



CITY OF
BAINBRIDGE ISLAND

CLIMATE CHANGE
ADVISORY COMMITTEE
REGULAR MEETING
WEDNESDAY, APRIL 17, 2019
6:15 – 7:45 PM
CITY HALL
COUNCIL CONFERENCE ROOM
280 MADISON AVENUE NORTH
BAINBRIDGE ISLAND, WA 98110

AGENDA

Members: Derik Broekhoff Gary Lagerloef Nora Fern Nickum
 Michael Cox (Co-Chair) David McCaughey (Co-Chair) Deborah Rudnick
 Lara Hansen Michelle McClure James Rufo-Hill

Liaison: Councilmember Joe Deets

6:15 Call to Order / Roll Call / Accept or Modify Agenda / Conflict of Interest Disclosure

6:20 Approve March 2019 minutes

6:25 Public Comment

6:30 Updates on 2019/2020 CCAC Work Plan

- Meeting with City Manager Morgan Smith
- Green House Gas Inventory (Action 3.1)
- Meeting w/Utility Advisory Committee (Action 4.1)
- Community Solar Project (Action 4.4)
- SLR Analysis (Action 10.1)
- Climate and Energy Forum (Action 11.3)
- Outreach to Parks and Schools (Action 11.5)
- Other

7:35 CCAC Candidates Interview (May 20)

7:45 Adjourn



MINUTES

Present: Committee members Michael Cox, Lara Hansen, Gary Lagerloef, David McCaughey, Michelle McClure, Nora Fern Nickum, James Rufo-Hill; Council Liaison Joe Deets

Absent: Committee members Derik Broekhoff, Deborah Rudnick

Public: Deborah Weinmann, Ben Persyn, Gloria Sayler, Edwin Rymarz, Troy D. Abel

The meeting was called to order at 6:17 pm.

Minutes from the previous meeting (February 6, 2019) were approved.

Public Comment

- Edwin Rymarz shared that he has asked the City Council in the past to look at rising sea levels and soil erosion, including in the shoreline planning process.
 - i. Note: This Committee has relevant items in its workplan, and we welcome community members to be involved.

Western Washington University Intern Update

- Deb Weinmann and Ben Persyn, students at WWU's Huxley College of the Environment, will be interns of Climate Action Bainbridge:
 - i. Looking at community solar is part of the Committee's workplan. Ben Persyn is interested in helping the Committee analyze how community solar projects could reduce the island's greenhouse gas emissions. He plans to study potentially viable locations for community solar infrastructure—applying criteria such as cost effectiveness, environmental efficacy, and political and legal acceptability—and provide the results to the Committee by June.
 - ii. Debbie Weinmann reported that she has been looking at how other cities (e.g., Bellingham) are structuring emissions reduction goals for the transportation sector, and what mitigation strategies they have proposed.

Draft CCAC Work Plan

- The Committee's draft proposed goal is to reduce emissions by 90% by 2040 compared to 2013 levels, with interim goals to ensure that we are making progress. The greenhouse gas inventory that just got underway is likely to use 2013 data, making that a solid baseline. We may adjust the goal based on the final inventory results (expected by July 2019) and outcomes from the current state legislative session.
- The Committee reviewed the draft mitigation, adaptation, and community engagement actions in its workplan, clarifying leads and timelines for each action.

Updates

- The *Idle Threat* movie is being shown at the library on April 4.
- The Climate and Energy Forum will have a public session on April 20 from 10am-noon. This one will focus on how we can reduce greenhouse gases from energy on the island. Future events will focus on transportation and adaptation.
- Arctic sea ice is at a lower level than it was last year on this date. We are now where we were predicted to be in 2050.

The meeting was adjourned at 8:10 pm.

Bainbridge Island Climate Change Advisory Committee: Draft 2019/2020 Workplan (April 15th, 2019)

Section 1: Background

The Bainbridge Island City Council established the Climate Change Advisory Committee (CCAC) in the fall of 2017¹. The CCAC was established to serve as a technical and planning advisory committee to the city council, city manager, and department of planning and community development staff on issues related to climate change as directed by the City Council.

More specifically, the CCAC was tasked with assisting the city in implementing the climate related goals and policies of the comprehensive plan² by undertaking several tasks as expeditiously as committee and city resources allow as outlined in Ordinance 2017-13³.

The plan that follows is for calendar year 2019 and 2020. We believe it is more efficient to provide a workplan for two years as many of the actions will occur over two years or more.

¹ Bainbridge Island City Council. Ordinance 2017-13. May 17, 2017. <https://www.bainbridgewa.gov/DocumentCenter/View/8510/Ordinance-No-2017-13-Climate-Action-Advisory-Committee-Approved-050917?bidId=>

² **Guiding Principle #7 Reduce greenhouse gas emissions and increase the Island's climate resilience.**

Guiding Policy 7.1 Mitigation: Participate with state, regional and local partners to reduce greenhouse gas emissions consistent with the 1990 benchmark and future year targets set forth in state law, educate the public about climate change and incentivize Island activities including land use patterns and building practices that reduce greenhouse gas emissions.

Guiding Policy 7.2 Adaptation: Minimize or ameliorate the impacts of climate change on our community and our Island's ecosystems through climate-informed policies, programs and development regulations.

Guiding Policy 7.3 Evaluate the climate vulnerabilities and implications of City actions and identify policies that alleviate those vulnerabilities. Consider the effects of shifting conditions (sea level rise, changing rainfall patterns, increasing temperatures and more extreme weather events) and the effects they cause (altered vegetation, changing water demands, economic shifts).

³ **Tasks for CCAC**

1. Provide advice and/or recommendations to the city council or city staff, as appropriate, on methods of completing a baseline island-wide greenhouse gas (GHG) inventory for the city.
2. To the degree directed by the city council, assist with or manage the completion of a baseline island-wide GHG inventory.
3. Provide advice and/or recommendations to the city council or city staff, as appropriate, related to city GHG emission reduction targets.
4. Work with city staff, as appropriate, to complete and recommend to the city council a city climate action plan and implementation strategy.
5. Provide advice and /or recommendations to the city council or city staff, as appropriate, on how to measure progress toward meeting the city's GHG emission reduction targets and adaptation actions.
6. As directed by the city council, assist the city with participation in regional climate change efforts.
7. Provide education and outreach to the public regarding climate change and the work of the committee and the city relating to climate change.

Section 2: Proposed Goals

The CCAC believes that in order to achieve the comprehensive plans guiding principles for climate change and complete the specific tasks requested by the City Council, the CCAC needs to establish goals that can be measured and tracked over time. At this time, the CCAC is proposing one goal in each of the three areas: mitigation, adaptation, and community engagement. The mitigation goal has a specific timeframe while the adaptation and community engagement goals are more qualitative in nature. As we progress in the implementation our workplan we may develop more quantitative goals for the adaptation and community engagement areas. The CCAC believes these three areas are consistent with the guiding principles in the Comprehensive Plan. The goal and the basis for the goal are included in Table 1.

Table 1: Proposed Goals for Mitigation, Adaptation, and Community Engagement

Area	Goal	Basis
Mitigation	By 2040 Bainbridge Island will reduce its greenhouse gas emissions by 90% compared to 2013 levels with interim goals of reducing greenhouse gases by 25% by 2023 and 60% by 2033 compared to 2013 levels. ⁴	<p>The urgency to dramatically reduce our greenhouse gas emissions is highlighted in a 2018 report from the Intergovernmental Panel on Climate Change⁵ that indicated in order to keep global temperatures below 1.5 degrees Celsius compared to post-industrial levels will require net zero global carbon emissions by 2050. Net zero global carbon emissions mean some of those emissions can be offset with carbon credits.</p> <p>We selected a 90% greenhouse gas emissions goal, because we did not want to utilize carbon offsets in our goal as carbon offsets can be difficult to evaluate and verify.</p> <p>We selected the year 2040 because we wanted to achieve our goal earlier than 2050.</p> <p>We selected 2013 because this is the baseline year that Cascadia will use in the GHG inventory. We will evaluate after we receive the GHG inventory if it is possible to hindcast to 2005. This is the year used by the USA in the Paris agreement.</p> <p>We selected interim targets of 2023 and 2033 because this provides a 10 year progress report for the Island.</p>

⁴ We will revisit this goal after the 2019 State Legislative session and we receive the greenhouse gas inventory for the Island. There are several bills that may impact meeting this goal and the inventory will also inform the probability of meeting these goals.

⁵ IPCC, 2018: Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. <https://www.ipcc.ch/sr15/>

Area	Goal	Basis
Adaptation	Bainbridge Island is climate savvy, and can withstand the impacts of climate change (e.g., sea level rise, warming temperatures, and changing precipitation patterns, changing vegetation).	<p>As an Island community Bainbridge Island is vulnerable to climate change. In fact, we are already experiencing the effects of climate change and are committed to much more change in the coming years. To this end, it is prudent governance to both understand the potential implications of climate change (vulnerabilities) and reduce those vulnerabilities to our community (risk reduction or adaptation). Failing to plan for the impacts of climate change and act to avoid them would result in long-term harm to our Island’s people, culture, economy and environment.</p> <p>By 2020, Bainbridge Island will have a formal process to evaluate all permits and expenditures for their climate vulnerability and a standardized approach to reduce that vulnerability.</p> <p>By 2019, Bainbridge Island will have tools to educate the community about climate vulnerability and the need to implement adaptation.</p>
Community Engagement	The City of Bainbridge Island inspires action across the community and partners with local and regional organizations to take meaningful climate change mitigation and adaptation actions.	<p>Community engagement is essential to effectively implement actions throughout this workplan and to achieve the overarching mitigation and adaptation goals; as such, community engagement is interwoven in the mitigation and adaptation sections. Given its importance and its cross-cutting nature, we are also calling it out with its own goal.</p> <p>We need to increase public understanding and awareness of the magnitude and consequences of climate change in order to create engagement in and support for mitigation actions.</p> <p>We need to work with extant community groups to disseminate information and achieve adaptation and mitigation goals and improve coordination/collaboration with other City advisory committees and Bainbridge Island taxing entities.</p> <p>We need to foster regional collaboration to support and advise the City in engaging in regional climate change efforts, with benefits such as sharing best practices and lessons learned.</p>

Over time the CCAC plans to propose additional goals for the different areas. For example, the CCAC envisions proposing goals for moving the Island to 100% clean, renewable energy or dramatically reducing greenhouse gas emissions from transportation or establish green building standards for all Island projects.

Table 2 provides a road map for the different areas the CCAC will be concentrating its efforts over the next two years.

Table 2: Road Map for CCAC 2019/2020 Workplan

Area	Sub-Work Areas
Mitigation	Greenhouse Gas Emissions Inventory
	Energy Use <ul style="list-style-type: none"> - Energy provider - Energy conservation and energy efficiency - Local renewable energy sources
	Transportation <ul style="list-style-type: none"> - Public Transportation - Electric Vehicles - Non-motorized transportation infrastructure
	Buildings
	Land-Use/Forestry/Agriculture
	Waste Management
	Consumption
	Adaptation
Risk Reduction	
Community Engagement	Community Awareness
	Island Collaboration
	Regional Collaboration

Section 3: Mitigation

As highlighted above, the urgency to dramatically reduce our greenhouse gas emissions is highlighted in a 2018 report from the Intergovernmental Panel on Climate Change⁶ that indicated in order to keep global temperatures below 1.5 degrees Celsius compared to post-industrial levels will require net zero global carbon emissions by 2050. This is also supported by the 4th National Climate Assessment⁷ and many other scientific publications that indicated the impacts of climate change on our communities.

Goal: By 2040 Bainbridge Island will reduce its greenhouse gas emissions by 90% compared to 2013 levels with interim goals of reducing greenhouse gases by 25% by 2023 and 60% by 2033 compared to 2013 levels^{8,9}

We are proposing actions in seven areas for mitigation for 2019/2020.

- 1. Greenhouse gas emissions** - Need to complete GHG emissions inventory to establish baseline for measuring progress;
- 2. Energy Use** – Need to move towards 100% clean, renewable electrical energy source for Island, increase energy conservation and energy efficiency in our buildings, and encourage use of renewable energy on the Island.
- 3. Transportation** – Need to increase use of public transportation, encourage electrification of ferry fleet, increase use of electric vehicles; and support development of infrastructure to increase biking and walking on Island.
- 4. Buildings** – Need to develop green building standards for public, residential, and commercial buildings on Island.
- 5. Land Use/Forestry/Agriculture** – Need to develop guidelines and strategies to reduce GHG emissions in development and work with local entities to develop strategies to preserve the existing stock of forest and to promote sustainable agriculture on the Island;
- 6. Waste Management** – Need to develop food waste diversion programs and evaluate our wastewater facility to reduce GHG emissions.
- 7. Consumption** – Need to provide education how individuals and businesses can reduce their carbon footprint by their individual choices.

⁶ IPCC, 2018: Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. <https://www.ipcc.ch/sr15/>

⁷ Fourth National Climate Assessment. Volume 11: Impacts, Risks, and Adaptation in the United States. 2018. <https://nca2018.globalchange.gov/>

⁸ We will revisit this goal after the 2019 State Legislative session and we receive the greenhouse gas inventory for the Island. There are several bills that may impact meeting this goal and the inventory will also inform the probability of meeting these goals.

⁹ Many Cities in Washington and around the country have established a goal of reducing greenhouse gas emissions by 80% by 2050 with different baseline years. ICLEI completed a report in 2016 that summarized goals for other cities. http://icleiusa.org/wp-content/uploads/2015/08/Measuring_Up_2015.pdf

For each of the actions areas we include: 1) description of the action; 2) whether the action is a high, medium, or low priority; a timeline to complete; 4) resources needed to accomplish; 5) CCAC Lead; and 6) status for each action. These tables will be updated every 6 months and presented to the City Council.

Section 3.1: Greenhouse Gas Emissions

In order to measure progress in reducing greenhouse gas emissions it is necessary to have a baseline from which to measure progress. Currently, Bainbridge Island does not have a baseline for greenhouse gas emissions. The GHG emissions inventory will provide that baseline. In addition, it will be important to update the GHG emissions inventory periodically to evaluate what programs are successful and which programs need to be modified. Table 3 provides the actions for 2019/2020 for greenhouse gas emissions.

Table 3: Greenhouse Gas Emissions

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
3.1: Complete Island-wide GHG Inventory: City will hire consultant to complete and Island-wide GHG emissions inventory	High	2019		Derik and Gary	Draft: May/June Final: June/July
3.2: Present findings from greenhouse gas consumption inventory: CCAC will work with City staff to present findings from the greenhouse gas consumption inventory to the public.	Medium	2019		Derik and Gary	We will schedule presentation once the Inventory is completed.
3.3: Work with High School on Annual update to GHG Inventory: CCAC will collaborate with BISD/BHS/Eagle Harbor High to add curriculum module that will include an annual GHG inventory by students	High	2020		Lara	Lara will be discussing working with a summer intern at High School
3.4: Develop COBI internal carbon pricing program: COBI would incorporate a shadow price for carbon in evaluating all new capital and procurement decisions, and/or implement a carbon fee for operations, revenues from which could be	Medium	2020		Derik and Lara	Derik has worked on carbon pricing and will meet

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
invested in energy efficiency and clean energy projects at city facilities. Each department is given a carbon budget (as well as a financial budget) for the year.					with City Council and city staff to discuss.

Section 3.3: Energy Use

Currently the City of Bainbridge Island receives about 5%¹⁰ of its electricity from clean, renewable energy sources. In Washington State electricity generation contributes about 20% of the States greenhouse gases¹¹. Bainbridge Island is currently conducting a greenhouse gas inventory for the Island, but it is anticipated that the contribution from electrical generation maybe higher than the State average since a large percentage of electrical generation in the State is from hydroelectricity. Bainbridge gets its electricity from Puget Sound Energy that has a fuel mix of over 60% fossil fuels. It is anticipated that Bainbridge Islands percent of greenhouse gases from electricity generation will be greater than the State average. The values from the inventory will be used as a baseline for evaluating potential reductions in emissions.

The Washington State legislator is considering establishing a goal of achieving 100% clean energy from electricity generators by 2045¹². Across the U.S. over 90 cities, more than ten counties and two states, have already adopted ambitious 100% clean energy goals. Six cities in the U.S.-- Aspen, Burlington, Georgetown, Greensburg, Rock port, and Kodiak Island--have already hit their targets¹³.

We believe Bainbridge Island should strive to achieve 100% clean, renewable energy in order to do our part to keep global temperatures below 1.5 degrees Celsius compared to post-industrial levels. The CCAC will be working over the next year to determine the correct timeframe and interim goals to achieve 100% clean, renewable energy.

Table 4 provides specific actions for 2019 and 2020 in three areas:

- Energy provider:
- Energy conservation and energy efficiency; and
- Local renewable energy sources

¹⁰ Greenhouse Gas Emissions Inventory, Prepared for the Puget Sound Clean Air Agency by Cascadia Consulting Group. June 2018. Assume fuel mix for PSE on Page 17 was the same for Bainbridge Island.

¹¹ Washington State Greenhouse Gas Emissions Inventory: 1990-2015. Report to the Legislature. December 2018. Publication No. 18-02-043. <https://fortress.wa.gov/ecy/publications/documents/1802043.pdf>

¹² SB-5116- 2019-20. <https://app.leg.wa.gov/billssummary?BillNumber=5116&Initiative=false&Year=2019>. Accessed February 5th 2019.

¹³ 100% Commitments in Cities, Counties, and States. Sierra Club Home Page. Accessed February 5th 2019. <https://www.sierraclub.org/ready-for-100/commitments>.

Table 4: Energy Use

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
Energy Provider					
4.1: Ensure energy delivered to Bainbridge Island is from renewable, lowest GHG emissions sources: Work with the City and UAC to develop an RFP and criteria for the renewal of our island electric utility provider franchise agreement that requires delivery of 100% lowest carbon, renewable energy to all consumers on Bainbridge Island that is additive to the fuel mix of the energy provider (unless they are already 100% renewable carriers with excess product to sell).	High	2020		James, David, Gary, Derik, and Lara	UAC and CCAC have formed a subgroup to develop recommendations for City Council consideration.
Energy Conservation and Efficiency					
4.2: Incentivize reduction in propane use: Work with the City and propane providers to develop strategies to reduce GHG emissions and improve air quality from generation, transportation and combustion of propane.	Medium	2020		David	Will evaluate GHG inventory to determine how to proceed.
4.3: Limit GHG emissions from buildings: Work with the City and the design review board to develop regulations that would require that all new, retrofit, and re-development minimizes GHG emissions by 1) maximizing energy efficiency and 2) increasing renewable generation either on site or at a community renewable energy investment site. This will decrease our total grid demand decreasing the need to expand our energy delivery infrastructure (which is costly) and decrease greenhouse gas emissions from a mixed grid.	High	2019/2020		Mike and Lara	Design Review Board developing green building standards for Island. We will follow their progress and review their work.
Island Renewable Energy					
4.4: Create community renewable energy project sites: Work with the City and others to develop renewable energy projects on the Island. Not all sites on Bainbridge Island are suitable for renewable energy generation, but local renewable generation is	High	2019/2020		David, Gary, and Mike	Ben Persyn and Joe Deets completed preliminary solar

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
part of building our resilience while decreasing our GHG emissions. Giving community members the opportunity to invest in and benefit from local generation (including financially through benefit from selling electrons into the grid) can increase local generation for those sited where it is not a functional option, and protect local tree canopy in those locations.					assessments at two sites: Vincent Road Transfer Station and Grace Church. They plan to evaluate two other sites. Ben will prepare a report.
4.5: Develop Local Micro-grids: Work with the City to evaluate harnessing local renewable energy production into local micro-grids to increase our resilience including increasing reliability.	Medium	2020		David and Mike	Will follow work of Ben above and reach out to PSE to discuss.

Section 3.4: Transportation

In Washington State, transportation is estimated to produce almost 43%¹⁴ of greenhouse gases. Bainbridge Island is currently conducting a greenhouse gas inventory for the Island, but it is anticipated that the contribution from transportation will be similar to the State wide percent of emissions. The values from the Inventory will be used as a baseline for evaluating potential reductions in emissions from transportation.

Table 5 provides specific actions for 2019 and 2020 in three areas:

- Public transportation;
- Electric vehicles; and
- Non-motorized transportation infrastructure

¹⁴ Washington State Greenhouse Gas Emissions Inventory: 1990-2015. Report to the Legislature. December 2018. Publication No. 18-02-043. <https://fortress.wa.gov/ecy/publications/documents/1802043.pdf>

Table 5: Transportation

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
Public Transportation					
5.1: Develop better understanding of park and rides: CCAC and City staff would meet with Kitsap Transit to improve the park and ride system on the Island to potential reduce GHG emissions. We would need to better understand the current locations, how are they planned and is there a plan for future park and rides.	High	2019		Nora and David	Will look into working with City when they meet with Kitsap Transit.
Electric Vehicles					
5.2: Support and incentivize electrification of transportation on island: CCAC would work with the City to create incentives to move our Island transportation fleet toward electrification in order to reduce GHG emissions and improve local air quality (e.g., reduce local car tabs for electric vehicles and develop electrical charging stations around Island).	High	2020		Deb	
5.3: Encourage School District/COBI/Parks to move towards electric fleets: CCAC would work with the school district, parks, and COBI to move towards electrification of their fleet and battery storage. Some examples can be found at https://driveevfleets.org/ of ideas from other cities.	High	2019		James and Deb	The BISD has provided Ellen with information requested. Parks is in the process of collecting information. Next step is to discuss possibility of electrifying their fleets.
5.4: Support Washington State Ferries Efforts towards electrification: City would continue to work with Washington State Ferries on the electrification of the ferries and continue to supports efforts to use VW funds to make this conversion. Also ask the WSF to consider lower rates for electric cars as it would also provide health benefits for their deck hands.	High	2019		David and Deb	WSF moving ahead with electrifying their fleet. We will follow their progress.

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
5.5: Explore Options with Kitsap Transit to move towards electrification of their fleet: City, CCAC, and Multi-Modal committee would meet with Kitsap Transit to learn of their plans for fleet electrification and how they could increase the use of electric buses.	High	2019		James and Nora	Same as 5.1. Work with City to attend meetings with Kitsap Transit when possible.
5.6: Develop strategies to encourage use of electric vehicles: City would develop strategies for increasing electric vehicle infrastructure and access for high density housing. CCAC would evaluate how many electric cars on the Island and explore innovate ways to use cars during low production time.	Medium	2020		David, Deb, Derik, and James	Debbie Weinman (Western intern) is completing case studies of several cities looking at how they are moving towards more sustainable transportation policies. She has requested how many cars and electric cars are on the Island.
5.7: Explore the use of electric vehicles with UPS/Fedex/USPS: CCAC would meet with the deliver companies to determine if they have pilot programs with electrification or if we could work with them to develop a pilot program. Also, we could prompt anti-idling programs with them.	Medium	2020		Derik	TBD.
Non-Motorized Transportation Infrastructure					
5.8: Work with the Council, Multi-modal Committee (MMC), and Bainbridge Mobility Alliance (BMA) on possible second levy for non-motorized transportation: CCAC would work with all the groups to provide support on efforts to advance non-motorized transportation on the Island and increase island non-autocentric transit paths.	High	2019		Mike	Had meeting with BMA and will meet with City Council. City asks for RFQ for study on increasing walking and biking on Island. Will follow developments.
5.9: Introduce hierarchy of transit concept for adoption by council: CCAC would work with the MMC and BMA to develop strategies that that promote transit equity and	Medium	2020		Deb and Mike	TBD

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
community safety by considering the most vulnerable, then design and implement transit to support pedestrians, bicycles, mass transit and individual cars, in that order.					
5.10: Anti-idling ordinance: CCAC would work with MMC and BMA to develop an anti-idling ordinance for the Island especially for the ferries.	Medium	2020		James	School representative attended movie “Idle Threat” and is pursuing possibilities with information from movie.

Section 3.5: Buildings

In Washington State, residential, commercial, and industrial buildings are estimate to provide almost 21% of greenhouse gases¹⁵. Bainbridge Island is currently conducting a greenhouse gas inventory for the Island, but it is anticipated that the contribution from buildings will be similar to the State wide percent of emissions. The values from the greenhouse inventory will be used as a baseline for evaluating potential reductions in emissions.

Table 6 provides specific actions for 2019/2020 for buildings.

Table 6: Buildings

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
6.1: Support development of mandatory Green Building standards for all City-owned buildings over 5000 square feet: Work with Design Review board, city staff, and others to develop a mandatory green building program.	High	2020		Mike, Lara, Michelle, and Deb	Design Review Board along with City developing Green Building standards. Will follow progress.

¹⁵ Washington State Greenhouse Gas Emissions Inventory: 1990-2015. Report to the Legislature. December 2018. Publication No. 18-02-043. <https://fortress.wa.gov/ecy/publications/documents/1802043.pdf>

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
6.2: Support development of mandatory and/or incentive programs for residential and commercial development: Work with the design review board and City to develop incentive programs that could include reducing plan check and building permit fees and expedited permit review for those projects that pursue some minimum green building standards.	High	2019		Mike, Lara, Michelle, and Deb	Will follow progress with Design Review Board

Section 3.6: Land Use/Forestry/Agriculture

Decisions about land use and land cover can affect, positively and negatively, how much our climate will change and what kind of vulnerabilities humans and natural systems will face as a result. Because humans control land use, and to a large extent, land cover, individuals, businesses, non-profit organizations, and governments can make land decisions to adapt to and/or reduce the effects of climate change. Adaptation options include varying the local mix of vegetation or elevating homes to reduce exposure to sea level rise or flooding. Land use options for mitigating climate change include expanding forests to accelerate removal of carbon from the atmosphere and altering agricultural management practices to increase carbon storage in soil¹⁶.

Table 7 provides specific actions that we propose to assist to meet the building and land use targets.

Table 7: Land Use/Forestry/Agriculture

Action	Priority	Timeline	Staff Times	CCAC Lead	Status
7.1: Create Island-wide land use plan that reflects mitigation and adaptation goals: City would develop guidelines to encourage siting of projects to reduce greenhouse gas	High	2020		Michelle, Deb, and Lara	Meet with City Staff to discuss.

¹⁶ Fourth National Climate Assessment. Volume 11: Impacts, Risks, and Adaptation in the United States. 2018. Land Use and Land Change Chapter. <https://nca2014.globalchange.gov/report/sectors/land-use-and-land-cover-change>.

Action	Priority	Timeline	Staff Times	CCAC Lead	Status
emissions: This could include where to develop to decrease GHG emissions (e.g., decrease miles driven), maintain open space services (e.g., water recharge, water filtration, air filtration, temperature amelioration), increase permeable surfaces (built and natural), manage for change, etc.					

Section 3.7: Waste Management

In Washington State, solid waste and wastewater management contribute about 4% of total greenhouse gases¹⁷. Bainbridge Island is currently conducting a greenhouse gas inventory for the Island, but it is anticipated that the contribution from solid waste and wastewater management will be similar to the State-wide percent of emissions. The values from the greenhouse inventory will be used as a baseline for evaluating potential reductions in emissions. Table 8 provides specific actions to reduce GHG emissions for waste management.

Table 8: Waste Management

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
8.1: Increase use of greenwaste bins for household and commercial food waste: City would develop food waste diversion program for households and commercial businesses to greenwaste bins for compost or energy production to eliminate landfilling of food waste which causes methane emissions	Medium	2019		David and Nora	BI zero waste is working on this. We will follow their progress and work with them as needed.
8.2: Explore local ordinance for plastic waste reduction: Work with zero waste and others to	High	2020		Nora	Work with zero waste.

¹⁷ Washington State Greenhouse Gas Emissions Inventory: 1990-2015. Report to the Legislature. December 2018. Publication No. 18-02-043. <https://fortress.wa.gov/ecy/publications/documents/1802043.pdf>

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
develop an ordinance to reduce plastic waste on the Island.					

Section 3.8: Consumption

The consumption of goods and services by humans contributes significantly to greenhouse gases. The choices we make on the food we eat, the type of vehicle we drive, how often we travel by airplane, the amount of goods we purchase, and the type of housing we select all have a large impact on global greenhouse gas emissions. When developing the actions outlined in this workplan we will strive to include discussion of what we can do as a City, Community, and individually to make different choices on how we use goods and services. Table 9 includes actions for 2019 and 2020.

Table 9: Consumption

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
9.1: Work with City Green Team: CCAC would work with the City Green Team on sustainable purchasing and other activities to reduce the City’s greenhouse gas footprint.	Medium	2019		Mike	Reach out to City Green team to discuss what they are doing and how we can work with them.
9.2: Develop a per-capita community consumption: Determine what our community consumes on a per-capita basis and translate that into a GHG contribution.	Medium	2020		Lara	TBD

Section 4: Adaptation

As an Island community Bainbridge Island is vulnerable to climate change. In fact, we are already experiencing the effects of climate change and are committed to much more change in the coming years. To this end, it is prudent governance to both understand the potential implications of climate change (vulnerabilities) and reduce those vulnerabilities to our community (risk reduction or adaptation). Failing to plan for the impacts of climate change and act to avoid them would result in long-term harm to our Island’s people, culture, economy and environment.

Goal: Bainbridge Island is climate savvy, and can withstand the impacts of climate change (e.g., sea level rise, warming temperatures, changing precipitation patterns, and changing vegetation).

We propose actions in two areas.

1. Vulnerability Assessments – We would work with the City to conduct vulnerability assessments around the Island and provide that information in community forums.

2. Risk Reduction – We would work with the City to develop a process for using the information from the vulnerability assessments for evaluating projects on the Island and communicating that process to citizens.

Table 10 provides specific actions for 2019/2020 for adaptation.

Table 10: Adaptation

Action	Priority	Timeline	Staff Lead	CCAC Lead	Status
Vulnerability Assessments					
10.1: Map Climate Impacts to COBI assets: CCAC in collaboration with City staff would start with a sea level rise evaluation to evaluate the vulnerability of COBI assets including roads (motorized & non-motorized), other infrastructure (sewage treatment, water, buildings), and marine access. This first assessment will also provide a template for subsequent assessments. As needed, City staff will map additional climate impacts (e.g., fire, drought, vegetation change, precipitation changes).	High	2019 – Sea level rise 2020 – Other Analysis		James	SLR: Draft evaluation May and Final June. Other analysis will take place as resources allow.
10.2: Hold community discussions around vulnerable of COBI and non-COBI sites: City would host community conversations from the sea-level analysis and other analyses regarding findings and how to adapt to those changes.	High	2019		James and David	Will organize sessions with City after James completes his analysis. This will include presentations to Parks and BILT and others.
10.3: Create tool for use in the evaluation of vulnerability of COBI and non-COBI assets and activities on Bainbridge Island: CCAC would work with City to identify, and eventually require,	High	2019		Lara	Tool completed. Applied for funding to train City staff on use of tool.

Action	Priority	Timeline	Staff Lead	CCAC Lead	Status
the use of a tool (e.g., Climate Change Adaptation Certification) for use in evaluation of climate vulnerability of any activity or investment on Bainbridge Island. This would also include training for City staff, Council, and Committees in the use of the tool. Aforementioned climate impact maps may be used to inform these vulnerability assessments.					
Risk Reduction					
10.4: Incorporate vulnerability evaluation tool into all COBI (departments, committees and council) workflow in order to identify vulnerability and risk reduction opportunities: City, Council and committees will develop processes by which all decisions, including permits, planning, and budgetary decisions, are evaluated for their vulnerability to climate change, and determinations can be made based on this assessment in order to ensure better long-term outcomes in the face of factors such as sea level rise, altered precipitation patterns, increasing temperatures and other climate related hazards. CCAC can advise in this process.	High	2020		Lara, Deb, Michelle, and Mike	Will engage with City Staff and others.
10.5: Incorporate vulnerability evaluation tool into all non-COBI projects to identify vulnerability and risk reduction opportunities: Similar to 10.4 but apply to non-COBI projects.	High	2020		Lara, Deb, Michelle, and Mike	Will engage with City Staff and others.
10.6: Community training on adopted risk reduction process: City would host community conversations with vulnerable sites and how to adapt to those changes.	High	2020		Lara, Deb, and Mike	TBD

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Section 5: Community Engagement

Community engagement is essential to effectively implement actions throughout this workplan and to achieve the overarching mitigation and adaptation goals; as such, community engagement is interwoven in the mitigation and adaptation sections. Given its importance and its cross-cutting nature, we are also calling it out with its own goal. Areas of the workplan where community engagement is essential for success include:

- Work with community groups is an integral component of the actions in Tables 4, 5, 6, and 8;
- Work with the Council, Multi-modal Committee, and Mobility Alliance on possible second levy for non-motorized transportation is included in Table 5;
- Increase awareness and helping with community preparation is embedded the actions on vulnerability assessments and integration in City Operations in Table 8 and 9; and
- Hold community discussions around vulnerable sites, in Table 10, is also an example of community engagement.

Goal: The City of Bainbridge Island inspires action across the community and partners with local and regional organizations to take meaningful climate change mitigation and adaptation actions.

We propose actions in three areas for 2019/2020.

- 1. Increase Community Awareness** – Increase public understanding and awareness of the magnitude and consequences of climate change in order to create engagement in and support for mitigation actions.
- 2. Encourage and Support Island Collaboration** – Work with extant community groups to disseminate information and achieve adaptation and mitigation goals and improve coordination/collaboration with other City advisory committees and Bainbridge Island taxing entities.
- 3. Foster Regional Collaboration** – Support and advice the City in engaging in regional climate change efforts, with benefits such as sharing best practices and lessons learned.

Table 11 provides specific actions that we propose for community engagement in 2019-2020.

Table 11: Community Engagement

Action	Priority	Timeline	Staff Time	CCAC Lead	Status
Increase Community Awareness					
11.1: Create Climate Change Week: Council proclamation to designate a week each year (in conjunction with Earth Month) for City and community evaluation of the progress made on meeting our community commitments and goals relating to reducing our contribution and vulnerability to climate change.	Medium	2020		Mike and Lara	Work with Sustainable Bainbridge this year on Earth Month but do not have a separate event. Work towards hosting events associated with Climate Adaptation Week in 2020.
11.2: Convene semi-annual City events: Collaborate with the City to convene at least semi-annual programs on issues relating to climate change and how the City is addressing this in their daily operations as well as future planning.	High	2019		Mike	June 22: Share work of BI committees on Climate Change during farmers market September: GHG Inventory
Encourage and Support Island Collaboration					
11.3: Support community events on climate change: Participate in ongoing information forums such as the Climate and Energy Forum and the Movies that Matter.	High	Ongoing		All	CCAC members are active in organizing and participating in ongoing events
11.4: Increase cooperation with other City advisory committees: Attend other relevant City Advisory Committees (e.g., Multi-modal, UAC, and ETAC) at least twice a year.	High	Ongoing		Liaisons TBD at meeting	Possible Committees: - Multi-Modal - Utilities - ETAC - Design Board
11.5: Attend Intergovernmental Working Group (IWG) – COBI, BIFD, BIPD, and BISD: Work with IWG in a collaborative approach to identify and implement mitigation and adaptation actions with buy-in, engagement, and leadership from all of these relevant entities.	High	2019 – Initial Contact 2020 – Identify actions		Mike	Need to work with other taxing entities as other parts of workplan indicate need to work with BISD, BIFD, and Parks.

Foster Regional Collaboration

<p>11.6: Foster regional collaboration: Make a recommendation to the City on regional collaborations that Bainbridge Island should participate in and the form that involvement should take. (For example, Puget Sound Climate Preparedness Collaborative; Kitsap Public Transportation, and WSF)</p>	<p>Medium</p>	<p>2020</p>		<p>Nora</p>	<p>Identify groups and evaluate possible role of CCAC.</p>
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