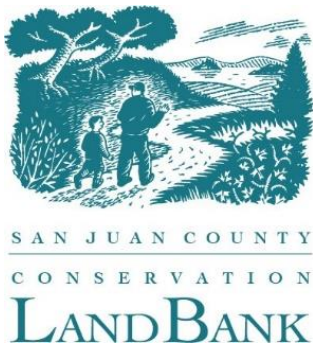


Crescent Beach Preserve Stewardship and Management Plan



April 2024

**San Juan County Conservation Land Bank
350 Court Street No. 6
Friday Harbor, WA 98250**



Crescent Beach Preserve, Orcas Island Stewardship and Management Plan

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Executive Summary

Crescent Beach Preserve first came into public ownership through purchase by the Conservation Land Bank (Land Bank) in 1998. The initial acquisition of 113 acres largely protected the upland forests and wetlands. Between 2000 and 2005, three subsequent additions to the Preserve expanded public ownership of the beach, forest, and tidelands and created the current 131-acre preserve with 2,100 feet of shoreline.

Crescent Beach Preserve is located near the population center of Eastsound Village and along a major county road, and it is a popular destination for residents and visitors throughout the year. Stewardship and Management Plans (SMP) for the Preserve were approved in 2001 and 2007. The 2007 document established habitat management initiatives and public access, and activities since have aligned with these early objectives; staff have focused on removing noxious weeds and marine trash, developing parking areas and creating a half-mile pedestrian and bicycle-friendly trail, and managing public use.

The primary purpose of this SMP update is to extend the scope of the 2007 plan to include more active management of the upland forests. The San Juan Islands are predicted to become increasingly subject to seasonal drought conditions and heightened wildfire risks. The State's Department of Natural Resources (DNR) has identified the islands as a priority area within western Washington and allocated funds to promote forest health on private and public lands across the County.¹

Much of the forested area within Crescent Beach Preserve still shows the effects of heavy logging, which occurred prior to 1998. Stands are characterized by high densities of young trees in poor health. These conditions, combined with the Preserve's proximity to residential and commercial development areas, present a fire hazard. Prescribed activities such as thinning are recommended to reduce fire risk, enhance forest health and wildlife habitat, and protect water quality within the nearshore.

The following new ecological objectives and activities are proposed in this plan:

- Thin high density stands to promote resilience to climate change;
- Remove young, competing conifers from the vicinity of older, legacy trees; and
- Target trailside areas to reduce wildfire risk and severity.

¹ See the DNR's 2020 [Forest Action Plan](#). DNR funds have recently supported forest health activities on the Land Bank's Turtleback Mountain Preserve and Mount Grant Preserve.

A. Introduction

Crescent Beach Preserve is an important conservation area within San Juan County. Scenic waterfront views extend southward across Ship Bay and contribute to the islands' open-space character. The Preserve's tide flats, shoreline, wetlands, and forests support a wide assemblage of native plants and wildlife. Two species found on the Preserve, quaking aspen and sand dollars, are uncommon elsewhere in the County.

Conservation of this forest and shoreline on East Sound help to protect water quality in the bay, as well as the aesthetic appeal of the islands for both residents and visitors. The Preserve also provides low-impact public access. Public access is focused along the beachfront and the half-mile pedestrian and bicycle trail. The trail traverses the forested upland and connects two major thoroughfares, Crescent Beach Drive and Mount Baker Road.

The protection of undeveloped natural areas is a central tenet of the Land Bank's mandate.² Establishing interconnected natural areas is one approach to mitigating the loss of species from stressors associated with landscape and regional disturbances such as climate change and population growth. Crescent Beach Preserve connects to the Land Bank's Stonebridge-Terrill Preserve and to open spaces managed by the San Juan Preservation Trust and the Orcas Island Park and Recreation District to create a combined area of over 200 acres. Additional development within the County and Puget Sound will increase the importance of such conservation areas to maintaining water resources, wildlife habitat, recreational opportunities, and the general quality of life.

The Land Bank creates a SMP for each preserve to guide decision making and work planning, and to promote transparency. These plans establish natural resource protection and ecological enhancement objectives, define public access objectives, and guide the development of trails and other infrastructure in ways that meet the Land Bank's mandate. Following regular monitoring and internal review, SMPs are revised approximately every ten years. SMPs are adopted by the Land Bank Commission following a public hearing and then ratified by the San Juan County Council, typically as part of the County's budgetary process.

The Land Bank's stewardship goals for Crescent Beach Preserve remain similar to those detailed in the 2007 SMP. This document primarily extends the scope of ecological projects

² The Land Bank's mandate is to "preserve in perpetuity areas in the county that have environmental, agricultural, aesthetic, cultural, scientific, historic, scenic or low-intensity recreational value and to protect existing and future sources of potable water."

to include active forest management. It also seeks to advance the initiative to trade the Land Bank's one-acre dog park for nearby natural lands owned by Orcas Island Parks and Recreation District (Orcas Parks and Recreation).

In a broad sense, the Land Bank's stewardship goals for Crescent Beach Preserve are:

- To protect and enhance the property's ecological values;
- To promote habitat resiliency in the face of climate change; and
- To provide opportunities for low-intensity recreation and education.

The Preserve's various ecological resources and the Land Bank's habitat conservation objectives are described in Section C. Stewardship activities for the next ten years based upon short-, medium-, and long-term goals are summarized in Table 3. This plan also describes current public access as well as the potential land exchange with Orcas Parks and Recreation (Section D), provides a ten-year management cost projection (Section E) and summarizes the public process (Section F). Management planning is an iterative process and the activities outlined are subject to final approval and available funding.

B. Preserve Overview

Crescent Beach Preserve encompasses 130.8 acres within the Eastsound watershed.³ It is located between the west and east lobes of Orcas Island, approximately eight miles from the ferry terminal and a half-mile from Eastsound Village. Access is provided from both Crescent Beach Drive and Mount Baker Road (Fig 1). Excluding the tidelands, the Preserve's gentle topography rises from sea-level to approximately 60 feet in elevation. Underlying geology is of glacial origin and contains sandy and gravelly loam, and silt.⁴

Most of the Preserve's acreage is forested. A mosaic of wetlands and small intermittent streams drain northward towards Stonebridge-Terril Preserve and southward into Ship Bay. The Preserve's sand and cobble beach extends for 2,100 feet and is a documented spawning site for forage fish. The nearshore marine habitat supports eelgrass beds and serves as breeding grounds for herring and Dungeness crab. The Land Bank's tidelands extend for approximately 21.6 chains or roughly two acres. Adjacent to the Land Bank's tidelands are privately-owned tidelands that are leased for oyster aquaculture. A commercial kayak business also operates on private property adjacent to the Preserve.

³ [San Juan County GIS](#)

⁴ As mapped by NRCS, and detailed in wetland assessments by Pacific BioSurvey (1998, 2001) and Rozewood Environmental (2005).

Crescent Beach has long been utilized as a transportation corridor. When tides permitted, farm wagons used the upper beach as a causeway, and the backshore was augmented with fill dirt and ballast rock until the County paved the road sometime after World War II. Maps from 1895 indicate three homesteader's names associated with the Preserve.⁵ Other evidence of colonial settlement exists in the creation of ditches, to alter flow in the wetlands. More recent activities included grazing and commercial timber extraction.

Crescent Beach Preserve is within the traditional territory of the Coast Salish peoples. Native American Tribes and First Nations of Canada have lived in and stewarded the San Juan Islands as part of their ancestral territory since time immemorial. Coast Salish people in the Islands tended and harvested shellfish, salmon, crab, and other species from the sea, camas in the prairies, berries along streams and in forests, and other flora and fauna for food and traditional uses. Still used by Coast Salish people, these ancestral lands and waters are protected under tribal treaty rights.

Coast Salish peoples, particularly the Lummi, inhabited Orcas Island. Prior to being called Eastsound, this area was known as Ts'el-xwi-sen' by the Lummi Tribe⁶ and Á7leleng by the Samish Tribe.⁷ Nearby Madrona Point is a sacred site owned by the Lummi Nation. Although evidence of permanent settlements within the boundaries of the Preserve is lacking, it is likely that people associated with the local settlement hunted, gathered, and stewarded resources on Crescent Beach and its diverse uplands. A shell midden exists on the land that comprises the Preserve, though its full extent is unknown. The Land Bank will seek opportunities to collaborate with Coast Salish peoples on this preserve, as well as others, to reincorporate Traditional Ecological Knowledge and to inform management priorities and stewardship practices. San Juan County is currently developing a tribal engagement policy which will help identify and establish best practices for tribal outreach. We expect this policy to include provisions for regular, timely updates to the Tribes. In the

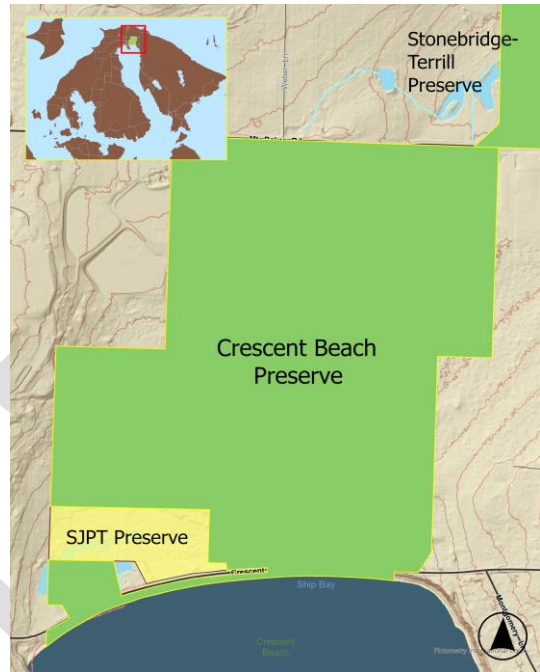


Figure 1. Preserve Context

⁵ U.S. Coast and Geodetic Survey

⁶ <https://salish-current.org/2024/04/02/additional-acreage-next-to-madrona-point-to-be-returned-to-lummi-nation/>

⁷ [Coast Salish Place Names of the San Juan Islands \(arcgis.com\)](https://arcgis.com)

interim, the Land Bank notifies Tribes of recent acquisitions, shares draft management plans, and extends open invitations to visit and consult on preserve management.

Acquisition History

The San Juan County Conservation Land Bank acquired today's Crescent Beach Preserve in four separate transactions over the span of seven years.⁸ In 1998, the first and largest 113-acre parcel was purchased for \$1.4 million dollars. This early acquisition included nearly 300 feet of waterfront, an extensive wetland system and forested uplands. Subsequent parcels were much smaller in acreage but extended public ownership of the shoreline by another 1,861 feet and included approximately two acres of tidelands. Together, these purchases protected the ecological, scenic, and low-intensity recreational values in perpetuity at a total cost of \$2,771,666. Funding for the acquisition came from the voter-approved conservation area Real Estate Excise Tax (REET).

Existing Infrastructure

Prior to Land Bank ownership, several roads were built within the Preserve to facilitate logging and residential access. Parking areas were developed after acquisition to improve public access.

Parking Areas

In total, four public parking lots provide access to the Preserve. Three lots are located along Crescent Beach Drive and receive frequent use; they provide scenic views of Ship Bay, easy access to the beach and trail, and space for up to 15 vehicles. The western lot also allows vehicle parking for operators of a privately owned oyster farm operating on adjacent tidelands. One additional lot is located along the northern boundary, accessed from Mount Baker Road. It provides trail access and space for four vehicles. In 2020, all southern lots received grading and parking stops to improve parking efficiency within the existing development footprint. There are no permanent structures in the parking areas, and no portable toilets. Public facilities are available nearby in Eastsound Village as well as Moran State Park.

Roads and Trails

A former logging road now serves as a pedestrian and bicyclist trail. The trail runs roughly north and south and extends for approximately a half mile. Crescent Beach Drive separates the Preserve's shoreline from upland areas. San Juan County Public Works is responsible for maintaining the road and often clears storm debris following high tides. Their current practice is to clear driftwood and marine debris from the roadway and stage it onto the beachfront. Current projections of sea level rise indicate that Crescent Beach Drive may

⁸ Tax Parcel Numbers: 271321001000, 271332003000, 271353001000, 271324003000

need to be removed or elevated in the future. In the event it is removed, the wetland complex to the north would likely change in response to increased tidal connectivity.

Cisterns

Three old below-ground cisterns exist on the Preserve. For safety reasons, they were filled-in and the old pumphouse was demolished prior to developing infrastructure for public access.

C. Ecological Overview and Conservation Objectives

Habitat and resource protection is a guiding principle of the Land Bank's stewardship program. Maintaining or restoring an area's ecological health also typically protects, and enhances, its scenic and open-space character and its recreational opportunities. For example, wildlife activity on a preserve affords memorable outdoor experiences.

Historic uses have reduced Crescent Beach Preserve's ecological values. Wetlands and forests have been altered by activities such as road building, agriculture, and logging. A busy roadway separates the beach from the uplands and impedes tidal influence. A portion of the wetlands was modified for wheat cultivation and supported livestock until the early 1960s, and the uplands were most recently logged in the 1980s.

Despite these alterations, the Preserve displays a high degree of habitat diversity and ecological function. Several assessments have identified notable habitats and species including, forage fish spawning areas, a significant aggregation of sand dollars, an extensive wetland complex, and one of the largest quaking aspen groves in the County. The Land Bank's proposed management actions detailed in this section focus on maintaining or restoring biodiversity, protecting water resources, promoting old-growth characteristics, increasing carbon storage potential, and reducing the risk of catastrophic fire.

Classification of a preserve into habitat types helps to inventory resources, and to organize and prioritize management activities. For general management purposes, Crescent Beach Preserve is divided into major areas based on land cover (Table 1). A map of the Preserve showing the locations of these major habitat types is provided in Figure 2. Collectively, these areas provide habitat for a diversity of native shellfish, resident and migrating birds, mammals, amphibians, reptiles, and invertebrates, and contribute to both marine and terrestrial food webs.

Stewardship activities within these habitat types, their estimated costs, and their proposed sequence over the next ten years, are outlined in Table 3. Stewardship and restoration work will be supported by grants and by Land Bank stewardship funds. Priorities for

specific habitat areas may be revised in response to available funding and changing site conditions. Even with careful management, the Preserve’s conservation values face threats

from stressors such as drought, invasive species, and changing land uses on, or further fragmentation of, surrounding properties.

Table 1. Land cover and approximate area

Habitat Type	Acres	% of Total
Mixed Hardwood-Conifer Forest	60.7	46.3
Wetland Complex (Forested Swamp, Shrub Swamp and Herbaceous Wetlands)	25.3	19.3
Lowland-Riparian Forest	25.2	19.3
Mesic Mixed Conifer Forest	16.2	12.4
Coastal-Tidal-Shoreline	2.1	1.6
Dog Park	1.5	1.1

Total 131.0

Wildlife

As a protected area, Crescent Beach Preserve supports an assortment of animal species. Mammals known to inhabit the Preserve include Douglas tree squirrels, black-tailed deer, mink, river otters and raccoons. No formal survey for bats has occurred, but they are likely to forage across wetland areas. Garter snakes, long-toed salamanders, rough-skinned newts, red-legged frogs, and Pacific chorus frogs may also use the Preserve.⁹

A 2012 bird survey performed on Crescent Beach Preserve and the adjacent Stonebridge-Terrill Preserve documented a total of 151 species.¹⁰ Of those, 36 species were identified as over-wintering on the preserves. Among the waterfowl documented in Ship Bay were loons, grebes, and goldeneyes. During the summer months, eight species of warblers and six species of swallows were detected. Peregrine Falcon, American Kestrel, Stellar’s Jay, Band-tailed Pigeon, and California Quail are among the various year-round residents. Early ecological assessments referred to a Great Blue Heron rookery and an active Bald Eagle nest. However, neither of these were detected during the 2012 survey. Nesting territories for a pair of Great Horned Owls and a pair of Pileated Woodpeckers was detected during that survey but have apparently been abandoned, though both species still utilize the Preserve for foraging.

⁹ Latin names for identified species are: *Ambystoma macrodactylum*, *Taricha granulosa*, *Rana aurora* and *Pseudacris regilla*.

¹⁰ RavenSight Consulting, 2012.

The Preserve's productive tidelands and eelgrass beds host a suite of species ranging from tube worms to various bivalves. Marine biologists have commented on the intertidal zone's dense shellfish and sand dollar populations, and the area's importance to forage fish such as sand lance and herring. The tidelands have been repeatedly used as a research site and marine invertebrates identified within the tide flats include five species of native clams as well as the non-native purple varnish clam.¹¹ The abundance of sand dollars within the bay is also believed to be the biggest aggregation of its kind in San Juan County.

Major Habitat Areas

For brevity and management purposes, the various habitat areas within the Preserve were divided into three distinct areas: an intertidal zone, a stream and wetland complex, and upland forests. The upland forests were further delineated into stand types based on species composition and structure. These include a riparian forest, a mixed hardwood and conifer forest, and a conifer forest. Further details about each type are provided below.

To link broad objectives to site-specific goals, the Preserve's areas with notable and distinct ecological values were mapped (Fig. 2). Staff then assigned ratings (e.g., Poor, Fair, Good) to represent their current condition. Future stewardship activities, to enhance the Preserve's ecology, were then identified by determining a reasonable, desired future condition for each area. A summary of the current and the desired future conditions is provided in Table 2. The off-leash dog park, which is managed by Orcas Parks and Recreation, is delineated on the map but excluded from the condition ratings.

The ratings used by staff reflect multiple ecological criteria with an emphasis on aspects of biology, ecology, or ecological processes that, if missing or altered, could lead to future declines or losses to either species or habitats.¹² A similar process is used by other conservation organizations to help prioritize stewardship goals, actions, and monitoring. The ecological attributes and ratings in use by the Land Bank represent an iterative, adaptive process informed by research, field observations and peer review. Priorities may be revised in response to site conditions and available funding.

¹¹ Species identified by Pacific BioSurvey include: Heart cockle, Native littleneck clam, Manila clam, Bentnose clam, Horse clam, Sand clam, Purple varnish clam and Probocis worm.

¹² These values are also referred to as Key Ecological Attributes (KEAs) and this methodology for determining conservation action was developed by The Nature Conservancy in 2007.

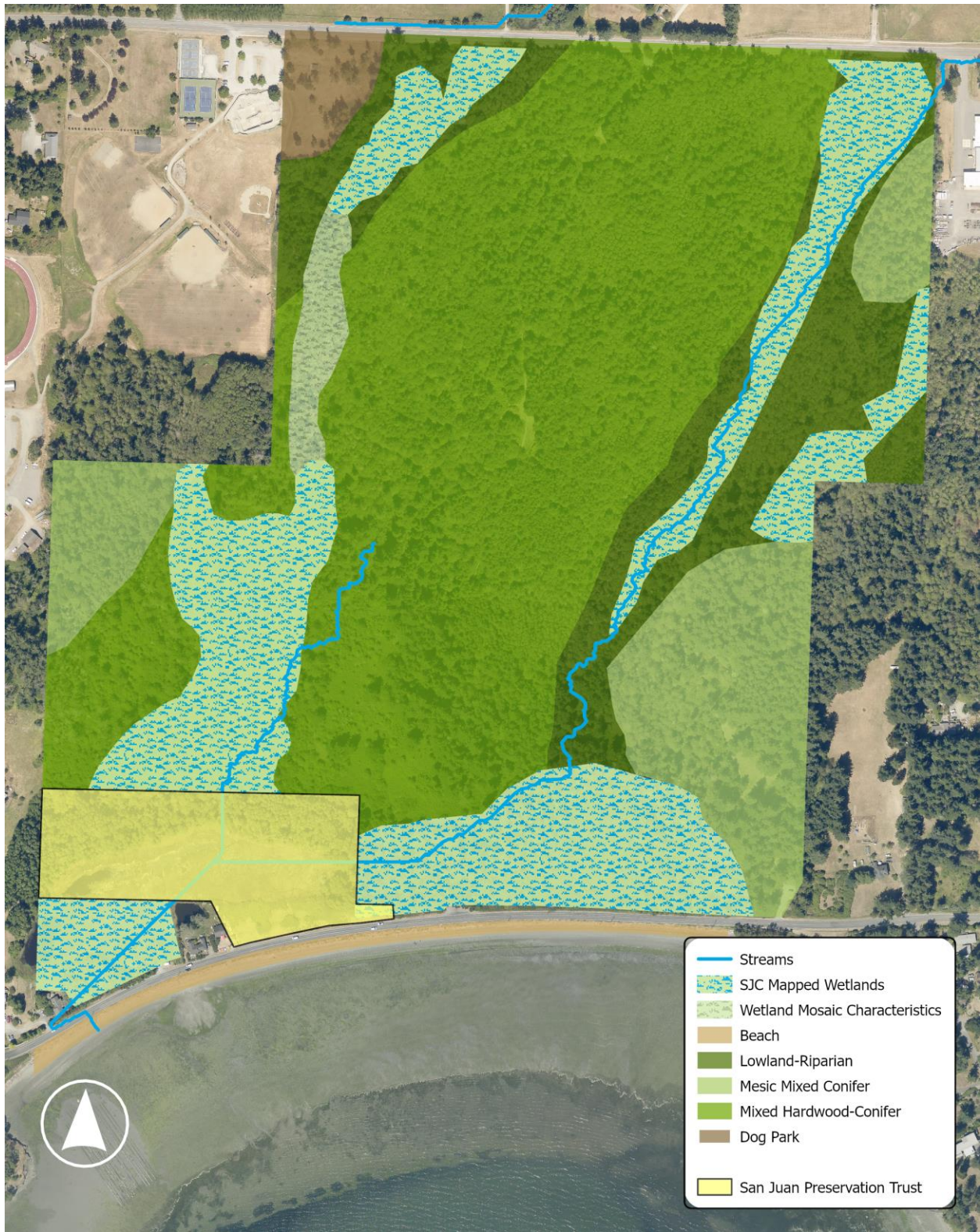


Figure 2. Generalized land cover of Crescent Beach Preserve

Invasive plants at Crescent Beach Preserve include Canada thistle, English hawthorn, English holly, English ivy, Himalayan blackberry, Sweetbriar rose, greater periwinkle, reed canary grass, Scotch broom, tansy ragwort and other common weeds. Management of holly and Scotch broom is well under way and other weeds can be managed effectively as part of planned forest thinning work. Both ivy and periwinkle are difficult to control and are spreading into the quaking aspen grove from Crescent Beach Drive.

The intertidal zone also supports dense populations of Japanese eelgrass.¹³ It has been the subject of various research studies which indicate that it usually doesn't interfere with native seagrasses. Crescent Beach has also been identified as an important monitoring site for the European green crab and volunteers through the University of Washington sample monthly throughout the summer. Continuous monitoring by staff and volunteers will help track the occurrence of these and other noxious plants and animals.

The spread of invasive species ranks second only to habitat loss as a threat to global biodiversity. The Land Bank recognizes this problem and puts a high priority on controlling populations of invasive species on its properties. In general, the Land Bank's weed management efforts are focused in areas of greatest priority and vulnerability, and where actions have the greatest chance of success. Staff follow Integrated Pest Management¹⁴ approaches, with the preferred methods being manual and mechanical control and with cut stem and spot herbicide treatment used on a case-by-case basis for species that are especially difficult to control.

¹³ *Zostera japonica*

¹⁴ For further details see the Land Bank's *Guidance for Integrated Pest Management Plan*

Table 2. Generalized current and desired future condition¹⁵

AREA	CURRENT CONDITION	DESIRED FUTURE CONDITION
Coastal-Tidal-Shoreline	FAIR– Tidal connectivity impaired by road and undersized culvert. Native plant cover limited. Driftwood collection and off-leash dogs common despite signage and education/enforcement efforts.	FAIR – Limited options for improvement unless tidal connectivity is restored. Little or no driftwood collection and few or no off-leash dogs.
Wetland Complex (Includes Forested and Shrub Swamp and Herbaceous Wetlands)	FAIR to GOOD– Hydrology altered through past land uses, but intact wetland function and diverse native plant communities. Excessive invasive plant cover in some areas.	FAIR to GOOD– Intact wetland function and diverse native plant communities. Measurable progress in management of priority invasive species. No detectable impacts from forest management operations in adjacent areas.
Upland and Riparian Forests	POOR to FAIR – Conditions range from mature, mixed-age structure to areas with young, dense, low-vigor trees. Excessive invasive plant cover in some areas.	GOOD – Appropriate stand density to develop old growth characteristics. Adequate snags and downed wood with diverse native understory and ground layer. Priority invasive species removed.

Shoreline and Intertidal Zone

The Preserve includes approximately 2,100-feet of beachfront. The upper shore has a clearly delineated driftwood zone that is situated above the high tide mark. The native plant community along this narrow beach features dune grass, beach pea, Puget Sound gumweed and American searocket.¹⁶

Low tide reveals a band of sand and mudflats approximately 500 feet wide. Substrata vary between the upper, mid, and lower intertidal zones. One assessment noted that a 12-foot-wide band of sand mixed with broken shells and pebbles transitioned abruptly into areas of sand and silt. Although nearshore processes are impacted by the road and upland development, the flats support an abundance of shellfish, including the aforementioned species of clams and the localized sand dollar community. East Sound is designated as a

¹⁵ Future condition timeframe is the duration of this plan or roughly ten years. Key Ecological Attributes and indicator rating definitions are available upon request.

¹⁶ Other plant species identified include Common orache (*Atriplex patula ssp. Hastata*), Silver burweed (*Ambrosia chamissonis*), California poppy (*Eschscholzia californica*).

high priority fish use region in San Juan County.¹⁷ It is identified by Washington State Department of Fish and Wildlife as one of five spawning grounds for Pacific herring in the County, and Pacific sand lance spawn below the high tide mark along the beach.

Eelgrass is an ecologically important species which provides habitat to species such as herring and helps to prevent shoreline erosion. Native eelgrass beds extend from the intertidal zone seaward into the subtidal regions (0 tide to -20 MLLW) of the bay. An analysis of 20-year changes in eelgrass beds in the County is currently underway by partner organizations. Non-native eelgrass also occupies part of the mid-upper tidal zones. It is heavily browsed by Canada geese and is not considered a threat to native seagrasses.

The private aquaculture operation in the tidelands was originally thought to overlay a portion of the tidelands purchased by the Land Bank. However, an official survey in 2014 proved that there was a discrepancy with DNR records, and that the current operation is exclusively on privately-owned tidelands. Through an informal agreement, parking for oyster harvest is allowed in a space adjacent to the westernmost parking lot.

The intertidal zone is experiencing what is referred to as “coastal squeeze,” meaning that it is becoming increasingly narrow. The beach is pinched between rising sea levels, storm surges, and the road on the backshore. Between 1899 and 2018, sea level rose over four inches in Friday Harbor.¹⁸ The loss of shoreline is expected to increase in the coming years. Stewardship activities along the shoreline will remain focused on trash removal and monitoring. This includes monitoring harvesting of driftwood, which occurs sporadically for personal and/or commercial uses and is prohibited because of the ecological values provided to the backshore. Staff will also seek opportunities to enhance hydrologic connectivity between the nearshore area and freshwater wetlands.

Summary of proposed shoreline and intertidal zone management activities:

- **Improve signage describing the importance of bay**
- **Leverage local expertise to monitor and support species of interest**
- **Remove marine trash**
- **Monitor and reduce off-leash dog use and driftwood harvest**

¹⁷ Friends of the San Juans, PIAT, 2017.

¹⁸ See “[Shifting Snowlines and Shorelines: The Intergovernmental Panel on Climate Change’s Special Report on the Ocean and Cryosphere and Implications for Washington State.](#)” Prepared by the Climate Impacts Group, University of Washington, Seattle, 2020.

Wetlands and Streams

The Preserve's mosaic of wetlands includes forested, shrub and herbaceous plant communities. Each of these types provide a variety of ecosystem services. Wetlands filter sediment and bacteria from surface water; recharge groundwater by regulating flow and allowing infiltration; and recently, they have gained recognition for their carbon-storage capabilities. They are also among the most imperiled habitats in the region because much of their historic extent has been altered for, if not lost to, agriculture and settlement.

Several assessments have noted that historic agricultural activities in certain portions of the Preserve have reduced wetland integrity and function.¹⁹ Grain cultivation and livestock grazing, as well as logging, have modified the various plant communities. Hydrology was altered through ditching and road development. Prior to the development of Crescent Beach Drive, the lower marsh was likely more tidally influenced. Saltgrass and Baltic rush, which are associated with salt or brackish water, are still present in small quantities.

Adjacent to this lower marsh, in the southwest corner of the Preserve, is a 7.4-acre parcel owned by the San Juan Preservation Trust. This protected land is almost entirely herbaceous wetlands and supports multiple species of sedges and rushes. This entire lower wetland was likely tidally influenced prior to the establishment of Crescent Beach Drive and will become so again with projected sea level rise. Currently, a single, small culvert conveys freshwater from the uplands into Ship Bay and limits, if not impedes, tidal exchange with this large wetland. Freshwater inputs from the Preserve's wetlands influence the quality and function of the nearshore, and staff intend to look for future opportunities to enhance connectivity.

The extensive wetland areas on the Land Bank's preserve have not been fully delineated. The wetland layer shown in Figure 2 was derived from the San Juan County Critical Areas maps and is likely underestimates their extent. These wetlands provide important wildlife habitat, support unique plant communities, and contribute to both the terrestrial and the marine nearshore habitats. This area is estimated to have moderate-to-low rates of well yield and recharge, and the absence of development on the Preserve also supports groundwater resources on surrounding private and public lands.²⁰

The well-developed band of aspen along the edge of the southern edge of the Preserve is a unique feature for the San Juan Islands, and one of the largest stands in the County. Quaking aspen stands are relatively rare in western Washington and characterized by high

¹⁹ Pacific BioSurvey 1998 and 2001, and Rozewood Environmental, 2005.

²⁰ SJC Water Resource Management Plan, 2004. Protection of existing and future sources of potable water is also part of the Land Bank's mandate.

species diversity as well as a high vulnerability to alteration or loss. Protection and monitoring of the aspen stand is a priority for Land Bank staff. Activities designed to enhance and protect regeneration may include a detailed inventory of the current extent, annual regular monitoring to track any potential changes, and potentially identifying areas where fencing is needed to protect from deer browse and ensure succession.

Outside of the aspen grove, red alder is most common tree found within the wetland complex. Conifers including Western red cedar, grand fir, and Sitka spruce, are found on hummocks and there is evidence, in the form of large Sitka spruce stumps, that there was formerly a larger presence of conifers in the wetlands. Many of the overstory trees in the wetland complex are unhealthy and have dead or dying tops. The wetlands support several species of willows, including Sitka, Pacific and Hookers, as well as Pacific crabapple and a large stand of red-osier dogwood. The wetland understory is dense in spots and consists of salmonberry, snowberry, trailing blackberry, horsetail, skunk cabbage, sedges, and grasses. Areas with open, or seasonally open water support water parsley, common cattails, as well as pockets of invasive reed canarygrass.

With ongoing and planned development along the Preserve's western boundary, there is potential for additional runoff as a result of the creation of additional impervious surfaces. San Juan County stormwater management requirements should prevent significant increases runoff, but staff will monitor activities and endeavor to prevent or reduce negative impacts to the Preserve.

Summary of proposed wetland and stream management activities:

- **Protect wetland hydrology**
- **Monitor and potentially cage aspen**
- **Outplant with species such as Sitka spruce**
- **Improve signage along wetland boundaries**
- **Manage priority weeds**

Upland and Riparian Forests

Forests sequester and store carbon, filter water, help control floods and erosion, and sustain biodiversity. Much of Crescent Beach Preserve is forested with common conifers such as Douglas fir, grand fir, Western hemlock, Western red cedar and lodgepole pine. Hardwoods include bigleaf maple, red alder, and madrone. Depending upon local conditions, common native shrubs such as salal, snowberry, baldhip and Nootka rose, oceanspray, trailing blackberry and low Oregon-grape occupy the understory along with herbaceous species such as sword fern, stinging nettle, upland sedges, and grasses.²¹

²¹ Latin names for identified shrubs include *Rosa gymnocarpa*, *Holodiscus discolor*, *Mahonia nervosa*.

As previously mentioned, the Preserve's upland forests include three different stand types. In combination, these areas provide a relatively continuous canopy that extends across most of the Preserve. Descriptions for each stand type are provided below and followed by proposed management activities.

Mixed Hardwood-Conifer Forest: This stand type covers roughly 60 acres with dominant species including red alder and grand fir, and to a lesser degree Douglas fir. Madrone and willow are scattered within as well as lodgepole pine, hemlock and Western red cedar. The trees in this stand are young and stocking levels are very high, with an average 465 trees per acre. These dense conditions have stagnated growth and increased mortality. Excessive surface and ladder fuels create a fire hazard. The understory is dominated by dense shrubs in some areas and characterized by bare ground in other areas where the canopy is especially dense. The southwestern portion of this stand was also historically used for agriculture. Consequently, a hardpan layer in the soil exists and anaerobic conditions have hindered fine root development. In the spring, this reduces leaf area and photosynthesis, and results in poor tree health.

Mesic Mixed Conifer Forest: Douglas fir dominates this stand type with a relative abundance of 47 percent. Grand fir and red alder are secondary in the overstory, and additional species scattered within include Sitka spruce, bigleaf maple, lodgepole pine, willow, and Western red cedar. This forest type is found in several small areas across the Preserve totaling roughly 16 acres. The understory varies depending on light levels and soil moisture.

The western portion of this stand type is relatively uniform in age. Trees are roughly 30 years-old and are characterized by high densities and poor health. By contrast, the eastern portion has trees estimated to be over 90 years old, coarse woody debris, snags, and a varied canopy structure with gaps and multiple layers. These attributes make this area a model for the desired future conditions of the western portion and for other forest types within the Preserve.

Lowland-Riparian Forest: This forest type encompasses 25 acres and is found in low-lying areas and along the stream corridor. It shades the stream and is important for wildlife. Red alder dominates the species composition and covers approximately 75 percent of the area. Douglas-fir, Western red cedar, grand fir, and willow are also present. Species are estimated to be in two age classes; the younger alders are 30 years-old and the older conifers are 60 years-old. Some coarse woody debris, likely left over from previous logging, and a few high-quality snags exist. The understory is well-developed in certain areas and the common shrubs mentioned above as well as red elderberry and herbaceous species such as stinging nettle, sword fern and sedges.

In 2022, the Land Bank retained Rain Shadow Consulting, LLC, to complete a forest assessment. Major findings and recommendations from their report are incorporated into this plan. The report identified that the history of extensive logging activity, along with altered fire regimes, has increased the vulnerability of the forests to stressors such as drought and wildfire. The Land Bank's overarching objectives for the Preserve's forests are to increase biodiversity and old-growth characteristics, promote resiliency to climate change, and reduce the risk of catastrophic fire. Management tools for achieving these objectives include establishing fuel breaks and reducing stand densities through thinning.

Fuel breaks reduce the abundance and the connectivity of surface and ladder fuels to moderate fire behavior and burn severity. These treatments target areas that have existing roads and trails to improve their effectiveness. In western Washington, species with high foliar water content such as red alder and bigleaf maple are generally fire resistant and will be retained in areas designated as fuel breaks.²² Short-term activities will focus on establishing a shaded fuel break that extends 50-feet on either side of the trail. Long-term activities may include extending shaded fuel breaks to interior skid roads and to areas along the Preserve's perimeter that abut residential and commercial development. Thinning to support forest health emphasizes residual forest structure, composition, and understory. Conserving large, old trees is the foundation of these treatments. Reducing competition within stands can increase vigor and allow remaining trees to release and develop old growth characteristics, as well as respond more favorably to disturbances. Removal of low, dead limbs also helps to reduce ladder fuels. Creating snags and retaining large wood within project areas will provide for greater biodiversity and wildlife habitat.

Considerations for implementation include minimizing soil impacts and disturbance to wildlife. Actions will prioritize existing corridors and aim to prevent new introductions of invasive plants. Staff will promote public safety and education through signage and temporary area closures, and optimize labor, equipment, and timing to reduce costs. Many of these recommendations and their general cost estimates are reflected in the Table 3. Although implementation is not covered in detail herein, additional information will be made available during one or more public meetings and site tours and upon request.

Summary of proposed forest management activities:

- **Create shaded fuel breaks to reduce wildfire risk and severity**
- **Thin to enhance forest resilience to climate change**
- **Promote standing and downed dead wood for habitat**
- **Manage priority weeds**
- **Out-plant understory species in thinned areas**

²² See OSU Extension publication on "[Firebreaks and Shaded Fuel Breaks.](#)" *pnw618achapter4.pdf*.

Table 3. Crescent Beach Preserve prioritized habitat management actions and cost estimates

HABITAT AREAS	KEY ECOLOGICAL ATTRIBUTES	STRESSORS	MANAGEMENT ACTIONS	PRIORITY²³	TIMING²⁴	EST. COST
Upland and Riparian Forest	Stand density and structure, Standing and downed dead trees, Native tree and shrub richness	Climate change, previous logging and land alterations, fire suppression, species introductions	Contracted selective thinning and fuels reduction in priority areas. Establish shaded fuel break along existing trail. This will require temporary closure of trail. Increase snags and downed wood. Control priority invasive species (e.g., English ivy, Himalayan blackberry, English holly). Understory planting.	High	Near term/ Medium term	\$300,000 ²⁵
Forested & Shrub Swamp (incl. Aspen stand) and Herbaceous Wetland	Forest structure, Standing and downed dead trees (Forested); Native shrub richness, Vegetative structure (Shrub); Native wetland plant cover, Edge condition (Herbaceous); Hydrology (all),	Climate change, alterations to wetland hydrology, species introductions	Increase snags and downed wood. Outplant wetland species. Control priority invasive species (e.g., English hawthorn, reed canary grass, English ivy and periwinkle). Monitor aspen stand for evidence of seedling recruitment or decline.	Medium	Near term/ Long Term	\$50,000
Coastal-Tidal-Shoreline	Large woody debris Tidal influences Mud and mixed-fine Sediments Sand	Overuse, asphalt road, sea level rise.	Leverage local expertise to monitor and support species of interest. Remove trash and marine debris (e.g., creosote lumber, plastic). Monitor and reduce off-leash dog use and driftwood harvest.	Medium	Near term/ Long Term	\$20,000

²³ In the context of this ~10-year plan

²⁴ Near term = 1-2 years, medium term = 3-10 years, long term =11+ years

²⁵ This work is likely to be supported by grant funding.

D. Public Access Overview and Objectives

Crescent Beach Preserve has been available for daytime pedestrian use since its acquisition and offers visitors a variety of experiences in a peaceful setting. The public currently enjoys a low-gradient forest trail, open vistas across Ship Bay backed by the marsh and upland forest, and the relatively rare opportunity for shoreline access on Orcas Island. The Preserve's predominantly flat terrain made it compatible for pedestrian and bicycle use, which was later authorized in 2007. Interest in cycling was anticipated due to the Preserve's location adjacent to the growing hamlet of Eastsound, the proximity of public schools, and the likelihood of trails being used as transportation routes as well as for recreation.

Providing access to the natural beauty and diversity of the San Juan Islands is an important part of the Land Bank's mission. The conservation mandate specifies preserving areas for "low-intensity" recreation. This stipulation reduces the likelihood that human use will degrade a preserve's ecology. Limited, low-intensity recreation also helps assure quietude for visitors; retain the rural character of neighboring communities; and avoid management costs that tend to result from high-intensity uses. For these reasons, access to Land Bank properties is primarily designed for pedestrians.

Initial concerns for allowing public use focused on the beach and intertidal areas and disturbance to notable species like the extensive, yet fragile, sand dollar beds. Public use was designed to avoid impacts to these areas and has largely been successful. To date, there is very little bicycle use, no significant erosion, and an easy coexistence between the two trail user groups. There is also easy walking access from East Sound to the Preserve.

In response to a 2023 inquiry regarding additional trails, Land Bank staff explored potential trail connections from the existing trail towards the west and found wetland indicators throughout. Due to the ecological impacts and high cost of wetland crossings, no additional trails are proposed. Public Works has proposed a trail along the north side of the Crescent Beach Road, but the future of such a project is unknown and not associated with the Land Bank.

The Land Bank's current ownership of the one-acre, off-leash dog park is an anomaly among its holdings. This heavy-use area was developed in 2017 following the closure of a dog park by the Port of Orcas. A desired, long-term goal is to trade the dog park for a nearby wetland area owned by Orcas Parks and Recreation.

Current Use

Four graveled parking areas provide public access to Crescent Beach Preserve. Improvements to the parking areas were made in 2020. The lots along Crescent Beach Drive experience the heaviest use. The western and central lots provide easy access the shoreline, while the eastern lot provides access to the upland trail. The north entrance also serves as trailhead to the hiking and biking trail.

Members of the public occasionally launch kayaks and paddleboards from the shoreline. A commercial kayak business is operated out of a private residence adjacent to the Preserve, and beach access is provided to launch kayaks within a narrow corridor immediately in front of the business; this allowance for commercial use is because this was a pre-existing use prior to the Land Bank's acquisitions.

Although staff have observed an increase in recreational use over the past several years, the current parking lots and trail remain adequate. Standard Land Bank rules such as day-use only and prohibiting of fires apply. A complete list of Land Bank restrictions is provided in Appendix A. To avoid disturbance to wildlife and preserve users, dogs are required to remain on a leash along the shoreline and trail.

Signage and in-person contact from Land Bank staff and volunteers is the primary method of educating visitors about regulations. When necessary, enforcement may be carried out through the San Juan County Sheriff's Office. Current routine maintenance to support public access in cutting brush along the upland trail, regular monitoring, parking area maintenance, signage upkeep, and other tasks as necessary.

The accessibility of Crescent Beach Preserve has led to occurrences of unauthorized camping, and the occasional abandoned vehicle. The Sheriff's Office has provided continued support in both situations. The proposed forest health projects are not expected to increase the likelihood of unauthorized activities and are designed to help alleviate the risk and/or severity of any accidental ignition related to either authorized or unauthorized human use.

Impacts from recreation are expected to increase throughout the Puget Sound region as population growth continues and more people seek access to natural areas.²⁶ Maintaining a moderate level of use will be essential to preserving the Preserve's special qualities. Additional traffic could negatively impact the Preserve's conservation values, visitor experience, and further tax parking capacity. The Land Bank always reserves the option of

²⁶ For more information see The Tulalip Tribes report, [The "Recreation Boom" on Public Lands in Western Washington: Impacts to Wildlife and Implications for Treaty Tribes](#), 2021

restricting or discontinuing any aspect of public use if it proves unmanageable or detrimental to the land's conservation values.

The following approaches are used to manage levels of use:

- **No recreational promotion or commercial uses**
- **Limited signage and facilities**
- **Land Bank permission required for groups of 15 people or more**
- **Collection of driftwood, seaweed and shellfish prohibited**

Outreach, Education and Research

To date, a variety of public education programs and events have been held on the Preserve. The Land Bank recently initiated a partnership with the San Juan Islands Conservation District and the Orcas Island School District to encourage outdoor activities for youth. The beach is a site for UW's green crab monitoring program April-October, and over the years scientific research has occurred in the intertidal zone. Marine biologists have sought permission to research sand dollars, purple varnish clams, and other clams and mussels. Friday Harbor Labs has also used the Preserve to provide field study for an Invertebrate Zoology Course.

More interpretive programs may be organized by Land Bank staff or in collaboration with outside groups or experts. Where appropriate, the Land Bank may collaborate with local organizations, schools, universities and scientists to increase or disseminate knowledge of the Preserve's ecological resources. Activities related to education and research will be subject to review, conducted on a permission-only basis, and limited in size or duration.

Volunteers have contributed countless hours of service and performed meaningful stewardship activities on the Preserve. Some have served for a single day to pick up marine debris along the shoreline. Others have signed up for recurring activities like monitoring. The Land Bank will continue to work with community volunteers and host work parties to meet some of its stewardship objectives.

Table 4. Crescent Beach Preserve prioritized access infrastructure improvements and cost estimates

TASK	JUSTIFICATION	MANAGEMENT ACTIONS	PRIORITY	TIMING²⁷	EST. COST
General trail maintenance	Ensure safe access for pedestrians and cyclists	Improve signage describing the importance of bay. Install bicycle racks and new benches. Staff and/or contracted surface maintenance and vegetation management	High	Near term/ Long term	\$40,000
General parking lot maintenance	Ensure safe vehicle access	Staff and/or contracted surface maintenance. Routine trash removal including from beach and roadside.	High	Near term/ Long term	\$20,000

²⁷ Near term = 1-2 years, medium term = 3-10 years, long term = 11+ years

E. Cost Projection

This cost projection is intended as a financial planning tool and is not a commitment of resources. It includes separate cost estimates for general operations and for one-time capital expenditures. All figures are approximate. Land Bank staff and Commissioners will review and revise actual planned expenditures during the Land Bank's budgeting process.

Table 7. 10-year cost projection (for planning purposes, only)

Year	General Operations ²⁸		Capital Projects ²⁹		Subtotal
2024	\$150,000	Implement forest management demonstration projects and begin large-scale thinning and fuel breaks as funds allow. ³⁰ Ongoing weed management. Routine trail and parking lot maintenance, general stewardship and monitoring	\$0	None planned	\$150,000
2025	\$100,000	Complete forest thinning, fuel breaks ³¹ and understory planting. Ongoing weed management. Routine trail and parking lot maintenance, general stewardship and monitoring.	\$3,000	Install bicycle racks	\$103,000
2026	\$35,000		\$2,000	Update signage, Replace/add benches	\$37,000
2027	\$30,000		\$0		\$30,000
2028	\$20,000		\$0		\$20,000
2029	\$20,000		\$0		\$20,000
2030	\$20,000		\$0		\$20,000
2031	\$20,000		\$0		\$20,000
2032	\$15,000		\$0		\$15,000
2033	\$15,000		\$0		\$15,000
Total					\$430,000

²⁸ Recurring, non-capital improvement operating expenses such as monitoring and maintenance

²⁹ One-time capital expenses

³⁰ This work is likely to be covered to a large degree by grant funding

³¹ This work is likely to be covered to a large degree by grant funding

F. Public Process Overview

To gather and incorporate input from the public regarding the use and management of Crescent Beach Preserve, the Land Bank provided and sought information in a variety of ways. These are summarized as follows:

Action	Completed (Planned)
LB Commission review of Draft Stewardship and Management Plan	February 2024
Stewardship and Management Plan Press Release	April 2024
Public review of Draft Stewardship and Management Plan	April 2024
LB Commission adoption of Final Stewardship and Management Plan	June 2024

G. References

Additional information about the Crescent Beach Preserve will be made available upon request. Supporting digital documents are hyperlinked when possible.

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H. Appendix A. Rules and Use Restrictions

The following use restrictions will be in effect. Restrictions are intended to protect the ecology of the Preserve, the safety and peace of neighbors, and to minimize management costs. They will be posted on site and mentioned in literature as appropriate.

The Land Bank generally relies on signage and periodic contact from staff or volunteers to educate visitors about use restrictions. An enforcement ordinance that governs activities on Land Bank Preserves was adopted by the San Juan County Council on August 25, 2009. When necessary, enforcement actions may be carried out through the San Juan County Sheriff's office.

- Daytime use only
- Pedestrian access only (except where posted for other uses)
- No camping
- No fires
- No vehicles
- No hunting
- Launching or landing of UAV (drones and similar devices) is allowed only for research purposes and requires written permission of Land Bank Director
- No commercial use
- No collection of botanical, zoological, geologic or other specimens except on a permission-only basis for scientific or educational purposes