



CITY OF
BAINBRIDGE ISLAND

ENVIRONMENTAL TECHNICAL
ADVISORY COMMITTEE
REGULAR MEETING
THURSDAY, SEPTEMBER 16, 2021
3:00 PM
VIA ZOOM WEBINAR

THE ENVIRONMENTAL TECHNICAL ADVISORY COMMITTEE
WILL HOLD THIS MEETING USING A VIRTUAL, ZOOM WEBINAR,
PER GOVERNOR INSLEE'S "STAY HOME, STAY HEALTHY" ORDERS

MEMBERS OF THE PUBLIC WILL BE ABLE TO CALL IN TO THE ZOOM MEETING

PLEASE CLICK THE LINK BELOW TO JOIN THE WEBINAR:

[HTTPS://BAINBRIDGEWA.ZOOM.US/J/97763494135](https://bainbridgewa.zoom.us/j/97763494135)

TELEPHONE: 1-253-215-8782

WEBINAR ID: 977 6349 4135

AGENDA

CALL TO ORDER / ROLL CALL / ACCEPT OR MODIFY AGENDA / CONFLICT OF INTEREST
DISCLOSURE
3:00 PM

WELCOME TO NEW MEMBERS – MALCOLM GANDER AND BRIAN HARMON (5 MIN)

APPROVAL OF MINUTES – MARCH 18, 2021 (5 MIN)

COUNCIL LIAISON REPORT – CHRISTY CARR (10 MIN)

CHAIR REPORT – CHARLIE KRATZER (20 MIN)

UPDATE ON GROUNDWATER MANAGEMENT PLAN (GWMP) PROCESS – COBI STAFF:
MAUREEN WHALEN (45 MIN)

ETAC RECOMMENDATIONS FOR AMERICAN RESCUE PLAN ACT (ARPA) FUNDING
PRIORITIES – CHARLIE KRATZER, CHRISTY CARR, AND MAUREEN WHALEN (30 MIN)

PUBLIC COMMENT (5 MIN)

ADJOURNMENT

Environmental Technical Advisory Committee

Meeting Minutes

March 18, 2021

Location: Zoom

Members Present

3:07 PM -- Charlie Kratzer, Ben Harrison, Dylan Frazer, Melanie Keenan, and Steve Saepoff

3:20 PM – Jane Hannuksela joins

Members Absent

Michelle McClure

Casey Schmidt

Juan Rovalo

Minutes from February 18, 2021 meeting approved by 5-0 vote.

Hoveida habitat management plan (HMP)

- The ETAC Review Comments on the Hoveida HMP were approved by a 5-0 vote.
- Charlie will transmit the comments to Annie Hillier, COBI Planning after the meeting.

Chair Report and other items

- COBI Public Works hired a LT Hydrologist on 1/8/21, Maureen Whalen, currently working for Environment Canterbury in New Zealand. Maureen started working on 2/22/21 as an independent contractor. In May/June she will transition to COBI for the 2-3 year LT Hydrogeologist position in charge of developing a Groundwater Management Plan (GWMP) for Bainbridge Island.
- ETAC would like another update on the groundwater monitoring on Bainbridge Island from COBI/KPUD.
- Charlie was contacted by Deb Rudnick of the BI Watershed Council about interest in hearing a presentation by Laurie Geissenger (Seattle City Light). In the mid-1990s, Laurie was the Vice-Chair of the advisory committee that developed a GWMP for the sole-source aquifer on Vashon Island (adopted in 1998). This would take place at the Watershed Council May meeting and could include either all of ETAC or just the ETAC GWMP sub-committee of Charlie, Melanie, Juan, and Casey.
- According to Christy Carr, the next edition of COBI Connects (May 2021) will have a Council Message by Christy. This would be a great opportunity to include the GW Fact Sheet and introduce the topic of the fact sheet, GWMP process, and the hiring of Maureen Whalen.
- Charlie is going to contact Kristen Drew, Communications Director for COBI, about the formatting of the GW Fact Sheet for inclusion in COBI Connects. It looks like the margins can be reduced, allowing for enlarging some of the figures in the fact sheet and still staying within the 4-page limit. Charlie will also add that the fact sheet was peer-reviewed by USGS and KPUD.

WRIA 15 revised draft report

- At the March 3rd joint meeting with UAC, it was discovered that the methodology for projecting permit-exempt (PE) wells for Bainbridge Island is not well-defined in the WRIA15 report. The projection of 491 PE wells to be added in the next 20 years seems unreasonably high. Chris Wierzbicki is going to ask the WRIA15 committee for clarification and get back to UAC and ETAC. At that point, the ETAC sub-committee on the WRIA15 report (Melanie, Ben, Charlie, and Juan) will discuss on-line. There may be another UAC/ETAC joint meeting as well. In the meantime, ETAC will hold off on any letter of recommendation to the City Council about the report.

Meeting adjourned at 3:59 PM.

Chair

Date

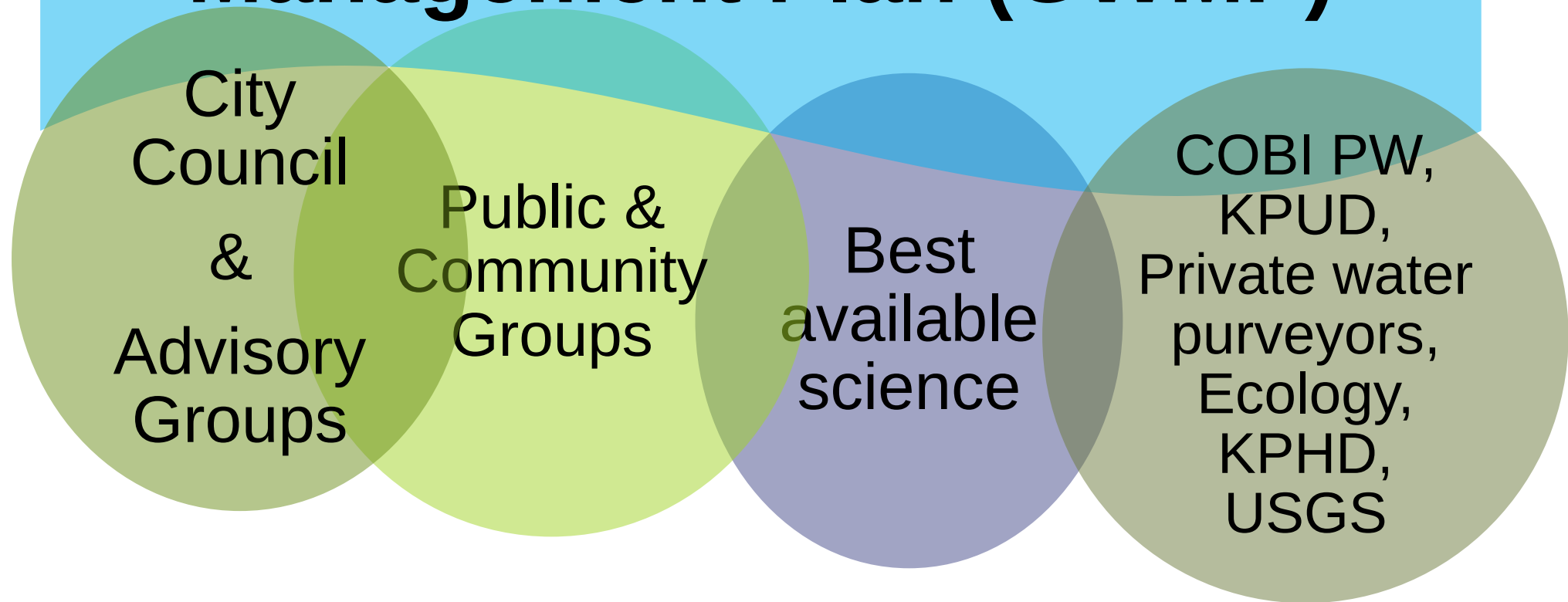


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Groundwater Management Plan Kickoff COBI Environmental Technical Advisory Committee

16 September 2021

COBI Groundwater Management Plan (GWMP)



GWMP Today

Next step

**Asking for your
input**



**City Council
21 September 2021**



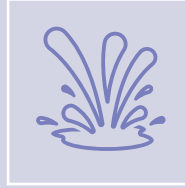
What do you think?



GWMP Goals & Objectives



COBI GWMP so far



**Groundwater resources
on Bainbridge Island***



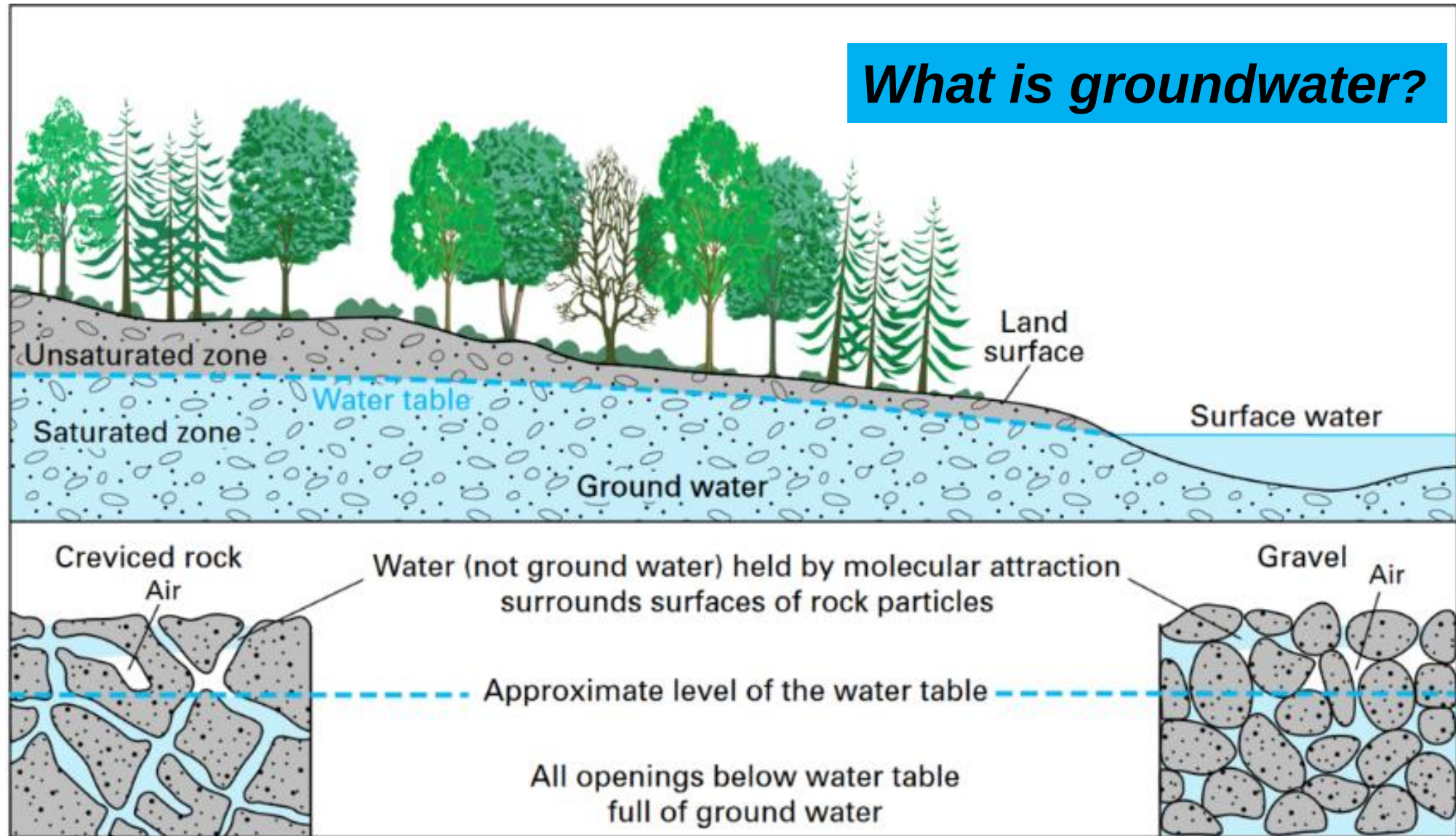
**Relevant plans &
policies**



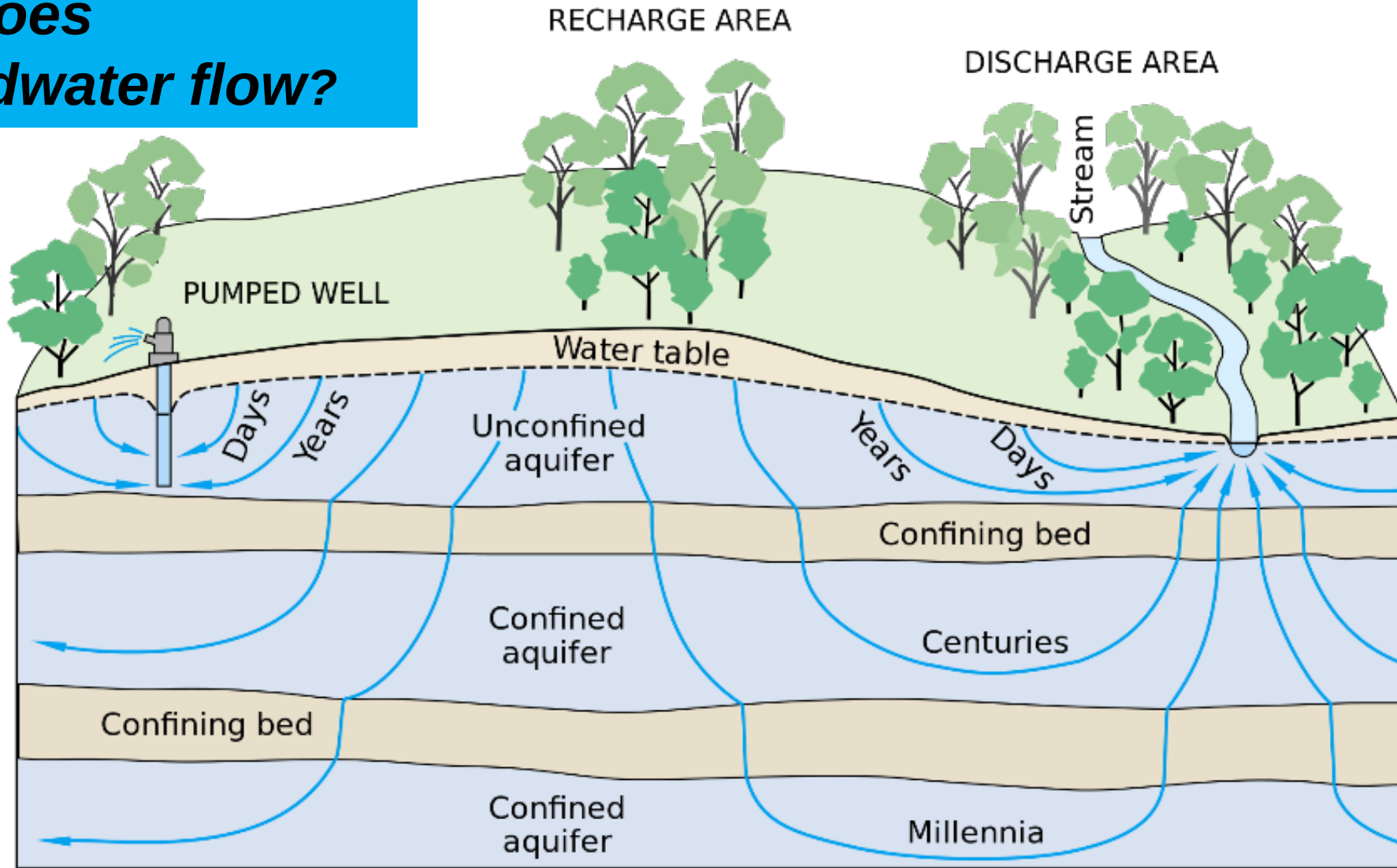
GWMP Roadmap

[* Bainbridge Island Groundwater Fact Sheet](#)

What is groundwater?

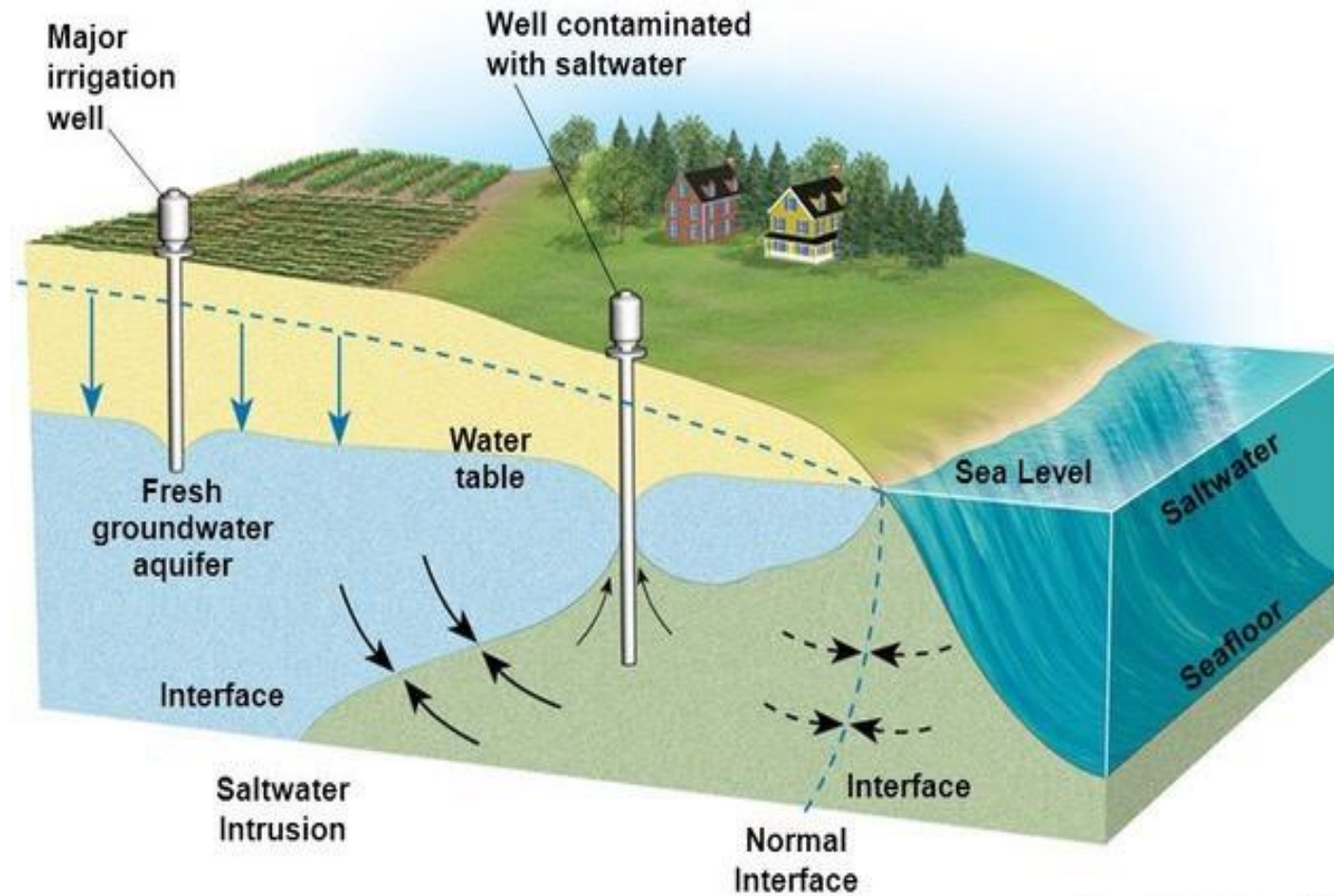


How does groundwater flow?



What is saltwater intrusion?

Saltwater Intrusion into Coastal Water Wells



Port Orchard

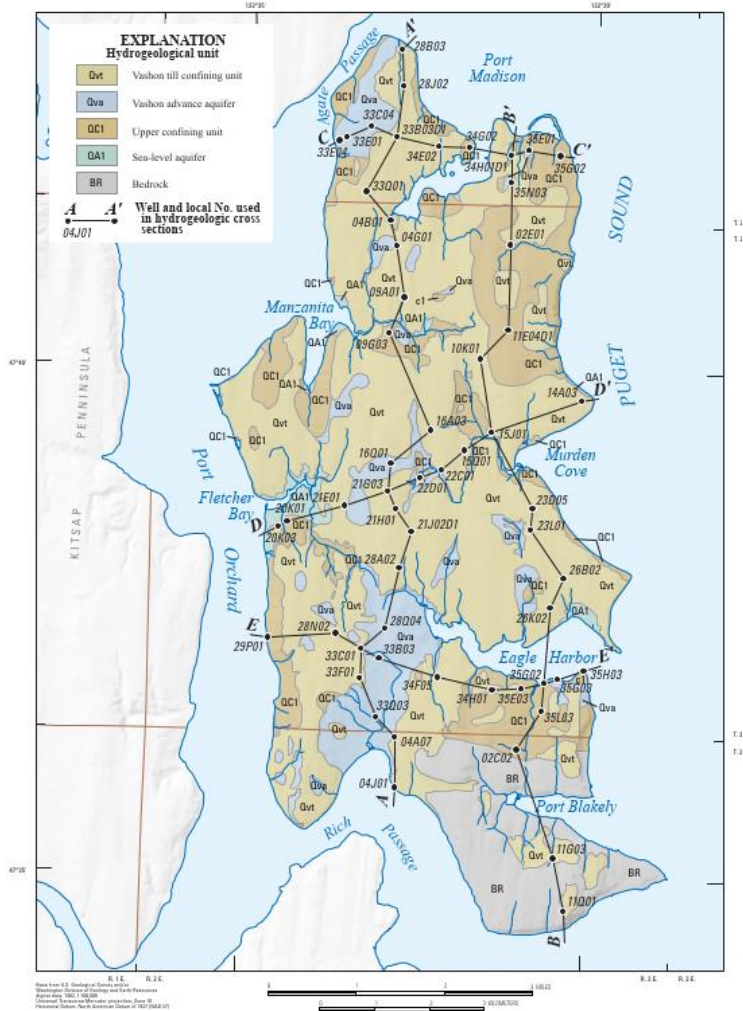
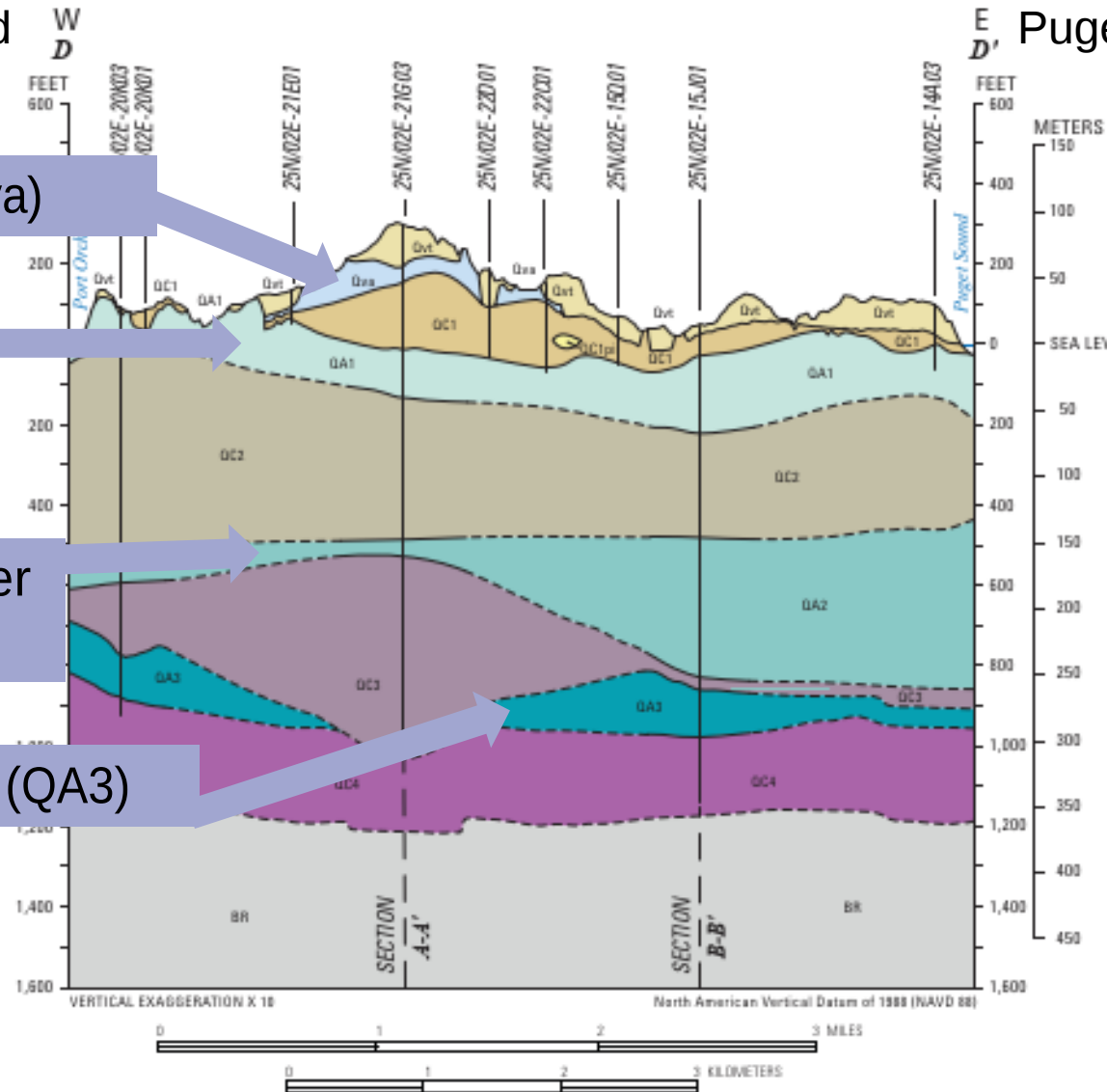
Puget Sound

Perched Aquifer (Qva)

Sea Level Aquifer (QA1)

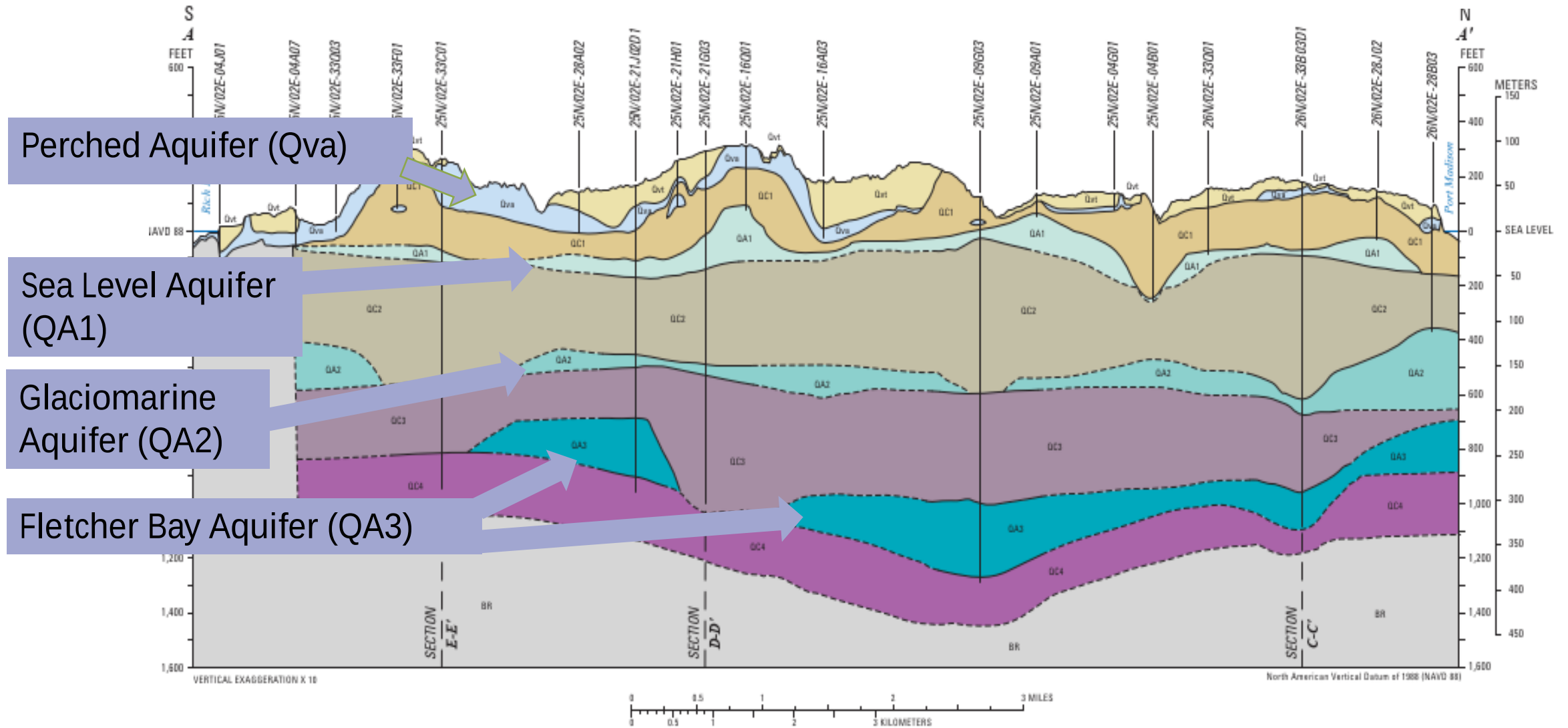
Glaciomarine Aquifer (QA2)

Fletcher Bay Aquifer (QA3)



Rich Passage

Port Madison



Modified from: Frans and others, 2011

COBI Plans

**All consider
groundwater**



**Comprehensive Plan (Water Resources,
Utilities & Environment Elements)**



Municipal Code



Climate Action Plan



Water System Plan (2017)



Wellhead Protection Plan



External Agencies

All consider
groundwater



Kitsap Co. Groundwater Management Plan



Growth Management Act



Kitsap Co. Climate Assessment



WRIA 15 Watershed Plan



EPA Sole Source Aquifer



WA Dept of Ecology



USGS



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GWMP Roadmap



1. Area characterization



2. Problem definition



3. Identify water quantity / quality goals and objectives



4. Identify land and water use management strategies



5. Recommend management strategies



6. Implementation / monitoring / review



COBI Advisory Committees GWMP Goals / Objectives



UAC Feedback 11 August 2021

1. Goals

- a. Climate change impacts explicitly considered
- b. Ensure reliable future water source and maintain current sources
- c. Holistic approach from taking groundwater to water distribution to recharge

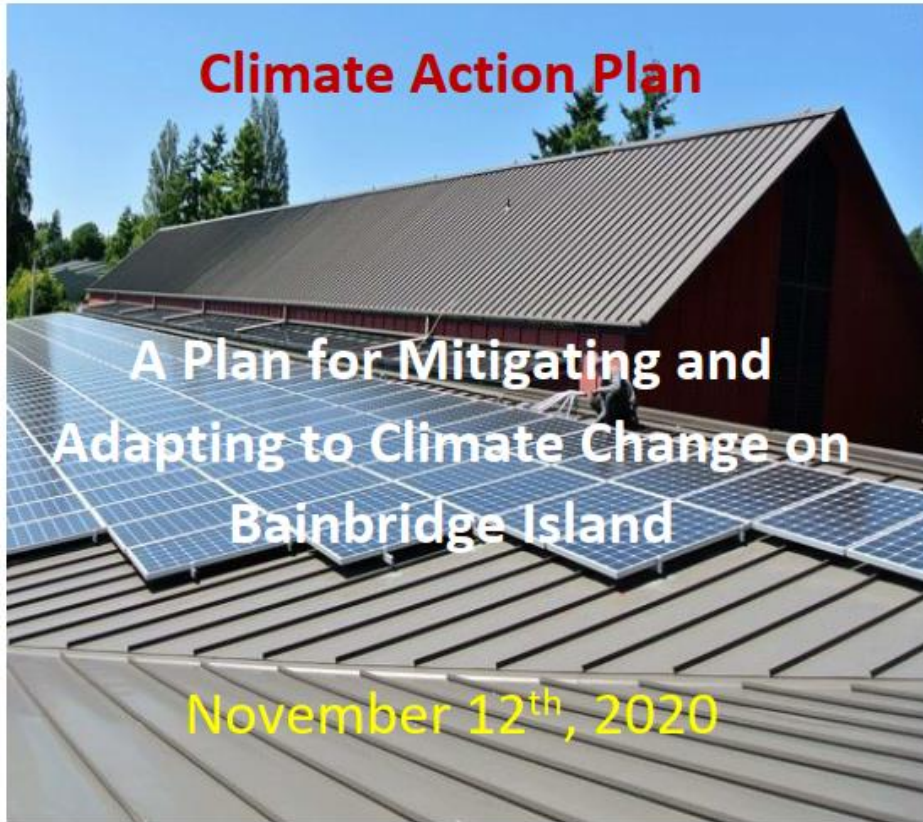
2. Objectives

- a. Sewer utility - no pollution of groundwater / failing septic systems
- b. Consider impacts to streamflow
- c. Consider need for fire / emergency response
- d. Consider stormwater recharge impacts

3. Other comments

- a. Focus on clear, easily understood information
- b. Basic understanding there is enough groundwater overall, quantity/quality may vary locally





Section 6: The Natural Environment

Goal: Protect and maintain the integrity of our island's surface and groundwater resources in the face of climate change

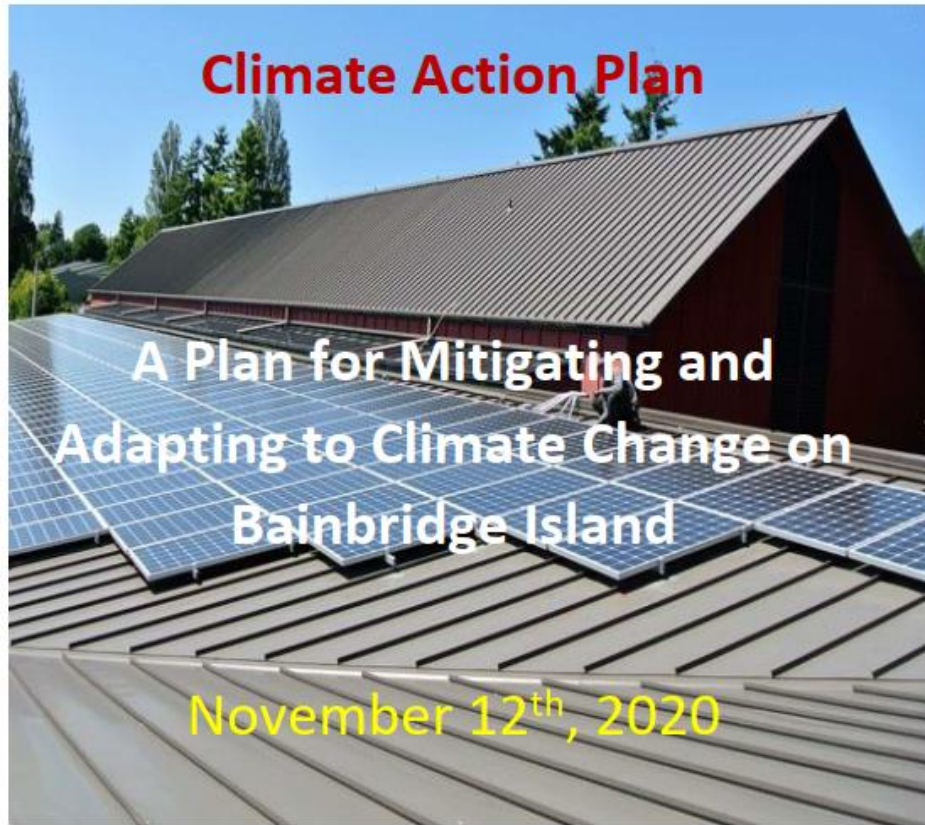
Target: By 2023, COBI will adopt a Groundwater Management Plan that accounts for climate change in its projections, policies, and guidance



Section 6: Natural Environment

Goal: Support an agricultural system that prioritizes climate change resilience, local food production, and ecosystem services including soil carbon storage and water management

Target: By 2023, agricultural uses will be incorporated into groundwater planning via the Groundwater Management Plan



Section 6: The Natural Environment

Challenges

- Expected lower groundwater recharge from more intense precipitation events (more runoff)
- Expected increase in demand with increasing temperature
- Potential saltwater intrusion



Section 6.4 Strategies / Actions

Strategy B.1

- Maximize protections for intact hydrologic processes (e.g., aquifer recharge, groundwater/surface water interaction, stormwater runoff)

Priority Actions

- Incentivize water conservation
- Continue robust monitoring program



Section 6.4 Strategies / Actions

Strategy B.2

- Identify and implement targets that will balance aquifer discharge and recharge, incorporating climate change projections

Priority Action

- Complete and implement COBI Groundwater Management Plan include incorporation of expected changes to groundwater inputs and outputs

ETAC Groundwater Management Plan Discussion Paper 1 Nov 2018



Community-wide education program concerning the state of the island's aquifers.



Encourage water conservation, re-use and reclamation



Robust monitoring program



Groundwater / surface water interaction & potential impacts from development / population growth



Thoughts?

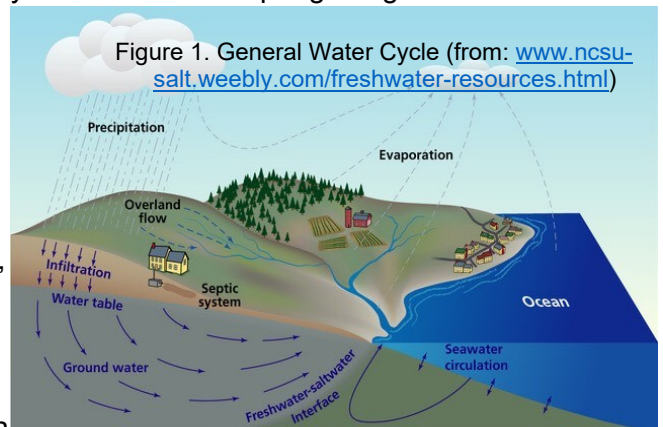


Groundwater on Bainbridge Island: A Fact Sheet

We depend on groundwater for all our water-supply needs on Bainbridge Island. Groundwater also supports our streams and wetlands. The Environmental Technical Advisory Committee (ETAC) for the City of Bainbridge Island consists of community volunteers with expertise in environmental issues. ETAC prepared this fact sheet to provide a summary of our understanding of the groundwater system and as a starting point for the development of a Groundwater Management Plan (GWMP). The GWMP will provide the necessary framework to responsibly manage this precious resource today and into the future.

What is Groundwater?

- According to the USGS, groundwater is water that exists underground in saturated zones beneath the land surface (Fig. 1). The upper surface of the saturated zone is called the water table. Contrary to popular belief, groundwater generally does not form underground rivers. It fills the pores and fractures in underground materials (soil, sand, gravel, and rocks), much the same way that water fills a sponge. If groundwater flows naturally out of rock materials or if it can be removed by pumping (in useful amounts), the permeable saturated zones are called aquifers. Groundwater moves slowly from higher to lower water levels, typically at rates of 3 to 25 inches per day. As a result, water could remain in an aquifer for hundreds or thousands of years.
- Aquifers are separated by less permeable layers of soil or rock called confining layers. Despite these confining layers, there is usually some water exchange between aquifers.
- Groundwater quantity (storage in aquifers) is estimated by measuring water levels in wells. Water levels vary seasonally due to rainfall and pumping, so measurements at the same time each year will give the best information on changes in the amount of groundwater storage in aquifers on an annual basis (from: USGS FAQs; www.usgs.gov/faq/water).
- Some surface waters (i.e., ponds, wetlands, streams) receive significant contributions from groundwater depending on groundwater levels.



Groundwater on Bainbridge Island

- According to the USGS, there are five aquifers on Bainbridge Island (shown in Fig. 2 cross-section of BI from Port Orchard Bay on the left to Puget Sound on the right). However, the permeable interbeds (QC1pi) aquifer produces little water. The four main aquifers are:
 - **Vashon (Perched)(Qva)** (water table at elevation 0 to 300 ft),
 - **Sea Level (QA1)** (-200 to +200 ft),
 - **Glaciomarine (QA2)** (-500 to -300 ft), and
 - **Deep (Fletcher Bay)(QA3)** (-900 to -600 ft)

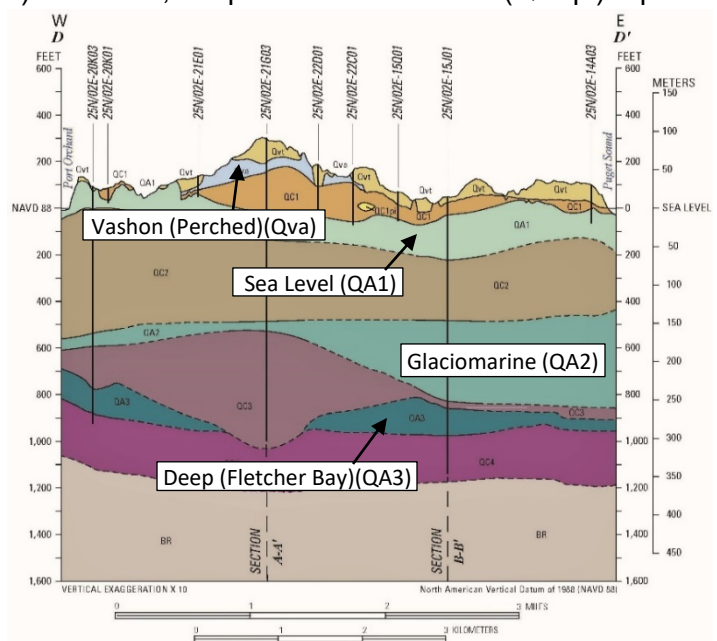
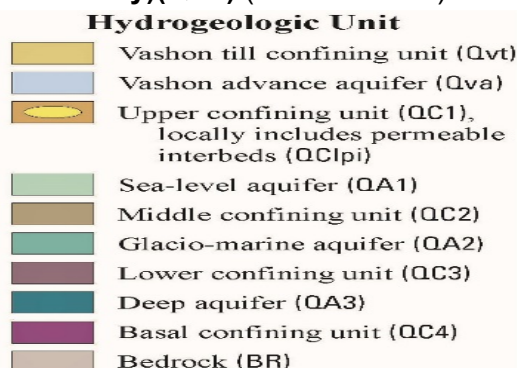


Figure 2. Hydrogeologic Units on Bainbridge Island (from: Frans and others, 2011)

- The four major aquifers are separated by five confining layers: Qvt (Vashon till near ground surface), QC1, QC2, QC3, and QC4.
- 97% of usage (pumped well water) comes from the Vashon (Qva), sea level (QA1), and deep aquifers (QA3).
- All the recharge water for the aquifers originates as precipitation (and septic-system returns) on the island, except for about 5% that flows under Port Orchard Bay from the Kitsap Peninsula to the sea level, glaciomarine, and deep aquifers (from: Frans and others, 2011).

Sole Source Aquifer Designation

- In 2013, USEPA designated the aquifers of BI as a sole source aquifer, meaning that it “supplies at least 50% of the drinking water consumed in the area overlying the aquifer, and for which there is no alternative source or combination of alternative drinking water sources which could physically, legally, and economically supply those dependent upon the aquifer” (from: www.epa.gov/dwssa).
- Sole source designation can affect Federal funding for any project with the potential to contaminate the groundwater on Bainbridge Island.

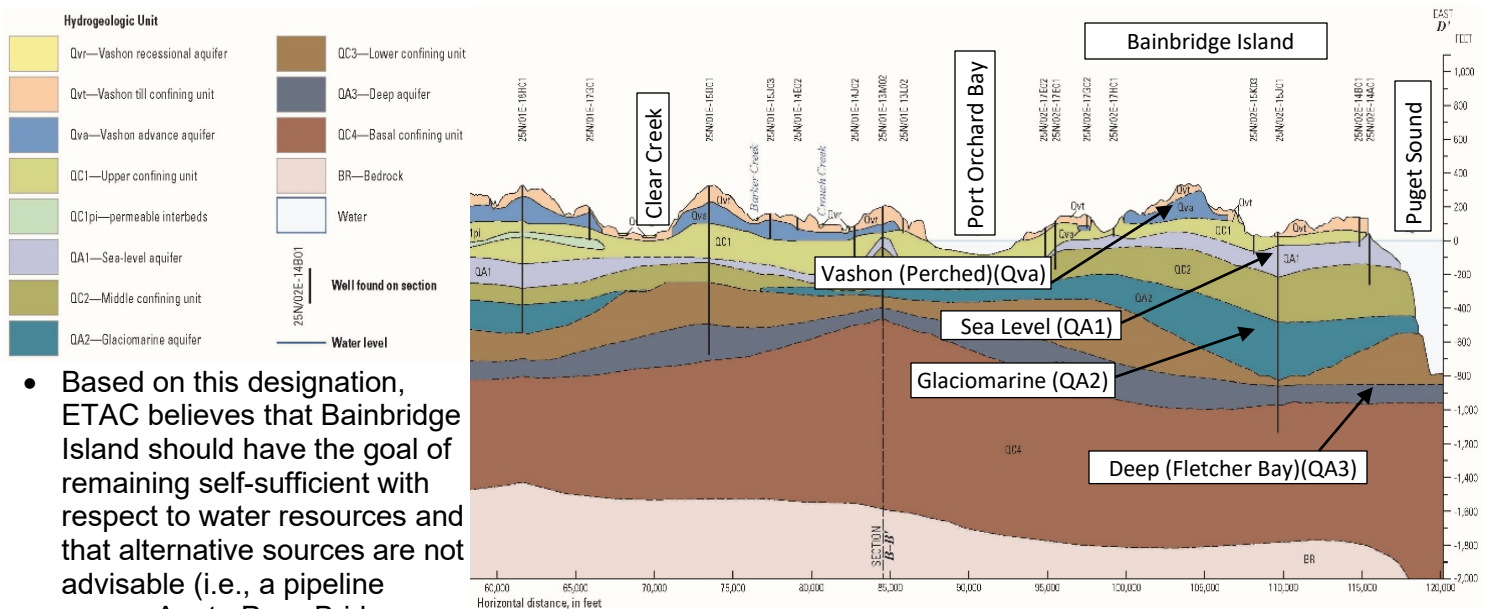


Figure 3. Hydrogeologic Units on Kitsap Peninsula (modified from: Welch and others, 2014)

- Based on this designation, ETAC believes that Bainbridge Island should have the goal of remaining self-sufficient with respect to water resources and that alternative sources are not advisable (i.e., a pipeline across Agate Pass Bridge or desalination of seawater).
- The cross-section of the Kitsap Peninsula (Fig. 3) from Clear Creek (Silverdale) on the left to BI/Puget Sound on the right depicts the connection of the glaciomarine and deep aquifers under Port Orchard Bay. However, as stated above the contribution of off-island water from these aquifers is only about 5% of the total GW recharge for BI aquifers, as the actual movement towards BI depends on several factors – pumping rates, recharge rates, and head/pressure differences between BI and Kitsap Peninsula.

Seawater Intrusion

- Seawater can potentially be drawn into near-shoreline wells if groundwater is over-pumped.
- COBI checks for potential seawater intrusion (Fig. 4) by monitoring chloride as a surrogate for seawater in near-shoreline wells (Cl⁻ > 100 mg/L is used as an early warning level for potential seawater intrusion).
- Historically, seawater intrusion has not been a significant problem, but as an island this issue is always of concern.
- Freshwater sits on top of seawater due to density differences; hence, for every 1 foot of GW above sea level, GW extends roughly 40 feet below sea level.

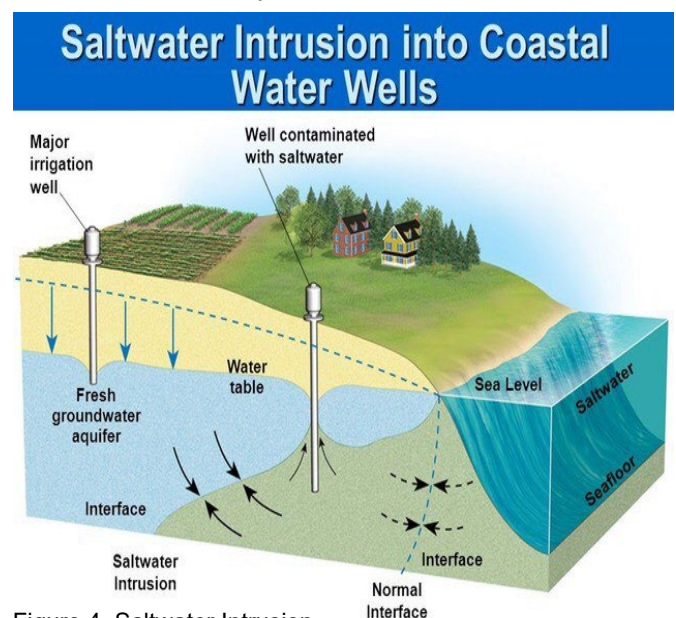


Figure 4. Saltwater Intrusion (from: www.whoi.edu/oceanus/feature/charette)

USGS Bainbridge Island Groundwater Model

The numerical groundwater models developed by USGS to model both Bainbridge Island and the entire Kitsap Peninsula use the free, publicly-available, industry-standard MODFLOW program (https://www.usgs.gov/mission-areas/water-resources/science/modflow-and-related-programs?qt-science_center_objects=0#qt-science_center_objects). The model specifics for the Bainbridge Island application are (Fig. 5):

- Horizontal discretization (grid size) – 800 feet by 800 feet; total of 139 columns by 197 rows for all of Bainbridge Island. Cells are categorized by:
 1. bordering surface waters (streams, coastline) are specified “drains” (flows from GW to SW),
 2. presence or absence of the Vashon till confining layer in the surface layer, and
 3. Gazzam Lake represented by “general head” recharge source (flows from SW to GW)
- Vertical discretization – 33 layers from land surface to bedrock
- Model inputs – monthly precipitation, soils, surface water features, streamflow, wells and monthly pumping, measured monthly water levels
- Model outputs – simulated monthly water levels
- Model calibration – calibrate simulated water levels to measured water levels; adjust model inputs until there is an optimized match of water levels

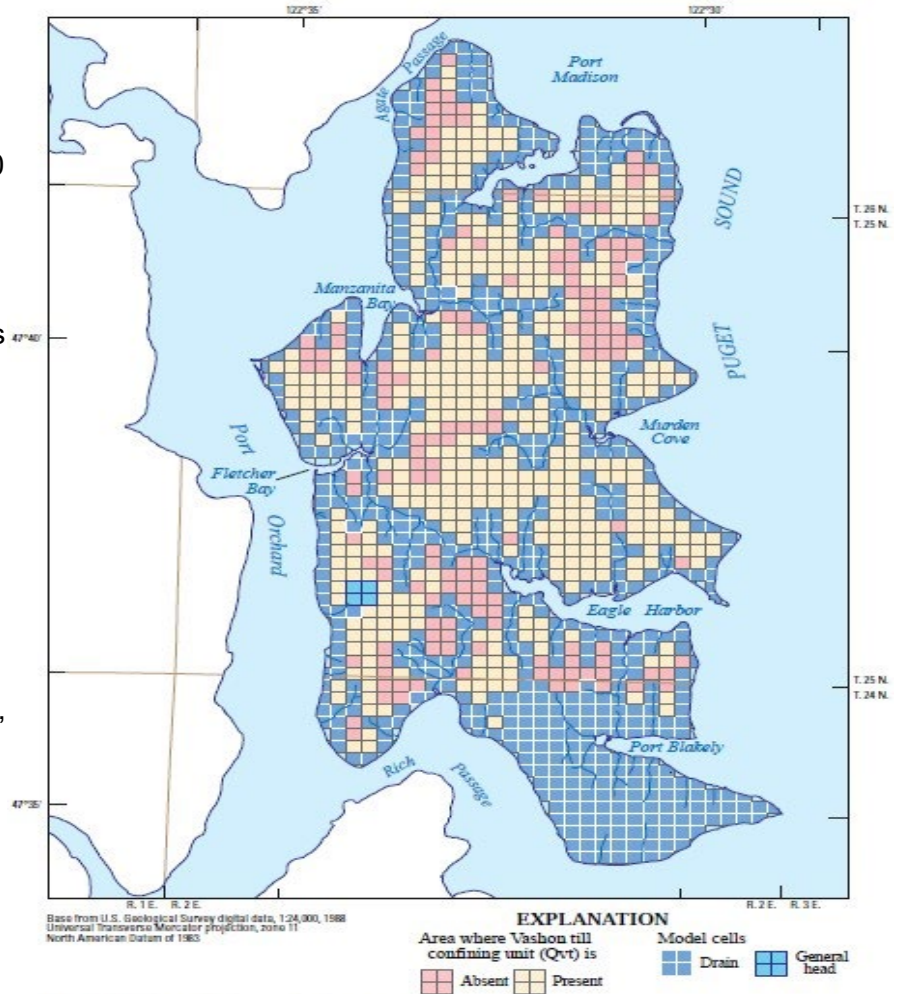


Figure 5. MODFLOW Grid for BI (from: Frans and others, 2011)

Water Budget for Bainbridge Island

In its' simplest terms, the simulated water budget for Bainbridge Island from the USGS model can be expressed as (Fig. 6):

$$\text{Inflows} - \text{Outflows} = \text{Change in Storage}$$

- Inflows: recharge from precipitation (85-90%); recharge from septic systems (5-10%); off-island aquifer flow to BI from Kitsap Peninsula (5%)
- Outflows: pumping (5-10%); discharge to BI surface waters (50-60%); discharge to Puget Sound (30-40%)
- Change in Storage: reflected in (calculated from) change in water levels

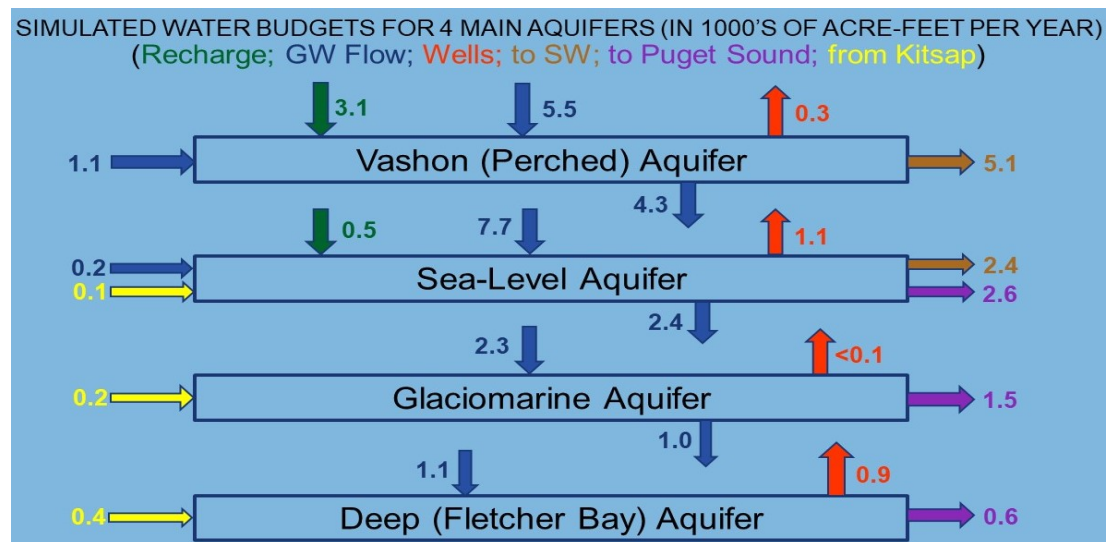


Figure 6. Water Budget for Bainbridge Island Aquifers (modified from: Frans and others, 2011)

USGS Kitsap Groundwater Model

- Simulations using the MODFLOW program indicate that changes in groundwater recharge have a larger effect on water levels than changes in groundwater pumping.
- Two examples of this for the Kitsap Peninsula: A 15% decrease in long-term annual recharge resulted in up to an 18% decrease in stream baseflow over seven years, while a 15% increase in long-term annual groundwater pumping resulted in up to a 0.3% decrease in stream baseflow over seven years (Frans and Olsen, 2016).

Importance of Monitoring

Although the number and frequency of water-level monitoring wells is in flux, long-term monitoring wells are shown in Fig. 7 by aquifer.

- Changes in water levels over the long-term provide an indication of potential issues (water availability, seawater intrusion).
- Thus, COBI and KPUD should continue monitoring water levels and water quality, and expand the monitoring to include more near-shoreline wells.
- Monitoring of water levels in Fall (lowest) and Spring (highest) is most important, depending on specific precipitation trends.

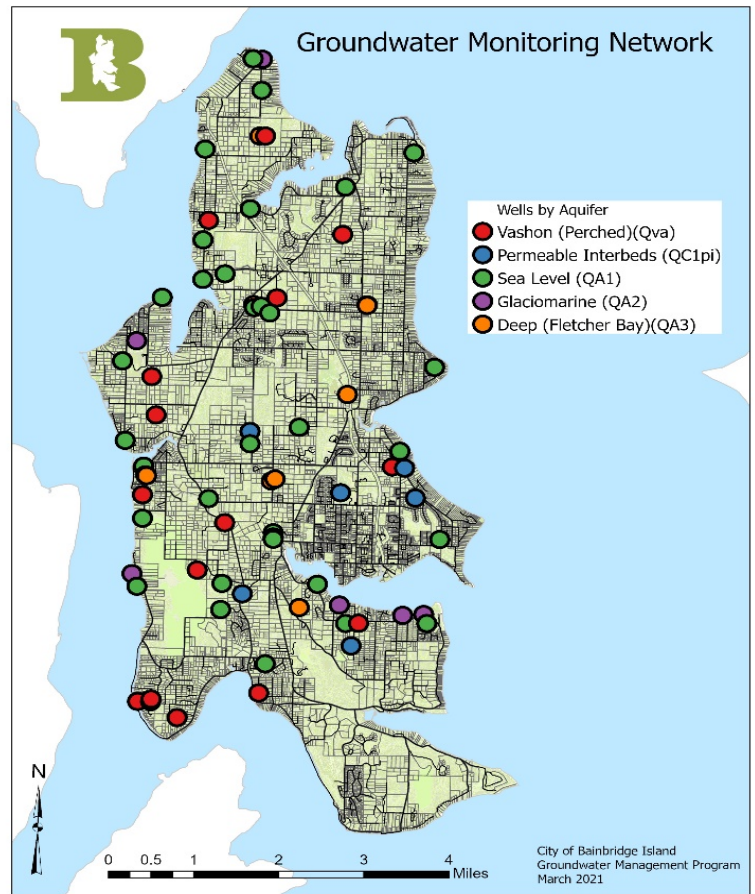


Figure 7. Long-term Monitoring Wells on Bainbridge Island (from: Christian Berg, COBI GW Management Program, written communication, March 9, 2021)

Recommendations for the Groundwater Management Plan

- COBI and KPUD should expand their groundwater and surface water monitoring program
- COBI should create aquifer conservation zones to enhance recharge, develop a water conservation program to reduce water usage, incentivize and facilitate the reuse of stormwater and grey water, and develop a community-wide education program on the aquifers of BI
- COBI should improve wastewater treatment to tertiary and recharge GW with effluent via surface infiltration instead of discharging the effluent to Puget Sound
- COBI should improve stormwater management to keep more stormwater on BI for recharging the aquifers instead of running off to Puget Sound
- COBI should coordinate recommendations in the GWMP with those in the Climate Action Plan (<https://www.bainbridgewa.gov/DocumentCenter/View/14270/Draft-Bainbridge-Island-Climate-Action-Plan-for-City-Council-Review-October-22nd-2020>)

References:

- Frans, L.M., Bachmann, M.P., Sumioka, S.S., and Olsen, T.D., 2011, Conceptual model and numerical simulation of the groundwater-flow system of Bainbridge Island, Washington: USGS Scientific Investigations Report 2011-5021, 96 p., www.doi.org/10.3133/sir20115021
- Welch, W.B., Frans, L.M., and Olsen, T.D., 2014, Hydrogeologic framework, groundwater movement, and water budget of the Kitsap Peninsula, west-central Washington: USGS Scientific Investigations Report 2014-5106, 44 p., www.doi.org/10.3133/sir20145106
- Frans, L.M. and Olsen, T.D., 2016, Numerical simulation of the groundwater-flow system of the Kitsap Peninsula, west-central Washington: USGS Scientific Investigations Report 2016-5052, 63 p., www.doi.org/10.3133/sir20165052

Abbreviations: BI – Bainbridge Island; SW – surface water; GW – groundwater; COBI – City of Bainbridge Island; KPUD – Kitsap Public Utility District; USGS – U.S. Geological Survey; Cl – chloride; ETAC – Environmental Technical Advisory Committee; USEPA – U.S. Environmental Protection Agency; GWMP – Groundwater Management Plan



MEMORANDUM

Date: September 1, 2021

To: Climate Change Advisory Committee, Environmental Technical Advisory Committee, Race Equity Advisory Committee, Sustainable Transportation Task Force, Utility Advisory Committee

From: Blair King, City Manager

Subject: Request for review and comment – ARPA Project List

Summary and Request for Feedback:

At the City Council meeting on August 24, Council and staff discussed priorities for use of funding the City will receive through the federal American Rescue Plan Act (ARPA). As you may know, the City will receive roughly \$7.0 million over the next two years, with a wide but not unlimited range of eligible uses. The Council reviewed a list of projects and has identified 12 projects and purposes for additional consideration.

At your next meeting, we'd appreciate your committee's review of the attached project list. Please provide feedback on the use of the funding for the projects or purposes shown. For example, it would be helpful for you to indicate which of the projects you feel should receive the most ARPA funding, or if there are any that you would recommend not receive further consideration, and why.

Timing:

The Council is planning further deliberation and a decision of which projects to fund on September 28. Staff will include committee feedback received by September 22 in the Council agenda materials for the September 28 discussion.

Background:

On June 15, 2021, the City Council received news that the City of Bainbridge Island would receive \$7.061 million from the \$1.9 trillion American Rescue Plan Act (ARPA). The Council was informed that these funds would be restricted to certain types of programs or expenditures and be subject to time limits. Specifically, funds need to be obligated by December 31, 2024 and expended by December 31, 2026.

As a result of the presentation the City Council in June, the Council adopted principles to guide the expenditure of ARPA funds and directed the City Manager to present specific project, programs, or opportunities consistent with the principles adopted by the City Council. The principles approved in June include A – E below, with F added in accordance with additional Council guidance.

- A. Acknowledge that ARPA funds are one-time monies and should be spent in such a way to avoid reoccurring cost
- B. To the extent practicable, funds should be spent to achieve long-lasting benefits and results - (e.g., 50-year time horizon)
- C. Activities or projects that promote fiscal and environmental sustainability will receive priority consideration
- D. Activities or projects must be completed within the expenditure deadline requirements of ARPA (funds must be committed by the end of 2024; expended by the end of 2026)
- E. Activities or projects that would not be able to be accomplished “except for” one-time impact sums will receive priority consideration
- F. Leverage other funds

These guiding principles are in addition to the federal eligibility regulations, available [HERE](#) and summarized below:

- 1. Support public health response/economic support
- 2. Premium pay for essential workers
- 3. Revenue replacement (capped at roughly \$2 million)
- 4. Investments in water, sewer and stormwater infrastructure

A list of potential projects generated by the community and staff was presented to the City Council. The City Council reviewed the information and selected a short list of projects and purposes for further review.

Staff is ready to support the City Council, advisory groups and the community through this important review.

Attachment: ARPA Project Identification memorandum to City advisory groups



ARPA Funding Discussion – Project Guidance and Options

City-Identified Parameters from June 15 Council Presentation

- A. Acknowledge that ARPA funds are one-time monies and should be spent in such a way to avoid reoccurring cost
- B. To the extent practicable, funds should be spent to achieve long-lasting benefits and results - (e.g., 50-year time horizon)
- C. Activities or projects that promote fiscal and environmental sustainability will receive priority consideration
- D. Activities or projects must be completed within the expenditure deadline requirements of ARPA (committed by the end of 2024; expended by the end of 2026)
- E. Activities or projects that would not be able to be accomplished “except for” one-time impact sums will receive priority consideration

Additional Considerations

- F. Leverage other funds

ARPA Category

1. Support public health response/economic support
2. Premium pay for essential workers
3. Revenue replacement (capped at roughly \$2 million)
4. Investments in water, sewer and stormwater infrastructure

Project Table

List developed by Council on initial review August 24. Staff has provided additional comments and is seeking input from City Advisory Groups ahead of the next Council discussion on September 28.

Shading:

- Green shading means that projects meet 5 or 6 of the criteria identified in June and are ARPA-eligible
- Yellow shading means that projects meet 3 or 4 of the criteria identified in June and are ARPA-eligible

Projects Identified for Additional Consideration

Project Name	ARPA Information	Parameters/Notes	Additional information
Water			
Water System Climate Resiliency Upgrades	Infrastructure \$1 M	• A, B, C, D, E, F • Design 2022-24; Build 2024-25 • No funding sources are currently identified for these projects, however, leveraged funding from the Water Utility is anticipated.	These projects were developed to ensure that the City's water system can function during greater changes in temperature. The project proposals include redundancy (having more than one piece of equipment or facility in case one of them goes down) and other upgrades to protect equipment during extreme heat. This project proposal includes: • Well site building ventilation upgrades; • Purchase spare, mobile, well pump(s); • Drill new back-up well and install new booster pumps at two well-site locations.
Winslow Water Tank Replacement	Infrastructure \$1.5 - \$ 2.5 M	• A, B, C, D, F • Design 2022-24; Build 2024-26 • Part of funding for large project. PWTF loan secured. • Replacement of critical infrastructure, including seismic protection	This project meets the Council-articulated priority of climate resilience. It also supports equity in its service to the island-wide public schools, public library, diverse socio-economic neighborhoods and the downtown business district.

Project Name	ARPA Information	Parameters/Notes	Additional information
Sewer			
Wastewater Beneficial Re-use	Infrastructure \$TBD	• B, C, E • Undetermined schedule • No funding sources are currently identified for these projects.	The scope of this project is currently undetermined, but could include: • Tertiary treatment; • Groundwater recharge for aquifer or streamflow restoration; • Re-use as irrigation. Preliminary evaluation and design are likely feasible within the required timeframe for the use of funds. Total project costs could exceed \$20M, and would require temporary project management staff, and additional operations and maintenance staff positions.
Wastewater Treatment Plant Near-term Capacity Upgrades	Infrastructure \$700k	• A, B, C, D, E, F • Design 2022-23; Build 2024 • Regulatory requirement • No funding sources are currently identified for these projects, however, leveraged funding from the Sewer Utility is anticipated.	Project includes mandatory, short-term capacity upgrades. Longer term upgrades will also be required but are outside the required timeframe for the use of funds.

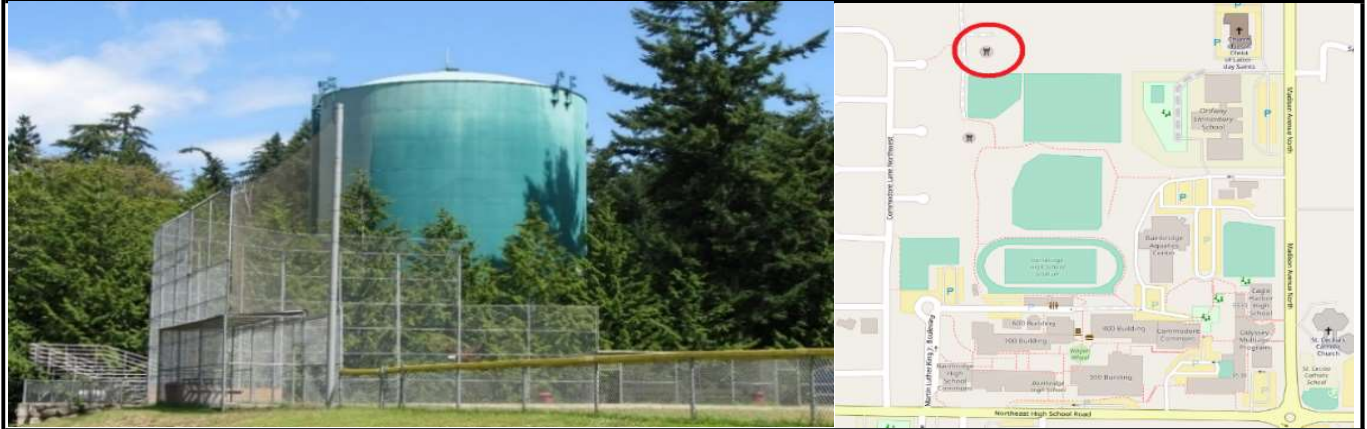
Project Name	ARPA Information	Parameters/Notes	Additional information
SSWM/ Groundwater			
McDonald Creek Culvert/ Springbrook Creek mitigation at High School Road and Fletcher Bay Road	Infrastructure \$1.5 M	• A, B, C, D, E, F • Design 2022-23; Build 2024-25 • No funding sources are currently identified for the mitigation efforts, however, leveraged funding from the Storm and Surface Water Utility is identified in the City's Capital Improvement Plan.	The McDonald Creek project is the replacement of a deep culvert under Eagle Harbor Drive near McDonald Ave. The project is at 90% design. The funds identified for this project would support environmental enhancements/mitigation required for permitting that would allow the McDonald Creek project to move forward. The enhancement/mitigation would physically be located near the intersection of High School Road and Fletcher Bay Road, where a separate City project, the replacement of failing culverts, would also benefit from the investment. See attached project page from the Adopted 2021-2026 CIP.
Springbrook Fish Passage on Fletcher Bay Road west of New Brooklyn Road	Infrastructure \$1.5 M	• A, B, C, D, E, F • Design 2022-23; Build 2023-24 • Funding is secured for design. No currently secured funding for construction.	This project would replace an existing culvert under Fletcher Bay Road (west of the New Brooklyn intersection) with a bridge structure. The structure would provide fish passage upgrades for the highest priority salmonid environment on Bainbridge Island. https://www.bainbridgewa.gov/868/Springbrook-Creek-Watershed-Study The project has historically been supported by the Suquamish Tribe.

Project Name	ARPA Information	Parameters/Notes	Additional information
Stormwater/Non-motorized demonstration project	Infrastructure or Revenue Replacement, \$ TBD	• A, B, C, D, E, F • Undetermined schedule • Design and construction TBD • No funding sources are currently identified for these projects, however, leveraged funding from the General Fund and Stormwater Utility is anticipated.	Added by Council on Aug. 24 The project scope is undetermined. See Madison Avenue Sidewalk Project for additional information.
Transportation			
Sustainable Transportation Plan (STP) Implementation Set-aside	Revenue Replacement, \$ TBD	• A, B, C, D, E, F • Design 2022-24, Build 2024-26 • Eligible for ARPA-related “replacement” funding for 23-24 biennium • No funding sources currently identified for these projects, however, leveraged funding from the General Fund is anticipated.	The project scope is undetermined. The STP project is anticipated to be reviewed with City Council November 2021.
Madison Avenue Sidewalk/Bike Lanes Project	Revenue Replacement, \$1.0 M	• A, B, C, D, E, F • Design 2021-22; Build 2023 • Eligible for ARPA-related “replacement” funding for 23-24 biennium • Leveraged funding from multiple sources identified in the City’s Capital Improvement Plan, including General Funds, Sewer Funds, and federal grant funds.	The project scope includes multiple necessary and desired improvements along the Madison Avenue corridor between Winslow Way and SR305, including sidewalk replacement, pavement replacement, separated bicycle lanes, sidewalk infill and sewer replacements. This project has a hard 9/28 deadline for scoping decision due to federal grant requirements. https://www.bainbridgewa.gov/1310/Madison-Avenue-Sidewalk-Improvements

Project Name	ARPA Information	Parameters/Notes	Additional information
Other Funds			
Affordable housing projects	Response to negative economic impact, \$ TBD	- E - Schedule TBD - Eligible projects serve those earning less than 60% of area median income, or with 25% of beneficiaries below federal poverty line. - Projects in a HUD Qualified Census Tract are eligible. Bainbridge Island does not have any Qualified Census Tracts.	The project scope is undetermined. Median family income for 2021 is \$94,100; 60% of that is \$56,460. Federal poverty level for a family of four is \$26,500. Regulations continue to evolve and additional clarification may come from federal Treasury Department. Administration of a housing program would require City staffing and program development consideration.
Biodigester	Revenue Replacement, \$ TBD	- B, C, E - Schedule TBD - Eligible under infrastructure category if used to finance the generation and delivery of clean power to a wastewater system or water treatment plant	The project scope is undetermined. The Climate Change Advisory Committee has begun research on a potential project. Initial information indicates a project cost range of \$8.6M - \$10.9M. Presentation from March 17, 2021 is available for review.
Premium pay for childcare workers	Premium pay, \$ TBD	- D - Schedule TBD - Eligible, but does not meet any of the parameters	Premium pay could be provided to eligible workers in accordance with the terms of the ARPA program.
Solar panels on emergency hubs/shelters	Revenue Replacement, \$ TBD	- A, B, C - Schedule TBD	The project scope and location(s) are undetermined at this time.
Buy or lease space to medical group for former Swedish clinic to improve health care access	Not eligible	- E - Schedule TBD - This would subsidize private enterprise and would not be an eligible use of ARPA funds unless a grant was provided to an impacted business.	Additional work would be needed to determine if a grant could be provided in accordance with the terms of the ARPA program. Administration of a grant program would require consideration of additional City staffing.

Location: New Brooklyn

Project Description



Description: Construct a new 2 million-gallon reservoir to replace both of the existing tanks that are located on an easement near the High School.

Benefit: A new tank built at a sufficient elevation, and to the most recent design standards, will correct several deficiencies associated with existing tanks including: significant dead storage, pressure zone deficiencies, water quality issues, and seismic deficiencies.

Schedule: 2021: Design; 2023: Construction

Capital Funding (1000's)

2027-									
	Prior Yrs.	2021	2022	2023	2024	2025	2026	2040	Total
FUNDING SOURCES (1000's)									
General Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Fund	\$1,005	\$535	\$39	\$10,040	\$0	\$0	\$0	\$0	\$11,619
Sewer Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SSWM Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Federal Grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State Grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sub-total	\$1,005	\$535	\$39	\$10,040	\$0	\$0	\$0	\$0	\$11,619
FUNDING USES (1000's)									
Project Management	\$5	\$35	\$39	\$40					\$119
Design/permitting	\$1,000	\$500							\$1,500
Construction				\$10,000					\$10,000
Sub-total	\$1,005	\$535	\$39	\$10,040	\$0	\$0	\$0	\$0	\$11,619

Estimated Impact on Future Operating Budget (1000's)

[illegible]

Number: 00823

Location: 5530 Eagle Harbor Drive

Project Description



Description: Replacement of an existing deep concrete culvert that shows signs of failure.

Benefit: Preservation of roadway and drainage system.

Schedule: 2020: Design and permitting; Construction deferred until permits are in place.

Capital Funding (1000's)

[illegible]

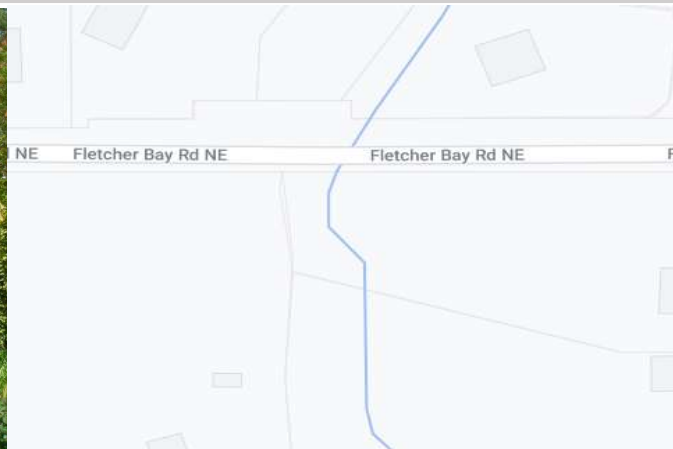
Estimated Impact on Future Operating Budget (1000's)

[illegible]

Number:

Location: Fletcher Bay Road west of New Brooklyn

Project Description



Description: The Springbrook Fish Weir/Passage project proposes to replace the existing culvert at Springbrook Creek with an open box/bridge structure and streambed restoration.

Benefit:

Schedule: YR 1: Design

Capital Funding (1000's)

	Prior							2027-	
	Yrs.	2021	2022	2023	2024	2025	2026	2040	Total
FUNDING SOURCES (1000's)									
General Fund	\$0	\$50	\$0	\$50	\$0	\$0	\$0	\$0	\$100
Water Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SSWM Fund	\$0	\$50	\$0	\$50	\$0	\$0	\$0	\$0	\$100
Federal Grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State Grant	\$0	\$85	\$0	\$1,000	\$0	\$0	\$0	\$0	\$1,085
Sub-total	0	185	0	1100	0	0	0	0	1285

FUNDING USES (1000's)

Project Management	\$4	\$50	\$54
Design/permitting	\$181	\$50	\$231
Construction		\$1,000	\$1,000
Sub-total	0	185	0
		1100	0
		0	0
		0	0
		0	0
		0	1285

Estimated Impact on Future Operating Budget

[illegible]