

This dynamic excel-based tool is intended to be used in conjunction with the technical me: Data, to help the City of Valdez understand the return on investment over time for the deve dock within South Harbor. Since there are so many variables and choices involved in these allows variables, such as lease agreement elements, to be changed and new ROIs calculate

	Private Construction/ Private Operation	Public Construction/ Private Operation
Total Costs (40 years)	\$ 302,010	\$ 3,569,625
Total Revenue (40 years)	\$ 3,047,466	\$ 3,197,414
ROI 10 years	13.8	0.3
ROI 20 years	12.4	0.5
ROI 40 years	10.1	0.9

	Private Construction/ Private Operation	Public Construction/ Private Operation
Total Costs (20 years)	\$ 128,917	\$ 3,328,491
Total Revenue (20 years)	\$ 1,599,919	\$ 1,599,919
ROI 10 years	13.8	0.3
ROI 20 years	12.4	0.5
ROI 40 years	10.1	0.9

Developed by Rain Coast Data

mo from Rain Coast
elopment of a new fuel
: calculations, this tool
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Public Construction/ Public Operation	
\$	10,960,374
\$	22,928,461
	1.3
	1.8
	2.1

Public Construction/ Public Operation	
\$	6,483,321
\$	11,958,719
	1.3
	1.8
	2.1

	40 Years	20 Years
Total Capital Costs	\$0	\$0
Total O&M Costs	\$0	\$0
Total Labor Costs	\$302,010	\$128,917
Total Fuel Revenue	\$2,747,466	\$1,442,419
Total Lease Revenue	\$300,000	\$157,500
Residual Value	\$0	\$0

ROI 10 years	13.77
ROI 20 years	12.41
ROI 40 years	10.09

Year	Costs to COV	
	Capital Costs	O&M
2021		
2022		
2023		
2024		
2025		
2026		
2027		
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2061
2062

Totals:

\$0.00

\$0.00

Fuel Wharfage	\$0.04
Volume	1,717,166
Tideland value	\$25,000
Upland value	\$50,000
Tideland rate	10%
Upland rate	10%
Annual Wage increase	2%

Benefits to COV

Labor	fuel revenue	Residual Value	Lease revenue
\$5,000	\$68,687		\$7,500
\$5,100	\$68,687		\$7,500
\$5,202	\$68,687		\$7,500
\$5,306	\$68,687		\$7,500
\$5,412	\$68,687		\$7,500
\$5,520	\$68,687		\$7,500
\$5,631	\$68,687		\$7,500
\$5,743	\$68,687		\$7,500
\$5,858	\$68,687		\$7,500
\$5,975	\$68,687		\$7,500
\$6,095	\$68,687		\$7,500
\$6,217	\$68,687		\$7,500
\$6,341	\$68,687		\$7,500
\$6,468	\$68,687		\$7,500
\$6,597	\$68,687		\$7,500
\$6,729	\$68,687		\$7,500
\$6,864	\$68,687		\$7,500
\$7,001	\$68,687		\$7,500
\$7,141	\$68,687		\$7,500
\$7,284	\$68,687		\$7,500
\$7,430	\$68,687		\$7,500
\$7,578	\$68,687		\$7,500
\$7,730	\$68,687		\$7,500
\$7,884	\$68,687		\$7,500
\$8,042	\$68,687		\$7,500
\$8,203	\$68,687		\$7,500

\$8,367	\$68,687	\$7,500
\$8,534	\$68,687	\$7,500
\$8,705	\$68,687	\$7,500
\$8,879	\$68,687	\$7,500
\$9,057	\$68,687	\$7,500
\$9,238	\$68,687	\$7,500
\$9,423	\$68,687	\$7,500
\$9,611	\$68,687	\$7,500
\$9,803	\$68,687	\$7,500
\$9,999	\$68,687	\$7,500
\$10,199	\$68,687	\$7,500
\$10,403	\$68,687	\$7,500
\$10,611	\$68,687	\$7,500
\$10,824	\$68,687	\$7,500
\$302,009.92	\$2,747,465.60	\$0.00 \$300,000.00

	40 Years	20 Years
Total Costs	\$302,010	\$128,917
Total Revenue	\$3,047,466	\$1,599,919

	40 years	20 Years
Total Capital Costs	\$3,061,924	\$3,061,924
Total O&M Costs	\$205,691	\$137,650
Total Labor Costs	\$302,010	\$128,917
Total Fuel Revenue	\$2,747,466	\$1,442,419
Total Lease Revenue	\$300,000	\$157,500
Residual Value	\$149,948	

ROI 10 years	0.26
ROI 20 years	0.48
ROI 40 years	0.90

Year	Costs to COV	
	Capital Costs	O&M
2021	\$1,874,697.32	
2022	\$1,187,226.52	
2023		
2024		
2025		
2026		
2027		\$31,645.06
2028		
2029		
2030		
2031		
2032		\$27,297.31
2033		
2034		
2035		
2036		
2037		\$58,396.31
2038		
2039		
2040		
2041		
2042		\$20,311.76
2043		
2044		
2045		
2046		
2047		\$17,521.10
2048		

2049		
2050		
2051		
2052		\$37,482.37
2053		
2054		
2055		
2056		
2057		\$13,037.35
2058		
2059		
2060		
2061		
2062		

Totals:	\$3,061,923.83	\$205,691.25
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Fuel Wharfage	\$0.04
Gallons	1,717,166
Tideland value	\$25,000
Upland value	\$50,000
Tideland rate	10%
Upland rate	10%
Annual wage increase	2%

Benefits to COV

Labor	fuel revenue	Residual Value	Lease revenue
\$5,000	\$68,687		\$7,500
\$5,100	\$68,687		\$7,500
\$5,202	\$68,687		\$7,500
\$5,306	\$68,687		\$7,500
\$5,412	\$68,687		\$7,500
\$5,520	\$68,687		\$7,500
\$5,631	\$68,687		\$7,500
\$5,743	\$68,687		\$7,500
\$5,858	\$68,687		\$7,500
\$5,975	\$68,687		\$7,500
\$6,095	\$68,687		\$7,500
\$6,217	\$68,687		\$7,500
\$6,341	\$68,687		\$7,500
\$6,468	\$68,687		\$7,500
\$6,597	\$68,687		\$7,500
\$6,729	\$68,687		\$7,500
\$6,864	\$68,687		\$7,500
\$7,001	\$68,687		\$7,500
\$7,141	\$68,687		\$7,500
\$7,284	\$68,687		\$7,500
\$7,430	\$68,687		\$7,500
\$7,578	\$68,687		\$7,500
\$7,730	\$68,687		\$7,500
\$7,884	\$68,687		\$7,500
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\$8,705	\$68,687		\$7,500
\$8,879	\$68,687		\$7,500
\$9,057	\$68,687		\$7,500
\$9,238	\$68,687		\$7,500
\$9,423	\$68,687		\$7,500
\$9,611	\$68,687		\$7,500
\$9,803	\$68,687		\$7,500
\$9,999	\$68,687		\$7,500
\$10,199	\$68,687		\$7,500
\$10,403	\$68,687		\$7,500
\$10,611	\$68,687		\$7,500
\$10,824	\$68,687	\$149,948	\$7,500
\$302,010	\$2,747,466	\$149,948	\$300,000

	40 Years	20 Years
Total Costs	\$3,569,625	\$3,328,491
Total Revenue	\$3,197,414	\$1,599,919

	40 Years	20 Years
Total Capital Costs	\$3,061,924	\$3,061,924
Total O&M Costs	\$205,691	\$137,650
Total Labor Costs	\$7,692,759	\$3,283,747
Total Fuel Revenue	\$21,693,822	\$11,389,256
Total Retail Revenue	\$1,084,691	\$569,463
Residual Value	\$149,948	

ROI 10 years	1.34
ROI 20 years	1.84
ROI 40 years	2.09

Year	Costs to COV	
	Capital Costs	O&M
2021	\$1,874,697	
2022	\$1,187,227	
2023		
2024		
2025		
2026		
2027		\$31,645.06
2028		
2029		
2030		
2031		
2032		\$27,297.31
2033		
2034		
2035		
2036		
2037		\$58,396.31
2038		
2039		
2040		
2041		
2042		\$20,311.76
2043		
2044		
2045		
2046		
2047		\$17,521.10
2048		

2049		
2050		
2051		
2052		\$37,482.37
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2057		\$13,037.35
2058		
2059		
2060		
2061		
2062		

Totals:	\$3,061,923.83	\$205,691.25
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Fuel Markup (10-25%)	15.0%
Diesel in Gallons	1,619,104
Wholesale Diesel Price	\$2.10
Gasoline in Gallons	98,062
Gasoline Price	\$2.27
Wage increases	2%
Retail as a percent of revenue	5%

Benefits to COV

Labor	fuel revenue	Residual Value	Retail
\$ 127,359	\$542,346		\$27,117
\$ 129,907	\$542,346		\$27,117
\$ 132,505	\$542,346		\$27,117
\$ 135,155	\$542,346		\$27,117
\$ 137,858	\$542,346		\$27,117
\$ 140,615	\$542,346		\$27,117
\$ 143,427	\$542,346		\$27,117
\$ 146,296	\$542,346		\$27,117
\$ 149,222	\$542,346		\$27,117
\$ 152,206	\$542,346		\$27,117
\$ 155,250	\$542,346		\$27,117
\$ 158,355	\$542,346		\$27,117
\$ 161,522	\$542,346		\$27,117
\$ 164,753	\$542,346		\$27,117
\$ 168,048	\$542,346		\$27,117
\$ 171,409	\$542,346		\$27,117
\$ 174,837	\$542,346		\$27,117
\$ 178,334	\$542,346		\$27,117
\$ 181,901	\$542,346		\$27,117
\$ 185,539	\$542,346		\$27,117
\$ 189,249	\$542,346		\$27,117
\$ 193,034	\$542,346		\$27,117
\$ 196,895	\$542,346		\$27,117
\$ 200,833	\$542,346		\$27,117
\$ 204,850	\$542,346		\$27,117
\$ 208,947	\$542,346		\$27,117

\$ 213,125	\$542,346		\$27,117
\$ 217,388	\$542,346		\$27,117
\$ 221,736	\$542,346		\$27,117
\$ 226,170	\$542,346		\$27,117
\$ 230,694	\$542,346		\$27,117
\$ 235,308	\$542,346		\$27,117
\$ 240,014	\$542,346		\$27,117
\$ 244,814	\$542,346		\$27,117
\$ 249,710	\$542,346		\$27,117
\$ 254,705	\$542,346		\$27,117
\$ 259,799	\$542,346		\$27,117
\$ 264,995	\$542,346		\$27,117
\$ 270,295	\$542,346		\$27,117
\$ 275,701	\$542,346	\$149,948	\$27,117
\$7,692,758.83	\$21,693,822	\$149,948	\$1,084,691

	40 Years	20 Years
Total Costs	\$10,960,374	\$6,483,321
Total Revenue	\$22,928,461	\$11,958,719

- * One time permitting fees pulled out from the total project cost; not recurring, and assumed to be included
- * Capital Costs assumed to be spread over two years of construction

		1/2 * capital cost
One-time permitting + support (from R&M estimate)	\$651,854	
Capital Cost	\$2,445,686.63	\$1,222,843.32

urred during year 1

Total Capital Cost: \$2,445,687

	Maintenance
	Construction Completed
operational in 2022	2022
maintenance	2027
	2032
	2037
	2042
	2047
	2052
	2057
replacement in 2062	2062

1.5% of capital cost every 5 years and 3.72% of ca

Life Cycle Costs

Years since completion	O&M
5 \$	31,645
10 \$	27,297
15 \$	58,396
20 \$	20,312
25 \$	17,521
30 \$	37,482
35 \$	13,037
40	
\$	205,691

Capital cost every 15 years

	fully loaded wage, benefit, and employee costs	hours	# workers
	71850	1950	1
seasonal	20	37.5	4

*wage used was median of range provided to Rain Coast.

#weeks	# months	annually
	12	67359.375
4	5	60000

Residual Value = $[(U-Y)/U]$ *total project cost

\$489,137.33