



**PLANNING COMMISSION SPECIAL MEETING
THURSDAY, OCTOBER 30, 2025**

BAINBRIDGE ISLAND CITY HALL
COUNCIL CHAMBERS
280 MADISON AVENUE N.
BAINBRIDGE ISLAND, WASHINGTON

AND

ZOOM WEBINAR
[HTTPS://BAINBRIDGEWA.ZOOM.US/J/85387328629](https://bainbridgewa.zoom.us/j/85387328629)
OR TELEPHONE: US: +1 253 205 0468
WEBINAR ID: 853 8732 8629

AGENDA

1. CALL TO ORDER/LAND ACKNOWLEDGMENT - 6:00 PM

We would like to begin by acknowledging that the land on which we gather is within the ancestral territory of the Suquamish, "People of Clear Salt Water." Expert fishermen, canoe builders and basket weavers, the Suquamish live in harmony with the lands and waterways along Washington's Central Salish Sea as they have for thousands of years. Here, the Suquamish live and protect the land and waters of their ancestors for future generations as promised by the Point Elliot Treaty of 1855.

2. AGENDA REVIEW / CONFLICTS DISCLOSURE - 6:05 PM

3. PUBLIC COMMENT INSTRUCTIONS - 6:10 PM

Members of the public are encouraged to submit written public comment to the Planning Commission at any time by emailing pcd@bainbridgewa.gov. Members of the public who wish to provide public comment in-person at a Planning Commission meeting should sign up to speak on the sign-in sheet by the Chamber doors. The Planning Commission Chair will call the people signed up on the sign-in sheet, and speakers will have up to three minutes to speak from the podium. Please speak directly into the microphone, which is adjustable. A timer on the screen will indicate when 3 minutes (or such other time set by the Chair) has elapsed. Orderly behavior and civility in remarks is expected with no clapping or booing, and no yielding of one person's time to another person.

Guidelines for public comment are provided. Remote public comment is allowed with advance notice to the Planning & Community Development Department by noon on the date of the meeting at pcd@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.

Public comment is not accepted during the balance of the Planning Commission meeting, unless a public hearing or public participation meeting is on the agenda.

3.a Public Comment Instructions - 6:10 PM 10 Minutes

[Instructions_for_Providing_Public_Comment_for all PC agendas 20250103.pdf](#)

4. UNFINISHED BUSINESS - 6:20 PM

4.a Presentation of the Groundwater Management Plan Peer Review - Public Works, 60 Minutes

[Keta Waters Presentation.pdf](#)

[Bainbridge Island GWMP Peer Review Documents.pdf](#)

4.b Discuss future of Planning Commission Subcommittees for work on the Winslow Subarea Plan 20 Minutes

[September_19__2025_Tovar_Memo_to_Planning_Commission.pdf](#)

4.c Continued Discussion on Updates to the Winslow Subarea Plan 90 Minutes

[251017_PC Meeting Packet_Oct 24 Meeting.pdf](#)

[Incentives-Subcommittee-Garcia-Presentation-Draft-2025.10.24.pdf](#)

[Tovar 10.24.25 Memo re Regulatory Barriers.pdf](#)

5. FOR THE GOOD OF THE ORDER - 9:10 PM

6. ADJOURNMENT - 9:15 PM

GUIDING PRINCIPLES

Guiding Principle #1 - Preserve the special character of the Island, which includes downtown Winslow's small town atmosphere and function, historic buildings, extensive forested areas, meadows, farms, marine views and access, and scenic and winding roads supporting all forms of transportation.

Guiding Principle #2 - Manage the water resources of the Island to protect, restore and maintain their ecological and hydrological functions and to ensure clean and sufficient groundwater for future generations.

Guiding Principle #3 - Foster diversity with a holistic approach to meeting the needs of the Island and the human needs of its residents consistent with the stewardship of our finite environmental resources.

Guiding Principle #4 - Consider the costs and benefits to Island residents and property owners in making land use decisions.

Guiding Principle #5 - The use of land on the Island should be based on the principle that the Island's environmental resources are finite and must be maintained at a sustainable level.

Guiding Principle #6 - Nurture Bainbridge Island as a sustainable community by meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Guiding Principle #7 - Reduce greenhouse gas emissions and increase the Island's climate resilience.

Guiding Principle #8 - Support the Island's Guiding Principles and Policies through the City's organizational and operating budget decisions.



Planning Commission meetings are wheelchair accessible. Assist listening devices are available in Council Chambers. If you require additional ADA accommodations, please contact the Planning & Community Development Department at (206) 780-3750 or pcd@bainbridgewa.gov by noon on the day preceeding the meeting.

Public Comment may be limited to allow time for the Commissioners to deliberate. To provide additional public

comment, email your comment to pcd@bainbridgewa.gov or mail it to Planning and Community Development, 208 Madison Avenue North, Bainbridge Island, WA 98110.



CITY OF
BAINBRIDGE ISLAND

Planning Commission Special Meeting Agenda Bill

MEETING DATE: October 30, 2025

ESTIMATED TIME: 10 Minutes

AGENDA ITEM: Public Comment Instructions - 6:10 PM

AGENDA CATEGORY: Discussion

PROPOSED BY: Planning &
Community Development

PREVIOUS PLANNING COMMISSION REVIEW DATE(S):

PREVIOUS COUNCIL REVIEW DATE(S):

RECOMMENDED MOTION:

Discussion Only

ATTACHMENTS:

[Instructions_for_Providing_Public_Comment_for all PC agendas 20250103.pdf](#)



PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

Members of the public are encouraged to submit written public comment to the Planning Commission at any time by emailing pcd@bainbridgewa.gov. For members of the public who wish to provide public comment in-person, at a Planning Commission meeting:

1. Sign up to speak on the sign-in sheet by the Chamber doors. The Planning Commission Chair will call the people signed up on the sign-in sheet
2. Speakers will have up to three minutes to speak from the podium. Please speak directly into the microphone, which is adjustable. A timer on the screen will indicate when 3 minutes (or such other time set by the Chair) has elapsed, and there is no yielding of one person's time to another person.
3. Orderly behavior and civility in remarks is expected with no clapping or booing, Guidelines for public comment are provided.
4. Remote public comment is allowed with advance notice to the Planning & Community Development Department by noon on the date of the meeting at pcd@bainbridgewa.gov, provided that all remote commenters shall be required to display their true name on Zoom.
5. Public comment is not accepted during the balance of the Planning Commission meeting, unless a public hearing or public participation meeting is on the agenda.

Instructions for Providing Public Comment Remotely

1. Contact the Planning & Community Development Department at pcd@bainbridgewa.gov no later than Noon on the day of the meeting. State which meeting you would like to make a public comment and provide your true name.
IMPORTANT: No remote public comment will be accepted without first registering at the email address above.
2. Join the Zoom webinar by following the link posted on the agenda and on the City's website calendar. Sign into Zoom. You will need to enter and display your true name on Zoom.
3. The Chair will indicate when it is time for you to make a public comment.

Excerpts from the Governance Manual regarding public comment (although “City Council” is mentioned below, this information applies equally to Planning Commission):

5.6 Respect and Decorum

It is the duty of the Presiding Officer and Councilmembers to maintain dignity and respect for their offices, City staff, and the public. While the Council is in session, the Councilmembers shall preserve civility, order and decorum. No member of the public shall, by conversation or otherwise, delay, disrupt, or interrupt the proceedings of the Council, nor engage in any of the prohibited behavior described below. Councilmembers and the public shall obey the proper orders of the Presiding Officer of the meeting.

5.6.1 Orderly Behavior and Civility in Remarks

Any person disrupting the business of the Council, either while addressing the Council or attending the proceedings, shall be asked to leave, or be removed from the meeting. Continued disruptions may result in a point of order by the Presiding Officer or a Councilmember pursuant to the Council’s parliamentary rules, or a recess, forced removal, or adjournment as described elsewhere in this manual. Disruptive behavior includes, but is not limited to, the following:

- (a) Speaking without being recognized by the Presiding Officer.
- (b) Continuing to speak after the allotted time has expired.
- (c) Speaking on an item at a time not designated for discussion by the public of that item, such as speaking on a quasi-judicial item at a time other than during a public hearing or closed record proceeding on the matter.
- (d) Throwing objects.
- (e) Speaking on an issue that is not a public topic, in violation of Section 9.12.2.
- (f) Speaking in favor of or in opposition to a ballot proposition or a candidate for public office, provided, that public comment is allowed when the City Council is considering taking a collective position in favor of or in opposition to a ballot proposition as authorized in RCW 42.17A.555.
- (g) Impersonating a City Councilmember or a member of the City staff.
- (h) Shouting or otherwise engaging in loud or boisterous behavior.
- (i) Continuing to make repetitive remarks after being requested not to do so by the Presiding Officer or a majority of the City Council.
- (j) Attempting to engage the audience rather than the Council, e.g., asking audience members to stand, clap, boo or otherwise express collective support or opposition to any matter.

- (k) Booing, hissing, or otherwise disrupting the comments of another speaker.
- (l) Using racial slurs or other slurs directed at the color, creed, religion, ancestry, gender, sexual orientation, gender expression or identity, national origin, citizenship or immigration status, or mental, physical, or sensory disability of any individual or group, under circumstances where such words constitute “fighting words” under constitutional law.
- (m) Refusing to modify conduct after being advised by the Presiding Officer that the conduct is disrupting the meeting or disobeying any other lawful order of the Presiding Officer or a majority of the City Council.

5.6.2 Permission Required to Address the Council

Persons other than Councilmembers and Administration shall be permitted to address the Council only upon recognition and introduction by the Presiding Officer of the meeting.

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9.12.2 Subjects – Whether or Not on the Current Agenda

Public comments received during the public comment period may be on any public topic, whether or not on the agenda, but a comment on the subject that is covered by a public hearing at that meeting must be made during the period of the public hearing. All public comment shall be made consistent with Section 5.6.

9.12.3 Use of Microphones

Comments shall be made directly into the microphone, as it is necessary for the public record and for the audience to hear all proceedings. No comments shall be made from any other location.



CITY OF
BAINBRIDGE ISLAND

Planning Commission Special Meeting Agenda Bill

MEETING DATE: October 30, 2025

ESTIMATED TIME: 60 Minutes

AGENDA ITEM: Presentation of the Groundwater Management Plan Peer Review - Public Works,

AGENDA CATEGORY: Discussion

PROPOSED BY: Public Works

PREVIOUS PLANNING COMMISSION REVIEW DATE(S):

PREVIOUS COUNCIL REVIEW DATE(S):

RECOMMENDED MOTION:

Discussion only.

SUMMARY:

City staff will introduce the Groundwater Management Plan peer reviewers, Joel and Adam Massmann of Keta Waters, Inc. The reviewers will provide a brief overview of the peer review findings, for the benefit of the Commission and the public, and will answer questions from the Planning Commission.

This material was presented to the City Council on October 21, 2025, followed by City Council questions. A video of the meeting can be viewed from the City website: <https://bainbridgewa.gov/1101/City-Council-Agendas>. At the end of its discussion, the City Council approved a motion to forward the Groundwater Management Plan Peer Review to the Groundwater Management Plan Sub-Committee and Technical Advisory Committee for development of next steps and plans for public engagement.

Additional information about work on the Groundwater Management Plan can be found on the City's website: www.bainbridgewa.gov/1320

BACKGROUND: Bainbridge Island residents, workers and visitors rely on groundwater for all water supply needs, from drinking water and dishwashers to toilets and garden watering. Groundwater also plays a vital role in supporting healthy streams and wetlands.

In 2022, the City began development of a Groundwater Management Plan (GWMP) that takes an Island wide approach to managing groundwater resources and serves as a document that can be adapted as needs change. The plan will include a summary of what we know about the Island's geology; groundwater systems; streams, lakes, and wetlands; climate and climate change projections; land use; and population projections.

On July 22, 2025, the City Council received the 2nd draft of the GWMP, and authorized Keta Waters, Inc. to perform a peer review of the plan. The draft peer review was completed on October 9, 2025, and is now being presented to the City Council.

At the end of its discussion on October 21, 2025, the City Council approved a motion to forward the Groundwater Management Plan Peer Review to the GWMP Sub-Committee and Technical Advisory Committee for development of next steps and plans for public engagement. The Sub-Committee includes members from the Utility Advisory Committee, the Climate Change Action Committee and the Environmental Technical Advisory Committee. The Technical Advisory Committee includes members from Kitsap Public Health, the State Department of Ecology, the Suquamish Tribe, and the Kitsap Public Utility District.

The 2nd draft of the GWMP, the GWMP Summary Memo, and other and associated documents can be found on the City's website:

www.bainbridgewa.gov/1320

ATTACHMENTS:

[Keta Waters Presentation.pdf](#)

[Bainbridge Island GWMP Peer Review Documents.pdf](#)

**Technical Peer Review of the City of
Bainbridge Island 2nd Draft Groundwater
Management Plan**

October 21, 2025

**Joel Massmann
Adam Massmann**

Keta Water LP

- 1. Brief Introductions**
- 2. Summary of Conclusions/Recommendations**
- 3. Overall Rationale**

Main Conclusions/Recommendations

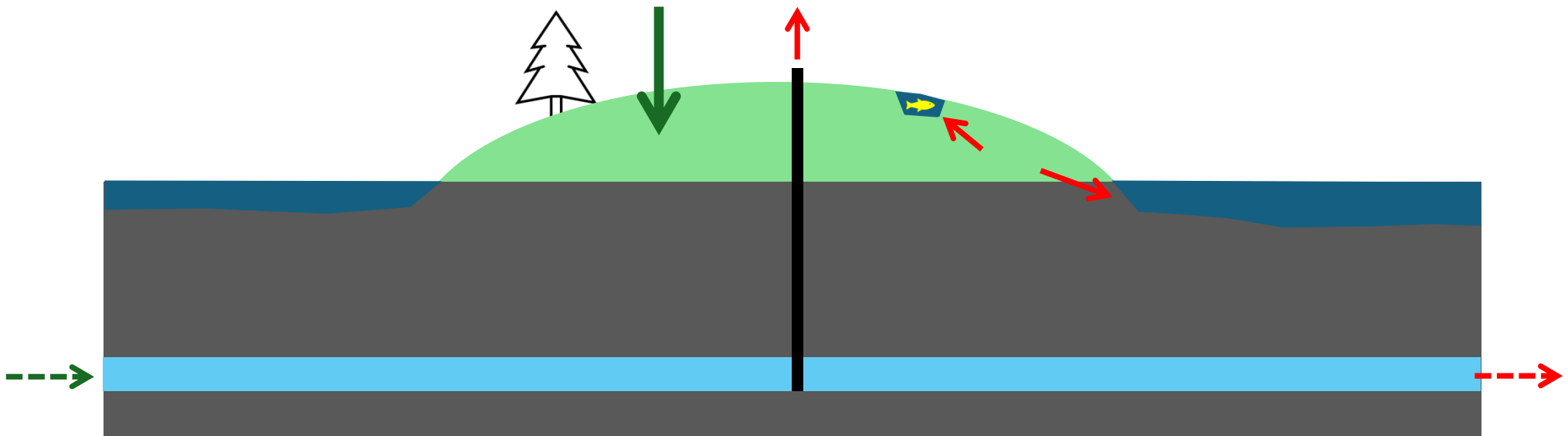
- The GWMP identifies water conservation as the most cost-effective management action. Water conservation will lead to a more resilient system and does not rely on correct groundwater modeling nor certain futures, neither of which are attainable.
- The GWMP identifies managing storm and surface water as a second-most cost-effective management action. More broadly, we would re-state that a second key management option for improving the resilience of the system is to implement infrastructure and policy that will maximize clean groundwater recharge.

Main Conclusions/Recommendations

- Current groundwater elevation data and modeling do not provide definitive evidence that current and future groundwater withdrawals are unsustainable. However, current groundwater elevation data and modeling also do not provide definitive evidence that current and future groundwater withdrawals are sustainable.
- The uncertainties in current and future recharge rates are large and are not likely to be resolved in the foreseeable future. Management actions should focus on developing resilient systems that are less dependent on estimated recharge.

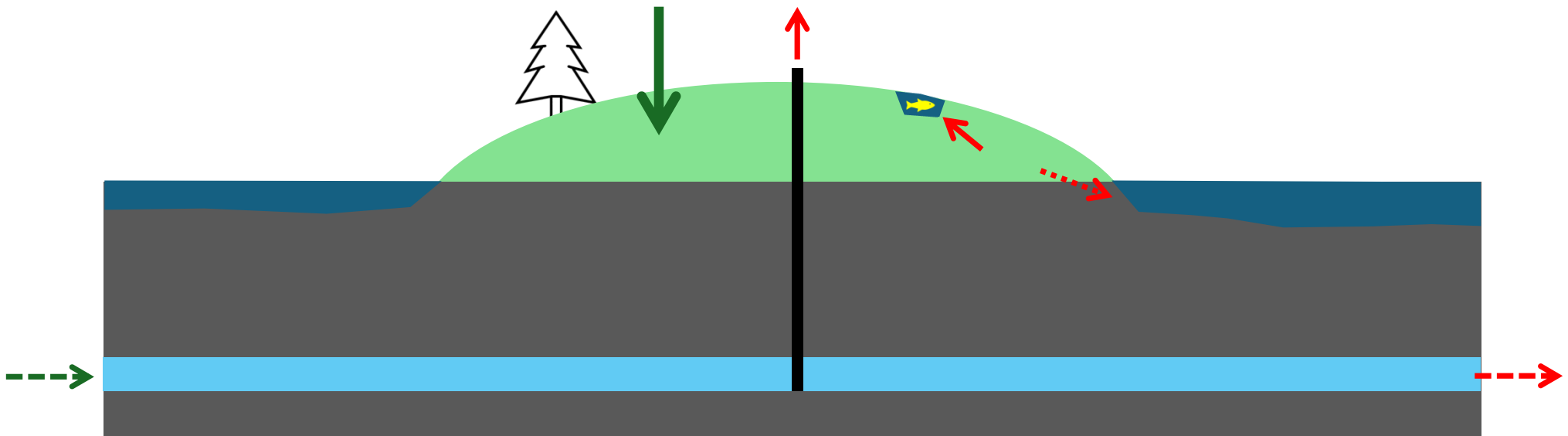
1. Brief Introductions
2. Summary of Conclusions/Recommendations
3. Overall Rationale

Wells + Streams + Saltwater + Aquifer Outflow = Recharge + Aquifer Inflow



$$2,500 + 7,500 = 12,500$$

Wells + Surface Water = Recharge



The uncertainties are large relative to the differences.

Groundwater Management Plan (GWMP) Peer Review Documentation

- Document 1 - GWMP Draft Peer Review
- Document 2 - Peer Reviewer Comments on the GWMP Summary Memo

Document 1 - GWMP Draft Peer Review

Technical Peer Review of the City of Bainbridge Island 2nd Draft Groundwater Management Plan

Prepared by

Joel Massmann, Ph.D., P.E.

Adam Massmann, Ph.D.

**Keta Waters LP
Seattle, WA**

October 9, 2025

*****DRAFT*****

A. BACKGROUND AND OBJECTIVES

This report presents our technical peer review of the Draft Bainbridge Island Groundwater Management Plan (GWMP) as described in the July 2025 report by EA Engineering, Science, and Technology (EA, 2025a). The overall goal of this review was to validate the methodology, assumptions, data sources, modeling, and proposed management actions in the plan. Specific objectives include the following:

- Evaluate the scientific soundness and technical accuracy of the plan.
- Assess the adequacy of groundwater data, hydrologic modeling, and demand projections.
- Identify any gaps, deficiencies, or areas for improvement.
- Assess the plan conclusions, next steps, and management actions.
- Provide constructive recommendations to enhance plan effectiveness and/or completeness.

Our overarching recommendation is that investment in actions aimed at proactive mitigation and management, including water conservation and recharge enhancement, will likely provide the greatest return for achieving an overall goal of providing clean and sufficient groundwater for the natural environment and future generations. Continued study and plan refinements are not expected to change the value or priority of these actions.

Additional conclusions and recommendations are summarized below. Further discussions and support for these conclusions and recommendations are provided in the sections that follow.

A.1 Conclusions and Recommendations Related to Goals and Actions

- The GWMP would benefit from a clear and concise statement of the overall goal of groundwater management on Bainbridge Island. The groundwater management plan should then provide recommendations for specific actions aimed at achieving the goal of groundwater management. The current report (e.g., Section 1.2) does not clearly distinguish between the overarching goal and recommended actions for achieving that goal. Based on discussions and analyses presented in the GWMP, an overarching goal may be something to the effect of “Ensure clean and sufficient groundwater for our natural environment and future generations.”
- The GWMP identifies water conservation as the most cost-effective management action. This is an important conclusion; improving water conservation and reducing ground water pumping will lead to a more resilient system and does not rely on correct groundwater modeling nor certain futures, neither of which are attainable.

- The GWMP identifies managing storm and surface water as a second-most cost-effective management action. This type of management action can complement increased conservation; improved surface management can enhance groundwater recharge while protecting water quality. More broadly, we would re-state that a second key management option for improving the resilience of the system is to implement infrastructure and policy that will maximize clean groundwater recharge.
- A primary flaw of the second draft of the GWMP, in our estimation, is that it focuses on groundwater model development and future climate scenarios which can offer no meaningful guidance on how to improve water conservation and increase recharge through surface water and land use management.
- Given the cost-benefit analysis identifies water conservation as the best approach, it is surprising that there is no meaningful engagement with the problem of how to achieve water conservation, and no tangible management actions are identified related to water conservation.

A.2 Conclusions and Recommendations Related to Addressing Uncertainty

- There are inherently large uncertainties in recharge estimates developed for current conditions. The draft GWMP does not acknowledge or explicitly consider those uncertainties. These uncertainties are magnified in estimating recharge under future climate conditions. The uncertainties in current and future recharge rates are not likely to be resolved in the foreseeable future and management actions should focus on developing resilient systems that are less dependent on estimated recharge.
- The plan includes descriptions of data gaps and uncertainties (e.g., Section 4.4.7) and suggests initiatives to address these. While the initiatives can generally be justified, it should be recognized that many of these data gaps and uncertainties are inherent – there is no amount of data collection or modeling that will fully resolve them. Decisions must be made in the face of these uncertainties. The best decisions and management options are those that are resilient in the sense that they are less sensitive to these uncertainties. Water conservation and recharge enhancement fall into this category.
- The inherent uncertainty in model predictions further supports investment in proactive mitigation and management actions that focus on system resiliency, including water conservation and recharge enhancement. These investments will likely provide the greatest return for achieving an overall goal of providing clean and sufficient groundwater for the natural environment and future generations, as compared to efforts aimed at additional modeling.

- Current groundwater elevation data and modeling do not provide definitive evidence that current and future groundwater withdrawals are unsustainable. However, current groundwater elevation data and modeling also do not provide definitive evidence that current and future groundwater withdrawals are sustainable. Increasing groundwater withdrawals increases the risk of unsustainability; decreasing groundwater withdrawals decreases the risk of unsustainability. The safest course of action from a risk perspective is the one with the lowest groundwater withdrawal.

A.3 Conclusions and Recommendations Related to Groundwater Recharge

- Recharge estimates are a fundamental component of groundwater management plans because the amount of water replenishing the aquifers dictates how much water can be sustainably pumped and used for years into the future. However, although the concept of recharge is relatively simple, we have no way of measuring it directly, and estimating it poses considerable challenges.
- The best practice to generate recharge estimates that will be useful for management purposes is to use a range of estimation methods (e.g. multiple land surface models)—each of which makes different assumptions about the factors that determine recharge—and generate a range of possible recharge rates.

A.4 Conclusions and Recommendations Related to Groundwater Model Development

- The EA 2025 model (EA, 2025b) describes a groundwater flow system under current conditions that has important differences compared to two earlier models developed by the USGS (Frans and Olsen, 2011; Frans et al., 2016). In particular, the EA 2025 model describes a system where most groundwater inflow to deeper aquifers occurs as lateral or horizontal flow from off-island sources, while in the two USGS models most inflow occurs as vertical flow from above. This difference has important implications in terms of future impacts from pumping in these deeper aquifers.
- The EA 2025 model does not explicitly include streams, wetlands, or lakes. This severely limits the usefulness of the model for estimating impacts of groundwater pumping on individual streams and wetlands.
- Either of the two earlier USGS models will provide more defensible estimates of impacts of groundwater pumping on groundwater levels in deeper aquifers and on surface water features (e.g., streams, wetlands, and lakes), as compared to the EA 2025 model. This is because of changes that were made to the way geological layers are incorporated and described in the model and to the way groundwater/surface water interactions have been excluded in the model.

- Groundwater recharge is not calculated in the USGS or EA groundwater flow models. Rather, recharge is estimated externally from the model and is then incorporated as input to the model. The general method used to estimate recharge in the EA 2025 model is the same as what was used in the earlier USGS models and the recharge rates in the EA 2025 model are the same as what was used in 2016 USGS model (Frans et al., 2016).
- The approach used to estimate recharge provides estimates of annual recharge rates. These annual recharge rates are calculated based on annual precipitation rates. The recharge estimates do not depend on how that precipitation is distributed throughout the year.
- The annual recharge rates used in the groundwater model are partitioned among the different months the same way for all years, regardless of when the precipitation occurs. For example, the recharge that is assigned to April is always 12% of the annual recharge and the recharge assigned to November is always 6% of the annual value.

A.5 Conclusions and Recommendations Related to Groundwater Model Calibration

- The EA 2025 model was calibrated using a trial-and-error approach in which calculated groundwater elevations were compared to observed elevations. A comparison of calculated and observed flows was not done, in large part because there are no streams included in the model. It is generally recommended that data of different types (e.g., flow data and water level data) should be included in the calibration process to the extent possible (e.g., Hunt et al., 2005).
- The approach used to calibrate the EA 2025 model often results in non-unique parameter estimates. This means that different sets of input parameters (e.g., different combinations of variables describing hydrogeology) can give similar model calibration results, but very different results for future management options. This should be explicitly considered in assessing model scenarios.

A.6 Conclusions and Recommendations Related to Groundwater Model Application

- The groundwater model is used to estimate future groundwater levels under three different scenarios. These estimates are not directly incorporated into any management decisions. Rather, the model results simply show that reducing recharge and increasing pumping rates result in larger water level declines and that these declines increase over time (see Table ES-1, page ES-6). No targeted levels of allowable water level declines have been developed or proposed.
- The groundwater model is used to simulate water levels 20, 50, and 100 years in the future. In none of the scenarios do water levels reach equilibrium. It would

be a relatively simple task to run the model in steady-state mode to estimate what the equilibrium levels would be for different combinations of recharge rates and groundwater extraction rates. These steady-state simulations can be completed much more efficiently than the transient simulations described in the current GWMP.

- An advantage of steady-state simulations is that they can be used to help identify the combinations of groundwater recharge and groundwater extraction that will be sustainable for future generations. Those combinations that are sustainable can then be used to help identify which management options are needed to achieve the targeted levels of recharge and extraction.

A.7 Conclusions and Recommendations Related to Demand Projections

- Estimates of current groundwater withdrawals included in the GWMP vary significantly, depending on the section of the plan (see Section C below (comments on GWMP excerpts) for more details). It is difficult to fully assess demand projections if current withdrawals are not well defined.
- Demand projections included in the GWMP were developed based on fixed assumptions regarding characteristics of population growth (e.g., density and distribution) and water use rates. Both population growth characteristics and water use rates can be controlled or impacted by available water supply. These relationships should be explored in the GWMP. Assuming an exponential growth model, as is done in developing population projections, is not sustainable for finite resources. This represents a significant management issue that has not been addressed in the GWMP.

B. SPECIFIC COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE AND THE GWMP PLAN SUB-COMMITTEE

The scope of work for this peer review explicitly included responding to selected comments provided by the city's Groundwater Management Plan Sub-Committee and Technical Advisory Committee on the first draft of the GPWM. These comments are listed in Table 1 and our replies are provided below.

Comment 154.

Table 1 on page 9 in the EA model memorandum shows that the upper three layers from the USGS 2016 model were combined and the bottom three layers were eliminated. The upper three layers included Qvr, Qvt, and Qva units (recessional, till, and advance deposits, respectively). The lower three layers included a clay layer and two bedrock layers.

Combining the upper three layers essentially reduces the impact of the till layer. Figure 4 shows the estimated distribution of till on Bainbridge Island (from Figure 9 in Frans et al., 2011). The till layers are described by Frans et al. as follows: *“The till is a very compact mix of sand and gravel in a clay matrix and is somewhat discontinuous due to erosion by streams.”* These till areas likely affect the magnitude and distribution of impacts from shallow wells and the amount and discharge to streams and wetlands. The model as currently implemented has limited capability to simulate groundwater/surface water interactions, even if the layers had not been combined. These limitations are due in large part to the drain boundary conditions that are applied to all cells at the land surface in the model.

Combining the three top layers in the USGS 2016 model into a single layer does not likely affect the model's capabilities to a significant degree in terms of estimating water level declines in the deeper pumped aquifers.

Eliminating the two lower bedrock layers in the USGS 2016 model likely does not affect model results significantly. However, removing the clay basal unit and the water that is stored in it eliminates a potential source of water for the FBA aquifer. Even though the clay has low permeability, a significant amount of water can be produced by inducing leakage over the full area of a well's zone of influence. The results for vertical leakage into the FBA shown in Table 3 in Section E below suggest some seasonality to these inflows. A deeper clay unit could dampen these variations, but the effect may be small. It is not clear that much is gained in terms of model efficiency by removing this layer, as it is unlikely that it would cause any model stability issues.

Table 1. Selected comments provided by the Groundwater Management Plan Sub-Committee and Technical Advisory Committee

Comment #	Commentor	Document	Page/Sect.	Comment
154	Joel Purdy	Model Memo	9	- Combining aquifers and confining units seems problematic. How were parameters chosen? Consider adding more explanation on why this was chosen and the advantages/disadvantages. It looks like variable hydraulic conductivity values were used (based on the map). How were these chosen? Consider adding an explanation. - Does combining layers 1-3 render the surface water/ground water interaction of these layers moot? The Qva is the most significant contributor to streamflow.
274F	Keenan 1 of 2	Model Memo	10	Should be using best available science. Please reference Charlie Kratzer, PhD 2024 whitepaper on Recharge. Peer review should evaluate EAs assumptions. Numerous requests for documentation to verify EA was denied by EA and COBI
274H	Keenan 1 of 2	Model Memo	2	Peer reviewers please evaluate EA changes to the model.
274O	Keenan 1 of 2	Model Memo	9	(Peer Review - does this present any modeling issues?
274P	Keenan 1 of 2	Model Memo	9	Do these changes present any problems with modeling?
274Q	Keenan 1 of 2	Model Memo	9	"Does eliminating the Clay Basal Unit reduce understanding of the thickness of FBA in locations on the
275	Keenan 1 of 2	Model Memo	14	Peer review please verify these numbers.
281	Keenan 1 of 2	Model Memo	34	These assumptions need to be peer reviewed. Reference Charlie Kratzer 2024 Recharge white paper

283	Keenan 1 of 2	Model Memo	36	Evaluating future changes in recharge is more than just projected annual precipitation accumulation. This analysis requires peer review. Scenario parameters should consist of Low=0% change in recharge, Medium=10% loss of recharge, and High 20% loss of recharge. Medium being the most statistically accurate. Table 6. Predicted Changes In Precipitation Between October And March (2010-
454	Online	Gen	N/A	The GWMP needs to include, evaluate, and address the following: (1) production and water level data from the main production wells on the Island for the entire period that such data is available; this critical data is not discussed in the current draft; it is needed to show the cumulative decline in water levels in all aquifers using all available historical data; (2) all available information on decreased streamflow and degraded water quality in all BI watersheds; we have a responsibility to maintain adequate surface water for flora, fauna, wetlands, natural systems, etc., in addition to maintaining sustainable water supply for human needs. (3) get independent, high-quality peer review input on the questionable Scenario parameters used, e.g., the "Low Impact Scenario" (which the Draft deems "the most likely") uses a 0% change in aquifer recharge across the entire 100 year period, despite likely increases in temperatures and evapo-transpiration, and the increase in impervious surfaces and run-off due to increased development. Seems like a flawed parameter calculated to understate potentially adverse impacts on water supply. Same with 122% increase in pumping input. On Recommendations: (1) increase number of wells monitored in all aquifers, including near shoreline for seawater intrusion; (2) increase monitoring of streamflow and begin watershed rehabilitation in all watersheds; (3) require all new construction to estimate water use and identify adequate available source.

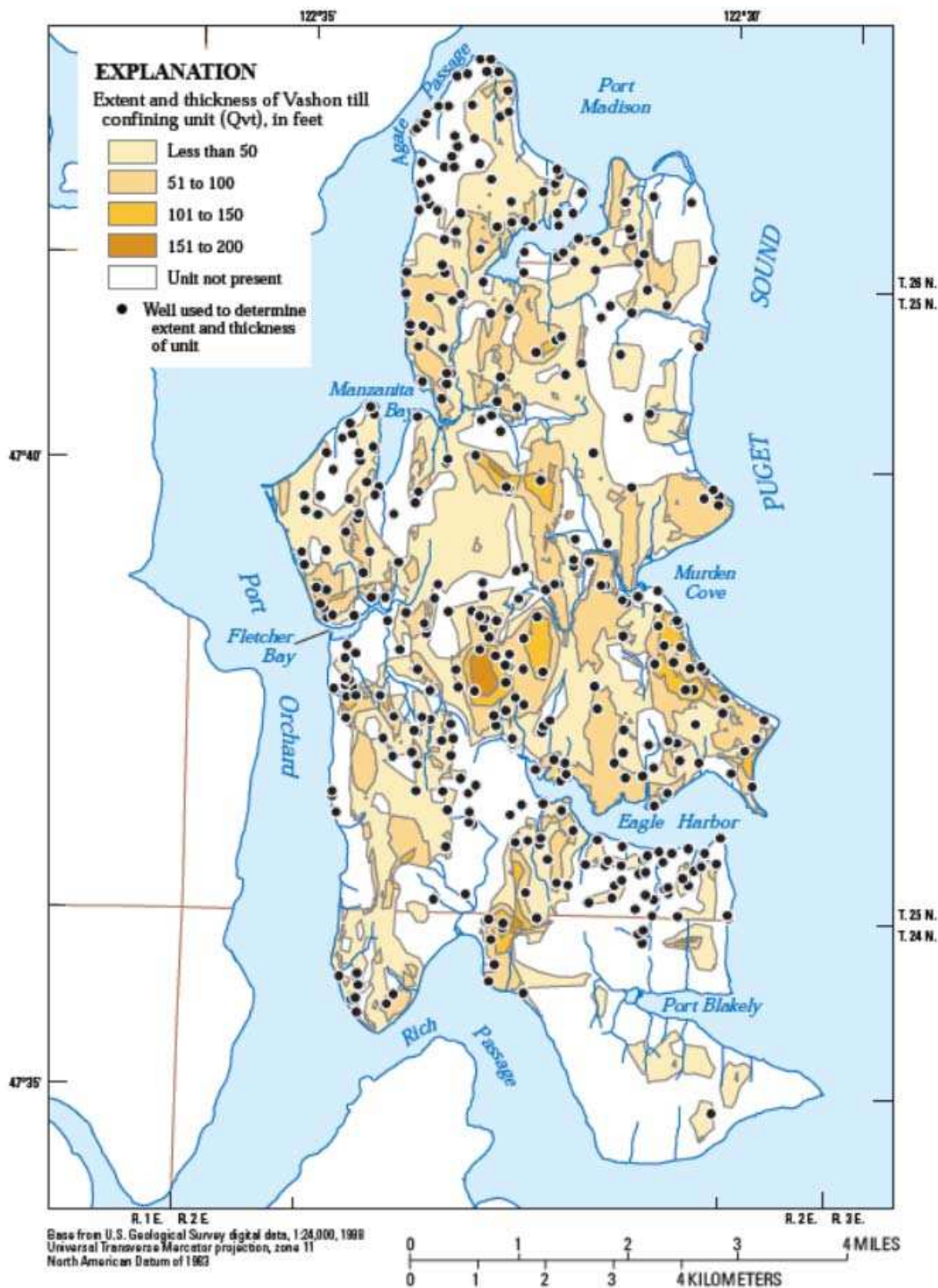


Figure 4. Distribution of glacial till (Qvt). From Figure 9 in Frans et al. (2011)

Comment 274F.

We have evaluated assumptions and methods used to estimate recharge in Section E.

Comment 274H.

Aspect (2023) converted the USGS 2016 model from MODFLOW-NWT to MODFLOW-USG and EA then converted the model back to MODFLOW-NWT. Using MODFLOW-NWT is a reasonable choice for this application.

Aspect (2023) removed the streams, wetlands, and lakes from the USGS 2016 model to improve model stability and to reduce the runtimes required to complete model simulations. As noted in the previous section, this approach is not generally-accepted practice for developing models that are intended to describe groundwater/surface water interactions. EA (2025) used this same approach for their modeling work.

EA disabled the Allow Automatic Flow Reduction function in the model. This enforces that extraction rates assigned to wells are always simulated unless the model fails to converge on a solution. This is a reasonable change for this model application.

EA also combined the top three layers in the USGS model and eliminated the bottom three layers. Our responses to Comment 154 speak to this issue.

EA modified the hydraulic conductivity values for aquifers and confining units. These modifications have changed the relative amount of vertical and horizontal inflow to the aquifers used for water supply. We address this topic in Section E.

Comment 274O.

Our responses to Comment 154 address the potential impacts from combining the top three layers

Comment 274P.

Our responses to Comment 154 address the potential impacts from eliminating the bottom three layers

Comment 274Q.

Our responses to Comment 154 discuss what role the basal clay unit may play in the groundwater flow system and how eliminating this role may impact groundwater model results.

Comment 275.

According to the EA modeling memo, the estimates of hydraulic conductivity included in their Table 2 were derived from pumping tests performed after well installation. We have not seen the data or analyses used to develop these estimates and are not able to verify the values listed in Table 2 in the EA modeling memo.

Comment 283.

We agree that evaluating future changes in recharge requires much more than evaluating changes in future annual precipitation. This is discussed in the previous section. It is difficult to identify which future recharge scenario is most likely or most statistically accurate. It is our assessment that while it may be more likely that recharge decreases in the future, there are also realistic scenarios that result in increased recharge.

Comment 454.

We agree that providing production and water level data from the main production wells on the Island would be useful (certainly more useful than the full set of well logs included in the current draft). Appendix D, the 2021 Early Warning Level Report, provides hydrographs for selected wells, and these are helpful.

It is not clear that all available information on decreased streamflow and degraded water quality in all BI watersheds should be included in the GWMP, but it would be helpful to provide a synopsis of this information and references and links to the relevant data sources.

We have provided input on scenario parameters, including recharge rates. We have also emphasized the importance of collecting data that constrain the variables and parameters that can be controlled or measured, including streamflow, water levels, and groundwater withdrawal rates.

C. COMMENTS ON SELECTED EXCERPTS FROM THE GWMP

The scope of work for peer review includes a task to provide a full list of comments and recommendations, identified by section. These comments and recommendations are provided below.

Page ES-2

The graphic shown on this page does not clearly distinguish between the overarching goal and recommended actions for achieving that goal. Ensuring clean and sufficient groundwater for our natural environment and ourselves is the goal. Developing community-wide understanding, reducing climate change impacts, and minimizing threats to water quality are actions taken to achieve that goal. Other actions that could be considered include data collection and data analysis, which would broadly include developing and improving groundwater models.

The primary purpose of Bainbridge Island's Groundwater Management Plan is to establish a comprehensive framework for cooperation between regulatory agencies and utilities to protect the island's EPA-designated Sole Source Aquifer system.

This statement of the primary purpose of the plan is not consistent with the contents of the plan.

Page ES-3

The plan addresses the impacts of development on both shallow and deep aquifer systems and calls for the implementation of comprehensive stormwater management practices.

The impacts of development on shallow systems have not been estimated in any reliable way. It is not possible to address the impacts without having a sense of what these impacts are.

In terms of conservation and management, the plan aims to mitigate a projected 7% increase in water use per house due to the projected longer, drier growing season.

There are no discussions in the plan about how this mitigation might be accomplished. There are no specific actions aimed at mitigation. There is also no justification for why a longer growing season would necessarily require residential homes to use more water. If the city is moving towards a more sustainable use of water resources, per-home and per-capita water usage could be decreased, regardless of changes to the growing season.

Page ES-4

Of this recharge, approximately 50-60% discharges to surface waters, 5-10% is withdrawn through well pumping, and 30-40% flows to the marine environment or eastward.

The basis for these estimates is not presented in the plan or in the groundwater technical memo (EA, 2025b). The groundwater model is not capable of developing reliable water balances, particularly for surface water features such as streams and wetlands. It is not clear how the 50%-60% estimate was derived.

An estimated groundwater withdrawal of 5%-10% of recharge corresponds to **683 to 1,367** acre-feet per year. The estimated groundwater production listed in Table 14 in EA 2025b is 845.7 million gallons per year, or **2,596** acre-feet/year. The total well pumping included in the EA 2025 groundwater model averages **2,313** acre-feet per year for the period January 2012 through December 2021 (from the model input files provided by COBI).

The combined water production of the City of Bainbridge Island, North Bainbridge Water Company, and South Bainbridge water systems in 2021 is reported as **1,757** acre-feet/year (Table 8, EA 2025b). The production from smaller public water systems is reported as **272** acre-feet per year (Table 9, EA 2025b) and the estimated water use for Group B systems is **112** acre-feet/year (Table 14, EA 2025). The estimated population on private wells is 4,789 (Table 13, EA 2025b) and their total estimated water use is **425** acre-feet per year or 79 gals/day/person (Table 14, EA 2025b). The combined total for all withdrawals **2,596** acre-feet/year (which includes 29 acre-feet/year from other miscellaneous withdrawals).

The modeling considered variations in recharge rates (down by as much as 20%)

The justification for a 20% reduction is not provided. This variation seems small relative to uncertainty in recent estimates of current recharge on Bainbridge Island (see Section D), and given uncertainties in future climate and land use changes. Running a simulation using a lower bound of physically-plausible future recharge is useful for planning purposes, but there is no evidence presented that this 20% reduction represents a lower bound on future recharge.

The modeling considered... significant increases in water production (up to 167%)

The purpose of this experiment should be clarified. There is no clear justification for such a large increase in water production, and increases in water production decrease the sustainability and reliability of the groundwater system. Increases in population could be offset by decreases in per-capita water use. On-island water use varies substantially (Table 2-9 on pg 2-65 of the GWMP). Exploring how the lowest water users use so much less water than the highest water users, and implementing policy based on that analysis to move the highest water users' consumption to be closer to the lowest water users' consumption could be a path toward reductions in per-capita water consumption.

Page ES-5

Groundwater drainage to surface water could decrease by as much as 40%, with implications for baseflows in streams and wetlands.

The basis for these estimates is not presented in the plan or in the groundwater technical memo. The groundwater model is not capable of developing reliable water balances, particularly for surface water features such as streams and wetlands.

Page ES-6, Table ES-1

Groundwater levels are simulated to decrease up to 6 feet after 100 years. Groundwater levels are simulated to be below mean sea level after 50 years around the South Bainbridge Wellfield.

How much above mean sea level are water levels under current conditions? If they decrease up to 6 feet after 100 years and if they are below mean sea level after 50 years, then they must be very close to seal level under current conditions. Is this true?

This is due to wells set in the FBA creating vertically induced drawdown in the aquitard separating GMA and FBA, ulitimately effecting both aquifers.

Check spelling (ultimately) and grammar (effecting).

Groundwater levels are simulated to decrease up to 50 feet after 100 years. After 100 years, drawdown of 80-100 feet is projected within 500 feet of Island Utility Wells 1 and 3. The area surrounding that zone is projected to drawdown between 60-80 feet.

The first sentence seems to be contradicted by the second. If the levels decrease up to 50 feet, then how can there be drawdowns of 80-100 feet?

Page ES-7, Table ES-1

Groundwater levels are simulated to decrease by 71 feet after 100 years. 80-100 feet of drawdown are simulated within approximately a 2,000 foot radius around Island Utility Wells 1 and 3 and approximately a 1,000 foot radius around Sands Road wells 1 and 2.

The northern part of the island experiences less drawdown, 60 to 80 feet and 40 to 60 feet
Does the 71 feet refer to the average level over the Fletcher Bay Aquifer? This should be clarified. Otherwise, the first sentence again seems to be contradicted by the second.

Groundwater levels are simulated to decrease 5 feet after 100 years. However, the mean groundwater elevation within the Qva unit will still be projected to be nearly 100 feet above sea level, so the 5 foot decrease is relatively small.

A 5-foot decrease in water levels in the top layer of the model (which includes the Qvt and Qva units) could have devastating impacts on wetlands and streams. Is this an average level? It should also be noted that the model does not provide reliable estimates of impacts to the top model layer.

Groundwater elevations are simulated to decrease by 82 feet, 5 feet more than the Mid Impact Planning Scenario.

The reported water level decline for the mid-impact scenario is 71 feet after 100 years. There is no mention of 77 feet in any of the discussions regarding the mid-impact scenario.

Page ES-8

"...the North Bainbridge and South Bainbridge systems—both owned and operated by KPUD—potentially seeing increases of 61– 115% and 194–373%, respectively. These trends reflect increasing demand on the COBI system, particularly as more areas transition from individual wells or small systems to centralized service.

How much of the KPUD increases are due to users transitioning to centralized service, versus increases in per-user consumption, versus new water users (e.g., new development)? These distinctions are important: transitions to centralized service provide opportunities for improved collective sustainable management, while increases to per-

user consumption and/or the total number of water users leads to a less sustainable and resilient groundwater system.

To address these challenges, COBI has implemented comprehensive management strategies, including stormwater programs, groundwater management plans, and climate action initiatives...

Are there other groundwater management plans? If so, can these be referenced and summarized?

Page 1-1.

See comment regarding Page ES-2 above.

Page 1-3.

The GWMP was developed through a collaborative process involving residents, water purveyors, businesses, agriculture, local governments, and state and federal agencies.

Is there a missing word associated with agriculture?

Page 1-4.

As part of this obligation, Bainbridge Island must plan to accommodate 1,977 new housing units by 2044 while preserving groundwater sustainability, in accordance in accordance with the quotas imposed by the Washington Growth Management Act.

Is this a hard and fast requirement, or can it depend on available resources (such as water supply)?

Page 2-6.

*Permit-exempt uses **are water rights** with a priority date of first use, they just do not have to go through the permit-application process...*

Yes, this is correct.

Page 2-10.

Figure 2-4 is labeled as “Groundwater Rights” and yet it does not include permit-exempt wells (see comment on Page 2-6). The figure title should note this.

Page 2-11.

A recent search of the Ecology water rights database (Ecology 2025) indicates about 205 active permitted and certified groundwater rights with a cumulative instantaneous rate of 6,810 gpm and an annual quantity of 5,118 acre-ft/yr.

Does this include permit-exempt uses, which are water rights?

Page 2-14.

The Qa for KPUD’s water systems is 1,466 AFY, based on current water rights across North Bainbridge, South Bainbridge, and consolidated systems such as Manzanita Heights and Sunset Hills.

The listed values for the individual systems total 1,376 AFY. Please check the math or explain the difference.

Page 2-16.

The pumping capacity and water rights are not sufficient to comply with COBI's supply reliability criteria.

The total annual water rights authorized for COBI is 4,399 acre-ft/yr and the total instantaneous rights is 4,957 gpm, according to text on page 2-11. The water production for the COBI in 2021 was 282 million gallons or 866 acre-feet/year, according to Table 8 in EA (2025b). What are the reliability criteria that are not being met by the available water rights?

Page 2-24.

While residential development increased in the 1970s, prompting additional clearing, it did not mark a major turning point; clearing has continued to the present day, sometimes irresponsibly.

This is an awkward sentence that is difficult to understand.

Page 2-26.

Several small wetlands are located throughout the island. Surface water drainage is generally via small spring-fed streams that discharge to Puget Sound. The streams are both permanent (about a dozen) and seasonal (approximately 40), and that permanent streams are fed by springs and seeps in the upper watersheds.

Maps available from the City's website show extensive wetlands and wetland complexes. Describing this system as "several small wetlands" is not accurate.

"Perennial" is typically used to describe streams, rather than "permanent."

Page 2-29

Stormwater runoff on Bainbridge Island is managed through a combination of built infrastructure and natural systems such as wetlands and streams) working together to reduce the discharge of pollutants to Puget Sound.

Delete).

Page 2-30.

Provide citation for Figure 2-13 and explain that it includes private wells. There are no references to Figures 2-12, 2-13, and 2-14 in the text.

Page 2-31.

On-site septic systems contribute to groundwater recharge, with amounts varying across the island. Overall, the contribution is estimated at less than 3 inches per year, equivalent to approximately 4,400 acre-feet annually—more than twice the volume of annual groundwater withdrawals, which total around 2,000 acre-feet.

This is misleading and confusing. On-site septic systems cannot contribute more than the total annual groundwater withdrawals. Three inches per year over the area of Bainbridge Island equals 4,445 acre-feet per year. The total inflow from septic recharge in the EA 2025 model for current conditions is approximately 1,251 acre-feet/year (from model files provided by COBI) or 0.84 inches/year. While 0.84 is less than 3, the way this is written is not informative.

Page 2-33.

Most of the Kitsap Peninsula is underlain by unconsolidated geologic deposits (loose materials like sand and gravel that allow water to flow in the pore space between grains), similar in hydrogeologic characteristics and sequence to those underlying Bainbridge Island. However, there is no evidence of hydraulic connection of aquifers within these similar geologic deposits.

Most of the unconsolidated deposits are highly compacted and not loose.

The EA 2025 model (EA 2025b) suggests significant groundwater exchange between deeper aquifers on Bainbridge Island and on the Kitsap Peninsula. The model and text should be consistent.

Page 2-34.

The major aquifers underlying Bainbridge Island are briefly described below in order of increasing depth and illustrated in illustrates the complex interlayering of aquifers (blue-green color) and confining units (tan and purple color).

This needs rewriting.

Page 2-37

Groundwater flows from areas of higher water levels (greater hydraulic pressure) to areas of lower water levels (lower hydraulic pressure). In an unconfined aquifer, the interface between the unsaturated and saturated zone is called the water table.

Unconfined groundwater flow is usually more directly influenced by precipitation, recharge, and well pumping. In a confined aquifer all the aquifer material is saturated and groundwater flows in response to changes in the confining pressure of overlying layers (which can be of variable thickness and permeability). This response to changes in precipitation, recharge, and pumping are often more subtle than in a water table aquifer.

This paragraph is mostly wrong and should be rewritten by someone with a background in hydrogeology or groundwater hydrology.

It should be noted that evidence for the connection of these aquifers between Bainbridge Island and the rest of the Kitsap Peninsula is not conclusive, especially for the shallower Perched and Semi-Perched Aquifers.

The units described as the “shallower perched and semi-perched aquifers” are conclusively not connected with the Kitsap Peninsula.

The rate of groundwater flow depends on the permeability or interconnectedness of the pore spaces in the sediment or bedrock and the hydraulic pressure exerted by the water in the system. This relationship is characterized as hydraulic conductivity.

This is not what hydraulic conductivity is. Hydraulic conductivity is directly related to permeability, and does not describe the relationship between flow and pressure.

Table 2-4 shows the range of hydraulic conductivity values for key aquifers on Bainbridge Island, which reflect how easily groundwater can move through each unit. The Qva and QA1 aquifers have the highest values, indicating they are the most productive and important for water supply.

The productivity and importance of aquifers for water supply depend on more than hydraulic conductivity. The units with highest hydraulic conductivity are not necessarily the most productive or important.

Page 2-38.

The units listed on the columns should be ft/day.

Page 2-41.

The lake is not hydraulically connected to deeper aquifers such as the Qva, SLA, or FBA. The basis for this statement is not provided. Based on the models that have been developed by both the USGS and EA, the lake is likely connected to these aquifers.

In addition to streams, ponds and lakes, wetlands cover an estimated 7% of the island (Kato and Warren 2001

Compare this statement to the statement page 2-26 that says “Several small wetlands are located throughout the island.”

As shown, annual average recharge values range between 0 and 17 inches.

It should be noted that 0 inches of recharge occurs offshore. All locations on the island receive recharge.

Page 2-42.

A simplified water budget for Bainbridge Island recognizes that over the long term, the aquifer recharge and discharge is in a state of ‘dynamic equilibrium’ (Welch et al. 2014).

Page 2-43

This recharge is balanced by 6,836-8,203 acre-ft per year discharge to surface water (50-60%), approximately 683 acre-ft per year (5%) discharge via well pumping, and approximately 4,101-5,469 acre-ft per year (30-40%) discharging to the marine environment or to the west towards Kitsap Peninsula (2) (USGS, 2011).

It would be helpful if the document presented a consistent set of values, particularly for the amount that is extracted at wells. See comment regarding page 3-1.

The updated Bainbridge Island model did not include septic system return (Aspect 2015).

The relevance of this is not clear. The Aspect 2015 model is not used. Both USGS models and the EA 2015 model include septic recharge.

Page 2-44

Models are calibrated to observed conditions (including groundwater levels derived from fit for purpose monitoring networks) to evaluate the appropriateness of the assumptions and data used to construct the model (Reilly and Harbaugh 2004)

How does the model calibration described in the groundwater model technical memorandum evaluate the appropriateness of the assumptions and data used to construct the model?

"Output data and results are properly contextualized and interpreted"

It is not clear how the GWMP does this. We do not see how the GWMP contextualizes modeling data and results.

On Bainbridge Island, the groundwater budget was estimated using an updated version of the 2011 U.S. Geological Survey groundwater model (see discussion in Section 4.6.6). There is no Section 4.6.6. A groundwater balance would be very helpful and should form the foundation for a groundwater management plan. THIS IS VERY IMPORTANT.

Page 2-45.

"Solutions or outputs from the model may be non-unique"

Additional discussions should be provided that describe how these non-unique solutions affect how the model results should be considered in management and policy decisions.

Page 2-47.

The 2016 Kitsap Peninsula groundwater model was supported by geological, hydrogeological, a water budget, land and water use, and climate (current and projected data) information described by Welch, Frans, and Olsen, 2016.

The reference year should be 2014.

Table 2-7 indicates approximately 40% decrease in groundwater drainage to surface water. This is an important finding that should be discussed. What are the limitations and assumptions?

Page 2-50.

With the development of the 2025 EA Model, EA has provided COBI with a well calibrated groundwater flow modeling tool that simulates groundwater flow across Bainbridge Island.

It should be noted that the model was calibrated by comparing observed and calculated water levels. It was not calibrated using flow data. While matching water levels is important, it does not eliminate the likelihood of non-unique models. This means that different sets of input parameters (e.g., different combinations of variables describing hydrogeology) can give similar model calibration results, but very different results for future management options. This should be discussed.

The Mid and High Impact Planning Scenarios represent the most conservative, yet reasonable, future conditions with both simulating the maximum estimated sea level rise and the high population growth estimate, and both simulating recharge reduction beyond what is predicted by CIG.

The CIG does not predict recharge. This is an important point to make. There are large uncertainties associated with recharge estimates.

Impact scenarios show that under all simulated future conditions, the Qva is minimally impacted, primarily due to the absence of large water system extraction and the increase in return water associated with increased production offsetting recharge reduction.

The model cannot reliably estimate impacts to the Qva because of the way the USGS model was modified in developing the EA model. These modifications include

combining the upper three model layers, eliminating boundaries that describe streams and wetlands, and assigning drain boundaries to all surface locations.

Page 2-52

The discussions on sea water intrusion should more fully explain that having water levels below sea level does not necessarily mean that sea water intrusion will occur. There can be conditions where water levels below the interior of the island may fall below sea level, and still be fully sustainable without sea water intrusion.

Seawater intrusion indicated by elevated chloride concentrations has been not been documented but may be possible in various locations on Bainbridge Island between 1957 and 2006.

This is an awkward sentence that is difficult to understand.

Page 2-64

...the Derby Downs and Islandwood Estates water system values are not reasonable for water use by ERU and are likely related to errors or other factors."

Why are these numbers not reasonable, and what are the "errors or other factors"? Water use is the part of the groundwater system humans have the most control over, and it could be the most certain quantity in the system with metering. Constraining the uncertainty on water use and understanding the factors that contribute to its variability across ERUs should be prioritized. That understanding can guide policy and infrastructure to reduce per-ERU consumption and improve the sustainability and reliability of the groundwater system.

Page 2-65

Table 2-9. Water Use by Public Water System on Bainbridge Island should be consistent with the water production tables included in EA 2025b. The total annual pumping listed in Table 2-9 adds up to 665 million gallons per year. According to the pie chart on Page 2-67, the private wells and Group B wells would therefore total 225 and 47 million gallons per year, for a grand total of 937 million gallons per year. The total reported in Table 14 in EA 2025b is 845 million gallons per year. This is a substantial difference that should be resolved.

Page 2-73

The City of Bainbridge Island Climate Action Plan (COBI 2020) described the impacts of climate change relevant to Bainbridge Island in terms six areas (temperature, precipitation/extreme weather, sea level rise, vegetation changes, ocean acidification, and slope stability). Three of these areas potentially impact the groundwater system: increasing temperature, projected changes in the timing and intensity of precipitation, and sea-level rise."

Changes in vegetation will certainly impact the groundwater system through evapotranspiration and recharge.

Page 2-74

In 2023, the COBI selected a consultant to conduct a Sea Level Rise Flooding Vulnerability and Risk Assessment for the Island. This project will result in an online

GIS-based map showing existing and future flood vulnerability. The final report will inform capital facilities planning for the 2024 Comprehensive Plan Periodic Update and summarize vulnerabilities for future adaptation efforts. Deliverables from this project are due by June 2024 (CAP 2024).

Has this assessment been finalized? If so, what are the results?

Page 3-1

Groundwater model was updated (latest data, groundwater/surface water interaction, climate change impacts).

This is misleading. The current model cannot reliably simulate groundwater/surface water interaction under current or future climate conditions. The changes made to the USGS models in the EA 2025 model make it less reliable at describing groundwater/surface water interactions.

Approximately 28% of groundwater discharge flows to streams, 53% moves to other natural features including the marine environment and deeper aquifers off-island, and 19% is extracted through wells. This understanding of the water budget helps inform sustainable management practices and future planning efforts.

Where are these numbers from? Note the following from page 2-43: “This recharge is balanced by 6,836-8,203 acre-ft per year discharge to surface water (50-60%), approximately 683 acre-ft per year (5%) discharge via well pumping, and approximately 4,101-5,469 acre-ft per year (30-40%) discharging to the marine environment or to the west towards Kitsap Peninsula.” The difference in the estimated amount extracted by wells is large and should be accounted for.

Page 3-3

This comprehensive approach allowed for a thorough assessment of potential future conditions under different climate and population growth scenarios.

It is not clear that the three scenarios thoroughly or comprehensively describe future conditions. This should be tempered. There are many other realistic scenarios that have not been considered.

The Qva aquifer showed minimal impact under all scenarios, largely due to the absence of large water system extraction and the offsetting effect of return water (EA 2025).

The current model cannot reliably simulate groundwater/surface water interaction under current or future climate conditions. This must be discussed.

Page 3-4

Stream systems are also affected, with baseflow reductions of up to 0.3 cubic feet per second, particularly in the Fletcher Bay and Eagle Harbor watersheds.

What is the source of these estimates? The current model does not include streams or wetlands. How was this calculated?

This analysis reinforces the model's value as a management tool while providing more specific details about projected impacts and recommended mitigation strategies.

It is not clear how the model has been used as management tool. What mitigation strategies have been considered? How was the model used to assess these strategies?

Page 4-3

Water conservation and efficiency remain important priorities, with both systems implementing measures to reduce water loss and maintain sustainable operation (KPUD 2020).

What measures are implemented, and how much do they reduce water loss and maintain sustainable operation?

Page 4-9

Potential impacts extend beyond groundwater level declines. Model simulations predict approximately a 40% decrease in groundwater drainage to surface water.

What is the source of these estimates? The current model does not include streams or wetlands. How was this calculated?

Page 4-12

Peninsula production in shallower aquifers can intercept recharge that could otherwise migrate downward into the GMA and FBA systems (EA 2025).

We don't see where this is described in EA, 2025. Please provide a page number for reference.

Page 4-13

The interconnected nature of the aquifer systems means that land use decisions on Bainbridge Island have far-reaching implications for groundwater resources throughout the region. Computer modeling shows that groundwater withdrawals result in impacts to the broader hydrologic system (COBI 2024), affecting not just local water levels but also regional groundwater availability and quality.

The basis for this is not clear. The statement that land use decisions have "far-reaching implications for groundwater resources throughout the region" seems a little exaggerated.

Page 4-14

The COBI is actively working to address these challenges through the development of a Groundwater Management Plan, which includes updated modeling to assess potential impacts from anticipated population growth and climate change.

Isn't **this** the Groundwater Management Plan?

Page 4-15

These discussions seem out of place and repetitive of other sections.

Page 4-16

This results in about 58% of annual withdrawals returning to the groundwater system, leading to a net consumptive withdrawal of approximately 205 acre-feet per year, which represents only about 1% of the subarea's annual groundwater recharge quantity (KPUD 2020).

This suggests that recharge is 20,500 acre-feet/year over the "subarea". Total Bainbridge Island recharge is given as 13,673 acre-feet/year. What is the "subarea", and what other consumptive systems share that subarea?

At North Bainbridge Well #9, the FBA extends from 1,125 to 1,394 feet below ground surface, with a total thickness of 270 feet (EA 2025). Previous modeling efforts had overestimated the FBA thickness at 454 feet, which could have led to significant misinterpretations of available water supply.

This overstates the significance of whether the FBA is 270 feet or 454 feet thick at a particular location. The important hydrogeological parameter is transmissivity for confined aquifers, which is the product of thickness and hydraulic conductivity. Being off by a factor of two on thickness at a particular location is not that significant, when compared to uncertainties in hydraulic conductivity.

Over the next 100 years, water extraction rates are expected to rise by 2.2 to 3.3 times, depending on the growth scenario, placing significant pressure on the island's Sole Source Aquifers.

This suggests that water extraction rates are not something that can be controlled and moderated. Perhaps a caveat that says something to the effect of without comprehensive conservation efforts, then the rates may rise by X amount.

Page 4-17

while off-island activity, particularly from the Kitsap Peninsula, could further strain local resources due to shared aquifers.

This is somewhat speculative and perhaps not likely. Is it based on model results? What are the references to support this?

The technical memorandum underscores that these are not inevitable outcomes,
What technical memorandum? Please provide a reference.

Page 4-18.

Section 4.4.7, Identifying Data Gaps Affecting Groundwater Problem Assessment

This is an important section. These data gaps and uncertainties are inherent – there is no amount of data collection or modeling that will fully resolve them. Decisions must be made in the face of these uncertainties. The best decisions and management options are those that are resilient in the sense that they are less sensitive to these uncertainties. It would helpful to note this, and not only focusing on data gaps.

There are also significant knowledge gaps regarding aquifer connectivity, particularly between Bainbridge Island and the rest of the Kitsap Peninsula. The evidence for these connections is not conclusive, especially for the shallower Perched and Semi-Perched Aquifers.

The Perched and Semi-Perched Aquifers cannot possibly be connected to the peninsula, given that they are above sea level.

Page 4-20.

The increase in ET and longer growing season is not expected to significantly impact groundwater recharge because very little recharge occurs from precipitation during this part of the year.

A longer growing season in the Pacific Northwest has the potential for large impacts to recharge; when the growing season expands earlier in the spring and later in the fall, vegetation demand for water overlaps more with the PNW wet season and water availability, which can facilitate more ET than would occur otherwise. Also, a statement that ET has little impact on recharge when there is very little recharge occurring (e.g., during the peak summer) ignores the role of soil moisture state in modulating recharge throughout the year. ET in the middle of the summer depletes soil moisture, and that soil moisture depletion can delay fall recharge when the rain returns, because the soil column has more capacity to store water above the water table.

Page 5-30.

The 2025 EA Model represents an updated and refined version of a previously developed model, providing COBI with a well-calibrated groundwater flow modeling tool that simulates groundwater flow across Bainbridge Island. The model structure accurately represents the existing aquifer framework and reasonably reflects known aquifer flow properties. The impact scenarios offer reasonable estimates of potential future climatic and water use conditions, drawing from available climate change studies and historical population and production trends.

The model does not reliably describe groundwater/surface water interactions. These interactions will play an important role in assessing potential impacts for climate change and increase groundwater production. The description of groundwater flow in deeper aquifers is one possibility out of several and is not the definitive assessment. This paragraph should be modified to note the limitations.

Page 5-36.

Large drawdowns, especially if water levels drop below MSL for extended periods of time, are not a desirable condition in island aquifers used for municipal water supply because marine water can migrate into the aquifer degrading water quality.

This may be true for wells close to the shoreline, but it is not necessarily true for all wells. Wells can draw down water levels below sea level and still be fully sustainable in terms of not causing sea water intrusion.

Page 5-37.

Section 5.8 Aquifer Storage and Recovery (ASR)

It is unlikely that ASR would be feasible on Bainbridge Island. This approach requires a significant volume of de-watered aquifers to provide the necessary storage. The aquifers beneath Bainbridge Island are not expected to become dewatered in any likely scenario. Without this dewatering, ASR simply displaces existing water in the aquifers by pushing it outward. The net increase in available water is typically minimal in these types of systems.

Page 5-41.

Given that conservation is the highest priority management strategy, it is surprising that the description and discussion is so cursory. (The number of words devoted to conservation (607) is barely more than half the number spent discussing aquifer storage and recovery (1,122), an option that likely has very limited applicability to Bainbridge Island.

D. GROUNDWATER RECHARGE

Groundwater aquifers on Bainbridge Island are replenished by rain; however, not all rain that falls on the island will make its way into the aquifers. Rain can evaporate through the plants and land surface (**evapotranspiration**); it can **runoff** into streams, rivers, lakes, and Puget Sound; and it can be **stored** in the surface soil column or water features. The only rain that replenishes the aquifer—the recharge—is that which percolates through the bottom of the soil column. In short: $\text{recharge} = \text{rain} - (\text{evapotranspiration} + \text{runoff} + \text{storage})$.

Recharge estimates are a fundamental component of groundwater management plans, because the amount of water replenishing the aquifers dictates how much water can be sustainably pumped and used for years into the future. However, although the concept of recharge is relatively simple, we have no way of measuring it directly, and estimating it poses considerable challenges.

The most common method of estimating recharge relies on land surface models (Li et al, 2021). These models ideally create computational representations of each of the factors that contribute to recharge listed in the equation above, and they allow the user to experiment with how different parameters and environmental conditions—such as land-use change—impact recharge rates. However, each individual factor that contributes to recharge is far too complicated to represent completely accurately with a computer, so each model must make simplifications and assumptions about each factor, which will inevitably introduce error into the estimates it generates. Different decisions about these assumptions and simplifications lead to substantially different estimates in recharge magnitude. As an example, in Li et al (2021), long term average recharge estimates in the Northwestern U.S. varied by over a factor 3 (106-333 mm/yr) depending on the model used.

Given this uncertainty in estimating recharge, the best practice for management decisions is to use multiple land surface models—each of which makes different assumptions about the factors that determine recharge, with varying input data and parameters, to generate a range of possible recharge rates. Vashon Island bases management monitoring on such a range of estimated recharge of 5-17 in/yr (Vashon Maury Island Groundwater Protection Committee, 2010); while it is beyond the scope of this comment to assess Vashon Island’s methods in generating this range, the important point is that a range of possible values is generated, presumably with strong physical and/or observational support. This range acknowledges the inherent uncertainty that goes into estimating recharge, and it provides managers with enough information to make decisions within that uncertainty.

The current management plan for Bainbridge Island is flawed in that 1) it uses a single number for estimated recharge—~9.3 in/yr—instead of a range, 2) that number varies from previous recharge estimates without acknowledgment or explanation of the difference, and 3) that number is derived from a method that is even more crude than the assumptions and simplifications described below (see Section E). Because of these flaws, the estimated recharge in the current GWMP is unlikely to be correct, fails to responsibly

capture the uncertainty inherent in estimating recharge, and renders the model into which it is fed fundamentally incapable of quantifying how changes in land-use, precipitation, temperature, radiation, or atmospheric aridity may impact recharge. The absence of reliable estimates of recharge rates and a lack of understanding of what controls these rates limits the usefulness of the GWMP for making informed decisions about sustainable water use on Bainbridge Island.

However, it is important to highlight that—even if you do not use the method described above to generate a plausible range of estimated recharge rates, which is admittedly resource-intensive—it is perfectly reasonable to guide decisions about management based on the known relative impacts of various factors on recharge. The Vashon-Maury Island Ground Water Management Plan (1998) uses this approach:

*“Residential low-density development can **reduce recharge by 30 percent** from previous forest cover. Rural pastures also reduce recharge, but their amount has not been estimated because hydrologic parameters have not been developed. (Hartley, David M., King County Surface Water Management, unpublished memo, August 29, 1995.) In addition, any reduction in the water supply to the till layer will reduce the **recharge to regional ground water by as much as 17 percent in areas with 30 percent impervious surface and 70 percent lawn area** (Wigmosta, et. al., 1994). This is because the topsoil above the till layer that provides the sponge-like effect to keep the till constantly supplied with water would be removed.”* (emphasis added)

Here, even though recharge is not quantified with specific values, the authors discuss the evidence-based relative impact of land use decisions on recharge and acknowledge where current understanding is incomplete, as is the case for transitions from forest cover to rural pastures. A similar approach would be appropriate on Bainbridge Island given that, regardless of what the recharge rate actually is, sound management policy will take steps to maximize it as much as possible relative to current conditions.

E. GROUNDWATER MODEL OVERVIEW

The groundwater model used to support the GWMP is described in EA 2025.¹ This model is a descendant of two previous models that were developed by the U.S. Geological Survey: the 2011 USGS model as described in Frans et al. (2011) and the 2016 USGS model as described in Frans and Olsen (2016). The 2011 model focuses specifically on Bainbridge Island while the 2016 model considers all of Kitsap County, including Bainbridge Island.

The EA 2025 model describes a groundwater flow system under current conditions that has important differences compared to the earlier 2011 and 2016 models. In particular, the EA 2025 model describes a system where most groundwater inflow to deeper aquifers occurs as lateral or horizontal flow from off-island sources, while in the USGS models most inflow occurs as vertical flow from above.² This difference has important implications in terms of future impacts from pumping in these deeper aquifers, as described in more detail in sections that follow.

A second major difference between the EA 2025 model and the earlier 2011 and 2016 models revolves around how groundwater/surface water interactions are described. The 2011 and 2016 models explicitly include streams, wetlands, and lakes and can be used to estimate how changes to the groundwater system affect these features. The EA 2025 model does not include streams, wetlands, or lakes. Instead of these features, “drains” are assigned to the land surface across the full model area. These drains remove water from the model if the calculated water level approaches the elevation of the land surface. This severely limits the usefulness of the model for estimating impacts of groundwater pumping on individual streams and wetlands.³

Water Balances

A comparison of water balances among the three models shows important differences between the EA 2025 model and the previous USGS models in terms of groundwater movement. The water balances described below are based on estimates derived for 2008. This is the last year included in the 2011 USGS model and was also the year used to illustrate water balances in the 2011 model.

¹ The file name for the model that was provided as part of the peer review package is entitled “cobi_nwtmodelv2_9layersR2_edits13024.gwv” with a time stamp of 4/12/2024.

² The deeper aquifers are referred to as the QA1, QA2, and QA3 hydrogeologic units. On Bainbridge Island, these hydrogeologic units correspond to the Sea-level aquifer (SLA), the glaciomarine aquifer (QA2), and the Fletcher Bay aquifer (QA3).

³ The streams, wetlands, and lakes were removed from the model to improve model stability and to reduce the runtimes required to complete model simulations. This approach is not a generally-accepted practice for developing models that are intended to describe groundwater/surface water interactions.

Table 2 compares horizontal and vertical inflow and outflow for the three deeper aquifers on Bainbridge Island. Outflow from wells and the overall change in the amount of water stored in each aquifer during 2008 are also included.⁴ The results included in Table 2 show that while the overall net inflows to each aquifer are similar (as shown in the last row), the source of these inflows is significantly different (particularly for the QA2 and QA3 aquifers. The USGS 2011 model shows much more vertical inflow.

Table 2. Horizontal and vertical flow in aquifers for 2008 as depicted in the USGS 2011 and EA2025 models. All values are acre-feet per year.

	Aquifer					
	QA1 (SLA)		QA2 (GMA)		QA3 (FBA)	
	EA 2025	USGS 2011	EA 2025	USGS 2011	EA 2025	USGS 2011
Horizontal inflow	292	302	422	200	714	364
Horizontal outflow	3,024	5,011	407	1,464	212	612
Vertical inflow	4,582	7,918	409	2,290	360	1,057
Vertical outflow	917	2,369	357	983	21	-81
Wells	936	1,057	67	44	841	890
Storage change	2	-2	-1	-1	0	0
Net horizontal	-2,732	-4,709	15	-1,264	502	-248
Net vertical	3,665	5,549	53	1,307	339	1,138
Overall net	933	840	68	43	841	890

Table 3 shows monthly recharge rates and inflows through the top of the three aquifers on Bainbridge Island for the USGS 2011, USGS 2016, and EA 2025 models on a monthly basis.⁵ This table shows that while recharge rates are similar for the USGS 2016 and EA 2025 models, the amount of vertical inflow to the QA2 and QA3 aquifers is significantly less in the EA 2025 model as compared to both the USGS 2011 and USGS 2016 models.

⁴ The 2008 results were used in the comparison for several reasons. First, 2008 was the most recent year simulated using the USGS 2011 model. The recharge estimates developed in the USGS 2011 model were also based on streamflow measurements collected in 2008 and the report describing the USGS 2011 model (Frans et al., 2011) included water balances for 2008.

⁵ The recharge rates listed in Table 3 are discussed in more detail in the subsection below entitled "Recharge as model input."

Table 3. Recharge rates and vertical inflow to aquifers for 2008 as depicted in the USGS 2011, USGS 2016, and EA2025 models. All values are inches per year.

Date	Recharge (inches)			Inflow through aquifer top								
				QA1			QA2			QA3		
	USGS 2011	USGS 2016	EA 2025	USGS 2011	USGS 2016	EA 2025	USGS 2011	USGS 2016	EA 2025	USGS 2011	USGS 2016	EA 2025
Jan-08	2.23	1.43	1.41	0.469	0.456	0.256	0.124	0.114	0.022	0.036	0.034	0.017
Feb-08	2.18	1.40	1.17	0.442	0.426	0.241	0.117	0.106	0.021	0.033	0.031	0.016
Mar-08	1.89	1.20	0.94	0.466	0.446	0.257	0.126	0.118	0.022	0.036	0.035	0.015
Apr-08	1.44	0.90	0.30	0.444	0.418	0.247	0.123	0.114	0.020	0.035	0.036	0.016
May-08	0.54	0.30	0.00	0.432	0.392	0.256	0.126	0.114	0.021	0.036	0.038	0.020
Jun-08	0.09	0.00	0.00	0.455	0.349	0.248	0.139	0.104	0.020	0.035	0.037	0.026
Jul-08	0.09	0.00	0.00	0.403	0.365	0.278	0.123	0.103	0.023	0.036	0.042	0.039
Aug-08	0.09	0.00	0.00	0.397	0.357	0.278	0.122	0.097	0.023	0.036	0.036	0.036
Sep-08	0.09	0.00	0.00	0.381	0.341	0.266	0.117	0.090	0.022	0.034	0.032	0.025
Oct-08	0.09	0.00	0.47	0.391	0.328	0.251	0.119	0.088	0.022	0.035	0.027	0.013
Nov-08	0.76	0.45	1.89	0.400	0.353	0.240	0.115	0.088	0.021	0.034	0.026	0.009
Dec-08	2.90	1.88	2.03	0.517	0.460	0.254	0.140	0.103	0.022	0.035	0.029	0.011
Annual total	12.40	7.58	8.22^a	5.20	4.69	3.07	1.49	1.24	0.26	0.42	0.40	0.24

^aThe recharge values assigned in the EA 2025 model appear to occur one month earlier than they should. For example, the recharge assigned to May (0 inches) is the value that should be assigned to June. If the recharge values are shifted to the correct months, the total annual recharge during 2008 in the EA 2025 model is 7.68 inches, which is very similar to the value from the USGS 2016 model.

Role of Confining Units

The comparison of water balances included in Table 2 and 3 shows that vertical flow from upper layers to lower layers is significantly less in the EA 2015 model as compared to the USGS 2011 and USGS 2016 models. The amount of vertical flow is controlled in large part by the vertical hydraulic conductivity (Kv) of the confining units that overlie the aquifers. Table 4 compares the Kv values assigned to the QC2 and QC3 confining units in the various models.⁶ This comparison shows that the values assigned in the EA 2025 model are generally much smaller than the values in the two USGS models.⁷

Table 4. Vertical hydraulic conductivity values assigned to QC2 and QC3 confining units. All values are ft/day.

	QC2			QC3		
	Vertical hydraulic conductivity values assigned to confining units					
	EA 2025	USGS 2011	USGS 2016	EA 2025	USGS 2011	USGS 2016
Average Kv	1.6E-03	1.1E-02	4.3E-02	2.9E-03	1.2E-03	3.0E-02
Median Kv	3.4E-04	9.2E-03	8.0E-03	6.0E-04	3.4E-04	2.0E-03
	Ratio of EA 2025 values to USGS values					
Average Kv		14.0%	3.7%		236.9%	9.6%
Median Kv		3.7%	4.3%		174.4%	30.0%

Figure 1 shows the distribution of vertical hydraulic conductivity values in the QC2 and QC3 confining units in the EA 2025 model. These values are not based on direct measurements, but rather were selected during model calibration.

The relatively low Kv values used for confining units in the EA 2025 model affect the estimates of the current water balances described in the previous section. These Kv values will also affect estimated water level declines under future pumping scenarios. While the exercise is beyond the scope of this peer review, it is likely that using the USGS 2011 or USGS 2016 models would result in lower estimates of water level declines in the deeper aquifers under future pumping scenarios. This opinion is based on the comparison of water balances summarized in Tables 2 and 3 and the comparison of vertical hydraulic conductivity values summarized in Table 4.

⁶ The QC2 confining unit separates the QA1 and QA2 aquifers and the QC3 confining unit separates the QA2 and QA3 aquifers.

⁷ The technical memorandum regarding the EA 2025 model (EA, 2025) does not describe the vertical hydraulic conductivity values assigned to the confining units in the model. Figures 5-D and 5-F in the memorandum show the horizontal hydraulic conductivity values, but these values are largely irrelevant. Flow in confining units is primarily vertical and is controlled by vertical hydraulic conductivity and is generally independent of horizontal hydraulic conductivity.

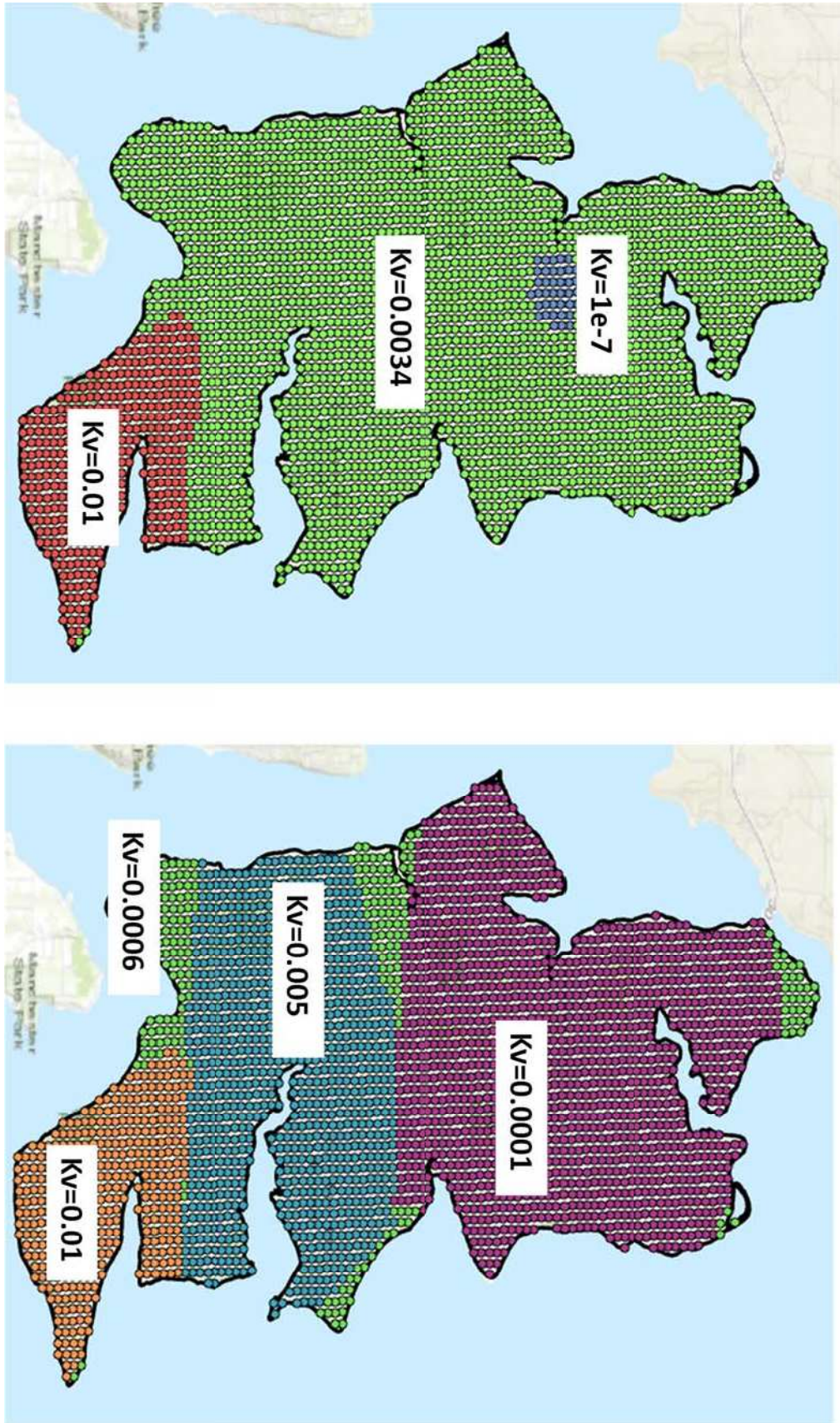


Figure 1. Vertical hydraulic conductivity (Kv) values for the QC2 (left) and QC3 (right) confining units. All values in ft/day.

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One might argue that lower K_v values will result in conservative estimates of allowable pumping rates or sustainable yields. This approach is not optimal, as it can result in compounding of conservative assumptions without explicitly recognizing or quantifying the degree of conservativeness.

Recharge as model input

Groundwater recharge is not calculated in any of the three groundwater flow models described above. Rather, recharge is estimated externally from the model and is then incorporated as input to the model. The general method used to estimate recharge was the same for all three models. This method is based on a study published by the USGS in 2001 (Bidlake and Payne, 2001) and is generally described as the Bidlake/Payne method. A general understanding of how this method works may provide an appreciation of the limitations inherent in the recharge estimates used in the models.

The Bidlake/Payne method involves using a relatively sophisticated surface hydrology model called the Deep Percolation Model or DPM. The DPM model estimates recharge based on detailed descriptions of a relatively large number of site-specific variables, including air temperature, solar radiation, evaporation rates, transpiration rates, vegetation types, soil types, and underlying geology. It is not possible to run the DPM model over the large area and the long timescales used in the groundwater flow models. Instead, the DPM model is used to estimate recharge in small watersheds (generally less than several square miles) over time periods on the order of one or two years. The recharge estimates from these detailed DPM models are then extrapolated over the full area of the groundwater model and over the full length of the time period considered in the groundwater model. This extrapolation is accomplished using relative simple regression equations.

For the USGS 2011 model, the regression equations used for the extrapolations were developed using the DPM results for data collected from October 2007 through September 2008 in the Springbrook Creek watershed on Bainbridge Island. For the USGS 2016 and EA 2025 models, the regression equations were developed using DPM results for data collected between August 1994 and April 1996 in several watersheds in the vicinity of SUBASE Bangor (Bidlake and Payne, 2001). It is not clear, based on the available information, if the regressions used in the USGS 2016 and EA 2025 models are better or worse than the estimates used in the 2011 USGS model. As shown in Table 3 in Section E, the estimates in the USGS 2016 and EA 2025 models are approximately 60% of the values in the USGS 2011 model.

It should be noted that the Bidlake/Payne regression equations provide estimates of annual recharge rates. These annual recharge rates are calculated based on annual precipitation rates. The recharge estimates do not depend on how that precipitation is distributed throughout the year. For example, a year with a very wet spring and very dry fall will have the same annual recharge rates as a year with a very dry spring and a very wet fall, provided the annual total precipitation is the same.

The annual recharge rates are partitioned among the different months the same way for all years, regardless of when the precipitation occurs. Table 5 lists how these annual recharge rates are distributed throughout the year. For example, the recharge that is assigned to April is always 12% of the annual recharge and the recharge assigned to November is always 6% of the annual value. These percentages do not change from year to year and do not depend on when precipitation occurs within the year and they do not depend on how wet or dry the land surface may be.

Table 5. Percentages of annual recharge assigned as monthly rates.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
19%	18%	16%	12%	4%	1%	1%	1%	1%	1%	6%	25%

Model Calibration

The EA 2025 model was calibrated using a trial-and-error approach in which calculated groundwater elevations were compared to observed elevations. A comparison of calculated and observed flows was not done, in large part because there are no streams included in the model. It is generally recommended that data of different types should be included in the calibration process to the extent possible (e.g., Hunt et al., 2005).

The approach used to calibrate the EA 2025 model often results in non-unique parameter estimates. This means that different sets of input parameters (e.g., different combinations of hydraulic conductivity values) can give similar model calibration results, but very different results for future management options.

Figure 4 in the EA Groundwater Flow Model Technical Memorandum (EA,2025b) is used to describe the model calibration. The figure is reproduced below as Figure 2. The following excerpt from the EA memorandum is used to describe the figure:

“An observed versus simulated graph of groundwater levels is shown on Figure 4 along with two dashed lines showing the 5% and 10% error. Ideally, all monitoring points would lie within a 10% error. For this model, 97% of modeled points fall within 10% error (9,259 out of 9,574).”

Figure 4 in the EA memorandum and its associated description present a misleading assessment of the calibration statistics. The dashed lines do not show 5% and 10% error. Rather, it appears that the +/-10% line actually shows plus or minus 30 feet, which is approximately 10% of the largest water level value shown on the graph. Most of the water levels are significantly less than 300 feet, and a 30-foot error is significantly larger than a 10% error.

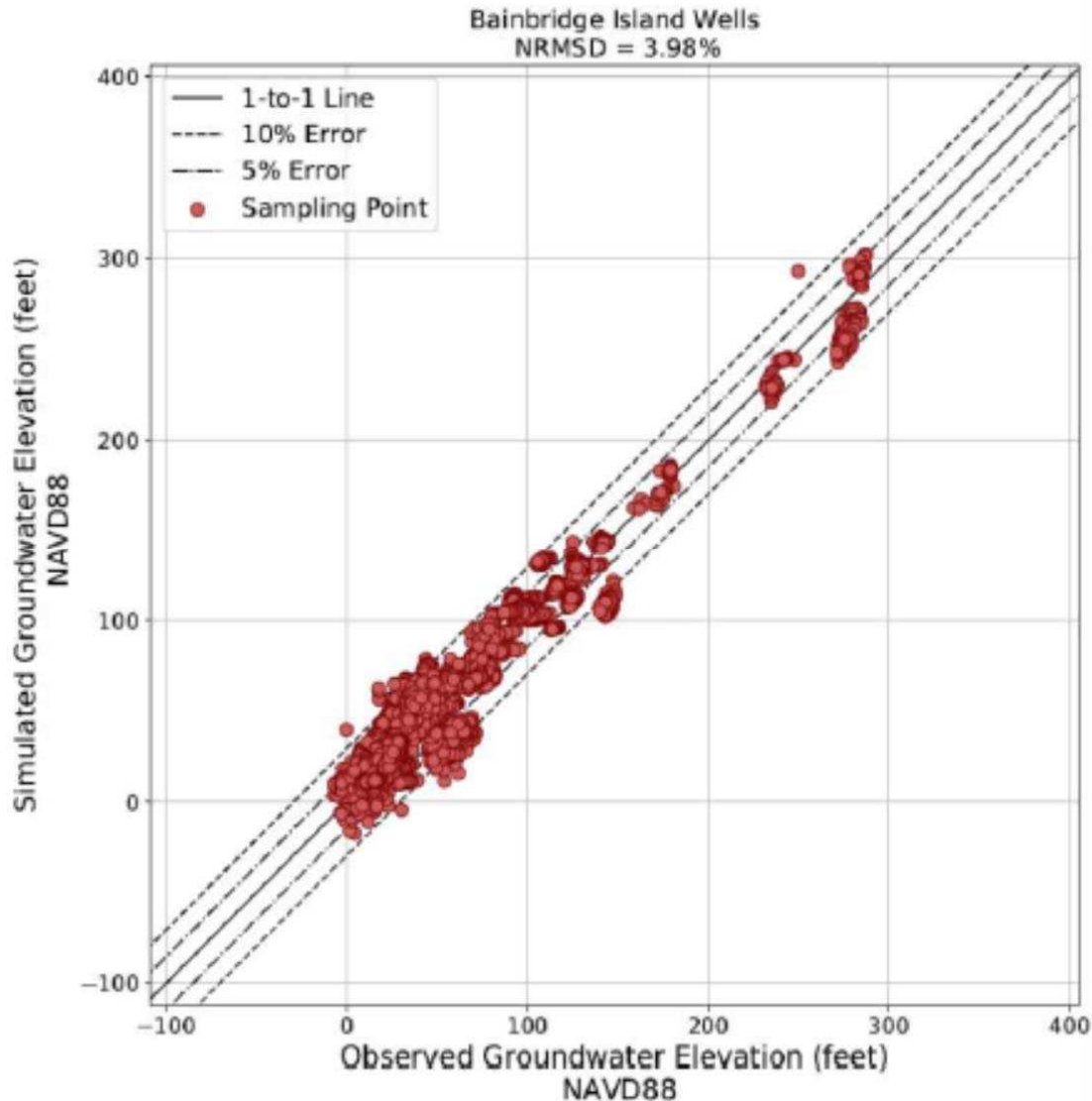


Figure 2. Plot of observed and calculated groundwater elevations as shown in Figure 4 from the EA groundwater modeling technical memorandum (EA, 2025b)

Figure 3 presents an alternative approach for showing the $\pm 10\%$ error lines and compares these lines to the observed and calculated groundwater elevations in the range of 0 to 100 feet.⁸ As an example, the $\pm 10\%$ error line for an observed water level of 30 feet is ± 3 feet. The difference between observed and calculated groundwater elevations is significantly larger than 3 feet for those observations in the vicinity of 30 feet. Most of the calculated water levels shown in Figure 3 fall significantly outside the $\pm 10\%$ lines.

⁸ The data shown in Figure 3 were taken from the file "results_31824_i2.csv" with a time stamp of 7/28/2025, 1:57 PM. This file was included in the package of materials provided by COBI for the peer review. Only those wells that are located on Bainbridge Island are included in the figure.

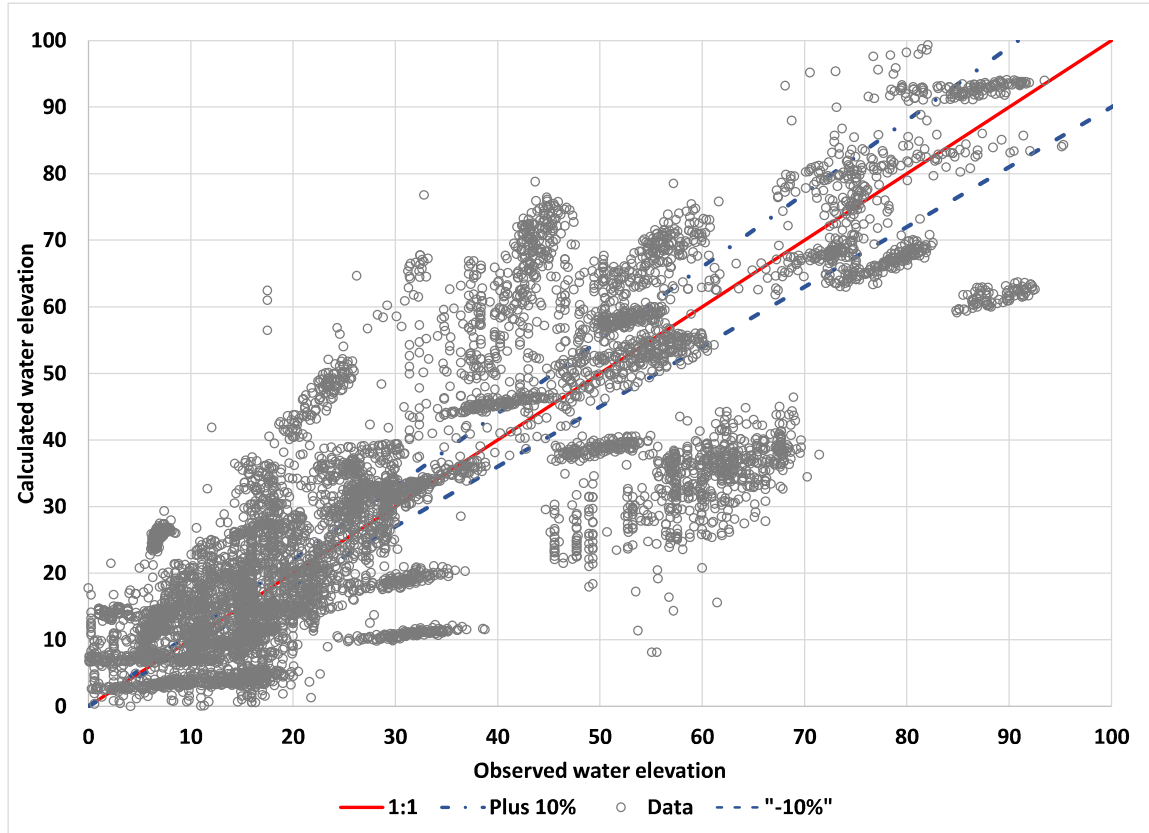


Figure 3. Comparison of observed and calculated water levels with +/- 10% error lines

As part of our peer review, we ran the EA model and graphed observed and calculated water level elevations for wells on Bainbridge Island.⁹ The results are shown in Figure 4. A comparison of these results with the results included in the July 2025 tech memo (reproduced in Figure 2 above) shows significant differences. In particular, the calculated water levels from our simulations are approximately 50 feet higher than the observed levels.

In response to the results shown in Figure 4, we emailed EA Engineering on September 4, 2025 asking if there was a different model version.¹⁰ We heard back on September 18, 2025 that there was not a different version.¹¹ We have therefore assumed that we have the model version that was relied upon in developing the GWMP.

⁹ The model version that we have is "cobi_nwtmodelv2_9layersR2_edits13024.gwv" and the time stamp is 4/12/2024.

¹⁰ Email to Luke Flores, EA Engineering, September 4, 2025.

¹¹ Email from Lee Garret, EA Engineering, forwarded by Chris Wierzbicki, COBI, September 18, 2025..

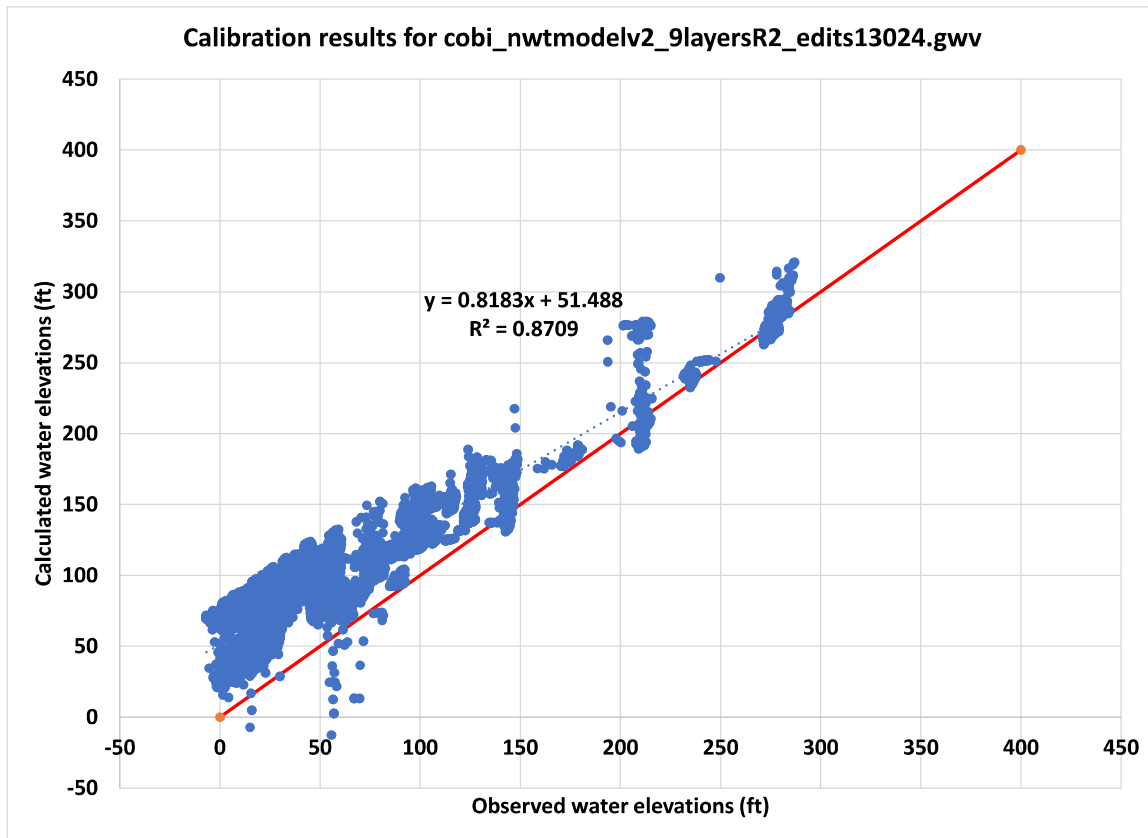


Figure 4. Plot of observed and calculated groundwater elevations derived by running the model provided as part of the peer review process.

F. PLANNING IN THE FACE OF UNCERTAINTY

Given the complexity and interdependence of the earth system, and the unprecedented rate of global climate change, uncertainties must be considered when developing predictions associated with the groundwater system. Uncertainty increases as our predictions attempt to describe conditions further into the future for specific local conditions. Any responsible attempts to produce quantitative predictions of future scenarios should address this unavoidable uncertainty and “accurately reflect the limits of current knowledge” (Parker 2010). The current version of the GWMP, and the quantitative modeling results it relies upon, do not fully acknowledge uncertainty in any reasonably-quantitative way and do not accurately reflect the limits of current knowledge. This foundational flaw significantly limits the scientific integrity of the analysis and makes the results potentially misleading for management decisions.

There are methods to quantify uncertainty and generate a range of plausible outcomes for future scenarios. One such method is ensemble modelling. An example of this method is suggested in Section D above for estimating recharge. With this approach, several models are run using different assumptions and simplifications, possibly with varying inputs and/or parameters. The output from these models is then used to attempt to bracket the range of possible outcomes. The approach may require significant resources in the form of data, expertise, and time, and even then, it does not provide a surefire method for quantitative representing uncertainty (Parker 2010). The current draft GWMP’s various recharge, pumping, and sea level modeling scenarios are limited, incomplete versions of an ensemble that under-represents the uncertainty in model parameters and recharge. If the focus is to remain on quantified approaches; we recommend, as a priority, constraining the more certain and knowable quantities like current water usage and pumping and ground water levels (e.g., increasing metering and monitoring). The report does not provide any concrete plan to constrain these more knowable quantities, but it does focus substantial resources on trying to estimate deeply uncertain quantities like future climate and groundwater levels.

To guide local decision-making, the Intergovernmental Panel on Climate Change (IPCC) recommends that stakeholders “need to consider multiple lines of evidence on all physically plausible outcomes (especially when they are contrasting) relevant to a specific decision required in response to a changing climate. Confidence in the distilled regional climate information is enhanced when there is agreement across multiple lines of evidence” (IPCC 2021 TS). In other words, to have confidence in future predictions on a local scale, there must be several lines of evidence—such as ensemble modeling and historical data—that all support each other and agree on a specific range of outcomes. This “distillation” method is the gold standard of climate science; however, it may require interdisciplinary teams of experts and access to data and resources that may make it inaccessible to smaller governments and institutions.

For a small area like Bainbridge Island, the results from quantitative modelling of future scenarios may be so uncertain that they have limited value for guiding specific management decisions. However, as Roe (2012) states in the context of policy decisions on carbon emissions and the global climate, “uncertainty is not ignorance” and “a reliance of policy

makers on scientific and economic analyses to deliver more certainty on how to optimize our future consumption... may be placing more weight on those analyses than they should be reasonably asked to bear.” Instead of being guided by specific, uncertain figures representing future conditions, planning decisions should be made that will result in a resilient groundwater system that will be able to adapt to uncertainty. In this respect, the GWMP is successful in identifying broad management areas that would result in such a system: implement policies that increase water conservation, reduce pumping, and promote increased clean recharge. A groundwater management plan built around these core principles will be the most sustainable and resilient in any future scenario, regardless of the specific quantities of precipitation, recharge, sea-level rise, etc.

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Document 2 - Peer Reviewer Comments on the GWMP Summary Memo

We found summary memo to be very clear and accessible and we think it represents the information in the plan/tech memo well (recognizing that we believe the plan and modeling have flaws that we pointed out in our report). Some specific suggestions include the following:

Page 8.

Impacts to streams and creeks:

Suggested word change: “Impacts on streams and creeks can only be partially evaluated, as the model only **roughly approximates** groundwater contributions to surface water...”

Growth on the Island: “Areas outside Winslow are subject to aquifer protection regulations – all of which substantiates the model’s recharge assumptions.” It is not clear what is meant by substantiating the model’s recharge assumptions.

The model assumes well pumps are always running – a conservative assumption...” It is not clear that this is necessarily a conservative assumption. If the water withdrawal during a particular month is fixed at a particular well, the maximum drawdown from pumping at a lower, steady rate may be lower than the maximum drawdown from intermittent pumping at higher rates followed by periods of resting.

Page 9.

The model has drain boundaries in all cells located in layer 1. These boundaries artificially control water levels and severely limit the usefulness of the model in calculating water levels in the shallow aquifer. You may want to note that the estimates of impacts to shallow aquifers are not reliable.

Page 10.

Again, because of drain boundaries in all cells located in layer 1, the estimated impacts to surface waters are not reliable. We don’t know where that graphic comes from – it was not included in the EA groundwater model tech memo. Table 2-7 in the GWMP indicates a 40% decrease in groundwater drainage to surface water. You might consider dropping the graphic and associated callouts (i.e., Cautious and Modest).

Page 13.

Consider the following revisions: “With modest growth assumptions and modest changes in climate, the Island’s water supply for human consumption is expected to be secure for the 20-year planning horizon. Increased water conservation and managed aquifer recharge are expected to provide resiliency in the 50-year horizon.”



CITY OF
BAINBRIDGE ISLAND

Planning Commission Special Meeting Agenda Bill

MEETING DATE: October 30, 2025

ESTIMATED TIME: 20 Minutes

AGENDA ITEM: Discuss future of Planning Commission Subcommittees for work on the Winslow Subarea Plan

AGENDA CATEGORY: Discussion

PROPOSED BY: Planning &
Community Development

PREVIOUS PLANNING COMMISSION REVIEW DATE(S):

PREVIOUS COUNCIL REVIEW DATE(S):

RECOMMENDED MOTION:

The Planning Commission could make a motion regarding future subcommittee work.

ATTACHMENTS:

[September_19__2025_Tovar_Memo_to_Planning_Commission.pdf](#)



MEMORANDUM

DATE: September 19, 2025
TO: Bainbridge Island Planning Commission
FROM: Joseph W. Tovar, FAICP
SUBJ: Winslow Subarea Plan items on the September 25 and October 2 Agendas

At its September 4, 2025 meeting, the Planning Commission passed motions to form two Winslow Subarea Plan Subcommittees to draft alternatives and potential recommendations for Incentives and Development Standards. These motions, and adopted Protocols and Expectations for the Subcommittees, are set forth in Attachments 1 and 2 to this Memo.

Both Subcommittees have met to conduct preliminary work and will present their initial findings to the full Planning Commission in the coming weeks. The Incentives Subcommittee will share their preliminary findings at the September 25 meeting, while the Standards Subcommittee will do the same at the October 2 meeting. At each Planning Commission meeting, the Subcommittee members will present their preliminary findings, alternatives being considered and any potential recommendations, after which they will engage a dialogue with the full Planning Commission. This will be an opportunity for the Commissioners to ask questions, discuss the potential merits of alternatives, determine if there are points of agreement and/or if further research and work is appropriate before reaching conclusions.

The Incentives Subcommittee presentation and dialogue with the full Commission is the priority for the September 25 meeting. It is not known at this time whether the Incentives Subcommittee work will require the full agenda, and/or if it will need to be continued to October 2. Depending on that determination, there may be time remaining on the September 25 Agenda, in which case we propose to turn to a continued review and decisions regarding the remaining WSP Goals and Policies.

Attachments

Attachment 1 - Motions regarding the Winslow Districts Standards Subcommittee

- 1** I move to establish a Winslow District Standards Subcommittee that will refine into a final recommendation boundaries, max FAR, max height, desired housing types, and other applicable standards for the core district first, with subsequent work addressing other districts within the Winslow subarea.
- 2** I move that the Commission recommend the base height in the core area be as existing code of 3 stories. Provided that an additional story should be permitted for inclusion of either affordable housing or tuck under parking, and further provided that the inclusion of both affordable housing and tuck under parking would allow up to an additional two stories, and that this issue is referred to a subcommittee to prepare a more detailed proposal based upon research of what other cities have done. To create incentives, and with input from the development community.
- 3** I move to direct the Winslow District Standard Subcommittee to define overlay districts along Winslow Way, Madison Avenue, and Erickson Avenue.
- 4** I move that the Winslow District Standards Subcommittee provide three alternatives to the existing Ferncliff District, [as shown on the screen]

Motions regarding the Winslow Districts Incentives Subcommittee

- 1** I move to establish a subcommittee that will evaluate affordable housing incentives across Winslow, considering increases to height, FAR, TDR as it relates to AMI and percent of affordable housing, and including other tools as the community committee feels are related or relevant.
- 2** And I'll make a motion to... for the Incentive Subcommittee to recommend criteria for the public benefit incentives in the Madison Zone.

Attachment 2 - Protocols and Expectations for Planning Commission Subcommittees

1. The Winslow Standards Subcommittee shall consist of Commissioners Deines, Schaab, and Pruedhomme.
2. The Winslow Districts Incentives Subcommittee shall consist of Commissioners Birtley, Blossom, and Garcia.
3. The scope of each subcommittee shall be as set forth in the Motions passed at the Sep. 3 Planning Commission meeting.
4. Subcommittee recommendations shall be technical rather than policy in nature.
5. Subcommittee meetings are not public, may be virtual or in person, but any emails or documents created shall be of record.
6. Each Subcommittee shall designate a Chair who will coordinate with the City's Winslow Planning Consultant Tovar and shall include him in all meetings.
7. Each Subcommittee will adopt a schedule to provide summaries, findings and recommendations to the full Planning Commission.
8. The City's consultant and City staff will provide each committee with administrative, logistical, and research support.



Planning Commission Special Meeting Agenda Bill

MEETING DATE: October 30, 2025

ESTIMATED TIME: 90 Minutes

AGENDA ITEM: Continued Discussion on Updates to the Winslow Subarea Plan

AGENDA CATEGORY: Review and Recommendation

PROPOSED BY: Planning & Community Development

PREVIOUS PLANNING COMMISSION REVIEW DATE(S):

January 9, 13, 30; February 13, 27; March 5, 13, 27; April 2, 10, 24; May 1, 8, and 22; June 5, 12, 26; July 10, 24; August 7 and 28, 2025, September 3, 4 and 25, and October 2 and 23, 2025

PREVIOUS COUNCIL REVIEW DATE(S):

Monthly updates to City Council, including September 16 and October 28, 2025.

RECOMMENDED MOTION:

Continue presentation from the Planning Commission *Standards* subcommittee and additional presentation from *Incentives* subcommittee for discussion, and for possible motions.

SUMMARY:

During the September 3rd Special Meeting, the Planning Commission approved the following motions establishing subcommittees to work on specific topics in between Planning Commission meetings, and bring back recommendations or options for the full Planning Commission to consider.

I move to establish a Winslow District Standards Subcommittee that will refine into a final recommendation boundaries, max FAR, max height, desired housing types, and other applicable standards for the core district first, with subsequent work addressing other districts within the Winslow subarea. Commissioners Deines, Schaab, and Preudhomme volunteered for this subcommittee.

I move to establish a subcommittee that will evaluate affordable housing incentives across Winslow, considering increases to height, FAR, TDR as it relates to AMI and percent of affordable housing, and including other tools as the community committee feels are related or relevant. Commission Chair Blossom, Vice Chair Garcia, and Commissioner Birtley

volunteered for this subcommittee.

The *Standards* and *Incentives* subcommittees have been meeting, and on October 2, the *Incentives* subcommittee presented their work to the full Planning Commission and the *Standards* subcommittee provided brief remarks presented its work on October 23, 2025, and the Commission discussed options for regulating setbacks and stepbacks along Winslow Way, and options for a zoning or overlays for the commercial center along Winslow Way and a new "Ferncliff" zone on the east side of State Route 305. There were not any motions made on the topic discussed. On October 30, the Planning Commission will continue to discuss recommendations and options from each subcommittee.

BACKGROUND: The Planning Commission is reviewing and making recommendations on a preferred land use alternative for the Winslow Subarea Plan. A working outer boundary for the Winslow Subarea was recommended by the Planning Commission at their February 27, 2025, meeting. Throughout March, April, May, June, and September 4, 2025 the Planning Commission has been discussing zoning district boundaries, working from more-dense to less-dense, in addition to discussing a variety of related land use issues.

At their June 5, 2025, Special Meeting, the Planning Commission continued its discussion of downtown Winslow geographies and development standards with a focus on the boundaries of the Central Core zone and the areas to the north and west of the Central Core zone, currently identified as the "Madison" zone. The Planning Commission then discussed properties/areas previously noted as TBD, and approved motions regarding the zoning for those TBD areas.

Additional information about the Winslow Subarea Plan can be found on the project website:
<https://cityofbainbridgeisland.civilspace.io/en/projects/winslow-subarea-plan-update>

Some sections of an updated Winslow Subarea Plan have been drafted and can be found on the project website under "Supporting Documents".

ATTACHMENTS:

[251017_PC Meeting Packet_Oct 24 Meeting.pdf](#)

[Incentives-Subcommittee-Garcia-Presentation-Draft-2025.10.24.pdf](#)

[Tovar 10.24.25 Memo re Regulatory Barriers.pdf](#)

Overview of Work

PC Subcommittee on Design Standards

*Four main areas of study:

1. Zoning Districts

1a. Core

- Winslow overlay
- Civic and Cultural overlay

1b. Madison Zone

- Madison and Erickson overlay

1c. Ferncliff Zone

- Study options

1d. Ferry and High School Zones

1e. Moderate and low intensity zones

2. Middle housing types

3. Parking

4. Other key policies

- Large lot standards
- Height measurement definition
- pocket neighborhoods and 'mews'

*Subcommittee is working on a list of 'Phase 2' items (i.e. open space requirements) and may include some of the list above.



Today's Agenda:

1. Review Winslow Way Overlay

- 1a. Should it become a district instead of an overlay?

1b. Review boundary

1c. Review Stepback Diagrams

2. Review Ferncliff District

- Compare 3 options for moving forward

3. Review building Types diagram

- Adjust allowed building types by zone.

Agenda Items for Future Meeting(s):

1. Review remaining 'red' spots on zoning map
2. Review each zone in greater detail (including FAR/lot coverage, building heights and incentives, setbacks, etc.)
3. Review middle housing code
4. Review parking requirements

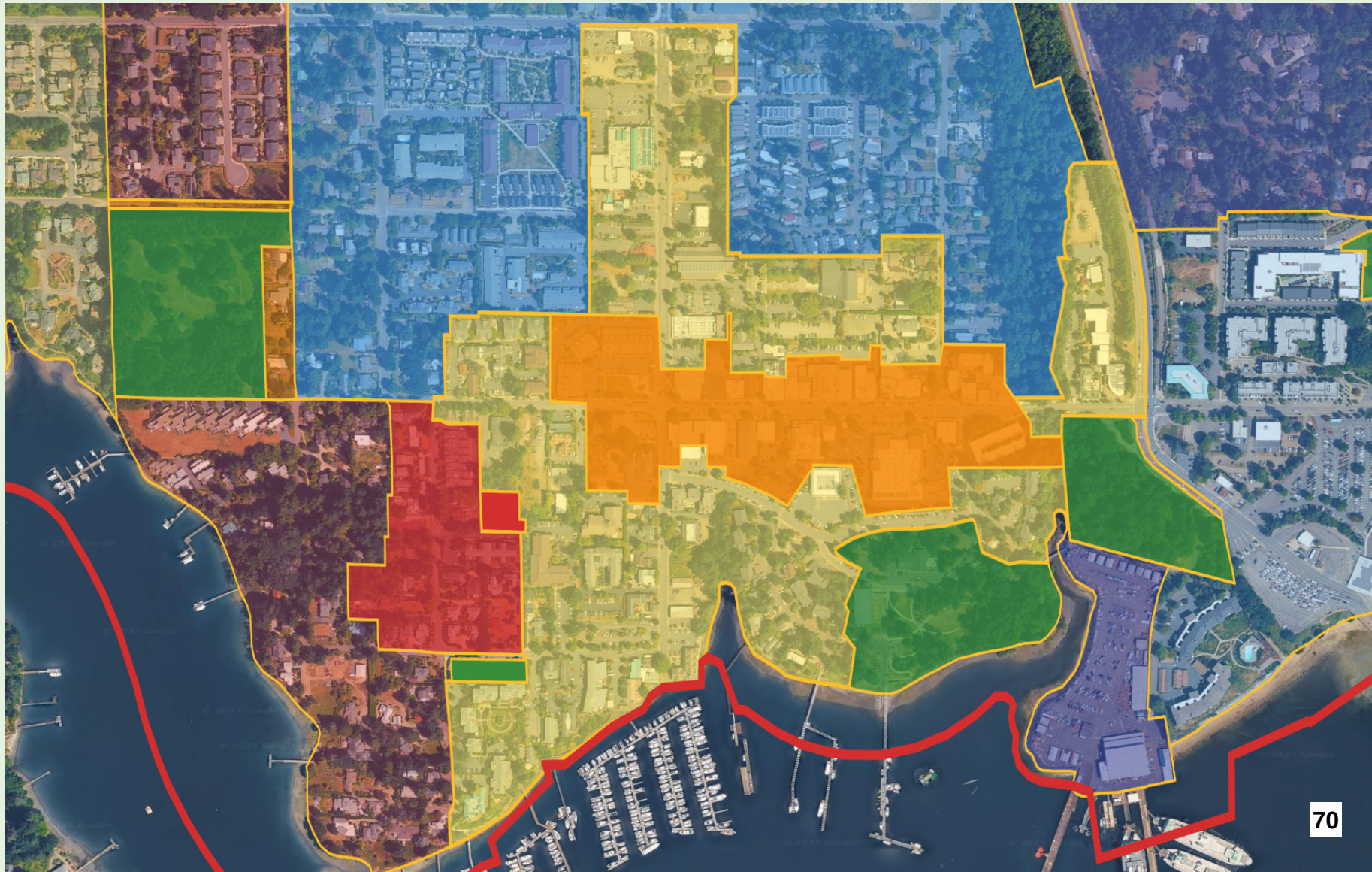
Today's Agenda:

1. Review Winslow Way Overlay

1a. Should it become a district instead of an overlay?

1b. Review boundary

1.c Review Stepback Diagrams



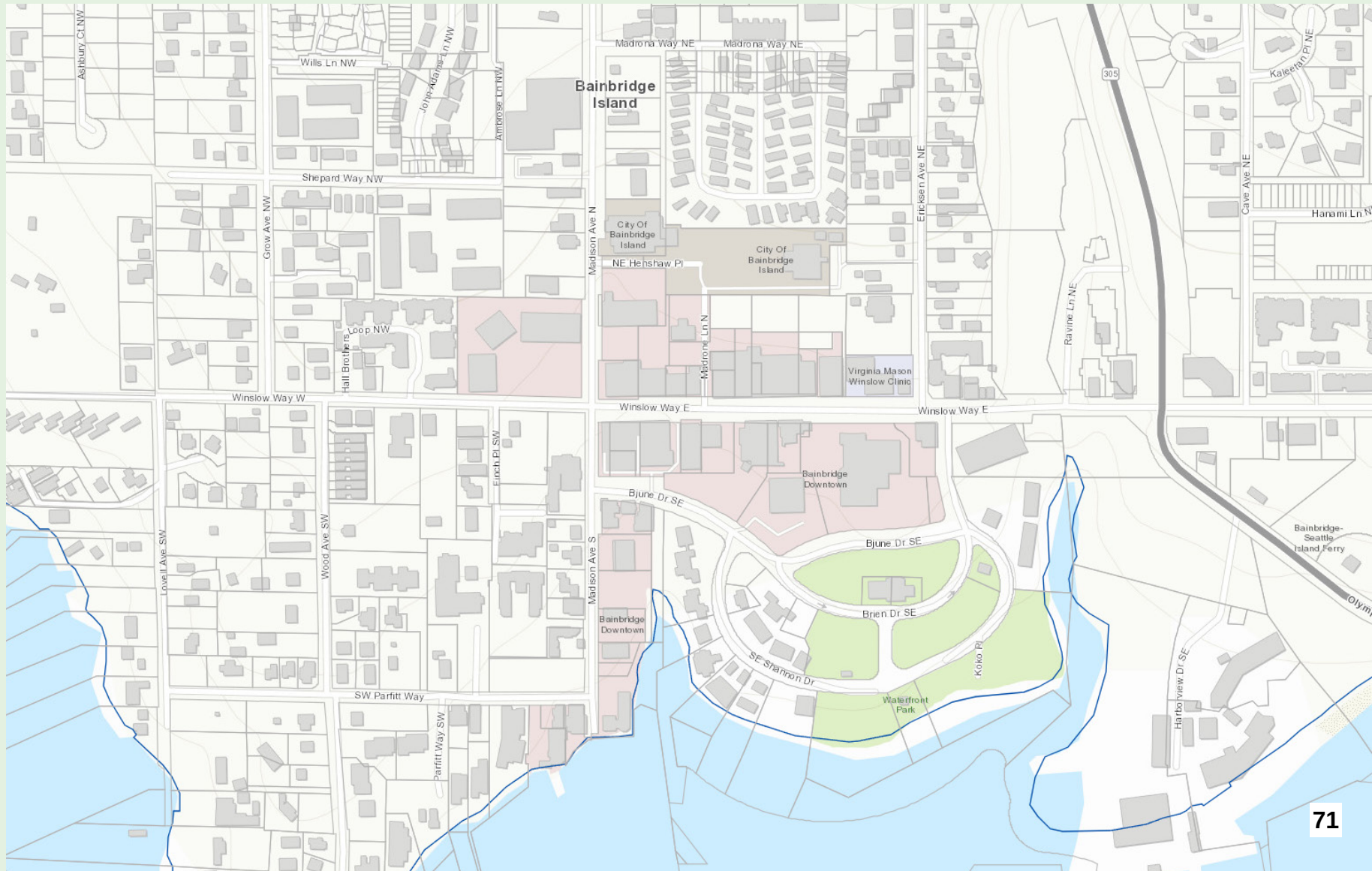
Today's Agenda:

1. Review Winslow Way Overlay

1a. Should it become a district instead of an overlay?

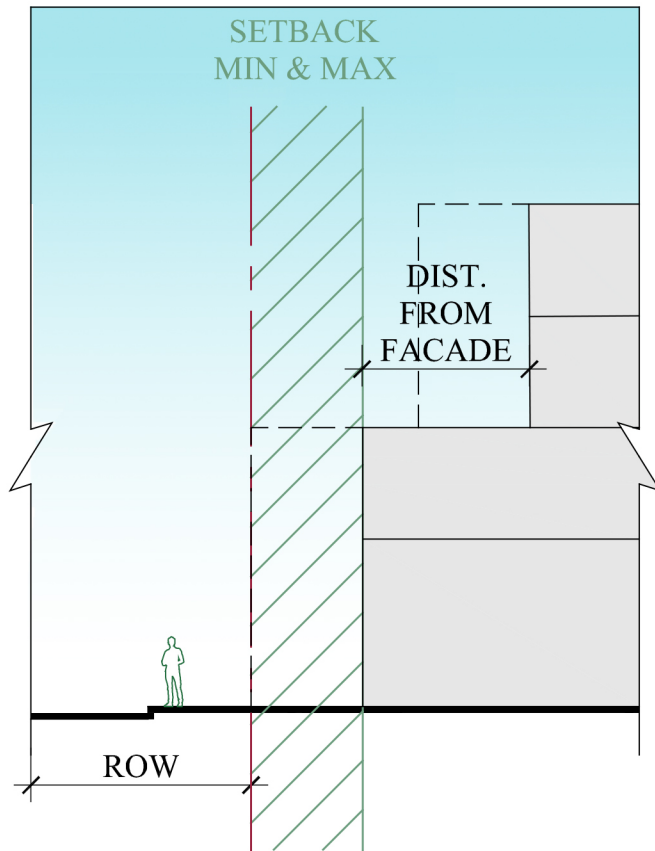
1b. Review boundary

1c Review Stepback Diagrams

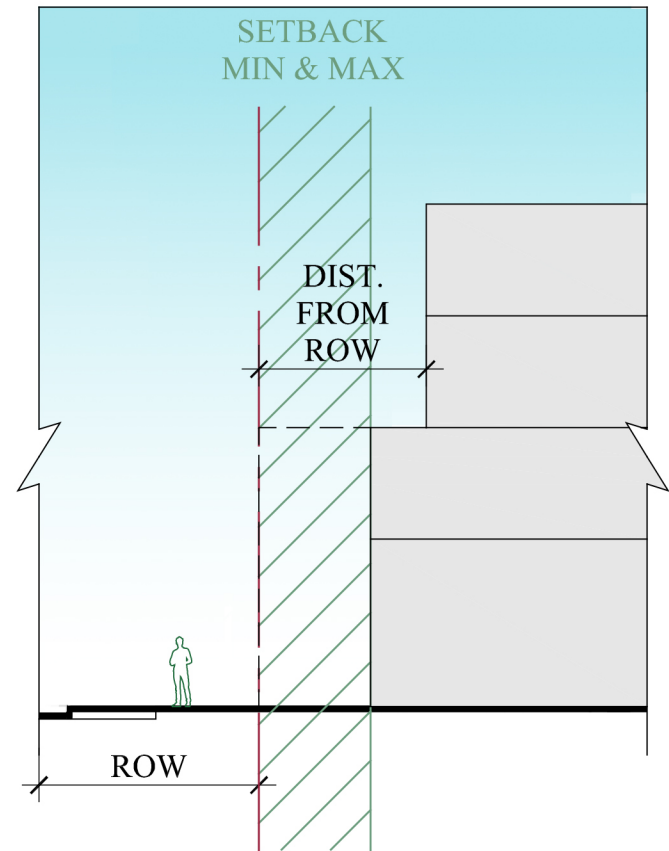


Measuring the Stepback

WINSLOW WAY STEPBACK DIAGRAM



1. Measuring Stepback from Building Facade



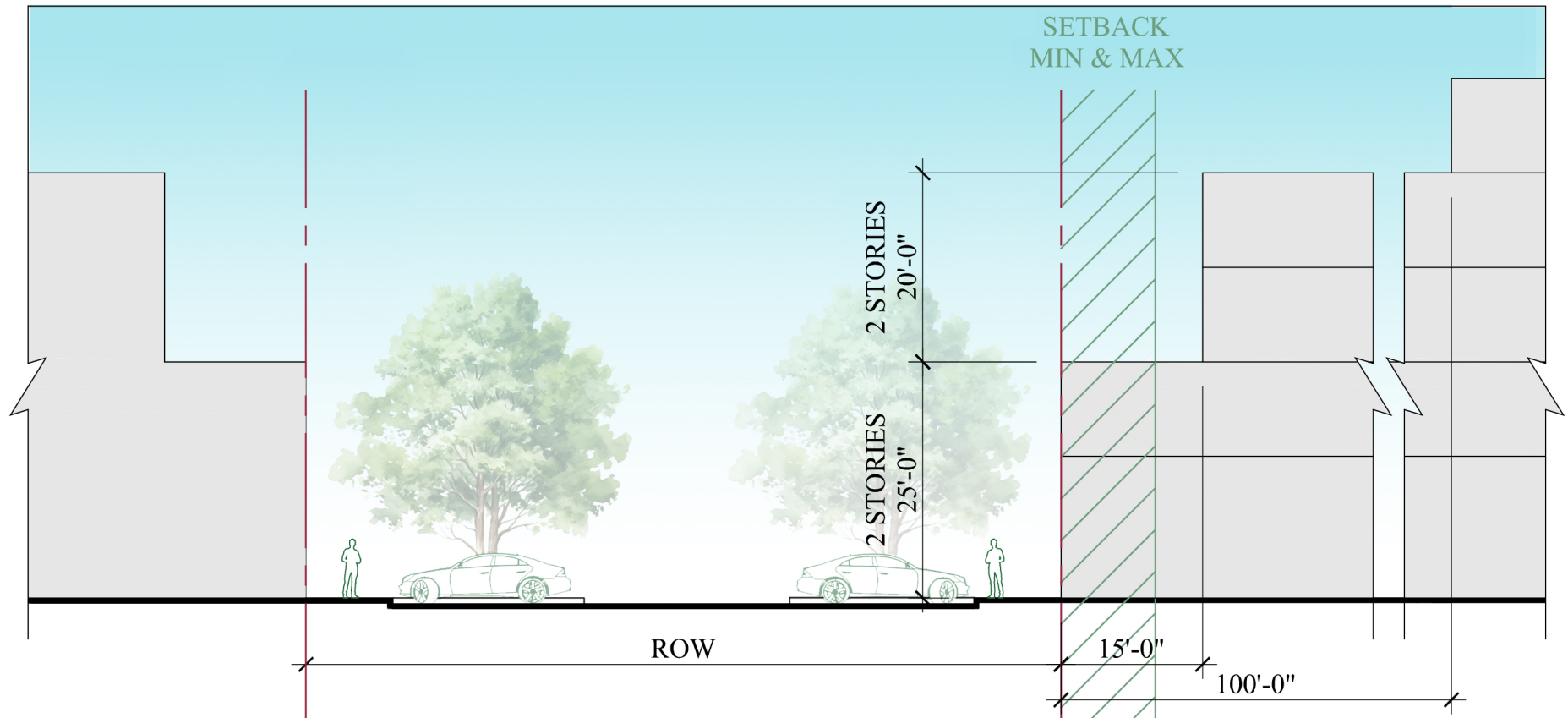
2. Measuring Stepback from R.O.W.

WINSLOW WAY STEPBACK DIAGRAM



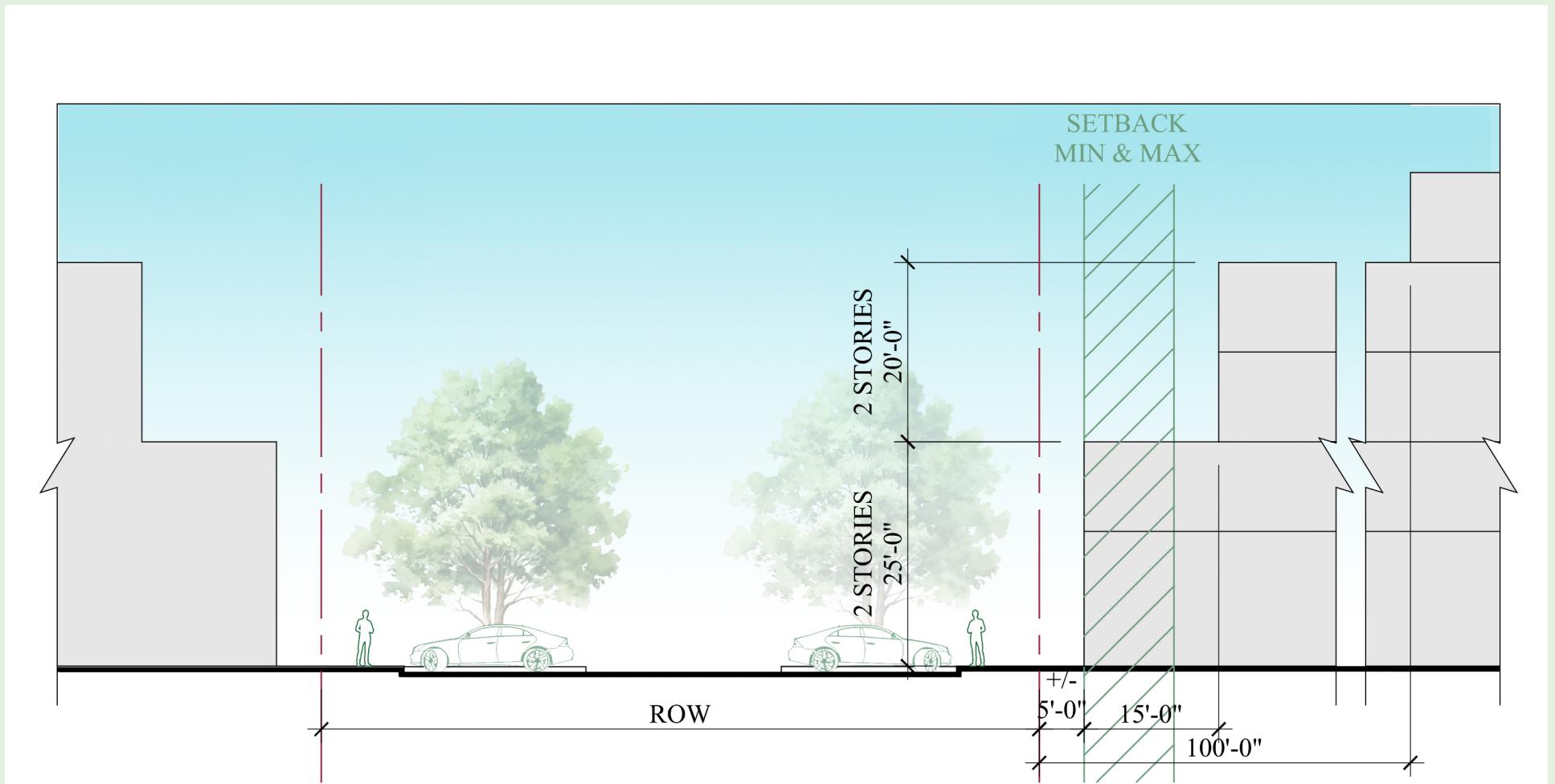
OPTION 2: 15ft Stepback

WINSLOW WAY STEPBACK DIAGRAM



OPTION 3: 15ft Stepback + 5ft Setback

WINSLOW WAY STEPBACK DIAGRAM

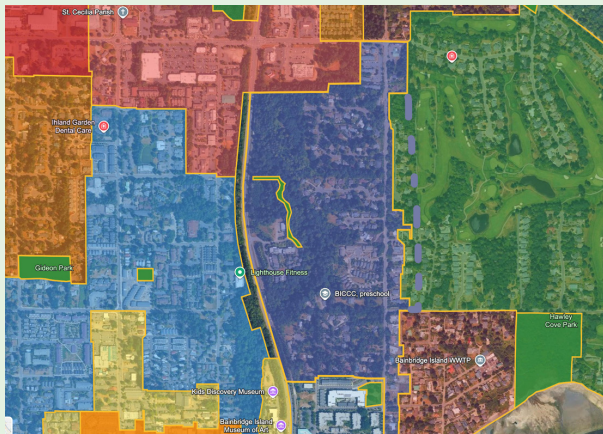


Today's Agenda:

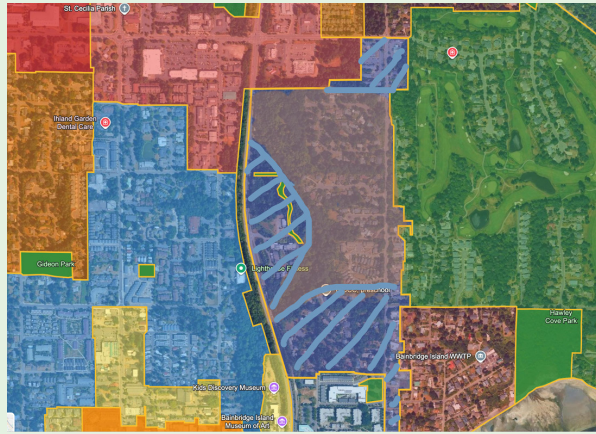
2. Review Ferncliff District

-Compare 3 options for moving forward

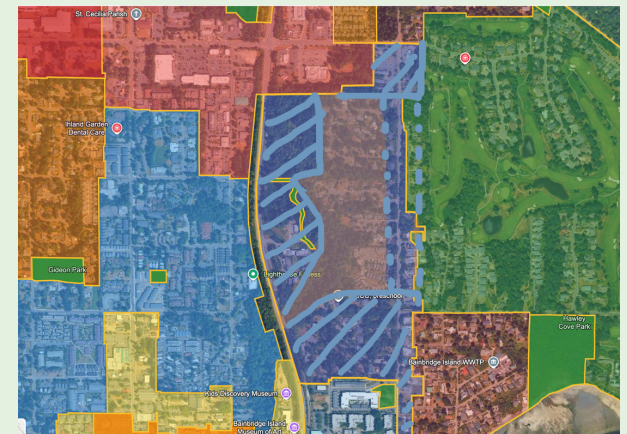
OPTION 1



OPTION 2A



OPTION 2B

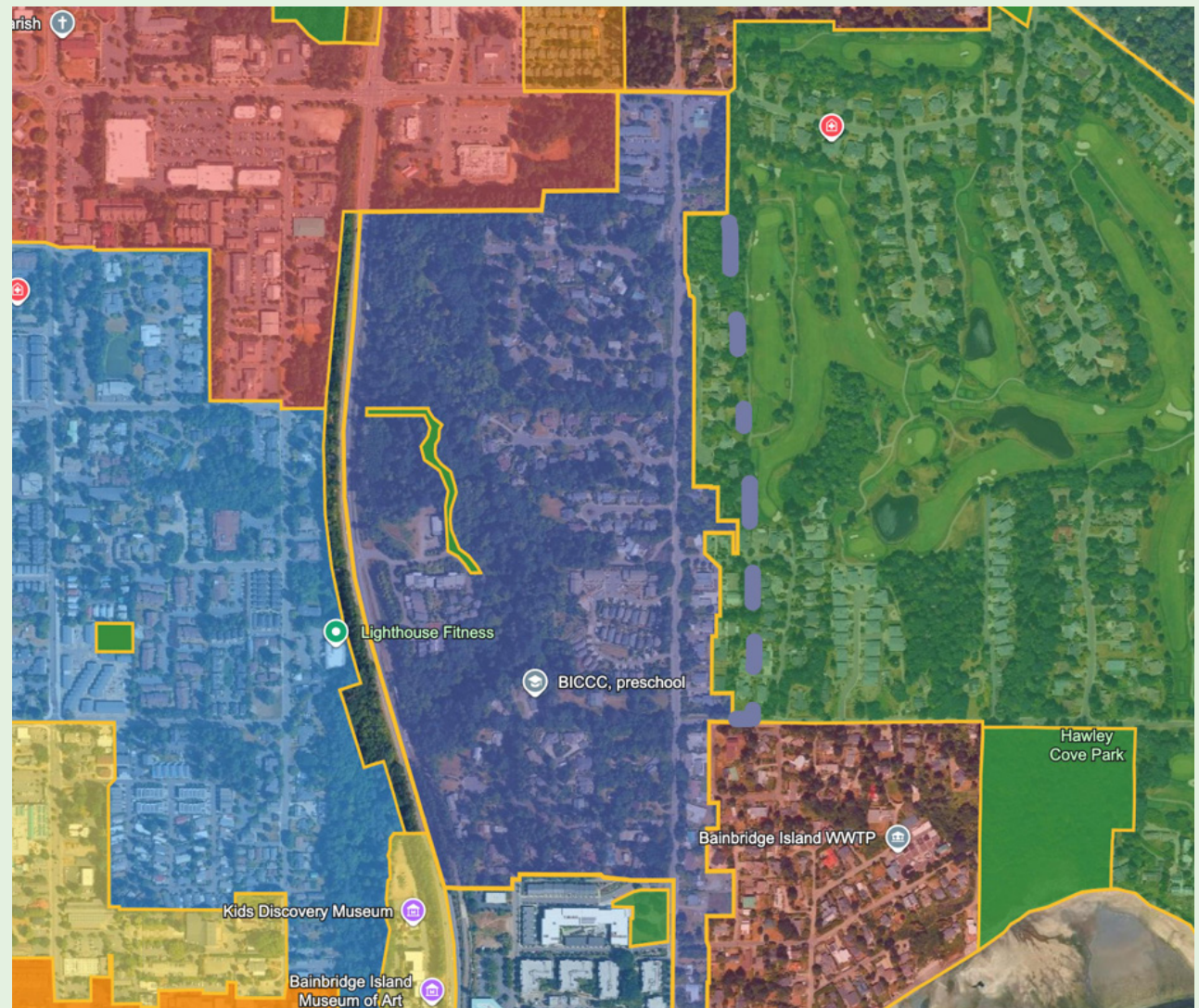


OPTION 1: New Ferncliff Zone

Review of Options for Ferncliff District

Allowed Building Types Overview

	Ferncliff Zone (TBD)
Block-Scale (Regulated by Building Envelope only)	
Mid-Rise Building	X
Mid-Rise Building (Mixed Use)	X
Block-Scale (Regulated by Building Form)	
Multiplex: Large (9-18 Units)	X
Courtyard Building	X
Townhouses (1-3 Units, includes Triplex Stacked)	P
House-Scale (Regulated by Building Form)	
Multiplex: Small (5-8 Units)	X
Fourplex	P
Cottage Court	P
Duplex	P
Single-Family Home	P
ADU	P

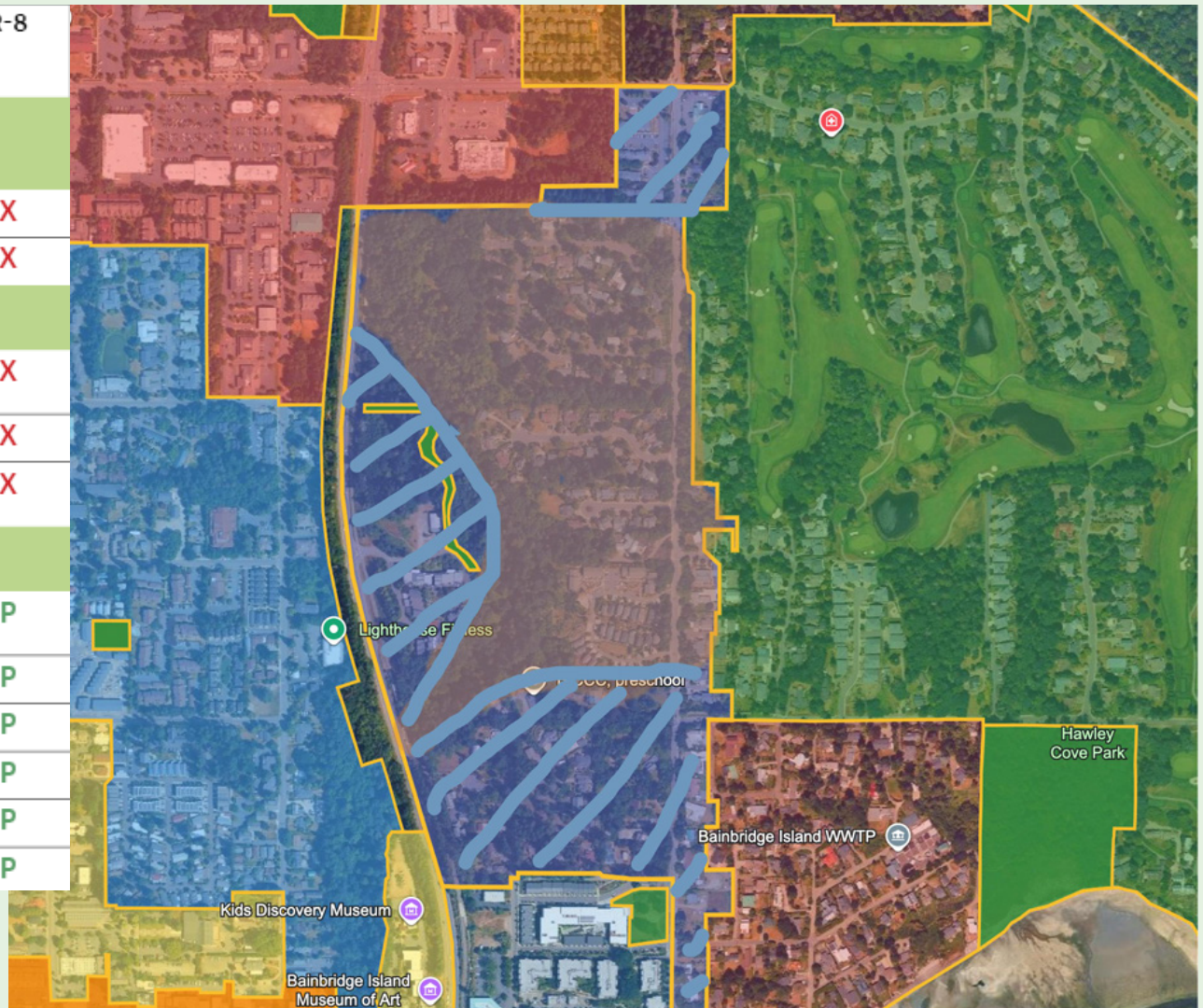


OPTION 2A: Connection + R Zone

Review of Options for Ferncliff District

Allowed Building Types Overview

	Connection District (Madison)	R-8
Block-Scale (Regulated by Building Envelope only)		
Mid-Rise Building	X	X
Mid-Rise Building (Mixed Use)	X	X
Block-Scale (Regulated by Building Form)		
Multiplex: Large (9-18 Units)	P	X
Courtyard Building	P	X
Townhouses (1-3 Units, includes Triplex Stacked)	P	X
House-Scale (Regulated by Building Form)		
Multiplex: Small (5-8 Units)	P	P
Fourplex	P	P
Cottage Court	P	P
Duplex	C	P
Single-Family Home	C	P
ADU	C	P

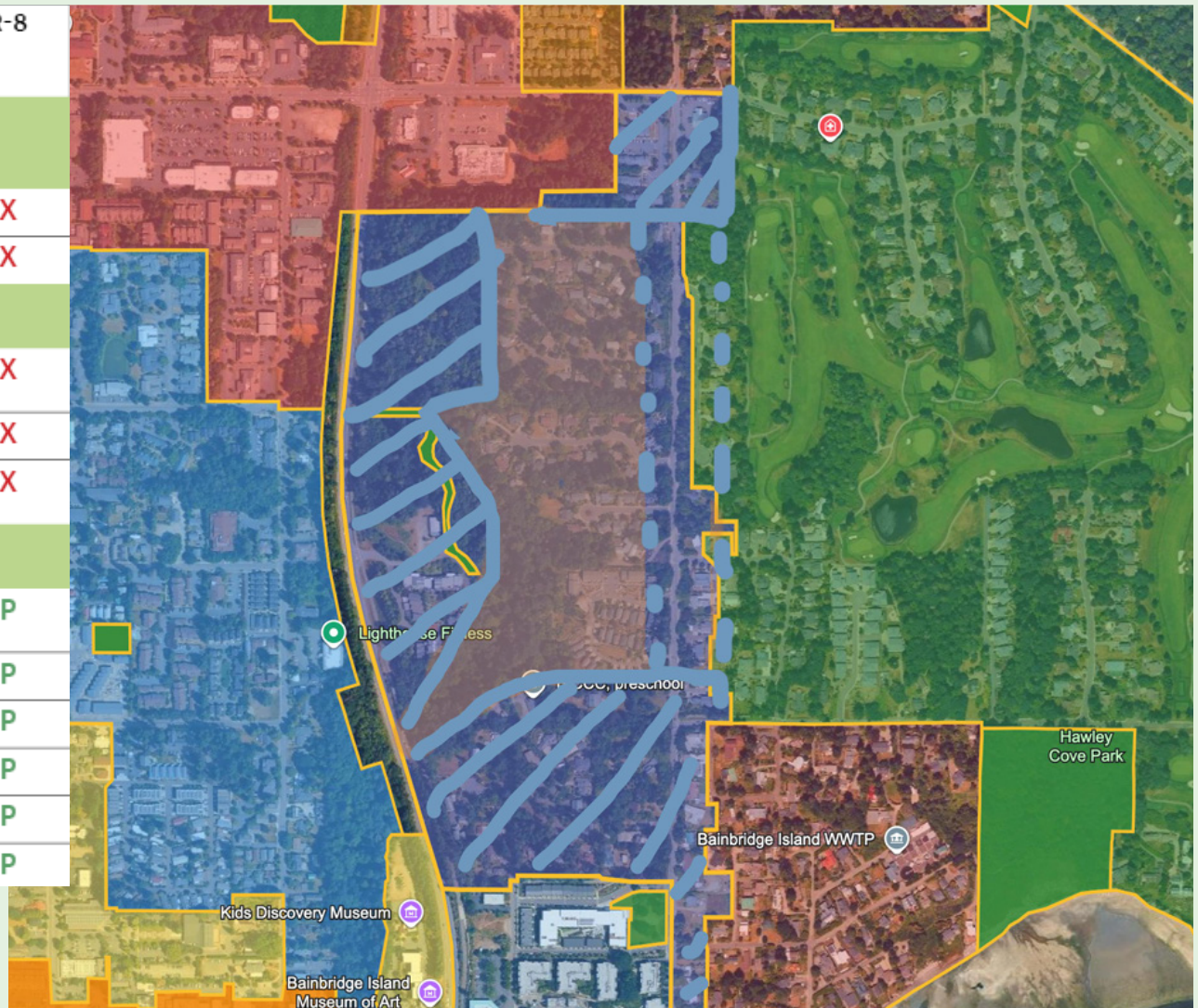


OPTION 2B: Connection + R Zone

Review of Options for Ferncliff District

Allowed Building Types Overview

	Connection District (Madison)	R-8
Block-Scale (Regulated by Building Envelope only)		
Mid-Rise Building	X	X
Mid-Rise Building (Mixed Use)	X	X
Block-Scale (Regulated by Building Form)		
Multiplex: Large (9-18 Units)	P	X
Courtyard Building	P	X
Townhouses (1-3 Units, includes Triplex Stacked)	P	X
House-Scale (Regulated by Building Form)		
Multiplex: Small (5-8 Units)	P	P
Fourplex	P	P
Cottage Court	P	P
Duplex	C	P
Single-Family Home	C	P
ADU	C	P



Today's Agenda:

3. Review building Types diagram

-Adjust allowed building types by zone.



Where we left off:

Zone						"Missing Middle" Types (4 stories or less)									
	Mid-Rise Multifamily (4-5 stories)	Mid-Rise Mixed Use (4-5 stories)	Low-Rise Multifamily (4 stories or less)	Low-Rise Mixed Use (4 stories or less)	Multiplex: Large Scale (9-18 units)	Triplex: Stacked (live/work possible)	Multiplex: Medium (5-8 units; live/work possible)	Courtyard Building (live/work possible)	Townhouse (live/work possible)	Cottage Court	Fourplex: Stacked	Duplex: Stacked	Duplex: Side-By-Side	Accessory Dwelling Unit (ADU)	Detached Single-Family House
Ferry Urban Center T-5.5	✓	✓	✗	✗	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
High School Urban Center T-5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
Core Urban Center T-5.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
Winslow Way Overlay	✗	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Madison / Connection Urban Transition T-4.5	✗	✗	TBD	TBD	✓	✓	✓	✓	✓	✓	✓	✗ (conversion of existing SFR permitted)	✗ (conversion of existing SFR permitted)	✓ (conversion-of-existing SFR-permitted)	✗
Ferncliff OPTION 1 Suburban Transiti T-4.0	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓
Ferncliff OPTION 2 Suburban Transiti T-4.0	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Subcommittee Review of Types

Zone	Proposals	Framework	Max FAR	Max Height	Max Lot Coverage	Frontage (% of lot frontage with building facade within facade zone)	Facade (% of building facade within facade zone) *Includes any facade publicly accessible, even if space behind it is not open, etc. examples	Setback Front/Corner Resi	Setback Front/Corner Comm	Setback Side Resi	Setback Side Comm	Steps	Minimum Public Open Space *Only for lots larger than 10,000 sq ft	Minimum Parking Requirements (directional; needs deeper dive)	Defined by Building Envelope				Defined by Form>>>				"Missing Middle" Types < 10 stories or less										Accessory Dwelling Unit (ADU)	Detached Single-Family House
															Mid-Rise Multifamily (4-5 stories)	Mid-Rise Mixed Use (4-5 stories)	Low-Rise Multifamily (4-stories-or- less)	Low-Rise Mixed-Use (4-stories-or- less)	Multiplex: Large Scale (9-18 units)	Triplex: Stacked (live/work possible)	Multiplex: Medium Small (5-8 units; live/work possible)	Courtyard Building (live/work possible)	Townhouse (1-3 units; live/work possible)	Cottage Court	Fourplex: Stacked	Duplex: Stacked	Duplex: Side-By-Side							
Ferry Urban Center T-5.5	Current Standards	Base	0.5	35 ft	75%																													
	Jan/25 Preferred Alternative	Bonus	1.4	45 ft	75%																													
		Base	3.0	65 ft	Not Provided																													
	SubComm Meetings	Base	n/a	35 ft	80%										1	✓	✓	✗	✗	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗					
High School Urban Center T-5.5	Current Standards	Bonus	0.3	35 ft	50%																													
	Jan/25 Preferred Alternative	Bonus	0.9	45 ft	50%																													
		Base	2.5	65 ft	Not Provided																													
	SubComm Meetings	Base	n/a	35 ft	65%											✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗					
Core Urban Center T-5.0	Current Standards	Base	1.0	35 ft	100% (90% in Erickson)																													
	Jan/25 Preferred Alternative	Bonus	1.5	45 ft	100% (90% in Erickson)																													
		Base	n/a	35 ft	45%																													
	SubComm Meetings	Parking Bonus	n/a	+10 ft	+0%	n/a	75%	10-20 ft	5-15 ft	0 ft	0 ft	n/a	10%		1	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗				
Winslow Way Urban Center	Current Standards	Base	2.0	55 ft	Not Provided																													
		Base	n/a	35 ft	65%																													
	SubComm Meetings	Parking Bonus	n/a	+10 ft	+0%																													
		Aff/Hou Tier 1	n/a	+0ft	+10%	80%	85%	n/a	n/a	0-10 ft	0 ft	0 ft	After 2 stories, back 15 ft	10%		✗	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗				
Madison / Connection Urban Transition T-4.5	Current Standards	Base	0.5	25 ft	35%																													
	Jan/25 Preferred Alternative	Bonus	1.0	35 ft	35%																													
		Base	1.2	45 ft	Not Provided																													
	SubComm Meetings	Base														✗	✗	TBD	TBD	✓	✓	✓	✓	✓	✗	✗	✓	✗	✗					
Farmcliff OPTION 1 Suburban Transiic T-4.0	Current Standards	Base	0.16	25 ft	25%																													
	Jan/25 Preferred Alternative	Bonus	n/a	30 ft	n/a																													
		Base	1.2	45 ft	Not Provided																													
	SubComm Meetings	Base														✗	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓				
Farmcliff OPTION 2 Suburban Transiic T-4.0	Current Standards	Base	0.16	25 ft	25%																													
	Jan/25 Preferred Alternative	Bonus	n/a	30 ft	n/a																													
		Base	1.2	45 ft	Not Provided																													
	SubComm Meetings	Base														✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
R-14 Suburban Residential T-3.5																																		
R-8 Suburban Residential T-3.5																																		
R-6 Suburban Residential T-3.0																																		
R-4 Suburban Residential T-3.0																																		
R-4.3 Suburban Residential T-3.0																																		
R-3.5 Suburban Residential T-3.0																																		
R-2.9 Rural Town T-2.5																																		
R-2 Rural Town T-2.5																																		
R-1 Rural T-2.0																																		
R-0.4 Rural T-2.0																																		

Subcommittee Review of Types

Zone	Defined by Building Envelope				Defined by Form>>>				*Missing Middle* Types (4 stories or less)						
	Mid-Rise Multifamily (4-5 stories)	Mid-Rise Mixed Use (4-5 stories)	Low-Rise Multifamily (4 stories or less)	Low-Rise Mixed-Use (4 stories or less)	Multiplex: Large Scale (9-18 units)	Triplex: Stacked (live/work possible)	Multiplex: Medium Small (5-8 units; live/work possible)	Courtyard Building (live/work possible)	Townhouse (1-3 units; live/work possible)	Cottage Court	Fourplex: Stacked	Duplex: Stacked	Duplex: Side-By-Side	Accessory Dwelling Unit (ADU)	Detached Single-Family House
Ferry Urban Center T-5.5	✓	✓	✗	✗	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
High School Urban Center T-5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
Core Urban Center T-5.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
Winslow Way Urban Center	✗	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Madison / Connection Urban Transition T-4.5	✗	✗	TBD	TBD	✓	✓	✓	✓	✓	✓	✓	✗ (conversion of existing SFIR permitted)	✗ (conversion of existing SFIR permitted)	✓ (conversion of existing SFIR permitted)	✗
Ferncliff OPTION 1 Suburban Transition T-4.0	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓
Ferncliff OPTION 2 Suburban Transition T-4.0	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Allowed Building Types Overview

Allowed Building Types Overview

	High Intensity Zones				Moderate Intensity Zones					Low Intensity Zones				
	Ferry District	High School District	Winslow Way District	Core District	Connection District (Madison)	Madison Overlay	Ferncliff Zone (TBD)	R-14	R-8	R-4.3	R-2.9	R-2	R-1	R-0.4
Block-Scale (Regulated by Building Envelope only)														
Mid-Rise Building	P	P	X	P	X	X	X	X	X	X	X	X	X	X
Mid-Rise Building (Mixed Use)	P	P	P	P	X	X	X	X	X	X	X	X	X	X
Block-Scale (Regulated by Building Form)														
Multiplex: Large (9-18 Units)	-	-	-	-	P			X	X	X	X	X	X	X
Courtyard Building	-	-	-	-	P			P	X	X	X	X	X	X
Townhouses (1-3 Units, includes Triplex Stacked)	-	-	-	-	P			P	X	X	X	X	X	X
House-Scale (Regulated by Building Form)														
Multiplex: Small (5-8 Units)	-	-	-	-	P			P	P	X	X	X	X	X
Fourplex	-	-	-	-	P			P	P	P	X	X	X	X
Cottage Court	-	-	-	-	P			P	P	P	X	X	X	X
Duplex	-	-	-	-	C			P	P	P	P	P	P*	P*
Single-Family Home	-	-	-	-	C			P	P	P	P	P	P	P
ADU	-	-	-	-	C			P	P	P	P	P	P	P

Key: P = Allowed, X = Not Allowed, C = Conditional.

*Only on lots without an ADU. Max unit size limited to 1,400 sf

Notes in Red are PC Subcommittee Recommendations

Bainbridge Island Planning Commission Incentives Subcommittee

Draft Considerations – 9/26/2025

For feedback and discussion purposes only!

Fair housing and anti-displacement strategies

- HB 1220 also requires jurisdictions to address historical and systemic inequities in their housing policies:
- **Equity analysis:** Local governments must identify regulations and policies that have led to racially disparate impacts or displacement. One Seattle Comprehensive Plan, includes a robust anti-displacement strategy with historic investments in community-driven development and strong renter protections.
- **Anti-displacement policies:** Planning must include policies to mitigate the risk of displacement in neighborhoods undergoing change.
- **Targeted funding for at-risk populations:** The state's Apple Health and Homes initiative pairs highly vulnerable Medicaid-eligible individuals with housing and support services to prevent homelessness. Many cities are using sales tax revenue and local housing funds to address the needs of specific vulnerable populations, such as veterans, people with disabilities, and seniors.
- **Housing Action Plans (HAPs):** Bainbridge Islands HAP can help specifically plan for needed housing and identify anti-displacement measures.
- **Combine new affordable housing with cultural and economic centers** to help preserve community identity and prevent displacement through collaboration between a community non-profit, the COBI, and a development organization.

Zoning and land-use strategies

Adjust development regulations to create more capacity for affordable housing. Key strategies include:

- **Missing Middle housing:** Many cities are exploring ways to promote housing types that fall between single-family homes and large apartment buildings, like duplexes, triplexes, and townhomes. State law now provides financial incentives for cities that adopt policies to allow this housing.
- **Allowing emergency and supportive housing:** Zoning codes must be updated to allow for emergency shelters, transitional housing, and permanent supportive housing in more areas, such as multifamily, commercial, and mixed-use zones where short-term rentals are allowed.
- **Encouraging Accessory Dwelling Units (ADUs):** Many jurisdictions encourage the construction of ADUs and duplexing (e.g., basement apartments, carriage houses) through relaxed regulations and **free or low cost pre-approved architectural plans** seeing them as a tool to expand affordable housing stock.
- **Reducing or eliminating parking requirements:** Many communities are eliminating or reducing minimum parking requirements for new developments, which can significantly lower construction costs and encourage higher-density housing.

Table 2-2**KITSAP COUNTY GROWTH ALLOCATIONS - HOUSING (2020-2044)**

			Permanent Housing Needs by Income Level (% of Area Median Income)							
			0 – 30%							
		Total	Non-PSH*	PSH	>30-50%	>50-80%	>80-100%	>100-120%	>120%	Emergency Housing** Needs (Temporary)
Unincorporated Kitsap County	Estimated Housing Supply (2020)	69,987	1,802	8	7,335	21,046	13,531	7,815	18,450	153
	Allocation (2020-2044)	14,498	2,768	1,214	2,376	1,996	1,028	1,012	4,103	612
Bainbridge Island city Target	Estimated Housing Supply (2020)	11,251	331	0	331	788	1,150	2,073	6,578	0
	Allocation (2020-2044)	1,977	377	166	324	272	140	138	560	83

By The Numbers - Bainbridge

	Extremely Low Income	Very Low Income	Low Income	Moderate Income	Middle Income	Above Middle	Total
<u>Bainbridge Island HB 1220 Allocation</u>	<u>543</u>	<u>324</u>	<u>272</u>	<u>140</u>	<u>138</u>	<u>560</u>	<u>1977</u>



Middle Income and Above Middle – $560 + 138 = 698$

- Provided for in Winslow and Outside Winslow
- 592 in Winslow & 1902 outside Winslow

Total Extremely and Very Low-Income Housing Required- Affordable Housing Overlay/FAR and Height Increase

- **Extremely Low Income – 543** – City Owned Property - AHOZ
- **Very Low Income – 324** - Partnership with local non profits and City. – AHOZ
- **Total 867**

Total Low Income and Moderate

- **Low Income – 272** - AHOZ
- **Moderate Income – 140** – Market Rate
- **Total : 412**

Kitsap County
MTSP-Income and Rent Limits
Effective 4/1/24
Median Income: \$ 119,700

Set-aside Percentage	1-person	2-person	3-person	4-person	5-person	6-person	7-person	8-person
20%	16760	19160	21560	23940	25860	27780	29700	31620
30%	25140	28740	32340	35910	38790	41670	44550	47430
35%	29330	33530	37730	41895	45255	48615	51975	55335
40%	33520	38320	43120	47880	51720	55560	59400	63240
45%	37710	43110	48510	53865	58185	62505	66825	71145
50%	41900	47900	53900	59850	64650	69450	74250	79050
60%	50280	57480	64680	71820	77580	83340	89100	94860
70%	58660	67060	75460	83790	90510	97230	103950	110670
80%	67040	76640	86240	95760	103440	111120	118800	126480

Set-aside Percentage	Studio	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom	5-Bedroom
20%	419	449	539	622	694	766
30%	628	673	808	933	1041	1149
35%	733	785	943	1089	1215	1341
40%	838	898	1078	1245	1389	1533
45%	942	1010	1212	1400	1562	1724
50%	1047	1122	1347	1556	1736	1916
60%	1257	1347	1617	1867	2083	2299
70%	1466	1571	1886	2178	2430	2682
80%	1676	1796	2156	2490	2778	3066

Our Partners

Federal

WA
State

Partners

Kitsap
County

Employers

Non Profits

Developers

COBI

Volunteers

Bainbridge
Community
Foundation

Housing
Resource
Bainbridge

Low Income
Housing Inc.

Helpline
House

RCW
Religious
Organizations

Citizens

Potential Funding Sources

The most likely sources for affordable housing projects on Bainbridge Island combine local, regional, and state-level foundations, as well as community development financial institutions (CDFIs). Key players include the Bainbridge Community Foundation, Seattle-based foundations with a regional focus, and local non-profit partnerships.

Federal

Washington
State

City of Bainbridge Island

Community
Development
Block Grants
(CDBG)

HOME
Investment
Partnerships
Program

The Low-
Income
Housing Tax
Credit (LIHTC)

Washington
State Housing
Trust Fund
(HTF)

Connecting
Housing to
Infrastructure
Program
(CHIP)

Real Estate
Excise Tax

Sales Tax

Property Tax
Levy

Lodging Tax

In-lieu Fees

Potential Funding Sources

Source	Program	Now	Near	Far
Federal	Community Development Block Grants (CDBG)			
	HOME Investment Partnerships Program			
	Low Income Housing Tax Credit (LIHTC)			
Washington State	WA State Housing Trust Fund (HTF)			
	Connecting Housing to Infrastructure Program (CHIP)			
COBI	Housing Trust Fund (HTF)			
	Real Estate Excise Tax			
	Sales Tax			
	Property Tax – Housing Levy			
	Lodging Tax			
	In-lieu Fees			
	Transfer Development Rights			
Other	Private/Public Grants			

State and federal programs

- Cities and counties can apply for funding and partner with entities that use state and federal resources:
- **Federal Funding:** Jurisdictions can access federal funds administered by the state Department of Commerce or directly through block grants. Examples include:
- **Community Development Block Grants (CDBG):** Grants for a variety of community needs, including decent housing.
- **HOME Investment Partnerships Program:** Federal block grants used exclusively for affordable housing initiatives.
- **The Low-Income Housing Tax Credit (LIHTC),** a federal program administered by the Washington State Housing Finance Commission, provides private owners with incentives to construct and maintain affordable rental housing.
- **Washington State Housing Trust Fund (HTF):** The Washington State Department of Commerce offers competitive loans and grants for affordable housing projects that can be used by local governments and housing authorities.
- **Connecting Housing to Infrastructure Program (CHIP):** This state program provides grants to local governments to reduce the cost of infrastructure for new affordable housing development.

Local Funding and tax incentives

- Local governments can use various financial tools to fund and incentivize affordable housing development:
- **Housing and Related Services Sales Tax:** Cities and counties can impose an optional 0.1% sales and use tax, with at least 60% of the revenue dedicated to affordable housing and related services for people with incomes up to 60% of the county median.
- **Affordable Housing Sales Tax Credit (HB 1406):** Jurisdictions that opted in by the 2020 deadline receive a share of the state sales tax revenue for 20 years to fund affordable housing for low- to moderate-income households.
- **Multi-Family Tax Exemption (MFTE):** This program allows cities to provide property tax exemptions, typically for 8 or 12 years, for new or rehabilitated multifamily housing projects in designated areas. To qualify for a 12-year exemption, a portion of the units must be designated for low- and moderate-income households.
- **Real Estate Excise Taxes (REET):** Some jurisdictions use a portion of their real estate excise taxes to finance affordable housing projects.
- **Housing Trust Funds:** Cities and counties can create their own housing trust funds, financed through methods like voter-approved property tax levies, to finance affordable housing projects.

Local Partners & Workforce Housing

For Bainbridge Island, innovative workforce housing programs could utilize employer-provided housing, religious organization partnerships, and public-private models that are being explored in Washington State and beyond.

These strategies would leverage local resources to create more affordable options for "missing middle" workers who do not qualify for traditional low-income housing but cannot afford market rates.



Local Partners & Workforce Housing

Employer-provided housing models: Employers have a strong incentive to support housing to improve employee recruitment and retention, reduce turnover, and strengthen the local workforce.

In Bainbridge Island, potential models include:

- **Direct investment and partnerships:** Large employers, or a consortium of smaller businesses, could partner with affordable housing developers like the Low Income Housing Institute (LIHI), which is already involved with the city's 625 Winslow Way project. This could involve direct funding, land contributions, or rent subsidies.
- **Rental subsidies and guaranteed leases:** Employers can offer rent subsidies directly to employees or property owners to reduce housing costs. They can also offer to guarantee a lease, which helps workers with limited rental history or those relocating to the island secure housing.
- **Housing resource programs:** Employers could sponsor homebuyer education and credit counseling for employees, either in-house or through local non-profits like Housing Resources Bainbridge (HRB).

Local Partners & Workforce Housing

Religious organization partnerships: Faith-based organizations (FBOs) are valuable partners due to their community ties and land holdings, which can be redeveloped for affordable housing. Bainbridge Island already has a pilot program allowing a religious organization to develop affordable housing on its property.

Innovative approaches include:

- **Density bonuses:** Under state law (HB 1377) and local policies, FBOs that dedicate their land for affordable housing (for households below 80% AMI) can receive a density bonus, allowing them to build more units than is typically zoned for.
- **Collaborative development:** A religious organization could partner with a non-profit housing provider, like HRB or LIHI, to develop underutilized church properties or parking lots into affordable rental housing. Examples in other cities show FBOs converting former convents or other buildings into affordable units.
- **Community Land Trust (CLT) integration:** FBOs could donate or sell their land at a reduced price to a CLT like HRB. The CLT model ensures that the housing remains permanently affordable for future generations of residents.

Local Partners & Workforce Housing

Public-private partnerships (PPPs): The City of Bainbridge Island is already actively pursuing PPPs for affordable housing, as seen with the 625 Winslow Way project and the Multifamily Property Tax Exemption (MFTE) program.

Additional innovative PPP strategies include:

- **Revolving loan funds:** The city or Kitsap County could participate in or establish a revolving loan fund, potentially with a private-sector partner, to provide low-cost financing for the development of workforce housing. The state of Washington has been exploring a revolving loan program for this purpose.
- **Corporate impact funds:** The city could seek investment from regional companies with housing equity funds, like Amazon or Microsoft, which invest in affordable housing projects in the Puget Sound area. These funds often partner with public agencies and developers.
- **Leveraging underutilized public land:** Similar to the 625 Winslow Way project, the city can continue identifying and developing other publicly owned land for workforce housing through partnerships with non-profit developers.
- **Modular and rapid-build solutions:** For specific workforce needs, such as seasonal workers or short-term employees, a city-employer partnership could utilize rapid-build modular housing from local companies like **Pallet**, based in Everett.

Local Partners & Workforce Housing

Integrating partnerships in Bainbridge Island: A multi-faceted approach, tailored to Bainbridge Island's specific needs, would have the greatest impact.

- **Winslow Area Focus:** Concentrated development in designated centers like Winslow, utilizing existing and expanded MFTEs, can help create dense, walkable, mixed-use communities that benefit the local economy and reduce traffic.
- **Prioritized workforce housing:** LIHI has already engaged with employers and unions representing Bainbridge workers to explore pre-leasing apartments to ensure that new housing serves the local workforce, a strategy that could be formalized and expanded.
- **Local fund creation:** The city could work with local businesses, philanthropic donors, and HRB to create a Bainbridge-specific housing trust fund to finance the acquisition of land or existing properties for affordable workforce housing.

Private Funding

The most likely sources of private grants for affordable housing projects on Bainbridge Island combine local, regional, and state-level foundations, as well as community development financial institutions (CDFIs).

Local Resources

- **[Bainbridge Community Foundation \(BCF\)](#)**: This is the most direct and crucial source of local private funding. The foundation has an explicit Housing Action Fund to address the need for affordable housing on Bainbridge Island. BCF provides grants for acquisition and "bricks-and-mortar" housing programs. It also conducts community needs assessments and allocates grants to local non-profits, including [Housing Resources Bainbridge \(HRB\)](#).
- **[One Call for All](#)**: This annual community fundraising campaign on Bainbridge Island can direct donations to local non-profits addressing housing insecurity. [Housing Resources Bainbridge](#) has been a recipient of One Call for All funding.
- **Private donations to [Housing Resources Bainbridge \(HRB\)](#)**: As the primary local non-profit building affordable housing on the island, HRB is a direct recipient of private donations and fundraising campaigns. These funds are used for land acquisition, construction, and maintaining permanently affordable units through its community land trust model.

Regional Resources

- **Community Development Financial Institutions (CDFIs)**: These are non-profit financial institutions that provide financing and technical assistance for development projects in underserved communities. Key players in the Puget Sound area that Bainbridge Island-based non-profits could partner with include:
- **LISC Puget Sound**: A local branch of a national CDFI that offers loans and technical assistance to non-profit developers.
- **[Impact Capital](#)**: Another CDFI that provides various loans for affordable housing projects.
- **[Building Changes](#)**: This organization administers the Washington Youth & Families Fund (WYFF), which combines private and public funding to provide grants for innovative housing strategies for youth and families experiencing homelessness. These grants are distributed statewide.
- **Regional Equitable Development Initiative (REDI) Fund**: Administered by Enterprise Community Partners, this revolving loan fund supports the acquisition of property in transit-rich corridors to ensure long-term affordability.

Community Block Grants



Federal Community Development Block Grants (CDBG) offer local governments significant flexibility and funding for community projects but have also been criticized for inefficient targeting and long-term funding instability. This program, administered by the U.S. Department of Housing and Urban Development (HUD), was created to provide a steady source of federal funding for local development efforts.

Pros:

- **Flexibility and local control:** CDBG funds can be used for a wide range of eligible activities, including housing rehabilitation, economic development, and improvements to public facilities like water and sewer systems. This allows local governments to design and implement strategies that address their specific, on-the-ground needs, rather than being restricted by rigid, federally-defined projects.
- **Encourages strategic planning:** To receive CDBG funds, local governments must create a consolidated plan that involves partnerships with other government agencies and the private sector. This process strengthens collaboration and promotes long-term, comprehensive community development planning.
- **Reliable and stable funding source:** For many jurisdictions, CDBG is a consistent source of funding that can support multi-year projects. This stability is vital for communities with limited local revenue and helps them to focus on project implementation rather than constant fundraising.
- **Leverages other investment:** CDBG grants are often used to attract additional private and public funding. By addressing core infrastructure needs, for example, CDBG projects can enable more significant private investment in economic development initiatives.
- **Responsiveness to disasters:** The CDBG program can be quickly expanded for disaster recovery, as it was during the COVID-19 pandemic. The existing CDBG framework allows federal resources to be rapidly deployed to communities in need, supporting housing, small businesses, and other critical services.

Cons

- **Inefficient targeting of funds:** Critics argue that the program's flexibility has led to funds being used for projects that do not effectively target low-income populations. The CDBG formula, which includes factors like population and housing stock age, has been critiqued for not accurately reflecting a community's need. In some cases, higher-income neighborhoods have received more funding per capita than genuinely distressed areas.
- **Declining real-dollar funding:** The core CDBG program has seen a significant decrease in funding over its lifetime. As federal funding levels erode and the number of entitlement communities grows, some communities may face cuts, eligibility restrictions, or project waiting lists.
- **Risk of displacement:** While CDBG is intended to revitalize neighborhoods, some projects, such as those focused on "slum and blight" elimination, have been used in ways that displace lower-income residents. This can occur when revitalization efforts lead to gentrification, which raises housing costs and forces out long-time residents.
- **Risk of funding for non-essential projects:** The broad eligibility of CDBG funds has, in some cases, enabled local governments to fund non-critical projects like breweries or festivals, instead of focusing on core housing and anti-poverty initiatives.
- **Inadequate long-term impact measurement:** The program has been criticized for a lack of clear and consistent outcome measurements. Claims of success often rely on intermediate metrics like the number of jobs created, rather than providing robust evidence of meaningful, long-term improvements in the lives of low-income people.
- **Potential for weak enforcement:** Some jurisdictions that receive CDBG funding have been accused of maintaining exclusionary zoning and land-use practices that inhibit affordable housing development. The program has been criticized for not having stronger mechanisms to penalize or incentivize better practices.

HOME Investment Partnerships Program



The HOME Investment Partnerships Program is a federal block grant that provides states and localities with flexible funding for a wide range of affordable housing activities. While it gives communities significant control, the program also has limitations stemming from federal requirements and inconsistent funding.

Pros:

- **Flexibility for local needs:** As a block grant, HOME allows states and localities—called Participating Jurisdictions (PJs)—to decide which affordable housing initiatives to fund. This lets them tailor strategies to their specific community needs, focusing on areas like new construction, homebuyer assistance, or rental rehabilitation.
- **Encourages partnerships:** The program requires PJs to partner with Community Housing Development Organizations (CHDOs), a specific type of non-profit. This requirement builds the capacity of local non-profits and fosters collaboration in developing affordable housing.
- **Mobilizes matching funds:** PJs must provide a 25% match for every dollar of HOME funds they receive. This leveraging requirement mobilizes additional public and private resources for affordable housing projects, stretching federal dollars further.
- **Serves low-income households:** HOME funds are specifically targeted to households at or below 80% of the Area Median Income (AMI), with at least 90% of funds for rental projects going to those at or below 60% of the AMI. This ensures the program directly benefits those with the greatest housing needs.
- **Expands housing options:** HOME funds can be used for a wide variety of activities, including:
 - New construction and rehabilitation of rental housing
 - New construction and rehabilitation of owner-occupied housing
 - Direct financial assistance for homebuyers
 - Tenant-based rental assistance (TBRA)

Cons

- **Inconsistent funding levels:** The program has been plagued by inconsistent and declining funding over time, especially following the 2008 financial crisis. Cuts have reduced the number of affordable homes built or preserved, limiting the program's overall impact.
- **Administrative challenges for PJs:** PJs face administrative burdens, including a five-year deadline to spend allocated funds and detailed project-specific requirements, which can slow down the development process.
- **Matching fund hurdles:** The 25% matching requirement can be a challenge for cash-strapped PJs, especially for smaller or rural communities with limited revenue streams.
- **Can indirectly increase housing costs:** Studies have shown that some investments, particularly in conjunction with other block grants like CDBG, have been associated with neighborhood housing price increases. While this can indicate successful revitalization, it also raises concerns about potential displacement of low-income residents.
- **Program complexity and oversight:** While flexibility is a strength, it can also lead to challenges in program oversight. HUD must balance giving PJs discretion with ensuring funds are used prudently and for their intended purpose, which can be difficult to monitor effectively.

Low Income Housing Tax Credit program (LIHTC)



The Low-Income Housing Tax Credit (LIHTC) program is the largest source of new affordable housing in the U.S. and is crucial for creating and rehabilitating rental units for lower-income households. However, it has been criticized for its complexity, inefficiency, and limitations in addressing the full scope of housing needs.

Pros:

- **Encourages private investment.** The LIHTC program effectively leverages private capital to address a public need. By offering investors a dollar-for-dollar reduction in their federal tax liability, the program incentivizes participation in affordable housing development, which might not otherwise be profitable.
- **Expands affordable housing stock.** Since its inception in 1986, LIHTC has funded the construction or rehabilitation of millions of affordable rental units across the country. In some years, LIHTC-supported developments have accounted for a significant portion of all newly built multifamily housing.
- **Supports diverse project types.** The program can be used to fund the construction of new buildings, the rehabilitation of existing ones, and even the conversion of non-residential properties like motels or schools into multifamily housing.
- **Long-term affordability.** Properties funded through LIHTC are required to maintain affordability for a minimum of 30 years, often longer, ensuring the long-term availability of low-cost housing.
- **Combines with other funding.** LIHTC can be used alongside other financing sources, such as grants and loans, to cover project costs. For example, some developers use LIHTC in conjunction with tax-exempt bonds to fund projects.

Cons

- **Complexity and high costs.** The LIHTC program is notoriously complex and difficult to navigate, creating significant "soft costs" for developers and investors. The lengthy and bureaucratic process, often dictated by state-level Qualified Allocation Plans (QAPs), can lead to project delays and higher per-unit construction costs compared to market-rate projects.
- **Inefficient subsidy.** A substantial portion of the federal subsidy can be absorbed by the transaction costs of the program rather than benefiting the tenants. Studies have indicated that much of the financial benefit is captured by developers and investors rather than low-income households.
- **Vulnerability to market changes.** The program's reliance on corporate tax liabilities makes it susceptible to fluctuations in the market. When corporate taxes are cut, as they were in 2017, the value of tax credits can decrease, which can lower investment and affordable housing production.
- **Risk of losing affordability.** After the 30-year compliance period ends, property owners can seek to convert their units to market-rate rents. This creates a risk that thousands of affordable units could be lost from the housing stock over time, though some states enforce longer affordability requirements.
- **Potential for segregation and uneven distribution.** State housing agencies, which allocate the credits, have been criticized for sometimes approving LIHTC projects in ways that concentrate affordable housing in areas that are already segregated and lack access to economic opportunity. This can reinforce existing patterns of poverty.
- **Doesn't serve the lowest incomes.** While LIHTC projects provide affordable housing, the rents are not always affordable enough for the lowest-income households. Many residents require additional subsidies, such as housing vouchers, to afford the capped rents, limiting the program's effectiveness for the most vulnerable populations.

WA State Housing Trust Fund (HTF)



The Washington State Housing Trust Fund (HTF) is a critical source of financing for affordable housing projects, but like other government funding programs, it has both significant strengths and notable drawbacks.

Pros:

- **Flexible and versatile funding.** The HTF is used for a variety of affordable housing needs, including new construction and preservation of multifamily rental housing, emergency repairs, supportive housing, and homeownership assistance. This flexibility allows the state to address diverse housing challenges across urban and rural areas.
- **Serves the most vulnerable.** A key benefit is its focus on serving the lowest-income households, including those with special needs, individuals experiencing homelessness, seniors, and people with disabilities. HTF funding is often crucial for projects that are not financially viable through other funding streams, such as the Low-Income Housing Tax Credit (LIHTC).
- **Leverages additional investment.** The HTF is highly effective at attracting other public and private financing. For every dollar of HTF money invested, it leverages significant additional funding, maximizing the state's investment and allowing for more units to be built.
- **Prioritizes rural areas.** By statute, a certain percentage of the HTF's funds must be directed to rural areas, ensuring that less-populated communities also receive investments in affordable housing.
- **Supports non-profits and local governments.** HTF funding is administered through state grants and loans to local governments, housing authorities, and non-profit organizations. This strengthens the capacity of local partners to develop and manage affordable housing projects.

Cons:

- **Funding is insufficient to meet demand.** Despite recent record-level investments, the need for affordable housing in Washington State far outpaces the available HTF funding. In a recent funding cycle, less than half of the applicants received money, indicating that many viable projects miss out on necessary financing.
- **Subject to biennial budget battles.** As an appropriated fund, the level of HTF funding can fluctuate, depending on the state's political and economic climate during each two-year budget cycle. This creates a degree of unpredictability compared to dedicated funding sources.
- **Administrative challenges.** The fund's competitive application process and strict guidelines, while necessary for oversight, can be challenging for applicants to navigate. This may favor more experienced developers and potentially disadvantage smaller or newer community-based organizations.
- **Reliance on leveraging can be a weakness.** While leveraging other funds is a strength, it also means that the overall success of HTF-funded projects depends on the availability of other financing sources. If economic conditions change, and those additional funds dry up, some projects may be stalled or abandoned.
- **Competition for funds.** Because the HTF is often the primary source of state funding for low-income projects, the competition for funds is intense. This can cause delays for projects and limit the ability of the state to scale up affordable housing production rapidly enough to meet the growing need.

Connecting Housing to Infrastructure Program (CHIP)



The Washington State Connecting Housing to Infrastructure Program (CHIP) provides grants to local governments to cover the expensive infrastructure costs associated with new affordable housing projects. While the program helps to reduce a major financial barrier to development, it is hampered by limited funding and a competitive, project-by-project funding model.

Pros:

- **Reduces development costs.** The primary benefit of CHIP is that it removes a significant financial barrier to building affordable housing by funding the infrastructure needed to support it. This can include on-site and off-site water, sewer, and stormwater improvements, as well as waived system development charges.
- **Leverages additional funding.** By paying for infrastructure, CHIP makes projects more viable and ready for other funding sources, such as the Washington State Housing Trust Fund (HTF) or federal Low-Income Housing Tax Credits (LIHTC). In essence, it helps get projects "off the ground" so they can attract other investment.
- **Partnership-driven.** To receive CHIP funds, cities, counties, or public utility districts must partner with affordable housing developers. This encourages collaboration and aligns the goals of municipalities with those of housing providers.
- **Addresses a specific need.** The program directly targets a pain point for affordable housing development, especially in rural areas, where infrastructure improvements can be prohibitively expensive. It allows projects that might otherwise be abandoned to move forward.
- **Benefits local taxpayers.** When a local government uses CHIP funds to waive system development charges (SDCs) for affordable projects, the cost of that waiver is covered by the state grant, rather than by local taxpayers.

Cons:

- **Insufficient and competitive funding.** Demand for CHIP grants consistently outstrips available funding. For example, in 2024, the Department of Commerce received applications for over \$48 million in infrastructure funding, but had only \$12.7 million to award. This means many viable projects miss out on the financial assistance they need.
- **Focuses on symptoms, not root causes.** As one commentator noted, CHIP funding is provided on a "project-by-project basis" instead of helping jurisdictions proactively plan and invest in large-scale infrastructure projects that could support multiple affordable housing developments. While helpful, this model does not systematically address the high cost of infrastructure statewide.
- **Complicated and bureaucratic.** While the CHIP program has clear goals, the application process and requirements can be complex for applicants. For example, projects must meet specific criteria, such as being in a jurisdiction with a qualifying affordable housing tax and starting construction within 24 months of the award.
- **Uneven distribution of funds.** While the program prioritizes applicants outside of Seattle and King County, there is still intense competition, and smaller or less experienced local jurisdictions may face challenges competing with larger, more established applicants.
- **Contingent on state budgets.** The program's funding is determined by appropriations in the biennial State Capital Budget. This means that funding is not guaranteed and can fluctuate, making long-term planning difficult.

Bainbridge Island Housing Trust Fund (BIHTF)



The Bainbridge Island Housing Trust Fund (BIHTF) is a local funding source intended to support affordable housing development on Bainbridge Island. Like other local trusts, it offers flexibility to address specific local needs but is limited by a small funding base and competition with other regional initiatives.

Pros:

- **Flexible and versatile funding:** According to the Bainbridge Island Municipal Code, the fund can be used for a wide range of affordable housing activities, including:
 - Repair and rehabilitation for seniors and disabled residents.
 - Financial and technical assistance for qualified housing projects.
 - Assistance for non-profit and private organizations developing housing.
 - Financial aid for utility connections.
- **Addresses diverse local needs:** A 1998 Mayor's study noted that the fund targets moderate- and lower-income residents, such as "clerks, teachers, public employees, wait staff, artists, crafts people, skilled workers". This focus helps serve the local workforce, which is crucial for the island's economic health.
- **Encourages private investment:** The fund uses a public-private partnership model. A 2008 policy plan indicates that private donations are matched dollar-for-dollar by city general funds, which helps to leverage private giving for public good.
- **Supports non-profit partners:** The BIHTF provides assistance directly to non-profits, such as Housing Resources Bainbridge (HRB), and other developers to fund projects like the Wintergreen Townhomes.
- **Funds multiple housing types:** The fund's policy plan guides assistance for a range of housing types, including rental housing, homeownership opportunities, and transitional housing.
- **Supports community land trusts:** The BIHTF and city policies work in tandem with non-profits like Housing Resources Bainbridge, which operates as a community land trust. This model creates permanently affordable housing by retaining ownership of the land and controlling the resale price of homes.

Cons:

- **Limited funding sources:** The primary funding sources are private donations and city matches, as well as optional "fee-in-lieu" payments from developers. This model is more vulnerable to economic shifts and donor interest compared to dedicated, revenue-based funds. In 2019, for example, the fund had approximately \$250,000 in unprogrammed funding, a relatively small amount given the island's high housing costs.
- **Competition for funds:** The fund's limited resources mean it cannot support every housing project on the island. The city's 2018 Affordable Housing Task Force Final Report noted that the island's affordable housing units accounted for only 3% of the total, a strong indicator that current programs are not meeting demand.
- **Vulnerability to high land values:** With Bainbridge Island's high property values, the BIHTF has a limited ability to purchase land outright or finance large-scale projects without relying on additional state or federal funding and other creative financing.
- **Program complexity and oversight:** The fund's management, including a citizen Executive Committee and oversight by the City Council, adds layers of bureaucracy and potential delays for projects. In 2018, an Affordable Housing Task Force noted issues with the "income criteria" of the existing program, indicating a need for review.
- **Inadequate to address the scale of the problem:** Bainbridge Island faces a significant affordability crisis, with a 2022 survey finding that the city was in the bottom 3% nationally for affordable housing availability. The BIHTF, while useful, is not large enough to single-handedly solve this problem and must be used in conjunction with other state and federal funding programs, such as the Washington State Housing Trust Fund.

Real Estate Excise Tax



Using revenue from a local Real Estate Excise Tax (REET) is a strategy Bainbridge Island, Washington, could potentially use to address its significant affordable housing crisis. Washington State law governs the uses of REET funds, primarily for capital projects, but recent legislative changes have expanded the ability for some jurisdictions to use it for affordable housing.

Pros:

- **Dedicated funding source:** REET provides a steady, dedicated revenue stream specifically tied to real estate transactions. This offers a more consistent and potentially larger funding source for affordable housing compared to relying solely on private donations or competitive state and federal grants.
- **Protects current vulnerable residents.** REET funding comes when ownership changes. Unlike property tax, REET minimizing displacement effects on current residents who bought their homes at a lower value and have experienced appreciation.
- **Funds critical needs:** REET funds can be used for the acquisition, construction, and rehabilitation of affordable housing units. New legislation also allows greater flexibility for using REET 1 funds for maintenance and operational support for existing affordable housing capital projects. This provides support throughout the housing life cycle.
- **Ties funding to development impact:** Since the tax is levied on real estate transactions, it can be argued that those benefiting from the real estate market contribute to mitigating its affordability challenges.
- **Potential to address the housing crisis:** Bainbridge Island faces a severe affordability crisis, with housing prices continuing to rise and limited housing inventory. A significant and dedicated funding source like REET could help make a measurable impact on the problem, potentially creating more units than smaller, existing programs alone.

Cons:

- **Volatility of revenue:** REET revenue is tied directly to the real estate market. During economic downturns or periods of slow market activity, the revenue stream could decrease significantly, impacting the stability and predictability of funding for affordable housing projects.
- **Tax burden on property transactions:** While usually paid by the seller, the REET is a tax on property transactions. In a less active market, it could potentially be seen as a disincentive to selling or as an added cost that could indirectly affect buyers through higher prices.
- **Legal restrictions and eligibility:** The use of REET for affordable housing is subject to specific state laws and limitations. While HB 1791 expanded allowable uses for REET 1 and 2, not all jurisdictions may be eligible for the 0.5% affordable housing REET option, and there are still rules about how much of REET 1 and 2 can be allocated for operations and maintenance. Bainbridge Island, as a city, can impose the local affordable housing REET only if Kitsap County has declared it will not impose it, or if the county hasn't imposed it by January 1, 2027.
- **Potential for political opposition:** Implementing or increasing a REET, even for a purpose like affordable housing, can face opposition from some residents or real estate interests who may view it as an additional tax burden.
- **May not be enough on its own:** While REET can provide a substantial amount of funding, the scale of Bainbridge Island's affordable housing crisis is significant. Even with REET revenue, the city would likely still need to leverage other state, federal, and local funding sources, and implement zoning changes, to meet the full demand for affordable housing. The median home price on Bainbridge Island reached \$1,281,500 in August 2025.

Sales Tax Increase



In Washington State, cities like Bainbridge Island can utilize the Housing & Related Services Sales Tax, an optional 0.1% sales and use tax, to fund affordable housing initiatives. If Kitsap County has not already imposed this tax, Bainbridge Island could implement it through a simple majority vote by the city council, though voter approval is also an option. Poulsbo, another city in Kitsap County, approved a 0.1% sales tax increase in 2024, expecting to raise \$425,000 annually. This revenue would be used for projects like building cottages to house women and

children.
Pros:

- **Dedicated Funding:** The tax provides a consistent source of revenue specifically for affordable housing and related services.
- **Supports Vulnerable Groups:** At least 60% of the funds must be used for creating or acquiring housing or behavioral health facilities for low-income populations (at or below 60% of the county median income), including people with disabilities, veterans, seniors, the homeless, youth, and domestic violence survivors.
- **Operational Costs:** The revenue can also cover the operation and maintenance expenses of new affordable housing units and facilities.
- **Behavioral Health and Services:** Remaining funds can be allocated to behavioral health treatment programs or housing-related services.
- **Access to State Funding:** Implementing the local sales tax can qualify jurisdictions for a larger share of the state's HB 1406 Affordable Housing Sales Tax Credit.
- **Councilmanic Option:** Since 2020, the city council can implement the tax with a simple majority vote, without requiring voter approval.

Cons:

- **Economic Sensitivity:** Sales tax revenue can be unpredictable due to fluctuations in the economy and consumer spending.
- **Regressive Nature:** Sales taxes can disproportionately affect lower-income households compared to higher-income households.
- **County Implementation:** If Kitsap County has already implemented the 0.1% tax, Bainbridge Island cannot but would receive its portion of the revenue.
- **Limited Impact:** A 0.1% sales tax might not generate enough revenue to fully address Bainbridge Island's significant affordable housing needs.
- **Competition:** Other cities in the county may also implement the tax, potentially creating competition for eligible projects and for residents seeking assistance.
- **Funding Restrictions:** The specific requirements for fund usage, such as income limits for beneficiaries and percentages for operations, could limit flexibility for certain projects.

Property Tax Increase – Housing Levy

Property tax is a potential funding source for affordable housing on Bainbridge Island, either through a voter-approved levy or through tax incentive programs. While it can provide substantial and consistent revenue, it also comes with notable drawbacks, including voter approval hurdles and potential burdens on residents.

Pros:

- **Significant and reliable revenue stream:** A property tax levy, like the ones used in Seattle, can generate substantial and predictable revenue over a fixed period (often seven to ten years). This consistency allows for long-term planning and investment in affordable housing projects.
- **Consistent tax base:** Property tax revenue is based on the value of a property and tends to be more stable than sales tax, which is dependent on consumer spending and can fluctuate with the economy.
- **Direct control:** A voter-approved levy gives the community direct control over how tax dollars are allocated and requires a clear plan for expenditures. In Bainbridge's case, this would require detailing how funds would address the affordable housing emergency on the island.
- **Can serve the lowest income households:** Unlike some programs with stricter income requirements, an affordable housing levy can be designed to create and preserve housing for very low-income households, including those experiencing homelessness.
- **Multi-use funding:** According to state law (RCW 84.52.105), levy funds can be used for programs that promote affordable homeownership, assist with owner-occupied home repair, or prevent foreclosure for low-income households.

Cons:

- **Requires voter approval:** A voter-approved levy is not guaranteed. A property tax increase can be a tough sell, especially in a community like Bainbridge Island with many retirees and families on limited and/or fixed incomes.
- **Regressive burden:** While property taxes are sometimes seen as a progressive tax, they can be regressive for vulnerable lower-income homeowners or those on fixed incomes. Landlords may also pass tax increases onto their renters. In Washington, senior citizens, people with disabilities, and veterans who meet certain income requirements may be exempt from levy increases.
- **Competition for tax dollars:** A property tax increase for affordable housing would compete with other potential tax requests for schools, parks, or other public services.
- **Can increase housing costs indirectly:** Incentivizing affordable development through property tax exemptions, like Bainbridge's Multifamily Property Tax Exemption (MFTE) program, shifts the tax burden to other property owners in the city and may accelerate housing unaffordability.
- **Limited scope for MFTE program:** Bainbridge Island already uses a partial property Multi-Family Tax Exemption program (MFTE) to incentivize affordable housing. However, this program is limited to specific areas and only for multifamily projects. It incentivizes, rather than directly funds, affordable housing.

Lodging Tax Increase

On Bainbridge Island, the lodging tax is primarily used to fund tourism promotion. However, Washington state law provides a path for lodging tax revenue to support affordable workforce housing under specific circumstances. The city could also choose to implement a new lodging tax specifically on short-term rentals (STRs) under recent legislation (ESSB 5576), with the explicit purpose of funding affordable housing.

Pros:

- **Dedicated revenue source:** The tax provides a consistent stream of revenue specifically from visitors, rather than placing a tax burden on local residents.
- **Links funding to tourism impact:** In communities with robust tourism, such as Bainbridge Island, the lodging tax helps connect the economic impact of tourism, which often leads to a rise in STRs and a reduction in long-term rental stock with a funding source to mitigate that impact.
- **Funds multiple affordable housing activities:** Depending on the specific tax authority used, lodging tax revenues can support various initiatives, including:
 - Acquisition and construction of affordable housing
 - Repaying bonds issued for affordable workforce housing
 - Operating costs for affordable or supportive housing
 - Supportive housing programs, temporary shelters, and housing infrastructure
- **Recent state legislation provides clear authority:** The passage of ESSB 5576, which allows a new lodging tax on STRs, removes ambiguity about how to use that specific revenue for affordable housing.
- **Targets a specific market segment:** A tax on STRs specifically addresses the conversion of permanent housing to transient lodging, a problem identified in many tourist-heavy communities.

Cons:

- **Limited funding scope for traditional lodging taxes:** Bainbridge Island's current 4% lodging tax is restricted to funding tourism-related facilities and promotion. Using it for affordable housing is only allowed for repaying bonds for "workforce housing within a half-mile of a transit station," which significantly limits its potential impact.
- **Vulnerability to economic shifts:** Lodging tax revenue is directly tied to tourism and travel trends. A decline in tourism, as seen during the COVID-19 pandemic, can result in a significant drop in revenue.
- **Potential for political opposition:** While proponents argue the tax is fair because tourists pay it, STR owners and operators may argue that it places an additional, unfair burden on their businesses, especially on smaller, owner-operated rentals.
- **Potential for weak enforcement:** Effectively taxing STRs requires robust enforcement, especially if exemptions are included. Some opponents argue that a new STR tax could be difficult to enforce and may not generate significant revenue.
- **Insufficient funding for the scale of the problem:** Bainbridge Island's affordable housing crisis is severe. Even with a new, dedicated lodging tax, the funds generated may not be sufficient to significantly address the scale of the need. For example, the city's annual lodging tax revenue in previous years has been around \$214,000 to \$345,000.

In-Lieu Development Fees

On Bainbridge Island, in-lieu fees allow developers to pay a fee to the city's housing trust fund instead of providing the required number of affordable units within their projects. This approach has both benefits and drawbacks compared to mandatory on-site affordable housing.

Pros:

- **Flexible funding for targeted needs:** Funds from in-lieu fees can be collected into a housing trust fund and used more strategically than scattered on-site units. On Bainbridge Island, these funds can be allocated to projects that address specific needs, such as supportive housing for individuals with disabilities, or to assist with critical repairs for existing low-income homeowners.
- **Greater number of affordable units:** In-lieu fees, if properly calculated and deployed, can sometimes produce more affordable units off-site than on-site. A non-profit affordable housing developer can leverage the funding with other sources, like tax credits, to build a larger number of units in a less costly location.
- **Maintains financial feasibility for developers:** In expensive real estate markets like Bainbridge Island, the cost of building on-site affordable units can be prohibitive for developers and may jeopardize the financial viability of a project. The in-lieu fee provides a more predictable and manageable cost for the developer.
- **Prevents "poor doors" and promotes integration:** When affordable units are built on-site, they are sometimes physically segregated from market-rate units, creating a "poor door" phenomenon. Off-site units, funded by in-lieu fees, can avoid this issue, although community integration is not guaranteed.

Cons:

- **Potential for reduced affordable housing development:** If the in-lieu fee is set too low, developers may choose to pay the fee rather than build affordable units, resulting in a net decrease of affordable housing units overall. On Bainbridge, the city has faced challenges with its voluntary affordable housing program, which includes an optional fee-in-lieu for certain lots.
- **Loss of on-site integration:** Critics of in-lieu fees argue that they can lead to the concentration of affordable housing in lower-income areas and reduce the economic diversity of market-rate developments. This can exacerbate existing patterns of segregation rather than promoting mixed-income communities.
- **Dependence on external factors:** For in-lieu fees to be effective, a city needs a strong system in place, including:
 - Sufficient staff capacity to manage the fund and projects
 - Partner organizations, like non-profit housing developers, to build the units
 - The availability of other financing sources to leverage the fees
- **High land costs can limit effectiveness:** On Bainbridge Island, the high cost of land poses a challenge for any affordable housing strategy, including those funded by in-lieu fees. The fund must accumulate enough revenue to overcome the high acquisition and construction costs.
- **Can be difficult to set the fee correctly:** Determining the appropriate fee requires a careful economic analysis. If it is too low, developers will always choose the fee. If it is too high, it could make development of any kind unfeasible.

Transfer Development Rights (TDRs)

Transfer of Development Rights (TDR) is a market-based tool that can be used to promote affordable housing on Bainbridge Island. The mechanism relocates development potential from designated “sending areas,” where a community wants to preserve existing land uses, to “receiving areas,” where higher density is desired. This program was previously developed but recently suspended by COBI.

Pros:

- **Preserves existing affordable housing:** A TDR program can be designed to allow property owners of existing affordable housing, such as mobile home parks, to sell their unused development rights. This provides revenue for the current owner and helps preserve the housing, protecting it from redevelopment.
- **Funds affordable housing preservation and rehabilitation:** As seen in Seattle's TDR program, the funds generated from selling TDRs can be used to preserve and rehabilitate affordable housing, extending its lifespan.
- **Encourages density in appropriate areas:** TDR programs, when structured effectively, can channel growth toward designated receiving areas, such as the Winslow area on Bainbridge Island. This focuses density in areas with existing infrastructure and supports a more walkable, compact community.
- **Leverages private investment for public good:** The program uses private market transactions to achieve a public goal without relying solely on tax revenue. It compensates owners who forgo development in sending areas and provides incentives for developers to build in receiving areas.
- **Supports multiple community goals:** TDR is a flexible tool that can also be used to achieve other community goals, such as preserving rural and open spaces, protecting historic landmarks, and reducing sprawl.
- **Preserves water and minimizes environmental impacts,** groundwater recharge capability protection.

Cons:

- **Difficulty in creating an effective market:** The success of TDR depends on a healthy and active market for development rights. This requires strong demand for increased density in the receiving areas. However, opposition from residents in receiving areas can limit the demand for TDRs and stifle the program.
- **Program complexity:** TDR programs can be complex and difficult to design and administer. They require significant upfront planning, ongoing management, and careful balancing of incentives.
- **Potential for limited impact:** In Washington State, some TDR programs, including those in Seattle and King County, have been criticized for being ineffective in practice due to restrictions and high costs. This suggests that a TDR program on Bainbridge Island might yield limited results if not designed carefully.
- **Can be difficult to balance competing incentives:** Bainbridge Island would need to ensure that the TDR program doesn't undermine other affordable housing incentives, such as density bonuses. The two systems must be carefully calibrated to avoid creating conflicts.
- **Vulnerability to market fluctuations:** The TDR market is reliant on developer interest and a healthy real estate market. During economic downturns, demand for TDRs can decrease, undermining the program.
- **High land costs:** Bainbridge Island's high property values pose a challenge for any affordable housing strategy. A TDR program might need to generate significant financial value to be competitive in a high-cost market.

USDA Homeownership Direct Loan Program (Section 502)



The USDA 502 Direct Loan Program is an option for affordable housing programs on Bainbridge Island. The program is designed for very low- and low-income buyers in specific rural areas.

Pros:

- **Low-interest financing:** Direct loans offer subsidized, fixed interest rates as low as 1% based on household income, making homeownership significantly more affordable.
- **No down payment:** Borrowers are not required to make a down payment, removing a major barrier for low-income buyers.
- **No mortgage insurance:** Direct loans do not require private mortgage insurance (PMI), reducing monthly payments.
- **Flexible credit standards:** The program has more lenient credit requirements than conventional loans, enabling people with less-than-perfect credit to qualify.
- **Extended repayment terms:** Longer repayment terms, up to 38 years for very-low-income borrowers, can reduce monthly mortgage payments.
- **Renovation costs can be financed:** Funds can be used to purchase, repair, renovate, or relocate a home, helping to create or improve affordable housing stock.

Cons:

- **Limited availability:** The USDA 502 Direct Loan Program is for individuals, not developers or affordable housing organizations. It is the individual, very low-income homebuyer who applies for the direct loan, which must be their primary residence. Other USDA programs exist for developers, but Section 502 is not for building large-scale affordable housing units.
- **Low-income limits:** The direct loan program has strict income limits, capping eligibility at very low or low income. This is a much lower threshold than for the USDA guaranteed loan program.
- **Longer processing times:** Because the loans are handled directly by the USDA rather than through a private lender, the underwriting and closing processes can take longer than conventional loans.
- **Upfront and annual fees:** While lacking mortgage insurance, the USDA program charges both an upfront guaranteed fee (1%) and an annual fee (0.35%).
- **No investment properties:** The loans are only for primary residences

Mandatory Inclusionary Zoning

A mandatory inclusionary zoning (IZ) policy for Bainbridge Island has strong arguments both for and against it. It would likely increase the number of affordable units and create mixed-income neighborhoods, but it also carries the risk of deterring some new development and increasing market-rate housing costs.

Pros:

- **Increases affordable housing supply:** In a strong market like Bainbridge Island, mandatory IZ is a reliable tool to generate new affordable units. Evidence from cities nationwide and in the Puget Sound region shows that mandatory programs produce more affordable housing than voluntary ones. Washington state law requires these units to be affordable for at least 50 years, securing long-term benefits.
- **Creates economically diverse communities:** IZ integrates affordable units directly into market-rate developments, promoting mixed-income neighborhoods across the island. This can help counter the effects of exclusionary zoning and reduce income segregation. Local nonprofit Housing Resources Bainbridge (HRB) supports this integrated approach.
- **Leverages private investment:** The policy uses the value created by new market-rate development to finance affordable housing, reducing the need for direct public subsidies. Developers absorb the cost, often in exchange for incentives like density bonuses.
- **Places affordable units in high-opportunity areas:** By tying affordable units to new development, IZ ensures that lower-income households can live in areas with better access to jobs, schools, amenities, and transit.
- **Offers developer flexibility:** A well-designed mandatory program can give developers options to meet the requirement, such as building affordable units on-site, paying an in-lieu fee, or constructing units off-site. This flexibility, combined with density bonuses and other incentives, can make projects viable.
- **Helps meet housing targets:** State legislation (HB 1220) requires Bainbridge Island to plan for housing across all income levels. Mandatory IZ helps satisfy this requirement by ensuring that new development contributes to affordable housing goals.

Cons:

- **Risk of reduced housing production:** If the required affordability percentage is too high and incentives (like density bonuses) do not adequately offset the costs, developers may find new projects financially unfeasible. This could slow down overall housing construction, including market-rate units.
- **Potential increase in market-rate prices:** To compensate for the cost of providing affordable units, developers may increase the price of the market-rate homes in the development. This could place a greater burden on other market-rate buyers and renters.
- **Dependence on market conditions:** The effectiveness of IZ is tied to a strong housing market with active new construction. While Bainbridge Island has a robust market, a significant economic downturn could stall development and, in turn, the production of new affordable units.
- **Administrative complexity:** Implementing and managing a mandatory IZ program is complex. The city would need dedicated staff and resources to administer the policy, monitor compliance, and ensure units remain affordable long-term through covenants.
- **Potential for legal challenges:** Critics sometimes argue that IZ is an unconstitutional "taking" of private property. To defend against these claims, cities must conduct "nexus studies" to demonstrate the need for affordable housing generated by new development and ensure requirements are proportional.
- **Limited scope and depth:** IZ is not a complete solution to a housing crisis. The number of units produced is typically modest relative to overall need. While it helps moderate-income households, it may not produce a significant number of units affordable to the lowest-income residents without additional subsidies.
- **Potential for unintended consequences:** In some areas, IZ can incentivize the demolition of older, less expensive buildings to make way for new developments that contain fewer, overall higher-priced units. However, this risk is mitigated when IZ is used alongside upzoning and careful planning.

Creating a Local Housing Authority

Creating a Local Housing Authority (LHA) on Bainbridge Island could offer significant advantages in addressing the well-documented housing affordability crisis, but it also carries potential challenges. The decision to establish one would involve weighing the potential for a more focused and powerful affordable housing strategy against the risks of increased bureaucracy and implementation issues.

Pros:

- **Dedicated and expert management:** An LHA is an independent public corporation with staff solely dedicated to developing, managing, and advocating for affordable housing. This would provide Bainbridge with a focused, professional body that can bypass the administrative constraints faced by city government departments.
- **Enhanced access to funding:** Housing authorities can access federal funding streams, such as HUD grants and Low-Income Housing Tax Credits (LIHTC), that are not available to local city governments. This could significantly expand the financial resources for affordable housing projects beyond what is currently possible through the city budget or local fundraising.
- **Long-term control of assets:** An LHA can own and manage properties, ensuring that affordable housing assets remain under local control for the long term. This prevents properties from being converted to market-rate units and ensures a permanent supply of affordable homes. State law in Washington allows housing authorities to acquire properties at low or no cost.
- **Potential for economic vitality:** By creating stable, affordable housing for the local workforce, an LHA can support local businesses that struggle to attract and retain employees. Increased housing stability for low- and moderate-income residents also puts more disposable income back into the local economy.
- **Coordination with regional efforts:** A Bainbridge LHA could coordinate with Kitsap County and other regional entities to align strategies for financing and building affordable housing, as outlined in the city's Housing Action Plan. This leverages larger-scale planning to achieve local goals more effectively.

Cons:

- **Potential for creating a new bureaucracy:** Establishing an LHA means creating a new, independent public agency with its own governing board and administration. This could introduce a new layer of bureaucracy and governance complexity to the island's existing structure.
- **Implementation and reputation risks:** If not managed effectively, a new LHA could face bureaucratic delays and potentially develop a poor reputation with developers and the community. In other places, housing agencies have faced difficulties, which can cause local landlords to be hesitant to participate in rental assistance programs.
- **Siting and community pushback:** Even with an LHA, new affordable housing projects can face significant opposition from residents concerned about changes to neighborhood character, traffic, and property values. The current conversation around specific affordable housing projects on the island demonstrates that community concerns exist regardless of the development entity.
- **Cost and complexity of new construction:** Building new affordable housing is expensive and complex, particularly on an island with high land costs. The financing for subsidized housing is often more complex than for market-rate housing, which can lead to longer development timelines.
- **Not a guaranteed quick fix:** An LHA is not a panacea for all housing problems. As the Bainbridge Island Housing Action Plan notes, there is no single strategy to resolve all complex housing affordability challenges. The

References

Federal programs

U.S. Department of Housing and Urban Development (HUD): The ultimate source for information on federal housing programs like CDBG and HOME. HUD publishes program rules, funding announcements, and statistics on program outcomes. [4, 5]

HUD User: A website managed by HUD that provides data, research, and technical assistance related to housing programs. This resource is valuable for understanding the specifics of CDBG and HOME, including eligibility and spending requirements. [4, 5]

Washington State Housing Finance Commission (WSHFC): The WSHFC is the primary state entity that administers federal tax credit programs, including LIHTC, in Washington. The commission's website provides program details, application information, and Qualified Allocation Plans. [6, 7]

HUD User: A website managed by HUD that provides data, research, and technical assistance related to housing programs. This resource is valuable for understanding the specifics of CDBG and HOME, including eligibility and spending requirements. [24, 25]

WSHFC: The primary state entity that administers federal tax credit programs, including LIHTC, in Washington. The commission's website provides program details, application information, and Qualified Allocation Plans. [26, 27]

State of Washington programs and legislation

Washington State Department of Commerce: The Department of Commerce is the state agency responsible for implementing and overseeing many of Washington's affordable housing initiatives. Its website provides guidance on programs like:

- HB 1220: Provides guidance and requirements for jurisdictions to meet their housing planning goals. [1]
- Connecting Housing to Infrastructure Program (CHIP): Outlines program rules and funding opportunities for infrastructure grants. [9, 10]
- Washington State Housing Trust Fund (HTF): Provides details on funding cycles, priorities, and requirements for HTF-funded projects. [8]

Affordable Housing Action: A non-profit organization that advocates for affordable housing policies in Washington State. It provides analysis and information on legislative changes, such as the expansion of REET flexibility via HB 1791. [15]

Bainbridge Island, WA resources

City of Bainbridge Island: The city's website and municipal code contain official information on local affordable housing policies and programs, including:

- Bainbridge Island Municipal Code: Outlines the legal framework for the city's housing trust fund and other related regulations. [11]
- Affordable Housing Task Force Final Report (2018): Provides a comprehensive overview of the city's affordable housing challenges and recommendations for addressing them. [14]
- Housing Resources Bainbridge: Information about the city's long-standing non-profit partner in affordable housing, including specific projects like Wintergreen Townhomes. [11]
- Comprehensive Plan: Chapter 15 of the city's plan details the TDR program and its goals. [17]
- Bainbridge Island Housing Trust Fund: Information on the purpose, funding sources, and uses of the trust fund. [11, 12]

REET (Real Estate Excise Tax) examples

City of Seattle Office of Housing: Seattle's Office of Housing has advocated for using REET as a dedicated funding source and has published analyses on its potential revenue generation for affordable housing. [15]

Kirkland, WA: The City of Kirkland's website provides documentation demonstrating its use of local REET 2 funds for affordable housing projects in partnership with ARCH. [15]

San Juan County, WA: Provides details on a special 0.5% REET for affordable housing authorized by prior state legislation. [15]

Sales tax examples

Kitsap Sun: The Kitsap Sun news site reported on the successful implementation of a 0.1% sales tax increase for affordable housing in the city of Poulsbo in 2024. [13]

TDR (Transfer of Development Rights) examples

City of Bainbridge Island: The Bainbridge Island Comprehensive Plan (Chapter 15) outlines the city's TDR program and its application for affordable housing and land preservation. [17]

General resources

Washington State Association of Cities (WSAC): An organization that represents cities and towns across Washington. Its website provides legislative updates and guidance on programs like the short-term rental tax (ESSB 5576). [13, 16]

References

- **[Puget Sound Regional Council \(PSRC\)](#)**: The PSRC provides information on its "Housing Innovations Program," detailing how inclusionary zoning (IZ) works in Washington, including long-term affordability requirements (RCW 36.70A.540), incentives like density bonuses, and the potential for mandatory programs based on local market conditions.
- **Municipal Research and Services Center (MRSC)**: MRSC, a Washington-focused resource for local governments, offers insights on inclusionary zoning pros and cons and provides context on the history of IZ in the state, referencing examples like Redmond.
- **Urban Institute**: The Urban Institute provided research on the effectiveness and challenges of IZ, including how it functions alongside broader housing policies.
- **[National Housing Conference \(NHC\)](#)**: The NHC offered perspectives on the legal and political challenges of implementing IZ, noting arguments made by critics and strategies for successful implementation.
- **[MasterClass](#)**: This source presented a balanced overview of the pros and cons of IZ, discussing community integration benefits and the potential for discouraging multifamily housing.
- **Mercatus Center**
 - : This source provided a critical analysis of IZ, arguing that it may hurt more than it helps by potentially restricting housing supply and increasing market-rate prices, even though it can benefit a small number of households.
- **InclusionaryHousing.org**: This website provided background information on IZ policies, including their prevalence and impact nationwide.

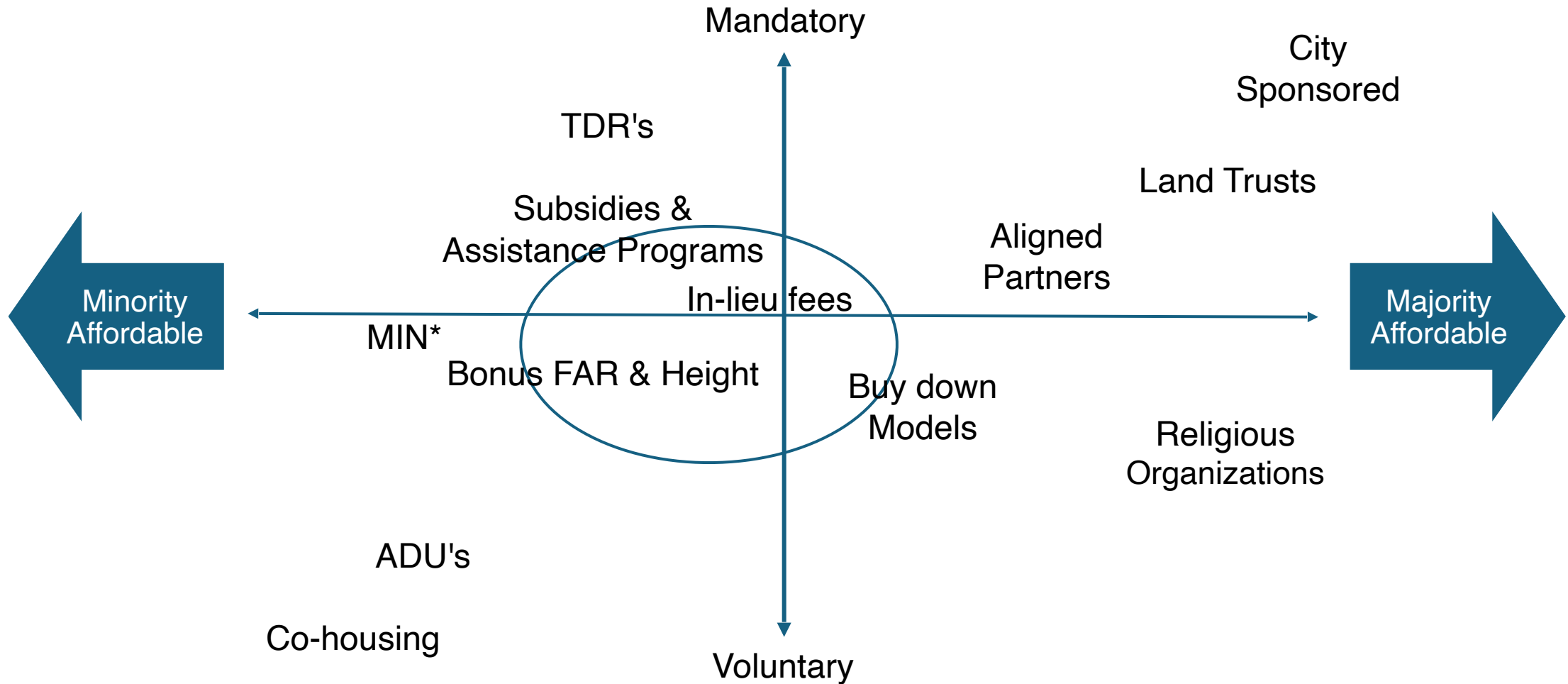
Policies to Review

-
- **Affordable Housing Overlay Zone**
 - [Affordable Housing Overlay Zones Oakley.pdf](#)
 - **Housing Trust Fund**
 - [Everett Affordable Housing Trust Fund 2060 Funds](#)
 - [Kirkland 112.30.4.c](#) - The payment obligation shall be established prior to issuance of any building permits for the project and shall be due prior to issuance of any [certificate of occupancy](#) for the project. Collected payments shall be deposited in the City's Housing Trust Fund account.
 - **In – Lieu Fee For Developers**
[Issaquah Ch. 18.514](#)
 - [Kirkland 112.15.4](#)
 - [Redmond Section 21.20.050](#)
 - [Seattle Chapter 23.58C](#)
 - **Inclusionary Zoning Policies:**
 - [Issaquah](#)
 - [Kirkland](#)
 - [Mount Vernon](#)
 - [Seattle](#)
 - [Portland Oregon - https://www.portland.gov/phb/inclusionary-housing/affordability-requirements](#)
 - [Marin County - https://www.marincounty.gov/departments/cda/housing-and-grants/creating-housing/affordable-housing-policies-and-fees/inclusionary-policy-and-lieu-fee](#)

Housing Typology Code Samples to Review

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- **Middle Housing Model Ordinance – OFM Guide**
 - <https://deptofcommerce.app.box.com/s/iik8a7qrb7wkh76obfxpbgs9hzv8ctzy>
 - **Accessory Dwelling Unit – OFM Guide**
 - <https://deptofcommerce.app.box.com/s/cnuqx6zm0zvku2a4lbox2iwdielg6>
 - **Co Housing Ordinance**
 - [Bellingham 10.10.048](#)
 - • College Place:
 - ○ [CHAPTER 14.50](#)
 - ○ [CHAPTER 14.60](#)
 - Olympia:
 - [Chapter 18.04](#) – See 18.04.060.F
 - [Chapter 18.56](#) – See 18.56.160

Tools & Programs



**My Island Neighbor (proposed)*

AHA Program Details - In Lieu Fee

The AHA In Lieu Fee option is designed to provide flexibility for developers subject to the new mandatory 10% inclusionary zoning requirement within Winslow mixed-use districts. Its primary goal is to provide an additional source of income for the Affordable Housing Trust Fund in the event a developer chooses not to build a minimum of 10% affordable units.

Assumptions for calculations (illustrative only; not based on Bainbridge-specific conditions)

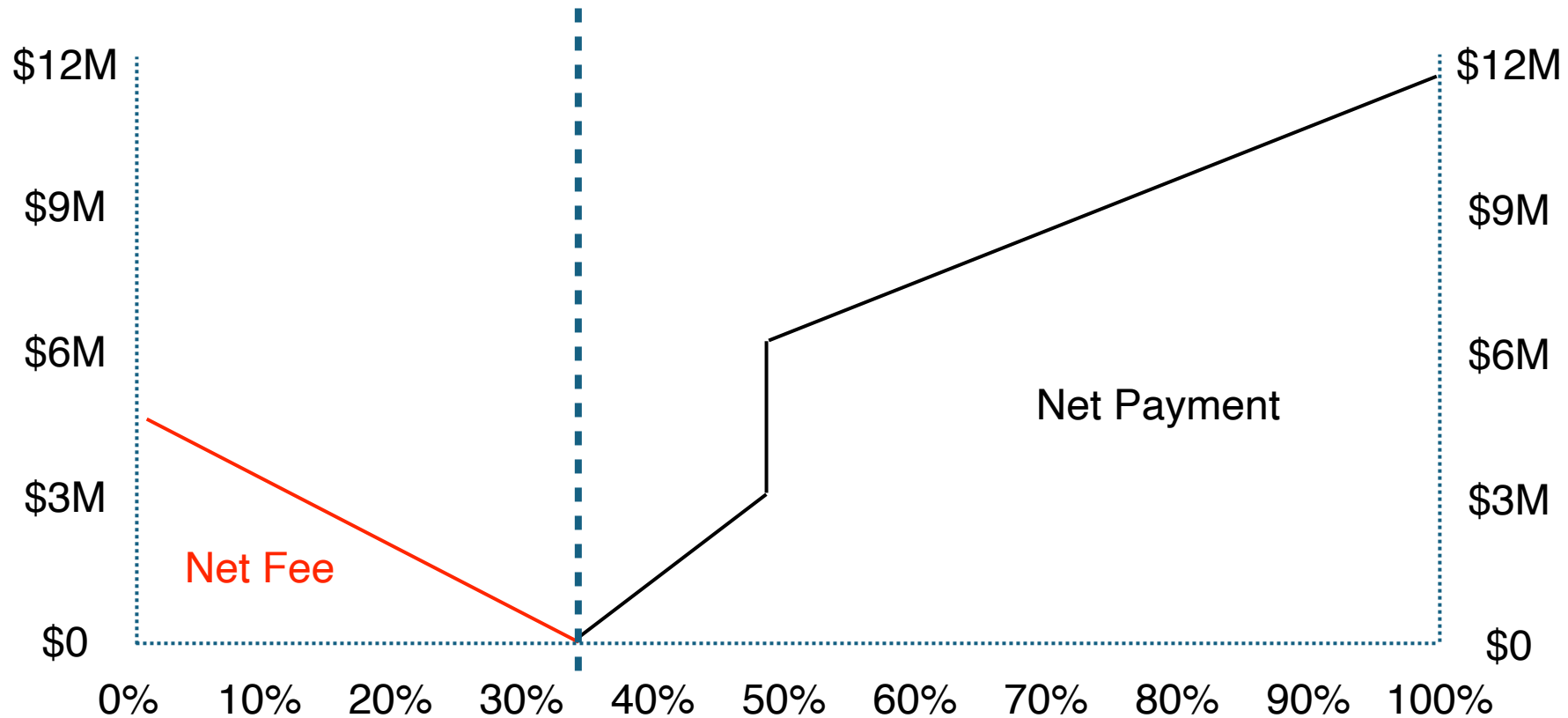
How close loopholes for LEED, etc.? REET options?

- The maximum housing expense affordable to a household making the area median income is \$1,500 per month.
- The project is a 100-unit rental development with an average unit size of 1,000 square feet.
- The jurisdiction policy is that 10 percent of rental units must be affordable to those making 50 percent of AMI.
- The capitalization rate is 5 percent. More like 7%
- The cost to construct one unit of housing is \$250,000. More like \$500K
- Monthly operating expenses (e.g., owner-paid utilities, fire insurance, and trash removal) are \$5,000 per unit per year.

In Lieu Fee calculation methods (example only)

Affordability Gap Method "Difference between fair market price of unit and what renters/owners in each AMI range can afford"	Production Cost Method "Difference between cost of developing affordable unit and what renters/owners in each AMI range can afford"	Indexed Based on Project Characteristics "Product of a square foot charge and the gross floor area; per-project framework"
• Rent loss per unit per month: $\\$1,500 - \\$750 = \\$750$ • Rent loss per year: $\\$750 \times 12 = \\$9,000$ • Rent loss divided by capitalization rate: $\\$9,000 / 0.05 = \\$180,000$ • In-lieu fee per unit = \$180,000 \$128,571	• Maximum housing expense per month: \$750 • Operating, administrative, and maintenance expenses: \$5,000 (annually); \$417 (monthly) • Net operating income per month: $\\$750 - \\$417 = \\$333$ • Net operating income per year: $\\$333 \times 12 = \\$3,996$ • Capitalized value: $\\$3,996 / 0.05 = \\$79,920$ • In-lieu fee per unit: \$250,000 – \$79,920 = \$170,080	• Total square footage: 100 units x 1,000 sq. ft. = 100,000 sq. ft. • Square footage x fee rate: $100,000 \times \\$10.82 = \\$1,082,000$ • In-lieu fee per unit: \$1,082,000 / 10 = \$108,200

BI Appropriate In Lieu Fees



< 50% = 18,000 Sq. Ft.

≥ 50% = 24,000 Sq. Ft. (Bonus Applied)

BI Appropriate In Lieu Fees

6 units
6 units
6 units

18 units * 1000 Sq. Ft. = 18,000 Sq. Ft.
18,000 Sq. Ft. * \$500/Sq. Ft. * 0.5 =
\$4.5M

In Lieu Fees = \$4.5M

Base
No Mandatory
50% In Lieu Fees

\$500 / sq. ft. for 50% total

BI Appropriate In Lieu Fees

Unit Blend: Tiers 1, 2, 3, 4

12 units * 1000 Sq. Ft. = 12,000 Sq. Ft.

12,000 Sq. Ft. * \$500/Sq. Ft. = \$6.0M

Buyout to Developer = \$6.0M

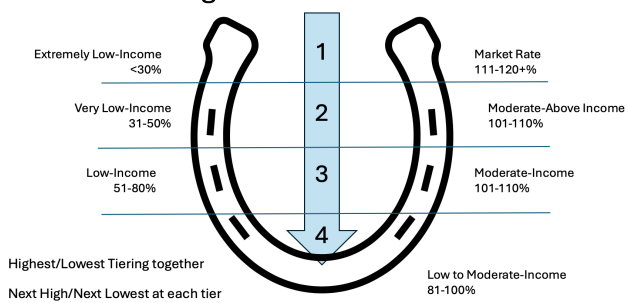
3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR

Bonus
Voluntary
50%+ Affordable
City Funded Buyout
HRB Managed
Permanent Housing
No In-Lieu Fees
"Horseshoe" Allocation

Base
No Mandatory
50% In Lieu Fees

\$500 / sq ft for 50% total

Allocation Programs



Example #1
Voluntary
12.5% Affordable
City Funded Buyout
HRB Managed
In-Lieu Fees Apply
"Little Piggy" Allocation

3 AH / 3 MR
6 MR
6 MR
6 MR

Unit Blend: Tiers 1, 2
3 units * 1000 sq. ft. = 3,000 sq. ft.
3,000 sq. ft. * \$500/sq. ft. * 0.5 = \$750K
Developer = (\$4.5M) + \$750K = (\$3.75M)

Example #2
Voluntary
37.5%+ Affordable
City Funded Buyout
HRB Managed
No In-Lieu Fees
"Horseshoe" Allocation

3 AH / 3 MR
2 AH / 4 MR
2 AH / 4 MR
2 AH / 4 MR

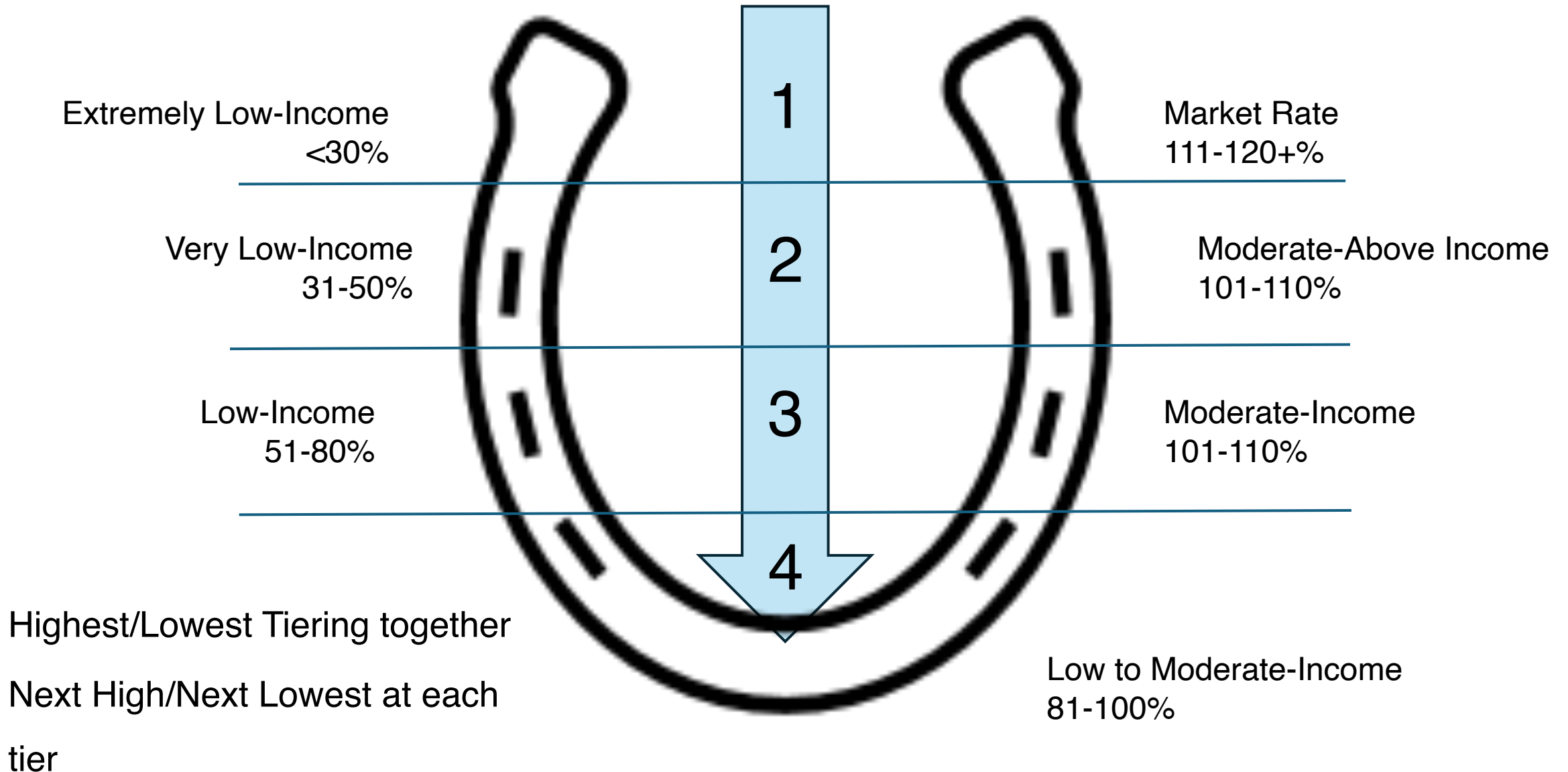
Unit Blend: Tiers 1, 2, 3, 4
9 units * 1000 sq. ft. = 9,000 sq. ft.
9,000 sq. ft. * \$500/sq. ft. = \$4.5M
Buyout to Developer = \$4.5M

Example #3
Voluntary
50%+ Affordable
City Funded Buyout
HRB Managed
No In-Lieu Fees
"Horseshoe" Allocation

3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR

Unit Blend: Tiers 1, 2, 3, 4
12 units * 1000 sq. ft. = 12,000 sq. ft.
12,000 sq. ft. * \$500/sq. ft. = \$6.0M
Buyout to Developer = \$6.0M

Allocation Programs



BI Appropriate In Lieu Fees – Continued

Example #1

Voluntary
12.5% Affordable
City Funded Buyout
HRB Managed
In-Lieu Fees Apply
"Little Piggy" Allocation

3 AH / 3 MR
6 MR
6 MR
6 MR

Unit Blend: Tiers 1, 2

3 units * 1000 Sq. Ft. = 3,000 Sq. Ft.
3,000 Sq. Ft. * \$500/Sq. Ft. * 0.5 = \$750K

Developer = **(\$4.5M) + \$750K =**
(\$3.75M)

Example #2

Voluntary
37.5%+ Affordable
City Funded Buyout
HRB Managed
No In-Lieu Fees
"Horseshoe" Allocation

3 AH / 3 MR
2 AH / 4 MR
2 AH / 4 MR
2 AH / 4 MR

Unit Blend: Tiers 1, 2, 3, 4

9 units * 1000 Sq. Ft. = 9,000 Sq. Ft.
9,000 Sq. Ft. * \$500/Sq. Ft. = \$4.5M

Buyout to Developer = **\$4.5M**

Example #3

Voluntary
50%+ Affordable
City Funded Buyout
HRB Managed
No In-Lieu Fees
"Horseshoe" Allocation

3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR

Unit Blend: Tiers 1, 2, 3, 4

12 units * 1000 Sq. Ft. = 12,000 Sq. Ft.

12,000 Sq. Ft. * \$500/Sq. Ft. = \$6.0M₁₂₇
Buyout to Developer = **\$6.0M**

BI Appropriate In Lieu Fees – Continued

Example #1

Voluntary
16.67% Affordable
City Funded Buyout
HRB Managed
In-Lieu Fees Apply
"Little Piggy" Allocation

3 AH / 3 MR
6 MR
6 MR

Unit Blend: Tiers 1, 2

3 units * 1000 Sq. Ft. = 3,000 Sq. Ft.

3,000 Sq. Ft. * \$500/Sq. Ft. = \$1.5M

15,000 Sq. Ft. * \$500/Sq. Ft. * 0.5 = **\$3.75M**

Developer = (\$3.75M) + \$1.5M = (\$2.25M)

Example #2

Voluntary
33.3%+ Affordable
City Funded Buyout
HRB Managed
No In-Lieu Fees
"Horseshoe" Allocation

2 AH / 4 MR
2 AH / 4 MR
2 AH / 4 MR

Unit Blend: Tiers 1, 2, 3, 4

6 units * 1000 Sq. Ft. = 6,000 Sq. Ft.

6,000 Sq. Ft. * \$500/Sq. Ft. = \$3M

12,000 Sq. Ft. * \$500/Sq. Ft. * 0.5 = **\$3M**

Developer = (\$3M) + \$3M = \$0

Example #3

Voluntary
50%+ Affordable
City Funded Buyout
HRB Managed
No In-Lieu Fees
"Horseshoe" Allocation

3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR
3 AH / 3 MR

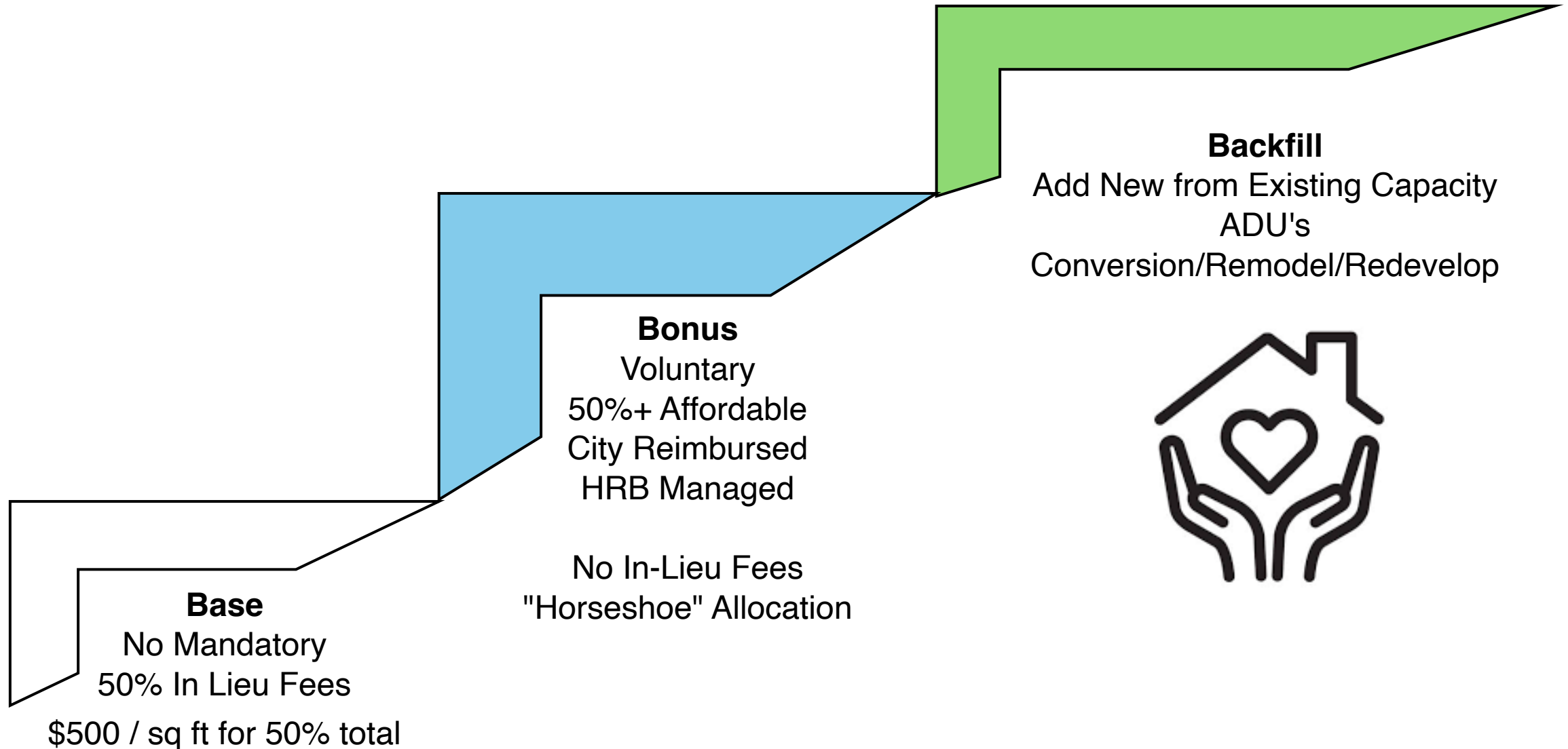
Unit Blend: Tiers 1, 2, 3, 4

12 units * 1000 Sq. Ft. = 12,000 Sq. Ft.

12,000 Sq. Ft. * \$500/Sq. Ft. = **\$6.0M**

Buyout to Developer = \$6.0M

Appropriate In Lieu Fees



"My Island Neighbor" Program

ADU Program for Bainbridge Island

This program is designed to incentivize homeowners on Bainbridge Island to create new affordable housing units by leveraging their private property. By providing a mix of financial and technical support, the program lowers the barriers to ADU construction and ensures new rental units remain affordable for income-qualified individuals and families. The program is built on a strong partnership between the City of Bainbridge Island, the Bainbridge Island Housing Trust Fund, and local non-profits like Housing Resources Bainbridge (HRB).

Program overview

Homeowners can apply to be part of the "My Island Neighbor" program, committing to build and rent an Accessory Dwelling Unit (ADU) to a tenant earning at or below 80% of the Area Median Income (AMI). In exchange, they receive a package of financial and technical incentives to offset construction and maintenance costs. The program would be managed by the City, with tenant qualification and support provided by HRB.



Sample Program:

*For concept
demonstration
purposes only!*

"My Island Neighbor" Program

Homeowner Eligibility and requirements

- Must be the primary resident of the property on which the ADU is built.
- Must enter into a minimum 15-year rental agreement with the City, committing to long-term affordability.
- Must maintain the ADU in good condition, passing regular inspections.
- Must provide documentation proving the ADU is rented to an income-qualified individual or family, verified annually by HRB.
- Must complete a "Landlord Education" course to understand best practices for renting to low-income tenants.

Tenant Eligibility and Requirements:

- Must earn at or below 80% of the AMI, verified by HRB.
- Rents would be capped at the HUD fair market rent for the unit size.



Sample Program:

*For concept
demonstration
purposes only!*

"My Island Neighbor" Program

Incentives for homeowners

- Construction cost reimbursement: Participating homeowners can receive a grant or forgivable loan of up to \$50,000 to be used for ADU construction, tied to the affordability agreement. This reduces the upfront financial burden for homeowners.
- Property tax credits: Through a potential state-level legislative change or local property tax program, homeowners who participate in "My Island Neighbor" could receive an annual property tax credit for the portion of their property with the ADU. The state Department of Revenue already offers property tax assistance programs that could serve as a model for this incentive.
- Waived fees: The City of Bainbridge Island could waive system development charges (SDCs), building permit fees, and utility hookup fees for program participants. This is an existing incentive allowed under state law.
- Optional rental income subsidy: For homeowners renting to extremely low-income individuals (at or below 30% AMI), the City could provide an additional rental income payment to ensure rent affordability while providing a sustainable income stream for the homeowner.
- Access to pre-approved plans: Homeowners can use the free, pre-approved ADU building plans available through the Kitsap Regional Coordinating Council, which the city is already participating in.



Sample Program:

For concept demonstration purposes only!

"My Island Neighbor" Program

Program administration

- City of Bainbridge Island: Would oversee the program, providing funding through a dedicated portion of the Bainbridge Island Housing Trust Fund. The City would manage the application process, grant dispersal, and track the long-term affordability covenants.
- Housing Resources Bainbridge (HRB): Would manage the tenant qualification process, certify income eligibility, and assist homeowners with tenant matching. HRB would also provide a vital support system for both the homeowner and the tenant, ensuring a successful rental experience.
- Oversight committee: An oversight committee would be established, consisting of city staff, HRB representatives, and potentially a private lender or CDFI, to manage the program and ensure compliance.



Sample Program:

*For concept
demonstration
purposes only!*

"My Island Neighbor" Program

Implementation steps:

1. Ordinance creation and funding: The City Council would pass an ordinance to create the program, authorize the use of Housing Trust Funds, and approve any local fee waivers.
2. Marketing and outreach: The City and HRB would launch a targeted outreach campaign to educate homeowners on the program's benefits and requirements, especially in areas with potential for ADU development.
3. Application and review: Homeowners would submit an application to the City, including their property information and commitment to the program.
4. Project development: Once approved, homeowners would utilize the pre-approved plans, secure additional financing if needed, and begin the permitting and construction process.
5. Tenant placement and oversight: Upon completion, HRB would facilitate tenant placement and begin annual income verification and unit inspections to ensure ongoing compliance.



Sample Program:

*For concept
demonstration
purposes only!*

"My Island Neighbor" Program

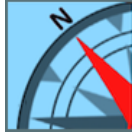
Potential funding sources

- **Housing Trust Fund:** A primary funding source for the grant and forgivable loan component of the program.
- **Local sales tax:** If implemented, the 0.1% local sales tax could be a consistent source of funding for the program's incentives.
- **State grants:** Apply for state grants, like the Connecting Housing to Infrastructure Program (CHIP), to further support infrastructure costs.
- **Partner with Community Development Financial Institutions** for financing options that homeowners can access to bridge funding gaps.



Sample Program:

*For concept
demonstration
purposes only!*



MEMORANDUM

DATE: October 24, 2025
TO: Bainbridge Island Planning Commission
FROM: Joseph W. Tovar, FAICP
SUBJECT: Regulatory Barriers

As I mentioned at last evening's meeting, one of the City's duties under the GMA is to identify potential regulatory barriers to housing availability. The GMA provides that the housing element is to make adequate provisions for existing and projected needs of all economic segments of the community, including:

(ii) Documenting programs and actions needed to achieve housing availability including gaps in local funding, **barriers such as development regulations**, and other limitations; . . . RCW 36.70A.070(2) (d)(ii)

The Washington State Department of Commerce has issued a checklist to assist local governments in assessing if specific regulatory barriers to housing affordability exist and what could or should be done to remove or lessen those barriers. Attached is an excerpt from the Commerce checklist. At previous Planning Commission and subcommittee meetings we have discussed a number of the items I have highlighted on this list, including parking, permit processes, and building height. I suggest that as the Commission continues its work on the Winslow Development Regulations, you consider if and how the city's regulations create barriers and how to respond.

Several of these items also came up at the meeting that Jennifer Sutton, Peter Best and I had with the Kitsap Builders Association (KBA) earlier this month. I would expect that you will be hearing from KBA on these issues in writing, via public comment, or both. Commissioners are not obliged to agree with everything builders may say, just as you are not obliged to agree with everything other interests or individual citizens may have to say. However, declining to engage in any meaningful way with the people who actually build housing would be a major failing in the City's process.

Attachment – Excerpt of Commerce Checklist of Regulatory Barriers

Washington State Department of Commerce

Barrier review: Low-Rise or Mid-Rise housing barrier review checklist

Barrier	Is this barrier likely to affect housing production? (yes or no)	Why or why not? Provide evidence.	Actions needed to address barrier.
High minimum lot sizes			
Low maximum densities or low maximum FAR			
Low maximum building heights			
Large setback requirements			
High off-street parking requirements			
High impervious coverage limits			
Lack of alignment between building and development codes			
PROCESS OBSTACLES			
Conditional use permit process			
Design review			
SEPA process			