



**PEACE RIVER REGIONAL DISTRICT
Solid Waste Committee**

for the meeting to be held on **Tuesday, February 7, 2017**
at the Regional District offices, 1981 Alaska Avenue, Dawson Creek, BC
commencing at 10:00 am

1. **Call to Order:** **Chair – Director Dan Rose**
 2. **Notice of New Business:**
 3. **Adoption of the Agenda:**
 4. **Adoption of the Minutes:**
 - M-1 Solid Waste Committee Meeting Minutes of January 7, 2017
 5. **Business Arising from the Minutes:**
 6. **New Business:**
 - Review of 2017 solid waste budget
 - Review of Sections 3, 4, and 5 of Solid Waste Management Plan
 - Discuss transition from Eco-Depot to RecycleIt next month as recycling contractor for the Regional District
 7. **Items for Information:**
 - I-1 2017 Solid Waste Budget
 - I-2 Sections 3, 4, and 5 of Solid Waste Management Plan
 9. **Adjournment:**
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PEACE RIVER REGIONAL DISTRICT Solid Waste Committee Meeting Minutes

DATE: Thursday, January 5, 2017

PLACE: Calvin Kruk Centre for the Arts, 10401 – 10th Street, Dawson Creek, BC

PRESENT: Director Karen Goodings, Electoral Area 'B'
Director Dan Rose, Electoral Area 'E'
Alternate Director Mel Deck, District of Chetwynd
Director Dale Bumstead, City of Dawson Creek
Director Lori Ackerman, City of Fort St. John
PRRD Chair Brad Sperling, ex officio

Staff

Paulo Eichelberger, General Manager of Environmental Services
Fran Haughian, Communications Manager/Commission Liaison
Phil Kovacs, Manager of Solid Waste
Loryn Day, Solid Waste Coordinator
Suzanne Garrett, Corporate Services Coordinator

- 1) Call to Order The meeting was called to order at 1:20 pm

- 2) Election of
Committee Chair The General Manager of Environmental Services called for nominations for the office of Committee Chair for 2017.

Director Goodings nominated Director Rose for the office of Committee Chair for 2017. Director Ackerman seconded the nomination.

Director Rose accepted the nomination.

The General Manager of Environmental Services called a second time for nominations for the office of Committee Chair for 2017.

Hearing none, the General Manager of Environmental Services declared Director Rose Chair of the Solid Waste Committee for 2017.

- 3) Election of
Vice-Chair The General Manager of Environmental Services called for nominations for the office of Committee Vice-Chair for 2017.

Director Rose nominated Director Ackerman for the office of Committee Vice-Chair for 2017. Director Goodings seconded the nomination.

Director Ackerman accepted the nomination.

The General Manager of Environmental Services called a second time for nominations for the office of Committee Vice-Chair for 2017.

Hearing none, the General Manager of Environmental Services declared Director Ackerman Vice-Chair of the Solid Waste Committee for 2017.

ADOPTION OF THE AGENDA:

- 4) Adoption of the Agenda MOVED by Director Bumstead, SECONDED by Alternate Director Deck, that the Solid Waste Committee agenda for the January 5, 2017 meeting including Director's new business and additional items for the agenda, be adopted as amended:
- Call to Order**
 - Election of Chair and Vice-Chair**
 - Notice of New Business**
 - Adoption of the Agenda**
 - Minutes**
 - M-1 Solid Waste Committee Meeting Minutes of November 3, 2016
 - M-2 Solid Waste Committee Special Meeting Minutes of November 24, 2016
 - Business Arising from the Minutes**
 - Correspondence**
 - C-1 December 16, 2016 letter from Tervita requesting an extension to Waste Transfer Station Operation and Haulage Contract Agreement No. 02-2012.
 - Reports**
 - R-1 December 8, 2016 report regarding extending solid waste facility hours of operation.
 - R-2 December 14, 2016 report regarding Waste Composition Study contract award.
 - New Business**
 - NB-1 Meeting schedule for 2017
 - Items for Information**
 - I-1 Solid Waste Summary Report for period ending December 31, 2016
 - Adjournment**
- CARRIED.

MINUTES:

- 3) M-1 Oct 6 SWC Mtg Min. MOVED by Director Bumstead, SECONDED by Alternate Director Deck, That the Solid Waste Committee meeting minutes of October 6, 2016 be adopted.
- CARRIED
- 4) M-2 Nov 24 SWC Mtg. Min MOVED by Alternate Director Mel Deck, SECONDED by Director Bumstead, That the Solid Waste Committee Special meeting minutes of November 24, 2016 be adopted.
- CARRIED.

CORRESPONDENCE:

- 5) C-1 Tervita It was noted that the expiry dates for the Waste Transfer Station Operation and Haulage Contracts are different, due to transfer station construction. Contract No, 02-2012 operation of transfer stations located at Kelly Lake, Pink Mountain, Prespatou, Rose Prarie, Tomslake, Wonowon and Dawson Creek. Contract No. 03-2013 operation of transfer stations located at Buick Creek, Cecil Lake, Goodlow, Upper Halfway, Moberly and Rolla. The Contractor, Tervita, is requesting that both contracts expire on the same date. Staff will be preparing new tenders for the operation/haulage contracts in the near future, with the idea of splitting the transfer stations into zones, i.e. West, North and South Peace.

Correspondence: (continued)

5) C-1

- MOVED by Director Bumstead, SECONDED by Director Goodings,
- a) That the Solid Waste Committee recommends to the Regional Board that for consistency and retendering purposes Waste Transfer Station Operation and Haulage Contract No. 02-2012 expiration date be changed to November 19, 2017 to coincide with the expiration date of Waste Transfer Station Operation and Haulage contract No. 09-2013; and
 - b) That the Solid Waste Committee be authorized to review the Waste Transfer Station Operation and Haulage tender documents prior to the tender being issued.

CARRIED.

REPORTS:

6) R-1

extended hours
of operation

As a result of the 2016 Solid Waste Customer Satisfaction Survey, the Regional Board, at its September 22, 2016 meeting, approved the preparation of a report outlining options with respect to implementing "seasonal" hours of operation at the Bessborough, Chetwynd, North Peace Regional landfills and the Dawson Creek Transfer Station.

- MOVED by Director Bumstead, SECONDED by Director Ackerman,
That the Solid Waste Committee recommends to the Regional Board that:
- a) The Dawson Creek Transfer Station days of operation be increased to 7 days per week, 8:00 am to 6:00 pm, for a six month period (May to October), and return to regular days/hours of operation at 5 days per week, 9:00 am to 6:00 pm, from November to April; and
 - b) That the Chief Financial Officer be directed to include the increase operational contract costs under the appropriate line item in the 2017 Annual Financial Plan.

CARRIED.

MOVED by Director Bumstead, SECONDED by Director Ackerman,
That the Solid Waste Committee recommends to the Regional Board that the hours of operation for the North Peace Regional landfill remain as is until 2018, after construction is complete to enable staff time to collect data and identify any trends that may have taken place.

CARRIED.

It was noted that the communication plan for the change of hours at the Dawson Creek Transfer Station will include local media, signage at the site, and the Regional District website.

7) R-2

Waste Composition
Study

- MOVED by Director Bumstead, SECONDED by Alternate Director Deck,
- a) that the Solid Waste Committee recommends to the Regional Board that the Waste Composition Study contract be awarded to Tetra Tech EBA Inc., in the amount of \$121,712.32, excluding taxes; and
 - b) that the Chair and Chief Administrative Officer be authorized to sign the contract on behalf of the Regional District.

CARRIED.

The Committee stressed the importance of focusing on the ICI (Industrial/Commercial/Institutional) waste stream.

The Committee further requested that particular attention be made toward waste materials generated by work camps in the region.

NEW BUSINESS:

8) 2017 Meeting Schedule First Thursday of every month, with the exception of February. The Committee will meet on February 7th (due to NCLGA and the Resource forum).

9) Joint Meeting PMAC Members were asked for feedback on the morning session with the Plan Monitoring Advisory Committee (PMAC) and review of the Solid Waste Management Plan. Comments included:

- good discussion
- valuable input from the contractors
- beneficial, PMAC should meet regularly
- still feel the need to go through the Plan section by section, regulatory changes – what are the impacts, policy review for changes, etc.
- use survey, high profile feedback that identifies issues

Action Item: Chair Rose suggested that members read the following Sections:
Section 3 – Establishing the Vision
Section 4 – The Planning Framework
Section 5 – Phase 1 – Building a Foundation
And highlight any issues for discussion.

Action Item: Parking lot issues identified during morning session, to be forwarded to PMAC for discussion.

10) I-1 SW Summary Report for period ending Dec 31, 2016 The Committee inquired if, for easier reference, information for each solid waste site/facility could be grouped together on the financial report?
Discussion ensued with respect to the need to clarify “surplus” amounts in the solid waste budget.
MOVED by Director Sperling, SECONDED by Alternate Director Deck, That the Solid Waste Committee recommends to the Regional Board that staff be directed to bring in a reduced solid waste budget, by 10%, less than the 2016 solid waste budget.
CARRIED.
(NAYS – Director Goodings)

11) Committee Report MOVED by Director Goodings, SECONDED by Alternate Director Deck, That the recommendations from the Solid Waste Committee meeting of January 5, 2017 be recommended to the Regional Board for approval.
CARRIED.

12) Adjournment The meeting adjourned at 2:45 pm

Director Dan Rose,
Chair – Solid Waste Committee

S. Garrett,
Corporate Services Coordinator

Service Other Portfolio Solid Waste Committee
 Fund General Operating - 01 Staff GM of Environmental Services
 Category 4300 Regional Solid Waste Management Requisition Exhibit 7

DRAFT

(Used same, 2% inflation, or actual)

2017	Acct	See	2016	2016	2016	2017	2018	2019	2020	2021
Category	#	Note	Budget	Actual	Variance	Budget	Budget	Budget	Budget	Budget
REVENUE										
4300 Regional Solid Waste Management										
01-1-4300-	110		4,773,234	4,773,234		4,906,882	6,608,896	6,600,162	5,897,386	6,021,836
01-1-4300-	111		2,270,172	2,270,172	0	2,212,980	2,980,580	2,976,641	2,659,692	2,715,819
01-1-4300-	116			8,153	8,153		-	-	-	-
01-1-4300-	120		480,000	726,734	246,734	480,000	480,000	480,000	480,000	480,000
01-1-4300-	122		100	2,380	2,280	100	100	100	100	100
01-1-4300-	123		100	60	-40	100				
01-1-4300-	124		1,500	2,314	814	1,500				
01-1-4300-	125		10	50		10				
01-1-4300-	126		10	0	-10	10	10	10	10	10
01-1-4300-	127		10	6	-4	10	10	10	10	10
01-1-4300-	128		10	1	-10	10	10	10	10	10
01-1-4300-	129		10		-10	10	10	10	10	10
01-1-4300-	130		10	85	75	10	10	10	10	10
01-1-4300-	131		10	-401	-411	10	10	10	10	10
01-1-4300-	132		10	-218	-228	10	10	10	10	10
01-1-4300-	133		10	277	267	10	10	10	10	10
01-1-4300-	134		10	-299	-309	10	10	10	10	10
01-1-4300-	135		10		-10	10	10	10	10	10
01-1-4300-	136		10	10	-0	10	10	10	10	10
01-1-4300-	137		10		-10	10	10	10	10	10
01-1-4300-	138		10	-55	-65	10	10	10	10	10
01-1-4300-	139		10	-6	-16	10	10	10	10	10
01-1-4300-	140			1,060	1,060	-	-	-	-	-
01-1-4300-	141	21	1,200,000	1,171,293	-28,707	1,100,000	1,122,000	1,144,440	1,167,329	1,190,675
01-1-4300-	142	21	400,000	454,038	54,038	400,000	408,000	416,160	424,483	432,973
01-1-4300-	143	21	60,000	64,198	4,198	60,000	61,200	62,424	63,672	64,946
01-1-4300-	144	21	2,600,000	1,997,377	-602,623	2,300,000	2,346,000	2,392,920	2,440,778	2,489,594
01-1-4300-	145	21	3,000	3,101	101	3,000	3,060	3,121	3,184	3,247
01-1-4300-	146	21	4,000	3,058	-943	3,000	3,060	3,121	3,184	3,247
01-1-4300-	147	21	1,500	1,354	-146	1,300	1,326	1,353	1,380	1,407
01-1-4300-	148	21	2,200	2,740	540	2,500	2,550	2,601	2,653	2,706
01-1-4300-	149	21	1,000	294	-706	500	510	520	531	541
01-1-4300-	150	21	1,000	5,864	4,864	5,000	5,100	5,202	5,306	5,412
01-1-4300-	151	21	1,000	3,316	2,316	3,000	3,060	3,121	3,184	3,247
01-1-4300-	152	21	1,000	1,431	431	1,000	1,020	1,040	1,061	1,082
01-1-4300-	153					-	-	-	-	-
01-1-4300-	155		19,500	12,500	-7,000	19,500	19,500	19,500	19,500	19,500
01-1-4300-	157	16	20,000	32,090	12,090	20,000	20,400	20,808	21,224	21,649
01-1-4300-	158		1,500	17,324	15,824	10,000	10,200	10,404	10,612	10,824
01-1-4300-	159		1,500		-1,500	100	102	104	106	108
01-1-4300-	160		1,500		-1,500	-	-	-	-	-
01-1-4300-	161					11,700				
01-1-4300-	162									
01-1-4300-	165	33	1,000	2,060	1,060	2,000	2,040	2,081	2,122	2,165
01-1-4300-	166	33	29,000	70,562	41,562	60,000	61,200	62,424	63,672	64,946
01-1-4300-	167			10,573	10,573	7,000	7,000	7,000	7,000	7,000
01-1-4300-	168	33	1,000	3,921	2,921	2,000	2,040	2,081	2,122	2,165
01-1-4300-	169		10	12		10	10	10	10	10
01-1-4300-	170		10	13		10	10	10	10	10
01-1-4300-	171	21	1,000	1,253	253	1,000	1,020	1,040	1,061	1,082
01-1-4300-	172	21	5,500	5,578	78	5,500	5,610	5,722	5,837	5,953
01-1-4300-	173	21	500	365	-135	500	510	520	531	541
01-1-4300-	174	21	1,000	1,152	152	1,000	1,020	1,040	1,061	1,082
01-1-4300-	175	21	3,500	4,207	707	3,500	3,570	3,641	3,714	3,789
01-1-4300-	178		40,028	58,711	18,683	40,028	58,711	78,167	98,428	119,528
01-1-4300-	189	30	5,000,000		-5,000,000	5,000,000	-	4,000,000		
01-1-4300-	190		2,012,651	2,012,651	-0	1,522,246				
01-1-4300-	191		35,000		-35,000	-				
01-1-4300-	195	15		2,535,000	2,535,000		5,000,000			

Total Category Revenue	18,974,155	16,259,591	-2,714,609	18,187,106	19,219,545	18,307,619	13,391,074	13,677,327
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Rev	Tax Rates (based on current year assessments)>>	0.309	change from LY	0.003	0.312	0.420	0.419	0.375	0.383
39%	Total Amount to Requisition:	7,043,406	Requisition/Parcel Tax	7,119,862	9,589,476	9,576,802	8,557,079	8,737,655	
3%		480,000	Grants	480,000	480,000	480,000	480,000	480,000	
27%	Prior Year Requisition:	5,000,000	Borrowing Proceeds	5,000,000	-	4,000,000	-	-	
		7,043,406	Trsf. From Reserves	-	5,000,000	-	-	-	
8%	Change from Prior Year	2,012,651	Prior Year Surplus	1,522,246	-	-	-	-	
22%		4,403,098	Other	4,064,998	4,150,069	4,250,817	4,353,996	4,459,672	

Service Other Portfolio Solid Waste Committee
 Fund General Operating - 01 Staff GM of Environmental Services
 Category **4300 Regional Solid Waste Management** Requisition Exhibit 7
DRAFT (Used same, 2% inflation, or actual)

2017	Acct	See	2016	2016	2016	2017	2018	2019	2020	2021
Category	#	Note	Budget	Actual	Variance	Budget	Budget	Budget	Budget	Budget

EXPENDITURES

4300 Regional Solid Waste Management

01-2-4300-200	22	Wages - full time	670,466	599,826	-70,640	670,466	703,989	739,189	776,148	814,956
01-2-4300-205	22	Benefits	189,718	143,854	-45,864	189,718	199,204	209,164	219,622	230,603
01-2-4300-206	22	WCB	7,408	7,003	-405	7,127	7,483	7,858	8,250	8,663
01-2-4300-210	2	Travel / Training / Conferences / Workshops	20,000	12,559	-7,441	20,000	20,400	20,808	21,224	21,649
01-2-4300-211		Travel, Use of RD Vehicle	39,400	39,400		39,400	40,188	40,992	41,812	42,648
01-2-4300-212		Mileage In-Region	500	21	-479	500	500	500	500	500
01-2-4300-215		Meals In-Region	4,000	3,127	-873	4,000	4,080	4,162	4,245	4,330
01-2-4300-216		Meetings	2,000	1,800	-200	3,000	5,000	5,000	5,000	5,000
01-2-4300-218	1	Memberships	5,000	6,185	1,185	7,000	7,140	7,283	7,428	7,577
01-2-4300-230		Phone, internet & alarms	6,000	4,761	-1,239	5,000	5,100	5,202	5,306	5,412
01-2-4300-240		Advertising	35,000	14,803	-20,197	15,000	15,300	15,606	15,918	16,236
01-2-4300-242	43	Videos	25,000	11,021	-13,979	13,979	24,000	5,000	5,000	5,000
01-2-4300-250	28	Legal Services	20,000	2,148	-17,852	20,000	25,000	25,000	25,000	25,000
01-2-4300-252	7	Consulting Services	40,000	17,331	-22,669	160,000	50,000	50,000	50,000	50,000
01-2-4300-260		Insurance	11,300	11,581	281	11,900	12,138	12,381	12,628	12,881
01-2-4300-261		Administration fees	198,000	198,000		198,000	198,000	198,000	198,000	198,000
01-2-4300-262	11	Interest - debenture	240,174	165,174	-75,000	315,174	315,174	315,174	315,174	315,174
01-2-4300-263	11	Principal - debenture	414,109	414,109		850,262	850,262	850,262	850,262	850,262
01-2-4300-289		Actuarial Recognized	58,711	58,711		58,711	78,167	115,378	154,106	204,582
01-2-4300-298		Bad Debts	1,000		-1,000	1,000	1,000	1,000	1,000	
01-2-4300-299		Miscellaneous	2,000		-2,000	2,000	5,000	5,000	5,000	5,000
01-2-4300-309		Unit #9 - Trailtech Flatdeck Trailer	2,000	600	-1,400	2,000	2,040	2,081	2,122	2,165
01-2-4300-311		Unit #11 - Bobcat	7,000	2,938	-4,062	7,000	7,140	7,283	7,428	7,577
01-2-4300-314		Unit #14 - Flat Deck Hauler	2,000	236	-1,764	2,000	2,040	2,081	2,122	2,165
01-2-4300-315	5	Unit #15 - 2005 GMC 3/4 T	5,000	8,604	3,604	5,000	5,100	5,202	5,306	5,412
01-2-4300-316		Unit #16 - Load Trail Black Dump Trl	4,000	851	-3,149	4,000	4,080	4,162	4,245	4,330
01-2-4300-317		Unit #17 - Sterling Picker Truck	20,000	11,227	-8,773	15,000	15,300	15,606	15,918	16,236
01-2-4300-321	34	Unit #21 - 1 Ton Chev (White)	21,000	17,638	-3,362	21,000	21,420	21,848	22,285	22,731
01-2-4300-324		Unit #24 - Replacement for Unit #15	10,000	4,666	-5,334	10,000	10,200	10,404	10,612	10,824
01-2-4300-361		Supplies - shop/warehouse	10,000	8,925	-1,075	8,000	8,160	8,323	8,490	8,659
01-2-4300-362		Supplies - office & computer (RD)	42,000	46,335	4,335	47,000	47,940	48,899	49,877	50,874
01-2-4300-600	39	Transfer to Op Reserves				-	100,000	100,000	100,000	100,000
01-2-4300-603		Transfer to Capital Resv-Vehicle/Equipment				50,000	50,000	50,000	50,000	50,000
01-2-4300-605		Trsf to "Green" Carbon Reserve	1,770	1,770		1,770	1,770	1,770	1,770	1,770
01-2-4300-607	30	Transfer to Capital Reserve	500,000	500,000		3,500,000	-	1,000,000	1,000,000	1,000,000
01-2-4300-608		Transfer to Landfill Closure Liability Reserve	100,000	100,000		100,000	100,000	100,000	100,000	100,000
01-2-4300-610		Transfer Interest on Reserve		8,153	8,153		-	-	-	-
01-2-4300-702	17	Operations - Bessborough LF	41,000	33,893	-7,107	63,000	64,260	65,545	66,856	68,193
01-2-4300-703	6	Operations - Buick Crk TS	7,500	6,509	-991	7,500	7,500	7,500	7,500	7,500
01-2-4300-705	10	Operations - Chetwynd LF	30,000	24,201	-5,799	52,000	53,040	54,101	55,183	56,286
01-2-4300-706	29	Operations - Dawson Creek	20,000	23,001	3,001	49,000	25,500	26,010	26,530	27,061
01-2-4300-708	18	Operations - North Peace LF	51,000	60,101	9,101	76,000	77,520	79,070	80,652	82,265
01-2-4300-709	40	Operations - Landfill Gas System	10,000	28,815	18,815	128,000	51,128	52,151	53,194	54,257
01-2-4300-711	21	Operations - Hudson's Hope	6,000	5,538	-462	6,000	6,120	6,242	6,367	6,495
01-2-4300-712	21	Operations - Kelly Lake	7,500	3,652	-3,848	7,500	7,650	7,803	7,959	8,118
01-2-4300-713	21	Operations - Upper Halfway	7,500	4,363	-3,137	7,500	7,650	7,803	7,959	8,118
01-2-4300-714	21	Operations - Mile 62.5	7,500	4,677	-2,823	7,500	7,650	7,803	7,959	8,118
01-2-4300-715		Operations - Rolla	7,500	7,898	398	8,500	8,670	8,843	9,020	9,201
01-2-4300-716		Operations - Moberly Lake	7,500	8,428	928	9,000	9,180	9,364	9,551	9,742
01-2-4300-719		Operations - Pink Mountain	7,500	6,958	-542	8,000	8,160	8,323	8,490	8,659
01-2-4300-721	21	Operations - Cecil Lake	7,500	3,178	-4,322	7,500	7,500	7,500	7,500	7,500
01-2-4300-722	21	Operations - Rose Prairie	7,500	3,732	-3,768	7,500	7,650	7,803	7,959	8,118
01-2-4300-723	21	Operations - Goodlow	7,500	3,117	-4,383	7,500	7,500	7,500	7,500	7,500
01-2-4300-724	21	Operations - Taylor	1,000	57	-943	1,000	1,020	1,040	1,061	1,082
01-2-4300-725		Operations - Tomslake	7,500	3,395	-4,105	7,500	7,650	7,803	7,959	8,118
01-2-4300-726	35	Operations - Tumbler Ridge	7,500	233	-7,267	7,500	7,650	7,803	7,959	8,118
01-2-4300-727	21	Operations - Woponow	7,500	5,622	-1,878	7,500	7,650	7,803	7,959	8,118
01-2-4300-728	21	Operations - Prespatou	7,500	7,837	337	9,000	9,180	9,364	9,551	9,742

Service	Other	Portfolio	Solid Waste Committee							
Fund	General Operating - 01	Staff	GM of Environmental Services							
Category	4300 Regional Solid Waste Management	Requisition Exhibit	7							
			DRAFT				<i>(Used same, 2% inflation, or actual)</i>			
2017	Acct See	2016	2016	2016	2017	2018	2019	2020	2021	
Category	# Note	Budget	Actual	Variance	Budget	Budget	Budget	Budget	Budget	

Budget Notes:

- 1 Includes: SWANA; RCBC; an BCPSC
- 2 Combined together Travel, Training, Conferences & Workshops (includes all meals while away). Continuing education for existing/new staff includes: MOLO, RCA, RCBC and additional SWANA courses.
- 3 Hudson's Hope Transfer Station: supply, delivery and infrastructure necessary to replace the attendant building with a container office module.
- 4 Budget for the computer programming changes for the Semi-paperless clean up program. The change to the coupon program is that only those that used a coupon last year will automatically be mailed their new coupons. If they did not use them, but qualify they can call and they will be sent the coupon. Still doing spring & fall bins and bins located inside Tier 2 sites gates, and available 24/7 at "strategic" unmanned sites
- 5 Selling later in year (use for seasonal staff so long as cost effective).
- 6 Upgrade yard lights to LED.
- 7 Consultant costs include: 1. Waste Composition Study (per Board 27 Oct/16); 2. Finalization of composting facility plan for the NPRL composting pad compliant with Organic Matter Recycling Regulation (OMRR); 3. Finalization of guidance document for SSG (landfill contractors) to operate the Composting Facility; 4. other studies or professional assistance that may arise during the year.
- 8 Costs are based on construction of similar transfer stations in 2012, 2013 & 2015.
- 9 Phase 1 Landfill Closure: Cost in 2018 is for design, construction document preparation, and RFP tendering services. Cost in 2019 for construction of Phase 1 closure cover, contract administration, and construction quality assurance oversight/reporting.
- 10 Maintain current amount of \$30K for ongoing scale/building maintenance and Annual report by consultant plus an additional \$22K for preparation of fill sequencing plans over the next five years, external ground survey to check intermediate cover grades, and replacement of computer in attendant building.
- 11 **The debt planned for last year will be this year. The budget includes the new loan payments (\$5M for 10 Yrs)**
- 12 From S.S.G. Holdings Ltd. June 25, 2015 contract pricing for 2017/18
- 13 Per Consultant's Schedule provided for 2017 on December 22, 2016.
- 14 Engineering costs for completion of infrastructure upgrades (front entrance, weigh scales, recycling area, composting pad) and includes engineering oversight and reporting. Budget was \$5,295,000, spent \$2,06,474 which should be \$2,588,526 to complete. Due to change order \$1,922,000 is budget.
- 15 Increase in hauling rate
- 16 Includes charges to local Bands and Reserves
- 17 Typical work to be done includes pumping leachate pipe, fixing leachate seeps, and Annual Report completed by consultant. Increase 2016 amount of \$41K by an additional \$22K to account for update of the five-year fill sequencing plans by consultant, external ground survey to check landfill intermediate cover grades, and replacement of attendant building computer.
- 18 LFG O&M portion of annual maintenance moved to 4300-709. Maintain current amount of \$51K for on-going maintenance and Annual Report completed by consultant and an additional \$25K for preparation of 5-year fill sequencing plans, external ground survey to check intermediate cover grades, compaction testing during the construction of the composting pad, and replacement of computer in attendant building; store old attendant building until it can be moved to Dawson Creek TS in 2017.
- 19 Includes additional costs for the installation and/or decommissioning and installation of groundwater monitoring wells along with costs for professional
- 20 Includes additional cost for contractor to manage composting facility and place engineered compacted fill for the construction of composting pad.
- 21 Maintaining budget amount. Exception: FSJ in 2015 was excess of \$2.6M & 2016 less than \$2M - budgeting in the middle due to last year being slow.
- 22 Wages & Benefits (includes GM of Environmental Services; Solid Waste Manager; Environmental Coordinator; SW Coordinator; Plus 2 Finance staff; Plus
- 23 All included in -763 (Contractor/Transport/Haul - Moberly Lake)
- 24 Last year was higher due to the year before missed half year payment so there were 3 payments in 2016. Back to 2 payments this year.
- 25 Contract price increased by \$25 per hour in 2016.
- 26 Three southern sites taken offline and replaced by new manned sites at Moberly and Rolla (Doe River unmanned site, Rolla unmanned site, Moberly site).
- 27 Replacement for stolen skid-steer and trailer (partially paid by insurance). Plus \$50K for other miscellaneous major equipment as required.
- 28 Includes drafting of land purchase agreements for transfer stations
- 29 Increased by an additional \$29K from \$20K to \$49K to account for the transport, installation, and utilities (electrical, sewer, water, IT) of the old NPRL scalehouse to replace the existing scalehouse at DCTS (\$25K) and supply and installation of a "stop-go" traffic lights (\$4K).
- 30 **Borrowing \$5M for 10 year term. Replacing \$2.5M that was used from reserve for work done in 2016 - Adding \$1M to Reserve.**
- 31
- 32 Audit conducted, lasted a year and resulted in reduced comingled price. However, the increase can be contributed to the RD being financially responsible for
- 33 Maintain Budget amount. Completed one year of the program and expect the same results this year.
- 34 Includes snowblade assembly rebuild.
- 35 Operational Costs to maintain transfer bins (include property taxes)
- 36 No contract increase. Keeping higher than last year actual in case of above average snow removal.
- 37
- 38 Landfill Gas Contractor cost, reduced because as of February 19th, the contract is combined with the North Peace Regional Landfill operating costs.
- 39 Already have maximum per bylaw in reserve.
- 40 For O&M and repairs (GHD budgetary cost estimate provided on December 4, 2017): \$42,273 (repairs) + \$50,125 (O&M). PLUS \$35K for repair of electrical line.
- 41 Phase 1 & 2 Landfill Closure, Phase 3 Landfill Expansion/Stormwater System: Cost in 2017 for design (Phase 1 landfill closure, Phase 2 landfill closure, and Phase 3 landfill expansion/stormwater system), preparation of construction documents, and RFP tendering. Cost in 2018 for landfill closure (Phase 1 and 2), landfill expansion (Phase 3), and stormwater system (Phase 3), contract administration, and CQA oversight/reporting.
- 42 Phase B Landfill Closure: Cost in 2017 to confirm limits of solid waste in the Phase B Annex closure area. Cost in 2018 for design, preparation of construction documents, and RFP tendering. Cost in 2019 for construction of Phase B landfill closure, contract administration, and CQA oversight/reporting.
- 43 Complete the time-lapse video of the construction of the NPRL Front Entrance Improvements/Upgrades for advertising & education purposes
- 44 GCCS Expansion: Cost in 2017 and 2018 for construction of gas collection and control system (GCCS) expansion, engineering design, construction document preparation, RFP tendering, contract administration, and construction quality assurance oversight/reporting. Cost in 2017 includes update of the landfill gas design plan.

Service Other Portfolio Solid Waste Committee
 Fund General Operating - 01 Staff GM of Environmental Services
 Category **4300 Regional Solid Waste Management** Requisition Exhibit 7

DRAFT

(Used same, 2% inflation, or actual)

2017	Acct	See	2016	2016	2016	2017	2018	2019	2020	2021
Category	#	Note	Budget	Actual	Variance	Budget	Budget	Budget	Budget	Budget

45 Cost for installation of infrastructure for off-site utilization of landfill gas. Cost for 2018 for design, construction document preparation, and RFP tendering. Cost in 2019 for infrastructure construction, contract administration, and construction quality assurance oversight and reporting.

As of Dec. 31, 2015		Tangible Capital Assets			Debentures		
		Original	Accu. Dep.	Net Value	Original	Dec. Bal.	
Fund 40	Machinery & Equipment	370,491	323,079	47,412	LA 1409/SI 1460/Issue 80 (2023)	1,000,000	464,314
	Vehicles	270,230	216,510	53,720	LA 2073/SI 2078/Issue 127 (2024)	1,880,082	1,560,631
	Buildings	686,741	385,532	301,209	LA 1930/SI 2020/Issue 121 (2022)	2,728,659	1,763,554
	Landfills	11,852,220	1,052,101	10,800,119	Total	5,608,741	3,788,498
	IT	66,414	66,414	0	Landfill Closure Liability		10,280,791
	Work in Progress	987,076		987,076	Landfill Closure Liability Reserve Balance Dec. 31		407,560
					Vehicle/Equipment Reserve Balance Dec. 31		132,719
	Total	14,233,172	2,043,636	12,189,536	Capital Reserve Balance Dec. 31		5,281,265

Annual Depreciation Expense 357,617 Bylaw 2035 / Bylaw 1967

Solid Waste - Summary

	2016	2016	2016	2017	
	Budget	Actual	Variance	Budget	
Revenue					
Tax Requisition - Electoral	4,773,234	4,773,234		4,906,882	
Tax Requisition - Municipal	2,270,172	2,270,172	-0	2,212,980	7,119,862 65%
Grants	480,000	726,734	-246,734	480,000	
Fees (includes Cash Short/Over)	4,288,070	3,724,846	563,224	3,892,670	3,892,670 35%
Extra Charges Recoverable (In/Out)		1,060	-1,060		
Admin Fees from Other Functions	19,500	12,500	7,000	19,500	11,012,532
Recovered Costs	20,000	32,090	-12,090	20,000	
Recycling commission & MMBC	34,000	104,441	-70,441	81,100	
Other/Miscellaneous/Sale of Assets	41,528	66,864	-25,336	51,728	
Borrowing Proceeds	5,000,000		5,000,000	5,000,000	
Transfer from Reserves	35,000	2,535,000	-2,500,000		
Unappropriated Surplus	2,012,651	2,012,651	0	1,522,246	
TOTAL	18,974,155	16,259,591	2,714,564	18,187,106	
Expenditures					
Administration/Operations (incl. debentures)	1,989,786	1,711,414	-278,371	2,592,236	
Vehicles	71,000	46,761	-18,905	66,000	
Supplies (computer/office/shop)	52,000	55,260	3,260	55,000	
Transfer to Reserves	601,770	609,923	8,153	3,651,770	
Operations (includes Addtn'l Site Work)	284,000	251,017	-32,983	504,500	
Contractors	5,182,000	5,011,767	-171,163	5,146,000	
Transport/Haul	673,000	723,283	50,283	721,500	
Extra Charges Recoverable (In/Out)		1,060	1,060		
Recycling / Waste Reduction	2,956,600	2,337,411	-629,761	2,166,600	
Spring/Fall Clean-up	130,000	116,820	-13,180	130,000	0
Water Monitoring	128,000	109,773	-18,227	178,500	
Remediation / Closure	50,000	8,943	-41,058	50,000	
Capital	6,856,000	3,753,913	-2,998,445	2,925,000	
TOTAL	18,974,156	14,737,345	-4,139,337	18,187,106	7,366,000 5,236,000 50,000 50,000
Surplus		1,522,246			

Does not include "other" revenues.
 or Surplus carried forward from last year
 Only "Requisition" & "Fees"

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Class 1 - Residential

Total All Other Classes

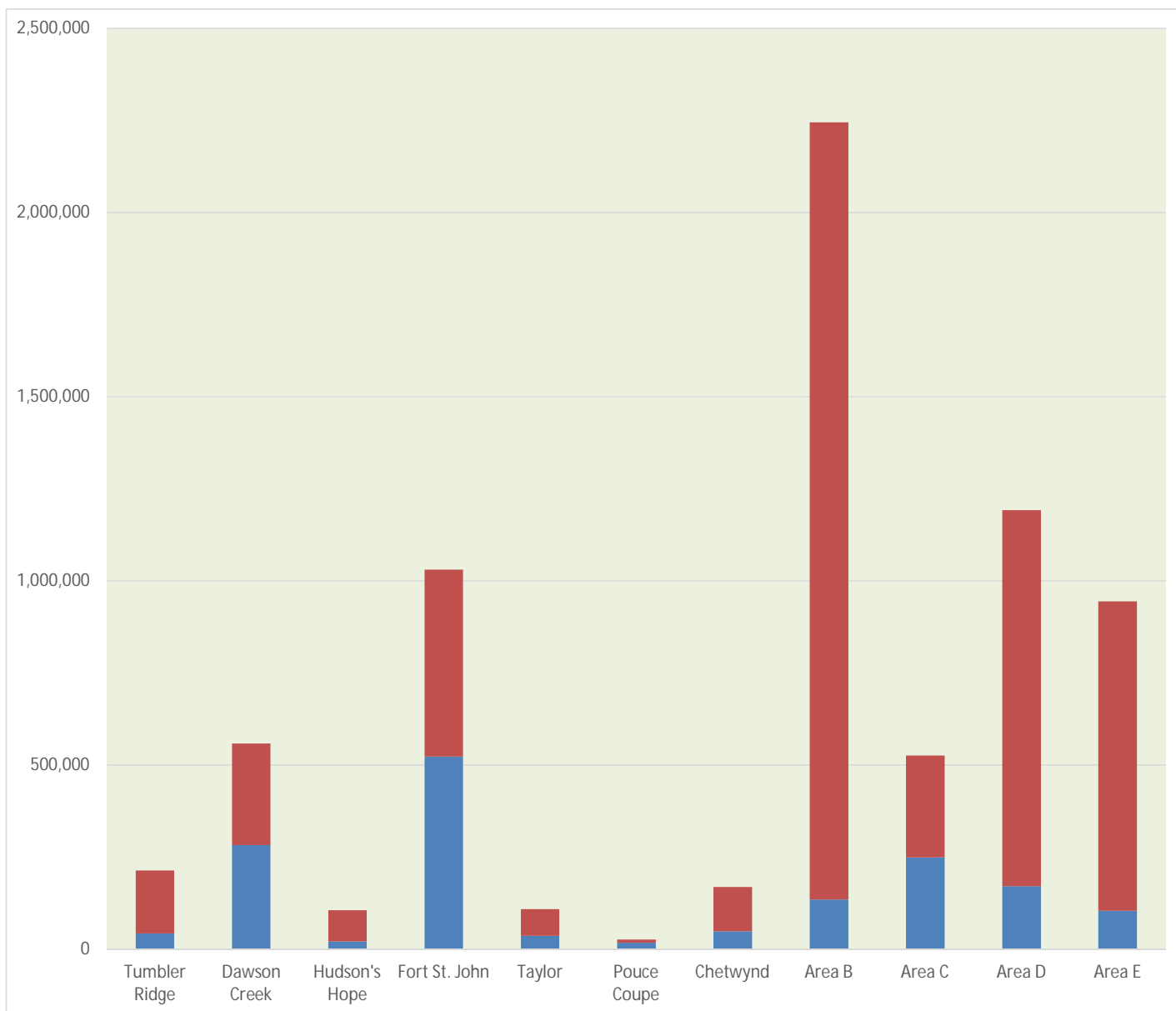


EXHIBIT 7

Regional Solid Waste Management

Category

[1-4300](#)

Basis of Apportionment: Converted Hospital Assessment - Improvements ONLY

Tax Rate or Other Limitations:

Bylaw No. 1044,1996

Greater of \$ 3,817,000
Or, the product of \$ 1.40 per \$1,000 taxable value

Max. Product \$ 14,956,490

DRAFT	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	210,607	0.312	67,565,142	2.96%	3,200	213,807
Dawson Creek	557,134	0.312	178,734,735	7.83%	1,499	558,633
Hudson's Hope	104,795	0.312	33,619,327	1.47%	1,068	105,863
Fort St. John	1,028,249	0.312	329,873,208	14.44%	2,001	1,030,249
Taylor	108,054	0.312	34,664,911	1.52%	799	108,853
Pouce Coupe	26,055	0.312	8,358,605	0.37%	376	26,430
Chetwynd	167,863	0.312	53,852,328	2.36%	1,280	169,143
Area B	2,273,826	0.312	729,467,757	31.94%	(29,326)	2,244,499
Area C	522,750	0.312	167,703,961	7.34%	2,920	525,671
Area D	1,179,024	0.312	378,243,619	16.56%	13,244	1,192,268
Area E - Jurisdiction 759	930,889	0.312	298,639,136	13.07%	2,790	933,679
Area E - Jurisdiction 760	10,616	0.312	3,405,662	0.15%	149	10,765
Total	7,119,862	0.312	2,284,128,391	100.00%	0	7,119,862

Municipal Requisition:	2,212,980
Electoral Area Requisition:	4,906,882
Total Requisition:	7,119,862

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	7,043,406	1.1%	76,456
Assessment	2,280,011,909	0.2%	4,116,482
Tax Rate	0.309	0.9%	0.003

<--See Chart on opposite page

2013 Tax Rate	0.31
2012 Tax Rate	0.34
2011 Tax Rate	0.30
2010 Tax Rate	0.26

Rates per 1,000 of Taxable Assessment		
	Ratio	Tax Rate
CL 1 Residential	1.00	0.312
CL 2 Utility	3.50	1.091
CL 4 Major Industry	3.40	1.060
CL 5 Light Industry	3.40	1.060
CL 6 Business	2.45	0.764
CL 7 Managed Forest	3.00	0.935
CL 8 Rec/Non Profit	1.00	0.312
CL 9 Farm	1.00	0.312



Peace River Regional District

SOLID WASTE MANAGEMENT PLAN

November 2008

March 3, 2009 - approved by the Honourable Barry Penner, Minister of Environment

Prepared for:

Peace River Regional District
P.O. Box 801
1981 Alaska Avenue
Dawson Creek, B.C.
V1G 4H8

Prepared by:

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Project No. 50361-601 (03)

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3. ESTABLISHING THE VISION – OUR APPROACH TO PLAN DEVELOPMENT

The Regional District remained fully committed to integrating environmental responsibility and engagement of the stakeholders and Advisory Committees throughout the planning process. This extended to involving the Advisory Committees in developing overall goals and guiding principles for the Plan, as well as integrating triple bottom line principles into the process for evaluating and selecting options for the SWMP.

3.1 Goals and Guiding Principles

When the PRRD embarked on the review of the existing Plan, it was recognized that one key area of focus would need to be a new goal or vision for the Regional District with respect to waste management. The Regional District used the combined input of the Advisory Committees and the public to examine options for a new goal for the Plan.

The overall consensus was that a broad and ambitious goal should be established, that could be readily measured, and that would be precise enough to embody accountability for the PRRD, to ensure that there was consistent effort towards achieving the goal. It was also recognized that the goal should be measured based on the reduction in the amount of waste going to the landfills on a *per capita* basis, to take into account changing population levels over time.

Based on the feedback from the Committees and the public, it was determined that the best way to address these various requirements was to use a two-fold approach:

- Establish a broad, long term vision, and
- Set interim targets with specific milestones in terms of time and level of achievement.

3.1.1 Zero Waste - The Long Term Vision

The Zero Waste International Alliance defines Zero Waste as follows:

"Zero Waste is a goal that is both pragmatic and visionary, to guide people to emulate sustainable natural cycles, where all discarded materials are resources for others to use. Zero Waste means designing and managing products and processes to reduce the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing Zero Waste will eliminate all discharges to land, water or air that may be a threat to planetary, human, animal or plant health."

The Regional District supports Zero Waste as a long-term, overarching vision. In support of this vision, the Regional District will work towards maximizing the results of its waste reduction and



waste diversion programs, and will use the Zero Waste philosophy as a guide to making decisions.

3.1.2 Our Goals

In addition to the long-term vision, a set of interim goals were also established. These targets will set levels of reduction in the amount of waste per capita being disposed to landfills, based on 2006 levels as a baseline. The goals are as follows:

- **26%** reduction in waste disposed per capita by the end of Phase 1;
- **A cumulative 41%** reduction in waste disposed per capita by the end of Phase 2, including reduction from Phase 1, and
- **A cumulative 42%** reduction in waste disposed per capita by the end of Phase 3, including reductions achieved in Phases 1 and 2.

In all these cases, the total reduction would be cumulative, measured relative to the baseline year of 2006.

3.1.3 Our Guiding Principles

In addition to the long-term vision and goals outlined above, the Regional District has also identified a series of guiding principles that will be applied in implementing programs outlined in the Plan. The Regional District will use the guiding principles as a tool to support or guide how decisions are made, as a way to highlight the underlying strategic vision of the Plan. The following guiding principles were selected, based on the collective input of the three Committees, as well as the guiding principles articulated in the original Plan:

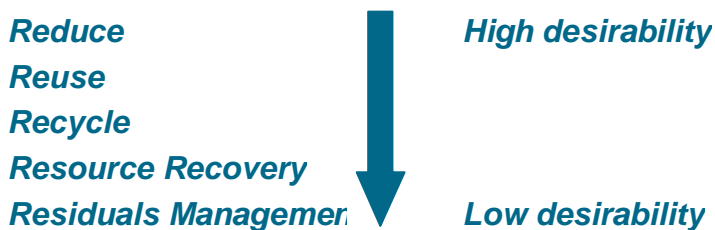
- Programs will be implemented across the region so as to provide more equal levels of access to both rural and urban residents
- New programs will be pilot tested before full-scale implementation, to test their suitability, success and acceptability to the public
- Waste reduction and diversion solutions will focus on the various waste generation sectors to identify solutions that are workable for individual sectors
- When considering the costs and benefits of new programs, a “triple bottom line” perspective will be applied to evaluate environmental, social and financial costs and benefits
- Priority for implementation will be given to programs that reduce toxicity to the environment
- The waste management hierarchy of Reduce, Reuse, Recycle, Resource recovery and Residuals management will be applied when considering and prioritizing programs for implementation.



- User pay and market-based incentives will be utilized in implementing programs in the Plan wherever possible, and will put preference on encouraging waste reduction
- Preference will be given to programs that encourage extended producer responsibility, so that manufacturers, retailers and consumers can take responsibility for the management and disposal of specific components of the waste stream.
- Waste management policies and strategies will be developed through public consultation to increase community buy-in and support in advance of implementation

3.2 Choosing Options for the Plan

The Plan have been developed with programs and policies to address the needs of all groups within the region, that is, the residential, and institutional, commercial, and industrial (ICI) sectors. Program selection has also been guided by the waste management hierarchy or “5 Rs” principle – Reduce, Reuse, Recycle, Resource Recovery and Residuals Management.



This hierarchy is a guide to the relative environmental benefits of different waste management options. Waste reduction most specifically refers to activities that reduce waste at the point of generation, i.e. prevent waste from occurring in the first place. Reuse supports the overall direction of reducing the amount of waste being disposed in the landfill by providing opportunities for usable items to have a longer useful life. Traditionally, reuse occurs in unstructured or informal ways, such as through garage sales, donations to non-profits and charity thrift shops, or giving away unwanted items to friends and family. While the options relating to the top of the hierarchy can be very good strategies, it is recognized that no single element on its own can offer a total solution. The Plan therefore reflects a balance between various waste management options, all aimed at minimizing the impact that waste has on the environment.

Several different options for managing waste in the PRRD exist, and range from relatively simple and easy options, to more extensive ones such as the development of new waste management facilities. Very early on, the Advisory Groups and the PRRD recognized that more than “just dollars” should be considered when assessing the cost-benefit profile of various options. As a result, the consideration of a range of social, environmental and financial factors



was included as a guiding principle. This approach to evaluating options is also known as a ‘Triple Bottom Line’ (TBL) assessment, and formed the basis of a framework for evaluating and considering potential options for the Plan. This approach provides a way of evaluating options that takes into account more than just financial cost or value by incorporating indicators of social and environmental benefits, to provide a more holistic understanding of options for the Plan.

While there is considerable work being done on environmental and social economics, the PRRD recognized that detailed analysis for the region was well beyond the scope of the Plan. To represent the triple bottom line, key indicators were used to provide a representative picture of environmental and social costs and benefits, along with a range of financial parameters. The full range of possible parameters is shown in the table below, although available information varied from program to program.

Table 2 describes the indicators used for the triple bottom line assessment. Further details on the calculations and assumptions associated with each parameter can be found in Appendix A.



Table 2: Triple Bottom Line Evaluation Criteria

PARAMETER TYPE	CRITERIA	
Financial	Capital Cost (\$)	Capital costs were determined as the costs of upfront activities, e.g. equipment purchases or facility construction. They include soft costs such as financing, engineering and project management. Capital costs exclude cost of land, business licensing, rezoning, permitting and any requirements to construct bench or pilot scale facilities as precursors to full scale plant development.
	Annual Operating Cost (\$)	Operating costs are those costs associated with the day-to-day operation and maintenance of a facility or program. This includes staffing, energy, supplies and equipment, and insurance. These costs were based on estimates for existing facilities or programs and the building of operating cost profiles. No revenues, e.g. from product or energy sales, have been accounted for in the financial evaluations.
	Operating Cost per tonne (\$/tonne)	This was derived from the total operating cost, divided by the expected annual net tonnage that could be diverted by implementing the program.
	Approximate Cost per Household (\$/household)	It was recognized that most residents would be best able to judge the financial implications of a program by considering the “cost per household” rather than an estimate of total costs. This metric was based on current (2007) residential tax rates.
	Landfill cost savings (based on \$54/tonne lifecycle costs)	In order to understand the full implications of diverting waste from the landfill, it was necessary to look at the potential cost savings over the entire life of the landfill. This included a consideration of landfill siting, construction, operating, monitoring and closure costs, as well as the total capacity of the landfill. The total life cycle cost of the landfill was computed, and divided by the total capacity in cubic metres to determine a cost per cubic metre, and a cost per tonne using the compaction density. The lifecycle cost per tonne was used to calculate the lifecycle savings achieved by diverting waste from the landfill.
Environmental	Net Waste Diversion Potential (tonnes)	The net diversion potential relates to the amount of material that could be diverted from landfills, less any waste resulting from this program that cannot be otherwise handled. Determination of the net waste diversion potential is dependent of the amount of the material being targeted that occurs in the waste stream, and the amount that a particular program or policy could capture for diversion.
	Greenhouse Gas Reduction	Greenhouse gas emissions associated with different programs are based on case



PARAMETER TYPE	CRITERIA	
	Potential in tonnes of CO ₂ /tonne of waste and equivalent # of Honda Civics taken off the road for 1 year	<p>studies for different technologies and a representative range of materials in the typical municipal waste stream. The amount of greenhouse gas reductions is linked to the type of program or process, as well as the types and quantities of material targeted.</p> <p>A model was used to relate the amounts of material recycled, composted or otherwise diverted from landfill, to greenhouse gas emissions reductions, expressed as “tonnes of CO₂ equivalents”. In order to make this simple to visualize, the greenhouse gas emissions reductions were presented in terms of “number of Honda Civics taken off the road for 1 year”.</p>
	Landfill space savings in cubic metres, and equivalent volume in # of school buses	This is the amount of space that materials to be diverted would take up in the landfill. It is based on the net diversion potential tonnage and the space taken up per tonne of material. To assist in visualization, the landfill space savings were converted to an equivalent number of school buses. The typical “big yellow school bus” has a volume of about 60 m ³ .
Social	Ability to be equitably implemented across region	All programs or services were rated with these social parameters, as indicators of how easy it would be for residents in the PRRD to access and use the programs.
	Accessibility and convenience	As outlined in the guiding principles, there was a need to prioritize those programs that could make access to service more even for both rural and urban areas. Programs that could readily be implemented region-wide scored best, while those programs that were more suited to one or the other scored less favourably.



4. THE PLANNING FRAMEWORK

Managing waste in the Peace River region for the next twenty years is understandably a broad and complex undertaking. There was therefore a need to address the broader time frame in a series of shorter segments, and to ensure that each phase was structured around specific objectives to support the overall direction of the Plan.

4.1 Plan Implementation Phases

The Plan has been organized in phases to divide the 20-year time frame into more manageable segments. Four implementation phases that have been formally defined:

- Phase 1 – this is the first 2 years following adoption of the Plan, and will build on existing programs. This phase will also be a transitional period as the PRRD works towards more sweeping changes in subsequent phases.
- Phase 2 – covers the next 3 to 5 years following Plan adoption, and involves more significant changes to the waste management system, with a focus on increased recycling
- Phase 3 – covers the period 5 – 10 years after Plan adoption, and concentrates on long-term waste management options
- Phase 4 – covers the next 10-20 years after Plan adoption. It is expected that more long-term waste management options will be part of this phase, as well as continued improvement of programs established in earlier phases

Some of the programs outlined in the Phases will function on a region-wide basis to support the broad goals of the Plan and provide the PRRD with better control over the waste management system. These aspects of the plan include new waste management policies to govern how waste will be handled, and improvements to waste management facilities. Other programs focus on specific sections of the population, e.g. residents or the agricultural sector, or a particular portion of the waste stream. Finally, some program elements focus on the PRRD in terms of how it functions as an organization.

It should be noted that the inclusion of a particular program or policy in a phase provides an indication of when that program or policy will be initiated; however, some programs may begin in one phase with preparatory steps, but not be fully complete until a later phase. In addition, some programs represent more permanent change, and will be expected to continue for the life of the plan and beyond, once they are initiated.



4.2 Plan Objectives

In developing objectives for the Plan, there was a focus on addressing the question “What needs to be achieved?” While the vision and guiding principles provide perspective on the overall direction of the Plan, the objectives are intended to link to specific deliverables, grouping programs together so that each phase supports the next in a logical manner. These objectives link directly to the guiding principles of the Plan, and reflect the step-by-step approach that the PRRD will follow in the upgrade and reshaping of the regional solid waste management system.

The sections that follow describe the programs and policies that will be implemented to deliver these objectives, and connect with the guiding principles in the Plan.



5. PHASE 1 – BUILDING A FOUNDATION

Phase 1 covers the period immediately following Plan adoption. This phase is characterized by the expansion of existing programs, as well as the establishment of “foundation-level” policies and service levels, that will support later, more expansive programs. Establishing and strengthening the connections between the PRRD and various stakeholders in each waste generation sector is also an important element of Phase 1.

5.1 Phase 1 Objectives

The Phase 1 objectives are to:

- Establish a baseline set of practices with respect to the existing waste management system
- Establish levels of service for both rural and urban areas of the region, supported through the transfer station and landfill network;
- Establish a policy platform or foundation for changes in later phases;
- Support and/or expand existing programs and services, including education and awareness-building;
- Enhance product stewardship program access
- Initiate greater outreach to and partnership with the ICI and agricultural sector stakeholders.

The following programs and policies will be undertaken to support these objectives.

5.2 Programs to Support Objective #1 – Establish Baseline Set of Practices

5.2.1 Track Waste Generation Sources

The ability to effectively divert the maximum amount of waste from the landfill will depend in part on having a clear understanding of quantities and sources of waste, and the types of materials that are present in the waste stream. Once this is known, specific strategies can be developed to work with waste generators to address particular components of the waste stream.

There is already the practice of identifying residential vs. commercial loads, but more precise categorization, e.g. to capture construction and demolition waste, would be beneficial. The Regional District will implement a policy to track waste coming into the landfill by source category, e.g. residential, small commercial, institutional (hospitals, schools, government offices, etc.), large commercial and industrial. Specific codes for each of these will be designated in the landfill scale system, and landfill operators instructed to collect this information from customers at the landfill. There would also need to be some public education efforts to alert people as to



the change to the new system, and advise them as to how the information collected will be used.

5.2.2 Conduct a Waste Composition Study

More accurate waste composition information is needed to support waste diversion programming, and the tracking of success as new programs are implemented. The Regional District will budget for undertaking periodic waste composition studies at the regional landfills, with a focus on the Bessborough and Fort St. John landfills which receive the majority of the waste disposed in the region. The first waste composition study will take place in Phase 1, but it is likely that the exercise will be repeated periodically. Ideally, waste composition analysis should be undertaken every 5 years, or following the implementation of any major programs that are considered likely to significantly affect waste composition.

5.2.3 Establish Minimum Operating Standards for Landfills

While the landfill operations at the four sites are generally in good order, the PRRD recognizes that improvements can be made to the sites, to improve operational efficiency and minimize impacts on the surrounding neighbours. Contractors are employed to provide day to day management services, and variations in their performance have been observed in the past. To address this, minimum operating standards will be developed for each landfill, in keeping with the BC Landfill Criteria developed by the Ministry of Environment, as well as the provisions of the Operational Certificates or Permits for the landfills. Best management practices that minimize environmental and neighbourhood impacts will also be incorporated into the minimum standards.

Issues that have been specifically identified as minimum standards include:

- Require Manager of Landfill Operations certification or equivalent for all operators
- Strict enforcement of the “no unsecured loads” policy at landfills, whereby vehicles with unsecured loads arriving at the landfill could be surcharged or fined for transporting unsecured loads onto the site
- Regular perimeter clean-ups to reduce illegal dumping in the immediate surroundings of the landfill, and to address blown litter from landfills and unsecured loads
- Requirement to enforce disposal bans and other PRRD policies to encourage recycling and waste diversion from the landfill
- Minimum operational requirements relating to the proper compaction and placement of waste, safety of operations at the landfill, as well as other issues.
- Establishment of minimum landfill closure requirements



Examination of current operating hours and service levels will also be incorporated into this activity, in order to offer extended or more flexible hours to customers, and to provide increased access to proper waste disposal and recycling. The Regional District will also adjust landfill operations contract requirements as feasible, e.g. at the time of re-tendering or renewal, to reflect these operating standards.

5.2.4 Identify Development Needs for Waste Management System

The PRRD operates four landfills and 32 transfer stations throughout the region, in a combination of rural and urban areas. Some transfer stations are very simple, offering only disposal of bagged waste using small PL-6 containers. Other locations are at former landfill sites, and are larger stations. These offer waste disposal and as well as some recycling opportunities. The four regional landfills are located at Fort St. John, Bessborough, Chetwynd and Rose Prairie. These sites accept waste from the member municipalities and rural areas surrounding them. Some recycling opportunities, for items such as scrap metal, tires, and lead-acid batteries are also provided.

The existing network of landfills and transfer stations throughout the region provides the framework for the existing residuals management or waste disposal services. They also have the potential to be service delivery locations for new programs and services. To increase access and bring greater equity to rural and urban service levels, the PRRD will evaluate the inter-relationship between the transfer station network and the transfer stations, as well as the needs for future landfill capacity in the region. Outcomes of this work will identify:

- Opportunities to improve efficiencies within the transfer station network
- Different levels of upgrades and other changes required for existing transfer stations in order to support future programs
- Alternatives for landfills that are nearing the end of their life

This activity will be considered as the basis for prioritizing capital works programs within the waste management system in this and later phases. It should be noted that some of this review is already in progress, and will be integrated into this activity.

5.2.5 Continue Planned Development and Operation of the Bessborough Landfill

In keeping with the Operational Certificate and the Design and Operations Plan for the Bessborough Regional Landfill, the Regional District will embark on the development of the next waste disposal phase, Phase 2A, shortly following Plan adoption. It is anticipated that Phase 2A would begin to receive waste for disposal in early 2009. This expansion builds on consultation undertaken in October 2006 with immediate neighbours of the landfill, as well as the direction of the Regional Board.



As part of the requirements of the Operational Certificate, the Regional District will develop a detailed engineering design and implementation process for this expansion, in consultation with the Ministry of Environment. The new phase of the landfill will continue to be operated in accordance with the approved Design and Operations Plan which identifies site-specific design features, daily operational requirements, environmental monitoring programs and reporting requirements.

5.3 Programs to Support Objective #2 – Establish Rural and Urban Levels of Services

5.3.1 Standardize Recycling Programs across the Region

Currently, the types of materials that can be recycled vary in different places in the region. Some materials can only be recycled at the community recycling depots, but not at the recycling bin depots located elsewhere in the region. Some rural areas have little if any access to recycling services.

The Regional District will work with our recycling partners and member municipalities to standardize recycling services across the region, to align the various program requirements. This will offer the ability to streamline education and awareness materials in support of recycling programs, offer increased access to recycling services for those using the recycling bin drop-off locations, and lower contamination rates by reducing confusion about program requirements. It is anticipated that increased recycling participation will be achieved through these efforts.

As the Regional District currently manages a single recycling contract for recycling services in the region, these standardization requirements will be incorporated into new contract specifications.

5.3.2 Initiate Upgrades to Transfer Stations to Secure, Attended Full-Service Sites

This activity will be the natural follow-up to the identification of development needs within the waste management system, particularly with respect to transfer stations. Currently, the majority of the transfer station sites are unattended, with 24-7 access. This unrestricted access has been observed to result in several operational challenges, such as the illegal dumping of prohibited and/or dangerous materials, and the overfilling of bins, attracting a variety of pests. These issues result in increasing site servicing and maintenance costs. The lack of recycling services at many sites, as well as the unrestricted access that opens these sites to use and potential abuse by residents from outside the region are also challenges being faced.

To address this, strategically located transfer stations identified through the development needs assessment will be upgraded to incorporate a range of services and changes, including:



- **Site Security & Access** – This will involve fencing and securing the sites, to limit unregulated access
- **Employment of Site Attendants.** The Site Attendant will be responsible to manage the site on a day-to-day basis, and to deal with residents using the site. These duties will include providing information on disposal and recycling options, collecting tipping fees, and liaising with haulage contractors removing waste from the site.
- **Set Operating Hours** - Each transfer station would have posted operating hours during which the site would be open for business. Access would only be allowed during open hours. The needs of the local areas will be assessed and operating hours set accordingly. The schedule will be developed in consultation with the community's needs, and would likely utilize a combination of morning and afternoon hours on weekdays and weekends to provide greater flexibility.
- **Acceptance of Bulky Waste** - Currently, the PRRD's solid waste bylaws restrict the disposal of bulky waste at transfer stations. This is largely because many of the sites, particularly the smaller rural sites, do not have suitable containers or sufficient space to handle bulky waste. Selected sites will be upgraded to permit the disposal of bulky waste at transfer stations, supported by the necessary amendments to the existing bylaws. Since there may be some sites where this expansion is not feasible, the PRRD will consider the most suitable sites for expansion, taking into account equality of access across the region, as well as the ability to efficiently develop collection routes for handling bulky waste.
- **Provision of Recycling Services in Rural Areas** – This service will involve the provision of multi-material recycling service at PRRD transfer stations, so that recycling facilities are accessible to all residents. This system will provide recycling facilities for a range of materials equal to those accepted at the recycling depots in the member municipalities. Depending on the nature of the facilities and the desired levels of service, recycling services for other materials such as batteries, paint, household hazardous waste or other materials could also be included, in collaboration with the relevant stewardship agencies.

Other supporting features of the upgraded sites would include improved signage, layouts, parking and container systems, customized to suit the sites, and meet the needs of the communities. The Regional District may also consider the implementation of nominal tipping fees for the disposal of waste at transfer stations, to make this service equitable with landfill disposal services.

The upgrade of the transfer stations will be initiated on a pilot program basis, to allow the PRRD to investigate the suitability of various types of equipment and service delivery models to provide the enhanced levels of service to communities in the region. It is anticipated that the pilot program will encompass upgrades to three existing transfer station sites in Phase 1, with a full scale implementation of the program continuing in Phase 2. The PRRD will also need to



secure services from a contractor to collect materials from the recycling depots and transfer them to an appropriate processing facility.

5.3.3 Investigate Replacement Options for Fort St. John Landfill

The Fort St. John Landfill is one of the four regional landfills operated by the PRRD, and provides disposal services for the City of Fort St. John as well as many of the transfer stations in the North Peace, from Pink Mountain to Charlie Lake. This landfill is fast nearing the end of its current design capacity, and it will be necessary to identify new disposal capacity to handle the 35,000 – 40,000 tonnes disposed in the Fort St. John landfill each year.

Recognizing that the process for developing new disposal capacity is a lengthy one, the Regional District will examine a range of options for providing replacement disposal capacity for the Fort St. John Landfill, beginning in Phase 1. These options will include, but are not limited to:

- Utilization of existing disposal capacity at other PRRD regional landfills
- Development of an agreement with a private waste disposal facility
- Development of a new landfill site within the North Peace
- Expansion of existing regional landfills
- Development of waste-to-energy facilities for use as disposal capacity

Recognizing that this investigation phase will be lengthy, the PRRD began some preliminary landfill siting activities in 2007. A preliminary assessment of potential sites was undertaken in 2006, which identified two possible sites within a 30 km radius of the existing landfill – the Rose Prairie Landfill, which would require expansion and upgrade to an engineered landfill, and a green field site which would require complete development.

As part of the consultation activities undertaken during the Plan Review, it was recognized that many residents in the Rose Prairie and Montney communities are concerned about the negative impacts that an expansion to the Rose Prairie Landfill site could cause. There was also considerable interest from the public in investigating non-landfill approaches to disposal capacity. The Regional District will continue to work with all stakeholders to identify feasible, environmentally responsible and cost-effective options for developing replacement disposal capacity. It is anticipated that any options short-listed as a result of this investigation in Phase 1 will need to be reviewed in consultation with the stakeholders, the Ministry of Environment and any other relevant agencies as needed.

5.3.4 Explore Feasibility of Joint PRRD-Industry Waste to Energy Facility

The PRRD recognizes that the presence of considerable industry operations in the region may present a unique opportunity to explore waste-to-energy as a suitable option for managing



waste. In particular, the forestry and oil and gas industries could be strategic partners. To this end, the PRRD intends to explore the feasibility of developing a waste-to-energy facility in the region, based on the combined needs and resources of industry and the PRRD. This feasibility study would explore the composition and quantities of waste being generated in the region, both from municipal and industrial sources, as well as the possibility to use excess natural gas (currently flared) as a supplemental fuel source in the facility.

The PRRD has applied for a Green Municipal Fund grant to support this work. Should the grant be approved, it is expected that this study would be undertaken in Phase 1, with the results of that work feeding into how later phases are executed.

5.4 Programs to Support Objective #3: Establish Policy Foundation

The policy changes planned for Phase 1 will be used to lay a foundation to support changes in later phases of the Plan. The policy changes in this Phase are linked to guiding principles that support the use of user pay and market-based incentives, the desire to place a preference on encouraging waste reduction, and the need for equitable program implementation across the region.

5.4.1 Implement Incentive-Based Tipping Fees

Tipping fees are the charges applied at the landfill for disposal of waste. An incentive-based tipping fee is structured to provide a financial incentive to encourage new waste management behaviour. High tipping fee rates are linked to the action being discouraged, so that people are encouraged to do the right thing because of financial savings. Currently, the PRRD uses the incentive-based tipping fee model for certain materials, e.g. a \$90/tonne rate for commercially generated cardboard, as compared with \$30/tonne for regular waste.

The PRRD will establish incentive-based tipping fees for an expanded range of materials to encourage greater diversion. In Phase 1, potential materials that will be targeted for the incentive-based tipping fee structure include:

- All cardboard – expanding the program to loads of cardboard from just commercially generated, to include all sources
- Yard Waste for Composting – if the PRRD landfills were going to be used for composting yard waste dropped off at the sites, a lower fee would be charged for separated yard waste.

Incentive-Based Tipping Fees at Work

As an example, in 2005 the Regional District of Central Okanagan ran a DLC pilot program for 3 months with five companies. The regular tipping fee for waste at the landfill was \$50/tonne. During the pilot, sorted materials were \$10/tonne, mixed recyclables, sorted at the landfill were \$105/tonne, and mixed waste (including recyclables) was charged at \$160/tonne. Eighty-five percent of the DLC waste was recycled instead of being landfilled. All the companies involved reported reduced costs for waste hauling and disposal.



- Construction & Demolition Waste – much of this material is more readily recycled when sorted. To encourage diversion of this waste stream, the highest tipping fees would be applied to mixed construction and demolition waste, with lower rates in place for sorted materials.

The Regional District recognizes that corresponding recycling or diversion opportunities will need to be in place for this program to be implemented, so that residents are able to take advantage of the lower cost options. An increased level of monitoring and quality control will be required at the landfill, since there is a risk that low disposal cost materials will be contaminated with higher disposal cost materials, e.g. people placing regular garbage in with yard waste. To support the expanded use of incentive-based tipping fees, the Regional District will also work to provide recycling areas and additional staff or operational capacity for accepting the targeted materials.

5.4.2 Implement Disposal Bans to Encourage Recycling

Currently, the PRRD already has certain disposal bans in place at the regional landfills, for materials that are difficult to handle, or undesirable for landfill disposal. Phase 1 will also incorporate the expansion of the disposal ban concept as a second, more aggressive step following the implementation of incentive-based tipping fees, for the purposes of increasing diversion, rather than just avoiding hard-to-handle materials. The range of materials banned from disposal at the PRRD landfills will depend on the waste management options chosen for implementation, and will be such that no material will be banned unless an alternative handling option exists.

The outright prohibition would be preceded by a period where the incentive-based tipping fees are implemented, so that users would have time to adjust to the proposed ban. Depending on the materials, they might still continue to be handled at the landfill for **recycling**, but would not be disposed in the landfill. Material categories that will be considered for disposal bans in Phase 1 include cardboard, sorted construction and demolition materials, and materials that can be composted, provided that appropriate composting operation is in place. In addition, the PRRD will also consider implementing disposal bans on those materials currently covered by stewardship programs, or those materials currently accepted for recycling.

Implementation of disposal bans requires supporting education and awareness building in advance of imposing the bans. Residents and businesses will require time to become accustomed to utilizing the alternatives, and the Regional District will be prepared to transition to full scale bans over time. Enforcement of the bans once in place will also be required, in terms of increased inspections of incoming loads. Coordination with member municipalities will also be important when considering disposal bans, as member municipalities may consider enforcing a ban on curbside collection of banned items, in conjunction with the PRRD landfill disposal



ban. Private haulers or municipal haulers may consider preventing collection of the material in question at the source.

5.4.3 Implications of Phase 1 Policy Options

This strong foundation in the guiding principles means that these options are directly supportive of the overall intent of the Plan. These policy options will work best if implemented together, as they address various aspects of the same issue – how to reduce the amount of waste being disposed, by creating both incentives and drivers to divert more waste from the region’s landfills. It is important to recognize that these policy options will also require co-operation between the PRRD and the member municipalities, as consistency of their implementation and enforcement is an important factor in their success.

In terms of the impacts of these policies on the waste management infrastructure in the region, it is likely that there will be some implications for the recycling service providers, as the intent would be to enforce these policies when alternative recycling options are in place. The regional district’s transfer station and landfill network will also need to be upgraded so as to allow enforcement of these policies. Member municipalities would likely need to incorporate issues such as disposal limits and disposal bans at the point of collection to provide the needed continuity with the regional district’s intentions.

5.5 Programs to Support Objective #4: Support & Expand Existing Programs

The program options in this section build on existing programs and services. Many of these programs focus on education and awareness building efforts, to increase waste reduction and reuse opportunities in particular.

5.5.1 Continue Existing Waste Reduction Education Program

The need for public engagement and outreach programming is considered to be a foundation activity in the Plan’s success, particularly as it is recognized that many of the programs contemplated in the Plan rely on changes in the behaviours of the citizens of the region – whether at home, at work or both – in order to succeed.

Currently, recycling and waste reduction education programs are provided by the Northern Environmental Action Team (NEAT) on behalf of the Regional District, through a contract between the two organizations. The organization was formed as a not-for-profit community group, and has been in operation since 1989. The PRRD has contracted with NEAT since 1997 to provide its waste reduction education programming. NEAT is responsible for the development and implementation of waste reduction education promotion programs in the Regional District, the objectives of which are to reduce the volume of waste produced by residents and businesses, encourage the re-use of goods and materials by residents and



businesses, and to maximize participation in recycling, composting and other waste reduction initiatives.

Specific waste reduction education activities have and continue to include:

- Operation of the “Green Line”, a toll-free hotline number providing waste reduction & recycling information for the BC Peace Region
- Develop of waste reduction education programs for businesses
- Composting education
- Sale of residential backyard compost units
- Household hazardous waste handling and reduction education
- Materials exchange program support
- Special events e.g. yard waste drop-off in Fort St. John
- School-based programs to encourage greater awareness of waste reduction in schools, children and youth
- Design and distribution of brochures, tools and educational materials on a range of waste reduction topics
- Maintenance of the www.prrrdy.com website
- Production of the “Prrrdy Says” Newsletter
- Ongoing support for waste reduction education and awareness throughout the region
- Acting as Waste Information Centre for the PRRD regarding tipping fees, facility locations, operating hours and policies.

The Regional District will continue similar programs to those noted above, in order to support existing and proposed programs. As is already occurring, these programs will continue to embrace the principles of community-based social marketing. This approach focuses on influencing behaviours, as much research has shown that providing information alone is not always successful in encouraging individuals to change how they do things.

This approach would continue to be integrated into the public outreach and engagement campaign to support the implementation of the Plan. Where appropriate, these strategies will be supported by informational materials using brochures, web sites and information provided by other partners such as environmental organizations, recycling organizations, stewardship agencies and community groups.

5.5.2 Promote and Support Existing Reuse Opportunities

The PRRD recognizes the value of formalized and informal reuse opportunities that exist throughout the region. Rather than duplicate other programs that already exist in the



community, the Regional District will focus on the promotion of these opportunities. These would include:

- Partnerships with non-profit organizations and thrift shops to promote their services, and to host combined education and awareness events
- Continued support of the “Free For All” newspaper classified section that currently appears in the Alaska Highway News and Dawson Creek Daily News. This program allows residents who have something that they want to get rid of to advertise it for free in the classified section of these newspapers, to allow those who might be interested an opportunity to see the notices and contact them about the items.
- Publicize the availability of informal networks for reuse, such as the online community reuse sites are already established to provide multiple channels of access for residents interested in these programs.

The Regional District will also work to coordinate more closely with the recycling depots, thrift stores and other waste diversion programs, to have a major “waste diversion drive” in advance of the Free Tipping events, currently held at the region’s landfill sites in the Spring and Fall each year. In addition, as there are some periodic waste reduction events operated directly by member municipalities, increased communication between municipalities and the PRRD will be facilitates as part of the event planning. These Reuse and Recycling Events will be heavily promoted to encourage residents and businesses to maximize their opportunities for waste diversion, rather than disposal.

5.5.3 Partner with Retail Sector on Reusable Shopping Bag Program

The Regional District will work with grocery store and other retail chains to support existing reusable bag promotions. In addition, partnerships will be also sought with other parts of the retail sector to develop similar programs, e.g. other independent stores or chains, malls and shopping streets in various communities. These could be facilitated through area Chambers of Commerce or Business Improvement Associations, as well as economic development offices in the communities. The role of the PRRD will be to encourage and promote these programs, and link the use of these reusable bags to the broader waste reduction goals in the Plan.

5.5.4 Develop Yard Waste Drop-off & Composting Facilities

The PRRD recognizes that many member municipalities, as well as some rural communities, have a high interest in developing community compost facilities for yard waste. The Regional District strongly supports this as a means of diverting yard waste from landfills, and will work to develop drop-off facilities for yard waste at up to five selected locations around the region. This program would initially focus on member municipalities, with the Regional

What is Yard Waste?

Yard waste typically consists of leaves, grass, brush and tree trimmings up to 2” diameter, vegetable debris such as corn stalks, tomato plants, etc. Generally, yard waste facilities are not equipped to handle large trees or branches, or stumps.



District in partnership with municipalities, so that municipal assistance with operation could be provided, with the PRRD supporting in the provision of suitable locations.

The finished compost would be available for use by residents, as well as in municipal landscaped areas, parks, school playing fields or other locations. The PRRD regional landfills and larger transfer stations will be considered as possible locations for yard waste drop-off and composting, provided that sufficient space is available. Any yard waste compost facility must meet the requirement of the BC Organic Matter Recycling Regulation (OMRR) and other Codes of Practice that may apply.

Participation in yard waste composting programs will be encouraged through the use of incentive-based tipping fees and an eventual ban on the disposal of residential yard waste at the curb in member municipalities, along with a reduction of collection limits for residents where applicable. An educational component will also be required to inform users on the types of material suitable for handling at this location, as good control of the organics coming into the site will go a long way to reduce odour and leachate issues.

5.6 Programs to Objective #5: Enhance Product Stewardship Access

Product stewardship programs that focus on household hazardous waste (HHW) disposal will also be incorporated into Phase 1. This reflects the intent of the guiding principles to give priority to programs that reduce toxicity to the environment, and those that encourage extended producer responsibility, so that manufacturers, retailers and consumers can take responsibility for the management and disposal of specific components of the waste stream.

5.6.1 Lobby Senior Government for Increased Levels of Product Stewardship

The PRRD recognizes that while locally implemented programs can have significant effects, another effective way to promote reduction and reuse is to support and lobby for provincial and federal product stewardship programs.

In British Columbia, Product Stewardship is regulated by the Provincial Government, which works with producers to develop stewardship programs for various materials. Successfully lobbying the Provincial Government to expand the list of products governed by Product Stewardship regulations will mean that even more items could be managed through stewardship programs and diverted from landfill. This in turn will reduce the financial burden to the

What is Product Stewardship?

Product Stewardship is a policy approach in which the producer's responsibility for managing the environmental impact of their product is extended across the whole life cycle of the product, from selection of materials and design to its end-of-life. This means that the producers and consumers have financial responsibility for the products from production to final disposal, so that the cost of managing this waste is not borne by local government responsible for waste management.



Regional District and other local governments across BC associated with managing these items.

To this end, the PRRD will:

- Lobby senior levels of government to implement policy to expand extended producer responsibility programs within British Columbia and Canada, particularly those that focus on packaging waste.
- Support the continuation and expansion of product stewardship programs implemented at the provincial and federal levels
- Lobby senior levels of government to implement stronger requirements for performance measurement and auditing of program performance, in order to increase access to programs in the Peace Region.
- Support extended producer responsibility and Design-for-Environment initiatives that encourage or regulate manufacturers to use recyclable and recycled packaging materials and discourage excessive packaging.
- Develop a Public Support for Product Stewardship package for circulation to interested residents and businesses, that will include information on product stewardship programs and the BC Recycling Regulation, a form letter and petition template that can be used by interested parties to send to provincial and federal agencies regarding potential new stewardship initiatives, and a list of contacts.
- Continue its participation in the Local Government Stewardship Council, an organization whose members include all Regional Districts across the province, as well as the Ministry of Environment and the stewardship agencies, which was created to provide direct input from local government to responsible parties developing new stewardship programs.

As noted elsewhere in the Plan, the PRRD will also allocate resources to promote existing stewardship programs, and to provide increased levels of access where feasible, using its own waste management facilities.

5.6.2 Support Existing Stewardship Programs Through Round-up Events

This program will involve periodic round-up events for household hazardous waste materials, and would be held in member municipalities and electoral areas. Household hazardous waste (HHW) includes chemicals and materials commonly used in the household that contain potentially hazardous or toxic elements, and therefore require special disposal. The events will focus on household hazardous waste materials that are covered under product stewardship programs, but could also include selected non-stewardship materials as appropriate. HHW includes items such as fuels, solvents, used oil, pesticides and fertilizers, as well as things like mercury thermostat switches, propane cylinders and fluorescent tubes.



These events will be held once or twice per year in different communities on a rotating basis, at existing transfer stations, landfill sites or other location convenient to residents, and would be sustained only until such time as those communities have reasonable accessibility to provincially mandated product stewardship programs to handle these materials.

The PRRD will partner with suitably qualified contractors who are able to safely collect, treat, recycle and/or dispose of these products appropriately. Promotion and awareness building activities will also need to be incorporated into the program, so that people can be made aware of where and when the events were occurring, and what types of materials can be accepted at the Round-up Events.

5.7 Programs to Support Objective #6: Initiate Greater Stakeholder Outreach

5.7.1 Provide Recycling Pilot Program for Agricultural Plastics

The agricultural sector in the BC Peace Region plays an important economic role in many communities. Managing non-organic agricultural wastes, such as plastics, presents a challenge for farm operators, many of whom have adopted environmental farm plans and are interested in recycling opportunities for these materials.

Under this program, the Regional District will utilize strategic disposal locations as collection points for agricultural plastics such as silage wrap and baling twine, provided that a recycling processor could be found to collect and process this material. This will be developed as a pilot program, so that a potential recycling processor would have an opportunity to test the possibility of recycling this material. In addition, a pilot project would also allow the PRRD and participating farms to determine how best to transport, handle and store their items prior to pick-up.

Once the pilot program has been successfully tested, a more comprehensive program will be developed and implemented in subsequent phases.

5.7.2 Explore Specific Education and Training Needs for Different Sectors

The Regional District recognizes that waste reduction education activities must be tailored to meet the needs of specific target sectors, such as schools, businesses and industries. The

Agricultural Plastics Recycling in Okanagan-Similkameen

The Regional District of Okanagan-Similkameen (RDOS) has undertaken a successful pilot program for collecting agricultural plastics to determine the resin type, processing methods and where to find suitable markets for the waste plastic. Although the RDOS has yet to find suitable markets, they have determined ways to collect certain plastics to minimize contamination.

The RDOS started the program by supplying branded bags and information sheets to agriculturists. These bags were filled and dropped-off at landfills with no tipping fees. Landfills were willing to accept the recycled plastic although a place to accumulate significant volume to be sent for recycling processing still needed to be sited. The RDOS is planning to make templates for their collection program and trials available to other Regional Districts.



PRRD, through its education program, will continue outreach to specific groups and organizations to identify specific training needs and interests for different areas, activities, age groups, etc. Examples of areas of potential focus include:

- Targeted programs for schools, based on their particular interests. This could include curriculum support, special events and activities, summer camp programs or long-term partnerships with particular schools through pilot programs
- Increased outreach to the institutional, commercial and industrial sector, with a focus on the provision of resources and tools to assist this sector with improving their waste management, tracking waste generation and composition information, and participation in the business-focused material exchange discussed in the next section

The PRRD will explore opportunities to partner with the relevant school districts, industry associations and business groups, to deliver these programs.

5.7.3 Develop Construction & Demolition Waste Working Group

The Regional District recognizes that the construction industry has the potential to be active partners in determining how best to manage construction and demolition waste generated in the region. There may be business opportunities to be developed that can support the waste reduction goals of the Regional District, and the PRRD would like to act as a facilitator of discussion with the construction sector to identify these opportunities. To this end, the PRRD will work with the construction industry to establish a Construction & Demolition Waste Working Group, whose role will be to:

- Improve the characterization and understanding of C&D waste generation patterns in the region
- Identify those materials for which alternative handling opportunities (other than landfilling) may exist
- Work with the PRRD to develop pilot programs to target particular material streams
- Develop practical regional solutions to increase the diversion of C & D waste from the PRRD landfills

The PRRD will act as a facilitator to kick-start the working group, through outreach with construction and building associations, major industry players in the various communities, and the hosting of meetings and support of discussions.

5.7.4 Develop ICI Waste Working Group

The Regional District recognizes that the business and industry in general has the potential to be active partners in determining how best to manage the wastes generated by this sector in the region. There may be business opportunities to be developed that can support the waste reduction goals of the Regional District, and the PRRD would like to act as a facilitator of



discussion with the ICI sector to identify these opportunities. To this end, the PRRD will work with groups within the ICI sector to establish an ICI Waste Working Group, whose role will be to:

- Improve the characterization and understanding of ICI waste generation patterns in the region
- Identify those materials for which alternative handling opportunities (other than landfilling) may exist
- Work with the PRRD to develop pilot programs to target particular material streams
- Develop practical regional solutions to increase the diversion of ICI-sector waste from the PRRD landfills

Target members of the Working Group include representation from business associations, Chambers of Commerce, School Districts 59 and 60, Northern Health Region and the colleges and institutions in the region. The PRRD will act as a facilitator to kick-start the working group, through outreach with construction and building associations, major industry players in the various communities, and the hosting of meetings and support of discussions.

5.7.5 PRRD Adoption of a Green Purchasing Policy

The Regional District's Board of Directors has committed to incorporating sustainable practices into its operations where possible. To further this commitment, the PRRD will adopt a district-wide purchasing policy to favour products made from recycled content such as paper products, motor oil and tires. In-house waste reduction would be enhanced by encouraging the purchase and use of reusable products. Over time, the program will be considered for extended application to include products that have minimal environmental impacts during production, products that are easily reused and recycled, or cause minimal environmental impacts in operation and upon disposal. This will be a strategic opportunity for the Regional District to demonstrate its commitment to leading by example and "walking the talk" with respect to waste reduction.

Using the lessons learned from the adoption of the green purchasing policy at the Regional District, the Regional District will work with other organizations and regional institutions to implement similar programs.

5.8 Triple-Bottom Line Evaluation for Phase 1

Triple bottom line evaluations were undertaken for those programs with a significant financial cost associated with them, or where the impacts of the program could have a noticeable environmental or social benefit. In those cases where the suggested program is primarily related to policy changes or decisions to be made internally by the PRRD, no formal evaluations were performed. Table 3 summarizes the triple bottom line evaluations for those programs that were analyzed.



Table 3: Summary of Triple Bottom Line Evaluations for Phase 1

TRIPLE-BOTTOM LINE CRITERIA	UPGRADE TRANSFER STATIONS	INCENTIVE-BASED TIPPING FEES	IMPLEMENT DISPOSAL BANS	REUSABLE SHOPPING BAG PROGRAM	YARD WASTE COMPOSTING	PRRD GREEN PURCHASING POLICY
Total Capital Cost (\$)	\$576,000	Negligible – no new costs to impose and enforce policy	Negligible – no new costs to impose and enforce policy	Low	\$100,000	Low
Annual Operating Cost (\$)	\$500,000	Negligible – policy enforcement is a part of landfill operations contract responsibilities	Negligible – no new costs to impose and enforce policy	\$2500	\$75,000	Low – incremental over existing levels of expenditure
Operating Cost per tonne	\$177	Negligible	Negligible	\$43	\$31	Low
Approximate Annual Cost per Household	\$19.70/hh	< \$1/hh	< \$1/hh	< \$1/hh	\$3.13/hh	< \$1/hh
Landfill life cycle cost savings (based on \$54/tonne lifecycle cost)	\$37,995	\$252,839	\$190,162	\$3,160	\$133,392	\$3,017
Net Diversion Potential (tonnes)	699	4,654	3,493	58	2,450	56
Greenhouse Gas Reduction Potential in CO ₂ /tonne of material	1,686	n/a	n/a	0	525.1	Negligible
Equivalent to taking this many Honda Civics off the road for 1 year	296	1,719	n/a	0	96	0
Landfill space savings (cubic metres)	1,166	7,757	5,822	97	4,084	93
A volume equal to this many school buses	19.4	129.3	97	1.6	68.1	1.5
Ability to be equitably implemented across region	Medium	Medium	Medium	High	High	High
Accessibility and Convenience	Medium - High	Medium	Medium	High	High	Medium - High



At the end of Phase 1, a foundation would have been laid on which the later phases will be built. A summary of Phase 1 is shown in Figure 5 below.

Figure 5: Summary of Phase 1 Options

