

11

CLIMATE



CONTENTS

Introduction	1
GMA Requirements	2
Relationship to Other Plan Elements	2
Climate Planning	4
Existing Conditions	6
Climate Vulnerability and Resilience in San Juan County	7
Greenhouse Gas Emissions in San Juan County	9
Goals and Policies	13
Overarching Goals and Policies	13
Climate Resiliency Goals and Policies	15
GHG Emissions Reduction Goals and Policies.....	19

FIGURES

Figure 11.1	Communitywide GHG emissions profile (2019)	11
Figure 11.2	San Juan County household consumption-based emissions (MTCO ₂ e, 2019).....	102

RESOURCE DOCUMENTS

1. [San Juan County Community Engagement Reports](#)
2. [San Juan County Climate Vulnerability Assessment Report](#)
3. [San Juan County Community and County Operations Greenhouse Gas Emissions Report](#)

ELEMENT 11. CLIMATE

Introduction

Climate change, one of the five key challenges identified as especially critical during this planning period and beyond, is a current and continuing threat to our community, environment, and economy. The widespread use of fossil fuels has resulted in a substantial rise in greenhouse gas (GHG) emissions, global temperature increases, and climate change impacts, including (but not limited to), increased risk of heat domes, drought, wildfires and wildfire smoke, extreme precipitation, flooding, and sea level rise. At a global scale, governments are engaged in efforts to reduce GHG emissions and prepare their communities, infrastructure, and environments to be more resilient to climate impacts – while accommodating human needs such as housing, energy reliability, and jobs. In San Juan County, the community and local government are committed to proactively addressing the climate crisis, leading by example in Washington state and beyond. As stated in the County’s Comprehensive Plan (*Plan*) Vision 2036, specific to climate change:

“Our community sets an example with its response to climate change. We prepare to address the negative effects in advance before they become crises. Our community encouraged voluntary efforts and enacts incentives and regulations if necessary to reduce our carbon footprint.”

This Vision acknowledges that to be best prepared for the future, we must seek to reduce our GHG emissions and prepare our communities, infrastructure, and environment for the climate change impacts that we are already experiencing and will continue to experience in the future. As an island community, we will be at the forefront of sea level rise challenges and associated impacts such as increased shoreline erosion, flooding, saltwater inundation/intrusion to groundwater, and storm surge events. Furthermore, as detailed in the Water Resources Element, potable water is a precious and threatened resource on the islands, with increasing risk as periods of drought and extreme weather become more frequent, longer, and more severe.

The Climate Element is meant to guide plans and action needed to reduce our GHG emissions and improve our resilience. It identifies climate change projections and impacts to the islands, assesses climate risk to key county sectors, and provides an inventory and analysis of communitywide GHG emissions. Climate goals and policies were informed by the best available science and shaped through close collaboration with the community to reflect their priorities.

GMA Requirements

The Growth Management Act (GMA) encourages all jurisdictions to complete a greenhouse gas and resiliency sub-element as part of their climate element. San Juan County is required to complete a resiliency sub-element and, committed to our ethos of being a leader in climate action, is voluntarily complying with greenhouse gas emission reduction sub-element requirements. The GMA sets the following goals for jurisdictions developing a climate element:

- Identify, protect, and enhance natural areas to foster resiliency to climate impacts, as well as areas of vital habitat for safe passage and species migration.
- Identify, protect, and enhance community resiliency to climate change impacts, including social, economic, and built environment factors, that support adaptation to climate impacts consistent with environmental justice.
- Address natural hazards created or aggravated by climate change, including sea level rise, landslides, flooding, drought, heat, smoke, wildfire, and other effects of changes to temperature and precipitation patterns.
- Reduce overall greenhouse gas emissions generated by transportation, heating, and land use within the jurisdiction but without increasing greenhouse gas emissions elsewhere in the state.
- Reduce per capita vehicle miles traveled within the jurisdiction but without increasing greenhouse gas emissions elsewhere in the state.
- Prioritize reductions that benefit overburdened communities in order to maximize the co-benefits of reduced air pollution and environmental justice.

RCW 36.70A.070(9)

Relationship to Other Plan Elements

Climate change's compounding and cascading impacts will be far-reaching and felt across sectors. Achieving GHG emission reduction goals will also require cross-sectoral collaboration and partnership. Climate change impacts and topics such as sea level rise, water availability, extreme weather, and fossil fuel dependence align with and are closely tied to multiple *Plan* elements. These elements, such as Land Use, Water Resources, Housing, Transportation, Utilities, Economic Development, Capital Facilities, and Historic and Archeological Preservation, address some of the impacts and causes of climate change by forwarding adaptive strategies such as stormwater management, water conservation, infrastructure management, increasing local renewable energy, and sustainable transportation systems. Specific alignment with climate impacts and emission reduction measures in other *Plan* elements include:

Sea Level Rise: In San Juan County, an island community surrounded by water, sea level rise will lead to increased shoreline erosion, flooding, and storm surge events. The following *Plan* elements address sea level rise: Element 2, Land Use and Rural, ensures development regulations are responsive to climate change and sea level rise impacts; Element 4, Water Resources, includes a policy to avoid saltwater intrusion, worsened by rising sea levels; Element 5, Housing, ensures climate risks like flooding and erosion are considered when siting UGA expansions and affordable housing; Element 6, Transportation, ensures infrastructure is managed in a manner that considers sea level rise, flooding, and storm surge; and Element 7, Capital Facilities, calls for gradually relocating public infrastructure from climate-impacted areas during replacement or maintenance.

Water Availability: San Juan County has limited freshwater resources, and water availability was a major community concern during the *Plan* update, especially in relation to climate change. The following *Plan* elements address water resource management and aquifer recharge during potentially stressful times for water systems: Element 2, Land Use and Rural, fosters practices that support natural systems, such as stormwater management and aquifer recharge; Element 4, Water Resources, promotes water efficiency, conservation, and long-term monitoring of water use and availability, while encouraging practices that enhance aquifer recharge; Element 5, Housing, avoids siting affordable housing in areas projected to face increased water shortages due to climate change; and Element 6, Transportation, supports designs that improve stormwater management and aquifer recharge.

Extreme Weather Events and Natural Disasters: Climate change is already bringing wetter winters and drier summers to Western Washington, and these trends are expected to continue. The following *Plan* elements include policies to address the impacts of more frequent flooding, drought, and natural disasters: Element 2, Land Use and Rural, promotes forest stewardship to reduce wildfire risk and commits to updating the *Plan* and UDC to address emerging climate change impacts; Element 4, Water Resources, promotes water conservation and aquifer recharge to mitigate drought; Element 6, Transportation, ensures infrastructure is managed to minimize impacts from storm surge; Element 8, Utilities, supports energy independence to enhance resilience during weather events and disasters; Element 9, Historic and Archeological Preservation, seeks to assess and address climate impacts specifically on historic and archaeological resources; and Element 10, Economic Development, promotes agricultural practices that increase climate resilience.

Reducing Fossil Fuel Dependence and Greenhouse Gas Emissions: The following *Plan* elements promote development patterns that reduce fossil fuel dependence and support the transition to cleaner energy and transportation by allowing the necessary

infrastructure: Element 2, Land Use, encourages development patterns that decrease reliance on fossil fuel-dependent transportation; Element 5, Housing, incentivizes practices that reduce fossil fuel reliance; Element 6, Transportation, supports the electrification of the ferry fleet and non-motorized transportation options and promotes active transportation and/or multi-modal transportation/transit; Element 7, Capital Facilities, commits to transitioning County vehicles and machinery to electric; Element 8, Utilities, supports locally produced renewable energy and the infrastructure to reduce GHG emissions by electrifying transportation and heating; and Element 10, Economic Development, promotes the electrification of transportation and encourages individuals and businesses to reduce fossil fuel consumption by transitioning to electric energy from local providers.

Additionally, through the Climate Element development process, preexisting policies in *Plan* elements (such as those listed above) were amended to strengthen climate resilience and GHG emissions reduction measures. These amended policies will exist in their respective *Plan* elements, and complement new goals and policies developed for the Climate Element.

Climate Planning

The Climate Element serves as a resource to integrate the many past planning efforts the County and its communities have made, and guide present and future efforts. During its development, the County engaged with partners, various stakeholders, and the broad community to ensure alignment with the Islands' needs and priorities. Led by the Department of Environmental Stewardship, County staff engaged with internal County departments, including, Community Development, Emergency Management, Health & Community Services, Public Works, Parks, Recreation & Fair, Conservation Land Bank, Facilities, Fleet Services, County Manager, County Council, and worked closely with the Climate and Sustainability Advisory Committee. Significant effort went into engaging the community to understand concerns, experiences, and climate action priorities. Using various methods such as surveys, community-led climate conversations, tabling, and presenting at community events and meetings – hundreds of residents were heard and the feedback received directly informed the goals and policies found within this element. We want to express sincere gratitude and thanks to community members who provided their time and efforts to meaningfully engage with the County. *Community Engagement Reports can be viewed on the Engage San Juan County platform.*¹

¹ <https://engage.sanjuancountywa.gov/climate-action>

Along with initiating new planning efforts for the development of the Climate Element, existing plans that demonstrate the islands' commitment to sustainability and resilience were reviewed and can be found below in chronological order:

- ❖ The **San Juan County Solid Waste Management Plan** (2012) provides information regarding the current solid waste management system and the basis for changes to the collection system. *This plan is currently being updated.*
- ❖ The **San Juan County Community Wildfire Protection Plan** (2012) seeks to make San Juan County residents, communities, state agencies, local and federal governments, and businesses less vulnerable to the negative effects of wildland fires. *This plan is currently being updated.*
- ❖ The **Drought Conservation Plan** (2016) provides a synthesis of water availability on the Islands and outlines responsible agricultural practices.
- ❖ The report, **Working Toward Climate Resilience in the San Juan Islands** (2017), provides an overview of climate change, identifies potential vulnerabilities in the islands, and includes ideas about adaptation measures that could help address climate change vulnerabilities.
- ❖ The **San Juan County Hazard Mitigation Plan** (2018) aims to reduce the impacts of natural and human-made disasters by identifying risks and outlining strategies to protect communities, infrastructure, and the environment. *This plan is currently being updated.*
- ❖ San Juan County adopted **Resolution No. 20-2020 to Respond and Adapt to Climate Change**, committing the County to take a leadership role in climate action and adaptation and serving as a model to the community.
- ❖ The County updated its **2036 Comprehensive Plan** (2022) explicitly integrating GHG emission reduction and climate resilience policy throughout the plan. *This plan is currently being updated.*
- ❖ The **Recreation, Open Space, and Stewardship Plan** (2022) guides future action and investment in the County's outdoor spaces and facilities.
- ❖ The **San Juan Islands Destination Management Plan** (*preliminary draft* 2023) sought to provide a roadmap for sustaining community and resource needs while maintaining the County's thriving visitation economy.
- ❖ The report, **San Juan County Community and County Operations Greenhouse Gas Emissions** (2023) establishes a baseline for targeting major emission sources and reducing the County's climate impact.

- ❖ The **San Juan County Food System Plan** (*draft* 2023) is a comprehensive resource that outlines strategies to localize the County's food system while supporting sustainable practices.
- ❖ The **San Juan County Sea-Level Rise Vulnerability and Risk Assessment** (2024) supports the development of a County-wide approach to addressing sea level rise and managing impacts on nearshore infrastructure and habitat.
- ❖ The **State of the Marine Stewardship Area** (2024) provides updated data and management strategies to adapt to climate change.
- ❖ The **Climate Action Plan** (*in progress*) will establish clear targets and schedules aligned with the policies outlined in the Climate Element and climate policy throughout the Comprehensive Plan. It will define actionable steps to develop projects and programs that adhere to these policies, ensuring a cohesive approach to achieving climate goals.

In addition to participating in formal planning efforts, San Juan County also demonstrates its commitment to sustainability through a suite of initiatives dedicated to ensuring adequate fresh water, protecting the marine environment, working towards achieving zero waste, fostering a climate-resilient and regenerative community, and honoring ancestral lands, waters, and lifeways.

Existing Conditions

San Juan County is already experiencing climate change impacts and climate-related hazards, such as increased temperature variation, more frequent extreme heat events, droughts, prolonged wildfire smoke episodes, extreme precipitation, and sea level rise. These climate impacts are expected to have cascading and compounding effects on essential resources and services such as water, energy, public health, ecosystems, and the local economy. This increasing stress on county infrastructure and communities underscores the need to reduce GHG emissions and enhance adaptation measures across county sectors and services.

We recognize that we are a small contributor to global GHG emissions, and that to limit global warming to 1.5°C² (2.7°F) above pre-industrial levels, global CO₂ emissions must be reduced by about 48% by 2030, reaching net zero around 2050³. However, climate action at

² The 2015 Paris Agreement, a global treaty that the United States has signed, requires action to limit warming of the global average temperature to well below 2°C (3.6°F) and ideally to 1.5°C above pre-industrial levels.

³ IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on

all levels of government will need to take place to achieve these targets and limit the severity of climate impacts.

Climate Vulnerability and Resilience in San Juan County

A climate vulnerability assessment (CVA) was conducted for the County in 2024-2025 to inform goals and policies for the Climate Element. Climate vulnerability refers to a system's propensity or the predisposition to be negatively affected by climate change and climate-related hazards. Assessing the climate vulnerability of key sectors can help the County (1) identify current exposure and sensitivity, (2) anticipate areas of future risk and the potential to adapt to climate impacts, and (3) assess strategies to prepare and adapt to future climate conditions.

Key impacts and projections, detailed in the CVA, are summarized below and are under the Representation Concentration Pathway 8.5 (RCP8.5) Scenario:

- **Extreme Heat:** San Juan County has warmed approximately 1.3°F from 1895 to 2024, and projected average daily maximum temperatures are expected to increase 8.9°F by 2090.⁴
- **Heavier Winter Precipitation:** Winter precipitation is expected to increase 7% by 2050 and 10.4% by 2080.⁵
- **Coastal Impacts:** Relative sea levels along the islands are projected to rise significantly, with estimates ranging from 2.0 to 4.8 feet by 2100.⁶
- **Drought:** A 10% decrease in summer precipitation will lead to elevated levels of drought and reduced groundwater recharge.⁷

Sector Specific Climate Vulnerability in San Juan County

The CVA assessed three sectors that were prioritized by staff and community input: buildings and energy, water resources, and transportation. These were then further

Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001

⁴ Abatzoglou, J.T., and T.J. Brown. 2012. *A comparison of statistical downscaling methods suited for wildfire applications*. International Journal of Climatology. 780. <https://doi.org/10.1002/joc.2312>.

⁵ Nijssen, B., O. S. Chegwidan, D.E. Rupp, and P.W. Mote. 2017. "Hydrologic Response of the Columbia River System to Climate Change."

⁶ Miller, I.M., et al. 2018. Projected Sea Level Rise for Washington State – A 2018 Assessment. A collaboration of Washington Sea Grant, University of Washington Climate Impacts Group, University of Oregon.

⁷ Salathé, E.P., L.R. Leung, Y. Qian, and Y. Zhang. 2010. "Regional climate model projections for the State of Washington." <https://doi.org/10.1007/s10584-010-9849-y>.

assessed by sub-sector, with a vulnerability ranking assigned based on a scale that assessed climate risk, adaptive capacity, and overall vulnerability. The sections below provide a summary of the CVA findings, which guided goal and policy development for the resilience sub-element; view the full report⁸ for a breakdown of ranking criteria and results.

Buildings and Energy

The CVA details climate impact risks, adaptive capacity strategies, and overall vulnerability for the following sub-sectors in the Buildings and Energy sector: buildings and critical infrastructure and energy assets, demand, and delivery.

Buildings and critical infrastructure—including homes, fire stations, healthcare facilities, and marinas—are vulnerable to sea level rise, coastal erosion, wildfires, and severe storms. While adaptive capacity is limited, risks can be reduced through strategic siting and strengthened fire protections. Additionally, the islands currently depend on mainland energy but are strengthening local resilience through OPALCO's underground lines and renewable energy initiatives. Barriers remain for large-scale renewable energy projects, but community engagement and policy support can help address energy production, demand, and delivery challenges.

Transportation

The CVA details climate impact risks, adaptive capacity strategies, and overall vulnerability for the following sub-sectors in the Transportation sector: Roads, active transportation (e.g., bike lanes or trails), and public transit systems (ferries and shuttle).

Transportation infrastructure, including roads, ports, and ferry terminals, face risks from sea level rise, coastal flooding, and storm surges, threatening connectivity for goods, healthcare, and emergency response. While efforts to identify alternative routes are underway, private land ownership poses challenges. There are also limited active transportation options and constrained public transit services on the islands, especially during severe storms, highlighting the need for enhanced mobility solutions to strengthen community resilience.

Water Resources and Water Supply

The CVA details climate impact risks, adaptive capacity strategies, and overall vulnerability for the following sub-sectors in the Water Resources: stormwater systems (conveyance

⁸ [San Juan County Climate Vulnerability Assessment 2025](#)

systems, surface water), wastewater (sewer/septic), and water supply (groundwater, surface water).

Stormwater and wastewater systems face significant risks from sea level rise and flooding, particularly in low-lying coastal areas on the islands. Aging septic systems are especially vulnerable to inundation and failure, though efforts are underway to improve inspection and maintenance. The islands' water supply is sensitive to climate change impacts, with drought threatening aquifer recharge and system reliability. Costly supply alternatives underscore the need to strengthen water resilience and ensure long-term sustainability.

Environmental Justice

Climate impacts, such as extreme heat, sea level rise, or shifting precipitation patterns, have the potential to greatly affect existing housing, transportation, and critical resources such as water and energy, especially in areas already vulnerable to climate risks. In addition, climate change amplifies existing risks and disparities like chronic health conditions, social and economic inequalities, and pollution exposure, which disproportionately impact frontline community groups.⁹

Understanding which areas and populations are most at risk from climate and environmental burdens will inform policy focus areas and community priorities. Climate change exacerbates existing inequitable health and well-being outcomes for communities, necessitating policies that reduce cumulative environmental and health risks within the county.

Greenhouse Gas Emissions in San Juan County

In addition to building climate resilience, greenhouse gas (GHG) emissions reduction is a critical component to limit global warming. As a baseline step in this process, the San Juan County Greenhouse Gas Emissions Report¹⁰ was completed with a goal to update these inventories every 10 years.

San Juan County is committed to reducing GHG emissions from community sources and municipal operations to reduce the county's carbon footprint in recognition of the importance of reducing GHG emissions. The goals and policies housed in this element aim

⁹ Frontline communities are those that will be disproportionately impacted by climate change; these are the populations that face historic and current inequities, often experience the earliest and most acute impacts of climate change, and have limited resources and/or capacity to adapt.

¹⁰ [San Juan County Community and County Operations Greenhouse Gas Emissions Report \(2022\)](#)

to reduce local GHG emissions, in line with meeting Washington State’s target of net-zero emissions by 2050. San Juan County will also benefit from several Washington state policies aimed at reducing emissions such as the Clean Energy Transformation Act, which aims to achieve carbon-neutral electricity by 2030, and the Clean Vehicles Program, which requires all new vehicles sold in Washington to meet zero-emissions by 2035.¹¹

Greenhouse Gas Inventory Methodology

The **geographic communitywide emissions inventory** was prepared in compliance with the *U.S. Community Protocol for Accounting and Reporting of GHG Emissions*. The geographic communitywide inventory accounts for emissions that are produced by actions from residents, visitors, and businesses within a community’s geographic boundaries. In addition to the geographic communitywide emissions inventory a **consumption-based emissions inventory (CBEI)** was performed. The CBEI considers emissions that may occur anywhere in the world, so long as they are directly or indirectly a result of the activities of the residents of the county.

The **County operations emissions inventory** was prepared in compliance with the *Local Government Operations Protocol for the Quantification and Reporting of GHG Emissions Inventories*. The County operations inventory accounts for emissions that are produced by facilities and sources they own, operate, and have full authority to determine operational policies and processes.

Greenhouse Gas Inventory Results

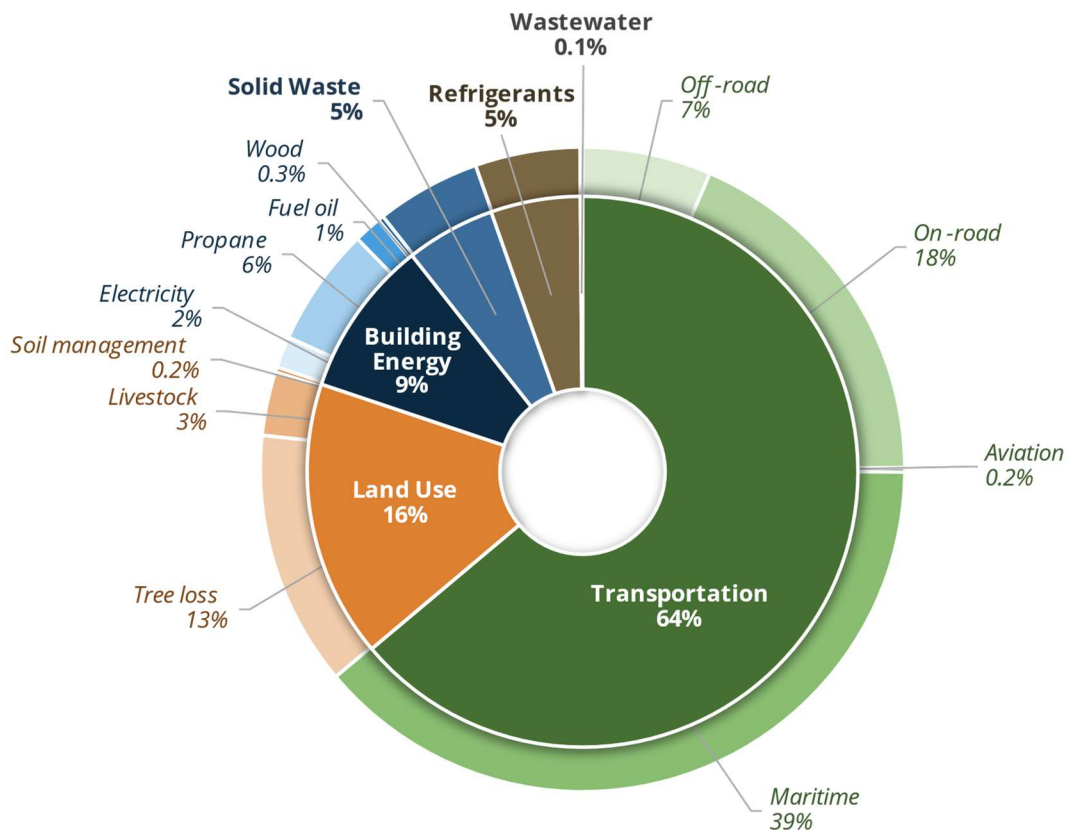
Communitywide Greenhouse Gas Inventory

In 2019, San Juan County’s residents, businesses, County operations, and visitors produced an estimated 177,830 metric tons of carbon dioxide equivalent (MTCO₂e), equivalent to approximately 10 MTCO₂e per capita. The emissions produced by San Juan County’s community were produced by the sources shown in Figure 11. The largest communitywide emissions sources were:

- **Transportation**, producing an estimated 113,602 MTCO₂e.
- **Land Use**, producing an estimated 28,919 MTCO₂e.
- **Building Energy**, producing an estimated 16,403 MTCO₂e.

Figure 11.1
Communitywide GHG emissions profile (2019)

¹¹ [The Big Seven: Washington’s biggest climate policies | Climate](#)



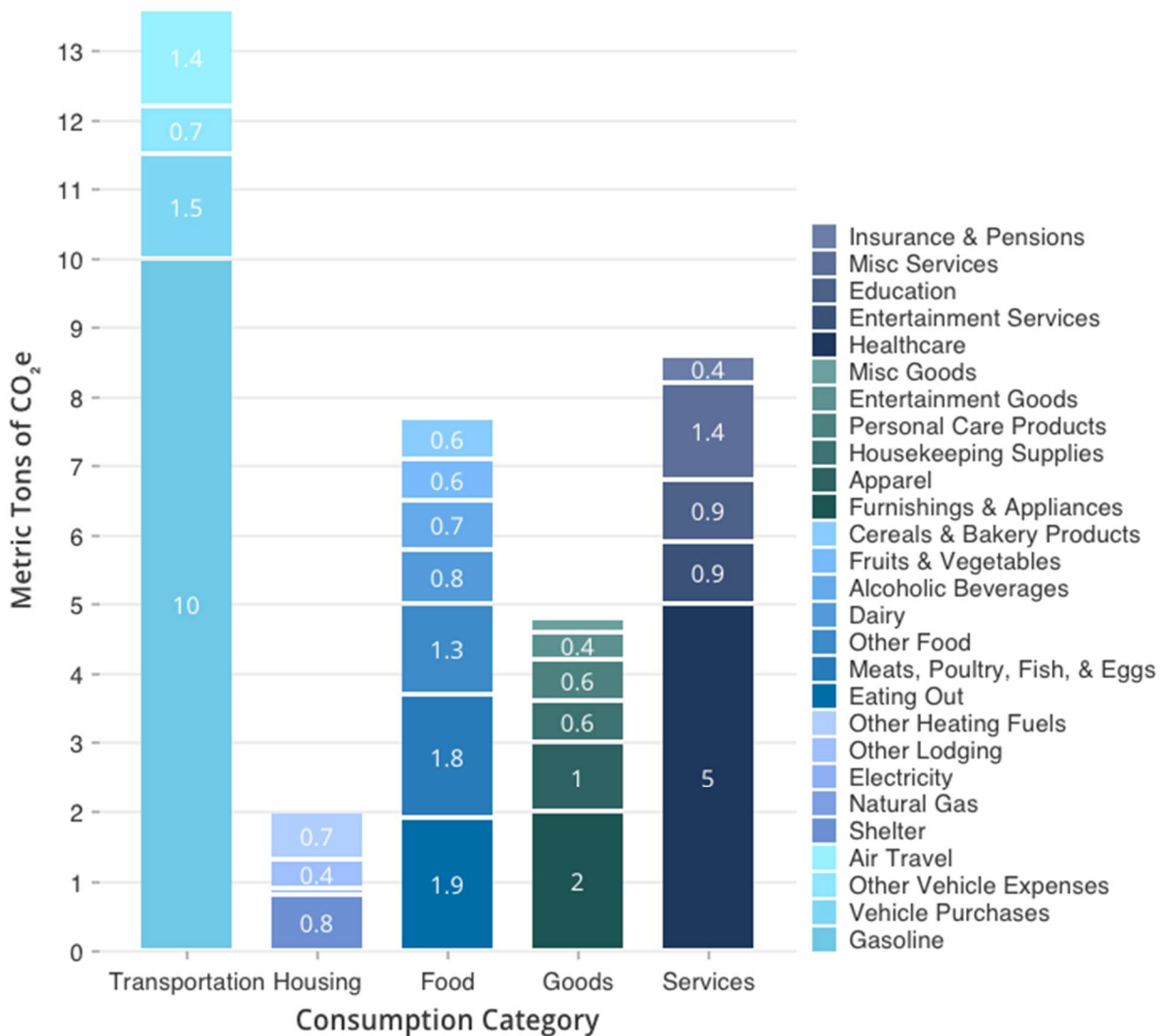
Consumption-based Emissions Inventory

In 2019, the emissions associated with county household consumption totaled 308,000 MTCO₂e, or roughly 37 MTCO₂e per household or 18 MTCO₂e per capita. This is nearly double the geographic communitywide emissions.

The largest categories of emissions were **transportation** (36%), **services** (23%), and **food** (21%), while the largest sub-categories were **gasoline** (27%), **healthcare** (14%), **furnishings & appliances** (5%), **eating out** (5%), and **meat** (5%). These emissions are shown in Figure 11.2.

Figure 11.2.

San Juan County household consumption-based emissions (MTCO₂e, 2019)





Goals and Policies

This section includes goals and policies that support Washington Department of Commerce requirements and reflects the Islands' climate action priorities. The organization of goals and policies includes:

- **Overarching:** Goals and policies focus on integrating climate into county processes and engagement.
- **Climate Resiliency:** Goals and policies enhance natural areas, vital habitats, and community resilience while addressing climate hazards like sea level rise, landslides, flooding, drought, heat, smoke, and wildfire.
- **GHG Emission Reduction:** Goals and policies support existing County policy and address identified gaps to reduce emissions and per capita vehicle miles traveled locally without shifting emissions elsewhere, prioritizing benefits for overburdened communities.

Overarching Goals and Policies

The following *Overarching* climate goals and policies seek to advance climate resilience and sustainability by integrating climate action into planning and budgeting while prioritizing equity, environmental justice, and collaboration with community partners. They emphasize inclusive community engagement, strategic partnerships, and long-term accountability to reduce greenhouse gas emissions, enhance adaptation efforts, and address climate challenges equitably.

GOAL C 1

Evaluate climate change risks and impacts and ensure that the Comprehensive Plan and development regulations foster climate resilience and greenhouse gas emissions reduction.

Policy C 1.1

Review and, if necessary, update goals, policies, and development regulations during San Juan County Comprehensive Plan periodic updates to ensure that:

- a. Plan goals and policies establish clear objectives and actions to increase community, natural resource, and infrastructure resilience to climate change impacts and decrease greenhouse gas emissions; and
- b. Policies and regulations are responsive when new climate-smart technologies and practices are available to address a changing climate.

Policy C 1.2

Engage the community when adopting changes to or implementing goals, policies, and regulations related to climate change impacts within the Comprehensive Plan and development code. Provide ample opportunities for public input to improve amendments and strengthen community buy-in.

Policy C 1.3

Create an interdepartmental climate team to lead and coordinate climate action across County departments. This team will ensure the integration of climate action and equitable community engagement in decision-making.

Policy C 1.4

Develop a robust vetting framework for the annual San Juan County budgeting process to integrate climate adaptation and mitigation strategies that prioritize sustainable infrastructure and reduce vulnerabilities to climate-related hazards while considering carbon footprint of all capital improvement projects.

GOAL C 2

Collaborate with the community, Tribes, community-based organizations, businesses, and public agencies on meaningful climate action, while committing to county and community-wide efforts through funding, monitoring, and transparent progress reporting.

Policy C 2.1

Ensure effective climate action through strategic collaborations that seek to gather input and support the implementation of equitable and impactful climate policies.

Policy C 2.2

Collaborate with the community to develop culturally relevant, place-based outreach and education initiatives that inform members about both near- and long-term climate change challenges and opportunities. Make outreach and education materials accessible and available in different languages (e.g., Spanish) and formats (e.g., accessible for people with hearing, vision, and mobility differences) per the demographics and needs of community members.

Policy C 2.3

Ensure that equity, environmental justice, and tribal treaty rights are central considerations in natural resources management and climate adaptation strategies.

Policy C 2.4

Foster trust and transparency through consistent monitoring, and public reporting of strategies, activities, progress and performance measures.

Policy C 2.5

Ensure long-term funding commitment to deliver on the climate policies identified in the Comprehensive Plan and associated implementation plans.

Climate Resiliency Goals and Policies

The following *Climate Resiliency* goals and policies seek to increase the resilience of San Juan County's natural resources, infrastructure, and communities against climate change impacts. They focus on protecting ecosystems through nature-based solutions, ensuring sustainable and adaptive built environments, and protecting community health and preparedness, particularly for overburdened communities.

See the **Land Use and Rural Element** for policies that address sustainable growth management, incorporating climate impacts projects into natural resource management plans and critical area ordinances, and promote sustainable agriculture. See the **Water Resources Element** for policies that promote water conservation, sustainable management, and resilience to climate change impacts such as drought and extreme heat through collaborative water supply solutions, wetland and stream restoration, instream flow protection, and low-impact development practices. See the **Utilities Element** for policies that address coordination between the County, utility providers, and other stakeholders to increase local energy resilience with local renewable energy generation, storage, and energy efficiency. See the **Economic Development Element** for policies that that support workforce training in green jobs, promote local food systems and regenerative land stewardship, and enhance economic resilience through climate adaptation and GHG emission

GOAL C 3

Strengthen the resiliency of the San Juan Islands' natural resources by implementing nature-based solutions that protect and restore ecosystems.

Policy C 3.1

Support preservation and enhancement of native habitats and species, which may provide ecosystem services (such as water storage, temperature regulation, air and water quality improvement, carbon sequestration, and pollination) to mitigate the effects of climate

change, particularly on designated Conservation, Agricultural, and Forest Resource lands.

Policy C 3.2

Prioritize and fund the protection and restoration of coastal and freshwater ecosystems to adapt to sea-level rise, coastal and channel erosion, and periodic flooding and/or regular inundation. Consider water-dependent uses and public access to these vulnerable areas. Collaborate with landowners and partners to support adaptation.

Policy C 3.3

Prioritize and fund a Countywide Forest Health Plan to identify actions that will improve forest and watershed health and carbon sequestration where ecologically appropriate. Preserve and enhance healthy mature forests and forested riparian/wetland/shoreline buffers as carbon sinks to absorb greenhouse gases and bolster local climate resilience to hazards such as extreme heat, wildfire risk, landslide and erosion hazards.

Policy C 3.4

Create incentives to preserve or restore native prairie, especially from lawn or other carbon-intensive land use. Support the preservation of grass-based agricultural lands, to help maintain pervious cover for water recharge, moderate landscape temperatures, and retain edge habitats in watersheds.

GOAL C 4

Strengthen the resiliency of San Juan County's built environment (roads, buildings, pipes, water and sewer infrastructure, recreation and marine facilities, electrical grid) by utilizing climate adaptation strategies, prioritizing sustainable infrastructure and enhancement of critical ecosystems, and reducing vulnerability to climate-related hazards.

Policy C 4.1

Conduct climate vulnerability assessments for built infrastructure to guide investment decisions, ensuring new infrastructure is sited in low-risk areas and that existing vulnerable infrastructure is relocated when feasible, such as during repairs or major maintenance.

Climate Hazards & Impacts

A climate hazard is an event intensified by climate change—such as extreme heat, drought, wildfire, or flooding—that causes harm to people or damage to assets. Impacts refer to the effects of these hazards on natural and human systems. Assessing potential impacts is a key step in evaluating vulnerability.

Policy C 4.2

Create a connected network of parks, open spaces, trails, and gardens to enhance environmental resilience and community health, and food security.

Policy C 4.3

Incentivize the use of green infrastructure, low-impact development and renewable energy development on existing developed lands first. Emphasize redevelopment of already-developed lands before expanding impervious surfaces, in order to retain natural watershed hydrology, habitat, groundwater recharge, and better manage stormwater runoff.

Policy C 4.4

Critically evaluate shoreline armoring and stabilization projects proposed to address wave-driven erosion or flooding from sea level rise. Require landowners to:

- a. document project design options and feasibility,
- b. employ soft-shore or nature-based solutions whenever feasible to promote short and long-term sustainability and minimize impacts on coastal ecosystems and communities;
- c. Where mitigation is required, offset impacts to coastal and estuarine ecosystems through a mitigation plan, taking environmental and tribal expertise into consideration.

Policy C 4.5

Support Island-wide integrated water resources management strategies within watersheds to prepare for changes in precipitation due to climate change that will impact water availability.

Policy C 4.6

Support the development of local food production, processing, and storage infrastructure while implementing the recommendations of the San Juan County Food System Plan to enhance food security, resilience, and the long-term capacity for sustainable, climate-resilient agriculture.

GOAL 5

Protect community health and well-being and enhance community preparedness, response, and recovery from the impacts of climate-exacerbated hazards, focusing on vulnerable communities.

Policy C 5.1

Ensure that critical community-serving facilities, essential services, and supply chains are equipped to support residents' needs and coordinate communication during emergency events.

Policy C 5.2

Implement the San Juan County Natural Hazards Mitigation Plan. Expand education and resources to help residents prepare for and build self-reliance during any and all emergencies.

Policy C 5.3

Implement the San Juan County Community Wildfire Protection Plan and Wildfire Risk Assessment to reduce wildfire risk and provide resources, guidance, and financial incentives for homeowners to create fire-resistant properties.

Policy C 5.4

Continue coordination efforts with the Northwest Clean Air Agency and seek to bolster the efforts of the San Juan County Department of Health & Community Services to ensure community health during smoke episodes.

GHG Emissions Reduction Goals and Policies

The following *GHG Emission Reduction* goals and policies seek to reduce greenhouse gas emissions and enhance environmental and social benefits by promoting energy-efficient infrastructure, sustainable development, and renewable energy use. They also prioritize actions that improve air quality, support carbon sequestration, and advance environmental justice through incentives, education, and targeted programs for overburdened communities.

See the **Utilities Element** for policies that address coordination between the County, utility providers, and other stakeholders to promote renewable energy generation, reduce greenhouse gas (GHG) emissions, and increase local energy resilience while minimizing environmental impacts.

See the **Transportation Element** for policies that reduce per capita vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions in the transportation sector by developing and expanding multimodal options, prioritizing pedestrian safety, increasing electric vehicle accessibility, and improving travel efficiency.

See the **Capital Facilities and Services Element** for policies that promote sustainable waste management and encourage composting and recycling.

GOAL C 6

Maximize local renewable energy generation and efficiency of new and existing development and maintenance of existing infrastructure (e.g. roads, trails, utilities) where practicable to reduce greenhouse gas emissions.

Policy C 6.1

Advance locally generated renewable energy by streamlining permitting, developing incentives, and collaborating with stakeholders. Prioritize distributed and community-scale renewable energy projects, especially in the built environment, to help balance grid demand and reduce impacts on natural areas and agricultural lands.

Incentive-based strategies could include expedited reviews, tax incentives, or model agreements.

Policy C 6.2

Incorporate energy efficiency, low-resource use, low-carbon criteria into publicly funded capital improvements and developments by applying a project vetting framework that considers GHG emission impacts of projects. Favor and incentivize projects that meet or exceed established resource-efficiency benchmarks.

Policy C 6.3

Incentivize weatherization and home maintenance programs to include energy efficiency and electrification retrofits, focusing on rental properties and low-income households that face high energy burdens.

Policy C 6.4

Reduce consumption-based emissions generated by the development and transport of building materials by promoting reuse or recycling, and renewable materials. Discourage the use of plastics and other inorganic products in buildings.

Policy C 6.5

Support the development of an integrated multimodal transportation plan that will support diverse, sustainable transportation options, increase safety and efficiency, and lower carbon footprint. Encourage electrification of transit and increase electric vehicle accessibility.

GOAL C 7

Incentivize emission reduction actions that promote co-benefits such as improved air quality, environmental justice, and carbon sequestration to deliver environmental and social benefits.

Policy C 7.1

Explore and promote land use and tax policy strategies that encourage conservation, climate-resilient management practices and carbon reduction benefits and credits.

Policy C 7.2

Maintain and restore forest and prairie health, utilizing indigenous and local knowledge in partnership with Tribes, to optimize long-term carbon sequestration, improve air quality, and reduce wildfire risk.

Policy C 7.3

Provide educational opportunities, financial incentives, and explore permitting reforms for farmers and landowners to adopt regenerative agricultural practices that enhance soil health, improve carbon storage, and promote resilience to climate impacts.

Policy C 7.4

Provide incentives for upgrading inefficient woodstoves, propane, and fuel oil heating units with cleaner technologies, such as heat pumps, to enhance public health, improve heating efficiency and reduce air pollution. Focus programs for renters and overburdened communities.

Policy C 7.5

Provide education and incentives for replacing gas-powered lawn and home care equipment with electric options, eliminating synthetic fertilizers, and reducing or replacing lawns with native plants and groundcovers.