Town of Friday Harbor 2025 Comprehensive Plan Climate Policy Audit Memo

May 7th, 2024

Introduction

The purpose of this memo is to summarize an audit of the goals and policies from existing Town of Friday Harbor planning documents. The audit will guide the creation of the Climate and Resiliency Element of the 2025 Comprehensive Plan update. Goals and policies from the 2018 Town of Friday Harbor Comprehensive Plan, The Town of Friday Harbor Municipal Code, and the 2018 San Juan County Hazard Mitigation Plan were audited to inform this memo.

This memo includes a representative list of audited goals and policies from the documents listed above. The Commerce Climate Planning Guidebook (December 2023) policy auditing tools were applied to help identify strengths and gaps. It also includes recommendations for updates to these policies within the Town's current Element, goals and policies that can be amended and integrated into a new draft Climate Change and Resiliency Element of the 2025 Comprehensive Plan, and proposed goals and policies to be added, adapted from the Washington State Department of Commerce "Climate Menu of Measures". While the list of recommendations is not exhaustive, the goal of this audit is to integrate strong existing strategies, identify gaps of past plans, and suggest amendments to help the Town plan for the potential impacts of climate change.

Comprehensive Plan Policy Audit Framework

The audit framework, created by the Washington State Department of Commerce (Commerce), divides community assets that are potentially impacted by climate change into the following Sectors:

Exhibit 1 Sectors for the Climate Policy Audit

Agriculture & Food Systems
Buildings & Energy
Cultural Resources & Practices
Economic Development
Ecosystems
Emergency Management
Health & Well-being
Transportation
Waste Management
Water Resources
Zoning & Development

Source: Washington State Department of Commerce, Climate Element Workbook, 2024

The policies in the comprehensive plan were given an initial screening to determine whether they related to climate resilience, hazard mitigation, greenhouse gas reduction, climate equity, or none of these. The goals and policies that did not meet the criteria for these four policy focus areas were removed from the audit and the remaining goals and policies were audited using the Commerce guidebook and robust map and tabular data as well as the maps included in the Friday Harbor Climate Impacts Assessment.

Each goal and policy were sorted by focus area, sector, associated climate hazards, impacts, and indicators. If the goal or policy was determined to be insufficient in either establishing or meeting the goals of the Element, amendments were proposed. An overview of the audit is in the next section of this memo and sample policy amendments are in the appendices.

Comprehensive Plan Policy Audit Findings

Land Use Element

Existing Land Use Policy Audit

The Land Use Element of the 2018 Comprehensive Plan has several Sub-Elements. About 51 goals and policies of this Element partially pertained to climate change and associated hazards. Of these, 32 are deemed to be "high quality" or "medium quality"[1] policies that should be kept as written in the 2025 Comprehensive Plan update. Approximately 10 policies did not directly address climate impacts or had unclear language that we recommend should be amended. Eight policies are recommended for consolidation into five policies. One policy related to off-street parking is recommended for removal or reconsideration as it presents possible negative externalities related to impervious surfaces, stormwater management, and aquifer recharge. A small sample of the audited policies is included in the appendices of this memo.

Proposed Land Use Policies

The recommended changes to the goals and policies of the Land Use Element should provide a sufficient framework to address the climate hazards facing Friday Harbor in relation to the Zoning and Development Sector at this time.

Specific Changes to Environment Sub-Element of Land Use Element

One recommended change to the Land Use Element is to remove the Environment Sub-Element and use these goals and policies as a substantial starting point for the new Climate Change and Resilience Element. Many of the goals and policies in this Sub-Element related to land use and, specifically, critical areas would be better served in conjunction with other climate related goals and policies and cited in the Environment Sub-Element of the Land Use Element.

Housing Element

Existing Housing Policy Audit

The goals and policies of the Housing Element present significant opportunities to promote housing affordability, increase densities, and ensure the economic future of the town. While housing policies may play a role in reducing the overall greenhouse gasses produced by a community through environmentally conscious building practices or transit/bicycle/pedestrian-oriented housing development, only three policies addressed the hazards related to climate

[1] Definition from Commerce workbook is as follows: How well does this policy address climate priorities? (Low Quality = nothing with teeth; Medium Quality = some teeth/climate considerations; High Quality = addresses priorities & climate risk well)

inequity and greenhouse gas (GHG) reduction. Goal HO-1 and Policy HO-14 promote housing affordability, which can increase the climate resilience of low-income individuals in the town, and are deemed to be sufficient. Policy HO-12, which cites the policies of the Land Use Element, could present possible unforeseen consequences in housing growth and GHG reductions that we recommend the Town amend.

The policy states that the Town should discourage the conversion of residential areas to non-residential uses. While this policy aims to maintain housing units and help them address the affordability crisis and GMA growth targets, the policy does not address mixed use developments as a possible exception to this discouragement. A potential negative consequence of this policy is to isolate residential areas from non-residential amenities within walking distance. This may hurt the Town's ability to meet other goals such as maintaining the pedestrian character of the town and is recommended for amendment to encourage exceptions in mixed use areas.

Proposed Housing Policies

Goals and policies should be added to the Housing Element to directly address climate hazards, GHG reduction, and increased climate resilience and equity. Themes of goals and policies to be added may include the following:

Exhibit 2 Proposed Housing Element Goals and Policies

Potential Goal or Policy	Potential Benefit or Associated Goal
Goal of Increasing density to reduce the overall energy burden of housing units.	Reduce GHG produced by new housing development or the maintenance of existing housing. Denser housing uses far less energy than detached single family homes to heat, cool, and connect utilities
Policy to create climate resilient design incentives for passive heating and cooling, heat pumps, water conservation, and renewable energy generation	Provide resilience to impacts from more days of extreme heat, drought, or other climate related hazard
Policy to create program to reduce runoff and promote aquifer recharge in residential lots	Mitigate effects of urban heat island effect, mitigate flood risk, mitigate potential water resource deficiencies

Source: BERK, 2024

Transportation Element

Existing Transportation Policy Audit

The audit of the Transportation Element goals and policies highlighted some deficiencies that could exacerbate climate related impacts such as extreme heat, extreme precipitation, or flooding due to sea level rise. Most policies that were audited in the Transportation Element were adopted in 2018 to improve access to the ferry terminal and ensure efficient vehicle movement and storage throughout the jurisdiction for residents and visitors alike. However, by

not addressing the increased risk of sea level rise/flooding, habitat loss, and urban heat island effect associated with promoting vehicular traffic infrastructure as the default, the Town may have more challenges accommodating a growing population while still maintaining a pedestrian character. Currently, policies to promote walking, biking, and rolling have weaker language which is why many of those goals and policies should be rewritten to prioritize pedestrian paths, bike lanes, non-vehicular ferry ridership, and street design. Examples of recommended changes to the goals and policies can be found in the appendices of this memo.

Proposed Transportation Policies

Exhibit 3 Proposed Transportation Element Goals and Policies

Potential Goal or Policy	Potential Benefit or Associated Goal
Policies governing the safety of public employees who work to in transportation i.e. ferry staff, public works employees	Resilience to extreme heat, extreme precipitation, sea level rise, wildfire smoke (poor air quality), promoting climate equity for workers
Policies governing the use of and promoting “complete streets” including green infrastructure	Mitigating extreme heat, extreme precipitation, runoff by reducing impervious surfaces
Goals of preserving the natural environment when citing new transportation facilities and the roads that serve them	Resilience to effects of sea level rise and increased wildfire risk
Policy regarding electric powered vehicle infrastructure such as EV charging facilities, electric scooter share, and e-bikes	GHG Reduction Policy
Goals and policies which promote a low-barrier network of separated bicycle and pedestrian facilities to help mitigate vehicle traffic and minimize vehicle traffic from visitors to the town	GHG Reduction Policy

Source: BERK, 2024

Capital Facilities Element

Existing Capital Facilities Policy Audit

Capital facilities make up a significant portion of Town-owned assets. Goals and policies that govern the construction of new capital facilities must ensure resiliency to several different climate hazards. Gaps in the goals and policies of this Element are most notable as they relate to sea level rise. The facilities must be resilient to inundation from sea level rise particularly since the Town is part of an island community that is highly dependent on ferry and maritime facilities. Other hazards inadequately addressed in this section's goals and policies include drought, , and changes in precipitation severity and timing. These hazards present a risk to water and utility facilities.

The Element addresses some opportunities to reduce GHG specifically in the form of emissions from solid waste, but changes are recommended to better address this strategy as they relate to organic material recovery and recycling. Resiliency to climate related emergencies is also addressed in the existing goals and policies, specifically relating to long-term capital facilities strategies on water resource management, new resource exploration, and existing resource conservation, however the policies did not adequately address emergency management during more acute climate events that depend on adequate facilities and resources.

Examples of recommended policy amendments are included in the appendices of this memo.

Proposed Capital Facilities Policies

Exhibit 4 Proposed Capital Facilities Element Goals and Policies

Potential Goal or Policy	Potential Benefit or Associated Goal
Goal of ensuring adequate service delivery of Police, Fire, Hospital, cooling shelters, and ferry service during acute climate emergencies	Resiliency to increased wildfire risk, inundation due to sea level rise, extreme heat, and extreme precipitation
Policies that create new opportunities for backyard or semi-industrial composting with support from adjacent landowners, businesses, or non-profit organizations. Including education on best ways to dispose of organic solid waste and its importance in reducing GHG emissions	GHG reduction policy considering the degradation of organics anaerobically releases methane when landfilled (due to anaerobic decomposition). Also reduces overall waste in the solid waste stream and therefore reduces the vehicle burden of hauling to off-island landfills.

Source: BERK, 2024

Utilities Element

Existing Utilities Policy Audit

As with other sections of this policy audit, most goals and policies of the Utilities Element are not directly related to climate change and resilience. Five were deemed relevant to the climate audit as they address either GHG reduction through energy efficiency, protection of critical areas that are necessary for the Town's mitigation of ongoing climate impacts, or policies necessary to ensure resiliency of utility infrastructure in case of climate emergencies.

Similar to the land use goals and policies audit, the Utilities Element's "environmental protection" policies should be considered for addition to the 2025 Comprehensive Plan's Climate Change and Resiliency Element. However, two of the goals and policies, UTL-22 and UTL-23, address similar resiliency and critical area protection and are recommended to be consolidated into one policy.

Utilities Policies to be Added

Pending the recommended changes which can be found in this memo's appendices, the policies of the Utilities Element appear adequate to meet the provisions of climate hazard mitigation, resiliency, GHG reduction, and climate equity.

Parks and Open Spaces Element

Existing Parks and Open Spaces Policy Audit

Many of the Parks and Open Spaces Element policies direct the provision of parks and recreation services and do not pertain to climate change resilience, mitigation of existing climate related hazards, greenhouse gas reduction, or climate equity.

Proposed Parks and Open Spaces Policies

Certain policies could be added to the Parks and Open Spaces Element to better align the growth goals of the Parks and Open Spaces Element with climate resiliency in mind. The following potential goal or policy additions could be incorporated into the plan:

Exhibit 5 Proposed Parks and Open Spaces Element Goals and Policies

Potential Goal or Policy	Potential Benefit or Associated Goal
Goal of retaining or creating new open spaces whose design is appealing to residents and visitors of Friday Harbor and San Juan Island while still maintaining biodiversity and the natural environment	This goal could align with the remaining Comprehensive Plan Element's policies while still addressing future system deficiencies and habitat retention.
Policy of identifying and protecting environmentally sensitive areas that are vital to climate resilience and ensure their protection if residential or commercial development within this area is deemed impossible or ill advised.	Certain critical areas can provide natural buffers from the risks of extreme heat, inundation from sea level rise, and other hazards.

Source: BERK, 2024

Economic Development Element

Existing Economic Development Policy Audit

One Economic Development goal and two policies were determined pertinent to the audit policy focus areas. Policy ED-12 fell into the policy focus area of climate equity and aims to create a full time farmer's market in the town which can support diverse economic opportunities and is in alignment with the other goals of the comprehensive plan's cultural resources sector. This policy promotes climate equity by increasing residents' access to fresh fruits and vegetables while also ensuring that those dependent on the agricultural economy of San Juan Island can benefit from year-round income. Goal ED-2 is a policy that, once amended, can reduce the greenhouse gas burden by decreasing the distance in which town residents have to

travel for certain services. One proposed amendment to this policy is to incorporate access to multi-modal transportation or non-motorized travel options to connect mixed use developments without requiring vehicle traffic. A similar amendment was proposed for Policy ED-13 as it relates to the economic benefits of Scenic Byway designation.

Proposed Economic development Policies

Pending the recommended changes from the previous section, the Economic Development Element's policies appear adequate to meet the provisions of climate hazard mitigation, resiliency, GHG reduction, and climate equity.

Administrative Element

The goals and policies of the Administrative Element were not directly or indirectly related to the policy focus areas of this audit and were therefore not audited further. No further Administrative goals and policies are proposed to be added or amended.

Code Audit Findings

The consultant team reviewed the Town's Municipal Code for climate resilience by reviewing the priority resilience measures in Commerce's Menu of Measures (December 2023). In general, the Town has strong regulations regarding environmental and shoreline protection similar to the resilience measures. There are some land uses and development standards that could be bolstered or incentives that could be added, regarding:

- Incentives or allowances for food production/storage
- Building awnings and green infrastructure (cool roofs)
- Tree canopy enhancement on private lands
- Drought tolerant landscaping standards
- Stormwater standards that address climate trends regarding extreme precipitation and drought
- Shoreline standards or incentives that allow for alternative upland and in-water design standards to address sea level rise with an emphasis on avoidance and conservation

Additional review of housing allowances and displacement avoidance would occur through the Comprehensive Plan Periodic Update and Racially Disparate Impacts evaluation.

Hazard Mitigation Plan Audit

The Hazard Mitigation Plan contains several categories of actions that are relevant to the Town's future Climate Element as shown in the Exhibit 7. Actions related to severe storms,

wildfires, sea level rise/flooding, drought, and sea water intrusion into water supplies, are applicable and could be integrated into the new Climate Element.

Appendix A. Document Audit

Exhibit 6 2018 Comprehensive Plan Climate Change and Resiliency Related Goals and Policies Audit Samples

Measure	Sector	Current Plan Element	Policy Focus Area	Mitigation or GHG reduction Strategy	Hazards	Policy Quality	Gaps and Opportunities	Next Step
Goal: DTN-2 Develop downtown with adequate public parking and a circulation system that focuses on pedestrian and vehicular movement.	Transportation, Zoning and Development	Land Use	Mitigation	Multimodal transportation/TOD		Medium quality	Climate mitigation strategies could be more explicit in this specific policy - public parking should also mitigate the risks of stormwater drainage problems as well as ecosystems protection incorporated into the parking plan for downtown	amend
Goal: SLU-1 Assure protection of the unique character of Friday Harbor, as recognized, and described in the Town's Comprehensive Plan, while providing for uses of the Local Shoreline which do not needlessly diminish the quality of the shoreline environment.	Cultural Resources & Practices, Ecosystems	Land Use	Resilience	N/A	Sea Level Rise	Medium quality	Should consider consolidating the goals SLU 1 &3 together into one comprehensive policy It could address both shoreline environmental quality and the ability to have public access while protecting unique and fragile areas.	combine with other policy
Goal: SLU-3 Assure safe, convenient, and diversified physical access for the public to the water and to and along the shoreline, and to assure that intrusions created by such public access will not endanger the quality of life or property of Town residents or have adverse effects on fragile natural features of the shoreline and water areas.	Cultural Resources & Practices, Ecosystems	Land Use	Resilience	N/A	Sea Level Rise	Medium quality	Should consider consolidating the goals SLU 1&3 together into one comprehensive policy	combine with other policy
Goal: SLU-4 Protect the economic base of Friday Harbor and the surrounding community by preserving, among other unique characteristics, the quality and scope of existing public shoreline views.	Economic Development, Ecosystems	Land Use		N/A	Sea Level Rise	Medium Quality	Could add concepts of resiliency as supporting the economic base.	amend
Goal: SLU-5 Develop sure, safe, and economical transportation systems which assure efficient movement of people, with minimum disruption of the shoreline environment and minimum conflict between different types of users	Transportation, Economic Development	Land Use	Resilience	N/A	Sea Level Rise, Flooding	Medium quality	incorporate resiliency language into this goal	amend
Goal: SLU-7 Assure preservation of scenic and nonrenewable natural resources and to assure conservation of renewable natural resources for the benefit of existing and future generations.	Economic Development	Land Use	Resilience	N/A	Sea Level Rise, Flooding	Medium quality	Combine it with SLU-13 as they say the same thing.	combine with other policy

Goal: SLU-13 Ensure preservation of scenic and nonrenewable shoreline natural resources for the benefit of existing and future generations	Ecosystems, Economic Development	Land Use	Resilience	N/A	Sea Level Rise, Flooding	Medium quality	Combine this with SLU 7, as they say the same thing.	combine with other policy
Policy: ENV-7 New development should be required to protect and preserve critical areas.	Ecosystems	Land Use	Resilience	N/A	Extreme Precipitation, Extreme Heat, All	High quality	None	keep as is
Policy: ENV-8 The Town should promote a land use pattern which will protect critical areas and minimize hazardous conditions.	Ecosystems	Land Use	Resilience	N/A	Extreme Precipitation, Extreme Heat, All	Medium quality	Combine with policy ENV-7 as the land use pattern and "new development" are nearly synonymous and could be simplified.	combine with other policy
Policy: ENV-11 Within potential aquifer recharge areas, the Town should identify and regulate land uses which could have a potential significant impact on ground water quality and/or quantity.	Water Resources	Land Use	Resilience	N/A	Drought, Sea Level Rise and saltwater intrusion	Medium quality	Address the offset of normal precipitation trends	amend
Land Supply Policy: HO-12 In accordance with the policies of the Land Use Element, Friday Harbor should discourage the conversion of residential areas to non-residential uses.	Zoning and Development	Housing	Climate Equity	N/A	N/A	Medium quality	This is a good policy as conversion to nonresidential uses could worsen the housing crisis but new mixed use development in single-use areas could support resiliency and GHG reduction and help create more vibrant residential areas where there used to only be homes. I think this policy should have exceptions for newly created ground level retail in conversions within mixed use zones in Town.	amend
Roadway policies: TE-68 All roads in Friday Harbor should be classified as arterials or local access streets. Streets that are not classified as arterials should be classified as local access streets.	Transportation	Transportation	N/a	N/A		Low quality	Through the Periodic Update address road functional classifications and multi-modal transportation needs.	amend
Parking Policy: TE-71 All major transportation facilities, including the ferry terminal and Port of Friday Harbor, should include adequate off-street parking areas.	Transportation	Transportation	Greenhouse Gas Reduction	VMT reduction	N/A	Low quality	provide a balance between the addition of parking, and protection of shoreline ecosystems and climate resilience in the case of the ferry terminal	amend
Goal: CFE-1 To provide needed public capital facilities to all Friday Harbor residents in a manner that protects investments in existing facilities, maximizes the use of existing facilities, and promotes orderly growth.	Buildings & Energy, Emergency Management	Capital Facilities	Greenhouse Gas Reduction	Building decarbonization	N/A	Medium quality	This policy should include a direct statement about the need to address climate resiliency in design, and to re-site certain facilities in the event of climate hazards or if there is environmental degradation. Could also maybe address that maintenance reduces GHG emissions from construction	amend
Goal: CFE-21 To encourage the research and use of water conservation technology.	Water Resources	Capital Facilities	Resilience	N/A	Drought, Flooding	Medium quality	Change "research and use" to encourage the use and adoption of proven water conservation technologies.	amend
Policy - Improvements: CFE-35 Friday Harbor should favor conservation measures over the acquisition of new resources.	Buildings & Energy	Capital Facilities	Resilience	N/A	Drought, Flooding	Medium quality	The Town should prioritize conservation but should still explore new options for water resources to increase the resilience to climate hazards. For example, the Hazard Mitigation Plan addresses the future potential for desalination.	amend
Policy: CFE-63 Friday Harbor should coordinate the provision of solid	Waste Management	Capital Facilities	Greenhouse Gas Reduction	Waste related emissions	N/A	Low Quality	Incorporate exploration of composting facilities.	amend

waste and recycling facilities with the residents of San Juan County.								
Project Coordination Policy: UTL-18 Where necessary, new development approved adjacent to existing utility facilities should provide vegetative screening or buffers.	Buildings & Energy	Utilities	Resilience	N/A	Wildfire, Extreme Heat, Drought	Medium quality	Address creating heat and drought resistant vegetative buffers to be resilient to climate change.	amend
Environmental Protection Policy: UTL-22 New utility facilities should be located away from, or constructed in a manner compatible with, designated critical areas and shorelines	Ecosystems	Utilities	Resilience	N/A	All	Medium quality	None	keep as is
Environmental Protection Policy: UTL-23 Friday Harbor should attach appropriate conditions to the approval of new utility facilities in order to mitigate impacts to critical areas, shorelines, or the character of Friday Harbor neighborhoods.	Ecosystems	Utilities	Resilience	N/A	All	low quality	It's the same as UTL-22.	combine with other policy
Goal: ED-2 Adjust the Town Development Regulations to support and encourage denser mixed-use commercial, professional services and residential uses.	Economic Development, Zoning and Development	Economic Development	Greenhouse Gas Reduction	Multimodal transportation/TOD		Medium Quality	Incorporate transportation component to this mixed-use development policy to promote multimodal access and diminish vehicle dependency.	amend
Policy: ED-13 The Town should maximize the benefits of the Scenic Byway Designation	Zoning and Development, Transportation	Economic Development	Mitigation	VMT reduction	N/A	Medium Quality	Address the use of non-vehicle traffic on this corridor and ensure that the benefits of the scenic byway support critical areas protections and other environmental protection within the town.	amend

Source: Town of Friday Harbor Comprehensive Plan, 2018; BERK, 2024

Exhibit 7 Hazard Mitigation Plan Policy Audit

Hazard Mitigation Policy	Subsection of County Hazard Mitigation Plan	Next Step
[SS-1] Expand Education and Outreach -Providers of emergency services and other public agencies should continue to work collaboratively to educate year-round and seasonal residents about the potential for severe storm events in San Juan County. Targeted efforts to reach island tourists, the poor, and those with limited English proficiency are also recommended	Severe Storms Mitigation Plan	Policy is still applicable. The frequency and intensity of extreme precipitation events are projected to increase across the region. A greater number of strong atmospheric river events and fewer moderate and weak events are projected to occur. See Climate Impacts Memo, April 2024.
[SS-2] Promote Individual Self-Sufficiency -Residents should be prepared to be entirely self-sufficient for 14 days, stocking extra food, water, and medicines for each member of the household, pets and livestock. Providers of commercial lodging should be prepared to provide necessary supplies for guests who may become stranded.	Severe Storms Mitigation Plan	Policy is still applicable. See SS-1. This action could be referenced in the new Climate Element in the Periodic Update.
[SS-3] Promote Weather-Watch Tools and Activities -Public safety agencies should encourage residents to purchase and use a NOAA weather radio, preferably one that works both on batteries and with a cranking mechanism for power. Residents should listen for weather and tide reports and high-wind warnings	Severe Storms Mitigation Plan	This action may be applicable for non-climate related hazards. The increase in atmospheric rivers documented in the literature is an increase in the *amount of* rain in those storms (extreme precipitation). Some of UWCIG's work and that of others in the Atmospheric Science department indicate that the frequency of high wind events or the windspeeds during high wind events are *not expected to change with climate change* and there is no evidence that they have already changed. Even without higher winds or more windstorms, heavier rain could lead to more fallen trees and therefore more power outages because of wetter soils that contribute to trees coming down in storms. There is some research but still not conclusive that the storm track of winter storms on the west coast could change. (Personal Communication, Crystal Raymond, USCIG, February 29, 2024)
[SS-4] Encourage Heating and Power Alternatives -Residents and providers of commercial lodging should consider purchasing as back-up systems, alternative heating, cooking, and telephone equipment operable without electricity, emergency generators, as well as other less-costly emergency supplies like emergency candles and oil lamps. Education on the safe operation of emergency generators is encouraged.	Severe Storms Mitigation Plan	See SS-3. Heavier rain could lead to more fallen trees and therefore more power outages because of wetter soils that contribute to trees coming down in storms.
[SS-5] Tree Damage -Encourage island residents to remove diseased and damaged tree limbs located close to buildings, driveways and parking areas; thin additional branches to make trees more wind resistant; keep a gas-powered chainsaw, with extra fuel, in operable condition.	Severe Storms Mitigation Plan	This is applicable to climate-related hazards of extreme precipitation. Heavier rain could lead to more fallen trees and therefore more power outages because of wetter soils that contribute to trees coming down in storms.

[SS-6] Protect Utilities -Continue efforts by local utilities to bury telephone and power lines	Severe Storms Mitigation Plan	This is applicable. See SS-4.
[SS-7] Road and Debris Clearing -Develop coordinated management plans to facilitate efforts (and avoided duplication of assignments) by County and Friday Harbor public works crews, private utility companies, and local residents to identify and prioritize publicly and privately maintained roads, streets and other access ways to be cleared and sanded during storm events.	Severe Storms Mitigation Plan	This is applicable to climate-related hazards like extreme precipitation and sea level rise/storm surge. This action could be referenced in the new Climate Element in the Periodic Update.
[SS-8] Protect Marinas - Hardening and improvements to Port of FH dock and pier infrastructure. Primarily the replacement of traditional wooden creosote pilings with larger, longer steel pilings that would hold up much better to stresses of major windstorms and high impact currents of a tsunami event.	Severe Storms Mitigation Plan	To the extent that dock and pier infrastructure could be damaged by sea level rise/storm surge, this action could be applicable.
[WF-1] Expand Education and Outreach - Providers of emergency services and other public agencies should continue to work collaboratively to educate building and landscape contractors, realtors, and the general public about the potential for wildland-urban interface fire in San Juan County. Outreach and incentive programs should be developed to encourage residents and business owners to implement mitigation strategies at home and in places of work or commerce. Targeted efforts to reach island tourists, the poor, and those with limited English proficiency are also recommended.	Wildfire Hazard Mitigation Plan	The Town is at risk of wildfire danger due to wildland-urban-interface (WUI). The Town has adopted the International Building Code/State Building Code that has a WUI code, which would apply to new development subject to building code review. The Town could incentivize property owners to apply WUI provisions voluntarily.
[WF-2] Encourage the practice of Fire Wise landscaping concepts in residential areas - Educate and involve residential property owners in fire-risk reduction by implementing Fire Wise programs throughout San Juan County.	Wildfire Hazard Mitigation Plan	This is applicable. See WF-1 This policy could be included in the new Climate Element.
[WF-3] Create Alternatives to Backyard Debris Burning - Create a county-wide program of woody debris chipping or large scale composting, as an alternative to backyard burning. Supply a chipper that can be checked out, or create a mobile system utilizing different temporary locations throughout the year where homeowner debris can be reduced to mulch. Offer incentives for using this alternative or launch with an extended county-wide burn ban. The County Solid Waste advisory Committee is exploring composting with solid waste disposal vendors in the county as an alternative to burning this debris. There is one facility located on Lopez island which is capable of composting large woody debris. Initial mitigation actions include Identification of public and private land suitable for these compost operations and land use designation adjustments required to facilitate this activity	Wildfire Hazard Mitigation Plan	The Town could work in partnership with the County on this action.
[WF-40] Annual Tall Grass Order To Mow	Wildfire Hazard Mitigation Plan	This is applicable (e.g. climate-related drought and loss of soil moisture and wildfire danger) and could be included in the new Climate Element.
[F-1] Continued Public Education and Outreach -San Juan County should continue to educate those who live or work in identified flood zones about the National Flood Insurance Program (where applicable), viable mitigation strategies for at-risk residential and agricultural property, as well as response and recovery procedures for public roads and facilities.	Flood Hazard Mitigation Plan	This is applicable in sea level rise areas, but primarily for Downtown ferry/waterfront access and parks areas, rather than for residential areas.

[F-2] Early Warning -The National Weather Service and National Ocean Survey provide flood and tidal-flood watch and warning information to the public through a number of media sources. Residents should also be encouraged to obtain and utilize weather radios during storm season. Local government agencies should continue to monitor weather conditions and prepare protocols for public notification when flooding is predicted.	Flood Hazard Mitigation Plan	This is applicable regarding sea level rise and storm surge.
[F-3] Flood Mapping -Nationally, 35-40 % of National Flood Insurance Program claims come from outside the mapped flood plains. The current FEMA flood-zone maps used by local planning officials are currently in the update process and being converted to digital format.	Flood Hazard Mitigation Plan	This may be an out-of-date provision. The County and Town are expecting updated sea level rise maps.
[F-4] Building Codes & New Construction -San Juan County and the Town of Friday Harbor have local ordinances in place to regulate and direct development in known floodplain areas. However, the continued rapid population growth in San Juan County–and predicted rising sea level–make it imperative to enforce building regulations and, in some cases, restrict development in flood-prone areas and sensitive watersheds. Where new construction is allowed, make Low Impact Development (LID) practices mandatory	Flood Hazard Mitigation Plan	This is relevant and an important action to include in the Climate Element.
[F-5] Storm Water Drainage -The Town of Friday Harbor and San Juan County have adopted storm water utility or districts. Both should continue efforts to prioritize drainage systems for upgrade, identify funding sources for improvements, and develop a timetable for implementing surface water/drainage projects.	Flood Hazard Mitigation Plan	This is relevant and an important action to include in the Climate Element. Updated stormwater sizing/design and landscape standards may be appropriate.
[D-1] Continue Public Education and Outreach Activities - Providers of emergency services and other public agencies should continue to work collaboratively to educate year-round and seasonal residents, and island visitors, about water scarcity and the potential consequences of drought in San Juan County. Outreach and education programs should encourage residents and business owners to implement water conservation and other mitigation strategies at home and in places of work or commerce. Targeted efforts to reach island tourists, the poor, and those with limited English proficiency are recommended.	Drought Hazard Mitigation Plan	This is relevant and an important action to include in the Climate Element. See Climate Hazards Memo regarding drought and climate trends.
[D-2] Aquifer Monitoring - Provide funding to maintain and expand the County's groundwater monitoring capacity. The groundwater monitoring networks on Lopez and in Eastsound require continued attention to remain functional. The data from these networks also requires regular analysis to detect trends and provide early warning signs of over-withdrawal or changing conditions. There are no data loggers recording groundwater levels on other islands in San Juan County Island $50,000 over 10 years for 10 data loggers and data analysis.	Drought Hazard Mitigation Plan	The Town has sole-source aquifers (FHMC 18.08). The town's small land areas and extensive shoreline create conditions where the balance between the sea water and freshwater interface is critical to prevent sea water intrusion. Groundwater impacts due to sea water intrusion and other climate related impacts should be considered. This action/partnership could be referenced in the Town's Climate Element.
[D-3] Aquifer Management -Convene a forum of consumers, water system managers, representatives of regulating agencies and decision-makers to: analyze the	Drought Hazard Mitigation Plan	This action/partnership could be referenced in the Town's Climate Element. See Action D-2.

development, management, and usage practices, of private water systems and individual wells; assess the impact of current practices on aquifer quality and sustainability; and develop strategies to promote aquifer sustainability.		
[D-4] Planning and Development -Manage water resource planning and new development to ensure ground water systems/aquifers do not become overdrawn, and to prevent seawater intrusion in existing wells.	Drought Hazard Mitigation Plan	This is an important action that is similar to the Town's aquifer regulations, and could be part of the Climate Element.
[D-5] Promote Alternatives - Study the feasibility and environmental impact of additional desalinization systems, increased use of catchment systems, and the use of non-potable(gray) water. Review and revise existing municipal codes to allow and encourage the permitting of alternatives.	Drought Hazard Mitigation Plan	This may be an action suited to the County with Town support as needed.
[D-6] Encourage Conservation -Promote conservation among surface-water consumers and individual well owners by establishing baseline usage levels, monitoring systems, and disincentives for over-consumption.	Drought Hazard Mitigation Plan	This is relevant and an important action to include in the Climate Element.
[D-7] Policy - Change policy so that new well developers are required to show no detrimental effect to existing wells, placing the burden of proof on new well developers as opposed to existing well owners.	Drought Hazard Mitigation Plan	The Town would have consumers connect to its system. See FHMC 13.04.
[D-8] Policy - Require water haulers to file an annual report describing where they are delivering potable water, to aid in long range water management	Drought Hazard Mitigation Plan	This is not applicable to the Town.
[ET-1] Project Impact Initiative- Countywide. Implement a "Home Retrofit Program "similar to the 1998 Phinney Neighborhood Association in Seattle, WA. funding was used to develop the "Home Retrofit Program," a comprehensive program to reinforce a typical Pacific Northwest home's ability to withstand earthquake movement. See<https://www.hsdl.org/?view&did=7054>, and<https://www.seattle.gov/Documents/Departments/Emergency/Preparedness/HazardSpecific/Earthquake/HomeRetrofit/HRBook1-overview.pdf>	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-2] Rapid Observation of Vulnerability and Estimation of Risk - Install a cloud based instance of the ROVER web based assessment software and complete survey of all critical infrastructure in the county and Town of Friday Harbor.	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-3] Expand Public Education and Outreach Efforts: Providers of emergency services and other public agencies should continue to work collaboratively to educate the public about the potential for earthquake, tsunami, and other geologic events in San Juan County. Targeted efforts to reach island tourists, low income residents, and those with limited english proficiency are also recommended.	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-4] Promote Greater Self-Reliance: As a general rule, residents should be prepared to survive on their own for a minimum of 14 days. This is especially true given San Juan County's relative isolation and limited transportation options to and from the mainland. Each residence or place of lodging should have enough food, water, medicines and other basic provisions to last each person and pet for 14 days.	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-5] Implement Tsunami Notification and Evacuation Plans: Implement evacuation plans that include multiple ways to alert the public, and publicized "safe zones" that	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.

anticipate water levels thirty or more feet above the normal high-tide level. Complete the posting of Tsunami warning signs in low-land areas county-wide.		
[ET-6] Survey Existing Structures for Earthquake Vulnerability: The participating HMP jurisdictions should take steps to conduct a county-wide survey of existing public and private commercial, civic and multi-family structures for earthquake vulnerability. The purpose of the survey would be to more accurately assess the level of current earthquake vulnerability, to educate property owners, and to formulate a multi-year program to mitigate areas of greatest potential risk. (See number 2 above)	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-7] Conduct Structural Analysis of County Dams and Reservoirs: Complete a survey and structural analysis of all San Juan County dams and reservoirs, including: Trout Creek, Purdue, Cascade and Mountain lake systems. Identify funding and implement necessary safety improvements.	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-8] Implement Marina Improvements: Ensure that all marine pier pilings extend ten feet or more above the high tide line in order to prevent pier and vessel losses.	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-10] Rebuild barge landing ramp at Jenson Beach - Repair and construction of appropriate barge/landing facility at site of former Jackson Beach gravel pit. Lack of available sites for landing of supplies and material following a disruption to routine transportation networks would make this a priority for response and recovery.	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.
[ET-11] Install automatic shutoff valves on gas and water systems.	Earthquake and Tsunami Hazard Mitigation Plan	Earthquakes and Tsunamis are not climate-related hazards.

Source: San Juan County Hazard Mitigation Plan, 2018; UWCIG, 2024; WUI Dashboard, 2023; BERK, 2024

Exhibit 8 Friday Harbor Code Climate Audit

Row	Entry #	Climate Measure (Goal or Policy) [Note: Goals are highlighted yellow]	Climate Sector Nexus	Supplemental Description	Friday Harbor Code Review
2	451	Facilitate increased land access for local farmers, providing affordable agricultural land ownership or long-term, stable leases.	Agriculture & Food Systems	High land acquisition costs are among barriers that make it difficult for new, local farmers to access land to grow local food. Counties could promote existing local land trust programs. Counties could also offer tax incentives to help lower land costs for farmers. Promoting local food economies and local agricultural or farming businesses should reduce water and air pollution (including greenhouse gas emissions) associated with shipping and distribution production pathways.	Not applicable. Town of Friday Harbor is not a location for agricultural production.
3	155	Expand local food security and the food-related economy to address climate impacts and increase access to healthy, affordable, and climate- friendly foods.	Agriculture & Food Systems	This policy could be a part of a comprehensive local or regional food system resilience strategy that includes public- and private-sector partners. Implementation actions could include: Use ordinances to encourage and support farmers' markets at community parks; Develop education and outreach programs; Expand public and private community gardens and urban agriculture activities across the community; and Support a distributed model of local food sales and distribution, such as farmers' markets, farm stands, and neighborhood food pantries.	Food security is important to Friday Harbor with the reliance on off- island food products. Enhancing local food security through incentives or allowances for cold storage, or other code support for production or processing may be appropriate (e.g. aquaculture; allowed by CUP in some shoreline environments).
4	108	Promote environmentally sustainable water-storage and farming practices that help agricultural producers adapt to changing conditions and reduce production losses while balancing ecosystem needs.	Agriculture & Food Systems	This policy could be a component of a comprehensive drought or food system resilience strategy. Implementation actions could include promoting no-till agriculture and aquifer storage and recovery (ASR) where soils and geology are suitable and excess water is available.	Not applicable. Town of Friday Harbor is not a location for agricultural production.
5	88	Require the design and construction of commercial and residential buildings and their surrounding sites to reduce and treat stormwater runoff and pollution.	Buildings & Energy	This policy could be implemented via changing development regulations to require low- impact development (LID) practices such as reducing soil compaction during construction, retaining tree tracts, creating smaller building footprints through denser development, and installing pervious pavement.	The City has adopted the Town of Friday Harbor Storm Water Technical Manual, in Title 13.36. The Town of Friday Harbor Design Standards identify the current manual as based on the King County Surface Water Design Manual (2021).
6	399	Develop or modify design standards to integrate exterior building features that reduce the impacts of climate change and increase resilience.	Buildings & Energy	Consistent and connected awnings that cover urban sidewalks, for example, provide pedestrians protective shade from heat waves, storms, and other severe weather events. Awnings have co-benefits by being able to integrate solar photovoltaic panels that reduce greenhouse gas emissions. "Cool" roofs covered with light colors or reflective pigments help direct away the sun's heat, cooling buildings and surrounding areas. Similarly, "green" roofs covered with sedum, native flowers, and other low-maintenance vegetation help insulate buildings from solar heat and provide pollinator habitat. Such rooftops help reduce building cooling costs and heat-related illnesses and deaths.	Awnings are regulated in the sign code (FHMC 14.04). They are not referenced in zoning or other development regulations; the City could identify locations where they are required or develop standards that facilitate them. Green roofs and cool roofs are not specifically identified in codes. Some jurisdictions give incentives for green or vegetated roofs. Some require green infrastructure at the time of reroofing, new or replacement roof installation, or repaving. The 2021 State Energy Code, adopted by Friday Harbor, indicates that new buildings larger than 10,000 SF of gross conditioned floor area needs to have a renewable energy generation system

7	3	Protect, enhance, and restore ecosystems in order to meet tribal treaty rights and conserve culturally important consumptive and non-consumptive resources including foods, medicinal plants, and materials that could be adversely impacted by climate change.	Cultural Resources & Practices	Examples of culturally important resources include salmon and other marine resources, mollusks, berries, cedar bark, grasses, roots, game, and waterfowl. Work with appropriate partners (tribes, local communities) to integrate traditional ecological knowledge and Western science to identify important resources and areas, assess their climate vulnerabilities, and develop a plan to protect and enhance their resilience to climate impacts.	The City has a shoreline restoration plan (2012) as part of its Shoreline Master Program. It is focused on enhancement to lift conditions above baseline or to serve as a source of mitigation for development that may affect shoreline ecological functions. The City could consider updating its restoration plan and prioritizing enhancement efforts that support restoration to conserve culturally important foods and plants in areas subject to sea level rise.
8	4	Work with partners to establish and sustain a native plant nursery and seed bank to support long-term restoration and carbon sequestration efforts.	Cultural Resources & Practices	If this policy is beyond your jurisdiction's span of control or responsibility, work with appropriate partners (tribes, state agencies, conservation districts, etc.) to establish and support the nursery and seed bank. Local jurisdictions could utilize state silviculture guidance including DNR's Webster Nursey or Silviculture program. Implementation could include identifying focal species such as grasses, berries, and roots that are important for ecosystem health as well as sources of cultural foods and medicines. Provide funding or grants to support partners' infrastructure and staff.	This is a partnership and policy based issue. Plant nurseries do not appear specifically referenced in the code. However, there are is one or more nurseries in Town.
9	477	Facilitate a green jobs pipeline for frontline communities.	Economic Development	Support organizations that are committed to building accessible on-ramps to living-wage green careers within frontline communities and leading specialized promotion of green industry sectors catered to frontline communities. Examples of such green jobs could include solar panel and green roof installation and maintenance. Partners could include schools, labor unions, businesses, and community-based organizations.	The development code does not reference specific types of industries. It does not reference solar energy or other renewable energy uses. However, the Energy Code 2021, adopted by the Town, does promote and require renewable energy for larger commercial buildings.
10	**271**	**Ensure the protection and restoration of streams, riparian zones, estuaries, wetlands, and floodplains to achieve healthy watersheds that are resilient to climate change.**	**Ecosystems**	**EJ note: Frontline communities identified using land and plants to absorb carbon pollution and prioritizing this work in frontline communities as an environmental justice priority.**	The Town developed critical area regulation updates in 2021. The town has adopted Ecology wetland buffer widths. It has developed shoreline buffers addressing no-net-loss of shoreline ecological functions. The State of Washington Department of Fish and Wildlife has published riparian buffer recommendations based on site potential tree height.
11	468	Implement actions identified in restoration and salmon recovery plans to improve the climate resilience of streams and watersheds.	Ecosystems	Salmon recovery plans, watershed plans, and other restoration plans exist in many places and may already identify key actions needed to improve the resilience of streams and watersheds to climate impacts. Local governments can work with tribes, neighboring jurisdictions, nonprofits, and other partners within their WRIA to secure funding and implement these projects.	See Row 7. The Town manages about 1 square mile of forested land and Trout Lake to protect its water supply. It is a portion of a 4,880-acre watershed. (Comprehensive Plan Appendix B Joint Planning Policy) Water quality data has been collected in county watersheds based on a partnership with the San Juan Islands Conservation District and the University of Washington.
12	285	Protect and restore wetlands and corridors between wetlands to provide biological and hydrological connectivity that fosters resilience to climate impacts.	Ecosystems	Functional wetlands can provide important climate resilience benefits such as absorbing floodwaters and providing habitat for vulnerable species. Implementation efforts should focus on maintaining and restoring connectivity between wetlands, streams, and nearshore habitats through the establishment of habitat buffers and corridors. Local governments can utilize information about biodiversity areas and corridors from the Priority Habitats dataset to identify areas, review and support efforts to improve wetland and stream mapping, monitor compliance with buffer requirements, and update critical areas regulations if needed to be more protective. Local governments can encourage	The Friday Harbor Municipal Code (Chapter 18.08) addresses wetlands. The fish and wildlife corridors are referenced in terms of ensuring mitigation helps achieve wildlife habitat corridors.

				appropriate partners (tribes, state agencies, counties private property owners, etc.) to lead implementation beyond their span of control or responsibility.	
13	268	Protect and restore watershed-scale processes to maximize the ecological benefits and climate resilience of riparian ecosystems.	Ecosystems	Protection and restoration are needed in many watersheds to maintain and enhance the climate resilience and habitat benefits these ecosystems provide. To implement this policy, local governments and partners can work together to assess the current condition of watersheds, review existing recovery plans, and if necessary, develop new watershed-scale management plans. Watershed-scale restoration requires working with tribes, public sector partners, and private landowners to implement restoration and protection where it is most needed and at scale.	See Row 11.
14	469	Protect and restore riparian vegetation to reduce erosion, provide shade, and support other functions that improve the climate resilience of streams.	Ecosystems	Riparian ecosystems provide many climate resilience benefits, including controlling erosion, shading streams and keeping them cool, and protecting water quality. Riparian ecosystems are degraded in many watersheds. Local governments can implement this policy by working with partners to assess the condition of riparian areas within their jurisdiction, seeking funding and implementing restoration projects on public land, and developing programs to incentivize private landowners to restore riparian areas on their lands.	See Row 10.
15	274	Restore floodplains and connectivity to improve the resilience of streams and rivers and reduce flood risk.	Ecosystems	Restoring and reconnecting floodplains improves the resilience of aquatic ecosystems and helps reduce flood risk downstream. Implementation actions may include levee setbacks, bank armor removal, riparian vegetation restoration, efforts to maintain sufficient streamflow, land acquisition, instream habitat restoration, beaver reintroduction, and others. Floodplain restoration projects likely require collaborating with public and private sector partners and tribes, engaging many landowners throughout a watershed, and partnering with other jurisdictions. Existing watershed restoration plans may identify priority areas for floodplain restoration for ecological and species recovery benefits; more information may be needed to identify restoration opportunities that provide climate resilience benefits. The Floodplains by Design Program funds projects in major river systems.	Flood hazard areas are associated with marine shorelines and sea level rise. The Town could address sea level rise in its Shoreline Master Program in terms of allowances for in-water and upland structure locations and heights, and promoting avoidance and adaptive design.
16	275	Increase aquatic habitat resilience to low summer flows by increasing water residence time, storing water on the landscape, conserving water, protecting groundwater, keeping waters cool, and protecting water quality.	Ecosystems	Low summer streamflow caused by drought, lower snowpack, and changing precipitation patterns stress aquatic ecosystems and water supplies. Restoring watersheds and conserving water to maintain flows improves ecosystem resilience to heat and other stressors. Actions to restore aquatic habitat include creating deep-water habitat features, increasing off-channel habitat, and protecting refugia in channels fed by wetlands, protecting wetland- fed streams, restoring wetlands and upland vegetation, promoting water efficiency and reuse, and managing stormwater. Tribes, agencies, landowners, and other public and private- sector entities are important partners for stream restoration. The Washington Department of Ecology provides information about instreamflow and established minimum levels.	Streams with low flow potential appear to be located outside of town limits.
17	276	Implement and encourage measures to reduce sedimentation in streams resulting from wildfire damage and the associated impacts of landslides and flooding.	Ecosystems	Both wildfires and extreme precipitation events are becoming more frequent due to climate change. After a wildfire, slopes are more susceptible to erosion and landslides because there is no longer vegetation to hold and stabilize soils. Precipitation falling on burned slopes can increase the risk of landslides and sediment from these events can degrade stream habitat. Actions to reduce sedimentation risk following fire include: (1) identify and stabilize areas susceptible to streambank and upland erosion and mass wasting; (2) inventory disturbed areas for riparian and upland vegetation restoration; (3) restore and revegetate burned areas to store sediment and maintain channel geomorphology; (4) evaluate road system for sediment input; (5) replace	See Row 16.

				culverts. Public and private sector partners will be needed to implement this policy, particularly if wildfire has affected areas owned by different entities or outside the local jurisdiction.	
18	291	Ensure no net loss of ecosystem composition, structure, and functions, especially in Priority Habitats and Critical Areas, and strive for net ecological gain to enhance climate resilience.	Ecosystems	Healthy ecosystems are more resilient to shocks caused by climate change. Ensuring that development does not result in degradation, or net loss, particularly in areas of high ecological importance, is an important climate resilience strategy. To implement this policy, local governments should work to ensure that the "avoid" step in the mitigation hierarchy is consistently applied. Additionally, local governments and partners should protect and restore priority habitats to a high-functioning condition wherever possible to better support all of the fish and wildlife species dependent on them. Fully mitigate for projects that will impact significant portions or functions of priority habitat, including projects in upland areas that will negatively influence basin hydrology or fish and wildlife use in riparian areas. Implementation may require reviewing and amending development regulations and critical area ordinances. Local governments can implement net ecological gain measures for public projects within their jurisdiction. Partners (tribes, state agencies, counties private property owners, etc.) can lead implementation for areas outside a jurisdiction's direct control or responsibility.	The Town could consider whether its development regulations and critical area regulations to avoid impacts are applied optimally and that impacts are fully mitigated.
19	497	Establish legal rights of nature for protection.	Ecosystems	The Rights of Nature is a global movement advocating for nation states to recognize that Nature has inherent rights, such as a forest's right to thrive or a river's right to flow, and that humans, in turn, have responsibilities to Nature. In some cases, Nature's rights are defended by legal guardians who act as the "human face" of Nature. Indigenous Nations and local communities in the United States, and more than a dozen other countries, including New Zealand, Ecuador, and Colombia, have recognized the Rights of Nature in some form. City and county attorneys could prepare to defend (be advocates of) the rights of local ecologies and natural resources.	This is a relatively newer legal concept not adopted widely. However, some cities have adopted proclamations on behalf of some species, e.g. orcas, by the cities of Port Townsend and Gig Harbor.
20	284	Identify opportunities to expand habitat protection and improve habitat quality and connectivity to foster climate resilience using conservation area designations, buffers, and open space corridors.	Ecosystems	Protecting habitat and connectivity between habitat blocks can help fish and wildlife adapt to climate change. Local governments and partners can use connectivity metrics to help prioritize natural areas that need to be connected, restored, and/or mitigated. Implementing this policy will enhance key habitat areas, facilitate migration opportunities for species vulnerable to climate change, and increase connectivity in areas at high risk from climate impacts. Local governments and partners can build on the work of the Washington Wildlife Habitat Connectivity Working Group and the Western Governors' Wildlife Corridors Initiative. This policy will be most relevant for counties who can work with partners on landscape-scale solutions, and will require engaging appropriate partners (tribes, state agencies, counties private property owners, etc.) to lead implementation for areas beyond a jurisdiction's direct control or responsibility.	The Town could consider development and design standards that reinforce drought tolerant and native species for buffers, stormwater facilities, and roadside vegetation, where appropriate to the conditions and potential habitat quality.

21	295	Create and support natural resource management plans that address existing stressors, consider climate change impacts, emphasize taking a precautionary approach to reduce risk of environmental harm, and guide adaptive management.	Ecosystems	Management plans for urban forests, watersheds, and other important natural assets can identify issues and outline the strategy for protecting and restoring important natural assets. Management plans should consider existing stressors and climate impacts to build resilience. The precautionary principle is erring on the side of not harming resources when faced with uncertainty, especially for potential harm that is essentially irreversible. Adaptive management is the collection and application of reliable information to address critical uncertainties and improve management over time. A local jurisdiction can incorporate these concepts into its management planning to reduce risk to ecosystems and ensure that climate resilience measures achieve desired outcomes. Technical consultants often prepare detailed management plans. If resources are limited, local governments can start by developing a higher-level strategy in consultation with partners. Tribes, land trusts and other conservation entities, and agencies may be important to engage in management planning and may provide funds or technical assistance, depending on the focus of the plan.	The Town could update its Trout Lake Forest Management Plan as needed to address climate stressors (WUI, drought, extreme precipitation).
22	297	Identify and quantify the ecosystem services benefits of natural systems and include these natural capital assets in cost-benefit assessments for community and development planning.	Ecosystems	Healthy ecosystems provide many climate resilience benefits, and protecting or restoring natural assets and the services they provide is often more cost-effective than engineered solutions. Restored wetlands and floodplains can prevent flooding and reduce the need for other types of flood-control infrastructure. Implementation of this policy could include comparing lifetime cost-effectiveness of nature-based versus engineered options for climate response to help identify cost-effective adaptation options. This can help build capacity and support for the adoption of response strategies that help protect and restore ecosystem function and services at risk from climate change.	The Town could address ecosystem benefits in its Capital Facility Element or regular budgeting process.
23	**470**	**Protect and enhance the climate resilience of urban forests by implementing climate-smart forest management.**	**Ecosystems**	**EJ note: Frontline communities identified building resilience to climate through** **ecological solutions as a top environmental justice priority.**	See Row 21.
24	332	Reduce loss of private forestland through forest stewardship education and identify opportunities to expand incentives for forest landowners.	Ecosystems	Conversion of privately owned forestland to more developed land use types is an issue in many parts of Washington, particularly where growth is rapid. Forests provide climate resilience by cooling the landscape, absorbing and slowing storm and floodwaters, and other functions. Forest stewardship education, tax incentive programs, payment for ecosystems services programs, and other approaches can help support landowners in managing their lands for climate resilience and preventing conversion. Local governments can collaborate with State agencies, conservation districts, and the Washington State University Extension Forestry Program to make resources and information available to landowners.	Forest management of public or private forestland is addressed in the shoreline master program. The degree to which this topic is relevant for the Town is likely low. See Row 21 regarding the Town's forestland/watershed.
25	282	Adopt a forest master plan and implementing ordinances to maintain and expand tree canopy cover, improve tree and watershed health, prioritize carbon sequestration, and build climate resilience.	Ecosystems	Implementing this policy requires coordination on landscape-level management across jurisdictions and with private landowners. Local land use codes should increase scrutiny and review over tree removal in certain areas by prioritizing retention of healthy trees and tree canopy. Requirements should focus on balancing the tradeoffs between the retention of existing healthy trees, the planting of new trees in locations that better support tree health and maintain or increase tree canopy, and the efficient and strategic use of limited developable land. Use an equity framework to prioritize low-canopy and low-income neighborhoods. Also, ensure the forest master plan facilitates ecologically appropriate management across different ownership types and jurisdictional boundaries.	See Row 21 regarding the Town's forest management plan for its watershed.

26	316	Encourage participation in Washington's small forest landowner assistance cost-share and stewardship programs.	Ecosystems	Conserving forests is a natural climate solution, as mature forests provide carbon sequestration, resilience benefits, and ecosystem services. Small forest landowners own significant amounts of forest across the state, and the risk of conversion to other land uses is high in some jurisdictions. Washington's cost-share program focuses on technical and financial assistance to implement forest treatments or write forest management plans for landowners, while the stewardship program focuses on education to help landowners develop their own forest management plans. These types of programs can support landowners in keeping their lands forested and practicing ecological and climate-smart management. Local governments can advertise and encourage participation in these programs and work with DNR and WSU Extension for more information.	See Rows 21 and 24.
27	89	Encourage private forest landowners to increase the climate resilience of forests and streams on their lands.	Ecosystems	Privately owned forests provide climate and ecosystem benefits in many jurisdictions throughout Washington. Encouraging private forest landowners to take actions to increase the resilience of their lands to climate change is an important strategy. Private forests may have barriers to fish passage that negatively impact salmon populations that are already stressed by climate impacts. In addition, culverts may not be sized adequately for higher streamflow. Local governments can promote DNR's Family Forest Fish Passage Program. This program can provide guidance regarding how to remove fish-barrier culverts and other structures that keep trout, salmon, and other fish from reaching upstream habitat. The program funds the replacement of eligible culverts or other barriers with new structures. Program implementation is through three agencies, WDFW, RCO, and DNR. Salmon enhancement groups, conservation districts, and tribes are involved as project sponsors.	See Rows 21 and 24.
28	441	Establish incentives and regulations to maintain open space buffers to reduce wildfire risk.	Ecosystems	Requiring open space buffers between developed and wilderness areas can help reduce the risk of wildfires to people and structures. However, the local context will be important for modifying this policy to ensure it is relevant. To implement this policy, local governments could assess vulnerability to wildfire for their jurisdiction and then identify where open space buffers are needed. This could be implemented as part of a broader wildfire resilience strategy.	The Town has adopted the 2021 International Building Code. Chapter 51-55 includes the 2021 Washington Wildland-Urban Interface Code.
29	336	Ensure that all urban forestry management plans include considerations for the impacts of climate change.	Ecosystems	Urban forests provide many climate benefits, including sequestering carbon, reducing heat, absorbing stormwater, and providing habitat. Local governments can work with public and private forestland partners to ensure that all forest plans developed or approved by counties and cities include strategies to minimize risk from climate change.	See Rows 21 and 24.
30	**471**	**Protect and restore coastal ecosystems to increase the resilience of species, habitats, and communities to climate change.**	**Ecosystems**	**EJ note: Frontline communities identified building resilience to climate through ecological solutions as a top environmental justice priority.**	See Rows 10 to 22.
31	325	Develop a comprehensive, communitywide wildfire resilience strategy to improve emergency response capabilities, create fire-resilient landscapes, promote fire-adapted communities, protect the economy, and foster short- and long-term recovery.	Emergency Management	Such a plan would address the natural, social, and economic challenges associated with preparing for, reducing, responding to, and recovering from wildfire impacts.	The Town and County have adopted a 2012 San Juan County Community Wildfire Protection Plan.
32	**389**	**Enhance emergency preparedness, response, and recovery efforts to mitigate risks and impacts associated with extreme weather and other hazards worsened by climate change.**	**Emergency Management**	**EJ note: Frontline communities identified creating places in a community to go to in emergencies such as for shelter & resources when there is a natural disaster as a top** **environmental justice priority.**	See below.

33	490	Prioritize the development of anti-displacement programs in overburdened communities when increasing densities.	Health & Well-being	Work closely with affected BIPOC and low-income communities to better understand community-specific displacement pressures (e.g., green gentrification) and goals related to anti-displacement practices and programs.	Anti-displacement efforts are part of the Town's Housing Action Plan and can be considered for code amendments as appropriate with the Periodic Update.
34	372	Review land use maps and identify opportunities or barriers to responding to rapid population growth or decline, rebuilding housing and services after disasters, and other extreme climate impact scenarios.	Health & Well-being	Climate change may cause population displacement within your community and cause slow or rapid in-migration due to displacement in other communities. While these changes are difficult to forecast, local governments could begin by analyzing buildable land capacity in the context of climate change, assessing potential barriers to building housing in appropriate locations and determining whether policy changes are needed to accommodate growth. Local governments may also need to assess who in the community is most vulnerable to temporary or permanent displacement (e.g., low-income or socially isolated residents who may be forced to move because of climate-exacerbated hazards) and what resources they might need (e.g., temporary shelter, relocation assistance, property buyouts). Implementation could also entail assessing who may be drawn to the community (e.g., people who share your community's linguistic or cultural characteristics or who have skills that match your community's economic sectors) and how to accommodate their housing, employment, and other needs. Local governments could partner with academic and government researchers who forecast growth to build a better understanding of climate migration scenarios and policy approaches.	The Town will implement its growth target in its Comprehensive Plan Periodic Update.
35	491	Provide overburdened communities subsidies to offset potential cost increases associated with conversion to non-fossil-fuel energy sources.	Health & Well-being	Creation of these programs and subsidies could come in part from local pollutant surcharges. This policy could help reduce population displacement risks.	Not applicable.
36	371	Develop and implement an urban heat resilience strategy that includes land use, urban design, urban greening, and waste heat reduction actions.	Health & Well-being	A heat resilience strategy could include heat mitigation and management actions that prepare for and respond to chronic and acute heat risk in your community. Actions could include developing cooling centers and early warning systems, building cool roofs, bolstering energy grid resilience, and revising codes and priorities to increase urban vegetation.	The Town has adopted Tree Care Standards (FHMC 12.45). It applies to street trees. The Town manages its forestland around the watershed. The town requires landscaping to screen loading and industrial areas. Trees and landscaping are required in parking lots. (FHMC 17.68.070) The Town could promote tree protection standards associated with new development, and development incentives to retain or add trees (e.g. setbacks, parking, height, etc.).
37	434	Ensure that all community members have equitable access to green space within a half-mile.	Health & Well-being	This policy will help ensure that all residents have equitable, walkable access to park and recreational spaces. Such green spaces can store greenhouse gas emissions, provide cooling, shade, and support community health and well-being.	This is not a code standard but a policy standard the Town can consider with its Periodic Update or a Parks, Recreation, and Open Space Plan.
38	436	Develop and maintain a program to distribute cooling units and install heat pumps, prioritizing households with residents (e.g., low-income seniors) most vulnerable to extreme temperature events.	Health & Well-being	A good model for establishing goals, funding, and eligibility criteria is the Portland Clean Energy Community Benefits Fund (PCEF) Heat Response Program.	This is a programmatic action rather than a code provision.

39	22	Design and site new and expanded roads and railroads to have the least possible adverse effect on the shoreline, account for sea-level rise projections, not result in a net loss of shoreline ecological functions, or adversely impact existing or planned water-oriented uses, public access, and habitat restoration and enhancement projects.	Transportation (roads, bridges, multimodal)	New roadways and railroads within shoreline jurisdictions should be avoided. This policy also aligns with the Department of Ecology's shoreline guidelines.	The Town has similar policies/regulations in its Shoreline Master Program. (FHMC 19.04.510)
40	272	Incorporate hydrologic climate impacts into the design of water-crossing structures (i.e., climate-smart culverts and bridges) for fish passage and habitat quality.	Transportation (roads, bridges, multimodal)	Climate change scientists have noted changes in Pacific Northwest hydrology, including reductions in the size of glaciers, less snowpack, and earlier peak streamflow in many rivers. These trends are expected to continue, along with increasing flood size, and decreasing summer low flows. Typically, the size of water-crossing structures like culverts and bridges is based on stream width. As the size of floods increases, so will stream width. WDFW's web application can help you understand how the stream width at your project site may change in the future -- the 2040s and 2080s. With this information, you can make an informed decision about the design of your new culvert, bridge, or habitat restoration project. Culverts and bridges built to accommodate higher streamflow are less likely to fail and block fish, which reduces future maintenance and repair costs.	There are no streams or lakes in the Town. There are marine waters. The potential for this measure for culverts and relationship to the broader watershed can be considered.
41	520	Support pilot projects that foster collaboration for providing water for people, fish, and farms, such as water banks, irrigation modernization, and other mechanisms to ensure sufficient water supply for agriculture.	Water Resources		Not applicable.
42	1	Require the use of green infrastructure and low-impact development to address increased storm intensities and stormwater runoff.	Water Resources	Factor in equity and ecosystem service benefits when determining the design and relative priority of proposed projects to manage flooding and stormwater runoff. This could include aligning such projects with broader efforts to increase green spaces in overburdened communities. Constructed wetlands and other green infrastructure projects planted with native trees and grasses can provide co-benefits that traditional gray infrastructure do not, including providing ecosystem services (wildlife habitat), mitigating emissions (carbon sequestration), and creating recreational opportunities (seasonal trails and picnic spots).	See Row 5.
43	321	Manage water resources sustainably in the face of climate change through smart irrigation, stormwater management, preventative maintenance, water conservation and wastewater reuse, plant selection, and landscape management.	Water Resources	The scope of this broad policy could include buildings and their surrounding sites, including parking and landscaping areas.	The Town could develop drought-tolerant landscape standards. The Town could consider if its stormwater standards including biofiltration, and other green infrastructure standards need update to address extreme precipitation and drought.
44	392	Establish land use patterns that increase the resilience of the built environment, ecosystems, and communities to climate change.	Zoning & Development	EJ note: Frontline communities identified building dense, affordable communities around public transportation as a top environmental justice priority.	See Rows below.
45	461	Restore and maintain critical areas and open space areas to maximize the climate resilience benefits they provide.	Zoning & Development	Critical areas such as wetlands, as well as undeveloped open space, provide climate resilience benefits. Some of these areas may not be protected from development or conversion to other land uses. To implement this policy, local governments need to identify the climate impacts facing their community, and then identify and inventory the open space and critical areas that provide resilience benefits. For unprotected areas, local governments can work with partners to determine the land ownership, current level of protection, and	See Rows 10 to 22.

				conversion risk, and then implement strategies to protect them. For critical areas and areas with adequate protection, restoration may be needed to support climate resilience (e.g., riparian areas along streams). Open space protection may be more effective at a regional scale than working as a single jurisdiction.	
46	460	Conduct an environmental justice audit prior to creating new zoning designations or rezoning.	Zoning & Development	Local governments may decide to change zoning and development regulations to adapt to climate change. It is vital to take into account the environmental justice implications of rezoning, ensuring that decisions center environmental justice and at a minimum do no further harm to overburdened communities. Implementing this policy first requires understanding existing disparities in your community, working closely with communities to understand their needs, and keeping this information at the forefront when assessing potential changes.	This could be considered as the Comprehensive Plan Periodic Update Racially Disparate Impacts are addressed.
47	20	Identify and implement strategies to increase the resilience of the shoreline environment to sea-level rise and other climate hazards, while also protecting shoreline ecological functions, allowing water-dependent uses, and providing public access.	Zoning & Development	Shorelines are vulnerable to flooding from sea level rise and extreme precipitation. Local governments could adopt goals, policies, and regulations focused on climate resilience in their Shoreline Master Programs, alongside the priorities of the SMA to protect ecological functions, allow water-dependent uses, and provide public access. Implementing this policy may include assessing shoreline areas' vulnerability to sea-level rise or other climate impacts and then identifying a high-level strategy (e.g., protect, accommodate, retreat) and more specific interventions (e.g., flood-proofing important wastewater infrastructure or acquisition of most vulnerable parcels) while protecting public and private water-dependent uses and access. Technical support may be necessary to assess vulnerability and identify appropriate interventions. Implementation will require collaborating across city and county divisions and engaging with the public to build understanding and support for the changes that may be needed. This policy must be implemented through a jurisdiction's SMP.	See Row 15.
48	303	Identify and protect agricultural and forested lands that provide climate resilience benefits from conversion to more developed land use types.	Zoning & Development	Agricultural and forested lands provide climate resilience benefits, including mitigating flooding, providing cooling during extreme heat events, and others. Protecting undeveloped areas from conversion and encouraging development within UGAs and already developed areas is an important resilience strategy. Implementing this policy may include identifying areas at risk of conversion and implementing strategies to protect them. Applying concepts including conservation design and a land-first approach to development can help prioritize healthy ecological functions, while still permitting development in appropriate locations. Cities could modify this policy to focus on urban forests, community gardens, or other types of open space that provide climate resilience benefits. External partnerships with Tribes, nonprofits, and others may help implement this policy.	Not applicable.
49	14	Consider climate change, including sea-level rise, extreme precipitation, increased winter streamflow, and other impacts, in floodplain management planning.	Zoning & Development	Local governments plan for flooding through comprehensive flood hazard management planning, hazard mitigation planning, designating frequently flooded areas, and other land use policies. Plans and policies should consider and address projected changes in the frequency, intensity, and location of flooding due to climate change. A first step is to assess your community's vulnerability to flooding from sea level rise, extreme precipitation, and other changes that may already be impacting or will impact your community. A second step is to review existing plans that address floodplain planning and identify any gaps or needs to better consider climate change. The Department of Ecology provides guidance for developing comprehensive flood hazard management plans that consider current and future conditions. Floodplain planning is likely most effective when conducted collaboratively with all jurisdictions within a river basin, including other counties, cities, and tribes.	See Row 15.

50	444	Identify and implement strategies for reducing residential development pressure in the wildland-urban interface.	Zoning & Development	The wildland-urban interface is the zone of transition between wilderness and developed areas; these areas can be highly vulnerable to wildfire. Local governments can implement this policy by identifying areas that have greater fire risk and implementing incentivizes to redevelop in urban areas and lower-risk areas rather than expanding into wilderness areas. In addition, development regulations should utilize tools such as the IWUI building code. This policy is most relevant to local governments with wilderness areas adjacent to suburban or urban development. This policy could be implemented as part of a wildfire resilience strategy.	See Row 28.
51	**464**	**Establish and maintain a purchase and transfer of development rights program to allow transferring development rights from areas that provide conservation and climate resilience benefits and promoting denser development in suitable areas.**	**Zoning & Development**	**Adapting to climate change requires reducing the exposure of people and property to current and future climate hazards. Many privately owned properties in low-lying coastal areas, in areas with extreme wildfire danger, or in river floodplains will become increasingly unsuitable for residential and commercial uses. Transfer of development rights (TDR) programs can shift development from areas that may provide conservation and resilience benefits to areas more suitable for development. Local governments and regional partnerships with existing TDR programs can update their programs to include climate resilience as a goal or establish new programs if needed.**	**This is likely not applicable in the Town.**

Source: Town of Friday Harbor Municipal Code, retrieved 2024; Berk, 2024

Appendix B. Document References

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