COMMITTEE OF THE WHOLE MEETING AGENDA

Monday, February 29, 2016 - 9:00 AM
Council Chambers
Municipal Hall, 13211 Henry Ave.
Summerland, BC

Page

1. Call to Order

2. Adoption of Minutes

2 - 4 2.1 February 22, 2016 Committee of the Whole Minutes

Recommendation:
THAT the February 22, 2016 Committee of the Whole minutes be adopted, as presented.

3. Adoption of Agenda

3.1 Adoption of Agenda

Recommendation:
THAT the February 29, 2016 Committee of the Whole agenda be adopted, as circulated.

4. Unfinished Business

4.1 Verbal Update Re: Grant in Aid requests

5 - 61 4.2 Review Water Utility Budget

62 - 105 4.3 Review Sewer Utility Budget

106 - 150 4.4 Review Electrical Utility Budget

5. New Business

5.1 Review General Fund Operating Budget

6. Adjourn

6.1 Adjourn Meeting

Recommendation:
THAT the February 29, 2016 Committee of the Whole meeting be adjourned at ____.

MINUTES OF THE COMMITTEE OF THE WHOLE
HELD AT DISTRICT OF SUMMERLAND COUNCIL CHAMBERS
13211 HENRY AVENUE, SUMMERLAND, BC
ON MONDAY, FEBRUARY 22, 2016

Members Present:	Mayor Peter Waterman Councillor Richard Barkwill Councillor Toni Boot Councillor Erin Carlson Councillor Doug Holmes Councillor Janet Peake Councillor Erin Trainer
Staff Present:	Linda Tynan, CAO Lorrie Coates, Director of Finance Jeremy Denegar, Director of Corporate Services Kris Johnson, Director of Works and Utilities Ian McIntosh, Director of Development Services Devon van der Meulen, Manager of Utilities Renee Belyk, Manager of Finance Tricia Mayea, Manager of Legislative Services

1. CALL TO ORDER

The Mayor called the February 22, 2016 Committee of the Whole meeting to order at 9:00 a.m.

2. ADOPTION OF AGENDA

Moved and Seconded,

THAT the agenda be adopted, as circulated.

CARRIED

3. UNFINISHED BUSINESS

None.

4. NEW BUSINESS

Review Grant in Aid requests

Moved and Seconded,

THAT the Grant in Aid discussion be deferred to the budget discussions for the general fund operating budget, scheduled for February 29, 2016.

CARRIED

Utility Budgets - Water

Staff noted that ongoing maintenance of the District's Water facilities has been sub-par over the past several years due to budget cuts and restraints.

The Director of Finance presented the proposed operating and capital budgets. Discussion ensued and focused on the lack of available resources for infrastructure repair and replacement.

It was determined that staff will update the Water Fund budget and circulate it to Council prior to the February 29, 2016 budget meeting, where discussion will resume on the topic. Staff will also put together a proposed strategy for the next meeting.

Council recessed the meeting at 10:39 a.m. and reconvened at 10:50 a.m.

Utility Budgets - Sewer

The Director of Finance presented the proposed operating and capital budgets. Discussion ensued and focused on the lack of available resources for infrastructure repair and replacement.

Staff will update the Sewer Fund budget and circulate it to Council prior to the February 29, 2016 budget meeting, where discussion will resume on the topic.

Utility Budgets - Electrical

Staff noted that the increases to the Electric rates over the past 4 years has been due to Fortis BC rate increases only, and has not covered any of Summerland's costs. Staff suggested a 4.2% increase to the 2016 rates; 2.2% is for FortisBC increase, and 2% for increased revenue to the District.

It was determined that the Utility Budget discussion will be continued at the February 29, 2016 budget meeting.

5. ADJOURN

Moved and Seconded,

THAT the meeting be adjourned at 11:32 a.m.

CARRIED

Certified Correct:

Corporate Officer Mayor

THE CORPORATION OF THE DISTRICT OF SUMMERLAND
WATER FUND OPERATING BUDGET

	BUDGET 2016	BUDGET 2015	Anticipated ACTUAL 2015	ACTUAL 2014	ACTUAL 2013
REVENUE					
Water rates	3,051,068	2,488,350	2,653,103	2,422,176	2,429,471
Water tax levies	1,507,900	1,505,000	1,507,935	1,505,940	1,500,240
Sundry	252,500	250,700	220,775	243,618	233,786
Other fiscal services	6,500	11,900	6,718	7,390	11,852
Actuarial adjustment on MFA debt	276,758	252,903	246,185	218,349	185,137
Transfer from surplus and reserve for future expenditure	-	-	-	-	70,763
	5,094,726	4,508,853	4,634,716	4,397,473	4,431,249
EXPENDITURE					
Administrative and general	394,099	344,746	325,171	318,335	351,447
Maintenance and operating	2,290,436	1,893,778	1,806,922	1,607,551	1,751,377
Subtotal	2,684,535	2,238,524	2,132,093	1,925,886	2,102,824
Debt charges	1,631,259	1,730,524	1,730,524	1,700,047	1,681,431
Transfer to other funds	97,000	97,000	97,000	97,000	152,000
Transfer to reserve for future expenditure	129,621	41,750	5,250	7,391	144,653
	4,542,415	4,107,798	3,964,867	3,730,324	4,080,908
FUNDS AVAILABLE FOR HIGHER SERVICE LEVELS, OPERATING AND CAPITAL PROJECTS	552,311	401,055	669,849	667,149	350,341
Operating projects	186,000	53,620	29,027	-	-
Capital	366,311	253,622	81,802	124,907	195,415
Reserves/Surplus	-	93,813	143,366	263,082	-
	552,311	401,055	254,195	387,989	195,415
SURPLUS (DEFICIT)	-	-	415,654	279,160	154,926

Water Fund

	BUDGET 2016	BUDGET 2015	Difference	% Change
Water Revenue				
Water Rates	$ 3,051,068	$ 2,488,350	$ 562,718	22.61%
Water Parcel Tax	1,507,900	1,505,000	2,900	0.19%
Other revenue	252,500	250,700	1,800	0.72%
Other fiscal services	6,500	11,900	(5,400)	-45.38%
Actuarial adjustment	276,758	252,903	23,855	9.43%
	$ 5,094,726	$ 4,508,853	$ 585,873	

Variance Analysis of Water Revenue ($2,500 threshold utilized)

Water rates budget updated to reflect 2015 actuals + 15% proposed increase.	$ 562,718
Parcel Tax budget updated to reflect 2015 actuals.	2,900
Reduction in debt reserve fund earnings.	(5,400)
Municipal Finance Authority actuarial adjustment increases each year.	23,855
	$ 584,073

Various other small adjustments (administration, connection fees, etc.)

Water Expenditures				
Administration and Office	$ 394,099	$ 344,746	$ 49,353	14.32%
Treatment Plant	953,027	873,162	79,865	9.15%
Chlorination	45,158	43,926	1,232	2.80%
Water Testing	87,467	86,788	679	0.78%
Water Supply	34,040	33,594	446	1.33%
Dam Maintenance	87,420	84,902	2,518	2.97%
Flume Maintenance	11,600	11,504	96	0.83%
Distribution System Maintenance	410,390	278,250	132,140	47.49%
Water Meter Repairs	14,563	13,430	1,133	8.44%
Hydrant Maintenance	71,310	33,400	37,910	113.50%
Residential Water Meters	64,436	21,992	42,444	193.00%
Distribution System Operations	185,130	181,461	3,669	2.02%
Cross Connections	6,970	6,674	296	4.44%
Pressure Reducing Valve Stations	135,963	56,451	79,512	140.85%
Developer Funded Works	25,000	25,000	-	0.00%
Pump Houses	157,962	143,244	14,718	10.27%
Debt Charges	1,631,259	1,730,524	(99,265)	-5.74%
Transfer to Water Reserves	129,621	41,750	87,871	210.47%
Transfers to Other Funds	97,000	97,000	-	0.00%
Subtotal	$ 4,542,415	$ 4,107,798	$ 434,617	

Variance Analysis of Water Expenditures ($2,500 threshold utilized)

Net affect of reallocation of municipal labour costs between Water Department cost centers.	$ 21,470
Increase in the equipment charge out rates for fleet	83,000
Budget addition for plumbers wage allocation (previously in Works).	33,813
Budget reduction for change in municipal insurance policy premiums.	(3,496)
20% incremental increase to administration charge (second year of phase in).	24,400
Addition to Treatment Plant Materials & Supplies budget for filter upgrades.	20,000
Budget increase for contracted services used for maintenance of the Distribution System.	35,000
Budget increase for contracted services used for maintenance of Residential water meters.	3,500
Increase in electricity budget for pump houses (to reflect 2015 actuals & 4% proposed increase).	13,680
Impact of Issue #95 debt interest reset.	(99,265)
Increase to Water reserves as a result of Issue #95 debt interest reset.	93,270
Budget for the addition of Preventative Maintenance & Upgrades.	75,000
Addition to budget for annual PRV Upgrades.	80,000
Addition to Treatment Plant wages for a 4 month Co-op student.	20,000
Increease for the annual renewal of fire hydrants.	30,000
	$ 430,372

Various other small adjustments (CUPE 2% increase, 4% electrical increase, etc.)

CORPORATION OF THE DISTRICT OF SUMMERLAND

Water Utility
2016 Operating Budget

	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
REVENUE							
USER CHARGES							
Domestic Water Rates							
Commercial rates	184,031	126,000	160,027	203,161	211,500	58,031	46.06
Municipal use	8,680	5,250	7,548	2,720	3,253	3,430	65.33
Residential rates	2,536,253	2,121,500	2,205,437	1,965,462	1,949,724	414,753	19.55
Discounts allowed	(164,784)	(164,900)	(143,290)	(147,801)	(134,370)	116	(0.07)
	2,564,180	2,087,850	2,229,722	2,023,542	2,030,107	476,330	22.81
Irrigation Rates							
Irrigation rates	500,896	439,000	435,562	437,516	437,629	61,896	14.10
Second service rates	29,976		26,066			29,976	
Discounts taken	(43,984)	(38,500)	(38,247)	(38,882)	(38,265)	(5,484)	14.24
	486,888	400,500	423,381	398,634	399,364	86,388	21.57
Water Tax Levies							
Parcel taxes	1,507,900	1,505,000	1,507,935	1,505,940	1,500,240	2,900	0.19
Other tax levies							
	1,507,900	1,505,000	1,507,935	1,505,940	1,500,240	2,900	0.19
Other Revenue							
Administration recovery		2,000		5,987	2,288	(2,000)	(100.00)
Environmental levy	212,000	209,000	212,102	209,437	207,974	3,000	1.44
Connection fees							
Turn on / off & transfers	14,500	14,500	14,326	15,599	14,646		
Contributions from developers	25,000	25,000		19,502	8,568		
Miscellaneous	1,000	200	1,065	483	310	800	400.00
	252,500	250,700	227,493	251,008	233,786	1,800	0.72
FISCAL SERVICES							
Other Fiscal Services							
MFA - Cash	283,258	264,803	252,903	225,739	196,989	18,455	6.97
TOTAL REVENUE	5,094,726	4,508,853	4,641,434	4,404,863	4,360,486	585,873	12.99

CORPORATION OF THE DISTRICT OF SUMMERLAND

Water Utility
2016 Operating Budget

	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	%
EXPENDITURES							
WATER UTILITY ADMINISTRATION							
Administration and Office							
Salaries - Regular	106,453	99,800	101,105	100,736	175,626	6,653	6.67
Wages - Regular	28,995	28,994	29,969	32,420	31,401	1	0.00
Wages - Part-time	1,395	0	0	0	0	1,395	
Wages - Overtime	0	0	117	1,656	0	0	
Public Open Houses	0	0	381	0	0	0	
Freight and courier	1,500	1,500	78	296	154	0	0.00
Telephone	3,000	3,000	2,691	1,730	1,587	0	0.00
Advertising	2,000	2,000	2,215	2,089	760	0	0.00
Publications & subscriptions	500	500	0	0	0	0	0.00
Engineering & survey	0	0	0	0	0	0	
Education and Training	6,250	6,250	1,649	4,461	4,598	0	0.00
Insurance	21,890	25,386	8,104	35,559	1,847	-3,496	-13.77
Memberships	2,000	2,000	1,615	2,064	1,859	0	0.00
Contracted services	2,500	2,500	6,098	2,206	1,216	0	0.00
Equipment rental - Internal	17,600	7,200	8,480	8,480	7,200	10,400	144.44
Small capital	3,000	3,000	1,012	276	0	0	0.00
Administration charge	188,800	154,400	154,400	120,000	120,000	34,400	22.28
Materials & supplies	2,000	2,000	787	688	2,095	0	0.00
Office supplies	4,000	4,000	4,254	2,945	1,704	0	0.00
Admin fee- greenhouse gas	2,216	2,216	2,216	2,729	1,400	0	0.00
	394,099	344,746	325,171	318,335	351,447	49,353	14.32
PURIFICATION AND TREATMENT							
Treatment Plant							
Wages - Regular	276,226	270,810	247,504	229,858	264,034	5,416	2.00
Wages - Overtime	17,781	17,432	18,446	6,141	11,818	349	2.00
Wages - Standby	16,200	16,500	15,673	15,543	14,558	-300	-1.82
Telephone	10,000	10,000	10,085	9,403	9,736	0	0.00
Contracted services	34,920	22,420	27,657	21,322	18,466	12,500	55.75
Grounds maintenance	2,500	2,500	1,480	1,517	1,836	0	0.00
Building maintenance	6,000	6,000	5,009	5,731	2,606	0	0.00
Equipment rental - Internal	13,900	4,800	7,412	3,939	4,173	9,100	189.58
Small capital	7,500	7,500	1,964	2,954	4,735	0	0.00
Materials & supplies	459,300	426,800	367,463	340,077	383,491	32,500	7.61
Electricity	88,400	88,400	89,907	81,881	75,605	0	0.00
Sewer	300	0	296	0	0	300	
	953,027	873,162	792,896	718,366	791,058	79,865	9.15

CORPORATION OF THE DISTRICT OF SUMMERLAND
Water Utility (continued)
2016 Operating Budget

	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
EXPENDITURES							
Chlorination							
Wages - Regular	16,542	16,218	11,930	15,024	10,758	324	2.00
Wages - Overtime	1,040	1,020	409	750	873	20	1.96
Telephone	1,500	1,500	1,339	1,338	1,132	0	0.00
Contracted services	2,500	2,500	0	1,600	0	0	0.00
Equipment rental - Internal	1,500	1,000	405	630	286	500	50.00
Materials & supplies	12,000	12,000	6,524	19,010	4,083	0	0.00
Electricity	10,076	9,688	6,454	7,389	7,247	388	4.00
	45,158	43,926	27,061	45,741	24,379	1,232	2.80
Water Testing							
Wages - Regular	29,547	28,968	36,438	35,734	30,427	0	0.00
Wages - Overtime	0	0	1,778	415	0	0	
Contracted services	40,000	40,000	33,442	33,963	33,160	0	0.00
Equipment rental - Internal	420	320	65	205	40	0	0.00
Materials & supplies	17,500	17,500	17,179	16,726	14,739	0	0.00
	87,467	86,788	88,902	87,043	78,366	679	0.78
SERVICE OF SUPPLY							
Water Supply							
Wages - Regular	6,450	6,324	2,686	3,254	2,656	126	1.99
Wages - Overtime	1,040	1,020	0	0	139	20	1.96
Contracted services	750	750	388	0	0	0	0.00
Equipment rental - Internal	2,800	2,500	233	55	68	300	12.00
Materials & supplies	3,000	3,000	0	15	332	0	0.00
Electricity	0	0	0	0	0	0	
Water licenses	20,000	20,000	16,714	16,961	16,844	0	0.00
	34,040	33,594	20,021	20,285	20,039	446	1.33
Dam Maintenance							
Wages - Regular	39,119	38,352	30,913	39,835	48,167	767	2.00
Wages - Overtime	2,601	2,550	111	396	1,685	51	2.00
Contracted services	35,000	35,000	4,320	24,916	6,100	0	0.00
Equipment rental - Internal	4,700	3,000	1,380	1,890	1,340	1,700	56.67
Materials & supplies	6,000	6,000	663	3,670	14,693	0	0.00
	87,420	84,902	37,387	70,707	71,985	2,518	2.97

CORPORATION OF THE DISTRICT OF SUMMERLAND
Water Utility (continued)
2016 Operating Budget

	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
EXPENDITURES							
Flume Maintenance							
Wages - Regular	4,900	4,804	2,072	1,303	3,029	96	2.00
Contracted services	500	500	0	2,300	900	0	0.00
Equipment rental - Internal	200	200	23	435	30	0	0.00
Materials & supplies	6,000	6,000	466	67	252	0	0.00
	11,600	11,504	2,561	4,105	4,211	96	0.83
Distribution System Maintenance							
Wages - Regular	145,656	142,800	168,899	151,603	141,051	2,856	2.00
Wages - Overtime	20,808	20,400	20,171	16,522	19,364	408	2.00
Wages - Standby	7,926	7,650	7,843	7,047	7,795	276	3.61
Contracted services	90,000	30,000	65,379	32,064	29,678	60,000	200.00
Equipment rental - Internal	84,000	40,400	35,326	29,462	29,723	43,600	107.92
Small capital	2,000	2,000	3,241	1,252	1,050	0	0.00
Materials & supplies	60,000	35,000	29,524	45,381	121,492	25,000	71.43
	410,390	278,250	330,383	283,331	350,153	132,140	47.49
Water Meter Repairs							
Wages - Regular	6,763	6,630	6,925	5,877	4,401	133	2.01
Wages - Overtime	0	0	628	115		0	
Contracted services	500	500	1,500	0	216	0	0.00
Equipment rental - Internal	1,300	300	819	778	600	1,000	333.33
Small Equipment			0	482		0	
Materials & supplies	6,000	6,000	5,422	5,302	10,135	0	0.00
	14,563	13,430	15,294	12,554	15,352	1,133	8.44
Hydrant Maintenance							
Wages - Regular	26,010	25,500	33,430	16,730	21,921	510	2.00
Wages - Overtime	0	0	174	0	100	0	
Advertising	100	100	0	0	0	0	0.00
Contracted services	0	0	738	0	0	0	
Equipment rental - Internal	9,200	1,800	6,045	3,030	2,433	7,400	411.11
Small Equipment	30,000	0	0			30,000	
Materials & supplies	6,000	6,000	23,935	6,242	5,159	0	0.00
	71,310	33,400	64,322	26,002	29,613	37,910	113.50

CORPORATION OF THE DISTRICT OF SUMMERLAND

Water Utility (continued)
2016 Operating Budget

	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
EXPENDITURES							
TRANSMISSION AND DISTRIBUTION							
Residential Water Meters							
Wages - Regular	41,463	7,650	34,489	12,570	4,671	33,813	442.00
Wages - Overtime	1,573	1,542	356	711	645	31	2.01
Contracted services	4,500	1,000	1,244	1,458	18,751	3,500	350.00
Equipment rental - Internal	6,100	1,000	4,157	1,030	123	5,100	510.00
Materials & supplies	15,000	15,000	36,071	5,867	34,631	0	0.00
Recoveries	-4,200	-4,200	-12,680	-16,600	-9,724	0	0.00
	64,436	21,992	63,637	5,036	49,097	42,444	193.00
Distribution System Operations							
Wages - Regular	137,905	135,201	123,627	114,844	117,380	2,704	2.00
Wages - Overtime	4,162	4,080	8,329	3,836	1,742	82	2.01
Wages - Standby	16,200	16,500	17,679	16,726	15,522	-300	-1.82
Freight & Courier	0	0	0	41	0	0	
Telephone	0	1,600	0	0	0	-1,600	-100.00
Contracted services	2,500	2,500	48	2,027	0	0	0.00
Equipment rental - Internal	5,200	2,500	2,158	1,350	582	2,700	108.00
Small capital	2,000	2,000	931	915	626	0	0.00
Materials & supplies	15,000	15,000	6,355	6,632	9,157	0	0.00
Electricity	2,163	2,080	2,421	2,347	2,362	83	3.99
	185,130	181,461	161,548	148,718	147,371	3,669	2.02
Cross Connections							
Wages - Regular	4,890	4,794	2,927	3,897	4,133	96	2.00
Contracted services	1,000	1,000	451	734	421	0	0.00
Equipment rental - Internal	300	100	135	258	0	200	200.00
Materials & supplies	780	780	291	1,304	185	0	0.00
	6,970	6,674	3,804	6,193	4,739	296	4.44
Pressure Reducing Valve Stations							
Wages - Regular	38,911	38,148	41,900	33,101	38,215	763	2.00
Wages - Overtime	5,202	5,100	1,307	421	388	102	2.00
Telephone	0	450	0	0	62	-450	-100.00
Contracted services	500	500	968	0	0	0	0.00
Equipment rental - Internal	1,350	750	458	450	210	600	80.00
Small capital	80,000	0	0	0	0	80,000	
Materials & supplies	10,000	10,000	9,264	6,992	8,497	0	0.00
Electricity	0	1,503	0	831	5,645	-1,503	-100.00
	135,963	56,451	53,897	41,795	53,017	79,512	140.85

CORPORATION OF THE DISTRICT OF SUMMERLAND

Water Utility (continued)
2016 Operating Budget

	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
EXPENDITURES							
Developer Funded Works							
Wages - Regular	12,500	12,500	0	575	0	0	0.00
Materials & supplies	12,500	12,500	0	440	0	0	0.00
	25,000	25,000	0	1,015	0	0	0.00
PUMPING							
Pump Houses							
Wages - Regular	32,460	31,824	21,942	17,387	21,004	636	2.00
Wages - Overtime	5,202	5,100	2,598	923	779	102	2.00
Contracted services	2,000	2,000	2,830	2,291	1,840	0	0.00
Equipment rental - Internal	1,800	1,500	277	250	65	300	20.00
Materials & supplies	16,500	16,500	15,769	15,984	13,494	0	0.00
Water	0	0	168	0	0	0	
Electricity	100,000	86,320	101,900	99,825	74,815	13,680	15.85
	157,962	143,244	145,484	136,660	111,997	14,718	10.27
FISCAL SERVICES							
Debt Charges							
MFA - Interest	697,800	840,000	840,000	844,078	858,674	-142,200	-16.93
MFA - Cash Expense			0	0	0	0	
MFA - Principal	933,459	890,524	890,524	855,969	822,757	42,935	4.82
	1,631,259	1,730,524	1,730,524	1,700,047	1,681,431	-99,265	-5.74
Transfer to Water Reserves							
Reserve for future expenditure	129,621	41,750	5,250	7,391	144,653	87,871	210.47
Transfers to Other Funds							
Transfer to Sewer Revenue	97,000	97,000	97,000	97,000	97,000	0	0.00
Transfer to General Revenue	0	0	0	0	55,000	0	
	97,000	97,000	97,000	97,000	152,000	0	0.00
TOTAL EXPENDITURES	4,542,415	4,107,798	3,965,142	3,730,324	4,080,908	434,617	10.58

CORPORATION OF THE DISTRICT OF SUMMERLAND
Water Utility Administration Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124111100	Salaries - Regular	Portion of salary for Director & Managers.	106,453	99,800
2124111210	Wages - Regular	Administrative salaries.	28,995	28,994
2124111211	Wages - Part-time	Provision for Administrative relief.	1,395	0
2124112100	Public Open Houses	Provision for Open House costs.	0	0
2124112120	Freight and courier	Courier and freight charges for sending various documents and critical correspondence.	1,500	1,500
2124112130	Telephone	Cellular phone charges.	3,000	3,000
2124112210	Advertising	Advertising of water maintenance which will result in shut downs of service and water restriction advisories.	2,000	2,000
2124112220	Publications & subscriptions	Purchase of various water utility publications	500	500
2124112330	Engineering & survey	Costs incurred on the preparation of engineering reports	0	0
2124112340	Training and Education	Cost of courses and seminars attended by Water Utility Staff	6,250	6,250
2124112375	Insurance	Allocation of premiums on municipal policy.	21,890	25,386
2124112390	Memberships	Annual memberships with water associations	2,000	2,000
2124112395	Contracted services	Work performed by consultants Engineering Studies.	2,500	2,500
2124112610	Equipment rental - Internal	Internal charge for the vehicles used by the Public Works Superintendent and Chief Operators.	17,600	7,200
2124113000	Small Capital	Provision for the purchase of small equipment.	3,000	3,000
2124114220	Administration charge	Internal charge to reflect costs incurred in the general operating fund on behalf of the water fund.	188,800	154,400
2124115300	Materials & supplies	Provision for small supplies used.	2,000	2,000
2124115400	Office supplies	Normal office supplies used in day to day operations such as paper, photocopier toner, etc.	4,000	4,000
2124117300	Admin Fee - Green House Gases		2,216	2,216
	Total Water Utility Administration Expenditures		394,099	344,746

SIGNIFICANT CHANGES: 2% CUPE increase. Allocation of 23% of total Administration Relief wages budget to this cost centre. Reduction in insurance policy premiums. 20% incremental increase to Administration charge.

WORK PLAN: The administration of the Water Division not directly related to the production of services. Portion of Managers and Directors salarlies and Jr. Accountant and Secretary wages. Shipping, training, office related materials and equipment.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Treatment Plant Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
2124201210	Wages - Regular	Municipal labour costs for crews to do the required operation and maintenance of the treatment plant.	232,946		
		Residual bed management	21,848		
		Electrical Instrumentation	21,432		
				276,226	270,810
2124201211	Wages - Part-time	Summer Student - 4 months Co-op program		20,000	0
2124201220	Wages - Overtime	Additional hours at the Treatment Plant:			
		Overtime and callouts	15,606		
		Stat Holiday checks (26 hours)	2,175	17,781	17,432
2124201290	Wages - Standby pay	Standby pay to the employee that is on call (1 hour /day).		16,200	16,500
2124202130	Telephone	Telephone charges on the business lines at the Treatment Plant office plus the costs for use of cellular phones.		10,000	10,000
2124202395	Contracted services	Provision for work performed by contractors:			
		Technical assistance	5,000		
		Residual Handling Maintenance	5,000		
		Janitorial	2,420		
		Other small contracts	10,000		
		Provision for Preventative Maintenance & Upgrades	12,500		
				34,920	22,420
2124202510	Grounds maintenance	Provision for maintenance on WTP grounds.		2,500	2,500
2124202520	Building maintenance	Provision for maintenance on the building, pumps, motors, building supplies, hardware, lights, fans, signs and oil.		6,000	6,000
2124202610	Equipment rental - Internal	Internal charge for use of municipal equipment.		13,900	4,800
2124203000	Small capital	Replacement costs for small items:			
		Lab supplies and control equipment	5,000		
		Parts and equipment	2,500	7,500	7,500
2124205300	Materials & supplies	Charge for materials used in maintaining the treatment plant including any chemicals required for the plant			
		General materials and supplies	50,000		
		Chemicals and coagulants	310,000		
		Chlorine	35,000		
		Process Sand	20,000		
		Petroleum products	1,500		
		Safety equipment	3,500		
		Coverall rentals	1,800		
		Filter upgrades	20,000		
		Software updates	5,000		
		Provision for Preventative Maintenance & Upgrades	12,500		
				459,300	426,800
2124205530	Electricity	Power consumption at the Treatment Plant site.		88,400	88,400
2124205540	Sewer	Total internal charges for sewer services.		300	0
	Total Treatment Plant Maintenance Expenditures			953,027	873,162

SIGNIFICANT CHANGES: 2% CUPE increase. 4% electricty increase. Filter Upgrades will be ongoing on a rotation over the next 5+ years. Addition to budget for Preventative Maintenance & Upgrades.

WORK PLAN: The maintenance of the Water Treatment Plant including staff and contractors time, parts & equipment, and chemicals to satisfy demands of up to 76 million litres of water in peak season.
Co-op student included in Discretionary listing.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Chlorination for Distribution System Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124211210	Wages - Regular	Municipal labour at the chlorinators for maintaining the system.	16,542	16,218
2124211220	Wages - Overtime	Additional hours for callouts and overtime.	1,040	1,020
2124212130	Telephone	Charges for cellular phone by employees in confined spaces.	1,500	1,500
2124212395	Contracted services	Work performed by contractors such as electrical repairs.	2,500	2,500
2124212610	Equipment rental - Internal	Internal charge for the use of municipal owned equipment.	1,500	1,000
2124215300	Materials & supplies	Replacement cylinders of chlorine used in the system.	12,000	12,000
2124215530	Electricity	Internal charges for use of municipal electricity by the pumps and chlorinators.	10,076	9,688
	Total Chlorination Expenditures		45,158	43,926

SIGNIFICANT CHANGES: 2% CUPE increase. 4% electricty increase.

WORK PLAN: Staff and contractors wages, equipment and repairs for the operation and maintenance of the water facilities using chlorine gas for disinfection including the Water Treatment Plant, the Summerland Chlorinator, and the Garnett Valley Chlorinator.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Water Testing Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124231210	Wages - Regular	Municipal labour for sampling and testing water sources.	29,547	28,968
2124232395	Contracted services	Lab tests performed by independent laboratories.	40,000	40,000
2124232610	Equipment rental - Internal	Internal charge for the use of municipal owned equipment.	420	320
2124235300	Materials & supplies	Water testing chemicals and consumable supplies.	17,500	17,500
	Total Water Testing Expenditures		87,467	86,788

NOTE: This will include the collection of samples in the water shed, bore holes and treated water. It will also include sending the samples to a lab for analysis. Bore hole (groundwater) testing and reporting move to Landfill expenditures.

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Collection and testing of water samples from the water shed, bore holes, and distribution water.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Water Supply/Snow Course/Stream Flow Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124311210	Wages - Regular	Municipal labour costs for crews to do the required maintenance of the water supply intakes.	6,450	6,324
2124311290	Wages - Overtime	Additional hours for callouts and overtime.	1,040	1,020
2124312395	Contracted services	Provision for work performed by contractors.	750	750
2124312610	Equipment rental - Internal	Internal charge for use of municipal equipment.	2,800	2,500
2124315300	Materials & supplies	Charge for materials used in maintaining the water supply.	3,000	3,000
2124315530	Electricity	Internal charges for electricity usage.	0	0
2124319900	Water licenses	Estimated charge by Provincial Government for the licenses.	20,000	20,000
	Total Water Supply Expenditures		34,040	33,594

NOTE: The water supply expenditures includes costs incurred for snow course, emergeency wells and streamflows.

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Maintenance of source water facilities.
Ministry licences for the diversion, storage and supply of water in lakes, reservoirs, and streams.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Dam Maintenance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
2124331210	Wages - Regular	Municipal labour costs for maintenance at the upper dams. Water operation crews		39,119	38,352
2124331220	Wages - Overtime	Additional hours for callouts and overtime.		2,601	2,550
2124332395	Contracted services	Intake inspections, debris and tree removal, brushing and annual maintenance requirements at dam sites and diversion ditches	15,000		
		Downstream Inundation increase in structures	5,000		
		Divers Services/Mech brushing - rotating schedule	15,000	35,000	35,000
2124332610	Equipment rental - Internal	Internal charge for use of municipal equipment.		4,700	3,000
2124335300	Materials & supplies	Provision for small supplies.		6,000	6,000
	Total Dam Maintenance Expenditures			87,420	84,902

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Maintenance, inspection, and minor repairs of 12 dams, diversion ditches, intake structures, and other related equipment.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Flume Maintenance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
2124341210	Wages - Regular	Municipal labour costs for crews to do any required maintenance of the water flumes			
		Water operation crews	3,225		
		Public Works crews	1,675	4,900	4,804
2124342395	Contracted services	Provision for repair work performed by contractors.		500	500
2124342610	Equipment rental - Internal	Internal charge for use of municipal equipment.		200	200
2124345300	Materials & supplies	Charge for materials used in maintaining the flumes.		6,000	6,000
	Total Flume Maintenance Expenditures			11,600	11,504

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Maintenance and repairs of the 60 year old, 1.5 km long concrete flume which conveys Summerland's main water source from Trout Creek to the Summerland Reservoir.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Distribution System Maintenance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details		2016 Total	Previous Year Budget
2124361210	Wages - Regular	Municipal labour costs for crews for repairs & maintenance of the water lines & connections including repairing leaks and preventative maintenance.		145,656	142,800
2124361220	Wages - Overtime	Additional hours on maintenance and repairs on the water distribution system.		20,808	20,400
2124361290	Wages - Standby pay	Standby pay to the employee that is on call. (0.5 hour per day for 365 days)		7,926	7,650
2124362395	Contracted services	Contractors used for specific jobs municipal crews are not equipped for, patch repairs & use of traffic control contractors.	65,000		
		Provision for Preventative Maintenance & Upgrades	25,000	90,000	30,000
2124362610	Equipment rental - Internal	Internal charge for use of municipal equipment.		84,000	40,400
2124363000	Small capital	Capital items under $10,000.		2,000	2,000
2124365300	Materials & supplies	Replacement lines, connections and materials.	35,000		
		Provision for Preventative Maintenance & Upgrades	25,000	60,000	35,000
	Total Distribution System Maintenance Expenditures			410,390	278,250

NOTE: The water supply expenditures includes costs incurred for the turn on/off of the irrigation and domestic water connections.

SIGNIFICANT CHANGES: Increase of 2% for CUPE. $35,000 addition to budget for contracted services to reflect 2015 actuals for water main system repairs. Addition to budget for Preventative Maintenance & Upgrades.

WORK PLAN: Maintenance, repairs locates and as-builts of the mians and services.
Water Turn on/off including the seasonal operation of the irrigation system.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Irrigation Water Meter Maintenance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124371210	Wages - Regular	Municipal labour costs for crews to install & maintain the water meters.	6,763	6,630
2124372395	Contracted services	Provision for a small amount of work by contractors.	500	500
2124372610	Equipment rental - Internal	Internal charge for use of municipal equipment.	1,300	300
2124375300	Materials & supplies	Charge for new meters and materials used	6,000	6,000
	Total Irrigation Water Meter Maintenance Expenditures		14,563	13,430

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Maintenance, repairs, and replacement of approximately 500 agricultural meters.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Hydrant Maintenance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124381210	Wages - Regular	Municipal labour costs for crews to install & maintain fire hydrants.	26,010	25,500
2124382210	Advertising	Cost incurred for notification of shut downs of the system and flushing.	100	100
2124382395	Contracted services	Provision for a small amount of work by contractors.	0	0
2124382610	Equipment rental - Internal	Internal charge for use of municipal equipment.	9,200	1,800
2124383000	Small Capital	Provision for purchase of new fire hydrants.	30,000	0
2124385300	Materials & supplies	Charge for materials used	6,000	6,000
	Total Hydrant Maintenance Expenditures		71,310	33,400

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Labour and materials for maintenance, repairs and replacement of hydrants, including annual flushing.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Residential Water Meters (Works)
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
2124401210	Wages - Regular	Municipal labour costs for inspection of connections & readings		41,463	7,650
2124401220	Wages - Overtime	Water meter reading (weekends).		1,573	1,542
2124402395	Contracted services	Provision for a small amount of work by contractors.		4,500	1,000
2124402610	Equipment rental - Internal	Internal charge for use of municipal equipment.		6,100	1,000
2124405300	Materials & supplies	Replacement valves and lines from inventory	10,800		
		New construction meters from Development Services	4,200	15,000	15,000
2124407200	Recoveries	Recovery of meter cost from residents.		-4,200	-4,200
	Total Residential Water Meters Expenditures			64,436	21,992

NOTE: All new construction in Summerland are now required to have a water meter installed.

SIGNIFICANT CHANGES: ~$33k of plumber's wage & internal equipment use moved to cost centre to reflect actual hours worked. Public Works has submitted a request for an additional maintenance worker. Addition of Neptune annual licence fee of $3,500.

WORK PLAN: Cost to install, maintain and repair domestic water meters.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Distribution System Operations Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
2124421210	Wages - Regular	Municipal labour costs for routine work - water samples, piezometers, checking pump houses, checking the flow monitors intakes, Garnet Valley system & water complaints.	114,028		
		Electrical instrumentation	23,877	137,905	135,201
2124421220	Wages - Overtime	Overtime and callouts	1,935		
		Stat Holiday checks (26 hours)	2,227	4,162	4,080
2124421290	Wages - Standby pay	Standby pay to the employee that is on call (1 hour /day)		16,200	16,500
2124422130	Telephone	Cost for cellular phone.		0	1,600
2124422395	Contracted services	Use of a contractor for special work.		2,500	2,500
2124422610	Equipment rental - Internal	Internal charge for use of municipal equipment.		5,200	2,500
2124423000	Small capital	Items under $10,000.		2,000	2,000
2124425300	Materials & supplies	Materials used for system operations out of inventory.		15,000	15,000
2124425530	Electricity	Internal charges for electricity usage.		2,163	2,080
	Total Distribution System Operations Expenditures			185,130	181,461

SIGNIFICANT CHANGES: 2% CUPE increase. 4% electricty increase. Telephone budget eliminated for 2016 as no costs are allocated to this cost centre.

WORK PLAN: Inspections, maintenance & repairs of the distribution system including pipes, services, fittings, valves and other appurtenances for 3 water systems: Summerland Water System with 185 km of water line. Garnet Valley water system with 3.1 km of water line. Two wells servicing the Rodeo Grounds facilities, the caretakers mobile home and the Kettle Valley Railway Station.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Cross Connections
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
2124431210	Wages - Regular	Municipal labour costs for inspection of the connections.		4,890	4,794
2124432395	Contracted services	Provision for a small amount of work by contractors.		1,000	1,000
2124432610	Equipment rental - Internal	Internal charge for use of municipal equipment.		300	100
2124435300	Materials & supplies	Replacement valves and lines	240		
		Online Backflow Mgmt and Facility Inspection System	540		
				780	780
	Total Cross Connections Expenditures			6,970	6,674

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Regular inspection, repairs, and notification of potential cross connection.
To reduce the chance contamination to the District's potable water through backflow.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Pressure Reducing Valve Stations Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124451210	Wages - Regular	Municipal labour costs for maintenance of the PRV stations.	38,911	38,148
2124451220	Wages - Overtime	Overtime and callouts (170 hours).	5,202	5,100
2124452130	Telephone	Total charges for cellular phone for confined space check-ins.	0	450
2124452395	Contracted services	Provision for a small amount of work by contractors.	500	500
2124452610	Equipment rental - Internal	Internal charge for use of municipal equipment.	1,350	750
2124453000	Small Capital	Provision for annual PRV upgrades (5 year plan).	80,000	0
2124455300	Materials & supplies	Replacement valves and lines from inventory.	10,000	10,000
2124455530	Electricity	Power consumed at the PRV Stations.	0	1,503
	Total Pressure Reducing Valve Stations Expenditures		135,963	56,451

SIGNIFICANT CHANGES: 2% CUPE increase. 4% electricty increase. Telephone & electricity budgets for 2015 were eliminated no related costs are allocated to this cost centre.

WORK PLAN: Inspection, maintenance, and repairs of 13 pressure reducing stations and related appurtenances.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Developer Funded Works Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124491210	Wages - Regular		12,500	12,500
2124495300	Materials & supplies		12,500	12,500
	Total Developer Funded Works Expenditures		25,000	25,000

SIGNIFICANT CHANGES: No significant changes anticipated for 2016.

WORK PLAN: Offsetting revenue reported in g/l account #21-1-480-9000.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Pump Houses Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
2124511210	Wages - Regular	Municipal labour costs for routine work on the pump house buildings and equipment.	32,460	31,824
2124511220	Wages - Overtime	Overtime and callouts (170 hours).	5,202	5,100
2124512395	Contracted services	Contract repair services on the pumps.	2,000	2,000
2124512610	Equipment rental - Internal	Internal charge for use of municipal equipment.	1,800	1,500
2124515300	Materials & supplies	Materials used for system operations out of inventory.	16,500	16,500
2124515510	Water	Internal charges for water usage.	0	0
2124515530	Electricity	Internal charges for electricity usage.	100,000	86,320
	Total Pump Houses Expenditures		157,962	143,244

SIGNIFICANT CHANGES: 2% CUPE increase. Increase electricty budget to reflect 2014 & 2015 actuals.

WORK PLAN: Inspection, maintenance, and repairs of 9 pumping stations and related appurtenances.

DISTRICT OF SUMMERLAND

2016-2020 Forecasted Operating Spending List

Water		Total	DESIRED YEAR	CRITERIA	RANKING	NOTES
Risk	Thirsk Dam Structural Inspection and Review (Vibrating Wire Piezometers)	26,000	2016	1, 2, 5	1	
W Shed	Isintok Dam Geophysical Survey and Borehole Investigation	60,000	2016	1, 2, 5	1	
W Shed	Isintok Dam Safety Review	50,000	2016	1, 2, 5	1	
WTP	Centrifuge De-Watering Study	50,000	2016	2	1	
	2016 SUBTOTAL	**186,000**				
Distribution	System Separation - Garnet Valley (Borrowing Costs)	29,773	2017	4	1	Year 1 of 5
W Shed	Garnet Dam Safety Review	60,000	2017	2, 3, 5	1	
W Shed	Video Inspection & Review of Dam Outlet Pipes every 5 years	10,000	2017	1, 2, 5	2	
Distribution	Pump Station 2 B - Selenoid Replacement	38,500	2017	6	2	
W Shed	Reservoir Spillway Weir Modifications	40,000	2017	1, 2, 5	2	
Staffing	Water Operator - Full Time	85,000	2017	1, 2, 6	2	**On-going**
W Shed	Whitehead Dam Crest Elevation Review	10,000	2017	1, 2, 3, 5	2	
W Shed	Head Waters #1 Crest Width at Spillway Review (17k) and Construction	67,000	2017	1, 2, 3, 5	2	
Distribution	PH #2 System Review and Pump Replacement	17,000	2017	6	2	
Distribution	SCADA - Free Wave Radio Review	100,000	2017	2, 5, 6	2	
Distribution	2 PLCs to replace Scada Pacs	10,000	2017	6	2	
Distribution	PRV#10 Electrical/Instrumentation Panel (leave u/g)	15,000	2017	1, 5, 6	2	
	2017 SUBTOTAL	**482,273**				
Distribution	System Separation - Garnet Valley (Borrowing Costs)	321,545	2018	4	1	Year 2 of 5
W Shed	Thirsk Dam Safety Review	60,000	2018	2, 3, 5	1	
W Shed	Operation and Maintenance Manuals for Remainder of Dams	60,000	2018	2, 5	2	
Risk	Water Master Plan - Update	20,000	2018	2, 5	1	
W Shed	Garnet Reservoir Intake Monitoring and Control	60,000	2018	1, 2, 5	2	
W Shed	Crescent Dam Outlet Work - Review (20k) and Reslope Outlet	50,000	2018	2, 5	3	
Distribution	UPS Installation at Select Pump Houses	10,000	2018	6	2	
WTP	Water Supply to WTP	18,000	2018	6	3	
	2018 SUBTOTAL	**599,545**				
Distribution	System Separation - Garnet Valley (Borrowing Costs)	315,591	2019	4	1	Year 3 of 5
WTP	Coagulant Transfer Pumps	20,000	2019	1, 2, 5, 6	3	
	2019 SUBTOTAL	**335,591**				
Distribution	System Separation - Garnet Valley (Borrowing Costs)	309,636	2020	4	1	Year 4 of 5
W Shed	Head Waters #1 Dam Safety Review	5,000	2020	2, 3, 5	1	10% - Design Phase
WTP	Replacement Sand Recirculation Valves	15,000	2020	5	3	
	2020 SUBTOTAL	**329,636**				
	TOTAL WATER	**1,933,045**				

Legend for Criteria:

1-Safety (public and employee)
2-Risk Mitigation
3-Statutory/Regulatory/Policy
4-Committed/Unavoidable
5-Investment Protection
6-Productivity Improvement
7-Grant/Reserve Funds
8-Other

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DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**Thirsk Dam Structural Inspection and Review Vibrating Wire Piezometers**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

Upon standard review of the vibrating wire piezometer data, Golder Associates observed higher than expected groundwater surface elevations under full reservoir conditions. In light of this they felt it was prudent to conduct an inspection of the gallery inside the spillway during near full pool conditions to verify good drainage system function.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	1,000.00
WAGES - OVERTIME	
CONTRACTED SERVICES	25,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
TOTAL BUDGET:	**26,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**26,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

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March 17, 2015
File: Kel P 2015 201 008 SUM

Shawn Hughes
District of Summerland
9215 Cedar Avenue
Box 159
Summerland, BC V0H 1Z0

Re: THIRSK DAM SPILLWAY- STRUCTURAL INSPECTION AND REVIEW

Dear Mr. Hughes:

1 INTRODUCTION

We write further to your email dated December 16th 2014 regarding standard review of the vibrating wire piezometer data recorded by Golder Associates. An initial review of the data suggests higher than expected groundwater surface elevations under full reservoir conditions. In light of this information, we believe that it is prudent to conduct an inspection of the gallery inside the spillway during near-full-pond conditions in the reservoir to verify satisfactory function of the drainage systems.

The inspection would be performed by Dale Harrison, P.Eng., who led the design team in the reservoir expansion project. We plan to retain Dean Environmental to assist with the confined entry requirements of entry into the gallery. Following the inspection, we will provide the District with a letter report concerning out inspection and any recommendation that may arise therefrom.

2 BACKGROUND DATA

The District was provided with the following information:

1. Piezometer readings taken by the District for the years from 2009 to 2014 inclusive; and
2. Technical Memo prepared by Golder Associates, December 15, 2014, reviewing the data and plotting the measured hydrostatic gradient.

We also have access to the construction drawings and design calculations including the following:

1. Drawings #2143-ABR-315A & 315B which show the location of the installed piezometers;
2. Drawing #2143-ABR-301-Rev3 g which shows the locations of the individual blocks;
3. Drawing #2143-ABR-306-Rev 2 which shows the cross-section dimensions, drain locations, and grout hole locations;
4. Drawings #2143-ABR-312-Rev2 & 313-Rev2 which show the gallery dimensions; and
5. Calculations of individual block stabilities with assumptions of the uplift hydrostatic pressures at the underside of the concrete blocks.

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

March 17, 2015
Shawn Hughes
District of Summerland
- 2 -

3 SCOPE OF ENGINEERING SERVICES

1. Kick-off meeting (teleconference).
2. Review recorded piezometer data as noted in Golder Associates Technical Memo, dated December 15, 2014.
3. Retrieve and review the record drawings and detailed design files to compare the recorded uplift pressures at the base of the spillway with the assumed pressures.
4. Site visit by Mr. Rod MacLean, P.Eng., and Mr. Dale B. Harrison, P.Eng. to inspect the gallery drains when the upstream lake level is at or near elevation 1028.0 but prior to spilling. Based on the previous freshet history, we anticipate that this inspection will be done in May, 2015. We request that the District of Summerland monitor the reservoir levels and confirm the timing.
5. Review the spillway block stability, assuming the hydrostatic uplift pressures are accurate
6. Submit a letter report to the District, summarizing our findings.

We have not included for a review of the instrumentation or vibrating wire piezometer sensors.
We have included a quote from Dean Environmental Inc. to provide confined space entry procedures; including ventilation, air quality monitoring, hatch watch and all necessary trained personnel to provide safe access to the gallery in accordance with Work Safe BC regulations. See attached quotation.

4 SCHEDULE

1. Inspection tentatively proposed for May prior to the freshet. Timing of the inspection to be confirmed with the District of Summerland.
2. Allow six week to review and prepare a letter report following the completion of the inspection.

5 ESTIMATED FEES

Our estimated engineering fees are $15,563 plus Goods and Services Tax. For a breakdown of the proposed tasks, hours and fees see the attached spreadsheet.

Yours truly,

Rod MacLean, P.Eng.
Senior Engineer

Ed Bird, P.Eng.
Senior Engineer

RM/EB/lw

P:\Proposals\2015\Kel_P_2015_201_008_SUM\3_Final\Ltr__Prp_Thirsk_Dam_Spillwy_20150312_Eb.Docx

DISTRICT OF SUMMERLAND
THIRSK DAM INSPECTION
Engineering Budget Estimate

Task	Task Description	Associated Engineering Personnel							Disbursemen		
		Time for Each Person (in Hours)									
		Rod Maclean	Senior Engineer	Dale Harrison	Intermediate Engineer	Clerical	Total Hours	Subtotal Fees	Travel	Miscellaneous	
	Hourly Chargeout Rate	**$220**	**$220**	**$185**	**$135**	**$75**					
101	Project Initiation & Kick-off Meeting	4		2		1	**7**	**$1,325**		$106	
102	Review Piezometer Data & Background Information			4		0	**4**	**$740**		$59	
103	Visit Site and Inspect Spillway Gallery	8		12		0	**20**	**$3,980**	$1,000	$318	
104	Calculate the Stability of the Spillway Blocks		4	8	8	0	**20**	**$3,440**		$275	
105	Letter Report	4		8		3	**15**	**$2,585**		$207	
106	Confined Space Requirements	0	0	0	0	0	**0**	**$0**			
	Hours	**16**	**4**	**34**	**8**	**4**	**66**				
	Fees	**$3,520**	**$880**	**$6,290**	**$1,080**	**$300**		**$12,070**	**$1,000**	**$966**	**$**

From: Dean Environmental Inc. Purchase Department
Sent: Thursday, Feb 19, 2015
To: Dale Harrison
Subject: District of Summerland

Phone: 250-494-0314
Fax : 250-494-0318
Web : www.deanenvironmental.com

CUSTOMER	QUOTATION
250-488-7729	170215-000

To

Associated Engineering Group Ltd.

Suite 610 - 1632 Dickson Ave. Kelowna, BC

V1Y 7T2

Information

Date	Thursday Feb 19 2015
Staff	BD
Notes	
Ship	
Freight	
Sub Total	1527.00
GST	76.35
TOTAL	$1603.35

Terms of Sale

Net 15 days month following. Errors and Omissions Excepted (E.& O.E.). Unless otherwise noted, all goods are F.O.B. our warehouse and taxes are extra. The above pricing is based on sufficient lead time being provided at the time of ordering. This quotation is valid for no more than 30 days. Our liability is limited to the manufacturer's warranty in regards to defective goods, labour or damage claims. Warranties may be void if product is not installed by a licensed professional. The purchaser acknowledges that the vendor does not have any knowledge or any control as to when, where or how the material on the face of this quotation will be installed, or what the final use of the product will be. Tax Key: GST=GST Exempt, PST=PST Exempt, Both=Both Exempt . Our terms are Net 15 payment is due within 15 days of receipt of the supplies.

Ordered	Product	Description	Price	Total Tax
16 Hours	Labour	2 person Tech crew and CSE equipment, power and lighting, provided to site. Rate includes travel time and vehicle and trailer.	90.00	1440.00
	Stock	Consumables (PPE, Cal Gas)		15.00
	Travel	90 km Travel	.80/ km	72.00
			GST 5%	76.35
		TOTAL QUOTATION		$1603.35

This page is a valid Quote from Dean Environmental Inc.

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**Isintok Dam Geophysical Survey and Borehole Investigation**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

Bruce Musgrave, Dam Expert Engineer, as part of his formal annual report on Isintok recommended that the district proceed with a a Geophysical Survey and Borehole Investigation asap due to the nature of the leakage in the outlet pipe. Estimate by Bruce Musgrave.

The Geophisical Survey would help determine the extent of voids of loose material around the low level outlet pipe which would in turm help the District make decisions on how to address the issue.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	60,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
TOTAL BUDGET:	**60,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**60,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

EXECUTIVE SUMMARY

BMA Engineering Ltd. (BMA) is pleased to provide the District of Summerland (District) with this report regarding the 2014 Formal Annual inspection of the District's Isintok Dam. As part of this inspection, BMA also carried out an initial review of the leakage observed in the low level outlet pipe. Formal inspections such as this are completed annually to meet the requirements of BC Dam Safety Regulation 44/2000 (as amended) and the intent of the Canadian Dam Association (CDA) Guidelines. The inspection also provided the opportunity for BMA to carry out reconnaissance of the dam and low level outlet that has been leaking significantly at several locations.

The following is a summary of the high priority dam safety issues identified and recommendations to address these:

Low Level Outlet (LLO)

- Instrumentation to provide advanced warning of potential failure due to piping should be installed. Instrumentation should include reservoir level, discharge level/ rate and turbidity (as measured at the downstream weir), as an initial minimum. Alarm levels should be set that once exceeded, will immediately notify District staff.
- Emergency Table Top exercise with this failure scenario should be held with appropriate staff and District representatives. Lessons learned should be documented and implemented as per Schedule 2 (items 5 & 6) of the BC Dam Safety Regulation.
- Weekly surveillance of the dam should continue along with monthly camera inspections of the LLO and known leakage points, observing both flow rate and sediment discharge with reservoir level noted.
- Geophysical surveys of the LLO conduit and its surrounding materials to ascertain potential evidence of voids or zones of loose materials.
- Embankment borehole investigations to determine material properties, seepage conditions and the long term potential for internal erosion near the LLO.
- Once the source of the leakage has been determined or estimated based on the work recommended above, remediation of the LLO leakage by pressure grouting through the pipe to consolidate materials and fill voids on the outside of the pipe, where these are observed and seal the pipe joints.
- Potential embankment remediation including seepage cutoff measures if the above measures indicate continued high potential for internal erosion.

Spillway and Reservoir Control

- New staff gauges should be installed with reservoir level instrumentation to provide redundant and consistent measures of reservoir level. Staff gauges should be readable under all reservoir conditions.
    - Although many aspects of this issue are currently being well maintained by staff, OMS documents should also include pertinent details of the following issues and recommendations:Systematic reservoir debris clearing and review of reservoir rim issues where they may contribute to significant additional debris inflow.
    - Regular and emergency removal of debris accumulation in the vicinity of the spillway. Debris boom configuration and excavator access should allow for debris removal under all conditions.
    - Outer debris boom should be designed and configured such that all anchor connection points can sustain design loads with an appropriate factor of safety and if failed at any point, the boom itself can not obstruct the spillway entrance. All connection and wear points should be adequately protected from chafe.
    - Inner debris boom should be removed as it, itself poses a significant blockage hazard.
- Ensure the capacity of the spillway can adequately accomodate the Inflow Design Flood (IDF) for the appropriate consequence classification of the dam.

Embankment

The most significant issue with respect to the embankment is lack of knowledge and data. Information to be obtained should include:

- As-built configuration and details of the observed toe drain.
- Historical review including library and museum archives, potential old records or reports, interviews with retired staff and contractors.
- Embankment/foundation geophysical and borehole investigations to determine material properties, piezometric levels and seepage conditions (as above).
- Confirmation survey of critical embankment and outlet features.

Other general recommendations are provided in Section 5.0 of the report

BC Dam Safety Regulations were revised in 2011 adding the requirement of dam owners to review the "Consequence Classification" for all dams annually and report any changes to the BC Ministry of Forest, Lands and Natural Resource Operations. However, no downstream consequence review was carried out as part of the BMA inspection; it is recommended that this requirement be adhered to.

As a result of the amendments, it is not clear what consequence classification the Isintok Dam falls under: Significant, High or Very High. It is recommended that the consequence classification of District's Isintok Dam be reviewed in detail to ascertain the appropriate classification.

This report is not a Dam Safety Review (DSR). The most recent Dam Safety Review (DSR) was completed in 2010 but contains only limited details and does not meet the current APEGBC Guidelines for Dam Safety Reviews. Furthermore, it is our opinion that the inspections of the LLO have revealed a potential safety hazard to the dam, as piping along or into the LLO is considered to be a realistic failure mode to the dam. The recommendations provided in this report identify and prioritize a number of actions to address this potential safety hazard. However, it is recommended that this report and these actions be reviewed with BC Dam Safety branch. Furhtermore, it is recommended that a new DSR specifically focusing on the Isintok Dam itself, be carried out within the next year.

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**Isintok Dam Safety Review (DSR)**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**	

DESCRIPTION:

B.C. Dam Safety Regulations sets a minimum frequency that a DSR must be done. This differs depending on the classification of the dam. Isintok is rated as a Very High and must be done every 10 years. Due in 2020.

Bruce Musgrave, Dam Expert Engineer, as part of his formal annual report on Isintok recommended that the district proceed with a DSR asap due to the nature of the leakage in the outlet pipe.

Cost estimated by Peter Fearon of KWL Consulting Engineers

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	50,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
TOTAL BUDGET:	**50,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**50,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**Centrifuge Dewatering Study**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**		**NO**	✓	

DESCRIPTION:

Hire a consultant to investigate the use of a centrifuge waste water and solids residuals from the Water Treatment Plant. The residual ponds are not working as well as they did initially and the drying beds in the landfill appear to be blinding off over time and not allowing the same volume of water to penetrate the ground thus having to rely only on evaporation. These ponds and beds were constructed as an interim solution until a Centrifuge or alternate solution can be purchased and installed. They have now been in operation for over 8 years.
The inability to get rid of this sludge presents great risk to the District.

BREAKDOWN OF PROPOSED BUDGET:		**ESTIMATED COSTS**
	WAGES - REGULAR	
	WAGES - OVERTIME	
	CONTRACTED SERVICES	
	EQUIPMENT RENTAL - INTERNAL	
	MATERIALS & SUPPLIES	-
	OTHER (Specify):	
		50,000.00
		-
		-
	TOTAL BUDGET:	**50,000.00**
	OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves		
	TOTAL DoS FUNDING:	**50,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:		**ESTIMATED COSTS**
	WAGES - REGULAR	-
	WAGES - OVERTIME	-
	CONTRACTED SERVICES	-
	EQUIPMENT RENTAL - INTERNAL	-
	MATERIALS & SUPPLIES	-
	OTHER (Specify):	
		-
		-
		-
	TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

DISTRICT OF SUMMERLAND
2016 - 2020 CAPITAL PLAN

	2016	2017	2018	2019	2020
WATER					
PROJECTS	1,034,613	7,571,779	1,305,000	3,468,357	823,323
FUNDING					
Legislative Reserves	242,916	2,880	485,000		638,825
Bylaw Reserves	273,366	269,384	150,000		
Borrowing		1,480,320		939,452	
Grants	244,800	5,369,195		1,878,905	
Transfer from Operating	273,531	450,000	670,000	650,000	184,498
	1,034,613	7,571,779	1,305,000	3,468,357	823,323
RESERVES AND SURPLUS BALANCES (end of year)					
Legislative Reserves	945,418	1,015,096	566,032	628,904	345,629
Bylaw Reserves	198,415	52,151	25,271	148,391	336,160
	1,143,833	1,067,247	591,303	777,295	681,789
Surplus	883,030	656,068	338,534	426,968	452,171

Water	2015 budget	2015 actual	2016	2017	2018	2019	2020
CAPITAL PROJECTS							
2015 projects completed	151,704	133,208					
Flume & Water Intake Structure Upgrade	153,580	16,549	137,031	-	-	-	-
Thirsk Spillway - Rock Anchor Lift-Off Tests	40,000		40,000	-	-	-	-
RS View 32 Migration Software Upgrade	60,000	6,634	53,366	-	-	-	-
Mobile Drive-By Data Collector (Water Meter Reading)			12,500	-	-	-	-
Belt Clip Receiver - RF Testing & Field Datalogging			4,000	-	-	-	-
Raw Water Slidegates - Screening Works & Slidegates	85,000	14,484	120,516	-	-	-	-
PRV #10 Valve Replacement - in conjunction with Sinclair valve install			180,000	-	-	-	-
Valve installation on Prairie Valley Road at Sinclair			120,000	-	-	-	-
System Separation - Garnet Valley	1,438,638		367,200	4,449,600	-	-	-
Isintok Control Gate Repair/Replacement			-	60,000	-	-	-
Okanagan Lake Pump Station (Phase I)			-	313,151	-	2,818,357	-
Isintok Dam Alarmed Remote Monitoring	50,000		-	130,000	-	-	-
Decommisioning of Eneas Design, Application (50k), & Construction			-	60,000	-	-	-
Isintok Slope Protection			-	250,000	-	-	-
Trout Creek Reservoir Flume			-	2,194,028	-	-	-
Raw Water Pump Isolation Valves			-	115,000	-	-	-
Garnet Dam Alarmed Remote Monitoring			-	-	130,000	-	-
Garnet Dam Spillway Capacity (Construction)			-	-	300,000	-	-
Garnet Dam Slope Protection			-	-	200,000	-	-
Decommisioning of Eneas Design, Application (50k), & Construction			-	-	90,000	-	-
Fibre Optics mainline for communication to WTP, pumphouses & prvs			-	-	100,000	-	-
Aileen Rd Water System Separation Construction			-	-	485,000	-	-
Fibre into Pump Houses and WTP (Internal Installation)			-	-	-	50,000	-
Thirsk Slide Gates Replacement			-	-	-	300,000	-
Auxillary Power to Pumphouses 1, 4, 5, and 6			-	-	-	300,000	-
Trout Creek Reservoir Screening Works			-	-	-	-	638,825
Okanagan Lake Booster Station (Phase II) 10% design - $1.845m total cost			-	-	-	-	184,498
	1,978,922	170,875	1,034,613	7,571,779	1,305,000	3,468,357	823,323
FUNDING SOURCES							
Transfer from operating			273,531	222,727	180,455	612,409	184,498
Transfer from surplus			-	227,273	489,545	37,591	-
Borrowing			-	1,480,320	-	939,452	-
Government Grants							
Gas Tax				2,194,028			
New Build Canada			244,800	3,175,167		1,878,905	
			244,800	5,369,195	-	1,878,905	-
Legislative Reserves							
Land Sales/Community Works			242,916	2,880	485,000	-	638,825
Bylaw Reserves			273,366	269,384	150,000	-	-
Funding Total			1,034,613	7,571,779	1,305,000	3,468,357	823,323

	2016	2017	2018	2019	2020
WATER					
Legislative Reserves					
Development Cost Charge					
Projected opening balance	86,524	144,387	216,945	252,881	315,753
contributions	56,565	70,392	32,682	59,079	25,140
interest earned	1,298	2,166	3,254	3,793	4,736
allocations					
projected balance end of year	144,387	216,945	252,881	315,753	345,629
Land Sales/Community Works (partial allocation)					
Projected opening balance	1,043,947	801,031	798,151	313,151	638,825
contributions					
interest earned					
allocations	(242,916)	(2,880)	(485,000)		(638,825)
projected balance end of year	801,031	798,151	313,151	313,151	
Bylaw Reserves					
Projected opening balance	205,295	198,415	52,151	25,271	148,391
contributions	266,486	123,120	123,120	123,120	187,769
interest earned					
allocations	(273,366)	(269,384)	(150,000)		
projected balance end of year	198,415	52,151	25,271	148,391	336,160

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**MRX920 Mobile Drive-by Data Collector**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

The Mobile Drive-by Data Collector would replace the unsupported MRX unit currently being used to obtain water meter readings. The new unit is smaller and would improve meter reading accuracy resulting in overall field and office efficiency.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	12,500.00
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**12,500.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**12,500.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY:	Jeremy Denegar	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

Fred Surridge Ltd
1245 Industrial Rd
West Kelowna, B.C. V1Z 1G6
Phone: (250) 769-9000
Fax: (250) 769-9041

Prepared by: Matt Stoltz

To: **District of Summerland**
Attention: **Jim Holtjer**
Email:
Phone:
Date: Tuesday January 12th, 2016
Quote # Summerland-011216-Hardware_Upgrade_MRX

Qty.	Description	U/M	Unit Price	Ext. Price
	Hardware Upgrade - Summerland			
1	MRX920 Mobile Drive-by Data Collector - To replace unsupported MRX Drive-by unit the District is currently using for meter reading	ea	$ 10,500.00	$ 10,500.00 ①
	Optional Items:			
1	On-Site Training & Implementation	ea	$ 1,500.00	$ 1,500.00
	Subtotal:			$ 12,000.00

Notes for Above Pricing Schedule:
1. FOB District of Summerland
2. Taxes extra
3. MRX920 pairs with a municipal laptop for drive-by meter reading
4. Pricing valid for 60 days

① 10,500.00+
laptop 1,000.00+
11,500.00✓

11,500.00×
PST 1.07=K
12,305.00✻+

ARB® UTILITY MANAGEMENT SYSTEMS™

NEPTUNE TECHNOLOGY GROUP

MRX920™

MOBILE DATA COLLECTOR

MRX920™ Moblie Data Collector

Neptune's MRX920™ is a rugged, portable, easy-to-use automatic meter reading device. Weighing only five pounds, the MRX920 is small enough to fit in any vehicle and comes with a carrying case or optional mobile office unit to be stowed or fastened in a location of your choice. Within minutes, the MRX920 can be securely placed in any vehicle and powered via the vehicle power source.

Data transmitted by R900® radio frequency (RF) meter interface units (MIUs) is received and stored by the MRX920 mobile data collector. Information can be quickly uploaded to Neptune's host meter reading software at the utility office. The N_SIGHT™ R900® host software transfers the customer information to the customer information system (CIS) to generate customer bills. The MRX920 unit also captures the advanced features of the E-Coder® solid state absolute encoder register connected to an R900 MIU*. These features include leak, tamper, and reverse flow indication.

The MX900 mobile data collection software runs on the user's laptop computer and is designed to support maximum efficiency. This software supports a USB connection or a wireless connection via WiFi to the MRX920 receiver and utilizes menu-driven commands to allow the user to effortlessly control all aspects of the meter reading process. No operator intervention is necessary once data collection has started. At any time, the operator can view either read or unread accounts with the touch of a button.

UTILITY ADVANTAGES

The MRX920 unit provides the meter reading industry with many advantages over other existing AMR systems:

- Industry-leading performance in a compact and affordable package
- Improves meter reading accuracy
- Addresses "hard-to-read" meters
- Increases meter reader safety
- Reduces man-hours needed to collect and process meter reading information
- Supports any size utility
- Portable and easy to set up

KEY FEATURES

- USB or wireless connection to the receiver via WiFi
- RF test application receives meter data information without loading a route
- Digital signal processing for improved meter reading throughput
- Portable for use in any vehicle
- Low power consumption (< 1A) allows for multiple devices to be connected in the same vehicle
- Intuitive graphical user interface
- Supports E-CoderPLUS advanced features**
- Supported by a courteous and knowledgeable Customer Support Center
- GIS meter location mapping***
- GPS vehicle location tracking***
- Wireless loading/unloading of routes

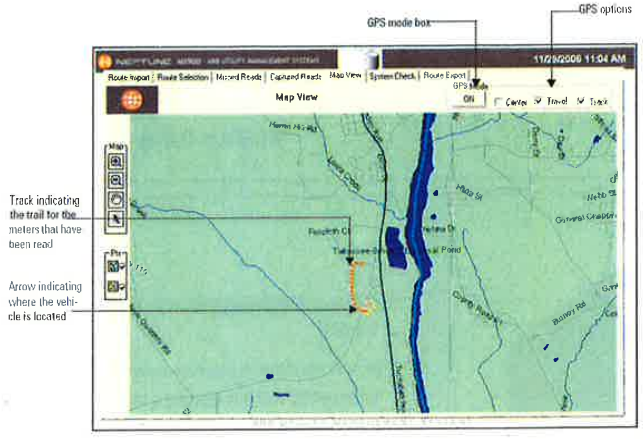
KEY BENEFITS

- Reads up to eight meters simultaneously and can process 70 unique meter readings per second
- Maximizes meter reading success rates and overall field and office efficiency
- Reduces potential liability to utility through improved meter reader safety
- Does not require a special or customized vehicle
- Operates from standard 12V DC vehicle power source (i.e., cigarette lighter)
- Will support leak detection, tamper detection, and reverse flow indication
- Courteous, prompt, and conscientious Support Specialists available if needed

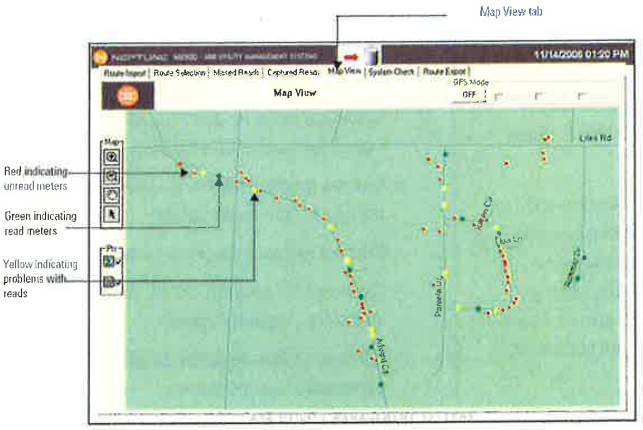
** When connected to second generation R900 or later.*

*** Indication of E-Coder*

****GIS mapping requires optional maps software package. GPS requires GPS capable laptop or USB-connected receiver.*



MX900 software is designed to significantly reduce the time required to collect and process meter reading data while increasing meter reader safety and efficiency. The mobile data collection software provides an optional GPS mapping view. The map view allows the operator to monitor route completion by visually determining unread accounts which are represented as colored objects on the map. The operator can stop along the route anytime it is safe to do so and monitors each route loaded into the software. As an added feature, the MX900 also allows the operator to view special conditions that may exist in the route. Conditions such as high/low alarms and tamper alarms are also visible to the operator. For those utilities with Neptune E-Coder-equipped meters, value-added warning flags such as leak detection are also available. This optional mapping package can be ordered with or added to any existing MRX920 mobile data collector. Adding the optional mapping solution could not be easier, as no additional hardware is required.



SPECIFICATIONS

- Electrical Specifications:
  - Power consumption: < 1A
  - Power supply: 12V DC via vehicle power source adapter
- In order to adequately run the MX900 software, Neptune recommends the following minimum specifications:
  - Operating System

Operating System Version	Operating System Type	32/64 Bit
Windows® XP	Professional	32
Windows® Vista	Business	32
Windows® 7	Professional	32
Windows® 7	Home Premium	64

  - Processor – Intel Pentium processor 1.7 GHz
  - Memory – 1 GB
  - Communication
    - Internal 802.11 b/g wireless LAN
    - Windows Wireless Connection Manager (if WiFi connection to the receiver is desired)
  - USB 2.0
  - GPS receiver (mapping package is optional)

The MRX920 is an in-vehicle mobile data collector which is designed to be occasionally used in bumpy terrain found in rural meter reading routes. This needs to be taken into consideration when choosing a laptop. Should your utility operate the MRX920 in bumpy conditions or should you require a display rated for outdoor visibility, Neptune recommends considering a ruggedized laptop such as a Panasonic Toughbook® or equivalent.

- Environmental Conditions:
  - Operating temperature: 32° to 122° F (0° to 50° C)
  - Storage temperature: -40° to 185° F (-40° to 85°C)
  - Operating humidity: 5 to 95% non-condensing relative humidity
- Physical Specifications
  - Shipping weight: ~5 lbs

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NEPTUNE TECHNOLOGY GROUP
neptunetg.com

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**R900 Belt Clip Transceiver**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

The Belt Clip Transceiver would allow both Public Works & Utilities staff members to obtain water meter readings while performing other non-meter-reading related job functions. The existing water meter-reading handheld units are retained at Municipal Office therefore if testing or re-reads are required, schedules have to be coordinated to ensure hardware availability.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	4,000.00
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**4,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**4,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Jeremy Denegar (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

Fred Surridge Ltd
1245 Industrial Rd
West Kelowna, B.C. V1Z 1G6
Phone: (250) 769-9000
Fax: (250) 769-9041

Prepared by: Matt Stoltz

To: **District of Summerland**
Attention: Ryan McDonald
Email:
Phone:
Date: Tuesday January 12th, 2016
Quote # Summerland-011216-Hardware_Upgrade

Qty.	Description	U/M	Unit Price	Ext. Price
	Hardware Upgrade - Summerland			
1	MRX920 Mobile Drive-by Data Collector - To replace unsupported MRX Drive-by unit the District is currently using for meter reading	ea	$ 10,500.00	$ 10,500.00
1	R900 Belt Clip Receiver - For RF Testing and Field Datalogging	ea	$ 3,700.00	$ 3,700.00
	Optional Items:			
1	On-Site Training & Implementation	ea	$ 1,500.00	$ 1,500.00
	Subtotal:			$ 15,700.00

Notes for Above Pricing Schedule:
1. FOB District of Summerland
2. Taxes extra
3. Belt Clip receiver can be paired with the Trimble Nomad or any Android Phone/Tablet for RF Test & Datalogging (in app purchase required for datalogging)
4. MRX920 pairs with a municipal laptop for drive-by meter reading
5. Pricing valid for 60 days

(1) 3,700.00 x
PST 1.07 = K
3,959.00 * +

ARB™ UTILITY MANAGEMENT SYSTEMS™

NEPTUNE TECHNOLOGY GROUP

MRX920™

MOBILE DATA COLLECTOR

MRX920™ Moblie Data Collector

Neptune's MRX920™ is a rugged, portable, easy-to-use automatic meter reading device. Weighing only five pounds, the MRX920 is small enough to fit in any vehicle and comes with a carrying case or optional mobile office unit to be stowed or fastened in a location of your choice. Within minutes, the MRX920 can be securely placed in any vehicle and powered via the vehicle power source.

Data transmitted by R900® radio frequency (RF) meter interface units (MIUs) is received and stored by the MRX920 mobile data collector. Information can be quickly uploaded to Neptune's host meter reading software at the utility office. The N_SIGHT™ R900® host software transfers the customer information to the customer information system (CIS) to generate customer bills. The MRX920 unit also captures the advanced features of the E-Coder® solid state absolute encoder register connected to an R900 MIU*. These features include leak, tamper, and reverse flow indication.

The MX900 mobile data collection software runs on the user's laptop computer and is designed to support maximum efficiency. This software supports a USB connection or a wireless connection via WiFi to the MRX920 receiver and utilizes menu-driven commands to allow the user to effortlessly control all aspects of the meter reading process. No operator intervention is necessary once data collection has started. At any time, the operator can view either read or unread accounts with the touch of a button.

UTILITY ADVANTAGES

The MRX920 unit provides the meter reading industry with many advantages over other existing AMR systems:

- Industry-leading performance in a compact and affordable package
- Improves meter reading accuracy
- Addresses "hard-to-read" meters
- Increases meter reader safety
- Reduces man-hours needed to collect and process meter reading information
- Supports any size utility
- Portable and easy to set up

KEY FEATURES

- USB or wireless connection to the receiver via WiFi
- RF test application receives meter data information without loading a route
- Digital signal processing for improved meter reading throughput
- Portable for use in any vehicle
- Low power consumption (< 1A) allows for multiple devices to be connected in the same vehicle
- Intuitive graphical user interface
- Supports E-CoderPLUS advanced features**
- Supported by a courteous and knowledgeable Customer Support Center
- GIS meter location mapping***
- GPS vehicle location tracking***
- Wireless loading/unloading of routes

KEY BENEFITS

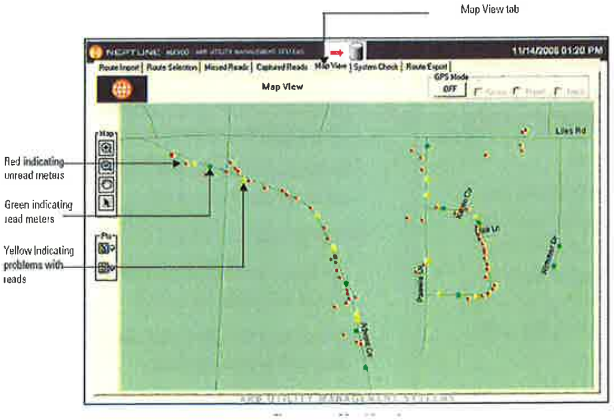
- Reads up to eight meters simultaneously and can process 70 unique meter readings per second
- Maximizes meter reading success rates and overall field and office efficiency
- Reduces potential liability to utility through improved meter reader safety
- Does not require a special or customized vehicle
- Operates from standard 12V DC vehicle power source (i.e., cigarette lighter)
- Will support leak detection, tamper detection, and reverse flow indication
- Courteous, prompt, and conscientious Support Specialists available if needed

** When connected to second generation R900 or later.*

*** Indication of E-Coder*

****GIS mapping requires optional maps software package. GPS requires GPS capable laptop or USB-connected receiver.*

MX900 software is designed to significantly reduce the time required to collect and process meter reading data while increasing meter reader safety and efficiency. The mobile data collection software provides an optional GPS mapping view. The map view allows the operator to monitor route completion by visually determining unread accounts which are represented as colored objects on the map. The operator can stop along the route anytime it is safe to do so and monitors each route loaded into the software. As an added feature, the MX900 also allows the operator to view special conditions that may exist in the route. Conditions such as high/low alarms and tamper alarms are also visible to the operator. For those utilities with Neptune E-Coder-equipped meters, value-added warning flags such as leak detection are also available. This optional mapping package can be ordered with or added to any existing MRX920 mobile data collector. Adding the optional mapping solution could not be easier, as no additional hardware is required.



SPECIFICATIONS

- Electrical Specifications:
  - Power consumption: < 1A
  - Power supply: 12V DC via vehicle power source adapter
- In order to adequately run the MX900 software, Neptune recommends the following minimum specifications:
  - Operating System

Operating System Version	Operating System Type	32/64 Bit
Windows® XP	Professional	32
Windows® Vista	Business	32
Windows® 7	Professional	32
Windows® 7	Home Premium	64

  - Processor – Intel Pentium processor 1.7 GHz
  - Memory – 1 GB
  - Communication
    - Internal 802.11 b/g wireless LAN
    - Windows Wireless Connection Manager (if WiFi connection to the receiver is desired)
  - USB 2.0
  - GPS receiver (mapping package is optional)

The MRX920 is an in-vehicle mobile data collector which is designed to be occasionally used in bumpy terrain found in rural meter reading routes. This needs to be taken into consideration when choosing a laptop. Should your utility operate the MRX920 in bumpy conditions or should you require a display rated for outdoor visibility, Neptune recommends considering a ruggedized laptop such as a Panasonic Toughbook® or equivalent.

- Environmental Conditions:
  - Operating temperature: 32° to 122° F (0° to 50° C)
  - Storage temperature: -40° to 185° F (-40° to 85°C)
  - Operating humidity: 5 to 95% non-condensing relative humidity
- Physical Specifications
  - Shipping weight: ~5 lbs

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NEPTUNE TECHNOLOGY GROUP
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ARB® UTILITY MANAGEMENT SYSTEMS™

NEPTUNE TECHNOLOGY GROUP

R900® BELT CLIP TRANSCEIVER

AUTOMATE MEASUREMENT TO ACTIVATE OPERATIONAL EFFICIENCY

Neptune's R900® System was designed to streamline and automate processes for your water utility, regardless of the meter reading method you choose – walk-by, mobile, or fixed network. As part of this system, our R900® Belt Clip Transceiver (R900 BCT) can help your personnel be more efficient in their jobs. The R900 BCT's two-way communications to the R900® MIU eliminate meter access issues and speed up retrieval of valuable data logging information – up to 96 days of historical hourly consumption data from an individual account. In addition, its exceptional radio frequency (RF) throughput reduces meter reading time, especially in high-density environments. Field personnel can even read R900s while performing maintenance or other tasks when taking advantage of the R900 BCT's unattended operations mode. These automated features ensure you collect accurate data that can be turned into meaningful information – to help improve accuracy, identify hidden causes of loss, and optimize the efficiency of your operations.

MOVE AHEAD WITH BACKWARD COMPATIBILITY AND FORWARD INNOVATION

The R900 BCT, as with the rest of Neptune's R900 System, works with past generations of equipment while remaining flexible to incorporate innovations as needed. The R900 BCT maintains support to read previous generations of R900 MIUs yet introduces powerful software-defined radio (SDR) technology to support the new advanced two-way features of the R900 System. Now, the R900 BCT is capable of reading electric, bubble-up ERT® devices and processing SCM or SCM+ message files that these ERT devices transmit. This gives utilities the freedom of equipping with just the R900 BCT to read both water and electric meters.

So, go ahead and phase in new features and equipment at your own pace with confidence that Neptune will support your future needs without leaving you with stranded assets.

PRESENT CONSUMPTION DATA IN THE FIELD FOR PROACTIVE CUSTOMER SERVICE

Simplified access to critical information means your utility can provide even more proactive customer service. Pairing the R900 BCT with a handheld device or a personal Android device running Neptune's NGO™ app, your personnel can maximize their efficiency in the field, with the flexibility to perform impromptu service calls and address customer service issues on-site without a separate truck roll. With the data literally in hand, they can share data logging graph information with homeowners. This on-the-spot, on-site presentment of how much water they used and when, helps head off customer complaints regarding high water bills, reduce delinquencies, and avoid write-offs.

KEY BENEFITS

- Increases meter reading efficiency
  - Increased RF throughput capabilities which reduce reading time in high-density R900 environments
  - Two-way communications to R900 MIU which reduces time required to retrieve data logging information
  - Unattended operations mode allows utility personnel to read R900s while performing other non-meter-reading-related job functions
- No stranded assets
  - Compatible with all generations of R900 MIUs
  - Probe compatibility with Advantage and Pocket ProReader
  - Connects via bluetooth to CE5320B, Trimble Nomad, and Trimble Ranger 3
  - Software-defined radio technology enables the R900 BCT to be updated for compatibility with future products
- Reads ERT devices
  - Compatible with Itron electric ERT technology (bubble-up ERTs only)
  - Processes SCM and SCM+ message format
- Analyze data at the source with Android phone or tablet via NGO app
  - Test-read R900s in the field or before installation to obtain reading and E-Coder® flag events
  - Retrieve 96 days of hourly interval data logging information
  - View graph of data logging intervals in the field
  - Share data logging graph information with homeowner to address high bill complaints

MODE OVERVIEW

	Normal	Unattended Operations	USB Mass Storage
Bluetooth Pairing to Handheld	Required	No	No. Used only for firmware updates and transfer of data via USB from SD card to N_SIGHT™ host PC
Trimble Nomad 900B/900LE/ 1050B/1050LE Compatible	Yes	No	
Android App Compatible	Yes*	No	
R900 Compatible	Yes	Yes	
Advantage / Pocket ProReader Compatible	Yes	No	
Data Logging Compatible	Yes	No	
SD Card Data Storage	Yes	Yes	

**Advantage/Pocket ProReader and data logging not supported in Android NGO™ app.*

Bluetooth, RF Status, Mode, and Battery LEDs

Battery Door

Power, Mode, and Enter Button

SD Card and USB Port Door

SPECIFICATIONS

- Communication: Bluetooth 2.1 and USB
- Handheld Software Compatibility: N_SIGHT™ version 5.0 or later
- Handheld Compatibility: Trimble Nomad 900B/900LE/1050B/1050LE, Trimble Ranger 3, and DAP CE5320B
- Memory: 4GB SD card
- Indicators: Four LEDs identify Bluetooth communication, RF status, mode status, and battery status
- Power Supply
  - Rechargeable lithium-ion battery pack — 5000 mAh capacity
  - Field-replaceable
- Dimensions
  - Height: 3.58" (9.1 cm)
  - Width: 1.66" (4.22 cm)
  - Length: 5.75" (14.6 cm)
- Weight: 1.1 lbs. (499g) including rechargeable battery
- Temperature Range
  - Operating: -4°F to +122°F (-20°C to +50°C)
  - Storage: -40°F to +185°F (-40°C to +85°C)
- Environmental: Tested to MIL-STD-810F and IP67
- Receiver Channels: 50
- Number of Simultaneous Channels: 8
- Approvals
  - FCC Class B
  - IC
- Accessories
  - Spare battery
  - Spare battery charger
  - Belt clip
  - SD card
  - 12V USB vehicle power cable
- Warranty
  - One-year comprehensive warranty
  - Hardware maintenance contracts available

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DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**Raw Water Slidegates - Installation**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**		**NO**	✓	

DESCRIPTION:

Design and replacement of slide gates and oil cylinder actuators in order to allow staff to safely enter the screening chamber for inspection and cleaning. Changes is WCB regulations have not allowed staff to do this for some time. Engineer to sign off the gates and butterfly valves for this purpose. To date extremely high Tender bids (200k+) were recieved, not accepted, divers were hired to take measurements and remove gates, awarded an RFQ for the gates, actuators, and butterfly valves to be purchased with the 85k 2015 budget. This budget request is for equipment installation to be done prior to the end of March so it is up and running before irrigation turn on (April 15).

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	50,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
TOTAL BUDGET:	**50,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**50,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**PRV #10 Valve Replacement - Rebuild**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**		**NO**	✓	

DESCRIPTION:

PRV #10 feeds thousands of residents including all of down town and is in dire need of being rebuilt before more valves fail and it becomes an emergency shut down. In an emergency situation water could be shut off to these residents for a week or more.

This work should be done at the same time as the installation of the valve on PVR at Sinclair which allows staff to enter safely as per WCB. The water shut down to do this will take approximately 2 days. Estimate by Agua Consulting.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	180,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
TOTAL BUDGET:	**180,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**180,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY:	Devon van der Meulen	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Water**
ITEM OR PROJECT NAME:	**Valve Instalation on Prairie Valley Road at Sinclair**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**		**NO**	✓	

DESCRIPTION:

In order to reduce the time to shut off the water downstream of PRV #10 which feeds most of town, a valve must be installed in the 42" main on PVR at Sinclair. This allows the water to drain in a shorter period of time and allows staff to safely enter the PRV #10 confined space as pper WCB Regulations. The valve has already purchased.

The water shut down to do this will take approximately 2 days and should be done at the same time as the rebuilding of PRV #10. Estimate by Agua Consulting.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	120,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
TOTAL BUDGET:	**120,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**120,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY:	Devon van der Meulen	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

Water Separation Project

2016 Budget Calculations:

200,000	Ineligible Costs - District
170,000	Eligible Costs - District
370,000	Total
340,000	Grant Funding (Matching 2/3 of Eligible Costs)
710,000	Total 2016

	Grant	Statutory Reserve	Borrowing	Total
General Fund - 28%	95,200	247,600	-	342,800
Water Fund - 72%	244,800	122,400	-	367,200
	340,000	370,000	-	710,000

2017 Budget Calculations:

-	Ineligible Costs - District
6,180,000	Remainder of Eligible Costs
6,180,000	Total
4,120,000	Remainder of Grant Funding
2,056,000	Borrowing
4,000	Remainder of Reserves
-	

	Grant	Statutory Reserve	Borrowing	Total
General Fund - 28%	1,153,600	1,120	575,680	1,730,400
Water Fund - 72%	2,966,400	2,880	1,480,320	4,449,600
	4,120,000	4,000	2,056,000	6,180,000

Water Separation Project
Grant application - as of January 8, 2016

			From 2015 Report	
Construction Cost Estimates				
Pump station	398,500			
Water lines	3,384,315			
	3,782,815	72%		
Roads	1,441,750	28%		
	5,224,565			
Total Project Cost Estimate	6,322,000		6,890,000	
Ineligible cost estimate	100,000		200,000	
Funding				
Costs eligible for grant funding	6,222,000		6,690,000	
			Water Fund - 72%	General Fund - 28%
Build Canada Grant	4,460,000		3,229,236	1,230,764
District Borrowing	2,056,000		1,488,634	567,366
District Land Sales Fund	374,000		270,792	103,208
	6,890,000		4,988,662	1,901,338
	Debt Servicing Costs			
Principal over 5 years	411,200		297,727	113,473
2017 Borrowing - start repayment in 2018				
2018 Repayment	411,200		297,727	113,473
2019 Repayment	411,200		297,727	113,473
2020 Repayment	411,200		297,727	113,473
2021 Repayment	411,200		297,727	113,473
2022 Repayment	411,200		297,727	113,473
	2,056,000		1,488,635	567,365
Interest over term - 2%				
2017 - $2,056,000	41,120		29,773	11,347
2018 - $2,056,000 less $411,200	32,896		23,818	9,078
2019 - $1,644,800 less $411,200	24,672		17,864	6,808
2020 - $1,233,600 less $411,200	16,448		11,909	4,539
2021 - $822,400 less $411,200	8,224		5,955	2,269
	123,360		89,319	34,041
Total Debt Servicing Costs				
2017	41,120		29,773	11,347
2018	444,096		321,545	122,551
2019	435,872		315,591	120,281
2020	427,648		309,636	118,012
2021	419,424		303,682	115,742
2022	411,200		297,727	113,473
	2,179,360		1,577,954	601,406

Schedule A: PROJECT INFORMATION

A.1 Project Title: Jones Flat and Garnet Valley Water System Separation
Project No. N20013.

A.2 The Jones Flat and Garnet Valley Water System Separation Project will consist of the following:

-installing approximately 9,300 metres of PVC and HDPE water main;
-approximately 140 water services;
-approximately 28 air valves;
-approximately 32,000 m2 of asphalt trench paving;
-approximately 18,750m2 of road rehabilitation beyond trench excavation;
-approximately 6 water main tie-ins to existing mains;
-1 booster pump station;
-approximately 2,500 lineal metres of trench rock blasting;
-construction traffic management and control;
-dewatering; and
-silt fencing.

A.3 The Commencement Date of the Project is July 2, 2015, which is the date the Project was approved.

A.4 The Completion Date of the Project shall be no later than March 31, 2018.

Schedule B: PAYMENT TERMS AND CONDITIONS

B.1 Financial Contribution by the Province:

The Province will make a financial contribution to the Eligible Expenditures properly incurred by the Recipient for the Project which will not exceed the lesser of 2/3 of the total Eligible Expenditures of the Project or Four Million Five Hundred and Twenty Six Thousand Six Hundred and Sixty Six Dollars and Zero Cents ($4,526,666) being the maximum amount approved.

B.2 Timing of Eligible Expenditures:

The Province will not make any payment for Eligible Expenditures incurred before the Commencement Date or after the Completion Date.

B.3. Timing of Claims:

B.3.1 The Recipient will deliver to the Province through NBCF-SCFA Staff, as required by the Province, claims setting out the amount of Eligible Expenditures actually incurred and paid by the Recipient to the date of such claims.

B.3.2 Claims for reimbursement will be submitted in accordance with the forecast detailed in the Recipient's most current budget forecast report, or at a time otherwise acceptable to the Province.

B.3.3 Claims must be submitted with an up-to-date progress report and a summary of expenditures which includes the name of the payee, date paid, work rendered start/end dates, invoice number, and invoice date.

B.3.4 In the event a claim for Eligible Expenditures submitted by a Recipient in a Fiscal Year is less than the amount set out in the forecast detailed in the recipient's most current budget forecast report for that Fiscal Year, the Province is not obligated to pay the unclaimed amount to the Recipient. The Province may, at its sole discretion, choose to add the unclaimed amount to a payment in the next Fiscal Year, in which case the forecast provided in the most current budget forecast report is deemed to be amended to reflect the change.

B. 3.5 The Eligible Expenditures included in each claim must all be incurred and paid in one Fiscal Year. Claims submitted that include Eligible Expenditures incurred and paid in more than one Fiscal Year will not be accepted by the Province.

B.3.6 No reimbursement of a claim of the Recipient may be paid by the Province unless it is received by the Province on or before March 31 of the year

following the year in which the Eligible Expenditures referred to in such claim were incurred, and in all cases, no reimbursement will be paid if a claim is received later than March 31, 2023.

B.4 Payment of Claims:

No reimbursement of a claim of the Recipient will be paid to the Recipient unless the following have been submitted to the Province:

a) a current Periodic Progress Report;
b) a current Budget Forecast Report; and
c) any other additional technical reporting requirements as required under Schedule C of this Agreement.

Schedule C: REPORTING REQUIREMENTS

C.1 Periodic Progress Reports:

The Recipient will deliver to the Province through NBCF-SCFA Staff on a quarterly basis and/or upon request by the Province, periodic progress reports ending March 31, June 30, September 30, and December 31 of each year of the term of this Agreement commencing on the first quarter following the date of execution of this Agreement and ending on the date of Project completion. The periodic progress reports will be in a form established by the Province and are to be completed and submitted within a time frame as stipulated by the Province.

C.2 Budget Forecasting Report:

The Recipient will deliver to the Province through NBCF-SCFA staff on a monthly basis and/or upon request by the Province, budget forecast reports ending the last day of each month for each year of the term of this Agreement commencing on the first month following the date of execution of this Agreement. The budget forecast reports will be in a form established by the Province.

C.3 Final Report:

In order to receive final payment when the Project is completed, the Recipient will deliver to the Province through NBCF-SCFA Staff a Final Report, in a form established by the Province.

C.4 Project Audit Report:

Prior to payment of the final claim for Eligible Expenditures, the Recipient may also be required to provide a Project audit report from a person authorized to be an auditor under section 169 of the *Community Charter* confirming that the Project expenditures have been made in compliance with this Agreement and the NBCF-SCFA guidelines. If required by the Province, the audit is to be in accordance with the form and reporting standards recommended by the Canadian Institute of Chartered Accountants.

C.5 Additional Reporting Requirements:

The additional reporting requirements are:

Drinking Water System Requirements
Prior to payment in excess of 25% of approved funding amount, the Recipient must provide written confirmation to the Province that the project design and

construction meets the statutory requirements under the British Columbia Drinking Water Protection Act and the Water Act. This includes:

Where the proposed construction involves a drinking water system, the Recipient must submit a copy of the Permit to Construct, issued under the British Columbia Drinking Water Protection Act. Where a Permit to Construct is not required, the Recipient must confirm that the Regional Public Health Engineer has been notified of the proposed project; and/or
Where the project involves the development and/or construction of a groundwater source, the well(s) must be designed, constructed, and tested in accordance with the British Columbia Ground Water Protection Regulation.

Proposed Equipment and Energy Systems
Prior to payment in excess of 25% of approved funding amount, the Recipient must submit documentation to the Province listing all energy features of this project including equipment/devices containing energy efficiency features and design (e.g. pumps, lighting, controls, HVAC, etc.).

Water Quality Requirements
Prior to payment in excess of 75% of approved funding amount, the Recipient must provide the following to the Province:

a) Confirmation that:

- The domestic water system has been classified by the British Columbia Environmental Operations Certification Program (BCEOCP); and
- The operator(s) of the domestic water system are either
  1. certified to the level required by the waterworks system classification under the BCEOCP; or
  2. a plan is in place and is submitted to the Province to ensure operators will receive their required training (includes both education and experience) to enable BCEOCP certification.

b) If source is groundwater, a completed Well Head Protection Plan.

Water Conservation Plan
Prior to payment in excess of 75% of approved funding amount, the Recipient must do one of the following.

1. Provide an up-to-date, succinct, effective, council or board endorsed water conservation plan, which covers the entire water system, to the Province; or
2. In the situation that a water conservation plan has been previously submitted to the Province and/or is more than 5 years old, the Recipient is required to submit an updated outline of that plan that identifies actions that are complete, in process and any new actions planned.

An effective water conservation plan may include the completion of a Water Conservation Calculator report (see: www.waterconservationcalculator.ca) and the following:

- Identify current water consumption (e.g. 600 L/capita/day);
- Set a water reduction target (e.g. 350 L/capita/day by xxxx year);
- Outline the communities current and planned water conservation actions/measures (e.g. universal metering, inclined block water rates, conservation plumbing fixtures, leakage reduction, rebate programs, education programs, xeriscaping, etc.);

- Identify current and planned mitigation and adaptation strategies to address climate change (e.g. installing water meters to secure water supply, lowering demand to reduce pumping requirements, etc.);
- Detail how strategies/initiatives will be implemented (e.g. schedule, funding, staff responsibility, etc.); and
- Link the plan to other regulatory mechanisms, policies and plans (e.g. Official Community Plan, water master plan, wastewater management strategy, BC Living Water Smart, Climate Action Plan, etc.).

Asset Management
Prior to payment in excess of 75% of approved funding amount, the Recipient must submit to the Province the following:

- A summary of the current state of asset management practice within the organization as related to the asset group which corresponds with the project (ex. for a water supply project, the asset group would be 'all water assets'); and
- A summary of the activities (related to the same asset group) that the organization intends to carry out to improve asset management practice within the organization.

The Asset Management BC Roadmap and/or AssetSMART 2.0 can be referred to: www.assetmanagementbc.ca. Responses relying upon different formats or resources may also be accepted at the discretion of the program lead.

Asset Renewal Profile
Prior to final payment, the Recipient must complete and submit an asset renewal profile for the asset group which corresponds with the project for which the grant was awarded (ex. for a water supply project, the asset group would be 'all water assets'). The profile should show the annual expenditures required to renew existing assets, including those assets constructed as part of the project, over the next 30 (or more) years. The renewal profile should be in the form of a vertical bar graph (year on the x axis and total replacement costs on the y axis) and should draw on data regarding expected remaining life and replacement value for individual assets from the community's asset data register.

Installed Equipment and Energy Systems
Prior to final payment, the Recipient must submit documentation to the Province listing all energy features of this project including equipment/devices containing energy efficiency features and design (e.g. pumps, lighting, controls, HVAC, etc.). The documentation must identify the degree to which the equipment met the expected energy efficiency and/or renewable energy performance (include the amount and type of energy estimated to be saved and/or amount/type of renewable energy produced).

Reports submitted by the Recipient under this section are for the Province's information and NBCF-SCFA guidelines accountability only, and their review by the Province in no way endorses, approves or verifies the findings, technical data, results, quality statements, representations or recommendations therein, and the Recipient warrants that all information contained in any report is true and correct.

C.6 Other Information:

The Recipient will provide the Province through NBCF-SCFA Staff, upon request, all such other information concerning the progress of the Project to completion and payment of Eligible Expenditures, as may be required by the Province from time to time.

Schedule D – ELIGIBLE AND INELIGIBLE EXPENDITURES

D.1 ELIGIBLE EXPENDITURES

Subject to Section D.2, Eligible Expenditures will be all direct expenditures which are, in the Province's opinion, properly and reasonably incurred and paid by the Recipient for goods or services necessary for the implementation of the Project. Eligible Expenditures will include only the following:

a) the capital expenditures for acquiring, constructing, renewing, rehabilitating, materially enhancing or renovating an Asset, as defined and determined according to accounting principles generally accepted in Canada;

b) expenditures directly associated with joint federal communication activities (press releases, press conferences, translation, etc.) and with project signage related to funding recognition set out in Schedule H (Communications Protocol) of the NBCF-SCFA;

c) all planning (including plans and specifications) and assessment expenditures specified in the Agreement such as the expenditures for environmental planning, surveying, engineering, architectural supervision, testing and management consulting services. Canada will contribute no more than 15% of its funding to these expenditures;

d) the expenditures for engineering and environmental reviews, including environmental assessments and follow-up programs as defined in the *Canadian Environmental Assessment Act 2012* and the expenditures of remedial activities, mitigation measures and follow-up identified in any environmental assessment;

e) the expenditures for Project–related signage, lighting, Project markings and utility adjustments;

f) expenditures for Aboriginal consultation;

g) recipient audit and evaluation expenditures as specified in the Agreement;

h) the incremental expenditures of the Recipient's employees or leasing of equipment may be included as eligible expenditures under the following conditions:

   i. The Recipient is able to demonstrate that it is not economically feasible to tender a contract;

   ii. The employee or equipment is engaged directly in respect of the work that would have been the subject of the contract; and

   iii. The arrangement is approved in advance and in writing by the Province.

i) leasing of equipment related to the construction of the Project; and,

j) other expenditures that, in the opinion of the Province, are considered to be direct and necessary for the successful implementation of the Project and have been approved in writing prior to being incurred.

D.2 INELIGIBLE EXPENDITURES

The following expenditures are ineligible:

a) expenditures incurred before the Commencement Date;

b) expenditures incurred after the Project Completion Date with the exception of expenditures related to audit and evaluation requirements pursuant to the Agreement;

c) the expenditures related to developing a business case or proposal for funding;

d) the expenditures related to purchasing land, buildings and associated real estate and other fees;

e) financing charges and interest payments on loans;

f) leasing land, buildings, equipment except those noted under D.1(i) above and other facilities;

g) furnishings and non-fixed assets which are not essential for the operation of the Project;

h) general repairs and maintenance of a Project and related structures, unless they are part of a larger capital expansion project;

i) services or works normally provided by the Recipient, incurred in the course of implementation of the Project, except those specified as eligible expenditures;

j) the expenditures related to any goods and services which are received through donations or in kind;

k) any overhead expenditures, including salaries and other employment benefits of any employees of the Recipient, direct or indirect operating or administrative expenditures of Recipients, and more specifically expenditures related to planning, engineering, architecture, supervision, management and other activities normally carried out by staff except in accordance with subsections D.1 (c) and D.1 (h) in the Eligible Expenditures above;

l) taxes for which the Recipient is eligible for a tax rebate and all other expenditures eligible for rebates; and,

m) legal fees.

DISTRICT OF SUMMERLAND

2021-2025 Forecasted Operating Projects and Capital

Water		Total	DESIRED YEAR	NOTES
Distribution	System Separation - Garnet Valley (Borrowing Costs)	303,682	2021	
W Shed	Decommisioning of Tsuh Design, Application (50k), & Construction	60,000	2021	30% - Design Phase
Distribution	Temperature Sensors and Alarming in all Stations	10,000	2021	
W Shed	Thirsk Dam Concrete Protection	50,000	2021	
Distribution	System Separation - Garnet Valley (Borrowing Costs)	297,727	2022	
W Shed	Video Instpection and Review of Dam Outlet Pipes every 5 years	10,000	2022	
W Shed	Reservoir Spillway Weir Modifications	40,000	2022	
W Shed	Decommisioning of Tsuh Design, Application (50k), & Construction	140,000	2022	70% - Construction Phase
W Shed	Miscellaneous - Wildfire Protection Plan (75k) Contingency (100k)	180,000	2022	
Distribution	Cedar Ave Water Main Extension (Pierre to Glenfir)	61,000	2022	
Distribution	TC Chlorinator Open Delta	20,000	2023	
Distribution	Okanagan Lake Booster Station (Phase II)	1,660,478	2023	90% - Construction Phase
W Shed	Crescent Dam Outlet Work - Dredging of Intake Basin	40,000	2024	
W Shed	Head Waters #3 Crest Reinstatement	50,000	2024	
Distribution	System Separation - Giant's Head Road (North)	95,253	2024	
	TOTAL WATER	3,018,140		

THE CORPORATION OF THE DISTRICT OF SUMMERLAND
SEWER FUND OPERATING BUDGET

	BUDGET 2016	BUDGET 2015	Anticipated ACTUAL 2015	ACTUAL 2014	ACTUAL 2013
REVENUE					
Sewer rates	1,134,985	938,663	986,943	895,210	874,150
Sewer Tax Levies	690,000	689,300	690,900	688,366	684,366
OBWB grants	392,281	395,236	395,236	397,126	383,360
Sewer study grants - gas tax	150,000	-	-	-	-
Sundry	25,200	21,400	10,276	10,428	6,828
Other fiscal services	6,000	12,000	6,805	7,486	12,005
Actuarial adjustment on MFA debt	363,853	332,867	326,063	301,760	272,073
Transfer from other funds	97,000	97,000	97,000	97,000	97,000
Transfer from surplus and reserve for future expenditure					
	2,859,319	2,486,466	2,513,223	2,397,376	2,329,782
EXPENDITURE					
Administrative and general	222,190	186,558	185,203	158,323	176,354
Maintenance and operating	1,002,860	884,384	829,469	782,348	899,490
Subtotal	1,225,050	1,070,942	1,014,672	940,671	1,075,844
Debt charges	1,318,765	1,304,196	1,304,198	1,276,200	1,152,463
Transfer to reserve for future expenditure	6,009	12,000	6,805	7,486	12,005
	2,549,824	2,387,138	2,325,675	2,224,357	2,240,312
FUNDS AVAILABLE FOR HIGHER SERVICE LEVELS, OPERATING AND CAPITAL PROJECTS	309,495	99,328	187,548	173,019	89,470
Operating projects	150,000	25,000	20,561	-	-
Capital	159,495	42,000	29,432	51,695	44,756
Reserves/Surplus	-	32,328	15,685	8,084	1,000
	309,495	99,328	65,678	59,779	45,756
SURPLUS (DEFICIT)	-	-	121,870	113,240	43,714

Sewer Fund

	BUDGET 2016	BUDGET 2015	Difference	% Change
Sewer Revenue				
Sewer rates	$ 1,134,985	$ 938,663	$ 196,322	20.92%
Sewer Tax Levies	690,000	689,300	700	0.10%
OBWB grants	392,281	395,236	(2,955)	-0.75%
Sewer study grants - gas tax	150,000	-	150,000	
Sundry	25,200	21,400	3,800	17.76%
Other fiscal services	6,000	12,000	(6,000)	-50.00%
Actuarial adjustment on MFA debt	363,853	344,867	18,986	5.51%
Transfer from other funds	97,000	97,000	-	0.00%
	$ 2,859,319	$ 2,498,466	$ 360,853	

Variance Analysis of Sewer Revenue ($2,500 threshold utilized)

Sewer rates budget updated to reflect 2015 actuals + 15% proposed increase.	$ 196,322
Budget reduction to reflect anticipated grant revenue per OBWB Annual Report.	(2,955)
Addition of Sewer study grant revenue (Asset Management)	150,000
Increase to Sani-dump budget to reflect 2015 actuals (included in Sundry).	5,500
Reduction in debt reserve fund earnings.	(6,000)
Municipal Finance Authority actuarial adjustment increases each year.	18,986
	$ 361,853

Various other small adjustments (Parcel tax, administration, connection fees, etc.)

Sewer Expenditures				
Administration	$ 222,190	$ 186,558	$ 35,632	19.10%
Sewage Collection System	136,895	94,723	42,172	44.52%
Sani Dump	7,675	7,142	533	7.46%
Lift Stations	60,364	49,153	11,211	22.81%
Treatment Plant	650,174	597,455	52,719	8.82%
Sludge Removal	132,752	120,911	11,841	9.79%
Developer Funded Works	15,000	15,000	-	0.00%
Debt Charges	1,318,765	1,304,196	14,569	1.12%
Transfer to Sewer Reserve Funds	6,009	12,000	(5,991)	-49.93%
Subtotal	$ 2,549,824	$ 2,387,138	$ 162,686	

Variance Analysis of Sewer Expenditures ($2,500 threshold utilized)

Net affect of reallocation of municipal labour costs between Sewer Department cost centers.	$ 11,689
Increase in the equipment charge out rates for fleet	51,000
20% incremental increase to administration charge (second year of phase in).	24,600
Budget addition for telephone line charges for alarm monitors & SCADA systems.	6,500
Increase in electricity budget for pump houses (to reflect 2015 actuals and 4% proposed increase).	3,959
Municipal Finance Authority actuarial adjustment increases each year.	14,569
Reduction in contribution to Sewer reserves.	(5,991)
Budget for the addition of Preventative Maintenance & Upgrades.	50,000
	$ 156,326

Various other small adjustments (CUPE 2% increase, 4% electrical increase, etc.)

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sewer Utility
2016 Operating Budget

REVENUE USER CHARGES	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	 %
Domestic Sewer User Charges							
Residential rates	1,076,046	898,183	935,692	864,144	834,545	177,863	19.80
Commercial rates	114,077	98,123	99,197	91,277	88,746	15,954	16.26
Municipal use	5,828	6,615	5,068	-	-	- 787	-11.90
Pacific Agri-Research Centre	12,913	5,200	11,229	6,087	12,473	7,713	148.33
Other	-	-	-	-	350	-	
Discounts allowed	- 73,879	- 69,458	- 64,243	- 66,298	- 61,964	- 4,421	6.36
	1,134,985	938,663	986,943	895,210	874,150	196,322	20.92
Sewer Tax Levies							
Parcel taxes	690,000	689,300	690,900	688,366	684,366	700	0.10
Other tax levies	-	-	-	-	-	-	
	690,000	689,300	690,900	688,366	684,366	700	0.10
Other Revenue							
Administration charges	200	1,000	210	1,246	879	- 800	-80.00
Recoveries	-	-	-	-	-	-	
Connection fees	-	900	-	-	900	- 900	-100.00
Sani dump fees	10,000	4,500	10,066	6,614	4,360	5,500	122.22
Contributions from developers	15,000	15,000	-	2,568	689	-	
Miscellaneous	-	-	-	-	-	-	
	25,200	21,400	10,276	10,428	6,828	3,800	17.76
Conditional Transfers							
Provincial conditional grants	-	-	-	-	-	-	
OBWB conditional grants	392,281	395,236	395,236	397,126	383,360	- 2,955	-0.75
Sewer study grants - gas tax	150,000	-	-	-	-	150,000	
	542,281	395,236	395,236	397,126	383,360	147,045	37.20

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sewer Utility
2016 Operating Budget

	2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
REVENUE							
FISCAL SERVICES							
Other Fiscal Services							
MFA - Cash and actuarial	369,853	344,867	332,868	309,246	284,078	24,986	7.25
Transfer from Surplus and Reserves							
Transfer from prior surplus	-	-	-	-	-	-	
Transfer from reserves	-	-	-	-	-	-	
	-	-	-	-	-	-	
Transfers from Other Funds							
Transfer from General Revenue	-	-	-	-	-	-	
Transfer from Water Revenue	97,000	97,000	97,000	97,000	97,000	-	
	97,000	97,000	97,000	97,000	97,000	-	
TOTAL REVENUE	2,859,319	2,486,466	2,513,223	2,397,376	2,329,782	372,853	15.00

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sewer Utility
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	SEWER UTILITY ADMINISTRATION							
	Administration							
3124111100	Salaries - Regular	57,659	54,500	53,380	51,297	78,191	3,159	5.80
3124111210	Wages - Regular	24,853	24,939	25,731	26,930	31,401	-86	-0.34
3124111211	Wages - Part-time	1,395					1,395	
3124111220	Wages - Overtime			24				
3124112110	Travel / Conferences		750		100	59	-750	-100.00
3124112120	Freight & courier	250	250		23	170		
3124112130	Telephone	300		266	67		300	
3124112210	Advertising	500	500					
3124112330	Engineering and survey							
3124112340	Training and education	6,000	5,250	4,473	4,850	5,286	750	14.29
3124112375	Insurance	1,476	1,712	547	7,762	19,395	-236	-13.79
3124112390	Memberships	900	500	1,254	710	734	400	80.00
3124112395	Contracted services	5,020	3,220	7,996	3,430	5,396	1,800	55.90
3124112610	Equipment rental - Internal	8,300	3,600	3,126	2,160	3,600	4,700	130.56
3124113000	Small capital	5,600	6,000	3,365	1,227	4,050	-400	-6.67
3124115300	Materials and supplies			12	57			
3124114220	Administrative charges	103,200	78,600	78,600	54,000	22,000	24,600	31.30
3124115400	Office supplies	4,000	4,000	3,692	3,054	1,672		
3124117300	Admin fee - greenhouse gas	2,737	2,737	2,737	2,656	4,400		
		222,190	186,558	185,203	158,323	176,354	35,632	19.10
	COLLECTION AND TRANSMISSION							
	Sewage Collection System							
3124211210	Wages - Regular	52,020	51,000	43,737	42,321	42,939	1,020	2.00
3124211220	Wages - Overtime	807	791	702	337	1,088	16	2.02
3124211290	Dirty Pay/Shift Differential	8,218	7,482	7,622	7,752	6,702	736	9.84
3124212130	Telephone							
3124212395	Contracted services	8,000	8,000	10,892	7,448	13,694		
3124212610	Equipment rental - Internal	33,750	18,350	10,225	6,680	10,693	15,400	83.92
3124212620	Equipment rental - External	100	100					
3124213000	Small capital	4,000	4,000		2,813			
3124215300	Materials & supplies	30,000	5,000	6,088	8,290	41,330	25,000	500.00
3124217200	Pump subsidies							
		136,895	94,723	79,266	75,641	116,446	42,172	44.52

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sewer Utility (continued)
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	Sani Dump							
3124251210	Wages - Regular	1,675	1,642	476	1,268		33	2.01
3124251220	Wages - Overtime				135			
3124252395	Contracted services	4,900	4,900	3,425	5,704			
3124252610	Equipment rental - Internal	600	100	261	173		500	500.00
3124255300	Materials & supplies	500	500		1,346			
		7,675	7,142	4,162	8,626		533	7.46
	Lift Stations							
3124351210	Wages - Regular	24,605	24,123	26,060	24,419	22,890	482	2.00
3124351220	Wages - Overtime	1,613	1,581	1,008	1,834	1,467	32	2.02
3124352130	Telephone	6,500		6,395	6,210	6,417	6,500	
3124352395	Contracted services	2,000	2,000		97	163		
3124352610	Equipment rental - Internal	2,600	1,000	1,087	952	648	1,600	160.00
3124355300	Materials & supplies	7,000	5,000	5,393	10,372	1,776	2,000	40.00
3124355520	Gas	515	515	358	325	342		
3124355530	Electricity	15,531	14,934	11,456	9,497	13,915	597	4.00
		60,364	49,153	51,757	53,706	47,618	11,211	22.81
	TREATMENT AND DISPOSAL							
	Treatment Plant							
3124401210	Wages - Regular	259,174	254,092	237,219	229,065	247,711	5,082	2.00
3124401220	Wages - Overtime	16,089	15,774	13,803	13,939	20,169	315	2.00
3124401290	Wages - Standby pay	31,923	28,790	31,032	30,094	30,493	3,133	10.88
3124402130	Telephone	5,000	5,000	3,419	3,339	4,206		
3124402375	Insurance	10,457	12,127	3,871	14,555	9,051	-1,670	-13.77
3124402395	Contracted services	14,000	14,000	15,503	17,984	51,750		
3124402610	Equipment rental - Internal	21,600	5,000	11,039	7,358	8,156	16,600	332.00
3124403000	Small capital	6,785	6,785	3,051	4,686			
3124405300	Materials & supplies	150,000	125,000	128,622	87,144	135,634	25,000	20.00
3124405520	Gas	30,900	30,900	12,933	16,014	22,757		
3124405530	Electricity	102,946	98,987	109,191	101,653	92,110	3,959	4.00
3124405540	Sewer	300		296			300	
3124409900	Licences and permits	1,000	1,000	759	840	821		
		650,174	597,455	570,738	526,671	622,858	52,719	8.82

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sewer Utility (continued)
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	%
	EXPENDITURES							
	Sludge Removal							
3124411210	Wages - Regular	78,602	77,061	91,781	80,471	72,480	1,541	2.00
3124412395	Contracted services	30,000	30,000	23,195	29,087	29,134		
3124412610	Equipment rental - Internal	18,150	5,850	8,163	5,248	5,369	12,300	210.26
3124415300	Materials & supplies	6,000	8,000	407	330	5,585	-2,000	-25.00
		132,752	120,911	123,546	115,136	112,568	11,841	9.79
	Developer Funded Works							
3124491210	Wages - Regular	7,500	7,500		958			
3124492395	Contracted services							
3124492610	Equipment rental - Internal							
3124495300	Materials & supplies	7,500	7,500		1,610			
		15,000	15,000		2,568			
	FISCAL SERVICES							
	Debt Charges							
3128118230	MFA - Interest	599,660	618,620	618,620	621,731	527,681	-18,960	-3.06
3128118231	MFA - Cash Expense							
	MFA - Exchange							
3128118330	MFA - Principal	719,105	685,576	685,578	654,469	624,782	33,529	4.89
		1,318,765	1,304,196	1,304,198	1,276,200	1,152,463	14,569	1.12
	Transfer to Sewer Reserve Funds							
3128210000	Reserve for future expenditure	6,009	12,000		7,486	12,005	-5,991	-49.93
	TOTAL EXPENDITURES	2,549,824	2,387,138	2,318,870	2,224,357	2,240,312	162,686	6.82

CORPORATION OF THE DISTRICT OF SUMMERLAND
Sewer Utility Administration Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
3124111100	Salaries - Regular	Portion of salary for Director & Managers.		57,659	54,500
3124111210	Wages - Regular	Administration Salaries		24,853	24,939
3124111211	Wages - Part-time	Provision for Administrative Relief		1,395	0
3124111220	Wages - Overtime	Charges for overtime hours by administrative staff.		0	0
3124112110	Travel / Conferences	Travel on sewer related activities.		0	750
3124112120	Freight and courier	Courier and freight charges for sending various documents and critical correspondence.		250	250
3124112130	Telephone	Telephone charges - portion of Manager's cell phone.		300	0
3124112210	Advertising	Advertising of annoucements regarding the sewer system.		500	500
3124112330	Engineering and survey	Consulting fees on sewer design work.		0	0
3124112340	Education and training	Training for certification requirements.		6,000	5,250
3124112375	Insurance	Allocation of premiums on municipal liability policies including environmental impairment.		1,476	1,712
3124112390	Memberships	Annual dues charged by certain associations such as BCWWA.		900	500
3124112395	Contracted services	Maintenance services provided by contractors for the following:			
		Alarm monitoring	300		
		Janitor	2,420		
		Software Licence - MP2 (yearly)	1,800		
		Other items such as HVAC, snow removal, electrical	500	5,020	3,220
3124112610	Equipment rental - Internal	Internal charge for the vehicle used on sewer related travel.		8,300	3,600
3124113000	Small capital	Cost of equipment too small to capitalize.		5,600	6,000
3124114220	Administration charge	Internal charge to reflect costs incurred in the general operating fund on behalf of the sewer fund.		103,200	78,600
3124115400	Office supplies	Normal office supplies used in day to day operations such as paper, photocopier toner, etc.		4,000	4,000
3124117300	Admin Fee - Green House Gases			2,737	2,737
	Total Sewer Utility Administration Expenditures			222,190	186,558

SIGNIFICANT CHANGES: 2% CUPE increase. Allocation of 19% of total Administration Relief budget to this cost centre.
Increase internal equipment use charge to reflect updated rates.
20% incremental increase to Administration charge.

WORK PLAN: Portion of Managers and Directors salarlies and Jr. Accountant and Secretary wages.
Shipping, training, office related materials and equipment.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sewage Collection System Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
3124211100	Salaries - Regular	Surveying, planning and inspections by Engineering Technicians.		0	0
3124211210	Wages - Regular	Municipal labour costs for crews to do the required maintenance of the collection system.		52,020	51,000
3124211220	Wages - Overtime	Provision for overtime		807	791
3124211290	Wages - Standby	Standby pay (0.5 hours per day X 365 days) Premium for 10 man days of dirty pay		8,218	7,482
3124212130	Telephone	Telephone charges on cell phone.		0	0
3124212375	Insurance	Allocation of premiums on municipal liability policies.		0	0
3124212395	Contracted services	Video inspections performed by contractors Flagging	2,000 6,000	8,000	8,000
3124212610	Equipment rental - Internal	Internal charge for use of municipal equipment.		33,750	18,350
3124212620	Equipment rental - External	Charges for rental of equipment from outside sources.		100	100
3124213000	Small Capital	Cost of equipment immaterial to capitalize.		4,000	4,000
3124215300	Materials & supplies	Charge for materials used in maintaining the collection system. Provision for Preventative Maintenance & Upgrades	5,000 25,000	30,000	5,000
3124217200	Pump subsidies	Payments to certain ratepayers for pumps.		0	0
	Total Collection System Expenditures			136,895	94,723

SIGNIFICANT CHANGES: 2% CUPE increase. Increase internal equipment use charge to reflect updated rates. Addition to budget for provision to cover Preventative Maintenance & Upgrades.

WORK PLAN: Flushing, locates, removing blockages and repairs to the gravity, low pressure and forced main system.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sani Dump Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
3124251210	Wages - Regular	Municipal labour costs		1,675	1,610
3124252395	Contracted services	Sani Star Contract ($150USD monthly year round) Pump Out - weekly May - Oct	1,900 3,000	4,900	4,900
3124252610	Equipment rental - Internal	Internal charge for use of municipal equipment.		600	100
3124255300	Materials & supplies	Charge for materials used in maintaining the sani dump		500	500
	Total Lift Stations Expenditures			7,675	7,110

SIGNIFICANT CHANGES: 2% CUPE increase.

WORK PLAN: Assisting the Waste Water Operators in the cleaning of 7 lift stations & the maintenance & repair of the Trout Creek Sani-dump.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Lift Stations Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
3124351210	Wages - Regular	Municipal labour costs for crews to do the required maintenance of the collection system	19,383		
		Instrumentation/Electrical work done by employee	1,196		
		Work Crew cleaning sumps and mowing	4,026	24,605	24,123
3124351220	Wages - Overtime	Overtime and callouts.		1,613	1,581
3124352130	Telephone	Line charges for alarm monitors and SCADA systems		6,500	0
3124352395	Contracted services	Provision for work performed by contractors.		2,000	2,000
3124352610	Equipment rental - Internal	Internal charge for use of municipal equipment.		2,600	1,000
3124355300	Materials & supplies	Charge for materials used in maintaining the lift stations.		7,000	5,000
3124355520	Gas	Natural gas costs on back-up generator for the sewer lift station.		515	515
3124355530	Electricity	Charge for electricity used in pumping at the lift stations		15,531	14,934
	Total Lift Stations Expenditures			60,364	49,153

SIGNIFICANT CHANGES: 2% CUPE increase. 4% electricty increase. Addition of telephone budget to reflect 2013 through 2015 actuals (lines for alarm & monitoring systems).

WORK PLAN: Inspections, maintenance and repairs of 7 lift stations and the Trout Creek Sani-dump.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Treatment Plant Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
3124401210	Wages - Regular	Municipal labour costs for crews to do the required maintenance of the treatment plant.	230,771		
		Instrumentation/ Electric work done by employees.	20,694		
		Works Crew	7,709	259,174	254,092
3124401220	Wages - Overtime	Provision for overtime.		16,089	15,774
3124401290	Wages - Standby pay	Standby pay to the employee that is on call Based on average loaded rate of $43.75/hour.		31,923	28,790
3124402130	Telephone	Telephone charges on the business lines at the Treatment Plant office plus the costs for use of cellular phones.		5,000	5,000
3124402375	Insurance	Allocation of premiums on municipal property insurance.		10,457	12,127
3124402395	Contracted services	Provision for work performed by contractors:			
		Lake Sampling	4,000		
		Other small contracts	10,000	14,000	14,000
3124402610	Equipment rental - Internal	Internal charge for use of municipal equipment.		21,600	5,000
3124403000	Small Capital			6,785	6,785
3124405300	Materials & supplies	Materials & chemical for maintainance of treatment plant, along with inventory shelving and storage.	125,000		
		Provision for Preventative Maintenance & Upgrades	25,000		
				150,000	125,000
3124405520	Gas	Natural gas charges for heating.		30,900	30,900
3124405530	Electricity	Power consumption at the Treatment Plant site.		102,946	98,987
3124405540	Sewer	Total internal charges for sewer services.		300	0
3124409900	Licences and permits	Annual fees charge by Provincial Authorities.		1,000	1,000
	Total Treatment Plant Maintenance Expenditures			650,174	597,455

SIGNIFICANT CHANGES: 2% CUPE increase. 4% electricty increase.
Addition to budget for provision to cover Preventative Maintenance & Upgrades.

WORK PLAN: The maintenance of the Waste Water Treatment Plant including staff and contractors time, parts and equipment and chemicals to accept average daily flows of approximately 2000 cubic meters per day.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Sludge Removal Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
3124411210	Wages - Regular	Municipal labour costs: - for crews to do the required maintenance - for crews to haul sludge to landfill (Works)	68,552 10,050	78,602	77,061
3124412395	Contracted services	Provision for work performed by contractors. Landfill tipping fees at $25 per tonne		30,000	30,000
3124412610	Equipment rental - Internal	Internal charge for use of municipal equipment. 3 loads per week at $37.50 per load		18,150	5,850
3124415300	Materials & supplies	Charge for materials used including chemicals to control odours.		6,000	8,000
	Total Sludge Removal Expenditures			132,752	120,911

SIGNIFICANT CHANGES: 2% CUPE increase. Increase internal equipment use charge to reflect updated rates.

WORK PLAN: Pumping, centrifuging, bin filling, and hauliing sludge to the landfill.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Developer Funded Works Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
3124491210	Wages - Regular		7,500	7,500
3124492395	Contracted services		0	0
3124492610	Equipment rental - Internal		0	0
3124495300	Materials & supplies		7,500	7,500
	Total Developer Funded Works Expenditures		15,000	15,000

NOTE: Offsetting revenue reported in g/l account #31-1-449-9000.

SIGNIFICANT CHANGES: No significant changes anticipated for 2016.

WORK PLAN: Offsetting revenue reported in g/l account #31-1-449-9000.

DISTRICT OF SUMMERLAND

2016-2020 Forecasted Operating Spending List

Sewer		Total	DESIRED YEAR	CRITERIA	RANKING	NOTES
WWTP	Integrated Asset Management & Infrastructure Investment Plan	150,000	2016			
	2016 SUBTOTAL	**150,000**				
WWTP	Centrifuge Major Overhaul	18,000	2017	2, 5, 6	1	
WWTP	Epoxy Coating for DAF Tank and Primary Clarifier	16,000	2017	2, 5	2	
Collection	Camera Inspection of Sanitary Sewer Mains	50,000	2017	2, 5	3	
	2017 SUBTOTAL	**84,000**				
	TOTAL SEWER	**234,000**				

Legend for Criteria:

1-Safety (public and employee)
2-Risk Mitigation
3-Statutory/Regulatory/Policy
4-Committed/Unavoidable
5-Investment Protection
6-Productivity Improvement
7-Grant/Reserve Funds
8-Other

Integrated Asset Management and Infrastructure Investment Plan

Estimated Cost Summary

Activity	Description	Cost
Asset Inventory Registry	Build on the work done to meet the PSAB 3150 requirements to provide the asset attribute information needed for the Integrated Investment Plan	$50,000
Asset Management Investment Plan	Detailed 20 year re-investment plan in water, wastewater, drainage, electrical, roadway, fleet and buildings based on existing assets	$50,000
Asset Management Funding Plan	Detailed 20 year revenue generation and funding plan for costs in the Asset Management Investment Plan	$25,000
Liquid Waste Management Plan		$50,000
Sanitary Sewer Master Plan		$75,000
Trails and Cycling Network Master Plan		$30,000
Public Outreach	Four (4) public engagement sessions, one (1) for each of the activities above. Each session would present information to the public and capture their feedback and preferences	$30,000
Total Activity Cost		**$310,000**
Contingency (20%)		**$62,000**
Total Project Cost		**$372,000**

Sewer: **$50,000 + 75,000 + 25,000 (Contingency) = $150,000**

General: $372,000 - 150,000 = $222,000

DISTRICT OF SUMMERLAND
2016 - 2020 CAPITAL PLAN

	2016	2017	2018	2019	2020
SEWER					
PROJECTS	3,566,185	136,000	208,000	328,000	322,000
FUNDING					
Legislative Reserves	120,000				
Bylaw Reserves	754,685				
Community Contributions		30,000	30,000	300,000	270,000
Borrowing	296,167				
Grants	2,070,333				
Transfer from Operating	159,495	106,000	178,000	28,000	52,000
Transfer from Surplus	165,505				
	3,566,185	136,000	208,000	328,000	322,000
RESERVES AND SURPLUS BALANCES (end of year)					
Legislative Reserves	1,189,338	1,284,850	1,340,185	1,395,477	1,444,149
Bylaw Reserves	22,806	83,930	145,054	218,459	291,864
	1,212,144	1,368,780	1,485,239	1,613,936	1,736,013
Surplus	116,752	143,247	241,742	552,737	905,732

Sewer	2015 budget	2015 actual	2016	2017	2018	2019	2020
CAPITAL PROJECTS							
2015 projects completed	720,000	490,537					
Peach Orchard Life Station Cover Replacement	7,000	1,167	80,833	-	-	-	-
Filter Bridge Electronics Replacement	15,000	5,148	9,852	-	-	-	-
Effluent Filter Underdrain Retrofit			250,000	-	-	-	-
Grit Removal and Effluent System	3,105,500		3,105,500	-	-	-	-
Burnham Boilers Replacement			120,000	-	-	-	-
Taylor Place Sewer			-	30,000	-	270,000	-
WWTP Software & Service agreement			-	20,000	-	-	-
SCADA - Free Wave Radios			-	21,000	-	-	-
Air Conditioner Replacement			-	10,000	-	-	-
Engineered Air MUA model DJ-40-O (as per Mavco Audit)			-	55,000	-	-	-
Dunham Crescent Sewer			-	-	30,000	-	270,000
Inventory Building at WWTP			-	-	50,000	-	-
Sludge Bin Replacement			-	-	20,000	-	-
Engineered Air MUA model LM-4-CO (as per Mavco Audit)			-	-	43,000	-	-
Chemscan Autoanalyser			-	-	65,000	-	-
Hespeler Road Sewer - $300,000 total cost			-	-	-	30,000	-
Engineered Air MUA model LM-1-CO (as per Mavco Audit)			-	-	-	28,000	-
Engineered Air MUA model FWE92/DJ-40-O (as per Mavco Audit)			-	-	-	-	52,000
	3,847,500	496,852	3,566,185	136,000	208,000	328,000	322,000
FUNDING SOURCES							
Transfer from operating			159,495	106,000	178,000	28,000	52,000
Transfer from surplus			165,505	-	-	-	-
Borrowing			296,167	-	-	-	-
Community contributions			-	30,000	30,000	300,000	270,000
Government Grants							
New Build Canada			2,070,333				
Legislative Reserves							
Community Works Fund			120,000				
Bylaw Reserves			754,685	-	-	-	-
Total			3,566,185	136,000	208,000	328,000	322,000

	2016	2017	2018	2019	2020
SEWER					
Legislative Reserves					
Development Cost Charge					
Projected opening balance	1,110,269	1,189,338	1,284,850	1,340,185	1,395,477
contributions	62,415	77,672	36,062	35,189	27,740
interest earned	16,654	17,840	19,273	20,103	20,932
allocations					
projected balance end of year	1,189,338	1,284,850	1,340,185	1,395,477	1,444,149
Community Works (partial allocation)					
Projected opening balance	120,000				
contributions					
interest earned					
allocations	(120,000)				
projected balance end of year					
Bylaw Reserves					
Projected opening balance	777,491	22,806	83,930	145,054	218,459
contributions		61,124	61,124	73,405	73,405
interest earned					
allocations	(754,685)				
projected balance end of year	22,806	83,930	145,054	218,459	291,864

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Waste Water**
ITEM OR PROJECT NAME:	**Peach Orchard Lift Station Building**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

For proper operator access and odour control a building is proposed to enclose the lift station equipment similar to the other lift stations. $7,000 was proposed in 2015 for the design of a block building. The decision was made in 2015 to design a wood frame building and begin construction. Design is 90% complete inhouse. The plan was to carry over the remainder of the $7,000 and request an additional $13,000 to complete construction of the building in 2016.

Now recommend 75k to build a block structure, similar to every other lift station and pump house, as was originally intended. This will help prevent moisture damage and premature repairs or relplacement.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	75,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**75,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**75,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

Ecora

District of Summerland
13211 Henry Road
Summerland, BC
V0H 1Z0

PN: PE-14-207-DOS
October 23, 2014

Attn: Devon van der Muelen
Re: New Lift Station Building - Proposal and Class D Construction Cost Estimate
Peach Orchard Beach

INTRODUCTION:
As requested, we are pleased to provide budget estimates of building fees and a Class D construction cost estimate.

We have visited the Peach Orchard facility with Joel Mertz and viewed some sample existing lift station buildings in Summerland to review the general style and layout to consider for this project.

PROJECT UNDERSTANDING:
The existing facility consists of a housekeeping pad with various lift station equipment and controls over a wet well.

We understand that some infrastructure may need to be adjusted to accommodate the required clearances, coupled with expanding the footprint of the housekeeping pad in order to house the equipment. It is intended to house the equipment within a new masonry building with a flat roof. It is understood that there are minimal expected modifications to the existing system as it is, but we expect some costs associated with the changeover and have included budget amounts in our estimates.

FEES AND SERVICES:
We anticipate a small topographic survey, drafting and building design, Structural Engineering, and some Geotechnical Engineering will be required for the design of the new facility. Preliminary size is considered to be approximately 400ft^2, which was used to establish the construction cost estimate. We estimate Structural Engineering and building design fees to be approximately $7,000 plus an additional allotment for Geotechnical Engineering of $3,000. We anticipate that the District would manage the tender and the contract and we do not include a figure for that aspect.

In addition to the engineering drafting and design estimates noted above, we provide the approximate building construction costs for budget purposes, which are estimated to be $60,000 based on the following breakdown, exclusive of applicable taxes:

• Foundation	$ 12,000
• Masonry	$ 10,000
• Carpentry	$ 5,000
• Roofing	$ 4,000
• Landscaping	$ 2,000
• Painting	$ 2,000
• Electrical/Communication	$ 15,000
• HVAC/Mechanical/Odour Control	$ 10,000

543 Ellis Street, Penticton, BC, V2A 4M4 Tel 250.492.2227 Fax 250.492-2135 www.ecora.ca

The construction cost estimate for the building is not a proposal to complete the work, and a contractor would have to be selected through a tendering process once drawings are completed, but we feel this is a sufficiently accurate value for budgeting purposes.

If our building design and engineering proposal is acceptable, we will be happy to forward our terms of engagement for signature.

Please contact us if you have any questions.

Regards,

Kelly Davies, P. Eng.
Sr. Structural Engineer

543 Ellis Street, Penticton, BC, V2A 4M4 Tel 250.492.2227 Fax 250.492-2135 www.ecora.ca

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Waste Water**
ITEM OR PROJECT NAME:	**Effluent Underdrain Retrofit**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

The Effluent Filters are a crucial part of cleaning the effluent before leaving the Plant and entering the Lake. The underdrains are severely damaged and as a consequence the capacity of the filter has been deminished. It is possible that if we had an issue with our settling and solids were sent to the filter, we would have a failure and we would exceed our permit for solids going to the lake. The original manufacturer of the filter has provided a quote for a retrofit to a new type of underdrain that will replace the existing one with little modification. Aside from moving ahead with our full filter replacement, we believe this to be our best option to handle this issue.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	5,000.00
WAGES - OVERTIME	
CONTRACTED SERVICES	120,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	125,000.00
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**250,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**250,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

Devon van der Meulen

From: Joel Mertz
Sent: October-17-14 3:23 PM
To: Devon van der Meulen
Subject: FW: Summerland ABW filter upgrade
Attachments: EstimatedManHrsConventionalInstall.xls

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Devon,
I just received this today. They recommend that we install the parts ourselves but they recommend 3-4 people work on it. I realize that we had discussed hiring a contractor but I am not sure what type of contractor could do it. So I may need a hand figuring out the install. Should we do a cost comparison of us doing the work with a couple of works guys against a mechanical contractor? Also it looks like they don't want us to use the sand that we have which is not great. Let me know what you think.

Thanks,

Joel Mertz | Chief Operator | Wastewater Treatment Plant
DISTRICT OF SUMMERLAND
Ph: 250-494-0619Fax: 250-494-0620
Box 159, 7630 Dunn St.
Summerland, BC V0H 1Z0
jmertz@summerland.ca

From: Peter Turgoose [mailto:gooseworks@telus.net]
Sent: October 17, 2014 8:54 AM
To: Joel Mertz
Cc: tonya.washington@infilcodegremont.com; Susan.PILGRAM@infilcodegremont.com
Subject: FW: Summerland ABW filter upgrade

Good morning Joel

The sand does not appear to be suitable for use in an ABW filter. The sand for this dual media application would be .45 - .55; the sand in the photo appears much larger. Closer to 1.0 mm

Many plants have done the rebuild themselves. A plant in upstate New York rebuild 4 of their filters and did an exceptional job.

Please see the attached man hours estimate, it is based on the conventional rebuild. The quick plate would take about twice as long because the underdrain is completely removed to the tank bottom. With the conventional rebuild the lower cell dividers are reused. A crew of 3 - 4 is recommended.

Please also remember Installation service was included in both proposals, each included multiple trips for verification during the installation supervision process. That is standard in all ABW rebuilds.

The material for the porous plates is the same for the quickplate and the conventional underdrain, polyethylene.

Hope I've answered all of the questions.

Estimated Man-hours for QuickPlate Installation for One (1) ABW Filter

Equipment: ABW Filter 12'-6" X 30'

Task	*Description*	*Notes*	*Man-hours*	
Original Under drain Removal/Demolition				
Media Removal	Via a vactor truck		40	
Porous plate & Upper cell divider removal			120	
				Demolition Man-hour Total
			160	
Underdrain Installation				
Porous Plate & Cell Angle Installation			120	
Upper cell divider installation			40	
Wall angle installation			40	
Media installation			40	
			240	**Installation Man-hour Total**

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Waste Water**
ITEM OR PROJECT NAME:	**Grit Removal and Effluent Filtration**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

There is not currently a grit removal system in place at the plant. A dedicated grit removal system is required to prevent the premature wear of the downstream equipment, reduce maintenance and improve the hydraulic capacity of the plant thus reducing maintenance, repairs, and replacement costs.
The current effluent filter system is essential in order to meet the effluent criteria required in the District's Operational Certificate. Unfortunately, it is only a single sand filtration unit with a traveling bridge which does not provide redundancy in cases where the filter is out of service for scheduled maintenance and repairs, or emergencies.
Design is completed. Grant applications in 2013 and 2015 have been unsuccessful.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	941,040.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	1,411,560.00
OTHER (Specify):	
Design	282,300.00
Contingency	470,600.00
	-
TOTAL BUDGET:	**3,105,500.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**3,105,500.00**

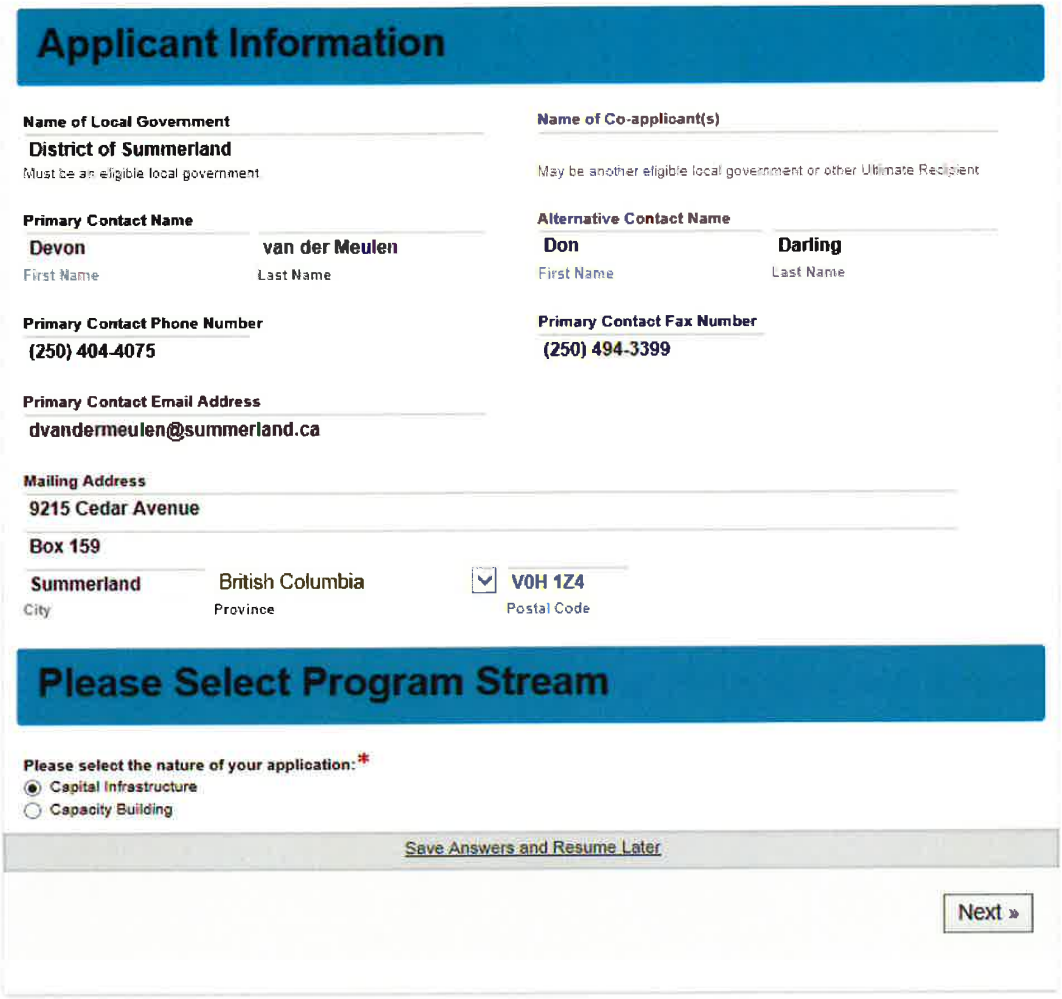
Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

STRATEGIC PRIORITIES FUND APPLICATION



Applicant Information

Name of Local Government
District of Summerland
Must be an eligible local government

Name of Co-applicant(s)
May be another eligible local government or other Ultimate Recipient

Primary Contact Name
Devon (First Name) van der Meulen (Last Name)

Alternative Contact Name
Don (First Name) Darling (Last Name)

Primary Contact Phone Number
(250) 404-4075

Primary Contact Fax Number
(250) 494-3399

Primary Contact Email Address
dvandermeulen@summerland.ca

Mailing Address
9215 Cedar Avenue
Box 159
Summerland (City) British Columbia (Province) V0H 1Z4 (Postal Code)

Please Select Program Stream

Please select the nature of your application: *
(•) Capital Infrastructure
( ) Capacity Building

Save Answers and Resume Later

Next »

Capital Infrastructure Application

4. Project Rationale

An audit of the Waste Water Treatment Plant was carried out in 2007 by AECOM Consulting which identified a number of items required to be added or upgraded. A dedicated grit removal system and an effluent filter were the highest priorities required to be completed as soon as possible.

Grit Removal

There is not currently a grit removal system in place at the plant. A dedicated grit removal system is required to prevent the premature wear of the downstream equipment, reduce maintenance and improve the hydraulic capacity of the plant thus reducing maintenance, repairs, and replacement costs. Grit currently settles in the grit "chimney" (vertical chamber) and is entrained in the primary fermenter/clarifier. This concept requires removal of the grit every 3 months from the chimney by vacuum truck which is a very difficult and dirty operation. There is also a substantial amount of grit that enters the sludge vault which in turn gets centrifuged and prematurely wears all the dewatering equipment. A great deal of money is spent every year to maintain, repair, and replace equipment due to the lack of proper grit removal and the constant additional wear on the aging system.

Effluent Filter

The current effluent filter system is essential in order to meet the effluent criteria required in the District's Operational Certificate. Unfortunately, it is only a single sand filtration unit with a traveling bridge which does not provide redundancy in cases where the filter is out of service for scheduled maintenance and repairs, or emergencies. When the filter is out of service, approval to bypass the system has to be obtained from the Ministry of Environment. This has been requested on several occasions and is likely to become more frequent as the filter continues to deteriorate. The filtration media has had many operational difficulties. Currently the filtration underdrain is damaged, the sand is mostly blinded off and the backwash system is not working properly. A disk type effluent filter is preferred as it allows a far finer filtration pore size, can provide much needed redundancy for maintenance and repairs, and can reduce the construction footprint.

5. Project Description

A new headworks room will be constructed adjacent to the existing secondary clarifiers. A new fine-screen system will be installed with 10mm circular openings that will prevent far more solids and elongated fibers passing through the old barscreen. A grit removal vortex is also far more effective at removing fine grit from the water as it immediately moves the grit to a garbage bin rather than slowly plugging off the incoming pipe as is the current situation. The influent piping will be re-routed to the new headworks and sent back to the existing headworks to simplify piping modifications. The existing headworks could act as a backup while the new system is under maintenance. The proposed systems have a long track record of successful installations and will provide very effective solids and grit removal.

The sand filter will be decommissioned and replaced with the disk filters. The new disk filters will be built right next to the old filter building so that the power and piping from the old filter can be easily utilized. Disk cloth media will have a pore size of 10 micron to provide a good quality effluent to increase the effectiveness of the downstream UV disinfection system.

8. When (year) and how were these cost estimates determined

The costs were determined by our Engineering Consultant, Stantec Consulting, through the design of the upgrade in December of 2011. Unit costs were determined from Stantec Consulting's experience with similar projects throughout western Canada in recent years as well as budgetary estimates from various suppliers. Revised costs were estimated in March of 2015 by Stantec Consulting.

9. What contingency plans are in place for increase in project costs or if external contributions are less than anticipated

The District's Tender will assign some less critical items as optional. This will allow the District to adjust the scope of work to include those items that are necessary for the construction of the project but which fall within budgeted estimates. Optional items for which there are insufficient funds can then be delayed and completed at a later date. If sufficient funds are not available the District will be required to consider borrowing options or increasing operational budgets to offset increasing operation and maintenance costs. The District has a short-term contingent plan to rebuild the existing effluent filter in order to keep the Plant operating within the District's Operating Certificate.

10. Describe how you will fund operation and maintenance over the lifecycle of the infrastructure subject to this application

The District of Summerland has been operating and maintaining the WWTP for fifteen years. The upgrades to the grit removal and filtration systems will reduce unnecessary wear and repairs to pumps, motors, and other equipment. It is anticipated that these upgrades will significantly reduce overall operational and maintenance costs.

Project Costs and Sources of Funding

Please provide detailed costs and proposed sources of funding.

1. TOTAL SPF REQUEST*
$ 3105500.00
See program guide for details.

2. Total Project Cost*
$ 3105500.00
If the project as defined in the application is greater in cost than the funding request, please identify the total project cost.

3. Ineligible Costs
$ 3105500.00
Based on total project cost. See program guide for details.

4. List Ineligible Costs
Staff labour, Design, Geotechnical Investigation,
(e.g. land, own force labour and equipment, costs already incurred)

5. Planning/Design/Studies
$ 282300.00
Based on total project cost.

6. Materials
$ 1411560.00
Based on total project cost.

7. Construction
$ 941040.00
Based on total project cost.

8. Contingency
$ 470600.00
Based on total project cost.

Other Funding Sources.
Please complete the information below if other funding sources are being used or considered to complete this project subject of this application.

9. Other Grants (Federal/Provincial etc.)
$ 0.00

10. Borrowing
$ 0.00

11. Other Local Government Contributions
$ 0.00

12. Other Contributions
$ 0.00

Up to four supporting documents can be uploaded at the end of this application. When referencing supporting documents in the application, identify the relevant section or page number.

1. Has this project started?
○ Yes
◉ No
The project is started if a purchasing instrument has been issued, construction tender awarded or construction has commenced.

Estimated Project Start Date
03 15 2016

2. Estimated Project Completion Date
09 30 2016

Project Information

3. Identify existing risks to meeting this timeline. Please list all that are known, and include your evaluation and proposed mitigation for each risk

Adverse weather

- The project would be tendered immediately after the approval of grant monies. Construction would start approximately 2 months thereafter. Preference would be to begin construction in the spring of 2016
- Make sure the contractor has staff and equipment to deal with inclement weather
- Switching to new systems will need to be coordinated with periods of milder weather and when flows are reduced
- Late equipment delivery
- Order specialized equipment well in advance of project start date
- Payment to the contractor upon on-site delivery of the equipment will ensure prompt ordering by the contractor
- Contractor construction schedule
- Standard contract includes clauses that penalize the contractor if not completed by a specific date
- The District could consider incentive clauses that would award the contractor upon early completion

4. Will a request for the use of own force labour and equipment be submitted for this project?
○ Yes
◉ No
If yes, please see program guide for how to submit a request for approval.

5. Can this project be phased?
◉ Yes
○ No

5. Can this project be phased? If yes, provide or attach information about how the project could be phased, and provide the estimated cost for each phase along with a description of the timing and other considerations relating to each phase

This project could be phased so that the Effluent Filter is constructed first with the construction of the grit removal taking place at a later date. The Effluent Filter is estimated to cost $1,389,000 and the Grit Removal System is estimated to cost $1,256,000. The simultaneous construction of the Effluent Filter and the Grit Removal system would take approximately 6 months. Constructed independently each project would take approximately 4 months to complete. For phased construction the preference would be to complete the effluent filter first as the current system has failed, the capacity has been drastically diminished, and the Ministry of Environment is concerned about its condition. Phased construction is not felt to be a viable alternative in this instance as it would increase construction costs and the frequency of disruptions or shutdowns of the operations. It would also significantly increase the risk of contamination of Okanagan Lake.

6. What alternative options to the project were considered and how were they compared or analyzed? Please list these options and explain why the chosen option was selected

Stantec Consulting reviewed and assessed alternatives for both the grit removal and the effluent filter systems. Options were assessed based on cost, feasibility, technology effectiveness, operations, and maintenance.

The grit removal systems that were considered were horizontal flow, aerated grit basin, and vortex grit removal. A review of alternate locations was also carried out with consideration being made to using the existing headworks building or constructing a new building in a separate location. The option of vortex grit removal in a separate building was deemed the most feasible option due to the proven track record locally and internationally of the vortex system combined with lower operating cost and ease of maintenance. Construction of a new building was the only feasible option due to size constraints of the existing building which would require extensive and expensive modifications to retrofit with the new equipment. The separate building allows construction to proceed and commissioning to take place without interrupting WWTP operations.

The effluent filter systems that were considered were media filtration, surface filtration, and membrane filtration. A review of alternate locations was also carried out with consideration being made to using the existing filtration building or constructing a new building in a separate location. Research took place into multiple manufacturers for each type of system to identify each systems unique characteristics to specific components and processes. The option of cloth disk filters was selected due to the small construction footprint, high performance in flow as well as particle size removed, ease of maintenance, redundant systems, and accessory equipment that is already familiar to the operators. The separate structure was selected so that equipment can be easily lifted out vertically with portable gantry or a crane. The separate building allows construction to proceed and commissioning to take place without interrupting WWTP operations. Costs were also estimated to replace the sand and rebuild the underdrain panels, in the existing Effluent Filter, with a new type of panel. This system option would be a short term solution as the current issues with this system, such as no redundancy, difficulty cleaning, low flow capacity for increased demands, bypassing the system for a long period of time during

maintenance and construction, would still remain. It was determined that this option was the least favourable as it would only delay the inevitable replacement with new technology.

Program Objectives

1. **Productivity and Economic Growth, describe the measurable economic benefits of the project in the community**

   The Waste Water Treatment Plant was designed to handle a capacity of 4000 m3/day. Current peak flows are approximately 2500 m3/day. There are many areas in Summerland where septic system failures are imminent such as Trout Creek West, Deer Ridge, Front Bench, and Happy Valley. The District is working towards extending sewer into these areas in order to resolve the septic concerns. There is also significant growth potential in Summerland with preference given to close in high density development with community sewer connections. This growth potential, and expansion of the sewer infrastructure, may be unnecessarily slowed or delayed due to the deteriorating condition of the grit removal and filtration systems which limit the WWTP's ability to handle additional flows. The proposed upgrades are the only means of ensuring growth can continue to take place without risking the District's ability to treat the effluent to Operating Certificate requirements.

2. **Productivity and Economic Growth, describe the economic benefits of the project in the community that are not measurable**

   The preservation of Okanagan Lake is the vital to productivity and economic growth of the Okanagan. There are many concerns around the environmental impact of a fully functioning Waste Water Treatment Plant as the final product is discharged to Okanagan Lake. People place value on a clean environment for its own sake and for the benefit of future generations. The value of positive outcomes of these types of investments can be estimated on the basis of what people are willing to pay to reside in an area. As many communities and visitors use the lake for both recreation and drinking water, the quality of the water is crucial to the healthy living and sustainable tourism industry in the region.

3. **Clean Environment, describe the environmental benefits and contribution of the project**

   The uncontaminated discharge into Okanagan Lake is the purpose of the wastewater treatment plant and is always of the utmost concern. There have been difficulties in the past with the ability to meet the Ministry of Environment discharge requirements and the District understands that the Ministry may now be making their effluent discharge requirements even more stringent. The effluent filter will reduce power consumption as well as extend the life of the plant, reduce mechanical wear on equipment, decrease the particle size removed and expand the design hydraulic capacity, all promoting improved effluent discharge.

The installation of the effluent filter will allow the wastewater treatment plant to use one filter at a time while maintenance or repairs can take place on the other. This will facilitate compliance to the Ministry of Environment's permitted requirements for discharge into Okanagan Lake. Currently when the aging filter system is out of service the District must obtain approval from MOE to bypass the filter. This happens more and more frequently and has the potential for health risks as the lake is not only an abundant aquatic environment but also used by many communities and visitors for recreation and drinking water. Continued sustainable operational costs will ensure quality service delivery for years to come.

4. **Clean Environment, what environmentally sustainable considerations have been incorporated into the project**

The new effluent disc filter will greatly reduce the backwash wastewater quantity by approximately 80%. This reduction will limit the amount of pumping required and decrease power requirements significantly. The backwash wastewater also contains elevated (organic) solids concentration and needs to be processed through the complete treatment cycle. This additional loading (typically 3-5% of treatment plant capacity) adds to the treatment plant energy consumption which includes pumps, blowers, centrifuge etc. however, the replacement of the traveling bridge and slow sand filter with the disk filter system will introduce more efficient system components, reducing GHG emissions.

Energy efficient equipment will be used throughout the project. These include lighting, electric motors, HVAC equipment, and building components.

- Interior lighting systems will utilize energy efficient LED sources for spaces 10 feet or lower and metal halide sources for spaces greater than 10 feet in height. T8 or T5 lamps and electronic ballasts will be utilized in fluorescent sources. Energy consumption will meet or exceed ASHRAE 90.1-2001; lighting luminance levels will be in accordance with IESNA. The lighting control will also use occupancy sensors to conserve energy when spaces are not occupied. Natural light will be used to the maximum extend in the new buildings with the use of triple glazed Low-E glazing reducing the amount of electricity required for lighting, heating and cooling.
- Electric motors used with process mechanical and HVAC equipment will achieve energy efficiencies through superior motor design techniques and the application of Variable Frequency Drive (VFD) control. These motors will be of an energy-efficient design through the use of premium materials, design and improved manufacturing process that reduces motor losses compared to standard efficiency designs. Motor efficiency will conform to NEMA Standard MG1-12.53a and full load efficiency labeled on motor nameplate in accordance with NEMA Standard MG1-12.53b.
- VFDs are capable of varying the speed of a motor to match energy consumption requirements with load demands. Conventional motor control utilizes fixed speed motors under full speed conditions regardless of the applicable load demand. In this instance when the actual load demand is less than that required by a motor running at

full speed, energy is needlessly wasted. In this project, all of the major pumps and motors that are larger than 1 HP will be controlled by VFDs.

- Decentralized and high energy efficient HVAC equipment, including
  - High efficiency indirect gas-fired air handling units (up to 90%)
  - High efficiency fan motors
  - High efficiency condensing gas-fired water heaters
- Implementation of a grit removal system will reduce the particle impediment of mechanical components thus improving efficiency and reducing operating costs
- The use of high volume fly ash ECOSMART concrete has been considered on projects to reduce the carbon footprint associated with the production of concrete. In ECOSMART concrete mix designs, cement is replaced at a higher percentage with fly ash. Fly ash content can be as high as 50% in comparison to the 20 to 25% content used in conventional concrete mix designs. Increased fly ash content has also been found to increase durability and water tightness of concrete. The use of ECOSMART concrete is very site specific and close coordination with the local concrete supplier in the development of the concrete mix design is necessary. Nevertheless a concrete mix design with a high volume of fly ash, at least 30%, should be considered to increase the water tightness and durability of the concrete.

5. **Strong Cities and Communities, describe the community health, and social benefits of the project**

   The completion of this project would ensure that tax dollars are not squandered on maintaining these obsolete and failing plant components. The upgrade would ensure that the WWTP systems are functioning efficiently and are able to accommodate future flow increases. These tax dollars could be used for other capital concerns of which there are many.
   Completing a project of this importance improves effluent quality being discharged into Okanagan Lake thus decreasing the potential for residents of Summerland and the Okanagan being exposed to pollution into the Okanagan Lake.

6. **Strong Cities and Communities, describe how this project will advance the long term goals and vision of the community as identified in applicable community plans. Include a copy of the relevant sections of the community plan as supporting documentation**

   - Community Charter 3.2 Community Plan Goals
   - By promoting and protecting the healthy and safe environment for the community
   - Manage new development in a manner that moves Summerland forward, towards an environmentally, socially and financially sustainable community
   - Provide long-term urban growth opportunities through intensification, infill and development within the Urban Growth Area

- Promote conservation stewardship of sensitive ecosystems, their functioning and associated species
- Effectively and efficiently plan and provide infrastructure services to address both the ongoing needs of the community and environmental best practices
- Preserve and protect Summerland's water resources through the protection, preservation and management of watercourses, ground/storm water flows, and discharge into Okanagan Lake

Program Criteria

1. **Larger in scale, describe how the size, scale and/or benefits of the project is large in relation to the size of the community**

   Although this project is directly related to the Summerland community and the sanitary services that are connected to the Wastewater Treatment Plant, the impact is far reaching. Every community on Okanagan Lake and all who vacation in the Okanagan make use of Okanagan Lake in some form. The potential to upset its ecosystems or risk the health of those who use it is of utmost concern and of course the reason why water quality in the lake is constantly monitored. Summerland is a community of 11,000 but has the potential to affect the entire population of more than 340,000 in the Okanagan Valley if our Waste Water Treatment Plant is not properly managed and maintained.
   The Okanagan Valley is a tourist destination and poor lake water quality can affect its use and possible visitor numbers potentially disrupting many businesses in the surrounding communities.

2. **Larger in scale, when and how would you undertake this project if you're not successful with this funding request**

   If the funding request is unsuccessful the District would likely replace the sand and retrofit the underdrain panels, in the Effluent Filter, with a new type of panel in 2015 because the damage to the failing system has to be replaced as soon as we are able. This system would simply replace the existing filter. Although there are many drawbacks to this approach, funds are not available to implement the design presented. In order to do this work it is likely that another infrastructure project of a similar magnitude would have to be tabled for the time being in order for the funds to be budgeted for. Because the grit removal and bar screen provides no grit removal in the system, if funding is not approved, the District would have to continue dealing with operational costs associated to damaged equipment.

3. **Regional in Impact, describe the degree to which this project supports inter jurisdictional collaboration and coordination**

This project allows the District of Summerland to install grit removal and effluent filter systems that are similar to waste water treatment plants in neighbouring communities. This allows more effective collaboration between staff from other plants sharing ideas, efficiencies, methods, tools, equipment, and other resources on a regular basis. Inventory equipment can be purchased and held by one municipality instead of each spending the money on every piece of inventory required to maintain the plant. Sharing in these costs can positively affect every municipality's budgets and equipment availability especially in emergent situations.

4. **Regional in Impact, describe the degree the project benefits more than one community or is identified as a regional priority, or is regional in scope**

   Regionally it is of upmost concern to all who border, draw water from, or live downstream of Okanagan Lake. Concerns with the effluent discharge into Okanagan Lake can affect the ecosystem within as well as the quality of water for recreation and consumption purposes. Without adequate filtration and grit removal the District of Summerland is forced to request approval from MOE to exceed the discharge limits into the lake and risk affecting water quality and those who use the water.

5. **Innovation, describe any innovative research, planning, testing, technology, methodology or approaches that will be used, and the risks associated with using this innovation.**
   N/A

6. **Innovation, describe the relative benefit of the innovative process, method or technology over existing processes methods or technology and describe where this innovation has been used and what were the results? Describe how these innovative elements may be transferable to other jurisdictions.**
   N/A

Project Planning and Benefits

1. **Explain how demand management was used to identify the project and/or the service provided by the project and describe how the project supports the implementation of your demand management initiatives**

   Over the past number of years repairs and replacement of pumps, motors, and other equipment have increased substantially due to the introduction of grit into the equipment. Expenses related to repairing and replacing these items are far in excess of the typical expected use of the equipment. Historically the amounts of repairs and

replacements for these types of equipment have been much less than those in recent years. The District expects repair related expenses to increase if work is not done to remedy the deteriorating condition of the grit removal and effluent filtration systems.

2. **Explain how resource management was considered in the design, operation, service provided by, and the construction of this project**

   The design of this project is such that fewer resources are required to operate and maintain the new equipment. Less financial resources are required to continue the repair and replacement of damaged equipment. Additional inventory on the shelf for emergencies will save time and money. When constant attention and worry is not required for the inspection, repair, and replacement of equipment, the District's greatest resource, our staff, will be able to spend their time more efficiently on other tasks. As well there will be less stress on staff, more piece of mind, and better relationships with MOE, other municipalities, and the Regional District staff.

3. **Clarify whether this project is supported in your budget or financial plan. Do you have a long term financial plan? If yes, how long is it**

   This project has been included in the financial plan and any impact on operating costs has been included as well. The District has a 5 year long-term financial plan and an additional 5 years of projects, for a 10 year listing.

4. **Explain how this project fits into or is supported by an asset management planning process**

   While the District has not undertaken a full asset management plan, there has been preliminary work done on asset inventories and future replacement costs. This project has been identified as the top priority in this asset category and is critical to the on-going operation of the utility. The District is applying for a grant under the capacity building stream to undertake an integrated asset management and long term funding plan.

5. **What, if any, regulatory requirements, or standards apply to this project, and how will the infrastructure and/or service provided by this project affect these requirements**

   Discharge permit requirements are set by the Ministry of Environment. Temporary permit modifications can be requested if required but the construction plan should allow for uninterrupted operation. This will be accomplished by running old and new systems in parallel before switching completely to the new equipment and removing old equipment.

6. **Describe the key project benefit(s) that lead your community to make this project a priority for application for funding**

This project will facilitate compliance with the Ministry of Environments permitted requirements for discharge into Okanagan Lake. Currently when the aging filter system is out of service the District must obtain approval from MOE and has to exceed the discharge limits into the lake. It will reduce the potential for health risk to the lake and in turn to the general public in many communities who use the lake for recreation and drinking water. Repairs and replacement of worn and damaged equipment due to the lack of grit removal takes an expensive toll on the tax payer where these funds could be better spent on new capital expenditures.

Detailed cost break down
Summerland WWTP Grit Removal Upgrade
Opinion of Probable Costs

Design Capacity = 4,000 m^3/d, Peak Flow Capacity = 10,000 m^3/d — Date: April 2015

Item No.	Description	Unit	Quantity	Material or Equipment Costs		Labour & Overhead	Total Costs
				Unit Price	Total Price		
1.0	**General Requirements (10% of item 2-5)**	LS	1				**$100,800**
2.0	**Siteworks:**						
2.1	Civil Works:						
	- Excavation and Stockpile	m^3	200	$20	$4,000	Included	$4,000
	- Structure Backfill	m^3	100	$45	$4,500	Included	$4,500
	- Yard Piping	LS	1	$150,000	$150,000	Included	$150,000
2.2	Landscaping Allowance	LS	1	$5,000	$5,000	Included	$5,000
	Subtotal Siteworks						**$163,500**
3.0	**New Headwork:**						
3.1	Superstructure	m^2	120	$1,800	$216,000	Included	$216,000
3.2	Sub-Structure	m^3	60	$1,500	$90,000	Included	$90,000
3.3	Veolia Water Mectan V System	LS	1	$145,000	$145,000	$75,000	$220,000
3.4	Piping and Valving	LS	1	$65,000	$65,000	Included	$65,000
3.5	Fine Screen and screw washer compactor	LS	1	$175,000	$175,000	$75,000	$175,000
3.6	Misc. Metals (Including Checker Plates, Handrails and Grating)	LS	1	$30,000	$30,000	Included	$30,000
	Subtotal SBR						**$796,000**
4.0	**Electrical, Control, and Instrumentation:**						
4.1	Electrical, Control, and Instrumentation Allowance	LS	1	$48,000	$48,000	Included	$48,000
	Subtotal Electrical, Control, and Instrumentation						**$48,000**
5.0	**Building Mechanical**						
5.1	HVAC	LS	1	$60,000	$60,000	Included	$60,000
5.2	Plumbing	LS	1	$10,000	$10,000	Included	$10,000
	Subtotal Administration Building						**$70,000**
	Subtotal - Construction						**$1,178,300**
	Engineering (12% of Subtotal)						**$141,400**
	Contingencies (20% of Subtotal)						**$235,700**
	Total						**$1,555,400**

Notes:
1. Costs are in 2015 Canadian Dollars.
2. Construction costs will vary depending on market conditions at the time of tender. The Engineer has no control over those conditions and cannot provide any guarnatees of the bid prices.
3. Does not include offsite works.
4. Based on CAN/US exchange rate of $1 CAN = $0.7888US

Detailed cost break down
Summerland WWTP Effluent Filter Upgrade
Opinion of Probable Costs

Design Capacity = 4,000 m^3/d, Maximum Flow Capacity = 4,800 m3/d — Date: April 2015

Item No.	Description	Unit	Quantity	Material or Equipment Costs		Labour & Overhead	Total Costs
				Unit Price	Total Price		
1.0	**General Requirements (10% of Item 2-5)**	LS	1				**$104,700**
2.0	**Siteworks:**						
2.1	Civil Works:						
	- Excavation and Stockpile	m^3	600	$20	$12,000	Included	$12,000
	- Structure Backfill	m^3	150	$45	$6,800	Included	$6,800
	- Yard Piping	LS	1	$150,000	$150,000	Included	$150,000
2.2	Landscaping Allowance	LS	1	$10,000	$10,000	Included	$10,000
	Subtotal Siteworks						**$178,800**
3.0	**New Effluent Filter Building:**						
3.1	Superstructure	m^2	90	$1,000	$90,000	Included	$90,000
3.2	Sub-Structure	m^3	80	$1,500	$120,000	Included	$120,000
3.3	Aqua-Aerobic Disc Filter Equipment Package	LS	1	$315,000	$315,000	$158,000	$473,000
3.4	Piping and Valving	LS	1	$90,000	$90,000	Included	$90,000
3.6	Misc. Metals (Including Checker Plates, Handrails and Grating)	LS	1	$45,000	$45,000	Included	$45,000
	Subtotal SBR						**$818,000**
4.0	**Electrical, Control, and Instrumentation:**						
4.1	Electrical, Control, and Instrumentation Allowance	LS	1	$49,800	$49,800	Included	$49,800
	Subtotal Electrical, Control, and Instrumentation						**$49,800**
5.0	**Building Mechanical**						
5.1	HVAC	LS	1	$20,000	$20,000	Included	$20,000
5.2	Plumbing	LS	1	$3,000	$3,000	Included	$3,000
	Subtotal Administration Building						**$23,000**
	Subtotal - Construction						**$1,174,300**
	Engineering (12% of Subtotal)						**$140,900**
	Contingencies (20% of Subtotal)						**$234,900**
	Total						**$1,550,100**

Notes:
1. Costs are in 2015 Canadian Dollars.
2. Construction costs will vary depending on market conditions at the time of tender. The Engineer has no control over those conditions and cannot provide any guarnatees of the bid prices.
3. Does not include offsite works.
4. Based on CAN/US exchange rate of $1 CAD = $0.7888US

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Waste Water**
ITEM OR PROJECT NAME:	**Burnham Boilers Replacement**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

18 year old boilers are at the end of their life expectancy and are likely to have problems and are very inefficient. An Audit done by Mavco Plumbing and Heating is attached. This is one of many upgrades but of the greatest priority. Without the upgrade their is a good chance of failer which would mean the boilers would have to be replaced in an emergency situation.
Possibility of Fortis Rebate upon completion. Possible portion funded from the Climate Action Committee.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	120,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**120,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**120,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY:	Devon van der Meulen	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

MAVCO Plumbing & Heating Ltd.
Air Conditioning • Refrigeration

Sept 14, 2015

Attn: Joel Mertz
Summerland Waste Water Treatment
Summerland, BC
250-494-0619
jmertz@summerland.ca

As requested, we have performed a full fall service and review of your facility's equipment. The following is an outline of current condition, repairs if required, lifespan on average and current replacement costs.

Please note that the Engineered Air product is based loosely on replacement costs as the manufacturer could have significant investment into quoting each item as they do so, starting from engineering forward. Items like stainless steel heat exchangers etc may be options you are interested in. These numbers are for future budget purposes only.

Labour and crane charges are included in each estimate.

A detailed quote for any item can be provided on request.

Engineered Air MUA model LM-4-CO sn 25110-MUA-1500
Located on upper roof of centre building. Unit is in fine operational condition. Installed 1997, unit has an average lifespan of 25 years with good annual maintenance. It should be replaced in 2022.

Estimated replacement cost at today's prices $38,462.76 + GST

Engineered Air MUA model LM-1-CO sn S25110-MUA-6500
Located on lower roof of centre building. Unit is in fine operational condition. Installed 1977, unit has an average lifespan of 25 years with good annual maintenance. It should be replaced in 2022.

Estimated replacement cost at today's prices $22,867.50 + GST

Engineered Air MUA model DJ-40-O sn 1325110-MUA-5501
Located on filter building. This unit is in good operation condition. Installed in 1997 and should last until 2022. However, due to excessive humidity in its existing location it is heavily corroded and will require replacement sooner than later.

Estimated replacement cost at today's prices $50,409.30 + GST

Engineered Air MUA model FWE92/DJ-40-O sn 25810-AHU-8500A
Located on south side of office building. Unit is in fine operational condition. Installed 1997, unit has an average lifespan of 25 years with good annual maintenance. It should be replaced in 2022.

Estimated replacement cost at today's prices $47,231.40 + GST

Engineered Air MUA model LM-6-CO sn 25110-AHU-3500
Located on east side of centre building. Unit is in fine operational condition. Installed 1997, unit has an average lifespan of 25 years with good annual maintenance. It should be replaced in 2022.

Estimated replacement cost at today's prices $39,063.02 + GST

2060 Government St, Penticton BC V2A 4W3 **Ph 250-493-7956 Fax 250-493-7957**

MAVCO Plumbing & Heating Ltd.
Air Conditioning • Refrigeration

Carier RTU model 48E5-A2404030 sn 1610C67619
Located on upper roof of centre building (RTU 1). Unit is in perfect operational condition. Installed 2010, with good annual maintenance it should be last until 2035.

Rheem hot water tank model PRO 405-4050 sn 0611532830
This tank is in good working order, however it is at the end of its lifespan of 10 years, and should be changed by next year. This unit is approximately 63% efficient and could be changed to an instant hot water on demand with a 95% efficiency. Quote includes removal of the old tank.

Cost $3,475.26 + gas permit + GST

Fujitsu ductless split system model ABU36RSLX sn CXA004280 and sn CWN005193
Serving electrical room for centre building. This system was installed in 2014 and is in perfect working order. It will be good until 2034.

RU40 hot water tank model PRO 040-38M sn 1097J98141
Located in boiler room. This unit is a 1997 and is 10 years past life expectancy. It is approximately 63% efficient and could be changed to an instant hot water on demand with a 95% efficiency. Quote includes removal of the old tank.

Cost $3,475.26 + gas permit + GST

Currently there are 5 Burnham boilers with model 807B-W1. These units are from 1997 and are currently at the end of their lifespan. They are 70+% efficient.

We propose removing and replacing with new IBC modulating condensing boilers. These units are 95.7% efficient. The quote includes removal of the old units, new, units, new venting, piping, electrical, miscellaneous materials and labour. The existing expansion tank and backflow device will be used. All other components will be replaced.

Cost $102,511.00 + gas permit + GST

Disclaimers:
NOT INCLUDED IN ANY OF OUR QUOTES UNLESS OTHERWISE NOTED: Permits of any kind, electrical work or electrical permit, if required.

Upon acceptance of this quote a 50% deposit cheque is required, with the balance due upon completion in the form of a cheque. We do not accept credit or debit cards for deposit or balance on a quote.

This quote does not include any relocation of existing electrical or plumbing if required during the installation.

This quote is based on reasonable site and equipment conditions. Any unforeseen or abnormal conditions can result in additional costs. Should this become a possibility, you will be advised and we will request your approval prior to commencing any further work. We assume no liability to any part of the original system, and any original part that is found to be faulty during the installation will be quoted as an extra.

This document and information contained herein are provided in confidence, for the sole purpose of the addressee and may not be disclosed to any third party or used for any other purpose without the express written permission of Mavco Plumbing & Heating Ltd.

2060 Government St, Penticton BC V2A 4W3 Ph 250-493-7956 Fax 250-493-7957

MAVCO Plumbing & Heating Ltd.
Air Conditioning ● Refrigeration

This quote is valid for 30 days from date of issue, after which we reserve the right to review the costs and issue an amendment.

Thank you, Jay Hartwick

2060 Government St, Penticton BC V2A 4W3 Ph 250-493-7956 Fax 250-493-7957

DISTRICT OF SUMMERLAND

2021-2025 Forecasted Operating Projects and Capital

Sewer		Total	DESIRED YEAR	NOTES
WWTP	Engineered Air MUA model LM-6-CO (as per Mavco Audit)	44,000	2021	
Collection	Hespeler Road Sewer	270,000	2022	90% - remaining project costs
Collection	HWY 97/McClure Sanitary Sewer Extension	540,000	2023	
	TOTAL SEWER	854,000		

THE CORPORATION OF THE DISTRICT OF SUMMERLAND
ELECTRIC FUND OPERATING BUDGET

	BUDGET 2016	BUDGET 2015	Anticipated ACTUAL 2015	ACTUAL 2014	ACTUAL 2013
REVENUE					
Electric rates	10,542,805	9,961,177	10,114,476	10,426,149	9,488,000
Other revenue	246,222	238,778	177,067	156,720	158,414
Transfer from reserve for future expenditure	-	-	-	-	-
	10,789,027	10,199,955	10,291,543	10,582,869	9,646,414
EXPENDITURE					
Administrative and general	917,938	878,806	880,115	397,413	403,363
Electric supply	7,850,773	7,625,071	7,608,004	7,319,925	7,059,580
PCB Compliance	37,225	41,319	25,630	61,614	36,445
Maintenance and operating	1,033,018	859,524	701,342	1,095,427	1,058,461
Transfer to general revenue fund	500,000	586,769	573,976	600,000	600,000
Transfer to reserve for future expenditure	-	-	-	-	96,000
	10,338,954	9,991,489	9,789,067	9,474,379	9,253,849
FUNDS AVAILABLE FOR HIGHER SERVICE LEVELS, OPERATING AND CAPITAL PROJECTS	450,073	208,466	502,476	1,108,490	392,565
Operating	335,000	44,000	42,304	4,663	30,000
Capital	115,073	152,000	135,187	61,119	256,186
Reserves/Surplus	-	12,466	91,028	655,000	85,000
	450,073	208,466	268,519	720,782	371,186
SURPLUS (DEFICIT)	-	-	233,957	387,708	21,379

Electrical Fund

	BUDGET 2016	BUDGET 2015	Difference	% Change
Electrical Revenue				
Electric rates	$ 10,542,805	$ 9,961,177	$ 581,628	5.84%
Administration and rental	23,000	24,500	(1,500)	-6.12%
Connection and service charges	30,400	23,000	7,400	32.17%
Other revenue	92,822	91,278	1,544	1.69%
Contributions from developers	100,000	100,000	-	0.00%
	$ 10,789,027	$ 10,199,955	$ 589,072	

Variance Analysis of Electrical Revenue ($2,500 threshold utilized)

Increase to Electric rates budget to reflect 2015 actuals.	$ 152,194
Electrical rates budget updated to reflect 2015 actuals, 2.96% Fortis cost increase & 2% Municipal increase.	225,702
Electrical rates budget updated to reflect 2015 actuals, 2.96% Fortis cost increase & 2% Municipal increase.	201,932
Addition to budget for installation of meter base surge arresters.	7,400
	$ 587,228

Various other small adjustments (administration, highway light recovery, etc.)

Electrical Expenditures				
Administration and Office	$ 917,938	$ 878,806	$ 39,132	4.45%
Electric Supply	7,850,773	7,625,071	225,702	2.96%
PCB Compliance	37,225	41,319	(4,094)	-9.91%
Substations	37,179	23,376	13,803	59.05%
Warehouse Building	14,672	14,150	522	3.69%
Storage and Pole Yards	13,382	12,448	934	7.50%
System - Operation and Maintenance	560,369	470,715	89,654	19.05%
Brushing	87,581	57,981	29,600	51.05%
Underground Locates	25,233	19,003	6,230	32.78%
Customer Meter Reading	46,355	79,966	(33,611)	-42.03%
Customer Meter Maintenance	119,973	54,336	65,637	120.80%
Inventory Control	28,274	27,549	725	2.63%
Developer Funded Works	100,000	100,000	-	0.00%
Transfers to Other Funds	500,000	586,769	(86,769)	-14.79%
Subtotal	$ 10,338,954	$ 9,991,489	$ 347,465	

Variance Analysis of Electrical Expenditures ($2,500 threshold utilized)

Net affect of reallocation of municipal labour costs between Electrical Department cost centers.	$ 41,527
Increase in the equipment charge out rates for fleet	55,000
Budget addition for provision of administrative relief.	4,186
Budget increase for 2.96% Fortis increase effective January 1, 2016 for electrical consumption.	223,937
Budget addition for PV Substation Reclosure Servicing - contracted services every 5 years.	20,000
Eliminate budget for annual permit fee - no longer required.	(8,000)
Increase budget for contracted services for removal of dangerous trees & flagging.	20,000
Reduction of budget for contracted cost for meter reading services.	(37,000)
Addition to budget for materials & suppliess required to maintain customer electrical meters (surge protectors).	7,400
Reduce annual transfer to General Fund to $500,000.	(86,769)
Budget for the addition of Preventative Maintenance & Upgrades.	50,000
Addition to budget for meter recertification costs.	50,000
	$ 340,281

Various other small adjustments (CUPE 2% increase, 4% electrical increase, etc.)

CORPORATION OF THE DISTRICT OF SUMMERLAND

Electrical Department
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	REVENUE							
	SALE OF SERVICE							
	User Charges							
4114411000	Commercial rates	3,080,770	2,562,207	2,955,588	2,905,249	2,599,179	518,563	20.24
4114412000	Industrial rates	349,483	299,282	335,282	276,669	279,704	50,201	16.77
4114413000	Irrigation rates	85	1,197	81	285	435	-1,112	-92.90
4114415000	Residential rates	7,396,719	7,542,891	7,096,166	7,509,713	6,984,169	-146,172	-1.94
4114419000	Discounts allowed	-1,100,015	-1,096,257	-1,055,318	-1,062,143	-992,222	-3,758	0.34
4114417000	Municipal use	544,655	391,123	522,524	544,163	371,988	153,532	39.25
4114422000	Street lighting	252,508	243,934	242,248	234,860	227,948	8,574	3.51
4114431000	Highway light recovery	18,600	16,800	17,905	17,353	16,799	1,800	10.71
		10,542,805	9,961,177	10,114,476	10,426,149	9,488,000	581,628	5.84
4114491000	Administration recovery	5,000	6,500	4,779	16,185	16,190	-1,500	-23.08
4114492000	Light rental fees	18,000	18,000	18,185	18,137	18,223		
		23,000	24,500	22,964	34,322	34,413	-1,500	-6.12
	Connection and Service Charges							
4114811000	Turn on / off & transfers	20,000	20,000	24,726	23,897	21,135		
4114812000	Connection fees	2,500	2,500	570	6,209	4,125		
4114813000	Space heating charges	500	500	343	285	2,951		
4114814000	New service connections			13,013				
4114819000	Meter base surge arrester	7,400		2,995			7,400	
		30,400	23,000	41,647	30,391	28,211	7,400	32.17
	Other Revenue							
4115301000	Pole rental	92,822	91,278	92,822	92,007	91,279	1,544	1.69
		146,222	138,778	157,433	156,720	153,903	7,444	5.36
4114499000	Contributions from developers	100,000	100,000	19,634		4,511		
	FISCAL SERVICES							
	Transfer from Surplus and Reserves							
4119120000	Transfer from prior surplus							
	Transfer from reserves							
	TOTAL REVENUE	10,789,027	10,199,955	10,291,543	10,582,869	9,646,414	589,072	5.78

CORPORATION OF THE DISTRICT OF SUMMERLAND

Electrical Department
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	Administration and Office							
4124111100	Salaries - Regular	65,905	64,000	71,953	60,286	84,054	1,905	2.98
4124111210	Wages - Regular	134,801	106,129	97,870	100,711	77,549	28,672	27.02
4124111211	Wages - Part-time	4,186		6,935			4,186	
4124111220	Wages - Overtime			12	498	129		
4124112100	Public Open Houses			306				
4124112110	Travel / Conferences		2,000		1,217	509	-2,000	-100.00
4124112120	Postage, freight & courier	4,000	4,000	1,823	1,560	4,134		
4124112130	Telephone	3,000	3,000	5,811	4,873	3,552		
4124112210	Advertising	2,300	2,300			1,929		
4124112220	Publications & subscriptions	100	100					
4124112320	Legal services	15,000	15,000		6,461			
4124112330	Engineering & survey							
4124112340	Education and Training	7,000	5,000	156	2,374	7,501	2,000	40.00
4124112375	Insurance	1,446	1,677	535	4,816	10,159	-231	-13.77
4124112390	Memberships	2,000	2,000	1,854	1,846	1,609		
4124112395	Contracted services	25,900	25,900	9,744	15,125	15,332		
4124112610	Equipment rental - Internal	8,800	4,200	6,429	2,645	8	4,600	109.52
4124113000	Administration & office			32,868				
4124114220	Administration charge	639,000	639,000	639,000	192,000	192,000		
4124115300	Materials & supplies	500	500	387	187	1,338		
4124115400	Office supplies	4,000	4,000	3,946	2,814	3,357		
4124115410	Photocopying and printing			486				
4124115520	Gas					203		
4124119990	Contingency							
		917,938	878,806	880,115	397,413	403,363	39,132	4.45
	Electric Supply							
4125105100	Basic customer charge	61,396	59,631	58,284	55,235	55,235	1,765	2.96
4125105200	Consumption charges	5,174,535	5,025,772	4,923,785	4,734,201	4,609,058	148,763	2.96
4125105210	Demand charges	2,614,842	2,539,668	2,625,935	2,530,489	2,395,287	75,174	2.96
4125105220	Interim increase							
		7,850,773	7,625,071	7,608,004	7,319,925	7,059,580	225,702	2.96

CORPORATION OF THE DISTRICT OF SUMMERLAND
Electrical Department (continued)
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	PCB Compliance							
4125111210	Wages - Regular	15,725	20,319	6,691	11,500	12,825	-4,594	-22.61
4125112340	Education and Training	5,500	5,500	2,761				
4125112395	Contracted services	12,000	12,000	15,119	47,843	20,406		
4125112610	Equipment rental - Internal	1,500	1,000	661	638	960	500	50.00
4125115300	Materials & supplies	2,500	2,500	398	1,633	2,254		
		37,225	41,319	25,630	61,614	36,445	-4,094	-9.91
	BUILDINGS AND YARD MAINTENANCE							
	Substations							
4126111210	Wages - Regular	5,229	5,126	9,673	6,659	2,458	103	2.01
4126111220	Wages - Overtime			1,566				
4126112130	Telephone	400		374			400	
4126112395	Contracted services	28,000	8,000	126	6,655		20,000	250.00
4126112610	Equipment rental - Internal	2,050	750	1,780	536	229	1,300	173.33
4126115300	Materials & supplies	1,500	1,500	3,397	2,678	921		
4126119900	Licences and permits		8,000				-8,000	-100.00
		37,179	23,376	16,916	16,528	3,608	13,803	59.05
	Warehouse Building							
4126151210	Wages - Regular	2,856	2,800	2,344	4,672	2,267	56	2.00
4126152395	Contracted services	3,000	3,000	2,928	3,100	2,210		
4126152610	Equipment rental - Internal	100	100	12				
4126155300	Materials & supplies	1,000	1,000	1,686	1,997	1,410		
4126155510	Water			382				
4126155520	Gas	3,090	3,090	2,084	2,263	2,324		
4126155530	Electricity	4,326	4,160	2,474	2,011		166	3.99
4126155540	Sewer	300		296			300	
		14,672	14,150	12,206	14,043	8,211	522	3.69
	Electrical Works Office							
4126162395	Contracted services					614		
4126165300	Materials & supplies					387		
4126165530	Electricity					2,143		
						3,144		

CORPORATION OF THE DISTRICT OF SUMMERLAND
Electrical Department (continued)
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	Storage and Pole Yards							
4126181210	Wages - Regular	6,832	6,698	4,512	3,644	2,915	134	2.00
4126182395	Contracted services	5,000	5,000	3,200		9,500		
4126182610	Equipment rental - Internal	1,300	500	1,188	227	259	800	160.00
4126185300	Materials & supplies	250	250	1,530				
		13,382	12,448	10,430	3,871	12,674	934	7.50
	DISTRIBUTION SYSTEM - MAINTENANCE AND OPERATION							
	System - Operation and Maintenance							
4126211210	Wages - Regular	215,149	210,930	213,299	283,544	224,835	4,219	2.00
4126211220	Wages - Overtime	12,240	12,000	15,942	26,684	13,700	240	2.00
4126211290	Wages - Standby pay	62,780	56,785	60,552	60,655	55,622	5,995	10.56
4126212330	Engineering & survey	2,500	2,500			1,462		
4126212395	Contracted services	50,000	50,000	54,601	44,555	19,338		
4126212610	Equipment rental - Internal	78,700	49,500	41,028	34,783	34,292	29,200	58.99
4126212620	Equipment rental - External	500	500					
4126213000	Small capital	8,500	8,500	8,481	8,992	2,528		
4126215300	Materials & supplies	130,000	80,000	84,287	111,293	135,490	50,000	62.50
		560,369	470,715	478,190	570,506	487,267	89,654	19.05

CORPORATION OF THE DISTRICT OF SUMMERLAND
Electrical Department (continued)
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	Brushing							
4126221210	Wages - Regular	35,681	34,981	31,521	28,781	42,897	700	2.00
4126222395	Contracted services	30,000	10,000	4,396	5,748	4,320	20,000	200.00
4126222610	Equipment rental - Internal	19,400	10,500	12,449	5,438	8,916	8,900	84.76
4126225300	Materials & supplies	2,500	2,500	267	430	521		
		87,581	57,981	48,633	40,397	56,654	29,600	51.05
	Underground Locates							
4126231210	Wages - Regular	21,833	16,503	25,976	19,626	22,344	5,330	32.30
4126231220	Wages - Overtime				219			
4126232395	Contracted services							
4126232610	Equipment rental - Internal	2,900	2,000	1,249	449	611	900	45.00
4126235300	Materials & supplies	500	500	223	-105	365		
		25,233	19,003	27,448	20,189	23,320	6,230	32.78
	Customer Meter Reading							
4126241210	Wages - Regular	9,551	9,364	13,122	11,023	15,130	187	2.00
4126241220	Wages - Overtime	104	102	195	224		2	1.96
4126242395	Contracted services	30,000	67,000	17,959	39,259	69,092	-37,000	-55.22
4126242610	Equipment rental - Internal	4,700	1,500	4,524	2,115	2,581	3,200	213.33
4126243000	Small capital			140				
4126245300	Materials & supplies	2,000	2,000	20	1,998	634		
		46,355	79,966	35,960	54,619	87,437	-33,611	-42.03
	Customer Meter Maintenance							
4126251210	Wages - Regular	41,653	40,836	34,609	43,663	39,477	817	2.00
4126251220	Wages - Overtime	1,020	1,000	332	407		20	2.00
4126251290	Wages - Shift Differential							
4126252395	Contracted services	54,500	2,500	1,450	2,610	360	52,000	2080.00
4126252610	Equipment rental - Internal	11,400	6,000	7,591	2,409	3,593	5,400	90.00
4126255300	Materials & supplies	11,400	4,000	2,601	784	3,053	7,400	185.00
		119,973	54,336	46,583	49,873	46,483	65,637	120.80

CORPORATION OF THE DISTRICT OF SUMMERLAND
Electrical Department (continued)
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	Inventory Control							
4126261210	Wages - Regular	26,774	26,249	24,125	12,940	26,851	525	2.00
4126262395	Contracted services					7,852		
4126262610	Equipment rental - Internal	1,400	1,200	339	75	888	200	16.67
4126265300	Materials & supplies	100	100	512		149		
		28,274	27,549	24,976	13,015	35,740	725	2.63
	Street Lighting Maintenance							
4126271210	Wages - Regular				17,071	21,534		
4126271220	Wages - Overtime							
4126272395	Contracted services				14,800	140		
4126272610	Equipment rental - Internal				2,913	4,253		
4126275300	Materials & supplies				14,895	9,977		
4126275530	Electricity				243,191	232,185		
					292,870	268,089		
	Highway Lighting and Signals							
4126282395	Contracted services - MOH				7,228	7,821		
	Christmas Lighting Maintenance							
4126291210	Wages - Regular				9,084	14,492		
4126291220	Wages - Overtime				189	897		
4126292395	Contracted services							
4126292610	Equipment rental - Internal				1,771	2,489		
4126295300	Materials & supplies				1,244	135		
					12,288	18,013		

CORPORATION OF THE DISTRICT OF SUMMERLAND
Electrical Department (continued)
2016 Operating Budget

		2016 Budget	2015 Budget	2015 Actual	2014 Actual	2013 Actual	Budget to Budget Increase (Decrease) $	Budget to Budget Increase (Decrease) %
	EXPENDITURES							
	Developer Funded Works							
4126391210	Wages - Regular	25,000	25,000					
4126395300	Materials & supplies	75,000	75,000					
		100,000	100,000					
	FISCAL SERVICES							
	Transfer to Electrical Reserves							
4128210000	Reserve for future expenditure					96,000		
	Transfers to Other Funds							
4128230000	Transfer to General Revenue	500,000	586,769	573,976	600,000	600,000	-86,769	-14.79
	Transfer to Capital Reserve							
		500,000	586,769	573,976	600,000	600,000	-86,769	-14.79
	TOTAL EXPENDITURES	10,338,954	9,991,489	9,789,067	9,474,379	9,253,849	347,465	3.48

CORPORATION OF THE DISTRICT OF SUMMERLAND
Electric Utility Administration Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
4124111100	Salaries - Regular	Portion of salary for Director & Managers.		65,905	64,000
4124111210	Wages - Regular	Meter Technician (36%)	44,821		
		Engineering Techs and Draftsperson (25%)	56,843		
		Administrative salaries	33,137		
				134,801	106,129
4124111211	Wages - Part-time	Provision for Administrative Relief		4,186	0
4124112100	Public Open Houses	Provision for costs related to open houses.		0	0
4124112110	Travel / Conference	Travel and accomodations for utility meetings, seminars and presentations by suppliers and B.C. Electical Assn.		0	2,000
4124112120	Postage, freight and courier	Postage, freight and courier charges for correspondence, documents, maps and plans sent to outside agencies.		4,000	4,000
4124112130	Telephone	Telephone, cellular and long distance charges for the year.		3,000	3,000
4124112210	Advertising	Advertising power outages, energy conservation messages & general notices.		2,300	2,300
4124112220	Publications & subscriptions	Subscription to trade magazines and technical publications.		100	100
4124112320	Legal	Legal fees incurred for interventions at B.C. Utility Commission hearings on FortisBC rate changes.		15,000	15,000
4124112330	Engineering & survey	Allocation of draftsman's cost for map upgrading.		0	0
4124112340	Training and education	Electrical department employees training and education.		7,000	5,000
4124112375	Insurance	Allocation of premiums on municipal policy.		1,446	1,677
4124112390	Memberships	Annual electrical permit and professional and affiliation fees.		2,000	2,000
4124112395	Contracted services	Electrical Engineering consultants	25,000		
		Surveillance Camera monitoring	900		
		Bargaining	0	25,900	25,900
4124112610	Equipment rental - Internal	Internal charge for the vehicle used by the Electric Foreman.		8,800	4,200
4124113000	Administration & office	Allocation for miscellaneous office admin charges.		0	0
4124114220	Administration charge	Internal charge to reflect costs incurred in the general operating fund on behalf of the electric fund.		639,000	639,000
4124115300	Materials and supplies	Cost for such items as janitorial supplies, builders' supplies, etc. used in the electrical administration office.		500	500
4124115400	Office supplies	Normal office supplies used in day to day operations.		4,000	4,000
4124115410	Photocopying and printing	Allocation for regular photocopying & printing costs.		0	0
4124115520	Gas	Fortis BC gas billings for heating the building.		0	0
4124119990	Contingency	Allocation for proposed 2% increase to IBEW wages.		0	0
	Total Electric Utility Administration Expenditures			917,938	878,806

SIGNIFICANT CHANGES: 2% IBEW & CUPE increases. Allocation of 13% of total Administration Relief budget to this cost centre. First full year reflecting hiring of additional Engineering Technician in prior year. Increase internal equipment use charge to reflect updated rates.

WORK PLAN: Portion of Managers and Directors salaries and Jr. Accountant and Secretary wages. Shipping, training, office related materials and equipment.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Electrical Supply Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
4125105100	Demand side management	Participation in the Power Smart Program through FortisBC.		0	0
4125105200	Basic customer charge	Basic customer charge by FortisBC.		61,396	59,631
4125105210	Cost attributed to consumption	Charges from FortisBC for electrical energy consumption.		5,174,535	5,025,772
4125105220	Cost attributed to demand	Charges from FortisBC for peak power demand during each month at the greater of actual demand or 75% of the highest power demand of the previous 11 months.		2,614,842	2,539,668
	Total Electrical Supply Expenditures			7,850,773	7,625,071

SIGNIFICANT CHANGES: Increased budget to reflect 2.96% cost increase implemented by FortisBC effective January 1, 2016.

WORK PLAN: Provision of electrical services to municipal customers.

CORPORATION OF THE DISTRICT OF SUMMERLAND
PCB Compliance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
4125111210	Wages - Regular	Regular wages for maintenance and testing (IBEW staff).		15,725	20,319
4125112340	Education and Training	Training for PCB compliance.		5,500	5,500
4125112395	Contracted services	Sampling	2,000		
		Audit	10,000		
		Hazardous waste disposal	0	12,000	12,000
4125112610	Equipment rental - Internal	Internal charge for use of municipal equipment.		1,500	1,000
4125115300	Materials & supplies	Materials required to do minor maintenance.		2,500	2,500
	Total PCB Compliance			37,225	41,319

NOTE: Breakers are required to be serviced once every five years.

SIGNIFICANT CHANGES: 2% IBEW increase. Decreased budget due to reallocation of $5,000 in Wages and $500 in Equipment rental - Internal to Underground Locates. Budgets adjustments were completed to reflect actual activity.

WORK PLAN: Regular testing, replacement, disposal and Government compliance of PCB transformers.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Substation Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details		2016 Total	Previous Year Budget
4126111210	Wages - Regular	Regular wages for maintenance and testing the switchgear in the substation (Majority IBEW staff).		5,229	5,126
4126111220	Wages - Overtime	Overtime attributed to outages due to equipment failures.		0	0
4126112130	Telephone	Internet fees for monitoring of substation.		400	0
4126112395	Contracted services	Contracted services:			
		PV Substation Reclosure Servicing (every 5 years)	20,000		0
		Repairs/Alterations to Substations by Contractor	8,000	28,000	8,000
4126112610	Equipment rental - Internal	Internal charge for use of municipal equipment.		2,050	750
4126115300	Materials & supplies	Materials required to do minor maintenance.		1,500	1,500
4126119900	Licences and permits	Annual Utility Permit renewal fee		0	8,000
	Total Substation Expenditures			37,179	23,376

NOTE: Breakers are required to be serviced once every five years.

SIGNIFICANT CHANGES: 2% IBEW increase. Addition of PV Substation Reclosure Servicing costs - required once every 5 years. Budget for annual Utility Permit fee eliminated as there was never a related charge since creation of this budget in 2012.

WORK PLAN: Maintenance and repairs of 2 sub-stations and related remote communications.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Warehouse Building Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
4126151210	Wages - Regular	Regular wages attributed to maintenance and repairs at the warehouse building (All IBEW staff).		2,856	2,800
4126152395	Contracted services	Janitorial services and garbage removal costs.		3,000	3,000
4126152610	Equipment rental - Internal	Internal charge for use of municipal equipment.		100	100
4126155300	Materials & supplies	Materials required for maintenance, cleaning and making minor repairs.		1,000	1,000
4126155510	Water	Internal charge for water services.		0	0
4126155520	Gas	Fortis BC gas billings for heating the building.		3,090	3,090
4126155530	Electricity	Internal charge for electrical power.		4,326	4,160
4126155540	Sewer	Internal charge for sewer services.		300	0
	Total Warehouse Building Expenditures			14,672	14,150

SIGNIFICANT CHANGES: 2% IBEW increase. 4% electricty increase.

WORK PLAN: Maintenance and cleaning of the Electrical Warehouse.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Storage & Pole Yard Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
4126181210	Wages - Regular	Estimated municipal labour costs for crews to maintain the storage yard (IBEW staff).	6,832	6,698
4126182395	Contracted services	Contractor charges for paving the reel yard, drainage and upgrades to reel yard.	5,000	5,000
4126182610	Equipment rental - Internal	Internal charge for use of municipal equipment.	1,300	500
4126185300	Materials & supplies	Materials used in organizing the inventories.	250	250
	Total Storage & Pole Yard Expenditures		13,382	12,448

SIGNIFICANT CHANGES: 2% IBEW increase. Increase internal equipment use charge to reflect updated rates.

WORK PLAN: Maintenance, organization, and snow removal in the Pole Yard and Reel Yard.

CORPORATION OF THE DISTRICT OF SUMMERLAND

System - Operation and Maintenance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
4126211210	Wages - Regular	Regular wages to accomplish the regular maintenance and daily tasks to keep the electrical system functioning.	210,113		
		Allocation for Works Crew (CUPE).	5,036	215,149	210,930
4126211220	Wages - Overtime	Overtime wages to accomplish the after hour maintenance & emergency tasks to keep the electrical system functioning.		12,240	12,000
4126211290	Wages - Standby pay	Standby pay to the employee that is on call 2 hours per day and 3 hours on weekends (All IBEW staff).		62,780	56,785
4126212330	Engineering & survey	Engineering and legal survey work related to the regular maintenance of the electrical system.		2,500	2,500
4126212395	Contracted services	Cost of repairs or alterations to the electrical system performed by local contractors, flagging and excavation. Pole contact charges on Fortis transmission line.		50,000	50,000
4126212610	Equipment rental - Internal	Internal charge for use of municipal equipment.		78,700	49,500
4126212620	Equipment rental - External	Rental of equipment from other sources to assist in emergency repairs and regular maintenance of the electrical system.		500	500
4126213000	Small capital	Repair and replacement of small tools used in the regular maintenance of the system.		8,500	8,500
4126215300	Materials & supplies	Cost of all materials used in making repairs and performing the regular maintenance of the electrical system.	80,000		
		Provision for Preventative Maintenance & Upgrades	50,000		
				130,000	80,000
	Total System - Operation and Maintenance Expenditures			560,369	470,715

SIGNIFICANT CHANGES: 2% CUPE & IBEW increase. Increase internal equipment use charge to reflect updated rates.
Addition to budget for provision of Preventative Maintenance & Upgrade exoenses.

WORK PLAN: Time, materials, tools, and equipment to maintain and repair the Electrical System including contractor and consultant time where necessary.
6-month journeyman lineman (crossover for retirement and vacation/sick relief) has been requested on Operating Project listing.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Brushing Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	Subtotal	2016 Total	Previous Year Budget
4126221210	Wages - Regular	Regular wages required for clearing trees back a safe distance from the electrical wires.	34,006		
		Allocation for Works Crew (CUPE).	1,675	35,681	34,981
	Advertising	Notices placed in the newspaper regarding the hazards of trees near power lines and notices of planned tree trimming.		0	0
4126222395	Contracted services	Services of professional tree trimmers to assist us in our annual tree trimming and remove large danger trees plus some flagging.		30,000	10,000
4126222610	Equipment rental - Internal	Internal charge for use of municipal equipment.		19,400	10,500
	Equipment rental - External	Externally rented equipment used for brushing.		0	0
4126225300	Materials & supplies	Materials used in the process of trimming the trees such as chains and bars for the saws, fuel, oil and small saws.		2,500	2,500
	Total Brushing Expenditures			87,581	57,981

SIGNIFICANT CHANGES: 2% CUPE & IBEW increase. Increase internal equipment use charge to reflect updated rates. Addition to contracted services budget to reflect 2015 actual costs.

WORK PLAN: Identifying, trimming & removing trees that are potentially hazardous to our electrical system including.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Underground Locates Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
4126231210	Wages - Regular	Regular wages required to perform underground locates for ourselves, contractors, customers & other utilities (IBEW).	21,833	16,503
4126232395	Contracted services	Work performed by contractors.	0	0
4126232610	Equipment rental - Internal	Internal charge for use of municipal equipment.	2,900	2,000
4126235300	Materials & supplies	Batteries and repair parts for underground locator.	500	500
	Total Underground Locates Expenditures		25,233	19,003

SIGNIFICANT CHANGES: 2% IBEW increase. Increased budget due to reallocation of $5,000 in budgeted wages & portion of internal equipment rental from PCB Compliance (account #'s 41-2-511-1210 and 41-2-511-2610).

WORK PLAN: Locating underground electrical lines at customers request to ensure damage does not occur to the electrical system.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Customer Meter Reading Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
4126241210	Wages - Regular	Regular wages for Bylaw Officer to obtain monthly readings & perform cut-offs for non-payment.	9,551	9,364
4126241220	Wages - Overtime	Overtime paid to deal with off hour power turn offs/ons.	104	102
4126242395	Contracted services	Contract meter reader	30,000	67,000
4126242610	Equipment rental - Internal	Internal charge for use of municipal equipment.	4,700	1,500
4126243000	Small capital		0	0
4126245300	Materials & supplies	Supplies used by the meter reader such as meter seals.	2,000	2,000
	Total Customer Meter Reading Expenditures		46,355	79,966

SIGNIFICANT CHANGES: 2% CUPE increase. Reduction to contracted services budget to reflect 2015 actuals - large cost reduction with implementation of electronic reading capabilities.

WORK PLAN: Time and materials to read, turn off, and turn on electrical meters.

CORPORATION OF THE DISTRICT OF SUMMERLAND

Customer Meter Maintenance Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details		2016 Total	Previous Year Budget
4126251210	Wages - Regular	Regular wages for meter repair technician to inspect, calibrate, replace or install meters (majority IBEW staff).		41,653	40,836
4126251220	Wages - Overtime	Overtime for repair and replacement of meters where a deadline for installation can not be met (IBEW staff).		1,020	1,000
4126251290	Wages - Shift differential	Wage premium for changing normal work shift.		0	0
4126252395	Contracted services	Recertification of meters through Itron. Provision for additional Water Meter Recertification.	4,500 50,000	54,500	2,500
4126252610	Equipment rental - Internal	Internal charge for use of municipal equipment.		11,400	6,000
4126255300	Materials & supplies	Incidental supplies such as connectors, wire ties, etc. used by the meter technician.		11,400	4,000
	Total Customer Meter Maintenance Expenditures			119,973	54,336

SIGNIFICANT CHANGES: Increase of 2% for IBEW wages. Additional amounts added to contracted services and materials & supplies to cover cost of surge protector installations. Related expenses will be partially offset by revenue reported in g/l account #41-1-481-9000. Further addition to contracted services for required Water Meter recertification.

WORK PLAN: Inspection, maintenance, purchasing, and replacement of electrical meters.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Inventory Control Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
4126261210	Wages - Regular	Regular wages for the storesman to receive, store, issue and count inventory (all IBEW staff).	26,774	26,249
	Wages - Overtime	Overtime for issuing and receiving stock in emergencies and during after hours deliveries.	0	0
4126262395	Contracted services	Disposal of toxic materials.	0	0
4126262610	Equipment rental - Internal	Internal charge for use of municipal equipment.	1,400	1,200
4126265300	Materials & supplies	Materials used in daily inventory control.	100	100
	Total Inventory Control Expenditures		28,274	27,549

SIGNIFICANT CHANGES: 2% IBEW increase.

WORK PLAN: Time to count, report, and purchase materials and equipment.

CORPORATION OF THE DISTRICT OF SUMMERLAND
Developer Funded Works Expenditures
2016 Operating Budget Details

Account Number	Account Description	Details	2016 Total	Previous Year Budget
Developer Funded Works				
4126391210	Wages - Regular		25,000	25,000
4126395300	Materials & supplies		75,000	75,000
	Total Developer Funded Works Expenditures		100,000	100,000

NOTE: Offsetting revenue reported in g/l account #41-1-449-9000 - estimated for Trout Creek Development.

SIGNIFICANT CHANGES: No significant changes anticipated for 2016.

WORK PLAN: Offsetting revenue reported in g/l account #41-1-449-9000.

DISTRICT OF SUMMERLAND

2016-2020 Forecasted Operating Spending List

Electric		Total	DESIRED YEAR	CRITERIA	RANKING	NOTES
Staffing	Succession planning - 6 months Lineman overlap	60,000	2016	1, 6	2	
Staffing	Lineman Position - Full Time	120,000	2016	6	2	Ongoing
SubSt	Substation Switch Upgrade	30,000	2016	1, 2, 5, 6	1	
Risk	Fuse Coordination Study and Model Update	25,000	2016	1, 2, 6	1	
Dist	Brushing Trees from Power Lines	100,000	2016	1, 2, 5, 6	2	
	2016 SUBTOTAL	**335,000**				
Dist	Overhead Tie at Latimer Avenue	19,000	2017	2	2	
	2017 SUBTOTAL	**19,000**				
Dist	Cct#149 - Re-establish #349 Link	35,000	2020	2	2	
	2020 SUBTOTAL	**35,000**				
	TOTAL ELECTRIC	**389,000**				

Legend for Criteria:

1-Safety (public and employee)
2-Risk Mitigation
3-Statutory/Regulatory/Policy
4-Committed/Unavoidable
5-Investment Protection
6-Productivity Improvement
7-Grant/Reserve Funds
8-Other

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Electrical**
ITEM OR PROJECT NAME:	**Succession Planning - 6 months Lineman Overlap**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED: YES [ ] NO [✓]

DESCRIPTION:

One of the Utility's Linemen will be retiring in 2016. Date still TBA. In order for a new lineman to learn what is a very complex electrical system and to play a valuable and safe role with the crew much time is required. One must spend at leaste 6 months to understand the system enough to be able to share in the standby duties. If this is not achieved prior to staff retiring the additional standby and callouts fall onto the existing linemen. Given the small staff compliment and high vacation availability, losing one even for a brief time is detremental to the Utility. $45.53 x 1.58(load) x (1522 hrs/2) = $54,744.36

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	-

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	60,000.00
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**60,000.00**

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Electrical**
ITEM OR PROJECT NAME:	**Lineman Position - Full Time**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**		**NO**	✓	

DESCRIPTION:

Over time the Electrical Utility staff contingent has been reduced from 9 down to 6 due to budget constraints. 2 years ago the Utility's Truck Driver was also layed off. This left a big hole in the group and has made all of our O&M and capital projects more difficult to schedule and complete. In order to keep up with O&M the Utility is considering contracting out more of the work that we typically would have done inhouse. Given the small staff compliment and high vacation availability much of the year becomes even more lean as these staff are gone shelving even more regularly scheduled work. $45.53 x 1.58(load) x 1522 hrs = $109,488

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	-

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	120,000.00
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**120,000.00**

REQUESTED BY:	Devon van der Meulen	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Electrical**
ITEM OR PROJECT NAME:	**Substation Switch Upgrade**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

Each substation has many switches that allow the connection and disconnection of the District's distribution system from FortisBC's transmission. These switches are made of a porcelain material which over time becomes very brittle and is a safety hazard every time staff works on them. New switches are made of an epoxy and are not susceptible to the same damage. This project includes the purchase of these switches and their installation which includes significant power outages.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	3,000.00
WAGES - OVERTIME	6,000.00
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	21,000.00
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**30,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**30,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY:	Devon van der Meulen	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

Request for Approval

DISTRICT OF SUMMERLAND

SHIP TO: **District of Summerland**
c/o Electrical Utility Division
9215 Cedar Avenue
Summerland, BC
V0H 1Z2

P: 250-494-0431
F: 250-494-3399

H.D. Supply
HD 600
1-866-592-2999

Date: 28-Aug-15

Qty	D.O.S. Description	I-City Part #	Unit Cost	Total Cost	GL Code	Supplier Discription	Manufacture	Supply or Manufacture Part #
	Prairie Valley Sub							
42	CUTOUT, SOLID BLADE 900AMP 125 KV (SUB)	ECO050900	429.25	$18,028.50				4733R9T-E-AD1
	Trout Creek Sub							
6	CUTOUT, SOLID BLADE 900AMP 125 KV (SUB)	ECO050900	429.25	$2,575.50				4733R9T-E-AD1

Sub Total $20,604.00

OFFICE NOTES

Please confirm Pricing & Descriptions on all items by return email - Attn: Lara
Thank you

DISTRICT OF SUMMERLAND
ELECTRICAL UTILITY DIVISION
summerland.ca

LR Purchase Agent

Assigned PO#
Checked by:

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Electrical**
ITEM OR PROJECT NAME:	**Fuse Coordination Study & Model Update**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

To update the District's CYME software model to a reasonable state of as-built and study the coordination of fuses in the system to help minimize staff time and costs associated with development, making better decisions on infrastructure upgrades, minimizing loss of electrical service, and improve staff safety.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	25,000.00
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**25,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**25,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY:	Devon van der Meulen	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

Proposal:

District of Summerland Coordination Study

Primary Reference: HR-2143

Client:

District of Summerland
Works & Utilities Department
Devon van der Meulen, Manager of Utilities
9215 Cedar Ave
PO Box 159
Summerland, British Columbia
V0H 1Z0

Proponent:

Primary Engineering and Construction
Jesse Spring, P.Eng.
Manager, Kelowna Operations
Suite 4, 1414 Hunter Court
Kelowna, British Columbia V1X 6E6
Phone: (250) 763-0401

Submission Date:

Friday, October 2nd, 2015

DOCUMENT HISTORY

Revision No.	Prepared by Date	Reviewed by Date	Authorized by Date	Remarks
0	J. Spring 2 Oct 2015			Issued to client

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1. COMPANY PROFILE

1.1. Corporate Overview

Primary Engineering and Construction (Primary) was incorporated in 2002 and is currently providing excellence in electrical design in Alberta, British Columbia and Saskatchewan. Primary (the company) considers its greatest assets to be relationships, professional skills, and commitment to conduct operations ethically and responsibly.

Primary recognizes its role and responsibility in delivering vision, innovation and sustainable employment practices to meet societal needs. The ability to recruit and retain professionals with proven experience allows its customers to capitalize on that knowledge, completing projects more quickly and to higher standards, increasing the client's return on investment.

Primary strives to add value in its day-to-day operations to foster the continuous improvement of industry standards and ultimately achieve high customer satisfaction ratings.

Primary is a growth-oriented industry leader providing professional services and specializing in an emerging marketplace. The company offers planning, design and design/build services for all types of electric utility distribution to a wide variety of clients including electric utility companies, developers, builders, commercial and industrial businesses, governments and private contractors.

Primary's organization is comprised of a team of dedicated veterans with extensive experience in utility consulting, distribution planning, design, maintenance and construction. The company devotion to excellence has also attracted some of the best young professionals.

Primary takes great pride in both past and future operations and believes that to demonstrate commitment to its customers, it is imperative to show constant improvement in all business areas including people and processes.

1.2. General Services

The diverse collection of experiences held by Primary employees has enabled the company to provide engineering and construction services for a variety of commercial, institutional, utility, and industrial clients, including, but not limited to:

- Design and design-build of transmission and distribution systems/networks
- Design of industrial power systems
- Shallow utilities design/build services for residential subdivisions
- Roadway lighting design and construction
- Distribution system modeling & planning
- Design of Electric utility distribution standards
- Completion of detailed specifications and contract documents for procurement of major electrical equipment
- Completion of construction document work packages
- Completion of client correspondence and presentations
- Completion of specialized technical reports pertaining to all aspects of industrial power systems analysis including harmonics, load flow, arc flash, transient stability, short circuit, protection & coordination, and others
- Preparation of drawings and parts lists for review by client and for construction, paying particular attention to scope, presentation, applicable standards, and technical accuracy
- Completion of estimates for engineering work
- Completion of capital cost estimates
- Drafting and asset management services

1.3. Health and Safety Policy

Primary's Corporate Policies (formalized in 2008) demonstrate the company's' dedication to Health and Safety. Its policy is to ensure the Health and Safety of those in its operating environment. This conduct is recognized by:

- Complying with applicable laws and regulations.
- Working safely as a condition of employment and a "Safety First, Zero Incident" attitude.
- Employees and subcontractors identifying and recognizing the hazards in their work, communicating these hazards to management and other direct stakeholders, and designing and implementing ways to control hazards.
- The right of individuals to declare work they have identified as unsafe and not perform unsafe work.
- Employees and subcontractors taking responsibility to conduct work safely.
- Employees and subcontractors participating in appropriate training to protect themselves from on-the-job illness or injury.
- Owners and management taking an active role in maintaining a healthy and safe work place.

The following procedures and certifications have been implemented to maintain corporate safety objectives:

- Corporate Health and Safety Program; H&S document numbers -1 through 19 collectively
- Alberta Construction Safety Association (ACSA) Certificate of Recognition (COR) program compliant
- Alberta ISNetworld ® compliant
- Alberta WCB good standing (account # 4468123; industry code 40604 and 86400)
- BC Work Safe compliant (account # 801852-AA, industry code - 763010)
- Saskatchewan WCB good standing (firm # A915967 S4101)

These documents are available upon request if not already provided as part of the submission requirements of the proposal.

1.4. Quality Management Policy

Primary is committed to comply with customer and regulatory requirements and strives to constantly improve the business through the use of quality management tools and objectives. A demonstration of this commitment is Primary's APEGBC certified corporate Organizational Quality Management (OQM) Program (certification #90644-2015).

Refer to the APEGBC website for an explanation of the OQM program as it explicitly applies to Engineering services offered in British Columbia.

https://www.apeg.bc.ca/For-Members/Professional-Practice/Organizational-Quality-Management-Program

1.5. Environmental Stewardship

Primary's policy is to conduct all operations in an environmentally conscious manner. The company strives to achieve constant improvement in its practices and materials, towards the preservation, recovery and enhancement of the natural environment. This conduct is recognized by:

- Complying with applicable laws and regulations.
- Considering and applying environmentally sustainable ways to deliver its services.
- Performing operations to reduce or prevent damage to the environment including maximizing recycling and use of recyclable materials.
- Evaluating both tangible and in-tangible value of environmentally responsible partners in business.
- Openly consulting with business partners to achieve environmental objectives.

1.6. Operations

ALBERTA	
Calgary (Head Office) 207 39 Avenue NE, Calgary, AB T2E 7E3 Phone: 403-873-0400 Business Sectors: Alberta Design & Design-Build, Enmax Design & Design-Build, City of Calgary Street Lighting Employees: 29	Construction Office 285220 61st Avenue SE, Rocky View, AB T1X 0K3 Phone: 403-236-4113 Employees: 49
BRITISH COLUMBIA	
Burnaby Unit F - 6908 Palm Avenue, Burnaby, BC V5J 4M3 Phone: 604-558-0401 Business Sectors: BC Hydro Customer Build, BC Hydro Consulting, Street lighting, Distribution Design Employees: 14	Kelowna #4 - 1414 Hunter Court, Kelowna, BC V1X 6E6 Phone: 250-763-0401 Business Sectors: BC Hydro Design, FortisBC Design & Design-Build, Municipal Utility Planning and Design, Industrial Power Systems Design, Street Lighting Design Employees: 10
Victoria #110 - 4252 Commerce Circle, Victoria, BC V8Z 4M2 Phone: 250-385-0401 Business Sectors: BC Hydro Customer Build, BC Hydro Design, Traffic Control Design, Municipal Roadway Lighting Systems Employees: 8	
SASKATCHEWAN	
Regina 385 Park Street, Regina, SK S4N 5B2 Phone: 306-216-2184 Business Sectors: SaskPower Design & Design-Build Employees: 10	Saskatoon 220 20 St W #210, Saskatoon, SK S7M 0W9 Phone: 306-988-0077 Business Sectors: SaskPower Design & Design-Build Employees: 5

2. OFFER OF SERVICES

2.1. Study Objectives

2.1.1. Model Update

2.1.1.1. Update the District of Summerland provided CYME software model to as reasonable a state of 'as built' as can be created with the information provided by District of Summerland, and generate deliverables based on the aforementioned model.

2.1.1.2. Confirm the load forecast based on new data from 2014 and 2015.

2.1.1.3. Apply the confirmed load forecast to the updated CYME model to verify planned capital projects and identify any possible new system weaknesses.

2.1.1.4. Provide modeling plan revisions as required.

2.1.2. System Wide Protection Coordination

2.1.2.1. Review the existing District of Summerland distribution circuits and perform an overcurrent protective device coordination study of the complete system.

2.1.2.2. Create a standard fusing chart for 'typical' configurations of the various circuits within the District of Summerland distribution.

2.1.2.3. Make additional proactive recommendations for long term sustainable power systems enhancements to promote additional development and expansions.

2.2. Study Principles

2.2.1. Attempt to minimize the capital expenditure required for development of new infrastructure within the District of Summerland distribution system.

2.2.2. Mitigate the potential impacts to service by considering all logistics for development. Promote operational flexibility by minimizing loss of electrical services.

2.3. Scope of Project Execution

2.3.1. Primary Engineering and Construction Responsibilities

2.3.1.1. To complete the project objectives outlined within section 2.1 to the satisfaction of District of Summerland in accordance with the principles outlined within section 2.2.

2.3.1.2. Receive and process all of the information from District of Summerland, and provide timely feedback on its perceived accuracy.

2.3.2. Customer Responsibilities

2.3.2.1. Provide dedicated personnel, knowledgeable about the application, and conceived design to assist with the review and release of all drawings, and communicate Q&A on behalf of District of Summerland.

2.3.2.2. Provide Primary Engineering with a comprehensive list of system changes since the most recent 'as built', which occurred in 2014

2.3.2.3. Where not already available, provide detailed information regarding specific site details that may be deemed pertinent to the project including but not limited to:

2.3.2.3.1. Normalized system loading at as may locations as possible

2.3.2.3.2. Load forecasts

2.3.2.3.3. Electrical distribution design standards

2.3.2.3.4. Electrical operating philosophies including switching procedures, generator loading schemes, etc.

2.3.2.3.5. Existing equipment maintenance test reports

2.3.2.3.6. Utility impedance/short circuit values under all possible operating conditions, particularly during 'normal', 'weak', and 'future' operating conditions

2.3.2.3.7. Protective device information, relay settings (particularly ANSI 50/51, 50/51/N/G), fuses, MV breaker operation time (2, 3, or 5 cycle), LV breaker trip curves

2.3.2.3.8. System impedances including line/cable size and configuration (overhead vs. buried in conduit), in-line impedances (if applicable)

2.3.2.3.9. Static or Dynamic VAR or voltage correction devices such as capacitor banks or static VAR compensators including controller settings

2.3.2.3.10. Substation and remote switching device (recloser) current transformer ratios, necessary to make the software work properly, and scale TCCs appropriately

2.3.2.3.11. System configuration. Switches and breakers that are open or closed. Radial feeds vs. loop feeds. Transformers operating in parallel, etc.

2.3.2.3.12. Substation protection diagrams (one line diagrams), which indicate the breaker/device ratings, CT ratios (particularly if multi-tap CTs are used), active ANSI functions, and trip/close/reclose and transfer conditions

2.3.2.3.13. Distribution plan drawings, showing the sizes of conductors for each respective circuit

2.3.2.3.14. Tap load data. Almost all the District of Summerland distribution loads are fairly small capacity transformers and could be modeled as distributed loads along the feeders

2.3.2.4. Provide on-site assistance to Primary Engineering representatives that may be travelling to site to complete any checks and inspections.

2.3.2.5. Provide timely reviews of all submission materials.

2.3.2.6. Provide all safety training and orientation required for site inspections.

2.3.3. Assumptions from the 2014 CYME™ model

2.3.3.1. Utility impedances were provided by FortisBC at the time

2.3.3.2. Transformer impedances, relay settings, CT ratios, fuses, o/h conductor sizes and lengths were correctly 'as built' at the time

2.4. Project Personnel

Primary Engineering intends to utilize the following resources to ensure the project is executed to the complete satisfaction of District of Summerland.

Name	Project Role	Professional Designation	Primary Engineering/District of Summerland 2015 Billing Rate	Anticipated Project Availability
Bill Kiedaisch	Project Engineer	Eng. L.	Junior Engineer	70%
Jeremy Shuba	Project Engineer	E.I.T.	Junior Engineer	10%
Marlin Frederick	Senior P&C Specialist	A. Sc. T	Senior Technologist	10%
Jesse Spring	Project Manager	P. Eng.	Intermediate Engineer	5%
Ben Casement	Engineer of Record	P. Eng.	Intermediate Engineer	5%

2.5. Pricing

2.5.1. The estimated cost to execute the system study as outlined within this proposal is (See Appendices A and B for estimates of hours):

Model Update
$5,229.98 (CAD) plus applicable taxes

System Wide Protection Coordination
$16,540.94 (CAD) plus applicable taxes

2.5.2. Invoicing will be for actual hours used and will occur on a monthly basis.

2.5.3. Includes labor and expenses and is subject to all inclusions, limitations, and exceptions defined within this proposal.

2.5.4. Primary Engineering and Construction reserves the right to pursue addendums to any applicable purchase orders that may result from the award of this project. Prices may be subjected to change if significant re-design time is incurred as a result of changes to scope.

2.5.5. The terms and conditions found in sections 1-2 supercede those found in section 3. Where not addressed elsewhere within this document, this quotation is subject to Primary Engineering and Construction General Terms and Conditions as found in Section 3 of this quotation.

2.6. Financial Terms

2.6.1. Quote normally valid for 30 days.

2.6.2. District of Summerland standard payment schedule and terms of payment shall apply (rates shown in Appendices A & B)

2.7. Appendices

Appendix	Description
A	Estimate of Hours – Model Update
B	Estimate of Hours – System Wide Protection Coordination

3. GENERAL TERMS AND CONDITIONS

Unless otherwise agreed in writing or specified elsewhere within this document, the following terms and conditions of sale shall apply to any sale of goods and services by Primary Engineering and Construction (hereinafter called "Primary").

3.1. General

Headings: The headings and section titles are inserted for convenience of reference only and shall not affect the construction or interpretation of this document.
Reference: Words which import the singular shall be deemed to include the plural and vice-versa and words importing gender include all genders.
Conflict: In the event of any conflict or inconsistency between the terms and conditions of sale herein and the terms and conditions contained in the purchaser's order or in any other form issued by the purchaser, whether or not any such form has been acknowledged or accepted by Primary the terms and conditions herein shall prevail.
Waiver: No waiver, alteration or modification of these terms and conditions shall be binding upon Primary unless made in writing and signed by a duly authorized representative of Primary.
Severability: The invalidity or unenforceability of any provision of this agreement shall not affect the validity or enforceability of any other provision hereof.
Trade Terms: Trade terms hall where appropriate, and where not inconsistent with the provisions of this agreement, be interpreted in accordance with the Incoterms 2000.
Law: The law of the Province shall govern the validity, interpretation and enforcement of these terms and conditions of sale and of any related documents of which these terms and conditions are a part.

3.2. Quotations

- Unless otherwise stated on the quotation, Primary' quotation shall be null and void unless accepted by the purchaser within thirty (30) days from the date of quotation.
- All quoted prices are based on the exchange rates, tariffs and costs of manufacture on the date of the quotation.
- Any quotation made by Primary is subject to change at any time prior to acceptance of an order by Primary.
- Quotations are subject to correction for error.

3.3. Prices

- Unless otherwise specifically provided in the quotation, all references to dollar amounts are expressed in terms of lawful money of Canada.
- Unless otherwise stated, all prices are Ex Works Primary' premises and include domestic packing.
- Prices listed on the quotations do not include Goods & Services Tax, Provincial or Municipal sales, use, value-added or any other tax or duty. Accordingly, in addition to the price specified in the quotations, the amount of any tax or duty applicable to the sale of the goods or the use of such goods by the purchaser shall be paid by the purchaser to the entire exoneration of Primary. In the event that Primary is responsible for any such payment the purchaser will reimburse Primary for such taxes upon a submission of an invoice.

3.4. Force Majeure

Primary shall not be responsible or liable for delay in or non-performance of the contract or any part thereof, resulting directly or indirectly from causes beyond the reasonable control of Primary including, but without limitation, acts of God, earthquakes, fire, flood, acts of the elements, any act of governmental authority, war, invasion, riot , delays in transportation, accidents and disruptions, breakdowns of essential machinery or equipment, power shortages, unavailability of equipment or materials, failure or delay in its source of supply, sabotage, lock-outs, strikes or labor disputes, faulty castings or forgings, or the failure of Primary' suppliers to meet their delivery promises or acts or omissions of the purchaser. Dates of delivery shall be extended for a period equal to the time lost by reason of any cause set forth above even though such cause even though such cause may occur after Primary' performance has been delayed for other causes. If any such delay lasts for more than ninety (90) days, the parties shall immediately consult with one another for the purpose of agreeing on the basis which Primary shall resume production at the end of the delay. If they do not agree upon a solution of the problems involved, including adjustment of the price, within one hundred fifty (150) days from the beginning of such delay, then either party, may, by written notice, cancel the portion of the order which is delayed and in such event the purchaser shall pay to Primary reasonable and proper cancellation charges. All the provisions of this paragraph shall apply all other provisions notwithstanding, whether the disrupting cause is total or partial in its effect upon the ability of Primary to perform.

3.5. Liability

Primary shall not be liable for and shall be held harmless by the purchaser from any damage, losses or claims of whatever kind, contractual or delictual, consequential or incidental, direct or indirect, arising out of, in connection with or resulting from the sale governed hereby or the goods, including, but without limitation, the manufacture, repair, handling, installation, possession, use, operation or dismantling of the goods and any and all claims, actions, suits, and proceedings which may be instituted in respect to the foregoing.

3.6. Terms of Payment

Unless otherwise stated, invoices on "open account" shipment are payable within thirty (30) days of invoice date. Should payment not be made to Primary when due, Primary reserves the right, until the price has been fully paid in cash, to charge the purchaser interest on such overdue payments at the rate of eighteen percent (18%) per annum. The charging of such interest shall not be construed as obligating Primary to grant any extension of time in the terms of payment.

3.7. Changes and Cancellation

Orders accepted by Primary are not subject to changes or cancellation by the purchaser, except with Primary' written consent. In such cases where Primary authorizes changes or cancellation, Primary reserves the right to charge the purchaser with reasonable costs based upon expenses already incurred and commitments made by Primary, including, without limitation, any labor completed, material purchased and also including supplier's usual overhead and reasonable profit and cancellation charges from Primary' suppliers.

PRIMARY
ENGINEERING AND CONSTRUCTION

Appendix A - Estimate of Hours

Job Name: Model Update

Date: 2015-Oct-02

Design Tasks	Specialist	Sr. Eng	Sr. Tech	Int. Eng	Jr. Eng	Sr. Draft	Jr. Draft	Proj. Sup.
Update CYME model (depends on data provided)				1	3	10		
Update Load Forecast				4	4			
Load Flow				1	8			
Confirm Exg Projects					3			
Add new Projects (depends on load flow results)					6	2		
Project Management, Communication				2	2			
Phone Meetings				2	2			
Quality Assurance Review				2				
Report, Documentation of Results				1	2			
Design TOTAL Hours	0	0	0	13	30	12	0	0
Contingency	**0%**							
Design TOTAL Hrs w/ Contingency	**0**	**0**	**0**	**13**	**30**	**12**	**0**	**0**

DESIGN TOTAL	**$5,229.98**

Design Summary *DOS 2015 Rates

Role	Rate/hr	Hours	Cost
Specialist	$ 210.81	0	$0.00
Sr. Engineer, P.L.(Eng), P.Tech	$ 183.31	0	$0.00
Senior Technologist	$ 113.88	0	$0.00
Intermediate Engineer	$ 108.68	13	$1,412.84
Junior Engineer	$ 92.23	30	$2,766.90
Senior Draftsman	$ 87.52	12	$1,050.24
Junior Draftsman	$ 77.53	0	$0.00
Project Support, FL Response	$ 63.23	0	$0.00
Design PRELIMINARY Cost			**$5,229.98**
Disbursements	0%		$0.00
# plots	0		$0.00
Design TOTAL Cost			**$5,229.98**

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Appendix B - Estimate of Hours

Job Name: System Wide Protection Coordination

Date: 2015-Oct-02

Design Tasks	Specialist	Sr. Eng	Sr. Tech	Int. Eng	Jr. Eng	Sr. Draft	Jr. Draft	Proj. Sup.
Feeder Protection Coordination Study			8	15	52.5			
Standard Fuse Chart				8	8			
Project Management, Communication				4	4			
Phone Meetings (4) / Site Visits (2)				12	6			
Travel (2 site visits)				4				
Quality Assurance Review				8				
Report, Documentation of Results				16	16			
Design TOTAL Hours	0.0	0.0	8.0	67.0	86.5	0.0	0.0	0.0
Contingency	**0%**							
Design TOTAL Hrs w/ Contingency	**0.0**	**0.0**	**8.0**	**67.0**	**87.0**	**0.0**	**0.0**	**0.0**

DESIGN TOTAL	$16,540.94

Design Summary *DOS 2015 Rates

Role	Rate/hr	Hours	Cost
Specialist	$ 210.81	0	$0.00
Sr. Engineer, P.L.(Eng), P.Tech	$ 183.31	0	$0.00
Senior Technologist	$ 113.88	8	$911.04
Intermediate Engineer	$ 108.68	67	$7,281.56
Junior Engineer	$ 92.23	87	$8,024.01
Senior Draftsman	$ 87.52	0	$0.00
Junior Draftsman	$ 77.53	0	$0.00
Project Support, FL Response	$ 63.23	0	$0.00
Design PRELIMINARY Cost			**$16,216.61**
Disbursements	2%		$324.33
# plots	0	$ 15.00	$0.00
Design TOTAL Cost			**$16,540.94**

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DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Electrical**
ITEM OR PROJECT NAME:	**Brushing**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**		**NO**	✓	

DESCRIPTION:

Trees and brush have always been an issue when interfering with the high voltage electrical lines. Staff have a small capital budget to have a few problem trees removed every year and a small operational budget to remove some themselves. Unfortunately staff cannot keep up to the problem trees in town and they in turn do cause outages and damage to the system.

This request is to have an electrical arborist company come through town and remove most of the main issues and trim back brush throughout town. This may have to be done about every 5 years.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	100,000.00
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**100,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**100,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

DISTRICT OF SUMMERLAND
2016 - 2020 CAPITAL PLAN

	2016	2017	2018	2019	2020
ELECTRIC					
PROJECTS	678,028	427,000	387,000	874,000	387,000
FUNDING					
Legislative Reserves					
Bylaw Reserves	262,955			380,000	
Community Contributions	300,000	300,000	300,000	300,000	300,000
Transfer from Operating	115,073	127,000	87,000	194,000	87,000
	678,028	427,000	387,000	874,000	387,000
RESERVES AND SURPLUS BALANCES (end of year)					
Bylaw Reserves	885,728	885,728	885,728	505,728	505,728
Surplus	633,137	1,020,737	1,674,889	2,433,544	3,479,652

Electric	2015 budget	2015 actual	2016	2017	2018	2019	2020
CAPITAL PROJECTS							
2015 projects completed - property owner paid works $296,149	70,353	358,482					
PCB Transformer Removal and Replacement	97,000	79,062	104,938	87,000	87,000	87,000	87,000
Bentley Road Conductor Upgrade	100,000	26,910	273,090	-	-	-	-
System expansions (property owner paid)			300,000	300,000	300,000	300,000	300,000
Main Street Lane Upgrade			-	40,000	-	-	-
Armstrong Upgrade - Sub-station to Wharton St. - construction			-	-	-	487,000	-
	267,353	464,454	678,028	427,000	387,000	874,000	387,000
FUNDING SOURCES							
Transfer from operating			115,073	127,000	87,000	194,000	87,000
Community contributions			300,000	300,000	300,000	300,000	300,000
Bylaw Reserves			262,955	-	-	380,000	-
Total			678,028	427,000	387,000	874,000	387,000

ELECTRIC					
Bylaw Reserves					
Projected opening balance	1,148,683	885,728	885,728	885,728	505,728
contributions					
interest earned					
allocations	(262,955)			(380,000)	
projected balance end of year	885,728	885,728	885,728	505,728	505,728

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Electrical**
ITEM OR PROJECT NAME:	**PCB Transformer Removal and Replacement**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

In order to comply with the Provincial Hazardous Materials Regulations all transformers that tested positive for PBC documented in the 2015 JACO Oil Sample project must be replaced by 2025. Included is the disposal of all PCB transformer cores and oil. As a first step, in 2014 transformers in the sensative areas were sampled and tested followed by their removal and replacement in 2015.
Approximately $610,000 worth of transformers must be removed from the system over the course of the next 9 years (~$67,000 per year). The District budgeted $97,000 in 2015 and $87,000 annually is being requested for the years 2016 through 2022. With this amount approved annually going forward, removal of these transformers will be completed and compliance will be achieved in 7 years.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	610,000.00
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**610,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**610,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	87,000.00
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**87,000.00**

REQUESTED BY:	Devon van der Meulen	
	(Print Name)	(Signature)
DIRECTOR'S APPROVAL:		
	(Signature)	

PCB Disposal Estimate 2016-2025

Total Transformers	Description	Unit	Total Liters	Total Gallon	Oil lbs.	Oil kg	Estimated Full Wieght (lbs)	Estimated Core Wieght (lbs)	Estimated Core Wieght (kg)	Per Unit (Costs based off 2015 Invoicing)	Estimated Core Disposal Cost	Estimated Oil Disposal Cost	Estimated Totals	Estimated Total Disposal Cost	Estimated Total Project Cost
87	Dispose contaminated transformers (>50 ppm)	kilograms					35,755.0	27,672	12,552	$0.65	$8,158.79		16,248.99		
	Dispose contaminated mineral oil (>50 ppm)	litres	4258	934.4	8,082.6	3,665.6				$1.90		$8,090.20			
225	Dispose contaminated transformers (2.0-49.9 ppm)	kilograms					93,506	73,482	33,331	$0.30	$9,999.22		14,218.82	$55,037.81	
	Dispose contaminated mineral oil (2.0-49.9 ppm)	litres	10549	2,315.0	20,024.3	9,081.3				$0.40		$4,219.60			
	On site Contactor Labour	52 hours								$60.00			3,120.00		
	Freight	13 trips								$1,500.00			19,500.00		
	Supply of drum for packaging	26 units								$75.00			1,950.00		
312															

Transformer Replacement Estimate 2016-2025

Total Transformers	Description	Per Unit (Costs based off 2015 Invoicing)	Estimated Landed Cost	15% Contingency	Estimated Totals	Estimated Total Replacement Cost	$609,642.69
91	TRNSFRM, N 10 KVA PLMNT 120/240	$641.78	$58,401.98	$8,760.30	$67,162.28		
76	TRNSFRM, N 15 KVA PLMNT 120/240	$712.32	$54,136.32	$8,120.45	$62,256.77		
84	TRNSFRM, N 25 KVA PLMNT 120/240	$844.80	$70,963.20	$10,644.48	$81,607.68		
38	TRNSFRM, N 37 KVA PLMNT 120/240	$1,704.17	$64,758.46	$9,713.77	$74,472.23		
14	TRNSFRM, N 50 KVA PLMNT 120/240	$1,200.95	$16,813.30	$2,522.00	$19,335.30	$331,524.89	
3	TRNSFRM, N 75 KVA PLMNT 120/240	$2,495.67	$7,487.01	$1,123.05	$8,610.06		
3	TRNSFRM, N 37 KVA PADMNT 120/240	$2,312.08	$6,936.24	$1,040.44	$7,976.68		
2	TRNSFRM, N 50 KVA PADMNT 120/240	$2,766.58	$5,533.16	$829.97	$6,363.13		
1	TRNSFRM, N 75 KVA PADMNT 120/240	$3,252.84	$3,252.84	$487.93	$3,740.77		
312							

Est. Labour 2016-2025	$166,920.00
Est. Equipment/Contractor 2016-2025	$56,160.00

DISTRICT OF SUMMERLAND

2016-2020 CAPITAL and OPERATING PROJECTS BUDGET SUPPORTING DOCUMENTATION

DIVISION(s):	**Electrical**
ITEM OR PROJECT NAME:	**Bentley Road Conductor Upgrade**
YEAR OF FIVE YEAR CAPITAL PLAN:	**2016**

SUPPORTING DOCUMENTS ATTACHED:	**YES**	✓	**NO**		

DESCRIPTION:

This project was identified out of working with potential and existing businesses in the Bentley Road Industrial area which suggested poor voltage in the area. Also of concern is the potential development of the Hunters Hill development fed from Bentley Road. The conductor on Bentey Road is undersized and is in poor condition. Upgrading the conductor, power poles, and other equipment is required in order for the District to provide balanced voltage to both of these areas. Engineer estimated approximately 300k.The District set aside 100k in 2015 to complete some of the work but Staff was not able to shcedule this work. Staff recommend adding an additional 200k in 2016 to hire a contractor and complete the project.

BREAKDOWN OF PROPOSED BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	
WAGES - OVERTIME	
CONTRACTED SERVICES	200,000.00
EQUIPMENT RENTAL - INTERNAL	
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	**200,000.00**
OTHER FUNDING AMOUNT (if applicable)	-
Give the details of other funding including reserves	
TOTAL DoS FUNDING:	**200,000.00**

Annual Operating costs - INCLUDE BUDGET FOR A FULL YEAR - INDICATE PRORATION FOR FIRST YEAR

BREAKDOWN OF PROPOSED ANNUAL OPERATING COSTS BUDGET:	**ESTIMATED COSTS**
WAGES - REGULAR	-
WAGES - OVERTIME	-
CONTRACTED SERVICES	-
EQUIPMENT RENTAL - INTERNAL	-
MATERIALS & SUPPLIES	-
OTHER (Specify):	
	-
	-
	-
TOTAL BUDGET:	-

REQUESTED BY: Devon van der Meulen (Print Name) _____ (Signature)

DIRECTOR'S APPROVAL: _____ (Signature)

Module 1 - Reconductor Overhead #2 ACSR to 266.8 ACSR (Jones Flat Rd to Sawyer Rd)

Description	Construction Estimate
1. Reconductor #2 to 266.8 ACSR (190m) on existing poles.	$26,000
8-22: Reframe for 266.8 ACSR tap	**Engineering & PM Estimate**
8-23: Reframe to 266.8 ACSR DDE (new crossarms) with switch	$3,200
8-29: Replace with 45/2 pole, 266.8 ACSR DE with dip and new guy/anchor	
Salvage 3 x #2 ACSR primary and #2 ACSR neutral	
Install 3x266.8 ACSR primary and 2/0 ACSR neutral	

Module 2 - Reconductor Underground #2Cu to 350MCM (Sawyer Rd to Sanborn St)

Description	Construction Estimate
1. Replace #2Cu cable with 350MCM (200m) in existing duct.	$82,300
Civil: Extend duct 7m on both sides of underground section. Install 4-3" in new trench.	**Engineering & PM Estimate**
Electrical: Salvage 3 x #2Cu UG Cable	$6,000
Install 3 x 350MCM Al UG Cable in existing duct	
Terminate 3 x 350MCM Al UG Cable in two Junction boxes and two riser Poles	
2. Provision for future development through Sanborn St	
Civil: Break into JB (south of Sanbourn St) and install 4x3" to intersection	

Module 3 - Reconductor Overhead #2 to 266.8 (Sanborn St to Bentley Place)

Description	Construction Estimate
1. Reconductor #2 to 266.8 ACSR (195m) on replaced poles. Replace two 3 phase overhead banks with one 3 phase overhead bank	$135,000
8-31: Replace with 45/2 pole, 266.8 ACSR DE with dip and new guy/anchor	**Engineering & PM Estimate**
8-32: Replace with 45/2 pole, 266.8 ACSR Tan, 1ph tap, pushbrace	$13,500
8-39: Replace with 45/2 pole, 266.8 ACSR Tan	
8-40: Replace with 45/2 pole, 266.8 ACSR Tan, 3ph TF bank	
5-35: Replace with 45/2 pole, 266.8 ACSR Tan	
5-34: Replace with 45/2 pole, 266.8 ACSR Tan	
5-33: Replace with 45/2 pole, 266.8 ACSR Tan, Delta TF bank	
5-32: Replace with 45/2 pole, 266.8 ACSR Tan, 1ph Tap	
5-26: Replace with 45/2 pole, 266.8 ACSR Tan, 266.8 ACSR DE	
5-23: Reframe to 266.8 ACSR DDE and new guy/anchor	
5-54: Reframe to 266.8 ACSR DDE and new guy/anchor	
5-52: Reframe to 266.8 ACSR DE and new guy/anchor	
Salvage 3 x #2 ACSR primary and #2 ACSR neutral	
Install 3x266.8 ACSR primary and 2/0 ACSR neutral	

Module 4 - Realign Overhead #2 (Bentley Place to End of 3 Phase)

Description	Construction Estimate
1. Realign from 5-23 to 5-16	$43,000
5-21: Replace with 45/2 pole, #2 ACSR DDE, 1ph TF, pushbrace	**Engineering & PM Estimate**
5-20: Replace with 45/2 pole, #2 ACSR Angle, 3ph Tap, pushbrace	$4,300
5-17: Replace with 45/2 pole, #2 ACSR Angle, 3ph Tap, pushbrace	
5-16: Reframe to 266.8 ACSR DDE and new guy/anchor	

DISTRICT OF SUMMERLAND

2021-2025 Forecasted Operating Projects and Capital

Electric		Total	DESIRED YEAR	NOTES
Dist	PCB Transformer Removal and Replacement	87,000	2021	9 year project
Dist	Sub-Station Consultation, Design, and Construction	10,000,000	2021	
Dist	Prairie Valley Substn. - New substation disconnects/steel	100,000	2021	
Dist	Trout Creek Substation - Substation rearrangements	100,000	2021	
Dist	PCB Transformer Removal and Replacement	87,000	2022	9 year project
Dist	Brushing trees from power lines (every 5 years)	100,000	2022	
Dist	Prairie Valley Substn. - 3 Phase Victoria, Jubilee Ave. to Turner St.	50,000	2022	
Dist	Prairie Valley Stage 3 - Saunders Cres to Cartwright Ave	1,140,000	2022	
Dist	Cct #479 - Double circuiting to Gartrell Rd.	150,000	2023	
Dist	Prairie Valley Substn. - Overhead cables and switches	100,000	2024	
	TOTAL ELECTRIC	11,914,000		