Report



Date August 21, 2024 File:

Subject 2023 Annual Forestry Report

PURPOSE

To provide a general summary of the metrics and activities conducted within the Forestry Department in 2023.

BACKGROUND

Each year, the Municipal Forester prepares an annual report containing key Municipal Forest Reserve (MFR) metrics and information about activities from the previous year for the Forest Advisory Committee (FAC) and Council's review.

Forestry management practices in the MFR have changed significantly since Council directed the forestry review in 2019. Staff worked with the University of BC Partnership Group, which developed four forest management scenario options and investigated the feasibility of a forest carbon credit project in the MFR. A parallel public engagement process was also conducted to seek feedback on the forest management scenarios and to begin a dialogue with the Quw'utsun Nation to ensure their interests are considered and integrated into the decision-making process. The Quw'utsun Nation remains highly interested in furthering dialogue about MFR activities and being an active partner in a collaborative future decision-making process.

In August 2021, a Memorandum of Understanding was signed in partnership with the Quw'utsun Nation to progress meaningful dialogue around many important initiatives within the MFR. Since then, staff and Quw'utsun Nation representatives have held several meetings that have furthered meaningful discussions around these issues, including conversations around co-management and partnership opportunities. As a result, on November 15, 2023, Council directed staff to suspend any forest management recommendations until a co-management plan/framework for the MFR is developed in partnership with the Quw'utsun Nation.

Until Council gives future direction, staff continue to perform key forestry management practices such as danger tree removal, forestry road maintenance, tree protection, tree planting, security patrols, silviculture practices, fire protection, FireSmart activities, forestry tours, community contributions, and continuing dialogue and discussions with provincial agencies.

While the 2023 Annual Forestry Report describes MFR metrics and activities consistent with the MFR management model currently under review, it is anticipated that future annual reports will be consistent with any new or altered forest management models adopted by Council.

DISCUSSION

Harvest Summary

Total Area = 0.2ha Total Volume = 607m³

Harvest Cost = $$40,951 = $67/m^3$ Gross Revenue = $$64,677 = $107/m^3$ Net Revenue = $$23,726 = $39/m^3$

Forestry Program Total Net Loss = (\$430,322)

- > Timber was harvested on Maple Mountain at the future water storage reservoir site that will be constructed as part of a nearby development in Crofton. This new reservoir will provide fire protection and increased water pressure for Crofton's new development and surrounding area.
- > Danger and/or blowdown trees accessible from the roadsides were salvaged on Maple Mountain and Mount Richards. This work is part of regular road maintenance to reduce the fire hazard and safety risks for road users and emergency vehicle access.

Log Sales Summary

Domestic sales = 342m³ (56%) *Export sales = 265m³ (44%) *Includes United States

Planting

Costs \$ 12,889

Budget \$ 14,350

In spring 2023, ~18ha were fill planted with 8,410 seedlings. The total cost for each tree planted was \$1.72/tree. Seedling costs were \$0.53/tree*, and planting costs were \$1.19/tree (includes fertilizer). *seedling costs include seed purchase, cold storage, and shipping

Planting Summary:

Species Planted	# Planted	% of Total Planted
Douglas Fir	7,660	91%
Western White Pine	540	6%
Western Red Cedar	210	3%

Tea-bag fertilizer application at the time of planting = 7,390

Since 1987, North Cowichan has planted 2,307,132 seedlings and harvested 1,567ha – all of which have been replanted.

Road Maintenance

Costs \$44,556 Budget \$35,000

- > Danger tree removal and road clearing along forestry roads throughout the MFR allows safe access for forestry activities, public users, and emergency vehicle access.
- > Removed and replaced failing road culverts on Maple Mountain and Mount Prevost.
- > Dust control applied to the forestry road entrance to Mount Prevost.
- Culvert/ditch cleaning and road grading/repair of forestry roads completed on Mount Richards, Mount Prevost, Mount Sicker and Grace Road.
- > Roadside brushing completed to maintain vehicle access on Maple Mountain and Mount Richards.

Fire Protection

Costs \$ 4,274 Budget \$ 16,100

- ➤ There were no large forest fires within the MFR in 2023.
- Additional firefighting equipment was purchased to add to the current equipment inventory.
- The Mount Prevost, Mount Sicker and Grace Road gates were closed due to high fire hazard on June 8 and re-opened on September 25.

Security and Vandalism

Costs \$ 7,406 Budget \$24,000

Staff regularly encounter garbage dumping, timber theft, campfires, and overnight camping in various locations within the MFR. Staff continued with the following initiatives:

- Promoting public awareness, education, and reporting by installing/maintaining signage and social media posts
- Ongoing regular patrols within the MFR
- Working with RCMP and the Bylaw Services Team on various initiatives
- Implementing video surveillance options and strategies
- Working with Crime Stoppers to increase public reporting of illegal activity
- Illegal access dig up/blocking
- Quick detection and cleanup of encampments and large garbage accumulations

Silviculture

Activity	Туре	Area Treated	Cost	Budget	
Plantation Brushing	Manual	4.8ha	\$12,548	\$12,500	
	Herbicide	0	0	\$0	
Invasive Species Control	Manual	*see below	\$14,380	\$15,000	
White Pine Pruning	Manual	0ha	\$0	\$5,500	
Silviculture Surveys	Various	308ha	Completed by Forestry staff		

*Invasive Species Control Summary:

Tansy Ragwort – Various locations on Mount Richards, Maple Mountain, and Stoney Hill Scotch Broom – Various locations on Mount Richards, Maple Mountain, and Stoney Hill

Tree Protection

Costs \$ 35,351 Budget \$ 51,913

- > Removed & re-packaged 6905 (contractor) and 3880 (staff) browse protectors.
- ➤ Installed 3,311 browse protectors.
- ➤ Re-Use 3,655 browse protectors.
- Purchased 4,000 stakes.

Community Relations and Contributions

Revenue generated from the MFR pays for all associated expenses for managing the forests within the MFR. It also helps fund community relations by contributing to activities in a variety of ways:

- Annual high school scholarship and bursary winners were chosen \$2,400 awarded.
 - ~\$160,800 total awarded since 1998
- Annual high school woodworking contest winners are chosen with \$1,000 in prizes awarded. A total of 12 students entered their "foot stool" project into the contest.
 - ~\$20,050 total awarded since 2001
- Annual firewood donations program is suspended until the conclusion of the forestry review.
- > Zero firewood permits and one salal permit was sold to the public.
- ➤ There were no Forest Legacy-funded projects in 2023.

Forest Tours

- ➤ In June, Council and North Cowichan staff toured Mount Prevost and Mount Tzouhalem to review silvicultural activities, operational practices, recreational trails, and the FireSmart project.
- Staff toured a group of University of British Columbia graduate students on Maple Mountain to review and discuss North Cowichan's forestry and recreational programs/practices within the MFR.

FireSmart

- Work began on the 2022 FireSmart fuel hazard reduction project on Mount Tzouhalem.
- Facilitated a field tour with UBCM, CVRD, and BC Wildfire Service representatives to view the FireSmart work in progress on Mount Tzouhalem.
- ➤ Received \$200,000 through the 2023 Community Resiliency FireSmart Community grant program to continue fuel hazard reduction treatments on Mount Tzouhalem and complete the high-risk area on Maple Mountain.
- ➤ Joined the Cowichan Regional Wildfire Resiliency Committee with CVRD, BC Wildfire Service, Cowichan Tribes, and other local jurisdictions.

Other Notable Activities

Forestry Staff:

- ➤ Continued to support work by an ecologist with the Conservation Data Center under the BC Ministry of Environment and Climate Change Strategy, conducting research and surveys looking for potential rare species of plants and ecosystems in various locations within the MFR.
- > Continued to support work by a research ecologist with the Ministry of Forests to maintain a study site for a coast plant phenology and climate change research project on Maple Mountain.
- Continued to support representatives from the Ministry of Water, Land and Resource Stewardship as they continue to research and remove invasive species in areas of high conservation value on Maple Mountain's southern and eastern portions. This work is funded through the federal Priority Places Program to protect Garry Oak ecosystems.
- > Supported Cowichan Community Land Trust volunteers to remove invasive species in areas of high conservation value on Maple Mountain.
- Continued to support work by an independent research group that obtained funding through the federal Habitat Stewardship Program to conduct survey work for the endangered Sharp-tailed snake on Maple Mountain.
- Continued to support the BC Purple Martin Stewardship & Recovery Program as they continue to work with their Coastal Purple Martin colony monitoring and nest-checking program on Mount Richards and Maple Mountain.
- Supported Cowichan Search and Rescue to conduct a training event on Mount Prevost.
- Coordinated and provided residual timber from the Mount Tzouhalem FireSmart Project to the Cowichan Trail Stewardship Society to produce materials for trail infrastructure maintenance and construction.
- Supported Cowichan Tribes Elders and community members who held a private ceremonial event on Mount Prevost.

OPTIONS

1. (Recommended Option) This report is being provided for information only.

RECOMMENDATION

THAT Council receive for information, the 2023 Annual Forestry Report provided by the Manager of Parks and Forestry.

Report prepared by:

Shaun Mason

Report reviewed by:

Neil Pukesh

Director, Parks and Recreation

Approved to be forwarded to Council:

Ted Swabey

Chief Administrative Officer

Manager, Parks and Forestry

Attachments:

- (1) 2023 Harvesting Summary
- (2) 2023 Harvest and Profit Summary
- (3) 2023 Statement of Account
- (4) 2023 Annual Forestry Report Photos

Appendix A

2023 Harvesting Summary

Harvest Area	Area (ha)	Vol m³/ha	Total Vol m³	Gross Revenue \$	Harvest Costs \$	Net Revenue \$	Net Profit \$/m³	Harvest Cost \$/m³
Water Reservoir Site - Maple Mountain	0.2	530	106	14,631	4,658	9,973	94	44
Danger Tree Salvage - Maple Mountain	0.0	N/A	305	32,896	15,432	17,464	57	51
Danger Tree Salvage - Mount Richards	0.0	N/A	196	17,150	20,861	-3,711	-19	106
Total	0.2		607	\$64,677	\$40,951	\$23,726	\$39	\$67

Average Harvest Area Size =

0.2

Appendix B - Harvest and Profit Summary

1987 To 2023 Harvesting Summary

			Volume			Net Revenue
	Year	На	m³	Volume/Ha	Net Revenue	\$/m³
1	1987	63.4	13,159	208	\$204,772	\$15.56
2	1988	73.9	18,602	252	\$354,256	\$19.04
3	1989	43.2	14,798	343	\$272,913	\$18.44
4	1990	36.1	10,969	304	\$254,831	\$23.23
5	1991	32.2	12,740	396	\$271,217	\$21.29
6	1992	63.3	12,935	204	\$289,102	\$22.35
7	1993	55.2	14,907	270	\$542,821	\$36.42
8	1994	58.6	16,160	276	\$692,414	\$42.85
9	1995	78	21,556	276	\$1,205,329	\$55.92
10	1996	48.7	14,427	296	\$639,017	\$44.29
11	1997	32.3	13,371	414	\$625,437	\$46.78
12	1998	30.2	12,085	400	\$444,933	\$36.82
13	1999	41	16,428	401	\$564,867	\$34.38
14	2000	35.9	13,378	373	\$564,778	\$42.22
15	2001	39.34	15,538	395	\$660,924	\$42.54
16	2002	39.9	13,880	348	\$580,631	\$41.83
17	2003	49.2	15,841	322	\$661,089	\$41.73
18	2004	64.47	19,126	297	\$773,940	\$40.47
19	2005	54.6	16,018	293	\$672,876	\$42.01
20	2006	53.4	17,518	328	\$792,562	\$45.24
21	2007	65.6	21,153	322	\$804,375	\$38.03
22	2008	39.5	13,703	347	\$619,866	\$45.24
23	2009	46.5	14,296	307	\$439,936	\$30.77
24	2010	42.1	16,418	390	\$451,287	\$27.49
25	2011	45.5	17,775	391	\$664,170	\$37.37
26	2012	42.7	17,142	401	\$618,045	\$36.05
27	2013	60.4	24,355	403	\$1,110,159	\$45.58
28	2014	51.7	20,226	391	\$1,063,196	\$52.57
29	2015	46.7	22,271	477	\$1,003,533	\$45.06
30	2016	36.6	17,268	472	\$1,020,010	\$59.07
31	2017	21.8	10,585	486	\$832,043	\$78.61
32	2018	25.1	11,562	461	\$977,787	\$84.57
33	2019	45.1	15,255	338	\$840,922	\$55.12
34	2020	5.4	2,734	506	\$117,125	\$42.84
35	2021	0	68	0	\$4,433	\$65.19
36	2022	0.3	253	0	\$24,357	\$96.27
37	2023	0.2	607	0	\$23,726	\$39.09
	Total	1568.11	529,107		\$21,683,680	\$40.98
	Average	42.4	14,300	337	\$586,045	

Forestry Program Profit

		Annual Forestry Profit Split As Follows:					
4 15 6	Annual	General	Forest	Forest Legacy	0.1.11.5	Land	
Annual Profit	Profit \$/m³	Revenues	Reserve Fund	Fund	Scholarship Fund	Purchases	Hectares
-\$24,825	-\$1.89	\$0	-\$24,825	\$0		\$0	
\$115,885	\$6.23	\$0	\$115,885	\$0		\$0	
\$38,486	\$2.60	\$0	\$38,486	\$0		\$0	
\$48,571	\$4.43	\$0	\$48,571	\$0		\$0	
-\$12,370	-\$0.97	\$0	-\$12,370	\$0		\$0	
\$67,231	\$5.20	\$45,000	\$22,231	\$0		\$0	
\$272,276	\$18.27	\$240,000	\$32,276	\$0		\$0	
\$275,880	\$17.07	\$250,000	\$25,880	\$0		\$0	
\$755,771	\$37.24	\$489,230	\$33,313	\$92,308		\$140,920	14.2
\$131,057	\$9.08	\$65,000	\$51,057	\$15,000		\$0	
\$24,815	\$1.86	\$24,815	\$0	\$0		\$0	
\$47,420	\$3.92	\$0	\$37,935	\$9,485		\$0	
\$97,579	\$6.04	\$29,274	\$48,789	\$19,516		\$0	10.5
\$33,745	\$2.52	\$9,865	\$17,057	\$6,823		\$0	
\$111,851	\$7.20	\$100,666	\$11,185	\$0		\$0	
\$95,375	\$6.87	\$28,612	\$47,688	\$19,075		\$0	
\$94,484	\$5.96	\$52,162	\$22,273	\$18,609	\$1,440	\$0	
\$121,932	\$6.38	\$29,183	\$68,880	\$19,455	\$4,414	\$0	
\$29,901	\$1.87	\$14,951	\$0	\$14,950	\$0	\$0	
\$30,343	\$1.73	\$15,171	\$0	\$15,172	\$0	\$0	
\$65,344	\$3.09	\$0	\$65,344	\$0	\$0	\$0	
-\$20,393	-\$1.29	\$0	-\$20,393	\$0	\$0	\$0	
-\$119,382	-\$6.24	\$0	-\$119,382	\$0	\$0	\$0	
-\$137,409	-\$8.37	\$0	-\$137,409	\$0	\$0	\$0	
-\$55,879	-\$3.14	\$0	-\$55,879	\$0	\$0	\$0	
\$9,602	\$0.56	\$0	\$9,602	\$0	\$0	\$0	
\$435,606	\$17.89	\$130,682	\$217,803	\$87,121		\$0	
\$409,430	\$20.24	\$122,829	\$204,715	\$81,886		\$0	
\$359,381	\$16.14	\$239,381	\$0	\$120,000		\$0	
\$412,195	\$23.87	\$206,098	\$123,659	\$82,438		\$0	
\$130,165	\$12.30	\$39,049	\$65,082	\$26,033			
\$261,077	\$22.58	\$78,323	\$130,539	\$52,215			
\$275,255	\$18.04	\$82,567	\$137,634	\$55,054			
-\$469,046	-\$171.56	\$0	-\$453,846	-\$15,200			
-\$509,476	-\$7,492.29	\$0	-\$509,476	\$0			
-\$310,641	-\$1,227.83	\$0	-\$310,641	\$0			
-\$430,322	-\$708.93	\$0	-\$430,322	\$0			
\$2,660,914	\$5.03	\$2,292,858	-\$498,658	\$719,940	\$5,854	\$140,920	24.7
\$71,917		\$61,969	-\$13,477	\$19,458	\$158	\$3,809	

Summary 1987 to 2023

337 M³/Ha

\$13,828 /Ha

Net Revenue from the MFR 1987 to 2023

\$2,660,914 \$5.03 \$/M³

Profit distribution for 2023

\$ (430,322) to Forest Reserve Fund \$ - to Forest Legacy Fund \$ - to General Revenues

^{\$ (430,322)} Total Loss

Appendix C - 2023 Statement of Account

		2023 Budget	Year to Date Jan 1 to Dec 31, 2023
Revenue	e		
Log Sales		0m ³ -	607m ³ 64,677
A 5	SUBTOTAL - LOGGING SALES	-	64,677
Grants		363,410	100,000
Rentals (Cell	Towers)	98,320	92,395
Other Revenu		9,880	9,944
	UBTOTAL - OTHER REVENUE	471,610	202,339
C	TOTAL REVENUE	471,610	267,016
_			
Expense	2 S		
Harvesting		-	40,951
Scaling		-	-
Contract Engi	-	-	-
Road Constru		-	40.054
D S	SUBTOTAL - LOGGING COSTS	<u> </u>	40,951
Road Mainter	nance	25,000	41,434
Road Deactiv	ation	-	-
Site Preparati	ion	-	-
Planting		14,350	12,889
Brushing and	Weeding	12,500	12,548
Brushing and	Herbicides	-	-
Pruning		5,500	-
Tree Protection	on	51,913	35,351
Administration	n	365,331	370,277
Fire Protectio	n	379,510	133,565
Security & Va	ındalism	24,000	7,406
Tours		3,600	1,625
Integrated Re	source Mgmt	4,000	3,940
Municipal For		100,000	16,800
Forestry contr		-	-
	oads Maintenance	10,000	3,122
Scholarships		2,450	1,855
Grants in Aid		2,550	1,195
Invasive Spec		15,000	14,380
	uded with Admin)		
E SUBTO	TAL - FORESTY OPERATIONS	1,015,704	656,387
F TOTAL	LOGGING OPERATIONS (A-C)		23,726
	ORESTRY OPERATIONS (B-D)	(544,094)	(454,048)
J.J.ALI	NET INCOME (LOSS) (F+G)	(544,094)	(430,322)
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Appendix D - 2023 Forestry Photos



Council Forestry Tour – Mount Tzouhalem



Council Forestry Tour – Mount Prevost



Council Forestry Tour – Mount Tzouhalem

Invasive Species Control - Manual Cutting - Scotch Broom - Mount Prevost





Before After

Invasive Species Control - Manual Pulling - Tansey Ragwort - Stoney Hill





Before After

Road Maintenance









Culvert Replacement – Mount Prevost

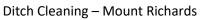




Roadside Brushing – Mount Richards









Illegal Access Dig Up – Mount Prevost

Mount Tzouhalem FireSmart Project





Debris Collection

Debris Collection Piles



Debris Collection



Debris Chipping



Debris Chipping



Debris Collection Pile



Completed Area

High school woodworking contest – "Foot Stool" project



1st Place



2nd Place



3rd Place