



the
**SAN JUAN
PRESERVATION
TRUST**

2022 Strategic Conservation Plan

PUBLIC VERSION

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Consultant Team



COVER PHOTO: WILL FISHER



KEEL PRESERVE WATERFALL - SJPT PHOTO

Executive Summary

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The San Juan Preservation Trust (SJPT) began this Strategic Conservation Plan (SCP or “the Plan”) in the fall of 2021 to update and expand on its previous 2004 Conservation Plan prepared jointly with the San Juan County Conservation Land Bank. The planning process integrated significant mapping analyses of development trends, current and anticipated climate-change impacts, and conservation opportunities, with strategies shared by the organization and its many stakeholders and partners. The mapping assessments confirmed the need to respond to ongoing development pressures with immediate and continual conservation actions to sustain the distinct character and quality of all life in the San Juan Islands.

The Plan pulls scientific information from numerous ecological studies relating to marine life, freshwater resources and terrestrial environments. The ecological changes that will occur due to climate change were examined to identify where more resilient lands can mitigate for changing conditions, and GIS modeling identified the most valuable habitats. Combinations of terrestrial, freshwater and shoreline habitats were assessed to rank the priorities for protection, and in some cases, restoration opportunities.

Using priority resource categories, a top-priority list of properties (as aggregated parcels) revealed a significant quantity of conservation targets worthy of protection (see Figure 1 on page 4).

While the entirety of these 15,000 acres of priority conservation properties may be out of reach in the next ten years, SJPT now has a powerful mapping tool that can identify and help promote the best guidance for future conservation targets in the context of its resources, partnerships and willing landowners. The Plan outlines the many partners and their respective roles, relationships and responsibilities within the context of the SJPT conservation program. Leveraging these relationships and resources will guide the rate and success of conservation and stewardship on the Islands.

The interactive mapping tool is now part of the practices of the SJPT conservation and stewardship team and can assist in determining the best targets, characteristics of those proposed conservation candidates, and tracking of program successes.

This version of the Plan has been edited for public distribution.

Figure 1. Summary of Priority Conservation Targets

Priority Conservation Targets	Aggregated Parcels	Parcels	Acres
Multiple Valued Sites (three resources)	16	66	2,749
Terrestrial & Freshwater Sites	116	306	7,161
Terrestrial & Shoreline Sites	126	298	4,570
Freshwater & Shoreline Sites	17	37	589
Total Priority Combinations	275	707	15,069

Outer Islands	Parcels	Miles of Shoreline	Acres
Outer Islands (in aggregate)	22	8.6	978.2

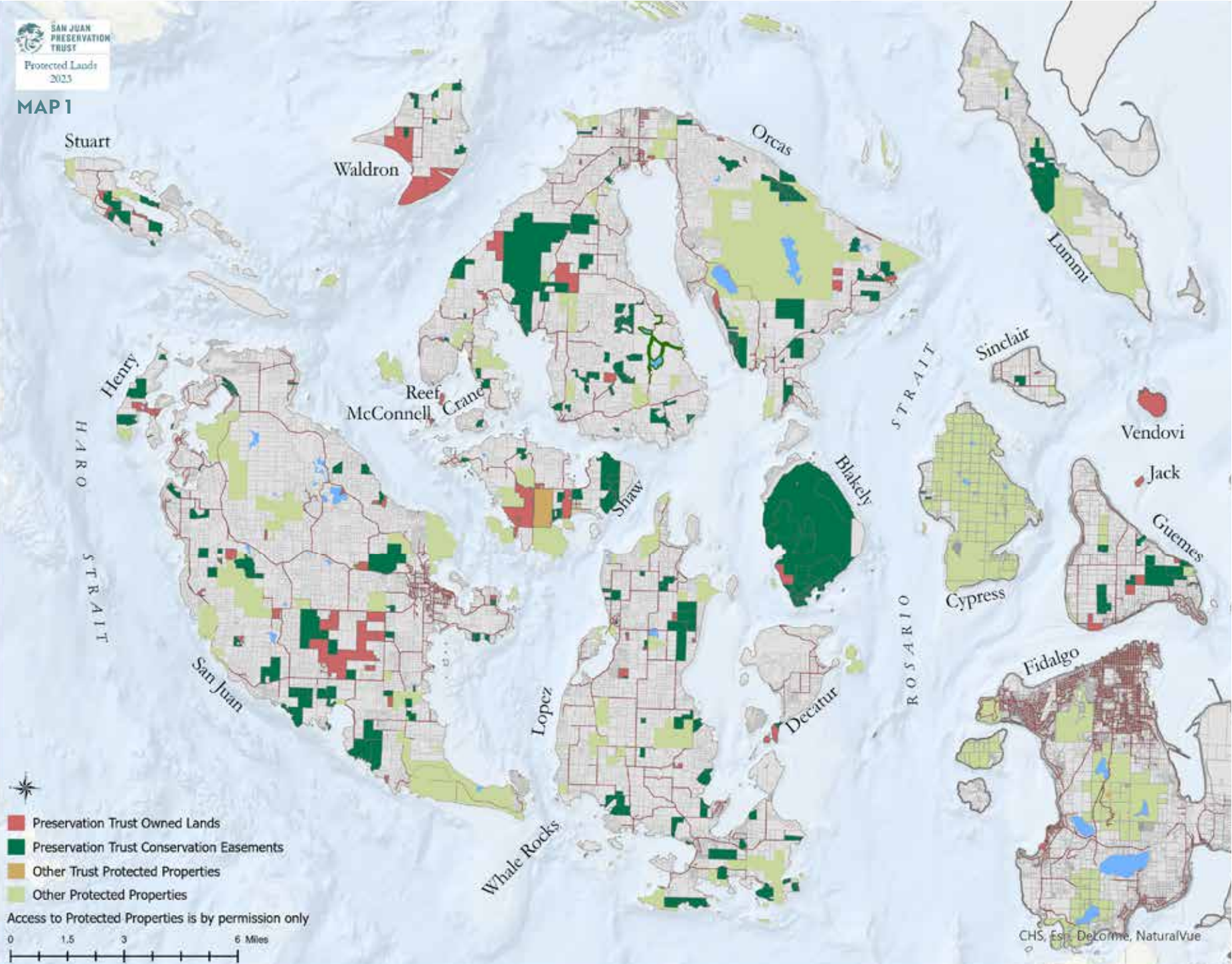
Barnes, Cactus Islands (2), Canoe, Charles, Cliff, Coon, Dinner, Double, Fawn (aka Fisherman), Giffin Rocks, Harnden, Little Double (Alegria), Long, North Finger, O'Neal, Picnic (aka Sheep), Ram, Satellite, Spieden, Trump, Whale Rock

Justice Equity Diversity Inclusion

The San Juan Preservation Trust’s mission is to conserve the natural beauty, vital ecosystems, and unique character of the San Juan Islands for future generations; care for the lands and waters under our protection with our partners; and connect people to nature, to each other, and to the Trust.

In the context of its philosophical and operational approach to conservation, the Preservation Trust views justice, equity, diversity and inclusion (JEDI) as crucial to creating healthier and more resilient communities, lands, and waters in the San Juan Islands. Thus, SJPT is working to infuse these principles into all of its programs and operations.

- Special places in the San Juan Islands will be protected for the benefit of every member of our local island communities and for visitors.
- Healthier relationships to the land must acknowledge the ancestral lands and waters of the Coast Salish and other regional indigenous peoples who have called this place home.
- Working through an equity lens recognizes that when nature thrives, people and communities thrive.
- Continually improving the Trust’s workplace culture through inclusive and equitable policies and practices, so that all staff and supporters feel valued and a sense of belonging to the Preservation Trust.
- Acknowledging our conservation principles are being applied to the ancestral lands and waters of the Coast Salish and other regional indigenous peoples, who have traditional knowledge of how to conserve and care for this land.
- All voices in the community should be considered from the diverse perspectives of people from all walks of life. Conservation work is strengthened through the creation of partnerships with others.



Introduction

PURPOSE

Conservation in the San Juan Islands has been at the forefront of retaining the iconic, ecological and unique values of the Islands for the last century. The San Juan Preservation Trust (SJPT, “the Trust”) has been successfully pursuing conservation efforts for over four decades and intends to update and refine its strategic priorities for conservation for the next ten years. This Strategic Conservation Plan (SCP or “the Plan”) identifies the most important conservation priorities through a rigorous scientific approach using the latest refined geospatial mapping data available. Incorporating climate-resilient modeling, the compilation of Islands-specific research on salmon recovery opportunities, unique ecological traits and land characteristics, this Plan captures the most critical sites for conservation that the Trust and its Partners can focus their resources to both protect and restore.

OVERVIEW

The Strategic Conservation Plan began in the fall of 2021 with the accumulation of background material, gathering of GIS data, contributions from stakeholders representing collaborating organizations and agencies, and an introduction to Trust properties and other public lands on the Islands. The planning effort also considered the context of the Trust’s recent strategic planning

directions and its broader mission. The SCP focuses on five (5) main elements to create the foundation for continuing its successful conservation program and achieving even more significant accomplishments over the next ten years.

1. History & Context. The SCP incorporates the visions from past planning and research studies that advocate for continued conservation work and preservation of the characteristics, qualities and ecosystem values of the San Juan Islands.
2. Development Trends. The SCP evaluates the past 20+ years of development trends to discern the greatest threats to ecological resources and help identify the highest priority conservation targets.
3. Conservation Opportunities & Priorities. Through GIS mapping and analyses, conservation research studies, stakeholder inputs and the best available climate science, the SCP assigned the combined values of sites with terrestrial, freshwater and shoreline conservation needs. These prioritized targets direct the Trust in procuring lands and easements to both protect and restore highly important conservation lands.
4. Recommendations and Strategies. The SCP considers the context of partners, community needs, and potential resources to recommend strategies for successful conservation implementation.
5. Interactive GIS Map. The SCP includes a mapping tool that provides user-friendly datasets, layers, and priority target areas for the Trust to apply in its acquisition program. The mapping tool is designed to be easily updateable so additional layers can be incorporated as new data becomes available. (For SJPT purposes only.)

CONSERVATION BY THE PRESERVATION TRUST

A History of Success

The San Juan Preservation Trust was formed in 1979. The founders and early supporters wanted to find ways for private landowners to conserve natural and historic features of their land voluntarily, independent of government process or regulations. Recent state legislation made it possible for nonprofit organizations to hold conservation easements—legal documents that private landowners can use in partnership with a land trust or other qualified entity to voluntarily protect conservation values of their land that benefit the public, such as open spaces, iconic views, ecological values, forests, and natural shoreline.

To put this legislation to work in preserving these islands' extraordinary beauty and unique way of life, SJPT became the first conservation land trust in the state of Washington. The Trust was at that time, and remains today, a pioneering organization at the forefront of private land conservation in the United States.

Together with its landowner partners and 3,000 member-supporters, the Preservation Trust has permanently protected more than 300 properties, 50 miles of shoreline, 27 miles of trails and 19,000 acres on 22 islands.

SJPT secured its first Preserve, Gann (Red Mill) in 1980 and its first conservation easement in 1982 on Lopez Island near Colville. Over the past four decades, five years in particular stand out for significant conservation successes:

- 1993: a 2,250 acre conservation easement was donated to the Preservation Trust by Thomas Crowley Sr, covering nearly half of Blakely Island.
- 2006: the Turtleback Mountain conservation easement and preserve was established after the largest fundraising effort in San Juan County history. With the help of multiple partner organizations and thousands of individual donors, SJPT played an integral role in protecting nearly 1,600 acres.
- 2007: with the purchase of large conservation easements on Guemes, Lummi, and Orcas and several smaller easements on five other islands, the Preservation Trust protected over 1,000 acres.
- 2012: nearly 1,500 acres were protected, including Turtleneck on Orcas Island, the remaining portion of Red Mill Farm on San Juan Island, and land on Waldron Island accepted via donation from The Nature Conservancy.
- 2016: the Trust protected nearly 1,600 acres with projects on Sinclair, San Juan, Henry, and Blakely islands. In combination with previous conservation efforts, the Trust now holds permanent protection on more than 85 percent of Blakely, the eighth-largest island in the archipelago..

2,360.7
ACRES
(1993)



1,812.0
ACRES
(2006)



1,015.0
ACRES
(2007)



1,471.3
ACRES
(2012)



1,577.9
ACRES
(2016)



Organizational Strategic Planning

The Preservation Trust conducted an intensive strategic planning effort in 2018-19 to help strengthen their efforts for conservation and stewardship of land in the Islands. The identified mission for the Trust incorporated three focused directions: Conserve, Care and Connect.

The “CONSERVE” element is the focus of this update of the Plan, but it recognizes the conservation priorities outlined provide immense opportunities for caring for the land and connecting people to this special place and SJPT.

The Preservation Trust envisions its continual conservation of critical lands, shorelines and freshwater habitat; land for increased connectivity of wild and public places, and places for increased community engagement.

To continue their ongoing success, the Preservation Trust also recognizes the value of these other strategic goals:

CARE: Continue and expand our capacity to steward protected lands, in cooperation with our partners, prioritizing long-term resiliency and best available science in all management plans.

CONNECT: Demonstrate the relevance and importance of land conservation to a wide cross-section of our community; foster a life-long connection to nature through educational outreach.

FUND: (“Build Financial Capacity”) Ensure SJPT’s future and provide for its goals by building financial capacity and reserves.

EXCEL: (“Pursue Excellence”) Ensure organizational effectiveness by managing operations efficiently and with the highest level of excellence, integrity, governance, and accountability.

The San Juan Preservation Trust has declared its **vision** through:

- Permanent conservation of the stunning beauty and magical character of the San Juan Islands,
- Healthy, diverse, and sustainable habitats for wildlife and human communities,
- Abundant pristine natural areas to nourish the soul, and
- An engaged community committed to island conservation.

CONSERVE.



CARE.



CONNECT.



The SCP follows the Trust’s mission to “CONSERVE the natural beauty, vital ecosystems, and unique character of the San Juan Islands for future generations” (Strategic Framework 2019).

The Connect part of the SJPT mission also lies at the foundation of its values and its commitment to justice and equity. The Preservation Trust is currently articulating its land ethic to help create and strengthen the connection between people and land.

In particular, SJPT is working to build and strengthen relationships with Coast Salish tribal partners, with the goals of learning from Indigenous stewardship practices, protecting cultural resources, and helping to reconnect tribes with their ancestral lands and waters.

The SCP recommends a program focused primarily on preservation and protection of targeted lands based on GIS analysis conducted at the site, island and system levels. The conservation mapping integrates scientific knowledge of geophysical features beginning with biodiversity, habitat and climate resilience. These geophysical features were categorized into terrestrial, marine/shoreline, freshwater, and outer island habitats due to their different and unique ecosystem conditions and threats. Working closely with SJPT staff and board members, a continuum of values were discerned and applied to conservation targets to help identify and prioritize the most important conservation sites.

Plans, Partners & Perspectives

To ensure successful collaborations and the best leveraging of resources, the SCP considers the context of public land agencies, tribal nations and other nonprofit organizations which are involved in some aspects of conservation. Past planning documents were reviewed to determine where missions and conservation targets were aligned. A variety of different stakeholders were interviewed to gather perspectives of related conservation and outdoor recreation needs and trends. These past plans and contemporary conservation perspectives provide an understanding of how conservation program implementation can be influenced by factors beyond the scientific construct offered in the GIS mapping analyses.

Specific Plan Reviews

The SCP incorporates past planning efforts that include the joint SJPT and Land Bank 2004 Conservation Plan, 2008 San Juan County Land Bank Habitat Conservation Plan, 2021 Washington Audubon Puget Sound Conservation Plan, the 2017 Pulling It All Together (PIAT) II report, the 2022 San Juan County (WRIA 2) Salmon Recovery Chapter Update, and the 2017 San Juan County Parks, Trails and Natural Areas Plan & Non-Motorized Transportation Plan. The SCP also considered the trends and patterns of land use and human activities that affect conservation by mapping recent changes and through the reviews of the 2018 San Juan Islands Visitor Study, 2006 San Juan Island Trails Plan, 2014 Lopez Island Trails Plan, and the Historic Old Military Road Trail Feasibility Study (1990).

Conservation-Related Perspectives from Stakeholders

In the initial phases of the planning process, input was sought from members of the Terrestrial Managers Group (TMG). The Terrestrial Managers Group represents the collaboration of nonprofit and governmental land managers cooperating on resource management across jurisdictional boundaries to promote planning efficiencies, leverage individual efforts, address gaps in resource knowledge, and inspire a shared vision for local conservation lands. Federal and state land agencies, county land programs, and conservation organizations communicate through regular meetings to foster more efficient stewardship and coordinated decision-making for the landscape health of San Juan Islands and its people. A review of themes from past TMG meetings was conducted to gather further expressed concerns and recurring issues.

Additionally, a compilation of ideas, priorities, concerns, best practices, collaborations, policies, and future directions were offered through selected stakeholder interviews prior to and during the planning for this update to the Trust’s SCP. Concurrent to mapping analyses, a number of stakeholder interviews were conducted by the consultant team to gather specific perspectives from existing and potential partners and 14 key representatives of conservation-oriented organizations, including other nonprofits, tribal nations, county government, committee members, and community groups.

The interviews were conducted in late October (in person), early to mid-January, and early March/April on a Zoom digital platform, each interview lasting no more than one hour. Stakeholders were queried about their priorities for conservation targets, development trends and threats, climate change issues, potential collaboration opportunities, and any other topics that they associated with SJPT and its conservation policies and practices.

MAPPING PROCESS

Extensive GIS-mapping and modeling were conducted to create and refine the data desired to guide future conservation targets. The process began with developing a clear understanding of how development and land-use changes have been affecting habitat loss and watershed health. This mapping of development trends provides context for the immediacy of conservation needs and imminent threats of continued habitat losses. The development changes included examining structures built, creation of new parcels (subdivision or “parcelization”) and changes to resident versus non-resident ownership. In close relationship to the land development patterns, the mapping analyses measured forest changes through tree canopy loss and gain.

Conservation opportunities were explored through four primary ecological categories: terrestrial, freshwater, shoreline, and outer islands. Terrestrial environments were mapped to select for climate resilience, biodiversity value, existing tree canopy heights, adjacency to public or protected lands, and aggregated parcel size. Freshwater opportunities focused on eleven (11) watersheds, considered as priority watersheds, with fish-bearing streams and their existing riparian vegetation buffers. The Freshwater category also included wetlands and their association with surrounding land use and land cover. The Shoreline (or nearshore marine) opportunities used the analyses and priorities developed by the Friends of the San Juans’ PIAT II research study that identifies waterfront parcels for either protection or restoration potential. The Outer Islands are a set of 22 single-owner private islands that contain a variety of unique aquatic and terrestrial habitats and species. In each conservation category, the desired traits were measured to determine parcels or aggregated parcels (under same ownership) that exhibit the greatest value for permanent conservation. The conservation opportunities were prioritized to direct the SJPT conservation resources to the highest-valued targets.



GLENWOOD/NORTH SHORE PROPERTY, ORCAS ISLAND - SJPT PHOTO

Conservation Challenges

Land Use & Land Cover Changes

Population Change

The San Juan Islands have experienced remarkable change over the past 40 years. At the time of the Trust’s founding, there were 7,838 people living in San Juan County. Over the subsequent four decades, the population has grown to 17,788, an increase of 127%. A more granular analysis of this change provides context for this strategic conservation plan. Examining the patterns of development along with changes to the tree canopy reveal how the increase in full-time and part-time residents has affected the Islands.

Land Development

Over the last two decades (2002-2021), the trend in land development is demonstrated clearly by the change in the number of parcels over time. As land is subdivided from larger farm and forest land, the newly created parcels are often the target for new homes, businesses or other forms of development. Parcelization is the term applied to the process of subdividing land. Counting the number of parcels as of 2021 within parcels as they existed in 2002 reveals the number and location of newly created properties. As shown in Figure 2, San Juan Island had the highest amount of parcelization, followed by Orcas and Lopez. These three islands account for over 97% of all new parcels created between 2002 - 2021, with San Juan Island accounting for more than Orcas and Lopez islands combined.

Figure 2. Ten Most Parcelized Islands Over Last Two Decades

ISLAND	Parcels 2002	Parcels 2021	New Parcels by 2021	Percent Change	Percent All New Parcels	Number of Subdivided Parcels
SAN JUAN	5,634	6,352	718	13%	49.3%	404
ORCAS	4,749	5,233	484	10%	33.3%	408
LOPEZ	2,927	3,140	213	7%	14.6%	193
SHAW	440	471	31	7%	2.1%	32
DECATUR	428	455	27	6%	1.9%	23
STUART	326	338	12	4%	0.8%	11
WALDRON	240	246	6	3%	0.4%	2
CRANE	84	86	2	2%	0.1%	1
BROWN	57	58	1	2%	0.1%	0
HENRY	189	190	1	1%	0.1%	0
Totals	15,074	16,569	1,495	10%	100%	1,074

The size distribution of the newly created parcels varies between the four ferry-served islands. On Orcas Island, a third of the newly created parcels are ¼ acre or smaller, with a similar but slightly smaller proportion on San Juan Island. Lopez Island had far fewer new parcels in the ¼ acre or smaller range, with the majority falling in the ½ - 2 acre category. Shaw Island contains a small fraction of the total new parcels, but of those, nearly half are larger than 10 acres in size. The creation of many small parcels contributes to the rise in habitat fragmentation. This development threat is greater on San Juan and Orcas Islands, thus warranting raised awareness for conservation needs.

Mapping the County’s ‘Year-Built’ data for each parcel shows the distribution of structures by the decade in which they were constructed (see Figure 3). Approximately 40% of all structures were built before 1980. Over 60% of all structures in the islands were built after 1980, with nearly one-fifth of all structures constructed between the years of 1990-2000.

Figure 3. Structures by Decade Built (per SJC Assessor Data)

Decade	Parcels	Structures	Percent of All Structures	Running Total
1850 - 1860	3	3	0.0%	0.0%
1870 - 1880	7	12	0.1%	0.1%
1880 - 1890	21	30	0.2%	0.3%
1890 - 1900	39	60	0.4%	0.7%
1900 - 1910	148	199	1.4%	2.1%
1910 - 1920	146	214	1.5%	3.6%
1920 - 1930	162	266	1.9%	5.5%
1930 - 1940	199	311	2.2%	7.6%
1940 - 1950	220	356	2.5%	10.1%
1950 - 1960	302	455	3.2%	13.3%
1960 - 1970	807	1,037	7.2%	20.5%
1970 - 1980	2,128	2,565	17.8%	38.3%
1980 - 1990	1,904	2,317	16.1%	54.4%
1990 - 2000	2,392	2,873	20.0%	74.4%
2000 - 2010	2,139	2,414	16.8%	91.2%
2010 - 2020	1,142	1,261	8.8%	100.0%
TOTAL	11,759	14,373	100.0%	

The land development analysis delved further into a subset of private parcels along the shoreline. Examining the development status of parcels and the years that structures were built reveals that by 2020, nearly 70% of all private shoreline parcels were developed.

In addition to the creation of many new parcels, the islands have also experienced a significant change in the proportion of resident property owners. This was measured by comparing the proportion of unique property owners with zip codes within San Juan County versus outside of San Juan County in

2002 and 2021. Between 2002 and 2021, the proportion of resident property owners increased from 51% to 59% for the islands as a whole. For the three most populous islands, a similar trend occurred, with San Juan Island increasing from 63% to 68%, Orcas Island’s residential ownership increasing from 55% to 63%, and Lopez Island increasing from 44% to 53%. These changes suggest that more people are choosing to live in the islands permanently, which will have ongoing repercussions for the local economy, demands on transportation, water, electricity, and other infrastructure, and the provision of public access to open space, trails, and shorelines.

Tree Canopy

To obtain a more accurate understanding of changes to forest habitats, highly detailed elevation data derived from remote sensing Light Detection and Ranging (lidar) was used to compare tree canopy heights in 2009 to 2019. Subtracting the 2009 canopy height from the 2019 canopy height model yields a map showing areas of canopy gain (positive change or tree growth) and canopy loss (negative change caused by harvest, disturbance, or disease). The loss of forest canopy is unevenly distributed across ownership categories, with nearly 60% occurring on private land, an additional 15.4% occurring on private forestry-zoned land, and the remainder spread across Preservation Trust, Land Bank, and other public landowners.

Collectively, the assessment of this forest canopy data show that the islands have continued to experience significant amounts of development and parcelization over the past twenty years. More of the people who own property in the islands are living in the islands full time and the islands are losing forest habitats, mostly on private land.

Development Threats

Additional mapping analyses explored the ongoing development pressures and potential future buildout for land use changes on the Islands. This examination is important context for the immediacy of conservation planning and action. Three aspects of each parcel were measured to better understand patterns of development pressure throughout the islands: assessed value per acre, percent surrounding development, and potential buildout.

Assessed Value

Assessed land value per acre provides a representation of the County Assessor’s perception of the real estate market. The County’s valuations frequently lag behind what the market will actually bear. However, the data clearly show that shoreline parcels are significantly more expensive than inland parcels, especially those that are more remote parcels with rugged terrain and/or challenges to accessibility. Waterfront property has higher values and more real estate market appeal.

Surrounding Development

The amount of development surrounding a parcel is typically an indication of accessibility and the availability of infrastructure (primarily roads and power) as well as the desirability of the land. The percentage of surrounding development was analyzed by determining the development status of all parcels neighboring each parcel. A parcel was considered developed if it has a Year Built value greater than zero or an assessed building value greater than \$10,000. The percentage of surrounding development for each parcel was calculated by adding the number of developed adjacent parcels and dividing by the total number of adjacent parcels (see Figure 4). This data can be used as an indicator of which undeveloped parcels are more likely to be developed in the near future, especially in conjunction with the data showing land value per acre.

Potential Buildout Scenario

To better understand the potential future expansion of development in the islands over time, the number of new dwellings that could be built under the County’s current regulations was estimated. The County’s maximum allowable density value was assigned to every parcel that is not public or in Friday Harbor and other urban growth areas (UGAs). Each parcel’s area was divided by the density value, then rounded to the floor to remove fractional parcels. For each parcel that was undeveloped but too small to subdivide, 1 new dwelling unit was assigned. This analysis estimated a total of 7,264 potential new dwelling units on private land outside of urban areas and excluding all properties with SJPT conservation easements in place. This potential buildout of new parcels could add approximately 44% more dwelling units. Clearly, the pressure of increased development warrants increasing efforts to conserve.

Climate Change

Climate change is already having an impact on the shorelines, streams, wetlands, forests, and other habitats throughout the islands, as well as the animals and people inhabiting them. Rising sea levels, elevated sea temperatures, ocean acidification, increased erosion, more frequent and intense heat waves, and changes in the timing and amount of precipitation already are occurring and are predicted to intensify in the coming years. Warmer, drier summers could lead to increased wildfire activity in the islands, and dry forest and woodland habitats are likely to experience more insect and disease outbreaks due to increased climate-induced stress. The presence of heavy smoke from regional wildfires is also expected to continue.

Forage fish species depend on spawning and rearing habitat in the eelgrass beds and tidal wetlands, and along the sand and gravel intertidal beaches across the islands. These will likely experience declines in quality and extent due to the expected increases in coastal erosion, runoff, and sea level rise. Warmer ocean

Figure 4. Surrounding Development Scoring Example.



In this illustration, green parcels are undeveloped and red parcels are developed. The source parcel is highlighted in cyan. It is surrounded by eight parcels (two of which are on the NE and SW corners) of which two are developed, yielding a percent surrounding development score of 25%.

temperatures and decreased dissolved oxygen content may also reduce the amount of suitable habitat and could alter forage fish behavior, with effects rippling throughout the marine food web. Marine mammals such as whales, porpoises, and seals will be affected by the impacts to terrestrial and nearshore ecosystems. Pressures on salmonids and forage fish that provide direct or indirect food sources may place stress on local populations, potentially forcing marine mammals to migrate away from the islands in search of food. Heavier winter precipitation combined with impacts from increased coastal erosion and runoff will also impact habitat quality, food supply, and species’ health.

The Trust can help to meet these conservation challenges by increasing the resilience of the terrestrial, freshwater, and marine ecosystems through a combination of strategies, including expanding protected areas, increasing connectivity between existing protected areas, and adding more protected habitat refuges such as wet forests, perennial wetlands, and isolated shoreline habitats.



Terrestrial Conservation

MAPPING FRAMEWORK

Conservation opportunities for undeveloped lands with valued habitats were identified through a series of mapping analyses that measured resilience in the face of the changing climate, the extent of older tree canopy coverage, adjacency of protected or conserved public lands, and aggregated parcel size. By putting these land characteristics together, the mapping highlights locations where more connected and higher-valued habitats can be found. This combination helps target priority terrestrial conservation opportunities.

Mapping Climate Resilience

The Nature Conservancy (TNC) produced a suite of mapping products designed to represent the ability of a landscape to support functioning ecosystems into the future as our climate continues to change. TNC defines a resilient site as an area of land where high microclimatic diversity and low levels of human modification provide species with connected, diverse climatic conditions they will need to persist and adapt to changing regional climates.

Resilience is conveyed upon a site by the abiotic factors present within and adjacent to the site, the combination of which TNC refers to as Land Facets. Broadly defined, Land Facets are landscape types with a similar geologic environment (e.g. similar bedrock, soils and elevation zone) that support distinctive plants, animals and natural communities. If conservation succeeds, each geophysical setting will continue to support species and communities that thrive in conditions defined by its physical properties, although the species in the future may differ from those currently present.

A site's Resilience Score estimates its capacity to maintain species diversity and ecological function as the climate changes. It was determined by evaluating and quantifying physical characteristics that foster resilience, particularly the site's landscape diversity and local connectedness. The score is calculated within ecoregions based on all cells of the same geophysical setting and is described on a relative basis as above or below the average. For example, cells of granite bedrock were compared with all other cells of granite bedrock, and coastal plain sands were compared with other coastal plain sands. TNC's goal was to identify the places most resilient to climate change for each geophysical setting within each ecoregion.

Unit of Analysis Note:

For the Terrestrial Conservation Opportunities analyses, aggregated parcels are the unit of analysis. This data layer was created by Trust staff by combining adjacent parcels that have the same mailing address, according to the San Juan County Assessor. Each aggregated parcel is related to its component parcels with a unique identifier. With this perspective, potential conservation properties are identified by land ownership rather than as individual parcels.

Local Connectedness refers to the degree of fragmentation and strength of barriers that create resistance to movement within a landscape. A highly connected landscape promotes resilience by allowing species to move through the landscape and find suitable microclimates where they can persist. In this study, TNC calculated local connectedness by measuring the amount and configuration of human-created barriers like major roads, development, energy infrastructure, and industrial farming and forestry land. For the Pacific Northwest, the TNC modelers estimated resistance to plant and animal movement created by each landscape feature, then used circuit theory to measure the effort or cost to move from any given location to every other location on the landscape. This process starts with a focal cell and looks at the resistance to ecological flow outward in all directions through the local neighborhood. As resistance increases, flow is impeded or stopped altogether. Areas of no resistance allow the flow to proceed until a user-specified maximum distance is achieved. Cells grow further in directions of low resistance. This process is repeated for every cell across the analysis extent, and the results are combined to create the final surface, which is a representation of omnidirectional connectivity or permeability.

These characteristics were combined by TNC to create a single layer that represents a resilient and connected network (see Map 2). The different flow types within the resilient sites suggest different approaches to conservation.

- Diffuse flow: areas that are extremely intact and consequently facilitate high levels of dispersed flow that spreads out to follow many different and alternative pathways. The conservation strategy here might be to keep these areas intact and prevent the flow from becoming concentrated.
- Concentrated flow: areas where large quantities of flow are concentrated through a narrow area. Because of their importance in maintaining flow across a larger network, these pinch points are good candidates for land conservation.
- Constrained flow: areas of low flow that are neither concentrated nor fully blocked but instead move across the landscape in a weak reticulated network. These areas present large conservation challenges. In some cases, restoring a riparian network might end up concentrating the flow and creating a linkage that will be easier to maintain over time.
- Blocked/Low flow: areas where little flow gets through and is consequently deflected around these features. Some of these might be important restoration areas where restoring native vegetation or altering road infrastructure might reestablish a historic connection.

The Resilient and Connected Network was summarized within aggregated parcels to represent the proportion of each private unprotected parcel that is covered by the network. Significant areas of resilient sites with diffuse flow on private lands exist on San Juan and Orcas Islands, with additional large extents of resilient sites with concentrated flow found on all other islands.

Mapping Tree Canopy

Older/taller tree canopies can provide an indication of areas in the landscape that have less historic land disturbance and likely contain more intact habitats. The 2019 Lidar-derived canopy height model was used to map the location of tall (and therefore ostensibly old) trees throughout the county. The distribution of tree heights was analyzed throughout the County, and categorized into trees that are one standard deviation above the mean height (80-119 feet) or two standard deviations above the mean height (120 feet or more). The most extensive areas of remaining tall/old growth forest are found in Moran State Park on Orcas Island and on the University of Washington Friday Harbor Laboratories property north of Friday Harbor on San Juan Island (see Map 3, p. 21). There are extensive areas of trees that are between 80-119 feet tall. The total acreage of trees that are greater than or equal to 80 feet tall was summarized within all private unprotected aggregated parcels.

Adjacency to Public or Protected Lands

Public land as well as private properties that have been protected from further development through conservation easements were mapped to take advantage of the potential for existing conserved landscapes to contribute to creating more connected and larger natural environments.

SYNTHESIZING TERRESTRIAL OPPORTUNITIES

Three tiers of terrestrial conservation priorities were created by combining the Resilient and Connected data, Tall/Old Trees data, aggregated parcel size, and adjacency to existing public or protected lands (see Figure 5 on page 20). Different criteria were used for each Tier, as follows:

- Tier 1: These priorities are in the top 20% for resilience, the top 20% for acreage of old/tall trees, the top 20% for aggregated parcel size, and are adjacent to existing public/protected land.
- Tier 2: These priorities are in the top 60% for resilience, the top 60% for acreage of old/tall trees, the top 60% for aggregated parcel size, and are adjacent to public/protected land.
- Tier 3: These priorities are in the top 60% for resilience, the top 60% for acreage of old/tall trees, the top 60% for aggregated parcel size, and are not adjacent to public/protected land.



Resilient and Connected Network MAP 2

Resilient and Connected Network

- Resilient, Diffuse Flow, Recognized Biodiversity Value
- Resilient, Diffuse Flow
- Resilient, Diffuse Flow, Recognized Biodiversity
- Resilient, Diffuse Flow
- Resilient, Concentrated Flow, Recognized Biodiversity
- Resilient, Concentrated Flow
- Mostly Resilient, Concentrated Flow, Recognized Biodiversity
- Mostly Resilient, Concentrated Flow
- Resilient Coastal Migration Space
- Resilient, Recognized Biodiversity

Roads

- Public
- Private

- Ferry Routes

- Freshwater Lakes & Ponds

Figure 5. Terrestrial Conservation Opportunity Tiers.

Terrestrial Opportunities	Aggregated Parcels	Main Valued Trait
Tier 1	117	Top 20%
Tier 2	248	Top 60%
Tier 3	314	Top 60% - no adjacency

Additional mapped values could be applied as secondary filters on a case-by-case basis across the Trust’s entire service area as new and improved data sources become available. These characteristics could include:

- Presence of herbaceous balds/bluffs
- Presence of native oaks
- Scenic/Iconic Open Space
- Potential new dwelling units/assessed land value/surrounding development



ISLAND MARBLE BUTTERFLY - JEFF BRENNAN

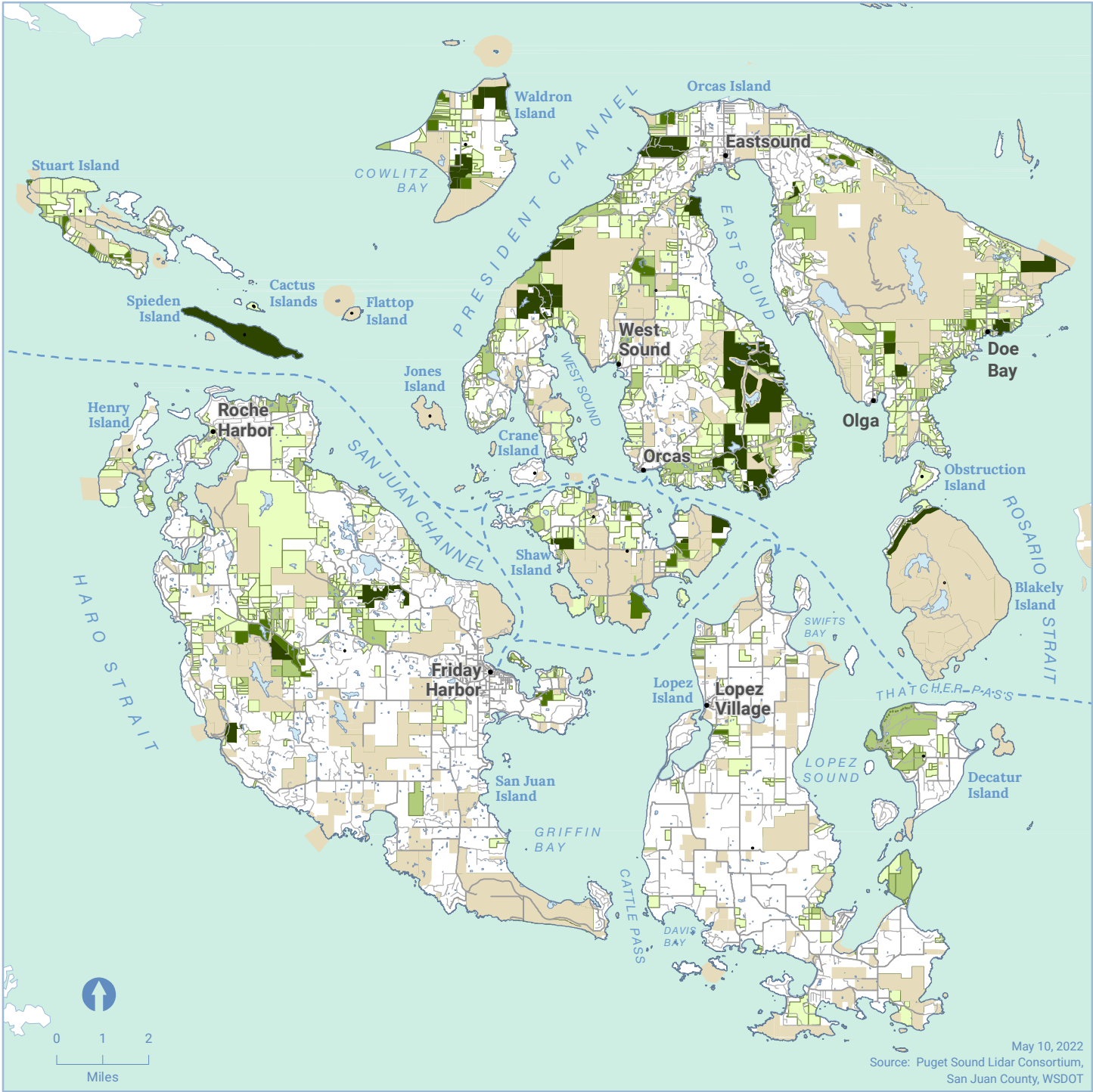


CAMAS FLOWERS - KURT THORSON



Many thanks to our partners, the San Juan County Conservation Land Bank, for providing the space at the Frazer Homestead Preserve on San Juan Island for us to create this safe place for these extremely rare butterflies to complete their life cycle. And kudos to our own Kathleen Foley Lewis, who heads the project.”

– SJPT WEBSITE, “ISLAND MARBLE CATERPILLARS UPDATE”



Acres of Trees
>= 120’ Within
Aggregated
Parcels

MAP 3

Acres of Trees >= 120'

- 1 or less
- 1.1 - 3.0
- 3.1 - 5.0
- More than 5
- Protected Lands

Roads

- Public
- Private

Ferry Routes

Freshwater Lakes & Ponds



Marine Shoreline Conservation

MAPPING FRAMEWORK

The 2022 San Juan County Salmon Recovery Chapter Update & Multi-Species Conservation Plan has stated that protection of remaining intact habitat is the top salmon recovery strategy for San Juan County. The nearshore marine habitat conservation opportunities and priorities have been compiled from extensive research conducted in the last decade beginning with the county-wide shoreform and landscape-scale strategic salmon planning effort completed in 2012 (Whitman et al. 2012 aka PIAT I). Additional work identified by the Friends of the San Juans from their 2017 Pulling It All Together initiative (PIAT II) looked at modifications in the nearshore marine environment of San Juan County's over 400 miles of marine shoreline and included all waterfront parcels.

A pre-screening process was conducted for the shoreline protection prioritization framework that removed all waterfront parcels already protected by ownership or easement, all parcels with low priority fish use region and low priority fish use shoreform rankings, and parcels less than 5 acres. The resulting 653 privately owned waterfront parcels that were 1) not already protected, 2) larger than 5 acres, and 3) located in the highest or high fish use region or shoreform, were further prioritized using a suite of parcel and shoreform specific metrics. In addition to salmon technical team involvement, the pre-screening and ranking metrics were developed in consultation with the two land conservation entities located and working in WRIA 2 (SJPT and SJCLB).

Parcel scale ranking factors that were scored included: development status (parcels with a building value less than \$50,000 were categorized as undeveloped); waterfront length; building setback; landscape context (adjacency to parcels already protected by ownership or easement and undeveloped parcels); coincidence with documented forage fish spawning beaches and herring spawning grounds; proximity to priority freshwater resources (fish bearing streams, streams and wetlands); presence of shoreline modifications such as docks, armoring, roads, etc. and if the parcel was currently enrolled in the Open Space Public Benefit Rating System (PIAT II).

The PIAT II used the following criteria to identify priorities:

- Private, unprotected parcels
- Located in the highest or high fish use region or shoreform
- Parcel area ≥ 5 acres
- Building setback > 200'

- Waterfront score based on length: >1,000’ as 5 points; 500’-1,000’ as 4 points, 250’-500’ as 3 points, < 250’ as zero points
- High or medium sea level rise resilience
- Documented forage fish spawning site with score 76-100 overhanging vegetation: 4; Documented forage fish spawning site with 50-75 overhanging vegetation: 2
- Intersecting top 9 streams, other fish-bearing streams, or wetland
- Adjacent to existing public/protected land
- No shoreline modifications on parcel

The Tier Ranking basis (shown in Figure 6, below) is a classification based on three Natural Breaks of the total scores.

Figure 6. Marine Conservation Opportunity Tiers

Shoreline Natural Breaks	Parcels	Main Valued Trait
Tier 1	152	Tier 1 Shoreline parcels
Tier 2	288	Tier 1 Shoreline parcels
Tier 3	213	Tier 1 Shoreline parcels

As the PIAT II report further explains, “fish use regions and shoreforms throughout the county were prioritized based on a combination of rearing juvenile chinook, rearing forage fish and spawning forage fish factors. Parcels in the protection prioritization framework included 34 parcels located in the highest priority fish use region and at the highest priority fish use shoreform; 291 parcels are located in the highest fish use region; 435 parcels are located in high ranked fish use regions and 251 parcels ranked as high fish use shoreforms. No parcels ranked as low fish use region and low fish use shoreform were included in the protection prioritization framework.”

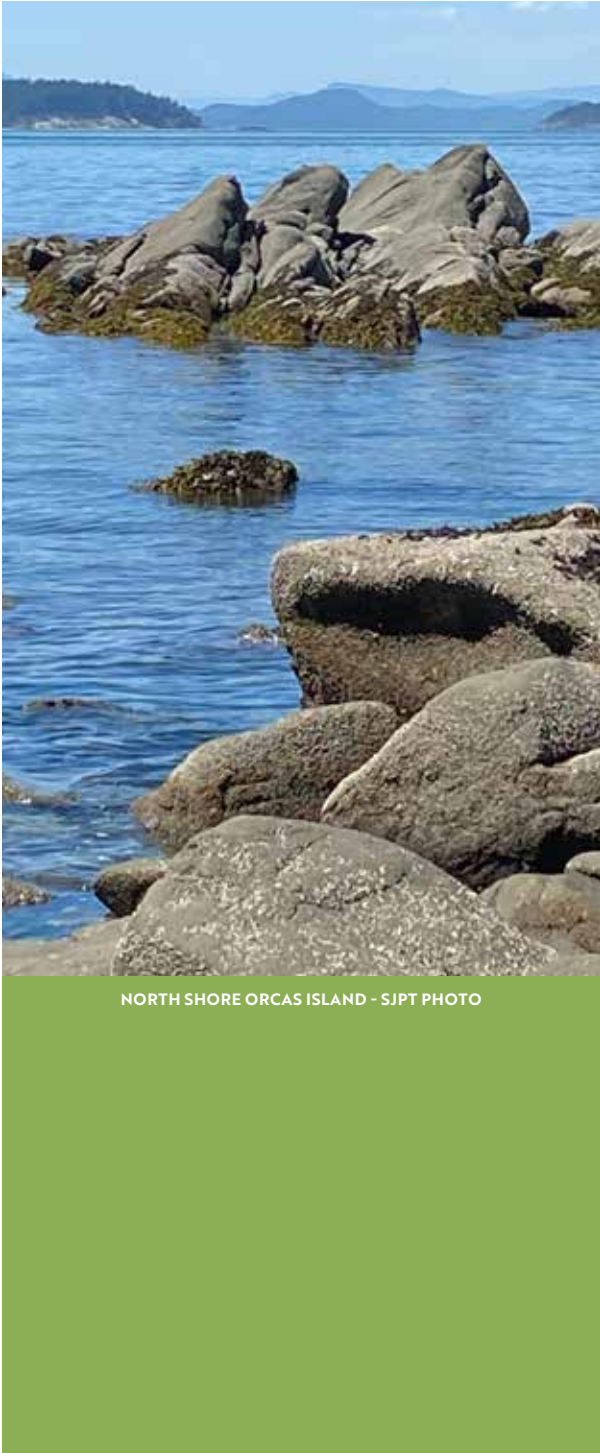
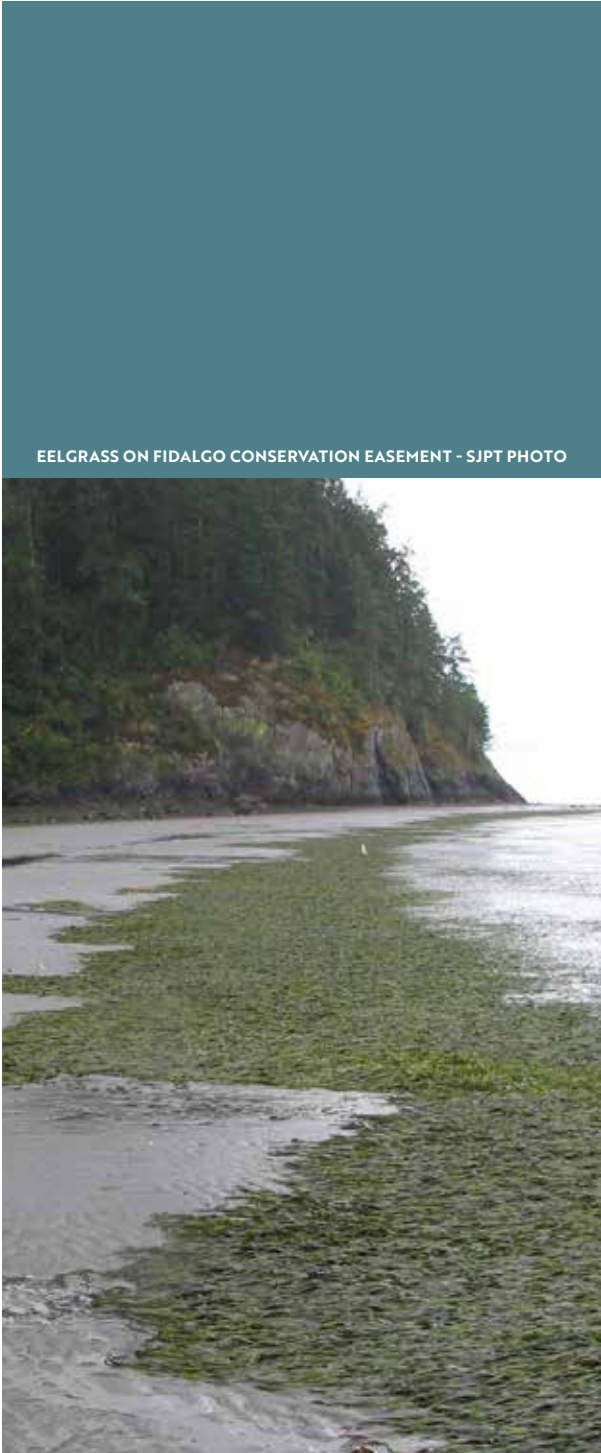
The highest priority fish use regions are Waldron/President’s channel, Haro Strait NE, Rosario Strait SW, and the Strait of Juan de Fuca/South Lopez.

In the five years since completion of PIAT II, there has been additional development and protection of shoreline parcels:

- 33 shoreline parcels protected: nine Tier 1, 17 Tier 2, seven Tier 3
- 10 parcels developed (according to year built from SJC Assessor): two Tier 1, six Tier 2, two Tier 3

Parcels with Eelgrass Habitat in the Nearshore

Eelgrass provides a number of important ecosystem functions, including foraging areas and shelter for young fish and invertebrates, food for migratory waterfowl, and spawning surfaces for species such as the Pacific herring. By trapping sediment, stabilizing the substrate, and reducing the force of wave energy, eelgrass beds also reduce coastal erosion.





Freshwater Conservation

MAPPING FRESHWATER OPPORTUNITIES

The freshwater ecosystems of the San Juan Islands provide critical habitat for a variety of plant and animal species, including resident and migratory birds, amphibians, and resident and anadromous fish.

The analysis of conservation and restoration opportunities for freshwater habitats is focused on 11 watersheds (see Map 4, p. 29). Eight of these watersheds were drawn from the WRIA 2 (San Juan Islands) Salmon Recovery Update and Multi-Species Conservation Plan (2022), and three additional watersheds were added based on input from the SCP Working Group and the Wild Fish Conservancy: Reef Net Bay on Shaw Island, and Swifts Bay and Davis Bay on Lopez Island. All three of these watersheds have fish-bearing streams. Wild Fish Conservancy detected salmonid eDNA in Reef Net Bay watershed. Both Swifts Bay and Davis Bay contain multiple fish-bearing streams and extensive freshwater wetland habitats.

Within each watershed, 110’ buffers were created along each side of streams containing salmon habitat (for the eight WRIA 2 watersheds) or the fish-bearing streams (for the three added watersheds). Within the stream buffers, the 2019 canopy height model was used to measure the height structure of riparian vegetation, which was stratified into one of four categories:

Figure 7. Riparian Vegetation Height Categories

Description	Range in Feet
Low	0 - 10
Medium-low	11 - 79
Medium-high	80 - 119
Tall	> 120

Vegetation that is greater than or equal to ten feet in height was considered to be providing beneficial shade and bank stabilization to the stream. The percentage of the riparian buffer with vegetation that is at least ten feet in height was measured for each aggregated parcel.

Unit of Analysis Note:
For the Freshwater analyses, aggregated parcels are the unit of analysis. These were created by Trust staff by combining adjacent parcels that have the same mailing address, according to the San Juan County Assessor. Each aggregated parcel is related to its component parcels with a unique identifier. With this perspective, potential conservation properties are identified by land ownership rather than as individual parcels.

Similarly, streams with salmon habitat and fish-bearing streams were intersected with aggregated parcels to measure the linear distance of streams.

For wetland habitats, the County's potential non-tidal wetlands layer was buffered by 110', and land cover was measured within the buffer. Fairly broad categories were used to characterize land cover. A wetland was assigned a single category if that category constitutes 75% or more of the buffer, otherwise the wetland was assigned to one of three mixed categories: mixed natural for wetlands surrounded by a combination of forested or riparian; mixed agricultural & developed for wetlands surrounded by a combination of development and agricultural land use; and mixed for a combination of natural, agricultural, and developed classes.

Each wetland was assigned to one of eight categories:

- Agricultural

■ Developed

■ Forested

■ Lake or pond
- Mixed

■ Mixed Ag/Developed

■ Mixed Natural

■ Riparian

To identify freshwater conservation opportunities and priorities, aggregated parcels were evaluated using six criteria:

1. Presence within one of the 11 priority watersheds

2. Private, unprotected land

3. Intersects stream with salmon habitat and/or fish-bearing stream

4. Riparian buffer is 75% or more forested (defined as >10')

5. Top 20% for length of stream(s) with salmon habitat or fish-bearing stream - OR -

6. Top 20% for area of non-tidal wetlands that have been categorized as: forested wetland, mixed natural, riparian, lake or pond and that intersect stream(s) with salmon habitat or fish-bearing stream(s).

The aggregated parcels satisfying these criteria were sorted into three tiers.

- Tier 1: These priorities have a stream buffer that is 75% or more forested, are within a priority watershed, are in the top 20% for length of salmon stream or fish-bearing stream; OR are in the top 20% for area of non-tidal wetlands, within priority watersheds, and intersect a fish-bearing stream.

■ Tier 2: These priorities have a stream buffer that is between 50 - 75% forested, are within a priority watershed, are in the top 20% for length of salmon stream or fish-bearing stream; OR are in the top 20% for area of non-tidal wetlands, regardless of location within a priority watershed.

■ Tier 3: These priorities have a stream buffer that is between 20 - 50% forested, are within a priority watershed, are in the top 20% for length of salmon stream or fish-bearing stream; OR are in the top 40% for area of non-tidal wetlands, regardless of location within a priority watershed.

Figure 8. Freshwater Conservation Opportunity Tiers

Freshwater Opportunities	Aggregated Parcels	Main Valued Trait
Tier 1	97	75% Forested buffer
Tier 2	156	50-75% Forested buffer
Tier 3	186	20-50% Forested buffer

These parcels represent the best opportunity to protect the most heavily forested riparian buffers adjacent to streams that provide salmon habitat within priority watersheds.

A similar approach was used to identify opportunities and priorities for restoring freshwater habitats, but starts at the other end of the spectrum—these opportunities exist where streams that contain salmon habitat or fish-bearing streams have buffers that are mostly non-forested, or contain non-tidal wetlands that are surrounded by development or agricultural activity. Unlike the conservation analysis, both private unprotected lands as well as Preservation Trust preserves and conservation easements were included because it may be easier to engage in restorative stewardship where the Preservation Trust is already engaged in managing the land.

To identify freshwater restoration opportunities and priorities, aggregated parcels were evaluated using six criteria:

1. Presence within one of the 11 priority watersheds

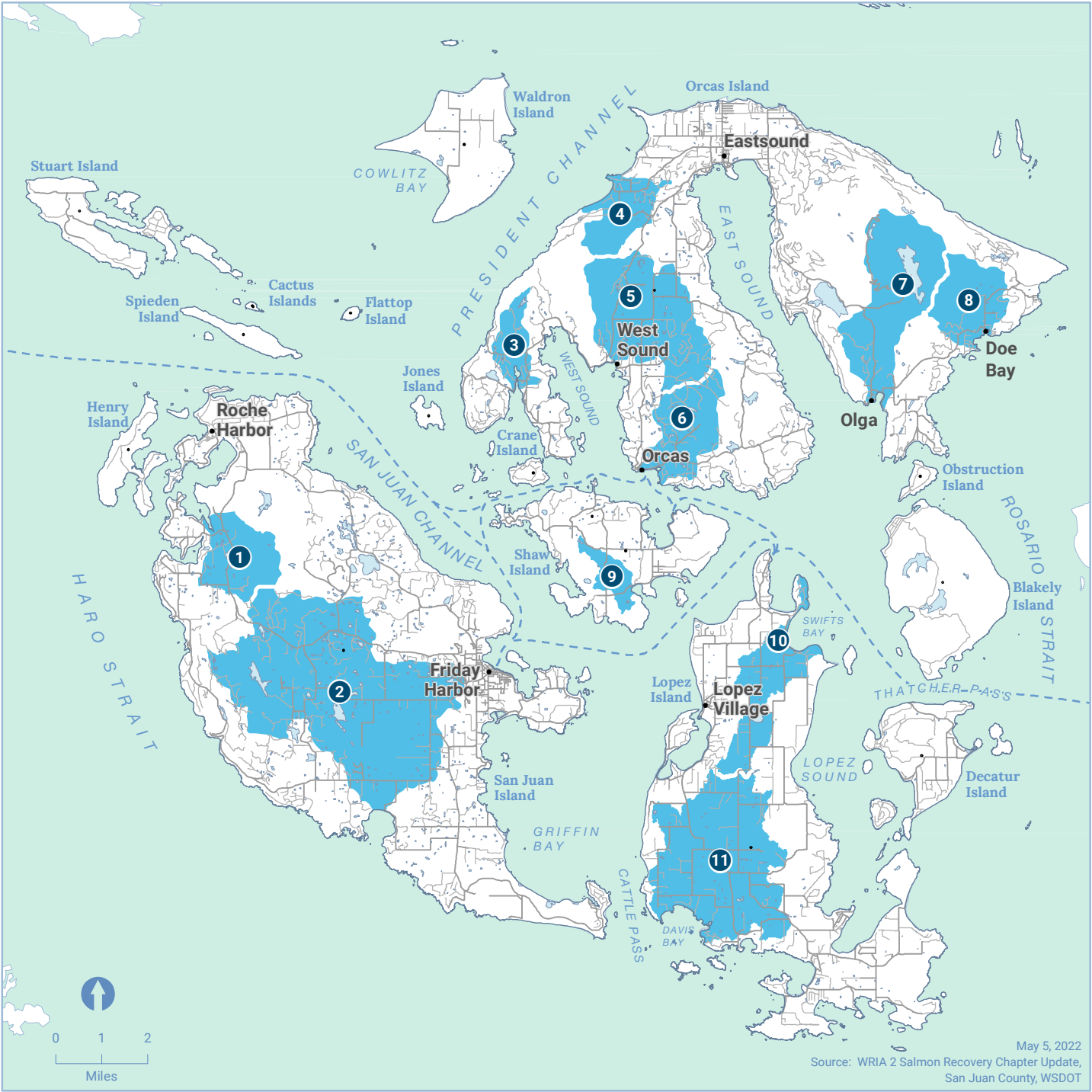
2. Private, unprotected land or SJPT preserve or conservation easement

3. Intersects stream with salmon habitat or fish-bearing stream

4. Riparian buffer is 20% or less forested

5. Top 20% for length of stream(s) with salmon habitat or fish-bearing stream (≥ 1,600') - OR -

6. Top 20% for area of non-tidal wetlands that have been categorized as: agricultural, developed, or mixed agricultural/developed, and that intersect stream(s) with salmon habitat or fish-bearing stream



Freshwater Priority Watersheds

MAP 4

1. Garrison Creek

2. False Bay

3. Fish Trap

4. West Beach

5. Crow Valley

6. Bayhead Creek

7. Cascade Creek

8. Doe Bay

9. Reef Net Bay

10. Swifts Bay

11. Davis Bay

- SJPT Freshwater Priority Watersheds

Roads

Public

Private

Ferry Routes

Freshwater Lakes & Ponds

The aggregated parcels satisfying these criteria were sorted into three tiers:

- Tier 1: These priorities have a stream buffer that is less than 20% forested, are within a priority watershed, are in the top 20% for length of streams with salmon habitat or fish-bearing streams; OR are in the top 20% for area of non-tidal wetlands intersecting salmon/fish-bearing streams
- Tier 2: These priorities have a stream buffer that is between 50 - 75% forested, are within a priority watershed, are in the top 20% for length of salmon stream or fish-bearing stream; OR are in the top 20% for area of non-tidal wetlands, regardless of location within a priority watershed.
- Tier 3: These priorities consist of all other parcels with salmon/fish-bearing streams with less than 20% forest cover in the stream buffer.

Figure 9. Restoration Opportunity Tiers

Freshwater Opportunities	Aggregated Parcels	Main Valued Trait
Tier 1	24	Top 20% stream length
Tier 2	38	Top 40% stream length
Tier 3	33	All other fish-bearing





There are few places left on San Juan Island that can provide so many benefits for so many people, so Zylstra Lake has always ranked among our highest priorities for protection.”

– TIM SEIFERT, FORMER EXECUTIVE DIRECTOR OF THE PRESERVATION TRUST





Goals & Strategies

Conservation Values

Through the extensive GIS mapping process for the Strategic Conservation Plan, the most significant ecological habitats and landscapes were identified that warrant proactive conservation to protect their continuing function and resilience into the future. In the face of land use development and climate changes, these conservation targets represent the highest priorities for preservation and protection through direct acquisition or conservation easements. This Plan recognizes that the San Juan Preservation Trust does not have limitless resources for protecting and conserving all of the most valued ecological landscapes of the Islands. Collaborative partnerships are key to strategic and creative conservation opportunities that help to expand the collective conservation footprint throughout the islands, with organizations complementing each other's work and leveraging their unique resources. An example of this is the collaborative partnership the Trust has with the San Juan County Conservation Land Bank (Land bank).

The strategic goal of the Trust's conservation efforts focuses on the most important sites for preservation, protection, and restoration of the Islands' ecological resources and at times, joining forces and funds with the Land Bank helps the Trust achieve that goal. Stated clearly in their 2019 Strategic Framework, SJPT seeks to "continue permanent conservation of critical lands, prioritizing shoreline and freshwater habitat, land for increased connectivity of wild and public places, and places for increased community engagement." This focus is similar to the habitat conservation goals adopted by the Land Bank in their Habitat Conservation Plan. This Plan is predicated on the continuing successful partnership between the Preservation Trust and the Land Bank where shared resources can obtain conservation easements, and where appropriate fee title land acquisition, to conserve critical lands for public values and sustainable communities.

Examining the terrestrial, freshwater and shoreline environments, the GIS mapping identified over 1,854 potential target parcels as priorities for conservation and/or restoration. These properties (including the Outer Islands) amount to over 52,388 acres of land with high ecological values needing permanent protection. Since these targets represent a significant amount of acreage, the goal of this Strategic Conservation Plan is to prioritize conservation efforts focused on the highest tier values, while also considering coordination with other land conservation efforts (scenic open spaces, public shoreline access, public parkland, farmlands, trail corridors, etc.) with collaborative partnerships and organizations whose resources and goals are more aligned to each specific acquisition goal.

Acquisition & Easement Targets

The Preservation Trust’s collaborative partnerships with private landowners and other conservation and community organizations and government entities contributes to the success of its Conservation Program. Its reputation as an outstanding conservation resource in the Islands engages the support of voluntary private landowners for the majority of its successful land conservation projects. Its collaborative partnership with the Land Bank allows for extending the reach of conservation and ecological protection to public lands.

The Land Bank’s public funding for protecting lands that can be open to the public has combined with SJPT’s private fundraising to pursue conservation opportunities for more than 20 years. Since 1998, over 20 acquisitions have occurred due to this successful partnership. The roles of the Land Bank and SJPT have often been interchangeable, in terms of ownership and management. Often, SJPT plays a key role in facilitating and negotiating land deals before assigning the purchase agreements to the Land Bank. As a private entity, SJPT is able to be more nimble than the Land Bank and can bring resources and financing to bear in a relatively short time to compete in a challenging real estate market.

Terrestrial

For this SCP, the most important terrestrial conservation lands were identified by their amount of old tree growth and degree of climate resilience. A series of three tiers were used to define the highest values for these primary targets, with Tier 1 as parcels containing the most valued conservation traits.

Figure 10. Terrestrial Conservation Priorities

Parcels	
Tier 1	117
Highest resilience & largest parcels	
Greatest amount of old/tall trees	
Adjacent to protected/public lands	
Tier 2	248
High resilience & large parcel size	
Percentage of old/tall trees	
Adjacent to protected/public lands	
Tier 3	314
High resilience & moderately large parcel size	
Some degree of old/tall trees	
Adjacent to protected/public lands	
Potential Terrestrial Parcels	679

Marine Shoreline

Nearshore marine habitat conservation opportunities across over 400 miles of marine shoreline included all waterfront parcels. The identification of opportunity targets followed the PIAT II report prepared by the Friends of the San Juans in 2017. “Using data from several years of field work, Pulling It All Together (PIAT 2017) provides a thorough, science-based prioritization of private waterfront parcels to protect for recovery. This strategy recommends the protection of a prioritized subset of shoreline parcels in the islands to ensure continued function of rearing habitat for salmon and their prey, while allowing continued space for resilience and retreat in the face of sea level rise.” (WRIA 2 SJI Salmon Recovery Chapter Update and Multi-species Conservation Plan. 2022)

The Tier ranking was determined by the Natural Breaks¹ in GIS classifications. Salmon Technical Advisory Group (TAG) listed priorities in the PIAT II report, divided between restoration (removal of armoring, groins, shore roads) & protection (acquisition or easements of good/valued fish habitat).

Figure 11. Shoreline Conservation Priorities

Parcels	
Tier 1	143
Tier 2	271
Tier 3	206
Potential Shoreline Conservation Target Parcels	620
Priority Shoreline Acreage =	9,257

Freshwater

For identifying freshwater conservation targets, the mapping selected parcels within priority watersheds containing fish-bearing streams and three degrees of forested stream buffer. Tier 1 had the highest percentage of forest canopy along the riparian corridor.

Figure 12. Freshwater Conservation Priorities

Preservation / Protection Targets	Parcels
Tier 1	97
Stream buffer >75% forested	
Within a Priority Watershed	
Fishbearing (or intersecting) Stream	
Tier 2	156
Stream Buffer 50-75% forested	
Within a Priority Watershed	
Fishbearing (or intersecting) Stream	
Tier 3	186
Stream Buffer 20-50% forested	
Within a Priority Watershed	
Fishbearing (or intersecting) Stream	
Potential Freshwater Conservation Parcels	439

Conservation targets for restoration of freshwater habitats were within one of the 11 priority watersheds and were located on both private, unprotected lands, as well as SJPT preserves and lands with conservation easements.

Figure 13. Freshwater Restoration Priorities

Restoration Targets	Parcels
Tier 1	24
Stream buffer <20% forested	
Within a Priority Watershed	
Fishbearing (or intersecting) Stream (top 20%)	
Tier 2	38
Stream Buffer <20% forested	
Within a Priority Watershed	
Fishbearing (or intersecting) Stream (top 40%)	
Tier 3	33
Stream Buffer less than 20% forested	
Within a Priority Watershed	
Fishbearing (or intersecting) Stream (others)	
Potential Freshwater Restoration Parcels	95

Figure 14. Summary of Target Parcels

Conservation Priority Type	Target Parcels
Potential Terrestrial Target Parcels	679
Potential Freshwater Conservation Target Parcels	439
Potential Freshwater Restoration Target Parcels	95
Potential Shoreline Protection & Restoration Parcels	620
Total Target Parcels	1,833

When examining the potential conservation targets based on the individual values, the quantity of potential acquisition targets seems overwhelming. However, many of these parcels had more than one conservation value so the parcel lists may contain identical parcels, thus measuring some redundancy. To help rank and prioritize the highest valued conservation direction, an additional mapping analysis revealed the parcels with more than one habitat value.



Resource Combinations

Priority resource categories used to define and identify conservation targets will to some extent overlap and result in the combining of conservation values. The geographic extent of high-quality ecological terrestrial, freshwater and shoreline environments may all be contained on a large parcel or overlap with a combination of parcels containing different percentages of each valued resource. A further refinement of GIS mapping to identify conservation priorities combined the overlapping resource categories to narrow the field of target parcels for conservation. Parcels were identified that have some combination of all three resource categories (in any combination of Tiers 1, 2 & 3). This combination resulted in identifying 16 parcels. Additional parcels were selected for terrestrial and freshwater combinations identifying 116 parcels. Terrestrial and shoreline combined resources revealed 126 target parcels. Freshwater and shoreline categories were combined and resulted in 17 target parcels. This more selective hierarchy helps highlight those potential conservation targets with the greatest combined conservation values. The priority combinations revealed 275 parcels with multiple resource conservation values.

Outer Islands

Since the Outer Islands are so much smaller than the larger islands that have multiple landowners, the mapping analysis of “terrestrial, freshwater & shoreline” did not extend to these properties. The Outer Islands do not have freshwater resources and are generally too small to meet the criteria used for terrestrial climate resilience. However, combining the 22 Outer Islands yields about 8.5 miles of shoreline that should be protected for its value to marine habitat as well as close to 1,000 acres of natural uplands that benefit migratory birds and native wildlife.

Ambassador Lands

Ambassador Lands are those iconic properties with extraordinary scenic and ecological values that also have a low-intensity recreational component that allow our members and the public to engage with these landscapes, SJPT, and each other. Ambassador Lands may or may not be held in partnership with the San Juan County Land Bank. Examples of Preserves that SJPT considers having these qualities are: Turtleback Mountain and the North Shore Preserve on Orcas Island (both with the Land Bank), the Marilyn & Fred Ellis and Graham Preserves on Shaw Island, Mount Grant and Beaverton Marsh on San Juan Island (both with the Land Bank), the Henry Island Preserve (partially with the Land Bank), the Peach Preserve on Guemes Island, and Vendovi Island Preserve. Identification of future Ambassador Lands could blend the components of SJPT’s Strategic Conservation Plan (which highlight the highest priority conservation lands) with localized trails, recreational planning efforts, and community needs to pinpoint where those values intersect.

PROGRAM GOALS

GOAL 1: Prioritize opportunities for land conservation of identified multiple-valued resource lands as primary targets through collaborations with private landowners and when appropriate, the Land Bank. Focus to expand outreach to Tier 1 properties with the highest resource percentages with adjacency to other protected lands.

GOAL 2: Pursue conservation easements for critical shoreline and freshwater habitats where significant ecological benefit can be gained from protection and/or restoration.

GOAL 3: Proactively seek to conserve and protect the shorelines and terrestrial habitats of the Outer Islands from further development.

GOAL 4: Seek to create and foster protection of large-scale landscapes on the Islands to approach greater climate change resiliency for future ecological function and expand the extent of existing conserved lands.

GOAL 5: Explore potential “new” partnerships when collaboration on conservation and acquisition opportunities may allow multiple uses for a site with limited existing conservation value. Flexibility and some creativity for the Trust conservation program may allow for a more sustainable Island-community approach to local needs and quality of life.

GOAL 6: Expand SJPT’s role as “broker” and “facilitator” to allow conservation methods that serve multiple community goals. Cultivate partnerships that enhance Island self-sufficiency.

GOAL 7: Connect people to the land by facilitating access to nature and personal contact with the land through education and stewardship activities.

GOAL 8: Re-connect with Tribal Nations through restoration of cultural landscapes, access to traditional activities and engagement with stewardship programs. Foster more active conservation partnerships with Tribal Nations, as feasible. Acknowledge the heritage of Tribal history on the Islands with respect and recognition.

GOAL 9: Maintain and update the conservation mapping tool with current available GIS data and monitor conservation successes.

GOAL 10: Evaluate each conservation opportunity with an eye towards advancing values of justice, equity, diversity, and inclusion in project work and potential partnership opportunities.

WALKERS AT THE KEEL PRESERVE, ORCAS ISLAND - SJPT PHOTO

VOLUNTEER PLANTS A GARRY OAK ON TURTLEBACK MOUNTAIN - SJPT PHOTO

Implementation

PARTNERING RESOURCES

Collaboration has been an ongoing approach for the PreservationTrust in many of its endeavors:

- Partnering in acquisition projects and the Salish Seeds native plant nursery with the County Land Bank.
- Western bluebird reintroduction with Ecostudies Institute
- Protecting Guemes Mountain with the Skagit Land Trust
- Collaborating in a multi-agency effort to save the Island Marble butterfly
- Adding the Trust for Public Land as an acquisition partner for Turtleback Mountain
- Protecting salmon habitat through use of data and outreach with Friends of the San Juans.

The list could continue.

SHARPENING THE TOOL

The priority mapping for this Plan was conducted in 2022. While the results will be valid for a number of years, land ownership and landscape character are not static. Parcels will continue to be subdivided and developed. Forest canopy cover will change. Shorelines could be altered. Future conservation and protection activities will shift the list of targets as successful acquisitions and easements are amassed. The interactive mapping tool provided as part of this Plan will help continue the work of identifying targets, as well as providing the supportive materials and mapping that will help generate financial backing and support for implementing the conservation program.

The interactive mapping tool makes the results of the analyses described in this report accessible to all SJPT staff, and the layers included in the tool can easily be updated and augmented by staff on an ongoing basis. The tool also incorporates mapping services published and maintained by San Juan County, including historic and current aerial photos, contours, and other reference layers. As properties are protected through partnerships, conservation easements, and acquisition, the protected lands layer and conservation successes data can be updated to help SJPT track its progress. Staff can use the mapping tool to evaluate prospective conservation properties prior to site visits, and can add data gathered in the field with the Landscape to the tool to provide more granular data about conservation values.

STEWARDSHIP CONSIDERATIONS

Stewardship of the acquired conservation easements and wholly-owned preserves requires extensive time and resources. As an aggressive conservation program moves forward, SJPT will need to ensure that adequate staffing is available to conduct the environmental assessments and ecological inventories, monitoring of easements, land management and restoration activities. Whenever appropriate, the partnership responsibilities between the Preservation Trust and the Land Bank could result in SJPT holding the conservation easement while the Land Bank holds the responsibilities for land management. Engaging volunteers should continue as a valuable resource for stewardship projects and activities for the Preservation Trust.

SUMMARY

The Strategic Conservation Plan is intended to guide conservation efforts for the next ten years. The mapping tool will identify potential sites but communications with willing landowners will be key to implementation. Rather than target specific acreage quantities, the Plan recommends reaching toward habitat conservation that targets a percentage of priority conservation areas.

Figure 15. Ten-Year Conservation Targets

Ten-Year Conservation Targets		
Terrestrial Tier 1 Priorities	10%	Aggregated Parcels
Freshwater Conservation - Tier 1	20%	Aggregated Parcels
Freshwater Restoration - Tier 1	25%	Aggregated Parcels
Shoreline Protection	2.5	Miles
Other Priority Combinations	25%	Aggregated Parcels
Outer Islands	3	Islands

The proactive conservation targets listed as a ten-year goal include securing several Outer Islands. If successful, these islands would contribute to the attainment of other priority goals such as shoreline protection and terrestrial habitat conservation. With each target, engaging partnerships to help secure easements, acquire shoreline, restore freshwater resource functions would greatly extend the Trust’s resources. Using these targets could also help encourage the contributions of private funding sources to support the effort.



PRIZE MUSHROOM, SHAW ISLAND, SJPT PHOTO

LITERATURE CITED

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