

# Mercer Island PROS

## Open Space, Land Conservation & Stewardship

### Chapter 9

Mercer Island’s open space and natural areas are a critical component of the City’s green infrastructure, and play key roles in supporting healthy, well-functioning ecosystems. These many benefits include maintaining air and water quality, mitigating impacts of climate change, capturing stormwater runoff, and providing healthy, recreational, and scenic opportunities to connect with nature.

### Open Space

The Mercer Island community is fortunate to have retained several significant natural areas across the city, and the City owns and/or manages nearly 300 acres of open space properties and natural lands in coordination with the acreage of the developed park areas. These open space properties include forested lands, riparian corridors, wetlands, and steep slopes across 15 different sites. Pioneer Park, the largest of the public open spaces, accounts for nearly half of the open space in the City. Other natural area sites are scattered across Mercer Island and are generally less than ten acres in size.

The classification of “open space” distinguishes natural lands from parks that have been developed or partially developed and contain natural areas. In both parkland classifications (‘parks’ and ‘open space’), natural areas are managed to preserve, restore, and conserve ecosystem functions, native vegetation, and wildlife habitat. Open space properties are undeveloped and are managed to retain or enhance natural or scenic resources, though an open space may include trails, interpretive signs or artwork, along with modest support amenities such as parking or restrooms.

Figure \_\_\_\_ Open Space Areas in Parklands

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In addition to protecting habitat and providing ecological services (e.g., stormwater management and air quality), the open space system provides educational and stewardship opportunities and is the primary framework for off-street recreational trails. The open space system provides access to nature for passive recreation (including opportunities for viewpoints and wildlife viewing areas) and relaxation.

### Pioneer Park

As the largest single open space in the City, Pioneer Park provides an expansive forested area in the southcentral portion of Mercer Island, divided into three quadrants separated by Island Crest Way and SE 68<sup>th</sup> Street. The property was transferred to the Mercer Island Open Space Conservancy Trust in 1992

as a way to protect and preserve the land in its natural state. Pioneer Park offers passive and low-impact recreation, such as walking, jogging, and picnicking.

Pioneer Park contains a range of trail types, access points, and trail surfacing. Trails are the primary way that park users experience Pioneer Park, so the trail system is crucial to the recreational value of the open space. Trail users include pedestrians (runners, walkers, and dog walkers), cyclists, and horseback riders. Equestrian use has been limited to the southeast quadrant and the eastern and southern perimeter trails of the northwest quadrant. Large format trail maps are posted at the primary trailheads in each quadrant, with informal trailheads dispersed along the roadsides. Existing amenities in the park include benches, a picnic table, interpretive signs, and trash receptacles.

Several studies were prepared in the 1990s to define vegetation management and consider trail improvements. The 2001 Pioneer Park Master Plan provided assessments on the ecological systems and trail conditions to guide preservation and improvements to the park. The master plan proposed upgrades and trail improvements that would address compliance with ADA accessibility standards. Additional recommended improvements included expanded parking, improved park entries, expanded picnic areas, and safer road crossings. The master plan also proposed trail design standards that would establish a clear hierarchy of trail types: accessible, primary pedestrian, secondary pedestrian, primary equestrian/pedestrian, secondary equestrian/pedestrian, and bicycle trails.

Figure \_\_\_\_\_. Map of Pioneer Park trail system

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### Engstrom Open Space

Acquired in two transactions in the early 2000s, the 8.5-acre Engstrom Open Space abuts the northeast quadrant of Pioneer Park and provides ravine habitat, additional second growth forest, and perched wetlands. The property has been permanently dedicated for park and recreation uses and, in conjunction with a pedestrian trail easement on adjacent private property, provides for a trail connection to East Mercer Way. The Open Space Conservancy Trust also is chartered to guide management of Engstrom Open Space.

### Other Open Space Properties

Additional open space properties, including SE 53<sup>rd</sup> Open Space, Mercerdale Hillside, Upper Luther Burbank Park, Gallagher Hill Open Space, Parkwood Ridge Open Space, and Clise Park, have trails that connect across their properties to local streets and neighborhoods. These open spaces provide valuable ecosystem services as well as recreational trail uses and pedestrian connections.

Other open space properties have no developed trails or site improvements. These open space properties include: Cayhill Open Space, Hollerbach Open Space, Salem Woods, SE 47<sup>th</sup> Open Space, and SE 50<sup>th</sup> Open Space. Development of these sites for public recreational use, including the construction of trails, may be limited, or prohibited by natural characteristics of the land, including steep slopes, wetlands, and other features.

### Parks that Include Open Space

In addition to the designated open space properties, eight of the City's developed parks also contain significant natural areas that are managed and maintained as open space. The developed areas of these parks provide active and passive recreational amenities, while considerable acreage is retained in its natural condition. The two parks that contribute the most open space acreage within developed parks are Island Crest Park (27.6 acres) and Luther Burbank Park (19.6 acres). Across all parks in this category, natural areas make up xx% of the total acreage. Figure \_\_\_ highlights designated open space acreages within developed parks.

Figure \_\_\_ Acreage of Open Space within Developed City Parks

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## Land Conservation

The City of Mercer Island has demonstrated its commitment to conservation of its natural resources within the context of a major metropolitan region. The preservation of Pioneer Park is a shining example of the importance of land conservation to the community. This commitment is also evident in the 8% increase in Mercer Island tree canopy between 2007 and 2017. The City has also preserved an impressive variety of public shoreline access and public park amenities along the edges of Lake Washington.

Luther Burbank Park contains three-quarters of a mile of lakefront water's edge, much of which is managed as natural shoreline. Two waterfront community parks, Clarke Beach and Groveland Beach Park, provide public access to Lake Washington, while also retaining much of their park acreage in natural forested condition. The conservation and continued restoration of these open spaces further highlight the conservation values of the Mercer Island community.

Conservation may also take the form of acquiring important lands that contribute to the ecological health of Mercer Islands' forests, wetlands, and watercourses. In situations where private landowners or non-profit organizations are looking to donate or sell their properties to the City as future conserved open space or parkland, consideration should be given to how the property adds either recreational value or conservation benefits to the parks and open space system.

The acquisition of properties that accommodate trail connections or provide access to the waterfront provide high value contributions to the open space system. The Mercer Island Comprehensive Plan encourages water-dependent recreational activities to be available to the public and an increase in public shoreline that is suitable for water-related recreational uses, balanced with protection of critical shoreline areas. Street rights-of-way abutting bodies of water are generally encouraged to remain in the public domain to preserve public access to the waterfront. Any potential consideration of the vacation of rights-of-way should require a detailed analysis of the City's projected needs for waterfront access.

Undeveloped lands or sections of existing properties are often restricted in their potential development by steep slopes, wetlands, or critical areas, features which are often highly valued for habitat conservation. These areas may serve as expansions of existing natural areas, or as important habitat

corridors between larger open space lands. Conservation easements and public access easements are tools that could be applied to extend natural vegetation benefits and access across the parks and open space system.

As noted in the Goals and Parks chapters, the City should initiate a Land Acquisition Strategy to further explore and develop an approach for prioritizing acquisition of habitat areas and park lands to expand the existing parks, trails, and open space system.

### Watercourses, Wetlands, and Shorelines

Stewardship and management of the parks and open space system is integral to maintaining and improving the health of watercourses, wetlands, and shorelines. Providing safe public access to shoreline and open space properties needs to be carefully balanced with the important goal of environmental stewardship and protection of natural habitat.

Mercer Island's shoreline presents one of its most aesthetic and environmentally important characteristics. Shorelands directly impact water quality as surface and subsurface waters are filtered back into the lake. Additionally, shorelines are a valuable fish habitat area, characterized by lake bottom conditions, erosion tendencies, and the proximity to watercourse outfalls that combine to provide a suitable environment for spawning fish. The City's Shoreline Master Program includes goals, policies, and regulations consistent with state guidelines to protect shorelines.

The City of Mercer Island has identified approximately 90 sub-basins as part of its stormwater management plan. Within these sub-basins, approximately 55 previously identified watercourses (streams) drain into Lake Washington. Watercourses are naturally occurring or partially altered streams, which are characterized by perennial or seasonal flows that contribute to water quality, stormwater and erosion control, and the provision of wildlife habitats. City code also protects and regulates wetlands on Mercer Island, which are characterized by hydric soils, water-tolerant plants, and surface waters that are either saturated or inundated for a minimum period of time.

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### Stewardship

Mercer Island benefits from a robust open space system covering nearly 300 acres of natural lands providing dynamic and diverse natural environments. Their close proximity to urban development, which can alter the natural processes of native landscapes, presents challenges that must be addressed with active management. Without this management, these open space lands will be heavily impacted by invasive plant species, low tree regeneration, and canopy deterioration, limiting their associated ecological benefits. In 2004, more than 50% of Mercer Island's public open space was significantly impacted by invasive plants.

### System-wide Open Space Vegetation Management

In 2004, the City adopted the Open Space Vegetation Management (OSVM) Plan that identified major threats to the parks system, established work priorities based on research and public involvement, and outlined restoration goals for open spaces. The 2004 OSVM Plan focused on maintaining functional benefits derived from Mercer Island's open space areas and noted that native canopy trees, regenerating conifers, and native understory vegetation were critical factors in maintaining these benefits.

During the subsequent ten years, Parks and Recreation Department staff managed a systematic restoration program to reduce invasive plant cover and plant native species, particularly coniferous trees, to improve forest cover. During this period, 43,000 native plants were installed (covering more than 50% of the open space area) and over 100 acres of trees were freed from climbing ivy.

The ten-year re-evaluation of the OSVM Plan, conducted in 2014, updated program goals to focus on maintaining the functional benefits of native vegetation and fostering resilient plant communities that can recover from disturbances and adapt to climate change. The 2014 OSVM Plan defined and characterized optimal conditions for the urban forest to facilitate ongoing restoration planning, which included the following:

- Primarily native vegetation with few invasive species
- High structural diversity (including trees, shrubs, herbs, and large woody debris)
- Uneven age distribution of trees (i.e., seedlings, saplings, and more mature trees present)
- High biological diversity with a mixture of native coniferous and deciduous canopy trees and a diverse native understory
- Landscape-level diversity with areas of differing vegetation, soils, and topography; high quality aquatic resources; healthy soils
- Safe trails and access routes for human users
- High level of investment, involvement, and interest by human users

### Pioneer Park Forest Management

In 2003, the Pioneer Park Forest Management Plan was adopted specifically to address the needs of Mercer Island's largest forest tract. The Pioneer Park Forest Management Plan directs site management and intervention to maintain the native forest ecosystem, protect public safety, and enhance positive uses of the park over time. Included by reference in the 2004 OSVM Plan, the Pioneer Park Forest Management Plan addresses a range of considerations for vegetation in the park, including tree risk assessment and management, fire management, tree pruning and removal, tree protection, invasive plant control, rare or unusual plants, off-trail use, and habitat management. In 2009, the Pioneer Park Forest Management Plan was amended to include the findings of the Forest Health Survey, a comprehensive study of the park's vegetation and forest structure. This data was used to shape the restoration work plan for the next 20 years, shifting from a site-based approach to a systemic approach, with a more comprehensive focus on canopy regeneration, invasive tree removal, and ivy management.

### Stormwater Management / Ecological Services

Our region is experiencing more severe rainstorms as the result of climate change, and more of that rain is falling on impervious surfaces: roads, parking lots, and rooftops. This untreated surface water runoff is

a major source of contamination all along the Lake Washington shoreline and in other riparian areas, impacting both humans and wildlife, especially salmon populations.

State requirements for surface water management are becoming more stringent and costly for both developers and the City. Runoff volumes, peak stream flows and local flooding can be reduced by incorporating trees into stormwater management planning, lessening the need for expensive detention facilities (e.g. catch basins) and the cost of treatment to remove sediment and other pollutants such as lawn chemicals. Green infrastructure is far more cost-effective than grey infrastructure.

Using open space areas and green spaces to capture stormwater runoff encourages infiltration into the soil, prevents excessive streambed erosion, and reduces sedimentation in Lake Washington. In addition, a healthy tree canopy increases carbon sequestration potential, encourages local biodiversity, and enhances overall environmental resilience by reducing heat island effects and offering cooler, shaded air.

### Habitat Restoration and Invasive Species Management

The control of invasive species is a key element of the restoration process and essential in the maintenance of a healthy natural landscape. Many invasive and non-native species exhibit strong adaptability to Pacific Northwest environments and displace native species, especially in the disturbed landscapes proximate to urban development. Mercer Island continues to engage in practices that reduce the impacts of invasive species, while also expanding partnerships that help with this effort. While removal efforts are ongoing, the restoration sites cleared of invasives will require ongoing monitoring and intervention to reduce or limit the re-establishment of the invasive plants.

The Parks and Recreation Department has been diligent in working to restore disturbed natural landscapes in open spaces and developed parks. Each year, natural resources staff evaluate open space properties to determine the success of past restoration activities and plan the next scope of restoration work that will move each landscape toward greater health and resiliency. Funding for restoration work has been included in the Capital Improvement Plan (CIP) for the past XX years, with annual funding levels ranging from \$XXX to \$XXX. The majority of restoration field work is performed by contracted landscape crews knowledgeable in native and invasive species identification, and ecological restoration best practices. In addition, the City employs a small seasonal crew to perform targeted and complex restoration tasks, such as noxious weed monitoring, mapping and control.

### Developed Parks

Managing the natural and cultivated landscapes across parklands is an ongoing process. In developed park landscapes, the Parks Maintenance and Natural Resources teams aim to ensure optimal growth of shade trees, shrub beds, and turfgrass in active lawn areas. From mowing open lawn areas to trimming vegetation from trail and pathway edges, parklands require continual attention and an investment of significant resources to properly manage and maintain the living landscape.

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## Water Conservation

Despite the rainy winters, water is not an infinite resource in Puget Sound, and summers are expected to get hotter and drier as climate change intensifies. It is increasingly likely that not just voluntary, but occasionally mandatory, water conservation measures will become necessary in order to preserve supplies for the most critical uses, such as domestic consumption. In recent years, the City has allowed some grassland and recreational areas to brown out for the summer months in order to conserve water and save on significant irrigation costs. In addition to reducing irrigation volumes and frequency, planting the most drought-tolerant species, and altered maintenance protocols will also help reduce future water demand.

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## Community Partnerships & Volunteers

While the COVID-19 pandemic eliminated many parks and open space volunteer activities in 2020 and 2021, the engagement and management of volunteer resources is an important element in restoration and stewardship of Mercer Island's public lands.

For over a decade, the City has contracted EarthCorps and Mountains to Sound Greenway Trust, two local non-profit organizations, to provide volunteer management services for restoration events in open space areas. These organizations coordinate and lead 45-50 volunteer events each year in natural areas across the island, providing training, tools, and support for volunteers of all ages and abilities. They have established long-standing partnerships with schools, places of worship, and community groups, and perform regular outreach to draw new volunteers and forest stewards. Between 2008 and 2018, 20,980 volunteers contributed over 64,000 hours to restoration work in Mercer Island's natural areas.

The Department's Natural Resources team oversees the Forest Stewardship program, which provides dedicated volunteers with training, tools, and ongoing support to run effective volunteer projects. Training includes information about native plant identification, invasive plant identification and removal, native plant installation, and volunteer event coordination. People who complete the training become Forest Stewards who are qualified to lead projects on behalf of the City's park and open space system. Due to the on-site training program and ongoing support of these Forest Stewards, which require significant staff resources, this program is limited to a small number of community members who express an interest in long-term stewardship of Mercer Islands' natural areas.

In addition to training local volunteers, community partnerships are a vital component of stewardship activities. Past and current partners include:

- EarthCorps
- Mountains to Sound Greenway Trust
- Student Conservation Association
- Washington Conservation Corps
- Washington State Department of Natural Resources
- Mercer Island Youth and Family Services VOICE Program
- Starbucks
- Mercer Island Preschool Association
- Friends of Luther Burbank Park
- Wildwood Park neighborhood
- Ellis Pond neighborhood
- Boy and Girl Scouts
- Mercer Island School District

The City manages Luther Burbank Park's wetland areas in partnership with Mountains to Sound Greenway Trust's volunteer program and Friends of Luther Burbank Park. Many wetland enhancement projects have been implemented that involve replanting activities, invasive species removal, and boardwalk development. Through proper management of public open spaces and natural areas, the City and its partners can maintain and enhance the open space system, as well as the critical ecosystem and community benefits they provide.

From time to time, other volunteer groups engage with the City of Mercer Island to contribute their time to park and open space restoration projects. These opportunities should continue to be made available and should be supported by sufficient staff oversight resources.

### Future Initiatives

In addition to ongoing monitoring of open space conditions and implementation of existing management plans, the City should consider the development of a citywide urban forest management plan to define goals for local forested ecosystems and outline the best management tactics to sustain forest canopy. Such a plan could include a citywide tree inventory, tree preservation and protection code amendments, and considerations for climate resiliency. A more broadly defined urban forestry plan can also be a means to engage the community in tree-related activities and facilitate community conversations about the overall health and diversity of the urban forest in Mercer Island.

The City should initiate a Land Acquisition Strategy to further explore and develop an approach for prioritizing acquisition of habitat areas and park lands to expand the existing parks, trails, and open space system.

The community has also expressed an interest in protecting these lands in perpetuity, so future work items should include implementation of additional measures to permanently protect these lands. Ideas considered thus far include zoning changes, conservation easements, and exploring the opportunity to move more properties under the umbrella of the Open Space Conservancy Trust.

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