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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Water Committee

From: Mike Mayers, Division Manager, Watershed Operations & Protection, Water Services

Date: April 28, 2022 Meeting Date: May 11, 2022

Subject: **Lower Seymour Conservation Reserve Management Plan 2022**

RECOMMENDATION

That the Water Committee receive for information the report dated April 28, 2022 titled "Lower Seymour Conservation Reserve Management Plan 2022".

EXECUTIVE SUMMARY

The Lower Seymour Conservation Reserve (LSCR) plays an important function in current water utility operations and future water supply planning. Home to a variety of water supply-based infrastructure including the Seymour Capilano Filtration Plant, and 10 kilometers of the Seymour water main, the LSCR also provides an excellent ecological buffer between the urban region and the water supply area. As was originally contemplated when the area was set aside, a second dam at mid-valley remains as a long-term water supply option.

The 2002 Lower Seymour Conservation Reserve Management Plan was updated this year. The new 2022 Plan expresses a long-term vision to guide the operations of the reserve over a 10-year horizon and is based on the existing programs and uses.

This report highlights high-level objectives of the 2022 Plan and provides links to the Water Services Drinking Water Management Plan and public and agency engagement. Through the 2022 Plan update process, it was determined that the original goals and principles were still substantially relevant and required only minor updates to modernize them and expand the management vision over the next decade. Primary updates were focused within the strategies and goals to better reflect current challenges and newly discovered initiatives.

PURPOSE

To inform the Committee of the review and updates to the Lower Seymour Conservation Reserve Management Plan, and highlight the guiding principles, goals, and implementation strategies within the plan.

BACKGROUND

The Lower Seymour Conservation Reserve (LSCR) was first opened to the public in 1987 as the Seymour Demonstration Forest. In 2002 a management plan was approved by the Board with a 20-year horizon. In 2019 staff initiated a review to determine if the plan vision and goals were still appropriate and continued to provide relevant links with the current and future Drinking Water Management Plan objectives. A consultant was retained to complete engagement with the public, stakeholders, stewardship groups, and Municipal and Provincial partners to confirm current and

future priorities, required infrastructure improvements, and any necessary operations or programming changes that would be necessary to guide staff for a further 10-year horizon.

At the November 1, 2002 meeting, the GVWD Board endorsed the following recommendation:
a) Adopt the Lower Seymour Conservation Reserve Management Plan.

This report summarizes the plan review engagement process and key plan areas that were updated in the 2022 Plan.

LOWER SEYMOUR CONSERVATION RESERVE

The Lower Seymour Conservation Reserve (LSCR) is a 5,668-hectare land reserve located south of the Seymour Reservoir and water supply area managed by Metro Vancouver. The LSCR has been open to the public since 1987 to encourage education and recreation opportunities that co-exist with the reserve's current and future water supply functions. The primary purpose of the LSCR is for future water storage and supply. The Seymour water supply area and reservoir provide approximately one-third of the region's water supply and the LSCR is home to critical water supply infrastructure, such as large-diameter water mains that transport water downstream from the Seymour Reservoir to the Seymour Capilano Filtration Plant. Projects to improve or expand this infrastructure include the seismic upgrade of Seymour Falls Dam (2008), the completion of the Seymour Capilano Filtration Plant (2009), and the Seymour Capilano Twin Tunnels Project (2015). The LSCR is distinguished from a traditional park environment because it is reserved for the potential future water supply needs of a growing regional population.

Metro Vancouver has numerous initiatives in the LSCR that benefit the region including education and interpretive programs around water supply and watershed ecology, fish habitat restoration and enhancement projects, research studies, environmental stewardship, and a variety of recreation opportunities including nature appreciation, hiking, cycling, mountain biking, dog walking, kayaking, and fishing.

MANAGEMENT PLAN

Vision and Goals

As stated in the 2022 Plan, "The LSCR will maintain its primary purpose as a future water reserve while protecting ecological health and engaging the public through a variety of recreation, education, and stewardship opportunities".

The 2022 Plan will guide staff for a further 10 years and continue to reflect the Board's original four goals for managing the LSCR which include:

1. Maintain the primary capacity of the LSCR to manage critical drinking water infrastructure and ensure a sufficient supply of clean, safe drinking water for a growing region
2. Continue ongoing partnerships, education, and community engagement in the LSCR
3. Monitor, maintain, and enhance the ecological health of the LSCR
4. Maintain and enhance the potential for recreation and other compatible uses in the LSCR.

The 2022 Plan builds upon the previous plan, periodic reviews, public, and stakeholder engagement and highlights changing conditions, priorities, and approaches. Several new strategies have been

included to address current issues such as climate change, future water infrastructure needs, expanding relationships with local First Nations, and shifts in public use. The implementation of this management plan will drive annual work plans and allow tracking of progress toward fulfilling the overarching guiding principles. The 2022 Plan, particularly the strategies and actions, will be reviewed and updated every 5 years. This allows progress to be tracked, new research and information to be incorporated, and the plan to be aligned with Metro Vancouver's planning initiatives and policies.

HIGHLIGHTS OF NEW STRATEGIES AND ACTIONS

Throughout the Plan, you will see strategies and targeted actions that will guide staff towards achieving the four plan goals. Some of these include:

- Ensure the Goal 1.0 message is communicated to the public by highlighting the importance of the LSCR's role in the water supply in all outreach programs;
- Strengthen relationships with Indigenous Nations and Peoples to gain a better understanding of shared interests in the LSCR within their lands by exploring opportunities for increased engagement, dialogue, and collaboration between Metro Vancouver and Indigenous Peoples;
- Monitor forest ecosystems and the impacts of climate change by restoring and enhancing forest ecosystems in stands of low biological diversity to improve important ecosystem functions and adapt to climate change impacts;
- Continue to improve visitor amenities and experiences by building a multi-use Watershed Centre and surrounding amenities.

MANAGEMENT PLAN ENGAGEMENT

On an annual basis since 2002 staff have engaged with the public to seek feedback on annual projects and initiatives through online newsletters and an annual open house. Input over the years has been positive and constructive. In 2019, with consultant assistance, this feedback was reviewed and staff began an in-depth engagement process which included public surveys, and meetings with stakeholders, stewardship groups, and Municipal and Provincial partners to review the management plan goals and strategies, look for trends, and get feedback on new initiatives.

Going forward, staff will employ the following engagement strategies to ensure continued collaboration:

Engagement Strategy	Objective
Annual Open Houses	Public opportunity to learn about and provide feedback on water infrastructure projects and LSCR short and long-term plans and projects.
Stakeholder meetings	Focused opportunities for special interest groups, associations, and agencies to learn about and provide feedback on Water Infrastructure Capital Projects, and LSCR short and long-term plans and projects.
Biannual LSCR E-newsletter	Sent to an established distribution list to provide project updates, stewardship & engagement opportunities, and contact information.
Signage in the LSCR	General project information, engagement opportunities
Metro Vancouver webpage	Provides project notifications & updates, stewardship & engagement opportunities, public & school tour information, and contact information.

IMPLEMENTATION

The plan goals, strategies, and actions set sound management practices to ensure the vision for the LSCR is met. Implementation will take place with a balanced approach, considering the full range of environmental, social, and economic costs and benefits.

To incorporate new information and changing conditions, the management plan will be reviewed annually and action priorities adjusted. A full review and update of the plans goals and strategies will occur every 5 years and serve as an opportunity to monitor implementation and reflect on any gaps or new priorities that may arise.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The updated management plan will establish a 10-year operational and project horizon for the LSCR. The current operations are funded through the LSCR Operations Program of the Watersheds and Environment Divisional budget. Going forward and as part of Metro Vancouver's long-term planning initiative, new initiatives will be reviewed and included in the Long term financial plan.

CONCLUSION

The LSCR plays an important function in current water utility operations and future water supply planning. The updated LSCR Management Plan 2022 will be a dynamic management tool for the continued effective operation of the area for a further 10-year horizon. The framework and goals written for the 2002 LSCR Management Plan remain relevant and have been transferred to the 2022 Plan. The strategies and actions were revised to better reflect current challenges and priorities. Annual and 5-year reviews will allow for proactive management, reprioritization of actions, and the ability to integrate and remain current with other Metro Vancouver management plans.

Attachment

Lower Seymour Conservation Reserve Management Plan 2022 (*51917501*)

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Lower Seymour Conservation Reserve

Management Plan 2022

Metro Vancouver is a federation of 21 municipalities, one electoral area, and one treaty First Nation that collaboratively plans for and delivers regional-scale services. Its core services are drinking water, wastewater treatment and solid waste management. Metro Vancouver also regulates air quality, plans for urban growth, manages a regional parks system and provides affordable housing. The regional district is governed by a Board of Directors of elected officials from each local authority.

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous peoples, including 10 local First Nations: Katzie, Kwantlen, Kwikwetlem, Matsqui, Musqueam, Qayqayt, Semiahmoo, Squamish, Tsawwassen, and Tsleil-Waututh.

Metro Vancouver respects the diverse and distinct histories, languages, and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.

FRONT COVER: VIEW FROM SEYMOUR FALLS GAZEBO

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Burnaby, BC V5H 0C6

SEYMOUR CAPILANO FILTRATION PLANT

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Introduction

Lower Seymour Conservation Reserve

The Lower Seymour Conservation Reserve (LSCR) is a 5,668-hectare land reserve located south of the Seymour Reservoir and water supply area managed by Metro Vancouver. The primary purpose of the LSCR is for future water storage and supply. The Seymour water supply area, located north of Seymour Falls Dam, has restricted public access to ensure a clean and reliable source of drinking water for the region. The LSCR opened to the public in 1987 to encourage education and recreation opportunities while co-existing with its current and future water supply functions. The popularity of the LSCR among the public continues to grow as visitors come to experience some of the most spectacular and diverse landscapes in the Metro Vancouver region and learn about their drinking water supply system. Its forested valley, river flood plain, and sub-alpine areas are accessible from all of Metro Vancouver (Figure 1).

Why is it Important?

The Seymour water supply area and reservoir provides approximately one third of the region's water supply. The LSCR is home to critical water supply infrastructure, such as large-diameter water mains that transport water downstream from the Seymour Reservoir. Recent projects to improve or expand this infrastructure include the seismic upgrade of Seymour Falls Dam (2008), the completion of the Seymour Capilano Filtration Plant (2009) and the Seymour Capilano Twin Tunnels Project (2015). The LSCR is distinguished from a traditional park environment because it is reserved for the potential future water supply needs of a growing regional population.

Metro Vancouver has numerous initiatives in the LSCR to enhance public amenities and benefits, including education and interpretive programs around water supply and watershed ecosystems, fish habitat restoration and enhancement projects, research studies, environmental stewardship, and expansion of recreation opportunities. With an extensive trail network as its backbone, recreation opportunities include nature appreciation, hiking, cycling, mountain biking, dog walking, kayaking and fishing.

SEYMOUR CAPILANO FILTRATION PLANT

Greater Vancouver Water District

Metro Vancouver and its members work together to provide clean, safe drinking water to the region. The Greater Vancouver Water District (GVWD) membership consists of 18 municipalities, one Electoral Area, and one Treaty First Nation. Working together with the members of the GVWD, we plan for and deliver regional scale drinking water services to approximately 2.7 million people. We are responsible for protecting and providing the region's water supply, including: protecting our water supply areas, storing, treating and ensuring the quality of our water, supplying water directly to our member jurisdictions, and planning for future supply and demand. Our member jurisdictions are responsible for providing water to residents and businesses, enforcing regulations, utility billing, and where used, water metering.

FIGURE 1 LSCR REGIONAL CONTEXT

Purpose of the Management Plan

Sustainable management of this area requires a balance of many environmental, social and economic considerations in order to achieve Metro Vancouver's goals for the LSCR. This plan outlines management strategies that ensure water utility operations and public access while continuing to protect ecological integrity of the LSCR.

The previous management plan was developed in 2002, at a time when the LSCR was transitioning from a "demonstration forest" approach to a focus on conservation and sustainable recreation. Since 2002, recreation and utility uses in the LSCR have changed; numerous projects and initiatives have been completed, and Metro Vancouver has created several new planning initiatives that affect the LSCR.

The 2022 management plan builds off of the previous plan and highlights changing conditions, priorities and approaches. A number of new strategies have been included to address current issues such as climate change, future water infrastructure needs, and shifts in public use. The implementation of this management plan drives annual operations plans and allows tracking of progress toward achieving the overarching goals.

The management plan, particularly the objectives and strategies, will be reviewed and updated every five years. This allows progress to be tracked, new research and information to be incorporated, and for the plan to be aligned with Metro Vancouver's planning initiatives and policies.

Policy Context

A number of Metro Vancouver policies were reviewed to ensure the plan aligns with current Board direction. (Figure 2). Relevant initiatives and goals were integrated into the management plan from the following:

FIGURE 2 METRO VANCOUVER PLANS

Key Accomplishments Since 2002

Water Utility Infrastructure

- Seismic upgrade of Seymour Falls Dam (2008)
- Seymour Capilano Filtration Plant (2009)
- Seymour Capilano Twin Tunnels Project (2015)

Partnerships and Education

- Collaboration with North Shore Black Bear Society for public education and outreach
- Hosted a variety of stewardship opportunities such as trail restoration, invasive species removal and trail resurfacing
- Provided opportunities for public engagement through user intercept surveys and annual open houses
- Development of curriculum-based education programs that focus on water as a resource
- Development of winter watershed tours in partnership with Mount Seymour Resorts
- Development of virtual programming to aid in improving equity of access to reach larger and more diverse audiences
- Fostered relationships with community groups such as the North Shore Mountain Bike Association and and local hiking groups through the establishment of programs such as the Trail Adoption Program
- Partnership with North Shore Rescue with an established headquarters at the Bone Yard and caches in the LSCR

Ecological Health

- Collaboration with provincial staff on Marbled Murrelet monitoring (radar survey at Seymour Falls Dam)
- Identification and designation of Pacific Water Shrew and Marbled Murrelet Critical Habitat under the federal Species at Risk Act
- Collaboration with BC Parks on bat species monitoring
- Significant restoration and remediation projects at Seymour Mainline – 2km, Seymour Capilano Filtration Plant Frog Pond, and the North Shore Skeet Club and Pacific Shooters Association range sites
- Installation of two new hydrometric stations to improve environmental flow monitoring from Seymour Falls Dam
- Improvements to culverts and drainage structures which were not previously passable to fish

Recreation

- Development of LSCR Trail Standards (2017) and completion of the Trails Strategic Plan (2018)
- Replacement of the Baden Powell staircase (2018)
- Construction of the Seymour River Suspension Bridge (2018)
- Surfacing and drainage improvements to Fisherman's Trail
- Surfacing and drainage improvements to Dog Mountain Trail
- Replacement of bridges along the Coho Trail

Vision

The LSCR will maintain its primary purpose as a future water reserve while protecting ecological health and engaging the public through a variety of education, stewardship, and recreation opportunities.

The vision for this plan reflects the Board's goals for managing the LSCR and looks 10 years into the future to outline important values that guide the management of the LSCR. The vision highlights the four key areas the plan is structured around: water services, education, ecological health and recreation.

The LSCR's primary purpose will continue to be the facilitation of public drinking water supply infrastructure and maintaining its purpose as a future water reserve. In addition, the LSCR plays an important role in the protection of a large forested area on the North Shore. While not a park itself, it is part of an inter-connected system of natural areas that offer education and recreation opportunities. The LSCR will continue to be an outdoor classroom and a showcase for the region's water supply system. It will provide an important opportunity for the public to learn about the ecological and biological diversity of the area including forest management activities that focus on conserving, restoring, and enhancing healthy ecosystems.

Managing recreation will minimize impacts on the environment and local community while recognizing and protecting the LSCR's importance in the region's drinking water supply system.

Guiding Principles

Seven principles guide Metro Vancouver in managing the LSCR

1. Recognize the LSCR's multiple values and work to balance them with the key goal of supporting the region's water utility.
2. Encourage and support public involvement in decision-making, program delivery, land management and monitoring activities.
3. Lead by example in encouraging stewardship, education, and research in the LSCR.
4. Use adaptive management strategies to measure and adapt to changing conditions, environmental impacts, and new challenges.
5. Implement protection of environmental values early in all project planning and review processes.
6. Restore and enhance ecosystems, particularly human-impacted areas, to the greatest extent possible.
7. Support recreation activities with regional interest that depend on the unique landscapes and features of the LSCR while managing impacts to environmental values.

HIGH SCHOOL TOUR OF THE SEYMOUR CAPILANO FILTRATION PLANT

GOAL 1 Maintain the primary capacity of the Lower Seymour Conservation Reserve to manage critical drinking water infrastructure and ensure a sufficient supply of clean, safe drinking water for a growing region

Introduction

The primary purpose of the LSCR, for which the land was purchased or leased from the Province, is to provide for future water supply and infrastructure.

Present water supply needs are met by the Capilano, Seymour, and Coquitlam reservoirs. The Seymour water supply area, north of the LSCR, supplies one third of the region's drinking water.

Why is it important?

The LSCR functions as an integral part of the water delivery system for the Seymour Reservoir, containing extensive water utility infrastructure, including Seymour Falls Dam, large-diameter watermains, water treatment, and operations and maintenance facilities. Since the implementation of the 2002 LSCR Management Plan, many new infrastructure projects have been completed including a seismic upgrade to Seymour Falls Dam and the construction of the Seymour Capilano Filtration Plant (SCFP).

Upcoming water utility projects in the LSCR include a new education and operations building and construction of Seymour Watermain No. 5 from Seymour Falls Dam to the SCFP (Figure 3). A growing population and increasing supply storage vulnerabilities due to climate change mean that water supply may need to be increased even though per capita demand is declining. In the next 100 years, a raised Seymour Falls Dam, an Upper Seymour Watershed Dam, and a Lower Seymour Watershed Dam are among the long-term options being considered to meet future water demands in Metro Vancouver. More information can be found in the Water Supply Outlook 2120.

Key Points: Maintain and Manage

The LSCR is home to critical water infrastructure, and will remain aligned with all Metro Vancouver plans, including the Drinking Water Management Plan and watershed and environmental protection guidelines. The LSCR provides the land base and corridors necessary for projects required to maintain and expand the water supply system. Best management practices are in place to allow for maximum protection of the environment during construction. Additionally, there are often opportunities to use this work to advance other goals relating to recreation, ecological health, and partnerships.

WATER SUPPLY AREAS

Metro Vancouver's drinking water comes from the Capilano, Seymour, and Coquitlam water supply areas (Figure 1). Together they include approximately 60,000 hectares of land with restricted access to the public for protection from pollution, erosion and fire. Each water supply area contains a lake or storage reservoir formed by impoundment of the river valley and is contained by a dam that regulates outflow. Rainfall and snowmelt fill the reservoirs, and their high elevations allow for gravity feed delivery to much of the Metro Vancouver region. In the LSCR, the Seymour Reservoir is visible from the Seymour Falls Picnic Area. The water supply areas also contain three supplemental feeder lakes: Palisade Lake, Burwell Lake, and Loch Lomond, with the latter two feeding into the Seymour Reservoir.

GOAL 1.0: MAINTAIN THE PRIMARY OBJECTIVE OF THE LSCR AS A WATER RESERVE AND TO PROVIDE FOR WATER UTILITY INFRASTRUCTURE

STRATEGIES	ACTIONS
1.1 Maintain access to critical water infrastructure.	1. Ensure all roads that provide access to water services infrastructure are maintained to industry standard. Facilitate water infrastructure construction projects 2. Ensure seasonal maintenance is completed for vegetation and snow clearing
1.2 Manage the LSCR in a way that maintains the environmental integrity of the land base for future water supply development.	1. Complete an environmental review and planning process prior to any projects to minimize and mitigate environmental impacts 2. Ensure the Guidelines for Materials Importation for Watershed Lands are followed 3. Continue to implement an invasive species management program to minimize or eradicate high risk invasive species 4. Implement best management practices as identified in the Trails Strategic Plan to minimize environmental disturbance during trail construction (minimize vegetation disturbance and erosion) 5. Prepare an aggregate development plan that includes minimizing impacts and restoring disturbed areas 6. Implement environmental protection strategies identified through the Environmental Management System (e.g. fuels management, road salt storage etc.) 7. Ensure staff complete environmental awareness training, including invasive species and environmental management, and are aware of risks and standards
1.3 Ensure the Goal 1.0 message is communicated to the public.	1. Highlight the importance of the LSCR's role in the water supply in all outreach programs: a. Watershed education (school and public) b. Interpretative signage and displays c. E-newsletters d. Webpages e. Open house materials

WHY IS THERE AGGREGATE DEVELOPMENT IN THE LSCR?

Gravel and rock aggregate extraction for water utility projects in the LSCR has been strongly supported by the public as a means of reducing truck traffic and greenhouse gas emission within the local community, and reducing the potential for introduction of contaminants to the water supply area. To ensure aggregate extraction does not impact sensitive ecosystems and their functions, Metro Vancouver develops strategies for the extraction and management of each aggregate resource area. These strategies address the aggregate requirements of the water utility capital projects as well as ongoing operations and maintenance requirements within the LSCR.

Planning considerations include:

- Hydrology, fish and aquatic habitat, and erosion control
- Protect species and ecosystems
- Restoration opportunities
- Aggregate importation cost/benefit analysis

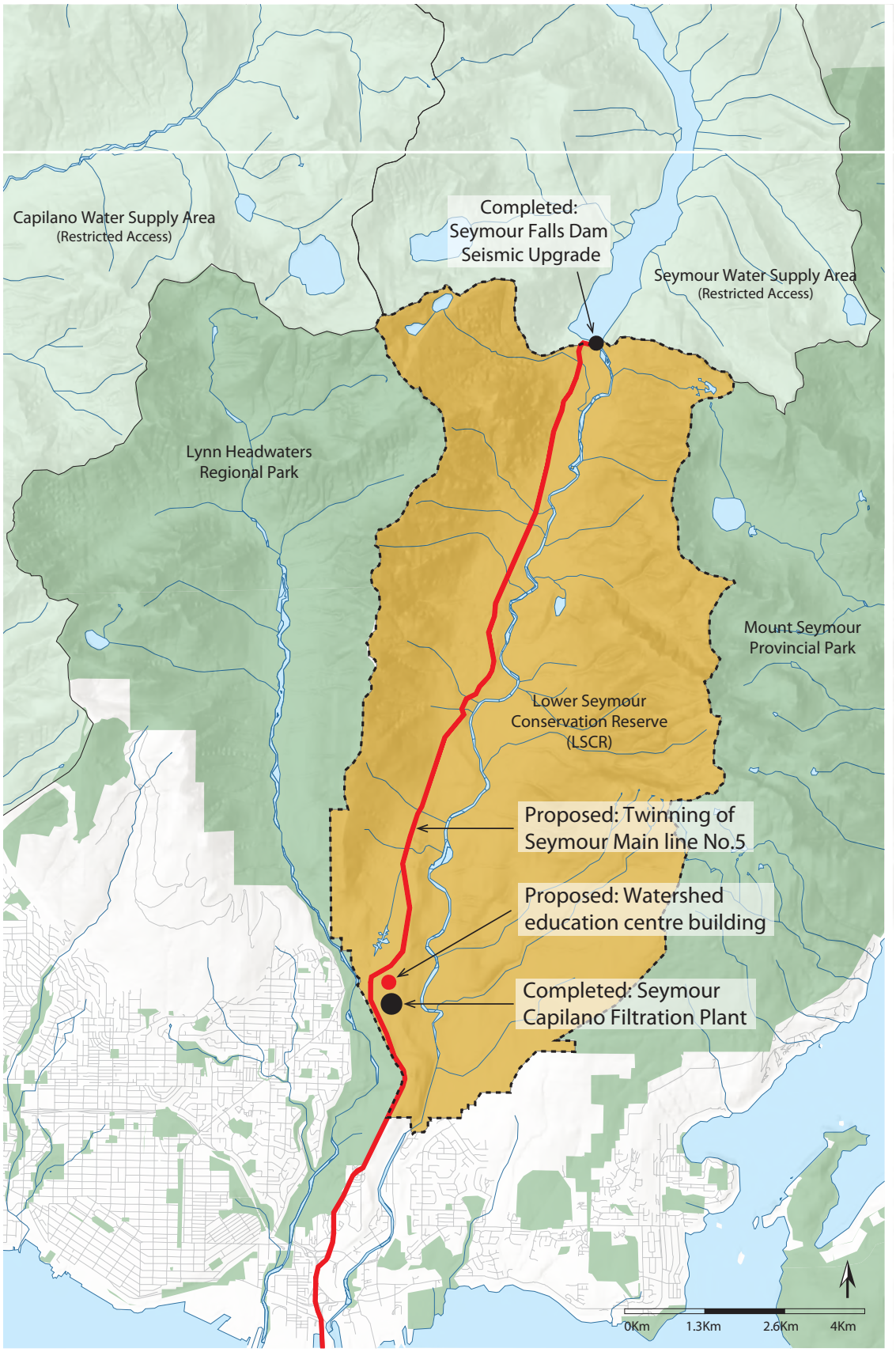


FIGURE 3 LSCR UTILITY PROJECTS

SEYMOUR RESERVOIR LOOKING EAST

GOAL 2 Continue ongoing partnerships, education and community engagement in the Lower Seymour Conservation Reserve

Introduction

The LSCR plays an important role in the community through partnerships with research and stewardship organizations, watershed education programming, and engagement and outreach. The area is well-used by the community for recreation and as a place to connect with nature. As the home of critical water services infrastructure, it underpins the daily lives of many in the region through its role in the drinking water system.

Why is it Important?

LSCR staff connect with the public in person, through an e-newsletter, the annual open house event, education booths, and through the LSCR email. Education programs in the LSCR contribute to Metro Vancouver's holistic approach to supplying the region's drinking water, which is to focus not just on providing a clean, safe supply, but also on education and outreach to ensure its sustainable use. Watershed education programming in the LSCR promotes conservation through the message that drinking water is a precious resource. Educators also describe the role of the LSCR and Metro Vancouver's water supply areas in providing drinking water for the region.

Key Points

Metro Vancouver aims to foster partnerships that further research and stewardship efforts in the LSCR. Many passionate individuals and organizations are involved in recreation and stewardship activities in LSCR, such as the North Shore Mountain Bike Association and the Seymour Salmonid Society.

Metro Vancouver also helps fund and mentor research by students at post secondary institutions in the Lower Mainland. The LSCR offers diverse opportunities for research that are not commonly found in close proximity to a major urban centre. At the same time, student projects benefit the knowledge base available to inform management decisions in the LSCR. Recent projects from the Sustainability Scholars Program with the University of British Columbia have focused on a number of Metro Vancouver's Climate 2050 topics, such as monitoring forest health, changes in species composition, reducing greenhouse gas emissions from regular operations, managing invasive species, and monitoring climate change data.

EDUCATION PROGRAMS IN THE LSCR

Metro Vancouver's watershed education tours and student field trips provide citizens with the opportunity to see where their water comes from, understand the value of our water resource, develop a sense of pride and confidence in the water supply, and become champions for sustainability.

Watershed school field trips started in 1989 and the public Watershed Tours Program was initiated in 1993 when logging operations were ending in the water supply areas. Opening up these closed areas for tours provided the opportunity to build trust with the public and create a culture of education and engagement around water supply operations. While these initial tours focused on familiarizing the public with management of the water supply areas, our programs have moved beyond that, engaging citizens in the importance of protected water supply areas, processes of treatment and transmission, conservation and our partnerships with member jurisdictions, provincial and federal governments, and non-governmental organizations to manage a resilient and efficient system.

GOAL 2.0: CONTINUE ONGOING PARTNERSHIPS, EDUCATION AND COMMUNITY ENGAGEMENT

STRATEGIES	ACTIONS
2.1 Strengthen relationships with Indigenous Nations and Peoples to gain a better understanding of shared interests in the LSCR within their lands.	1. Continue to engage with Indigenous Peoples on Metro Vancouver infrastructure works and other projects 2. Continue with conducting Archaeological Overview Assessments (AOAs) and, as needed, Archaeological Impact Assessments (AIAs) for projects 3. Explore opportunities for increased engagement, dialogue and collaboration between Metro Vancouver and Indigenous Peoples
2.2 Communicate the objectives and directions of the water utility in public interpretive and education programs.	1. Develop and deliver programs for the general public and K-12 audience that align with key themes: a) The role of the Metro Vancouver water utility to the region b) Importance of protected water supply areas c) Water treatment and distribution processes d) Raise awareness of the LSCR's important role in the region's future water supply (e.g. expanded water source capacity) e) Current BC education curriculum 2. Develop and deliver outreach materials that communicate key themes: a) Quarterly newsletter b) Interpretive signage c) Brochure d) Website updates
2.3 Guide research and interpretive activities based on environmental, recreational, educational, and cultural heritage landscapes.	1. Encourage and facilitate research with post-secondary institutions, other organizations, and provincial and federal agencies 2. Ensure completed LSCR research projects and reports are provided to the Metro Vancouver Library for public access 3. Recognize, manage, protect and interpret Indigenous and non-Indigenous cultural heritage resources. As needed, conduct Archaeological Overview Assessments (AOAs) and Archaeological Impact Assessments (AIAs).
2.4 Promote and expand stewardship opportunities.	1. Develop new relationships with partners and provide opportunities for volunteers to participate in stewardship activities such as invasive species management, trail maintenance, riparian habitat restoration, etc 2. Host an annual open house to inform and engage the public in ongoing stewardship and management 3. Connect with members of the community engaged in citizen science data collection and monitoring 4. Establish partnerships with nonprofits and consulting firms to explore grant funding opportunities to advance ecological research and restoration activities

ANNUAL OPEN HOUSE

Each spring or summer, the LSCR hosts its annual open house event to connect with the community. Members of the public are invited to drop by to learn about ongoing projects and programs, and staff are on hand to answer questions. The annual event is also an opportunity for LSCR staff to consult with members of the public on new initiatives. Each annual event provides the opportunity for the public to:

- Get updates on trail improvements, amenity upgrades and major projects
- Hear about stewardship opportunities and education programs
- Learn about where their water comes from and their role in its sustainable use

PARTNERSHIPS AND STEWARDSHIP

Metro Vancouver fosters partnerships with a variety of organizations to help fulfil goals related to ecological health, recreation uses, and community engagement in the LSCR.

Trails

Metro Vancouver relies on partnerships with local trail users, trail associations, and neighbouring land managers to help maintain over 100 kilometres of trails in the LSCR. Local trail associations and recreation groups apply for Trail Maintenance Permits and work with LSCR staff to ensure that the proposed work adheres to LSCR trail building standards. The North Shore Mountain Bike Association has a permit through the Trail Adoption Plan, in which a trail maintainer oversees volunteer work on trail upgrades, often sponsored by a local business. The Trail Adoption Plan program has contributed over 20,000 hours of trail maintenance across the North Shore since its inception in 2011. For all of the LSCR's trail partnerships, the focus is on building sustainable trails that minimize environmental disturbance and improve the user experience for all abilities.

Ecological Stewardship

The LSCR also fosters partnerships with conservation groups and members of the public for stewardship activities, such as habitat enhancement and invasive species management. This includes working closely with the Seymour Salmonid Society. The society operates the Seymour River Fish Hatchery, and was established to enhance salmonid stocks impacted by the creation of the Seymour Falls Dam. The society runs education programs, such as the Gently Down the Seymour field trip program, and habitat enhancement work along the Seymour River. The society has also been instrumental in mitigating the impacts of the 2014 Seymour River rockslide on salmonid populations.

VOLUNTEER DAY ON BOTTLETOP TRAIL

CULTURAL HERITAGE

There is a diverse cultural heritage in the LSCR, and maintaining this is an important part of stewardship of the reserve. Indigenous Peoples had an extensive trail system and used these lands for resource gathering, hunting, and ceremonies.

Over 40 historic heritage sites representing land-use by Euro-Canadian and Japanese Canadian people are currently known in the LSCR. Historic heritage sites in the LSCR include archaeological sites, defined in BC as those that pre-date 1846, and are protected under the BC Heritage Conservation Act, as well as post-European contact sites. There is abundant evidence of this more recent history of logging, homesteading, mining, and the development of water infrastructure and transportation routes in the LSCR. Two former logging camps in particular, at McKenzie Creek and Suicide Creek, are significant from an archeological perspective for the insight they offer into the experience of early 20th century Japanese Canadians. The McKenzie Creek site was added to the BC Register of Historic Places in 2017.

Collectively, cultural sites in the LSCR form "heritage landscapes" representing distinct periods and activities that have been superimposed upon the landscape chronologically. Eight heritage landscapes are represented in the LSCR. Metro Vancouver will take responsibility and act as stewards in managing the LSCR's heritage landscapes. Members of the region's First Nations and the public will be engaged to help determine the significance and best means for managing cultural heritage resources.

Cultural heritage information and artifacts from the LSCR are currently held within the LSCR at excavation sites and at Capilano University, as well as in the permanent collections of the North Vancouver Museum and Archives and the Nikkei National Museum and Cultural Centre.

INDIGENOUS RELATIONS

The Lower Seymour Conservation Reserve is located within the shared consultative areas of nine First Nations and tribal councils: three First Nations with communities located within the Metro Vancouver region (Musqueam Indian Band, Squamish Nation and Tsleil-Waututh Nation) as well as six other First Nations and tribal councils whose communities are located in the Fraser Valley (Seabird Island Band, Shxw'ow'hamel First Nation, Skawahlook First Nation, Soowahlie First Nation, Stó:lō Nation and Stó:lō Tribal Council).

Metro Vancouver actively engages with First Nations on its capital and infrastructure projects as well as other plans and initiatives. Over the past 10 years, Metro Vancouver has developed an information sharing and engagement process based on First Nations' requests, provincial guidance, court decisions, legal advice, best practices, and ongoing research. The process for sharing information and engaging with First Nations ensures that Metro Vancouver staff apply a consistent approach in project management and provincial permitting processes.

RESEARCH IN THE LSCR

Metro Vancouver actively works with academic institutions to support natural resource management and water quality research. The LSCR has internal and external funding opportunities available. As a large, intact, forested landscape in close proximity to major BC academic institutions, the LSCR presents a unique opportunity for research that supports the protection of our water supply, forests and ecosystems. Examples of past student research projects include:

- The Effect of the Western Hemlock Looper Moths on Forest Health (University of British Columbia)
- Potential Impacts of Recreation on Aquatic and Terrestrial Wildlife Habitat at Lost Lake (British Columbia Institute of Technology)
- Planning for Water Conservation (Simon Fraser University)


ECO LOOP STEWARDSHIP

NORTHERN RED-LEGGED FROG

GOAL 3 Monitor, maintain, and enhance the ecological health of the Lower Seymour Conservation Reserve

Introduction

Located within the lower Seymour Valley, the LSCR contains a mosaic of forest and aquatic habitats, including wetlands, riparian areas, mature and old growth forests, and sub-alpine zones.

Why is it important?

The value of nature can be understood not just through its intrinsic value, but also through the concept of ecosystem services, which are the benefits that people obtain from ecosystem functions. In the LSCR, these benefits are numerous, ranging from provisioning water and supporting biodiversity, recreation, and human health, to contributing to climate change mitigation by removing carbon dioxide from the atmosphere. Through this lens, the forests, rivers and streams of the LSCR can be seen as natural assets in the region's network of green infrastructure.

There are many environmental challenges facing the region, including climate change, habitat loss and fragmentation, environmental contamination, and invasive species. In most cases, the LSCR is both impacted by these challenges and plays a role in mitigating the impacts. In the case of climate change, warmer, drier summers and an increase in disturbances pose a risk to forests. At the same time, forests play an important role in temperature regulation and carbon sequestration.

The diversity of forests found in the LSCR provides a variety of habitats as well as education and recreation opportunities. Old-growth forests, those of 250 years of age and older, have the greatest biological diversity of all forests in the LSCR. They are highly significant from a regional and provincial perspective due to their ecological value, representation of rare and endangered ecosystems, and provision of habitat for many species and ecosystems at-risk. Aquatic habitats include the Seymour River, its tributaries, and several lakes and wetlands that support salmon, trout and a diversity of other of species. Riparian areas that have not been impacted by human activities are also some of the most biologically diverse habitats within the LSCR and provide important functions for a wide range of species at different stages in their life cycle.

Key Points: Monitoring, Managing and Enhancing

Data collection is a key tool for maintaining the ecological health of the LSCR and monitoring the integrity and function of sensitive ecosystems. Metro Vancouver's 2018 Sensitive Ecosystem Inventory (SEI) provides standardized identification and mapping of sensitive ecosystems throughout the region. The SEI is based on Terrestrial Ecosystem Mapping to generate SEI values and was also developed through image interpretation followed by selective field checks. Site-level ecological data, research on specific species, and detailed environmental assessments are all also key monitoring tools in the LSCR. Data such as the SEI and site-specific environmental assessments play an important role in management decisions in the LSCR, from water infrastructure planning to the design of individual trail features and restoration of disturbed sites.

GOAL 3.0: MONITOR, MAINTAIN, AND ENHANCE THE ECOLOGICAL HEALTH OF THE LSCR

STRATEGIES	ACTIONS
3.1 Identify the integrity and function of environmentally sensitive areas, ecosystems, and species.	1. Conduct site level assessments to update the SEI 2. Update LSCR Forest Ecosystem Biodiversity Indices 3. Consider restoring and enhancing forest ecosystems in stands of low biological diversity to improve important ecosystem functions and adapt to climate change impacts 4. Restore and enhance aquatic and riparian habitat 5. Monitor the establishment of invasive and non-native species. Create annual action plans for best management 6. Complete natural capital assets study for ecosystem services
3.2 Monitor forest ecosystems and the impacts of climate change.	1. Continue working with our federal and provincial partners to monitor forest health by conducting aerial surveys and ground-truthing 2. Conduct periodic environmental assessments to monitor climate change related impacts to the Rice Creek Watershed and implement recommendations 3. Update habitat suitability maps for relevant species and ecosystems
3.3 Manage environmental impacts from users and development activities.	1. Manage visitor activities and facilities in accordance with identified management zones 2. Restore disturbed sites to enhance ecosystem functions, habitat and biodiversity 3. Minimize habitat losses and impacts through project planning, environmental impact assessments, habitat restoration and enhancement

HABITAT RESTORATION

LSCR ecosystems are largely intact and healthy, and there are very few areas that need restoration. However, as part of providing water utility services as well as education and recreation opportunities, there can be some impacts to ecosystems and habitat. Metro Vancouver is diligent in proactive environmental planning that includes reviews of sensitive ecosystems, consideration of alternatives, and on-site planning and management to avoid and minimize impacts. Where impacts cannot be fully avoided, disturbed areas are restored and enhanced. Other threats to habitat integrity include climate change, invasive species spread, and increased use of the trails and amenities. These challenges will bring new opportunities for habitat restoration and enhancement of biodiversity values.

CLIMATE CHANGE AND ECOLOGICAL HEALTH

The Capilano, Seymour and Coquitlam water supply areas and the LSCR comprise approximately 60,000 hectares of intact and resilient old-growth and second-growth coastal temperate rainforest, representing approximately 20% of Metro Vancouver's land base and approximately 20 million tonnes of carbon storage. Fire suppression, ecosystem conservation, and ecosystem enhancement are actively addressed as critical aspects of drinking water quality protection and are key facets of regional carbon storage and climate change resiliency. Metro Vancouver's Climate 2050 Strategic Framework identifies actions to mitigate climate change impacts on the ecological health of our greenspaces. Given the extensive development and urbanization of the Lower Mainland, intact ecosystems such as the LSCR are crucial to the survival of species and ecosystems at risk. With climate change bringing an expected increase in the disturbance regime for forest pest outbreaks, forest fires and landslides, the LSCR and water supply area landscapes are continually and intensively monitored.

SEYMOUR VALLEY TRAILWAY

TRAIL RUNNING ON HOMESTEAD TRAIL

GOAL 4 Maintain and enhance the potential for recreation and other compatible uses in the Lower Seymour Conservation Reserve

Introduction

The LSCR's natural setting and network of over 100 kilometres of trails for all ages and abilities make the area a cherished regional recreation destination. By providing recreation opportunities that take visitors through the LSCR's forests and along its river, lakes and streams, Metro Vancouver encourages healthy lifestyles and connections with nature.

Why is it important?

Over 600,000 visitors a year enjoy activities such as walking, hiking, inline skating, road cycling, mountain biking, horseback riding, and fishing in the LSCR. Part of what makes the area unique is the number of distinct recreation experiences available, from walking the Rice Lake Loop Trail, to paddling in the Seymour River, to mountain biking and sub-alpine hiking on Mount Seymour. These experiences are enhanced by direct connectivity to other popular recreation areas such as the District of North Vancouver's Lynn Canyon Park, Metro Vancouver's Lynn Headwaters Regional Park, Mount Seymour Provincial Park, and the Canada Mortgage and Housing Corporation's Mountain Forest.

DOGS IN THE LSCR

Dogs are permitted on trails south of Rice Lake Gate and the Homestead Trail and on the access trail to Lynn Headwaters Regional Park. The trail network provides 65 kilometres of trail access for dog walking and includes designated off-leash trails. Signage, education and dog waste receptacles are provided as part of this program. This approach is consistent with Metro Vancouver's policy direction and principles on dog management. Dog walking will be monitored on an ongoing basis and management measures may be adapted to meet the plan's principles and objectives.

As additional trails are established, opportunities for dog access will be evaluated. Visitor and wildlife safety will remain the highest priority in managing dogs. Commercial dog walking is not permitted in the LSCR.

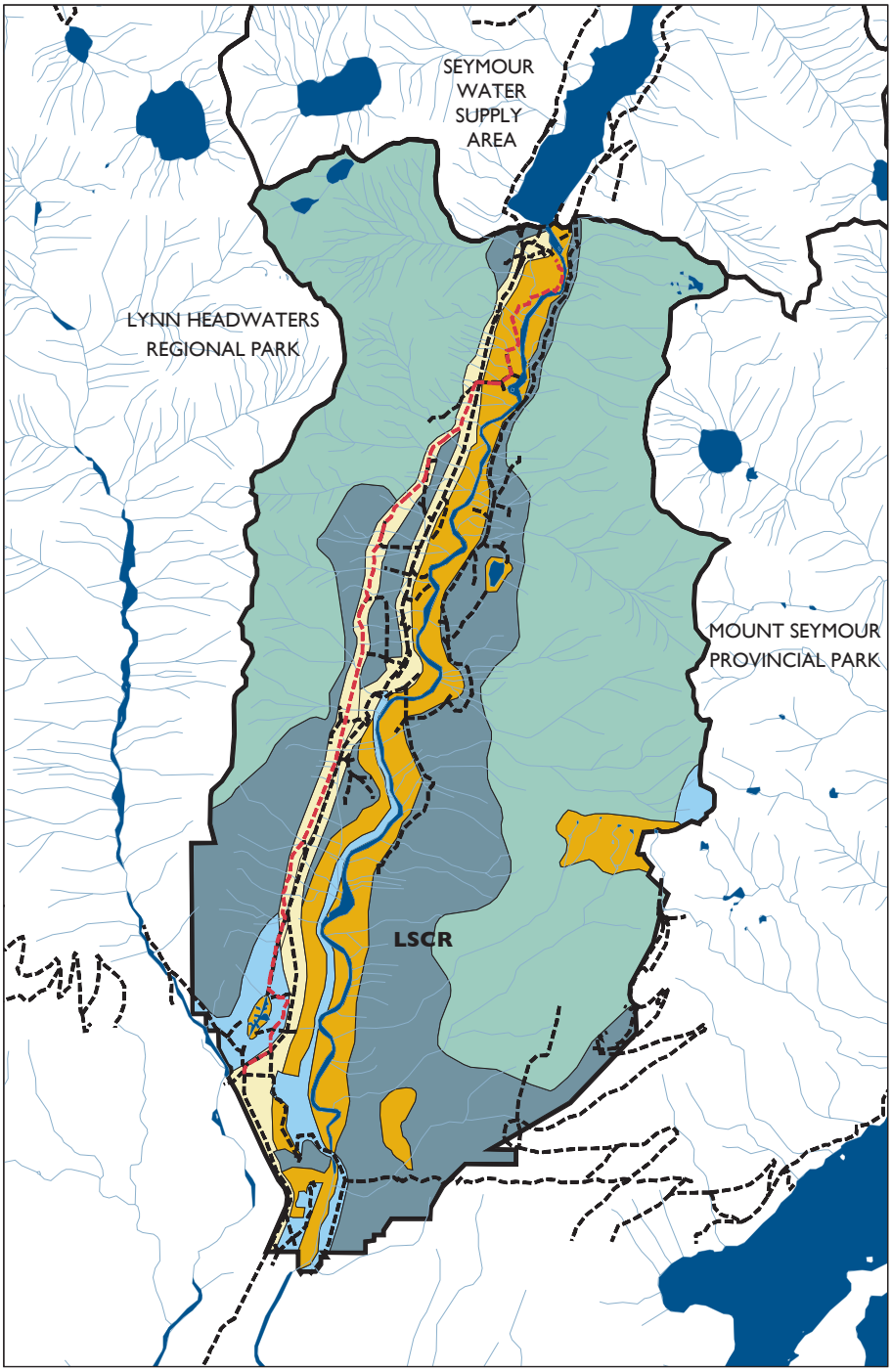
Key Points

Trail maintenance and enhancements are guided by the 2018 Trails Strategic Plan. The Trails Strategic Plan recommendations focus on:

- Creating a cohesive trail network through trail development, improvements to existing trails, trail closures and improving built structures
- Improving visitor experience through enhanced trail amenities and improved signage and wayfinding
- Protecting sensitive ecosystems
- Improving management and maintenance
- Fostering partnerships and stewardship

Ecological health guides many of the Trails Strategic Plan recommendations and plays a key role in planning and managing recreation in the LSCR. The management zones map (Figure 4) illustrates the relationship between ecosystem sensitivity and levels of public access. This zoning framework for the LSCR recognizes the physical and biological sensitivities, as well as existing facilities, in different areas to guide land management. It is based on an approach of providing for higher visitor use in lower sensitivity areas and limiting or carefully managing access in sensitive areas. All zones will be managed to protect sensitive areas or specific habitats including riparian areas, heritage features, old growth forests, and species and ecosystems at-risk.

Low-impact commercial activities are also accepted in the LSCR, provided they are consistent with the other goals and objectives of the management plan and can enhance the visitor experience. Examples of low-impact commercial activities include bike and trail running races, youth and adult bike clinics, outdoor education schools, and filmmaking. The use of permits for commercial activities is required, with fees funding programs and projects in the LSCR.



MAIN THOROUGHFARE
Low Sensitivity, High Use, Extensive Visitor Facilities or Utility Operations Corridor

HIGH USE RECREATION
Moderate Sensitivity, Major Destinations, High Use, Design Standards to Concentrate High Use

SPECIALIZED RECREATION
Medium Sensitivity, Medium Level Use, Design Standards to Terrain and Use

SPECIAL PROTECTION
High Sensitivity, Representative Landscapes, Access and Projects Carefully Managed

FOREST CONSERVATION
High Sensitivity, Access Limited

RECREATIONAL PATHWAY

ROAD

NOTE
Zone locations approximate to guide management.

N

0Km 1Km 2Km 3Km
SCALE 1:75,000

FIGURE 4 LSCR MANAGEMENT ZONES

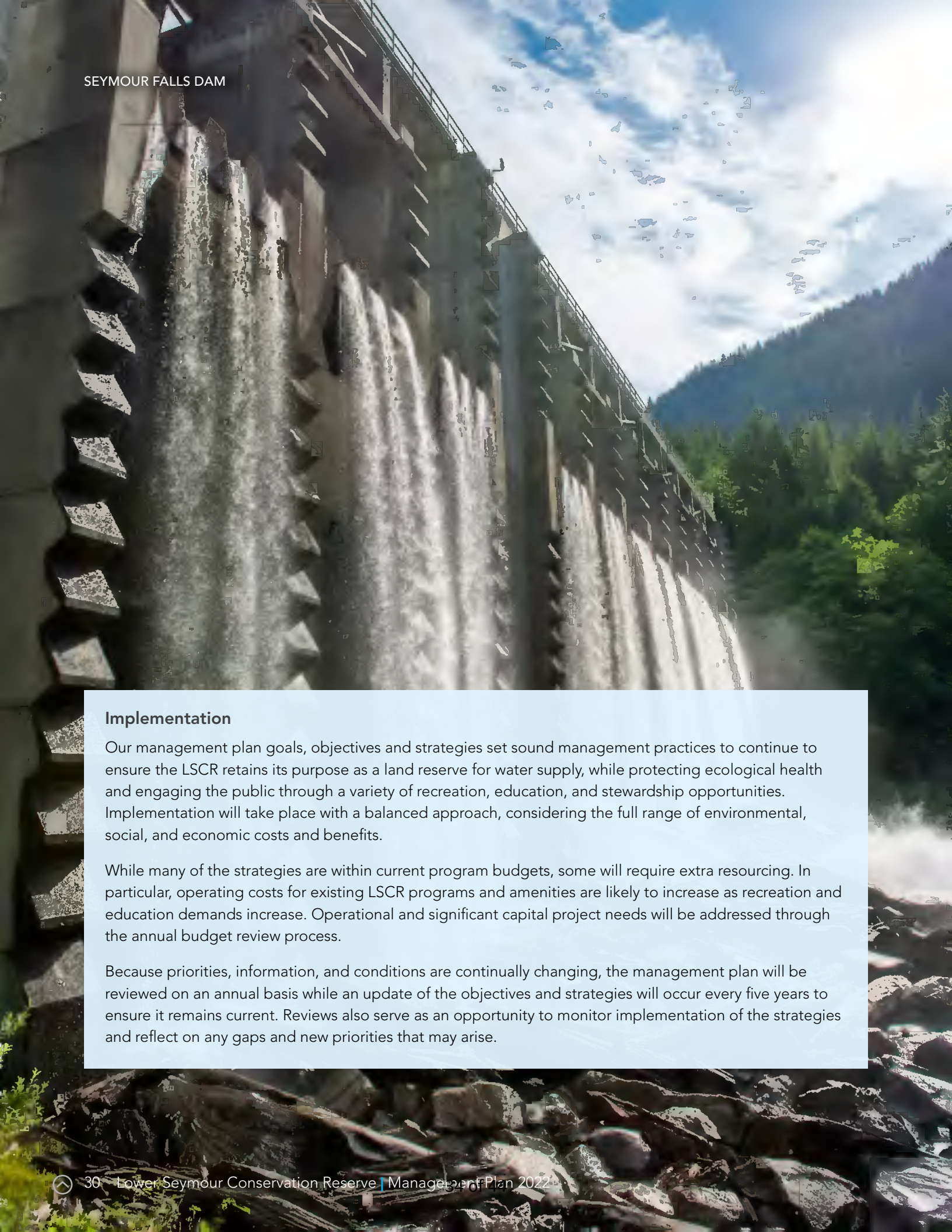
GOAL 4.0: MAINTAIN AND ENHANCE THE POTENTIAL FOR RECREATION AND COMPATIBLE USES

STRATEGIES	ACTIONS
4.1 Continue to improve the trails network.	1. Develop annual implementation plan(s) based on the LSCR Trails Strategic Plan 2. Assess and manage impacts to recreation prior to large scale projects and maintenance activities
4.2 Continue to improve visitor amenities and experiences.	1. Build a multi-use watershed centre and surrounding amenities 2. Review and update the signage program for interpretation, wayfinding and information 3. Identify opportunities to improve recreational opportunities in conjunction with water utility projects 4. Explore options for adding Electric Vehicle charging stations 5. Adhere to identified management zones during the planning and development of new visitor facilities and recreation infrastructure
4.3 Provide for and manage increasing demand for visitor access and parking.	1. Encourage alternative forms of transportation such as cycling, walking and public transit 2. Continue to work with North Shore land managers on capacity management strategies 3. Provide universal access to fishing at Rice Lake through mobility permit drive-in access and an all-abilities trail which allows for wheelchairs and strollers
4.4 Monitor recreation activities and visitor experience.	1. Conduct public intercept surveys every five years to assess capacity 2. Continue to facilitate and improve the Trail Counter Program and annual reporting
4.5 Consider approving low-impact activities in the LSCR.	1. Permit appropriate, low impact commercial and nonprofit activities that enhance visitor experience and provide benefits to the LSCR 2. Permit filming activities based on the Metro Vancouver Filming Policy that are aligned with LSCR Filming Guidelines

RECREATION USES

Recreation opportunities for all ages and abilities are available in the LSCR. The wide range of activities that take place include:

- Walking the Rice Lake Loop Trail
- Cycling the Seymour Valley Trailway
- Trail running on the Baden Powell Trail
- Gravel bike riding on Spur 4 and Fisherman's Trail
- Beginner mountain biking on the Circuit 8 Trail
- Advanced mountain biking on CBC and Ned's Atomic Dustbin trails
- Sub-alpine hiking the Dog Mountain Trail
- Horseback riding on the Richard Juryn Trail
- Picnicking at Rice Lake and Mid-Valley
- Canoeing and kayaking on the Seymour River
- Fishing for rainbow trout in Rice Lake
- Dog walking on Twin Bridges Trail



SEYMOUR FALLS DAM

Implementation

Our management plan goals, objectives and strategies set sound management practices to continue to ensure the LSCR retains its purpose as a land reserve for water supply, while protecting ecological health and engaging the public through a variety of recreation, education, and stewardship opportunities. Implementation will take place with a balanced approach, considering the full range of environmental, social, and economic costs and benefits.

While many of the strategies are within current program budgets, some will require extra resourcing. In particular, operating costs for existing LSCR programs and amenities are likely to increase as recreation and education demands increase. Operational and significant capital project needs will be addressed through the annual budget review process.

Because priorities, information, and conditions are continually changing, the management plan will be reviewed on an annual basis while an update of the objectives and strategies will occur every five years to ensure it remains current. Reviews also serve as an opportunity to monitor implementation of the strategies and reflect on any gaps and new priorities that may arise.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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

To: Water Committee

From: Mike Mayers, Division Manager, Watersheds and Environment, Water Services

Date: April 28, 2022 Meeting Date: May 11, 2022

Subject: **Water Services Wildfire Preparedness Update**

RECOMMENDATION

That the Water Committee receive for information the report dated April 28, 2022 titled "Water Services Wildfire Preparedness Update".

EXECUTIVE SUMMARY

Metro Vancouver provides clean, safe drinking water to the residents of the Metro Vancouver area. An integral component is protection of the forested lands surrounding Capilano, Seymour and Coquitlam Reservoirs. This objective is primarily achieved by restricting public access to eliminate pollution, reduce wildfire risk and ensure the areas are solely used for drinking water supply.

As a result, the water supply areas have a historically low incidence of wildfire. The primary remaining cause being lightning strikes during periods of moderate or higher fire danger. Real-time lightning detection, staff patrols, and local air traffic reports, ensure fires are discovered and extinguished quickly.

The Water Services Protection Program (Protection Program) has staff with expertise in wildfire management, an array of weather monitoring stations, equipment available for strategic deployment, and a provincial resource sharing agreement to ensure readiness for the 2022 fire season. Further, the Protection team has developed several strategic interagency relationships including the new Watershed Wildfire Strategic Partners Working Group and together with our Corporate Security and Emergency Preparedness team, hosted a Metro Vancouver Regional Wildfire Symposium in March, 2022.

PURPOSE

To provide the Water Committee with an annual update on wildfire preparedness for the water supply area in advance of the 2022 fire season.

BACKGROUND

The GVWD water supply areas encompass the mid and upper portions of the Capilano, Seymour, and Coquitlam watersheds and include approximately 60,000 ha of forested lands. Access into these lands is controlled and limited through the *Watershed Access Policy.* The principle of protecting the water supply areas by restricting access is a fundamental component of the multiple barrier approach to drinking water quality protection.

The requirements for fire protection on the GVWD's water supply lands dates back to the 1927 and 1942 provincial crown land leases. These 999-year leases require Metro Vancouver to protect the lands from wildfire and retain qualified and trained staff for this purpose.

The current Protection Program, based on an Initial Attack (IA) model, utilizes three-person IA fire crews, in conjunction with helicopters, for rapid deployment of resources to fires. In addition, Metro Vancouver maintains a resource sharing agreement with the BC Wildfire Service that ensures seamless communications with the province and allows for additional resource requests should they be needed.

In addition to providing wildfire response within the three water supply areas and the Lower Seymour Conservation Reserve (LSCR), the GVWD Protection Program is also the primary wildfire response for Electoral Area A, and assists the Greater Vancouver Regional District Parks system as required.

WATERSHED WILDFIRE PREPAREDNESS

Preparedness

The Protection Program currently has two dedicated three-person IA fire crews and approximately 30 additional Watersheds and Environment staff trained to a basic fire response level. Drills of varying complexity are conducted throughout the season to maintain proficiency in fire response skill sets and to ensure equipment readiness.

To enhance Water Services, Regional Parks, and other Metro Vancouver staff training and knowledge retention, Watershed Protection staff developed an online training module for the required annual refresher training. The module was launched this April and will ensure a consistent approach to training while providing a resource for staff throughout the fire season.

Equipment

For mobile deployment, the Protection Program maintains two dedicated IA fire trucks. These vehicles are primarily staged in North Vancouver and can be redeployed to other locations as the fire danger increases within the water supply areas. For inaccessible sites and rapid deployment, a contracted helicopter is available throughout the fire season as needed.

The majority of wildfire response equipment (pumps, hoses, hand tools) is stored at the Bone Creek Operations Centre in the LSCR, with strategic cache locations in each of the three water supply areas.

Three "Heli-well" tanks (one per supply area) are strategically positioned to allow helicopters to decontaminate and fill water buckets without directly drawing from the main reservoirs or alpine lakes.

Resource Sharing Agreement

Metro Vancouver maintains an agreement with the BC Wildfire Service (BCWS) in which fire-fighting resources are shared between both parties. This agreement is the basis for a strong and collaborative relationship which is of great benefit to both groups when assistance is required. Metro Vancouver crews routinely backfill BCWS resource shortfalls throughout the Coastal Fire Centre and, as required, BCWS crews can be stationed at the Bone Creek Operations Centre to provide additional support to

the GVWD response efforts. This arrangement has been in place since 1997 and has been effective for regional response to fire situations.

For the 2021 wildfire season, Metro Vancouver staff were deployed for a total of 58 days to support the BCWS teams through a very challenging wildfire year. This resource sharing request resulted in $208,659 being returned to Metro Vancouver to cover the costs of these deployments.

Interagency Preparedness

A new initiative, in the fall of 2021, was the creation of a "Watershed Wildfire Strategic Partners Working Group" that includes the Fire Chiefs from the District of North Vancouver, District of West Vancouver, and the City of Coquitlam along with key agency contacts from the BC Wildfire Service. This working group meets on a monthly basis to share local and regional wildfire initiatives, support planning, preparation, and cross training for wildfire responses, and build strong relationships between all the participating agencies. Letters of support for the working group from the member Fire Chiefs are included with the report as Attachment 4. For the 2022 season, a table top exercise is being developed with all participants to be held in late May along with familiarization tours of the water supply areas for Fire Department staff in May and June.

To support and develop regional interagency relationships, staff also presented and participated in the inaugural Metro Vancouver Regional Wildfire Symposium this March. This symposium was organized and hosted by Metro Vancouver's Security and Emergency Preparedness team.

Water Services Protection staff continue to work with various municipal partners, including the North Shore Interface Wildfire Working Group and the Metro Vancouver Wildfire Conditions Task Group, to ensure preparedness and coordinated response across the region.

Monitoring

Water Services staff carry out extensive fire weather monitoring and publish a weekly Fire Weather Report. This report utilizes data from eight weather stations located throughout the water supply lands and the Metro Vancouver region. Municipal fire chiefs, regional/municipal parks staff, and the emergency planning community rely on this information to determine the fire danger rating for their jurisdictions and the appropriate public activity restrictions.

Staff continue to investigate and monitor the current state of forest health, including the recent Looper Moth outbreak, within the water supply areas and to track changes over time associated with climate change. Working with neighboring watershed managers in the Pacific Northwest, a shared goal is to better understand wildfire and water quality implications from changing forest health trends.

Interface Areas and Fuels Management

Forest fuel management along the residential interface areas of the Capilano Water Supply Area primarily the British Properties have been completed and are now in a maintenance phase. Interface fuel management strategies for Seymour and Coquitlam are being developed and reviewed with the local fire departments as part of their Community Wildfire Protection Plans. Other interface areas,

including around Water Treatment facilities, are inspected on an annual basis and maintenance treatments (pruning, brushing, etc.) are used as required.

Staff are investigating options and considerations for forest fuel treatments within a small trial area of the Capilano water supply lands. A consultant report is being developed that will provide best practices to mitigate and minimize wildfire risks through the reduction of forest fuels in this trial area and the Protection team is working with the Province on potential joint funding opportunities.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
Water Services Protection Program initiatives as described in this annual update report are incorporated within the annual operating budget of the Watersheds and Environment Protection Program.

CONCLUSION
The 2022 Protection Program is well positioned to effectively react to wildfires within the water supply areas and the region. Experts on climate change and recent trends suggest that our region will be seeing longer, hotter summers that will elevate the risk of wildfires. The Protection Program is continually assessing new technologies and tactics to detect and respond to wildfires, strengthening and building interagency relationships to protect the water supply areas and our surrounding partners, and monitoring for changes in the water supply areas so the Protection Program can adapt and respond as necessary.

Attachments
1. Watershed Protection Crew on Deployment with the BCWS (2021)
2. Watershed Protection Crew Assisting with a Fire in Pacific Spirit Park
3. Wildfire Response Training
4. Letter of Support for Interagency Watershed Wildfire Preparedness (*52345662)*

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Watershed Protection Crew on Deployment with the BCWS (2021)

Watershed Protection Crew Assisting with a Fire in Pacific Spirit Park

ATTACHMENT 3

Wildfire Response Training

Dave Clark, Fire Chief
District of West Vancouver
760 16th Street
West Vancouver, BC V7V 3S1

Brain Hutchinson, Fire Chief
Dist. of North Vancouver
165 E 13th Street
North Vancouver, BC V7L 2L3

Jim Ogloff, Fire Chief
City of Coquitlam
1300 Pinetree Way
Coquitlam, BC V3B 7S4

April 27, 2022

Chair Brodie
Greater Vancouver Water District – Water Committee
4515 Central Blvd
Burnaby, BC V5H 0C6

Attention: Greater Vancouver Water District – Water Committee

Re: Letter of Support for Interagency Watershed Wildfire Preparedness

As climate change occurs and threatens our local forests and as regional growth into the wildland urban interface continues, a collaborative approach to protecting and responding to wildfires in the region is of utmost importance.

The Metro Vancouver water supply lands are large, vast areas of forest that share interface boundaries with the City of Coquitlam and the Districts of North Vancouver and West Vancouver. As shared stewards of these forests and to support protecting the region's critical drinking water supply, it is in the best interest of the residents of the Lower Mainland that the four groups work in partnership in preparing for, protecting, and responding to wildland fires in a coordinated fashion.

In the fall of 2021, the partners, including and with support from representatives of the BC Wildfire Service, created the "Watershed Wildfire Strategic Partners Working Group". The strategic focus of the working group is strengthening existing working relationships by increasing cross training and emergency exercise opportunities, coordinating wildfire and emergency response resources, and gaining a shared understanding of the forested areas in our respective jurisdictions.

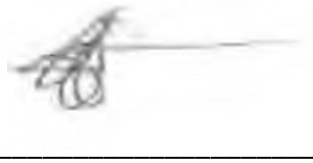
The group meets on a monthly basis throughout the year and will continue to work together on strategies to assess critical infrastructure towards FireSmart principles, develop prescriptions for fuel reduction, if required, and integrate operational wildfire plans to enhance preparedness in response to interface fires.

The Fire Chiefs of the above mentioned municipalities recognize the important work this newly formed group is doing and would like to express their continued support for this task group and appreciate the experience and skills that the Water Services Watershed Protection team brings to the table. The region's drinking water supply and neighbouring communities are better prepared through this collaborative approach.

Sincerely,

Dave Clark
Fire Chief | Dist. of West Vancouver

Brian Hutchinson
Fire Chief | Dist. of North Vancouver



Jim Ogloff
Fire Chief | City of Coquitlam