



**City of Seattle**  
Parks and Recreation

**MEMORANDUM**

To: Sandra Pinto de Bader, OSE Environmental Sustainability Policy Advisor  
From: Michael Yadrick, GSP Planning & Development Supervisor OOC  
CC: Dan Johnson, Parks Division Director  
Doug Critchfield, Natural Resources Unit Manager  
Jon Jainga, NRU Urban Forestry Manager  
Attached: "Restoring Native Forest Diversity to Seattle Parks" Prepared by: Kirk Hanson,  
Northwest Natural Resource Group  
Date: October 16, 2015  
Subject: Alder and Maple Thinning in the Forested Parklands

On June 3, 2014, Parks Urban Forestry received recommendations from the Northwest Natural Resource Group (NNRG) on forestry practices that could enhance the environmental benefits of forested parklands. Green Seattle Partnership (GSP) has now reached the ten-year benchmark of the 20-Yr. Strategic Plan, and Urban Forestry staff have been defining what sustainable urban forest will look like in the future as well as considering methods to accelerate the recovery of the forest with respect to its health, integrity and sustainability. As a recognized responsible forest management program by Northwest Certified Forestry, it is our goal to utilize the best practices we can to accomplish our goals of re-establishing and maintaining 2500 acres of forested parkland.

In view of this effort, in the early part of 2014, NNRG performed a scope of work as part of a consultant agreement to reach these recommendations, specifically:

1. Researched the current literature on hardwood (alder and maple) management in order to produce a series of forestry prescriptions.
2. Conducted field assessments and stakeholder consultations at Carkeek Park and West Duwamish Greenbelt (proposed sites).
3. Developed prescriptions for alder and maple management and underplanting at the proposed sites that take into account elements that align with the GSP efforts: a) best management practices for the enhancement of forest health and species diversity; b) Sustainability of funding and directing forest management and restoration activities; and, c) Community engagement and potential scrutiny of the prescriptions.

Ultimately, implementing these types of practices on a site-specific basis should help the forest meet the GSP program goals related to conifer canopy cover, natural seedling regeneration, native understory cover and diversity as well as an absence of non-native plant species that threaten the resiliency of the forest to disturbances.

To summarize the recommendations, NNRG suggests that creating canopy gaps in these hardwood-dominated forests, in combination with other GSP restoration practices, can promote site conditions conducive to successful conifer establishment and increased native forest diversity. In some sites, these conditions may help slope stability, increase wildlife habitat, reduce the effects of

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stormwater, and promote stewardship practices common on forestlands managed both for timber production and species diversity.

This type of active management has the potential to increase the cost of restoration using CIP funds. Parks Urban Forestry staff considered the commercial extraction of merchantable alder and maple logs, but did not consider the option to be economically viable to offset the cost of the operations at the proposed sites as well as the reparation of extraction methods.

In general, the proposed sites can be described as mixed-deciduous stands dominated by mature red alder and bigleaf maple that contain individual (or small patches of) conifers. NNRG highlighted a combination of forest health issues that Parks could remedy with active management of the dense alder and maple forests:

- The land use history of these sites has promoted the growth of alder and maple, reaching maximum height in ~40 years of age, that outcompete most other tree species. These hardwoods continue to heavily shade the sites until they decline.
- When trees do fall out of the canopy, lack of conifer seed sources and downed wood often leads to a dense brushy understory. Attempts to underplant with conifers and native understory species have been heavily suppressed by the shady conditions and ongoing competition with weeds and/or native salmonberry. There are also little to no mid-story trees present, which can help to intercept rainfall during storm events while also enhancing slope stability and wildlife habitat.
- The combination of age and the high height to diameter ratio (HDR) of the hardwood species will continue to create unstable conditions where trees are unable to support their heavy crowns. These stands are susceptible to blowdown in heavy winds and ice storms.

In consideration of the recommendations, Park’s Urban Forestry proposes to carry out one pilot projects in the West Duwamish Greenbelt to begin in fall 2016. The following steps outline the process to date as well as future benchmarks for implementation:

Timeframe	Action
Summer 2014	Staff review of NNRG recommendations; review by GSP Field Committee
All 2014	Training for staff, such as meetings with King County Natural Resources; education for forest stewards and volunteers
Late 2014	Initial review by Parks Planning & Development, GSP Mgt Team
March 2015	Parks ProView review and feedback on draft design for Carkeek
Summer 2015	Selection of West Duwamish for 2016 proposed site; outreach to key stakeholders
Winter 2016	Budget and integrate project into 2016 GSP workplan
Early 2016	Broader public outreach, “Open House” at South Seattle College and public walk at the proposed West Duwamish site
Early 2016	Develop prescription (design) for the project
Spring/Summer 2016	Final Design and internal review
Fall 2016	Implement thinning/gap creation at West Duwamish; subsequent TESC, brush/weed control and underplanting

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