

Report

Date June 30, 2020

File:

To Council

From Shaun Mason, Municipal Forester

Endorsed:

Subject 2019 Annual Forestry Report

Purpose

To provide a general summary of the metrics and activities conducted within the Forestry Department in 2019.

Background

Each year the Municipal Forester prepares an annual report of key Municipal Forestry Reserve (MFR) metrics and activities from the previous year for Forest Advisory Committee (FAC) and Council review. The release of this report typically coincides with the release of the municipal Annual Report, providing more detailed information on the MFR specifically. The 2019 report describes MFR metrics and activities consistent with the MFR management model currently under review. Given the forestry operations review and the public engagement activities occurring in 2020/2021, it is anticipated that future annual reports will be consistent with any new or altered management models that may be supported by the FAC and/or adopted by Council.

Harvest Summary

*Total Area = 45.1ha

Average Harvest Area = 4.5ha

Total Volume = 15,255m³

Logging cost = \$668,934 = \$43.85/ m³

Gross Revenue = \$1,509,856 = \$99/m³

Net Revenue = \$804,922 = \$55/m³

Forestry Program Total Net Profit = \$275,255 = \$18.04/m³

*This includes the total area identified within the identified blowdown salvage areas, not the actual area harvested.

Log Sales Summary

Domestic sales = 5,603 m³ (37%)

Export sales = 9,652 m³ (63%)

Planting

Costs \$ 42,323 Budget \$ 51,500

In spring 2019, 45.3 ha were planted with 44,790 seedlings. The total cost for each tree planted was \$0.91/tree. Seedling costs were \$0.51/tree and planting costs were \$0.40/tree (includes fertilizer)

*seedling cost include seed cost, cold storage and shipping

Planting Summary:

Species Planted	# Planted	% of Total Planted
Douglas Fir	40,020	90%
Western White Pine	1,890	4%
Western Red Cedar	2,880	6%

Tea-bag fertilizer application at time of planting = 27,255

Plantskydd (browse deterrent) was applied to the Douglas Fir seedlings prior to planting with a cost of ~\$0.01/tree.

Since 1987, the Municipality has planted 2,209,894 seedlings and harvested 1562 ha – all of which has been replanted.

Road Construction and Maintenance

Costs \$56,767 Budget \$89,400

- Tendered road reconstruction/rehabilitation of existing road to safely facilitate salvage harvesting – 1.9km.
- Culvert, ditch cleaning, road grading/repair and capping for various roads on Maple Mountain, Southview Terrace, Mount Prevost, Mount Sicker, Mount Tzouhalem and Mount Richards.
- Tree removal to allow safe access along forestry roads throughout the MFR as a result of the December 2018 windstorm.
- Roadside brush cutter mechanically removed encroaching brush and overhanging branches for improved safety while driving on Mount Richards, Maple Mountain and Mount Prevost – 15.5km

Site Preparation

Costs \$471 Budget \$ 8,000

The 2019 Hazard Abatement program consisted of 47 piles that were burnt successfully on Mount Prevost and Maple Mountain on November 23&24, 2019. The burning was completed by staff and Forestry Advisory Committee volunteer, Eric Jeklin. A professional custom forecast was used for the Mount Prevost area to meet venting requirements for burning on November 23 and the Environment Canada venting forecast allowed for burning on November 24 on Maple Mountain. Burning conditions were favorable on both days with piles successfully burnt.

Fire Protection

Costs \$ 24,346 Budget \$ 45,000

- No forest fires within the MFR in 2019.
- Renewed Wildfire Response Agreement for a 3 year term.
- Road improvements for emergency vehicle access in Stoney Hill and Southview Terrace.
- Community Wildfire Protection Plan started – Costs will be reimbursed through CRI grant funding in 2020.
- Additional fire fighting equipment purchased to replenish and add to the current equipment inventory.
- The Mount Prevost, Sicker and Grace Road gates were closed due to fire hazard concerns May 29 and re-opened October 13.

Silviculture

Activity	Type	Area Treated	Cost	Budget
Plantation Brushing	Manual	19.3ha	\$12,541	\$19,000
	Herbicide	0	0	\$2,000
Invasive Species Control	Manual	*see below	\$11,838	\$15,000
White Pine Pruning	Manual	10.5ha (920 Trees)	\$1,200	\$20,000
Silviculture Surveys	Various	562ha	*Completed by Forestry Staff	

Invasive Species Control Summary:

Tansy Ragwort – Various locations on Mount Richards and Maple Mountain

Scotch Broom – various locations on Mount Richards, Maple Mountain and Stoney Hill.

- Help support the Cowichan Trails Stewardship Society with Scotch Broom removal in the Southview Terrace area

Tree Protection

Costs \$ 33,107 Budget \$ 34,000

- Removed 5611 browse protectors (\$1.21/tree)
- Installed 9925 browse protectors (\$2.10/tree)
- Re-Use 1260 browse protectors (\$1.50/tree)
- Purchased 10,000 stakes

Community Relations and Contributions

Revenues generated from the MFR pay for the associated expenses of managing forest activities and also fund community relations and contribution activities in a variety of ways:

- Annual high school scholarship and bursary winners chosen - \$2,400 total awarded.
 - o ~\$151,200 total awarded since 1998
- Annual high school woodworking contest winners chosen - \$950 in prizes awarded. Total of 10 students entered their magazine rack projects into the contest.
 - o ~\$18,050 total awarded since 2001
- Annual firewood donations delivered. The 2019 recipients were Chemainus Rod and Gun Club, Maple Bay Rowing Club and Sacred Cedar Centre.
 - o ~38 Loads delivered since 2000, with an estimated total value of \$38,000
- 96 firewood permits sold to the public.
- Forest Legacy funded projects:
 - o Cross trail rebuild, improved accessibility, signage, fencing, bridges, and safety mitigation = \$100,000
 - o Recreational trail mapping, signage and sign posts = \$40,000

Forest Tours

Council/FAC

- Council and the FAC toured Mount Prevost, Stoney Hill and Maple Mountain in May as part of a general tour of the MFR.
- Council toured Mount Tzouhalem in November to view active salvage harvesting while in progress.

Schools/Public

- Cedar Community Secondary toured Maple Mountain in October. Approximately 45 grade 8 students visited Maple Mountain to look at the fire area that was burnt in summer of 2018.
- A Vancouver Island University second year forestry class of 17 students visited Mount Richards to view the active salvage harvesting.

Other Notable Activities

- Sensitive Ecosystem Assessments completed for Stoney Hill and Mount Prevost
- The Forestry Engagement Project was tendered and awarded to Lees and Associates who began working on the Communications and Engagement Plans for the Forestry Public Engagement project.
- On August 21, Council endorsed the UBC partnership group to lead the Forestry Review and authorized them to move forward with their proposal titled "Multi-Objective, Landscape-Scale Scenario Analysis & Forest Carbon Project Evaluation".
- Successfully completed the Association of BC Forest Professional mandatory peer review to ensure continuing competency of its members.
- Successful in receiving a grant from the CRI FireSmart Community Funding & Supports program to renew and update the outdated Community Wildfire Protection Plan.
- Municipal Forester attended the BC Community Forest Association Conference in Mission that included a tour of the Mission Municipal Community Forest.

Recommendation

That the 2019 Annual Forestry Report be received for information.

Attachment(s):

Appendix A – 2019 Harvesting Summary
Appendix B – Harvest and Profit Summary
Appendix C – 2019 Statement of Account
Appendix D – 2019 Annual Forestry Report Photos

Appendix A

2019 Harvesting Summary

Harvest Area	Area (ha)	Vol m ³ /ha	Total Vol m ³	Gross Revenue	Logging Costs	Net Revenue	Net Profit \$/m ³	Logging Cost \$/m ³
M-402	5.4	389	2103	\$224,724	\$60,987	\$163,737	\$77.86	\$29.00
M-403*	7.9	246	1943	\$206,646	\$68,005	\$138,641	\$71.35	\$35.00
Maple Roadside Salvage (MRS)	n/a	n/a	376	\$23,538	\$8,992	\$14,546	\$38.69	\$23.91
M-1000	12.6	180	2268	\$243,912	\$115,681	\$128,231	\$56.54	\$51.01
P-119**	2.1	664	1394	\$161,845	\$46,002	\$115,843	\$83.10	\$33.00
P-836	4.4	401	1778	\$175,020	\$56,896	\$118,124	\$66.44	\$32.00
P-800A (salvage)	0.2	390	78	\$6,242	\$2,496	\$3,746	\$48.02	\$32.00
R-1000	2.5	481	1203	\$112,175	\$57,539	\$54,636	\$45.42	\$47.83
R-352A***	3.5	389	1362	\$110,636	\$39,489	\$71,147	\$52.24	\$28.99
T-1000	2.3	330	760	\$64,206	\$61,005	\$3,201	\$4.21	\$80.27
TZH	n/a	n/a	899	\$70,700	\$64,267	\$6,433	\$7.16	\$71.49
SH-220	4.2	260	1091	\$110,212	\$87,575	\$22,637	\$20.75	\$80.27
Total	45.1	338	15,255	\$1,509,856	\$668,934	\$840,922	\$55	\$43.85

Average Harvest Area Size = 4.5ha (This includes the total area identified within the blowdown salvage areas, not the actual area harvested.)

*Total harvest area includes young plantation that was part of the fire area

**Started in 2018 and completed in 2019.

***R-352A ~60% completed in 2019

Appendix B - Harvest and Profit Summary

1987 To 2019 Harvesting Summary

	Year	Ha	Volume m ³	Volume/Ha	Net Revenue	Net Revenue \$/m ³
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
	Total	1562.21	525,445	336	\$21,514,039	\$40.94
	Average	47.3	15,923		\$672,314	

Forestry Program Profit

Annual Profit	Annual Profit \$/m ³	Annual Forestry Profit Split As Follows:					Land Purchases	Acres
		General Revenues	Forest Reserve Fund	Forest Legacy Fund	Scholarship Fund			
-\$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	35 acres	
\$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	26 acres*	
\$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		\$0		
\$261,077	\$22.58	\$78,323	\$130,539	\$52,215		\$0		
\$275,255	\$18.04	\$82,567	\$137,634	\$55,054		\$0		
\$4,380,399	\$8.34	\$2,292,858	\$1,205,627	\$735,140	\$5,854	\$140,920	61 Ac	
\$132,739		\$69,481	\$36,534	\$22,277	\$177	\$4,270		

Summary 1987 to 2019 336 M³/Ha
 Net Revenue from the MFR 1987 to 2019

\$13,772 /Ha
 \$4,380,399 \$8.34 /M³

Profit distribution for 2019

\$ 137,634 to Forest Reserve Fund
 \$ 55,054 to Forest Legacy Fund
 \$ 82,567 to General Revenues

\$ 275,255 Total Profit

2019 Average
338m³ / Ha

Appendix C - 2019 Statement of Account

	2019 Budget	Year to Date Jan 1 to Dec 31, 2019
Revenue		
Log Sales	16,500m ³ 1,285,000	15,255m ³ 1,509,856
Other Revenue	11,000	13,169
Community Wild Fire Protection Grant	25,000	-
Rentals (Cell Towers)	86,660	86,066
	<u>1,407,660</u>	<u>1,609,091</u>
Cost of Sales		
Logging	603,025	668,943
Scaling	1,000	-
Contract Engineering	25,000	11,135
Road Construction	50,000	35,760
Road Maintenance	39,400	21,007
Road Deactivation	5,000	-
Site Preparation	8,000	471
Planting	51,500	42,323
Brushing and Weeding	19,000	12,541
Brushing and Herbicides	2,000	-
Pruning	20,000	1,200
Tree Protection	34,000	33,108
	<u>857,925</u>	<u>826,488</u>
Expenses		
Administration	382,746	365,929
Fire Protection	45,000	24,346
Security	7,000	4,072
Tours	2,200	1,321
Integrated Resource Mgmt	5,000	5,227
Municipal Forest Review	150,000	44,361
Forestry contractor	2,000	16,661
Recreation Roads Maintenance	10,000	597
Scholarships	2,400	2,400
Grants in Aid	5,500	6,526
Invasive Species Control	15,000	11,838
Vehicles	35,940	22,099
Fire Truck	4,040	1,971
	<u>666,826</u>	<u>507,348</u>
Net Income	<u>(117,091)</u>	<u>275,255</u>
Reserve Fund End of year 2019	1,653,787	1,653,787
Interest	30,000	45,000
Forestry profits 50%	<u>(117,091)</u>	<u>137,634</u>
Total	<u>1,566,696</u>	<u>1,836,421</u>



VIU Field Tour – Mount Richards – Blowdown Salvage area R-1000



Cedar Elementary Field Tour – Maple Mountain



Tree Retention – Mount Richards – Harvest Area R-352A



Tree Retention – Mount Richards – Salvage Harvest Area R-1000



Blowdown Salvage Harvesting – Maple Mountain – M-1000



Blowdown Salvage Harvesting – Mount Tzouhalem – T-1000



Blowdown Salvage Harvesting – Mount Tzouhalem – T-1000



Blowdown Salvage Harvesting – Mount Tzouhalem – T-1000



Blowdown Salvage Harvesting – Machine Trail Rehab – Maple Mountain – M-1000



Blowdown Salvage Harvesting – Machine Trail Rehab – Stoney Hill – SH-220



Tree Planting – Maple Mountain – M-1000



Tree Protector Installation – Maple Mountain – M-403



Root Rot – Mount Tzouhalem - T-1000



Root Rot – Maple Mountain - M-402



Hazard Abatement –Pile Burning – Mount Prevost – P-100A



Fire Protection – Water Access Road Improvements – Stoney Hill



High School Woodworking Contest – 2019 Award Winners – Theme = End Table



Council and Forestry Advisory Committee MFR Tour – Maple Mountain



Manual Brushing – Scotch Broom – Stoney Hill



Manual Brushing – Red Alder – Mount Prevost