

DELEGATION REQUEST

Names of persons speaking: Molly Hudson, Director, Sustainability, David Belezny, Manager, Hydrology & Terrain

Organization you are representing: Mosaic Forest Management

Primary purpose of the organization: Forest management

Mailing address:

201-648 Terminal Ave.
Nanaimo, BC V9R 5E2

Contact name: Molly Hudson

Subject matter: Mosaic management of Langley Lake watershed, including water purveyor collaboration, harvest planning, and water quality monitoring.

Requested meeting date: June 29, 2021

Audio-visual equipment needed: Powerpoint presentation - I assume via Zoom?

CVRD Update

June 29, 2021

Molly Hudson, RPF, RPBio
Director, Sustainability

David Beleznay, RPF, PEng
Manager, Hydrology & Terrain

Agenda



Intro to Mosaic



Watershed
Management



Langley Lake
Watershed



Harvest Planning



Who is Mosaic



100% Canadian



Our owners are BC and federal public sector **pension funds**

We are responsible for **forest planning, operations and product sales**

We **own forest lands** – predominantly second and third generation forests

We also manage a **tree farm license** on public land.

We manage forests and market timber for other tree growers, including First Nations

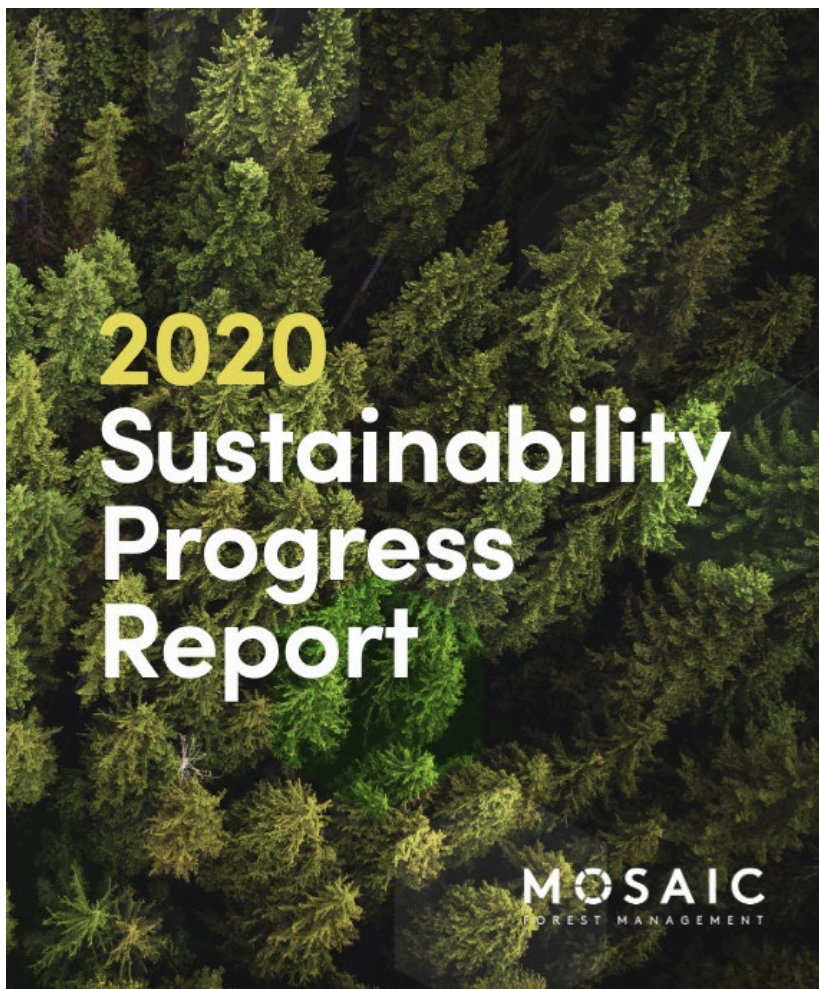
Responsible Stewardship



**Progressive
Aboriginal
RELATIONS**



We recognize the rights of Indigenous peoples and are committed to playing our part in forging a positive, shared future.



Key Achievements for 2020

Achieved best safety performance in company history, with a lowest-ever Medical Incident Rate of 0.82 on 1.47 million person hours worked.

—

Planted 11.2 million seedlings.

—

Achieved Scope 1, 2 and selected Scope 3 carbon footprint certification by the Carbon Trust.

—

Became the first forestry company in BC to achieve silver-level in the Progressive Aboriginal Relations Certification from the Canadian Council for Aboriginal Business.

Donated \$345,000 to community organizations across Coastal BC, including supporting wildlife and fish habitat improvement through a \$100,000 donation to the Pacific Salmon Foundation and \$140,000 to the Marmot Recovery Foundation.

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Provided comprehensive leadership training to all people managers in the company.

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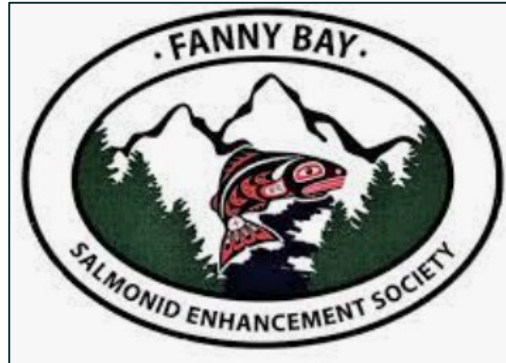
Reduced on-site burning of woody debris by a further 9.7%, for a total reduction of over 26.4% since 2018.



Volunteers Lend a Hand for Earth Day Cleanup on Mosaic Forest Lands

APRIL 22, 2021

Nanaimo, BC — Dozens of volunteers and key partners are being recognized for their hard work this week to help address illegal dumping on Mosaic forest land. Volunteer cleanup efforts are taking place in communities throughout Vancouver Island in connection with Earth Day and the Great Global Cleanup, one of the world's largest cleanup initiatives.



Research Partnership brings Climate Change and Weather Monitoring to New Heights on Mosaic Lands

FEBRUARY 23, 2021

Nanaimo, BC — A partnership between Mosaic Forest Management, Vancouver Island University (VIU), the Comox Valley Regional District and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) has brought a new state-of-the-art weather station to Mosaic Forest Management's private managed forest lands.

Water Purveyors including UBID and CVRD

MOSAIC Sustainable Stewardship from the Ground Up
FOREST MANAGEMENT

Community Drinking Watersheds

MARCH 2020

Timberland Manager for **ISLAND** TIMBERLANDS

Mosaic Forest Management identifies protecting water quality as a top priority in our management practices and sustainability commitments across our forest lands. In particular, several communities on Vancouver Island have licences to draw water from sources within our private managed forests, and protecting drinking water sources is a key shared accountability between Mosaic and community water managers.

WHAT IS A WATERSHED?

A watershed is any area of land that catches rain or snow and drains into a body of water. In this document, we are speaking specifically about community drinking watersheds, which are defined as the specific drainages that feed community water sources.

HOW IS DRINKING WATER REGULATED?

Drinking water in British Columbia is heavily regulated along the whole supply chain from source to tap. Water purveyors are responsible for delivering safe drinking water that meets the standards prescribed in the *Drinking Water Protection Act* and the *Drinking Water Protection Regulation*, as well as conditions of their operating permits. Regional Health Authorities are responsible for oversight to ensure compliance, and both the Health Authority and the water purveyors undertake extensive, mandated water testing and monitoring.

As a managed forest owner, Mosaic is prohibited from negatively impacting drinking water quality by the provisions of the *Private Managed Forest Land Act*. We also maintain formal relationships with licensed

DID YOU KNOW?

Management of drinking water quality and sources is **heavily regulated** in British Columbia.

Community drinking water sources can be located within **public** or **private** lands in B.C.

Mosaic maintains collaborative relationships with water purveyors with licences to draw water from within our lands. We partner and modify plans and practices based on risks and consultation with community water managers.

water purveyors, and share information on our planned activities. We are responsible for ensuring forest practices do not negatively impact water quality in the drainages associated with a water licence, and make any necessary amendments to planned activities based on our consultation work with relevant authorities and communities.

PRIVATE MANAGED FOREST LAND ACT:

"...a primary forest activity must not cause a material adverse effect on the quality of drinking water that may affect human health at the point of diversion of a drinking water intake."

Mosaic Forests.com |

DID YOU KNOW?

As part of our collaboration with community water purveyors, Mosaic provides a suite of services and benefits to water managers free of charge, including fire protection, access and road maintenance, and security.

Mosaic's watershed management programs are designed and implemented by qualified, registered professionals, including hydrologists, biologists and foresters.

SUSTAINABLE FOREST MANAGEMENT IN WATERSHEDS

- » **MOSAIC EMPLOYS SPECIALIZED, MODIFIED MANAGEMENT PRACTICES** within drinking watersheds, informed by detailed scientific analysis and monitoring.
- » **WE HAVE CONDUCTED** high resolution laser imaging across our land base that allows us to generate detailed geo-referenced topographical maps, surface water flows, geological features, and forest canopy definition down to the single tree.
- » **WE UNDERTAKE WATERSHED AND TERRAIN ASSESSMENTS** and deploy a continual water quality monitoring program.
- » **ANY HARVEST AREAS ARE CAREFULLY DESIGNED** based on detailed technical data and reviewed with community water purveyors in advance.

TOGETHER WITH COMMUNITY WATER MANAGERS, Mosaic hosts dozens of watershed tours each year, where members of the public can learn about management of water resources and sustainable forestry.

MOSAIC AND THE REGIONAL DISTRICT OF NANAIMO worked together to produce a video that details our collaborative partnership on water management, which can be viewed at www.MosaicForests.com/watersheds.

COMMUNITY BENEFITS

When managed appropriately and to high standards, locating community drinking watersheds within managed forest lands creates cost savings and management benefits for communities.

Mosaic's work with drinking water managers allows:

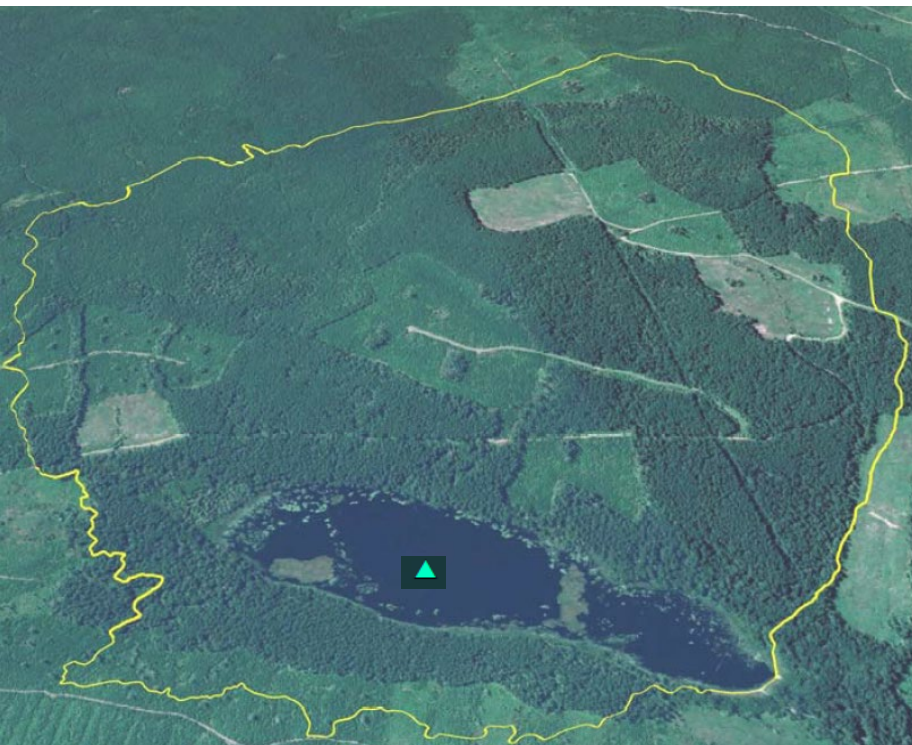
- Communities to benefit from our forest professionals' expertise in managing the resource and providing important watershed data through partnerships with indigenous, local and provincial governments.
- In addition, water resource managers from the community have both road infrastructure and access provided and maintained through our operations, yielding significant annual cost savings to taxpayers.
- We also employ access control and security throughout our private managed forest lands, which greatly reduces the risk of human-caused wildfire or unwanted and unmonitored access to water intakes and other sensitive areas.
- Our extensive resources in wildfire response provide a rapid, first-line of defense against wildfire, the impacts of which can be catastrophic for surface water resources.

Mosaic is proud of the collaborative management programs we deliver with our community partners. More information on watershed management, including links to relevant regulations and information on water purveyors and their management plans and testing, can be found at www.MosaicForests.com/watersheds.

Keep up to date on our latest by following **MosaicForests** on Facebook or **@MosaicForests** on Twitter

MOSAIC FOREST MANAGEMENT

Watershed Assessments



Oct 4, 2001
FS #10 WAP 2002

Jump Creek at LAN46-7 Road.
Looking upstream from bridge



Jun 18, 2019
FS #18 WAP 2019

UBID Water Treatment Plant

Water Treatment Plant Project ▲

New water filtration plant delivers high quality drinking water in Union Bay

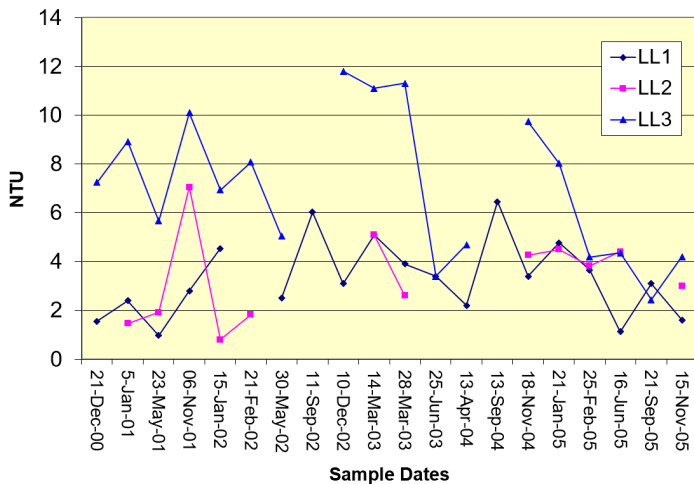
Residents on the east side of Vancouver Island in the [Union Bay Improvement District](#) (UBID) are the first in the Comox Valley to get their drinking water from a multi-barrier water filtration plant. UBID draws its drinking water from Langley Lake via a two-kilometer transmission line where previously chlorine had been the primary method to disinfect the water. An underground reservoir stored the water before sending it via gravity feed to the distribution system. With only one barrier to protect the drinking water, the former treatment system was left vulnerable to events that could create turbidity in the watershed.

Potable water standards are enforced by [Island Health](#) through a Permit to Operate that outlines the operating terms and conditions for each individual water system. The water treatment system in Union Bay no longer met the terms outlined by Island Health and was apparent that an upgrade to the system would be required.

UBID manages the water withdrawal license issued by the Ministry of Forests, Lands and Natural Resource Operations. In partnership with [Mosaic Forest Management](#), the watershed is monitored for activity and any changes to water quality and quantity.

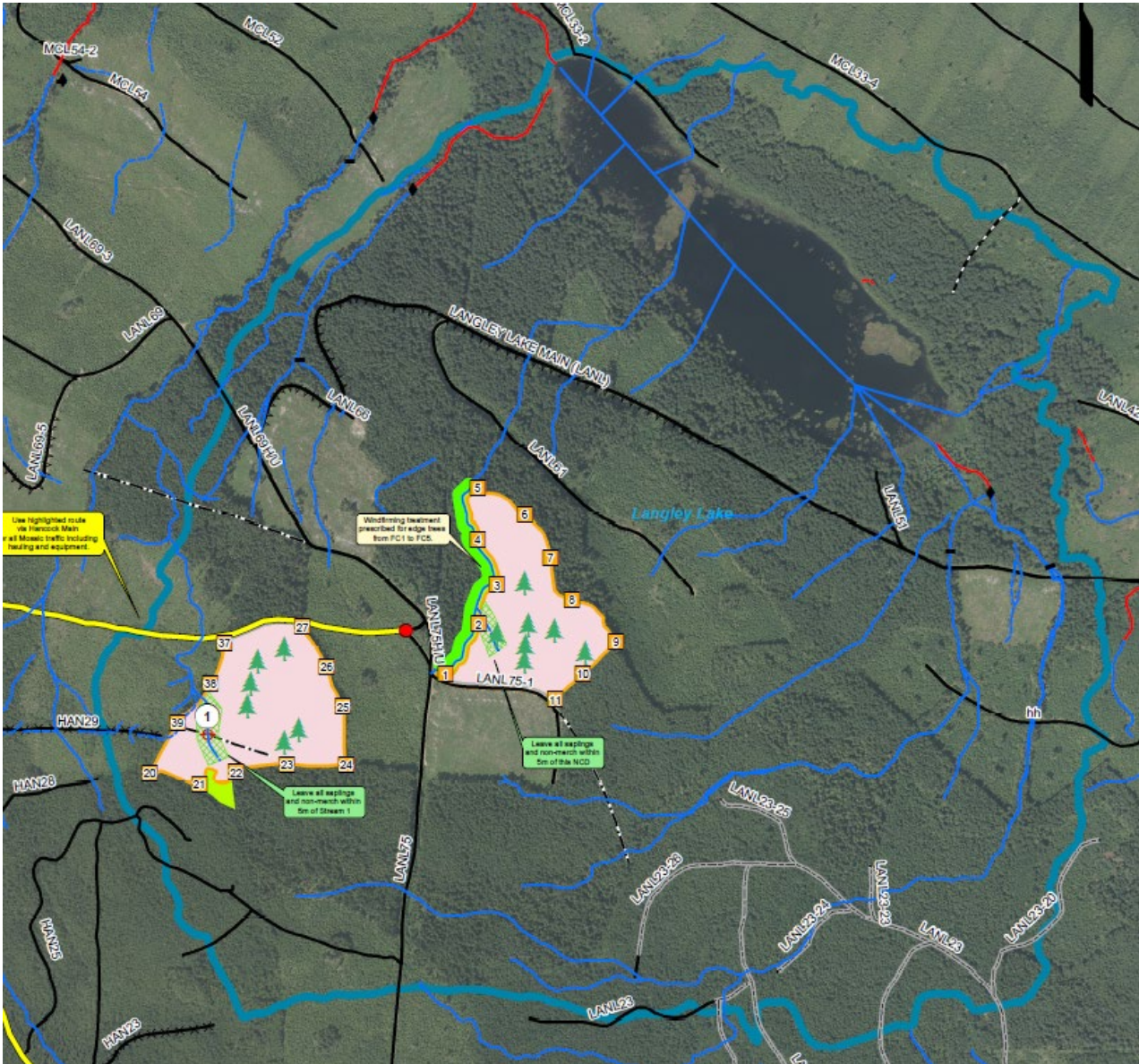


Langley Lake: Turbidity (2000-2005)

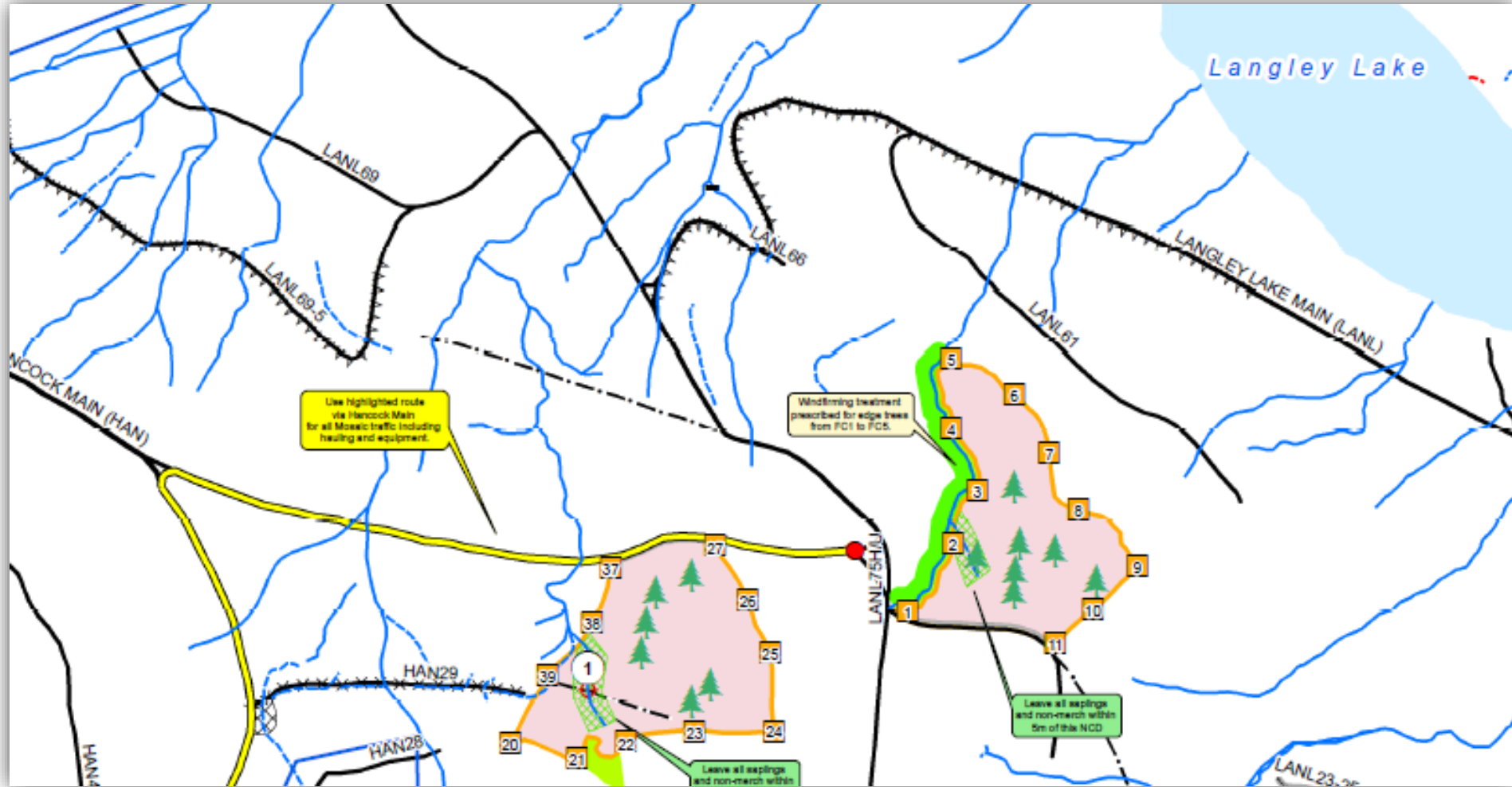


- Elevated levels throughout year indicate quality more related to natural processes
- Fine particles slow to settle out in suspension
- Significant groundwater contribution to lake

Harvest Planning



Harvest Planning





In June 2021, Mosaic Forest Management will commence second-growth harvesting operations in the Union Bay/Langley Lake watershed area. To that end, we want to ensure the public understands our work in the area and how we collaborate with the relevant water purveyors: Union Bay Improvement District (UBID) and Comox Valley Regional District (CVRD).

FOREST MANAGEMENT

The scheduled harvesting activities will take place entirely within Mosaic's private managed forest lands. These lands are subject to Provincial and Federal legislation, including the Fisheries Act, Water Sustainability Act, Wildfire Act, Drinking Water Protection Act, and Private Managed Forest Land Act. Further, Mosaic subscribes to voluntary third party Certification programs, including the Sustainable Forestry Initiative, Progressive Aboriginal Relations and the Program for the Endorsement of Forest Certification. Our lands are managed by Professional foresters, biologists, and engineers among others, and we are audited by third party groups annually.

To ensure proper watershed management, we have had a qualified independent professional complete a whole Watershed Assessment. Mosaic has committed to following all assessment recommendations which include strategies to ensure water quality is protected. In addition, we have shared information related to our Watershed Assessment with the UBID, CVRD, Island Health, and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development.

We have made extra efforts above and beyond the requirements of legislation to have Standard Operating Procedures created for the area by an independent professional to guide our operational activities.



DID YOU KNOW?

UBID manages the water license for the area, and this responsibility will transfer to the CVRD in July 2021. In partnership with Mosaic Forest Management, the watershed is monitored for activity and any changes to water quality and quantity. In addition, the new treatment system that become operational in June 2020 is monitoring 24/7 for all processes, functions and water quality parameters.

MOSAIC FOREST MANAGEMENT, WATER PURVEYORS AND LOCAL GOVERNMENT

Mosaic Forest Management identifies protecting water quality as a top priority in our management practices and sustainability commitments across our forest lands. Protecting drinking water sources is a key shared accountability between Mosaic and the UBID and CVRD water managers. Under legislation, we are responsible for ensuring forest practices do not negatively impact water quality in the drainages associated with a water licence, and we plan our activities in consultation with relevant authorities and communities.

We work with, discuss and share our operational plans on an annual basis with local purveyors including the UBID and CVRD and have made revisions to our original plans for this area based on input from the UBID water purveyors. Local elected officials have also been engaged regarding our watershed management and upcoming plans.

For more information on our focus on watersheds, please visit <https://www.mosaicforests.com/watersheds>

SCHEDULED ACTIVITIES

Harvesting activities will begin during June 2021. Road construction is not required with these planned activities. Hauling will not occur in the vicinity of Langley Lake and is scheduled for the summer months.

The harvest area is comprised entirely of second growth forest. Our Professional foresters, biologists and engineers have designed the area taking into consideration hydrology, fish, terrain, wildlife and recreation values and more. The harvest area is composed of two small harvest units which include dispersed leave tree retention throughout and includes retention on the seasonal streams that exceed requirements under legislation. Operations will follow specific prescriptions from the Watershed Assessment and Standard Operating procedures to protect water quality.

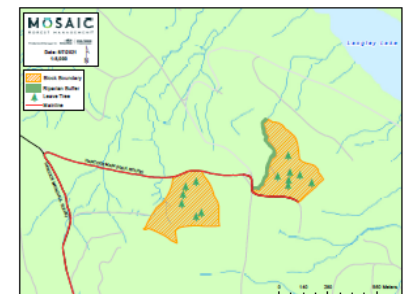
ACCESS

Mosaic has worked with the UBID to understand the local concerns including controlling access – this includes investing in technology related to smart gates along with managing other access control points in the area. Mosaic has invested in maintained existing roads to protect water quality and has removed illegally dumped garbage in the area. We continue to work with the UBID and CVRD to manage appropriate access in this area so that illegal activities, 4X4s and off-road vehicles do not impact the area.



MAP

We've attached an image below that shows haul routes and areas where harvesting will occur.



FOR MORE INFORMATION

If you have any questions please contact Colin Koszmar, Land Use Forester at: (250) 468-6831.

Thank you

MOSAIC
FOREST MANAGEMENT

Molly Hudson

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