



OPEN SPACE CONSERVANCY TRUST SPECIAL VIDEO MEETING

Thursday, January 21, 2021 at 5:00 PM

BOARD MEMBERS:

Chair Marie Bender
Vice Chair Thomas Hildebrandt
Secretary Craig Olson
Board Members: Lisa Anderl, Carol Lynn Berseth,
Hillary Ethe, Geraldine Poor

LOCATION & CONTACT

Mercer Island City Hall – Zoom Meeting
9611 SE 36th Street | Mercer Island, WA 98040
Phone: 206.275.7706 | www.mercerisland.gov

In compliance with the Americans with Disabilities Act, those requiring accommodation for meetings should notify the Staff Liaison at least 24 hours prior to the meeting at 206.275.7706.

Virtual Meeting Notice

The virtual meeting will be broadcast live on Zoom and recorded and saved on the City's [YouTube Channel](#)

Registering to Speak: Individuals wishing to speak live during Appearances will need to register their request with the City Clerk at 206.275.7793 or email deb.estrada@mercergov.org and leave a message before 4 PM on the day of the meeting. Please reference "Appearances" on your correspondence. Each speaker will be allowed three (3) minutes to speak.

Join by Telephone at 5:00 PM: To listen to the meeting, or speak under appearances, via telephone, please call **253.215.8782** and enter Webinar ID **864 8667 0482** and Password **996869** when prompted.

Join by Internet at 5:00 PM: To watch the meeting, or speak under appearances, over the internet via your computer, follow these steps:

- 1) Click [this link](#)
- 2) If the Zoom app is not installed on your computer, you will be prompted to download it.
- 3) If prompted for Webinar ID, enter **864 8667 0482**; Enter Password **996869**

For the safety and wellbeing of the public and staff, the City strongly recommends that community members attend the meeting by viewing the live feed on Zoom or watching the recording of the video conference on the City's [YouTube Channel](#), which will be available approximately 24 hours after the meeting.

CALL TO ORDER & ROLL CALL, 5:00 PM

PUBLIC APPEARANCES

REGULAR BUSINESS

1. Approve minutes of the November 19, 2020 OSCT Meeting
2. Draft 2020 Annual Report & 2021 Work Plan
3. Review 2003 Fire Management Plan
4. Engstrom Open Space Title Update

OTHER BUSINESS

8. Quadrant Reports
9. Next Meeting

ADJOURNMENT



OPEN SPACE CONSERVANCY TRUST BOARD MEETING MINUTES NOVEMBER 19, 2020

CALL TO ORDER AND ROLL CALL

Chair Bender called the meeting to order at 5:00 PM

Chair Marie Bender, Vice Chair Thomas Hildebrandt, Secretary Craig Olson, Trustee Carol Lynn Berseth, Trustee Ethe, Trustee Geraldine Poor, and Councilmember Lisa Anderl participated remotely using a video teleconferencing platform by Zoom.

Staff participating remotely included: City Clerk Deborah Estrada, Parks Operations Manager Alaine Sommargren, and Natural Resources Specialist Kim Frappier.

PUBLIC APPEARANCES: There were no public appearances

REGULAR BUSINESS:

(II) Review and Consider Approving Minutes of the October 15, 2020 OSCT Regular Meeting

Regarding the Term Length referenced in the minutes, Trustees requested to replace striking the "limit to two terms" with the "length of the term."

It was moved by Berseth; seconded by Olson to:

Approve the minutes as amended.

Agreed by unanimous consent. Motion passed: 7-0.

(III) 2021 Work Plan

Park Operations Manager Alaine Sommargren presented the process for creating the 2021 Work Plan. She provided a draft and the Trustees discussed specific items they wanted to add. She noted that due to the COVID-19 related staffing cuts to the Recreation team, Letter Boxing and Leap for Green are not scheduled for 2021. Topics requested to be added to the 2021 work plan include:

- The status of Engstrom Open Space as a Trust Property.
- Reaching out to letterboxing volunteers about the feasibility of launching the Letterboxing program considering City staff changes.

Park Operations Manager Sommargren will present an updated draft to the Trust at the January 2021 meeting. The final version will be included in the annual report to City Council.

(IV) By-Laws Revisions, 2nd Reading and Adoption

Trustees discussed final edits to the by-laws. Vice Chair Hildebrandt requested that the section header labeled "Term Limits" be changed to "Terms of Office." City Clerk Estrada will do a final review to standardize labels and clean up the final version.

It was moved by Olson; seconded by Berseth to:

Approve the by-laws as amended.

Agreed by unanimous consent. Motion passed: 7-0

(V) Forest Stewardship Volunteer Program Update

Natural Resources Specialist Kim Frappier reported on the changes to the volunteer forest stewardship program in 2020. She reported that many events were cancelled to adhere to Washington State and King County Public Health guidelines. She reported that modified small events were developed and hosted by EarthCorps from August through October. This included the 2020 Arbor Day Celebration held at Pioneer Park. She noted that regular volunteer events will likely resume in the Spring or Summer of 2021. Trustees are interested in learning more about the City's plan for community outreach and education efforts during the time that volunteer events are on hold.

(VI) 2020 Restoration Report

Natural Resources Specialist Kim Frappier provided a report on the 2020 restoration work in Pioneer Park and Engstrom Open Space. She provided a status update of the Natural Resources staff due to COVID-19 related budget cuts and the impacts to the Natural Resources Program. She noted that restoration was conducted on over 80 acres by professional restoration contractors focusing primarily on invasive tree treatment and ivy ring creation as well as two small plantings.

It was moved by Ethe and seconded by Berseth to:

Ratify the 2020 Restoration Work Plan.

Agreed by unanimous consent. Motion passed: 7-0

(VII) Regional Sword Fern Decline Update

Natural Resources Specialist Kim Frappier provided an update on regional sword fern decline and the work conducted by the Sword Fern Decline Working Group hosted by Seattle Parks and Recreation. She noted that although the City does not have documented incidents of decline within Trust properties, there are two small sites of concern at North Mercerdale Hillside and Upper Luther Burbank Park. She gave an overview of monitoring and research efforts being led by the working group and resources for additional information.

(VIII) Merilyn Hatheway Bench Restoration Update

Trustee Hildebrandt reported on the project to refurbish the Merilyn Hatheway Bench in the NW Quadrant. Trustee Hildebrandt supported Eagle Scout Joe Lamaster, who conducted the balance of the work.

(IX) Quadrant Reports**NW Quadrant:** Trustee Poor and Secretary Olson

Trustee Poor reported a lot of windfall on the perimeter trail after a recent storm.

NE Quadrant: Vice Chair Hildebrandt and Trustee Berseth

Trustees reported that conditions in the NE quadrant look good. They reported that there is a large amount of leaf litter on trails that needs to be blown off and repairs are needed on some metal grating. The Trails Specialist has both of these issues on his work plan.

SE Quadrant: Chair Bender and Trustee Ethe

No report.

(X) Next Meeting

The next meeting is scheduled for January 21, 2020 at 5:00 PM.

Adjournment: 6:41 PM

Hildebrandt moved; Anderl seconded to adjourn the meeting.
Agreed by unanimous consent. Motion passed: 7-0.

Marie Bender, Chair

Attest:

Kim Frappier, Scribe



OPEN SPACE CONSERVANCY TRUST STAFF REPORT

Item 2
January 21, 2021
Regular Business

AGENDA ITEM INFORMATION

TITLE:	Draft 2020 Annual Report & 2021 Work Plan	<input checked="" type="checkbox"/> Discussion Only <input type="checkbox"/> Action Needed: <input type="checkbox"/> Motion <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution
RECOMMENDED ACTION:	Discuss draft report and suggest additions or edits	

STAFF:	Kim Frappier, Natural Resources Specialist
COUNCIL LIAISON:	Lisa Anderl
EXHIBITS:	<ol style="list-style-type: none"> Draft Open Space Conservancy Trust 2020 Annual Report 2021 Work Plan

SUMMARY

BACKGROUND

The ordinance that established the Open Space Conservancy Trust requires that the Trust report to City Council each year on its activities of the past year and the condition of the Trust properties.

PROCESS

Natural Resources staff have drafted a report based on the 2020 meeting minutes, Natural Resources work accomplishments, and progress on the 2008 Forest Health Plan. The Trustees may discuss the report and suggest changes at the January meeting. Staff will finalize the report in conjunction with the Chair. The report will be presented to the City Council on the Consent Calendar at the March 16, 2021 meeting. The report will also include the Open Space Conservancy Trust's 2021 Work Plan.

RECOMMENDATION

Discuss draft 2020 Annual Report.



City of Mercer Island Open Space Conservancy Trust 2020 Annual Report to City Council

INTRODUCTION

The Open Space Conservancy Trust held meetings in January, October, and November of 2020. To minimize the risk of COVID-19 exposure, the October and November meetings were conducted remotely via the Zoom video-conferencing platform. Governor Inslee's Proclamation No. 20-28 regarding the Open Public Meetings Act put in place statutory waivers and suspensions regarding in person meetings.

TRUSTEE APPOINTMENTS AND ELECTIONS

Councilmember Lisa Anderl was appointed as the Council Liaison on February 2, 2020 to serve a two-year term. Hillary Ethe was appointed by City Council as a trustee to serve a four-year term from June 2020 through May 2024. The annual election of officers took place at the October meeting. Trustee Marie Bender was elected Chair, Trustee Thomas Hildebrandt was elected Vice Chair, and Trustee Craig Olson was elected Secretary.

CITY OF MERCER ISLAND, NATURAL RESOURCES PROGRAM

The Natural Resources program is tasked with managing forest restoration, tree risk mitigation, and trail construction and maintenance on Trust properties – Pioneer Park and Engstrom Open Space. The program is staffed by two three-quarter time employees, who are supervised by the Parks Operations Manager.

Due to COVID-19 related budget cuts, the Parks Operations Manager and Natural Resources Specialist positions were temporarily eliminated between April and mid-June. All casual labor positions were also eliminated for the year, including positions on the seasonal Restoration and Trails Crew, which typically consists of two to three crewmembers. During this time, the Trails and Urban Forestry Specialist continued to work under the supervision of the Public Works Department. The Parks Operations Manager and Natural Resources Specialist were reinstated in June and transitioned from the Parks and Recreation Department to the Public Works Department. In 2020, the Natural Resources Program staff included:

Alaine Sommargren, Park Operations Manager
Kim Frappier, Natural Resources Specialist
Andrew Prince, Trails and Urban Forestry Specialist

FOREST HEALTH AND MANAGEMENT

Background

Forest management of Trust properties is guided by the Pioneer Park Forest Management Plan (PPMP), adopted in 2003 and amended in 2009 by the Trust to incorporate recommendations from the 2008 Pioneer Park Forest Health Plan. The Open Space Vegetation Plan 10-year Evaluation and Update, adopted by City Council in 2015, also provides guidance for this work. Restoration activities outlined in the plans include invasive plant removal, invasive removal maintenance, ivy ring creation, invasive tree treatment, native tree and shrub installation, and planting maintenance. Annual planning and project management is conducted by the Natural Resources Specialist, while on-the-ground work is accomplished by contracted professional restoration crews, the seasonal crew, and volunteers.

2020 Accomplishments

Approximately 82 acres of Trust properties received restoration work in 2020. In response to on-the-ground

conditions and to meet benchmarks outlined in the 2008 Forest Health Plan, restoration work largely focused on invasive tree treatment and ivy ring creation. Due to the COVID-19 response, staff reductions, and the subsequent delay to the contracting process, a smaller number of maintenance projects were scheduled on comprehensive restoration sites. This success of restoration tasks in these areas is dependent on removing invasive herbaceous plants while they are actively growing and before they've set seed, usually in the late spring. Having missed that season, restoration efforts were reallocated within the park to tasks that would be more effective in late summer and fall. Most of the work was accomplished by professional contractors. The following is a summary of 2020 accomplishments:

Professional contractors

Restoration Task	Pioneer Park	Engstrom Open Space
Invasive removal maintenance	3.3 ac	
Ivy rings	34.0 ac	
Planting maintenance	8.3 ac	
Invasive Tree Treatments	59.0 ac	5.7 ac
Fall planting	0.5 ac	

Volunteers

The City of Mercer Island’s Natural Resources program contracts EarthCorps to lead volunteer stewardship events at Pioneer Park as well as conduct outreach in the community to engage and educate Mercer Island residents about forest restoration. In keeping with Washington State Department of Health COVID-19 safety guidance, all regularly scheduled large-scale volunteer events were cancelled from March-July and November-December. EarthCorps held one regularly scheduled event in February before cancelling events through most of the summer. In response to state mandated social distancing protocols, EarthCorps developed a revised protocol to host small events of up to five volunteers and hosted three modified events at Pioneer Park in August, September, and October. Volunteer restoration primarily consisted of invasive removal maintenance on the west perimeter of the park, along 84th Avenue SE. In addition, City staff and EarthCorps led a successful planting in the NW quadrant of Pioneer Park to celebrate the City’s 3rd Annual Arbor Day on October 19th.

Forest Health Plan Progress

The Natural Resources program implements the management recommendations and benchmarks outlined in the FHP. The benchmarks serve as a guide to managing forest health on Trust Properties. Between 2009 and 2014, the Natural Resources program was able to get ahead of schedule due to a favorable bidding climate and lower contracting costs. Beginning in 2015, the regional demand for qualified restoration contractors increased and costs increased significantly. Implementation of tree planting and associated maintenance slowed during the last two biennia so the program could focus on additional maintenance needed on existing projects. However, Natural Resources staff continued to advance restoration priorities while addressing challenges and making effective use of available resources. Twelve years into the FHP, restoration efforts are overall on track, particularly regarding invasive tree treatments, ivy ring creation, and tree planting.

In 2020, restoration work focused on maintenance of existing projects, so there were no large-scale plantings by professional contractors nor any new comprehensive invasive removal projects. Staff prioritized a second round of invasive tree treatment for English holly, cherry laurel, and other invasive tree species. Regarding planting maintenance, although the FHP calls for one year of maintenance post-plant installation, some areas required supplemental work. This was largely due to an increase in summer drought conditions which contributed to high plant mortality. As outlined in the FHP benchmarks and in response to vigorous ivy regrowth during the last 10 years, staff also prioritized ivy ring maintenance on sites that had been originally completed in 2010. Table 1 outlines actual progress made to date versus proposed benchmarks outlined in the 2008 FHP:

Table 1. Forest Health Plan Cumulative Progress in Pioneer Park, 2009-2020

Restoration Task	Proposed (acres)	Actual (acres)
Invasive tree treatment	93	105
Invasive tree treatment maintenance	93	93
Ivy ring creation	77	75
Ivy ring maintenance	93	34
Tree planting	89	71
<i>Replanting due to high mortality</i>	<i>n/a</i>	14
Plant maintenance (1-year post-planting)	84	68
<i>Additional plant maintenance due to site conditions</i>	<i>n/a</i>	84

Forest Health Survey 10-year data collection

The Pioneer Park Forest Health Plan specified that data be re-collected every ten years, to track changes in ecological health. In summer 2018, the City hired two field technicians to collect vegetation data in the plots established for the 2008 Pioneer Park Forest Health Survey. Due to staffing changes and constraints in 2019, staff were unable to complete analysis and provide a report to the Trust. In 2020, the Natural Resources program hired EarthCorps, whose staff ecologist analyzed the data and prepared a preliminary report to City staff in December 2020. Natural Resources staff will present findings to the OSCT in early 2021.

LETTERBOXING PROGRAM

The Letterboxing Program is a collaborative effort between Parks and Recreation staff, OSCT Board Members, and community volunteers. Due to COVID-19 related staff reductions to the Parks and Recreation Department, and adherence to state and county public health guidelines, the Letterboxing Program was cancelled in 2020.

LEASH POLICY EDUCATION EFFORTS

In 2020, leash policy education was accomplished through the distribution of the “Dog Owner’s Guide to Mercer Island Parks” brochure, which provides park users with information about voice/signal control and the location of off-leash versus on-leash parks. Due to staffing shortages, the brochure was distributed to the Pioneer Park kiosk by Parks Maintenance team members during park checks. There were no off-leash dog workshops offered in 2020.

TRAILS

The Natural Resources team continued to manage trails for safety and access in 2020. Due to the elimination of casual labor in 2020, seasonal crew members that would typically handle trail brushing and repairs were not hired. The Trails Specialist and Parks Maintenance staff did their best to keep up with brushing and leaf blowing but levels of service were not as high as they usually are. As a result, the 2021 trails work plan calls for additional maintenance and repair work on Trust property trails.

URBAN FORESTRY

Tree risk mitigation continues to be a primary focus of urban forestry efforts in Pioneer Park. Certified staff arborists make decisions each year to remove dead, dying, or structurally defective trees to reduce the risk of trees failing and causing injury, property damage, or interference with utility lines or roadways. Trees are retained through corrective pruning or as wildlife snags when possible, but tree removals are occasionally necessary. In the case of whole tree removals, the wood from the tree is left to decompose on site as habitat and to improve soil

conditions. Dead and dying trees continue to make up the majority of tree removal work. In 2020, the City contracted the removal of four trees for risk mitigation. Staff continued to monitor park boundaries regularly for tree risk.



Mercer Island Open Space Conservancy Trust

2021 Work Plan

Meeting Date	Agenda Item
January 21	Annual Report to Council: The Trust is required in its by-laws to report to City Council each year on the status of Trust properties.
	Work Plan: The Trust develops a list of topics that it intends to address during the year (this document). This work plan is submitted to City Council with the Annual Report as a courtesy.
	Fire Management Plan: The Trust will consider revisions to the plan, which is part of the 2003 Pioneer Park Forest Management Plan.
	Engstrom Open Space: Discuss ownership status.
	Quadrant Reports (ongoing item): Trustees will report on the condition of certain quadrants at Trust board meetings.
March 18	PROS Plan update: City staff will report on current status of PROS Plan development and discuss Trust participation.
	Forest Health Survey – 10 year update: Staff will present results and analysis of 2018 data collection
	Restoration Work Plan: City staff report to the Trust its planned restoration activities, and recap work completed in the previous year.
	Letterboxing program: The Trust will reach out to letterboxing volunteers about launch of program.
May 20	Plant selection: Staff will report on current considerations for plant selection in restoration work on Trust properties.
	Trail Work Plan: City staff report to the Trust its intended maintenance activities in the spring of each year, and recap work completed in the previous year. This report includes status of recently decommissioned social trails on Trust properties.
	Off-leash dogs: The Trust will evaluate success of education measures over the past year and discuss possible changes.
July 15	Election of Officers: The Trust is required by its bylaws to elect officers at its July meeting each year.
	Permanent restroom facility: The Trust will discuss potential options for the restroom facility at Pioneer Park.
	Parking on 84th Ave SE: The Trust will discuss possible changes to parking on the west side of the NW Quadrant.
September 16	Eagle Project recognition: The Trust will recognize Eagle projects that have benefitted Trust Properties.
	Herbicide application report: City staff will report on the use of herbicides on Trust properties each year, in accordance with the Herbicide Use Protocol.
November 18	

Note: The listing of an item under a particular month indicates that the item will be introduced at that meeting. There may be follow-up discussions and decisions at subsequent meetings, as directed by the Chair.



**OPEN SPACE CONSERVANCY TRUST
STAFF REPORT**

**Item 3
January 21, 2021
Regular Business**

AGENDA ITEM INFORMATION

TITLE:	Review 2003 Fire Management Plan	<input checked="" type="checkbox"/> Discussion Only <input type="checkbox"/> Action Needed: <input type="checkbox"/> Motion <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution
RECOMMENDED ACTION:	Review revised plan. Provide staff direction.	

STAFF:	Alaine Sommargren, Deputy Public Works Director	
COUNCIL LIAISON:	Lisa Anderl	
EXHIBITS:	1. Revised Appendix M: Pioneer Park and Engstrom Open Space Fire Management Plan (redline version) 2. Revised Appendix M: Pioneer Park and Engstrom Open Space Fire Management Plan (clean version)	

SUMMARY

BACKGROUND

In light of recent wildfires affecting urban areas on the west coast, City staff received several inquiries about the potential for wildland fire in Pioneer Park, and the City’s plan for mitigating fire risk and responding to a fire occurrence on Trust properties.

The Pioneer Park Forest Management Plan, adopted by City Council in November 2003, includes the Pioneer Park Fire Management Plan (Appendix M), which was intended to address these issues. This plan details the firefighting resources available to address such a fire, summarizes the challenges and mitigating factors involved in fighting a wildland fire on these properties, and outlines actions that Mercer Island Fire and Parks staff can take to minimize fire risk in the park.

PLAN REVIEW AND UPDATES

The plan not been updated since its adoption, and unsurprisingly, many pieces of information included are no longer current with Mercer Island Fire Department (MIFD) practices and resources. To bring this document up-to-date, staff consulted with Steve Heitman, Mercer Island Fire Chief, and Mike Mandella, Deputy Fire Chief. Exhibit 1 includes suggested edits that reflect current mutual aid agreements, updated information about fire hose reach/water availability in the park, and MIFD’s assessment of the challenges that the properties present for wildland firefighting. In addition, Parks staff have updated maps of the park to include the Engstrom Open Space property, terrain information, and new fire hose reach projections.

Staff recognize that several of the action items included in the plan, meant to address areas for improvement, are not reflected in current work plans and practices. While staff has continuously worked with neighboring property owners to improve habitat value along the park boundary, staff has not recently sought to educate homeowners about fire-wise landscaping techniques or worked with them to reduce firewood and debris adjacent to the park. Such educational outreach can be prioritized in the coming year.

FURTHER REVISIONS

While these revisions correct out-of-date information, they do not present any substantive changes to the policy or staff direction presented in the original plan. The Trust may wish to explore alternative strategies for addressing wildland fire risk. Such strategies should be considered in tandem with established management plan priorities, goals, and prescriptions. If requested, staff can evaluate the effectiveness and potential impacts of specific mitigation strategies and/or work with local agencies to determine if there are updated forest management recommendations that consider both wildfire risk and forest health.

RECOMMENDATION

Review plan. Provide staff direction for further research and/or revisions.

23. Appendix M: Pioneer Park and Engstrom Open Space Fire Management Plan

23.1. Introduction

Pioneer Park ~~is~~ and Engstrom Open Space are susceptible to forest fires of natural and human origin. The risk can be partially managed by planning for an occurrence and intervening to mitigate risk factors before such an occurrence. This plan does both within the constraint of preserving the native forest ~~in Pioneer Park~~ on Trust properties and using the resources currently available to the City of Mercer Island. The goal of this plan is to guide City departments to better protect Pioneer Park, Engstrom Open Space, and the surrounding neighborhood from fire. It begins by assessing current resources and proposes certain goals for fire management, ~~t~~. Then ~~it~~ describes actions for mitigation of risk factors and improving response to fire occurrences.

23.2. Resource Assessment

Forest Fire Occurrence

Fire ~~Department~~ fighting Resources

The Mercer Island Fire Department (~~MI Fire~~ MIFD) would be the first response to fire occurrence. ~~MI Fire~~ MIFD has seven fire-fighters stationed on the island at any one time. Three are located at Fire Station 92, which is located on the south side of SE 68th St, across ~~the street~~ from Pioneer Park's NW Quadrant. The remaining firefighters are located at Fire Station 91, located approximately 3 miles north of Pioneer Park. ~~However,~~ either station might respond to ~~the a~~ fire based on the battalion's availability. The incident Commander would make the decisions about fighting a fire based on the situation.

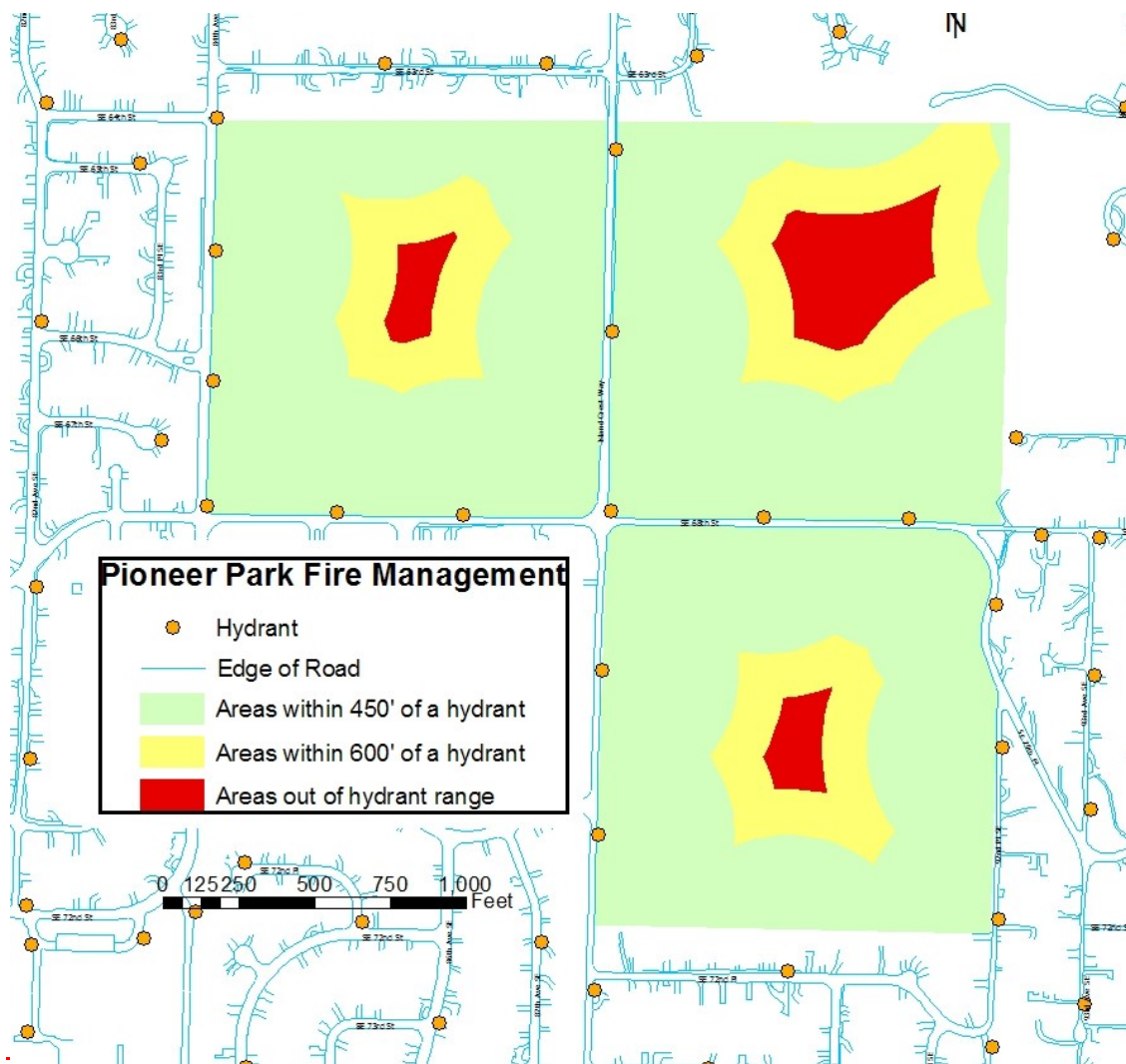
Washington State Department of Labor and Industries allows fire-fighters in structural protective clothing to work a maximum of one hour on a wildfire ~~.(WAC 296-305)~~. First response by on-duty staff could be followed by calling out for mutual aid from adjacent jurisdictions ~~. to insure coverage of the incident.~~ If required, off-duty staff could be called to report for duty as the incident Commander deems necessary, and dependent on the duration of the incident.

Mutual aid agreements with other jurisdictions allow ~~MI Fire~~ MIFD to request fire units from other fire departments. Bellevue, Kirkland, Woodinville, Redmond, Seattle and Eastside Fire and Rescue ~~(EF&R)~~ have resources that would be useful for wildland forest fire fighting; these Departments have firefighters who are wildland firefighting certified, ("Red Card"), to fight this type of fire, and who would respond under a mutual aid request. ~~For example, Eastside Fire and Rescue has personnel trained in fighting wildland fires.~~ These resources ~~might~~ would likely be needed depending on the extent of a fire.

Washington State Department of Natural Resources (DNR) [also](#) has [the](#) capability to fight wildland fires. They may be called in, if necessary, when local and mutual aid resources are exhausted. [This resource is limited and should not be considered an adequate resource.](#) However, they offer many resources most fire departments do not have, such as inmate crews, wildland engines, and experienced overhead (aerial) support. Eastside Fire and Rescue currently houses and operates a CO-OP H5S engine owned by DNR [\(BR662\)](#). Response time is expected to be less than two hours. The main office is located in Enumclaw. The City would be responsible for the cost of any resources utilized. ~~This, includes including~~ logistical support, ~~r~~ such as food, restrooms, lodging, etc.

Hydrants and ~~Trail~~ [Hose](#) Access

Pioneer Park [and Engstrom Open Space](#) [haves](#) fire hydrants along ~~all of~~ the perimeter roads [\(See figure 1\)](#). [O](#)



~~Figure 1: map showing hydrant locations and coverage in Pioneer Park.~~

~~Other~~ boundaries also have hydrants available through private property. ~~Only the very center of each quadrant and some parts of the ravine in the Northeast quadrant are more than 600~~

23.3. Goals and Priorities

The goals of the Pioneer Park Forest Management Plan are directed toward maintaining a diverse native forest with dense vegetation buffering the edges of the park and abundant deadwood for wildlife habitat. The generally accepted principles of fire management along wildland interfaces run counter to these goals. Prescriptions for reducing risk to adjacent properties include removing trees to increase distances between trees, extensive pruning of trees and shrubs to reduce ladder fuels and clearing the ground layer of woody debris to reduce fuel loads.

These two goals can be partially reconciled to achieve dense vegetation along park edges while achieving some reduction of ladder fuels and fuel loads along residential portions of the park perimeter. Furthermore, the size and location of the hydrant system surrounding the park, as well as the immediate availability of a highly-trained, well-equipped firefighting staff, make this situation distinct from typical wildland fire situations. Prescriptions for wildland fire scenarios assume lower levels of immediate response than we might expect on Mercer Island. Nevertheless, any response to fire in the park will be limited.

The priorities for ~~MI Fire~~ MIFD response in any situation are (in priority order) life, property, and incident stabilization. Protecting forest vegetation would fall into the third priority. Protecting lives and adjacent homes would be the overriding concern of the Incident Commander in a forest fire situation. A large fire in the park would burn sizable portions of the park before it could be brought under control. There is also the risk of fire extending outside the park boundaries leading to a potential conflagration. Additional risk is assumed if a fire in the park reaches the crowns of a cluster of trees, particularly in warm, dry weather, in which case, providing a defensive line of fire crews to protect fire from reaching homes on the park perimeter would be a top priority.

23.4. Evaluation

Pioneer Park and Engstrom Open Space are susceptible to fire primarily from human behavior. Historical incidents of encampments (with fire) and fireworks use in the park are particular concerns. The forest is particularly prone to drought because the soils are well drained. Woody debris and organic “duff” have built up in the park, increasing fuel loading. Houses back up to the park, with minimal distances between structures and stands of dense vegetation. The interior of the park is not accessible to fire vehicles because the trails are too narrow for ~~them~~ large fire apparatus to traverse.

However, the size of the park and the cooler, moister climate of Western Washington reduce risk in comparison to Eastern Washington forest landscapes. The quadrants are surrounded by a network of fire hydrants that can supply water to the park perimeter and significant portions of the interior. Fire Station 92 is located across the street from the park. The staff of ~~MI Fire~~ the MIFD is highly trained and experienced in incident response. Furthermore, mutual aid agreements with other cities and the availability of DNR crews would enable the City to ~~sustain a response~~ respond and initiate mitigation and control measures, and provide specialized capabilities as conditions warrant.

Limitations in response include the difficulty of conveying water to the center portion of a quadrant, ~~difficult terrain in parts of the wooded areas~~ certain areas of the park, and limited firefighting resources. For certain hydrants, vegetation poses a barrier to ready trail access, while other hydrants have no trails that lead into the park. City firefighters have not received training specific to the situation in Pioneer Park and Engstrom Open Space. These limitations are certainly addressable (See section 23.6 Action Items, ~~below, in 23.6~~).

In most fire scenarios within the wooded areas, MIFD will likely lay hose lines into the interior of the park and wait for the fire to reach their location. One advantage here is that the park trail system provides reasonable access, except in the NE corner of the NE quadrant, where the terrain is untenable.

	<u>Safety Factors</u>	<u>Risk Factors</u>
Fire Occurrence	<ul style="list-style-type: none"> Well-developed trail system Extensive fire hydrant network around park perimeter Nearby location of Fire Station 92 Trained and coordinated firefighters Mutual aid agreements with other cities Availability of DNR resources Standard incident <u>Incident Management</u> protocols are expected to work for all possible fire scenarios (<u>NIMS</u>) 	<ul style="list-style-type: none"> Narrow trail widths Some hydrant locations are not close to trail access points Lack of water conveyance to the interior of the park <u>Lack of firefighter training specific to Trust properties Pioneer Park</u> [MM1][MM2] <u>Limited initial firefighting resources</u> <u>Hilly terrain and underbrush shrubby understory vegetation growth in certain quadrants reduces ability to lay hose lines close to the seat of a fire</u>
Fire Mitigation	<ul style="list-style-type: none"> Street buffers Low summer temperatures Winter rainfall Low summer wind speeds Small land area 	<ul style="list-style-type: none"> Seasonal low rainfall <u>Well-drained, D drought-prone</u> soils Woody debris and “duff” (ground fuel load) Encampment activity Fireworks use in the park Minimal backyard buffers

Figure 2: Case-specific factors in Fire Occurrence and Fire Mitigation at Pioneer Park and Engstrom Open Space

23.5. Vegetation Management Plan

Neighbor partnerships will be sought to “adopt” areas of the park for fire mitigation (and also habitat improvement, as described in the Pioneer Park Forest Management Plan). Participating neighbors, under the direction of City staff, would restore and maintain the portion of the park behind their houses within a certain distance of the residence depending on the terrain and the vegetation found there. City staff would recommend ways the forest edge should be managed to meet forest management and fire management goals. The neighbors and City staff would develop a work plan cooperatively. The following describe some examples of these activities. Neighbor partners would foster dense, low-growing evergreen shrubs in the understory and periodically thin tall shrubs and dead branches to inhibit a ground fire from climbing into the canopy. Neighbors also would work to eliminate firewood and debris piles along property boundaries. City staff would support these activities with debris pickup, tool lending, and technical assistance. The City would also remove the wood from trees that they cut down in these areas, instead of leaving branches and logs to decompose.

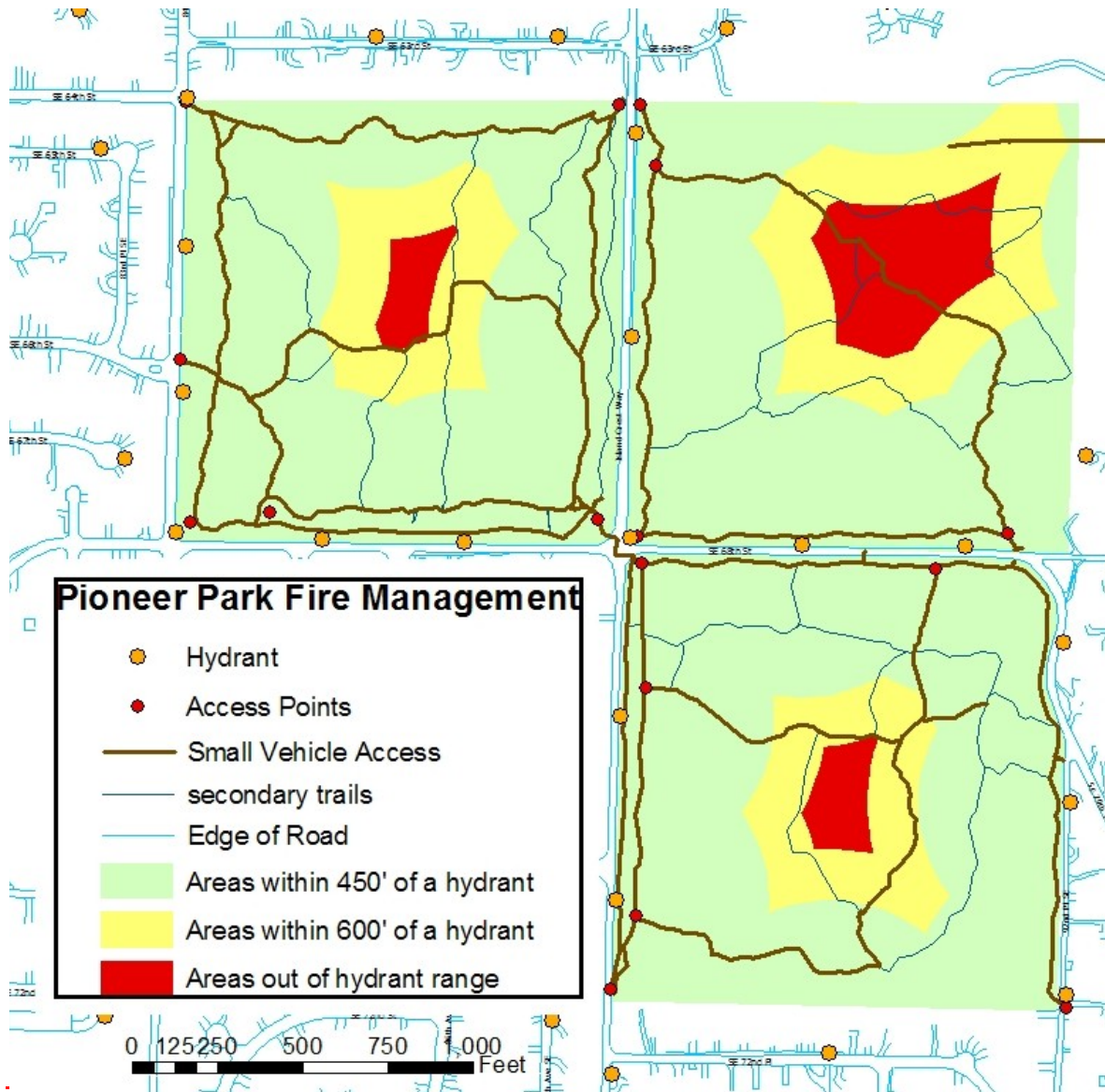


Figure 3: Fire occurrence resources, including small vehicle access, entry points, hydrant locations and secondary trails (see Appendix for larger version)

23.6. Action Items

Fire Occurrence

1. ~~MI Fire MIFD~~ will offer training for Station 92 staff pertinent to the Pioneer Park [and Engstrom Open Space](#) situation. The DNR Western Washington Interagency Training Committee provides standard training on wild-fire situations. [However, such training and the resulting certification \(“Red Card”\) is far more extensive than needed for the situation on Mercer Island and maintaining such certification is burdensome for the City. Therefore, MI Fire MIFD will seek other training situations for its firefighters that would be relevant to this situation. If existing training is not adequate or pertinent to the Pioneer situation, MI Fire will propose specialized training and a budget for that.](#)

2. MI Parks will give ~~Pioneer Park~~ trails access information to ~~MI Fire~~[MIFD](#) in formats most useful to ~~MI Fire~~[MIFD](#) staff.
3. ~~MI Fire~~[MIFD](#) will familiarize staff with Pioneer Park [and Engstrom Open Space](#) and evaluate its existing equipment for anticipated incidents in the park.
4. MI Parks and ~~MI Fire~~[MIFD](#) will develop a list of desirable basic fire-fighting hand tools to be stored in fire caches at Station 91 and 92.
5. Both departments will further research the availability of DNR for fire response and determine what conditions may warrant their involvement. [If DNR resources are unavailable or inadequate, MI Fire MIFD staff will research and propose additional solutions](#)^[MM3].

Forest Fire Mitigation

1. MI Parks will approach park neighbors and work with them to reduce fire potential and improve habitat value along the residential perimeter of the park.
2. MI Parks will conduct an educational campaign about fire-wise landscaping with adjacent property owners using existing educational materials.
3. MI Parks will patrol remote locations of the park during summer months to discourage encampment activity.
4. MI Parks will conduct an educational campaign with citizens about fire risk in Pioneer Park [and Engstrom Open Space](#).
5. MI Parks and ~~MI Fire~~[MIFD](#) will develop a plan to improve trail access into the park for a narrow vehicle and create access points where the trail system does not connect well with existing hydrant locations.

23.7. Costs

This plan is intended to work within the existing resources as much as ~~practical~~[possible](#). Certain items proposed above may be purchased within existing budgets, while others may represent new costs. Budget planning is beyond the scope of this plan. Items that may represent new purchases include:

- Training for MI staff
- Public education materials and events
- [Tool caches for Fire Stations 91 and 92](#)
- [Additional firefighting resources](#).



Pioneer Park
Hydrant Coverage-F

23. Appendix M: Pioneer Park and Engstrom Open Space Fire Management Plan

23.1. Introduction

Pioneer Park and Engstrom Open Space are susceptible to forest fires of natural and human origin. The risk can be partially managed by planning for an occurrence and intervening to mitigate risk factors before such an occurrence. This plan does both within the constraint of preserving the native forest on Trust properties and using the resources currently available to the City of Mercer Island. The goal of this plan is to guide City departments to better protect Pioneer Park, Engstrom Open Space, and the surrounding neighborhood from fire. It begins by assessing current resources and proposes certain goals for fire management, then describes actions for mitigation of risk factors and improving response to fire occurrences.

23.2. Resource Assessment

Forest Fire Occurrence

Firefighting Resources

The Mercer Island Fire Department (MIFD) would be the first response to fire occurrence. MIFD has seven firefighters stationed on the island at any one time. Three are located at Fire Station 92, which is located on the south side of SE 68th St, across from Pioneer Park's NW Quadrant. The remaining firefighters are located at Fire Station 91, located approximately 3 miles north of Pioneer Park. Either station might respond to a fire based on the battalion's availability. The Incident Commander would make the decisions about fighting a fire based on the situation.

Washington State Department of Labor and Industries allows firefighters in structural protective clothing to work a maximum of one hour on a wildfire (WAC 296-305). First response by on-duty staff could be followed by calling out for mutual aid from adjacent jurisdictions. If required, off-duty staff could be called to report for duty as the Incident Commander deems necessary, and dependent on the duration of the incident.

Mutual aid agreements with other jurisdictions allow MIFD to request fire units from other fire departments. Bellevue, Kirkland, Woodinville, Redmond, Seattle and Eastside Fire and Rescue have resources that would be useful for wildland fire fighting; these Departments have firefighters who are wildland firefighting certified ("Red Card") to fight this type of fire, and who would respond under a mutual aid request. These resources would likely be needed depending on the extent of a fire.

Washington State Department of Natural Resources (DNR) also has the capability to fight wildland fires. They may be called in, if necessary, when local and mutual aid resources are exhausted. This resource is limited and should not be considered an adequate resource. However, they offer many resources most fire departments do not have, such as inmate crews,

wildland engines, and experienced overhead (aerial) support. Eastside Fire and Rescue currently houses and operates a CO-OP engine owned by DNR (BR662). Response time is expected to be less than two hours. The main office is located in Enumclaw. The City would be responsible for the cost of any resources utilized, including logistical support such as food, restrooms, lodging, etc.

Hydrants and Hose Access

Pioneer Park and Engstrom Open Space have fire hydrants along the perimeter roads. Other boundaries also have hydrants available through private property. Hose that is normally used in structural firefighting is too bulky and cumbersome to be used in wildland firefighting. MIFD has 600 feet of wildland hose available for hydrant hook-up.

However, topography and trail access reduce the actual distance that water can be conveyed into the park by fire hose. Realistically, 500 feet is the maximum distance that water can be reliably conveyed into the park. Figure 1 illustrates that center of each quadrant and some parts of the ravine in the Northeast quadrant are more than 500 feet from an available hydrant, leaving significant areas of the park without access to water in case of a fire.

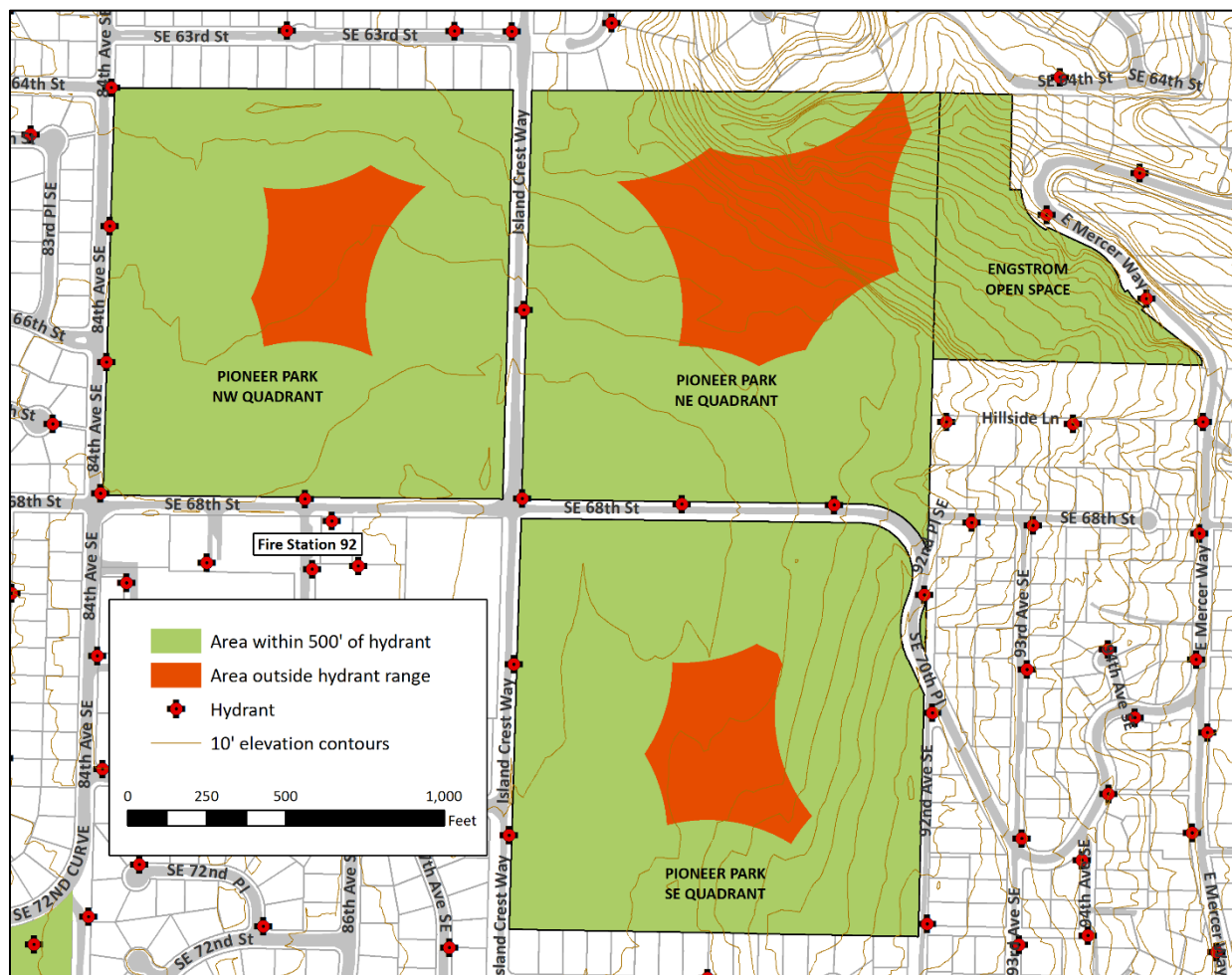


Figure 1: Map showing hydrant locations and coverage in Pioneer Park and Engstrom Open Space.

23.3. Goals and Priorities

The goals of the Pioneer Park Forest Management Plan are directed toward maintaining a diverse native forest with dense vegetation buffering the edges of the park and abundant deadwood for wildlife habitat. The generally accepted principles of fire management along wildland interfaces run counter to these goals. Prescriptions for reducing risk to adjacent properties include removing trees to increase distances between trees, extensive pruning of trees and shrubs to reduce ladder fuels and clearing the ground layer of woody debris to reduce fuel loads.

These two goals can be partially reconciled to achieve dense vegetation along park edges while achieving some reduction of ladder fuels and fuel loads along residential portions of the park perimeter. Furthermore, the size and location of the hydrant system surrounding the park, as well as the immediate availability of a highly-trained, well-equipped firefighting staff, make this situation distinct from typical wildland fire situations. Prescriptions for wildland fire scenarios assume lower levels of immediate response than we might expect on Mercer Island. Nevertheless, any response to fire in the park will be limited.

The priorities for MIFD response in any situation are (in priority order) life, property, and incident stabilization. Protecting forest vegetation would fall into the third priority. Protecting lives and adjacent homes would be the overriding concern of the Incident Commander in a forest fire situation. A large fire in the park would burn sizable portions of the park before it could be brought under control. There is also the risk of fire extending outside the park boundaries leading to a potential conflagration. Additional risk is assumed if a fire in the park reaches the crowns of a cluster of trees, particularly in warm, dry weather, in which case, providing a defensive line of fire crews to protect fire from reaching homes on the park perimeter would be a top priority.

23.4. Evaluation

Pioneer Park and Engstrom Open Space are susceptible to fire primarily from human behavior. Historical incidents of encampments (with fire) and fireworks use in the park are concerns. The forest is particularly prone to drought because the soils are well drained. Woody debris and organic “duff” have built up in the park, increasing fuel loading. Houses back up to the park, with minimal distances between structures and stands of dense vegetation. The interior of the park is not accessible to fire vehicles because the trails are too narrow for large fire apparatus to traverse.

However, the size of the park and the cooler, moister climate of Western Washington reduce risk in comparison to Eastern Washington forest landscapes. The quadrants are surrounded by a network of fire hydrants that can supply water to the park perimeter and significant portions of the interior. Fire Station 92 is located across the street from the park. The staff of the MIFD is highly trained and experienced in incident response. Furthermore, mutual aid agreements

with other cities and the availability of DNR crews would enable the City to respond and initiate mitigation and control measures, and provide specialized capabilities as conditions warrant.

Limitations in response include the difficulty of conveying water to the center portion of a quadrant, difficult terrain in certain areas of the park, and limited firefighting resources. For certain hydrants, vegetation poses a barrier to ready trail access, while other hydrants have no trails that lead into the park. City firefighters have not received training specific to the situation in Pioneer Park and Engstrom Open Space. These limitations are certainly addressable (See section 23.6 *Action Items*).

In most fire scenarios within the wooded areas, MIFD will likely lay hose lines into the interior of the park and wait for the fire to reach their location. One advantage here is that the park trail system provides reasonable access, except in the NE corner of the NE quadrant, where the terrain is untenable.

Safety Factors		Risk Factors
Fire Occurrence	<ul style="list-style-type: none"> Well-developed trail system Extensive fire hydrant network around park perimeter Nearby location of Fire Station 92 Trained and coordinated firefighters Mutual aid agreements with other cities Availability of DNR resources Incident Management protocols for all possible fire scenarios (NIMS) 	<ul style="list-style-type: none"> Narrow trail widths Some hydrant locations are not close to trail access points Lack of water conveyance to the interior of the park Lack of firefighter training specific to Trust properties Limited <i>initial</i> firefighting resources Hilly terrain and shrubby understory vegetation in certain quadrants reduces ability to lay hose lines close to the seat of a fire
Fire Mitigation	<ul style="list-style-type: none"> Street buffers Low summer temperatures Winter rainfall Low summer wind speeds Small land area 	<ul style="list-style-type: none"> Seasonal low rainfall Well-drained, drought-prone soils Woody debris and “duff” (ground fuel load) Encampment activity Fireworks use in the park Minimal backyard buffers

Figure 2: Case-specific factors in Fire Occurrence and Fire Mitigation at Pioneer Park and Engstrom Open Space

23.5. Vegetation Management Plan

Neighbor partnerships will be sought to “adopt” areas of the park for fire mitigation (and also habitat improvement, as described in the Pioneer Park Forest Management Plan). Participating neighbors, under the direction of City staff, would restore and maintain the portion of the park behind their houses within a certain distance of the residence depending on the terrain and the vegetation found there. City staff would recommend ways the forest edge should be managed to meet forest management and fire management goals. The neighbors and City staff would develop a work plan cooperatively. The following describe some examples of these activities. Neighbor partners would foster dense, low-growing evergreen shrubs in the understory and periodically thin tall shrubs and dead branches to inhibit a ground fire from climbing into the canopy. Neighbors also would work to eliminate firewood and debris piles along property boundaries. City staff would support these activities with debris pickup, tool lending, and technical assistance. The City would also remove the wood from trees that they cut down in these areas, instead of leaving branches and logs to decompose.



Figure 3: Fire occurrence resources, including small vehicle access, entry points, hydrant locations and secondary trails (see Appendix for larger version)

23.6. Action Items

Fire Occurrence

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