

Appendix D

Costs for Refuse Transfer and Transport to Regional Landfills

	2009	
	WOW	NG&R
WOW Annual MSW	39,610	
Riverbend Self haul (McMinnville)	10,400	
NG&R Annual MSW		54,545
Total MSW tons	50,010	54,545

NG&R Annual Ash 28,486

Alternative #1 MSW to Coffin Butte

	WOW	NG&R
Coffin Butte MSW Tons	50,010	54,545
Construct TS ?	yes	no
TS Compactor ?		no
TS Capital Cost per Ton	\$ 10.98	\$ 7.44
TS Operational Cost per Ton	\$ 21.90	\$ 19.25
Transport Cost per Ton	\$ 13.41	\$ 15.50
Transfer & Transport Cost per Ton	\$ 46.30	\$ 42.19
Landfill Tip Fee Low	\$ 28.00	\$ 28.00
Landfill Tip Fee High	\$ 44.00	\$ 44.00
Landfill Tip Fee Median	\$ 36.00	\$ 36.00
Total Cost per Ton (Low)	\$ 74.30	\$ 70.19
Total Cost per Ton (High)	\$ 90.30	\$ 86.19
Current Disposal Cost (Approx.)	\$ 27.00	\$ 61.56
▲ per Ton (Median)	\$ 55.30	\$ 16.63
Increased Cost per Year	\$ 2,765,426	\$ 907,178

Alternative #2 MSW to Wasco County

	WOW	NG&R	WOW	NG&R
Wasco County MSW Tons	50,010	54,545	50,010	54,545
Construct TS ?	yes	no	yes	no
TS Compactor ?		no	yes	yes
TS Capital Cost per Ton	\$ 10.98	\$ 7.44	\$ 18.19	\$ 14.65
TS Operational Cost per Ton	\$ 21.90	\$ 19.25	\$ 21.90	\$ 19.25
Transport Cost per Ton	\$ 40.62	\$ 31.50	\$ 26.81	\$ 25.59
Transfer & Transport Cost per Ton	\$ 73.50	\$ 58.19	\$ 66.90	\$ 59.49
Landfill Tip Fee Low	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00
Landfill Tip Fee High	\$ 33.00	\$ 33.00	\$ 33.00	\$ 33.00
Landfill Tip Fee Median	\$ 29.00	\$ 29.00	\$ 29.00	\$ 29.00
Total Cost per Ton (Low)	\$ 98.50	\$ 83.19	\$ 91.90	\$ 84.49
Total Cost per Ton (High)	\$ 106.50	\$ 91.19	\$ 99.90	\$ 92.49
Current Disposal Cost (Approx.)	\$ 27.00	\$ 61.56	\$ 27.00	\$ 61.56
▲ per Ton (Median)	\$ 75.50	\$ 25.63	\$ 68.90	\$ 26.93
Increased Cost per Year	\$ 3,775,735	\$ 1,398,020	\$ 3,445,629	\$ 1,469,037

Alternative #3 MSW to Columbia Ridge

	WOW	NG&R	WOW	NG&R
Columbia Ridge MSW Tons	50,010	54,545	50,010	54,545
Construct TS ?	yes	no	yes	no
TS Compactor ?		no	yes	yes
TS Capital Cost per Ton	\$ 10.98	\$ 7.44	\$ 18.19	\$ 14.65
TS Operational Cost per Ton	\$ 21.90	\$ 19.25	\$ 21.90	\$ 19.25
Transport Cost per Ton	\$ 40.91	\$ 37.86	\$ 32.73	\$ 30.33
Transfer & Transport Cost per Ton	\$ 73.80	\$ 64.55	\$ 72.82	\$ 64.23
Landfill Tip Fee Low	\$ 22.00	\$ 22.00	\$ 22.00	\$ 22.00
Landfill Tip Fee High	\$ 33.00	\$ 33.00	\$ 33.00	\$ 33.00
Landfill Tip Fee Median	\$ 27.50	\$ 27.50	\$ 27.50	\$ 27.50
Total Cost per Ton (Low)	\$ 95.80	\$ 86.55	\$ 94.82	\$ 86.23
Total Cost per Ton (High)	\$ 106.80	\$ 97.55	\$ 105.82	\$ 97.23
Current Disposal Cost (Approx.)	\$ 27.00	\$ 61.56	\$ 27.00	\$ 61.56
▲ per Ton (Median)	\$ 74.30	\$ 30.49	\$ 73.32	\$ 30.17
Increased Cost per Year	\$ 3,715,527	\$ 1,663,288	\$ 3,666,766	\$ 1,645,571

Alternative #4 MSW to Regional Disposal

	WOW	NG&R	WOW	NG&R
Regional Disposal MSW Tons	50,010	54,545	50,010	54,545
Construct TS ?	yes	no	yes	no
TS Compactor ?		no	yes	yes
TS Capital Cost per Ton	\$ 10.98	\$ 7.44	\$ 18.19	\$ 14.65
TS Operational Cost per Ton	\$ 21.90	\$ 19.25	\$ 21.90	\$ 19.25
Transport Cost per Ton	\$ 40.98	\$ 39.02	\$ 32.74	\$ 30.29
Transfer & Transport Cost per Ton	\$ 73.87	\$ 65.72	\$ 72.83	\$ 64.19
Landfill Tip Fee Low	\$ 23.00	\$ 23.00	\$ 23.00	\$ 23.00
Landfill Tip Fee High	\$ 34.00	\$ 34.00	\$ 34.00	\$ 34.00
Landfill Tip Fee Median	\$ 28.50	\$ 28.50	\$ 28.50	\$ 28.50
Total Cost per Ton (Low)	\$ 96.87	\$ 88.72	\$ 95.83	\$ 87.19
Total Cost per Ton (High)	\$ 107.87	\$ 99.72	\$ 106.83	\$ 98.19
Current Disposal Cost (Approx.)	\$ 27.00	\$ 61.56	\$ 27.00	\$ 61.56
▲ per Ton (Median)	\$ 75.37	\$ 32.66	\$ 74.33	\$ 31.13
Increased Cost per Year	\$ 3,769,056	\$ 1,781,173	\$ 3,717,386	\$ 1,697,781

Alternative Impacts on Yamhill County Collection Rates

Current Collection Rates

	WOW	WOW	NG&R	NG&R
Residential	McMinnville	YC Suburban	Newberg	Yamhill Cty.
32 gallon cart	\$ 17.90	\$ 16.51	\$ 18.04	\$ 12.84
64 gallon cart	n/a	n/a	\$ 22.19	\$ 16.86
96 gallon cart	\$ 29.83	\$ 27.52	\$ 24.38	\$ 20.50
2 yard x collected once a week	\$ 189.53	\$ 176.63	\$ 128.55	\$ 125.61
2 yard x collected twice a week	\$ 359.06	\$ 333.26	\$ 243.30	\$ 237.71
3 yard x collected once a week	\$ 249.68	\$ 234.56	\$ 183.17	\$ 178.93
4 yard x collected once a week	\$ 309.82	\$ 292.50	\$ 240.55	\$ 235.00

Collection Rates with Alternative #1

32 gallon cart	32 ▲	\$ 3.35	32 ▲	\$ 1.01
64 gallon cart	64 ▲	\$ 6.47	64 ▲	\$ 1.95
96 gallon cart	96 ▲	\$ 8.35	96 ▲	\$ 2.51
2 yard x collected once a week	2x1 ▲	\$ 34.80	2x1 ▲	\$ 10.47
2 yard x collected twice a week	2x2 ▲	\$ 69.60	2x2 ▲	\$ 20.93
3 yard x collected once a week	3x1 ▲	\$ 52.20	3x1 ▲	\$ 15.70
4 yard x collected once a week	4x1 ▲	\$ 69.60	4x1 ▲	\$ 20.93

	WOW	WOW	NG&R	NG&R
Residential	McMinnville	YC Suburban	Newberg	Yamhill Cty.
32 gallon cart	\$ 21.25	\$ 19.86	\$ 19.05	\$ 13.85
64 gallon cart	n/a	n/a	\$ 24.14	\$ 18.81
96 gallon cart	\$ 38.18	\$ 35.87	\$ 26.89	\$ 23.01
Commercial				
2 yard x collected once a week	\$ 224.33	\$ 211.43	\$ 139.02	\$ 136.08
2 yard x collected twice a week	\$ 428.66	\$ 402.86	\$ 264.23	\$ 258.64
3 yard x collected once a week	\$ 301.88	\$ 286.76	\$ 198.87	\$ 194.63
4 yard x collected once a week	\$ 379.42	\$ 362.10	\$ 261.48	\$ 255.93

Collection Rates with Alternative #2

32 gallon cart	32 ▲	\$ 4.18	32 ▲	\$ 1.63
64 gallon cart	64 ▲	\$ 8.07	64 ▲	\$ 3.15
96 gallon cart	96 ▲	\$ 10.41	96 ▲	\$ 4.07
2 yard x collected once a week	2x1 ▲	\$ 43.36	2x1 ▲	\$ 16.95
2 yard x collected twice a week	2x2 ▲	\$ 86.72	2x2 ▲	\$ 33.90
3 yard x collected once a week	3x1 ▲	\$ 65.04	3x1 ▲	\$ 25.43
4 yard x collected once a week	4x1 ▲	\$ 86.72	4x1 ▲	\$ 33.90

Collection Rates with Alternative #2

	WOW	WOW	NG&R	NG&R
Residential	McMinnville	YC Suburban	Newberg	Yamhill Cty.
32 gallon cart	\$ 22.08	\$ 20.69	\$ 19.67	\$ 14.47
64 gallon cart	n/a	n/a	\$ 25.34	\$ 20.01
96 gallon cart	\$ 40.24	\$ 37.93	\$ 28.45	\$ 24.57

Commercial

2 yard x collected once a week	\$ 232.89	\$ 219.99	\$ 145.50	\$ 142.56
2 yard x collected twice a week	\$ 445.78	\$ 419.98	\$ 277.20	\$ 271.61
3 yard x collected once a week	\$ 314.72	\$ 299.60	\$ 208.60	\$ 204.36
4 yard x collected once a week	\$ 396.54	\$ 379.22	\$ 274.45	\$ 268.90

Collection Rates with Alternative #3

32 gallon cart	32 ▲	\$ 4.45	32 ▲	\$ 1.83
64 gallon cart	64 ▲	\$ 8.58	64 ▲	\$ 3.53
96 gallon cart	96 ▲	\$ 11.07	96 ▲	\$ 4.56
2 yard x collected once a week	2x1 ▲	\$ 46.15	2x1 ▲	\$ 18.99
2 yard x collected twice a week	2x2 ▲	\$ 92.29	2x2 ▲	\$ 37.97
3 yard x collected once a week	3x1 ▲	\$ 69.22	3x1 ▲	\$ 28.48
4 yard x collected once a week	4x1 ▲	\$ 92.29	4x1 ▲	\$ 37.97

Collection Rates with Alternative #3

	WOW	WOW	NG&R	NG&R
Residential	McMinnville	YC Suburban	Newberg	Yamhill Cty.
32 gallon cart	\$ 22.35	\$ 20.96	\$ 19.87	\$ 14.67
64 gallon cart	n/a	n/a	\$ 25.72	\$ 20.39
96 gallon cart	\$ 40.90	\$ 38.59	\$ 28.94	\$ 25.06

Commercial

2 yard x collected once a week	\$ 235.68	\$ 222.78	\$ 147.54	\$ 144.60
2 yard x collected twice a week	\$ 451.35	\$ 425.55	\$ 281.27	\$ 275.68
3 yard x collected once a week	\$ 318.90	\$ 303.78	\$ 211.65	\$ 207.41
4 yard x collected once a week	\$ 402.11	\$ 384.79	\$ 278.52	\$ 272.97

Collection Rates with Alternative #4

32 gallon cart	32 ▲	\$ 4.51	32 ▲	\$ 1.89
64 gallon cart	64 ▲	\$ 8.70	64 ▲	\$ 3.64
96 gallon cart	96 ▲	\$ 11.23	96 ▲	\$ 4.70
2 yard x collected once a week	2x1 ▲	\$ 46.78	2x1 ▲	\$ 19.59
2 yard x collected twice a week	2x2 ▲	\$ 93.56	2x2 ▲	\$ 39.18
3 yard x collected once a week	3x1 ▲	\$ 70.17	3x1 ▲	\$ 29.38
4 yard x collected once a week	4x1 ▲	\$ 93.56	4x1 ▲	\$ 39.18

Collection Rates with Alternative #4

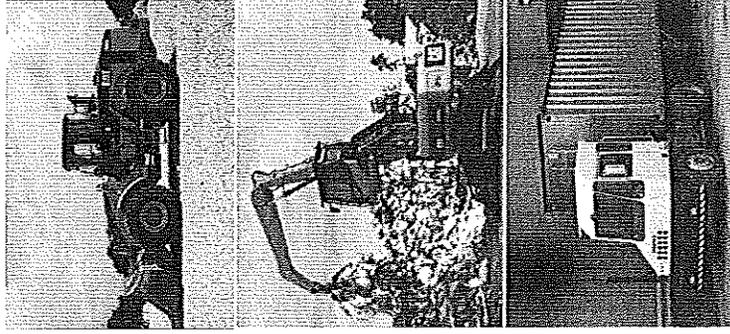
	WOW	WOW	NG&R	NG&R
Residential	McMinnville	YC Suburban	Newberg	Yamhill Cty.
32 gallon cart	\$ 22.41	\$ 21.02	\$ 19.93	\$ 14.73
64 gallon cart	n/a	n/a	\$ 25.83	\$ 20.50
96 gallon cart	\$ 41.06	\$ 38.75	\$ 29.08	\$ 25.20
Commercial				
2 yard x collected once a week	\$ 236.31	\$ 223.41	\$ 148.14	\$ 145.20
2 yard x collected twice a week	\$ 452.62	\$ 426.82	\$ 282.48	\$ 276.89
3 yard x collected once a week	\$ 319.85	\$ 304.73	\$ 212.55	\$ 208.31
4 yard x collected once a week	\$ 403.38	\$ 386.06	\$ 279.73	\$ 274.18

No.	Item	Unit	Quantity	Unit Price	Total Price
Site Work					
	Land	ACRE	10	\$ 100,000	\$ 1,000,000
	Mobilization / Demobilization	LS	1	\$ 45,000	\$ 45,000
	Topsoil Stripping / Storage / Placing	CY	30,000	\$ 5	\$ 150,000
	Earthwork	CY	22,500	\$ 10	\$ 225,000
	Power Supply and Distribution	LS	1	\$ 65,000	\$ 65,000
	Tie Into Existing Utilities	LS	1	\$ 20,000	\$ 20,000
Site Work Subtotal					\$ 1,505,000
Facility (200 x 150) = 40,000 sq ft.					
	Foundation Walls & Pedestals	SF	7,500	\$ 20	\$ 150,000
	Structural Slab	SF	30,000	\$ 15	\$ 450,000
	Gravel Fill and Compaction	SF	30,000	\$ 5	\$ 150,000
	Steel Building and Accessories	SF	30,000	\$ 36	\$ 1,080,000
	Pushwalls	LF	150	\$ 100	\$ 15,000
	Misc. Embedded Steel	LS	1	\$ 50,000	\$ 50,000
	Overhead Doors	LS	8	\$ 3,200	\$ 25,600
Facilities Subtotal					\$ 1,920,600
Mechanical and Electrical					
	Fire Protection	SF	30,000	\$ 3.00	\$ 90,000
	Building Ventilation	SF	30,000	\$ 2.00	\$ 60,000
	Water Distribution	SF	30,000	\$ 2.00	\$ 60,000
	Water Treatment	SF	30,000	\$ 5.00	\$ 150,000
	Lighting & Electrical	SF	30,000	\$ 6.00	\$ 180,000
	Dust Control	SF	30,000	\$ 1.00	\$ 30,000
Mechanical and Electrical Subtotal					\$ 570,000
Total Items					\$ 3,995,600
Contingency @ 25%					\$ 998,900
Build Subtotal					\$ 4,994,500
General Conditions (8% of build)					\$ 399,560
Permitting (2% of build)					\$ 99,890
Insurance and Bonding (3% of build)					\$ 149,835
Inspection and Testing (1% of build)					\$ 49,945
Design Services (10% of build)					\$ 499,450
Facility Construction Grand Total					\$ 6,193,180
				Cost per sq. foot	\$ 206
Annual Cost (20 years @ 5%)					\$490,467
Retrun on Investment					\$58,856
Fixed Cost per SW Ton (40,000 per year)					\$ 10.98
	SSI Compactor		1	\$ 1,100,000	\$ 1,100,000
	Compactor Construction & Engineering		1	\$ 100,000	\$ 100,000
	Compactor Install		1	\$ 150,000	\$ 150,000
Compactor Subtotal					\$ 1,350,000
Annual Cost (10 years @ 5%)					\$171,826
Variable Cost per ton for Compactor (power and R&M)					\$150,000
Return on Investment					\$38,619
Fixed Cost per SW Ton (50,000 per year)					\$ 7.21
Total Cost per Ton					\$ 7.21

TS Operational Data

	Cap/Op Cost	Annual Cost	Req FTEs	Annual Cost	Cost per Ton
Labor Hours to Operate					
Scalehouse attendant		27,500	2	55,000	\$ 1.10
Equipment Operators / Driver		42,000	4	168,000	\$ 3.36
Spotters/laborer		25,000	4	100,000	\$ 2.00
TS Supervisor		60,000	1	60,000	\$ 1.20
Benefits		45%		172,350	\$ 3.45
Total Labor Cost				\$ 555,350	\$ 11.10
Capital Equipment and Operational Costs					
Cat 950H loader	248,000				
Cat 315 DL tracked excavator or Cat 930**	195,000				
Kalmar Ottawa 4X2 (Yard Goat)	105,000				
Loader Operational Cost per Hour	\$ 64	\$ 140,587		\$ 140,587	\$ 2.81
Loader Operation Hours	2,200				
Excavator Operational Cost per Hour	\$ 36	\$ 54,533		\$ 54,533	\$ 1.09
Excavator Operation Hours	1,500				
Yard Goat Operational Cost per Hour	\$ 22	\$ 16,360		\$ 16,360	\$ 0.33
Yard Goat Operation Hours	750				
TS Variable Cost per Ton					
Utilities		\$ 18,000		\$ 18,000	\$ 0.36
Supplies		\$ 15,000		\$ 15,000	\$ 0.30
Building R&M		\$ 20,000		\$ 20,000	\$ 0.40
Insurance		\$ 15,500		\$ 15,500	\$ 0.31
Other Costs		\$ 15,000		\$ 15,000	\$ 0.30
Administrative		\$ 22,000		\$ 22,000	\$ 0.44
Total Cost per Ton		\$ 105,500.00		\$ 105,500	2.11

Total Cost	\$ 977,830	\$ 2.35
Return on Operations	\$ 117,340	\$ 21.90



Description:	Cat 950H Loader	Cat 315 DL	Yard Goat
Date of Acquisition:			
Condition:	New	New	New
Cost:	\$ 248,000	\$ 195,000	\$ 105,000
Unit of Measurement:	Operational Hours	Operational Hours	Operational Hours
Life:	15,400	15,000	10,000
Depreciation:	Straight Line	Straight Line	Straight Line
Buy Back Value:	\$ 49,600	\$ 39,000	\$ 21,000
Per Unit Cost:	\$ 12.88	\$ 10.40	\$ 8.40
Replacement Factor	3.0%	3.0%	3.0%
Estimated life in years	7	7	7
Replacement Cost	\$ 305,009	\$ 239,825	\$ 129,137
Replacement Accrual	\$ 57,009	\$ 44,825	\$ 24,137
Accrual per Unit	\$ 3.70	\$ 2.99	\$ 2.41
Total Per Unit Cost	\$ 16.58	\$ 13.39	\$ 10.81
Fuel Consumption per Hour	12	5	2
Diesel cost per gallon	\$ 3.50	\$ 3.50	\$ 3.50
Fuel cost per hour	\$ 42.00	\$ 17.50	\$ 7.00
Routine Maintenance	\$ 7,500	\$ 4,400	\$ 1,500
Unexpected Repairs	\$ 4,200	\$ 3,800	\$ 1,500
Total R&M Cost	\$ 11,700	\$ 8,200	\$ 3,000
Annual Operational Hours	2,200	1,500	750
R&M Cost per Hour	\$ 5.32	\$ 5.47	\$ 4.00
Total Per Unit of Use Charge	\$ 63.90	\$ 36.36	\$ 21.81

Container Needs Assessment

McMinnville to Arlington, Oregon			
MSW Waste Stream (8 Cont./day)			
Container Handling Activity	Number of Days		
	Optimal	Average	Worst Case
Loading	0.25	0.25	1
Waiting for cars to ship	1	2	4
Transport from McMinnville to Brooklyn Yard	0.5	1	1
Move cars to Fir yard in N. Portland for hook up with Seattle unit train	0.5	1	4
Transport to Columbia Ridge LF	0.5	1	1.5
Unload / Reload at Columbia Ridge LF	1	1	2
Transport empty container back to Portland	0.5	1	1.5
Remove cars from Seattle Unit	0.5	1	1.5
Transport Empty container back to McMinnville via Brooklyn Yard	0.5	1	4
Total No. of Days	5.25	9.25	20.5
Number of containers to be loaded daily	8	8	8
Containers needed for loading during elapsed time	42	74	164
Containers Needed (based on 2 : 1 ratio of active containers enroute)**	84	148	328

Container Needed	84	148	328
Container Price	\$ 9,500	\$ 9,500	\$ 9,500
Cost of Containers	798,000	1,406,000	3,116,000
Interest @ 6% for 10 years	265,132	467,138	1,035,279
Total Cost of Containers	1,063,132	1,873,138	4,151,279
Annual Cost	\$ 106,313	\$ 187,314	\$ 415,128

Additional Equipment			
Container Top Pick	502,000		
Interest @ 6% for 10 years	166,788		
Annual Cost	\$ 66,879		

Rail Head Build Cost

Rail Switch & Signal (limited signal work)	175,000		
Rail Spur (400 feet @ \$200 per ft.)	80,000		
Total Rail Cost	255,000		
Interest @ 6% for 10 years	84,723		
Annual Cost	\$ 33,972		

Total Rail Transport Infrastructure	\$ 1,820,132	\$ 2,630,138	\$ 4,908,279
Annual Infrastructure (10 year life)	\$ 207,164	\$ 288,165	\$ 515,979

Rail Transport Cost per 30 ton container	1,150	1,150	1,150
Fuel Surcharge (\$0.05 per mile)	17	17	17
Total Cost per Container for Waste by Rail	\$ 1,291	\$ 1,291	\$ 1,291

Annual Containers Transported	1,667	1,667	1,667
Annual Transport Cost for Waste by Rail	\$ 2,359,711	\$ 2,440,712	\$ 2,668,526
Cost per Container Transported	\$ 1,416	\$ 1,464	\$ 1,601

Waste by Rail Transport Cost per SW Ton	\$ 47.18	\$ 48.80	\$ 53.36
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-----Original Message-----

From: DKGALT@up.com [mailto:DKGALT@up.com]
Sent: Monday, March 02, 2009 2:59 PM
To: Borghese, John
Cc: EAKREUTZ@up.com
Subject: McMinneville, OR

John in our meeting with the McMinneville landfill manager, he requested a rate to consider shipping "intermodal/garbage train" from the McMinneville, OR landfill site to WM's landfill in Arlington, OR.

WM would like to review the potential of loading waste into containers similar to the "garbage train" concept we currently have at Seattle, WA. (I did not get his card so I did not include him on the email, I apologize).

The potential of utilizing the McMinneville - site - WM to build the rail infrastructure, ability to load "containers" onto well cars, build a 40-60 unit train, to be to be switched by the P&WRR (Portland & Western RR) shortline - and be interchanged to UPRR either at Albany, OR or Portland, OR (Brooklyn yard) and move to Waste Management's landfill in Arlington, OR.

Rate Offer: (This offer is non-binding - as we discussed this is a "rough" estimate) We would need to initiate a "formal" CSP request to determine the operational plan - it the economics, costs, capacity - manpower, locomotives are available and the Western Region - Portland Service Unit would sign off on the project.

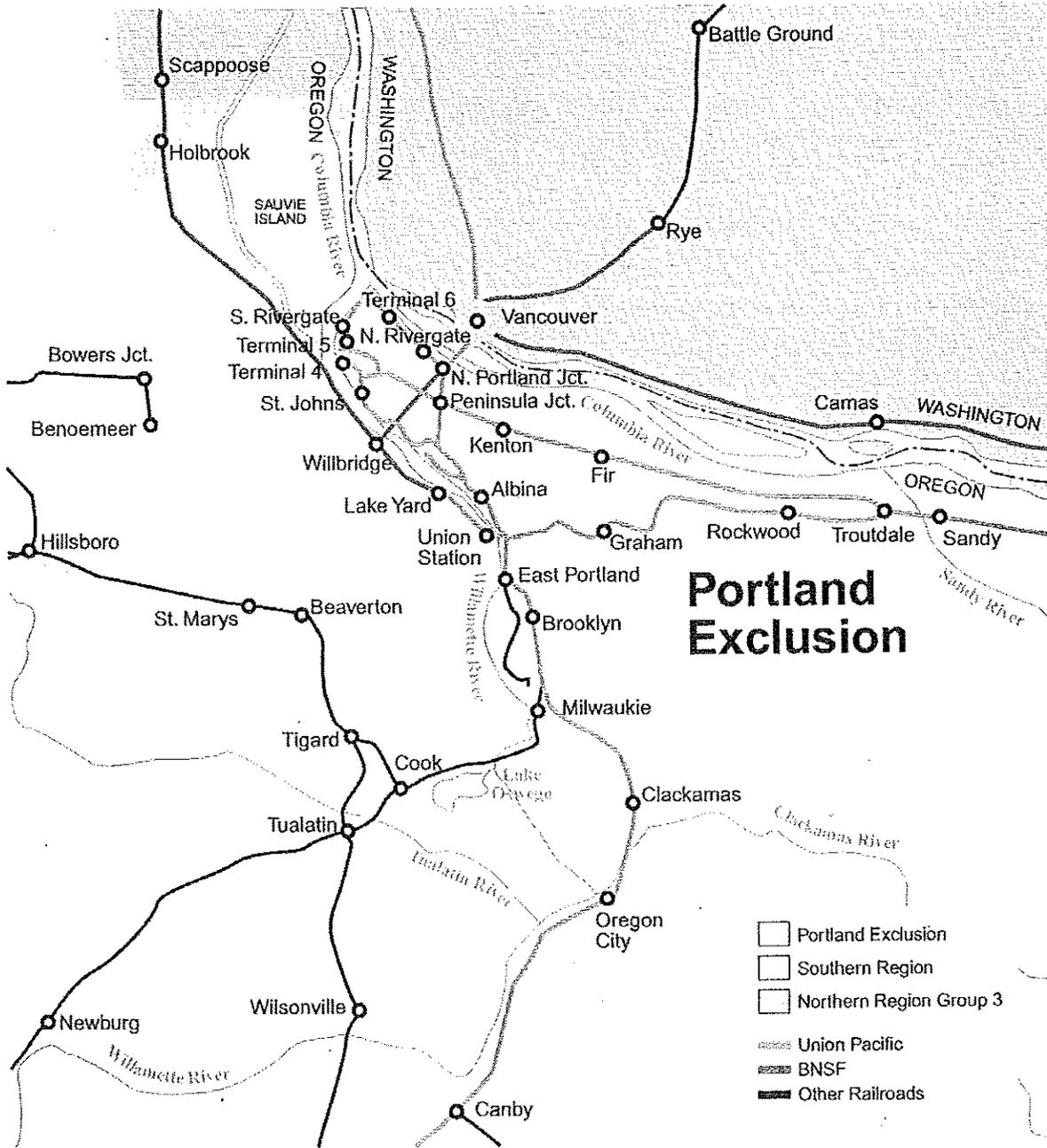
\$1150/container plus fuel
4 container Minimum
ZMPO
Stcc: 4029

Donna Gault
Sr. Business Manager
Union Pacific Railroad
Vancouver, WA 98684
Telephone: New Telephone Effective 8/01/08 503-249-2726 Fax: 402-501-3019
Cell: 360-607-6254 e-mail: dkgault@up.com

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**

Portland Area Detail



Transportation Model

Origin Location	McMinnville
Destination	Corvallis, Oregon
Miles (one way)	38
Average Miles per Hour (from tabl	45
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,168
Average Tons per Trip	24
Compacted / Uncompacted Loads	Uncompacted
Daily Tons	160
Loads per day	7
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	1.69
Total Time per Trip	2.52
Total Driver Hours per Day	17
Annual Loads from the T/S	2,052

Labor Assumptions

Driver Daily Shift Hours	8
Daily Shifts	1
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	3
Annual Labor Hours	5,219
Annual Required FTEs	2.51
FTE per Shift	2.13

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	
Fuel MPG	5.0
Diesel Cost per Gallon	4.00
Repair & Maintenance	
Truck Cost per Mile	0.15
Trailer Cost per Mile	0.13

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	104,452	\$ 50.90	\$ 2.12	\$ 0.67
Trailers	91,887	\$ 44.78	\$ 1.87	\$ 0.59
Labor	163,721	\$ 79.79	\$ 3.32	\$ 1.05
Fuel	124,758	\$ 60.80	\$ 2.53	\$ 0.80
R&M	43,665	\$ 21.28	\$ 0.89	\$ 0.28
Insurance	20,000	\$ 9.75	\$ 0.41	\$ 0.13
License & Fees	37,416	\$ 18.23	\$ 0.76	\$ 0.24
G&A	14,847	\$ 7.14	\$ 0.30	\$ 0.09
Profit	60,055	\$ 29.27	\$ 1.22	\$ 0.39
Total	660,601	\$ 321.94	\$ 13.41	\$ 4.24

Contract Life in Years

Equipment Cost

Required FTE & Truck Quantity	4.00
Required Trailer Quantity	5
Tractor Make and Model	Kenworth T-800
Number of Trucks in the Fleet	4.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 133,000
Federal Excise Tax @ 12%	\$ 15,960
Sales Tax	\$ -
Vehicle Cost	\$ 148,960
Interest Expense @ 7 years	\$ 33,832
Total Truck Financed Cost	\$ 182,792

tipper

Tractor Make and Model	tipper
Number of Tractors in the Fleet	4.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 78,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$ -
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	150%

Total Truck Expense	\$ 731,166
Total Trailer Expense	\$ 643,206
Total Capital Expense	\$ 1,374,373

Licenses & Taxes

State Highway Use Tax	
State	
Rate per mile	Oregon 0.15
State Annual Registration (per truck)	\$ 2,800
Federal Highway Use Tax (per truck)	\$ 550
Local Tolls (per roundtrip)	\$ -
Insurance (per truck per year)	\$ 5,000
Annual Insurance	\$ 20,000

Transportation Model

Origin Location	McMinnville
Destination	The Dalles, Oregon
Miles (one way)	140
Average Miles per Hour (from table)	50
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,168
Average Tons per Trip	24
Compacted / Uncompacted Loads	Uncompacted
Daily Tons	160
Loads per day	7
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	5.60
Total Time per Trip	6.43
Total Driver Hours per Day	43
Annual Loads from the T/S	2,052

Labor Assumptions

Driver Daily Shift Hours	12
Daily Shifts	1
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	1
Annual Labor Hours	13,201
Annual Required FTEs	6.35
FTE per Shift	3.58

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	
Fuel MPG	5.0
Diesel Cost per Gallon	\$ 4.00
Repair & Maintenance	
Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Life in Years

Equipment Cost

Required FTE & Truck Quantity	10.00
Required Trailer Quantity	16
Tractor Make and Model	Kenworth T-800
Number of Trucks in the Fleet	10.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 133,000
Federal Excise Tax @ 12%	\$ 15,960
Sales Tax	\$ -
Vehicle Cost	\$ 148,960
Interest Expense @ 7 years	\$ 33,832
Total Truck Financed Cost	\$ 182,792

Trailer Make and Model

Number of Trailers in the Fleet	10.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 78,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$ -
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	200%

Total Truck Expense	\$ 1,827,916
Total Trailer Expense	\$ 2,144,022
Total Capital Expense	\$ 3,971,937

Licenses & Taxes

State Highway Use Tax	Oregon	\$ 0.15
Rate per mile	State	\$ 2,800
State Annual Registration (per truck)		\$ 550
Federal Highway Use Tax (per truck)		\$ -
Local Tolls (per roundtrip)		\$ 5,000
Insurance (per truck per year)		\$ 50,000
Annual Insurance		\$ -

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	261,131 \$	127.26 \$	5.30 \$	0.45 \$
Trailers	306,289 \$	149.27 \$	6.22 \$	0.53 \$
Labor	414,118 \$	201.82 \$	8.41 \$	0.72 \$
Fuel	469,633 \$	224.00 \$	9.33 \$	0.80 \$
R&M	160,872 \$	78.40 \$	3.27 \$	0.28 \$
Insurance	50,000 \$	24.37 \$	1.02 \$	0.09 \$
License & Fees	121,979 \$	59.45 \$	2.48 \$	0.21 \$
G&A	44,351 \$	21.61 \$	0.90 \$	0.08 \$
Profit	181,837 \$	88.62 \$	3.69 \$	0.32 \$
Total	2,000,210 \$	974.79 \$	40.62 \$	3.48 \$

Transportation Model

Origin Location: McMinnville
 Destination: The Dalles, Oregon
 Miles (one way): 140
 Average Miles per Hour (from tabl): 50
 Workdays per Week: 6
 Annual Workdays: 307
 Monthly Tons through the T/S: 4,168
 Average Tons per Trip: 30
 Compacted / Uncompacted Loads: Compacted
 Daily Tons: 160
 Loads per day: 5
 Average Loading Time: 20
 Average Unloading Time: 30
 Average Roundtrip Time: 5.60
 Total Time per Trip: 6.43
 Total Driver Hours per Day: 35
 Annual Loads from the T/S: 1,642

Labor Assumptions

Driver Daily Shift Hours: 8
 Daily Shifts: 2
 Driver Annual Wage: \$ 45,000
 Loaded Driver Percentage: 145%
 Average Trips per Daily Shift: 1
 Annual Labor Hours: 10,745
 Annual Required FTEs: 5.17
 FTE per Shift: 2.19

Operational Assumptions

SG&A Overhead Percentage: 2.5%
 (SG&A is Mgmt / Admin / Dispatch)
 Profit Margin Percentage: 10%
 Interest Rate: 6.00%
 Fuel Cost: \$ 5.00
 Fuel MPG: 4.00
 Diesel Cost per Gallon: \$ 4.00
Repair & Maintenance
 Truck Cost per Mile: \$ 0.15
 Trailer Cost per Mile: \$ 0.13

Contract Life in Years

Equipment Cost: Kenworth T-800
 Required FTE & Truck Quantity: 4.00
 Required Trailer Quantity: 6
 Number of Trucks in the Fleet: 4.00
 Useful Life (Financed): 7
 Salvage Percentage: 0%
 Price: \$ 133,000
 Federal Excise Tax @ 12%: \$ 15,960
 Sales Tax: \$ -
 Vehicle Cost: \$ 148,960
 Interest Expense @ 7 years: \$ 33,832
 Total Truck Financed Cost: \$ 182,792

tipper

Number of Tractors in the Fleet: 4.00
 Useful Life (Financed): 7
 Salvage Percentage: 0%
 Price: \$ 82,000
 Federal Excise Tax @ 12%: \$ 9,840
 Sales Tax: \$ -
 Trailer Cost: \$ 91,840
 Interest Expense @ 7 years: \$ 20,859
 Total Trailer Financed Cost: \$ 112,699
 Tractor to Trailer Ratio: 200%

Total Truck Expense: \$ 731,166
 Total Trailer Expense: \$ 901,589
 Total Capital Expense: \$ 1,632,755

Licenses & Taxes

State Highway Use Tax: Oregon \$ 0.15
 Rate per mile: \$ 2,800
 State Annual Registration (per truck): \$ 550
 Federal Highway Use Tax (per truck): \$ -
 Local Tolls (per roundtrip): \$ -
 Insurance (per truck per year): \$ 5,000
 Annual Insurance: \$ 20,000

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	104,452	\$ 63.63	\$ 2.12	\$ 0.23
Trailers	128,798	\$ 78.46	\$ 2.62	\$ 0.28
Labor	337,073	\$ 205.84	\$ 6.84	\$ 0.73
Fuel	367,707	\$ 224.00	\$ 7.47	\$ 0.80
R&M	128,687	\$ 78.40	\$ 2.61	\$ 0.28
Insurance	20,000	\$ 12.18	\$ 0.41	\$ 0.04
License & Fees	84,184	\$ 51.28	\$ 1.71	\$ 0.18
G&A	29,273	\$ 17.83	\$ 0.59	\$ 0.06
Profit	-120,018	\$ -73.11	\$ -2.44	\$ -0.26
Total	1,320,202	\$ 804.24	\$ 26.81	\$ 2.87

Transportation Model

Origin Location	McMinnville
Destination	Arlington, Oregon
Miles (one way)	184
Average Miles per Hour (from table)	50
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,168
Average Tons per Trip	24
Compacted / Uncompacted Loads	Uncompacted
Daily Tons	160
Loads per day	7
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	7.36
Total Time per Trip	8.19
Total Driver Hours per Day	55
Annual Loads from the T/S	2,052

Labor Assumptions

Driver Daily Shift Hours	9
Daily Shifts	2
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	1
Annual Labor Hours	16,885
Annual Required FTEs	8.12
FTE per Shift	3.06

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	5.0
Fuel MPG	4.00
Diesel Cost per Gallon	\$
Repair & Maintenance	\$
Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Life in Years

Equipment Cost

Required FTE & Truck Quantity	5.00	8
Required Trailer Quantity		
Tractor Make and Model	Kenworth T-800	
Number of Trucks in the Fleet	5.00	
Useful Life (Financed)	7	
Salvage Percentage	0%	
Price	\$ 133,000	
Federal Excise Tax @ 12%	\$ 15,960	
Sales Tax	\$	
Vehicle Cost	\$ 148,960	
Interest Expense @ 7 years	\$ 33,832	
Total Truck Financed Cost	\$ 182,792	

tipper

Number of Tractors in the Fleet	5.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 78,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	200%

Total Truck Expense	\$ 913,958
Total Trailer Expense	\$ 1,072,011
Total Capital Expense	\$ 1,985,969

Licenses & Taxes

State Highway Use Tax	
State	
Rate per mile	Oregon \$ 0.15
State Annual Registration (per truck)	\$ 2,800
Federal Highway Use Tax (per truck)	\$ 550
Local Tolls (per roundtrip)	\$
Insurance (per truck per year)	\$ 5,000
Annual Insurance	\$ 25,000

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	130,565	63.63	\$ 2.65	\$ 0.17
Trailers	153,144	74.63	\$ 3.11	\$ 0.20
Labor	529,566	258.14	\$ 10.76	\$ 0.70
Fuel	604,090	294.40	\$ 12.27	\$ 0.80
R&M	211,431	103.04	\$ 4.29	\$ 0.28
Insurance	25,000	12.18	\$ 0.51	\$ 0.03
License & Fees	133,037	64.84	\$ 2.70	\$ 0.18
G&A	44,674	21.77	\$ 0.91	\$ 0.06
Profit	183,163	89.26	\$ 3.72	\$ 0.24
Total	2,014,790	981.90	\$ 40.91	\$ 2.67

Transportation Model

Origin Location	McMinnville
Destination	Arlington, Oregon
Miles (one way)	184
Average Miles per Hour (from table)	50
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,168
Average Tons per Trip	30
Compacted / Uncompacted Loads	Compacted
Daily Tons	160
Loads per day	5
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	7.36
Total Time per Trip	8.19
Total Driver Hours per Day	44
Annual Loads from the T/S	1,642

Labor Assumptions

Driver Daily Shift Hours	9
Daily Shifts	2
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	1
Annual Labor Hours	13,508
Annual Required FTEs	6.49
FTE per Shift	2.44

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	
Fuel MPG	5.0
Diesel Cost per Gallon	\$ 4.00
Repair & Maintenance	
Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Cost	Annual Trucking		Cost per Ton	Cost per Mile
	Costs	Roundtrip		
Trucks	104,452 \$	63.63 \$	2.12 \$	0.17 \$
Trailers	122,516 \$	74.63 \$	2.49 \$	0.20 \$
Labor	423,749 \$	258.14 \$	8.60 \$	0.70 \$
Fuel	483,272 \$	294.40 \$	9.81 \$	0.80 \$
R&M	169,145 \$	103.04 \$	3.43 \$	0.28 \$
Insurance	20,000 \$	12.18 \$	0.41 \$	0.03 \$
License & Fees	106,430 \$	64.84 \$	2.16 \$	0.18 \$
G&A	35,739 \$	21.77 \$	0.73 \$	0.06 \$
Profit	146,550 \$	89.26 \$	2.98 \$	0.24 \$
Total	1,611,832 \$	981.90 \$	32.73 \$	2.67 \$

Contract Life in Years

Equipment Cost	4.00
Required FTE & Truck Quantity	6
Required Trailer Quantity	6

Tractor Make and Model

Number of Trucks in the Fleet	Kenworth T-800
Useful Life (Financed)	4.00
Salvage Percentage	0%
Price	\$ 133,000
Federal Excise Tax @ 12%	\$ 15,960
Sales Tax	\$ -
Vehicle Cost	\$ 148,960
Interest Expense @ 7 years	\$ 33,832
Total Truck Financed Cost	\$ 182,792

Trailer Make and Model

Number of Trailers in the Fleet	tipper
Useful Life (Financed)	4.00
Salvage Percentage	0%
Price	\$ 78,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$ -
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	200%

Total Truck Expense	\$ 731,166
Total Trailer Expense	\$ 857,609
Total Capital Expense	\$ 1,588,775

Licenses & Taxes

State Highway Use Tax	
State	
Rate per mile	Oregon \$ 0.15
State Annual Registration (per truck)	\$ 2,800
Federal Highway Use Tax (per truck)	\$ 550
Local Tolls (per roundtrip)	\$ -
Insurance (per truck per year)	\$ 5,000
Annual Insurance	\$ 20,000

Transportation Model

Origin Location McMinnville
 Destination Roosevelt, WA
 Miles (one way) 177
 Average Miles per Hour (from table) 45
 Workdays per Week 6
 Annual Workdays 307
 Monthly Tons through the T/S 4,168
 Average Tons per Trip 24
 Compacted / Uncompacted Loads Uncompacted
 Daily Tons 160
 Loads per day 7
 Average Loading Time 20
 Average Unloading Time 30
 Average Roundtrip Time 7.87
 Total Time per Trip 8.70
 Total Driver Hours per Day 59
 Annual Loads from the T/S 2,052

Labor Assumptions
 Driver Daily Shift Hours 9
 Daily Shifts 2
 Driver Annual Wage \$ 45,000
 Loaded Driver Percentage 145%
 Average Trips per Daily Shift 1
 Annual Labor Hours 18,113
 Annual Required FTEs 8.71
 FTE per Shift 3.28

Operational Assumptions
 SG&A Overhead Percentage 2.5%
 (SG&A is Mgmt. / Admin. / Dispatch)
 Profit Margin Percentage 10%
 Interest Rate 6.00%
 Fuel Cost 5.0
 Fuel MPG 4.00
 Diesel Cost per Gallon \$
 Repair & Maintenance \$
 Truck Cost per Mile \$ 0.15
 Trailer Cost per Mile \$ 0.13

Contract Life in Years

Equipment Cost
 Required FTE & Truck Quantity 5.00
 Required Trailer Quantity 8

Kenworth T-800
 Number of Trucks in the Fleet 5.00
 Salvage Percentage 0%
 Price \$ 133,000
 Federal Excise Tax @ 12% \$ 15,960
 Sales Tax \$
 Vehicle Cost \$ 148,960
 Interest Expense @ 7 years \$ 33,832
 Total Truck Financed Cost \$ 182,792

tipper
 Number of Tractors in the Fleet 5.00
 Salvage Percentage 0%
 Price \$ 78,000
 Federal Excise Tax @ 12% \$ 9,360
 Sales Tax \$
 Trailer Cost \$ 87,360
 Interest Expense @ 7 years \$ 19,841
 Total Trailer Financed Cost \$ 107,201
 Tractor to Trailer Ratio 200%

Total Truck Expense \$ 913,958
 Total Trailer Expense \$ 1,072,011
 Total Capital Expense \$ 1,985,969

Licenses & Taxes
 State Highway Use Tax Oregon \$ 0.15
 State Rate per mile \$ 2,800
 State Annual Registration (per truck) \$ 550
 Federal Highway Use Tax (per truck) \$
 Local Tolls (per roundtrip) \$ 5,000
 Insurance (per truck per year) \$ 25,000
 Annual Insurance \$

Contract Cost	Annual Trucking Costs		Cost per Ton	Cost per Mile
	Costs	Roundtrip		
Trucks	130,565	63.63	\$ 2.65	\$ 0.18
Trailers	153,144	74.63	\$ 3.11	\$ 0.21
Labor	568,208	276.91	\$ 11.54	\$ 0.78
Fuel	581,108	283.20	\$ 11.80	\$ 0.80
R&M	203,388	99.12	\$ 4.13	\$ 0.28
Insurance	25,000	12.18	\$ 0.51	\$ 0.03
License & Fees	128,613	62.68	\$ 2.61	\$ 0.18
G&A	44,751	21.81	\$ 0.91	\$ 0.06
Profit	183,473	89.42	\$ 3.73	\$ 0.25
Total	2,018,256	983.59	\$ 40.98	\$ 2.78

Transportation Model

Origin Location McMinnville
 Destination Roosevelt, WA
 Miles (one way) 177
 Average Miles per Hour (from tabl 45
 Workdays per Week 6
 Annual Workdays 307
 Monthly Tons through the T/S 4,168
 Average Tons per Trip 30
 Compacted / Uncompacted Loads
 Daily Tons 160
 Loads per day 5
 Average Loading Time 20
 Average Unloading Time 30
 Average Roundtrip Time 7.87
 Total Time per Trip 8.70
 Total Driver Hours per Day 47
 Annual Loads from the T/S 1,642

Labor Assumptions
 Driver Daily Shift Hours 9
 Daily Shifts 2
 Driver Annual Wage \$ 45,000
 Loaded Driver Percentage 145%
 Average Trips per Daily Shift 1
 Annual Labor Hours 14,429
 Annual Required FTEs 6.94
 FTE per Shift 2.61

Operational Assumptions

SG&A Overhead Percentage 2.5%
 (SG&A is Mgmt / Admin / Dispatch)
 Profit Margin Percentage 10%
 Interest Rate 6.00%
 Fuel Cost 5.0
 Fuel MPG 4.00
 Diesel Cost per Gallon \$
Repair & Maintenance
 Truck Cost per Mile \$ 0.15
 Trailer Cost per Mile \$ 0.13

Contract Life in Years

Equipment Cost 7
 Required FTE & Truck Quantity 4.00
 Required Trailer Quantity 6
 Tractor Make and Model Kenworth T-800
 Number of Trucks in the Fleet 4.00
 Useful Life (Financed) 7
 Salvage Percentage 0%
 Price \$ 133,000
 Federal Excise Tax @ 12% \$ 15,960
 Sales Tax \$
 Vehicle Cost \$ 148,960
 Interest Expense @ 7 years \$ 33,832
 Total Truck Financed Cost \$ 182,792

Trailer Make and Model tipper
 Number of Tractors in the Fleet 4.00
 Useful Life (Financed) 7
 Salvage Percentage 0%
 Price \$ 78,000
 Federal Excise Tax @ 12% \$ 9,360
 Sales Tax \$
 Trailer Cost \$ 87,360
 Interest Expense @ 7 years \$ 19,841
 Total Trailer Financed Cost \$ 107,201
 Tractor to Trailer Ratio 200%

Total Truck Expense \$ 731,166
 Total Trailer Expense \$ 857,609
 Total Capital Expense \$ 1,588,775

Licenses & Taxes

State Highway Use Tax State
 Rate per mile Oregon 0.15
 State Annual Registration (per truck) \$ 2,800
 Federal Highway Use Tax (per truck) \$ 550
 Local Tolls (per roundtrip) \$
 Insurance (per truck per year) \$ 5,000
 Annual Insurance \$ 20,000

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	104,452 \$	63.63 \$	2.12 \$	0.18 \$
Trailers	122,516 \$	74.63 \$	2.49 \$	0.21 \$
Labor	452,641 \$	275.74 \$	9.19 \$	0.78 \$
Fuel	484,888 \$	283.20 \$	9.44 \$	0.80 \$
R&M	162,710 \$	99.12 \$	3.30 \$	0.28 \$
Insurance	20,000 \$	12.18 \$	0.41 \$	0.03 \$
Licenses & Fees	102,891 \$	62.68 \$	2.09 \$	0.18 \$
G&A	35,752 \$	21.78 \$	0.73 \$	0.06 \$
Profit	146,585 \$	89.30 \$	2.98 \$	0.25 \$
Total	1,612,433 \$	982.26 \$	32.74 \$	2.77 \$

Transportation Model

Origin Location	Newberg
Destination	Corvallis, Oregon
Miles (one way)	52
Average Miles per Hour (from table)	45
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,545
Average Tons per Trip	24
Compacted / Uncompacted Loads	Uncompacted
Daily Tons	175
Loads per day	7
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	2.31
Total Time per Trip	3.14
Total Driver Hours per Day	23
Annual Loads from the T/S	2,238

Labor Assumptions

Driver Daily Shift Hours	10
Daily Shifts	1
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	3
Annual Labor Hours	7,061
Annual Required FTEs	3.39
FTE per Shift	2.30

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	
Fuel MPG	5.0
Diesel Cost per Gallon	4.00
Repair & Maintenance	
Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Life in Years

Equipment Cost	4.00
Required FTE & Truck Quantity	5
Required Trailer Quantity	
Tractor Make and Model	Kenworth T-800
Number of Trucks in the Fleet	4.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 133,000
Federal Excise Tax @ 12%	\$ 15,960
Sales Tax	\$ -
Vehicle Cost	\$ 148,960
Interest Expense @ 7 years	\$ 33,832
Total Truck Financed Cost	\$ 182,792

tipper

Trailer Make and Model	4.00
Number of Trailers in the Fleet	7
Useful Life (Financed)	0%
Salvage Percentage	\$ 78,000
Price	\$ 9,360
Federal Excise Tax @ 12%	\$ -
Sales Tax	\$ 87,360
Trailer Cost	\$ 19,841
Interest Expense @ 7 years	\$ 107,201
Total Trailer Financed Cost	\$ 150%

Total Truck Expense	\$ 731,166
Total Trailer Expense	\$ 643,206
Total Capital Expense	\$ 1,374,373

Licenses & Taxes

State Highway Use Tax	
State	Oregon 0.15
Rate per mile	\$ 0.15
State Annual Registration (per truck)	\$ 2,800
Federal Highway Use Tax (per truck)	\$ 550
Local Tolls (per roundtrip)	\$ -
Insurance (per truck per year)	\$ 5,000
Annual Insurance	\$ 20,000

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	104,452 \$	46.67 \$	1.94 \$	0.45 \$
Trailers	91,887 \$	41.06 \$	1.71 \$	0.39 \$
Labor	221,505 \$	98.97 \$	4.12 \$	0.95 \$
Fuel	186,202 \$	83.20 \$	3.47 \$	0.80 \$
R&M	65,171 \$	29.12 \$	1.21 \$	0.28 \$
Insurance	20,000 \$	8.94 \$	0.37 \$	0.09 \$
License & Fees	48,244 \$	22.00 \$	0.92 \$	0.21 \$
G&A	18,462 \$	8.25 \$	0.34 \$	0.08 \$
Profit	75,692 \$	33.82 \$	1.41 \$	0.33 \$
Total	832,615 \$	372.03 \$	15.50 \$	3.58 \$

Transportation Model

Origin Location Newberg
 Destination The Dalles, Oregon
 Miles (one way) 126
 Average Miles per Hour (from tabl 50
 Workdays per Week 6
 Annual Workdays 307
 Monthly Tons through the T/S 4,545
 Average Tons per Trip 24
 Compacted / Uncompacted Loads Uncompacted
 Daily Tons 175
 Loads per day 7
 Average Loading Time 20
 Average Unloading Time 30
 Average Roundtrip Time 5.04
 Total Time per Trip 5.87
 Total Driver Hours per Day 43
 Annual Loads from the T/S 2,238

Labor Assumptions

Driver Daily Shift Hours 8
 Daily Shifts 2
 Driver Annual Wage \$ 45,000
 Loaded Driver Percentage 145%
 Average Trips per Daily Shift 1
 Annual Labor Hours 13,201
 Annual Required FTEs 6.35
 FTE per Shift 2.69

Operational Assumptions

SG&A Overhead Percentage 2.5%
 (SG&A is Mgmt / Admin / Dispatch)
 Profit Margin Percentage 10%
 Interest Rate 6.00%
 Fuel Cost 5.0
 Diesel Cost per Gallon \$ 4.00
 Repair & Maintenance \$ 0.15
 Truck Cost per Mile \$ 0.13
 Trailer Cost per Mile

Contract Life in Years

Equipment Cost 7
 Required FTE & Truck Quantity 6.00
 Required Trailer Quantity 10

Tractor Make and Model Kenworth T-800
 Number of Trucks in the Fleet 6.00
 Useful Life (Financed) 7
 Salvage Percentage 0%
 Price \$ 133,000
 Federal Excise Tax @ 12% \$ 15,960
 Sales Tax \$ -
 Vehicle Cost \$ 148,960
 Interest Expense @ 7 years \$ 33,832
 Total Truck Financed Cost \$ 182,792

Trailer Make and Model tipper
 Number of Tractors in the Fleet 6.00
 Useful Life (Financed) 7
 Salvage Percentage 0%
 Price \$ 78,000
 Federal Excise Tax @ 12% \$ 9,360
 Sales Tax \$ -
 Trailer Cost \$ 87,360
 Interest Expense @ 7 years \$ 19,841
 Total Trailer Financed Cost \$ 107,201
 Tractor to Trailer Ratio 200%

Total Truck Expense \$ 1,096,749
 Total Trailer Expense \$ 1,286,413
 Total Capital Expense \$ 2,383,162

Licenses & Taxes

State Highway Use Tax Oregon 0.15
 State Rate per mile \$ 2,800
 State Annual Registration (per truck) \$ 550
 Federal Highway Use Tax (per truck) \$ 5,000
 Local Tolls (per roundtrip) \$ -
 Insurance (per truck per year) \$ 30,000
 Annual Insurance

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	156,678 \$	70.01 \$	2.92 \$	0.28 \$
Trailers	183,773 \$	82.11 \$	3.42 \$	0.33 \$
Labor	414,118 \$	185.04 \$	7.71 \$	0.73 \$
Fuel	451,182 \$	201.60 \$	8.40 \$	0.80 \$
R&M	157,914 \$	70.56 \$	2.94 \$	0.28 \$
Insurance	30,000 \$	13.40 \$	0.56 \$	0.05 \$
Licenses & Fees	106,953 \$	47.79 \$	1.99 \$	0.19 \$
G&A	37,515 \$	16.76 \$	0.70 \$	0.07 \$
Profit	153,813 \$	68.73 \$	2.86 \$	0.27 \$
Total	1,697,948 \$	756.01 \$	31.50 \$	3.00 \$

Transportation Model

Origin Location	Newberg
Destination	The Dalles, Oregon
Miles (one way)	126
Average Miles per Hour (from tabl	50
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,545
Average Tons per Trip	30
Compacted / Uncompacted Loads	Compacted
Daily Tons	175
Loads per day	6
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	5.04
Total Time per Trip	5.87
Total Driver Hours per Day	35
Annual Loads from the T/S	1,790

Labor Assumptions

Driver Daily Shift Hours	8
Daily Shifts	2
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	1
Annual Labor Hours	10,745
Annual Required FTEs	5.17
FTE per Shift	2.19

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	
Fuel MPG	5.0
Diesel Cost per Gallon	\$ 4.00
Repair & Maintenance	
Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	130,565 \$	72.93 \$	2.43 \$	0.29 \$
Trailers	153,144 \$	85.54 \$	2.85 \$	0.34 \$
Labor	337,073 \$	188.27 \$	6.28 \$	0.75 \$
Fuel	360,946 \$	201.60 \$	6.72 \$	0.80 \$
R&M	126,331 \$	70.56 \$	2.35 \$	0.28 \$
Insurance	25,000 \$	13.96 \$	0.47 \$	0.06 \$
License & Fees	86,232 \$	48.16 \$	1.61 \$	0.19 \$
G&A	30,482 \$	17.03 \$	0.57 \$	0.07 \$
Profit	124,977 \$	69.80 \$	2.33 \$	0.28 \$
Total	1,374,751 \$	767.84 \$	25.59 \$	3.05 \$

Contract Life in Years

Equipment Cost	7
Required FTE & Truck Quantity	5.00
Required Trailer Quantity	8

Tractor Make and Model	Kenworth T-800
Number of Trucks in the Fleet	5.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 133,000
Federal Excise Tax @ 12%	\$ 15,960
Sales Tax	\$ -
Vehicle Cost	\$ 148,960
Interest Expense @ 7 years	\$ 33,832
Total Truck Financed Cost	\$ 182,792

tipper

Trailer Make and Model	tipper
Number of Tractors in the Fleet	5.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 76,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$ -
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	200%

Total Truck Expense	\$ 913,958
Total Trailer Expense	\$ 1,072,011
Total Capital Expense	\$ 1,985,969

Licenses & Taxes

State Highway Use Tax	
State	
Rate per mile	Oregon 0.15
State Annual Registration (per truck)	\$ 2,800
Federal Highway Use Tax (per truck)	\$ 550
Local Tolls (per roundtrip)	\$ -
Insurance (per truck per year)	\$ 5,000
Annual Insurance	\$ 25,000

Transportation Model

Origin Location	Newberg
Destination	Arlington, Oregon
Miles (one way)	170
Average Miles per Hour (from table)	50
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,545
Average Tons per Trip	24
Compacted / Uncompacted Loads	Uncompacted
Daily Tons	175
Loads per day	7
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	6.80
Total Time per Trip	7.63
Total Driver Hours per Day	56
Annual Loads from the T/S	2,238

Labor Assumptions

Driver Daily Shift Hours	8
Daily Shifts	2
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	1
Annual Labor Hours	17,192
Annual Required FTEs	8.27
FTE per Shift	3.50

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	\$ 5.0
Diesel Cost per Gallon	\$ 4.00
Repair & Maintenance Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Life in Years

Equipment Cost

Required FTE & Truck Quantity	5.00
Required Trailer Quantity	10
Tractor Make and Model	Kenworth T-800
Number of Trucks in the Fleet	5.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 133,000
Federal Excise Tax @ 12%	\$ 15,960
Sales Tax	\$ -
Vehicle Cost	\$ 148,960
Interest Expense @ 7 years	\$ 33,832
Total Truck Financed Cost	\$ 182,792

Trailer Make and Model

Number of Trailers in the Fleet	5.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 78,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$ -
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	200%

Total Truck Expense	\$ 913,958
Total Trailer Expense	\$ 1,072,011
Total Capital Expense	\$ 1,985,969

Licenses & Taxes

State Highway Use Tax	Oregon	0.15
Rate per mile	\$	2,800
State Annual Registration (per truck)	\$	550
Federal Highway Use Tax (per truck)	\$	-
Local Tolls (per roundtrip)	\$	5,000
Insurance (per truck per year)	\$	25,000
Annual Insurance	\$	

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	130,565 \$	58.34 \$	2.43 \$	0.17 \$
Trailers	153,144 \$	68.43 \$	2.85 \$	0.20 \$
Labor	539,316 \$	240.98 \$	10.04 \$	0.71 \$
Fuel	608,738 \$	272.00 \$	11.33 \$	0.80 \$
R&M	213,058 \$	95.20 \$	3.97 \$	0.28 \$
Insurance	25,000 \$	11.17 \$	0.47 \$	0.03 \$
Licenses & Fees	133,932 \$	59.84 \$	2.49 \$	0.18 \$
G&A	45,094 \$	20.15 \$	0.84 \$	0.06 \$
Profit	184,885 \$	82.61 \$	3.44 \$	0.24 \$
Total	2,033,734 \$	908.72 \$	37.86 \$	2.67

Transportation Model

Origin Location	Newberg
Destination	Arlington, Oregon
Miles (one way)	170
Average Miles per Hour (from table)	50
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,545
Average Tons per Trip	30
Compacted / Uncompacted Loads	Compacted
Daily Tons	175
Loads per day	8
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	6.80
Total Time per Trip	7.63
Total Driver Hours per Day	45
Annual Loads from the T/S	1,790

Labor Assumptions

Driver Daily Shift Hours	8
Daily Shifts	2
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	1
Annual Labor Hours	13,815
Annual Required FTEs	6.64
FTE per Shift	2.81

Operational Assumptions

SG&A Overhead Percentage (SG&A is Mgmt / Admin / Dispatch)	2.5%
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	
Fuel MPG	5.0
Diesel Cost per Gallon	\$ 4.00
Repair & Maintenance	
Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Life in Years

Equipment Cost

Required FTE & Truck Quantity	4.00	8
Required Trailer Quantity		
Tractor Make and Model	Kenworth T-800	
Number of Trucks in the Fleet	4.00	
Useful Life (Financed)	7	
Salvage Percentage	0%	
Price	\$ 133,000	
Federal Excise Tax @ 12%	\$ 15,960	
Sales Tax	\$ -	
Vehicle Cost	\$ 148,960	
Interest Expense @ 7 years	\$ 33,832	
Total Truck Financed Cost	\$ 182,792	

Trailer Make and Model

Number of Tractors in the Fleet	4.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 78,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$ -
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	200%

Total Truck Expense	\$ 731,166
Total Trailer Expense	\$ 857,609
Total Capital Expense	\$ 1,588,775

Licenses & Taxes

State Highway Use Tax	
State	Oregon
Rate per mile	\$ 0.15
State Annual Registration (per truck)	\$ 2,800
Federal Highway Use Tax (per truck)	\$ 550
Local Tolls (per roundtrip)	\$ -
Insurance (per truck per year)	\$ 5,000
Annual Insurance	\$ 20,000

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	104,452 \$	58.34 \$	1.94 \$	0.17 \$
Trailers	122,516 \$	68.43 \$	2.28 \$	0.20 \$
Labor	430,379 \$	242.06 \$	8.07 \$	0.71 \$
Fuel	486,991 \$	272.00 \$	9.07 \$	0.80 \$
R&M	170,447 \$	95.20 \$	3.17 \$	0.28 \$
Insurance	20,000 \$	11.17 \$	0.37 \$	0.03 \$
License & Fees	107,146 \$	59.84 \$	1.99 \$	0.18 \$
G&A	36,123 \$	20.18 \$	0.67 \$	0.06 \$
Profit	148,105 \$	82.72 \$	2.75 \$	0.24 \$
Total	1,629,159 \$	909.94 \$	30.33 \$	2.68 \$

Transportation Model

Origin Location Newberg
 Destination Roosevelt, WA
 Miles (one way) 163
 Average Miles per Hour (from tabl 45
 Workdays per Week 6
 Annual Workdays 307
 Monthly Tons through the T/S 4,545
 Average Tons per Trip 24
 Compacted / Uncompacted Loads Uncompacted
 Daily Tons 175
 Loads per day 7
 Average Loading Time 20
 Average Unloading Time 30
 Average Roundtrip Time 7.24
 Total Time per Trip 8.08
 Total Driver Hours per Day 59
 Annual Loads from the T/S 2,238

Labor Assumptions
 Driver Daily Shift Hours 9
 Daily Shifts 2
 Driver Annual Wage \$ 45,000
 Loaded Driver Percentage 145%
 Average Trips per Daily Shift 1
 Annual Labor Hours 18,113
 Annual Required FTEs 8.71
 FTE per Shift 3.28

Operational Assumptions
 SG&A Overhead Percentage 2.5%
 (SG&A is Mgmt / Admin / Dispatch)
 Profit Margin Percentage 10%
 Interest Rate 6.00%
 Fuel Cost \$ 5.0
 Diesel Cost per Gallon 4.00
Repair & Maintenance
 Truck Cost per Mile \$ 0.15
 Trailer Cost per Mile \$ 0.13

Contract Life in Years

Equipment Cost
 Required FTE & Truck Quantity 6.00
 Required Trailer Quantity 10
 Tractor Make and Model Kenworth T-800
 Number of Trucks in the Fleet 6.00
 Useful Life (Financed) 7
 Salvage Percentage 0%
 Price \$ 133,000
 Federal Excise Tax @ 12% \$ 15,960
 Sales Tax \$ 148,960
 Vehicle Cost \$ 33,832
 Interest Expense @ 7 years \$ 182,792
 Total Truck Financed Cost \$

tipper
 Number of Tractors in the Fleet 6.00
 Useful Life (Financed) 7
 Salvage Percentage 0%
 Price \$ 78,000
 Federal Excise Tax @ 12% \$ 9,360
 Sales Tax \$ 87,360
 Trailer Cost \$ 19,841
 Interest Expense @ 7 years \$ 107,201
 Total Trailer Financed Cost \$ 200%
 Tractor to Trailer Ratio

Total Truck Expense \$ 1,096,749
 Total Trailer Expense \$ 1,286,413
 Total Capital Expense \$ 2,383,162

Licenses & Taxes
 State Highway Use Tax Oregon \$ 0.15
 State Rate per mile \$ 2,800
 State Annual Registration (per truck) \$ 550
 Federal Highway Use Tax (per truck) \$ -
 Local Tolls (per roundtrip) \$ 5,000
 Insurance (per truck per year) \$ 30,000
 Annual Insurance

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	156,678 \$	70.01 \$	2.92 \$	0.21
Trailers	183,773 \$	82.11 \$	3.42 \$	0.25
Labor	568,208 \$	253.69 \$	10.58 \$	0.78
Fuel	583,673 \$	260.80 \$	10.87 \$	0.80
R&M	204,285 \$	91.28 \$	3.80 \$	0.28
Insurance	30,000 \$	13.40 \$	0.56 \$	0.04
License & Fees	132,457 \$	59.19 \$	2.47 \$	0.18
G&A	46,477 \$	20.77 \$	0.87 \$	0.06
Profit	190,555 \$	85.14 \$	3.55 \$	0.26
Total	2,096,707 \$	936.59 \$	39.02 \$	2.87

Transportation Model

Origin Location	Newberg
Destination	Roosevelt, WA
Miles (one way)	163
Average Miles per Hour (from tabl)	45
Workdays per Week	6
Annual Workdays	307
Monthly Tons through the T/S	4,545
Average Tons per Trip	30
Compacted / Uncompacted Loads	Compacted
Daily Tons	175
Loads per day	6
Average Loading Time	20
Average Unloading Time	30
Average Roundtrip Time	7.24
Total Time per Trip	8.08
Total Driver Hours per Day	48
Annual Loads from the T/S	1,790

Labor Assumptions	
Driver Daily Shift Hours	9
Daily Shifts	2
Driver Annual Wage	\$ 45,000
Loaded Driver Percentage	145%
Average Trips per Daily Shift	1
Annual Labor Hours	14,736
Annual Required FTEs	7.08
FTE per Shift	2.67

Operational Assumptions

SG&A Overhead Percentage	2.5%
(SG&A is Mgmt / Admin / Dispatch)	
Profit Margin Percentage	10%
Interest Rate	6.00%
Fuel Cost	
Fuel MPG	5.0
Diesel Cost per Gallon	\$ 4.00
Repair & Maintenance	
Truck Cost per Mile	\$ 0.15
Trailer Cost per Mile	\$ 0.13

Contract Life in Years

Equipment Cost	
Required FTE & Truck Quantity	4.00
Required Trailer Quantity	8
Tractor Make and Model	Kenworth T-800
Number of Trucks in the Fleet	4.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 133,000
Federal Excise Tax @ 12%	\$ 15,960
Sales Tax	\$ -
Vehicle Cost	\$ 148,960
Interest Expense @ 7 years	\$ 33,832
Total Truck Financed Cost	\$ 182,792

Trailer Make and Model	tipper
Number of Tractors in the Fleet	4.00
Useful Life (Financed)	7
Salvage Percentage	0%
Price	\$ 78,000
Federal Excise Tax @ 12%	\$ 9,360
Sales Tax	\$ -
Trailer Cost	\$ 87,360
Interest Expense @ 7 years	\$ 19,841
Total Trailer Financed Cost	\$ 107,201
Tractor to Trailer Ratio	200%

Total Truck Expense	\$ 731,166
Total Trailer Expense	\$ 857,609
Total Capital Expense	\$ 1,588,775

Licenses & Taxes

State Highway Use Tax	
State	
Rate per mile	\$ 0.15
State Annual Registration (per truck)	\$ 2,800
Federal Highway Use Tax (per truck)	\$ 550
Local Tolls (per roundtrip)	\$ -
Insurance (per truck per year)	\$ 5,000
Annual Insurance	\$ 20,000

Contract Cost	Annual Trucking Costs	Cost per Roundtrip	Cost per Ton	Cost per Mile
Trucks	104,452 \$	58.34 \$	1.94 \$	0.18
Trailers	122,516 \$	68.43 \$	2.28 \$	0.21
Labor	462,271 \$	258.19 \$	8.61 \$	0.79
Fuel	466,938 \$	260.80 \$	8.69 \$	0.80
R&M	163,428 \$	91.28 \$	3.04 \$	0.28
Insurance	20,000 \$	11.17 \$	0.37 \$	0.03
License & Fees	103,286 \$	57.69 \$	1.92 \$	0.18
G&A	36,072 \$	20.15 \$	0.67 \$	0.06
Profit	147,896 \$	82.60 \$	2.75 \$	0.25
Total	1,626,860 \$	908.65 \$	30.29 \$	2.79

Appendix E

**Communication from
Waste Management, Inc.**



RIVERBEND LANDFILL CO., INC.

13469 SW Highway 18
McMinnville, OR 97128
(503) 472-8788
(503) 434-9770 Fax

July 15, 2009

Richard Hertzberg
Chris Bell
Zia Engineering and Environmental
Consultants
1700 Woodland Terrace
Lake Oswego, OR 97034

Re: Comments on JR Miller and Associates' alternatives analysis for Yamhill County

Dear Richard and Chris:

You have asked members of the public to provide you with any hard evidence that the facts or assumptions contained in the County's earlier analysis, conducted by JR Miller and Associates, are wrong or need to be revised. There are several conclusions in the JR Miller report that I believe are in error.

First, the JR Miller report erroneously concludes that the transportation of solid waste by rail to eastern Oregon will reduce overall disposal costs. Specifically, pages 5 and 6 of the report contain the following language with respect to Wasco County Landfill and Columbia Ridge Landfill:

One option for decreasing transportation cost would be to haul by rail. The WOW facility is located adjacent to a rail siding. To implement rail haul the initial capital costs would increase to install track and to purchase containers. However, transportation cost would be reduced if rail transportation were used.

As part of our determination that expansion of the Riverbend Landfill is the best option for the County's disposal of solid waste, we looked into the cost of shipping waste by rail to Columbia Ridge Landfill. Waste Management has experience with shipping waste by rail, so we are familiar with the circumstances that can make that transportation option feasible.

As a result of our investigation, and as confirmed by a representative of Union Pacific, we have determined that rail shipment of Yamhill County's solid waste is more expensive than long-haul by truck, contrary to the conclusion in the JR Miller report. Specifically, Union Pacific has estimated that the cost of shipping Yamhill County's solid waste to the Columbia Ridge Landfill would be approximately \$1150 per container, with an average container able to hold 26 tons of

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waste. This estimate results in a transportation cost of \$44 per ton, which does not include costs for additional containers or infrastructure that would be required to operate a rail-haul facility. In contrast, the JR Miller report identified the cost of long-haul trucking to Columbia Ridge Landfill as \$24 per ton, much less than the transportation cost of rail. I have included with this letter an email from Union Pacific describing in more detail the difficulties of transporting Yamhill County's solid waste by rail.

Second, the JR Miller report concludes that Yamhill County can establish a long-term contract with Coffin Butte Landfill that results in lower overall disposal costs. Page 4 of the report states:

Coffin Butte has a published disposal rate of \$44/ton tipping fee but assuming a long-term contract can be established the disposal rate may range from \$25/ton (in 2008 \$).

The JR Miller report provides no basis for the conclusion that Yamhill County can obtain a disposal rate that is almost half of the published gate rate at Coffin Butte Landfill. Further, the report provides no basis for using a negotiated rate at Coffin Butte Landfill while using the published gate rate at all other landfills considered in the analysis.

There is no identifiable reason for Coffin Butte Landfill to offer a discount to Yamhill County, especially in the event that Riverbend Landfill is no longer operational and able to compete with Coffin Butte Landfill. The JR Miller report ought to be revised to reflect this reality. At a minimum, the JR Miller report ought to rely on published gate rates for all alternative disposal sites so that the analysis of those alternative sites will be a consistent one.

Third, the JR Miller report assumes \$10/ton to operate a transfer station and 20-years for servicing the debt associated with the transfer station. Based on general operating knowledge of similar solid waste facilities I believe that the operating costs when factoring the cost of capital and an acceptable margin of 10% appear rather low and may be not realistic, especially in these current economic times.

Fourth, the JR Miller report may understate the capital investment needs for transportation (specifically containers) if material is being hauled to a distant facility such as Columbia Ridge or Wasco Landfills. Generally for every container being used in a day two more would be in motion actively transporting the waste.

Thank you for the opportunity to provide these comments.

Sincerely,



George Duvendack
Riverbend District Manager

July 15, 2009
Page 3

cc: Sherrie Mathison, Yamhill County Solid Waste
Enclosure