



CITY OF  
BAINBRIDGE ISLAND

ENVIRONMENTAL TECHNICAL  
ADVISORY COMMITTEE  
REGULAR MEETING  
THURSDAY, APRIL 18, 2019  
3:00 PM – 5:00 PM  
COUNCIL CONFERENCE ROOM  
280 MADISON AVENUE NORTH  
BAINBRIDGE ISLAND, WA 98110

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## **AGENDA**

**CALL TO ORDER / ROLL CALL / ACCEPT OR MODIFY AGENDA / CONFLICT OF INTEREST DISCLOSURE**

**3:00 PM** CALL-IN NUMBER: 206-780-8633

<b>MEMBERS:</b>	JASON FLOWERS	JUAN ROVALO
	DYLAN FRAZER	STEVE SAEPOFF
	MELANIE KEENAN	CASEY SCHMIDT
	CHARLIE KRATZER	KARL SHEARER

**COUNCIL LIAISON:** RASHAM NASSAR

**APPROVAL OF MINUTES – MARCH 21, 2019 (10 MIN)**

**COUNCIL LIAISON REPORT – RASHAM NASSAR (10 MIN)**

**CHAIR REPORT ON ACTIVITIES SINCE MARCH 21<sup>ST</sup> MEETING – CHARLIE KRATZER (20 MIN)**

**COBI DRAFT SCOPE OF WORK FOR GWMP – MORGAN SMITH, COBI CITY MANAGER (30 MIN)**

**GWMP UPDATE – ALL (20 MIN)**

**GW FACT SHEET UPDATE – ALL (20 MIN)**

**PUBLIC COMMENT (10 MIN)**

**ADJOURNMENT**  
**5:00 PM**



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## MINUTES

### Call to Order

The meeting was called to order at 3:05 pm.

### Member Attendees

Karl Shearer, Casey Schmidt, Charlie Kratzer, Dylan Frazer, Jason Flowers, Steve Saepoff (by phone and in person), Juan Rovalo (by phone), and Melanie Keenan (by phone)

**Guests:** Tami Allen (COBI Harbor Master), Michael Ditmore

**Council Liaison:** Rasham Nassar

### Presentation on Fourth of July Fireworks

- Tami Allen, the Harbormaster of COBI, gave a presentation on the use of unmanned aerial vehicles (UAV/Drones) in lieu of fireworks.
- The goal is to minimize the air and water quality impacts, and reduce noise disturbances for people, wildlife, and pets.
- This would consist of 200-400 USA-made drones supplied and programmed by Intel, similar to what was seen in the recent Olympics and Super Bowl.

### Council Liaison Report

- The Chair spoke with Morgan regarding GWMP; progress has been slow.
- Morgan will be at next ETAC meeting with draft scope of work for GWMP; come to ETAC for revisions before presenting to Council.
- The newly hired geohydrologist will be the COBI Liaison to ETAC.
- There was a discussion regarding the process of ETAC involvement with COBI staff, particularly related to GWMP.

### Chair Report

- Discussion of collaborative relationship with KPUD.
- ABC environmental conference discussion.
- Fact sheet will be discussed at next meeting.



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**Karl Shearer presentation on fish aquaculture**

- Karl discussed provided an update on the activities, risks, and regulations surrounding this issue.

The meeting adjourned at 4:38 pm.

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Charlie Kratzer, Chair

4/18/19

DRAFT

## Groundwater Management Plan (GWMP) Proposed Project Scope

### Background

The development of a Groundwater Management Plan has been identified as a priority by the City Council. The development of the plan should be informed and guided by several sources of information, including:

- Washington State Code (WAC 173-100) establishes guidelines, criteria, and procedures for the designation of groundwater management areas, subareas or zones and sets forth a process for the development of groundwater management programs for such areas, subareas, or zones, in order to protect groundwater quality, to assure groundwater quantity, and to provide for efficient management of water resources for meeting future needs while recognizing existing water rights.
- The City's Comprehensive Plan establishes many goals and policies related to water resources, including the following overall policies for groundwater planning:
  - Policy WR 1.3 - The City will provide sustainable water resource planning, protection, management and monitoring in coordination with government agencies at all levels, drinking water purveyors, Tribes, non-profit organizations, and other stakeholders.
  - WR Action #2 - Adopt an Island-wide Groundwater Management Plan. Take the actions necessary- capital improvements, code changes, etc.- to capture, clean and re-infiltrate as much stormwater as reasonably possible.
  - Policy WR 2.7 - Establish a stakeholder group to develop an Island-wide *groundwater* management plan and work with Kitsap Public Utility District to update the Kitsap County Coordinated Water System Plan.
- The City's Environmental Technical Advisory Committee (ETAC) was asked by the City Council to analyze the possible need for the development of a Groundwater Management Plan (GWMP). In addition, the City Council requested ETAC to recommend a scope and level-of-effort (e.g., budget, staffing needs) for the development of such a GWMP. To complete its assessment, ETAC reviewed the available information on the aquifers, aquifer modeling efforts, well hydrographs, and groundwater quality information.
- WRIA (Water Resource Inventory Area - 15 Kitsap) Watershed Restoration and Enhancement Committee has been established as required by recent (2018) state law. Watershed planning is required in 15 watersheds across the state. These groups must update or develop plans that help fish by protecting and improving rivers and streams in the watersheds. Components of the Watershed Restoration and Enhancement Plans must include:
  - 20-year consumptive use estimate (2018-2038)
  - Time and place impact assessment

- Projects and actions to offset estimated consumptive use and meet net ecological benefit
- Net ecological benefit determination

## Proposed Process

### Phase 1:

- The City will initiate and lead the planning process using in-house staff (hydrogeologist position authorized during 2019 City Budget process).
- The abundance of existing information on the island's groundwater resource means that pulling together the recommended informational elements of a GWMP would be primarily a matter of information mining and not information development.
- In-house staff will gather this information from the various sources (City records, KPUD, other water purveyors, DOE, DOH, consultants, WRIA) and summarize in a report that is written as an informational document for the general public.
- City staff will participate as required in the WRIA Watershed Restoration and Enhancement Committee.
- The overall goal of this first Phase should be guided by Comprehensive Plan Policy **WR 6.1** to educate and inform the public about:
  - The purpose and importance of aquatic environments, their vulnerabilities and observed status and trends in ecological health and function;
  - Expected *climate change* impacts and how these will affect the Island's water resources and their beneficial uses;
  - The characteristics of the *aquifer* system, the Island's dependency upon it and its vulnerability to contamination (including seawater intrusion) and depletion;
  - The Environmental Protection Agency's Sole Source Aquifer Designation Program and what this designation means for the Island's *aquifer* system;
  - Critical *aquifer recharge areas* (or other special conservation areas) and the purpose they serve to the *aquifer* system;

### Phase 2:

- The City will identify and bring together a stakeholder group to act as an advisory committee to help identify goals, alternatives, recommendations, and implementation of the GWMP.

## Proposed Elements of the Plan

### GWMP OUTLINE (from WAC 173-100)

#### Phase 1 Staff Work

- Section 1: Area Characterization
  - General description of topography, climate, population, land use, and water resources
  - Description of hydrogeology
  - Description of groundwater use, quality, and projected future use
  - Detailed breakdown of categories of water use, including residential (indoor and outdoor), commercial, industrial, and agricultural
  - Breakdown of pumping data from larger COBI, KPUD, or community wells and from small exempt domestic wells
- Section 2: Problem Definition
  - Discussion of land and water use activities that could affect the groundwater quality and quantity (commercial, municipal, and industrial discharges; leaking tanks; waste disposal; stormwater; agricultural activities; improperly constructed or abandoned wells)
  - Identify any issues related to seawater intrusion or other contamination, water table declines, or depletion of surface waters

#### Phase 2 Stakeholder Group Work

- Section 3: Identifying water quantity and quality goals and objectives which
  - Start with policies already identifies in the City Comprehensive Plan
  - Recognize existing and future uses of the aquifer
  - Are in accordance with relevant water quality regulations
  - Recognize annual variations in aquifer recharge and other hydrogeologic factors
- Section 4: Alternatives
  - Outline various land and water use management strategies for achieving the goals and objectives in Section 3 while addressing each of the groundwater problems discussed in Section 2
  - Priority alternative strategies shall be evaluated in terms of feasibility, effectiveness, cost, time and difficulty to implement, and degree of consistency with local comprehensive plans and water management programs such as the coordinated water system plan
- Section 5: Recommended Management Strategies
  - Management strategies from Section 4 that are recommended for implementation
- Section 6: Implementation
  - Provide a detailed work plan for implementing each aspect of the groundwater management strategies presented in Section 5, including a listing of responsible parties and a schedule for implementation

- Where possible the work plan should also include recommended policy statements, interagency agreements, and proposed amendments to local comprehensive plans, coordinated water system plans, and others as appropriate.

## Existing and Potential Management Strategies

- Existing programs that could be recommended to continue or expanded;
  - Maintain a groundwater monitoring network that collects water levels, water quality (especially chloride and nitrate) and production amounts. Encourage the inclusion of exempt wells in the network. Include shoreline wells to provide an early-warning network for seawater intrusion.
  - Expand assessment of groundwater withdrawals to determine whether they could be coordinated on an aquifer basis, such as pumping from deep aquifers in the summer and shallow aquifers in the winter.
  - Continue to apply low-impact development (LID) requirements for new development and re-development
  - In accordance with WAC [365-190-100](#), the entirety of Bainbridge Island is classified as an aquifer recharge area to preserve the volume of recharge available to the aquifer system and to protect groundwater from contamination. Critical aquifer recharge areas could be identified for higher level protection..
  - Continue to apply stringent requirements and incentives for conservation of open space and stream habitat.
  - Continue efforts to reduce use of fertilizers, herbicides and pesticides.
- There are numerous potential new and/or expanded management strategies identified as policies in the City Comprehensive Plan, so the work of the Stakeholder Group will not be to identify the management strategies or programs, but rather to prioritize. *Some* examples of current or future management strategies or programs already identified in the Comprehensive Plan are (not a complete listing):
  - **Policy WR 2.2** Identify and assess areas of high *aquifer recharge* as part of a *land use* application. Minimize the effect of development on these areas.
  - **Policy WR 2.3** To promote efficient use of *groundwater* resources, encourage the expansion of existing water systems rather than encouraging shallow or individual residential wells.
  - **Policy WR 2.4** Assess the impacts of proposed activities and development on the flow of springs and *streams* and levels of *wetlands* that are either sustained by *groundwater* discharge or contribute *recharge* to *groundwater* and require an assessment of anticipated hydrologic impacts. Activities or development may be restricted if the report indicates any adverse impacts.
  - **Policy WR 2.5** In cooperation with the appropriate regulatory agencies (e.g., Washington State Department of Health and the Kitsap Public Health District) institute new wellhead protection procedures.
  - **Policy WR 2.6** Reduce the use of pesticides and herbicides by encouraging integrated pest management techniques and less toxic alternatives.



- **Policy WR 2.8** Develop an incentive-based program to encourage exempt well owners to regularly monitor and report the quality of their well water and identify leaks using tools such as flow meters
- **Policy WR 2.9** Recognizing that the Island *aquifer* system is a Sole Source *Aquifer* as designated by EPA, consider creation and application of one or more aquifer conservation zones for appropriate areas of the Island and institute an added level of development and re-development permit review to prevent or mitigate potential pollutant-generating activities or activities that could affect stormwater runoff and aquifer recharge associated with a proposed *land use*. The Island's aquifers are protected through critical area regulations and Revised Code of Washington (RCW) 36.70A.550.
- **Policy WR 2.10** Retard seawater intrusion into our groundwater through the development and application of a comprehensive seawater intrusion prevention program.
- **Policy WR 2.11** Develop a water conservation program for all water uses on the Island.
- **Policy WR 2.12** Encourage water re-use and reclamation to serve as a supplementary source for high-water users such as industry, parks, schools and golf courses as approved by the Washington State Department of Health.
- **Policy WR 2.13** Require the retention of native landscapes to promote water quality and to reduce the need for irrigation.
- **Policy WR 2.14** Develop a program that incentivizes and facilitates innovative methods for homeowners and business owners to use stormwater and grey water as approved by the Washington State Department of Health and the Kitsap Public Health District.
- **Policy WR 2.15** Maintain a comprehensive program of *groundwater* data gathering, analysis, and reporting including modeling, hydrogeologic and geologic studies, and monitoring of static water levels, water use, water quality, surface water flows and acquisition of other data as necessary.
- **Policy WR 2.16** Develop and maintain a publicly-available system to report groundwater levels on a timely basis.
- **Policy WR 3.10** Work with state and local health departments to evaluate the merits of new technologies such as grey water capture, package treatment plants and composting toilets as alternatives to septic and sewer systems.
- **Policy WR 3.16** Ensure a comprehensive program of surface water inventory, data gathering and analysis. The program *shall* include monitoring and assessment of physical, chemical and biological health of surface water ecosystems to include *streams*, ephemeral *streams*, lakes, *wetlands* and marine waters. This may include water, flow, sediment, habitat, pollutants, submerged aquatic vegetation, fish and shellfish tissue, aquatic species diversity and other ecosystem health indicators.
- **Policy WR 3.17** Support a community-wide program to educate Island residents about alternatives to using and disposing of herbicides, pesticides, and other household chemicals, to reduce impacts to marine shoreline areas, wetlands, streams, and other environmentally sensitive areas.
- **Policy WR 4.7** Develop and actively enforce a strong *low impact development (LID)* ordinance to require any and all *LID* methods and practices for new development and redevelopment to the maximum extent practicable and reasonable.
- **Policy LU 12.4** Protect *aquifer recharge* functions throughout the Island, all of which is an *aquifer recharge area*, through the application of *critical areas*



*regulations*, Shoreline Master Program use regulations, *low impact development regulations*, and the wellhead protection regulations administered by the Kitsap Health District.

- **Policy U 11.6** Encourage and support water utilities to enter into cooperative activities, such as jointly managed operations, shared storage, and construction of interties, to manage water resources and systems more efficiently, economically, and safely.
- **Policy U 11.7** Encourage and facilitate consolidation of water systems, with particular emphasis on mergers of contiguous and small systems, to manage water resources and systems more efficiently, economically, and safely.
- **Policy U 11.8** Conduct a study of consolidation of water systems owned by the City and Kitsap Public Utility District. Pursue long-term consolidation of larger water systems.
- **Policy U 11.9** Implement conservation measures through education and regulation with emphasis on limiting and reducing demand.
- **Policy U 13.5** Minimize disruption and/or degradation of natural drainage systems, minimize impervious areas by restricting site coverage, and encourage site permeability by retaining natural vegetation and buffers, and specifying use of permeable materials.
- **Policy U 13.6** Manage surface water in a manner which prevents pollutants from industrial, commercial, and agricultural land uses from entering ground or surface waters.