



Whyte Lake Park Forest Management Plan

June 2015

*Submitted in support of the District of West Vancouver's application under
the Avoided Forest Conversion Project*



Version 002, June 18, 2015

Doc #930071

Version Control

Title	Version	Date	Prepared by	Comment
Forest Management Plan - Whyte Lake Park	<i>No. 001</i>	<i>Dec. 30, 2014</i>	<i>GHG Accounting Services</i>	<i>For review by the District</i>
Forest Management Plan - Whyte Lake Park	<i>No. 002</i>	<i>June 18, 2015</i>	<i>Parks Department</i>	<i>After review by the District</i>
	<i>No. 003</i>	<i>Dec. 2024</i>		<i>10 year Review</i>

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1. Introduction

On July 7, 2014, the District of West Vancouver Council (Council) dedicated Whyte Lake and the Whyte Lake trail to create Whyte Lake Park. Whyte Lake Park spans 124 hectares and is currently the largest park in West Vancouver.

This Council decision accomplishes a key recommendation of the District's Parks Master Plan, which was approved in 2012. The area has high ecological values and includes stands of old growth and second growth forest, wetlands, creeks and the lake; it also captures a large portion of the Nelson Creek watershed. The new Whyte Lake Park bridges Nelson Canyon Park to Cypress Provincial Park, creating a large and contiguous area of protected land supporting and enhancing the rich ecological values found in the area.

The Whyte Lake Trail is accessed from Westport Road just south of the Upper Levels Highway at Nelson Canyon. There is also a trailhead closer to Horseshoe Bay at Exit #1. The trail follows the Trans Canada Trail route, diverges westward through old growth trees, follows Whyte Creek and ends at Whyte Lake.

Part of the consideration involved in the process to protect the forest stand in Whyte Lake Park was also the significant protection of forest carbon inventory from deforestation, as evidenced in the Report to Council dated May 26, 2014 titled: *Park Dedication Bylaw No. 4794, 2014 for Whyte Lake Area and Trail, and associated attachments including updated map and additional resolution re carbon credits.*

This Forest Management Plan (FMP) for Whyte Lake Park is intended to lay out the types of management activities that will ensure the ecological and physical integrity of the park itself and its carbon stock. Specifically, this FMP describes how and by whom the project lands are to be maintained to ensure the carbon benefit is retained and not released back into the atmosphere.

2. Location & Map:

Legal Address:

Parcel Identifier: 008-877-301, Block B, Except: Firstly: Part In Plan 1918, Secondly: Part On Highway Plan 118 District Lot 1494 PLAN 12498, ("District Lot 1494").

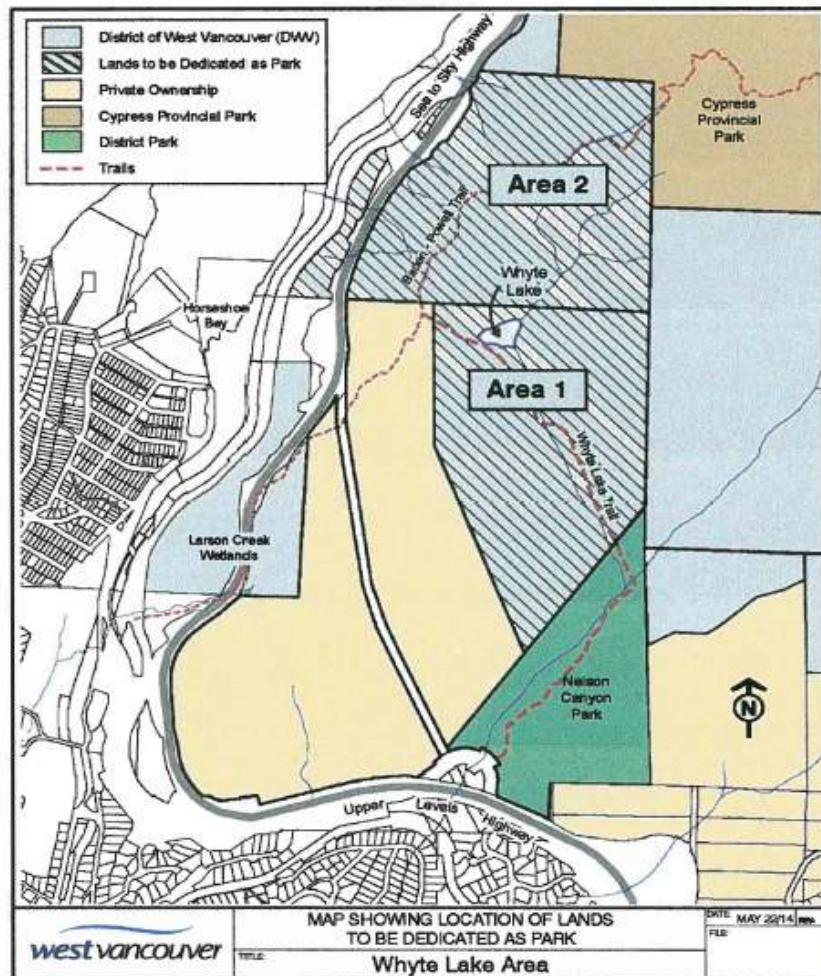
and

Parcel Identifier: 015-946-991, Legal Description: District Lot 1495 Group 1 New Westminster, District Except Portions In Reference Plans 987 And 1831, Highway Plan 52 And Part Lying West Of Reference Plan 987 And Part Dedicated Road On Plan Bcp23203, ("District Lot 1495")

AND WHEREAS a part of District Lot 1494 was dedicated as park under the District's Nelson Canyon Park Bylaw #483, 1931;

AND WHEREAS it is deemed advisable to dedicate District Lot 1495 and that part of District Lot 1494 that is not included as park under the District's Nelson Canyon Park Bylaw #483, 1931 for park purposes.

Map:



3. Protection Approach:

The District of West Vancouver does not have park zoning in its Zoning Bylaw. Therefore, most parks have the same zoning as the land surrounding them. An analysis of options for protecting parks determined that adding park zoning would not result in a high level of protection of parks. Many of the parks in the District are protected by park dedication bylaws, a tool which offers a high level of protection, higher than zoning would offer. Dedication of parks occurs in accordance with the Community Charter, and it is difficult to remove once established.

Whyte Lake Park is protected through a dedication bylaw that was adopted by the District of West Vancouver Council on July 7, 2014. The park boundaries were developed by the District of West Vancouver Parks and Planning staff (see previous page). Watershed protection and minimizing interference to existing ecosystems have been important considerations in this process as well. Further expansion of protected park lands to cover more land in the area is contemplated.

The protection of highly valuable environmental areas such as the Whyte Lake Park is part of the District of West Vancouver's Parks Master Plan, dated July 2012. The Parks Master Plan (PMP) sets the direction for the management, protection, enhancement of and community engagement within West Vancouver's parks and open spaces. Community engagement and consultation were fundamental in the preparation of the PMP, which was developed by a citizen-led Working Group in 2011 and completed in 2012.

The FMP specifically designed for the Whyte Lake Park is guided by the 2012 Parks Master Plan principles and policies. A very important aspect for Whyte Lake Park is the long term protection of the ecological integrity and the carbon stock of the park. Therefore, the FMP is focused on deforestation threat mitigation. The threats of deforestation for Whyte Lake Park have been evaluated in the development of this FMP. The potential threat categories are as follows: fire, pests, plant diseases, wildlife, park visitors, encroachment, infrastructure construction and invasive plants. The different sections of the FMP will address each threat with the appropriate monitoring and mitigation activities. The FMP and its prescribed maintenance and management activities will be reviewed and evaluated upon their effectiveness every 10 years.

4. General Management Guidelines:

Whyte Lake Park falls into the category of Natural Area Park. Natural Area Parks are defined in the 2012 Parks Master Plan as: *"composed primarily of natural ecosystems and may protect areas with high environmental values, e.g. forests, riparian areas. Natural area parks may be large or small, and they may be linear with a primary purpose of supporting trails. Facilities may include trails and staging areas for trails. Although not a "park" in the legal sense, the municipally-owned lands used for recreation known as the Upper Lands are considered a natural area park by the community and they are maintained by the Parks Department as such."* (2012 Parks Master Plan, p7).

The 2012 Parks Master Plan provides goals and recommendations that form the basis of this FMP. The following guidelines give direction for maintenance and management activities for Whyte Lake Park:

Goals:

1. Protect ecological integrity, species habitat and diversity, and heritage values.
2. Increase interpretation and education about the natural and heritage resources.
3. Protect areas with environmental values and historical significance parkland.
4. Embed environmental best practices.
5. Protect the existing carbon stock and mitigate any future risks of deforestation.

Service Guidelines:

Generally, maintenance levels need to appropriately consider the following factors:

1. Whyte Lake Park classification as a forested Natural Area Park.
2. Park location within an ecologically significant area in the Upper Lands.
3. Natural trails are a significant attraction of this park, which draws a large number of visitors.
4. Environmental characteristics in the park such as the sensitivity of vegetation with typical area wildlife.
5. Minimal park infrastructure in place with consideration of infrastructure age, condition and replacement cycle.

The maintenance and infrastructure replacement planning for the Park should consider options that help minimise maintenance costs as well as placing a high priority on sustainability and ecological integrity. In regards to managing vegetation replanting, this should only be done with native plants for restoration of disturbed areas.

In order to enhance the educational role of this natural area park and to encourage community engagement, efforts should be made to invite volunteer, stewardship, school and neighbourhood groups to participate in monitoring, restoration, educational, invasive plants removal and trail maintenance activities where appropriate.

5. Threat Management

5.1 Fire

To prevent deforestation, Whyte Lake Park fire management follows the North Shore Initial Response Guideline for Interface/ Wildfires which involves a multi-agency process that is in place for addressing forest fires in West Vancouver. Please see Appendix A to this FMP for details.

5.2 Pests, Plant Diseases

To prevent deforestation from pests and plant disease, a monitoring procedure is in place at Whyte Lake Park. Monitoring observations will take place at a minimum of twice per year at four established checkpoints. The observations will be recorded on the Park Trails, Pests/ Disease Checklist. Please see Appendix B to this FMP for a copy of the checklists. The checklists will be retained for future reference.

Observations by trained observers will focus on:

1. Visual observations for pests and disease including bark beetles, wood borers and ambrosia beetles.
2. Visual observations for disease including but not limited to: fruit-bodies of root rot disease

The following designated Checkpoints for Whyte Lake Park have been established:

1. West entrance, by the sign.
2. Floating dock by the lake.
3. Whyte Lake trail at Nelson Creek.
4. Baden – Powell trail at Cypress Provincial Park border.

5.3 Wildlife

In mid-2014, beaver(s) took up residence the small pond in Whyte Lake Park causing the water level to rise and flood the surrounding land including the float and boardwalks. Parks staff has installed a flow device (Beaver Deceiver) in the water at Whyte Lake that provides a cost-effective, low maintenance solution to regulate the water level of the beaver dam and keep water flowing out into Whyte Creek. This is a long-term solution that is an ecological, fiscal and ethical approach which will allow the beaver to stay in the pond while still maintaining a desired water level that prevents flooding. Keeping the water level at its usual height helps maintain infrastructure like the float, and help minimize damage to trees from elevated water levels. Deer browsing will also be monitored to avoid the depletion of the forest of young trees over time.

5.4 Park Visitors

The most common activities in parks in this general area are walking and viewing. For this reason, the management of the trails is very important. In the future, new trails may be built in the park using natural materials and designed to have a minimal impact on the environment. New trails should not be extensive in order to preserve the ecological and forest integrity. Trail visitors should be educated on trail etiquette such as to stay on the trails and be informed of activities that are prohibited within the Park through site signage. Visitor education should be established on the relevant internet web sites, as well as with signage at entrance points to the Park.

Trail maintenance should be done in such a manner that trails do not contribute to erosion, damage to creeks and riparian areas, trail braiding, trampling of vegetation, injuries and avoid increases in human-wildlife conflicts. Unauthorized informal trails established by park visitors need to be closed off and restored in a timely manner.

A monitoring procedure will be used as in Section 5.2. Monitoring observations will take place at a minimum of twice per year at the four established checkpoints noted in Section 5.2. The observations will be recorded on the Park Trails, Pests/ Disease Checklist in Appendix B. The checklists will be retained for future reference.

Observations will focus on:

1. Trail condition status/unauthorized establishment of informal trails.
2. Disturbance of vegetation by logging, plant and mushroom removal.

5.5 Encroachment

One of the District's challenges is that there are cases where private property owners have encroached onto adjacent parkland with structures, fences, gardens, etc. These encroachments can be detrimental to environmental values through increasing fragmentation, introduction of invasive plants, increased pollution, infilling of wetlands, and dumping of garden waste. Whyte Lake Park currently does not have any known encroachments. However, any encroachment should be documented if it occurs.

5.6 Infrastructure Construction

Park users' convenience requirements may lead to calls for further infrastructure development in the form of additional trails, washrooms, picnic areas, parking or other amenities. However, only amenities that balance with the high environmental value of the park should be considered in the planning of any further infrastructure development at Whyte Lake Park. The build-up of infrastructure in the Park is to be kept at a minimum level. Beyond the consideration of interconnectivity to other regional trails, no further trails than the existing ones will be established at Whyte Lake Park. In addition, if other management activities such as fire or monitoring activities require further permanent access points, a dual use may be considered. Any temporary access

points to restore disturbed lands are not to be used as trails or viewpoints in the future. These will need to be closed off to the public and reforested as well.

5.7 Invasive Plants

Invasive plants are a major concern in the District's parks. The District prepares educational information and regularly updates its staff and citizens regarding the risks and the control of invasive plants. The District also actively discourages the sale and use of invasive plants in the community, e.g. Lamium, English Ivy.

To prevent any threat to the existing forest inventory from invasive plants, the monitoring procedure at Whyte Lake Park also considers invasive plants. Monitoring observations will take place at a minimum of twice per year at four established checkpoints. The observations will be recorded on the Park Trails Checklist. Please see Appendix A for a copy of the checklists. The checklists will be retained for future reference.

Visual observations will seek out any signs of invasive plants, with a priority emphasis on Knotweed and Hogweed from the Invasive Plants Strategy Target List.

5.8 Windthrow

Windthrow damage occurs as a domino effect. It often begins where there are pre-existing tree defects such as root rot or stem decay, where there are severely restricted roots or in areas adjacent to recently logged or damaged areas. These areas represent valuable areas for future damage at times of excessive wind speeds and are causing a progression of tree failures. The monitoring activities will focus on such areas after each major wind storm occurrence to identify areas that potentially represent a future windthrow damage threat. These areas need to be monitored more intensely for diseases and pests, and replanting activities need to focus on re-establishing wind resistant stands.

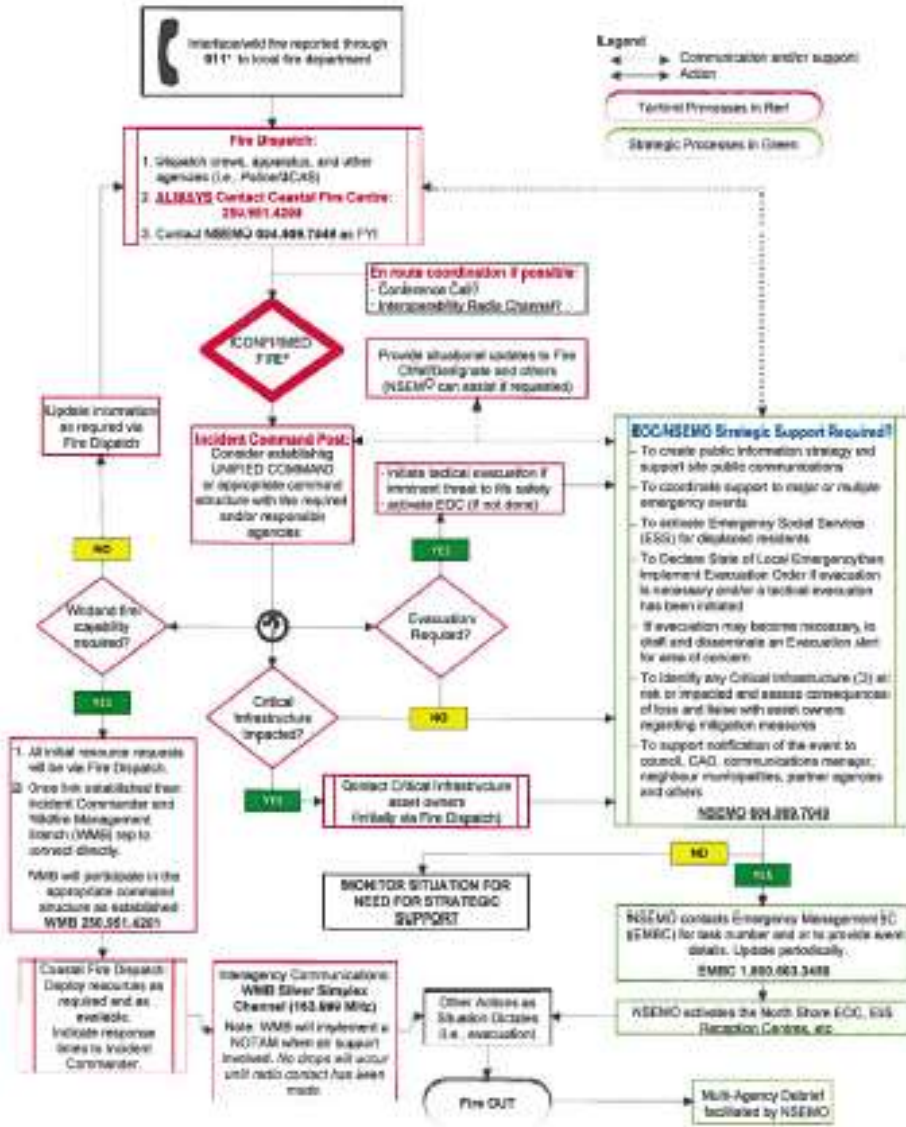
5.9 Growth, Mortality and Regeneration

Apart from the threat posed by diseases, pests and windthrow, the natural regeneration of the forest stand can be diminished by other factors. Changes in rainfall, temperature and wind patterns are other factors that can reduce the natural ability of the forest stand to sustain itself. Therefore it is important to establish overall monitoring activities for the forest stand to identify such developments early. Such forest stand monitoring activities should be conducted at least every ten years by establishing permanent forest inventory plots in the park. In between these intervals, park staff will also monitor growth, mortality and regeneration activities as part of their regular maintenance activities.

Appendix A

North Shore Initial Response Guideline for Interface / Wildfires Reported Directly to 911 (Local Fire Departments)

Note: these guidelines do NOT preclude other e-ROFA tasks (i.e. save lives, reduce suffering, protect property and minimize impacts).



* Note: Interface/Wildfires may also be reported directly to Coastal Fire Centre via 1 800 663 3499 or 1999 (from cell phone) and will call Fire Department Dispatch to provide information.

* Note: for large established fires, Coastal Fire will immediately dispatch resources even if site reconnaissance has not been completed.



10/2012 July 2012

Appendix B

PARK TRAILS, PESTS/ DISEASE AND INVASIVE PLANT CHECKLIST

Whyte Lake Park

DATE: _____

1. Trail: Condition

- Excellent
- Good
- Fair
- Poor

Trail Observations:

Checkpoint	Item	Action needed	Priority (U, H, M, L)
1.			
2.			
3.			
4.			

2. Pests and Disease

- Visually observe trees in area for signs of disease
- Visually observe trees in area for signs of pests

Pests/ Disease Observations:

Checkpoint	Item	Action needed	Priority (U, H, M, L)
1.			
2.			
3.			
4.			

3. Invasive Plants

- Visually observe general area invasive plants
- Visually observe edge of trail for invasive plants
- Visually observe any newly disturbed areas

Are invasive plants present? Y or N

If Y, note below

Checkpoint	Type	Action needed	Priority (U, H, M, L)
1.			
2.			
3.			
4.			

4. Vegetation disturbances

- Visually observe general area for signs of logging
- Visually observe edge of trail for plant and mushroom removal
- Visually observe any deer browsing

Vegetation disturbance observations:

Checkpoint	Type	Action needed	Priority (U, H, M, L)
1.			
2.			
3.			
4.			