



Utility Advisory Committee Rescheduled Regular Meeting Friday, May 22, 2026

Council Conference Room
280 Madison Ave N
Bainbridge Island, WA

and

Remote Meeting on Zoom
<https://bainbridgewa.zoom.us/j/83426304914>
or Telephone: US: +1 253 215 8782
Webinar ID: 834 2630 4914

Agenda

- 1. Call to Order / Roll Call**
- 2. Approval of Agenda / Conflict of Interest Disclosure**
- 3. Public Comment**

In person public comment is accepted at this time on any topic of public interest. Each commenter will have three minutes, or such amount as the meeting chair determines, to speak. Public comment is not taken on individual agenda items during the meeting. Public comment is simply received by the Committee, with no response, and the Committee cannot deliberate on items that are not on the agenda. The lack of comment is not an endorsement or a denial of the comment. Please refer to guidelines and instructions for public comment, including orderly behavior and civility in remarks, posted on the agenda page. Remote public comment is allowed with advance notice by 4:00 p.m. on the business day before the meeting by emailing cityadmin@bainbridgewa.gov, provided that all remote commenters shall be required to display their true name and to keep their camera turned on to show their true uncovered face while delivering their comments.

- 4. Council Liaison Report**
- 5. Regular Business**
 - A. Approve Meeting Minutes - March 19th
 - B. Welcome Peter
 - C. Utilities Element in Comp Plan discussion (Andy)
 - D. Initial InterLocal Agreement Discussion with KPUD

- E. Response to Council's Work Plan Directives
- F. Status of Committee's 2026 Recruitment and Interviews (Ted)
- G. Capital Facilities Plan Element overview
- H. Introduction to the draft Water System Business Plan (Peter)
- I. Public Works update

6. Good of the Order

7. Adjournment

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UTILITY ADVISORY COMMITTEE MINUTES

March 19, 2026

Call to Order

Meeting called to order at 5:30 pm

Members Present: Wanda Schulze, Ted Jones, Andy Maron, Charlie Averill, Lara Lant (Council Liaison)

Also Present: Chris Wierzbicki, COBI Public Works Director,
KPUD staff: Dave Epperson, Asst General Manager; Tom Colby Water Resources Manager; Brent Kenworthy, Engineering Supervisor; Todd Smith, Sr Construction Manager

Disclosure of Conflicts of Interest: None

Approval of Meeting Minutes: February meeting minutes were approved.

Council Liaison Report: Lara reported that Andy presented the UAC workplan to Council at their last meeting. The Council had a number of comments including potable water conservation, wastewater beneficial reuse and others. UAC members are encouraged to watch the video of the Council meeting. The work plan is not yet approved so UAC will work with Chris W. to make edits and resubmit.

Public Comment: There were two members of the public present at the meeting but no comments were presented.

KPUD Presentation

Dave Epperson provided an overview of KPUDs operations on Bainbridge. KPUD staff then went on to provide more detail on some of the current issues with the S Bainbridge water system in terms of both water quality and quantity. Three wells (previously associated with Island Utility) have been declining in production despite several rehabilitation efforts. In addition, KPUD discovered that several water meters had been recording higher amounts than what was actually produced. This resulted in an overestimation of how much the water system could produce and, therefore, how many homes the system could serve. KPUD drilled two new wells near Lynwood Center, the first (Well #9) doesn't produce much, but the second (Well #10) is producing well. A third well was attempted on Deer Path, but it didn't show enough promise to complete. Based on all this data, KPUD is recommending that no more wells be drilled on the S part of the island.

Regarding water quality, some wells in the system (and one well in particular) are showing rising levels of chlorides, which can be an indicator of saltwater intrusion. Production at the worst well has been reduced, with other wells making up the difference. In addition, PFAS ("forever chemicals") have been detected in S Bainbridge and Bill Point wells, with the most significant detection being in one of the Bill Point wells. KPUD has stopped using that well and is considering options for treating the water.

Based on all this information, the KPUD Board passed a resolution to restrict new connections and customer water use during the summer. Summer water use in S Bainbridge is the highest of all the systems KPUD operates. They are hoping to achieve about 20% reduction in water use.

KPUD's vision of next steps includes working with COBI on island-wide water conservation messaging, consideration of intertie piping to connect N end water sources to S end customers and initiating a new Interlocal Agreement with COBI.

There was also a brief discussion of the Fort Ward wastewater treatment facility. KPUD has been working on beneficial reuse options and also on Nitrate reduction as well as some general plant maintenance and minor upgrades. The plant currently has excess capacity.

Capital Facilities Element of Comprehensive Plan

Chris said that City Staff will be submitting the Capital Facilities Element to the Planning Commission for review. There aren't many changes from the previous version and much of the new work that has been done is incorporated by reference (Stormwater Plan, Water System Plan, etc). A conservative analysis of future capital facility needs was done as part of the EIS for the Winslow Sub-Area Plan. As we move through the Comp. Plan process, it now looks like the population targets that the Planning Commission is settling on are less than what was considered in the EIS. For the Wastewater Treatment Facility, this is good news and may mean that the next capacity upgrade will be sufficient through the planning horizon of the Comp Plan.

Water System Business Plan

The consultant has issued the draft Business Plan and Chris will share with the committee after the meeting. We can discuss at the next meeting.

Other Business

As a follow on to the Council Liaison report, we had a brief discussion of how to proceed with the UAC work Plan. Chris believes that most of the Council's comments are already addressed in the work plan and he will revise some sections and resubmit for Council approval.

Meeting adjourned at 7:00 pm

2/28/17

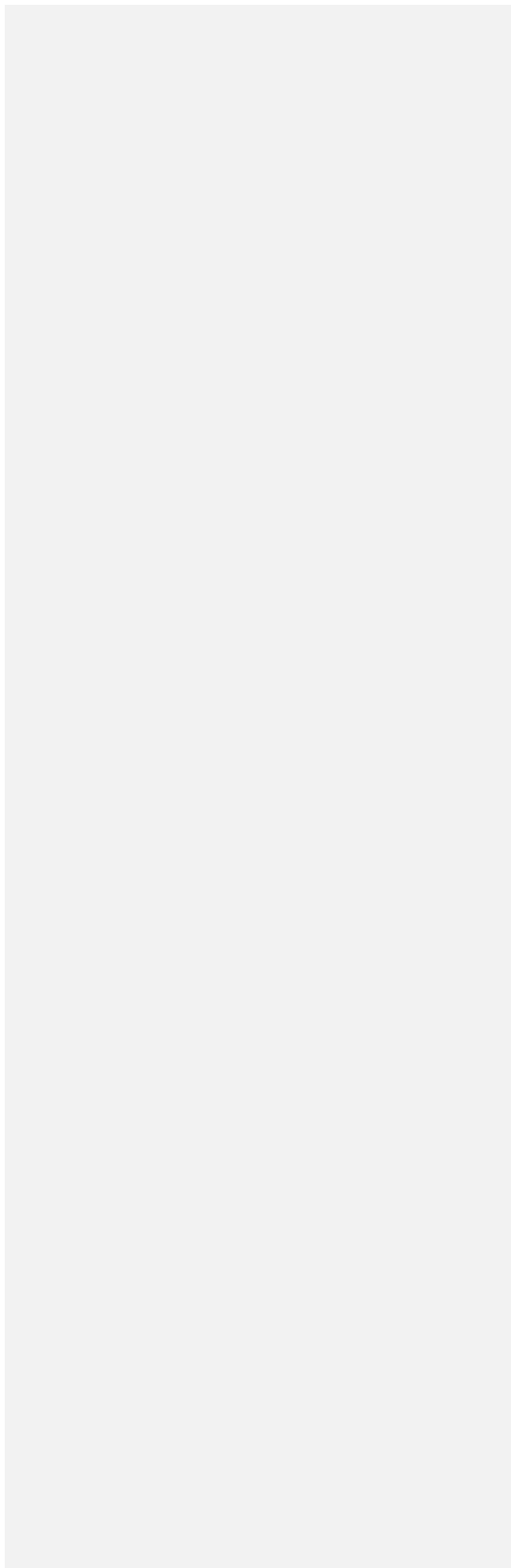
UTILITIES ELEMENT

Reviewed by:
[Jones 2/11](#)
[Schulze 2/11](#)
[Maron 2/14](#)
[Brandt-Erichsen 2/17](#)

Commented [CW1]: I'm adding a comment so comments appear in the document.

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UTILITIES INTRODUCTION

The *Growth Management Act* requires all comprehensive plans to include a utilities element consisting of the general location, proposed location, and capacity of all existing and proposed utilities, including but not limited to electrical lines, telecommunication lines, drinking water and sewer lines (RCW 36.70A.070(4)). On Bainbridge Island, these utilities are provided by a combination of the City of Bainbridge Island, State regulated investor-owned utilities, federally licensed communications companies and a municipally franchised cable television company.

The City of Bainbridge Island provides some sewer and water services. Other public and privately held water and sewer purveyors on the Island also provide services to residents of the City. Private households provide ~~for~~ a large percentage of the City's utility infrastructure with individual and on-site wells and septic systems.

A private corporation based on the Island provides solid waste disposal and recycling services to residents and businesses and is regulated by the Washington Utilities and Transportation Commission (WUTC).

Regional telecommunication and electric utilities serve the City of Bainbridge Island. The electric and telecommunication utilities are regulated by the WUTC.

Commented [CW2]: Make reference to how this section relates to the water resources element, particularly stormwater.

Commented [TJ3]: What is the year for our Vision? 2045?

UTILITIES VISION 20362044

The City of Bainbridge Island has ensured that all residents have reliable electric power, telecommunications services to meet their needs, potable water, solid waste and recycling services, and stormwater facilities that prevent flooding and erosion, maximize infiltration and eliminate pollutants before the water enters Puget Sound.

Commented [CW4]: Solicit feedback from UAC on this vision - at next meeting.

Coordinated water and sewer systems serve the more densely populated areas. ~~Some-In lower density areas, private homes continue to rely on septic systems, and private wells, but most are served by water purveyors that cover broad areas of the Island.~~ The City, working with other water purveyors, coordinates a monitoring program to ensure that the quantity and quality of potable water are sustained at safe levels for present and future generations. The City has maintained a groundwater model that reasonably portrays the aquifers we draw upon and enables evaluation of the effect of future changes in the environment and local use.

Commented [AM5]: Do we say something about discouraging new wells, even though COBI has no authority to do anything about that. State law and KC Health District deals with private wells.

The Groundwater Management Plan, based on the groundwater model, guides the public and private sector in all aspects of water supply, stormwater management and sewage. Water use is managed to encourage conservation and limit consumption. Sewer systems provide for the reuse of treated water to recharge aquifers, for irrigation and to reduce outflow into Puget Sound. Tertiary treatment has been implemented to improve water quality in Puget Sound.

Materials in the waste stream continue to decline, while composting and recycling are standard practices on the Island. A Bainbridge Island moderate-risk waste facility encourages the proper disposal of materials such as paints, solvents and cleaners.

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A state-of-the-art telecommunication network has increased cooperation among neighbors and across the Island which has facilitated ride-sharing and reduced dependence on private automobiles for commuting and daily errands. Broadband service is readily available for all homes and businesses. Persistent gaps in cell phone coverage have been eliminated. ;

Hardened utility infrastructure serves emergency neighborhood hubs and disaster response facilities enabling rapid and sustained response to natural disasters and other emergencies that may interrupt the utility and transportation infrastructure.

Alternate ecological and innovative energy sources now supply much of the Island's electricity, and geo-thermal heating systems have proven their effectiveness in reducing demand for electric power.

GOALS & POLICIES

APPLICABLE TO ALL UTILITIES

GOAL U-1

Ensure that reliable utility services are available to all Bainbridge Island residents, regardless of race, ethnicity, and income, and to all businesses and institutions.

GOAL U-2

Ensure that the utility services are comparable in terms of cost, quality, and technology to services available in similar jurisdictions in the Puget Sound region.

GOAL U-3

Ensure that utility services are adequate to meet current demands, and that utility providers plan for future demands.

GOAL U-4

Ensure that the provision of utility services is environmentally responsible and sustainable, and encourage utility services that are to be carbon neutral and do not contribute to climate change.

GOAL U-5

Ensure that new or major renovations to existing utility facilities are designed to minimize adverse impacts on residents and the environment.

GOAL U-6

Ensure that permits and approvals for utility facilities are processed in a fair, timely manner and in accord with development regulations and this Plan.

Commented [CW6]: Consider whether this is needed

Commented [TJ7]: I feel we should have some words here to address race equity, underserved neighborhoods and low income/senior residents. Lets work on that.

Commented [SB8R7]: Suggested text added for discussion

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GOAL U-7

Ensure that all utility providers give timely public notice and solicit community input on the siting of proposed facilities and on any other substantive projects before seeking City approval.

GOAL U-8

Cooperate with other jurisdictions and utility providers in planning and implementing utility facility additions, improvements, maintenance, and emergency response, so that such activities are coordinated for maximum efficiency and public benefit.

GOAL U-9

Ensure that sufficient city resources are provided to implement the above goals by adopting systems and processes for meaningful and timely review of utility services, and by assigning to the Utility Advisory Committee (UAC) or other city organizations the responsibility for advising the City Council on matters regarding all utility services on Bainbridge Island.

GOAL U-10

Ensure that city-managed and to the extent possible, non-city managed utility services are sufficient, cost effective, safe, and reliable.

Commented [CW9]: Consider language regarding use of the equity toolkit as part of the project review or other processes. Also, potentially add a focus on resiliency.

Commented [CW10]: Determine which elements of utilities to review. Consider how utilities address "performance, cost, scope, risk and opportunity."

Commented [AM11]: This is moved up from Potable Water, as it is applicable to all utilities.

POTABLE WATER

Currently, potable water is provided to citizens of Bainbridge Island by the City, Kitsap County Public Utility District, private for-profit water companies, not-for-profit companies or homeowner associations, and private wells. All water providers must comply with a variety of federal and state laws and regulations.

GOAL U-10

~~Ensure that city-managed and to the extent possible, non-city managed utility services, are sufficient, cost effective, reliable, and that safe water utility service is provided.~~

Commented [CW12]: Consider adding a percentage for how many customers are served by large water systems/companies

GOAL U-11

Require utilities to operate in a manner that preserves and protects the water resources of the Island.

Commented [AM13]: This is moved up above, and the mention of water only is deleted

Policy U 11.1

Maintain maps of public water systems service areas and evaluate modifications to their system boundaries based on maintaining sufficient and sustainable capacity to meet the present and future needs of the service areas.

Commented [CW14]: How / or should this section address the relationship between the city and other water purveyors. Requirements to coordinate water systems for the public good - spirit to lead.

Policy U 11.2

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City should evaluate becoming a stateAs an approved Satellite System Management Area (SMA), so the City may elect to provide water system management services to other utility providers.

Policy U 11.3

Encourage new development in previously unserved water service areas to connect to existing public water systems. The City, at its discretion, may require new water systems to be dedicated to the City.

Commented [CW15]: Consider whether this "may" is a "should" - remove at it's discretion

Policy U 11.4

Require engineering specifications for new public water systems and expansions or improvements to existing public water systems that are to be located within the City's rights-of-way to meet standards set forth by the City.

Commented [CW16]: Consider more proactive language here to address the consolidation of systems or the expansion of the public system.

Policy U 11.5

Adopt standards that differentiate between urban and non-urban density fire flow requirements. A differential policy is needed to promote cost effective water system upgrades by the many small water systems on the Island.

Commented [TJ17]: We got that done, right?

Commented [AM18R17]: I think this has been accomplished, and the policy may be deleted.

Commented [CW19R17]: Consider proactive language

Commented [CW20R17]: Move 11.2 and 11.6 together

Policy U 11.6

Encourage and support water utilities to enter into cooperative activities, such as jointly managed operations, shared storage, and construction of interties, to manage water resources and systems more efficiently, economically, and safely, and devote resources to implementation of this policy.

Policy U 11.7

Encourage, and facilitate, and devote resources to consolidation of water systems, with particular emphasis on mergers of contiguous and small systems, to manage water resources and systems more efficiently, economically, and safely.

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Policy U 11.8

Conduct a study of consolidation of water systems owned by the City and Kitsap Public Utility District. Pursue long-term consolidation of larger water systems under City management or ownership.

Commented [AM21]: This clause was proposed by UAC in 2016, but deleted by Planning Commission or City Council.

Policy U 11.9

Implement conservation measures through education and regulation with emphasis on limiting and reducing demand.

Commented [CW22R21]: Long-term direction

PUBLIC SEWER

Currently, there are two public sewer systems on Bainbridge Island. One, owned by the City of Bainbridge Island, serves the Winslow area and the Rockaway Beach, Pleasant Beach, and Lynwood areas ("the Southend System.") The other, owned by Kitsap County Sewer District #7, serves the Fort Ward area.

Commented [CW23]: Make note in this section about the consolidation of SD7 and KPUD

The service area for the Winslow Public Sewer System is designated in the City's General Sewer Plan. Treatment for this part of the system occurs at the Winslow Wastewater Treatment Plant. The sewer service area for the Southend System is also designated in the City's General Sewer Plan. Treatment for this the Southend System occurs at the Kitsap County Sewer District #7 treatment plant pursuant to an interlocal agreement.

GOAL U-12

Ensure that adequate, cost effective, and reliable sewer service is provided to those areas of Bainbridge Island served by public sewer systems and designated in the General Sewer Plan for future public sewers.

Policy U 12.1

Emergency service or other minor modifications to sewer service areas may be allowed with approval by the City Council via resolution so long as there is sufficient sewer facility capacity, and, with regard to the Southend System, sewage quality meets the standard outlined in the interlocal agreement with Kitsap County Sewer District #7.

Policy U 12.2

Within public sewer system service areas, new construction should provide for eventual connection to public sewer systems.

Policy U 12.3

Sewer connections will not be required where septic systems are fully functional and maintained, except as provided by law.

Policy U 12.4

In planning and establishing a service area for a new public sewer facility, or major expansion of an existing public sewer facility, service area boundaries will be evaluated taking the following into consideration:

Commented [CW24]: Tweak these policies to reflect the upcoming changes to the connection policies being considered by Council. Where is the best place for this language? Is it too specific for the Util element? Consider "develop criteria" language.

Commented [CW25R24]: Consider condensing this language into concepts

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- a. Areas that have an environmental need for sewer due to 1) a group of documented failing septic systems; or 2) proximity to sensitive bodies of water that are unsuitable for on-site septic systems according to the Kitsap County Health District.
- b. Areas used or planned for development that serve a public need, such as a public school.
- c. Areas designated for commercial and mixed use.
- d. Areas designated for residential use at densities of four units to the acre (R4) or greater.
- e. Areas planned for an increase in density through a special planning area process.

Policy U 12.5

When utilities plan, renovate, or build treatment facilities, require utilities to consider constructing facilities that facilitate the re-use of treated wastewater for irrigation, recharge, and other non-potable uses. Require that facilities be consistent with health and safety considerations and consider financial impacts to ratepayers and taxpayers.

Policy U 12.6

Improve the quality and reduce the quantity of effluent discharged to Puget Sound.

Policy U 12.7

Investigate the development of tertiary sewer and sewer greywater systems.

Policy U 12.8

Study cooperation (such as shared operations) or consolidation or joint ownership (WWTP) of sewer systems owned by the City and Kitsap County Sewer District #7.

Commented [CW26]: Consider including the creation of a large utility coordination process for both water and sewer.

Commented [CW27R26]: Maybe this belongs in the overall section

Commented [CW28]: Include a policy addressing pre-treatment?

Commented [CW29]: Change this entity?

Commented [CW30R29]: Should this policy include a recommendation that the systems should eventually be consolidated? Dedicate resources? What is the best means of providing sewer in the south island?

Commented [CW31R29]: Fold 12.5,6,7 into a policy

Commented [CW32R29]: Consider moving to "joint ownership" of the WWTP? - Could this lead to better rates, better financing options? Maybe this is a second sentence related to the WWTP.

STORM AND SURFACE WATER

The City of Bainbridge Island operates a storm and surface water utility for the purposes stated in BIMC Section 13.24.010.

GOAL U-13

Manage stormwater runoff to protect life, property and habitat from flooding and erosion; to channel runoff to minimize impacts to daily activities; to protect the quality of groundwater, surface water, and the waters of Puget Sound; and to provide recharge of groundwater where appropriate.

Policy U 13.1

Maintain a comprehensive storm drainage plan that identifies problems, proposes solutions, provides a strategy for implementation and funding, and establishes design and development guidelines.

Commented [CW33]: Convert this language to address the Stormwater System Plan

Policy U 13.2

Require new development to provide both on-site and off-site improvements necessary to avoid adverse water quality and quantity impacts.

Policy U 13.3

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Use *low impact development* standards wherein infiltration of stormwater is preferred over surface discharge to downstream systems, so as to encourage the return of uncontaminated precipitation to the soil at natural rates near where it falls through the use of detention ponds, grassy swales, and infiltration facilities.

Policy U 13.4

Design and construct stormwater systems that provide for removal of pollutants and sediment through bio-filtration or other means.

Policy U 13.5

Minimize disruption and/or degradation of natural drainage systems, minimize impervious areas by restricting site coverage, and encourage site permeability by retaining natural vegetation and buffers, and specifying use of permeable materials.

Policy U 13.6

Manage surface water in a manner which prevents pollutants from industrial, commercial, and agricultural land uses from entering ground or surface waters.

Policy U 13.7

Consider a program of retrofitting existing roads with water quality and quantity stormwater system improvements in order to minimize pollution from runoff from roadways to natural drainage systems and the waters of Puget Sound.

Commented [CW34]: Consider language regarding the maintenance of stormwater systems

Commented [CW35]: ...and enhance/restore fish passage environment.

ELECTRICAL

The City is currently served by Puget Sound Energy (PSE), which provides electricity generation sources, transmission, distribution and maintenance of electrical facilities throughout the island. PSE is regulated by the Washington Utilities and Transportation Commission (WUTC.) It is the commission's responsibility to ensure regulated companies provide safe and reliable service to customers at reasonable rates, while allowing them the opportunity to earn a fair profit.

GOAL U-14

Ensure adequate, cost effective, reliable, and environmentally responsible electric service to the citizens of Bainbridge Island.

New Policy Uxx

Maintain regular communications with electric service provider to ensure information needed by COBI to achieve the goals of this comprehensive plan is available.

New Policy Uxx

Ensure Electric provider actions requiring permits or other approvals from COBI go through an equity evaluation.

New Policy UXX

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Ensure adequate public outreach is conducted by electric provider for projects that will relocate, expand or provide new electrical infrastructure and ensure outreach is compliant with COBI equity guidelines.

Policy U 14.1

~~Develop a plan together with the electric service provider to undertake energy efficiency improvements and other alterations of electric utility facilities to provide capacity for future growth.~~

Policy U 14.2

~~Encourage the conservation of electrical energy, especially during periods of peak usage. Increase public awareness of existing conservation programs including energy audits, discounts, tax credits, etc offered by the energy provider or government agencies, and encourage energy saving building code strategies, local renewable energy, and other cost effective approaches to meeting the island's energy needs, including distributed energy systems.~~

Policy U 14.3

Encourage the electric service provider to improve reliability, with particular attention to adding transmission redundancy and mitigating impacts on service from storms or other natural events.

Policy U 14.4

Encourage undergrounding new and existing electric ~~transmission and~~ distribution power lines. ~~Encourage and assist the electric energy provider in development of, and develop~~ a long-term strategy for future undergrounding, to include maximizing opportunities with new construction, and prioritizing the work that affects the greatest number of *households* and businesses.

Policy U 14.5

Encourage the electric service provider and electricity users to use carbon neutral electricity generation, local electricity generation, solar, and innovative technologies such as ~~s~~ distributed energy systems ~~solar power~~ that are reliable, cost effective, preserve resources, provide minimal environmental impact, and do not contribute to global warming.

Policy U 14.6

Periodically undertake comparative evaluations of electric service reliability, cost, and environmental impact, customer service and customer support and evaluate opportunities to provide improved and less costly electrical service from alternative service providers.

Policy U 14.7

New construction or significant remodels of taxpayer-funded buildings shall incorporate energy conservation measures ~~use carbon-neutral energy for heating, cooling, and operational use~~ to the maximum extent practical within site specific and existing technology limitations. Measures to be considered include carbon-neutral heating/cooling, rooftop solar, building envelope design, landscape planning etc.

Policy U 14.8

Encourage new development to integrate environmentally responsible and innovative energy systems.

Commented [CW36]: Consider that all neighborhoods get outreach

Commented [WS37]: I don't understand what this is getting at

Commented [WS38R37]: I think we decided to delete this one at the Feb meeting

Commented [CW39R37]: Remove 14.1

Commented [WS40]: I think we should keep this one focused on conservation.

Commented [WS41R40]: local energy and distributed energy are mentioned in 14.5

Commented [WS42]: lets discuss this are we saying go beyond Fed or State requirements?

Commented [WS43R42]: deleted language about "code strategies" code is code.

Commented [WS44]: This language can be incorporated with below policy on reducing carbon. check for consistency with environmental and other elements

Commented [TJ45]: Transmission lines are much harder to underground. The vault space for splices is immense. Being at the top of the poles they are best protected from trees unless the tree comes down.

Commented [TJ46]: Let's mention the worst served customers as well. That is the rationale for asking PSE to report on a line or segment basis vs. island wide averages.

Commented [TJ47]: The Island Power initiative was about cost, reliability and sustainability. But I think that ship has sailed. I think leaving this in here now is more antagonistic than cooperative. Discuss?

Commented [CW48R47]: Consider deleting this reference

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Policy U 14.9

Explore ways to obtain 100% green electricity including investing in new renewable energy projects.

New Policy UXX

Work with electricity provider to ensure climate resiliency is being address for electrical equipment and infrastructure on the Island

Commented [WS49]: this seem to duplicate 14.5 except that this sets a policy for COBI to invest in energy projects - in what way?

Commented [WS50R49]: We decided to delete this at the Feb meeting

SOLID WASTE DISPOSAL, RECYCLING AND COMPOSTING

Currently, Bainbridge Disposal, Inc., a private corporation based on the Island, is the exclusive provider of solid waste disposal and recycling services to City. Bainbridge Disposal is regulated by the Washington Utilities and Transportation Commission (WUTC), which is charged with ensuring the utility provides reliable, safe and economical service.

Commented [CW51]: BD owns and operates the transfer center that provides services to the Island.

GOAL U-15

Ensure adequate, cost effective, reliable, and environmentally responsible solid waste, recycling and composting service to the citizens of Bainbridge Island.

Commented [CW52]: Consider adding a policy that focuses on encouraging solid waste services that are offered, particularly compost and recycling, options for multi-family residential - and which they sign up for. Is this an equity issue?

Policy U 15.1

Seek a method to provide on-island collection site for moderate risk waste or household hazardous waste including oil based paints, stains, adhesives, aerosols, paint thinner, corrosive cleaners, yard chemicals, and pool/spa chemicals and a means for transferring these substances in a timely manner to the Kitsap County site.

Commented [TJ53]: In line with Blair's announcement and our prior input we should mention CONVENIENCE. In particular COBI has been asking for household pickup to get closer to the houses on long streets. Trash in gulleys and burn barrels as much a result of the inconvenience of disposal as it is the cost. Not

Policy U 15.2

Support non-governmental organizations that provide outreach and education to citizens to ensure that the populace is informed about the latest waste reduction, composting, recycling and hazardous waste practices.

Commented [SB54]: How many of these waste streams are currently being accepted at the transfer station? Is this policy already being met, or does it seek expansion of existing transfer station capabilities?

Commented [CW55R54]: Consider referring to common household wastes in lieu of specifics

Commented [CW56]: Focus should be on providing outreach and education including support for NGOs

Commented [CW57R56]: Maybe we should be doing more than relying on NGOs for outreach

Policy U 15.3

In addition to WUTC regulation, the City should perform periodic reviews to ensure that Bainbridge Disposal is providing safe, reliable, cost effective and responsive solid waste, compost and recycling collection. Evaluate opportunities to provide improved and cost effective services from alternative providers.

Policy U 15.4

Coordinate with Bainbridge Disposal and the County to improve access to updated information on solid waste, recycling and composting collection and disposal services. [Obtain information from Bainbridge Disposal regarding where collected material is sent for recycling and reuse rates for recyclable materials.](#) Increase visibility and outreach for special events for hard-to-recycle materials such as hazardous waste or polystyrene foam.

Policy U 15.5

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Consider methods to reduce the amount of solid waste disposed, e.g. material bans, composting or compaction, or by the conversion of solid waste to energy, e.g. using a biodigester.

Commented [SB58]: Discuss - permitting for biodigesters has proved difficult and their performance has been mixed.

Commented [CW59R58]: Consider removing reference to biodigester.

TELECOMMUNICATION

Telecommunication is the technology of communication at a distance by electronic transmission of alphanumeric, audio, video and other data over wired and wireless delivery systems. On Bainbridge Island, telecommunication utilities provide telephone, television, and internet services.

Telephone utilities are regulated by the WUTC. The Federal Communications Commission (FCC) regulates wireless service providers.

Comcast (d.b.a Xfinity) and CenturyLink are the largest telecommunication service providers on Bainbridge Island.

KPUD is focused on areas within communities that are without or have limited access to residential broadband. Today they have over 700 miles of fibre infrastructure in the County, including some on Bainbridge Island. KPUD provides a public wi-fi service in Fort Ward Hall, Winslow.

Commented [CW60]: Ensure that this is correct - check with website. Maybe too much detail.

GOAL U-16

Ensure adequate, cost effective, reliable, and environmentally responsible telecommunication service to the citizens of Bainbridge Island.

Policy U 16.1

Encourage shared use of facilities and the use of existing utility corridors, public rights-of-way and city owned properties.

Policy U 16.2

Require the placement of cellular and/or wireless communication facilities in a manner that minimizes the adverse impacts on adjacent and surrounding land uses.

Policy U16.3

Encourage major telecommunication utility providers to work with the City to identify potential sites for infrastructure and facility expansion to address future growth and development and meet the demands for additional utility service.

Policy U 16.4

Encourage all providers to serve all parts of the City equally well. Persistent and well documented cell phone coverage gaps exist in many areas of the island. Encourage cell phone providers to be truthful about their advertised coverage areas.

Commented [CW61]: Consider whether this is needed.

Commented [CW62R61]: Address routine gaps as well as covering cell phone ability during power outages.

Commented [CW63]: "accurate"

Policy U 16.5

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The City expects all providers to evaluate the capacity of their facilities regularly to ensure that new facilities are installed in a timely basis to meet new and future demand. Providers are expected to provide facilities to accommodate growth within the City.

Policy U 16.6

Pursue internet and cellular service of the highest standards for governmental and educational institutions, business and commerce and personal use.

Policy U 16.7

Require new development to have underground conduits suitable for existing and foreseeable new utilities such as cable and broadband.

Policy U 16.8

Ensure that emergency communication services are universally available to assist residents in emergencies. Work with cell phone providers to ensure more robust coverage at all emergency neighborhood hubs and emergency response facilities.

Policy U 16.9

In addition to WUTC regulation, the City should perform periodic reviews to ensure that various telecommunication providers are providing safe reliable, cost effective, and responsive telecommunication services. During such reviews, the City should evaluate opportunities to obtain improved and cost effective services from alternative providers.

Policy U 16.10

Conduct a study to support the creation of an Island-wide high-speed internet service.

UTILITIES IMPLEMENTATION

To implement the goals and policies in this Element, the City must take a number of actions, including adopting or amending regulations, creating partnerships and educational programs, and staffing or other budgetary decisions. Listed following each action are several of the comprehensive plan policies that support that action.

HIGH PRIORITY ACTIONS

U Action #1 Continually utilize ~~Develop~~ the developed ~~established~~ process for periodic review of Island utility services.

Goal U-9 Ensure that sufficient city resources are provided to implement the above goals by adopting systems and processes for meaningful and timely review of utility services, and by assigning to the Utility Advisory Committee (UAC) or other city organization the responsibility for advising the City Council on matters regarding all utility services on Bainbridge Island.

U Action #2 Support the development of sewer tertiary treatment and sewer greywater systems.

Policy U 12.6

Improve the quality and reduce the quantity of effluent discharged to Puget Sound.

Commented [CW64]: Will the Council consider prioritizing policies again in this next update? Consider whether the UAC should draft a memo that identifies recommended prioritization.

Commented [TJ65]: We wrote this process. Council approved it. We used it and recommended studying broadband, cell phones and solid waste. Council turned us down. Lets try again.

Commented [TJ66]: Not sure why we are restating the policy or goal under the action. Could we just say see goal# or policy#? Restating them adds to the length and increases chance of errors.

Commented [CW67R66]: Refer to earlier policies, don't repeat them

Commented [AM68]: In 2017, this was an added action by the city council; it was not a recommendation from the UAC or Planning Commission. We should discuss this.

2/28/17

U Action #3 Facilitate cooperation among or consolidation of water systems.

Policy U 11.6

Encourage and support water utilities to enter into cooperative activities, such as jointly managed operations, shared storage, and construction of interties, to manage water resources and systems more efficiently, economically, and safely.

U Action #4 Encourage KPUD to complete connection of Bainbridge Island home to broadband and high-speed internet where services is not available. Continue the investigation of the creation of an Island-wide high-speed internet service.

Commented [CW69]: This is no longer a high priority.

Policy U 16.10

Conduct a study to support the creation of an Island-wide high-speed internet service.

Commented [CW70]: This is deleted above

MEDIUM PRIORITY ACTIONS

U Action #5 Proactively encourage, study, and facilitate consolidation of water systems to manage water resources and systems more efficiently, economically and safely.

Policy U 11.7

Encourage and facilitate consolidation of water systems, with particular emphasis on mergers of contiguous and small systems, to manage water resources and systems more efficiently, economically, and safely.

Policy U 11.8

Conduct a study of consolidation of water systems owned by the City and Kitsap Public Utility District. Pursue long-term consolidation of larger water systems.

INTERLOCAL AGREEMENT BETWEEN CITY OF BAINBRIDGE ISLAND AND KITSAP PUBLIC UTILITY DISTRICT FOR PUBLIC WATER SYSTEM COORDINATION EFFORTS

THIS AGREEMENT (“Agreement”) is made and entered into on the date of the last signature set forth below by the City of Bainbridge Island (“City”) and Kitsap Public Utility District (“KPUD”).

RECITALS

WHEREAS, the Interlocal Cooperation Act, Chapter 39.34 of the Revised Code of Washington, authorizes cooperative efforts between public agencies; and

WHEREAS, the City and KPUD own and operate public water systems within the City of Bainbridge Island with source, storage and facilities capable of being shared with the other for mutual benefit of their constituents; and

WHEREAS, the City and KPUD both desire to coordinate future public water system improvements to ensure the best possible outcomes for resource management, environmental sustainability and continuity of utility service to customers; and

WHEREAS, KPUD has identified near-term water supply needs for the South Bainbridge Water System; and

WHEREAS, the City’s Groundwater Management Plan recommends long-term water system planning and coordination efforts with KPUD to advance resource sustainability and water conservation efforts; and

WHEREAS, the City and KPUD acknowledge that this Interlocal Agreement establishes an intentional framework for coordination efforts, and that the Agreement is intended to be amended as needed to address the details of specific supportive actions moving forward.

AGREEMENT

NOW, THEREFORE, in consideration of and subject to the terms and conditions set forth below, the City and KPUD agree as follows:

1. Near-Term South Bainbridge Water System Intertie Planning. KPUD has identified near-term water supply needs for the South Bainbridge Water System. The City and KPUD share a mutual interest in addressing these needs through cooperative planning and infrastructure coordination that supports efficient and resilient systems operation, protection of shared water resources, and cost-effective service delivery to their respective customers. The City and KPUD anticipate working together to construct a water system intertie near the head of Eagle Harbor that would connect the South Bainbridge system and the City’s Winslow system. Subject to system capacity, regulatory approval, and mutually agreed operational conditions, the City could provide supplemental supply to KPUD during peak demand periods. The intertie would provide a

cost-effective and timely alternative to development of new supply sources. The city is committed to evaluating available system capacity to determine the extent to which water may be provided through the proposed intertie.

An amendment to this agreement will establish the terms and responsibilities between parties for the planning, design, funding, construction and operation of the intertie, including but not limited to the following:

- An engineering evaluation of the City's Head of the Bay well site to identify any infrastructure or operational modifications necessary to support intertie use;
- Planning, permitting, design, construction, and operation/maintenance requirements for a water main extension along Eagle Harbor Drive north from the South Bainbridge Water System to the proposed intertie location with the City;
- Estimated capital costs, cost allocation, and potential funding sources; and
- Wholesale water rates and payment terms applicable to any water provided by the City to KPUD through the intertie.

2. Long-Term Water System Intertie and Supply Well Planning. The City and KPUD recognize that long-term coordination and physical interconnection of the island's south, central and north end major public water systems can improve system reliability, enhance emergency response capability, promote efficient use of existing infrastructure, and reduce long-term capital and operational costs. Strategic system interties can support sustainable groundwater management by allowing water to be conveyed from areas of relative surplus to areas of need, thereby reducing localized impacts to the island's aquifers. Interconnected systems are commonly governed through a "Wheeling Agreement," which enables regional infrastructure sharing for water conveyance. Wheeling agreements benefit both agencies and their customers by improving reliability and cost efficiency, reducing reliance or over-pumping of individual sources, and supporting balanced use of the island's groundwater resources. These outcomes are consistent with the City's Groundwater Management Plan, which recommends diversifying water supply locations geographically and across multiple aquifers to minimize impacts on surface and groundwater levels.

An amendment to this agreement will establish the terms and responsibilities between parties for the development of a Wheeling Agreement that includes parameters for planning, funding, construction, and operation of interties and coordinated water system management, including, but not limited to the following:

- An engineering and permitting evaluation of intertie locations, including recommendations for timing, permitting, and infrastructure needs, including associated costs and funding opportunities;
- A hydrogeologic review of shared supply well alternatives, including groundwater model evaluations;
- Evaluation of shared operational and planning procedures, including updating of the regional Water Retail Service Area Map.

3. **Water Conservation Efforts.** The City and KPUD recognize the need for coordinated and consistent water conservation efforts to ensure the long-term sustainability of the Island's water resources. An amendment to this agreement will establish shared goals and tactics to advance water conservation efforts in the short and long-term.

4. **Term of Agreement.** This Agreement shall take effect on the date of the last signature of the parties below.

5. **Notices.** All notices hereunder may be delivered, emailed, or mailed. If mailed, they shall be sent to the following respective addresses:

To KPUD:

General Manager
PO Box 2910
Poulsbo, WA 98370
Phone: (360) 626-7760

To Bainbridge Island:

City of Bainbridge Island
280 Madison Ave. N.
Bainbridge Island, WA 98110
Attn: City Clerk
Phone: (206) 780-8618

or to such other respective addresses as either party may hereafter designate in writing. All notices and payments mailed by regular post (including First-Class) shall be deemed to have been given on the second business day following the date of mailing, if properly mailed and addressed. Notices and payments sent by certified or registered mail shall be deemed to have been given on the day following the date of mailing, if properly mailed and addressed. For all types of mail, the postmark affixed by the United States Postal Service shall be conclusive evidence of the date of mailing.

6. **Termination.** Either party may terminate this Agreement without cause on at least twelve (12) months' advance written notice to the other party. Either party may terminate this Agreement for a material breach thereof on thirty (30) days' advance written notice, provided, that if the breaching party cures the breach within the thirty (30) day notice period or, if such breach cannot reasonably be cured within thirty (30) days the breaching party commences cure and pursues the same diligently to conclusion, then this Agreement shall not terminate. Until the date of termination, the parties shall continue to comply with the terms and conditions of this Agreement. If both parties consent in writing, this Agreement may be terminated at any mutually agreed upon time.

7. **Indemnity.**

A. **Indemnity by KPUD.** KPUD agrees to indemnify, defend (with counsel reasonably acceptable to the City) and hold the City, its elected and appointed officers, agents, employees, and contractors harmless from and against any and all claims, suits, actions, damages, fines, penalties, liabilities and/or causes of action for any alleged personal injury, loss of life, and/or damage to property arising out of or in connection (i) KPUD's breach of its obligations under this Agreement; or (ii) any negligent, reckless, or intentional act of KPUD or any of its officers, agents, employees, invitees, or contractors. The foregoing indemnity is specifically and expressly intended to constitute a waiver of KPUD's immunity under the Washington Industrial Insurance Act, Title

51 RCW, to the extent, but only to the extent, necessary to provide the City with a full and complete indemnity from claims made by KPUD or its employees as provided herein. The City and KPUD acknowledge that additional indemnification terms may be negotiated as the agreement is amended to address future actions.

B. **Indemnity by the City.** The City agrees to indemnify, defend (with counsel reasonably acceptable to KPUD) and hold KPUD, its officers, agents, employees, and contractors harmless from and against any and all claims, suits, actions, damages, fines, penalties, liabilities and/or causes of action for any alleged personal injury, loss of life, and/or damage to property arising out of or in connection (i) the City's breach of its obligations under this Agreement; or (ii) any negligent, reckless, or intentional act of the City or any of its officers, agents, employees, invitees, or contractors. The foregoing indemnity is specifically and expressly intended to constitute a waiver of the City's immunity under the Washington Industrial Insurance Act, Title 51 RCW, to the extent, but only to the extent, necessary to provide KPUD with a full and complete indemnity from claims made by the City or its employees as provided herein. The City and KPUD acknowledge that additional indemnification terms may be negotiated as the agreement is amended to address future actions.

C. **Limitation on Indemnity.** The indemnity provisions of this Agreement shall be construed consistent with RCW 4.24.115. The indemnitor under Subsections 16.A and 16.B shall not be required to indemnify the indemnitee under such subsections for injuries, death, or damage caused by or resulting from the sole negligence of the indemnitee or the indemnitee's officers, agents, employees, invitees, or contractors. Where injuries, death, or damage are caused by the concurrent negligence of (i) the indemnitor or its officers, agents, employees, invitees, or contractors, and (ii) the indemnitee or its officers, agents, employees, invitees, or contractors, the indemnity obligation of the indemnitor shall apply only to the extent of the negligence of the indemnitor or its officers, agents, employees, invitees, or contractors. In addition, neither party shall be liable to the other for incidental or consequential damages.

8. **Insurance.** The City and KPUD acknowledge that terms related to insurance are not necessary for the initial agreement but may be negotiated as the agreement is amended to address future actions.

9. **Legal/Administrative Entity.** No separate legal or administrative entity is created by or pursuant to this Agreement. This Agreement shall be jointly administered by the General Manager of KPUD and the City Manager of the City.

10. **Assignment.** The parties shall not assign this Agreement or any interest, obligation, or duty herein without the express written consent of the other party.

11. **Nondiscrimination.** The parties agree not to discriminate in the performance of this Agreement because of race, color, creed, religion, sex, honorably discharged veteran or military status, sexual orientation, the presence of any sensory, mental, or physical disability, or the use of a trained guide dog or service animal by a person with a disability, or national origin, citizenship or immigration status, lawful business relationship, or other status protected by law.

12. Choice of Law and Venue. This Agreement shall be interpreted according to the laws of the State of Washington. Any action to resolve disputes arising out of this Agreement shall be brought as follows: Should the parties not be able to agree, the matter shall be submitted to mediation and then binding arbitration should the mediation not resolve any disputes. The parties shall split the cost of the mediator or arbitrator evenly. The arbitrator shall be selected by mutual agreement of the parties or in the event they cannot agree, by the presiding judge of the Kitsap County Superior Court. The decision of the arbitrator shall be binding.

13. Attorney's Fees. In the event of a dispute between the parties leading to mediation or arbitration, each party shall pay its own costs and attorney's fees.

14. Entire Agreement. This Agreement merges and supersedes all prior negotiations, representations, and agreements between the parties hereto relating to the subject matter hereof and constitutes the entire agreement between the parties.

15. Filing of Agreement with County Auditor. KPUD shall record the original of this Agreement with the County Auditor or post a copy of the Agreement to its website immediately following signature by the last party signing the same.

16. Counterparts. This Agreement shall be executed in two counterparts, each of which shall be regarded for all purposes as one original. The parties agree that they will execute any and all instruments, documents, resolutions, or ordinances necessary to give effect to the terms of this Agreement.

EXECUTED by each of the parties on the dates hereafter written and effective as of the last date of signature.

CITY OF BAINBRIDGE ISLAND
KITSAP COUNTY, WASHINGTON

KITSAP PUBLIC UTILITY DISTRICT
KITSAP COUNTY, WASHINGTON

Ellen Schroer, Interim City Manager
Dated: _____

Angela Bennink, General Manager
Dated: _____

ATTEST:

ATTEST:

Christine Brown, City Clerk

Michael Land, Clerk of the Board

Approved as to form:

Approved as to form:

Andrew Tsoming, City Attorney

Christy Palmer, District Attorney

DRAFT

ORDINANCE NO. 2026-06

AN ORDINANCE of the City of Bainbridge Island, Washington, granting Seattle SMSA Limited Partnership d/b/a Verizon Wireless, a nonexclusive ten-year franchise to construct, operate, and maintain telecommunications facilities in, upon, over, under, along, across, and through the City's public rights-of-way for the purpose of providing telecommunications Services, providing for severability and establishing an effective date.

WHEREAS, RCW 35A.11.020 grants the City broad authority to regulate the use of the public right-of-way and RCW 35A.47.040 authorizes the City "to grant nonexclusive franchises for the use of public streets, bridges or other public ways, structures or places above or below the surface of the ground for... poles, conduits, tunnels, towers and structures, pipes and wires and appurtenances thereof for transmission and distribution of... signals or other methods of communication;" and

WHEREAS, the City Council finds that it is in the public interest to grant a franchise to SMSA Limited Partnership d/b/a Verizon Wireless; and

WHEREAS, pursuant to RCW 35A.47.040, this franchise ordinance was introduced at one Bainbridge Island council meeting and passed at a subsequent regular meeting occurring at least five days after its introduction.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BAINBRIDGE ISLAND, WASHINGTON, DOES HEREBY ORDAIN AS FOLLOWS:

Section 1. Grant of Franchise. A franchise is hereby granted to SMSA Limited Partnership d/b/a Verizon Wireless under the terms and conditions set forth in Exhibit A attached hereto and incorporated herein by reference. The franchise is granted for a period of ten (10) years from the effective date as listed in Section 23.5 of Exhibit A.

Section 2. Acceptance - Compliance with Franchise Terms. As a condition of the franchise granted by this ordinance, Comcast shall provide its written and acknowledged unconditional acceptance consistent with Section 4 of Exhibit A. By the adoption of this ordinance, the City of Bainbridge Island agrees to comply with all provisions of the same.

Section 3. Severability. Should any section, paragraph, sentence, clause, or phrase of this ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this ordinance be preempted by state or federal law or regulation, such decision or preemption shall not affect the validity of the remaining portions of this ordinance or its application to other persons or circumstances.

Section 4. Effective Date. This ordinance shall take effect five (5) days from its passage and publication as required by law.

PASSED BY THE CITY COUNCIL this ____ day of _____, 2026.

APPROVED BY THE MAYOR this ____ day of _____, 2026.

Clarence Moriwaki, Mayor

ATTEST/AUTHENTICATED:

Christine Brown, MMC, City Clerk

APPROVED TO FORM:

City Attorney

PASSED BY THE CITY COUNCIL:

PUBLISHED:

EFFECTIVE DATE:

EXHIBIT A
TELECOMMUNICATIONS
FRANCHISE AGREEMENT

This Telecommunications Franchise Agreement (“Franchise”) dated _____, 202_ (the “Effective Date”) is made and entered into by and between the City of Bainbridge Island, a municipal corporation in the state of Washington (“City”) and Seattle SMSA Limited Partnership d/b/a Verizon Wireless, a Delaware limited partnership with its principal offices at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920 (“Grantee”).

Recitals

WHEREAS, Seattle SMSA Limited Partnership d/b/a Verizon Wireless (“Grantee”) doing business in the State of Washington, has applied for a non-exclusive telecommunications franchise to construct, operate, and maintain telecommunications facilities upon, in, under, across, along, and over certain City rights-of-way as hereinafter set forth, and

NOW THEREFORE, in consideration of the terms, covenants and conditions set forth below, and other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the City and Grantee agree as follows:

1 Franchise Granted.

1.1 *Grant of Franchise.* Subject to obtaining any permits as are required under the City’s Code or other applicable Laws (and subject to Grantee obtaining any additional necessary agreements, approvals, or authorizations from any entity that owns poles or any other third party rights), the City hereby grants on a nonexclusive basis as provided in City Code, authorization for Grantee to attach, install, operate, maintain, remove, reattach, reinstall, relocate, upgrade and replace Facilities within the Rights-of-Way in the City for the purposes of providing Services to Persons located within or without the limits of the City.

1.1.1 Exhibit 1 is a detailed map representing the current locations of all Facilities in Grantee's Network in the City Rights-of-Way. If Grantee owns and/or

operates Facilities in the City Rights-of-Way under a separate franchise agreement or otherwise, Grantee shall also include them in Exhibit 1.

1.1.2 During the term of this Franchise, the location of Facilities installed by Grantee or its designee shall be permitted by the City and disclosed, in writing, to the City by Grantee within ten days before its installation, removal, or relocation.

1.1.3 All provisions of Title 19 Bainbridge Island Municipal Code (“BIMC”) and Chapters 18.10 and 18.10A BIMC except as may be explicitly set forth otherwise in this Agreement, are hereby incorporated by reference.

1.2 *Costs Related to Exercise of Franchise.* Any and all rights expressly granted to Grantee under this Franchise shall be exercised at Grantee's sole cost and expense, shall be subject to the prior and continuing right of the City to use any and all parts of the Rights-of-way or Public Facilities or property, nonexclusively or concurrently, with any other Person, and further shall be subject to City's police powers and all deeds, easements, dedications, conditions, covenants, restrictions, encumbrances and claims of title which may affect the Rights-of-Way, or Public Facilities now or hereafter existing. Nothing in this Franchise shall be deemed to grant, convey, create, or vest a real property interest in land to or in Grantee, including any fee or leasehold interest or easement rights.

1.3 *No Interference.* Except as expressly permitted by applicable Laws, in the performance and exercise of its rights and obligations under this Franchise, Grantee shall not interfere in any manner with the use of Rights-of-Way by the City, by the general public or other Persons authorized to use or be present upon the Rights-of-Way, including interference with the operation of any and all sanitary sewers, water mains, storm drains, gas mains, parkway landscaping and/or irrigation, landscape planters, poles, aerial or underground electric and telephone wires, cable television and other telecommunications, utility and municipal property, without the express written approval of the owner or owners of the affected property or properties.

1.4 *Compliance with Laws.* Grantee shall comply with all applicable Laws in the exercise and performance of its rights and obligations under this Franchise. If required by applicable Law, Grantee shall obtain all required approvals from the appropriate

governing authorities. Grantee acknowledges it is subject to the City's police powers and all applicable Laws.

2 Acceptance.

2.1 *Franchise Acceptance.* Grantee shall execute and return to the City its execution and acceptance of this Franchise in the form attached hereto as Exhibit 2 within sixty (60) days of the effective date of the ordinance authorizing the Franchise. In addition, Franchisee shall submit a certificate of insurance as proof of insurance obtained and blanket additional insured endorsement pursuant to Section 14, any applicable construction Restoration Bond pursuant to Section 21.1 and the Franchise Performance Bond required pursuant to Section 21.2 within sixty (60) days of the effective date. The administrative fee pursuant to Section 23.3 is due within ninety days of receipt of the invoice from the City.

2.2 *Grantee to Have No Recourse.* Grantee specifically agrees it will not seek monetary damages from City for any loss, cost, expense, or damage arising out of any Provision or requirement of this Franchise, or enforcement of this Franchise, nor from the City's exercise of its authority to grant additional Franchises, but shall only be entitled to seek declaratory or injunctive relief, except to the extent caused by the negligence or willful misconduct of the City. The City shall not be liable, unless directly and proximately caused by the willful, intentional or malicious acts of the City, for any damage to or loss of any Facility within the Right-of-Way as a result of or in connection with any public works, public improvements, construction, excavation, grading, filling, or work of any kind in the Right-of-Way by or on behalf of the City.

2.3 *Acceptance of Power and Authority of City.* Grantee expressly acknowledges by acceptance of this Franchise that:

2.3.1 It has relied upon its own investigation and understanding of the power and authority of the City to grant and enforce the Franchise;

2.3.2 It has not been induced to enter into this Franchise arrangement by any understanding or promise or other statement, whether verbal or written, by or on

behalf of the City concerning any term or condition of the Franchise that is not specifically included herein;

2.3.3 It has carefully read the terms and conditions contained herein and of the Ordinance and that Grantee is willing to and does accept all the obligations of such terms and conditions to the extent not inconsistent with state or federal law.

3 Limitations on Authority.

3.1 *Subject to Other Requirements.* Grantee's right to operate and maintain its Telecommunications Network is subject to the terms, conditions, and requirements of this Franchise, the City Code, and all applicable Laws, and Grantee's right to construct, erect, install or modify its Telecommunications Network is specifically subject to the requirement that Grantee obtain Permits as set forth in Code; and obtain all required permits for, and otherwise comply with, all applicable land use and zoning regulations, which control development on property contiguous to the right-of-way containing the proposed Facilities site.

3.2 *After-Acquired Facilities.* Grantee expressly acknowledges and agrees, by acceptance of this Franchise, that Facilities and appurtenances in Rights-of-Way that are subsequently acquired by the Grantee and that (if acquired prior to this original Franchise grant) would have been subject to this Franchise and the permitting authority related thereto shall be subject to the provisions of this Franchise and all Permits related thereto.

3.3 *Privileges Must be Specific.* No privilege or exemption is granted or conferred by this Franchise except as may be specifically prescribed.

4 Nonexclusive Franchises. This Franchise is nonexclusive. City reserves the right to grant additional Franchises to any Person at any time.

5 Amendments. Except for changes to Exhibit 1 addressed in Section 1.1.2, this Franchise may be amended only upon the mutual written consent of City and Grantee or in the exercise of the City's police power authority or other explicit authority pursuant to applicable laws.

6 Service of Notice. Except as otherwise specifically provided herein, any notices required or permitted to be given under this Franchise shall be deemed to be properly served when deposited with the United States Postal Service, postage paid, certified or registered mail, or via nationally recognized overnight carrier, and addressed to the party to receive same, or at such other address of which the party to receive the notice shall have designated in the Franchise.

NOTICES TO THE CITY shall be addressed to all of the following:

Attention: City Clerk

280 Madison Avenue North

Bainbridge Island, WA 98110-1812

With Copies to:

Attention: Public Works Director

280 Madison Avenue North

Bainbridge Island, WA 98110-1812

NOTICES TO THE GRANTEE shall be addressed to all of the following:

Seattle SMSA Limited Partnership d/b/a Verizon Wireless

180 Washington Valley Road

Bedminster NJ 07921

Attn: Network Real Estate (Site: Bainbridge Island / MDG# _____)

With a copy to:

Basking Ridge Mail Hub

Attention: Legal Intake

One Verizon Way

Basking Ridge, New Jersey 07920

7 Term of Franchise. This Franchise shall be for ten (10) years, beginning on the Effective Date of this Franchise (the “ Term”), unless earlier terminated in accordance with this Franchise.

8 Abandonment.

8.1 In the event that any Facilities or the Services are out of service for a period of one hundred eighty (180) consecutive days or more, it shall be considered abandoned ("Abandoned") and Grantee shall promptly notify the City in writing, and within ninety (90) days remove Abandoned Facilities and restore the Right-of-Way to its condition prior to the placement of the Facilities, all at Grantee's sole cost and expense. If the City determines that any Facilities or the Services are Abandoned, City shall inform Grantee in writing, and Grantee upon ninety (90) days following receipt of written notice shall promptly remove such Facility or Facilities and restore the Right-of-Way to its condition prior to the placement of the Facilities, all at the Grantee's sole cost and expense.

8.2 If Grantee fails to remove the Facilities and restore the Right-of-Way as required in 8.1 of this Franchise, following the expiration of the ninety (90) day removal period and all cure periods have expired, the City shall be entitled to remove the Facilities and restore the Right-of-Way at Grantee's sole cost and expense or accept the transfer of ownership of the same to the City,

8.3 The Grantee has the right to challenge the City's determination that Facilities are Abandoned. Upon receipt by the City of written notice of such challenge, the City and the Grantee shall meet in good faith to discuss the nature of the City's determination and the Grantee may produce facts and other supporting information as to why the City's determination is incorrect or should be modified.

9 Repair of Damage. Grantee is responsible for repairing damage Grantee causes to all public and private facilities within the Right-of-Way and the Right-of-Way itself. Grantee shall complete all necessary repairs within sixty (60) days of notification by the City, unless emergency conditions necessitate, in City's reasonable discretion, more exigent remediation or City must immediately act. If Grantee fails to make the necessary repairs within sixty (60) days of notice, or emergency circumstances compel the City to immediately act, City may have repairs made with the reasonable costs being billed to Grantee. Billed costs are due within thirty (30) days of receipt of invoice. If the repair cannot fully reverse the deterioration or loss of life, the City may require Grantee to pay for the damage suffered as a direct result.

9.1 The Grantee has the right to challenge the City's determination that Grantee caused damage which must be repaired. Upon receipt by the City of written notice of such challenge, the City and the Grantee shall meet in good faith to discuss the nature of the City's determination and the Grantee may produce facts and other supporting information as to why the City's determination is incorrect or should be modified.

9.2 Grantee shall reimburse the City within 90 days following the receipt of an invoice for all reasonable amounts paid and/or costs incurred by the City in relation to the enforcement of this Section, all such fees, expenses and costs shall be recoverable from Grantee to the extent the City prevails in such enforcement action.

10 Default. Grantee shall be in default under this Franchise upon the occurrence of any of the following events:

10.1 Grantee's violation of material terms or provisions of Title 19 BIMC and Chapters 18.10 and 18.10A BIMC, this Franchise, or any other applicable Laws.

10.2 Grantee's failure to pay the City for any duly invoiced costs and/or fees incurred, pursuant to this Franchise or Code, and Grantee does not cure within sixty (60) days after written notice of non-payment is received by Grantee.

10.3 Upon Grantee's failure to perform any other obligation under this Franchise or to cure any failure of performance within sixty (60) days after notice of such failure or demand for cure is given by the City to Grantee or, if such failure of performance is not curable within sixty (60) days in the reasonable determination of City, if the defaulting party fails to commence such cure within sixty (60) days and fails to thereafter diligently pursue such cure to completion.

10.4 Grantee becomes insolvent, liquidates, is adjudicated as bankrupt, makes an assignment for the benefit of creditors, invokes any provision of law for the relief of debtors, or initiates any proceeding seeking protection from its creditors.

10.5 The waiver of any default or violation of any provision of this Franchise shall not be deemed to be a waiver or a continuing waiver of any subsequent breach or violation of the same or any other Provision of this Franchise.

11 Facility Relocation. Grantee shall, by a time specified by the City, protect, support, temporarily disconnect, relocate, or remove any of its Facilities when required by the City by reason of traffic conditions; public safety; public right-of-way construction; public right-of-way repair (including resurfacing or widening); change of public right-of-way grade; construction, installation or repair of sewers, drains, water pipes, power lines, signal lines, tracks, or any other type of government-owned communications system, public work, public facility or improvement, or any government-owned utility; public right-of-way vacation; or for any other purpose where the work involved would be aided by the removal or relocation of the Facility. Collectively, such matters are referred to below as the “public work.”

11.1 Except in the case of emergencies, the City shall provide written notice describing where the public work is to be performed as soon as practical but at least 30 days prior to the deadline by which Grantee must protect, support, temporarily disconnect, relocate or remove its Facilities. Grantee may seek an extension of the time to perform such tasks where they cannot be performed in 30 days or by the completion time specified even with the exercise of its best efforts, and such request for an extension shall not be unreasonably refused.

11.2 In the event of an emergency, or where Grantee creates or is contributing to an imminent danger to health, safety, or property, the City may protect, support, temporarily disconnect, remove, or relocate any or all parts of the Facilities without prior notice, and charge Grantee for costs incurred. The City will make a reasonable effort to notify Grantee as soon as practicable, either before or after any emergency removal or relocation of Facilities.

12 Relocation Costs. Whenever the removal or relocation of Facilities is required under this Franchise or otherwise by order of the City, and such removal or relocation shall cause the Rights-of-Way to be damaged, Grantee, at its sole expense, shall promptly repair and return the surrounding Rights-of-Way to the same condition as existed prior to such work, in the

reasonable determination of City. If Grantee fails to comply with this requirement, then the City shall have the option of performing or causing to be performed such reasonable and necessary work, and charge Grantee for the actual cost(s) incurred by City. Upon the receipt of a demand for payment by the City, Grantee shall reimburse the City for such costs within sixty (60) days.

13 Relocation for Third Parties. If any user that is authorized to place facilities in the rights-of-way requests Grantee to protect, support, temporarily disconnect, remove, or relocate its Facilities to accommodate the construction, operation, or repair of the facilities of such other user, Grantee shall, after 30 days' advance written notice, take action to effect the necessary changes requested. Unless the matter is governed by a valid contract or a state or federal law or regulation, or unless the communications facility that is being requested to move was not properly installed, the reasonable cost of the same shall be borne by the user requesting the protection, support, temporary disconnection, removal, or relocation and at no charge to the City, even if the City makes the request for such action. Further, Grantee shall, on the request of any entity or person holding a valid permit issued by a governmental authority, temporarily raise or lower its Facilities and/or wires to permit the moving of buildings or other objects. The expense of such temporary removal or raising or lowering of Facilities or wires shall be paid by the entity or person requesting the same. Grantee shall be given not less than seven days' advance notice to arrange for such temporary wire changes.

14 Insurance. Grantee shall at all times comply with the insurance requirements of BIMC 19.02.070(B). The required Certificate of Insurance must be provided to the City within two days of Acceptance of this Franchise.

15 Termination. In addition to the provisions of BIMC 19.02.080, this Franchise may be terminated upon a default hereof as provided in this Franchise. A termination of this Franchise because of Grantee's default shall not prejudice any other remedy for breach of contract, damages, non-payment or otherwise, which the City has under this Franchise or under law.

15.1 *Notice.* This Franchise may be terminated by the City in accordance with the provisions of BIMC 19.02.080 after notice, an opportunity to cure, and a hearing as provided therein.

15.2 *Lesser Sanctions.* Additionally, the City may impose a lesser sanction as authorized by Code or Law.

15.3 If, at any time the City vacates any Rights-of-Way that is subject to rights granted by this Franchise, the City may, at its sole option, and by giving 60 days written notice to Grantee, its successors and assigns, terminate this Franchise with reference to such portions of Rights-of-Way so vacated and the City shall not be liable for any damages or loss to Grantee by reason of such termination. Further, the City may, at its sole option, choose to retain an easement for public utilities and services consistent with RCW 36.87.140.

16 General Terms.

16.1 *Reports and Records of the Grantee.* Reports Required. Grantee shall supply, upon request and at no cost, any information, requested by the City to coordinate municipal functions with the Grantee's activities and fulfill any municipal obligations under state law. Said information may include an installation inventory, location of existing or planned Facilities, maps, plans, and as-built drawings of the operator's installations in the City. Said information may be requested either in hard copy and/or electronic format compatible with the City's database system, as now or hereafter existing. Grantee shall keep the City informed of its long-range plans for coordination with the City's long-range plans.

16.1.1 In the event that the City receives a public records request under Chapter 42.56 RCW or similar law, the City shall promptly notify Grantee and Grantee shall produce all records required under Chapter 42.56 RCW. Should Grantee obtain an injunction or court order limiting or prohibiting production of such records, the City shall comply with such injunction or court order obtained by Grantee; however, in the event a higher court overturns such injunction or court order and such higher court action is or has become final and non-appealable, Grantee shall reimburse the City for any fines or penalties imposed for failure to disclose such records as required hereunder within sixty (60) days of receipt of a request from the City.

16.2 *Enforcement and Administration by City.* The City, through the office of the City Engineer, shall have continuing regulatory jurisdiction and supervision over the occupancy of the Rights-of-Way pursuant to this Franchise, and may from time to time adopt such rules and regulations as it may deem necessary.

16.3 *Failure to Enforce.* Neither the Grantee nor the City shall be excused from complying with any of the terms and conditions of this Franchise by any failure of the other party upon one or more occasions to insist upon or to seek compliance with any of such terms or conditions.

17 **Inspection.** The City maintains the right to inspect, at Grantee's reasonable expense, all of Grantee's Facility installations in the Rights-of-Way. In addition, the City Engineer may require Grantee to furnish certification from Grantee's engineer that the Facilities are constructed and operated in accordance with good engineering practice and are reasonably secure against damage and injury.

18 **Removal of Unauthorized Facilities.** Within ninety (90) days of receipt of written notice from the City Engineer or designee, Grantee shall remove any unauthorized Facility or related appurtenance within the rights-of-way, at its own expense. If Grantee fails to remove such Facilities or appurtenances, the City may cause the removal and charge the Grantee for the reasonable costs incurred. A Facility or appurtenance is unauthorized and subject to removal in the following circumstances:

18.1 Upon expiration or termination of the Grantee's Franchise.

18.2 Upon abandonment of a Facility within the Rights-of-Way.

18.3 If the Facility was constructed or installed without the prior grant of a franchise or permit.

18.4 If the Facility was constructed or installed without the prior issuance of a required right-of-way permit.

18.5 If the Facility was constructed or installed at a location not permitted by the Grantee's Franchise.

18.6 Any such other reasonable circumstances deemed necessary by the City Engineer or designee.

19 Permits and Construction Standards.

19.1 *General Standards.*

19.1.1 **Permits.** Grantee shall comply with all applicable City code and City standards for the proposed right-of-way work. In addition thereto, Grantee shall apply for a Right-of-Way Permit, Wireless Communication Facility, a Small Wireless Facility Permit, or other applicable permit prior to beginning any work in a Right-of-Way generally including the opening of any street in the City. No work, other than emergency work, shall commence without such Permit. Grantee may immediately perform emergency repairs necessary due to imminent danger to health, safety or property or to temporarily restore communications system services which have been disrupted by storms, earthquakes, riots or other unexpected accidents or phenomenon. When performing such emergency work, Grantee shall be required (a) to give notice to the City of the commencement of the emergency work as quickly as practical, (b) to apply for the permits which would otherwise be required for such work by the next business day from the commencement of such work; and (c) to conform any work performed prior to the approval of the required permit and to carry out any other work in the area involved in accordance with the requirements of the permit.

19.1.2 **Network Planning.** The Grantee and the City shall make reasonable good faith efforts to advise each other of plans and programs, both long and short range, for the placement of Facilities in Rights-of-Way, and other Public Property which might affect the other party or require its coordination. Upon the City's request, Grantee shall use commercially reasonable efforts to submit to the City a current (as of the date of City's request) Exhibit 1.

19.1.3 **Limited Access.** The City reserves the right to limit or exclude Grantee's access to a specific route, public right-of-way, or other location when there is inadequate space to deploy, a pavement cutting moratorium, deployment would cause unnecessary damage to public property, or interfere with City utilities, or for any other reason determined by the City Executive or designee, or the City Engineer

in their reasonable discretion to be necessary for management and preservation of the Rights-of-Way.

20 Indemnification. The Grantee agrees to defend, indemnify, and hold harmless the City, its trustees, elected and appointed officers, agents, and employees, from and against any and all claims, demands, or causes of action of whatsoever kind or nature, and the resulting losses, costs, expenses, reasonable attorneys' fees, liabilities, damages, orders, judgments, or decrees, sustained by the City to the extent resulting from or of the acts, errors, or omissions of Grantee, or its agents, independent contractors or employees or the construction, operation or repair of any Facility in the public rights-of-way. The indemnity in the preceding sentence shall not apply to the negligence or willful misconduct of the City, its trustees, elected and appointed officers, agents, and employees. The City shall give prompt written notice to Grantee of any claim for which the City seeks indemnification. Grantee shall have the right to investigate such claims, and the City shall cooperate with the Grantee in any such investigation.

If the claim, suit, or action for injuries, death, or damages as provided for in the preceding paragraphs of this Franchise is caused by or results from the concurrent negligence of the indemnitee or the indemnitee's agents or employees, this Section 20 shall be valid and enforceable only to the extent of the indemnitor's negligence.

Grantee specifically and expressly waives any immunity under Industrial Title 51 RCW, and acknowledges that this waiver is mutually negotiated by the parties herein.

20.1 *No Responsibility for Loss.* The City shall not be responsible for any damages, losses, or liability of any kind arising from the issuance or approval by the City of a permit, license, or franchise to any third party.

22.3 *Consequential Damages.* Neither party will be liable under this Agreement for consequential, special, punitive or indirect damages, whether under theory of contract, tort (including negligence), strict liability, or otherwise.

21 Bonds.

21.1 *Restoration Bond Requirement.* Prior to the commencement of any construction of new or additional Facilities within the rights-of-way, Grantee shall furnish a

Restoration Bond if required by Code as a result of constructing the Grantee's facilities within rights-of-way.

21.2 *Franchise Performance Bond Requirement.* Grantee shall provide City with a Franchise Performance Bond in the amount of Twenty-Five Thousand Dollars (\$25,000.00) ("Franchise Bond") running or renewable for the term of this Franchise, in a form and substance reasonably acceptable to City. In the event Grantee shall fail to substantially comply with any one or more of the provisions of this Franchise following notice and a reasonable opportunity to cure, then there shall be recovered jointly and severally from Franchisee and the bond any actual damages suffered by City as a result thereof, including but not limited to staff time, material and equipment costs, compensation or indemnification of third parties, and the cost of removal or abandonment of Facilities hereinabove described. Grantee specifically agrees that its failure to comply with the terms of this Section 21 shall constitute a material breach of this Franchise. The amount of the bond shall not be construed to limit Grantee's liability or to limit the City's recourse to any remedy to which the City is otherwise entitled at law or in equity.

21.3 *Rights Cumulative.* The rights reserved by City with respect to the Performance Bond and Franchise Bond are in addition to all other rights City may have under the Franchise or any other law. City may, from year to year, in its sole discretion, adjust the amount of the bond.

21.4 *Change in Surety.* If, at any time during the term of this Franchise, the condition of the corporate surety shall change in such a manner as to render the bonds unsatisfactory to the City, the Grantee shall replace such bonds by a bond of like amount, similarly conditioned, issued by a corporate surety satisfactory to the City.

22 Assignment or Transfer of Grantee or Franchise and Franchise Renewal.

22.1 This Franchise shall not be sold, leased, assigned, or otherwise alienated without the express consent of the city, and no rule of estoppel shall be invoked against the city in case the City shall assert the invalidity of any attempted transfer in violation of this section. The city agrees not to withhold consent where the operator demonstrates that the

requested assignment is in the nature of a change of name or a change in the nature of a reorganization or merger of or with an entity controlled by, controlling, or under the common control of the operator, there being no other change in the resulting entity's ability to meet its master permit or license obligations.

22.2 The City reserves the right to invoke any or all provisions of this Franchise upon the Grantee's successors or assigns, judgment creditors, or distributes of Facilities or property used in enjoyment of privileges conferred herein, whether or not stated elsewhere, all without waiver of the right to withhold consent not expressly given of any such transfer and/or require a new Franchise.

22.3 Grantee shall not permit installations by others without written approval from the City. Such approval shall not be in lieu of a franchise, master permit or license or other requirements of the City. Whether or not permitted, Grantee shall remain responsible for all third party users permitted or allowed by Grantee for compliance with the Franchise.

23 Miscellaneous.

23.1 *Severability.* If any section, subsection, sentence, clause, phrase, or portion of this Franchise is for any reason held to be invalid or unconstitutional by any court or administrative agency of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions thereof. In such event, the parties mutually agree to make any amendments to this Franchise or other applicable agreements necessary to effectuate the intention of this Franchise. In the event that such amendments are barred by any legal requirements governing any party, the parties shall use their best efforts to otherwise avoid prejudice to the respective parties' interests, and to implement changes to effectuate the intent in entering into this Franchise. Should the City, in its reasonable discretion, determine that the severed portions substantially alter the Franchise so that the original intent and purpose of this Franchise no longer exists, the City may terminate this Franchise without cost or penalty.

23.2 *Applicable Law.* The Franchise is governed by the Laws of the State of Washington, and venue for any enforcement litigation shall be in Kitsap County Superior Court or the United States District Court serving Kitsap County, Washington. In case of conflict or ambiguity between this Franchise and Grantee's application, this Franchise shall be controlling.

23.3 Grantee shall pay the actual administrative expenses incurred by the City that are directly related to receiving and approving this Franchise pursuant to RCW 35.21.860, including the reasonable and actual costs associated with the City's legal costs incurred in drafting and processing this Franchise. No construction permits shall be issued for the installation of Facilities authorized until such time as the City has received payment of this fee. Grantee shall further be subject to all permit fees associated with activities undertaken through the authority granted in this Franchise or under the laws of the City. Where the City incurs costs and expenses for review, inspection, or supervision of activities, including but not limited to reasonable fees associated with attorneys, consultants, City Staff and City Attorney time, undertaken through the authority granted in this Franchise or any ordinances relating to the subject for which a permit fee is not established, Franchisee shall pay such costs and expenses directly to the City.

23.4 *Hazardous Substances.* Grantee shall not introduce or use any hazardous substances (chemical or waste), in violation of any applicable law or regulation, nor shall Grantee allow any of its agents, contractors or any person under its control to do the same. Grantee will be solely responsible for and will defend, indemnify and hold the City, its officers, officials, employees, agents and volunteers harmless from and against any and all claims, costs and liabilities including reasonable attorneys' fees and costs, arising out of or in connection with the cleanup or restoration of the right-of-way to the extent caused by Grantee's use, storage, or disposal of hazardous substances, whether or not intentional, and the use, storage or disposal of such substances by Grantee's agents, contractors or other persons acting under Grantee's control, whether or not intentional. Notwithstanding this paragraph or any other provision in the Franchise, Grantee shall not be liable or responsible for any environmental condition, including the release of hazardous substances, except to the extent Grantee causes or exacerbates the condition.

23.5 *Effective Date.* The provisions of this Franchise shall be effective only once the acceptance of this Franchise by the Grantee as provided herein is provided.

23.6 *Limitation.* Nothing in this Franchise shall be construed or interpreted in any manner as limiting, relinquishing, or waiving any rights of ownership enjoyed by the City in any Rights-of-Way or any Public Facilities, or in any manner limiting, relinquishing, or waiving the City's control over the operation and maintenance of the Rights-of-Way or any Public Facilities or in any manner limiting, relinquishing, or waiving lawful governmental rights that the City possesses.

23.7 *Non-Waiver.* Excuse by City or Grantee of strict performance of any Provision of this Franchise shall not be a waiver or prejudice the such party's right to require strict performance of the same or any other Provision in the future.

23.8 *Integration.* This Franchise contains the entire understanding between the parties with respect to the subject matter herein. There are no representations, agreements, or understandings (whether written or oral) between or among the parties relating to the subject matter of this Franchise which are not fully expressed herein.

23.9 *Franchise Subject to Future Ordinance(s).* Grantee acknowledges that the City may develop additional rules, regulations, and specifications for the use of the Rights-of-Way and/or Public Facilities, and Grantee agrees that such rules, regulations, and specifications, when finalized and to the extent not inconsistent with, or otherwise preempted by, federal or state law, shall govern Grantee's activities hereunder as if they were in effect at the time this Franchise was executed, provided that, no subsequently enacted rule, regulation, or specification may retroactively place Grantee in violation thereof.

23.10 *Attorneys' Fees.* If a suit or other action is instituted in connection with any controversy arising out of this Franchise, the substantially prevailing party shall be entitled to recover all of its costs and expenses, including such sum as the court may judge as reasonable for attorneys' fees, costs, expenses and attorneys' fees upon appeal of any judgment or ruling.

23.11 *Survival.* All of the provisions, conditions, and requirements of Section 1.4, Section 8, Section 8, Section 10, Section 11, Section 12, Section 13, Section 14, Section 16.1, Section 17, Section 18, Section 20, Section 21, Section 23.4, and Section 23.7 of this Franchise shall be in addition to any and all other obligations and liabilities Grantee may have to the City at common law, by statute, or by contract, and shall survive the City's Franchise to Grantee for the use of the City Rights-of-Way, and any renewals or extensions thereof. All of the provisions, conditions, regulations and requirements contained in this Franchise Agreement shall further be binding upon the heirs, successors, executors, administrators, legal representatives and assigns of Grantee and all privileges, as well as all obligations and liabilities of Grantee shall inure to its heirs, successors and assigns equally as if they were specifically mentioned where Grantee is named herein.

23.12 *Authorization.* The undersigned respectively represent and warrant that its signatory is a duly authorized and empowered to sign this Franchise Agreement.

24 Definitions.

24.1 **General Interpretation.** For the purpose of this Franchise, and except as defined specifically below, the terms, phrases, words and their derivations herein shall have the meaning given in BIMC. Words not otherwise defined shall be given their common and ordinary meaning. When consistent with the context, words used in the singular number include the plural number, words in the plural number include the singular number, and words used in the present tense include the future tense.

24.1.1 "Agency" means any governmental agency or quasi-governmental agency other than the City, including the FCC and the WUTC.

24.1.2 "City" means the City of Bainbridge Island, Washington, and its lawful designees.

24.1.3 "City Property" means any real property owned by the City whether in fee or other ownership, estate or interest comprising or related to a Right of Way.

24.1.4 "Effective Date" means the date identified in Section 23.5 herein.

24.1.5 "**Facilities**" means the elements of Grantee's Telecommunications Network including (i) physical infrastructure supporting high speed data, internet protocol-based services, internet access services, telephone, and data transport services conveyed using wireless facilities and (ii) the infrastructure development to be used for Wireless Facilities. The placement by Grantee of new poles is allowed with approval by the City. For the purposes of this Franchise, the term Facilities includes both Small Wireless Facilities and other Wireless Facilities, commonly referred to as "macrocell" facilities, including towers and new base stations.

24.1.6 "**FCC**" means the Federal Communications Commission, or lawful successor, authorized to regulate and oversee Telecommunications carriers, Services and providers on a national level.

24.1.7 "**Fee**" means any assessment, license, charge, fee, imposition, tax (but excluding any utility users' tax or occupation tax), or levy lawfully imposed by any governmental body.

24.1.8 "**Franchise**" means the nonexclusive authorization granted herein to use City Rights-of-Way to construct, operate, and maintain Grantee's Facilities.

24.1.9 "**Grantee**" means Seattle SMSA Limited Partnership d/b/a Verizon Wireless, and its agents, employees, lawful transferees, successors, and/or assigns.

24.1.10 "**Laws**" means any and all judicial decisions and any and all federal, state and local statutes, constitutions, ordinances, resolutions, regulations, rules, tariffs, administrative orders, certificates, orders, or other requirements of the City or other Agency having jurisdiction over the parties to this Franchise, in effect at the time of execution of this Franchise and thereafter.

24.1.11 "**Month**" means a calendar month.

24.1.12 "**Person**" means an individual, a corporation, a limited liability company, a general or limited partnership, a sole proprietorship, a joint venture, a business trust, or any other form of business association.

24.1.13 "**Provision**" means any clause, condition, covenant, qualification, restriction, reservation, term, or other stipulation in this Franchise that defines or otherwise controls, establishes, or limits the performance required or permitted by

this Franchise. All provisions, whether covenants or conditions, shall be deemed to be both covenants and conditions.

24.1.14 **"Public Facility"** means any tower, water tower, building, pole or other structure which the City owns or controls.

24.1.15 **"Right-of-Way"** or **"Public rights-of-way"** means land acquired or dedicated for public roads and streets which under applicable law the City has authority to grant master permits, franchises, right-of-way permits or licenses for use thereof or has regulatory authority thereover. The term does not include:

24.1.15.1 State highways;

24.1.15.2 Land dedicated for roads, streets and highways not opened and not improved for motor vehicle use by the public;

24.1.15.3 Structures such as, but not limited to, poles and conduits located in the right-of-way;

24.1.15.4 Parks and open space;

24.1.15.5 Publicly owned shorelines or harbor areas; and

24.1.15.6 Utility easements.

24.1.16 **"Small Wireless Facilities"** shall have the same meaning as "small wireless facility" as set forth in [47 CFR 16002](#), as may be amended.

24.1.17 **"Telecommunications Network"** or **"Network"** means all of Grantee's Facilities used in the provision of Telecommunication Services in the City, taken together as a unified system.

24.1.18 **"Telecommunications Services"** or **"Services"** means the transmission of information by wire, radio, optical cable, electromagnetic, or other similar means for hire, sale, or resale to the general public. For the purpose of this subsection, "information" means knowledge or intelligence represented by any form of writing, signs, signals, pictures, sounds, or any other symbols. For the purpose of this chapter, telecommunications service excludes the over-the-air transmission of broadcast television or broadcast radio signals

24.1.19 **"Wireless communication facility"** or **"WCF"** means an unstaffed facility for the transmission and/or reception of radio frequency, microwave

or other signals for commercial communications purposes, including and typically consisting of antennas, equipment facilities, transmission cables, a support structure required to achieve the necessary elevation, and reception and transmission devices and antennas.

EXHIBIT 1 – DETAILED NETWORK MAP

At the time of acceptance of this agreement the Grantee
does not have any Facilities located in the City's Rights-of-Way

EXHIBIT 2 - Acceptance

Seattle SMSA Limited Partnership d/b/a Verizon Wireless, for itself, its successors and assigns, hereby accepts and agrees to be bound by all lawful terms, conditions and provisions of this Franchise.

Seattle SMSA Limited Partnership
d/b/a Verizon Wireless
By: Cellco Partnership, its general partner

By: _____ Date: _____
Name: _____
Title: _____

STATE OF WASHINGTON)
)ss.
COUNTY OF)

On _____, before me, a Notary Public in and for the State of Washington, personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed this instrument, on oath stated that he was authorized to execute the instrument, and acknowledged it as the _____ of Seattle SMSA Limited Partnership d/b/a Verizon Wireless, By Cellco Partnership, Its General Partner, to be the free and voluntary act and deed of said party for the uses and purposes mentioned in the instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year first above written.

NOTARY PUBLIC in and for the State of WA,
residing at _____
My appointment expires _____

Print Name _____



CITY OF
BAINBRIDGE ISLAND

Department of Public Works Memorandum

Date: March 13, 2026

To: City Council

From: Utility Advisory Committee
Christopher Wierzbicki, PE, Public Works Director

Subject: Utility Advisory Committee 2025 Summary and 2026 Work Plan

Summary of 2025 Activities

A. Larger work:

1. Provided guidance and support for the 2025 Utility Rate Study and utility rate recommendations
2. Provided guidance, support and recommendations for updates to the 2025-2030 Utility Capital Improvement Plan
3. Provided guidance, support and recommendations for the adoption of the Stormwater System Plan
4. Provided guidance, support and recommendations for the adoption of the Puget Sound Energy franchise agreement
5. Provided guidance and support for updates to the Utility Element of the Comprehensive Plan

B. Guidance on other issues: (ordered chronologically)

1. Wastewater Treatment Plan (WWTP) capacity upgrades
2. Winslow Water Tank Replacement project
3. Waste Management Study
4. Water System Business Plan

C. Participated in sub-committee and offline discussions related to the following:

1. Electrical Utility (Puget Sound Energy) Franchise and Memorandum of Understanding
2. Ground Water Management Plan (GWMP)
3. Evaluation of the future status of the Meadowmeer water system (private)

2026 Proposed Work Plan

A. Recurring/Continuing Efforts

1. Water System
 - a) Provide guidance and make final recommendations on adoption of the Water System Business Plan
 - b) Provide guidance, support and recommendations for an interlocal agreement with KPUD on water system cooperation and inter-connections
 - c) Provide guidance, support and recommendations for the 2027-28 Biennial Budget and the 2028-2032 Water Utility Capital improvement Plan
2. Sewer System
 - a) Provide guidance, support and recommendations for an interlocal agreement with KPUD regarding the South Island Sewer System and Fort Ward Wastewater Treatment Plant
 - b) Provide guidance and support for the ongoing work on the wastewater beneficial reuse project
 - c) Provide guidance and make recommendations on adopting fat, oils and grease (FOG) / pre-treatment ordinance
 - d) Provide guidance, support and recommendations for the 2027-28 Biennial Budget and the 2028-2032 Sewer Utility Capital improvement Plan
3. Storm and Surface Water Management (SSWM)
 - a) Provide guidance, support and recommendations for the 2027-28 Biennial Budget and the 2028-2032 Sewer Utility Capital improvement Plan
 - b) Provide guidance and support on the development of the stormwater source control program
4. Provide guidance and support on the execution of utility capital projects
5. Provide guidance and support for the adoption of the Groundwater Management Plan
6. Provide guidance, support and final recommendations on Utility Element for Winslow Subarea Plan and Comprehensive Plan
7. Provide guidance on the City's approach to solid waste management
8. Continue subcommittee consultations with other COBI committees
 - a) ETAC and CCAC on Groundwater Management Plan
 - b) CCAC on PSE Memorandum of Understanding
9. Host tour of utility facilities with new Council members
10. Provide recommendations to create water conservation effort policies
11. Provide recommendations to create policies to improve communication and coordination between utilities and the public

B. Emergent Issues

1. Respond to inquiries and requests from citizens, COBI staff and Council

Approved by UAC on November 20, 2025

Andy Maron

Wanda Schulze

Svend Brant-Erichsen

Charles Averill, Co-Chair

Sheina Hughes

Martin Pastucha

Ted Jones, Co-Chair



DEPARTMENT OF PUBLIC WORKS MEMORANDUM

Date: March 20, 2026

To: Planning Commission

From: Christopher Wierzbicki, PE, Public Works Director

Subject: **Summary of Updates to the Capital Facilities Plan Element of the Comprehensive Plan**

Purpose

The purpose of this memo is to provide the Planning Commission with a summary of proposed updates to the Capital Facilities Plan Element of the Comprehensive Plan. A copy of the strike and underline version of the Element is attached this memo.

High-Level Summary of Capital Facilities Plan Element Updates

Overall, very few updates were required for this Element. Capital facility inventories and projected needs are included in the referenced plans. Water and Sewer capital facility needs are documented in the referenced plans, and in a supplemental memo prepared by City staff and attached to this memo.

- References to the Islandwide Transportation Plan were revised in all places to reflect the Islandwide Mobility Plan.
- The referenced plans were updated in the Capital Facilities Inventory.
- The tables listing City-owned buildings and land were updated to reflect the demolition of the old police station, the construction of the Ted Spearman Justice Center, and the purchase of 180 Olympic Drive.
- The Table of Group A and B water systems were updated.
- References to the Kitsap County Sewer District #7 were removed or revised to Kitsap Public Utility District.
- The Stormwater System Plan, Groundwater Management Plan and Capital Facilities Plan Update Memo were added to the plans adopted by reference.
- Functional and inventory plans from partners agencies such as the State Department of Transportation are still being collected for reference in the plan.
- Special Purpose District plans were revised to reflect the most recent documents.

CAPITAL FACILITIES ELEMENT

NOTE: PAGE NUMBERS TO BE UPDATED AT LATER DATE
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CAPITAL FACILITIES INTRODUCTION

What Are *Capital Facilities* and Why Do We Need to Plan for Them?

Capital facilities are all around us. They are the *public facilities* we all use on a daily basis. They are our public streets and sidewalks, our City park and agriculture properties, our public buildings such as City Hall, the library, fire and police stations, our public water systems that bring us pure drinking water, and the sanitary sewer systems that collect our wastewater for treatment and safe disposal. Even if you don't reside within the City, you use *capital facilities* every time you drive, eat, shop, work, or play here.

While a *Capital Facilities Plan (CFP)* does not cover routine maintenance, it does include renovation and major repair or reconstruction of damaged or deteriorating facilities. *Capital facilities* do not usually include furniture and equipment. However, a capital project may include the furniture and equipment clearly associated with a newly constructed or renovated facility.

The planning period for a [Capital Improvement Plan \(CIP\)](#) is six years. Expenditures proposed for years one and two of the program are incorporated into the City's Biennial Budget as the Capital Budget.

The [CIP](#) process is an important ongoing part of the City's overall management process. New information, grant-making and evolving priorities require continual review. Each time the review is carried out, it must be done comprehensively.

All of these facilities should be planned for years in advance to assure they will be available and adequate to serve all who need or desire to utilize them. Such planning involves determining not only where facilities will be needed, but when, and not only how much they will cost, but how they will be paid for. It is important to note that the *CFP* is a planning document that includes timeline estimates based on changing dynamics related to growth projections, project schedules, or other assumptions.

Capital Facilities Plans are required under State law to identify *capital facility* deficiencies needed to serve our existing population, plan for capital facility improvements to meet the needs of our future population, and ensure that local governments have the fiscal capacity to afford to construct and maintain those capital facilities.

The *Capital Facilities Plan* includes summary details of the major capital projects of the City and a financial capacity analysis. As the general purpose government on Bainbridge Island, the City is required to analyze and integrate the *capital facilities plans* from special purpose districts (Schools, Parks, Fire, etc) into its *Capital Facilities Plan*. The City and the special purpose districts shall work together to integrate their capital planning efforts to provide a more even tax impact and to prioritize their projects while still providing quality facilities and services for the citizens they serve. This is consistent with *Guiding Principle #8* and its supporting policies 8.1,

8.2, 8.4, 8.5, 8.6. Staff Note: this last sentence could be updated pending final update to *Guiding Principles*.

Growth Management Act Requires a Capital Facilities Plan

This *Capital Facilities Element* update has been developed in accordance with the RCW 36.70A.070, the *Growth Management Act (GMA)*, and WAC 365-196, the Procedural Criteria. This *Capital Facilities Plan*, and other City plans adopted by reference, support the Land Use, Housing, and Economic Elements by utilizing the same ~~2036~~ 2044 population and employment forecasts.

This *Capital Facilities Plan* is the product of many separate but coordinated planning documents and planning bodies. Each special purpose district (Schools, Parks, Fire, etc.) has its own Capital Facility Plan, Strategic Plan, and/or budget. In this *Capital Facilities Plan*, the City adopts these special purpose district planning documents by reference. The City's adopted functional plans are adopted by reference in this *Capital Facilities Element*, including an Island-wide ~~Transportation~~ Mobility Plan, Water System Plan, a Sewer System Plan, a Storm and Surface Water Management Program, and a Pavement Asset Management ~~System~~ Plan – each operational plan providing an inventory of existing facilities, an analysis of deficiencies and future demand, and recommendations for capital improvements.

The *GMA* requires that the *Capital Facilities Element* contain a six-year financing plan, known as a *Capital Improvement Plan (CIP)* that identifies the type and location of expanded or new *capital facilities* and the sources of funding that will be used to pay for them.

Relationship of Capital Facilities Plan to the Budget

The *Capital Facilities Plan* and the City's budget serve different but related purposes. The budget authorizes the amount to be spent during the coming biennium; whereas the *Capital Facilities Plan* identifies needed capital facilities over a six-year period. A requirement of the *Capital Facilities Plan* is that it show how the needed facilities will be paid for during at least a six-year period (*Capital Improvement Plan*). Because State law requires that no money can be spent on capital projects which are not shown in the *Capital Facilities Plan*, it is important that the budget authorize spending only on *capital facilities* in the Plan.

Concurrency and Levels of Service (LOS)

The *Growth Management Act* requires jurisdictions to have *capital facilities* in place and readily available when new development occurs. This concept is known as concurrency. Specifically, this means that:

1. All public facilities needed to serve new development and/or a growing service area population must be in place at the time of initial need. If the facilities are not in place, a financial commitment must have been made to provide the facilities within six years of the time of the initial need; and

2. Such facilities must be of sufficient capacity to serve the service area population and/or new development without decreasing service levels below locally established minimum standards, known as *level of service*.
3. In the allocation of funds for *capital facilities*, choices will be made. The *CFP* may facilitate some forms of development while constraining other forms.

Levels of service (LOS) are usually quantifiable measures of the amount and/or quality of public facilities or services that are provided to the community and are usually expressed as a ratio of amount of service to a selected demand unit. For example, sewer *LOS* is expressed as 100 gallons per capita per day, public school *LOS* may be expressed as the number of square feet available per student or as the number of students per classroom. Police or Fire protection may be expressed as the average response time for emergency calls. Factors that influence local standards are citizen and City Council recommendations, national standards, federal and state mandates, and the standards of neighboring jurisdictions.

CAPITAL FACILITIES VISION ~~2036~~ 2044

Capital facilities planning has kept up with changes in the natural and built environments, meeting the needs of a population that expects a high level of service. The City's *Capital Improvement Plans* were coordinated with the strategic plans and budgets of the special purpose districts (e. g., Schools, Parks and Fire).

Planning and budgeting for facilities has been concurrent with subarea planning for the *designated centers*, and to a large extent, recent population growth and commerce have been concentrated in and near those centers. Planning and budgeting has kept pace with maintenance and expansion of recreational facilities and public lands preserved for agriculture or conservation.

Over the past twenty years, Capital Improvement Plans have responded to anticipated impacts of climate change and sea level rise. New construction and retrofits have made public buildings energy efficient and models of low impact design.

GOALS & POLICIES

GOAL CF-1

The Capital Facilities Element and *Capital Improvement Plan (CIP)* provides the public facilities needed to support orderly compact urban growth, protect and support public and private investments, maximize use of existing facilities, promote economic development and redevelopment, increase public well-being and safety, and implement the *Comprehensive Plan*.

Policy CF 1.1

Biennially review, update and amend a six-year *CIP* that:

- Is subject to review and adoption by the City Council.
- Is consistent with the *Comprehensive Plan*, functional plans and adopted capital and operating budgets.
- Defines the scope and location of capital projects or equipment;
- States why each project is needed and its relationship to established *levels of service*.
- Includes costs of property acquisition, if any, project construction costs, timing, funding sources, and projected operations and maintenance impacts.

Policy CF 1.2

Coordinate with other *capital facilities* service providers to keep each entity current, maximize cost savings, and schedule and upgrade facilities efficiently. In general, it is the policy of the City to transfer parklands to the Park District whenever desirable and practical.

Policy CF 1.3

Evaluate and prioritize proposed *capital improvement* projects using the following long-term financial strategy principles and guidelines:

- Preserve and maintain physical infrastructure.
- Use an asset management approach to the City's capital facilities.
- Use unexpected one-time revenues for one-time costs or reserves.
- Pursue innovative approaches.
- Maintain capacity to respond to emerging community needs.
- Address unfunded mandates.
- Selectively recover costs.
- Recognize the connection between the operating and capital budgets.
- Utilize partnerships wherever possible.
- Remain committed to City *goals* over the long run.
- Anticipate and respond to the impacts of *climate change*, including sea level rise.

Policy CF 1.4

Ensure that capital improvement projects are:

- Financially feasible.
- Consistent with planned growth patterns provided in the *Comprehensive Plan*
- Consistent with State and Federal law.
- Compatible with plans of state agencies.
- Sustainable within the operating budget.
- Affordable and equitably accessible to all residents.

Policy CF 1.5

Give priority consideration to projects that:

- Are required to comply with State or Federal law.
- Implement the *Comprehensive Plan*.
- Are needed to meet concurrency requirements for growth management.
- Are already initiated and to be completed in subsequent phases.

- Renovate existing facilities to remove deficiencies or allow their full use, and preserve the community's prior investment or reduce maintenance and operating costs.
- Replace worn-out or obsolete facilities.
- Are substantially funded through grants or other outside funding.
- Address public hazards.

Policy CF 1.6

Adopt each update of the *Capital Facilities Plan* as part of the *Comprehensive Plan*.

Policy CF 1.7

Recognize that the year in which a project is carried out, or the exact amounts of expenditures by year for individual facilities, may vary from amounts stated in the *Capital Facilities Plan* due to:

- Unanticipated revenues or revenues that become available to the City with conditions about when they may be used,
- Change in the timing of a facility to serve new development that occurs in an earlier or later year than had been anticipated in the *Capital Facilities Plan*,
- The nature of the *Capital Facilities Plan* as a multi-year planning document. The first year or years of the Plan are consistent with the budget adopted for that financial period. Projections for remaining years in the Plan may be changed before being adopted into a future budget.

GOAL CF-2

Provide the *capital facilities* needed to direct and serve future development and redevelopment.

Policy CF 2.1

When planning for public facilities, consider expected future land use activity.

Policy CF 2.2

Capital facilities planning is an essential component of subarea planning and promoting development in *designated centers*.

Policy CF 2.3

Require new development to fund the *capital facilities* needed to serve the development.

GOAL CF-3

Prudently manage fiscal resources to provide needed *capital facilities*.

Policy CF 3.1

Ensure a balanced approach to allocating financial resources among:

- Maintaining existing facilities and eliminating existing *capital facility* deficiencies, and
- Providing new or expanding facilities to serve development and encourage redevelopment.

Policy CF 3.2

Use the *CIP* to integrate all of the community's capital project resources (grants, bonds, city funds, donations, *impact fees*, and any other available funding).

Policy CF 3.3

Allow developers who install infrastructure with excess capacity to use *latecomer's agreements* wherever reasonable.

Policy CF 3.4

Assess the additional operations and maintenance costs associated with acquisition or development of new *capital facilities*. If accommodating these costs places a financial burden on the operating budget, consider adjusting the capital plans.

Policy CF 3.5

Achieve more efficient use of capital funds through joint use of facilities and services by utilizing measures such as interlocal agreements, regional authorities, and negotiated use of privately and publicly owned land.

Policy CF 3.6

Consider potential new revenue sources for funding capital facilities, such as:

- Growth-induced tax revenues.
- Additional voter-approved revenue.
- Impact Fees.
- Benefit Districts.
- Local Improvement Districts.

Policy CF 3.7

Choose among the following available contingency strategies should the City be faced with capital facility funding shortfalls:

- Increase general revenues, rates, or user fees; change funding source(s).
- Decrease level of service standards in the Comprehensive Plan and reprioritize projects to focus on those related to concurrency.
- Change project scope to decrease the cost of selected facilities or delay construction.
- Decrease the demand for the public services or facilities by placing a moratorium on development, developing only in served areas until funding is available, or changing project timing and/or phasing.
- Use Local Improvement Districts; or surplus City-owned assets.

Policy CF 3.8

Secure grants or private funds, when available, to finance capital facility projects when consistent with the Comprehensive Plan.

GOAL CF-4

Public facilities constructed on Bainbridge Island meet appropriate safety, construction, energy conservation, durability and sustainability standards.

Policy CF 4.1

Adhere to the City's Engineering Development and Design Standards when constructing utility and transportation related facilities.

Policy CF 4.2

Regularly update the Engineering Development and Design Standards, and ensure that the Standards are consistent with the *Comprehensive Plan*.

Policy CF 4.3

Apply value engineering approaches on major projects in order to use resources efficiently and meet community needs.

Policy CF 4.4

Require public facilities to incorporate energy generation when and where possible.

CAPITAL FACILITIES INVENTORY

The following is the City's *capital facilities* property inventory. The inventory is organized by category and includes a current inventory of facilities, a narrative providing a general background of the planning activities and some discussion of future plans, and a discussion of *level of service (LOS)*, if applicable. Inventories of public roads, water utility, and sewer utility *infrastructure* are found in the following functional plans (hyperlinked):

- [Island-wide ~~Transportation~~ Mobility Plan](#)
- [City General Sewer Plan](#)
- City Water System Plan
- [City Stormwater Management Program Plan](#)
- [City Stormwater System Plan](#)

City Offices, Facilities, and Undeveloped Land

City offices are located at several sites due to space constraints at City Hall. Additional City buildings and facilities provide a variety of functions, including public works operations, police and municipal court, and ~~house~~ cultural and social services.

Table CF-1: City Land and Office Facility Inventory

Building and Location	Land Area		Building Area		Owned or Leased	Uses
City Hall 280 Madison Ave. N	1.92	Ac	24,107	Sq Ft	Owned	Administration, Finance, Planning, & Engineering
Police Station 625 Winslow Way E	0.82	Ac	7,000	Sq Ft	Owned	Police
Municipal Court 10255 NE Valley Rd.	NA		2,289	Sq Ft	Leased	Municipal Court
Ted Spearman Justice Center 8804 Madison Avenue N.	2.95	Ac	19,007	Sq Ft	Owned	Police and Municipal Court
Subtotal Staff Office Space	2.74 4.87	Ac	33,396 43,114	Sq Ft		
Bainbridge Island Commons 223 Bjune Ave.	0.38	Ac	4,975	Sq Ft	Owned	Social Services & Public Meetings
Bainbridge Performing Arts (land only) 200 Madison Ave N	2.45	Ac	NA		Owned	Land leased to BPA for \$1/yr through May 2081
Public Works Facility 7305 NE Hidden Cove Rd	12.62	Ac	22,712	Sq Ft	Owned	O&M Offices, Shop, Covered Equipment Storage
Public Works Facility 7305 NE Hidden Cove Rd	Included Above		1,524	Sq Ft	Owned	Covered Storage
Public Works Facility 7305 NE Hidden Cove Rd	Included Above		NA		Owned	Fueling Facility
Land with City-owned utilities	15.42	Ac	NA		Owned	Wells, pump stations, etc.
180 Olympic Drive	0.11	Ac	1,125	Sq Ft	Owned	Building rented to tenant
Total	34.79	Ac	68,132	Sq Ft		

Table CF-2: City Public Works Facilities Inventory

Facility	Floor Area		Function
Portable office trailers (3)	2,520	Sq Ft*	Storage, safety & future parks buildings
Steel shop building	2,400	Sq Ft	Storage - holds telemetry
PW Facility - Wood Building	100	Sq Ft	Wellhouse
PW Facility - Shop	7,776	Sq Ft*	Mechanics Shop/Equipment Maintenance
PW Facility - Covered Equipment Storage	11,520	Sq Ft*	Covered Equipment Storage
PW Facility - Office Trailer	1,792	Sq Ft*	O & M Office
Fueling Facility			Vehicle Fueling inside covered equipment storage building
Total	26,108	Sq Ft	

*These facilities are also counted in the main office inventory above.

Table CF-3: City Undeveloped/Open Space Land Inventory

Location / Description	Land Area		Owned or Leased	Uses
High School Rd. near Madison	1.42	Ac	Owned	Proposed surplus property
Head of the Bay Wellhead	31.82	Ac	Owned	Wellhead protection
Head of the Bay	2.00	Ac	Owned	Proposed surplus property
Head of the Bay	6.00	Ac	Owned	Proposed surplus property
Suzuki Property	13.83	Ac	Owned	Potential Surplus property
Johnson Farm	14.51	Ac	Owned	Agricultural/Open space
Suyematsu Farm	15.00	Ac	Owned	Agricultural land
Lovgreen Pit	15.54	Ac	Owned	Land Reclamation/Spoils Disposal
Vincent Road Landfill	34.15	Ac	Owned	Public Works Facility
Manitou Beach Property	*1.36	Ac	Owned	Transferring to Park District
M & E Tree Farm	13.00	Ac	Owned	Open space/Agricultural
Morales Property	4.74	Ac	Owned	Agricultural land
Crawford Property	2.30	Ac	Owned	Agricultural land
Ft. Ward Wetlands – 8 lots	2.63	Ac	Owned	Open space
Lot Next to Parade Ground Ave.	0.04	Ac	Owned	Adjacent to Right-of-way
Lost Valley	13.57	Ac	Owned	Open space
Waypoint Park	1.03	Ac	Owned	Open space
Waterfront Park	5.76	Ac	Owned	Shoreline park
Strawberry Plant	4.20	Ac	Owned	Shoreline restoration and park
Bentryn Property	11.50	Ac	Owned	Agricultural land
Pritchard Park	27.18	Ac	Owned	Transferring to Park District (except Point area)
625 Winslow Way East	0.82	Ac	Owned	Vacant
Misc. unimproved land	2.24	Ac	Owned	No use specified
Total	224.64	Acres		
City Open Space/Park Land (including transfer to BIMPRD)	83.24	Acres		

*Not including tidelands

Parks & Trails

Most of the parks and recreational trails on Bainbridge Island are owned and managed by the Bainbridge Island Metropolitan Park and Recreation District. The City has a few parks which are generally maintained (with the exception of Waterfront Park) by the Park District under contract to the City. ~~During the past 10-15 years, the City has acquired or helped the Park District acquire a large amount of open space and park lands. A number of these parcels are being transferred to the Park District based on Resolution Number 2011-16.~~ The City adopts by reference [the 2014-2020 2026 Bainbridge Island Park and Recreation District Comprehensive Plan](#) (and any subsequent update), which establishes *levels of service* for park and recreation facilities for the Island.

Transportation Facilities (Roads, Bike Lanes, Sidewalks, Trails)

Of the many types of *capital facilities* that are constructed, operated and maintained by the City, the most familiar to citizens are the transportation facilities. Where there are facility needs that involve SR305 or the ferries, the Washington State Department of Transportation (WSDOT) is responsible for planning and improvements. For non-motorized and other desired facilities, the City may elect to plan and implement additional improvements. This may be accomplished by participating/funding elements in WSDOT projects or by undertaking City projects and obtaining the necessary permits and approvals from WSDOT. Kitsap Transit pays for facilities that support transit service. A complete inventory of the Island's transportation facilities is contained in the [Island-wide Transportation Mobility Plan](#).

Drinking Water

Domestic drinking water is supplied by the City of Bainbridge Island, Kitsap County P.U.D. No. 1, numerous smaller public water systems (2 or more hookups), and over 1,000 private single-dwelling wells. The *levels of service* for water systems on Bainbridge Island are the minimum design standards and performance specifications provided in the [2005 Kitsap County Coordinated Water System Plan](#). Fire flow requirements are regularly updated by the City, in coordination with the Bainbridge Island Fire Department, most recently adopted by Ordinance 2016-13 and are tiered based on zoning and type of construction. Residences can satisfy deficiencies by installing individual sprinkler systems. *Levels of service* for the City water system are identified in the [City Water System Plan Update](#).

The Kitsap Public Health District records indicate approximately 170 water systems on the Island that have 2 or more households connected. The number of Group A & B systems are listed below and following is a summary of systems with more than 100 connections.

Table CF-4: Group A & B Water Systems

Group A systems (15 or more connections)	39 32
Group B systems (under 15 connections)	145 126

Table CF-5: Water Systems with over 100 Connections (2016)

System	# Connections	Capacity		Storage
		(ERU)	(MGD)	Volumes (gal)
PUD #1 Island Utility (Eagledale)	197	455	0.43	400,000
PUD #1 North Island	1767	2,028	0.365	825,105
PUD #1 Fletcher Bay	102	Unspecified	Unspecified	0
Meadowmeer (MWSA)	306	335	.45	225,000
North Bainbridge Water Sys.	1,842	Unspecified	Unspecified	842,400
PUD #1 South Bain. Water Sys.	1,241 1,595	1,416 Unspecified	0.90 Unspecified	807,000 1,275,000
Winslow (City)	2,428 2,787	Unspecified	Unspecified	2,800,000
Total	6,041 6,530	Unspecified	Unspecified	5,107,105 5,142,400

Most existing water systems were established under state and local guidelines and generally provide high quality water at an adequate pressure and flow rate for residential use. However, because of the number of systems on the Island, there are systems that may not be in compliance with Department of Health water quality requirements and may not meet minimum requirements of pressure and reliability. It is also likely that most of the smaller systems have poor or nonexistent fire protection designed into their systems due to the cost of providing large diameter pipes and storage tanks.

Winslow Water System

The Winslow Water System is owned and operated by the City of Bainbridge Island under the direction and control of the Department of Public Works. It serves an area similar to the historic Winslow city limits plus Fletcher Bay and Rockaway Beach. The system gets all of its water from the eleven wells owned by the City. Water is pumped into the distribution system both directly from the well pumps and by booster pump stations. A detailed inventory and capacity analysis is provided in the [City of Bainbridge Island Water System Plan](#), which was accepted by the City Council in ~~2016~~ 2017, and updated in 2019 and 2023.

Sanitary Sewage Disposal

The City of Bainbridge Island provides for the collection, treatment, and disposal of effluent in the Winslow service area. The ~~Kitsap County Sewer District #7~~ Kitsap County Public Utility District treatment plant north of Fort Ward Park serving customers within the District's service area in Fort Ward and the City's sewer service areas in the Emerald Heights, Point White, North Pleasant Beach, and Rockaway Beach neighborhoods and Blakely School. All other residents not within the service areas of the above districts rely upon on-site septic systems that require approval from the Kitsap Public Health District.

Levels of service for wastewater treatment systems are typically expressed as the number of gallons of flow per capita per day and the level of treatment provided by the treatment plant. The current and proposed level of service for the Winslow service area follow the Department of Ecology guidelines of 100 gallons per capita per day (flow) and secondary treatment. In areas not served by treatment plants, on-site septic systems must be built to Kitsap Public Health District standards that consider combinations of lot size, soil type, infiltration capacity, depth to hardpan, and proximity to surface water among others.

The Winslow sanitary sewer system consists of two separate parts: the collection system, and the treatment plant. The City completed the update to the [General Sewer Plan](#) in 2015. The updated plan documents the inventory of the existing system and needs for new facilities and replacement or upgrading existing facilities during the coming decade.

Storm and Surface Water Management

In the Winslow urban area and a few smaller areas, stormwater is managed by a combination of piped collectors, roadside ditches and natural stream channels. All other watersheds and sub-basins on the Island are drained by natural streams and roadside ditches only. The existing

natural drainage system consists of wetlands, streams, springs, ditches, and culverts under roadways. Storm and surface water is managed by the City as a utility. [Ongoing surface and stormwater system evaluations are used to identify future capital projects](#). In addition, the City places priority on the improvement and restoration of stream channels, particularly undersized or perched culverts, for the improvement of fish passage and fish habitat.

CITY FUNCTIONAL PLANS ADOPTED BY REFERENCE

In planning for future *capital facilities*, several factors have to be considered. Many are unique to the type of facility being planned. The process used to determine the location of a new water line is very different from the process used to determine the location of a new bike lane. Many sources of financing can only be used for certain types of projects. Therefore, this Capital Facilities Element and Plan is actually the product of many separate but coordinated functional planning documents, each focusing on a specific type of facility. These plans utilize the same year ~~2036-2044~~ population forecast that the Land Use Element of this *Comprehensive Plan* accommodates. These functional plans are therefore adopted by referenced. They are listed (and hyperlinked) below.

- [Island-wide ~~Transportation~~ Mobility Plan](#)
- [City General Sewer Plan](#)
- [City Water System Plan](#)
- [City Stormwater Management Program Plan](#)
- [City Stormwater System Plan](#)
- [City Groundwater Management Plan](#)
- [March 2026 Capital Facilities Plan Update Memo and Reference Materials](#)

SPECIAL PURPOSE DISTRICT PLANS ADOPTED BY REFERENCE

In addition to planning for capital facilities and projects such as public buildings, bike lanes and sewer infrastructure, the GMA requires that jurisdictions plan public capital projects, such as for parks, fire and schools. The City has several special districts that serve the entire Island (e.g. B.I. Fire Department) and some that serve certain geographical areas, but not the entire Island (e.g. Kitsap County Sewer District 7). The City coordinates with these other special districts to ensure that they are using the same land use designations and population forecasts. These special district plans are therefore adopted by reference. They are listed (and hyperlinked) below.

- [Bainbridge Island Municipal Parks & Recreation District ~~2014-2026~~ Comprehensive Plan](#)
- [Bainbridge Island School District ~~2014-2020~~ Capital Facilities Plan ~~2024~~ Long-Range Strategic Facilities Plan and Sustainability Framework](#)
- [Bainbridge Island Fire Department ~~2013-2022~~ 2026-2028 Strategic Plan](#)
- [Kitsap Public Utility District 2011 Water System Plan](#)

- ~~Kitsap County Sewer District #7~~
- Washington State Ferries 2040 Long Range Plan
- Kitsap Regional Library ~~Vision 2020-2024-2029 Strategic Direction Plan~~

SIX-YEAR CAPITAL IMPROVEMENT PLAN

The Six-Year Financial Capacity Analysis and Capital Improvement Plan (CIP) for the City of Bainbridge Island is updated each year as part of the City's biennial budget process. This CIP list shows the anticipated expense and timing of each project and contains a project description, if available and *level of service (LOS)* deficiency analysis. The CIP lists for the special districts on Bainbridge Island are adopted by reference. The City conducts a financial capacity analysis in order to evaluate the City's ability to fund capital expenditures along with general operations. The financial capacity analysis is integrated into the CIP. Funding for the projects needed to meet LOS standards will come from a combination of local, State, and federal sources. ~~The Wyatt Way Reconstruction project will be funded with significant support from a State grant. In the next six years, given the past history of federal grant funding, it can be reasonably anticipated that grant funding can be secured for the Sportsman's Club/New Brooklyn Intersection Improvement project. In summary, t~~The City is well positioned to address projects to maintain LOS standards over the next six years, well before the 20-year planning horizon of this Comprehensive Plan.

CAPITAL FACILITIES IMPLEMENTATION

To implement the goals and policies in this Element, the City must take a number of actions, including adopting or amending regulations, creating partnerships and educational programs, and staffing or other budgetary decisions. Listed following each action are several of the comprehensive plans policies that support that action.

HIGH PRIORITY ACTIONS

CFE Action #1 Implement the priorities in the Capital Facilities Element through the adopted Capital Improvement Program

GOAL CF-1 The Capital Facilities Element and Capital Improvement Plan (CIP) provide the public facilities needed to promote orderly compact urban growth, protect investments, maximize use of existing facilities, encourage economic development and redevelopment, promote private investment, increase public wellbeing and safety, and implement the Comprehensive Plan.

Policy CF 1.1

Biennially review, update and amend a six-year Capital Improvement Program that:

- Is subject to review and adoption by the City Council.

- Is consistent with the *Comprehensive Plan*, functional plans and adopted capital and operating budgets.
- Defines the scope and location of capital projects or equipment;
- States why each project is needed and its relationship to established levels of service.
- Includes costs for property acquisition, if any, project construction costs, timing, funding sources, and projected operations and maintenance impacts.

CFE Action #2 Coordinate the City's plans and capital investment programs with those of other jurisdictions responsible for providing and maintaining capital facilities on the Island.

Policy CF 1.2 Coordinate with other capital facilities service providers to keep each other current, maximize cost savings, and schedule and upgrade facilities efficiently. In general, it is the policy of the City to transfer parklands to the Park District whenever desirable and practical.

GOAL CF-2 As growth occurs, provide the capital facilities needed to direct and serve future development and redevelopment.

MEDIUM PRIORITY ACTIONS

CFE Action #3 During the review of the Land Use Code, identify and adopt amendments that will facilitate achieving the objectives of both the City and the utility service providers.

GOAL CF-4 Public facilities constructed on Bainbridge Island meet appropriate safety, construction, durability and sustainability standards.

Policy CF 4.2 Regularly update the Engineering Development and Design Standards, and ensure that the Standards are consistent with the Comprehensive Plan.



DEPARTMENT OF PUBLIC WORKS MEMORANDUM

Date: March 20, 2026

To: Comprehensive Plan Update File

From: Christopher Wierzbicki, PE, Public Works Director

Subject: **2024-2044 Water and Sewer Utility Capital Facilities Plan Summary**

Purpose

The purpose of this memo is to supplement the 2024-2044 Capital Facilities Element of the updated Comprehensive Plan with references and supporting materials for the City's Water and Sewer Utility Infrastructure.

Background

The Water System Plan (2017, updated 2019) and the General Sewer Plan (2015) serve as the primary references for water and sewer utility infrastructure analysis in the current Capital Facilities Element of the Comprehensive Plan. Both plans evaluate the need for infrastructure through the year 2035. The Public Works Department plans to formally update both plans in the 2027-28 biennium following the completion and the performance evaluation of the two major system capacity upgrades currently under construction, the Winslow Water Tank and the Wastewater Treatment Plant Capacity Upgrades.

In the interim, a Capital Facilities Plan for the Water and Sewer Utility (Attachment A) was developed through 2044 using materials and analysis recently developed as part of ongoing system planning, as well as utility analysis performed for the Environmental Impact Statement (EIS) and other planning work associated with the Comprehensive Plan update.

The following list of reference materials is appended to this memo:

- Attachment A – 2031-2044 Water and Sewer Capital Facilities Plan
- Attachment B – Sewer Utility Technical Memo Prepared by BHC (2024)
- Attachment C – Winslow Sub-Area Water and Sewer Analysis Memo (2023)
- Attachment D – Wastewater Treatment Plant Population Projection Memo (2023)

Water Utility Summary

With the ongoing and planned improvements and upgrades, the Winslow Water System is adequate to serve the future projected population of the Winslow area. As identified in the Winslow Sub-Area Water and Sewer Analysis Memo, the demand for water service has not been growing as rapidly as anticipated in the 2017 Water System Plan. With the construction of the new Winslow

Water Tank, which will correct existing system deficiencies related to water pressure and storage, the water system is expected to be able to serve an increase in population of 6,600 people, which is almost double the projected Winslow area population (3,352) included in the Planning Commission's expected recommendation. Additionally, in 2025, the City was exercising less than half of the water rights currently allocated to the primary well sources. The surplus in capacity and supply is sufficient to also address the increases in commercial uses, the impact from which are less predictable than the impacts from residential uses. The draft Groundwater Management Plan is expected to recommend that exploring intertie connections with Kitsap Public Utility District Water System will allow for access to existing and new production wells that will relieve pressure and extend the life of aquifer systems. The 2031-2044 Water and Sewer Capital Facilities Plan identifies projects associated with those improvements.

Sewer Utility Summary

With the ongoing and planned improvements and upgrades, the Winslow Sewer Collection System is adequate to serve the future projected population of the Winslow area. As part of the preparation of the Environmental Impact Statement for the 2024 Winslow Subarea Plan Update, the City contracted with BHC Consultants to model the impacts of future population growth on the sewer collection system. The resulting technical memo analyzed a maximum Winslow population of 6,397 people by 2044, almost double the projected Winslow area population (3,352) included in the Planning Commission's expected recommendation. The surplus in capacity and supply is sufficient to also address the increases in commercial uses, the impacts from which are less predictable than the impacts from residential uses. The planned improvements and upgrades identified in the memo have been included in the 2031-2044 Water and Sewer Capital Facilities Plan, although depending on the rate of population growth, not all of the projects will be required within the 20-year timeframe.

Wastewater Treatment Plant Capacity Summary

The Winslow Wastewater Treatment Plant can be upgraded within the existing plant footprint to meet future population demand, but the timing of the upgrades are dependent on the pace of growth and the balance of uses (single family, multi-family, commercial). As identified in the Wastewater Treatment Plan Population Projection Memo, there are at least two capacity upgrade projects that could be implemented within the footprint of the existing plant, providing an ultimate capacity of 2,110 equivalent residential units (ERUS), which translates to a conservative residential population of 5,064 (using 2.4 people per unit). This is approximately 1.5 times the projected Winslow area population (3,352) included in the Planning Commission's expected recommendation. The surplus in capacity and supply is sufficient to also address the increases in commercial uses, the impacts from which are less predictable than the increases from residential uses. The first capacity upgrade is expected to be completed in 2027. The second upgrade is planned in the 2031-2044 Water and Sewer Capital Facilities Plan for implementation in 2040, in alignment with the population projection memo. Depending on the pace of growth, particularly the rate and types of commercial growth, the second capacity upgrade project may need to be implemented sooner than planned.

Attachment A - 2031-2044 Water and Sewer Capital Facilities Plan

2031-2044 Water/Sewer Utility Capital Facilities Plan

Project / Location	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	Total
Sewer Projects															
Village Pump Station Upgrade(0)	900	2,400													3,300
Hawley Pump Station Upgrade*	230		800												1,030
Ferry Terminal Pump Station Relocation ^h		250		1,200											1,450
Ferrisville Avenue Conveyance Upgrade*						1,285									1,285
Hillebrand Sewer Main Upgrade ^e	250		800												1,050
Wallace Sewer Main Upgrade (1)								1,100							1,100
WWTP Misc. Upgrades*		320		340		360		380	400	3,250	3,250	420		440	2,660
WWTP Capacity Upgrades ^{ee}							750	800							7,300
Rockaway Pump Station Rehabilitation (1.1)															750
Sakai Village Pump Station Rehabilitation (2)											800				800
Lynwood Center Pump Station Rehabilitation (3)									775						775
Old Treatment Plant Pump Station Upgrade (4)												3,000			3,000
Sunday Cove PS Pump Station Upgrade (5)												800	2,450		3,250
Sunday Cove Force Main Upgrade (5.1)													494		494
Ill Source Reduction ^{eees}							500		500				500		1,500
South Island Sewer Force Main Upgrades ^{eees}					1,000										1,000
Lynwood Center Sewer Pump Station Rehabilitation (6)					423										423
WWTP Inflow Pipe Upgrade (7)	1,400	2,970	1,600	1,540	1,423	1,645	1,250	1,180	1,875	282	4,432	4,050	3,420	1,300	3,384
Water Projects															
Public Water System Coordination Projects - Moran (8)	800		1,000												1,800
Public Water System Coordination Projects - Mandan Olsen (9)		800			1,000										1,800
Private Water System Main Extension Projects ^{eees}	1,000				1,100				1,200				1,400		4,700
Head of the Bay Wall Site Main Replacement ^{eees}		200	750												950
Head of the Bay Wall Site Variable Frequency Drive (VFD) Upgrade ^{eees}				150	600										750
Sands Wall Site VFD Upgrade ^{eees}					150	600									750
Water Main Replacement/Upgrade Projects - Grow Avenue (10)						528									528
Water Main Replacement/Upgrade Projects - Shepherd Way (11)		430													430
Water Main Replacement/Upgrade Projects - Winslow Way (12)		100													100
Water Main Replacement/Upgrade Projects - Erickson Avenue (13)					150	500									650
Water Main Replacement/Upgrade Projects - Cave Avenue and Hawley Way (14)								524							524
Byron Water Main Extension (15)		250													250
Fletcher Bay Main Extension (16)				1,100											1,100
Fletcher Bay Storage/Upgrade Improvements ^{eees}						4,000									4,000
Rockaway Storage/Fireflow Improvements ^{eees}											1,000	3,000			4,000
High School Tank 2 Demolition ^{eees}										450					450
TOTALS	1,800	1,780	1,750	2,250	2,000	1,628	4,000	524	1,200	450	1,000	3,000	1,400	500	23,282

* CIP Out Years (Beyond 6 Year Planning Horizon)

** Per WWTP Capacity Analysis Memo

*** Staff Recommendation

(0, 1, 4, 5, 5.1, 7) - Per BHC Memo

(1.1) - Rockaway Pump Station Rehabilitation: Long-Term Recommendation from General Sewer Plan (GSP)

(2) - Sakai Pump Station Rehabilitation: Long-Term Recommendation from GSF

(3) - Lynwood Center Pump Station Upgrades: Long-Term Recommendation from GSF

(6) - Lynwood Center Pump Station Rehabilitation: Long-Term Recommendation from GSF

(8) - Driat Water System Business Plan

(9) - Driat Water System Business Plan

(10) - Grow Avenue (Water System Plan (WSP) Projects P1-A & B

(11) - Shepherd Way (WSP Projects P1-D & P-3)

(12) - Winslow Way West (WSP Project P4-A)

(13) - Erickson Avenue (WSP Project P4-C)

(14) - Cave Avenue and Hawley Way (WSP Projects P1-G & F

(15) - Byron Main Extension (WSP Project P-2C)

(16) - Fletcher Bay Main Extension (WSP Project P-2B

**Attachment B - Sewer Utility Technical
Memo Prepared by BHC Consultants**



TECHNICAL MEMORANDUM

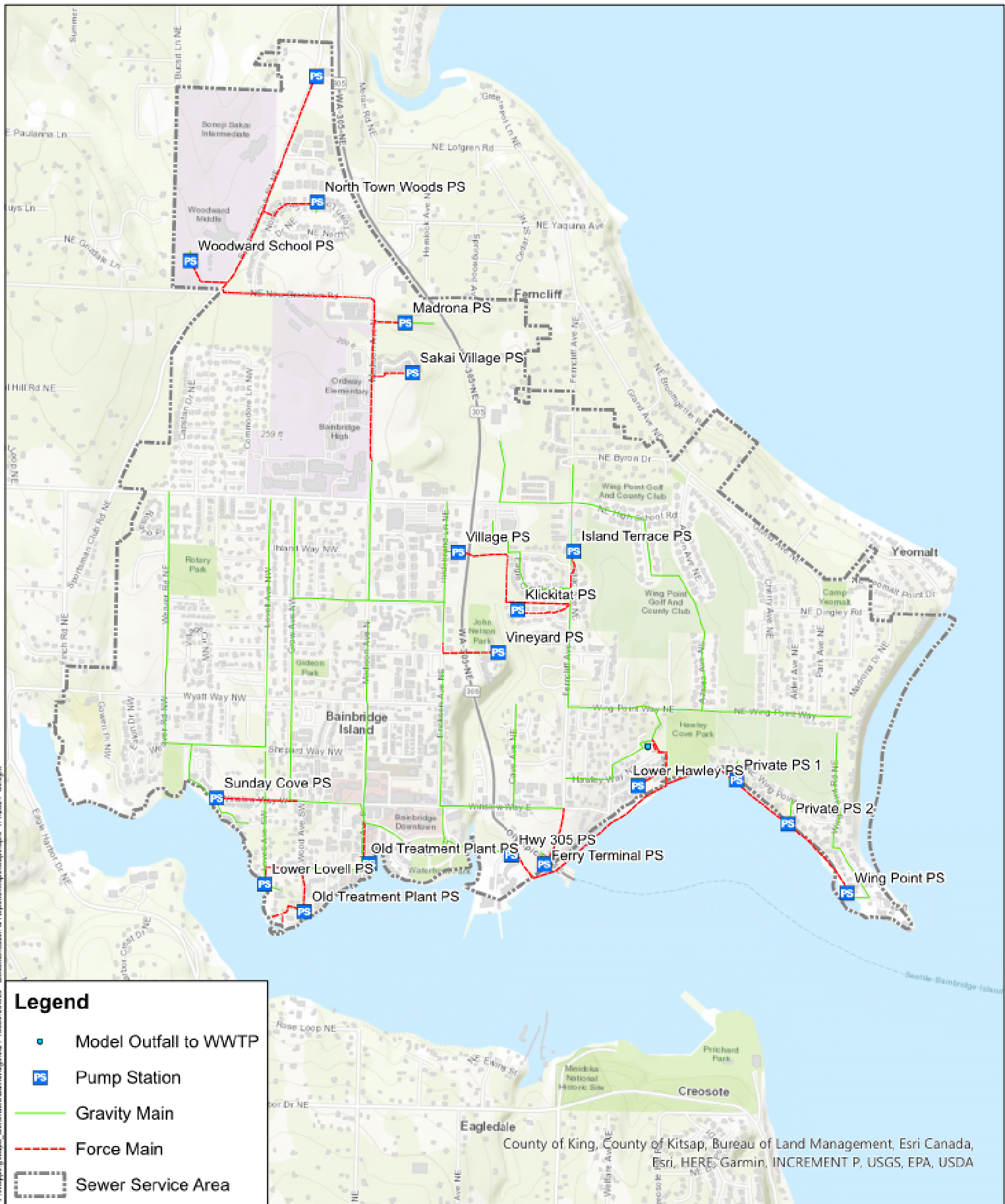
Date: July 2, 2024
To: Peter Corelis, P.E., City of Bainbridge Island
From: Kevin Cook, P.E.; Sudip Gautam, PHD, EIT., BHC Consultants, LLC
Subject: Capacity Analysis and Capital Improvement Project Identification

1. Introduction and Purpose

The City of Bainbridge Island (City) is conducting a sewer collection capacity analysis to support the City's Winslow Subarea Plan and Comprehensive Plan. This update to the Winslow Subarea Plan will incorporate subsequent planning efforts including the Sustainable Transportation Plan, the Housing Action Plan, and the Climate Action Plan with additional land use and transportation policy recommendations in coordination with the 2024 update to the Comprehensive Plan.

The last general sewer plan (GSP) for the City was prepared in 2015 to document the status of the City's sewer system and analyze the capacity of the system to accommodate future demands. The City has been using the GSP as a guide for operation, maintenance, and expansion of the sewer system since then. Since the 2015 GSP, the City has seen an increase in development activities creating capacity issues in pump stations and straining the capacity of the wastewater treatment plant. In response, the City conducted the New Brooklyn Sewer Basin Study in 2021, which provided four pump station design alternatives to improve the sewer capacity in the basin.

The purpose of this analysis is to gather information on the existing sewer collection system for the Winslow Subarea Plan Update 2024 to study a "no-action" alternative and compare the "no-action" alternative to two "action" alternatives that are anticipated to provide capacity for increased residential and commercial development within the existing service area. This analysis will focus on the "no-action" and "action" alternatives and identify potential capacity deficiencies within the City's collection system as well as develop recommendations for improvements, including sewer main extensions and upgrades, pump station capacity improvements, additional pumping systems, and other improvements. This analysis will help identify the impacts of increased flows, due to increased development, to the City's wastewater treatment plant via hydraulic modeling analysis. Figure 1 shows the Winslow Subarea and sewer collection system.



Figure

2. Model Development

As a part of the 2015 GSP, hydraulic models of the sewer collection system within the City's sewer service area were developed. The 2015 models, created using InfoSWMM, were converted into the PCSWMM modeling software for update and further analysis. The model scenarios included in the 2015 GSP included the baseline/existing year (2013), short-term planning year (2025), and long-term planning year (2035). All these model scenarios were converted to PCSWMM models, and the model performance was validated to the previously simulated results. The baseline model was updated to reflect the current (2024) conditions to incorporate the hydraulic changes since the 2015 GSP. The following information was obtained and used to perform the hydraulic updates and update the model to reflect existing conditions:

- New Brooklyn Sewer Basin Study – Preliminary Design Report (2021)
- Coppertop North Addition Grinder Pump Station (2015)
- Madison Avenue Nonmotorized Improvements – SR 305 to Winslow Way (2023)
- West Eagle Harbor Pump Station Improvements (2024)
- Wintergreen Lane – Visconsi Masterplan (2014)
- Model hydraulic features validation with the City staff – updates to pipe GIS data (2024)

3. Flow Development

Flow assumptions from the 2015 GSP were used as a reference to ensure that similar assumptions were used such that flow projections were consistent and suitable for this analysis. Table 1 shows the flows from the 2015 GSP as a point of comparison.

Table 1
2015 GSP Table of Flows

Scenario	Dry Weather Flow (MGD)	Wet Weather Flow (MGD)	Peak Flow (MGD)
Existing (2013)	0.43	1.47	1.90
Short-term Planning Year (2025)	0.58	1.81	2.39
Long-term Planning Year (2035)	0.70	1.87	2.57

After incorporating and updating the model hydraulics and updating flows to represent current conditions (2024), the peak flow calculated in the system was computed to be 2.29 million gallons per day (MGD), which consists of 0.48 MGD of the dry weather flow and 1.81 MGD of the wet weather flow. This is similar to the 2015 GSP published values corresponding to the 2025 planning year.

For the alternatives, the “no-action” alternative (Alternative 1 – no action) and two additional land-use “action” alternatives (Alternative 2 – dense centers, and Alternative 3 – distributed density) from the Winslow Subarea Plan Update 2024 were used to develop estimated flows through the system.

Population, land use, and employment data for the alternatives were obtained from the City and projected flows for the alternatives were calculated based on the assumptions below.

- Alternative 1 is projected to add 592 dwelling units and 86 jobs,
- Alternative 2 is projected to add 2,868 dwelling units and 927 jobs, and
- Alternative 3 is projected to add 2,386 dwelling units and 689 jobs in the Winslow Subarea over current conditions.

Using this data, additional flows were computed and were distributed over the collection system that lies within the study area based on their assumed connection into the collection system based on the respective alternative. The Washington State Department of Ecology Orange Book (Publication # 98-37 WQ) was used to estimate the unit flows (including normal infiltration) and compute total flows corresponding to the additional population and jobs associated with the alternatives.

Wet weather flows were calculated for the 2044 planning horizon, consistent with the methodology outlined by the 2015 GSP. This included degradation of existing infrastructure contributing to increases in wet weather inflow and infiltration (I/I) as well as additional I/I due to development. Flows for the alternatives are higher given the additional degradation due to I/I, the assumptions regarding development for the alternatives, as well as inclusion of additional data and studies. The calculated flows as part of this analysis are higher than the 2015 GSP flows. A summary of flows simulated for the three alternatives is provided in Table 2.

Table 2
Summary of Flows for Alternatives Analysis

Alternative	Dry Weather Flow (MGD) ¹	Wet Weather Flow (MGD) ²	New Development Wet Weather Flow (MGD) ³	Peak Flow (MGD) ⁴
Alternative 1 – no action	0.62	1.95	1.58	4.15
Alternative 2 – dense centers	1.17	1.95	1.58	4.70
Alternative 3 – distributed density	1.04	1.95	1.58	4.57
Notes: 1) Represents average use over the course of a single day and does not consider diurnal pattern peaking factors based on usage through the course of a day. 2) Inflow and infiltration projections for future planning years consistent with previous degradation factors from 2015 General Sewer Plan. Representative of instantaneous peak I/I rate for existing areas. 3) Considers additional I/I from new developments, which are dependent on development size and intensity. Distribution of new development wet weather flow is dependent on locations where development is expected to occur for this analysis. A consistent value of the new development wet weather flow expected from development was used for all the alternatives to provide a conservative assumption for the analyses. In practical application, it is possible that existing Wet Weather flows due to I/I may be reduced due to infrastructure improvement and more or less New Development Wet Weather Flow is observed based on development type. 4) Peak flows representative of the sum of average daily dry weather, peak hourly wet weather inflow for existing areas, and peak hourly wet weather flow due to development. This is intended for relative comparison and peak flows may be slightly higher or lower due to timing of peaks and diurnal usage.				

4. Capacity Analysis - Deficiencies

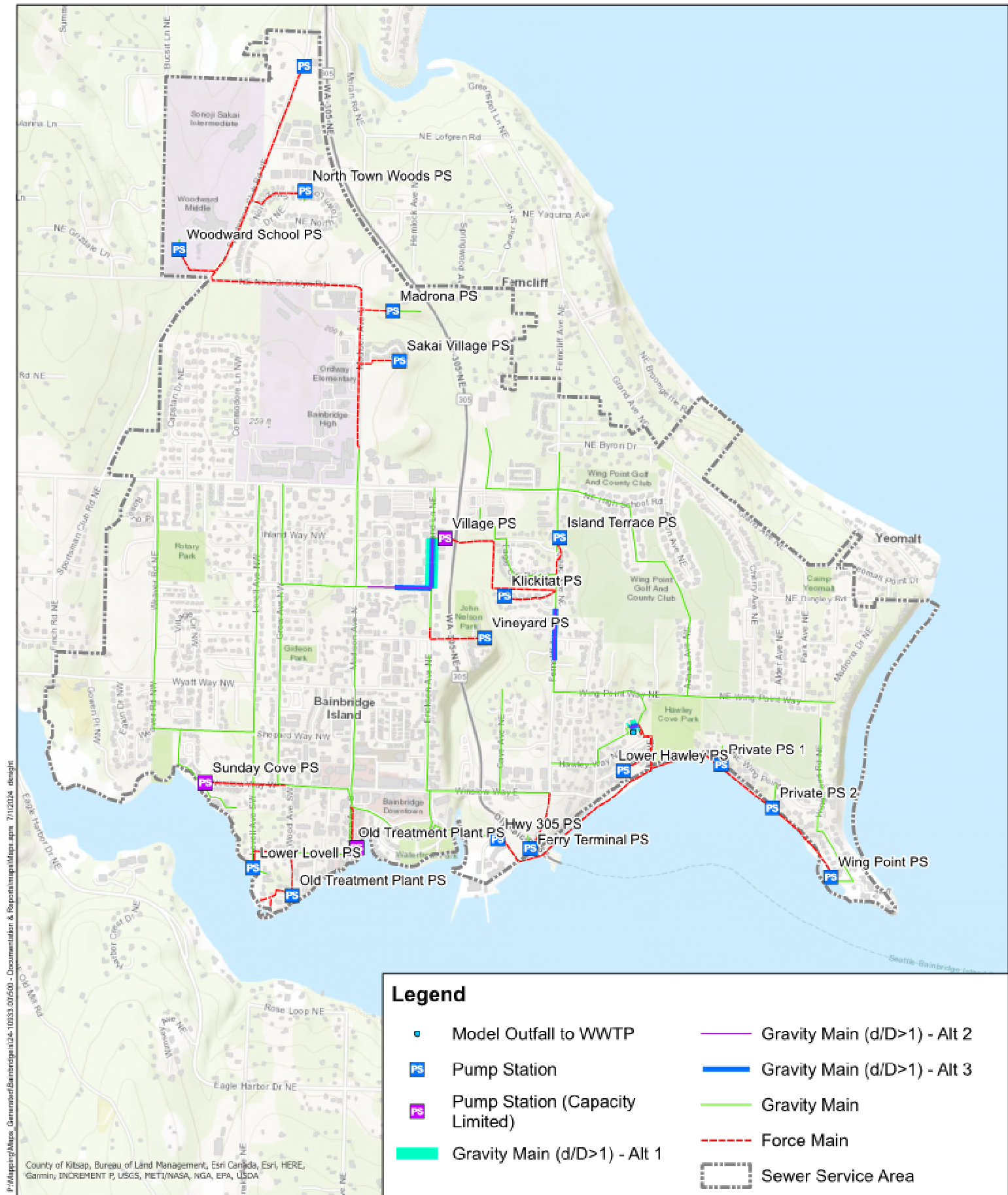
Model simulations representing the “no-action” alternative (Alternative 1 – no action) and two additional “action” alternatives (Alternative 2 – dense centers and Alternative 3 – distributed density) were run and the conveyance system deficiencies were identified based on further analysis of model results. To determine the location of capacity issues within the collection systems for each alternative, the following guidelines were observed:

- Gravity Pipe Segments: the flow depth is equal to or greater than the pipe diameter ($d/D > 1$).
- Manholes: the manhole is flooding, leading to sewer overflow.
- Pump Stations: the rated capacity is exceeded.

A comparative summary of the sewer deficiencies in the three alternatives modeled is provided in Table 3. Alternative 1 has four unique deficiency areas, whereas Alternative 2 and Alternative 3 both exhibit six unique deficiency areas, which include both pipe capacity and pump capacity issues. Alternative 2 has the longest length of pipes exceeding $d/D > 1$, indicating more extensive collection system deficiencies compared to Alternative 3, which has a slightly lower total length. Figure 2 shows the comparison and spatial distribution of deficiencies identified for the three alternatives modeled. In general, deficiencies between the alternatives are consistent with location and distributed density amongst the alternatives.

Table 3
Comparison of Deficiencies Between Alternatives

Alternative	Count of Unique Deficiency Areas	Length of Pipe Exceeding $d/D > 1$, ft	Count of Pump Stations Over Capacity
Alternative 1 – no action	4	724	3
Alternative 2 – dense centers	6	2,280	3
Alternative 3 – distributed density	6	1,890	3



This map is a geographic representation based on information available. No warranty is made concerning the accuracy, currency, or completeness of data depicted on this map.



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Sewer Deficiencies
Winslow SubArea Plan
City of Bainbridge Island
July 2024

Figure

2

Deficiencies for the alternatives were disaggregated into individual project areas to further differentiate simulated capacity issues between alternatives. Table 4 provides a summary of the identified project areas, including a brief description of the issues identified and their status under the three alternatives. In summary, five pipe capacity projects and three pump capacity projects have been identified.

While all alternatives demonstrate deficiencies in pipe capacity and pump station capacity in the future, the nature and extent of these deficiencies vary. For example, Alternative 2 (Dense Centers) shows the most extensive pipe capacity issues, particularly in terms of length, while Alternative 3 (Distributed Density) shows a slightly reduced length of pipe issues but similar pump station deficiencies. Alternative 1 (No Action) shows fewer deficiencies overall but still suffers from critical pump station capacity problems, similar to Alternatives 2 and 3.

Table 4
Summary and Comparison of Deficiencies for Alternatives

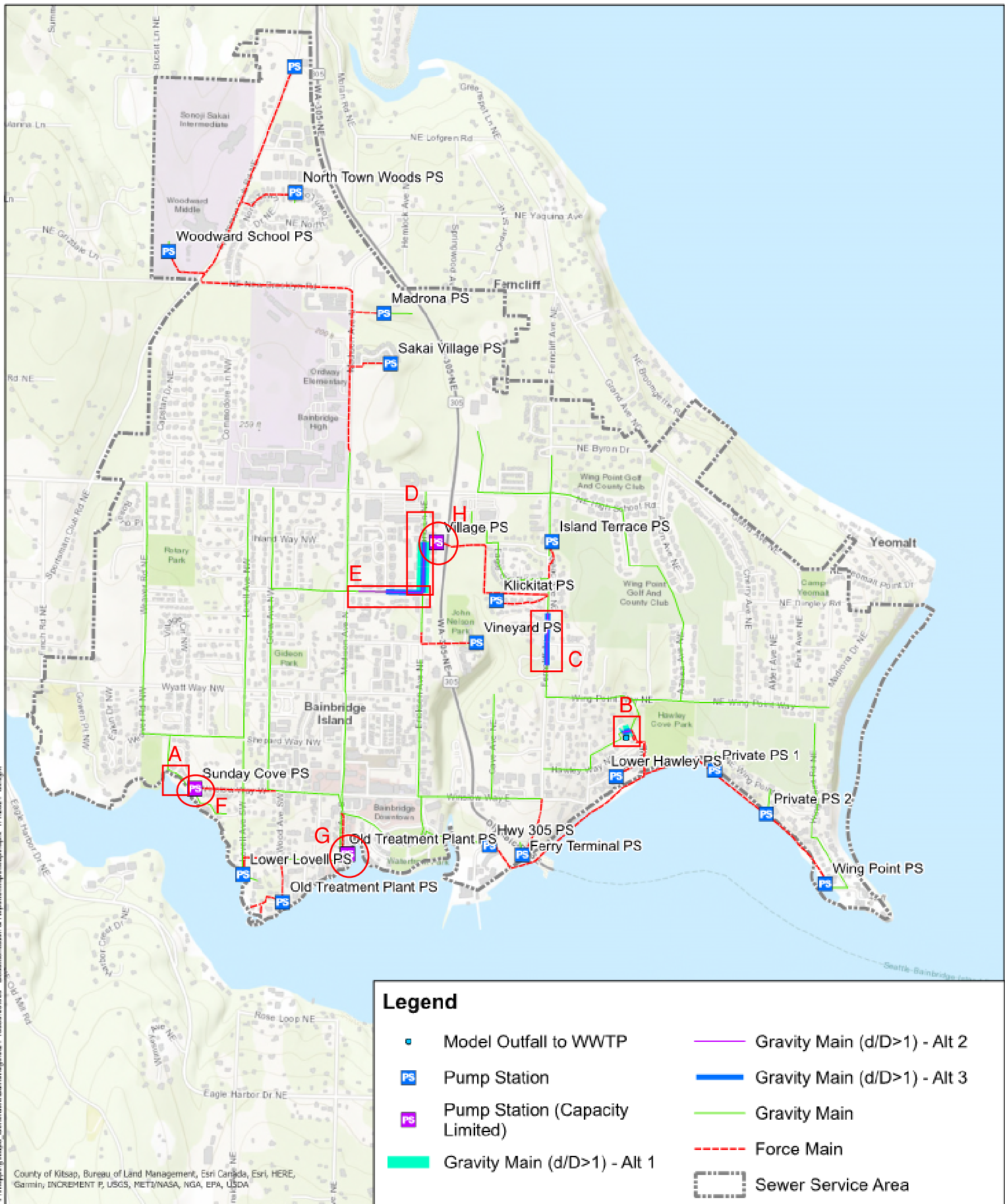
Project Area	Description	Alternative 1 – No Action	Alternative 2 – Dense Centers	Alternative 3 – Distributed Density
A	Pipe capacity limited due to small diameter/shallow slope	No Deficiency	Surcharging	No Deficiency
B	Pipe capacity limited due to small diameter	Surcharging	Surcharging	Surcharging
C	Pipe capacity limited due to small diameter/shallow slope	No Deficiency	Surcharging	Surcharging
D	Pipe capacity limited due to small diameter/shallow slope	Surcharging	Surcharging gets worse in depth of surcharge	Surcharging
E	Pipe capacity limited due to small diameter	No Deficiency	Surcharging gets worse in depth of surcharge and extent	Surcharging
F	Sunday Cove PS over capacity	Pump over capacity	Pump over capacity and backwater issue	Pump over capacity
G	Old Treatment Plant PS over capacity	Pump over capacity	Pump over capacity	Pump over capacity
H	Village PS over capacity	Pump over capacity	Pump over capacity	Pump over capacity

5. Capacity Analysis – Improvements

The deficiency modeling effort identified areas in the model where capacity issues were simulated under each of the alternatives. Additional modeling was completed to identify improvements to resolve existing deficiencies, as well as identify new potential deficiencies that could be simulated because of removing upstream restrictions. This was done in an iterative fashion, by increasing the pipe diameter in conformance to industry standard pipe diameters, as well as increasing lift station capacity, as necessary. This helped to identify the minimum required capacity improvements to alleviate the deficiency in the model, with the understanding that the purpose of this analysis was to compare relative differences between alternatives, and that final recommendations from pre-design through construction activities may warrant changes to the improvements. Table 5 provides a summary of the sewer improvements identified for the project areas for all the alternatives, and Figure 3 shows the location of the improvements.

Table 5
Summary and Comparison of Capacity Improvements for Alternatives

Project Area	Description	Alternative 1 – No Action	Alternative 2 – Dense Centers	Alternative 3 – Distributed Density
A	Pipe capacity limited due to small diameter/shallow slope	No Improvement	Upsize/replace 260-ft of pipe from 10-in to 12-in	No Improvement
B	Pipe capacity limited due to small diameter	Upsize/replace 107-ft of pipe from 16-in to 18-in	Upsize/replace 107-ft of pipe from 16-in to 18-in	Upsize/replace 107-ft of pipe from 16-in to 18-in
C	Pipe capacity limited due to small diameter/shallow slope	No Improvement	Upsize/replace 926-ft of pipe from 10-in to 12-in	Upsize/replace 926-ft of pipe from 10-in to 12-in
D	Pipe capacity limited due to small diameter/shallow slope	Upsize/replace 794-ft of pipe from 10-in to 12-in	Upsize/replace 794-ft of pipe from 10-in to 15-in	Upsize/replace 794-ft of pipe from 10-in to 15-in
E	Pipe capacity limited due to small diameter	No Improvement	Upsize/replace 838-ft of pipe from 8-in to 10-in	Upsize/replace 482-ft of pipe from 8-in to 10-in
F	Sunday Cove PS over capacity	Increase the firm capacity of the pump from 484-gpm to 650-gpm	Increase the firm capacity of the pump from 484-gpm to 650-gpm	Increase the firm capacity of the pump from 484-gpm to 650-gpm
G	Old Treatment Plant PS over capacity	Increase the firm capacity from 256-gpm to 400-gpm	Increase the firm capacity from 256-gpm to 400-gpm	Increase the firm capacity from 256-gpm to 400-gpm
H	Village PS over capacity	Increase the firm capacity from 614-gpm to 870-gpm	Increase the firm capacity from 614-gpm to 870-gpm	Increase the firm capacity from 614-gpm to 870-gpm



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Sewer Improvements
Winslow SubArea Plan
City of Bainbridge Island
July 2024

Figure

3

6. Discussion

The comparative capacity analysis simulated deficiencies across all alternatives, primarily in pipe and pump station capacities. Both Alternatives 2 and 3 pose higher risks of service disruptions due to additional pipe capacity issues, with Alternative 2 facing additional challenges likely due to high-density urban development. Alternative 2 emerged with the most extensive simulated pipe capacity issues, evidenced by the longest length of pipes exceeding critical surcharge thresholds ($d/D > 1$). Alternative 3, while showing slightly reduced pipe capacity stresses compared to Alternative 2, presents similar challenges in pump station capacities. This was consistent with the simulated improvements, where Alternatives 2 and 3 would likely require more substantial investments in pipe capacity upgrades and operational improvements compared to Alternative 1.

Alternative 1, despite fewer identified deficiencies overall, simulated critical pump station capacity problems similar to Alternatives 2 and 3. This underscores the potential need for proactive measures to avoid service disruptions and maintain system integrity, regardless of changes to future population and land use.

7. Limitations and Sources of Uncertainty

The baseline hydraulic model was updated to reflect the current sewer collection in the Winslow Subarea based on the previously constructed model and newly available data. Judgment was used to fill in data gaps and make assumptions where necessary. Performance of the physical system for both existing and future conditions may differ than simulated results due to limitations and uncertainty, such as distribution and timing of dry weather flows within the system, distribution of inflow and infiltration within the system, etc. Industry standard efforts were made through internal quality assurance and quality control (QA/QC) of results to ensure that the model provided reliable information for use in deficiency identification and capital improvement project (CIP) development.

The model was used in conjunction with engineering practices and understanding of the system to review simulated results and qualify areas in the system as either CIP or Watch List project areas based on the deficiency criteria. The identification of CIP and Watch List areas is intended to provide planning level information to support City's efforts, such as financial outlay planning and areas of investigation for City staff. Planning year horizons are intended to provide a relative comparison based on the land use alternatives and potential degradation of the system and do not represent a deadline for planning purposes.

The identified CIPs were developed to provide preliminary opinions of probable construction costs, and their use in pre-design efforts should be supplemented with further field investigation and analysis.



TECHNICAL MEMORANDUM

Date: October 9, 2024
To: Peter Corelis, PE, City of Bainbridge Island
From: Kevin Cook, PE and Sudip Gautam, PHD, EIT, BHC Consultants, LLC
Subject: Addendum to Capacity Analysis and Capital Improvement Project Identification
Technical Memorandum

1. Introduction and Purpose

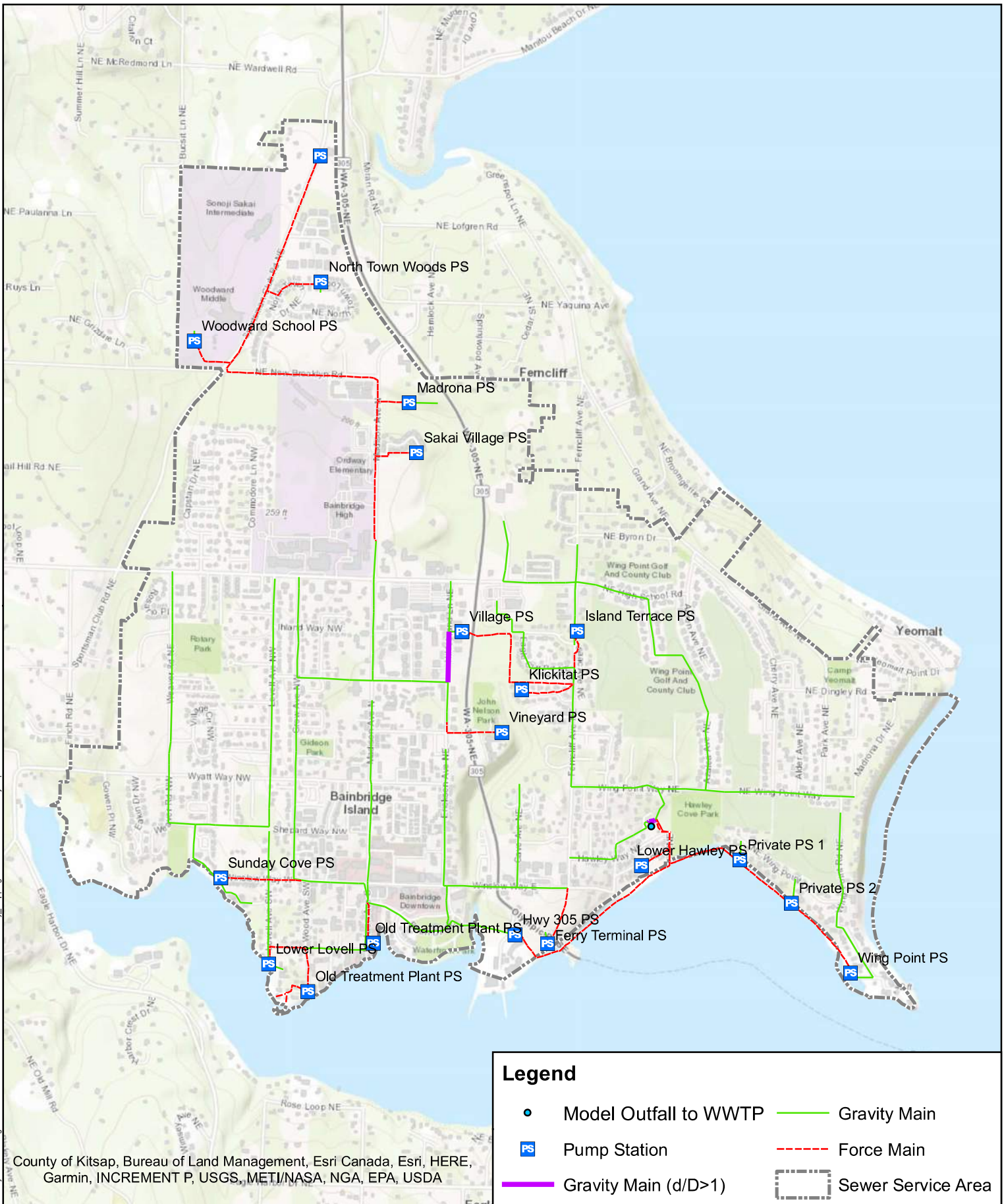
This Technical Memorandum (TM) serves as an addendum to the Capacity Analysis and Capital Improvement Project Identification TM for the capacity analysis and capital improvement project identification conducted to support the City of Bainbridge Island's (City) Winslow Subarea Plan and Comprehensive Plan update. This addendum covers the cost estimate for the capacity improvement projects (CIP) identified in the TM corresponding to the "no-action" alternative (Alternative 1 – No Action) and two additional land-use "action" alternatives (Alternative 2 – Dense Centers, and Alternative 3 – Distributed Density) from the Winslow Subarea Plan Update 2024. Details regarding the model development and capacity analysis can be found in the TM. Additionally, this TM also includes discussion on how these three alternatives differ from the current (baseline) conditions.

2. Model Results for the Baseline Conditions

The baseline (current) conditions model was run to identify any conveyance system deficiencies. Dry weather flow of magnitude 0.48 million gallons per day (MGD) and wet weather flow of magnitude 1.81 MGD were distributed over the collection system following the same methodology as the alternative scenarios models.

The baseline model showed two unique deficiency areas, both related to pipe capacity. The total length of pipes exceeding $d/D > 1$ for the baseline condition is 724 feet (ft), which is the same as Alternative 1. This suggest that the additional pipe deficiencies seen in Alternatives 2 and 3 might be due to the increased flow from additional development. Figure 1 shows the spatial distribution of deficiencies identified for the baseline condition modeled. It is to be noted that the pump station over-capacity issues observed in the three alternatives were not present in the baseline conditions.

T:\Projects\Bainbridge Island\24-10933.00 - Winslow Subarea Plan\GIS\Deficiency Mapping\WinslowSewerDeficiencyMap-Baseline.mxd 7/30/2024 SGautam



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Sewer Deficiencies - Baseline
Winslow Subarea Plan
City of Bainbridge Island
July 2024

Figure

1

3. Cost Estimate for the CIPs

Opinions of Probable Project Costs (OPPC) were prepared for all the CIPs identified in the TM. Documentation for these OPPCs can be found in the Attachment A. The level of analysis performed is assumed to be sufficient to support developing planning level OPPCs. These projects will require further definition and design refinement as part of the design process. Each OPPC includes 9.2% Washington State sales tax (WSST) for Kitsap County, 30% construction contingency, and allied costs of 5% for planning, 15% for design and permitting, and 15% for engineering services during construction including inspection and observation services. Several unit price items were used to determine the cost estimates. Quantities were estimated for each item and unit prices were estimated from recent bid results in the Puget Sound area and Means “Estimating Guide.” Certain assumptions needed to be made in terms of quantities and unit prices. Those assumptions are presented below in Table 1.

Table 1
Basis of Project Cost Estimates

Construction Estimate Category	Cost	Notes
Mobilization	10% of Construction Costs	-
Traffic Control	4% of Construction Costs of Mainline Sewer	-
Trench Dewatering	\$15/LF	-
Sheeting, Shoring, Bracing	\$10/LF	-
Saw Cutting	Included in Pavement Removal Cost	Required for the entire length of the mainline sewer.
Pavement Removal	\$250/Ton	Limited to a trench width of 60 inches, plus 12 inches on both sides, total width of 84 inches.
Temporary Sewer Bypass	\$5,000/Week	For all open cut installations.
Import Trench Backfill	Included in Pipe Costs	100% of all excavation will require imported material. Maximum width 60 inches, average depth of 10.67 feet.
Crushed Surfacing, Base Course	\$50/Ton	Assumed to be 6 inches deep and a maximum pay width of 84 inches.
Crushed Surfacing, Top Course	\$50/Ton	Assumed to be 6 inches deep and a maximum pay width of 84 inches.
Hot Mix Asphalt (HMA)	\$250/Ton	Maximum thickness of 3 inches applied over a width of 84 inches for the entire length of all mainline sewers or where patching is required.

Construction Estimate Category	Cost	Notes
Restoration	2% of Construction Costs	-
Lift Station Rehabilitation	Assumed in Construction Costs	Assumes no excavation needed and the needed increase in capacity can be accomplished with pump and motor changes, and electrical revisions.
Allied and Other Costs – Assumptions		
Construction Contingency	30% of Estimated Construction Costs	-
State Sales Tax	9.2% of Estimated Costs	-
Engineering Design, Survey, Geotechnical Investigation, Permits	15% of Estimated Costs	-
Construction Services	15% of Estimated Costs	-
Planning	5% of Estimated Costs	-

Project costs are calculated based on current dollars and do not reflect future considerations for inflation with respect to the applicable future planning alternatives. Each project was considered equal with regards to complexity with no adjustments made for site specific constructability or other mitigating factors that would impact a project construction, design, or permitting costs for this level of planning. Table 2 provides a summary of the costs associated with linear improvements for all the individual CIP projects.

Table 2
Summary of Linear Improvement OPCC

Project Area	CIP Name	Description	Existing Diameter (in)	Proposed diameter (in)	Length (ft)	Total Opinion of Probable Construction Cost	Total Opinion of Probable Allied Cost	Total Estimated Project Cost
A	PR-A-2	Project Area A, Alternative 2	10	12	260	\$ 294,000	\$ 200,000	\$ 494,000
B	PR-B-123	Project Area B, All Alternatives	16	18	107	\$ 182,000	\$ 100,000	\$ 282,000
C	PR-C-23	Project Area C, Alternatives 2 and 3	10	12	926	\$ 885,000	\$ 400,000	\$ 1,285,000
D	PR-D-1	Project Area D, Alternative 1	10	12	794	\$ 752,000	\$ 300,000	\$ 1,052,000
D	PR-D-23	Project Area D, Alternatives 2 and 3	10	15	794	\$ 770,000	\$ 300,000	\$ 1,070,000
E	PR-E-2	Project Area E, Alternative 2	8	10	838	\$ 782,000	\$ 300,000	\$ 1,082,000
E	PR-E-3	Project Area E, Alternative 3	8	10	482	\$ 459,000	\$ 200,000	\$ 659,000

Detailed project cost estimates were not provided for lift station improvements given the uncertainty related to the need for large scale upgrades including but no limited to firm capacity, mechanical, electrical, force main, and site-specific details. The total estimated project cost shown in Table 3 represents a planning level comparative estimate based on firm capacity.

Table 3
Summary of Lift Station Improvement OPCC

Project Area	Lift Station Name	Existing Firm Capacity (gpm)	Increased Firm Capacity (gpm)	Total Estimated Project Cost
F	Sunday Cove PS	484	650	\$3,250,000
G	Old Treatment Plant PS	256	400	\$3,000,000
H	Village PS	614	870	\$3,500,000

Table 4 provides a summary of the estimated costs for the three future alternative conditions and the baseline condition.

Table 4
Comparison of the Estimated Costs Between Alternatives

Alternative	Count of Linear Projects	Count of Lift Station Projects	Sum of Linear Projects Cost	Sum of Lift Station Projects Cost	Sum of Total Estimated Costs
Baseline Condition	2	0	\$ 1,334,000	\$ 0	\$ 1,334,000
Alternative 1 – No Action	2	3	\$ 1,334,000	\$ 9,750,000	\$ 11,084,000
Alternative 2 – Dense Centers	5	3	\$ 4,213,000	\$ 9,750,000	\$ 13,963,000
Alternative 3 – Distributed Density	4	3	\$ 3,296,000	\$ 9,750,000	\$ 13,046,000

4. Discussion

Alternative 1, while showing fewer deficiencies overall compared to the other future options, simulated capacity issues at critical pump stations, likely requiring major investments in operational upgrades. Alternatives 2 and 3 carry a greater risk of service disruptions due to problems related to additional pipe capacity. Alternative 2, in particular, faces extra challenges stemming from high-density urban development. Overall, both Alternatives 2 and 3 would likely require additional investments for improvements compared to Alternative 1.

ATTACHMENT A

Opinion of Probable Project Costs

City of Bainbridge Island, WA
Capital Improvement Project Identification
Planning Level Opinion of Probable Project Costs

PR-A-2

Prepared by: SG

Reviewed by: KC

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$17,300	1	LS	\$17,300
2	Temporary Erosion & Sediment Control	\$7,000	1	LS	\$7,000
3	Dewatering	\$3,900	1	LS	\$3,900
4	12-inch PVC Gravity Sewer	\$367	260	LF	\$95,420
5	48-inch Manhole	\$12,000	3	EA	\$36,000
6	HMA Trench Patch	\$250	50	TN	\$12,500
7	HMA Grind & Overlay	\$350	30	TN	\$10,500
8	HMA Sawcut and Seal	\$30	260	LF	\$7,800
9	Crushed Surfacing	\$50	50	TN	\$2,500
10	Sheeting, Shoring, Bracing	\$10	260	LF	\$2,600
11	Bypass	\$1,300	1	LS	\$1,300
12	Traffic Control	\$7,000	1	LS	\$7,000
13	General Restoration	\$3,500	1	LS	\$3,500
Construction Costs Subtotal					\$207,320
Construction Contingency		30%			\$62,196
Sales Tax		9.2%			\$24,795
Total Opinion of Probable Construction Cost					\$294,000
Allied Costs					
Planning		5%			\$14,700
Design and Permitting		15%			\$44,100
Services During Construction		15%			\$44,100
Total Opinion of Probable Allied Cost					\$200,000
TOTAL ESTIMATED PROJECT COST					\$494,000
Assumptions, Notes					
1. Import backfill assumed to be 100%					
2. Foundation Gravel assumed to be 100%					
3. Mobilization assumed to be 10% of construction costs					
4. Temporary Erosion Control and General Restoration assumed to be 2% of construction costs					
5. Traffic Control assumed to be 4% of construction costs					
6. Pipe costs includes all excavation, pipe, fittings, bedding, imported backfill, and haul					
7. Costs are in 2024 dollars					
The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.					

City of Bainbridge Island, WA
Capital Improvement Project Identification
Planning Level Opinion of Probable Project Costs

PR-B-123

Prepared by: SG

Reviewed by: KC

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$10,700	1	LS	\$10,700
2	Temporary Erosion & Sediment Control	\$4,300	1	LS	\$4,300
3	Dewatering	\$1,605	1	LS	\$1,605
4	18-inch PVC Gravity Sewer	\$398	107	LF	\$42,586
5	48-inch Manhole	\$12,000	4	EA	\$48,000
6	HMA Trench Patch	\$250	20	TN	\$5,000
7	HMA Grind & Overlay	\$350	10	TN	\$3,500
8	HMA Sawcut and Seal	\$30	107	LF	\$3,210
9	Crushed Surfacing	\$50	20	TN	\$1,000
10	Sheeting, Shoring, Bracing	\$10	107	LF	\$1,070
11	Bypass	\$535	1	LS	\$535
12	Traffic Control	\$4,300	1	LS	\$4,300
13	General Restoration	\$2,200	1	LS	\$2,200
Construction Costs Subtotal					\$128,006
Construction Contingency		30%			\$38,402
Sales Tax		9.2%			\$15,310
Total Opinion of Probable Construction Cost					\$182,000
Allied Costs					
Planning		5%			\$9,100
Design and Permitting		15%			\$27,300
Services During Construction		15%			\$27,300
Total Opinion of Probable Allied Cost					\$100,000
TOTAL ESTIMATED PROJECT COST (ROUNDED UP TO NEAREST \$1,000)					\$282,000
Assumptions, Notes					
1. Import backfill assumed to be 100%					
2. Foundation Gravel assumed to be 100%					
3. Mobilization assumed to be 10% of construction costs					
4. Temporary Erosion Control and General Restoration assumed to be 2% of construction costs					
5. Traffic Control assumed to be 4% of construction costs					
6. Pipe costs includes all excavation, pipe, fittings, bedding, imported backfill, and haul					
7. Costs are in 2024 dollars					
The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.					

City of Bainbridge Island, WA
Capital Improvement Project Identification
Planning Level Opinion of Probable Project Costs

PR-C-23

Prepared by: SG

Reviewed by: KC

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$52,000	1	LS	\$52,000
2	Temporary Erosion & Sediment Control	\$20,800	1	LS	\$20,800
3	Dewatering	\$13,890	1	LS	\$13,890
4	12-inch PVC Gravity Sewer	\$367	926	LF	\$339,842
5	48-inch Manhole	\$12,000	4	EA	\$48,000
6	HMA Trench Patch	\$250	160	TN	\$40,000
7	HMA Grind & Overlay	\$350	80	TN	\$28,000
8	HMA Sawcut and Seal	\$30	926	LF	\$27,780
9	Crushed Surfacing	\$50	160	TN	\$8,000
10	Sheeting, Shoring, Bracing	\$10	926	LF	\$9,260
11	Bypass	\$4,630	1	LS	\$4,630
12	Traffic Control	\$20,800	1	LS	\$20,800
13	General Restoration	\$10,400	1	LS	\$10,400
Construction Costs Subtotal					\$623,402
Construction Contingency		30%			\$187,021
Sales Tax		9.2%			\$74,559
Total Opinion of Probable Construction Cost					\$885,000
Allied Costs					
Planning		5%			\$44,300
Design and Permitting		15%			\$132,800
Services During Construction		15%			\$132,800
Total Opinion of Probable Allied Cost					\$400,000
TOTAL ESTIMATED PROJECT COST (ROUNDED UP TO NEAREST \$1,000)					\$1,285,000
Assumptions, Notes					
1. Import backfill assumed to be 100%					
2. Foundation Gravel assumed to be 100%					
3. Mobilization assumed to be 10% of construction costs					
4. Temporary Erosion Control and General Restoration assumed to be 2% of construction costs					
5. Traffic Control assumed to be 4% of construction costs					
6. Pipe costs includes all excavation, pipe, fittings, bedding, imported backfill, and haul					
7. Costs are in 2024 dollars					
The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.					

City of Bainbridge Island, WA
Capital Improvement Project Identification
Planning Level Opinion of Probable Project Costs

PR-D-1

Prepared by: SG

Reviewed by: KC

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$44,200	1	LS	\$44,200
2	Temporary Erosion & Sediment Control	\$17,700	1	LS	\$17,700
3	Dewatering	\$11,910	1	LS	\$11,910
4	12-inch PVC Gravity Sewer	\$367	794	LF	\$291,398
5	48-inch Manhole	\$12,000	3	EA	\$36,000
6	HMA Trench Patch	\$250	140	TN	\$35,000
7	HMA Grind & Overlay	\$350	70	TN	\$24,500
8	HMA Sawcut and Seal	\$30	794	LF	\$23,820
9	Crushed Surfacing	\$50	140	TN	\$7,000
10	Sheeting, Shoring, Bracing	\$10	794	LF	\$7,940
11	Bypass	\$3,970	1	LS	\$3,970
12	Traffic Control	\$17,700	1	LS	\$17,700
13	General Restoration	\$8,900	1	LS	\$8,900
Construction Costs Subtotal					\$530,038
Construction Contingency					30%
Sales Tax					9.2%
Total Opinion of Probable Construction Cost					\$752,000
Allied Costs					
Planning		5%			\$37,600
Design and Permitting		15%			\$112,800
Services During Construction		15%			\$112,800
Total Opinion of Probable Allied Cost					\$300,000
TOTAL ESTIMATED PROJECT COST (ROUNDED UP TO NEAREST \$1,000)					\$1,052,000
Assumptions, Notes					
1. Import backfill assumed to be 100%					
2. Foundation Gravel assumed to be 100%					
3. Mobilization assumed to be 10% of construction costs					
4. Temporary Erosion Control and General Restoration assumed to be 2% of construction costs					
5. Traffic Control assumed to be 4% of construction costs					
6. Pipe costs includes all excavation, pipe, fittings, bedding, imported backfill, and haul					
7. Costs are in 2024 dollars					
The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.					

City of Bainbridge Island, WA
Capital Improvement Project Identification
Planning Level Opinion of Probable Project Costs

PR-D-23

Prepared by: SG

Reviewed by: KC

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$45,200	1	LS	\$45,200
2	Temporary Erosion & Sediment Control	\$18,100	1	LS	\$18,100
3	Dewatering	\$11,910	1	LS	\$11,910
4	15-inch PVC Gravity Sewer	\$380	794	LF	\$301,720
5	48-inch Manhole	\$12,000	3	EA	\$36,000
6	HMA Trench Patch	\$250	140	TN	\$35,000
7	HMA Grind & Overlay	\$350	70	TN	\$24,500
8	HMA Sawcut and Seal	\$30	794	LF	\$23,820
9	Crushed Surfacing	\$50	140	TN	\$7,000
10	Sheeting, Shoring, Bracing	\$10	794	LF	\$7,940
11	Bypass	\$3,970	1	LS	\$3,970
12	Traffic Control	\$18,100	1	LS	\$18,100
13	General Restoration	\$9,100	1	LS	\$9,100
Construction Costs Subtotal					\$542,360
Construction Contingency		30%			\$162,708
Sales Tax		9.2%			\$64,866
Total Opinion of Probable Construction Cost					\$770,000
Allied Costs					
Planning		5%			\$38,500
Design and Permitting		15%			\$115,500
Services During Construction		15%			\$115,500
Total Opinion of Probable Allied Cost					\$300,000
TOTAL ESTIMATED PROJECT COST (ROUNDED UP TO NEAREST \$1,000)					\$1,070,000
Assumptions, Notes					
1. Import backfill assumed to be 100%					
2. Foundation Gravel assumed to be 100%					
3. Mobilization assumed to be 10% of construction costs					
4. Temporary Erosion Control and General Restoration assumed to be 2% of construction costs					
5. Traffic Control assumed to be 4% of construction costs					
6. Pipe costs includes all excavation, pipe, fittings, bedding, imported backfill, and haul					
7. Costs are in 2024 dollars					
The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.					

City of Bainbridge Island, WA
Capital Improvement Project Identification
Planning Level Opinion of Probable Project Costs

PR-E-2

Prepared by: SG

Reviewed by: KC

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$45,900	1	LS	\$45,900
2	Temporary Erosion & Sediment Control	\$18,400	1	LS	\$18,400
3	Dewatering	\$12,570	1	LS	\$12,570
4	10-inch PVC Gravity Sewer	\$358	838	LF	\$300,004
5	48-inch Manhole	\$12,000	3	EA	\$36,000
6	HMA Trench Patch	\$250	150	TN	\$37,500
7	HMA Grind & Overlay	\$350	80	TN	\$28,000
8	HMA Sawcut and Seal	\$30	838	LF	\$25,140
9	Crushed Surfacing	\$50	140	TN	\$7,000
10	Sheeting, Shoring, Bracing	\$10	838	LF	\$8,380
11	Bypass	\$4,190	1	LS	\$4,190
12	Traffic Control	\$18,400	1	LS	\$18,400
13	General Restoration	\$9,200	1	LS	\$9,200
Construction Costs Subtotal					\$550,684
Construction Contingency		30%			\$165,205
Sales Tax		9.2%			\$65,862
Total Opinion of Probable Construction Cost					\$782,000
Allied Costs					
Planning		5%			\$39,100
Design and Permitting		15%			\$117,300
Services During Construction		15%			\$117,300
Total Opinion of Probable Allied Cost					\$300,000
TOTAL ESTIMATED PROJECT COST (ROUNDED UP TO NEAREST \$1,000)					\$1,082,000
Assumptions, Notes					
1. Import backfill assumed to be 100%					
2. Foundation Gravel assumed to be 100%					
3. Mobilization assumed to be 10% of construction costs					
4. Temporary Erosion Control and General Restoration assumed to be 2% of construction costs					
5. Traffic Control assumed to be 4% of construction costs					
6. Pipe costs includes all excavation, pipe, fittings, bedding, imported backfill, and haul					
7. Costs are in 2024 dollars					
The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.					

City of Bainbridge Island, WA
Capital Improvement Project Identification
Planning Level Opinion of Probable Project Costs

PR-E-3

Prepared by: SG

Reviewed by: KC

Bid Item No.	Bid Item Description	Unit Bid Price	Quantity	Unit	Total
1	Mobilization	\$27,000	1	LS	\$27,000
2	Temporary Erosion & Sediment Control	\$10,800	1	LS	\$10,800
3	Dewatering	\$7,230	1	LS	\$7,230
4	10-inch PVC Gravity Sewer	\$358	482	LF	\$172,556
5	48-inch Manhole	\$12,000	2	EA	\$24,000
6	HMA Trench Patch	\$250	90	TN	\$22,500
7	HMA Grind & Overlay	\$350	50	TN	\$17,500
8	HMA Sawcut and Seal	\$30	482	LF	\$14,460
9	Crushed Surfacing	\$50	80	TN	\$4,000
10	Sheeting, Shoring, Bracing	\$10	482	LF	\$4,820
11	Bypass	\$2,410	1	LS	\$2,410
12	Traffic Control	\$10,800	1	LS	\$10,800
13	General Restoration	\$5,400	1	LS	\$5,400
Construction Costs Subtotal					\$323,476
Construction Contingency		30%			\$97,043
Sales Tax		9.2%			\$38,688
Total Opinion of Probable Construction Cost					\$459,000
Allied Costs					
Planning		5%			\$23,000
Design and Permitting		15%			\$68,900
Services During Construction		15%			\$68,900
Total Opinion of Probable Allied Cost					\$200,000
TOTAL ESTIMATED PROJECT COST (ROUNDED UP TO NEAREST \$1,000)					\$659,000
Assumptions, Notes					
1. Import backfill assumed to be 100%					
2. Foundation Gravel assumed to be 100%					
3. Mobilization assumed to be 10% of construction costs					
4. Temporary Erosion Control and General Restoration assumed to be 2% of construction costs					
5. Traffic Control assumed to be 4% of construction costs					
6. Pipe costs includes all excavation, pipe, fittings, bedding, imported backfill, and haul					
7. Costs are in 2024 dollars					
The opinion of probable cost herein is based on our perception of current conditions at the project location. This opinion reflects our professional opinion of costs at this time and is subject to change as the project design progresses. BHC Consultants has no control over variances in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work or of determining prices, competitive bidding or market conditions, practices or bidding strategies. BHC Consultants cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the costs presented as shown.					

Attachment C - Winslow Sub-area Water and Sewer Analysis Memo



DEPARTMENT OF PUBLIC WORKS MEMORANDUM

Date: March 14, 2023

To: Winslow Sub-Area Plan Team; File

From: Christopher Wierzbicki, Public Works Director
Peter Corelis, City Engineer

CC: Paul Nylund, Development Manager

Subject: Winslow Sub-Area Plan Sewer and Water Capacity Analysis

Executive Summary

This memo provides an analysis of the city's sewer and water service capacity for the purpose of informing the Winslow Sub-Area Plan process. In summary:

- With the planned upgrades to the wastewater treatment plan (WWTP), the city's sewer utility will have the capacity to serve a residential population of approximately 10,500 (an increase of approximately 2,700) in or around the Winslow sewer service area if carefully balanced out by commercial growth. The planned upgrades, which are currently underway, will allow the WWTP to meet existing regulations, and must be completed independent of planned future growth.

Additionally, within the existing footprint of the WWTP, the facility could be further upgraded to serve a greater population, the details of which will be determined later this year.

- With the planned upgrades to the Winslow Water Tank, the city's water utility will have the capacity to serve a population of approximately 17,600 (an increase of approximately 6,600) inside the Winslow water service area boundary, an area that includes the Winslow subarea, and in addition, the New Brooklyn Road corridor, Fletcher Bay, and Upper Ferncliff. The planned tank upgrades, which are currently underway, will allow the utility to meet both existing and future system requirements and standards.

Population/Development Background Information

The following population background information was used to inform the sewer and water service area capacity analysis:

- In 2005, the city documented residential population growth in a study titled “Population Allocation Study for Year 2005 Preliminary Report” which estimated the Winslow Study Area at approximately 5,800 residents. The study predicted a 20-year average annual residential growth rate of 2.4%.
- The 2020 census population numbers for greater Winslow (census tracts 909.01 and 909.02, which combined is slightly larger than the Winslow Study area) add up to 7,967 people, which represents an actual average annual residential growth rate between 2005 and 2020 of 2.2%.
- Assuming the actual 2.2% average annual growth rate, the 2022 population of the Winslow Study Area is approximately 8,321 people. The sewer population – which is less than the overall population due to some houses still being served by septic systems - is approximately 7,769.
- The 2021 Buildable Lands Report (BLR) estimated that the maximum residential population capacity in Winslow in 2020 - under the current development regulations - was an additional approximately 1,000 residents (144 single-family units, and 258 multi-family units.) Therefore, assuming the 2019 population was 7,795 (7,967 in 2020 minus 2.2%), then the current maximum population in Winslow according to the BLR would be approximately 8,795, or an additional 474 residents.
- The 2005 population study referenced earlier estimated a 1.4% annual increase in commercial growth between 2005 and 2025. An analysis using commercial sewer and water usage rates indicates that the actual increase in commercial growth since 2005 was close to zero. Estimating the capacity for commercial growth in the future is a challenging exercise, as many commercial zoning districts allow mixed-uses and therefore need to be analyzed for capacity on a parcel-by-parcel basis to effectively measure capacity. However, the BLR estimated that there are currently 36 acres of commercial development remaining, which equates to about 14% of the total acreage (261) that allows commercial uses. Therefore, this analysis assumes a relatively low rate of commercial growth in the future, absent significant zoning changes.
- The Winslow water service area is larger than the sewer service area – the latter of which largely mimics the Winslow Study Area – and includes the New Brooklyn Road corridor, Fletcher Bay, and Upper Ferncliff. The number of Equivalent Residential Units (ERU) currently served (an approximation of single-family, multi-family, and commercial water connections in terms of single-family households) is approximately 4,775 ERUs, which equates to approximately 11,000 residents currently being served with water (assuming an average of 2.3 people per household/ERU.)

Sewer Service Analysis

The following analysis of the sewer system is based on a technical memo prepared by Tetra Tech entitled “TM1 – Analysis of Treatment Plant Flows and Loads” dated October 3, 2022.

The city's sewer service area mostly mimics the Winslow Study area, despite being slightly smaller, and includes some residences that are still served by septic systems. As mentioned previously, the system serves approximately 7,769 residents and also commercial establishments. The Tetra Tech report analyzed the sewer service area using the capacity of the wastewater treatment plant as the limiting factor on serving new growth. The plant capacity was analyzed from the perspective of both flows (volume) and loads (concentration). The plant loading is considered to be the limiting factor for serving new growth.

From a *flow* perspective, based on the trending data from 2017 to 2022, the annual average flow is projected to remain steady, with limited increases. This is due to larger commercial service areas being largely built-out – as mentioned previously, only about 14% of commercially zoned land is available for new development. Additionally, residential water consumption per capita flows are likely dropping as older fixtures and appliances are upgraded with new low-flow fixtures.

From a *loading* perspective, despite low commercial growth (commercial development contributes to higher loads than residential,) loads measured at the plant have been steadily increasing. Some of this increase is likely the result of discharges to the sewer system from commercial winery and brewery establishments. The Tetra Tech report projects that based on current trends, the plant loading will likely reach capacity by mid-year 2026 (2,642 lbs/day of biological oxygen demand (BOD)). To meet current state regulations and best serve the existing customer base, the city is currently planning near-term operational and capital upgrades that will likely increase the plant capacity by about 25% (to 3,200 lbs/day BOD). These upgrades will also serve a 25% increase in the customer base.

In terms of population growth, at current trends, the current configuration of the WWTP can be expected to serve a sewered population of 8,475 (a population increase of 706 from the time of this memo), increasing to sewered population of approximately **10,500** (a population increase of 2,700). This includes new growth, and potential new connections from existing residences in the sewer service area currently served by septic.

Sewer Service Capacity Context

For context, the growth target for the entire island over the next 20 years is estimated to be an increase of around 4,500. If one goal of the Winslow Sub-Area plan is to accommodate a majority of that growth in Winslow, *the city can only expect to serve about half of that population in the sewer service area with the planned upgrades to the treatment plant.* Larger, long-term expansions of the treatment plant capacity are also possible, and capacity forecasts are currently being developed by the city's design team. More information on the maximum capacity of the plant within the current footprint will be developed later this year.

Another factor for consideration includes any potential increases in commercial development, which have remained flat for the last several years, but which absorb treatment plant capacity more quickly than residential development. Planned expansions for commercial development in Winslow must be carefully considered in the future capacity analysis along with residential population growth.

Water Service Analysis

The Winslow water service area includes the Winslow Subarea, in addition to New Brooklyn Road corridor, Fletcher Bay, and Upper Ferncliff areas. The service area is documented in the 2017 Water System Plan, prepared by Carollo Engineers, Inc., without providing an account of system customers in the Subarea only, therefore, this capacity analysis applies to the larger service area.

The System Plan predicted water use demand in 2021 at 5,312 equivalent residential units (ERUs), which equates to 12,218 residents (assuming 2.3 people per household/ERU to estimate equivalent residents.) However, in reviewing the City's actual annual well production data from 2021, the Winslow Water System is actively supplying only 4,775 ERUs, or approximately 11,000 residents. This decrease in expected demand may have resulted from a number of factors, such as a lack of commercial businesses expansions, conditions related to the COVID-19 epidemic, inflationary pressures on construction, or the slow production of new housing stock.

To serve existing and new customers, the city is planning to replace the two existing water storage tanks serving the system with a new elevated tank in 2024. The Winslow Water Tank project addresses several system deficiencies as well as managing projected customer growth. The system deficiencies include excessive dead storage in the current tanks due to their minimal height, resulting in water quality issues, over-cycling of well-site booster pumps, limitations on serving existing high elevation customers with adequate pressure, system fire flows, and seismic resiliency of the tanks – the latter of which is a critical public safety issue. The city is temporarily addressing some of these deficits by augmenting the reservoir levels to operate in a much narrower band (i.e. maintaining higher water levels and replenishing them more often) but this configuration is not sustainable in the long-term as it creates a dead-storage column of water in the tanks that is mostly useless for daily system needs. The deficiencies have led to a reduction in estimated capacity to 5,200 ERUs (or 11,960 residents.)

With regards to customer growth, there is currently a surplus of connections totaling approximately 425 ERUs (5,200 ERUs of capacity minus 4,775 served,) which is capable of serving approximately another 1,000 residents. Accounting for 182 ERUs worth of binding reservations for water service that are not yet connected to the system, it is estimated that only 243 of the 425 total ERUs are available, which equates to an additional 559 residents. Therefore, if the population growth continues at a rate of 2.2% annually, the remaining ERUs will run out in early to mid-2024, just in time for the completion of the tank project. The new tank, which will replace 2.5M gallons of ground-tank storage with 2.0M gallons of elevated storage, will correct existing system deficiencies and add 2,866 ERUs to the system capable of serving a population of 17,600 (an increase of 6,600 residents.)

Other limiting factors on the Winslow water system include well capacity and/or the well pump's ability to deliver water from the wells; the instantaneous or total water withdrawals permitting as determined by the system's water rights; and, the volume of groundwater supply. In review of the former two factors, the city's infrastructure and available water rights are mostly sufficient to meet the system capacity that will be available when the new water tank comes online in 2024. Small deficits in infrastructure capacity will be addressed in the coming years through planned capital improvements such as well rehabilitations and booster pump upgrades. Water rights currently

exceed the needs of the planned capacity upgrades, and the availability of groundwater supply was confirmed in the city's 2016 evaluation of the groundwater model. The model is being updated and re-evaluated as part of the ongoing development of the Groundwater Management Plan.

Water Service Capacity Context

In the context of planned population growth, *the existing Winslow water system with planned improvements will be able to serve the estimated growth target for the entire island over the next 20 years*, which is estimated to be an increase of around 4,500 residents (1,953 ERUs.) Additionally, the system will also have the capacity to serve an excess population of approximately 2,100 residents (913 ERUs.) In the short-term, prior to the planned improvements, the Winslow water system can support an additional population growth of approximately 559 residents (243 ERUs).

Attachment D - Wastewater Treatment Plant Population Projection Memo



DEPARTMENT OF PUBLIC WORKS MEMORANDUM

Date: April 7, 2023

To: City Manager
City Council

From: Christopher Wierzbicki, Public Works Director

Subject: **Council Request: House Bill 1220 (Housing Needs) Sewer Assessment**

Background

At the Regular Meeting of March 21, 2023, the City Council was presented with an overview of a draft housing allocation process under House Bill 1220, which requires Comprehensive Plans to plan for housing for all income levels. The Council requested input from the staff on the City's capacity for serving the housing allocation with sewer in advance of the Kitsap Regional Coordinating Council's adoption of the allocation into the Countywide Planning policies.

Housing Allocation Summary

At the above-mentioned Council meeting, staff presented a chart that outlined the draft 20-year housing allocation. The chart is reproduced below as Figure 1.

			Permanent Housing Unit Needs by Income Level (% of Area Median Income)						
			0-30%						
			Non-PSH	PSH	>30-50%	>50-80%	>80-100%	>100-120%	>120%
Total Units									
City of Bainbridge Island	Estimated Housing Supply (2020)	11,251	331	0	331	788	1,150	2,073	6,578
	Allocation Method A (2020-2044)	1,977	377	166	324	272	140	138	560
			1,139 Multi-Family Units in Winslow						

Figure 1 – House Bill 1220 Housing Draft Housing Allocation for the City of Bainbridge Island

The chart indicates that the draft 20-year housing allocation would require zoning capacity for 1,139 multi-family (MF) units to serve between 0 and 80% of area median income, which are presumed to be located in the Winslow subarea. According to the 2019 Buildable Lands Report, the Winslow subarea already has capacity for 258 MF units, as well as 144 single-family units. Therefore, the total number of planned housing units to be accommodated for sewer capacity in Winslow is 1,283 units.

Sewer Population Capacity

As outlined in Figure 2 below, with the upgrades planned in the 2023-28 Capital Improvement Plan, the Wastewater Treatment Plant (WWTP) can accommodate approximately 85% of the current and future housing allocated for the Winslow sewer service area (this area closely, but not exactly mimics the Winslow subarea boundary.) The capacity of the WWTP is measured in equivalent residential units, or ERUs, which is calculated by multiplying the number of housing units by the number of members in each house (the average for Bainbridge Island is 2.48 per household.)

Assuming a steady annual trend in housing, future upgrades to the plant would need to be designed in 2038 for implementation in 2040. The future upgrades would include new capital infrastructure within the existing footprint of the plant site and would conservatively accommodate an additional increase in housing up to 2,110 units.

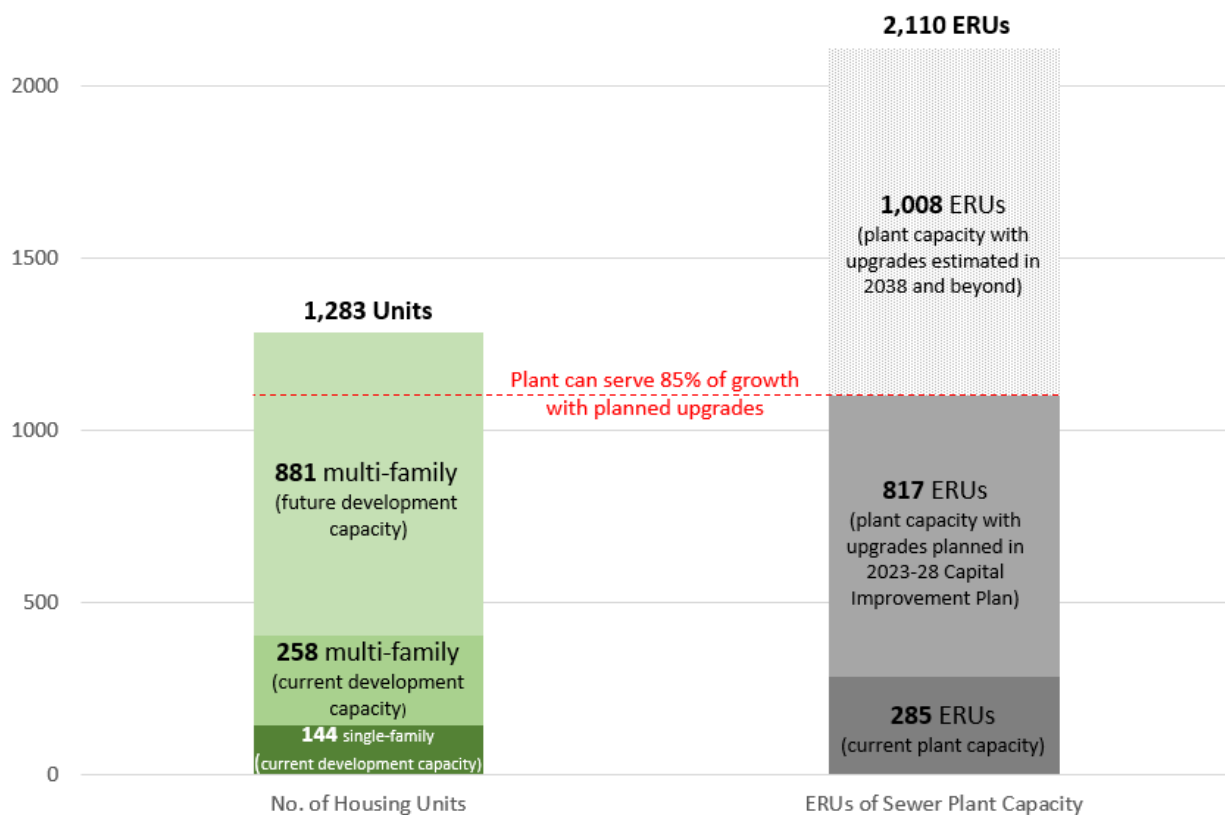


Figure 2 –Current/Planned Housing Units in Winslow Compared with Sewer Utility Capacity

Other Factors for Consideration

- Consideration should be made for any potential increases in *commercial* development, which has remained flat for the last several years, but which absorb treatment plant capacity more quickly than residential development. Planned increases in commercial development in the Winslow sewer service area must be carefully balanced along with residential population growth and reflected in future evaluations of the plant capacity.

- Within the Winslow sewer service area, the sewer population is approximately 200 housing units (500 persons) *less* than the overall population due to some houses still being served by septic systems. Some accommodation for the connection of existing homes to the sewer system should be considered as part of the analysis.
- Multifamily housing has a lower household occupancy level (2.3) for multi-family housing than average (2.48). Therefore, the analysis provided in this memo can be considered conservative on the order of 8-10%.
- Lastly, for context, the planned upgrades to the Winslow Water Tank will provide the city's water utility the capacity to serve approximately 2,600 new ERUs inside the Winslow water service area boundary, an area that closely mimics the Winslow subarea, and also includes the New Brooklyn Road corridor, Fletcher Bay, and Upper Ferncliff.

CITY OF BAINBRIDGE ISLAND

KITSAP COUNTY WASHINGTON



CITY OF
BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

**G&O #23633
FEBRUARY 2026**



Gray & Osborne, Inc.
CONSULTING ENGINEERS

CITY OF BAINBRIDGE ISLAND

KITSAP COUNTY

WASHINGTON



CITY OF
BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN



G&O #23633
FEBRUARY 2026



Gray & Osborne, Inc.
CONSULTING ENGINEERS

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CHAPTER 1

INTRODUCTION

INTRODUCTION AND PURPOSE

The City of Bainbridge Island contracted with Gray & Osborne (G&O) in December of 2023 to provide assistance in generating a Water System Business Plan (Plan).

The purpose of the Plan is to help guide growth of the City's water system infrastructure, ensure efficient and sound management and maintenance of its existing assets, and to responsibly grow the water system to provide maximum benefit for both current and potential water system customers. Specifically, this report investigates the potential of incorporating existing small water systems into the City's system as the City's system grows.

To ensure that growth of the City's water system is responsibly, efficiently, and cost-effectively managed, the City is interested in completing a Water System Business Plan (Plan). The goal of the Plan is to ensure that the City's water utility is prepared to address planned and unplanned system expansion needs.

In addition, the Plan adds some detail and context to two upcoming planning exercises: a broader effort to inter-tie all of the largest municipally owned utilities on the Island; and, a plan to address the recommendations from the forthcoming Groundwater Management Plan. The final adopted version of the Groundwater Management Plan is expected to recommend the inter-connection of large water systems in an effort to co-develop water supply alternatives in the northern areas of the City, and also to adopt consistent and potentially enforceable water conservation policies across the larger water service areas. Specific to the Winslow Water System, the Plan herein will include the development of a forecast, strategy, and planning steps for the following:

- Serving new customers within and in close proximity to the City's water utility retail service area boundary;
- Serving areas that are not currently assigned a water service provider, or are assigned to the City but are not adjacent to the City's water infrastructure; and
- Coordinating resources and infrastructure with other service providers within the city limits.
- Anticipating potential water system issues and proactively exploring partnerships and opportunities with smaller water systems to avoid sudden, unexpected changes or disruptions in service.

The Plan will complement the data and information contained in existing planning documents by incorporating the following:

- A 20-year evaluation of the potential system expansion needs within, and adjacent to, the current retail service areas;
- Evaluation of adjacent water provider infrastructure and future service needs, including the potential costs and benefits of coordinating system interties, expansions, or other shared resource opportunities. This evaluation should also consider a risk analysis of the sustainability of water systems currently outside of the City's control;
- Input from the other water providers in the City; and
- Input and feedback from the City's Utility Advisory Committee.

The Plan is generally outlined as follows:

- Chapter 2 includes a description of background information, the existing facilities, and a summary of previous work and analysis.
- Chapter 3 provides more information on planning considerations for the Project, including existing facility analysis and projections, and regulatory/permitting considerations.
- Chapter 4 includes a brief assessment and characterization of the existing water system, as well as descriptions for potential system expansion projects.
- Chapter 5 provides insights into water system consolidation and satellite management.

CHAPTER 2

PROJECT BACKGROUND

INTRODUCTION

The City of Bainbridge Island (City) is located on Bainbridge Island in Kitsap County, Washington. The City limits encompass the entire island, which is located approximately 11 miles west of Seattle across Puget Sound.

The City owns and operates two Group A municipal public water systems that provide water service to customers within the service area. The larger system is the Winslow Water System, which serves approximately 7,100 full-time residents via approximately 3,160 service connections. The second system is the Rockaway Beach system, which serves approximately 200 full-time residents via approximately 72 service connections. The connections within the Winslow Water System are distributed between two pressure zones: the High Zone which covers a majority of the system and the Low Zone which covers roughly the portion of the service area south of Wyatt Way. The Winslow Water System ID number is #97650 while the Rockaway Beach Water System ID number is #734507.

In addition to the Winslow and Rockaway Beach water systems, there are several additional water systems within the City limits that are not owned by the City that provide water service. These systems range from small, privately owned, operated, and managed Group B systems to large Group A systems owned and operated by the Kitsap Public Utility District (KPUD). The City's two systems, as well as a majority of the island's other water systems, are shown in Figure 2-1.

In recent years, the City has been approached by several of these privately-owned water systems requesting to be served by the City's municipal infrastructure. Reasons for these requests vary, but a primary reason is that managers for these smaller systems no longer have the desire, availability, or expertise to maintain and manage the water system in accordance with the ever-changing public health landscape. In an effort to prepare for and efficiently manage these requests, and any other consolidation opportunities for centralized water service, the City has contracted with Gray & Osborne (G&O) to assist with the generation of a Water System Business Plan. This project has been divided into two phases. The first phase is to generate a Water System Inventory for Bainbridge Island while the second phase is to generate a plan on how to accommodate private water system requests, strategies for handling these requests and any upgrades necessary, and to assess the risk for these requests.

PREVIOUS WORK

CITY OF BAINBRIDGE ISLAND WATER SYSTEM PLAN

The City completed their most recent Water System Plan (WSP) in 2017. The Plan was prepared by Corollo Engineering and was approved in July 2017. The Plan meets all the criteria as required by the Washington State Department of Health and highlights the existing water system facilities as well as provides a system-wide analysis for the City's water infrastructure. The WSP is available on the City's website.

In general, the City's current and proposed infrastructure provides sufficient storage, pressure, treatment, and distribution system accommodations required and recommended for a Class A municipal water system.

CITY OF BAINBRIDGE ISLAND GROUNDWATER STUDY

This study is currently in progress and will provide an analysis of the groundwater available to the City for service. The study is currently being reviewed by City staff and City residents prior to being finalized sometime in 2025 or 2026. The study provides both an analysis of the current groundwater systems and also provided recommendations for modifications to ensure continued reliable service.

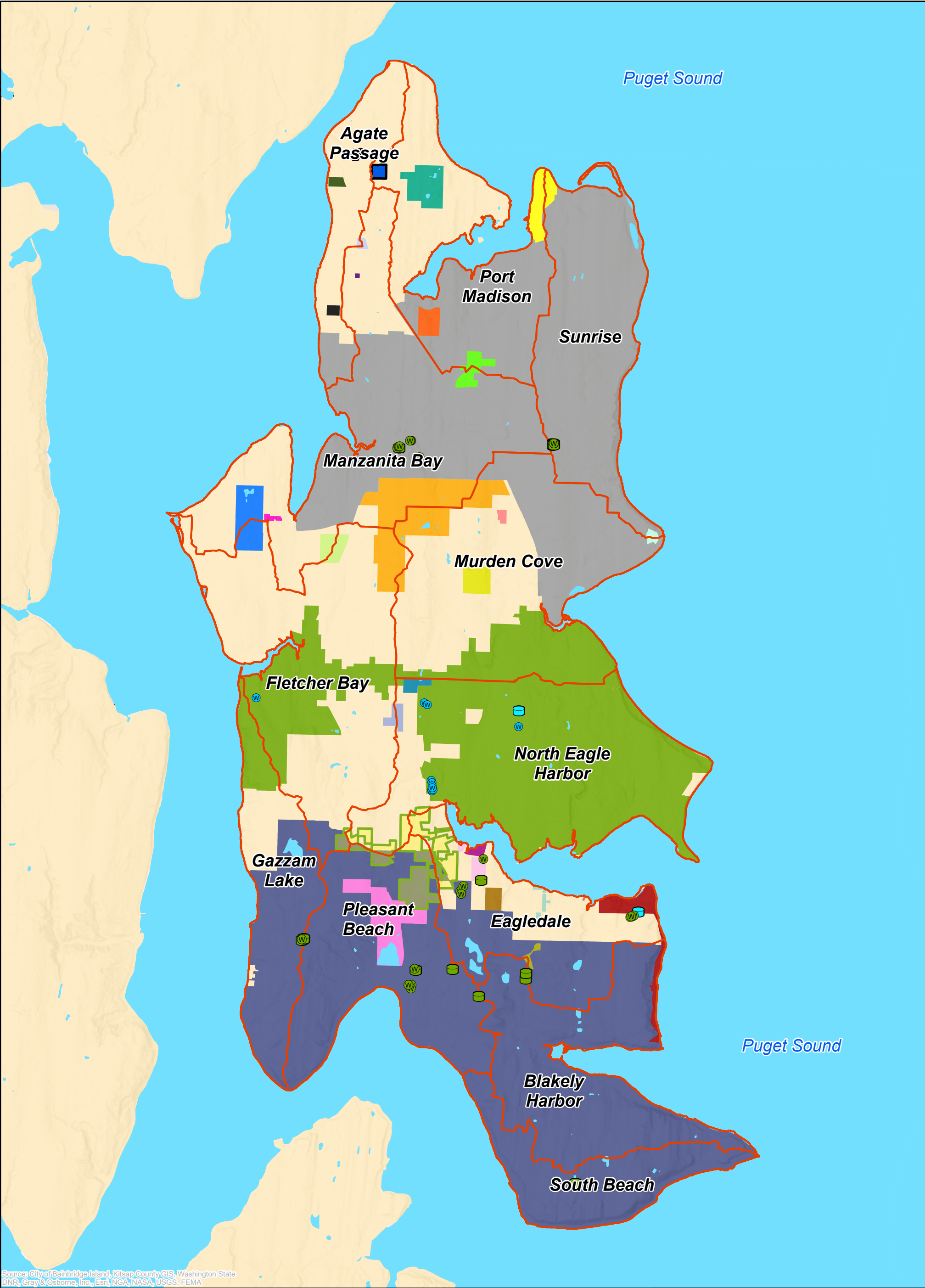
UTILITY ADVISORY COMMITTEE SMALL WATER SYSTEM POLICY MEMORANDUM

The City's Utility Advisory Committee (UAC) authored a technical memorandum in September, 2020 that provided useful information about the Island's water systems. The memo provided a history of the City's water system service, described key water service entities on the island, discussed key regulatory directives and tenets for public water systems, and provided alternatives and recommendations for how the City should manage and pursue water system service in the future. The UAC's ultimate recommendations were for the City to take a more active approach in engagement, potential management, and potential consolidation of small water systems on the island on an individual basis depending on the needs of the specific system.

COBI WATER SYSTEM INVENTORY STUDY TECHNICAL MEMORANDUM

A brief technical memorandum was completed by Gray & Osborne in April 2024 as a first step for the Water System Business Plan. This technical memorandum provided a summary of all water systems identified on the island, their classification, and as much information about each system as was available through publicly available channels.

The technical memorandum identified 32 Group A water systems on the island in addition to 134 Group B water systems. This technical memorandum is provided in Appendix A.



Source: City of Bainbridge Island, Kitsap County GIS, Washington State DNR, Gray & Osborne, Inc., Esri, NGA, NASA, USGS, FEMA

COBI Water System Facility

- Well
- Reservoir

KPUD Water System Facility

- Well
- Reservoir

Water Systems

- Group B Water System
- Winslow Water System (COBI)
- Emerald Heights
- Harbor Crest
- Islandwood Estates
- Meadowmeier

- North Bainbridge (KPUD)
- Port Madison Water Company
- Ravens Beach
- Rockaway Beach (COBI)
- Seabold Heights
- South Bainbridge (KPUD)
- Walden Water System
- Strawberry Hill Park
- Seabold United Methodist Church
- Seabold Community Hall
- Place Eighteen HOA
- Phelps Road Water System
- Hidden Heights
- Eagledale Park

- Bloedel Reserve
- Battle Point Park
- Graham Place
- Montessori Country School AP
- Derby Downs
- Eagle Harbor Marina
- Hazel Creek Montessori
- Rose Avenue Water Association
- Fieldstone Memory Care
- Bucklin

Reference

- Watershed
- Area Not Served by Group A
- Surface Water



0 0.25 0.5 1
Mile

CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 2-1

**CITY OF BAINBRIDGE ISLAND
WATER SYSTEMS**



EXISTING CITY OF BAINBRIDGE ISLAND (COBI) FACILITIES

WINSLOW WATER SYSTEM

Distribution System

The Winslow Water System was originally constructed to serve the City of Winslow on Bainbridge Island, which was incorporated in 1947. The City's current distribution system is comprised of approximately 47 miles of piping ranging from 2-inch to 12-inch diameter. The majority of the system is well looped and is ductile iron piping greater than 6-inch diameter.

The Rockaway Beach Water System was originally owned by the Rockaway Beach Water Association and supplied by two artesian wells. The wells were located within the Wyckoff industrial complex, which was subsequently designated as a US Environmental Protection Agency (USEPA) Superfund site. In 1993, USEPA assumed responsibility for the Superfund site and LID #17 was formed to make improvements to the Rockaway Beach Water System. The system contains approximately 6,500 LF of 8-inch water main and associated service connections along Rockaway Beach Road.

Figure 2-2 shows both the Winslow and Rockaway Beach Water Systems, and additional information on the two distributions systems is provided in Section 4.2.5 and 4.3 of the WSP.

Source of Supply

Supply for the Winslow water system is provided via groundwater supplied by eleven wells located at four well sites: Head of the Bay, Sands Avenue, Fletcher Bay, and Commodore. The wells draw from three separate aquifers.

DOH has determined eight of the eleven wells have a low risk of contamination while the remaining three have a moderate or high risk of contamination. A wellhead protection plan and an active cross-connection control program help protect the water system from contamination. The current limiting source capacity of the water system is approximately 1,750 gpm or 2.52 million gallons per day (mgd), which assumes that both Sands booster pumps are in operation.

Additional information on the wells and associated pumping equipment is provided in Section 4.2.1 of the WSP.

Treatment

Chlorine for disinfection and fluoride for oral hygiene are added at each well site prior to water being pumped into the High Pressure Zone distribution system.

Additional information on the City's existing treatment facilities is provided in Section 4.2.2 of the WSP.

Storage

Beginning in February 2025, storage for the system is provided by a single, 2.0 MG, elevated storage tank. This tank supplies the High Zone by gravity when wells are not operating. Previously, the City utilized two separate reservoirs (1.0 MG and 1.5 MG) for storage. The older, 1.0 MG reservoir was demolished as part of the elevated tank storage improvements project, and the 1.5 MG reservoir will be cleaned and stored empty in its current location.

Additional information on the City's existing storage facilities is provided in Section 4.2.3 of the WSP.

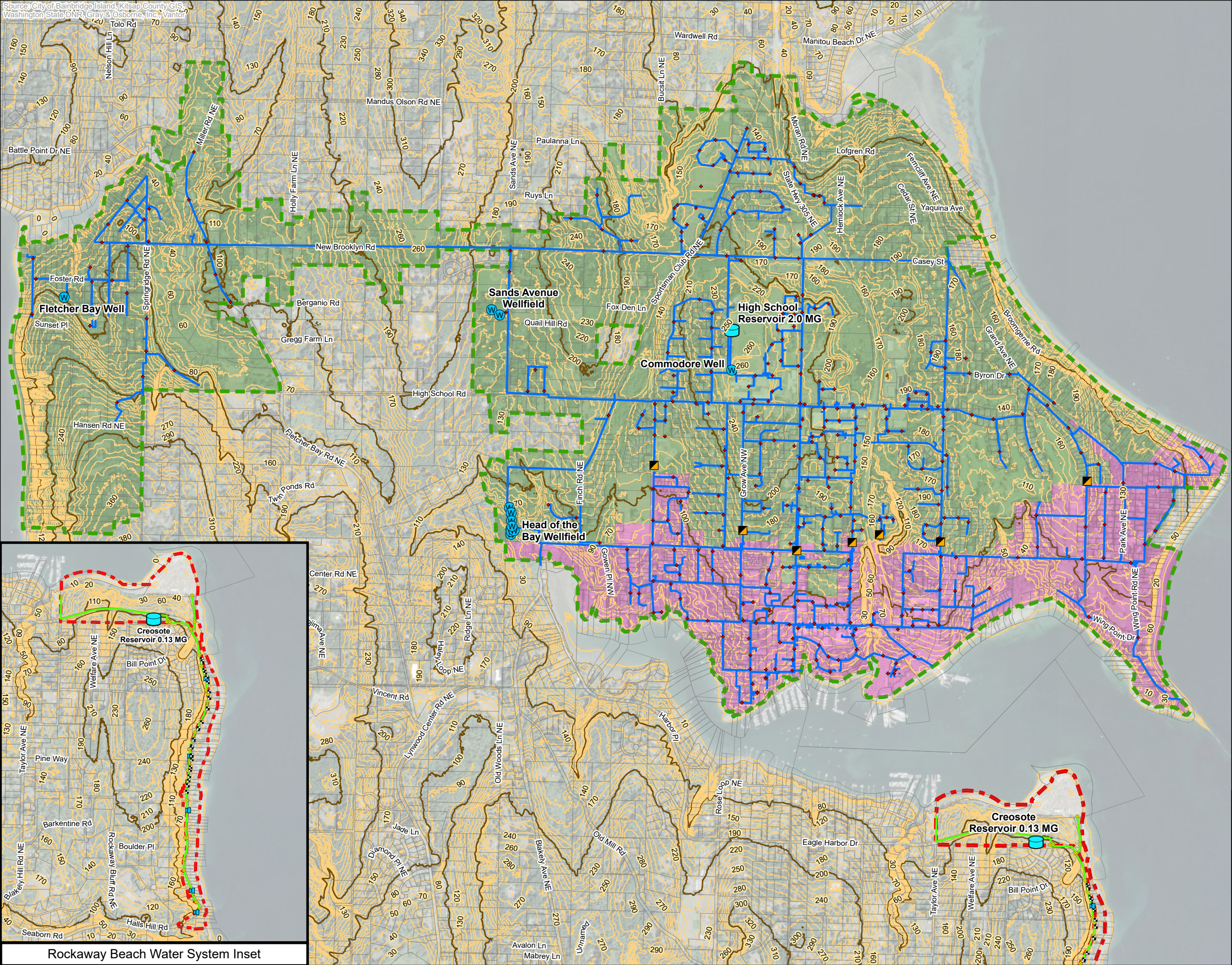
Pressure Zones and Pressure Reducing Stations

The COBI Water System is composed of two parts: the Winslow Water System and the Rockaway Beach Water System. The Winslow Water System is further divided into two pressure zones: the High Zone and the Low Zone. These zones and the COBI water system components are shown in Figure 2-2.

The Hydraulic Grade Line (HGL) of the High Zone is set by the elevation of the High School Reservoir at 359 feet. This zone serves a majority of the Winslow Water System and accommodates connections at higher elevations within the system.

The Low Pressure Zone is at an HGL of approximately 230 feet and is served via the High Zone through six pressure reducing valve (PRV) stations. With one exception (Head of the Bay), each station is equipped with a 2-inch low flow pressure reducing valve and a 6-inch or 8-inch high flow pressure reducing/sustaining valve. The downstream PRV pressure settings are adjusted to maintain a minimum pressure of 30 psi at the highest elevation in the Low Zone. With the construction of the new 2.0 MG reservoir described above, nine new PRV stations will be added to the system, along with over 2,000 LF of pipeline, and approximately 130 individual PRVs. When combined, these new components will balance the water pressure within the system resulting from the new, taller storage tank.

Additional information on the City's existing storage facilities is provided in Section 4.2.4 of the WSP.



COBI Facility

- Hydrant
- Valve
- Water Meter
- Blowoff
- PRV Station
- Well
- Reservoir
- Water Main
- Rockaway Water Main

Water Service Area

- Winslow Water System
- Rockaway Beach Water System

Pressure Zone

- High Pressure Zone
- Low Pressure Zone

Reference

- 10' Contour
- 100' Contour
- Parcel



0 625 1,250 2,500 Feet

CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 2-2

COBI WATER SYSTEMS



Rockaway Beach Water System Inset

ROCKAWAY BEACH

The Rockaway Beach Water System serves customers along Rockaway Beach Drive NE on the south side of Eagle Harbor. The system consists of a supply well, iron and manganese treatment facility, storage reservoir, and distribution system. The system is connected to the KPUD's South Bainbridge Water System via an intertie valve. This intertie connection is currently only used for emergency purposes.

Additional information for the Rockaway Beach system is provided in Section 4.6 of the WSP.

Briefly, the system is supplied with water from a 694-foot deep well. Water passes through a simple treatment system, then is pumped to the Creosote Reservoir. From there, the distribution system is fed by gravity. The system is controlled with modern telemetry and essentially operates based on the level within the Creosote Reservoir.

CHAPTER 3

PLANNING CONSIDERATIONS

INTRODUCTION

This purpose of this plan is not to modify existing demand projections or establish new demand projections, but rather to utilize the planning considerations from the WSP since having a basic understanding of current demand projections will help guide decision making and priorities for expanding and/or optimizing the water system. As such, a brief summary of pertinent planning components from the City's most recent WSP are provided in this Chapter.

HISTORICAL AND PROJECTED SYSTEM DEMANDS

Water system demands were fully investigated as part of the City's WSP. The City evaluated low, medium, and aggressive demand projections as part of their forecasting effort. For the Winslow System medium growth scenario, the projected Average Day Demand (ADD) and Maximum Day Demand (MDD) (including Distribution System Leakage) was 162 gpd/ERU and 350 gpd/ERU, respectively.

SOURCE CAPACITY

Source capacity is addressed within Chapter 5 of the WSP. Under the medium planning scenario, the City maintains adequate supply capacity through 2035 (20-year planning period) with their existing sources of supply.

This project does not affect existing source capacity or the need for additional source capacity.

WATER RIGHTS

A discussion and analysis of water rights is beyond the scope of this Plan; however, when evaluating whether or not to pursue water system consolidation, water rights should be considered. In general, the City maintains adequate water rights to serve the projected Winslow and Rockaway Beach Water System demand throughout the planning period. These calculations; however, do not consider the potential consolidation of Group A or Group B water systems. With this consideration, it may be necessary to pursue additional water rights – either at their existing facilities or by acquiring the water rights from the consolidated system – in order to supplement their source capacity. It may also be necessary to further develop their existing booster station and/or source capacity in order to provide service.

When considering whether to consolidate a particular system, the City should consider how these additional customers will affect the overall demand vs. source surplus/deficit, and should consider whether or not the system has water rights worth acquiring. This acquisition process can often be long and tedious, and specialty engineering services may often be desirable for this effort.

The previously completed water system inventory technical memorandum summarized the water rights possessed by each water system identified within the City. In general, the combined volume of these systems' water rights are small when compared to the City's existing water rights.

Existing water rights are described in Section 4.6 of the WSP. Additional information is provided in Section 5.2.1.1 of the WSP.

REGULATORY CONSIDERATIONS

As with any project that affects the equipment used to provide potable water to a municipal water system, regulatory and permitting concerns must be addressed. The section below summarizes the regulatory efforts needed to complete the proposed project.

WASHINGTON STATE DEPARTMENT OF HEALTH

Per WAC 246-290-110, a Project Report must be submitted to the Washington State Department of Health (DOH) for any modification or addition to a water system. At this point in time, this Plan serves to guide the City on water system expansion opportunities that may offer benefits of consolidation, and may serve to benefit small water systems and their customers throughout the City. While this plan will not be submitted to DOH, any projects recommended herein that are carried through for implementation must be reviewed and approved by DOH prior to execution. Alternatively, these projects may be incorporated into future water system planning documents and reviewed as a part of that effort.

CONSTRUCTION DOCUMENTS

Per WAC 246-290-120, construction documents must be submitted to DOH for review and approval prior to constructing modifications or additions to a water system.

For most municipal projects, the construction documents (Plans, Specifications, Forms, etc.) are advertised publicly via a public forum for bidding by responsive, responsible contractors as soon as the project is approved by DOH.

Once the project is awarded, it is then constructed in accordance with the approved contract documents.

Upon completion of the Project, the District or their representative must submit a Project Completion Form for DOH review and filing.

STATE ENVIRONMENTAL POLICY ACT (SEPA)

Per RCW 43.21C and WAC 197-111, all government agencies must consider the environmental impacts of a proposed project. The City typically serves as lead agency for the SEPA review and notification process. Typically, a SEPA checklist is prepared and a SEPA determination is made. After a determination is made, the SEPA Checklist and determination are provided for public comment. After the public comment period has elapsed, a final determination is made the project may progress accordingly. Any projects recommended herein that are carried through for implementation are likely to require SEPA consideration prior to execution.

PERMITTING

Depending on the scope of the project, permits may be required prior to execution. These may include Right-of-Way permits, clearing permits, grading permits, and/or building permits. For most projects, the City will serve as the authority having jurisdiction and will identify and issue any permits required for project execution. Fees, review times, and the types of permits all depend on the specific project.

Depending on the project and its location, the City may wish to provide both the predesign and contract documents to KPUD for review and comment prior to execution. This teamwork and open communication can help ensure that all water system improvements are coordinated in an effective and efficient manner with an emphasis on maximizing value and synergy between the island's two largest utility providers.

CHAPTER 4

WATER SYSTEM ASSESSMENT AND CHARACTERIZATION

INTRODUCTION

As noted previously, the purpose of this Plan is to ensure that the City's water utility is prepared to address planned and unplanned system expansion needs. Within this chapter, we will identify and describe existing water systems on the island, highlight any specific and/or critical information regarding these systems, and will highlight the potential for connection of these systems based on a rubric that considers a multitude of factors such as geography, age, number of connections, etc.

From this analysis, we will make recommendations and provide budgetary cost estimates and key design criteria for projects that would allow consolidation of these systems should the opportunity arise, or should consolidation be requested by the small water system customers.

EXISTING SYSTEM DESCRIPTION

WATER SYSTEM MANAGEMENT

The City owns and manages both the Winslow and Rockaway Beach Water systems. As is typical for other municipally owned and operated water systems, the City owns and maintains water system infrastructure within their service area, including, but not limited to, distribution system and transmission piping, booster stations, reservoirs, wells, treatment facilities, and pressure reducing stations.

The City uses this infrastructure to extract, treat, distribute, and provide water to customers within the service area, and these customers pay for this service through general finance charges, connection charges, and billing rates based on the volume of water used. The City then uses this revenue stream to provide administrative support and to maintain, improve, and grow their infrastructure based on the needs of the community and/or recommendations by engineering and/or water system professionals.

Along with these duties, the City also coordinates with adjacent water system purveyors as needed to help deliver high quality water to all customers on the island.

REVENUES

The City's current water utility rate structure was adopted in 2026 and is summarized in Table 4-1.

TABLE 4-1**City of Bainbridge Island Water Utility Billing Rates**

Parameter	Value
Category 1 – SFR	
Meter size: ≤ 0.75"	\$31.25
Meter size: 1"	\$61.63
Meter size: 1.5"	\$112.34
Water Volume: First 500 cf	\$3.18 per 100 cf
Water Volume: Next 700 cf	\$5.09 per 100 cf
Water Volume: Next 1,800 cf	\$7.25 per 100 cf
Water Volume: More than 3,000 cf	\$9.84 per 100 cf
Category 2 – Multi-Family	
Fixed rate - each unit	\$13.49
Water Volume	\$2.77 per 100 cf
Category 3 – Commercial	
Meter size: ≤ 0.75"	\$40.99
Meter size: 1"	\$90.66
Meter size: 1.5"	\$173.83
Meter size: 2"	\$272.83
Meter size: 3"	\$537.81
Meter size: 4"	\$835.90
Meter size: 6"	\$1,663.92
Water Volume	\$3.87 per 100 cf
Category 4 – Industrial	
By contract only. Rates and fees not less than Categories 1 - 3.	
Irrigation	
Meter size: ≤ 0.75"	\$10.26
Meter size: 1"	\$13.49
Meter size: 1.5"	\$18.91
Meter size: 2"	\$25.41
Meter size: 3"	\$42.66
Meter size: 4"	\$62.14
Meter size: 6"	\$116.18
Water Volume	\$8.47 per 100 cf
Contractor Project Use	
Only available at the Sands Avenue Well site. \$9.56 per 100 cf, plus a monthly administrative fee of \$37.80 when water is used.	

In addition to the utility billing rates described above, there are also additional charges applied for new construction or new development, based on various factors including the projected demand, type of water use, and size of the water meter and/or water service. These charges are typically called Participation Fees, and are based on the individual structure or development at a specific parcel. These are one-time charges applied to account for work by City staff to install necessary components and other administrative efforts to be used for future billings, maintenance, etc. Participation fees adopted in 2026 are summarized in Table 4-2.

TABLE 4-2**City of Bainbridge Island Water System Participation Fees**

Parameter	Value
Category 1 – S FR	
Meter size: ≤ 0.75 "	\$10,516
Meter size: 1"	\$14,264
Meter size: 1.5"	\$23,635
Meter size: 2"	\$34,881
Meter size: 3"	\$64,686
Meter size: 4"	\$98,605
Meter size: 6"	\$192,316
Category 2 – Multi-Family	
Meter size: ≤ 0.75 "	\$12,962
Meter size: 1"	\$16,710
Meter size: 1.5"	\$26,082
Meter size: 2"	\$37,327
Meter size: 3"	\$67,315
Meter size: 4"	\$101,051
Meter size: 6"	\$194,763
Category 3 – Commercial	
Meter size: ≤ 0.75 "	\$12,962
Meter size: 1"	\$16,710
Meter size: 1.5"	\$26,082
Meter size: 2"	\$37,327
Meter size: 3"	\$67,315
Meter size: 4"	\$101,051
Meter size: 6"	\$194,763
Category 4 - Irrigation	
Meter size: ≤ 0.75 "	\$5,623
Meter size: 1"	\$9,371
Meter size: 1.5"	\$18,742
Meter size: 2"	\$29,988
Meter size: 3"	\$59,975
Meter size: 4"	\$93,712
Meter size: 6"	\$187,423

Although analysis of these revenue streams is outside the scope of this Plan, these values are important when considering water system expansion because new water system customers generate additional revenues for the City, as well as incurring additional costs. As such, any decision on whether or not to connect new water systems to the City's infrastructure should consider both the immediate capital costs for such an expansion, but must also consider the new and long-term revenues that will be generated as a result of this expansion.

OPERATION AND MAINTENANCE

A full and complete description of the City's Operations and Maintenance program is provided in Chapter 8 of the WSP. The City has a Manager-Council form of government in which the City Manager oversees management of the Public Works Department and the Water Utility through the Public Works Director. The Water Utility is operated as a utility enterprise under the direction of the Public Works Director. Policy and planning oversight and input are provided by the Utility Advisory Committee comprised of a group of citizen volunteers.

Throughout the City, the Public Works Department coordinates with other departments for key water utility support services. These services are performed by positions that have multiple responsibilities. Together these support services amount to 4.8 full time equivalent (FTE) positions.

The public works department is responsible for the City buildings, grounds, streets, water systems, storm sewer systems, sanitary sewer collection systems, and the wastewater treatment plant. The department currently has 37 approved FTE positions spread across two divisions (water and wastewater). Under the Public Works Director there are a total of 3.3 FTEs assigned responsibility for planning, design, construction, operation, maintenance, and management of the City's water systems.

Operation and maintenance of the City's water infrastructure is complicated and specialized, and requires specialized knowledge about water extraction, treatment, and delivery. The City's operations and maintenance tasks generally fall under the following categories:

- Routine operations;
- Preventive maintenance and repairs;
- Cross connection control;
- Capital and development project support; and
- Emergency response.

These duties are noted here to highlight the tasks that are required of City staff. When considering connecting existing systems to the City's infrastructure, it is important to realize that additional FTEs may be needed to accommodate the new facilities and

workload that is added. The size of any system added, its distribution system complexity, system age, existing infrastructure, sampling requirements, water quality parameters, and geographical location will all help to determine if operation and maintenance of the new system can be accomplished using existing staff, or if additional staff are needed.

SATELLITE MANAGEMENT

A Satellite Management Agency (SMA) is an individual, purveyor, or entity that is approved by DOH to own or operate more than one public water system on a regional or county-wide basis, without the necessity for a physical connection between such systems. Management responsibilities include planning and policy decision making. Operational responsibilities include normal day-to-day operations, preventative maintenance, water quality monitoring, trouble-shooting, emergency response, responding to complaints, public/press contact, and recordkeeping.

Although the City does not serve as an SMA for any existing water systems on the island, it may be beneficial to provide this service under specific circumstances. The systems requiring these services are typically small and require minimal management and/or upkeep, and additional revenues could be generated for services rendered by the City. Depending on the number, size, and complexity of the system; however, it may require additional City FTEs in order to provide necessary services. These additional FTEs represent an additional cost to the City. Additional information on potentially providing SMA services is provided later in this Plan.

As described in the following sections, there are two primary SMAs that serve a number of small water systems within the City. These SMAs are Northwest Water Systems and Washington Water Service Group.

GROUP A WATER SYSTEM ASSESSMENT

EXISTING SYSTEM SUMMARY

As shown in Table 4-3, there are currently approximately 32 Group A water systems within the city limits. A summary of system owners/operators is provided in Table 4-4 while Table 4-5 provides a summary of the type and classification of the water systems identified.

TABLE 4-3**Summary of Group A Water Systems**

Parameter	Value
City of Bainbridge Island	
Quantity	2 ⁽¹⁾
Winslow Connections	3,438
Rockaway Beach Connections	72
Other Group A Systems	
Quantity	30
Average Number of Connections	154
Lowest Number of Connections	1
Highest Number of Connections	1,944
Total Estimated Connections	4,473

(1) Does not include Fire Department or Public Works Facilities.

TABLE 4-4**Summary of Group A Owners/Operators**

Owner/Operator Name	Number of Systems	Approximate No. of Connections	Potential Total Connections
Northwest Water Systems	12	334	395
Kitsap PUD	5	3,910	3,976 ⁽¹⁾
Bainbridge Island Metro Park and Recreation District	4	18	27 ⁽¹⁾
Washington Water Service	3	143	161
Montessori Country School	1	1	1
Cascadia Holdings	1	1	1
Eagle Harbor Condo Owner Association	1	54	54
City of Bainbridge Island ⁽²⁾⁽³⁾	1	4	4
Bloedel Reserve	1	8	8
Total	29⁽³⁾	4,473	4,627

- (1) Estimated. The number of allowed connections for some selected systems are not specified by DOH.
- (2) Public works.
- (3) The Bainbridge High School System is currently labeled “inactive” and is not included in the list above.

TABLE 4-5**Summary of Group A System Types**

System	Quantity
Ownership Type	
Community ⁽¹⁾	19
Transient Non-Community ⁽²⁾	6
Non-Transient, Non-Community ⁽³⁾	6
Management Type	
Association/Satellite	11
Public	10
Private	6
Private/Satellite	4

- (1) Community water system means any Group A water system providing service to fifteen or more service connections used by year-round residents for 180 or more days within a calendar year, regardless of the number of people, or regularly serving at least twenty-five year-round (i.e., more than 180 days per year) residents.
- (2) A Group A water system that is not a community water system. Transient (TNC) water systems serve 25 or more different people each day for sixty or more days within a calendar year; 25 or more of the same people each day for 60 or more days, but less than one hundred eighty days within a calendar year; or, One thousand or more people for two or more consecutive days within a calendar year. Examples of a TNC water system might include a restaurant, tavern, motel, campground, state or county park, an RV park, vacation cottages, highway rest area, fairground, public concert facility, special event facility, or church.
- (3) A Group A water system that is not a community water system. Non-transient (NTNC) water systems provide service opportunity to 25 or more of the same non-residential people for 180 or more days within a calendar year (schools, day cares, business, motels, factories, or large restaurants).

The existing Group A water systems are shown geographically in Figure 2-1, as well as Figure 4-1 through 4-12. Figures 4-1 through 4-12 are divided by the Island's individually recognized watershed boundaries. The geographical location of a water system is important when considering the resources and cost that will be required to connect any water systems located at the northern or southern extent of the island given that the majority of the City's existing water system infrastructure lies within the center portion of the island.

Key takeaways from these figures are as follows:

- There are three, large water systems in three distinct regions.
 - North Bainbridge Water Company (KPUD);

- Winslow Water System (City of Bainbridge Island);
- South Bainbridge Water System (KPUD).
- 23 of the 31 listed Group A water systems lie within or directly adjacent to the three largest water systems on the island.
- A majority of the Group B water systems lie within the central third of the Island, which would make their consolidation both feasible and cost effective, provided that Winslow Water System infrastructure is extended to these areas.
- There are many existing Group A water systems that lie within or directly adjacent to the City's Winslow Water System. For these water systems, connection to City infrastructure is both feasible and cost effective.
- There are many apparent opportunities for interties and water system coordination between the City's three largest water systems.
- A slight majority of the existing Group A water systems are located to the north of the Winslow Water System.

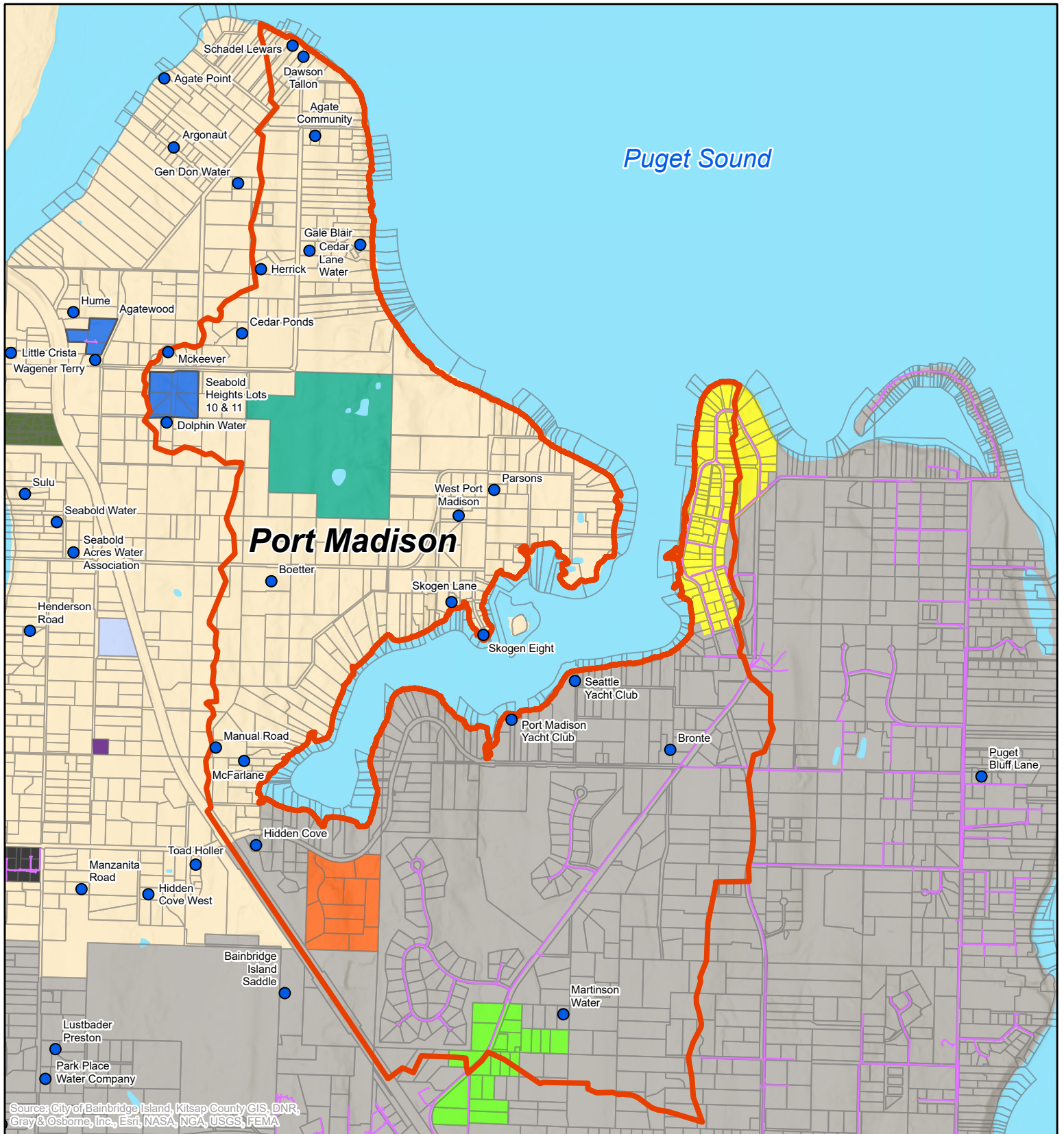
EXISTING SYSTEM GEOGRAPHICAL ASSESSMENT

Figures 4-1 through 4-12 highlight the geographical location of Group A and B water systems on the island. Table 4-6 highlights the number of systems in each individual watershed.

TABLE 4-6

Summary of Water System Locations

Watershed Name	Group A	Group B
Port Madison	5	22
Agate Passage	4	15
Sunrise	2	1
Manzanita Bay	6	15
Murden Cove	6	12
Fletcher Bay	7	16
North Eagle Harbor	5	18
Gazzam Lake	2	8
Eagledale	9	13
Pleasant Beach	3	5
Blakely Harbor	3	1
South Beach	1	0



Source: City of Bainbridge Island, Kitsap County GIS, DNR, Gray & Osborne, Inc., Esri, NASA, NGA, USGS, FEMA

Water Systems

- Group B Water System
- North Bainbridge (KPUD)
- Port Madison Water Company
- Seabold Heights
- Seabold United Methodist Church
- Seabold Community Hall
- Phelps Road Water System
- Hidden Heights
- Bloedel Reserve
- Graham Place

Reference

- KPUD Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



0 500 1,000 2,000
Feet

CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-1

PORT MADISON WATERSHED





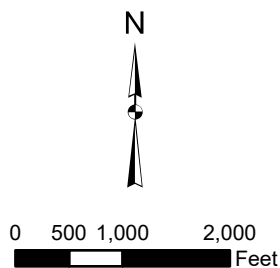
Source: City of Bainbridge Island, Kitsap County GIS, DNR, Gray & Osborne, Inc., Esri, NASA, NGA, USGS, FEMA

Water Systems

- Group B Water System
- North Bainbridge (KPUD)
- Seabold Heights
- Seabold United Methodist Church
- Seabold Community Hall
- Phelps Road Water System
- Hidden Heights
- Bloedel Reserve
- Graham Place

Reference

- KPUD Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



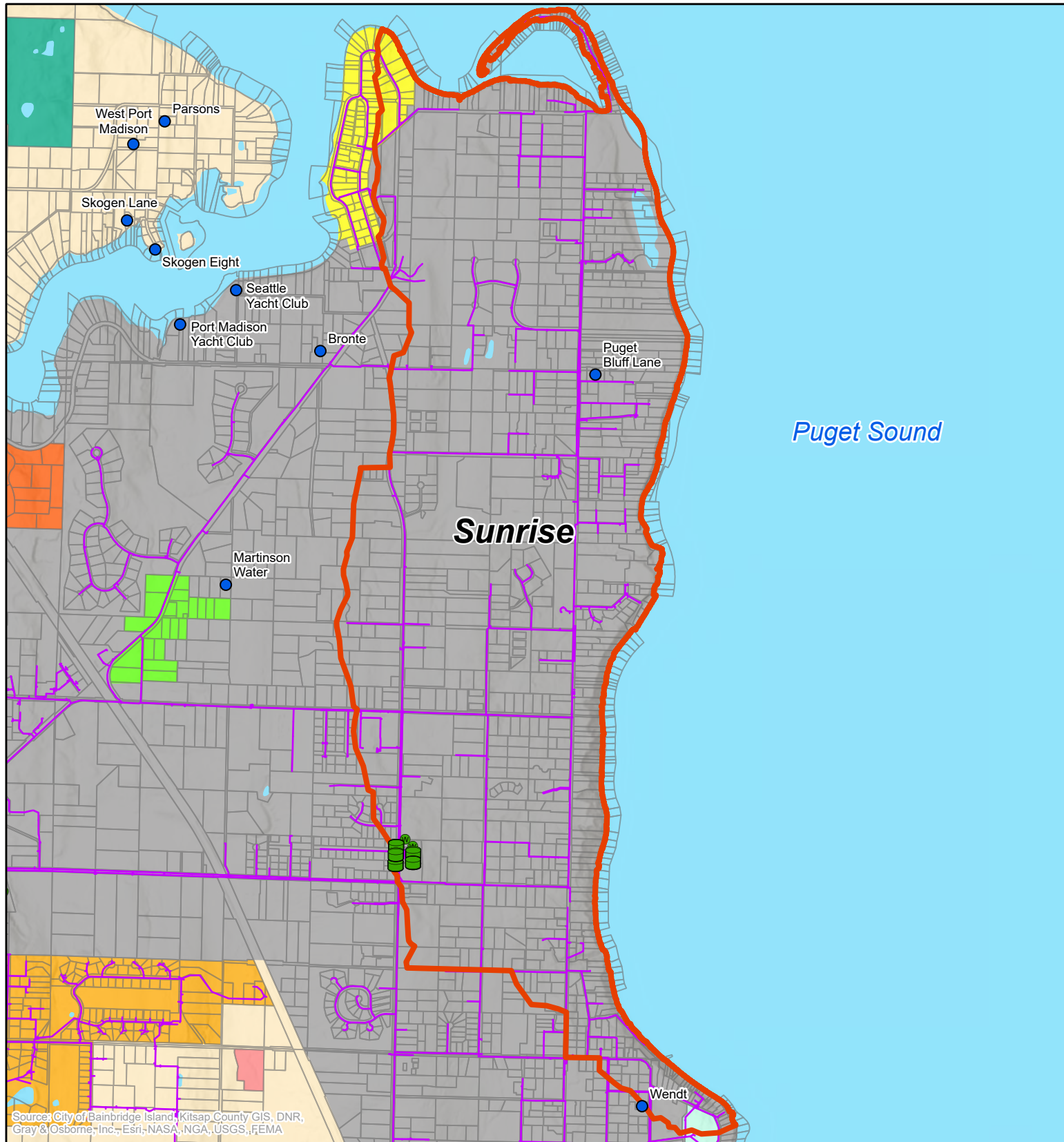
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-2

AGATE PASSAGE WATERSHED





KPUD Facility

- Well
- Reservoir

Water Systems

- Group B Water System
- Meadowmeer
- North Bainbridge (KPUD)
- Port Madison Water Company
- Phelps Road Water System
- Hidden Heights
- Bloedel Reserve

- Hazel Creek Montessori
- Fieldstone Memory Care

Reference

- KPUD Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



0 500 1,000 2,000
Feet

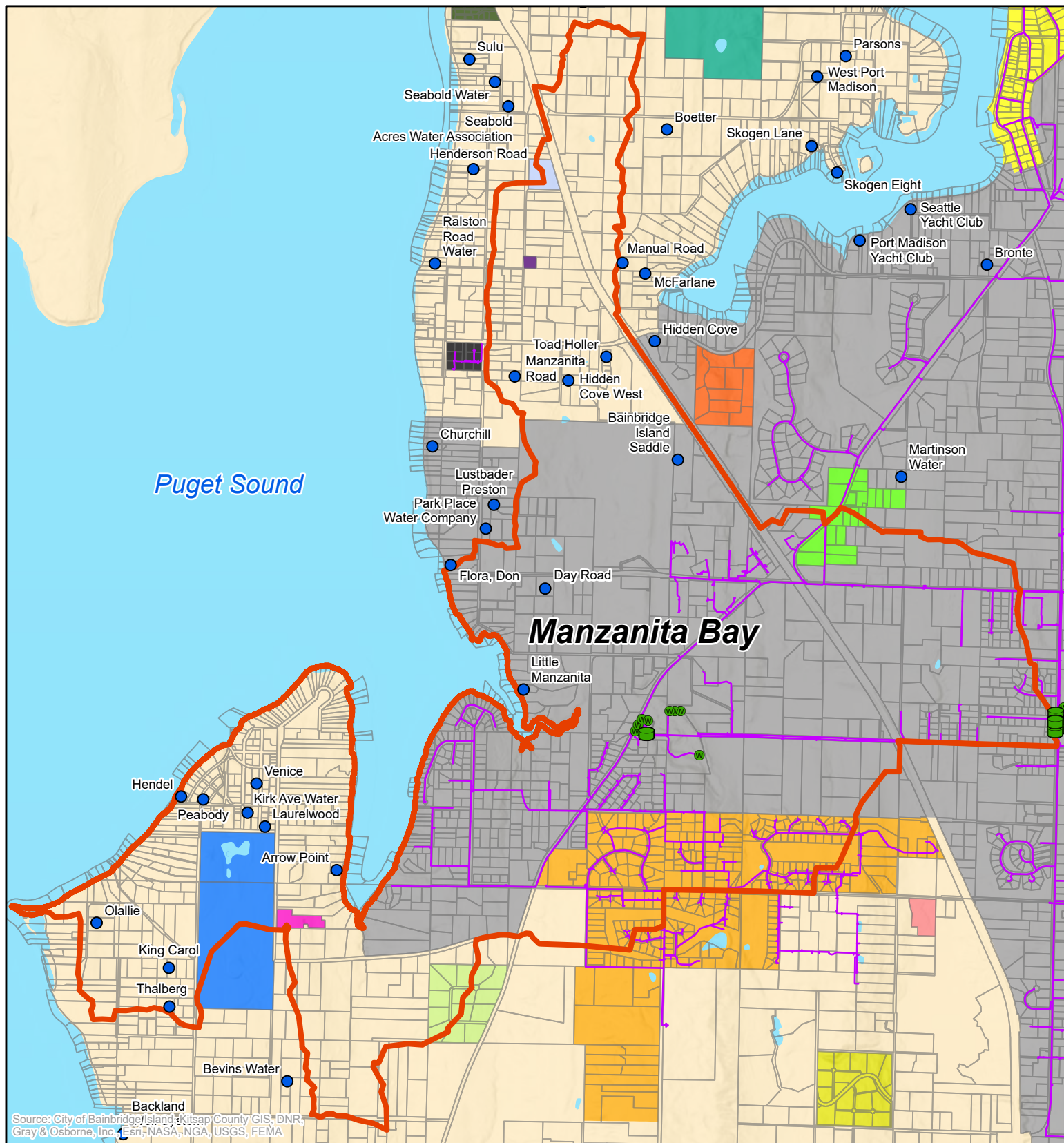
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-3

SUNRISE WATERSHED





Source: City of Bainbridge Island, Kitsap County GIS, DNR, Gray & Osborne, Inc., Esri, NASA, NGA, USGS, FEMA

KPUD Facility

- Well
- Reservoir

Water Systems

- Group B Water System
- Islandwood Estates
- Meadowmeer
- North Bainbridge (KPUD)
- Port Madison Water Company
- Seabold Heights
- Seabold United Methodist Church
- Seabold Community Hall
- Phelps Road Water System

- Hidden Heights
- Bloedel Reserve
- Battle Point Park
- Graham Place
- Montessori Country School AP
- Derby Downs
- Hazel Creek Montessori

Reference

- KPUD Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



0 625 1,250 2,500
Feet

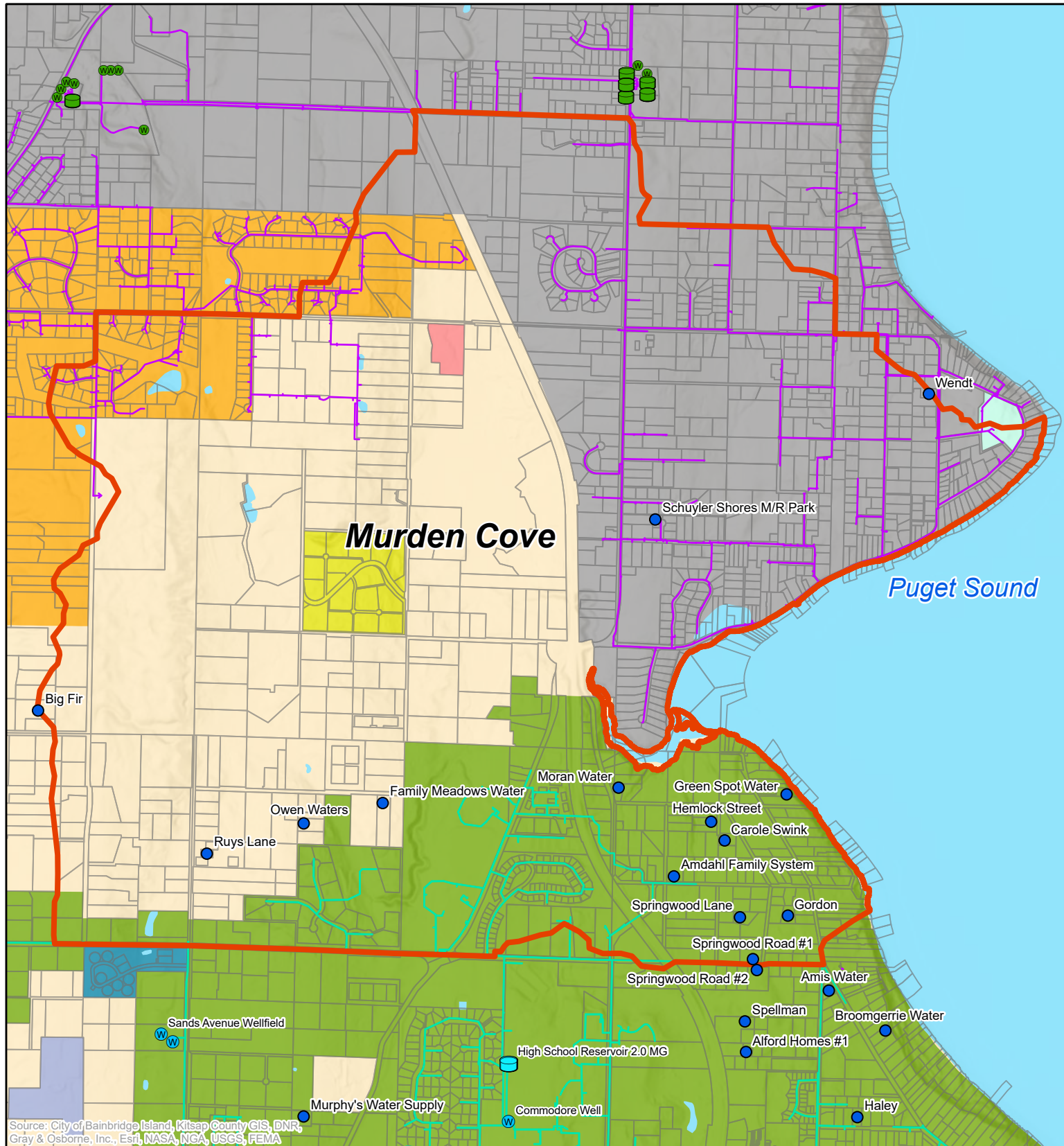
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-4

MANZANITA BAY WATERSHED





Source: City of Bainbridge Island, Kitsap County GIS, DNR, Gray & Osborne, Inc., Esri, NASA, NGA, USGS, FEMA

COBI Facility

- Well
- Reservoir

KPUD Facility

- Well
- Reservoir

Water Systems

- Group B Water System
- Winslow Water System (COBI)
- Meadowmeier
- North Bainbridge (KPUD)

- Walden Water System
- Strawberry Hill Park
- Derby Downs
- Hazel Creek Montessori
- Fieldstone Memory Care

Reference

- KPUD Water Main
- City of Bainbridge Island Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



0 400 800 1,600
Feet

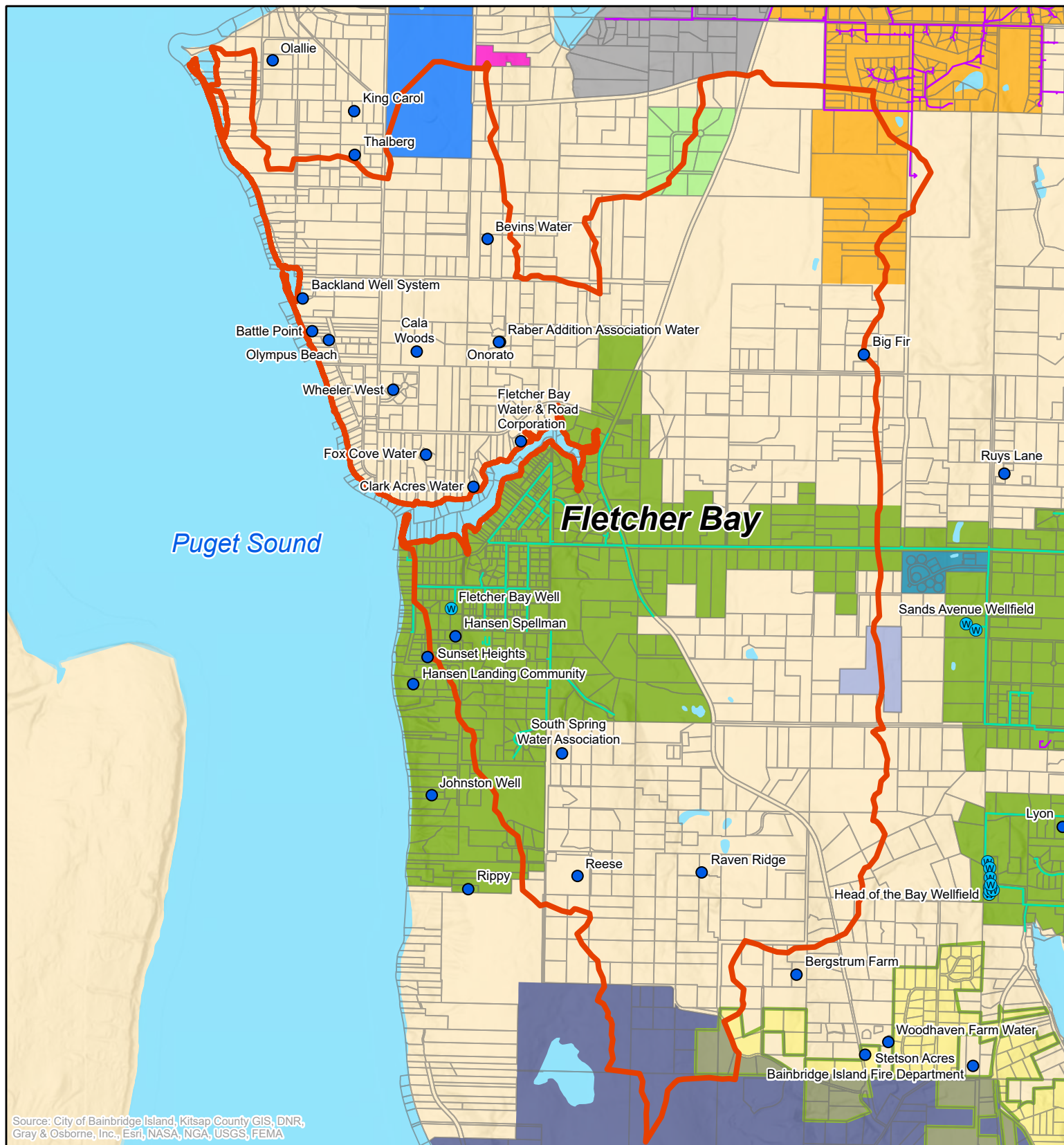
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-5

MURDEN COVE WATERSHED





COBI Facility



Water Systems

- Group B Water System
- Winslow Water System (COBI)
- Harbor Crest
- Islandwood Estates
- Meadowmeer
- North Bainbridge (KPUD)
- South Bainbridge (KPUD)
- Walden Water System

■ Strawberry Hill Park

■ Battle Point Park

■ Montessori Country School AP

■ Bucklin

Reference

- KPUD Water Main
- City of Bainbridge Island Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



0 500 1,000 2,000
Feet

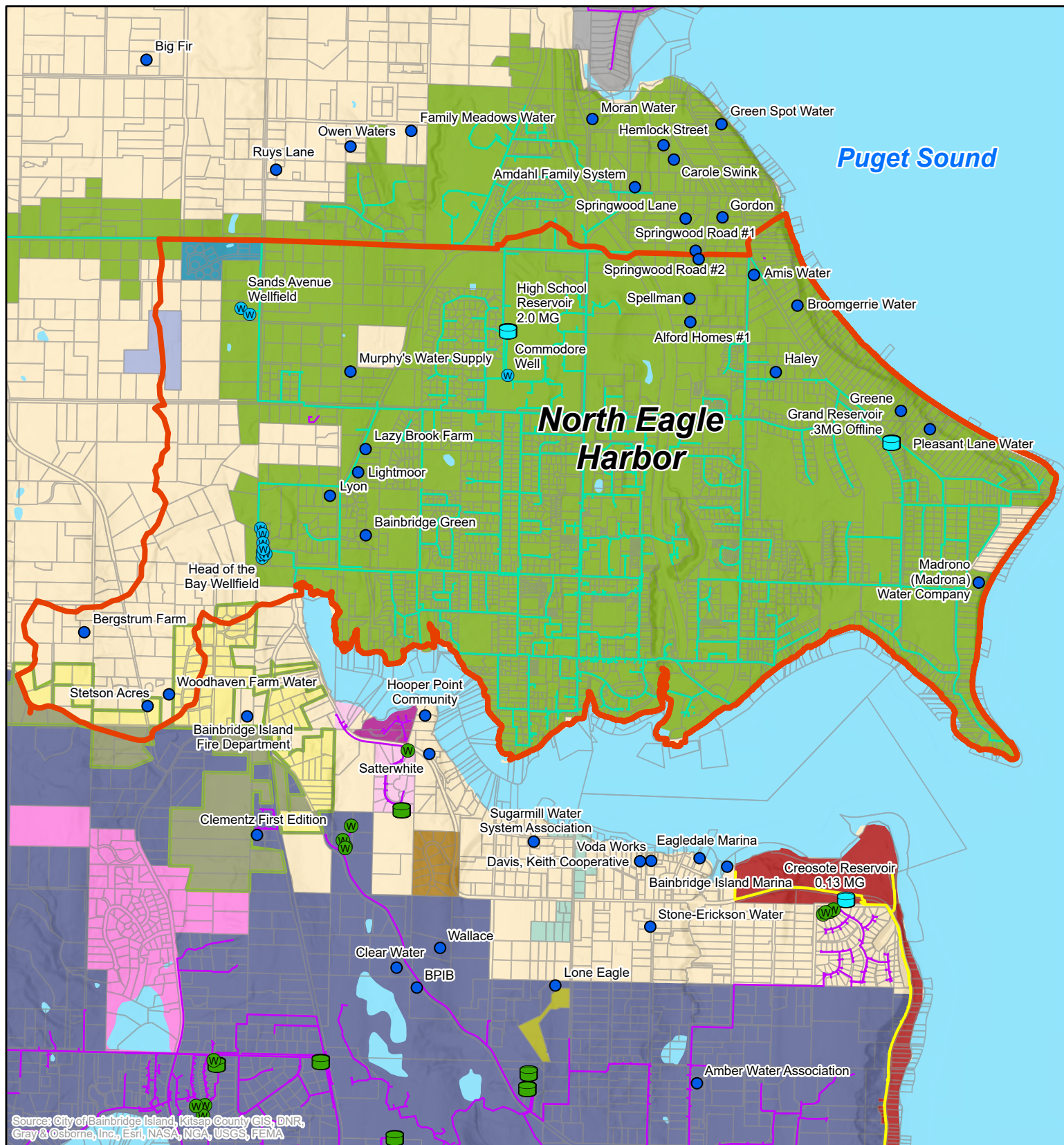
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-6

FLETCHER BAY WATERSHED





Source: City of Bainbridge Island, Kitsap County GIS, DNR, Gray & Osborne, Inc., Esri, NASA, NGA, USGS, FEMA

COBI Facility

Well

Reservoir

KPUD Facility

Well

Reservoir

Water Systems

Group B Water System

Winslow Water System (COBI)

Emerald Heights

Harbor Crest

North Bainbridge (KPUD)

Ravens Beach

Rockaway Beach (COBI)

South Bainbridge (KPUD)

Walden Water System

Strawberry Hill Park

Place Eighteen HOA

Eagledale Park

Rose Avenue Water Association

Bucklin

Reference

KPUD Water Main

City of Bainbridge Island Water Main

Rockaway Water Main

Watershed

Area Not Served by Group A

Parcel

Surface Water



0 500 1,000 2,000
Feet

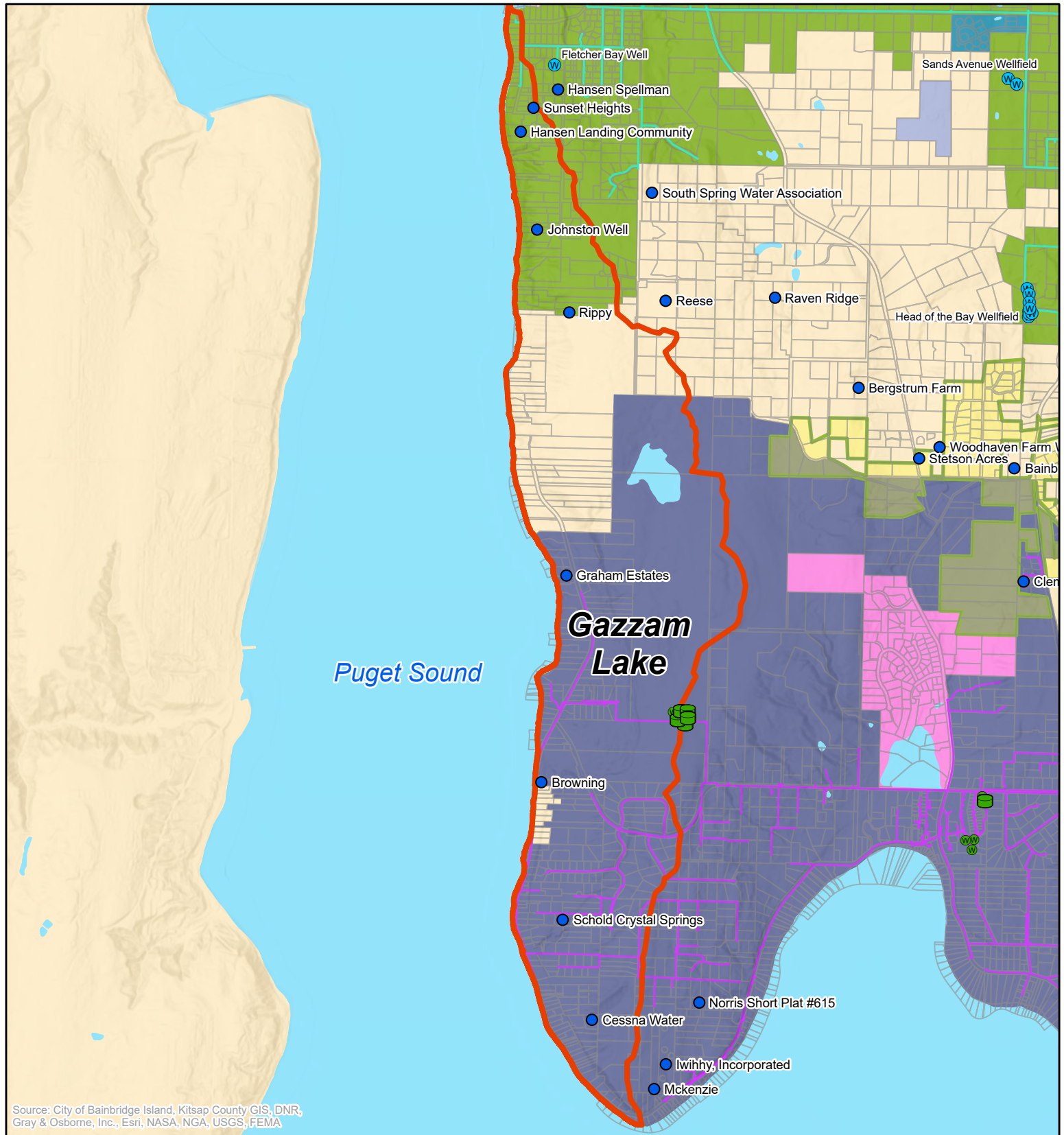
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-7

NORTH EAGLE HARBOR WATERSHED





Source: City of Bainbridge Island, Kitsap County GIS, DNR, Gray & Osborne, Inc., Esri, NASA, NGA, USGS, FEMA

COBI Facility

Well

KPUD Facility

Well

Reservoir

Water Systems

Group B Water System

Winslow Water System (COBI)

Emerald Heights

South Bainbridge (KPUD)

Walden Water System

Strawberry Hill Park

Bucklin

Reference

KPUD Water Main

City of Bainbridge Island Water Main

Watershed

Area Not Served by Group A

Parcel

Surface Water



0 625 1,250 2,500
Feet

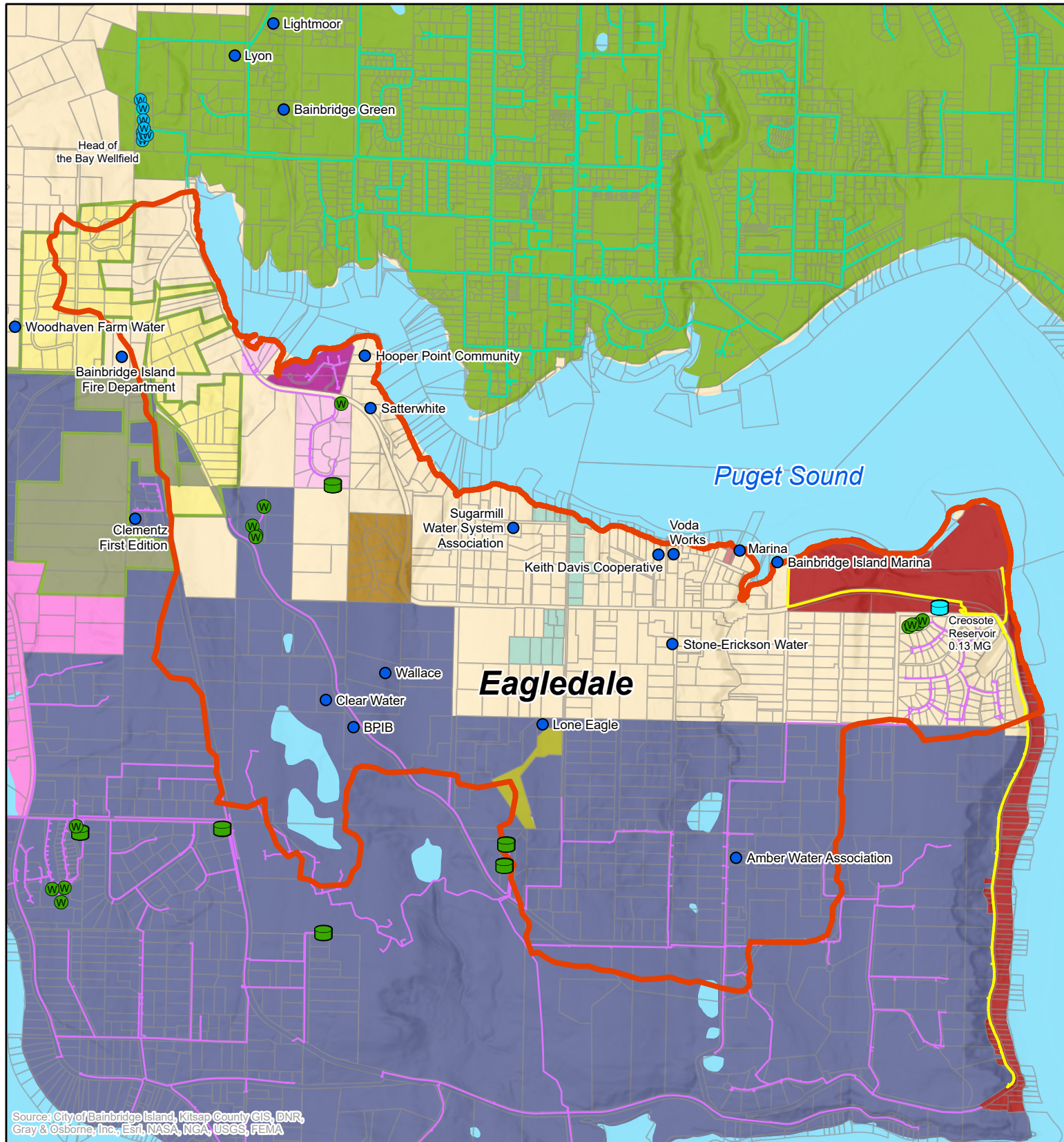
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-8

GAZZAM LAKE WATERSHED





COBI Facility

- Well
- Reservoir

KPUD Facility

- Well
- Reservoir

Water Systems

- Group B Water System
- Winslow Water System (COBI)
- Emerald Heights
- Harbor Crest
- Ravens Beach
- Rockaway Beach (COBI)

South Bainbridge (KPUD)

- Place Eighteen HOA
- Eagle Dale Park
- Eagle Harbor Marina
- Rose Avenue Water Association
- Bucklin

Reference

- KPUD Water Main
- City of Bainbridge Island Water Main
- Rockaway Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



0 375 750 1,500
Feet

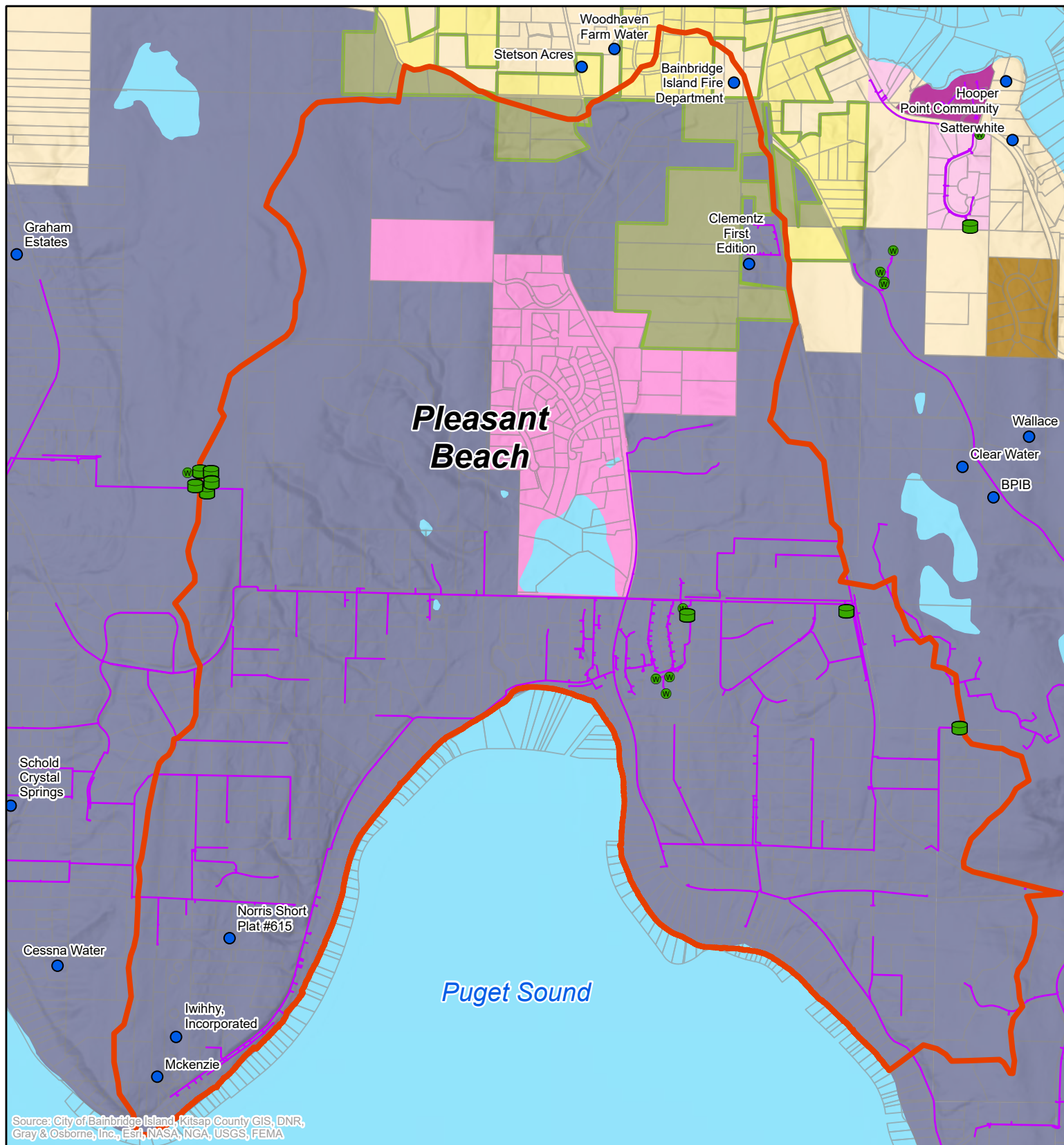
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-9

EAGLEDALE WATERSHED





KPUD Facility

- Well
- Reservoir

Water Systems

- Group B Water System
- Winslow Water System (COBI)
- Emerald Heights
- Harbor Crest
- Ravens Beach
- South Bainbridge (KPUD)
- Place Eighteen HOA
- Bucklin

Reference

- KPUD Water Main
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



0 375 750 1,500
Feet

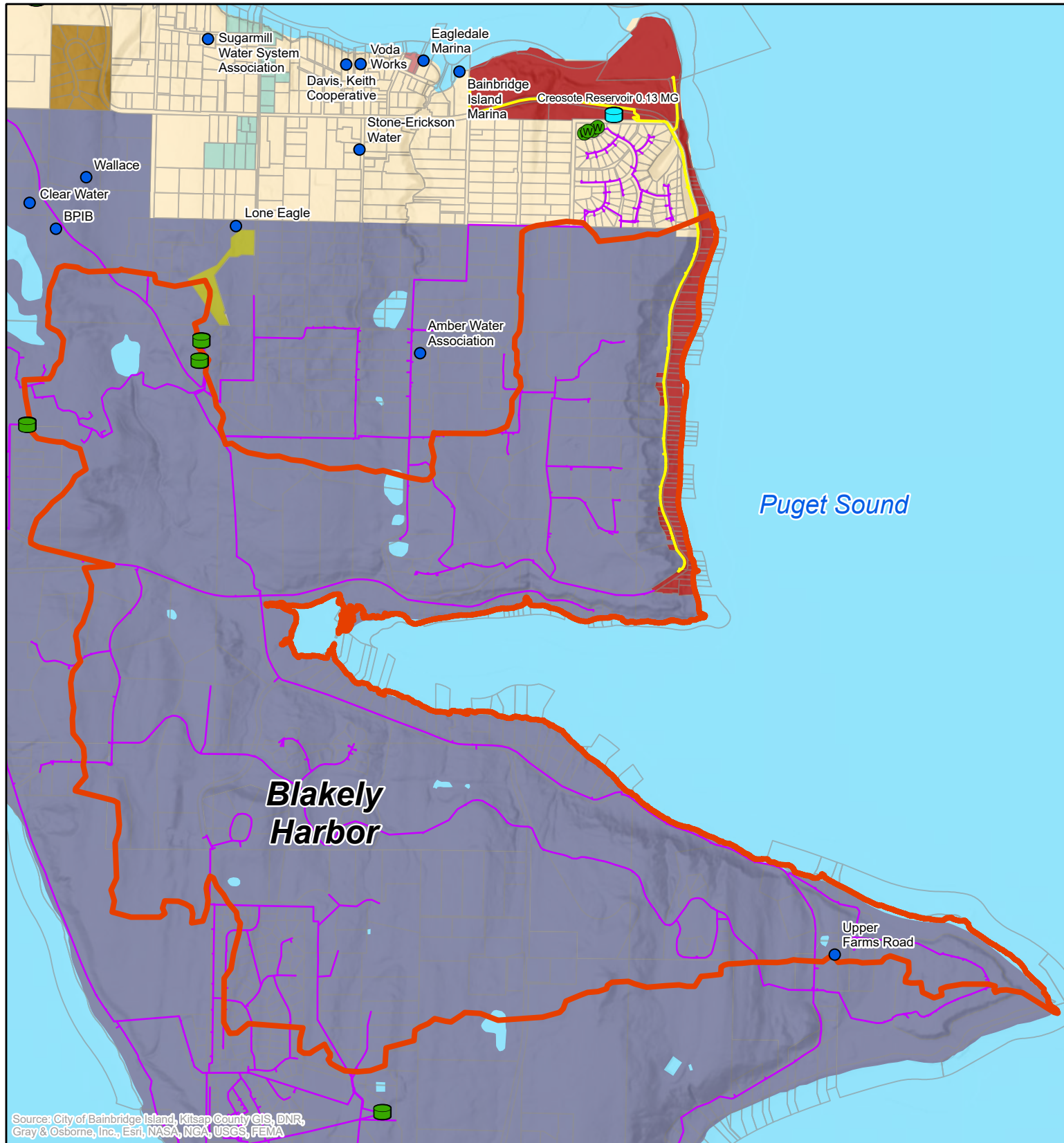
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-10

PLEASANT BEACH WATERSHED





COBI Facility

Reservoir

KPUD Facility

Well

Reservoir

Water Systems

Group B Water System

Ravens Beach

Rockaway Beach (COBI)

South Bainbridge (KPUD)

Eagledale Park

Eagle Harbor Marina

Rose Avenue Water Association

Reference

KPUD Water Main

Rockaway Water Main

Watershed

Area Not Served by Group A

Parcel

Surface Water



0 500 1,000 2,000
Feet

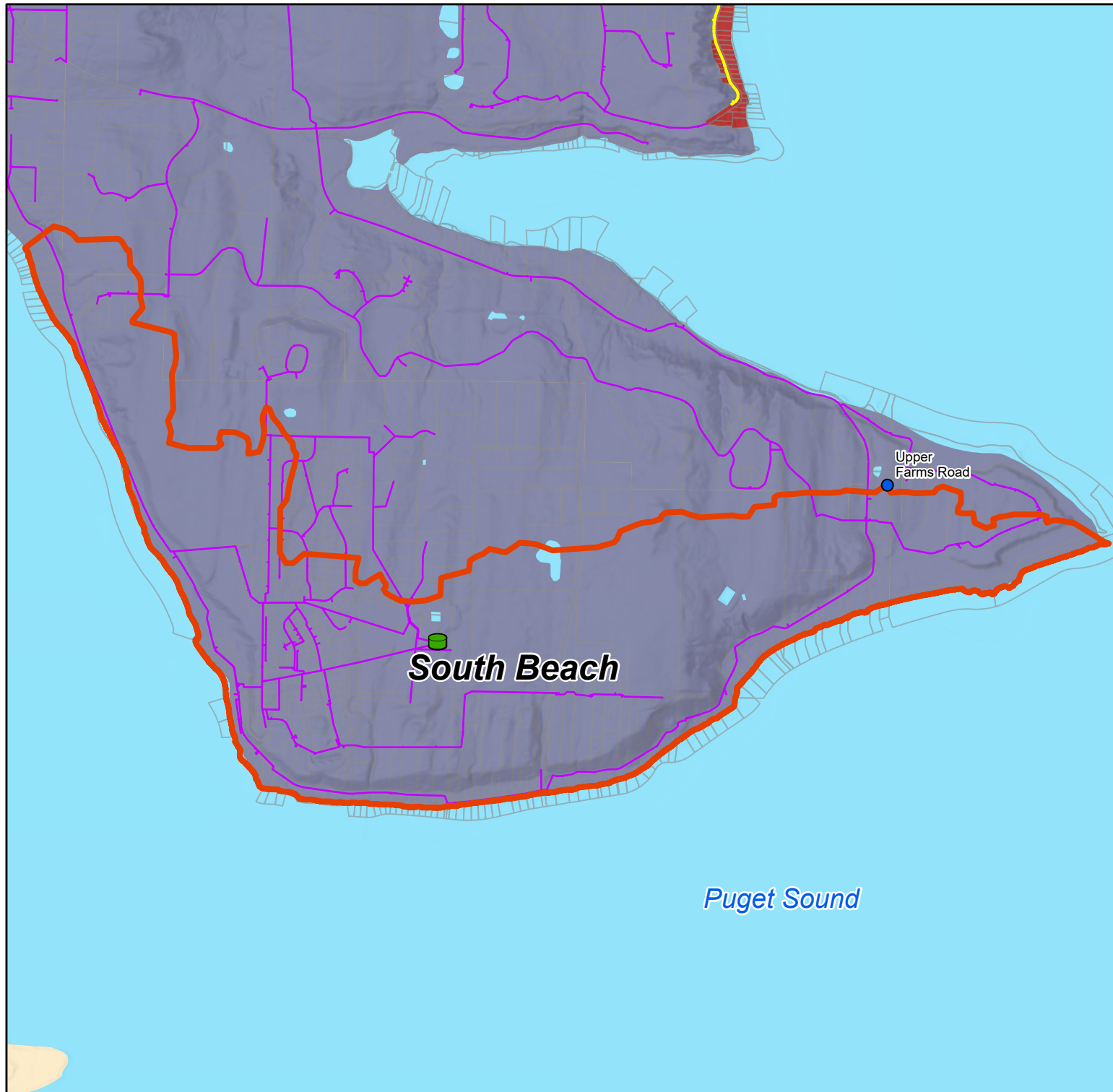
CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-11

BLAKELY HARBOR WATERSHED





Source: City of Bainbridge Island, Kitsap County GIS, DNR, Gray & Osborne, Inc., Esri, NASA, NGA, USGS, FEMA

KPUD Facility

- Well
- Reservoir

Water Systems

- Group B Water System
- Rockaway Beach (COBI)
- South Bainbridge (KPUD)

Reference

- KPUD Water Main
- Rockaway Water Main
- Watershed

- Area Not Served by Group A
- Parcel
- Surface Water



0 500 1,000 2,000
Feet

CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-12

SOUTH BEACH WATERSHED



North Eagle Harbor, Fletcher Bay, and Eagledale watersheds are in closest proximity to the Winslow Water System, and as such represent the most cost-effective areas to explore potential system expansion/consolidation. From Table 4-6, there are 20 Group A and 46 Group B water systems in these watersheds.

Although systems located farther north or south could still be connected, their geographical separation from existing City infrastructure necessitates a much higher capital investment to connect. As such, each system in these regions must be considered individually based on existing infrastructure, desire to connect, and the availability for connection to other major purveyors such as KPUD.

As such, the City should prioritize communication and potential connection efforts with all existing Group A water systems within the North Eagle Harbor, Fletcher Bay, and Eagledale watersheds prior to prioritizing Group A water systems in the remaining watersheds.

EXISTING SYSTEM RISK ASSESSMENT

To help prioritize which system might provide maximum value to the City, it is useful to quantify the risk factors associated with each system based on key criteria. For example, connection of a system with a “score” of 10 may be more valuable to the City than connection of a system with a “score” of 2. Through thoughtful selection of key decision making criteria, and the scoring of each water system relative to their performance/value in these criteria, a quantitative analysis can be completed and a decision on whether to pursue/allow connection of a particular system may be made more effectively. Description of these criteria and the basis for scoring is provided in the sub-sections below, and is followed by the scoring analysis.

Key Criteria for the City are as follows:

1. Geographic Location
 - a. This criteria highlights how close a particular system is to existing City water infrastructure. A system that is closer to existing infrastructure will receive a higher score.
 - b. Scoring indicates the relative closeness of the system to existing city infrastructure. All systems will be scored on a scale of 1-10. Systems located in the northwest, northeast, southwest, and southeast regions will be scored between 1-5 points. Systems located in the central, north central, and south central regions will be scored between 5-10 points.

2. System Connections

- a. This criteria highlights potential revenue streams, which will benefit the City. Systems with a higher number of connections will receive a higher score because they will generate more revenue for the City.
- b. Scoring indicates the relative number of potential system connections available to the City. The more system connections are available, the higher the score. All systems will be scored on a scale of 1-10

3. Water Rights

- a. This criteria highlights additional water rights that may be transferrable to the City and provide additional source capacity to serve future demands. Systems with more water rights will receive a higher score.
- b. Scoring indicates the presence and volume of existing water rights available to the City. The more water rights are available, the higher the score. All systems will be scored on a scale of 1-10

4. System Age

- a. This criteria highlights the age of the system, which is a proxy for its condition. Younger water systems will receive a higher score because their infrastructure is newer and likely is in better condition than that of older systems.
- b. Scoring indicates the relative age of the system based on the date of formation. New systems will receive a higher score. All systems will be scored on a scale of 1-10

TABLE 4-7

Group A Water System Assessment Summary

Watershed	Unweighted Scores				Weighted Scores ⁽¹⁾				Combined Score	Rank
	Location	Connections	Water Rights	Age	Location	Connections	Water Rights	Age		
					0.5	0.3	0.1	0.1		
Bucklin	9	7	2	6	4.5	2.1	0.2	0.6	7.4	1
Walden Water	10	4	2	9	5	1.2	0.2	0.9	7.3	2
Meadowmeer Water Service	7	8	8	3	3.5	2.4	0.8	0.3	7	3
Islandwood Estates	8	4	4	6	4	1.2	0.4	0.6	6.2	4
Harbor Crest	6	4	5	6	3	1.2	0.5	0.6	5.3	5
Eagle Harbor Marina	6	5	2	6	3	1.5	0.2	0.6	5.3	5
Place 18 HOA	6	4	4	6	3	1.2	0.4	0.6	5.2	7
Derby Downs HOA	5	4	4	9	2.5	1.2	0.4	0.9	5	8
Rose Avenue Water Assn.	6	4	2	6	3	1.2	0.2	0.6	5	9
Ravens Beach	6	4	2	6	3	1.2	0.2	0.6	5	9
Emerald Heights	3	7	5	3	1.5	2.1	0.5	0.3	4.4	11
Seabold Heights	4	4	2	9	2	1.2	0.2	0.9	4.3	12
Montessori Country School	5	2	2	6	2.5	0.6	0.2	0.6	3.9	13
Hidden Heights	3	4	2	9	1.5	1.2	0.2	0.9	3.8	14
Phelps Road	3	5	2	6	1.5	1.5	0.2	0.6	3.8	14
Hazel Creek Montessori	5	1	2	6	2.5	0.3	0.2	0.6	3.6	16
Port Madison Water Co.	1	7	6	3	0.5	2.1	0.6	0.3	3.5	17
Bloedel Reserve	1	3	6	6	0.5	0.9	0.6	0.6	2.6	18
Graham Place	1	4	2	6	0.5	1.2	0.2	0.6	2.5	19
Fieldstone Memory Care	3	1	4	3	1.5	0.3	0.4	0.3	2.5	19
Seabold UMC	1	2	2	9	0.5	0.6	0.2	0.9	2.2	21

(1) Weighting factor listed below column header.

POTENTIAL EXPANSION OPPORTUNITIES/ALTERNATIVES

In the sections that follow, we have identified several capital improvement projects that would allow the City to explore both the opportunity to connect existing Group A water systems as well as the opportunity to consolidate interested Group B water systems. These alternatives are presented geographically, and are provided with brief project descriptions as well as cost estimates. The projects are also displayed on Figures 4-13 and 4-14.

North Expansion

To facilitate regional, robust, and reliable water service to all existing and potential customers within the city, the City is considering options for a potential connection with the KPUD North Bainbridge Water System. For this connection, the City would need to extend their existing infrastructure to the north. In this section, several projects are described that would allow for such a connection. Additionally, there are several other potential projects which would allow for the consolidation of other Group A and Group B water systems with the Winslow Water System.

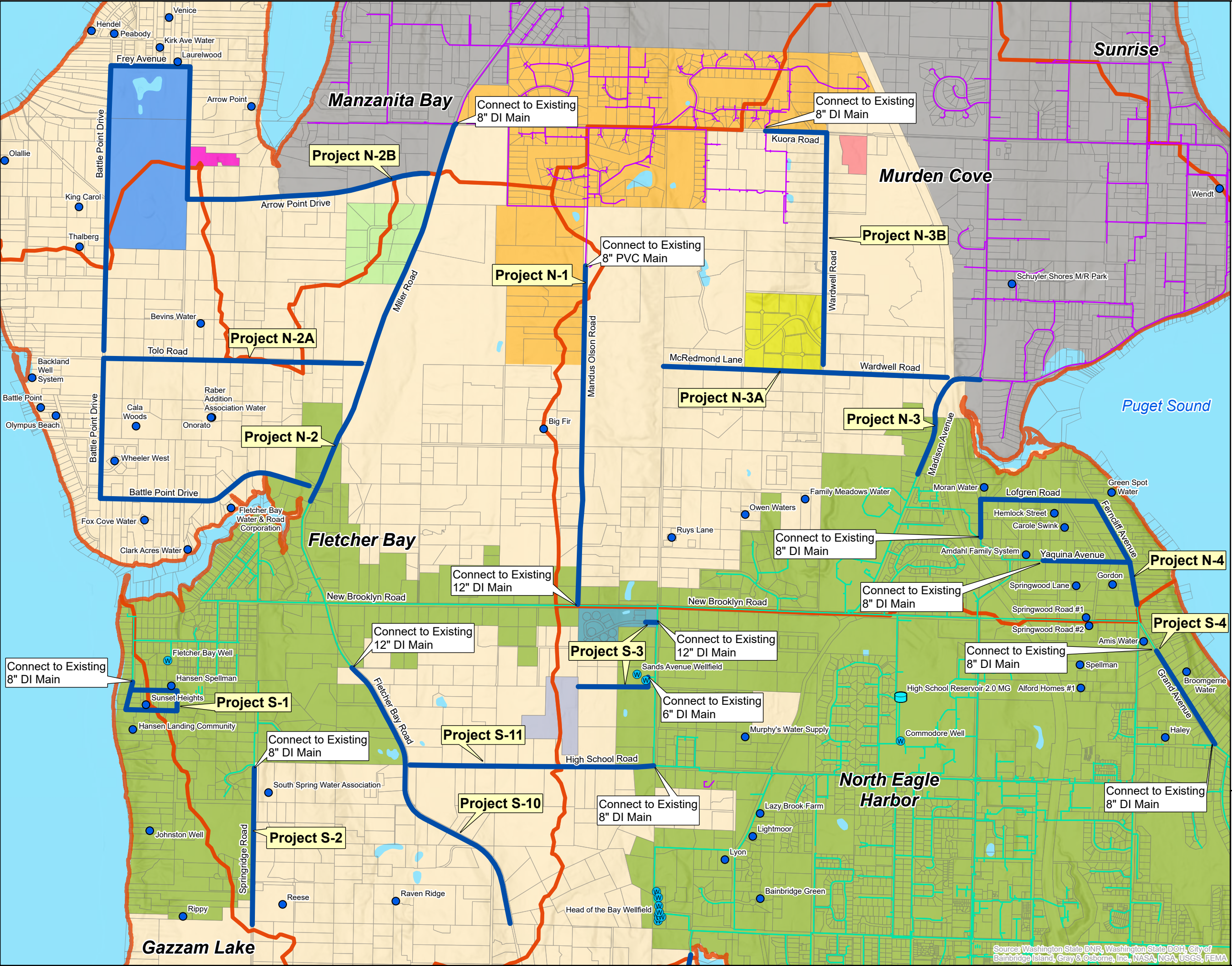
For connection with the North Bainbridge Water System, projects N-1 and N-2 are provided below. An additional project N-3 would allow for an additional intertie connection between the Winslow Water System and the North Bainbridge Island Water System. Lastly, a separate supplemental to Project N-3 would allow for consolidation of two additional Group A water systems.

North Expansion, Mandus-Olsen Road Extension, Project N-1

In this project, the City would extend their existing infrastructure north via piping within Mandus-Olsen Road. Mandus-Olsen Road connects with New Brooklyn Road to the south, which already contains a 12-inch water main connecting the eastern and western portions of the Winslow Water System.

A new 12-inch water main would be connected at the intersection of New Brooklyn Road and Mandus-Olsen Road and would proceed north. At North Koura Road, the main would continue north through private property or easements, and would eventually connect with KPUD North Bainbridge Water System piping within NE Bay Hill Road. The proposed alignment is shown in Figure 4-13 and includes approximately 5,600 linear feet of new piping, fittings, and valves.

With this alignment, the proposed infrastructure would allow for connection of one Group A Water System. The Meadowmeer System is a large Group A system located along Mandus-Olsen Road. The system contains 335 potential connections. As shown in Table 4-7, Meadowmeer ranks highly with regards to the City's critical decision making criteria. The Meadowmeer Water System is currently operated and managed by KPUD under a satellite management agreement.



COBI Facility

- Well
- Reservoir

KPUD Facility

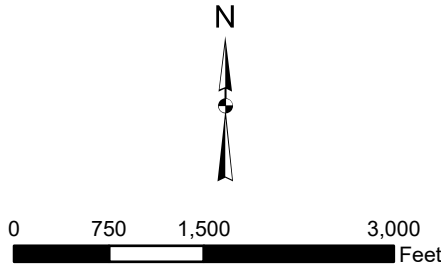
- Well
- Reservoir

Water Systems

- Group B Water System
- Winslow Water System (COBI)
- Islandwood Estates
- Meadowmeer
- North Bainbridge (KPUD)
- Battle Point Park
- Strawberry Hill Park
- Walden Water System
- Derby Downs
- Hazel Creek Montessori
- Montessori Country School AP

Reference

- KPUD Water Main
- City of Bainbridge Island Water Main
- Proposed North End Expansion Pipe
- Watershed
- Area Not Served by Group A
- Parcel
- Surface Water



CITY OF BAINBRIDGE ISLAND

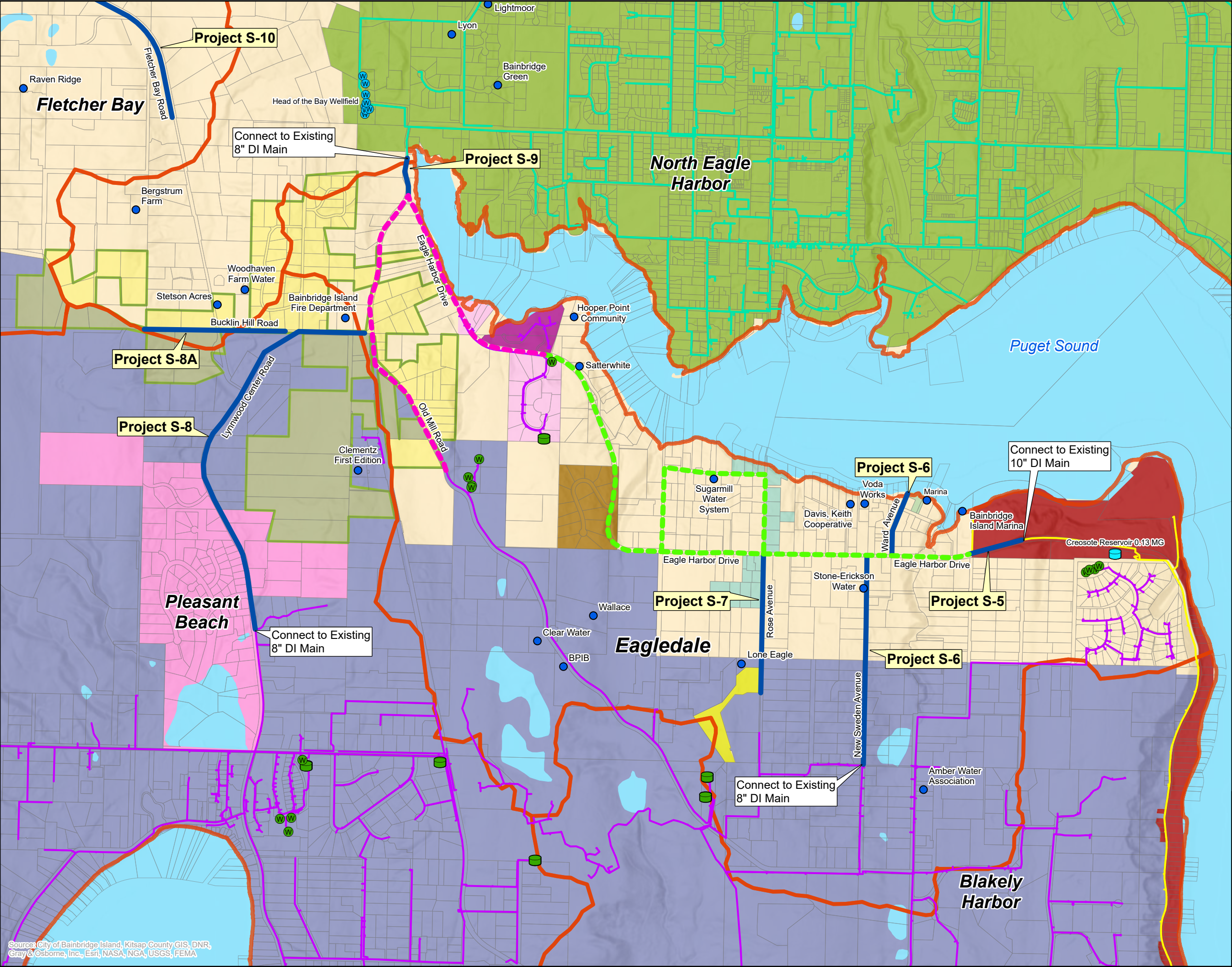
WATER SYSTEM BUSINESS PLAN

FIGURE 4-13

**NORTH END WATER SYSTEM
EXPANSION OPPORTUNITIES**



Source: Washington State DNR, Washington State DOH, City of Bainbridge Island, Gray & Osborne, Inc., NASA, NGA, USGS, FEMA



COBI Facility

- Well
- Reservoir

KPUD Facility

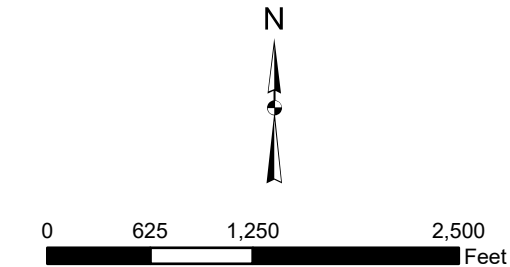
- Well
- Reservoir

Water Systems

- Group B Water System
- Winslow Water System (COBI)
- Emerald Heights
- Harbor Crest
- Ravens Beach
- Rockaway Beach (COBI)
- South Bainbridge (KPUD)
- Place Eighteen HOA
- Eagledale Park
- Rose Avenue Water Association
- Eagle Harbor Marina
- Bucklin

Reference

- KPUD Water Main
- City of Bainbridge Island Water Main
- Proposed South End Expansion Pipe
- Future KPUD Expansion (KPUD-I)
- Future KPUD Expansion (KPUD-II)
- Rockaway Water Main
- Watershed
- Parcel
- Area Not Served by Group A
- Surface Water



CITY OF BAINBRIDGE ISLAND

WATER SYSTEM BUSINESS PLAN

FIGURE 4-14

**SOUTH END WATER SYSTEM
EXPANSION OPPORTUNITIES**



This proposed project alignment would also allow for connection of one Group B system. The Big Fir water system is located along Mandus-Olsen Road across from the entrance to Grand Forest Trail. The Big Fir System is a private system with up to 6 connections. The system is currently managed by Northwest Water Systems through a satellite management agreement.

This project is estimated to cost \$4,313,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.2 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

North Expansion, Miller Road Extension, Project N-2

In this project, the City would extend their existing infrastructure north via piping installed within Miller Road. Miller Road connects with New Brooklyn Road, which already contains a 12-inch water main that connects the eastern and western portions of the Winslow Water System.

A new 12-inch water main would connect at the intersection of New Brooklyn Road and Miller Road and would proceed north. This proposed piping would eventually connect with existing 8-inch or 12-inch diameter KPUD North Bainbridge Water System piping already within Miller Road. The proposed alignment is shown in Figure 4-13 and includes approximately 6,700 linear feet of new piping, fittings, and valves.

The proposed infrastructure would also allow for connection of several additional water systems. In addition to the Meadowmeer System noted in Project N-1, the Islandwood Estates System could also connect. Islandwood Estates is located adjacent to Justin Court Northeast and contains 14 current connections. As shown in Table 4-7, Islandwood ranks highly with regards to the City's critical decision making criteria. The Islandwood Water System is currently managed by Northwest Water Systems through a satellite management agreement.

There are no Group B water systems that would be feasible for connection as a direct result of this project; however, several Group B water system could connect as a result of Projects N-2A or N-2B as described below.

This project is estimated to cost \$5,195,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.2 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

Project N-2 would also facilitate future expansion that could provide accommodations for consolidation of several Group B water systems. These future expansion projects are described below.

North Expansion, Tolo Road Loop, Project N-2A

The infrastructure described in Project N-2 would also allow for connection of several Group B water systems. The following Group B water systems are located west of Miller Road and could be connected with additional future infrastructure after completion of Project N-2. The potential number of connections for each system is listed in parenthesis.

- Backland Well (6)
- Bevins Water (4)
- Battle Point (4)
- Olympus Beach (8)
- Cala Woods (6)
- Fox Cove Water (10)
- Clark Acres Water (6)
- Fletcher Bay Water Corporation (5)
- Wheeler West Water (4)
- Raber Addition Association (3)

Project N-2A includes new 12-inch diameter water main piping west along Northeast Tolo Road, south along Battle Point Drive, and east along Battle Point Drive. The new piping would connect to the proposed water main within Miller Road at Northeast Tolo Road and at Battle Point Drive. The proposed alignment is shown in Figure 4-13 and includes approximately 10,200 linear feet of new piping, fittings, and valves.

This project is estimated to cost \$7,872,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

North Expansion, Arrow Point Loop, Project N-2B

The infrastructure described in Project N-2 would also allow for connection of several smaller Group B systems located near Battle Point Park. The following Group B water systems are located west of Miller Road and could potentially be connected with future infrastructure after completion of Project N-2. The potential number of connections for each system is listed in parenthesis.

- Thalberg (8)
- King Carol (6)
- Ollalie (5)
- Venice (6)
- Arrow Point (6)
- Laurelwood (5)
- Peabody (2)
- Kirk Avenue Water Company (9)
- Hendel (3)

This project would require additional water main piping west along Arrow Point Drive Northeast, north along Arrow Point Drive Northeast, west along Northeast Frey Road, and south along Battle Point Drive Northeast. New piping could terminate at the southern extents of Battle Point Park, or it could continue down Battle Point Drive Northeast and connect with the proposed infrastructure described in Project N-2A. The proposed alignment is shown in Figure 4-13 and includes approximately 12,220 linear feet of new piping, fittings, and valves.

This additional infrastructure would also allow for a connection to Battle Point Park, which is already owned and managed by the City of Bainbridge Island Metropolitan Parks and Recreation District. It would also allow for connection to Montessori Country School AP. Both of these entities are considered Group A water systems.

This project is estimated to cost \$9,423,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

North Expansion, Madison Avenue Intertie, Project N-3

For this project, the City would extend their existing infrastructure north via piping installed within Sportsman Club Road to a connection point within Madison Avenue east of Highway 305. The proposed water main would include approximately 2,150 linear feet of 12-inch diameter piping and is shown in Figure 4-13.

This project would provide an additional intertie connection with the North Bainbridge Water System (KPUD, Group A), and would further bolster the resiliency of the Winslow Water System. It would also align with the goal to coordinate water delivery on an island-wide scale and could add flexibility in delivering water between the north and south ends of the Island. Unfortunately, there are no water systems available for consolidation along this proposed route.

This project is estimated to cost \$1,703,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

North Expansion, Wardwell Road Extension, Project N-3A

After its construction, the infrastructure described in Project N-3 would also allow for connection of one additional Group A water system via Project N-3A. Derby Downs is a Group A community water system with 13 potential connections and is located at the western end of Project N-3A. This project would also allow for a large number of additional private connections between NE New Brooklyn Road and NE Wardwell Road. These additional connections could potentially be connected with future infrastructure after completion of Project N-3A.

Under Project N-3A, the City would install additional piping south within NE Wardwell Road and NE McRedmond Lane between Highway 305 and Sands Avenue. The proposed alignment is shown in Figure 4-13 and includes approximately 4,700 linear feet of new piping, fittings, and valves.

This project is estimated to cost \$3,661,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

North Expansion, Kuora Road Extension, Project N-3B

After their construction, the infrastructure described in Project N-3 and N-3A would also allow for connection of one additional Group A water system via Project N-3B. Hazel Creek Montessori is a Group A community water system with two potential connections and is located at the northern end of the Kuora Road Extension project. Project N-3B would also potentially allow for an additional connection to the Meadowmeer water system, and furthermore, would allow for a large number of additional private connections between Mandus Olsen Road, Highway 305, NE Wardwell Road, and NE Kuora Road.

Under Project N-3B, the City would install additional piping north within NE Wardwell Road, proceed through undeveloped land, then west along Kuora Road. The proposed alignment is shown in Figure 4-13 and includes approximately 4,900 linear feet of new piping, fittings, and valves.

This project is estimated to cost \$3,809,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

North Expansion, Yaquina Avenue Loop, Project N-4

The following Group B water systems are located east of Highway 305 and could potentially be connected with additional infrastructure. The potential number of connections for each system is listed in parenthesis.

- Moran Water (3)
- Hemlock Street (6)
- Green Spot Water (4)
- Gordon (6)
- Amdahl Family System (2)
- Carole Swink (4)
- Springwood Lane Water (4)

Project N-4 would require additional water main piping east along Northeast Yaquina Avenue, north and south along Ferncliff Avenue Northeast, west along Northeast Lofgren Road, and south along Moran Road Northeast. The proposed alignment is shown in Figure 4-13 and includes approximately 5,820 linear feet of new piping, fittings, and valves.

This project is estimated to cost \$4,518,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

North Expansion Summary

Table 4-8 provides a summary of North Expansion Projects described above.

There are several feasible alternatives for northward expansion and connection with the North Bainbridge Island Water System (KPUD), all of which are shown in Figure 4-13. The cost to implement these projects varies greatly, as does the total number of potential future connections; however, each of the projects N-1, N-2, and N-3/N-3A/N-3B all provide for additional connections to the North Bainbridge Island Water System and would provide additional resiliency for both water systems, the ability to serve additional areas currently not served by the City or by KPUD, and could allow for consolidation of existing Group A and Group B water systems. Advantages/disadvantages for each of these projects is discussed later in this Plan.

While Project N-4 would not provide any additional connections with the North Bainbridge Island Water System, it would allow for the consolidation of several additional Group B water systems already within the existing Winslow Water System service area.

TABLE 4-8**North Expansion Project Summary**

Project	Watershed	Summary	Length (ft)	Potential Group A Connections	Potential Group B Connections	Cost Estimate
N-1	Murden Cove Fletcher Bay	Mandus-Olsen Road Extension	5,600	335	6	\$4,313,000
N-2	Fletcher Bay Manzanita Bay	Miller Road Extension	6,700	14 ⁽¹⁾	0	\$5,195,000
N-2A	Fletcher Bay Manzanita Bay	Tolo Road Loop	10,200	0	56	\$7,872,000
N-2B	Fletcher Bay Manzanita Bay	Arrow Point Drive Loop	12,220	2	50	\$9,423,000
N-3	Murden Cove	Madison Avenue Intertie	2,150	0	0	\$1,703,000
N-3A	Murden Cove	Wardwell Road Extension	4,700	13	0	\$3,661,000
N-3B	Murden Cove	Kuora Road Extension	4,900	2	0	\$3,809,000
N-4	Murden Cove North Eagle Harbor	Yaquina Avenue Loop	5,830	0	29	\$4,518,000
North Expansion Subtotal			52,300	366	141	\$40,495,000

(1) Does not include Meadowmead connections assumed in Project N-1. If project N-2 is completed instead of Project N-1, total additional Group A connections would be 349.

South Expansion

To facilitate regional, robust, and reliable water service to all existing and potential customers within the City, the City is considering an expansion of their existing infrastructure to the south. This expansion would both allow for the connection of existing Group A and Group B water systems, and would allow for additional interties and coordination with KPUD's South Bainbridge Island Water System.

South Expansion, Hansen Road Loop, Project S-1

For this project, the City would extend their existing infrastructure south and east via piping installed within Hansen Road Northeast. For this project, new piping would loop south and continue east within Northeast Sunset Place and connect back into piping within Hansen Road. The proposed alignment is shown in Figure 4-13 and includes approximately 2,420 linear feet of new piping, fittings, and valves.

With this alignment, the proposed infrastructure would allow for connection of several Group B water systems. The following Group B water systems are located along Hansen Road and could potentially be connected with additional infrastructure. The potential number of connections for each system is listed in parenthesis.

- Hansen Spellman (6)
- Hansen Landing Community (4)
- Sunset Heights (6)

This project is estimated to cost \$1,907,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Spring Ridge Road Extension, Project S-2

For this project, the City would extend their existing infrastructure south via piping installed within Springridge Road Northeast. New piping would continue south within Springridge Road Northeast to 7300 Springridge Road Northeast – just south of Chorus Frog Road Northeast. The proposed alignment is shown in Figure 4-13 and includes approximately 2,590 linear feet of new piping, fittings, and valves.

With this alignment, the proposed infrastructure would allow for connection of several Group B water systems. The following Group B water systems are located along Hansen Road and could potentially be connected with additional infrastructure. The potential number of connections for each system is listed in parenthesis.

- South Spring Water Association (6)
- Rippy (4)
- Reese (6)
- Johnston Well (9)

This project is estimated to cost \$2,044,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Walden Water/Strawberry Hill, Project S-3

For this project, the City would extend their existing infrastructure west via piping installed within Northeast Quail Hill Road. New piping would extend west and would allow for a connection to Strawberry Hill Park, which is already owned and managed by the City of Bainbridge Island Metropolitan Parks and Recreation District. This system is approved for up to five connections.

In addition, this project would allow for connection of the Walden Water System. The Walden Water system is a Group A system with 14 approved connections. Connection of this system would require minimal additional infrastructure because the existing system is adjacent to Sands Avenue Northeast, which contains an existing 12-inch water main. The proposed alignment is shown in Figure 4-13 and includes approximately 1,510 linear feet of new piping, fittings, and valves.

This project is estimated to cost \$1,212,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Grand Avenue Extension, Project S-4

For this project, the City would extend their existing infrastructure east via piping installed within Grand Avenue Northeast, and would also install new piping west within Northeast Casey Street, and south within Ferncliff Avenue Northeast. The proposed alignment is shown in Figure 4-13 and includes approximately 1,820 linear feet of new piping, fittings, and valves.

If completed, this project would allow for connection of several Group B water systems. The following Group B water systems are located adjacent to Grand Avenue Northeast, Ferncliff Avenue Northeast, and Northeast Casey Street and could potentially be connected with additional infrastructure. The potential number of connections for each system is listed in parenthesis.

- Haley (4)
- Amis Water (3)
- Alford Homes #1 (8)
- Broomgerrie Water (4)
- Spellman (4)

This project is estimated to cost \$1,449,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent).

This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Eagle Harbor Drive Extension, Project S-5

For this project, the City would extend their existing infrastructure east via piping installed within Eagle Harbor Drive Northeast. KPUD is planning a future project that will install 8-inch or 12-inch water main piping within Eagle Harbor Drive between Taylor Avenue NE and Harbor Crest Drive. Project S-5 would extend this proposed piping east from Taylor Avenue NE and connect with their existing 10-inch Rockaway Beach water main. The proposed alignment is shown in Figure 4-14 and includes approximately 700 linear feet of new piping, fittings, and valves.

This project would allow for additional future interties with the South Bainbridge Water System. It would also allow for connection of Bainbridge Island Marina, which is currently a Group B water system with 24 potential connections.

This project is estimated to cost \$591,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

KPUD is also planning a second phase of their Eagle Harbor Road Extension, which includes installation of new water main within Eagle Harbor Drive north from Harbor Crest Drive to Eagle Harbor Drive NE. At this intersection, the main would proceed south within Eagle Harbor Drive, then south within Old Mill Road to approximately 5958 NE Old Mill Road where it will connect with existing KPUD infrastructure. With these two phases of water main installed, Rose Avenue Water Association (20 connections), Harbor Crest (23 connections), Place Eighteen Homeowners Association (18 connections), and the Raven's Beach (16 connections) Group A water systems would be available for connection to the South Bainbridge Water System or the Winslow Water system. These Group A systems represent 77 new Group A service connections. Currently, Harbor Crest is a public water system managed by KPUD under a satellite management agreement. Rose Avenue Water Association, Raven's Beach, and Place Eighteen systems are all managed by Northwest Water under a satellite management agreement. As shown in Table 4-7, all three of these systems rank moderately with regards to the City's critical decision making criteria.

South Expansion, New Sweden Road Extension, Project S-6

Under Project S-6, the City would install additional piping south within New Sweden Road from Eagle Harbor Drive to NE Pine Street as well as north from Eagle Harbor Drive NE within Ward Avenue to Eagle Harbor Marina. The proposed alignment is shown in Figure 4-14 and includes approximately 3,480 linear feet of new piping, fittings, and valves.

With this alignment, the proposed infrastructure would allow for connection of one additional Group A water system. Eagle Harbor Marina is a Group A, Non-Transient, Non-Community water system with 54 potential connections and is located at the northern end of the Ward Avenue extension piping.

In addition to the Group A systems noted above, this project would allow for connection of several Group B water systems. The following Group B water systems are located along the proposed piping alignment and could be connected with additional infrastructure. The potential number of connections for each system is listed in parenthesis.

- Voda Works (9)
- Keith Davis Cooperative (6)
- Stone-Erickson Water (3)

This project, is estimated to cost \$2,722,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, South Rose Avenue Extension, Project S-7

For this project, the City would install new 12-inch water infrastructure south within Rose Avenue NE from Eagle Harbor Drive NE to Eagledale Park. The proposed alignment is shown in Figure 4-14 and includes approximately 1,770 linear feet of new piping, fittings, and valves.

With this alignment, the proposed infrastructure would allow for connection of Eagledale Park Water System. Eagledale Park is a Group A system with 2 potential connections. The system is a non-transient Group A system and is managed by the City of Bainbridge Metropolitan Parks and Recreation District. The proposed infrastructure would also allow for connection of one additional Group B water system. The Lone Eagle Water System is a Group B system, has 6 potential connections, and is located just north of Eagledale Park. The system is privately managed.

This project, is estimated to cost \$1,412,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Lynnwood Center Avenue, Project S-8

Project S-8 includes new infrastructure from the intersection of Blakely Avenue NE and NE Bucklin Hill Road west and south down Lynnwood Center Road NE. New piping would then connect with an existing pipe just south of Northeast Emerald Way. The point of connection is an existing 8-inch PVC pipe owned and managed by KPUD as part of the South Bainbridge Water System. The proposed alignment is shown in Figure 4-14 and includes approximately 5,210 linear feet of new piping, fittings, and valves.

This project would allow for connection of the Emerald Heights Water System. The Emerald Heights Water system is a Group A system with 112 approved connections. Emerald Heights is currently managed by Northwest Water Systems under a satellite management agreement. Connection of this system would require minimal additional infrastructure, but may require upgrades to the existing service laterals in order to conform to City standards.

This project would also allow for connection of the Bainbridge Island Fire Station 22 located along NE Bucklin Hill Road. Station 22 is considered a Group B system and contains 1 potential connection.

This project is estimated to cost \$4,049,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Bucklin Hill Road Extension, Project S-8A

For this project, the City would extend the infrastructure described in Project S-8 west along NE Bucklin Hill Road to Fletcher Bay Road NE. The proposed alignment is shown in Figure 4-14 and includes approximately 1,790 linear feet of new piping, fittings, and valves.

After construction of Project S-8, Project S-8A would allow potential connection of the Bucklin Water Association. Bucklin is a Group A water system with 121 potential connections. Bucklin is currently managed by Washington Water Service under a satellite management agreement. It should be noted that the Bucklin Water System is also directly adjacent to KPUD's South Bainbridge Water System, and as such, could easily be served by KPUD with minimal additional infrastructure. For the purposes of this analysis; however, these potential connections will be included.

This project would allow for connection of two Group B water systems. The following Group B water systems are located north of Northeast Bucklin Hill Road and could be connected with additional infrastructure. The potential number of connections for each system is listed in parenthesis.

- Stetson Acres (6)
- Woodhaven Farm Water (3)

This project is estimated to cost \$1,428,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Eagle Harbor Drive NE Extension, Project S-9

For this project, the City would extend their existing infrastructure south within Eagle Harbor Drive NE from Wyatt Way NW to the intersection of Eagle Harbor Drive NE and Blakely Avenue, where it would then connect with proposed piping owned and managed by KPUD. The proposed alignment is shown in Figure 4-14 and includes approximately 490 linear feet of new piping, fittings, and valves.

This project would not directly allow for connection of any Group A or Group B water systems, but would provide an extension of the City's existing infrastructure, as well as another connection between the City's Winslow water system and KPUD's South Bainbridge water system.

This project is estimated to cost \$428,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, Fletcher Bay Road Extension, Project S-10

For this project, the City would extend their existing infrastructure south within Fletcher Bay Road from NE Berganio Road to Island Center Road NE. The proposed alignment is shown in Figure 4-13 and includes approximately 5,300 linear feet of new 12-inch diameter piping, fittings, and valves.

This project would allow for connection of one Group B water system. Raven Ridge is a Group B system with five connections. The system is located just west of the proposed piping alignment and could be connected with additional infrastructure.

This project would also allow for the connection of additional single-family residences, or potential subdivisions.

This project is estimated to cost \$4,119,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion, High School Road NE Extension, Project S-11

For this project, the City would extend their existing infrastructure east within High School Road NE from Fletcher Bay Road to Sands Avenue where it would then connect with existing piping owned and managed by the City. The proposed alignment is shown in Figure 4-13 and includes approximately 4,030 linear feet of new piping, fittings, and valves.

This project would not directly allow for connection of any Group A or Group B water systems, but would provide an extension of the City's existing infrastructure and would allow for future connection of several single-family residences and potential sub-division development. This project would also provide additional looping of the City's water system, which helps ensure high water quality.

This project is estimated to cost \$3,143,000. This cost includes contingency (30 percent), Washington State Sales Tax (9.5 percent), project design and construction administration (25 percent), and permitting, fees, and other administrative requirements (2 percent). This cost is provided in 2025 dollars, and it is important to note that the cost estimate must be adjusted based on inflation, bidding climate, and current construction costs for the estimated year of construction. A budgetary cost estimate is provided in Appendix B.

South Expansion Summary

Table 4-9 summarizes expansion projects highlighted above for the south portion of the island.

TABLE 4-9

South Expansion Project Summary

Project	Watershed	Summary	Length (ft)	Potential Group A Connections	Potential Group B Connections	Cost Estimate
S-1	Fletcher Bay Gazzam Lake	Hansen Road Loop	2,420	0	16	\$1,907,000
S-2	Fletcher Bay	Spring Ridge Extension	2,600	0	25	\$2,044,000
S-3	North Eagle Harbor	Walden Water/ Strawberry Hill	1,510	19	0	\$1,212,000
S-4	North Eagle Harbor	Grand Avenue Extension	1,820	0	23	\$1,449,000
S-5	Eagledale	Eagle Harbor Drive Extension (East)	700	0	24	\$591,000
S-6	Eagledale	New Sweden Road Extension	3,480	54	18	\$2,722,000
S-7	Eagledale	South Rose Avenue Extension	1,770	2	6	\$1,412,000
S-8	Pleasant Beach	Lynnwood Center Extension	5,210	112	1	\$4,049,000
S-8A	Pleasant Beach	Bucklin Hill Road Extension	1,790	121	9	\$1,428,000
S-9	Eagledale	Eagle Harbor Drive NE Extension	490	0	0	\$428,000
S-10	North Eagle Harbor	Fletcher Bay Road Extension	5,300	0	5	\$4,119,000
S-11	North Eagle Harbor	High School Road Extension	4,030	0	5	\$3,143,000
South Expansion Subtotal			31,120	308	132	\$24,504,000

Southern expansion provides the opportunity to consolidate a larger number of Group A water systems, which would benefit all parties involved; however, the capital improvement projects needed to provide this service are larger and more expensive when compared to northern extension projects. Southern expansion, especially along Eagle harbor Drive towards the Rockaway Beach Water System, could be phased to minimize the financial impact in any given year, and would provide for “slow and steady” approach to proactively accommodate future system; however, any project along this route should be coordinated with infrastructure projects proposed by KPUD.

PROJECT PLANNING ANALYSIS

COST PER CONNECTION

The north and south expansion opportunities highlighted in the previous section would allow the City to potentially connect with existing Group A water systems, and would strategically position their infrastructure to allow for consolidation of many Group B water systems should those systems be interested in connecting. A brief comparison of the potential connections is summarized in Table 4-10.

TABLE 4-10

System North and South Expansion Potential Connection Summary

Project Group	Potential Group A Connections	Potential Group B Connections	Total Cost of Proposed Project	City Cost per Connection	Adjusted City Cost per Connection
North Expansion	366	141	\$40,495,000	\$79,871	\$67,871
South Expansion	308	132	\$24,504,000	\$73,361	\$61,361

As shown in Table 4-10, there are approximately 507 new connections associated with the northern expansion projects and 430 new connections associated with the southern expansion projects. A gross cost per connection was estimated by dividing the total cost of all the proposed projects by the potential number of connections (Group A and Group B). It is important to note that this cost includes only the piping required to provide service to the system, and does not include any system improvements necessary to bring the components up to the City's current water system standards. As such, this estimated will be lower than the actual cost to consolidate any particular system. This analysis shows a significantly higher cost per connection for northern development when compared to southern development. This is largely due to the lengthier pipelines and subsequently higher cost of the northern development projects. Additionally, we estimated the adjusted cost per connection by subtracting the revenues received for both participation and connection fees. For this, the total fee to connect a service was assumed to be \$12,000, which is based on a recent agreement to consolidate the Ferncliff Group A water system in 2024. The adjusted cost per connection is the cost per connection less the revenues received from each connection.

There are three primary reasons for the higher cost per connection in the northern development scenario. The first is that the density of Group A and Group B water systems is significantly higher in the Eagle Cove area (e.g., south) when compared to the area north of the Winslow Water System. As such, more systems can be reached through fewer, and shorter projects. Second, the City's existing utility infrastructure is closer to south Eagle Cove than it is to the northern reaches of areas currently not served by either the City or by KPUD. Lastly, the cost per connection for the southern projects is significantly lower as a result of KPUDs proposed future water main within Eagle Harbor

Drive NE. This two-phase project, stretching approximately 17,530 linear feet is estimated to cost approximately \$13,424,000. This amount would be paid for by KPUD, but if included in the cost per connection charge shown in Table 4-10, would increase the southern expansion cost per connection to \$73,361. Additionally, the adjusted cost per connection would increase to \$61,361 per connection. Both of these costs are comparable to the respective costs for the northern development projects. Additionally, because KPUD would pay to install this piping, it follows that they would be responsible for its maintenance and operation. As such, it is unlikely that KPUD would agree or allow the City to connect various laterals to this water main in order to install piping that would allow the City to assume ownership and operation of the various Group A or Group B water systems accessible along Eagle Harbor Drive NE.

While a future revenues or complete financial analysis are beyond the scope of this report, is it noteworthy that in addition to recovering the costs for participation and connection fees, the City would also receive monthly utility fees for all services used for each additional connection. Because these fees are garnered in perpetuity, it seems clear that eventually, the City would recover all costs necessary to provide infrastructure required for additional service connections.

PRIORITIZATION

When developing a plan of action for water system expansion, every municipality must prioritize how to spend the limited funds available to complete the desired work. Based on the information in Table 4-10, the Bucklin, Walden water, Meadowmeer, and Islandwood Estates Group A systems rank the highest with regards to the identified selection criteria. It is noteworthy that Bucklin and Meadowmeer are two of the four largest Group A systems not already served by the City or KPUD. Port Madison Water Company and Emerald Heights are the two remaining largest systems; however, both of these systems are fully within the KPUD service area, and as such, would be logistically and managerially difficult to serve with City infrastructure (Figure 2-1). Similarly, the Bucklin system is partially enclosed by KPUD South Bainbridge Water System, and would be logistically and managerially difficult to serve with City infrastructure.

The Walden water system is directly adjacent to the City's existing Winslow water system, and should be prioritized for consolidation due to its close proximity and minimal capital outlay required. Similarly, Strawberry Hill Park is in close proximity to the Winslow water system, and could be consolidated without significant expense. Both of these projects would be served through Project S-3. While adding these two Group A Systems would not significantly increase the number of connections, it would accomplish the secondary goal of reducing the total number of water systems – thus simplifying the overall water system complexity within the City.

While not directly adjacent to the Winslow water system, both Meadowmeer and Islandwood estates could be served through a number of specific projects (N-1, N-2, or N3/N-3B), and would significantly increase the number of rate paying utility customers served by City infrastructure. While Islandwood Estates does not contain any existing KPUD infrastructure, a large proportion of the Meadowmeer water system utilizes KPUD owned and managed infrastructure, and, as such, consolidation of this system would likely require significant coordination with KPUD.

Instead of prioritizing expansion by location, expansion could also be prioritized by the number of potential connections. Table 4-8 and Table 4-9 list the proposed projects described above, along with the number of potential Group A and Group B connections. Based on this analysis, project N-1/N-2, N-2A, N-2B, S-6, S-8, and S-8A should be prioritized. Of these projects, S-6, S-8, and S-8A will be connected to existing or proposed KPUD infrastructure, or will serve areas surrounded by KPUD service area, and as such, are not ideal candidates for consolidation into the City's Winslow water system. Project N-1/N-2, N-2A, and N-2B provide the greatest opportunity for system expansion and would allow for service to a relatively high number of new and potential customers.

HYDRAULICS

Table 4-11 lists the highest and lowest elevations within a particular watershed, as well as the resulting HGL for these developments if served by the existing Winslow Water System High Zone. The elevation data was based on topographical maps of the Island.

TABLE 4-11

General Hydraulic Summary

Watershed	HGL (ft)⁽¹⁾	Highest Grade Elevation (ft)	Lowest Grade Elevation (ft)	Highest Development Pressure (psi)	Lowest Development Pressure (psi)
Port Madison	359	310	20	21	147
Agate Passage		250	30	47	142
Sunrise		350	10	4	151
Manzanita Bay		350	20	4	147
Murden Cove		270	10	39	151
Fletcher Bay		200	10	69	151
North Eagle Harbor		280	20	34	147
Gazzam Lake		340	50	8	134
Eagledale		310	40	21	138
Pleasant Beach		220	10	60	151
Blakely Harbor		290	70	30	125
South Beach		290	20	30	147

(1) Based on assumed overflow elevation of new COBI elevated storage tank.

While general in nature, these data show the wide variability in grade elevation within each watershed. This range in elevation highlights the challenges anticipated for each area in order to provide the minimum service pressure of 20 psi required by DOH, while still maintaining a maximum service pressure of 100 psi as listed in the International Plumbing Code (IPC) for municipal potable water systems. For each area and/or community that is proposed for service, the City should investigate the full range of service pressures anticipated within that community in the early stages of discussion to ensure service may be provided. For communities at these higher or lower elevations, booster stations may be required to increase service pressure, and regional and/or individual pressure reducing valves may be required to reduce the service pressure. Additionally, coordination with any connections to KPUD infrastructure should also include an analysis of pressure to identify any modifications or facilities required to accommodate differences in HGL between the systems. Lastly, it is important to note that a full hydraulic analysis was not completed for each water system, and any pressure adjusting accommodations are not currently included in any cost estimates.

CHAPTER 5

WATER SYSTEM CONSOLIDATION AND MANAGEMENT

INTRODUCTION

In the previous chapter, several expansion opportunities were identified that would allow the City to expand their water system, create interties with neighboring water purveyors, and increase the breadth, resilience, and service of the water system. There are several other factors and considerations that will drive the determination on where and how to expand the water system, and those additional factors are discussed within this Chapter.

RECOMMENDATIONS

In the UAC Small Water System Technical Memorandum written in September, 2020, the UAC recommends an “Active Plus Acquisition” approach to water system service and expansion. This approach includes actively engaging small water systems on the island to encourage and educate these systems on the availability of additional assistance and cooperation. Furthermore, if the City is approached by any small water systems – either Group A or B – regarding consolidation, the City may elect to provide assistance with the condition that the small water system will actively work toward consolidation with the City’s water system within some reasonable time frame.

Other recommendations from that memo include the following:

- Create or assign one or more staff positions within the Public Works Department to focus on water systems and water resource policy, possibly combining that role with the staffing to develop a Groundwater Management Plan.
- Update and consolidate information about water systems into a comprehensive inventory document. This report may serve as the genesis for this effort, or additional documentation may be generated that combines all efforts completed to date.
- Convene a meeting or series of meetings for all Group A and B systems to discuss problems, solutions, alternatives, cooperation, consolidation; and advertise the City’s availability to assist with water system management/operations.

- Establish a common venue to enable small water systems to do water sampling, and provide a City staff member to assist volunteers with their questions about these and other operational tasks.
- Apply to the State Department of Health to become an approved Satellite Management Agency (SMA). This concept is further described below, and may require the hiring of additional staff.
- Consider establishing/modifying policies that make consolidation of systems less administratively burdensome and costly to the property owners and water systems.

Recommendations provided as a result of the analysis herein include the following:

- Apply to DOH to become an approved SMA, and establish the need/criteria for additional staff that may be required to facilitate the management of these small water systems.
- The following Group B water systems are already located within the boundaries of the Winslow Water System, and could be connected to the system without significant additional infrastructure. We recommend that the City approach these systems, establish communication with their system managers, notify them of their proximity to existing City infrastructure, and provide contact information for City staff who could provide additional information should the system wish to connect/consolidate. Alternatively, the City can notify these systems of the City's ability to provide water system management as an SMA.
 - Hansen Spellman
 - Sunset Heights
 - Hansen Landing Community
 - South Spring Water Association
 - Murphy's Water Supply
 - Lazy Brook Farm
 - Lightmoor Water
 - Lyon Water
 - Bainbridge Green
 - Haley Water
 - Amis Water
 - Springwood Road #1
 - Springwood Road #2
 - Amdahl Family System
 - Owen Waters

- The following Group B water systems are already within, adjacent to, or near the boundaries of the Winslow Water System, and could be connected to the system with small to medium scale improvements/extensions of existing infrastructure. We recommend that the City approach these systems and notify them of their proximity to existing City infrastructure, and provide contact information to City staff who could provide additional information should the system wish to connect/consolidate. Alternatively, the City can notify these systems of the City's ability to provide water system management as an SMA.
 - Johnston Well
 - Rippy Water
 - Ruys Lane Water
 - Family Meadows Water
 - Green Spot Water
 - Moran Water
 - Broomgerrie Water
 - Reese Water
 - Hemlock Street
 - Carole Swink
 - Gordon Water
- Connect with managers for the Walden Water System and engage them on the possibilities of consolidation to the Winslow Water System. Prepare informational documentation as desired, and maintain communication if system managers are interested in exploring possible consolidation.
 - If amenable to consolidation, the City should pursue grant/low interest loan funding to complete a Consolidation Feasibility Study and, subsequently, a Water System Consolidation Design project.
- Connect with managers for the Strawberry Hill Park System and engage them on the possibilities of consolidation to the Winslow Water System. Prepare informational documentation as desired, and maintain communication if system managers are interested in exploring possible consolidation.
 - If amenable to consolidation, the City should pursue grant/low interest loan funding to complete a Consolidation Feasibility Study and, subsequently, a Water System Consolidation Design project.
- Initiate the development of informational documentation that can be distributed to individual land owners adjacent to the existing Winslow Water System boundary. This documentation will provide information on how interested parties may connect to the City's infrastructure, frequently

asked questions, contact information for City staff, and can be distributed to potential customers.

- Pending the results of the Groundwater Management Report, coordinate with KPUD on a regional strategy for water delivery, water wheeling, and/or water infrastructure resiliency across the entire island.
 - Pending the result of any connection and/or coordination discussions, pursue completion of specific projects that accomplish these goals.
 - N-1, N-2, or N-3;
 - S-9.

Outside of providing effective and coordinated regional water service alongside KPUD, it does not appear to be cost effective to complete major extension projects (i.e., >\$3 million) simply to expand the Winslow Water System – unless advantageous funding opportunities become available. Some potential funding opportunities are discussed later in this Plan; however, the cost for Projects N-1, N-2, N-3/N-3A/N-3B, S-8, and S-10 are extremely high on a cost per connection basis, and furthermore, there is no guarantee that individual parcels or smaller water systems will connect to City water, which helps defer a portion of the significant capital costs. Lastly, the cost of these projects is likely infeasible for any consolidated Group B water system to absorb, and as such, a significant portion of the costs for these projects would be borne by the City.

If the goal of the project is system consolidation and unification, and funding opportunities arise, then the City should pursue these projects. However, we do not recommend proceeding with construction of these projects using only City funds, or if the project goal is simply to provide the opportunity for individual parcels or small Group B systems to connect.

- Proceed with planning, budgeting, financing, and design for capital improvement Project N-4 that will allow for the connection of up to several Group B water systems, and will require minimal additional infrastructure.
- Continue to engage with KPUD on proposed water service projects, intertie coordination, and project coordination to ensure a cohesive and unified approach to water service on the island. We recommend the City and KPUD meet at least annually to discuss growth, development, and the status of any improvement projects.

WATER SYSTEM CONSOLIDATION FUNDING OPPORTUNITIES

CONSOLIDATION FEASIBILITY STUDY

The Department of Health Drinking Water State Revolving Fund (DWSRF) program accepts year-round applications for the Consolidation Feasibility Study Grant Program. The grant program promotes regionalization of water resource management throughout Washington to provide greater efficiency and effectiveness in the provision of safe and reliable water to the citizens of the state. Application worksheets for the program are available on the DWSRF webpage.

The objective of the Drinking Water System Rehabilitation and Consolidation (DWSRC) program is to improve the delivery of safe and reliable drinking water to communities served by struggling or failing Public Water Systems (PWS) impacted by environmental, technical, financial, or managerial challenges. Funding can be used for management system development, planning, document preparation, feasibility studies, and infrastructure projects resulting in the rehabilitation or consolidation of the struggling or failing PWS. PWS eligible for rehabilitation or being restructured/consolidated must have been issued a health-based violation by the state, have an outstanding significant deficiency, or is missing at least one of the following:

- Technical Capacity – a water system without a certified operator, has had a vacancy at a water treatment plant for more than six months, or with identified and documented operational challenges or deficiencies.
- Managerial Capacity – a water system without a functional governing body, an inability to implement administrative and financial changes necessary to provide safe and reliable drinking water to a community, or has management unwilling to comply with safe drinking water regulations.
- Financial Capacity – Fiscal documents indicate that the community does not have the fiscal viability or sufficient rates/reserves to fund management systems, operations and maintenance, and the development of reserves to support the water system; costs to undertake necessary infrastructure upgrades would create affordability challenges that could be better resolved through regionalization or the creation of economies of scale; or the water system serves a disadvantaged community.

Maximum grant funding amount per project or project phase is no more than 25 percent of the funds appropriated to our DWSRF program in a given fiscal year (July 1 to June 30) per the requirements of RCW 70A.125.180.

To be eligible, you must meet all of the following criteria:

- The receiving water system for the consolidation must be a Group A publicly owned water system, an approved Satellite Management Agency (SMA), or an approved receiver. A receiver is a water system or SMA approved by us to acquire failing water systems through a court order. Receiving systems must meet technical, managerial and fiscal requirements and demonstrate future viability in incorporating the system(s) to be consolidated into existing infrastructure, governance and operations to be eligible for funding.
- The water system(s) being consolidated, restructured, or received under court order must be
 - a community Group A system serving fewer than 10,000 people;
 - a Group B system serving residences;
 - or several properties served by private wells.

In addition, the consolidated, restructured, or received system must become part of a new or existing community Group A system by the end of the project.

- A receivership project must satisfy the terms of the court order (the receiver must submit the court order as part of application submittal).
- Funding can be utilized to establish a new Group A PWS or to consolidate other systems that are eligible for consolidation, restructuring, or receivership. Funding can provide for the development of capacity within existing or new Group A PWS or counties, municipalities or Public Utility Districts seeking to expand their existing capacities through consolidation efforts.

During the 2023 Legislative Session, the Washington State Legislature appropriated \$5 million for consolidating, restructuring, and rehabilitating struggling and/or failing Public Water Systems (PWS). Over \$2 million of the appropriated funds were targeted for specific projects and the remainder of the funds were directed to projects supporting struggling and failing systems and communities. Projects will be selected by DWSRF Program staff. We will ask selected projects to submit an online application through WALT.

Additional information is available in DOH Bulletin #331-726 and #331-742 or the City can contact their regional engineer.

Other funding for CRR include Planning Grants, Emerging Contaminants for Small and Disadvantaged Community Grants, Planning and Engineering Loans, and Construction Loans.

UTILITY LOCAL IMPROVEMENT DISTRICT (ULID)

Another potential source of funds for improvements can be obtained through the formation of Utility Local Improvement Districts (ULIDs) involving a special assessment made against properties benefiting by the improvements. ULID bonds are further backed by a legal claim to the revenues generated by the utility, similar to revenue bonds.

ULID financing is frequently applied to system extensions into areas previously not served. Typically, ULIDs are formed by a municipality at the written request (by petition) of the property owner within a specific area of the municipality. Upon receipt of a sufficient number of signatures on petitions, the local improvement area is defined. Each separate property in the ULID is assessed in accordance with the special benefits the property receives from the system improvements.

There are several benefits to a municipality in selecting ULID financing. The assessment places a lien on the property and must be paid in full upon sale of the property. Furthermore, property owners may pay the assessment immediately upon receipt reducing the costs financed by the ULID. The advantages of ULID financing, as opposed to rate financing, to the property owner include:

- The ability to avoid interest costs by early payment of assessments;
- If the ULID assessment is paid in installments, it may be eligible to be deducted from federal income taxes;
- Low-income senior citizens may be able to defer assessment payments until the property is sold; and,
- Some Community Block Grant funds are available to property owners with incomes near or below poverty level; however, funds are available only to reduce assessments.

The major disadvantage to the ULID process is that it may be politically difficult to approve formation. The ULID process may be stopped if 40 percent of the property owners protest its formation. Also, there are significant legal and administrative costs associated with the ULID process, which increases total project costs by approximately 30 percent over other financing options.

GENERAL FACILITIES CHARGE

In order to finance improvements of general benefit to a water utility, such as the City, a general facilities charge may be adopted. General facilities charges, or Participation Fees as termed in the City, are established as one-time charges assessed against new water customers as a way to recover part or all of the cost of additional system capacity constructed for their use.

The intent is that all new system customers will pay an equitable share of the cost of the system improvements needed to accommodate growth. Typical types of construction financed by these fees are general improvements that benefit the entire system, such as reservoirs, pump stations, transmission lines, water filtration plants, new sources of supply, and office and storage space.

The City's Participation Fees were last analyzed as part of the Water System Comprehensive Plan completed in 2017, but can be revisited as part of the next planning cycle, or as an Amendment to the approved Plan in order to facilitate additional capital development.

DEVELOPER EXTENSIONS

Developers may fund the construction of extensions of the water system to property within new plats. The developer extensions are turned over to the wastewater system for operation and maintenance when completed.

It may be necessary, in some cases, to require the developer to construct facilities outside of the plat limits to provide service to the plat and/or larger pipelines for the ultimate development of the water system. The municipality may, by policy, reimburse the developer through direct outlay, latecomer charges, or reimbursement agreements for the additional costs of facilities, including increased size of pipelines over those required to serve the property under development.

Construction of any pipe in commercial or industrial areas that is larger than the size required to service the development may also be considered as an oversized line possibly eligible for compensation. Developer reimbursement (latecomer) agreements provide up to 15 years or more for developers to receive payment from other connections made to the developer-financed improvements.

WATER SYSTEM COORDINATION

KPUD WATER SYSTEM

As previously noted, KPUD owns and manages two large Group A water systems on the island – the North and South Bainbridge Island Water Systems. Together, these systems serve approximately 3,450 connections and approximately 8,280 people, and together

with the City of Bainbridge Island Water System Make up the serve more than 80 percent of the island's population.

We strongly recommend that the City work closely with KPUD to develop a regional strategy for water delivery on the island. This can include interties to provide system resiliency, the ability to wheel water from one end of the island to the other, and the coordination/cost sharing of projects that will provide a robust water delivery system able to accomplish the goals stated previously in this Plan.

This coordination can be accomplished through regular meetings and strategy sessions aimed at developing water delivery strategies that are cost effective, efficient, and serve the greater needs of all the City's water customers. Additionally, this coordination will help both entities adhere to the recommendations provided by the pending Groundwater Management Report. The recommendations in this report will be critical to ensuring the long-term sustainability of potable water within the City.

In 2005, KPUD worked with HDR Engineering to produce the Kitsap County Coordinated Water System Plan. This plan addresses at a high level the need for a coordinated strategy for all of KPUD's service area, and highlighted projections for storage, source, pumping, and distribution system needs. This document can be used to guide additional discussions for specific strategies that can be employed within the City.

GROUNDWATER IMPACTS

The City recently completed a comprehensive groundwater report. The report was authored by EA Engineering and provides a hydrogeological analysis of groundwater on the island. This is particularly important because the island generates all of its potable water via groundwater extraction, and the rate of extraction and volumes of groundwater must be carefully identified and monitored in order to preserve this precious resource.

Key conclusions/recommendations from this report are listed below.

- Conclusion/recommendation 1
- Conclusion/recommendation 2
- Conclusion/recommendation 3
- Conclusion/recommendation 4
- Conclusion/recommendation 5
- Conclusion/recommendation 6
- Conclusion/recommendation 7

WATER SYSTEM MAINTENANCE AND OPERATIONS

EXISTING STAFF, DUTIES, AND RESPONSIBILITIES

Existing public works staffing and key responsibilities are highlighted in Chapter 8 of the WSP. The City maintains a full service staff of management, engineering, and operations personnel as required to maintain and manage their water system infrastructure. The City reviews their staffing levels as needed, but at least every other year, and makes adjustments based on projected needs, employee retention, retirement, etc.

STAFFING IMPACTS

Staffing levels should be considered prior to executing any changes recommended herein. For any program to be successful, it must be appropriately staffed so that the required managerial and operational duties can be completed.

SATELLITE MANAGEMENT AGENCY

General

The concept of satellite management has evolved from general guidance contained in Chapter 246-295 WAC and the State Department of Health (DOH) Satellite Management Planning Handbook (October, 1995). In general terms, the satellite management program is intended to address situations where small public water systems exist or are proposed in areas remote from the supply facilities of larger systems and extension of existing facilities may not be practical in a timely and reasonable manner. Prior to 1991, the term SMA (Satellite Management Agency) was applied loosely to those water utilities that provided service to remote systems.

In 1991, the legislature modified the Public Water System Coordination Act rules to establish criteria for designating entities as approved SMAs. The current definition of a SMA is “a person or entity that is approved by DOH to own or operate more than one public water system on an area wide-basis, without the necessity for a physical connection between such water systems.”

Currently, the laws and policies relating to the provision of satellite management services are embodied in legislation passed in 1995. In that year, the legislature passed Engrossed Second Substitute Senate Bill 5448 (E2SSB 5448) which required all new public water systems to be owned or managed and operated by an ‘approved’ SMA, where one was available. SMAs must meet the requirements of WAC 246-295 to become approved. SMAs, which are not approved under WAC 246-295, cannot be on the county “approved” list and will not be given referrals of proposed systems.

DOH currently has the following policy regarding SMA service in areas having Coordinated Water System Plans (CWSP):

“If a purveyor has claimed a future served area in a DOH approved Water System Plan (WSP) and identified that it may be served with a remote system, DOH will require that system, in their next WSP update, to include information about their SMA program that satisfies the approval criteria. If the system opts not to submit the SMA information, DOH will not approve the updated WSP until the service area to be served with remote systems is modified.”

In regard to objections raised in association with service policies imposed by SMA entities, the appeals process specified in Section 10 will apply to resolve “timely and reasonable” disputes. In contrast, conflicts in areas not under the jurisdiction of a CWSP are resolved by court appeal. All of Kitsap County is under the jurisdiction of this CWSP.

Recommendations

Both the UAC Small Water System Technical Memorandum and this Plan recommend that the City pursue steps to become registered as an SMA in order to proactively engage small water systems and offer assistance as desired. Steps to become a registered SMA include:

1. Submit a notice of intent to become an approved SMA to the department on a form provided by the department;
2. Participate in a “presubmittal conference” to discuss the SMA plan content, and, if applicable, the water system plan;
3. Submit a SMA application and plan which shall include all information required under WAC 246-295-050 or 246-295-060 at the level of detail agreed upon at the presubmittal conference.
4. The department will then forward the SMA plan to affected counties for review and comment. To ensure consideration, the county must submit its comments to the department within sixty days.
5. When all conditions listed in subsection (1) of this section have been completed, the secretary shall either approve or deny the proposed SMA based on the secretary's review and evaluation of information presented and comments received from the county.
6. The secretary shall maintain a list of approved SMAs and make it available to counties, purveyors, individuals or other entities on request. A listing shall be distributed to each county at least annually and on approval

of new SMAs by the secretary. The approved listing shall include a service area for each SMA and designate which SMAs are approved for ownership and management/operation only.

One critical item that should be addressed prior to applying for SMA status is staffing. The City should investigate current staffing levels and compare this to the anticipated workload for SMA leadership and operations to identify whether additional staff support is needed. Based on this analysis, the City should coordinate their SMA application and hiring processes to ensure that the appropriate level of staff is in place once the application is accepted. Both administrative and operations/maintenance activities should be considered when considered staffing resources. It is important to note that the SMA agreements that are required for management of small water systems must be investigated on a case-by-case basis, and depend on the system's size, location, infrastructure, as well as several other factors. Establishing a financial agreement prior to management will be key to ensuring a smooth transition for both parties.

APPENDIX A

**WATER SYSTEM INVENTORY
SUMMARY TECHNICAL MEMORANDUM**



TECHNICAL MEMORANDUM

TO: CHRIS WIERZBICKI, P.E., PUBLIC WORKS
DIRECTOR
FROM: KEITH STEWART, P.E.
MAYA VITA, E.I.T.
DATE: JUNE 10, 2024
SUBJECT: WATER SYSTEM INVENTORY SUMMARY
CITY OF BAINBRIDGE ISLAND,
KITSAP COUNTY, WASHINGTON
G&O #23633.00

INTRODUCTION

The City of Bainbridge Island (City) is located on Bainbridge Island in Kitsap County, Washington. The city limits encompass the entire island, which is located approximately 11 miles west of Seattle across Puget Sound.

The City owns and operates two Group A municipal public water systems that provide water service to customers within the service area. The largest system is the Winslow Water System, which serves approximately 7,100 full-time residents via approximately 3,160 service connections. The Winslow Water System Identification number (ID) is 97650.

The second system is the Rockaway Beach system, which serves approximately 200 full-time residents via approximately 72 service connections. The Rockaway Beach Water System ID is 734507.

In addition to permanent residents, the Winslow System serves a large, non-permanent population on weekends and during the summer tourism season. These connections are distributed between two pressure zones: The High Zone, which covers a majority of the system and the Low Zone, which covers roughly the portion of the service area south of Wyatt Way.

In addition to the Winslow and Rockaway Beach Water Systems, there are several additional water systems within the city limits that provide water service. These systems range from small, privately-owned, operated, and managed Group B systems, to large Group A systems owned and operated by the Kitsap Public Utility District.

In recent years, the City has been approached by several of these privately-owned water systems requesting to be served by the City's municipal infrastructure. Reasons for these requests vary, but a primary reason is that managers for these smaller systems no longer have the desire, availability, or expertise to maintain and manage the water system in accordance with the ever-changing public health landscape. In an effort to prepare for and efficiently manage these requests, and any other consolidation opportunities for centralized water service, the City has contracted with Gray & Osborne to assist with the generation of a Water System Business Plan. This project has been divided into two phases. The first phase is to generate a Water System Inventory for Bainbridge Island, while the second phase is to generate a Plan on how to accommodate private water



Technical Memorandum – Water System Inventory Summary June 10, 2024

system requests, strategies for handling these requests and any upgrades necessary, and to assess the risk for these requests.

This memorandum highlights the tactics used to complete the first phase of the project and provides an introduction, the purpose of the project, and briefly summarizes the methods used to generate the Water System Inventory list and accompanying map(s).

PURPOSE

To ensure that growth of the City's water system is responsibly, efficiently, and cost-effectively managed, the City is interested in completing a Water System Business Plan (Plan). The goal of the Plan is to ensure that the City's water utility is prepared to address planned and unplanned system expansion needs. To meet that goal, the Plan will include the development of a forecast, strategy, and planning steps for the following.

- Serving new customers within and in close proximity to the City's water utility retail service area boundary.
- Serving areas that are not currently assigned a water service provider, or are assigned to the City but are not adjacent to, the City's water infrastructure.
- Coordinating resources and infrastructure with other service providers within the city limits.

The Plan will complement the data and information contained in existing planning documents by incorporating the following.

- A 20-year evaluation of the potential system expansion needs within, and adjacent to, the current retail service areas.
- Evaluation of adjacent water provider infrastructure and future service needs, including the potential costs and benefits of coordinating system interties, and expansions or other shared resource opportunities. This evaluation should also consider a risk analysis of the sustainability of water systems currently outside of the City's control.
- Input from the other water providers in the City.
- Input and feedback from the City's Utility Advisory Committee.

This technical memorandum has been developed to set the groundwork for the Plan by identifying existing water systems on Bainbridge Island, summarizing key information about them, and to locate the systems spatially on Bainbridge Island. This information can then be used to develop decision making criteria that will be used to guide composition of the Plan.



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WATER SYSTEM INVENTORY

To complete the first phase of the project, Gray & Osborne assembled an inventory of all registered water systems within the city limits. To accomplish this, the location search feature of the Washington Department of Health (DOH) Sentry database was used to identify water systems within each township/section/range within city limits. The location search feature shows all water systems with sources within the given location. The water systems were documented and the following components were tabulated, where available.

- System name
- Group type
- DOH identification number
- System contact information
- Ownership/management type
- Number of connections
- System age
- Source capacity
- Storage capacity
- Geographic location (according to the designations delineated on Figure 1)

Any water systems that were marked “inactive” or appeared to serve an area outside of city limits was excluded. Additional information was obtained for some systems through their respective satellite management agencies (SMAs) or from additional DOH resources.

An effort was made to record the water rights held by each system. A portion of the water rights information was obtained from the associated Water System Plans provided by the SMAs. The remaining portion of the water rights information was acquired via the Washington State Department of Ecology (Ecology) Water Right Record database.

Several systems in our inventory list do not have source water right information. This is because many water rights are registered under alternative spellings or abbreviations of the Owner entity’s name; some water rights may have changed ownership but have not been updated with the new Owner’s name, and because many water rights are also not searchable by township, range, or section.

Additionally, the DOH Office of Drinking Water was contacted about their ability to provide Gray & Osborne with access to their water system records for the area. The goal for this request was to cross-check our information against that recorded by DOH, and to



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June 10, 2024

address any inconsistencies between the two data sets. However, after making initial contact with the DOH about acquiring this list, the DOH noted that the time required for them to compile and provide this information did not synchronize with our schedule for completion of Phase 1 of this project. The DOH suggested that a formal public records request be submitted if the information was desired and a request was submitted on March 12, 2024. Gray & Osborne expects a response on or around September 10, 2024.

Each water system that was identified was also geographically located into one of seven regions (Figure 1). These regions were based on major geographical features (roads, parcel lines, etc.) and were generated to further subdivide the island. This division, and the resulting geographical location of a particular water system, will play a role in prioritization of consolidation of water systems, which will be further developed in the Plan.

WATER SYSTEM SUMMARY

Group A Systems

In our research, we noted 32 Group A water systems within city limits (Table 1). A summary of System Owners/Operators is provided in Table 2, while Table 3 provides a summary of the type and classification of the water systems identified.

The full water system inventory is included in Exhibit A.

TABLE 1
Summary of Group A Water Systems

Description	Number
City of Bainbridge Island	
Quantity	2 ⁽¹⁾
Winslow Connections	3,438
Rockaway Beach Connections	72
Other Systems	
Quantity	30
Average Number of Connections	154
Lowest Number of Connections	1
Highest Number of Connections	1,944
Total Estimated Connections	4,480

(1) Does not include Fire Department of Public Works Facilities.



Technical Memorandum – Water System Inventory Summary
June 10, 2024

TABLE 2
Summary of Group A Owners/Operators

Owner/Operator Name	Number of Systems
Northwest Water Systems	12
Kitsap Public Utility District	5
Bainbridge Island Metro Park and Recreation District	4
Washington Water Service	3
Montessori Country School	1
Cascadia Holdings	1
Eagle Harbor Condo Owner Association	1
City of Bainbridge Island ⁽¹⁾⁽²⁾	1
Bloedel Reserve	1

(1) Public works.

(2) The Bainbridge High School System is currently labeled “inactive” and is not included in the list above.

TABLE 3
Summary of Group A System Types

System	Quantity
Ownership Type	
Community	19
Transient Non-Community	6
Non-Transient, Con-Community	6
Management Type	
Association/Satellite	11
Public	10
Private	6
Private/Satellite	4

Group B Systems

In total, we identified 134 Group B systems within the city limits, and our findings are summarized in Table 4. Twenty-one of the Group B water systems are managed by Northwest Water Systems, while all others appear to be managed by their respective Owners.

The full water system inventory is included in Exhibit A.



Technical Memorandum – Water System Inventory Summary
June 10, 2024

TABLE 4
Summary of Group B Water Systems

Parameter	Number of Systems
Quantity	134
Total Estimated Number of Connections	597
Systems by Region	
Northwest	37
Northeast	1
North Central	9
Central	27
South Central	25
Southwest	16
Southeast	19
Average Number of Connections	4.5
Lowest Number of Connections	1
Highest Number of Connections	14

To provide insight into the geographical location for each system, both Class A and Class B water systems are shown in Figures 1 through 8. To facilitate viewing of the maps, and to provide some basis for geographical reference, the island was divided into regions. Regions were selected by location and were outlined by major roads or land features. Figure 1 shows Group A systems as well as the location of each region, while Figures 2 through 8 show a map of the individual region along with both Group A and Group B water systems located therein.

RECOMMENDATIONS

Now that a formal inventory has been created for the water systems within city limits, we recommend that the City proceed with Phase 2 of the project. Phase 2 includes creating a Plan and strategy for system consolidation requests. This may include, but not be limited to, the following.

- Identification of factors or criteria that can be used to rate or prioritize potential candidates for consolidation.
- Continue research and information gathering for high-priority systems. These are systems with existing large diameter infrastructure, water rights, or systems where consolidation may be geographically advantageous.
- Identify what, if any, additional information is needed from smaller water systems.
- Develop the framework for the Water System Business Plan document.

Gray & Osborne will meet with the City project staff and any other stakeholders within the coming weeks and outline the extra steps for completion of Phase 2.

APPENDIX B

BUDGETARY COST ESTIMATES

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - North Expansion, Project N-1 - Mandus-Olsen Road Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	217,000	\$ 217,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	56,000	\$ 56,000
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	28,000	\$ 28,000
5	Trench Excavation Safety Systems	1	LS	\$	56,000	\$ 56,000
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	16,800	\$ 16,800
8	Locate Existing Utilities	1	LS	\$	16,800	\$ 16,800
9	Project Temporary Traffic Control	1	LS	\$	140,000	\$ 140,000
10	Potholing	28	EA	\$	1,500	\$ 42,000
11	Bank Run Gravel for Trench Backfill	5,040	TN	\$	40	\$ 201,600
12	Additional Ductile Iron Fittings	2,240	LB	\$	10	\$ 22,400
13	Crushed Surfacing Base Course (CSBC)	840	TN	\$	55	\$ 46,200
14	Crushed Surfacing Top Course (CSTC)	840	TN	\$	55	\$ 46,200
15	Temporary HMA	270	TN	\$	200	\$ 54,000
16	HMA Cl. 1/2" PG 58H-22	760	TN	\$	240	\$ 182,400
17	12-inch Diam. DI Water Main and Fittings	5,600	LF	\$	180	\$ 1,008,000
18	Gate Valves, 12-inch	11	EA	\$	5,000	\$ 56,000
19	Fire Hydrant Assembly	11	EA	\$	10,000	\$ 112,000
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	5,600	LF	\$	10	\$ 56,000

Subtotal \$ 2,382,400
Contingency (30%) \$ 715,000

Subtotal \$ 3,097,400
Sales Tax (9.2%) \$ 285,000

Subtotal \$ 3,382,400
Project Design and Construction Management (25%) \$ 846,000

Subtotal \$ 4,228,400
Project Administration & Permitting (2%) \$ 85,000

Total Project Cost \$ 4,313,400

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - North Expansion, Project N-2 - Miller Road Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	261,000	\$ 261,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	67,000	\$ 67,000
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	33,500	\$ 33,500
5	Trench Excavation Safety Systems	1	LS	\$	67,000	\$ 67,000
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	20,100	\$ 20,100
8	Locate Existing Utilities	1	LS	\$	20,100	\$ 20,100
9	Project Temporary Traffic Control	1	LS	\$	167,500	\$ 167,500
10	Potholing	34	EA	\$	1,500	\$ 50,250
11	Bank Run Gravel for Trench Backfill	6,260	TN	\$	40	\$ 250,400
12	Additional Ductile Iron Fittings	2,680	LB	\$	10	\$ 26,800
13	Crushed Surfacing Base Course (CSBC)	1,050	TN	\$	55	\$ 57,750
14	Crushed Surfacing Top Course (CSTC)	1,050	TN	\$	55	\$ 57,750
15	Temporary HMA	320	TN	\$	200	\$ 64,000
16	HMA Cl. 1/2" PG 58H-22	950	TN	\$	240	\$ 228,000
17	12-inch Diam. DI Water Main and Fittings	6,700	LF	\$	180	\$ 1,206,000
18	Gate Valves, 12-inch	13	EA	\$	5,000	\$ 67,000
19	Fire Hydrant Assembly	13	EA	\$	10,000	\$ 134,000
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	6,700	LF	\$	10	\$ 67,000

Subtotal \$ 2,870,150
Contingency (30%) \$ 861,000

Subtotal \$ 3,731,150
Sales Tax (9.2%) \$ 343,000

Subtotal \$ 4,074,150
Project Design and Construction Management (25%) \$ 1,019,000

Subtotal \$ 5,093,150
Project Administration & Permitting (2%) \$ 102,000

Total Project Cost \$ 5,195,150

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - North Expansion, Project N-2A - Tolo Road Loop

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>	<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$ 395,000	\$ 395,000
2	Minor Changes	1	LS	\$ 10,000	\$ 10,000
3	Dewatering	1	LS	\$ 102,000	\$ 102,000
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$ 51,000	\$ 51,000
5	Trench Excavation Safety Systems	1	LS	\$ 102,000	\$ 102,000
6	Unsuitable Excavation	50	CY	\$ 100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$ 30,600	\$ 30,600
8	Locate Existing Utilities	1	LS	\$ 30,600	\$ 30,600
9	Project Temporary Traffic Control	1	LS	\$ 255,000	\$ 255,000
10	Potholing	51	EA	\$ 1,500	\$ 76,500
11	Bank Run Gravel for Trench Backfill	9,520	TN	\$ 40	\$ 380,800
12	Additional Ductile Iron Fittings	4,080	LB	\$ 10	\$ 40,800
13	Crushed Surfacing Base Course (CSBC)	1,590	TN	\$ 55	\$ 87,450
14	Crushed Surfacing Top Course (CSTC)	1,590	TN	\$ 55	\$ 87,450
15	Temporary HMA	480	TN	\$ 200	\$ 96,000
16	HMA Cl. 1/2" PG 58H-22	1,440	TN	\$ 240	\$ 345,600
17	12-inch Diam. DI Water Main and Fittings	10,200	LF	\$ 180	\$ 1,836,000
18	Gate Valves, 12-inch	20	EA	\$ 5,000	\$ 102,000
19	Fire Hydrant Assembly	20	EA	\$ 10,000	\$ 204,000
20	Connection to Existing Water Main	2	LS	\$ 5,000	\$ 10,000
21	Surface Restoration	10,200	LF	\$ 10	\$ 102,000

Subtotal \$ 4,349,800
Contingency (30%) \$ 1,305,000

Subtotal \$ 5,654,800
Sales Tax (9.2%) \$ 520,000

Subtotal \$ 6,174,800
Project Design and Construction Management (25%) \$ 1,544,000

Subtotal \$ 7,718,800
Project Administration & Permitting (2%) \$ 154,000

Total Project Cost \$ 7,872,800

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - North Expansion, Project N-2B - Arrow Point Drive Loop

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	473,000	\$ 473,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	122,200	\$ 122,200
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	61,100	\$ 61,100
5	Trench Excavation Safety Systems	1	LS	\$	122,200	\$ 122,200
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	36,660	\$ 36,660
8	Locate Existing Utilities	1	LS	\$	36,660	\$ 36,660
9	Project Temporary Traffic Control	1	LS	\$	305,500	\$ 305,500
10	Potholing	61	EA	\$	1,500	\$ 91,650
11	Bank Run Gravel for Trench Backfill	11,410	TN	\$	40	\$ 456,400
12	Additional Ductile Iron Fittings	4,890	LB	\$	10	\$ 48,900
13	Crushed Surfacing Base Course (CSBC)	1,900	TN	\$	55	\$ 104,500
14	Crushed Surfacing Top Course (CSTC)	1,900	TN	\$	55	\$ 104,500
15	Temporary HMA	580	TN	\$	200	\$ 116,000
16	HMA Cl. 1/2" PG 58H-22	1,720	TN	\$	240	\$ 412,800
17	12-inch Diam. DI Water Main and Fittings	12,220	LF	\$	180	\$ 2,199,600
18	Gate Valves, 12-inch	24	EA	\$	5,000	\$ 122,200
19	Fire Hydrant Assembly	24	EA	\$	10,000	\$ 244,400
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	12,220	LF	\$	10	\$ 122,200

Subtotal \$ 5,205,470
Contingency (30%) \$ 1,562,000

Subtotal \$ 6,767,470
Sales Tax (9.2%) \$ 623,000

Subtotal \$ 7,390,470
Project Design and Construction Management (25%) \$ 1,848,000

Subtotal \$ 9,238,470
Project Administration & Permitting (2%) \$ 185,000

Total Project Cost \$ 9,423,470

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - North Expansion, Project N-3 - Madison Avenue Intertie

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>	<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$ 86,000	\$ 86,000
2	Minor Changes	1	LS	\$ 10,000	\$ 10,000
3	Dewatering	1	LS	\$ 21,500	\$ 21,500
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$ 10,750	\$ 10,750
5	Trench Excavation Safety Systems	1	LS	\$ 21,500	\$ 21,500
6	Unsuitable Excavation	50	CY	\$ 100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$ 6,450	\$ 6,450
8	Locate Existing Utilities	1	LS	\$ 6,450	\$ 6,450
9	Project Temporary Traffic Control	1	LS	\$ 53,750	\$ 53,750
10	Potholing	11	EA	\$ 1,500	\$ 16,125
11	Bank Run Gravel for Trench Backfill	2,010	TN	\$ 40	\$ 80,400
12	Additional Ductile Iron Fittings	860	LB	\$ 10	\$ 8,600
13	Crushed Surfacing Base Course (CSBC)	340	TN	\$ 55	\$ 18,700
14	Crushed Surfacing Top Course (CSTC)	340	TN	\$ 55	\$ 18,700
15	Temporary HMA	100	TN	\$ 200	\$ 20,000
16	HMA Cl. 1/2" PG 58H-22	310	TN	\$ 240	\$ 74,400
17	12-inch Diam. DI Water Main and Fittings	2,150	LF	\$ 180	\$ 387,000
18	Gate Valves, 12-inch	4	EA	\$ 5,000	\$ 21,500
19	Fire Hydrant Assembly	4	EA	\$ 10,000	\$ 43,000
20	Connection to Existing Water Main	2	LS	\$ 5,000	\$ 10,000
21	Surface Restoration	2,150	LF	\$ 10	\$ 21,500

Subtotal \$ 941,325
Contingency (30%) \$ 282,000

Subtotal \$ 1,223,325
Sales Tax (9.2%) \$ 113,000

Subtotal \$ 1,336,325
Project Design and Construction Management (25%) \$ 334,000

Subtotal \$ 1,670,325
Project Administration & Permitting (2%) \$ 33,000

Total Project Cost \$ 1,703,325

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - North Expansion, Project N-3A - Wardwell Road Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	184,000	\$ 184,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	47,000	\$ 47,000
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	23,500	\$ 23,500
5	Trench Excavation Safety Systems	1	LS	\$	47,000	\$ 47,000
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	14,100	\$ 14,100
8	Locate Existing Utilities	1	LS	\$	14,100	\$ 14,100
9	Project Temporary Traffic Control	1	LS	\$	117,500	\$ 117,500
10	Potholing	24	EA	\$	1,500	\$ 35,250
11	Bank Run Gravel for Trench Backfill	4,390	TN	\$	40	\$ 175,600
12	Additional Ductile Iron Fittings	1,880	LB	\$	10	\$ 18,800
13	Crushed Surfacing Base Course (CSBC)	740	TN	\$	55	\$ 40,700
14	Crushed Surfacing Top Course (CSTC)	740	TN	\$	55	\$ 40,700
15	Temporary HMA	220	TN	\$	200	\$ 44,000
16	HMA Cl. 1/2" PG 58H-22	670	TN	\$	240	\$ 160,800
17	12-inch Diam. DI Water Main and Fittings	4,700	LF	\$	180	\$ 846,000
18	Gate Valves, 12-inch	9	EA	\$	5,000	\$ 47,000
19	Fire Hydrant Assembly	9	EA	\$	10,000	\$ 94,000
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	4,700	LF	\$	10	\$ 47,000

Subtotal \$ 2,022,050
Contingency (30%) \$ 607,000

Subtotal \$ 2,629,050
Sales Tax (9.2%) \$ 242,000

Subtotal \$ 2,871,050
Project Design and Construction Management (25%) \$ 718,000

Subtotal \$ 3,589,050
Project Administration & Permitting (2%) \$ 72,000

Total Project Cost \$ 3,661,050

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - North Expansion, Project N-3B - Kuora Road Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	191,000	\$ 191,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	49,000	\$ 49,000
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	24,500	\$ 24,500
5	Trench Excavation Safety Systems	1	LS	\$	49,000	\$ 49,000
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	14,700	\$ 14,700
8	Locate Existing Utilities	1	LS	\$	14,700	\$ 14,700
9	Project Temporary Traffic Control	1	LS	\$	122,500	\$ 122,500
10	Potholing	25	EA	\$	1,500	\$ 36,750
11	Bank Run Gravel for Trench Backfill	4,580	TN	\$	40	\$ 183,200
12	Additional Ductile Iron Fittings	1,960	LB	\$	10	\$ 19,600
13	Crushed Surfacing Base Course (CSBC)	770	TN	\$	55	\$ 42,350
14	Crushed Surfacing Top Course (CSTC)	770	TN	\$	55	\$ 42,350
15	Temporary HMA	230	TN	\$	200	\$ 46,000
16	HMA Cl. 1/2" PG 58H-22	690	TN	\$	240	\$ 165,600
17	12-inch Diam. DI Water Main and Fittings	4,900	LF	\$	180	\$ 882,000
18	Gate Valves, 12-inch	10	EA	\$	5,000	\$ 49,000
19	Fire Hydrant Assembly	10	EA	\$	10,000	\$ 98,000
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	4,900	LF	\$	10	\$ 49,000

Subtotal \$ 2,104,250
Contingency (30%) \$ 631,000

Subtotal \$ 2,735,250
Sales Tax (9.2%) \$ 252,000

Subtotal \$ 2,987,250
Project Design and Construction Management (25%) \$ 747,000

Subtotal \$ 3,734,250
Project Administration & Permitting (2%) \$ 75,000

Total Project Cost \$ 3,809,250

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project N-4 - Yaquina Avenue Loop

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	227,000	\$ 227,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	58,200	\$ 58,200
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	29,100	\$ 29,100
5	Trench Excavation Safety Systems	1	LS	\$	58,200	\$ 58,200
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	17,460	\$ 17,460
8	Locate Existing Utilities	1	LS	\$	17,460	\$ 17,460
9	Project Temporary Traffic Control	1	LS	\$	145,500	\$ 145,500
10	Potholing	29	EA	\$	1,500	\$ 43,650
11	Bank Run Gravel for Trench Backfill	5,440	TN	\$	40	\$ 217,600
12	Additional Ductile Iron Fittings	2,328	LB	\$	10	\$ 23,280
13	Crushed Surfacing Base Course (CSBC)	910	TN	\$	55	\$ 50,050
14	Crushed Surfacing Top Course (CSTC)	910	TN	\$	55	\$ 50,050
15	Temporary HMA	280	TN	\$	200	\$ 56,000
16	HMA Cl. 1/2" PG 58H-22	820	TN	\$	240	\$ 196,800
17	12-inch Diam. DI Water Main and Fittings	5,820	LF	\$	180	\$ 1,047,600
18	Gate Valves, 12-inch	12	EA	\$	5,000	\$ 58,200
19	Fire Hydrant Assembly	12	EA	\$	10,000	\$ 116,400
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	5,820	LF	\$	10	\$ 58,200

Subtotal \$ 2,495,750
Contingency (30%) \$ 749,000

Subtotal \$ 3,244,750
Sales Tax (9.2%) \$ 299,000

Subtotal \$ 3,543,750
Project Design and Construction Management (25%) \$ 886,000

Subtotal \$ 4,429,750
Project Administration & Permitting (2%) \$ 89,000

Total Project Cost \$ 4,518,750

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-1 - Hansen Road Loop

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	96,000	\$ 96,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	24,200	\$ 24,200
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	12,100	\$ 12,100
5	Trench Excavation Safety Systems	1	LS	\$	24,200	\$ 24,200
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	7,260	\$ 7,260
8	Locate Existing Utilities	1	LS	\$	7,260	\$ 7,260
9	Project Temporary Traffic Control	1	LS	\$	60,500	\$ 60,500
10	Potholing	12	EA	\$	1,500	\$ 18,150
11	Bank Run Gravel for Trench Backfill	2,260	TN	\$	40	\$ 90,400
12	Additional Ductile Iron Fittings	970	LB	\$	10	\$ 9,700
13	Crushed Surfacing Base Course (CSBC)	380	TN	\$	55	\$ 20,900
14	Crushed Surfacing Top Course (CSTC)	380	TN	\$	55	\$ 20,900
15	Temporary HMA	120	TN	\$	200	\$ 24,000
16	HMA Cl. 1/2" PG 58H-22	340	TN	\$	240	\$ 81,600
17	12-inch Diam. DI Water Main and Fittings	2,420	LF	\$	180	\$ 435,600
18	Gate Valves, 12-inch	5	EA	\$	5,000	\$ 24,200
19	Fire Hydrant Assembly	5	EA	\$	10,000	\$ 48,400
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	2,420	LF	\$	10	\$ 24,200

Subtotal \$ 1,054,570
Contingency (30%) \$ 316,000

Subtotal \$ 1,370,570
Sales Tax (9.2%) \$ 126,000

Subtotal \$ 1,496,570
Project Design and Construction Management (25%) \$ 374,000

Subtotal \$ 1,870,570
Project Administration & Permitting (2%) \$ 37,000

Total Project Cost \$ 1,907,570

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-2 - Spring Ridge Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	103,000	\$ 103,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	25,900	\$ 25,900
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	12,950	\$ 12,950
5	Trench Excavation Safety Systems	1	LS	\$	25,900	\$ 25,900
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	7,770	\$ 7,770
8	Locate Existing Utilities	1	LS	\$	7,770	\$ 7,770
9	Project Temporary Traffic Control	1	LS	\$	64,750	\$ 64,750
10	Potholing	13	EA	\$	1,500	\$ 19,425
11	Bank Run Gravel for Trench Backfill	2,420	TN	\$	40	\$ 96,800
12	Additional Ductile Iron Fittings	1,036	LB	\$	10	\$ 10,360
13	Crushed Surfacing Base Course (CSBC)	410	TN	\$	55	\$ 22,550
14	Crushed Surfacing Top Course (CSTC)	410	TN	\$	55	\$ 22,550
15	Temporary HMA	130	TN	\$	200	\$ 26,000
16	HMA Cl. 1/2" PG 58H-22	370	TN	\$	240	\$ 88,800
17	12-inch Diam. DI Water Main and Fittings	2,590	LF	\$	180	\$ 466,200
18	Gate Valves, 12-inch	5	EA	\$	5,000	\$ 25,900
19	Fire Hydrant Assembly	5	EA	\$	10,000	\$ 51,800
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	2,590	LF	\$	10	\$ 25,900

Subtotal \$ 1,129,325
Contingency (30%) \$ 339,000

Subtotal \$ 1,468,325
Sales Tax (9.2%) \$ 135,000

Subtotal \$ 1,603,325
Project Design and Construction Management (25%) \$ 401,000

Subtotal \$ 2,004,325
Project Administration & Permitting (2%) \$ 40,000

Total Project Cost \$ 2,044,325

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-3 - Walden Water / Strawberry Hill

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	61,000	\$ 61,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	15,100	\$ 15,100
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	7,550	\$ 7,550
5	Trench Excavation Safety Systems	1	LS	\$	15,100	\$ 15,100
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	4,530	\$ 4,530
8	Locate Existing Utilities	1	LS	\$	4,530	\$ 4,530
9	Project Temporary Traffic Control	1	LS	\$	37,750	\$ 37,750
10	Potholing	8	EA	\$	1,500	\$ 11,325
11	Bank Run Gravel for Trench Backfill	1,410	TN	\$	40	\$ 56,400
12	Additional Ductile Iron Fittings	604	LB	\$	10	\$ 6,040
13	Crushed Surfacing Base Course (CSBC)	240	TN	\$	55	\$ 13,200
14	Crushed Surfacing Top Course (CSTC)	240	TN	\$	55	\$ 13,200
15	Temporary HMA	70	TN	\$	200	\$ 14,000
16	HMA Cl. 1/2" PG 58H-22	220	TN	\$	240	\$ 52,800
17	12-inch Diam. DI Water Main and Fittings	1,510	LF	\$	180	\$ 271,800
18	Gate Valves, 12-inch	3	EA	\$	5,000	\$ 15,100
19	Fire Hydrant Assembly	3	EA	\$	10,000	\$ 30,200
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	1,510	LF	\$	10	\$ 15,100

Subtotal \$ 669,725
Contingency (30%) \$ 201,000

Subtotal \$ 870,725
Sales Tax (9.2%) \$ 80,000

Subtotal \$ 950,725
Project Design and Construction Management (25%) \$ 238,000

Subtotal \$ 1,188,725
Project Administration & Permitting (2%) \$ 24,000

Total Project Cost \$ 1,212,725

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-4 - Grand Avenue Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	73,000	\$ 73,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	18,200	\$ 18,200
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	9,100	\$ 9,100
5	Trench Excavation Safety Systems	1	LS	\$	18,200	\$ 18,200
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	5,460	\$ 5,460
8	Locate Existing Utilities	1	LS	\$	5,460	\$ 5,460
9	Project Temporary Traffic Control	1	LS	\$	45,500	\$ 45,500
10	Potholing	9	EA	\$	1,500	\$ 13,650
11	Bank Run Gravel for Trench Backfill	1,700	TN	\$	40	\$ 68,000
12	Additional Ductile Iron Fittings	730	LB	\$	10	\$ 7,300
13	Crushed Surfacing Base Course (CSBC)	290	TN	\$	55	\$ 15,950
14	Crushed Surfacing Top Course (CSTC)	290	TN	\$	55	\$ 15,950
15	Temporary HMA	90	TN	\$	200	\$ 18,000
16	HMA Cl. 1/2" PG 58H-22	260	TN	\$	240	\$ 62,400
17	12-inch Diam. DI Water Main and Fittings	1,820	LF	\$	180	\$ 327,600
18	Gate Valves, 12-inch	4	EA	\$	5,000	\$ 18,200
19	Fire Hydrant Assembly	4	EA	\$	10,000	\$ 36,400
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	1,820	LF	\$	10	\$ 18,200

Subtotal \$ 801,570
Contingency (30%) \$ 240,000

Subtotal \$ 1,041,570
Sales Tax (9.2%) \$ 96,000

Subtotal \$ 1,137,570
Project Design and Construction Management (25%) \$ 284,000

Subtotal \$ 1,421,570
Project Administration & Permitting (2%) \$ 28,000

Total Project Cost \$ 1,449,570

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-5 - Eagle Harbor Drive Extension (East)

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	30,000	\$ 30,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	7,000	\$ 7,000
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	3,500	\$ 3,500
5	Trench Excavation Safety Systems	1	LS	\$	7,000	\$ 7,000
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	2,100	\$ 2,100
8	Locate Existing Utilities	1	LS	\$	2,100	\$ 2,100
9	Project Temporary Traffic Control	1	LS	\$	17,500	\$ 17,500
10	Potholing	4	EA	\$	1,500	\$ 5,250
11	Bank Run Gravel for Trench Backfill	660	TN	\$	40	\$ 26,400
12	Additional Ductile Iron Fittings	280	LB	\$	10	\$ 2,800
13	Crushed Surfacing Base Course (CSBC)	110	TN	\$	55	\$ 6,050
14	Crushed Surfacing Top Course (CSTC)	110	TN	\$	55	\$ 6,050
15	Temporary HMA	40	TN	\$	200	\$ 8,000
16	HMA Cl. 1/2" PG 58H-22	100	TN	\$	240	\$ 24,000
17	12-inch Diam. DI Water Main and Fittings	700	LF	\$	180	\$ 126,000
18	Gate Valves, 12-inch	1	EA	\$	5,000	\$ 7,000
19	Fire Hydrant Assembly	1	EA	\$	10,000	\$ 14,000
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	700	LF	\$	10	\$ 7,000

Subtotal \$ 326,750

Contingency (30%) \$ 98,000

Subtotal \$ 424,750

Sales Tax (9.2%) \$ 39,000

Subtotal \$ 463,750

Project Design and Construction Management (25%) \$ 116,000

Subtotal \$ 579,750

Project Administration & Permitting (2%) \$ 12,000

Total Project Cost \$ 591,750

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-6 - New Sweden Road Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	137,000	\$ 137,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	34,800	\$ 34,800
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	17,400	\$ 17,400
5	Trench Excavation Safety Systems	1	LS	\$	34,800	\$ 34,800
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	10,440	\$ 10,440
8	Locate Existing Utilities	1	LS	\$	10,440	\$ 10,440
9	Project Temporary Traffic Control	1	LS	\$	87,000	\$ 87,000
10	Potholing	17	EA	\$	1,500	\$ 26,100
11	Bank Run Gravel for Trench Backfill	3,250	TN	\$	40	\$ 130,000
12	Additional Ductile Iron Fittings	1,390	LB	\$	10	\$ 13,900
13	Crushed Surfacing Base Course (CSBC)	550	TN	\$	55	\$ 30,250
14	Crushed Surfacing Top Course (CSTC)	550	TN	\$	55	\$ 30,250
15	Temporary HMA	170	TN	\$	200	\$ 34,000
16	HMA Cl. 1/2" PG 58H-22	490	TN	\$	240	\$ 117,600
17	12-inch Diam. DI Water Main and Fittings	3,480	LF	\$	180	\$ 626,400
18	Gate Valves, 12-inch	7	EA	\$	5,000	\$ 34,800
19	Fire Hydrant Assembly	7	EA	\$	10,000	\$ 69,600
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	3,480	LF	\$	10	\$ 34,800

Subtotal \$ 1,504,580
Contingency (30%) \$ 451,000

Subtotal \$ 1,955,580
Sales Tax (9.2%) \$ 180,000

Subtotal \$ 2,135,580
Project Design and Construction Management (25%) \$ 534,000

Subtotal \$ 2,669,580
Project Administration & Permitting (2%) \$ 53,000

Total Project Cost \$ 2,722,580

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-7 - South Rose Avenue Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	71,000	\$ 71,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	17,700	\$ 17,700
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	8,850	\$ 8,850
5	Trench Excavation Safety Systems	1	LS	\$	17,700	\$ 17,700
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	5,310	\$ 5,310
8	Locate Existing Utilities	1	LS	\$	5,310	\$ 5,310
9	Project Temporary Traffic Control	1	LS	\$	44,250	\$ 44,250
10	Potholing	9	EA	\$	1,500	\$ 13,275
11	Bank Run Gravel for Trench Backfill	1,660	TN	\$	40	\$ 66,400
12	Additional Ductile Iron Fittings	710	LB	\$	10	\$ 7,100
13	Crushed Surfacing Base Course (CSBC)	280	TN	\$	55	\$ 15,400
14	Crushed Surfacing Top Course (CSTC)	280	TN	\$	55	\$ 15,400
15	Temporary HMA	90	TN	\$	200	\$ 18,000
16	HMA Cl. 1/2" PG 58H-22	250	TN	\$	240	\$ 60,000
17	12-inch Diam. DI Water Main and Fittings	1,770	LF	\$	180	\$ 318,600
18	Gate Valves, 12-inch	4	EA	\$	5,000	\$ 17,700
19	Fire Hydrant Assembly	4	EA	\$	10,000	\$ 35,400
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	1,770	LF	\$	10	\$ 17,700

Subtotal \$ 780,095
Contingency (30%) \$ 234,000

Subtotal \$ 1,014,095
Sales Tax (9.2%) \$ 93,000

Subtotal \$ 1,107,095
Project Design and Construction Management (25%) \$ 277,000

Subtotal \$ 1,384,095
Project Administration & Permitting (2%) \$ 28,000

Total Project Cost \$ 1,412,095

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-8 - Lynnwood Center Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	203,000	\$ 203,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	52,100	\$ 52,100
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	26,050	\$ 26,050
5	Trench Excavation Safety Systems	1	LS	\$	52,100	\$ 52,100
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	15,630	\$ 15,630
8	Locate Existing Utilities	1	LS	\$	15,630	\$ 15,630
9	Project Temporary Traffic Control	1	LS	\$	130,250	\$ 130,250
10	Potholing	26	EA	\$	1,500	\$ 39,075
11	Bank Run Gravel for Trench Backfill	4,870	TN	\$	40	\$ 194,800
12	Additional Ductile Iron Fittings	2,084	LB	\$	10	\$ 20,840
13	Crushed Surfacing Base Course (CSBC)	810	TN	\$	55	\$ 44,550
14	Crushed Surfacing Top Course (CSTC)	810	TN	\$	55	\$ 44,550
15	Temporary HMA	250	TN	\$	200	\$ 50,000
16	HMA Cl. 1/2" PG 58H-22	740	TN	\$	240	\$ 177,600
17	12-inch Diam. DI Water Main and Fittings	5,210	LF	\$	180	\$ 937,800
18	Gate Valves, 12-inch	10	EA	\$	5,000	\$ 52,100
19	Fire Hydrant Assembly	10	EA	\$	10,000	\$ 104,200
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	5,210	LF	\$	10	\$ 52,100

Subtotal \$ 2,237,375
Contingency (30%) \$ 671,000

Subtotal \$ 2,908,375
Sales Tax (9.2%) \$ 268,000

Subtotal \$ 3,176,375
Project Design and Construction Management (25%) \$ 794,000

Subtotal \$ 3,970,375
Project Administration & Permitting (2%) \$ 79,000

Total Project Cost \$ 4,049,375

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-8A - Bucklin Hill Road Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	72,000	\$ 72,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	17,900	\$ 17,900
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	8,950	\$ 8,950
5	Trench Excavation Safety Systems	1	LS	\$	17,900	\$ 17,900
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	5,370	\$ 5,370
8	Locate Existing Utilities	1	LS	\$	5,370	\$ 5,370
9	Project Temporary Traffic Control	1	LS	\$	44,750	\$ 44,750
10	Potholing	9	EA	\$	1,500	\$ 13,425
11	Bank Run Gravel for Trench Backfill	1,670	TN	\$	40	\$ 66,800
12	Additional Ductile Iron Fittings	716	LB	\$	10	\$ 7,160
13	Crushed Surfacing Base Course (CSBC)	280	TN	\$	55	\$ 15,400
14	Crushed Surfacing Top Course (CSTC)	280	TN	\$	55	\$ 15,400
15	Temporary HMA	90	TN	\$	200	\$ 18,000
16	HMA Cl. 1/2" PG 58H-22	260	TN	\$	240	\$ 62,400
17	12-inch Diam. DI Water Main and Fittings	1,790	LF	\$	180	\$ 322,200
18	Gate Valves, 12-inch	4	EA	\$	5,000	\$ 17,900
19	Fire Hydrant Assembly	4	EA	\$	10,000	\$ 35,800
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	1,790	LF	\$	10	\$ 17,900

Subtotal \$ 789,625
Contingency (30%) \$ 237,000

Subtotal \$ 1,026,625
Sales Tax (9.2%) \$ 94,000

Subtotal \$ 1,120,625
Project Design and Construction Management (25%) \$ 280,000

Subtotal \$ 1,400,625
Project Administration & Permitting (2%) \$ 28,000

Total Project Cost \$ 1,428,625

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-9 - Eagle Harbor Drive NE Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	22,000	\$ 22,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	4,900	\$ 4,900
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	2,450	\$ 2,450
5	Trench Excavation Safety Systems	1	LS	\$	4,900	\$ 4,900
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	1,470	\$ 1,470
8	Locate Existing Utilities	1	LS	\$	1,470	\$ 1,470
9	Project Temporary Traffic Control	1	LS	\$	12,250	\$ 12,250
10	Potholing	2	EA	\$	1,500	\$ 3,675
11	Bank Run Gravel for Trench Backfill	460	TN	\$	40	\$ 18,400
12	Additional Ductile Iron Fittings	196	LB	\$	10	\$ 1,960
13	Crushed Surfacing Base Course (CSBC)	80	TN	\$	55	\$ 4,400
14	Crushed Surfacing Top Course (CSTC)	80	TN	\$	55	\$ 4,400
15	Temporary HMA	30	TN	\$	200	\$ 6,000
16	HMA Cl. 1/2" PG 58H-22	70	TN	\$	240	\$ 16,800
17	12-inch Diam. DI Water Main and Fittings	490	LF	\$	180	\$ 88,200
18	Gate Valves, 12-inch	1	EA	\$	5,000	\$ 4,900
19	Fire Hydrant Assembly	1	EA	\$	10,000	\$ 9,800
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	490	LF	\$	10	\$ 4,900

Subtotal \$ 237,875
Contingency (30%) \$ 71,000

Subtotal \$ 308,875
Sales Tax (9.2%) \$ 28,000

Subtotal \$ 336,875
Project Design and Construction Management (25%) \$ 84,000

Subtotal \$ 420,875
Project Administration & Permitting (2%) \$ 8,000

Total Project Cost \$ 428,875

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-10 - Fletcher Bay Drive Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	207,000	\$ 207,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	53,000	\$ 53,000
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	26,500	\$ 26,500
5	Trench Excavation Safety Systems	1	LS	\$	53,000	\$ 53,000
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	15,900	\$ 15,900
8	Locate Existing Utilities	1	LS	\$	15,900	\$ 15,900
9	Project Temporary Traffic Control	1	LS	\$	132,500	\$ 132,500
10	Potholing	27	EA	\$	1,500	\$ 39,750
11	Bank Run Gravel for Trench Backfill	4,950	TN	\$	40	\$ 198,000
12	Additional Ductile Iron Fittings	2,120	LB	\$	10	\$ 21,200
13	Crushed Surfacing Base Course (CSBC)	830	TN	\$	55	\$ 45,650
14	Crushed Surfacing Top Course (CSTC)	830	TN	\$	55	\$ 45,650
15	Temporary HMA	250	TN	\$	200	\$ 50,000
16	HMA Cl. 1/2" PG 58H-22	750	TN	\$	240	\$ 180,000
17	12-inch Diam. DI Water Main and Fittings	5,300	LF	\$	180	\$ 954,000
18	Gate Valves, 12-inch	11	EA	\$	5,000	\$ 53,000
19	Fire Hydrant Assembly	11	EA	\$	10,000	\$ 106,000
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	5,300	LF	\$	10	\$ 53,000

Subtotal \$ 2,275,050
Contingency (30%) \$ 683,000

Subtotal \$ 2,958,050
Sales Tax (9.2%) \$ 272,000

Subtotal \$ 3,230,050
Project Design and Construction Management (25%) \$ 808,000

Subtotal \$ 4,038,050
Project Administration & Permitting (2%) \$ 81,000

Total Project Cost \$ 4,119,050

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project S-11 - High School Road Extension

February 5, 2026

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	158,000	\$ 158,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	40,300	\$ 40,300
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	20,150	\$ 20,150
5	Trench Excavation Safety Systems	1	LS	\$	40,300	\$ 40,300
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	12,090	\$ 12,090
8	Locate Existing Utilities	1	LS	\$	12,090	\$ 12,090
9	Project Temporary Traffic Control	1	LS	\$	100,750	\$ 100,750
10	Potholing	20	EA	\$	1,500	\$ 30,225
11	Bank Run Gravel for Trench Backfill	3,770	TN	\$	40	\$ 150,800
12	Additional Ductile Iron Fittings	1,612	LB	\$	10	\$ 16,120
13	Crushed Surfacing Base Course (CSBC)	630	TN	\$	55	\$ 34,650
14	Crushed Surfacing Top Course (CSTC)	630	TN	\$	55	\$ 34,650
15	Temporary HMA	190	TN	\$	200	\$ 38,000
16	HMA Cl. 1/2" PG 58H-22	570	TN	\$	240	\$ 136,800
17	12-inch Diam. DI Water Main and Fittings	4,030	LF	\$	180	\$ 725,400
18	Gate Valves, 12-inch	8	EA	\$	5,000	\$ 40,300
19	Fire Hydrant Assembly	8	EA	\$	10,000	\$ 80,600
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	4,030	LF	\$	10	\$ 40,300

Subtotal \$ 1,736,525
Contingency (30%) \$ 521,000

Subtotal \$ 2,257,525
Sales Tax (9.2%) \$ 208,000

Subtotal \$ 2,465,525
Project Design and Construction Management (25%) \$ 616,000

Subtotal \$ 3,081,525
Project Administration & Permitting (2%) \$ 62,000

Total Project Cost \$ 3,143,525

City of Bainbridge Island

Water Business Plan

Preliminary Project Cost Estimate - South Expansion, Project ____ - Future KPUD Expansion (Eagle Harbor) November 4, 2025

<u>No.</u>	<u>Item</u>	<u>Quantity</u>		<u>Unit Cost</u>		<u>Total</u>
1	Mobilization/Demobilization	1	LS	\$	674,000	\$ 674,000
2	Minor Changes	1	LS	\$	10,000	\$ 10,000
3	Dewatering	1	LS	\$	175,300	\$ 175,300
4	Temporary Erosion and Sedimentation Control (TESC)	1	LS	\$	87,650	\$ 87,650
5	Trench Excavation Safety Systems	1	LS	\$	175,300	\$ 175,300
6	Unsuitable Excavation	50	CY	\$	100	\$ 5,000
7	Removal of Structures and Obstructions	1	LS	\$	52,590	\$ 52,590
8	Locate Existing Utilities	1	LS	\$	52,590	\$ 52,590
9	Project Temporary Traffic Control	1	LS	\$	438,250	\$ 438,250
10	Potholing	88	EA	\$	1,500	\$ 131,475
11	Bank Run Gravel for Trench Backfill	16,370	TN	\$	40	\$ 654,800
12	Additional Ductile Iron Fittings	7,012	LB	\$	10	\$ 70,120
13	Crushed Surfacing Base Course (CSBC)	2,730	TN	\$	55	\$ 150,150
14	Crushed Surfacing Top Course (CSTC)	2,730	TN	\$	55	\$ 150,150
15	Temporary HMA	830	TN	\$	200	\$ 166,000
16	HMA Cl. 1/2" PG 58H-22	2,470	TN	\$	240	\$ 592,800
17	12-inch Diam. DI Water Main and Fittings	17,530	LF	\$	180	\$ 3,155,400
18	Gate Valves, 12-inch	35	EA	\$	4,000	\$ 140,240
19	Fire Hydrant Assembly	35	EA	\$	10,000	\$ 350,600
20	Connection to Existing Water Main	2	LS	\$	5,000	\$ 10,000
21	Surface Restoration	17,530	LF	\$	10	\$ 175,300

<i>Subtotal</i>	\$ 7,417,715
Contingency (30%)	<u>\$ 2,225,000</u>

<i>Subtotal</i>	\$ 9,642,715
Sales Tax (9.2%)	<u>\$ 887,000</u>

<i>Subtotal</i>	\$ 10,529,715
Project Design and Construction Management (25%)	<u>\$ 2,632,000</u>

<i>Subtotal</i>	\$ 13,161,715
Project Administration & Permitting (2%)	<u>\$ 263,000</u>

Total Project Cost \$ 13,424,715

APPENDIX C

UAC SMALL WATER SYSTEM MEMORANDUM

**MEMORANDUM REGARDING
THE CITY OF BAINBRIDGE ISLAND'S POLICIES
TOWARD SMALL WATER SYSTEMS**

Prepared by the City of Bainbridge Island
Utility Advisory Committee
September 23, 2020

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EXECUTIVE SUMMARY

In 2018, the City Council asked the Utility Advisory Committee (UAC) to “study and recommend a process for facilitating consolidation of small water systems.” The Council’s direction was driven by the City’s Comprehensive Plan, which generally calls for managing utility services in a manner that is efficient, effective, and safe, and preserves and protects the Island’s water resources.

As part of its work, the UAC developed four alternative models for a future City of Bainbridge Island (COBI) policy regarding facilitating the consolidation of small water systems:

- Minimal, hands-off role;
- Reactive to requests from water systems – which the UAC suggests summarizes the City’s current policy;
- Active assistance to water systems; and,
- Active assistance along with acquisition over time of small water systems.

The UAC believes it is time for the City to depart from its reactive and inconsistent approach towards interfacing with small water systems on Bainbridge Island. Accordingly, the UAC **recommends that the City adopt a policy of providing active and consistent assistance, if requested, to the small water systems on Bainbridge Island, and encourage, if appropriate, voluntary consolidation of those systems into the City’s current water utility.** Priority focus should be on the water systems within and adjacent to the City’s current county-assigned service areas.

The UAC encourages the Council to consider addressing this policy in coordination with the development of the City’s Groundwater Management Plan, and through the Winslow Water System Business Planning effort, both of which are proposed to be funded in the 2021-22 Biennial Budget.

COBI UTILITY ADVISORY COMMITTEE
MEMORANDUM REGARDING COBI'S POLICIES TOWARD
SMALL WATER SYSTEMS

I. INTRODUCTION

In 2018, the City Council asked the Utility Advisory Committee (UAC) to “study and recommend a process for facilitating consolidation of small water systems.” The council’s direction begins implementation of Comprehensive Plan Utilities Element Policy U-11.7, which is reproduced in the next section.

There are 35 Group A (the largest) water systems on Bainbridge Island, and 135 Group B systems (the smallest). COBI currently owns and manages two of the Group A systems (Winslow-Fletcher Bay and Rockaway Beach) and one Group B system (Casey Street).

The UAC gathered data on Island water systems, considered the history of water system management on the Island, and consulted with water system experts within state, county-wide, and city governments, and from the private sector.

The UAC then developed four alternative models for COBI policy regarding small water systems: (1) minimal, hands-off role; (2) reactive to requests from water systems – which the UAC suggests is an apt description of the City’s current policy; (3) active assistance to water systems; and (4) active assistance along with acquisition over time of small water systems. Descriptions of these alternatives are contained in this memo and on an attached matrix.

As discussed in this memorandum, the UAC believes it is time for the City to depart from its disengaged, reactive, and inconsistent attitude toward water management on Bainbridge Island. Accordingly, the UAC recommends that the City adopt a policy of providing active and consistent assistance, if requested, to the small water systems on Bainbridge Island, and encourage, if appropriate, voluntary consolidation of those systems into the City’s current water utility. Priority focus should be on the systems within and adjacent to the City’s current county-assigned service areas.

The primary reasons for this policy are to help ensure all Island residents have adequate, safe drinking water and to protect Island water resources.

II. BACKGROUND

A. Comprehensive Plan

In 2017, the City Council approved an update to the Comprehensive Plan, which included a newly revised Utilities Element. Among the goals and policies in the Utilities Element are the following pertinent to this subject (key clauses are identified by bold highlighting):

- Goal U-10. Ensure that city-managed and **to the extent possible non-city managed utility services** are sufficient, cost effective, reliable, and that safe water utility service is provided.

- Goal U-11: Require utilities to operate in a manner that **preserves and protects the water resources** of the Island.
- Policy U 11.6: **Encourage and support water utilities to enter into cooperative activities**, such as jointly managed operations, shared storage, and construction of interties, to manage water resources and systems more efficiently, economically, and safely.
- Policy U 11.7: **Encourage and facilitate consolidation of water systems**, with particular emphasis on mergers of contiguous and small systems, to manage water resources and systems more efficiently, economically, and safely.

The Comprehensive Plan also contains Policy U 11.9 which states as follows: “Conduct a study of consolidation of water systems owned by the City and Kitsap Public Utility District. Pursue long-term consolidation of larger water systems.” As is shown below, the City and KPUD own the three largest water systems on the Island, all of which are substantially larger than the remainder of Island water systems.

The UAC was not asked to study and recommend a process for implementing Policy 11.9 – but rather to focus on “small water systems.” The size of “small water systems” was not defined, but for purposes of this memo the UAC will consider “small” to be all systems other than the three largest owned by the City and KPUD.

The drinking water policies and goals in the afore-described 2017 Comprehensive Plan build on those already outlined in the Water Resources Element of the City’s 2004 Comprehensive Plan, namely:

- WR 3.2: The City may elect to facilitate small water system management services by applying to the Department of Health to be an approved Satellite Management Area (SMA).
- WR 3.3: New development in previously unclaimed water service areas may be required to dedicate public water systems to the City if the system meets City standards and the City determines it is appropriate to accept, own and operate such systems.

All of these goals and policies were adopted to help ensure that all island residents have safe drinking water.

B. Water Systems on Bainbridge Island

Potable water service is provided to residents of Bainbridge Island from private single or double¹ connection wells or public water systems classified by the Washington State Department of Health as Groups A or B, depending on the number of connections.

¹ The 2005 Kitsap Coordinate Water System Plan notes that normally only single-connection wells are considered “private,” but the Kitsap Public Health District has an exemption that allows double-connection residential wells meeting certain criteria to be classified as a “private well.”

- 1) **Group A.** Those water systems serving 15 or more connections or the general public are labeled Group A. There are 35 active Group A systems on Bainbridge Island which are listed below by number of connections, and shown on a map attached as Exhibit A. This data comes from the Washington State Department of Health, and can be accessed at this link: <https://fortress.wa.gov/doh/eh/portal/odw/si/Intro.aspx>.

Name/Owner 	Connections	Population
Winslow/Fletcher Bay (COBI)	3165	7130
North Bainbridge (KPUD)	1894	4663
South Bainbridge (KPUD)	1245	2863
Meadowmeer (managed by KPUD)	311	897
Island Utility (KPUD)	255	590
Port Madison (managed by KPUD)	103	233
Bucklin (managed by WA Water Co)	103	272
Emerald Heights	92	250
Bill Point (managed by KPUD)	84	200
Rockaway Beach (COBI)	72	175
Eagle Harbor Marina	54	17
Phelps Road (managed by WA Water Co)	22	58
Harbor Crest (KPUD)	21	53
Rose Avenue	20	53
Place Eighteen (managed by KPUD)	18	32
Ferncliff (managed by KPUD)	18	40
Ravens Reach	16	42
Graham Place	15	34
Hidden Heights	14	36
Islandwood Estates	14	40
Walden Water	13	34
Derby Downs	13	30
Seabold Heights (managed by KPUD)	12	36
Bloedel Reserve	8	2
Battle Point Park	6	0
Montessori Country School	5	0
Strawberry Hill Park	5	0
COBI Public Works	4	0
Fort Ward Park	3	1
Carden County School	2	3
Eagledale Park	2	0
Hazel Creek Montessori	2	0
Fieldstone Memory Care	1	96
Island Center Community Center	1	0
Seabold Community Hall	1	0
Totals	7614	17,880

- 2) Group B. Those water systems serving 2 to 14 connections are classified by the State and Kitsap Health District as Group B. There are 135 Group B systems on Bainbridge Island, many of which are shown on a map attached as Exhibit A. A list of the Group B water systems provided by Kitsap Public Health District is attached at Exhibit B. The list indicates the Group B water systems have 540 connections. Assuming 2.1 residents per connection, the Group B systems serve 1134 residents.
- 3) Private Wells. Many properties owners obtain potable water for a single residence or business from a private well. These are not considered “public water systems,” and therefore are not addressed in detail in this analysis.
- 4) Statistical Analysis. The WA Department of Health and Kitsap Public Health District data indicates that the 35 *Group A* water systems on Bainbridge Island serve 7614 connections and 17,880 residents, and the 135 *Group B* water systems serve 540 connections and approximately 1134 residents.

There is no data indicating how many Bainbridge residents are served by *private wells*. But, it is possible to estimate that number. One method is to subtract the population served by Group A and B water systems (19,110) from the total Island population of 25,300². Doing so results in an estimate that 6286 of the Bainbridge population obtains water from private wells.³

Looking further at the 35 Group A systems, the three largest cannot be considered “small.” The City’s Winslow/Ferncliff system and KPUD’s North Bainbridge and South Bainbridge water systems together serve 6304 connections and a population of 14,656. Thus, the remaining 32 Group A water systems, which are truly small systems, in the aggregate serve 1310 connections and 3224 residents.

In summary, on a percentage basis, it is estimated that Bainbridge residents obtain water from:

Large Group A water systems	58 %
<i>City – Winslow/Fletcher</i>	28 %
<i>KPUD – No. & So. Bainbridge</i>	30 %
Small Group A water systems	12.5 %
Group B water systems	4.5 %
Private wells	24 %

² US Census, 2019.

³ It is important to note again that this is only an estimate. Another calculation method, based on parcels, yields a lower result. KPHD records indicate that approximately 2000 parcels of property on Bainbridge are served by private wells. Multiplying that number by 2.1 persons per connection tells us that 4200 people are served by private wells, which is approximately 2000 less than that above population method. But, if this method was to be used, it is unclear how to allocate those 2000 people among the Group A and B systems.

C. Ownership and Management of Water Systems

Water systems are owned by a variety of organizations: governments like COBI, for-profit corporations, non-profit organizations such as homeowner associations, and private individuals and businesses.

Many water systems, primarily very small ones, are self-managed. That is, the owners utilize volunteers or contractors to perform needed operational and administrative tasks.

In addition, two large organizations manage water systems owned by others pursuant to negotiated contracts of varying durations. They are Kitsap Public Utility District (KPUD) and Northwest Water Service, Inc.

KPUD owns and manages 4 Group A systems on Bainbridge Island: North Bainbridge, South Bainbridge, Island Utility, and Harbor Crest; and at least 3 Group B systems. See map at **Exhibit A**. KPUD also manages Group A water systems on Bainbridge Island owned by other entities, typically homeowner associations. Examples are Port Madison, Seabold Heights, Ferncliff, Place 18, and recently Bill Point and Meadowmeer.

Northwest Water Service, a private for-profit company headquartered in Port Orchard, manages 6 Group A and 16 Group B systems on Bainbridge Island. It manages 450 systems in Washington. Northwest Water generally does not provide complex engineering and construction services but may refer that work to KPUD or Washington Water.

Washington Water Service, a division of a publicly-traded California corporation with a local office in Gig Harbor, owns and manages three Group A water systems on the Island. It used to manage other water systems as well. However, in 2018, Washington Water changed its business model and will now only manage water systems it owns. The company thus withdrew from managing various Island small water systems unless and until they agreed to sell to Washington Water.

D. Service Areas

The 2005 Kitsap County Coordinated Water System Plan (CWSP) assigned “service areas” to Group A systems within the County. Most service areas contained just the properties currently being served by the Group A systems. The two largest water systems, COBI and KPUD, were also assigned properties that were not currently being served by that utility. This assignment essentially established that assigned water system as the primary future provider for the area.

Group B water systems do not have assigned “service areas” under CWSP. They do have the right to provide water service to the properties consistent with their approved water system plans.

The attached **Exhibit C** shows the assigned service areas on Bainbridge Island. COBI has three assigned areas: a large swath across the middle of the Island in which the Winslow-

Fletcher Bay system is located; the Rockaway Beach area which contains the Rockaway Beach system; and the northern tip of the Island in which neither COBI or any other Group A system operates a water system.

KPUD has two large service areas, resulting from its ownership of the North Bainbridge System and its relatively-recent acquisition of the South Bainbridge and Island Utility Systems.

There is an area on the south side of Eagle Harbor that is not within any assigned service area. It is wedged between the City's Winslow and Rockaway Beach systems, and adjacent to other small water systems.

E. Problems Identified with Small Water Systems

Beginning in the 1970's, the WA State Department of Health identified significant deficiencies with many small water systems throughout the state. Generally, many small water systems have some or all of the following problems: (1) lack of professional management; (2) outdated and deteriorating infrastructure; (3) lack of appropriate capital improvement planning and capability; (4) insufficient financial resources; (5) inadequate backup and support; and (6) limited fire suppression facilities.

For example, there are no requirements by either the State Office of Drinking Water or Kitsap Public health that Group B systems have reserves for improvements or repairs. The State Department of Health does require Groups A systems to have a capital reserve at the time they are initially created and approved. There is also a requirement that the amount of reserve be reviewed every 5 years during a Group A sanitary survey inspection, but this requirement is dependent on the State Department of Health's staffing. (Anecdotally, DOH did fail to review Meadowmeer's reserves at its last inspection due to new staff.) The lack of reserve requirements for Group B systems is becoming more significant because most water small water systems were developed during the 1960's and 1970's, and the equipment is reaching the end of its useful lives.

Small water systems also often rely on volunteer staff with little to no professional experience or knowledge of regulatory changes. Volunteers may also be reluctant to raise rates to make necessary safety improvements like backup generators for power outages, fire hydrants, interties with adjacent systems, and seismic improvements. These safety concerns are becoming more pressing due to the effects of global warming and the drier, longer summers Bainbridge is experiencing.

The Washington State Department of Health (DOH) has encouraged small water systems to develop more "professional" planning, maintenance, financing, and staffing, and to consider consolidation with other water systems in order to jointly possess the resources to develop those attributes of effective water system management. As noted above, the City's comprehensive plans have similarly called for consolidation.

Neither the City's Public Works Department nor the UAC has conducted a survey of the condition of the Group A and B systems on the Island, so we are not in a position to state which, if any, of the above-identified deficiencies are suffered by Island water systems. However, the

UAC has received complaints from customers of numerous small water systems about deficiencies in their systems and the need for assistance. Therefore, more data would be helpful.

Finally, as identified in the 2005 Kitsap County Coordinated Water System Plan, smaller water systems negatively impact the ability to accomplish water resource management made possible by larger interconnected water systems, and Group B water systems, which typically have shallow wells, are more likely to negatively impact stream flows.

F. Legal and Regulatory Authorities Pertinent to Small Water Systems

- 1) Federal: EPA Safe Water Drinking Act (1974). The Act protects public drinking water supplies throughout the United States. It sets regulatory limits for the amounts of certain contaminants in water provided by public water supply systems. The EPA also implements various financial programs to ensure drinking water safety. (See Title XIV of Public Health Service Act.)
- 2) State: Public drinking water is regulated at the State level by the Washington State Department of Health.
 - a. Group A systems (15 or greater connections or public access): The Washington State Department of Health (DOH) regulates Group A's under state law and a formal agreement with the US Environmental Protection Agency (EPA) for carrying out the federal Safe Drinking Water Act. DOH's Drinking Water Division's highest priority is responding to actual or potential public health emergencies. DOH's technical staff is available to water systems 24 hours a day. See Ch. 246-290 WAC.
 - b. Group B systems (2-14 connections): Group B systems are regulated under Chapter 246-291 of the Washington Administrative Code. Group B regulations suggest that new Group B owners should design their systems to comply with the more regulated Group A requirements like seismic safety, power outage, back-up systems, and capital reserves in order to allow for future consolidation into Group A's. Older Group B systems had no such requirements. Group B rules for ongoing oversight were amended in 2014 to be optional due to State budget cuts at DOH, so DOH does not provide oversight of Group B systems. See section 3) below for information about Kitsap Public Health District involvement with Group B systems.
 - c. Revolving Fund: The DOH makes funds available to Group A drinking water systems to pay for infrastructure improvements and consolidation of Class A systems or consolidation of Group B's into existing Group A systems through the Drinking Water State Revolving Fund. There was \$20 million available in the last cycle. The loan program is funded through state and federal money and is subject to state laws and additional federal regulations. These loans cover capital improvements that increase public health and compliance with drinking water regulations. They are for Public entities, so COBI and KPUD can apply for these loans, but private management agencies (like Washington Water) can not apply.

- d. State Loans: In implementation of the priority the State Department of Health places on the consolidation of Group A water systems, the State has created a loan and grant program. One such program offers \$25,000 grants to help public entities (like the City) investigate consolidation.
- e. DOH Priorities: One of the priorities of the DOH is to consolidate Groups A's (and possibly Group B's with Group A's or other B's) for the following reasons:
 - Better economies of scale ensure better supervision and monitoring
 - Large systems are generally more reliable
 - Large systems reduce the administrative burden on the Health Department
 - Improved well head protection ensures aquifer protection for all
 - Improved fire safety

3) Kitsap Public Health District: Although often mis-identified as a Kitsap County department, Kitsap Public Health District (KPHD) is a separate district governed by a seven-person Board composed of the three county commissioners and the mayors of the four Kitsap cities, including Bainbridge Island.

- a. Group A's: KPHD defers to the State DOH to regulate Group A's, but assists State DOH with sanitary survey inspections/reports through a joint plan of responsibility agreement.
- b. Groups B's: KPHD initially inspects Group B systems when they are installed. In September 2018 the KPHD adopted the proposed ordinance 1999-6, now approved as Ordinance 2018-01 which regulates ongoing operation of Group B's. The new ordinance requires all Group B's to purchase an annual permit, have a sanitary service inspection every 5 years, and obtain a water status report from the Health District at the time of sale to be delivered to the purchaser. Between 2009 and 2018, due to lack of funding, no one was monitoring Group B's for potential acute health problems from bacteria, nitrates and poorly monitored well head protection.
- c. Wells: The KPHD publishes wellhead protection guidelines for owners of wells, but it is not clear whether these rules are well distributed or whether any government entity ensures that the rules are followed.

4) Kitsap County: As required by RCW 70.116, Kitsap County adopted its first Coordinated Water System Plan (CWSP) in 1992, and updated it in 2005. As mentioned previously, it is this document that assigns "service areas" within the County, and also establishes other policies and strategies.

As mentioned in Section F.2) e. above, for many decades the State encouraged the consolidation and professionalization of water systems. Kitsap County has followed those policies. The 2005 County Plan calls upon the County's water systems to coordinate and consolidate and to stop the proliferation of new small water systems. One of the principal points of the 2005 County Plan is to "provide improved coordination of new development and to restrict the proliferation of small public water systems." (See section 2-3.) The 2005 County Plan also called for "future growth planning" to be "in consideration and coordinated with the water service that it is in." (See Exhibit 2-4)

5) WUTC: The Washington Utilities and Transportation Commission regulates the rates charged by private water companies (such as Washington Water Co. and Northwest Water Inc.) operating within Washington State that have 100 or more connections or charges more than \$557 a year per customer.

G. History of COBI Policies and Activities Related to Island Water Systems

Prior to 1990, the City of Winslow owned and operated a water system to serve the Winslow area. The Winslow city limits were generally High School and Finch Roads. The water system was created in the 1940's and added to over the intervening years. By the 1970's, the major sources of Winslow's water were wells at the Head of the Bay and Fletcher Bay which fed a large reservoir at the High School – all of which were located outside the city limits.

The rest of Bainbridge Island was served by many private water systems, most of which were for-profit corporations or homeowner associations. One of the issues influencing the Home Rule movement in the late 1980's was a desire to better protect and manage the Island's water supply.

In 1991, the City of Winslow annexed the remainder of Bainbridge Island creating the City of Bainbridge Island. This had no direct effect on the ownership or management of water systems on the Island, but it did mean that the new COBI could begin to develop plans for water supply and system management. In February 1993, COBI adopted its first such planning document, Resolution 93-3., attached as **Exhibit D**. This document stated, among other things, that the City shall be prepared to, upon request from a water system, acquire a system, become a contract service provider for a system, or provide support assistance to a system.

In 1994, the Rockaway Beach Homeowner Association approached the City because its water system was failing. In implementation of the above policy, the City acquired the Rockaway Beach water system in 1996, and utilized the Local Improvement District (LID) process to construct a new well, reservoir, and distribution lines.

Regarding City assistance to Island water systems, it apparently provided limited support services as a Satellite System Agency (SMA) in the late 1990's to 19 small water systems. However, due to staffing concerns and other more pressing issues, in 2000, the City allowed the services contracts to expire. In 2002, the City revoked that portion of Resolution 93-3 regarding serving as an SMA.⁴ In 2001, the North Bainbridge Water Company approached the City about purchasing its system. The City staff commenced negotiations, but the owner of the company ultimately sold it to KPUD. KPUD Board of Commissioner minutes indicate KPUD believed COBI had decided not to purchase the company. That is not correct, as the issue had never reached the City Council.

During 2010-13, the City considered selling its water system to KPUD or contracting with KPUD to manage the system. The City eventually chose not to do so.

⁴ The Resolution revoking SMA authority, Resolution 2002-25, indicates in its title that the entire Resolution 93-3 has been repealed. However, the content of Resolution 2002-25 states it is eliminating the SMA program only. Thus, there may be an ambiguity as to whether the remaining portion of Resolution 93-3 is still in effect.

In 2015, KPUD purchased the South Bainbridge Water Company and Island Water Company. These systems were sold to KPUD by their private owners without notice to the City despite an informal agreement between the City and KPUD that KPUD would not purchase any water systems within the City without first obtaining agreement from the City.

In the 2017 Comprehensive Plan, the City adopted the policies listed on the first page of this memorandum. (See Section I.A. above.)

In 2017, a small 8-customer Group B water system known as Casey Street approached the City about acquiring it. After consideration, the City chose to do so because: (1) it was located within the City's water service area; (2) it was located in the north Ferncliff area relatively close to the City's existing Winslow water system; (3) the City has periodically discussed constructing a new water pipeline from North Ferncliff to North Madison to "loop" the Winslow system, which would be directly adjacent to the Casey Street system; and (4) acquiring this system would be a "test case" about how COBI might manage assimilation of small systems in the future.

In 2018, two Group A systems, Bill Point and Place 18, were faced with changing managers when Washington Water Service Co. withdrew. COBI staff had preliminary discussions regarding assuming satellite management of the systems, which would require eventual approval from Washington DOH, but the water systems contracted with others.

In 2019-20, three larger Group A systems, Emerald Heights, Bill Point, and Meadowmeer, contacted UAC representatives and some City senior staff about possible assistance from COBI. In February 2020, the UAC recommended to the City Council and senior staff that COBI consult with the three systems regarding their needs and the assistance the City might be able to provide. Apparently, City representatives have not had such consultations (COVID limitations no doubt impacted the staff), and Bill Point and Meadowmeer have retained KPUD as manager for the time being.

The 2019-2020 budget called for the City to begin a Groundwater Management Plan (GMP). For a variety of reasons, this process did not begin. The UAC understands that during the 2021-22 budget deliberations the City Council will be re-engaging the discussion around the development of a GMP. The UAC further understands the planned first step in the GMP process was the hiring of a hydrogeologist to manage the plan. The UAC supports the development of a GMP, and suggests the work plan should be expanded to include implementation of many of the recommendations contained in this memorandum.

Finally, beginning with the City's first Comprehensive Plan in 1994 and then continuing in the two major updates in 2004 and 2017, many policies were adopted concerning water systems on Bainbridge Island. Some are listed in Section II.A above. Taken together, the policies call for:

- Ensuring reliable, safe, and cost-effective water for City and non-City managed utility service;
- Preserving and protecting water resources;
- Encouraging water utilities to enter into cooperative activities;
- Encouraging and facilitating consolidation with particular emphasis on mergers of contiguous and small systems;

- Applying to the Department of Health to become a satellite management agency (SMA); and;
- Requiring new development to build according to City standards (Group A standards) and dedicate water systems to the City when it is appropriate for the City to accept such system.

III ANALYSIS AND RECOMMENDATION

A. Overview

In the three decades since the small City of Winslow annexed the remainder of Bainbridge Island, thus becoming the City of Bainbridge Island, the City has had only limited focus on Island water systems that it did not own. This is surely because the City was focused on other more pressing issues, such as land use policies and transportation, and because Island water systems were in general not seeking assistance from the City as they were still newer and in better repair.

Historically, the City had not been involved with the smaller water systems, and the City's passage of Resolution 93-3 did not significantly change that position. The City has no direct regulatory authority over Island water systems, other than management of the City's rights-of-way. Therefore, the City has had only minor interactions with Island water systems since the late 1990's and did not "advertise" its availability as a resource for those systems. This is despite the City's Comprehensive Plan policies encouraging actions to improve water resource protection and management. Island water systems needing assistance had to turn to private water companies and KPUD out of necessity.

In the meantime, interest in preserving water resources and in improving water quality in aging systems has become a larger concern of most island citizens, particularly in light of the steadily increasing development of the island and increasing population. To meet this increasing concern, the City and others conducted studies of Island water resources and the various aquifers which exist beneath the island. Unfortunately, to date, no studies were conducted about how the multitude of water systems, either individually or in the aggregate, were effectively and efficiently managing the resource or whether small water systems were protecting the health of islanders by ensuring good water quality.

The import of local control of the water consumed by its citizens has been highlighted elsewhere in the country, such as Flint, Michigan. There, the State assumed control resulting in catastrophic consequences. Similarly, stories across the country of private entities controlling water supplies and charging exorbitant rates while failing to ensure water quality have increased.

The 2005 CWSP suggests that Bainbridge as a water purveyor should implement policies that ensure efficient and effective management of water resources for numerous reasons. The 2005 Plan also assigned responsibility to Bainbridge Island's water utilities to plan for water system development within its assigned water service areas, to require new development to be built to Group A standards to help facilitate connection at a later time, and to require new developments to record a covenant at the registry of deeds and note the covenant on a title report for subsequent owners. (See Section 5.3.3)

It is interesting, and perhaps meaningful, to note that the 2005 County Plan (section 1.2.11 and in section 9) projects population growth concentrated in Central and North Kitsap and suggests that it will be necessary to develop water sources in the other parts of the County and “establish transmission mains to move the water to where growth is occurring.” This argues for the City to be more involved in the water resources of the island to ensure that the City retains a seat at the table in any future discussions concerning use of water from Bainbridge Island wells in other areas in Kitsap County.

Given this situation, what should be the City’s role toward Island water systems? Should the City continue to ignore requests for help from smaller water purveyors like Emerald Heights, Bill Point, and Meadowmeer, and thus avoid the opportunity to cooperate with or even consolidate with those systems? Should it adopt a somewhat more active policy of providing assistance only when approached by a small water purveyor? Or more proactively still, should the City seek out water systems to assist in the management (and perhaps ownership) of their water systems, so as to encourage more professional management of them and more island-wide planning and cooperation? What should be the City’s role in ensuring Island residents have access to safe and adequate water?

Whatever policy is chosen, the focus of the City should be the long term. How do the citizens of Bainbridge Island want their water resource to be managed in 20, 30, 50, 75, 100 years? Is it through many, decentralized, small water systems, or by one or more large organizations? As stated, for many of the reasons outlined in this memo above, the State and County have made it clear that it believes consolidation over time is the best means for ensuring quality drinking water for all citizens.

B. City Relationship with KPUD

KPUD is a major provider of water service on the Island, owning four systems (two large and two small) and managing six others. This study effort by the UAC was specifically directed toward small water systems. The UAC was not asked to discuss or evaluate the present and future relationship between the City and KPUD. Thus, to a certain extent, this analysis and recommendation has been prepared while “avoiding the elephant in the room.”

However, prior to outlining alternatives available to the City and making its policy recommendation, the UAC believes it is appropriate to comment on the City’s relationship with KPUD.

The City and KPUD both serve approximately the same number of customers on the Island (approximately 7000 people or 30% of the Bainbridge population), and both have two large County-designated service areas. Yet there is no island-wide water resource and management planning being done by KPUD or the City, either separately or together.

At the current time, KPUD and the City exist as collaborating neighboring water utilities serving their own customers and cooperating in limited ways on planning and projects, while at the same time being competitors toward water systems they don’t own or manage.

At some point in the future, the City needs to develop a policy about how it intends to work with KPUD. Comprehensive Plan Policy U 11.9 anticipates that analysis, when it states:

“Conduct a study of consolidation of water systems owned by the City and Kitsap Public Utility District. Pursue long-term consolidation of larger water systems.”

Such a study *could* result in consolidation of one or more of the large water systems, but it could also result in collaborative activities such as construction of joint storage facilities and transmission lines, or preparation of island or sub-regional water resource planning. At a minimum, an interlocal agreement should be developed which outlines how and under what circumstances either utility will provide services to or assume ownership of water systems on the Island that they do not currently own. This will prevent the acquisition of water systems by either utility without knowledge of the other.

C. Policy Alternatives

The UAC suggests there are four policy alternatives for COBI’s relationship with the other water systems on Bainbridge Island.: minimal; reactive; active; and active plus acquisition over time. To aid in the consideration of the alternatives, the UAC prepared a discussion Matrix, attached as **Exhibit E** to this Memo. The matrix outlines possible levels of city action for water systems within COBI’s Current and Future Retail Service Areas as defined by the Kitsap County CWSP, and within small water systems that are not within COBI’s assigned service areas.

The matrix also differentiates between smaller Group B’s and the larger Group A systems, and posits that the City may establish different policies for them. Finally, the matrix provides pros and cons of the possible recommendations and provides examples of sample water systems that fit within the matrix sections.⁵

1) Minimal

In this situation, COBI decides it will have nothing to do with water systems on Bainbridge Island other than those it currently owns: Winslow-Fletcher Bay, Rockaway Beach, and Casey Street. COBI will defer entirely to other water purveyors/managers, primarily to KPUD and Northwest Water Company.

The City might do this because it takes the least effort, staff time, and cost, and allows it to focus fully on its current 2700 water customers. On the other hand, this policy abdicates any assistance to the vast majority of Bainbridge Island land and citizens, and likely gives up any long-term ability to consider, manage, and protect the entire Island water resource or protect the safety and adequacy of drinking water for Island citizens.

2) Reactive

This is essentially the policy in Resolution 93-3, and describes what the City has been doing in the past 30 years. That is, on occasion, the City has provided assistance to small water systems or acquired them. This policy is the status quo – the City reacts to requests from other water systems and may respond consistent with staff time and interest.

⁵ Ex. E. does not detail the minimal alternative, since it is less than what the City is currently doing. Further, Active and Active Plus Acquisition alternatives are merged into one row for a simpler presentation.

This policy is slightly more energetic than the Minimal alternative discussed above, in that the City may decide to deal with the needs of other water systems if the city staff or council conclude that it can do so within existing resources. But, this reactive policy could lead to unfair practices, i.e., assistance to some water systems and not to others.

3) Active

Under this policy, the City reaches out to the small water systems and encourages assistance and cooperation. It does so by devoting sufficient City staff, time, and resources to determining the needs of the water systems and developing financial, engineering, and management solutions. This policy does not mandate that small water systems participate with the City in any way, but rather calls for the City to develop the resources that will attract cooperation from small systems.

This policy will enable COBI to become more actively engaged with managing and thus preserving and protecting Island water resources. This policy has the potential to increase revenue to the City's existing water utility, thus utilizing economies of scale to benefit both current City and small water system customers. Also, in the long term, this policy may be the most cost-effective means to protect Island water supplies and ensure safe and adequate drinking water for Island citizens.

Among those steps that could be taken are:

- to become a Satellite Management Agency (SMA) pursuant to WAC 246-295,
- to require new development within or adjacent to the City's designated service areas to either connect to the City water system or build to Group A standards to facilitate future connection.

The City could also begin implementation of the 2005 County Plan's directive to create a water system plan which includes a program of capital improvements required to provide the anticipated level of island-wide water service, and to ensure that Bainbridge's water utility plans respond to its own land use and comprehensive plan policies.

This active policy will, at least at the outset, require some investment by the City. There should be no doubt about this. A major reason the City has not been more involved with Island water systems and resources is that it has not had the budget to do so. To be effective, the City must hire staff and perhaps consultants, when needed. The UAC has not attempted to determine any details of the costs to implement this policy; the Public Works Department is best suited to do that.

It is possible the funding for this investment could be shared by the City's water utility and general fund accounts so as to not unduly burden the City's existing water customers. That is because there is a general island-wide purpose behind this policy (water resource protection) and also a potential COBI water utility benefit (economies of scale).

4) Active Plus Acquisition (over time)

This policy is essentially the same as the Active policy above, but with one significant change. That is, if a small water system requests assistance from the City with meeting its defined needs, be it management, testing, billing, reconstruction, etc., the City may agree to do

so on condition that the water system agree to be consolidated within the COBI water utility at some established time in the future. The UAC does not recommend a set period, leaving that to negotiation between the parties.

This policy is in furtherance of DOH's long-standing objective to consolidate small water systems within larger ones, and encourages long-range planning of water resource management.

D. UAC Recommendation

For the reasons outlined above, the UAC believes that the City should depart from its disengaged reactive, and inconsistent position toward other water systems on Bainbridge Island, and become more actively and consistently involved with managing the water resources on the Island.

Accordingly, the UAC recommends that the City adopt alternative #4 for small water systems within and adjacent to the City's assigned service areas. That is, the City should actively seek to provide assistance as needed by those systems, and in doing so there should be a plan for eventual consolidation within the City's water utility.

However, for the small water systems located outside the City's service areas, the UAC recommends adopting policy alternative #3. That is, the City should reach out to small water systems to offer assistance as needed.

The UAC emphasizes that under either alternative #3 or 4, the City will not be mandating any particular outcome for small water systems on Bainbridge Island. The City will be *encouraging* cooperation and consolidation when appropriate.

When implementing the above recommendations, the UAC suggests that the City start by focusing on the Group A systems not owned by KPUD that provide service to water customers (as opposed to the remaining Group A systems which primarily serve parks and facilities for the general public). Thereafter, the City could expand its outreach to the many Group B systems on the Island. However, due to their large number and likely limited incentive to seek professional assistance, the City should proceed with Group B systems much more slowly.

The UAC suggests an example of a circumstance that is ripe for City analysis and possible involvement and assistance exists at the southeast corner of Eagle Harbor. There, three adjacent small Group A water systems operate almost wholly independent of each other. They are the City-owned Rockaway Beach system with 72 connections, the Bill Point water system owned by the 84 members of its Homeowner Association, and the KPUD-owned Island Utility system with 255 connections. Also, nearby is the unassigned service area containing many very small Group A and B systems.

It is logical that the three systems should meet and discuss the current status of their systems and their short- and long-term needs, and then hopefully coordinate and cooperate with each other when implementing improvements. The UAC recommends that the City arrange for and facilitate such a dialogue and cooperative analysis.

E. Suggested Next Steps

If the Council is prepared to establish policies toward small water systems, the UAC suggests the following initial steps:

- 1) Create or assign one or more staff positions within the Public Works Department to focus on water systems and water resource policy, possibly combining that role with the staffing to develop a Groundwater Management Plan.
- 2) Coordinate – and to the extent practical, include – the recommended next steps on small water systems into the City’s development and implementation of upcoming work on a Groundwater Management Plan.
- 3) Update and fine tune its information about Island water system in a comprehensive inventory and map. There is data in a variety of locations about the water systems, which has been the basis for information provided in this memorandum, but there is no single collection of the information in one usable and up-to-date location.
- 4) Internally consider how COBI can provide management, assistance, and capital improvement services for small water systems. The idea is to develop a list of services the City may be able to provide to smaller water systems if needed, such as billing and other administrative tasks, equipment rental, emergency assistance, and inspection and testing.
- 5) Convene a meeting(s) of all small Group A and B systems to discuss problems, potential solutions, cooperation, consolidation, etc., and to advise of the availability of City resources to assist.
- 6) Following the meeting(s) described above, evaluate and then propose steps to solve identified problems in the attending small water systems, and consider and propose recommendations for a larger policy for the City toward small water systems and unassigned service areas. Priority should be given to Group A systems. Among the issues to consider when developing such steps and policies is the financial fees charged to support the City’s efforts, in alignment with the financial recommendations of Goals U-10 and Policies 11.6 and 11.7 of the Comprehensive Plan (reproduced on page 3 above).
- 7) Establish a common venue to enable small water systems to do water sampling, and providing an experienced City employee to assist volunteers with their questions about these and other operational tasks.
- 8) Apply to the State Department of Health to become an approved Satellite Management Agency (SMA).
- 9) Establish policies that make consolidation of systems less administratively burdensome and costly to the property owners and water systems. For example, consider requiring all new Group B systems to be constructed to Group A standards, thus more easily allowing future consolidation with Group A’s, and

consider requiring new building permits for private single-connection wells to consent to later connection to public water systems.

- 10) At the appropriate time, develop an established plan or pathway for the City to assume ownership of and provide capital improvements to systems which need assistance. Such planning would include necessary financing mechanisms, such as Local Improvement Districts (LID's) and state loans and grants.

IV. CONCLUSION

The UAC believes it is time for the City to depart from its disengaged, laissez faire attitude toward water management on Bainbridge Island. Accordingly, the UAC recommends that the City adopt a policy of providing active and consistent assistance to the small water systems on Bainbridge Island, and encourage voluntary consolidation over time of those systems within the City's current water utility. The UAC recommends the City prioritize its efforts and focus on Group A water systems and the small water systems within or adjacent to the City's current assigned service areas.

Adopted unanimously at UAC Meeting on September 23, 2020.

- Charles Averill
- Sheina Hughes
- Ted Jones, Co-Chair
- Andy Maron, Co-Chair
- Nancy Nolan
- Martin Pastucha (absent 9/23/20)
- Emily Sato

EXHIBITS

- Exhibit A: Map Group A and B Water Systems
- Exhibit B: List of Group B Systems
- Exhibit C: Map of Service Areas
- Exhibit D: COBI Resolution 93-3
- Exhibit E: UAC Discussion Matrix

Exhibit A: Group A and B Water Systems

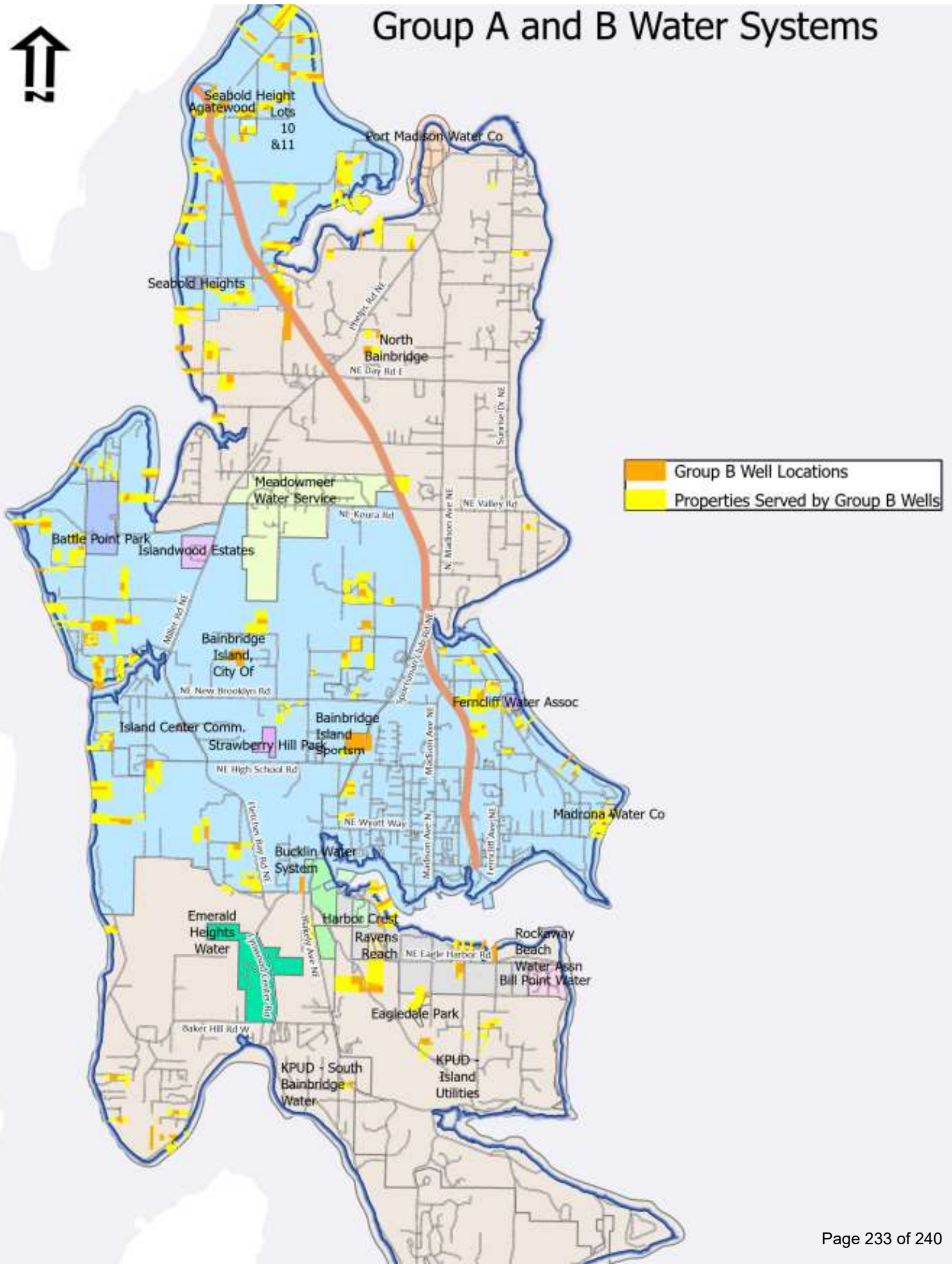


Exhibit B – List of Group B Water Systems on Bainbridge Island

Class	SystemName	ApprovedConnections	ConnectionCount
B	Agate Community	9	6
B	Agate Point	4	4
B	Agatewood	3	3
B	Alford Homes I Water System	8	8
B	Alice Kimball Water System	2	2
B	Amber Water Assoc.	9	9
B	Amis Water	0	3
B	Argonaut	6	3
B	Arrow Point Water	6	5
B	Backland Well System	6	5
B	Bainbridge Green	8	8
B	Bainbridge Is Saddle	1	1
B	Bainbridge Island Marina	2	1
B	Bainbridge Island Sportsmans Club	0	1
B	Battle Point Water System	4	2
B	Bbd Water System	7	6
B	Bennett-Upton Water	6	4
B	Bergstrom Farm	4	4
B	Bernhard Water	4	4
B	Bevins	4	4
B	Big Fir	6	2
B	Blakely	9	9
B	Boetter Water	5	4
B	Booth Water	0	0
B	Bpib	3	3
B	Bronte	4	4
B	Broomgerrie	7	5
B	Browning	3	3
B	Cala Woods	6	5
B	Carole/Swink	4	4
B	Casey Street Water Co. Llc	9	8
B	Cedar Lane Water	4	4
B	Cedar Ponds Water System	0	4
B	Cessna Water	4	4
B	Churchill Water Corp.	9	8
B	Clark Acres Water	0	6
B	Clear Water	6	6
B	Clementz First Edition	4	4
B	Davis Keith Cooperative	5	5
B	Dawson/Tallon	5	2
B	Day Road Water System	4	4
B	Dolphin	4	4
B	Douglas Water System	5	3
B	Eagledale Marina	0	1
B	Family Meadows Water	6	3
B	Fletcher Bay Water	5	5
B	Flora Water	3	3
B	Fox Cove Water	10	9
B	Gale-Blair	3	3
B	Gen-Don Water System	4	4
B	Gordon	6	5
B	Graham Estates	4	4
B	Green Spot Water	4	3
B	Greene Water System	2	2
B	Haley Water System	4	3
B	Hansen/Spellman	6	6
B	Heavenly Waters	6	5
B	Hemlock Street	6	6

B	Hendel	3	3
B	Henderson Road	3	2
B	Hidden Cove	9	7
B	Hidden Cove West Water Co	9	9
B	Holly Lane Gardens	2	1
B	Hooper Point	4	4
B	Hume Water System	4	4
B	Iwihy Inc	7	6
B	Johnston Well	9	9
B	Keeney Water	8	8
B	King, Carol/Ted Water	6	4
B	Kirk Ave Water	9	9
B	Laurelwood	5	5
B	Lazy Brook Farm	4	4
B	Lee Memorial Water Assn	6	1
B	Lightmoor	6	6
B	Little Manzanita Water	4	3
B	Little, Crista Water	6	4
B	Lone Eagle	7	7
B	Lustbader-Preston	4	4
B	Madrono Water Co	14	14
B	Manual Road	4	4
B	Manzanita Road	3	3
B	Martinson Water	0	3
B	McFarland Well	0	4
B	McFarlane Water System	4	2
B	McKeever Water System	6	6
B	McKenzie Water System	0	0
B	Moran Water	3	2
B	Murphys	4	3
B	Norris Sp 615 Water System	4	3
B	Olallie Water Sysem	2	2
B	Olympus Beach Water	8	7
B	Onorato	8	7
B	Park Place Water Company	4	3
B	Parsons	4	2
B	Peabody Water	6	4
B	Piper	9	9
B	Pleasant Lane Water	0	3
B	Port Madison Yacht Club	0	1
B	Puget Bluff Lane Water	6	7
B	Ralston Water System	3	3
B	Raven Ridge	5	5
B	Reese, Roy	6	3
B	Rippy Water System	4	2
B	Ruys Lane	4	4
B	Satterwhite	4	4
B	Schadel / Lewars	6	4
B	Schold - Crystal Springs	5	5
B	Seabold Acres Water Assoc.	4	4
B	Seabold Height Lots 10 &11	3	3
B	Seabold Water	8	7
B	Seattle Yacht Club	4	1
B	Skogen Eight	8	8
B	Skogen Lane	6	5
B	South Springridge Water	8	9
B	Spellman Water System	4	4
B	Springwood Lane	4	4
B	Springwood No. 1	1	1

B	Springwood No. 2	6	8
B	Stetson Acres	6	6
B	Stone-Erickson Water	0	3
B	Strawberry Water System	6	6
B	Sugar Mill	5	2
B	Sulu Water System	6	5
B	Sunset Heights Water	6	6
B	Thalberg Water System	8	8
B	Toad Holler	7	7
B	Tyee Yacht Club	1	1
B	Venice Water System	6	6
B	Wagener	3	3
B	Wallace	3	3
B	Waters, Owen Water System	4	4
B	Wendt Water System	6	4
B	West Port Madison	6	6
B	Wheeler West	5	5
B	Woodhaven Farm Water	3	3

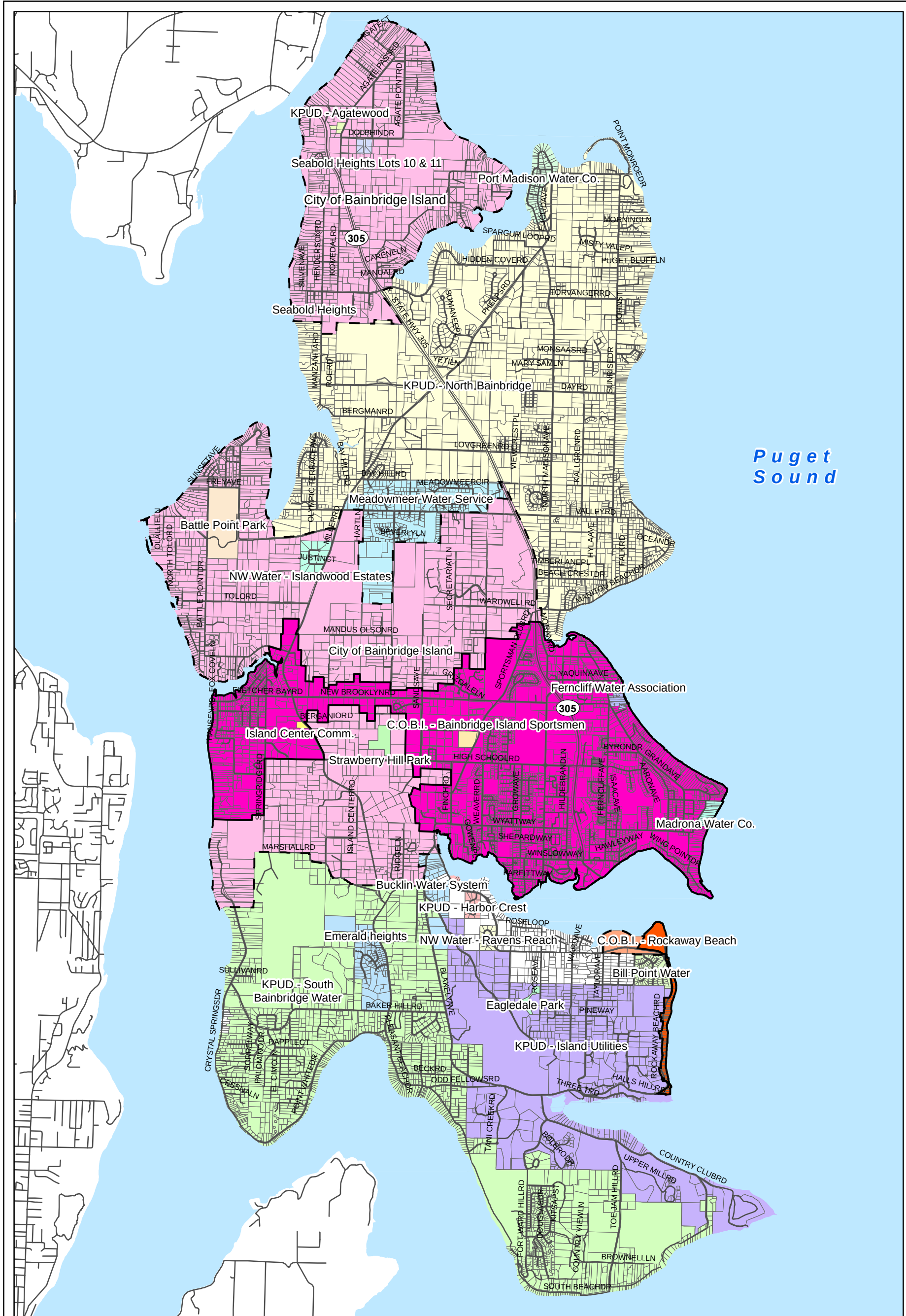
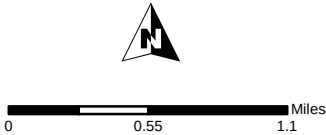


Exhibit C. Service Areas

Legend

- Winslow RWSA
- Rockaway Beach RWSA
- Future Winslow RWSA
- Future Rockaway Beach RWSA

- Roads
- Parcels
- Water Body



Water System Plan
City of Bainbridge Island



Exhibit D – Resolution 93-03

RESOLUTION NO. 93-03

A RESOLUTION ESTABLISHING POLICIES TOWARD WATER SYSTEMS OUTSIDE HISTORIC WINSLOW AND WATER RESOURCES ON BAINBRIDGE ISLAND

WHEREAS:

1. The citizens of Bainbridge Island obtain their water from wells owned by private individuals and almost 200 different water purveyors. 42% of the island's population are served by 17 water systems, which serve 12 to 1000 customers. The remaining 58% of the population obtain water from individual systems or small systems developed to serve a few residents.
2. The City of Bainbridge Island owns and operates one system, that being the former City of Winslow's system which serves 1200 connections.
3. Strict new federal and state regulations for drinking water systems, rising water demands, and stringent environmental and resource conservation standards for new water supply projects are making it more difficult for small water systems managers to operate successful systems.
4. Customers of several water systems have approached the City requesting assistance with a variety of system deficiencies. It is expected that small system customers and operators will continue to request the City's help in solving water system problems.
5. The Growth Management Act mandates that the City's land use plans be developed with a consideration of the island's water resources. There is thus a need to inventory water supplies, investigate water resources, and begin comprehensive water planning.
6. All citizens and the City must take steps now to protect the Island's water resources and to insure high quality and quantity of water for our citizens, future generations, and the natural habitat of the Island.

IT IS THEREFORE RESOLVED:

7. The City of Bainbridge Island shall work with other governmental agencies, water purveyors, and citizens to preserve and protect the water resources of Bainbridge Island. The City shall assist citizens and water system purveyors to obtain reliable, high quality water service. In furtherance of this objective, the City shall be prepared to respond to requests to:
 - a. become a direct service provider through acquisition of water systems;
 - b. become a contract service provider to water system operators (performing such services as maintenance, billing, testing); and
 - c. provide support assistance (such as training and purchasing).

Revised 2-5-93

8. For existing water systems where the operators have expressed interest in relinquishing ownership to the City, the City shall respond actively to pursue system acquisition. The cost to bring the deficiencies of the water systems up to acceptable regulatory standards shall not be borne by the citizens of the City, but rather by the owners of the water system. The City may utilize the LID/ULID process to help finance the water system improvements.

9. The formation of new small water systems, the organization of new water purveyors, and the proliferation of new small wells shall be discouraged. Those persons desiring new or replacement water service are encouraged to hook-up to existing water systems. The City shall assume ownership of new water systems greater than a size to be determined by the Public Works Department when the systems are placed into service. The Public Works Department shall advise the council as to the size of new water systems that should be owned by the City.

10. The City shall develop a Water System Master Plan consistent with the Comprehensive Land Use Plan. The Water System Master Plan shall include issues of water quantity, quality, conservation, watershed, and well head protection. The City shall also work with water purveyors, other governmental agencies (like Kitsap County Public Utility District No. 1, Washington State Department of Ecology), and private citizens to provide education to the public about the Island's water resources and the benefits of conservation.

11. As part of the City's Water System Master Plan, the City may conclude that certain improvements will benefit the general public. These improvements may include new water sources, storage facilities, service lines, system interties, etc. Contrary to the situation described in paragraph 8, in which costs are paid by specific system owners, improvements which have general community benefit should be paid for by the City as a whole. Funding for these sorts of projects may come from a variety of sources, including general tax revenue, bonds, grants, matching funds, and may, consistent with the law, be allocated proportionate with the benefit.

12. As the City becomes involved with the water resource and water systems outside historic Winslow, in the manner described in the above paragraphs, it must be careful to consider the needs, benefits, and effects of its activities on those persons who obtain water from small private wells.

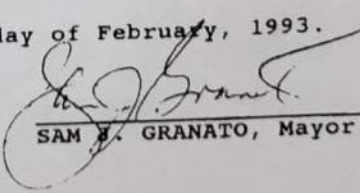
13. The City shall prepare a detailed inventory of all public water supplies on Bainbridge Island, and shall develop a well-monitoring program.

14. At the time annexation became effective, some water systems were actively working with Kitsap County Public Utility District No. 1, the City, and private contractors to improve their systems. The City shall continue to cooperate with these purveyors to accomplish the improvements.

15. The Public Works Department and Planning and Community Development Department shall advise the council by March 30, 1993 of the methods and means to implement this resolution and any proposed budget amendments necessary to do so.

PASSED BY THE CITY COUNCIL this 4th day of February, 1993.

APPROVED BY THE MAYOR this 4th day of February, 1993.


SAM J. GRANATO, Mayor

ATTEST/AUTHENTICATE:

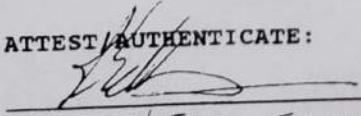

RALPH W. EELLS, FINANCE DIRECTOR

Exhibit E: COBI POLICY DISCUSSION MATRIX FOR ALL ON-ISLAND WATER SYSTEMS

updated: 9/18/2020

	Inside COBI Retail Service Area (RSA)			Outside COBI RSA				
Potential COBI Involvement	Public <i>Group B</i> Systems (3-14 connections)		Private Wells	Public <i>Group A</i> Systems (>14 conn.)	Public <i>Group B</i> Systems (3-14 connections)	Private Wells	Pros	Cons
	Near current infrastructure	Distant from current infrastructure						
<i>Example Systems</i>	<i>Casey Street</i>	<i>North Service Area (unserved now)</i>		<i>Bill Pt, Meadowmeer, Emerald Heights</i>				
Reactive (Status Quo) <i>current staffing</i>	SM, SB and SS if owner and COBI agree and if system is in good shape for fee	Defer to KCHD, KPUD and private water companies for all services and support		SM, SB and SS if owner requests and if system is in good shape for fee	Defer to KPHD, KPUD and private water companies for all services and support		Little city cost, effort and liability No staff growth	Doesn't encourage consolidations as recommended by State and County Doesn't help protect citizens and aquifers from failing aging water systems Occasional acquisition costs
	COBI 1st in line to acquire Rates may vary from contiguous system			COBI <u>may</u> acquire if cost effective and on border of COBI Service Area or infrastructure, <u>if requested by the water system (as current staffing allows).</u>				
Active (Reaching Out) <i>increased staffing</i>	SM, SB and SS if owner requests and if system is in good shape for fee	Defer to KPHD, KPUD and private water companies	COBI not staffed to operate private wells	SM, SB & SS if owner requests and if system is in good shape for fee	Offer information about closest water system and about LID programs available	Defer to KPHD, KPUD and private water companies for all services and support	More cost effective, efficient, reliable and safe	More PW staff required
	In exchange for helping old system; require agreement that when COBI infrastructure is in reach, future source is COBI Opportunity to pay early connection fee (impact fees included) to get building permit approval LID, if needed may be prefunded Discourage new Group Bs in Current RSA - must connect to COBI, unless COBI cannot support New Group Bs must be built to Group A technical specs to facilitate future consolidation	Consider trading away service area if serving area is prohibitively costly	Offer information about closest water system and about LID programs available For new wells; require agreement that when COBI infrastructure is in reach, future source is COBI Opportunity to pay early connection fee (impact fees included) to get building permit approval	In exchange for helping old system; require agreement that when COBI infrastructure is in reach, future source is COBI COBI may acquire if cost effective and on border of COBI Service Area or infrastructure, <u>if requested by the water system.</u> Short range partnering with large operators (mostly KPUD) on CWF at RSA boundaries and growth areas to create interties and looped supply Long range: Build-out Infrastructure Plan, including wells, storage, and fire fighting. Annual CIP or LIDs until built out.	New Group Bs must build to Group A technical specs to facilitate future consolidation Short range partnering with large operators (mostly KPUD) on CWF at RSA boundaries and growth areas to create interties and looped supply Long range: Build-out Infrastructure Plan, including wells, storage, and fire fighting. Annual CIP or LIDs until built out.	Offer information about closest water system and about LID programs available	Clear rules for system owner/operators More protective of Groundwater Encourages and enables consolidation as required by State and County recommendations Protects citizens from aging water systems Approaches WA standards island-wide. Improve fire protection	More planning, acquisition and operations Periodic acquisition costs for interties and system wide improvements