



TOWN OF FRIDAY HARBOR  
Post Office Box 219 • Friday Harbor, Washington 98250  
(360) 378 - 2810 • [www.fridayharbor.org](http://www.fridayharbor.org)

AGENDA  
**PLANNING COMMISSION**

Thursday, August 13, 2026 at 5:30 PM

Town Council Chambers - 60 Second Street

Zoom: <https://us02web.zoom.us/j/86062582578> ~ Meeting ID: 860 6258 2578

***Vision:** Honoring our past while building a thriving and sustainable future.*

***Mission:** To preserve and enhance our unique island community known for its small town, rural atmosphere, and natural beauty. To sustain a vital downtown that enriches the business community, honors history, celebrates the arts, and preserves our natural environment.*

**Call to Order / Roll Call**

**Public Comments**

**Workshop**

- Chapter 9 Climate Change and Resiliency

**Department Update**

**Adjourn**



# 9 Climate Change and Resiliency

## 9.1 Summary and Purpose

The Growth Management Act was amended in 2023 under Washington House Bill 1181, requiring the Town of Friday Harbor to integrate climate resilience goals, policies, and strategies into this Comprehensive Plan. This Element addresses climate change impacts, vulnerabilities, and risk, while considering co-benefits and integration with other elements of this Comprehensive Plan and other plans. Goals and policies in this element are intended to be consistent with the Washington State Department of Commerce's Climate Planning Guidance. Policies must also consider and prioritize actions that benefit vulnerable communities and promote environmental justice consistent with HB 1181. Additional information on specific climate related vulnerabilities, risks, and mitigation strategies can be found in the **Climate Vulnerability and Risk Assessment Appendix**.

## 9.2 Conditions and Trends

### Assets

Climate change resiliency planning assesses the vulnerability of different assets (people, resources, ecosystems, and infrastructure) within a community and strategies to reduce vulnerabilities. Different community characteristics and vulnerabilities assessed as well as a full list of assets within Friday Harbor can be found in the **Climate Vulnerability and Risk Assessment Appendix**. **Exhibit 9-1** includes a generalized list of assets by category and sector.

**Exhibit 9-1. Generalized Community Assets by Sector and Category**

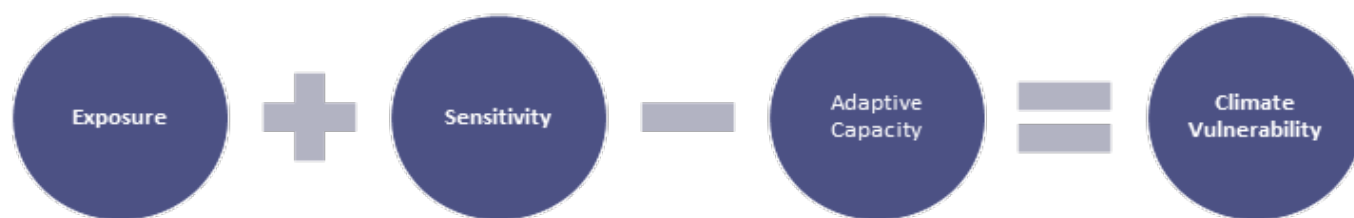
| Sector                         | Asset Category                       | Assets                                                                                                                         |
|--------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Agriculture & Food Systems     | Food Production & Distribution       | Community garden, food bank, grocery stores: Friday Harbor Market Place and Kings Market                                       |
| Buildings & Energy             | Government facilities                | Municipal/public buildings                                                                                                     |
|                                | Schools                              | Schools                                                                                                                        |
|                                | Energy Infrastructure                | OPALCO Power lines & microgrid projects; EV charging stations; 25 submarine power cables                                       |
|                                | Commercial and Residential Buildings | Commercial and residential buildings                                                                                           |
| Cultural Resources & Practices | Historic Sites                       | Historic district and sites                                                                                                    |
|                                | Cultural Foods                       | Salmon; First Foods (foods important to Indigenous peoples)                                                                    |
|                                | Community Resources                  | San Juan County Library; Family Resource Center; Schools; Faith-based institutions; Parks and Open spaces                      |
|                                | Social Networks                      | Social networks and community connectivity                                                                                     |
| Economic Development           | Job Security                         | Income for maritime workers                                                                                                    |
|                                | Local Businesses                     | Banks; restaurants; hotels; small businesses; water-based sport retailers; outfitters (fishing, cycling); commercial fisheries |
|                                | Industrial/Manufacturing             | Industrial/manufacturing operations; commercial fisheries                                                                      |
| Ecosystems                     | Natural Areas                        | Bluffs and beaches                                                                                                             |
|                                | Natural Resources                    | Tree canopy; Clean air; Shoreline                                                                                              |
|                                | Plant & Animal Species               | Native species; Threatened/endangered species                                                                                  |
| Emergency Management           | Emergency Response/Services          | Emergency services (police, fire, EMS); Shelters                                                                               |
| Health & Well-being            | Medical Facilities                   | Peace Island Medical Center; nursing homes and elder care facilities                                                           |
|                                | Social Services                      | Health/mental health services; childcare facilities                                                                            |
|                                | Human Health & Well-Being            | Healthy and safe populations                                                                                                   |
| Transportation                 | Major Transportation                 | Port of Friday Harbor Marina, WSDOT Ferry Terminal; Port of Friday Harbor Airport                                              |
|                                | Local/Public Transportation          | Trails/walkways/sidewalks; bike infrastructure                                                                                 |
| Waste Management               | Waste Management                     | Transfer station; waste hauling; septic systems; wastewater/sewage treatment facility                                          |
| Water Resources                | Water Resources                      | Groundwater aquifers/private wells; Trout Lake Reservoir                                                                       |
|                                | Water Infrastructure                 | Pipes; pumping stations; culverts; stormwater infrastructure/drains; dams                                                      |
| Zoning & Development           | Development & Conservation Potential | Available land for development; available land for conservation/open space                                                     |
|                                | High-Traffic Areas                   | Downtown/Central business district                                                                                             |
|                                | Residential Structures               | Single and multi-family residences (structures)                                                                                |
|                                | Commercial Buildings                 | Businesses (structures)                                                                                                        |

Source: BERK, 2024

## Vulnerabilities

Vulnerability of different assets is defined by the US Climate Resilience Toolkit as the sum of exposure to a changing climate and the inherent sensitivity of people or environments to a changing climate, minus capacity of the community to manage the impacts of a changing climate. Risk of a certain climate hazard to an asset is a separate but related concept defined as the probability and magnitude of hazards impacting a specific asset.

## Exhibit 9-2. Climate Vulnerability Assessment Framework



Source: UKAID. (2011). Defining disaster resilience

| Exposure                                                                                                                                                                                                     | Sensitivity                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Adaptive Capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Vulnerability                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The presence of people, assets, and ecosystems in places where they could be adversely affected by hazards                                                                                                   | The degree to which a system, population, or resource is or might be affected by hazards.                                                                                                                                                                                                                                                                                                                                                                            | The ability of a person, asset, or system to adjust to a hazard, take advantage of new opportunities, or cope with change.                                                                                                                                                                                                                                                                                                                                                                                                                     | The propensity or predisposition of assets to be adversely affected by hazards. Vulnerability encompasses exposure, sensitivity, potential impacts, and adaptive capacity. |
| <p>Common exposures:</p> <ul style="list-style-type: none"> <li>• Extreme Heat</li> <li>• Extreme Precipitation</li> <li>• Flooding</li> <li>• Wildfire Smoke and Danger</li> <li>• Air Pollution</li> </ul> | <p>Common Indicators of high sensitivity:</p> <ul style="list-style-type: none"> <li>• Human Indicators <ul style="list-style-type: none"> <li>○ &lt; 5 years old</li> <li>○ &gt; 65 years old</li> <li>○ Diabetes</li> <li>○ Asthma</li> <li>○ Respiratory disease</li> <li>○ Heart Disease</li> </ul> </li> <li>• Physical Indicators <ul style="list-style-type: none"> <li>○ Steep Slopes</li> <li>○ Critical Areas</li> <li>○ Shorelines</li> </ul> </li> </ul> | <p>Common factors for low adaptive capacity:</p> <ul style="list-style-type: none"> <li>• People of Color</li> <li>• Poverty</li> <li>• Less than high school degree</li> <li>• Linguistic Isolation</li> <li>• Living Alone</li> <li>• High Housing Cost Burden</li> <li>• Unreliable Access to Transportation</li> <li>• Poor Housing Condition</li> <li>• Unemployment</li> <li>• Working in Outdoor Professions</li> <li>• Lack of Health Insurance</li> <li>• Lack of Access to Open Space</li> <li>• Low Tree Canopy Coverage</li> </ul> |                                                                                                                                                                            |

Source: US Climate Resilience Toolkit. (2021); IPCC (2014); BERK, 2025

## Hazards in Friday Harbor

As part of the Fifth National Climate Assessment (Jay, et al., 2023), climate change trends and projections were highlighted for the Pacific Northwest, including:

- **Warming:** Annual average air temperatures in the region have risen by almost 2° F since 1900. Compared to the period of 1900-2020, the annual number of extremely hot days and warm nights in the Northwest has been above the long-term average over the past decade. Future warming in the region is expected to exacerbate regional heatwave intensities.
- **Extreme Precipitation:** Summer precipitation is projected to decline contributing to more frequent, longer, and more severe regional drought conditions that increase wildfire risk and decrease water availability. 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. Warmer winter temperatures have led to declines in mountain snowpack, particularly in areas with warm maritime climates. A greater proportion of winter precipitation is projected to fall as rain rather than snow.
- **Coastal Waters:** Annual average coastal sea surface temperatures in the Northwest have warmed approximately 1.2° F since 1900. Human-caused carbon emissions have already driven ocean acidification of surface and subsurface waters off Oregon and Washington. Ocean acidification, hypoxia, and human-caused nutrient inputs negatively affect many species. Sea level is projected to increase across the Northwest. In Puget Sound, where most land is subsiding, sea levels are expected to rise 0.9 to 1.6 feet by 2050, and 3.2 to 10.2 feet by 2150 under a very high scenario (RCP8.5), relative to the reference period (Climate Mapping for a Resilient Washington. , 2022).

Based on the University of Washington's Climate Mapping for a Resilient Washington (Raymond, 2022), trend information has been developed for each county in Washington State, including San Juan County. See **Exhibit 9-3**. Each hazard is described in **Exhibit 9-4**.

### Exhibit 9-3. San Juan County Median Changes to Climate by 2050

| Climate Change Hazard                                                                                                                                                  | Potential Impacts and Likely Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Indicators                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Created by Adrien Coquet from the Noun Project</p> <p><b>Extreme Heat</b></p>     | <p>An increase in average summer temperatures is expected. This could affect people, landscaping, agriculture, and natural areas like wetlands, wildlife habitats, and other ecosystems.</p> <p>More days above 90° F humidex (humidity and heat) are expected, which can affect public health.</p> <p>An increase in the number of cooling degree days is an indicator of greater cooling demand for buildings in the summer.</p> <p>Warmer stream temperatures are expected to reduce habitat quality for aquatic species that depend on cold water.</p> <p>Changes in temperature and precipitation can affect wetlands as well as upland plant communities (Ecology, 2024).</p> | <p>+ 6.1° F Change in Average Daily Summer (June - Aug) Maximum Temperature.</p> <p>+ 5.2 days above 90° F humidex.</p> <p>+ 208° F-days change in cooling degree days (base 65° F).</p> <p>+ 16.0° C average August stream temperature (°C).</p> |
|  <p>Created by Laynik from the Noun Project</p> <p><b>Wildfire &amp; Smoke</b></p>    | <p>There would be more fire-danger days that could affect homes and businesses where forests and wildland vegetation meet or intermingle.</p> <p>More wildfire smoke can result in particulates affecting those with health conditions (e.g., heart and lung disease, pregnancy, etc.).</p>                                                                                                                                                                                                                                                                                                                                                                                         | <p>+ 21 days Change in High Fire Danger Days.</p>                                                                                                                                                                                                 |
|  <p>Created by Nae Activated Yourself from Noun Project</p> <p><b>Drought</b></p>   | <p>A decrease in late summer precipitation could reduce available water for multiple uses during the period that is typically driest, and low fuel moisture during fire season.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>-14.4% change in total precipitation for July 15 - September 15.</p>                                                                                                                                                                           |
|  <p><b>Extreme Precipitation</b></p>                                                | <p>More frequent and intense storms are expected. This could affect flooding, erosion, and runoff and impact stormwater systems, transportation, and emergency responses.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>+10 % change in the magnitude of 2-year storm.</p> <p>+15 % change in storm that occurs on average once every 25 years.</p>                                                                                                                    |
|  <p>Created by Adrien Coquet from the Noun Project</p> <p><b>Sea Level Rise</b></p> | <p>The county would experience an increase in frequency and extent of coastal flooding. This could impact more homes, businesses, and infrastructure.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>+0.6 feet sea level rise expected with a 50% likelihood by 2050</p> <p>+2 feet sea level rise expected with a 50% likelihood by 2100.</p>                                                                                                      |

Source: Climate Mapping for a Resilient Washington, 2022.

**Exhibit 9-4. Hazard Impacts by Sector**

| Sector                         | Potential Climate Hazard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agriculture & Food Systems     | A warming climate, droughts, and extreme precipitation can stress crops and livestock. However, Friday Harbor does not have significant agricultural production. The town's food system is dependent on delivery of food from off-island.                                                                                                                                                                                                                                                                                                                                                           |
| Buildings & Energy             | Extreme heat can cause an increase in demand for energy (cooling).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Cultural Resources & Practices | <p>Potential impacts to historic and cultural resources could include:</p> <p>Loss of cultural and historical sites on coastline to sea-level rise and related impacts</p> <ul style="list-style-type: none"> <li>• Loss of cultural and historic sites due to more frequent and intense severe weather events</li> <li>• Loss of locally grown, temperature-sensitive foods that are culturally important (berries, shellfish, salmon, etc.)</li> </ul> <p>Extreme heat can result in warmer stream temperatures that can affect fish and wildlife and plants important as cultural resources.</p> |
| Economic Development           | Extreme heat or wildfire smoke events could affect persons working outdoors, delaying jobs and income (e.g. construction). These impacts could interfere with cultural events and impact tourism.                                                                                                                                                                                                                                                                                                                                                                                                   |
| Ecosystems                     | <p>There could be changes in the size and shape of designated environmentally critical areas, buffers, and shoreline environments.</p> <p>Warmer summer temperatures could reduce tree growth in some areas and increase growth in mild climates.</p> <p>There is a potential for increased ocean acidification and sea surface temperature. There can be stress on cold-water species in lakes.</p> <p>Sea level rise can result in loss of near-shore habitat and coastal wetlands to sea-level rise and erosion.</p>                                                                             |
| Emergency Management           | <p>The 2018 Hazard Mitigation Plan identified a high probability of a severe storm event, a moderate probability of a WUI fire event, and a low probability of a drought.</p> <p>The Town's Watershed Forest Assessment identified wildfire risk as a concern and identified management strategies.</p> <p>Regarding drought, since 2019 there has been persistent drought in the Pacific Northwest. In 2023, there was a drought advisory including in San Juan County.</p> <p>In April 2024, the State declared a drought including all counties.</p>                                             |
| Health & Well-Being            | Friday Harbor has populations that could be vulnerable to extreme heat, due to age or health conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Transportation                 | Climate change could result in infrastructure damage and increased maintenance requirements (e.g., roadside vegetation).                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

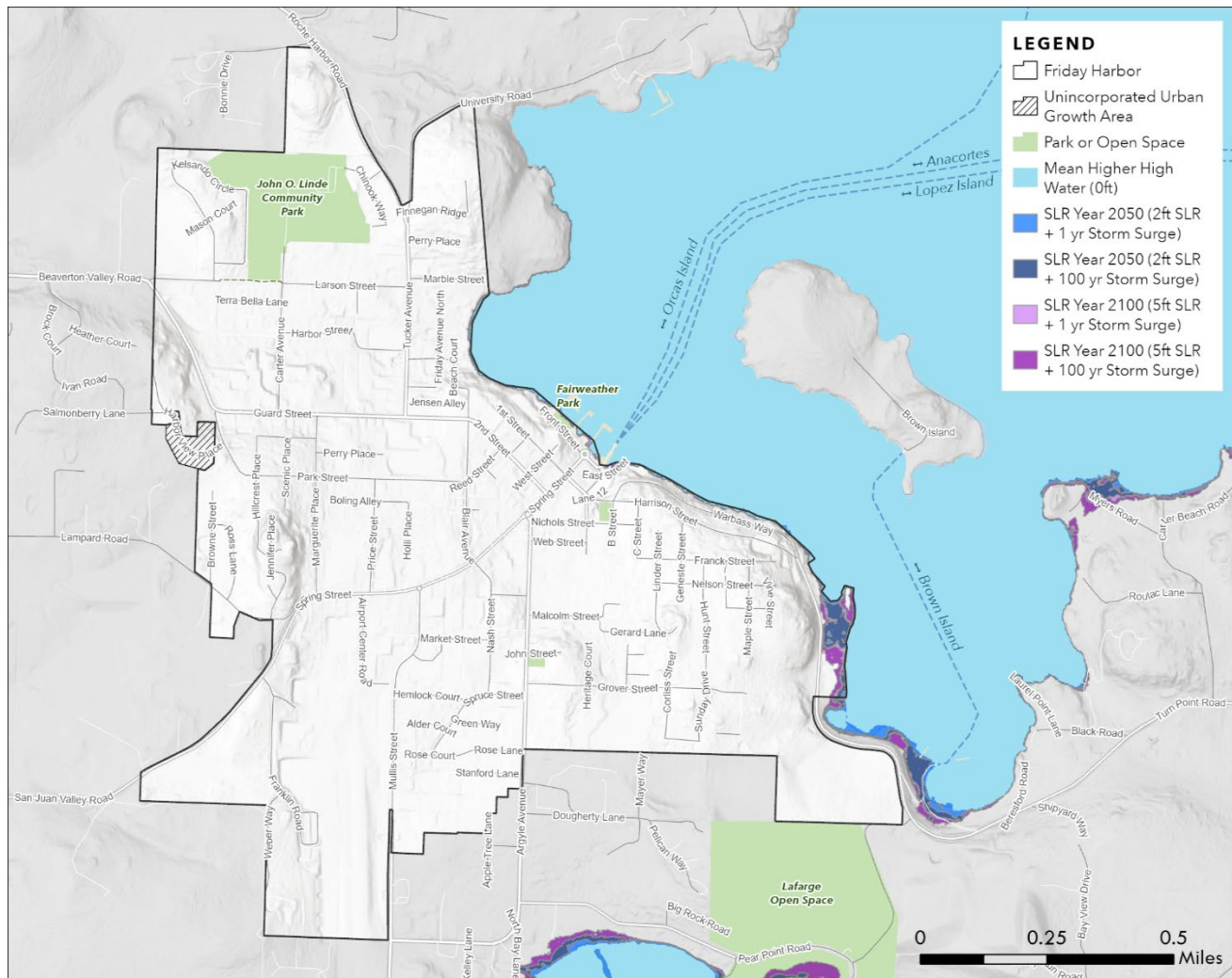
| Sector               | Potential Climate Hazard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | A primary concern is sea level rise and damage to the ferry terminal area, and other shoreline facilities with marinas and trails.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Waste Management     | Due to climate hazards, there could be increased solid waste and debris (downed tree limbs, building rubble, roof shingles, vehicles, and appliances).                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Water Resources      | <p>The forest land surrounding the reservoir could be affected by extreme heat and drought as described under Ecosystems.</p> <p>Other water resource impacts due to climate hazards include:</p> <ul style="list-style-type: none"> <li>• Changes in water quality</li> <li>• Increased demands on stormwater management systems with the potential for more combined stormwater and sewer overflows</li> </ul>                                                                                                                                                                                                          |
| Zoning & Development | <p>Key climate hazards for the Town include sea level rise and extreme precipitation events and erosion, drought, and other concerns. Potential impacts could include:</p> <ul style="list-style-type: none"> <li>• Increased erosion or damage to coastal infrastructure, beaches, and other natural features due to sea level rise and storm surge</li> <li>• Increased demand for irrigation of non-native, non-productive landscaping</li> <li>• Changes in housing stock availability due to hazard events</li> <li>• Increased impervious surface runoff and associated management and maintenance costs</li> </ul> |

Source: BERK, 2025

## Sea Level Rise

Over the course of the next century, sea level rise is anticipated that can have impacts on existing infrastructure and may limit growth. Sea level rise would more severely impact low-lying areas of San Juan Island, which include the WSDOT Ferry Terminal at Friday Harbor and other areas within the Friday Harbor town boundaries the FHUGA. A map of potential sea level rise is shown in **Exhibit 9-5**.

**Exhibit 9-5. Sea Level Rise in Friday Harbor, 2050 and 2100**



Sources: San Juan County, 2024; BERK, 2024.

Within town and the FHUGA, a notable area that is at heightened risk of sea level rise is the area near the Ferry Terminal, Warbass Way, and Jensen Marine. **Exhibit 9-5** shows that while sea level rise is a risk with critical facilities such as the ferry terminal area and some parkland, Friday Harbor has fewer residential areas that are at risk of inundation

### *Extreme Heat*

By 2050 it is anticipated there will be an increase in maximum summer temperature, increases in the number of 65-degree humidex nights and 90-degree humidex days<sup>14</sup>, and an increase in cooling degree days.<sup>15</sup>

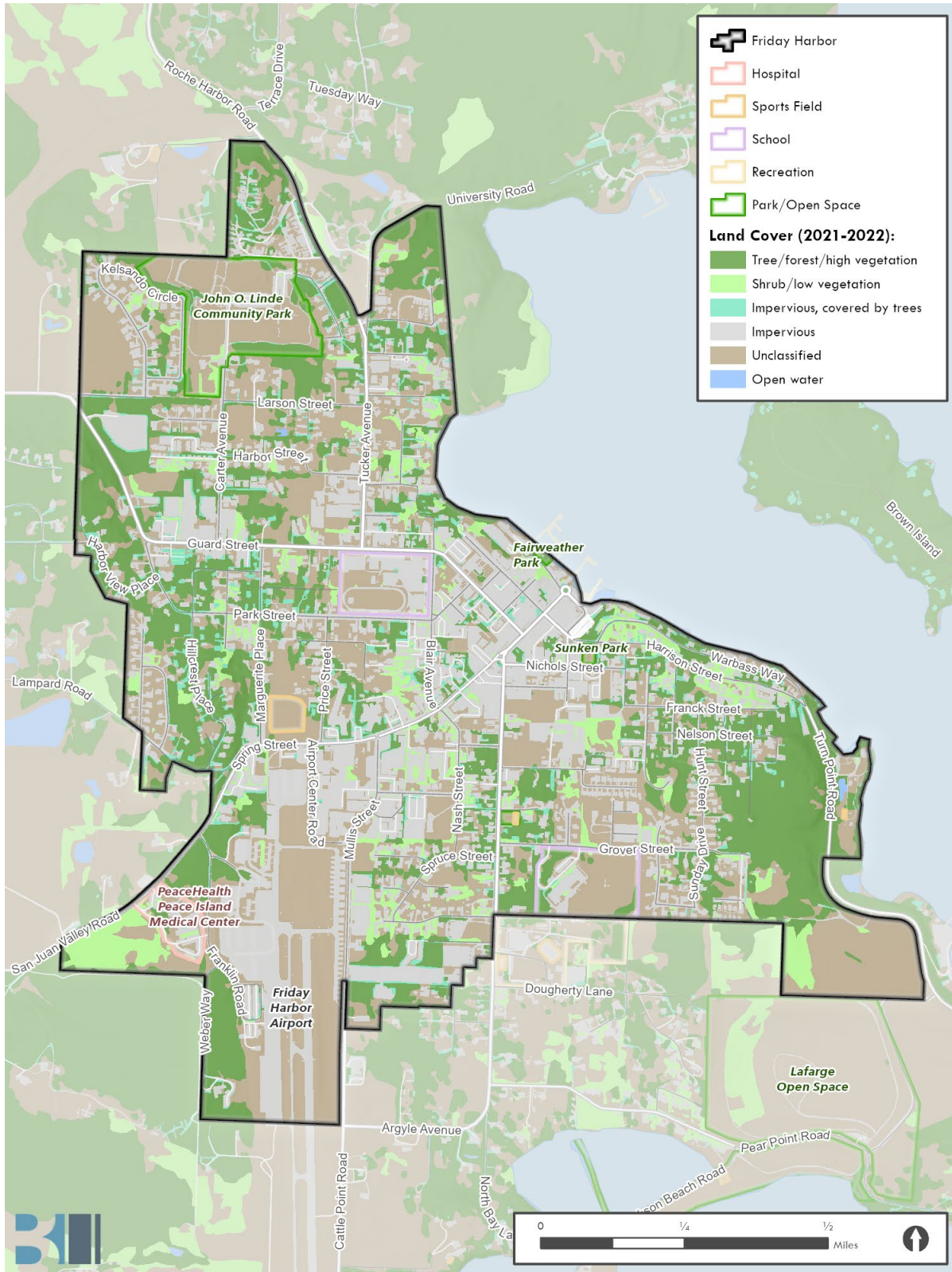
Areas with less tree canopy and more impervious areas can magnify the effects as “heat islands.” Exposure to extreme heat can put health strain on the aging population and by extension the emergency management systems, as well as strain on electric and water utilities, and hurt overall ecosystem health throughout the town’s residential areas, parks, open spaces, and greenways. See **Exhibit 9-6** and **Exhibit 9-7** which show maps of land cover and heat islands within the town limits.

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<sup>14</sup> Per the University of Washington Climate Impacts Group, humidex is a measure of "experienced" temperature, and includes measures of both temperature and humidity.

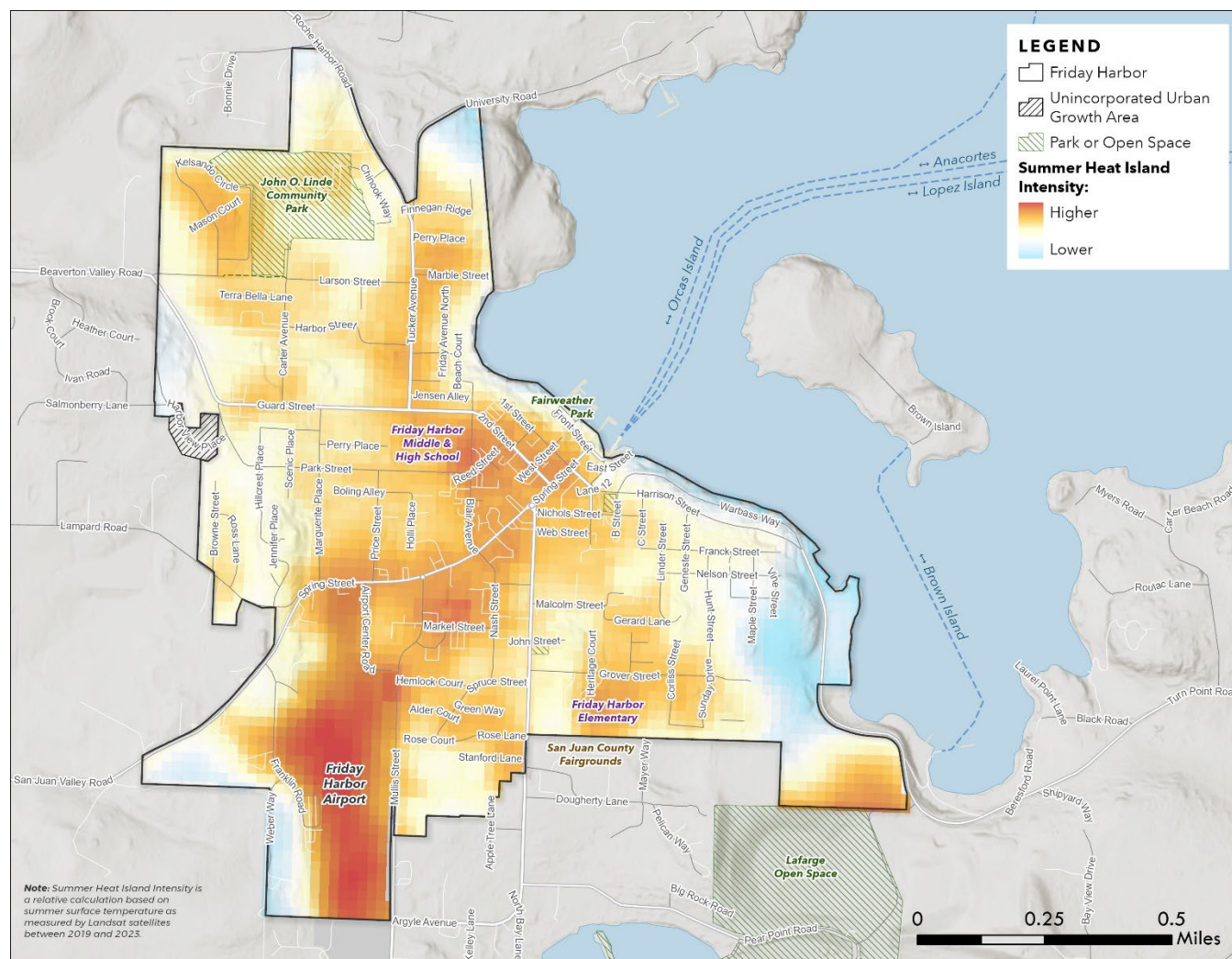
<sup>15</sup> According to the National Weather Service cooling degree days is a comparative metric used when the temperature mean is above 65°F, indicating air conditioning or cooling may be needed. Degree days are the difference between the daily temperature mean, (high temperature plus low temperature divided by two) and 65°F. If the temperature mean is above 65°F, subtract 65 from the mean, and the result is **Cooling Degree Days**.

## Exhibit 9-6. Land Cover types - 2022



Sources: Washington State Ecopia Land Cover; 2022, BERK, 2024.

## Exhibit 9-7. Summer Heat Island Intensity in Friday Harbor



Sources: Landsat 8, 2019-2023; BERK, 2024.

### Drought

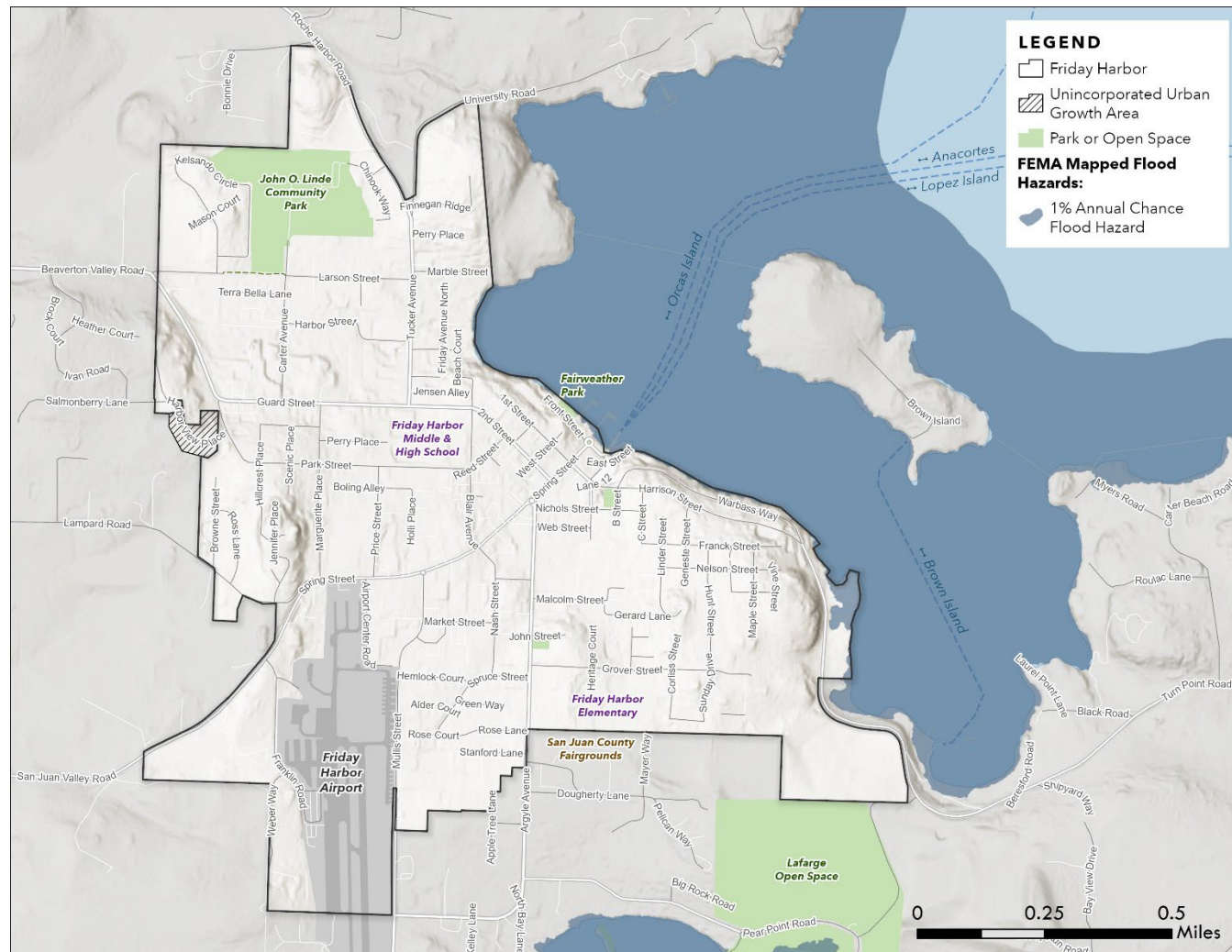
The drought conditions of Friday Harbor do not closely resemble drought conditions elsewhere in the region since certain indicators such as low streamflow and snowpack do not significantly apply to San Juan County or Friday Harbor. Drought conditions in Friday Harbor would be attributed to a decrease in late summer precipitation despite the overall increase in annual precipitation. These acute drought events can put short term strain on Trout Lake Reservoir sustainable yields that the town is dependent on. Additionally drought conditions may increase overall costs of municipal services such as emergency management and parks management, acutely damage ecosystems, and strain certain groundwater resources.

## Extreme Precipitation and Flooding

Flood hazards in the town are primarily related to sea level rise as mapped by FEMA. See [Exhibit 9-8](#). However, unmapped flood hazards could be expected in areas that lack stormwater management.

More annual rainfall is expected in the Town of Friday Harbor despite acute drought conditions that might be expected. Overall extreme precipitation events are expected to increase in magnitude by between ten and 20 percent in the next 50 years (FEMA, 2021). These events can lead to significant soil degradation and localized flooding in the urbanized areas of Friday Harbor. This flooding can impact the economic development of certain low-lying areas in the town and can lead to damaged transportation infrastructure or traffic delays during these acute severe storms. The southeast part of the town and ferry terminal and park access areas are at the highest risk for a 1% annual change in flood hazards.

### Exhibit 9-8. Flood Hazards in Friday Harbor



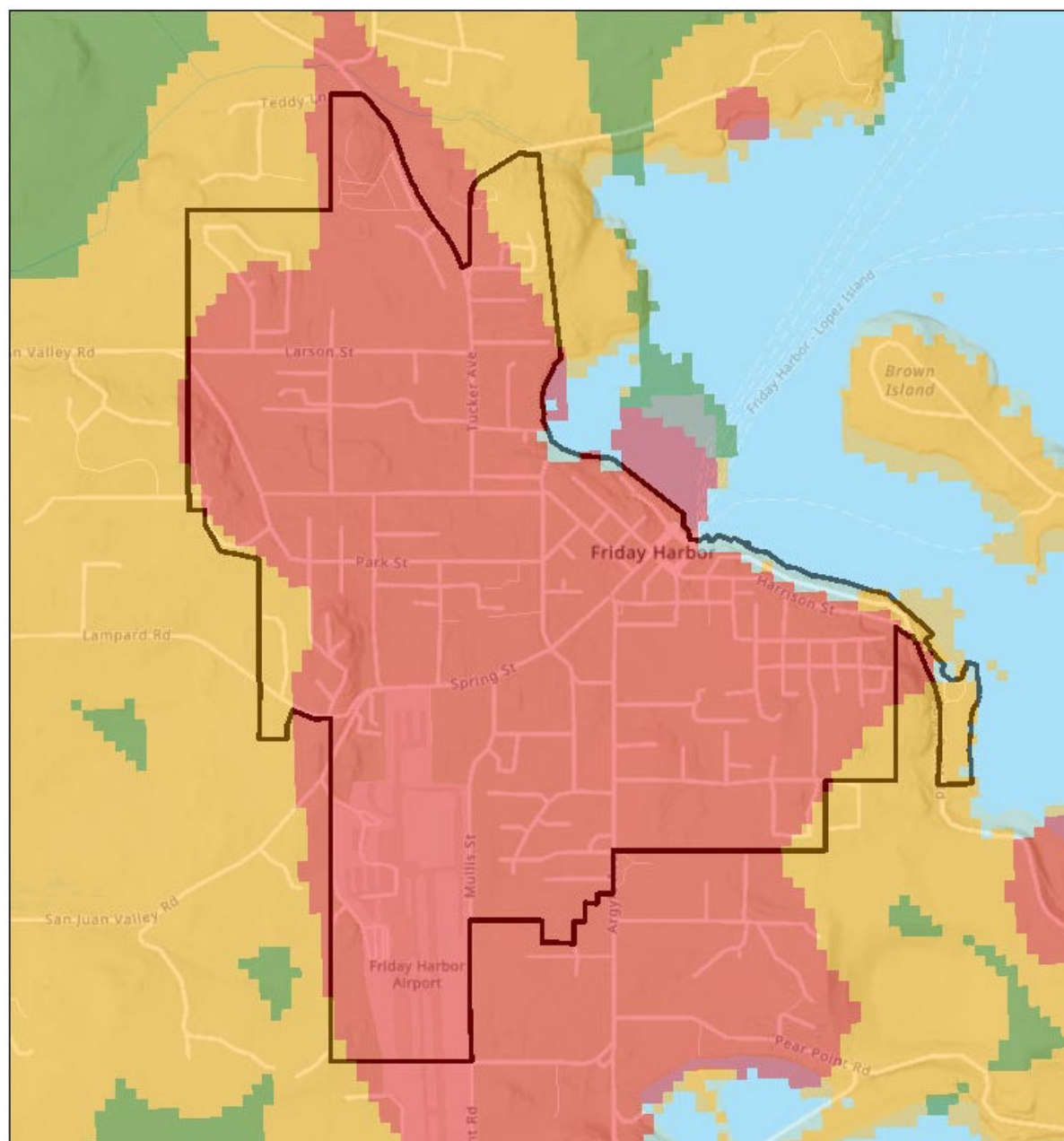
Sources: FEMA, 2021; BERK, 2024.

### *Wildland Fires and Smoke Events*

Parts of the town could be affected by wildland fires where wildlands and homes intermix; generally, wildfire smoke from sources in the state or Pacific Northwest can expose the community to wildfire smoke.

The Wildland Urban Interface (WUI) is a land use planning tool created by the Washington State Department of Natural Resources to understand where wildlands could present a risk to urban environments related to wildfire spread and fire management. While much of the town center lacks tree cover, the WUI depicts areas where structures and wildland overlap with specific structure density ranges. **Exhibit 9-9** shows that a large area of the town is “WUI-Intermix.” One error in this map is in the area north of the Port of Friday Harbor Marina. This area is mistakenly shown as WUI, but is actually open water or marina and should be disregarded.

## Exhibit 9-9. Wildland Urban Interface in Friday Harbor



8/23/2024

Wildland Urban Interface

WUI - Interface

WUI - Intermix

Non-Vegetated Uninhabited

Vegetated Uninhabited

Water

SJ Urban

World Hillshade



1:24,000  
0 0.13 0.25 0.5 mi  
0 0.2 0.4 0.8 km

Esri, NASA, NGA, USGS, FEMA, WA State Parks GIS, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS, NRCan, Parks Canada, Department of Natural Resources (DNR), Wildfire Division, Forest Health Division

Source: Washington State Department of Natural Resources, 2019; BERK, 2024.

## 9.3 Climate Change and Resiliency

### Climate Change and Resiliency Goals and Policies

Several specific strategies as well as analyses of exposure, risk, adaptive capacity, and vulnerability can be found in Appendices. Below are goals and policies necessary to lower vulnerabilities and remain resilient to the possible impacts. Cross references are made to relevant goals and policies in other elements.

#### **Goal CR 9.1**

**Ensure there are adequate, climate resilient public facilities and public services with capacity to respond to climate-related hazards or other emergencies.**

##### **Policies:**

- CR 9.1.1: Support the establishment of a year-round multipurpose climate-resiliency shelter (resilience hub) that includes protection from extreme temperatures, severe storms, and wildfire smoke and provides resources during major power outages or utility interruptions.
- CR 9.1.2: Explore opportunities to collaborate with jurisdictional agencies, Tribes, and other partners to relocate critical infrastructure and facilities from within potential sea level rise inundation zones.
- CR 9.1.3: Pursue upgrades and align facility investments to the San Juan County and Town of Friday Harbor Hazard Mitigation Plan.
- CR 9.1.4: Determine access needs and traffic flow to support rapid evacuations during emergency events.

#### **Goal CR 9.2**

**Communicate climate hazard response and preemptive climate adaptation strategies with residents.**

##### **Policies:**

- CR 9.2.1: Support the development of community wildfire protection plans and wildfire risk reduction plans in coordination with San Juan Island Fire and Rescue.  
ENV Goal 3.4
- CR 9.2.2: Educate the public on opportunities and facilities to utilize during climate related emergencies. Pursue several methods of communication and Spanish language communication to reach a wide audience.
- CR 9.2.3: Communicate with employers about the importance of protecting the health and well-being of outdoor workers exposed to extreme heat and other climate-exacerbated hazards.

### **Goal CR 9.3**

**Ensure that historical structures, culturally significant sites, and tribal resources are protected or adapted to address climate-related hazards.**

#### **Policies:**

- CR 9.3.1: Encourage climate adaptive retrofits to historical and, culturally significant structures.  
[See Land Use Element Historic and Cultural Resources Sub element](#)
- CR 9.3.2: Coordinate with Tribal partners to adapt culturally significant sites to be resilient to extreme precipitation and sea level rise through retrofits and enhancement of shoreline conditions.  
[See Land Use Element Historic and Cultural Resources Sub element](#)

### **Goal CR 9.4**

**Establish land use patterns and design standards that increase resilience and decrease vulnerability of the built environment, ecosystems, and communities to climate change.**

#### **Policies:**

- CR 9.4.1: Direct new development into areas where exposure to climate hazards is low or where development can be designed to be sustainable and resilient.  
[OSR Policy 3.1.1](#)  
[ENV Goal 3.3](#)  
[SLU Goal 3.1](#)
- CR 9.4.2: Implement and promote green stormwater infrastructure and stormwater drainage in developments and rights-of-ways with large amounts of impervious surface to alleviate strain on existing stormwater systems.  
[ENV Policy 3.3.1](#)  
[CFSD Goal 6.2](#)  
[CFSD Goal 6.3](#)
- CR 9.4.3: Remove unnecessary barriers in design standards in order to increase climate adaptation to flooding, drought, wildfire smoke, and extreme heat. Encourage energy and water conservation to reduce associated strain on energy and water system infrastructure.  
[UTL Goal 7.4](#)  
[UTL Goal 7.5](#)  
[CFW Goal 6.1](#)  
[CFW Goal 6.2](#)
- CR 9.4.4: Expand municipal reclaimed water systems and allow onsite non-potable water systems to reduce water demand in private-sector commercial and residential buildings.  
[CFW Goal 6.3](#)  
[CFWW Goal 6.2](#)

- CR 9.4.5: Maintain an up-to-date tree canopy map. Identify tree canopy inequities in public spaces and rights-of-way. Seek to add trees and shade structures in response to increased days of extreme heat in priority areas.
  - ED Policy 10.4.3
  - PR Policy 8.4.7
- CR 9.4.5: Develop and implement an urban heat resilience strategy that includes land use, urban design, and urban greening actions.
  - PR Policy 8.4.7
  - CFSD Policy 6.3.5
- CR 9.4.6: Choose native drought and pest-resistant trees, shrubs, and grasses when planting in public spaces or rights-of-way to support ecosystem health and biodiversity.
  - CFW Policy 6.3.3
  - CFW Policy 6.3.6
  - CFSD Policy 6.3.5
- CR 9.4.7: Expand local food security, mitigate the impacts of potential food-related supply chain disruption and increase access to healthy, affordable foods, particularly to serve vulnerable subsections of the population. Lower barriers to add community gardens in underutilized spaces.
  - See Capital Facilities Element Medical Services Sub element
- CR 9.4.8: Implement complimentary and mixed land uses to promote cycling and walking and reduce driving. Increase overall community connectivity, improve population health, and create transportation redundancies for residents to access vital services.
  - TE Goal X.X
  - UGA Goal 3.2
  - DTN Goal 3.2
  - OSR Goal 3.4

## Goal CR 9.5

**Protect Friday Harbor's natural environment, water resources, and clean air from drought, extreme heat, wildfire smoke, and other hazards exacerbated by climate change.**

### Policies:

- CR 9.5.1: Protect “critical areas” through a variety of measures such as:
  - Restrictions on clearing, grading, and filling; or
  - Stormwater runoff controls; or
  - Construction practices that are compatible with environmental concerns; or
  - Sufficient buffers to sustain environmental functions; or
  - Damage mitigation and restoration.
- CR 9.5.2: Identify and regulate land uses within potential aquifer recharge areas which could have a potential significant impact on ground water quality and/or quantity.
- CR 9.5.3: Explore the need for expanded water-storage systems to ensure potable water supply keeps up with demand as growth occurs in the wake of projected worsening drought conditions.

- CR 9.5.4: Identify and protect ecosystems that provide climate resilience benefits from conversion to land uses that do not increase resilience.
- CR 9.5.5: Utilize water conservation methods and technologies within parks and recreation areas to foster climate resilience.

## Implementation Actions

The **Climate Vulnerability and Risk Assessment Appendix** provides a set of strategies by sector that the Town can consider when implementing this Element's goals and policies.