

APPENDIX F

TRANSPORTATION

**Table F-1 Port of Anchorage Traffic Model
Data Sheet 1**

Year	2003	2005	2008	2010	2015	2020	2025
Truck Traffic							
Number of Containers by Truck	208,797	219,759	207,649	216,370	239,089	264,193	291,933
Number of Auto Trailers per Year	3,586	3,774	3,963	4,129	4,562	5,042	5,571
Days per Year of Operations	312	312	312	312	312	312	312
Percentage of Two Way Trucks	33%	33%	33%	33%	33%	33%	33%
Percent of Empty Trucks	3%	3%	3%	3%	3%	3%	3%
Peak Week Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Peak Day Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Peak Hour Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Annual Truck Trips	277,700	292,279	280,135	291,901	322,550	356,418	393,842
Average Daily Truck Trips	891	937	898	936	1,034	1,143	1,263
Peak Daily Truck Trips	1,229	1,293	1,240	1,292	1,427	1,577	1,742
Rail Traffic							
Number of Boxes by Rail	0	0	23,072	24,041	26,565	29,355	32,437
Percent Export	50%	50%	50%	50%	50%	50%	50%
Percent Import	50%	50%	50%	50%	50%	50%	50%
Export Boxes	0	0	11,536	12,021	13,283	14,677	16,219
Import Boxes	0	0	11,536	12,021	13,283	14,677	16,219
Boxes per Rail Car (80 feet)	2	2	2	2	2	2	2
Length of Train (in feet)	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Number of Cars per Train	50	50	50	50	50	50	50
Number of Boxes per Train	100	100	100	100	100	100	100
Inbound Trains (Exports)	0	0	115	120	133	147	162
Outbound Trains (Imports)	0	0	115	120	133	147	162
Additional Equipment Trains	0	0	0	0	0	0	0
Total Annual Trains	0	0	231	240	266	294	324
Days per Year of Operations	312	312	312	312	312	312	312
Average Daily Train Trips	0	0	1	1	1	1	2
Auto Traffic							
Days per Week of Gate Operations	6	6	6	6	6	6	6
Total Number of On-POA Employees	389	410	429	474	523	578	638
Auto Trips per Employee	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Average Weekday Traffic	973	1,024	1,074	1,186	1,309	1,445	1,595
Total Peak Hour Directional Traffic							
Autos (15% of AWDT)	146	154	161	178	196	217	239
Trucks (5% of AWDT)	45	47	45	47	52	57	63
Total One-way Directional Peak Hour	191	200	206	225	248	274	302
% Trucks	30.5%	30.5%	27.9%	26.3%	26.3%	26.4%	26.4%

AWDT = Average Weekday Daily Traffic

**Table F-2 Port of Anchorage Traffic Model
Data Sheet 2**

Year	2003	2005	2008	2010	2015	2020	2025
Cement Traffic							
Tons per Year	145,000	152,613	160,225	166,954	184,485	203,856	225,260
Times per Year	6	6	6	7	7	8	9
Avg Load	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Trains per Avg Load	2	2	2	2	2	2	2
Trains per Year	12	12	13	13	15	16	18
Avg Train Load	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Amount Shipped By Truck per Load	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Avg Truck Load	20	20	20	20	20	20	21
Number of Trucks per Load	550	550	550	550	550	550	550
Annual Truck Trips	3,190	3,357	3,525	3,673	4,059	4,485	4,956
Work Days	312	312	312	312	312	312	313
Avg Cement Trucks per day	10	11	11	12	13	14	16
Yard Equipment							
Avg Yard Hustlers	25	25	25	25	25	25	25
Avg Vessel Call Time	10	10	10	10	10	10	10
Yard Hustler Hours per Call	250	250	250	250	250	250	250
Yard Hustler Hours per Year	59,500	62,750	65,770	68,532	75,728	83,680	92,466
Container Cranes							
Container Cranes	3	3	3	3	3	3	3
Container Crane Hours per Call	8	8	8	8	8	8	8
Ship Calls Requiring Cranes	136	143	150	156	173	191	211
Hours of Crane Operation per Year	3,256	3,434	3,599	3,750	4,144	4,579	5,060
Break-Bulk Shipments							
Tons per Year	5,591	5,885	6,178	6,438	7,113	7,860	8,686
Tons per Truck	20	20	20	20	20	20	20
Trucks per Year	280	294	309	322	356	393	434
Total Truck Trips per Year	559	589	618	644	711	786	869
Trucks per Working Day	2	2	2	2	2	3	3
POL Shipments							
Tons per Year	2,583,580	2,719,218	2,854,856	2,974,760	3,287,110	3,632,256	4,013,643
Avg Tons per Ship	13,527	13,527	13,527	13,527	13,527	13,527	13,527
POL Ships	191	201	211	220	243	269	297
Ship Calls							
Container Ships	238	251	263	274	303	335	370
Avg. Loads/Call	877	876	877	877	877	877	877
Cement Ships	6	6	6	7	7	8	9
POL Ships	191	201	211	220	243	269	297
Cruise Ships	7	7	8	8	9	10	11
Miscellaneous Vessels	49	49	54	56	62	69	76
Total Vessel Calls	491	514	542	565	625	690	763

**Table F-3 Port of Anchorage Traffic Model
Summary Sheet**

Year	2003	2005	2008	2010	2015	2020	2025
Input							
Containers (Year)	208,797	219,759	230,721	240,411	265,654	293,548	324,370
Cement (Tons per Year)	145,000	152,613	160,225	166,954	184,485	203,856	225,260
Autos (Units per Year)	28,688	30,194	31,700	33,032	36,500	40,332	44,567
Modal Splits							
Truck	100.0%	100.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Rail	0.0%	0.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Transshipment	0%	0%	0%	0%	0%	0%	0%
Number of Containers Moved By:							
Truck	208,797	219,759	207,649	216,370	239,089	264,193	291,933
Rail	0	0	23,072	24,041	26,565	29,355	32,437
Transshipped	0	0	0	0	0	0	0
Autos per Trailer	8	8	8	8	8	8	8
Auto Trailers per Year	3,586	3,774	3,963	4,129	4,562	5,042	5,571
Port Workers							
Port Workers	21	22	23	26	28	31	34
Rail Staff	10	11	11	12	13	15	16
Port Staff	158	166	174	193	213	235	259
Tenant Staff	200	211	221	244	269	297	328
Output: Port Generated Traffic							
Average Weekday Traffic (Total)	1,864	1,910	1,972	2,122	2,343	2,588	2,858
Average Weekday Auto	973	973	1,074	1,186	1,309	1,445	1,595
Average Daily Truck	891	937	898	936	1,034	1,143	1,263
Percent Trucks	47.8%	49.1%	45.5%	44.1%	44.1%	44.2%	44.2%
Peak Day Truck	1,229	1,293	1,240	1,292	1,427	1,577	1,742
Daily Number of Train Movements	0	0	1	1	1	1	2

APPENDIX G

SOCIOECONOMICS

APPENDIX G SOCIOECONOMICS

This appendix presents the detailed input data, assumptions, and detailed results of the economic impact analysis, both for construction activities associated with the Project, and for POA operations with and without the Project.

Analysis was facilitated by the MARAD-sponsored Port Economic Kit¹, hereafter referred to as the model. Briefly, the model incorporates input-output analysis to estimate the overall economic effects of operations and capital expenditures at ports located in the United States. The model includes specific industrial structure information for various regions of the nation, including Alaska. All model results presented in this appendix are specific to Alaska.

Construction Impact Analysis

To analyze the effects of construction spending, it was necessary to translate construction costs to capital expenditure categories specified in the model. The specific categories (and abbreviations) employed are presented in the Table G-1.

Table G-1 MARAD Port Kit Capital Expenditure Categories Used to Allocate Port of Anchorage Construction Costs	
<i>Spending Category : Subcategory</i>	<i>Abbreviation¹</i>
Site Preparation : Demolition	Demolition
Dredging : Channel Deepening	Dredging
Site Preparation : Fill	Fill
Site Preparation : Paving	Paving
Bulkheads/Dockside/Berths work	B/D/B work
Equipment : Yard and Gate Lighting	YG lights
Equipment : Plugs/outlets for reefer containers/trailers	Plugs, etc
Structures : Administration buildings	Admin Building
Structures : Sheds and warehouses	Sheds/W.
On- and near-dock rail terminals (inc. yards, track)	Rail Yard
Services (including overhead, insurance, engineering, architecture, and contingency)	Services
<i>Note: ¹ These abbreviations appear in many tables throughout this appendix.</i>	

As the construction cost categories prepared by Project engineers are different, it was necessary to convert the estimates to the model's categories before assessing total economic effects. It was also necessary to account for construction spending that would immediately leave the region (leakages), because this

¹ A. Strauss-Weider, Inc. and Center for Urban Policy Research at Rutgers University. *MARAD Port Economic Impact Kit, Version 1.1*. Prepared for U.S. Department of Transportation, Maritime Administration, December 2000. Information about this economic impact model is posted online at <http://www.as-w.com/toppage1.htm> (as of June 10, 2004).

portion of the spending would not result in regional economic impacts. Therefore, the spending on structural steel and container cranes was not allocated to any of the model's sectors, assuming these materials and equipment would be produced outside Alaska.

One other adjustment to construction cost estimates was necessary. These estimates did not include the costs of dredging, because the funding for that activity is expected to be provided directly to the USACE. As dredging is a substantial effort, however, any associated spending will result in regional economic effects, no matter who pays for it. This analysis assumed a fixed cost of \$5.50 per cubic yard to estimate the dredging costs.

Table G-2 shows the assumed correspondence between construction cost categories and the model's capital expenditure sectors.

Table G-2 Allocation of Port of Anchorage Construction Cost Categories to MARAD Port Kit Expenditure Categories	
<i>Budget Category</i>	<i>MARAD Category</i>
Demolition Sub-total	Demolition
Dredging Sub-total	Dredging
Construction temporary trestle and floating dock	B/D/B work
Backlands Sub-total, less trestle/dock	Fill
Steel Sheetpile Bulkhead (material)	n.a. ¹
Dock Sub-total, less steel	B/D/B work
Backland Utilities Sub-total	B/D/B work
Pavement Sub-total	Paving
Container Crane Runway Sub-total	B/D/B work
Lighting High Mast	YG lights
Electrical Sub-total, less high mast	Plugs, etc
Admin. Building Sub-total	Admin bld.
Maintenance & Storage Building Sub-total	Sheds/W.
Pier Operations Building Sub-total	Admin bld.
Landscaping	Admin bld.
Container Cranes Sub-total	n.a. ¹
Rail Intermodal Yard Sub-total	Rail Yard
POL Terminals Sub-total	B/D/B work
Mobilization & Insurance Sub-total	Services
Engineering & Construction Mgmt	Services
Contingency	Services
<i>Note: ¹ Steel material and cranes are assumed produced outside Alaska, and are not allocated to sectors.</i>	

As a first step, the model was run separately for each of the eleven pertinent expenditure categories by inputting a total of \$1,000,000 to the category and \$0 for all other categories. These model runs produced the factors shown below in the section titled "Output, Employment, Income, and Gross State Product Effects per \$1,000,000 Construction Expenditures" – one table each for output, employment, income, and Gross State Product. The factors in these tables are specific to the model's general industry output categories.

Expenditures by year and by model category for construction (shown in the section titled “Input Data for Construction, Construction Spending Allocated to MARAD Port Economic Kit Expenditure Categories”) were divided by 1,000,000, summed over common model categories, and multiplied by the output, employment, income, and Gross State Product factors to arrive at the estimates of total economic effects presented in the section on construction results “Results for Construction, Output, Employment, Income, and Gross State Product Effects of Construction Spending, 2005-2011.”

Operations Impact Analysis

Less data preparation was required to analyze operations, because the model is specifically designed to accommodate cargo and cruise passenger estimates directly in terms of quantities. In particular, factors were obtained by running the model separately for: 1) 10,000 twenty-foot equivalent units (TEUs) of containerized cargo; 2) 10,000 tons of break-bulk cargo; 3) 10,000 autos; 4) 10,000 tons of liquid-bulk cargo; 5) 10,000 tons of dry-bulk cargo; and 6) 10,000 cruise ship passengers. The resulting factors are shown in the four tables of the section titled “Output, Employment, Income, and Gross State Product Effects per 10,000 Units, by Operation Category” – broken down by the same general industry sectors as the construction factors.

Cargo and passenger projections (presented in Chapter 1 of this EA) were interpolated to a yearly series from 2005 through 2025, to multiply these output, employment, income, and Gross State Product factors by year to estimate the impacts of POA operations with marine terminal redevelopment. These projections were then reduced to account for sustainable capacities in the case of No Action, and multiplied by the same factors to estimate the impacts of POA operations without the Project. Finally, the differences between these two sets of projections were multiplied to obtain estimates of the impacts of No Action.

The annual operations projections input to the model are presented in the section titled “Input Data for Operations, Projections of Port of Anchorage Operations By MARAD Port Economic Kit Operation Categories” and the corresponding results are presented in the final section of this appendix, “Results for Operations, Output, Employment, Income, and Gross State Product Effects of Construction Spending, 2005, 2010, 2015, 2020, 2025.”

**OUTPUT, EMPLOYMENT, INCOME, AND GROSS STATE PRODUCT
EFFECTS PER \$1,000,000 CONSTRUCTION EXPENDITURES**

Output per \$1 Million, by Expenditure Category (Results are in thousands of dollars)											
	Demolition	Dredging	Fill	Paving	B/D/B Work	YG Lights	Plugs, etc.	Admin Building	Sheds/W.	Rail Yard	Services
TOTAL EFFECTS (Direct and Indirect/Induced)											
1. Agriculture	0.7	0.6	1.6	0.4	1.0	0.4	0.4	0.8	0.7	0.6	0.5
2. Agri. Serv., Forestry, & Fish	2.2	1.7	2.7	1.7	3.2	1.0	1.2	3.0	2.1	1.6	1.3
3. Mining	13.6	77.6	162.2	81.1	101.5	8.9	9.1	19.8	19.7	33.0	9.9
4. Construction	1,029.8	336.4	775.1	392.4	624.6	22.9	21.6	448.8	493.1	570.7	24.8
5. Manufacturing	73.6	250.8	82.5	260.0	321.9	1,061.0	1,060.0	185.5	226.4	144.9	42.3
6. Transport. & Public Utilities	96.6	765.1	81.7	97.9	89.1	70.5	68.5	86.6	87.9	109.9	81.9
7. Wholesale	47.9	77.6	51.7	41.5	43.5	85.9	60.5	80.2	77.8	61.7	25.4
8. Retail Trade	167.1	139.7	152.7	77.5	109.6	82.8	83.1	106.3	113.7	116.7	120.5
9. Finance, Ins., & Real Estate	240.5	292.8	181.4	112.2	156.4	127.8	126.1	148.9	158.0	165.1	203.8
10. Services	215.4	336.8	143.9	112.6	167.5	100.0	100.5	237.1	227.9	210.2	1,227.9
11. Government	12.5	15.6	10.2	7.2	9.8	9.4	8.9	8.3	8.8	8.9	10.0
Total Effects	1,899.9	2,294.5	1,645.7	1,184.7	1,628.0	1,570.5	1,539.8	1,325.3	1,416.2	1,423.4	1,748.5
DISTRIBUTION OF EFFECTS/MULTIPLIER											
1. Direct Effects	1,000.0	1,242.0	892.8	629.2	869.0	1,000.0	1,000.0	717.7	773.8	763.1	903.9
2. Indirect and Induced Effects	899.9	1,052.5	752.9	555.4	759.0	570.5	539.8	607.6	642.4	660.3	844.6
3. Total Effects	1,899.9	2,294.5	1,645.7	1,184.7	1,628.0	1,570.5	1,539.8	1,325.3	1,416.2	1,423.4	1,748.5
4. Multipliers (3/1)	1,900	1,847	1,843	1,883	1,873	1,570	1,540	1,847	1,830	1,865	1,934

Source: results of MARAD Port Economic Kit, April 2004 - revision is Alaska.

Source: results of MARAD Port Economic Kit, April 2004 - region is Alaska.

Employment per \$1 Million, by Expenditure Category											
	Demolition	Dredging	Fill	Paving	B/D/B Work	YG Lights	Plugs, etc.	Admin Building	Sheds/W.	Rail Yard	Services
TOTAL EFFECTS (Direct and Indirect/Induced)											
1. Agriculture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Agri. Serv., Forestry, & Fish	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
3. Mining	0.0	0.2	1.5	0.5	0.7	0.0	0.0	0.1	0.1	0.2	0.0
4. Construction	11.1	3.4	12.3	5.3	7.3	0.1	0.1	7.8	8.6	9.3	0.1
5. Manufacturing	0.8	1.3	0.7	1.5	2.7	0.4	0.5	1.9	2.7	1.5	0.4
6. Transport. & Public Utilities	0.7	6.8	0.5	0.7	0.6	0.5	0.4	0.6	0.6	0.9	0.6
7. Wholesale	0.5	0.8	0.5	0.4	0.5	0.9	0.6	0.8	0.8	0.6	0.3
8. Retail Trade	3.2	2.7	2.9	1.5	2.1	1.6	1.6	2.0	2.2	2.3	2.3
9. Finance, Ins., & Real Estate	3.3	3.5	2.4	1.5	2.1	1.6	1.7	2.0	2.1	2.2	2.5
10. Services	3.8	5.3	2.7	1.9	2.8	1.9	1.9	3.6	3.5	3.3	15.0
11. Government	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Effects	23.6	24.2	23.9	13.4	18.9	7.1	6.9	19.0	20.7	20.3	21.3
DISTRIBUTION OF EFFECTS/MULTIPLIER											
1. Direct Effects	11.0	11.1	13.7	6.9	9.6	0.0	0.0	10.8	12.0	11.4	9.1
2. Indirect and Induced Effects	12.6	13.1	10.2	6.6	9.3	7.1	6.9	8.2	8.7	8.9	12.2
3. Total Effects	23.6	24.2	23.9	13.4	18.9	7.1	6.9	19.0	20.7	20.3	21.3
4. Multipliers (3/1)	2.142	2.177	1.745	1.954	1.975	NA	NA	1.759	1.722	1.780	2.337

Source: results of MARRID Post Economic Exp. April 2004 - location is Alaska

Source: results of MARAD Port Economic Kit, April 2004 - region is Alaska.

Income per \$1 Million, by Expenditure Category (Results are in thousands of dollars)											
	Demolition	Dredging	Fill	Paving	B/D/B Work	YG Lights	Plugs, etc.	Admin Building	Sheds/W.	Rail Yard	Services
TOTAL EFFECTS (Direct and Indirect/Induced)											
1. Agriculture	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2. Agri. Serv., Forestry, & Fish	1.6	1.2	2.0	1.3	2.5	0.8	1.0	2.3	1.6	1.2	1.0
3. Mining	2.6	13.8	61.5	22.1	30.1	1.6	1.7	5.0	4.9	8.6	1.8
4. Construction	808.6	255.7	600.1	300.1	477.4	10.8	10.1	347.3	381.8	444.2	11.5
5. Manufacturing	13.9	37.7	15.6	48.7	76.0	252.2	353.6	46.2	61.8	34.7	7.2
6. Transport. & Public Utilities	25.0	209.9	20.5	23.9	21.7	18.1	17.3	22.0	22.1	28.0	22.6
7. Wholesale	18.0	30.2	19.5	15.6	16.4	32.5	22.9	29.9	29.2	22.9	9.7
8. Retail Trade	58.7	48.7	54.1	27.2	38.5	28.7	28.7	37.4	40.0	41.1	42.0
9. Finance, Ins., & Real Estate	86.5	96.7	64.7	39.6	55.7	42.4	44.1	52.1	55.5	58.4	66.2
10. Services	91.3	141.1	63.0	47.0	69.4	44.2	44.2	95.3	92.4	85.7	464.4
11. Government	5.4	6.7	4.5	3.1	4.2	4.0	3.8	3.6	3.8	3.9	4.4
Total Effects	1,111.7	841.9	905.6	528.6	792.0	435.4	527.4	641.1	693.2	728.7	630.7
DISTRIBUTION OF EFFECTS/MULTIPLIER											
1. Direct Effects	794.8	486.9	645.1	348.0	539.3	240.0	340.3	429.9	469.4	499.7	322.3
2. Indirect and Induced Effects	316.9	355.0	260.4	180.6	252.7	195.4	187.1	211.1	223.9	229.0	308.4
3. Total Effects	1,111.7	841.9	905.6	528.6	792.0	435.4	527.4	641.1	693.2	728.7	630.7
4. Multipliers (3/1)	1.399	1.729	1.404	1.519	1.469	1.814	1.550	1.491	1.477	1.458	1.957

Source: results of MARAD Port Economic Kti April 2004 - region is Alaska

Source: results of MARAD Port Economic Kit, April 2004 - region is Alaska.

Gross State Product per \$1 Million, by Expenditure Category (Results are in thousands of dollars)											
	Denolition	Dredging	Fill	Paving	B/D/B Work	YG Lights	Plugs, etc.	Admin Building	Sheds/W.	Rail Yard	Services
TOTAL EFFECTS (Direct and Indirect/Induced)											
1. Agriculture	0.5	0.4	1.0	0.3	0.7	0.2	0.3	0.5	0.5	0.4	0.3
2. Agri. Serv., Forestry, & Fish	2.1	1.6	2.5	1.6	3.0	1.0	1.2	2.9	2.0	1.6	1.3
3. Mining	9.2	53.0	133.6	60.7	77.6	5.9	6.1	14.4	14.2	24.0	6.6
4. Construction	918.8	293.5	690.9	348.4	556.0	14.7	13.8	398.4	438.0	507.6	15.7
5. Manufacturing	33.5	142.0	36.2	145.7	182.4	265.7	368.3	85.5	106.3	72.5	19.9
6. Transport. & Public Utilities	44.3	324.4	36.7	41.8	38.6	32.3	30.8	39.5	40.3	48.5	40.1
7. Wholesale	34.1	56.8	36.9	29.6	31.1	61.6	43.4	56.8	55.5	43.6	18.3
8. Retail Trade	96.7	80.5	88.6	44.9	63.4	47.6	47.6	61.6	65.9	67.8	69.4
9. Finance, Ins., & Real Estate	179.4	217.9	135.5	83.8	116.7	96.0	94.2	111.4	118.1	123.4	153.4
10. Services	144.0	214.9	96.4	73.5	108.3	67.7	68.1	143.9	139.9	131.2	681.8
11. Government	5.1	6.3	4.2	2.9	4.0	3.7	3.6	3.4	3.6	3.6	4.1
Total Effects	1,467.6	1,391.3	1,262.6	833.1	1,181.8	596.4	677.2	918.3	984.3	1,024.0	1,010.9
DISTRIBUTION OF EFFECTS/MULTIPLIER											
1. Direct Effects	900.0	723.1	794.7	483.8	705.2	240.0	340.3	536.6	580.8	607.8	464.8
2. Indirect and Induced Effects	567.6	668.2	467.9	349.3	476.6	356.4	336.9	381.6	403.5	416.2	546.1
3. Total Effects	1,467.6	1,391.3	1,262.6	833.1	1,181.8	596.4	677.2	918.3	984.3	1,024.0	1,010.9
4. Multipliers (3/1)	1.631	1.924	1.589	1.722	1.676	2.485	1.990	1.711	1.695	1.685	2.175
COMPOSITION OF GROSS STATE PRODUCT											
1. Wages-Net of Taxes	795.4	685.7	664.3	401.5	593.9	377.3	452.2	493.6	530.2	546.2	608.2
2. Taxes	242.0	243.5	192.5	122.4	168.0	131.8	130.0	160.7	169.5	172.9	186.2
a. Local	38.3	49.2	33.5	23.0	29.4	30.1	24.9	34.3	35.2	32.5	28.7
b. State	18.1	26.8	16.6	12.9	16.7	9.2	8.7	12.9	13.6	14.2	14.9
c. Federal	185.6	167.5	142.4	86.5	121.8	92.4	96.3	113.5	120.8	126.2	142.5
d. General	97.8	92.6	76.7	47.1	65.9	49.7	51.8	60.8	64.7	67.3	75.3
e. Social Security	87.9	74.9	65.7	39.5	55.9	42.8	44.5	52.7	56.1	58.9	67.2
3. Profits, dividends, rents, and other	430.1	462.0	405.8	309.2	419.9	87.3	95.1	263.9	284.5	304.9	216.5
4. Total Gross State Product (1+2+3)	1,467.6	1,391.3	1,262.6	833.1	1,181.8	596.4	677.2	918.3	984.3	1,024.0	1,010.9

Source: results of MARAD Port Economic Kit, April 2004 - region is Alaska.

Source: results of MARAD Port Economic Kit, April 2004 - region is Alaska.

**OUTPUT, EMPLOYMENT, INCOME, AND GROSS STATE PRODUCT
EFFECTS PER 10,000 UNITS, BY OPERATION CATEGORY**

Category/Units Key:

TEUs (20-Foot Equivalent Units) – Containerized Cargo

Tons – Break-Bulk Cargo, Liquid-Bulk Cargo, Dry-Bulk Cargo

Vehicles – Autos

Passengers – Cruise Ships

Output per 10,000 Units, by Operation Category (Results are in thousands of dollars)						
	<i>Containers (TEUs)</i>	<i>Break Bulk (tons)</i>	<i>Autos</i>	<i>Liquid Bulk (tons)</i>	<i>Dry Bulk (tons)</i>	<i>Cruise Ships (passengers)</i>
TOTAL EFFECTS (Direct and Indirect/Induced)						
1. Agriculture	1.7	0.2	0.5	0.0	0.1	16.2
2. Agri. Serv., Forestry, & Fish	5.6	0.5	1.6	0.0	0.2	134.6
3. Mining	182.9	17.1	45.0	10.9	14.4	8,146.0
4. Construction	142.0	12.1	62.3	1.4	5.2	9,234.4
5. Manufacturing	487.3	45.5	123.1	25.4	34.8	23,734.0
6. Transport. & Public Utilities	4,399.8	291.3	1,383.7	13.9	178.6	19,571.9
7. Wholesale	199.3	16.1	52.3	4.1	10.8	3,618.7
8. Retail Trade	422.4	38.0	128.5	2.3	17.1	3,208.2
9. Finance, Ins., & Real Estate	774.8	68.2	260.6	4.1	30.7	5,005.9
10. Services	723.2	123.0	248.4	4.5	28.6	6,278.0
11. Government	55.7	10.1	82.6	1.4	4.6	452.2
Total Effects	7,394.8	622.0	2,388.6	68.0	325.0	79,400.3
DISTRIBUTION OF EFFECTS/MULTIPLIER						
1. Direct Effects	3,935.6	337.1	1,294.8	36.4	171.1	44,707.5
2. Indirect and Induced Effects	3,459.2	284.9	1,093.7	31.6	153.9	34,692.8
3. Total Effects	7,394.8	622.0	2,388.6	68.0	325.0	79,400.3
4. Multipliers (3/1)	1.879	1.845	1.845	1.868	1.900	1.776
<i>Source: results of MARAD Port Economic Kit, June 2004 - region is Alaska.</i>						

Employment per 10,000 Units, by Operation Category						
	<i>Containers (TEUs)</i>	<i>Break Bulk (tons)</i>	<i>Autos</i>	<i>Liquid Bulk (tons)</i>	<i>Dry Bulk (tons)</i>	<i>Cruise Ships (passengers)</i>
TOTAL EFFECTS (Direct and Indirect/Induced)						
1. Agriculture	0.0	0.0	0.0	0.0	0.0	0.1
2. Agri. Serv., Forestry, & Fish	0.3	0.0	0.1	0.0	0.0	3.9
3. Mining	0.5	0.0	0.1	0.0	0.0	22.7
4. Construction	0.6	0.0	0.3	0.0	0.0	31.3
5. Manufacturing	1.8	0.2	0.6	0.0	0.1	66.7
6. Transport. & Public Utilities	40.4	3.3	18.7	0.1	1.4	128.8
7. Wholesale	2.1	0.2	0.6	0.0	0.1	40.0
8. Retail Trade	8.1	0.7	2.5	0.0	0.3	61.3
9. Finance, Ins., & Real Estate	9.8	0.9	3.0	0.0	0.4	61.7
10. Services	12.6	2.2	4.4	0.1	0.5	118.0
11. Government	0.3	0.1	1.2	0.0	0.1	1.0
Total Effects	76.5	7.6	31.3	0.4	2.9	535.6
DISTRIBUTION OF EFFECTS/MULTIPLIER						
1. Direct Effects	35.6	4.2	18.4	0.1	1.2	206.3
2. Indirect and Induced Effects	40.9	3.5	12.9	0.3	1.7	329.2
3. Total Effects	76.5	7.6	31.3	0.4	2.9	535.6
4. Multipliers (3/1)	2.149	1.834	1.701	2.745	2.360	2.596
<i>Source: results of MARAD Port Economic Kit, June 2004 – region is Alaska.</i>						

Income per 10,000 Units, by Operation Category (Results are in thousands of dollars)						
	<i>Containers (TEUs)</i>	<i>Break Bulk (tons)</i>	<i>Autos</i>	<i>Liquid Bulk (tons)</i>	<i>Dry Bulk (tons)</i>	<i>Cruise Ships (passengers)</i>
TOTAL EFFECTS (Direct and Indirect/Induced)						
1. Agriculture	0.2	0.0	0.1	0.0	0.0	2.3
2. Agri. Serv., Forestry, & Fish	4.2	0.4	1.2	0.0	0.1	63.7
3. Mining	32.6	3.1	8.2	1.9	2.6	1,467.9
4. Construction	67.6	5.8	29.6	0.7	2.5	4,598.9
5. Manufacturing	54.7	5.0	15.7	1.9	3.1	2,698.9
6. Transport. & Public Utilities	1,336.2	95.8	407.6	2.9	46.3	5,396.2
7. Wholesale	76.1	6.2	20.0	1.6	4.2	1,424.0
8. Retail Trade	146.7	13.2	44.6	0.8	5.9	1,099.8
9. Finance, Ins., & Real Estate	257.6	22.3	77.7	1.3	10.4	1,635.5
10. Services	304.6	55.7	109.4	2.0	11.5	2,755.8
11. Government	27.2	6.0	52.4	0.8	2.7	195.5
Total Effects	2,307.9	213.4	766.5	14.0	89.3	21,338.7
DISTRIBUTION OF EFFECTS/MULTIPLIER						
1. Direct Effects	1,180.6	118.5	405.0	5.4	41.6	10,146.6
2. Indirect and Induced Effects	1,127.3	94.8	361.5	8.6	47.7	11,192.1
3. Total Effects	2,307.9	213.4	766.5	14.0	89.3	21,338.7
4. Multipliers (3/1)	1.955	1.800	1.893	2.583	2.144	2.103
<i>Source: results of MARAD Port Economic Kit, June 2004 - region is Alaska.</i>						

Gross State Product per 10,000 Units, by Operation Category (Results are in thousands of dollars)						
	<i>Containers (TEUs)</i>	<i>Break Bulk (tons)</i>	<i>Autos</i>	<i>Liquid Bulk (tons)</i>	<i>Dry Bulk (tons)</i>	<i>Cruise Ships (passengers)</i>
TOTAL EFFECTS (Direct and Indirect/Induced)						
1. Agriculture	1.1	0.1	0.4	0.0	0.0	10.4
2. Agri. Serv., Forestry, & Fish	5.3	0.5	1.5	0.0	0.2	127.5
3. Mining	124.8	11.7	30.3	7.5	9.8	5,584.4
4. Construction	91.9	7.8	40.3	1.0	3.4	6,184.1
5. Manufacturing	282.9	26.6	69.0	16.0	21.1	13,356.3
6. Transport. & Public Utilities	1,953.6	144.1	628.7	4.8	65.9	10,753.7
7. Wholesale	144.0	11.7	37.8	3.1	7.9	2,674.7
8. Retail Trade	243.0	21.8	73.9	1.3	9.8	1,830.5
9. Finance, Ins., & Real Estate	582.9	51.4	197.6	3.0	23.1	3,757.1
10. Services	486.3	89.1	171.4	3.0	18.7	4,274.3
11. Government	26.7	6.3	56.3	0.9	2.8	182.7
Total Effects	3,942.4	371.0	1,307.1	40.7	162.7	48,735.8
DISTRIBUTION OF EFFECTS/MULTIPLIER						
1. Direct Effects	1,791.1	190.1	617.8	20.4	68.6	25,929.4
2. Indirect and Induced Effects	2,151.2	180.8	689.3	20.3	94.1	22,806.4
3. Total Effects	3,942.4	371.0	1,307.1	40.7	162.7	48,735.8
4. Multipliers (3/1)	2.201	1.951	2.116	1.993	2.373	1.880
COMPOSITION OF GROSS STATE PRODUCT						
1. Wages--Net of Taxes	2,057.4	192.4	686.7	11.8	82.3	18,158.9
2. Taxes	712.9	63.7	218.9	5.5	29.2	6,647.7
a. Local	138.0	11.7	42.5	1.5	6.0	1,615.4
b. State	74.7	6.5	23.2	1.2	3.4	1,119.8
c. Federal	500.2	45.5	153.1	2.8	19.7	3,912.4
d. General	278.5	25.2	85.3	1.7	11.0	2,401.9
e. Social Security	221.7	20.2	67.8	1.1	8.8	1,510.5
3. Profits, dividends, rents, and other	1,172.0	114.9	401.4	23.4	51.2	23,929.2
4. Total Gross State Product (1+2+3)	3,942.4	371.0	1,307.1	40.7	162.7	48,735.8
<i>Source: results of MARAD Port Economic Kit, June 2004 - region is Alaska.</i>						

INPUT DATA FOR CONSTRUCTION

**CONSTRUCTION SPENDING ALLOCATED TO
MARAD PORT ECONOMIC KIT EXPENDITURE CATEGORIES**

Construction Spending Allocated to MARAD Port Economic Kit Expenditure Categories Alternative A: Construction by Sheet Pile Design - Phasing Option 1								
Category	2005	2006	2007	2008	2009	2010	2011	Total
Demolition	\$0	\$0	\$0	\$4,187,500	\$1,766,400	\$4,437,500	\$0	\$10,391,400
Dredging	\$11,052,228	\$0	\$14,097,567	\$0	\$2,114,327	\$2,074,303	\$0	\$29,338,425
Fill	\$14,583,472	\$11,384,577	\$8,916,286	\$14,358,245	\$13,338,424	\$11,412,370	\$0	\$73,993,374
Paving	\$0	\$4,975,341	\$2,843,052	\$2,451,407	\$3,191,181	\$2,814,041	\$3,278,213	\$19,553,235
B/D/B work	\$4,688,667	\$6,712,291	\$6,353,587	\$5,833,462	\$7,118,726	\$7,353,427	\$727,178	\$38,787,338
YG lights	\$0	\$281,260	\$160,720	\$138,580	\$180,400	\$159,080	\$185,320	\$1,105,360
Plugs, etc	\$0	\$0	\$0	\$350,000	\$250,000	\$160,000	\$0	\$760,000
Admin Bldg.	\$0	\$0	\$0	\$13,699,000	\$0	\$0	\$0	\$13,699,000
Sheds/W.	\$0	\$0	\$0	\$800,000	\$0	\$0	\$0	\$800,000
Rail Yard	\$0	\$0	\$0	\$0	\$4,932,187	\$0	\$0	\$4,932,187
Services	\$15,263,994	\$22,766,556	\$19,048,696	\$24,470,529	\$19,474,532	\$17,366,063	\$1,858,913	\$120,249,283
Leakage ¹	\$14,460,444	\$26,959,362	\$23,822,922	\$12,260,322	\$12,260,322	\$12,041,622	\$0	\$101,804,994
Total	\$60,048,805	\$73,079,387	\$75,242,830	\$78,549,045	\$64,626,499	\$57,818,406	\$6,049,624	\$415,414,596

Note: ¹Steel material and cranes are assumed produced outside Alaska, so related spending is counted as leakage from the region

Construction Spending Allocated to MARAD Port Economic Kit Expenditure Categories								
Alternative A: Construction by Sheet Pile Design - Phasing Option 2								
Category	2005	2006	2007	2008	2009	2010	2011	Total
Demolition	\$0	\$0	\$4,187,500	\$4,437,500	\$1,766,400	\$0	\$0	\$10,391,400
Dredging	\$11,052,228	\$0	\$0	\$2,074,303	\$2,114,327	\$14,097,567	\$0	\$29,338,425
Fill	\$14,583,472	\$11,384,577	\$14,358,245	\$11,412,370	\$13,338,424	\$8,916,286	\$0	\$73,993,375
Paving	\$0	\$4,975,341	\$2,451,407	\$2,814,041	\$3,191,181	\$2,843,052	\$3,278,213	\$19,553,235
B/D/B work	\$4,688,667	\$6,712,291	\$7,833,462	\$7,353,427	\$7,118,726	\$6,353,587	\$727,178	\$40,787,338
YG lights	\$0	\$281,260	\$138,580	\$159,080	\$180,400	\$160,720	\$185,320	\$1,105,360
Plugs, etc	\$0	\$0	\$350,000	\$160,000	\$250,000	\$0	\$0	\$760,000
Admin Bldg.	\$0	\$0	\$13,699,000	\$0	\$0	\$0	\$0	\$13,699,000
Sheds/W.	\$0	\$0	\$800,000	\$0	\$0	\$0	\$0	\$800,000
Rail Yard	\$0	\$0	\$0	\$0	\$4,932,187	\$0	\$0	\$4,932,187
Services	\$15,263,994	\$22,766,556	\$25,375,529	\$17,366,063	\$19,474,532	\$19,048,696	\$1,858,913	\$121,154,283
Leakage ¹	\$14,460,444	\$26,959,362	\$12,260,322	\$12,041,622	\$12,260,322	\$23,822,922	\$0	\$101,804,994
Total	\$60,048,805	\$73,079,387	\$81,454,045	\$57,818,406	\$64,626,499	\$75,242,830	\$6,049,624	\$418,319,596

Note: ¹Steel material and cranes are assumed produced outside Alaska, so related spending is counted as leakage from the region

Construction Spending Allocated to MARAD Port Economic Kit Expenditure Categories Alternative B: Construction by Pile-Supported Dock Design - Phasing Option 1								
Category	2005	2006	2007	2008	2009	2010	2011	Total
Demolition	\$0	\$0	\$0	\$4,187,500	\$1,766,400	\$4,437,500	\$0	\$10,391,400
Dredging	\$11,052,228	\$0	\$14,097,567	\$0	\$2,114,327	\$2,074,303	\$0	\$29,338,425
Fill	\$10,028,394	\$6,994,622	\$5,304,859	\$10,061,687	\$9,037,547	\$7,486,756	\$0	\$48,913,865
Paving	\$0	\$4,975,341	\$2,843,052	\$2,451,407	\$3,191,181	\$2,814,041	\$3,278,213	\$19,553,235
B/D/B work	\$19,666,862	\$24,019,627	\$18,264,228	\$18,936,804	\$20,207,151	\$20,293,352	\$727,178	\$122,115,202
YG lights	\$0	\$281,260	\$160,720	\$138,580	\$180,400	\$159,080	\$185,320	\$1,105,360
Plugs, etc	\$0	\$0	\$0	\$350,000	\$250,000	\$160,000	\$0	\$760,000
Admin Bldg.	\$0	\$0	\$0	\$13,699,000	\$0	\$0	\$0	\$13,699,000
Sheds/W.	\$0	\$0	\$0	\$800,000	\$0	\$0	\$0	\$800,000
Rail Yard	\$0	\$0	\$0	\$0	\$4,932,187	\$0	\$0	\$4,932,187
Services	\$19,770,656	\$28,506,772	\$22,699,191	\$28,350,699	\$23,345,998	\$21,300,554	\$1,858,913	\$145,832,783
Leakage ¹	\$13,996,800	\$26,727,540	\$23,591,100	\$12,028,500	\$12,028,500	\$11,722,320	\$0	\$100,094,760
Total	\$74,514,940	\$91,505,162	\$86,960,717	\$91,004,177	\$77,053,691	\$70,447,906	\$6,049,624	\$497,536,217

Note: ¹Steel material and cranes are assumed produced outside Alaska, so related spending is counted as leakage from the region

Construction Spending Allocated to MARAD Port Economic Kit Expenditure Categories Alternative B: Construction by Pile-Supported Dock Design - Phasing Option 2								
Category	2005	2006	2007	2008	2009	2010	2011	Total
Demolition	\$0	\$0	\$4,437,500	\$0	\$1,766,400	\$4,187,500	\$0	\$10,391,400
Dredging	\$11,052,228	\$0	\$2,074,303	\$14,097,567	\$2,114,327	\$0	\$0	\$29,338,425
Fill	\$10,028,394	\$6,994,622	\$7,486,756	\$5,304,859	\$9,037,547	\$10,061,687	\$0	\$48,913,865
Paving	\$0	\$4,975,341	\$2,814,041	\$2,843,052	\$3,191,181	\$2,451,407	\$3,278,213	\$19,553,235
B/D/B work	\$19,666,862	\$24,019,627	\$20,293,352	\$18,264,228	\$20,207,151	\$18,936,804	\$727,178	\$122,115,202
YG lights	\$0	\$281,260	\$159,080	\$160,720	\$180,400	\$138,580	\$185,320	\$1,105,360
Plugs, etc	\$0	\$0	\$160,000	\$0	\$250,000	\$350,000	\$0	\$760,000
Admin Bldg.	\$0	\$0	\$0	\$0	\$0	\$13,699,000	\$0	\$13,699,000
Sheds/W.	\$0	\$0	\$0	\$0	\$0	\$800,000	\$0	\$800,000
Rail Yard	\$0	\$0	\$0	\$0	\$4,932,187	\$0	\$0	\$4,932,187
Services	\$19,770,656	\$28,506,772	\$21,300,554	\$22,699,191	\$23,345,998	\$28,350,699	\$1,858,913	\$145,832,783
Leakage ¹	\$13,996,800	\$26,727,540	\$11,722,320	\$23,591,100	\$12,028,500	\$12,028,500	\$0	\$100,094,760
Total	\$74,514,940	\$91,505,162	\$70,447,906	\$86,960,717	\$77,053,691	\$91,004,177	\$6,049,624	\$497,536,217

Note: ¹Steel material and cranes are assumed produced outside Alaska, so related spending is counted as leakage from the region

Construction Spending Allocated to MARAD Port Economic Kit Expenditure Categories								
Alternative C: Construction by Combined Design - Phasing Option 1								
Category	2005	2006	2007	2008	2009	2010	2011	Total
Demolition	\$0	\$0	\$0	\$4,187,500	\$1,766,400	\$4,437,500	\$0	\$10,391,400
Dredging	\$11,052,228	\$0	\$14,097,567	\$0	\$2,114,327	\$2,074,303	\$0	\$29,338,425
Fill	\$14,583,472	\$11,384,577	\$8,916,286	\$14,358,245	\$13,338,424	\$11,412,370	\$0	\$73,993,374
Paving	\$0	\$4,975,341	\$2,843,052	\$2,451,407	\$3,191,181	\$2,814,041	\$3,278,213	\$19,553,235
B/D/B work	\$4,688,667	\$6,712,291	\$6,353,587	\$18,902,429	\$7,118,726	\$7,331,702	\$727,178	\$51,834,580
YG lights	\$0	\$281,260	\$160,720	\$138,580	\$180,400	\$159,080	\$185,320	\$1,105,360
Plugs, etc	\$0	\$0	\$0	\$350,000	\$250,000	\$160,000	\$0	\$760,000
Admin Bldg.	\$0	\$0	\$0	\$13,699,000	\$0	\$0	\$0	\$13,699,000
Sheds/W.	\$0	\$0	\$0	\$800,000	\$0	\$0	\$0	\$800,000
Rail Yard	\$0	\$0	\$0	\$0	\$4,932,187	\$0	\$0	\$4,932,187
Services	\$15,263,994	\$22,766,556	\$19,048,696	\$30,279,337	\$19,474,532	\$17,316,648	\$1,858,913	\$126,008,676
Leakage ¹	\$14,460,444	\$26,959,362	\$23,822,922	\$12,028,500	\$12,260,322	\$11,954,142	\$0	\$101,485,692
Total	\$60,048,805	\$73,079,387	\$75,242,830	\$97,194,998	\$64,626,499	\$57,659,786	\$6,049,624	\$433,901,929

Note: ¹ Steel material and cranes are assumed produced outside Alaska, so related spending is counted as leakage from the region.

Construction Spending Allocated to MARAD Port Economic Kit Expenditure Categories Alternative C: Construction by Combined Design - Phasing Option 2									
Category	2005	2006	2007	2008	2009	2010	2011	Total	
Demolition	\$0	\$0	\$4,437,500	\$0	\$1,766,400	\$4,187,500	\$0	\$10,391,400	
Dredging	\$11,052,228	\$0	\$2,074,303	\$14,097,567	\$2,114,327	\$0	\$0	\$29,338,425	
Fill	\$14,583,472	\$11,384,577	\$11,412,370	\$8,916,286	\$13,338,424	\$14,358,245	\$0	\$73,993,374	
Paving	\$0	\$4,975,341	\$2,814,041	\$2,843,052	\$3,191,181	\$2,451,407	\$3,278,213	\$19,553,235	
B/D/B work	\$4,688,667	\$6,712,291	\$7,331,702	\$6,353,587	\$7,118,726	\$18,902,429	\$727,178	\$51,834,580	
YG lights	\$0	\$281,260	\$159,080	\$160,720	\$180,400	\$138,580	\$185,320	\$1,105,360	
Plugs, etc	\$0	\$0	\$160,000	\$0	\$250,000	\$350,000	\$0	\$760,000	
Admin Bldg.	\$0	\$0	\$0	\$0	\$0	\$13,699,000	\$0	\$13,699,000	
Sheds/W.	\$0	\$0	\$0	\$0	\$0	\$800,000	\$0	\$800,000	
Rail Yard	\$0	\$0	\$0	\$0	\$4,932,187	\$0	\$0	\$4,932,187	
Services	\$15,263,994	\$22,766,556	\$17,316,648	\$19,048,696	\$19,474,532	\$30,279,337	\$1,858,913	\$126,008,676	
Leakage ¹	\$14,460,444	\$26,959,362	\$11,954,142	\$23,822,922	\$12,260,322	\$12,028,500	\$0	\$101,485,692	
Total	\$60,048,805	\$73,079,387	\$57,659,786	\$75,242,830	\$64,626,499	\$97,194,998	\$6,049,624	\$433,901,929	

Note: ¹ Steel material and cranes are assumed produced outside Alaska, so related spending is counted as leakage from the region.

INPUT DATA FOR OPERATIONS

**PROJECTIONS OF PORT OF ANCHORAGE OPERATIONS
BY MARAD PORT ECONOMIC KIT OPERATION CATEGORIES**

Cargo and Cruise Passenger Projections With Marine Terminal Redevelopment						
Year	Containers (TEUs)	Break-Bulk (tons)	Autos (vehicles)	Liquid-Bulk (tons)	Dry-Bulk (tons)	Cruise Ships (passengers)
2005	449,000	15,000	44,000	1,120,000	106,000	4,000
2006	462,379	17,230	44,957	1,185,641	107,364	5,139
2007	476,156	19,793	45,936	1,255,130	108,746	6,602
2008	490,344	22,736	46,935	1,328,691	110,146	8,482
2009	504,954	26,117	47,956	1,406,564	111,564	10,897
2010	520,000	30,000	49,000	1,489,000	113,000	14,000
2011	534,686	31,241	50,167	1,512,551	114,595	14,950
2012	549,786	32,534	51,361	1,536,475	116,212	15,965
2013	565,314	33,880	52,584	1,560,777	117,852	17,049
2014	581,279	35,282	53,836	1,585,463	119,516	18,206
2015	597,696	36,742	55,118	1,610,540	121,202	19,442
2016	614,576	38,263	56,430	1,636,013	122,913	20,762
2017	631,933	39,846	57,774	1,661,889	124,648	22,171
2018	649,780	41,495	59,150	1,688,175	126,407	23,676
2019	668,131	43,212	60,558	1,714,876	128,191	25,284
2020	687,000	45,000	62,000	1,742,000	130,000	27,000
2021	706,402	46,862	63,476	1,769,553	131,835	28,833
2022	726,352	48,801	64,987	1,797,541	133,696	30,790
2023	746,866	50,820	66,534	1,825,972	135,583	32,880
2024	767,959	52,923	68,118	1,854,853	137,497	35,112
2025	789,648	55,113	69,740	1,884,191	139,438	37,495
<i>Source: interpolated from projections in Table 1.2 of this EA.</i>						

Cargo and Cruise Passenger Projections Without Marine Terminal Redevelopment						
Year	Containers (TEUs)	Break-Bulk (tons)	Autos (vehicles)	Liquid-Bulk (tons)	Dry-Bulk (tons)	Cruise Ships (passengers)
2005	363,927	15,000	29,000	1,120,000	83,000	4,000
2006	363,927	17,230	29,000	1,185,641	83,000	5,139
2007	363,927	19,793	29,000	1,255,130	83,000	6,602
2008	363,927	22,736	29,000	1,328,691	83,000	8,482
2009	363,927	26,117	29,000	1,406,564	83,000	10,897
2010	363,927	30,000	29,000	1,489,000	83,000	12,800
2011	363,927	31,241	29,000	1,512,551	83,000	12,800
2012	363,927	32,534	29,000	1,536,475	83,000	12,800
2013	363,927	33,880	29,000	1,560,777	83,000	12,800
2014	363,927	35,282	29,000	1,585,463	83,000	12,800
2015	363,927	36,742	29,000	1,610,540	83,000	12,800
2016	363,927	38,263	29,000	1,636,013	83,000	12,800
2017	363,927	39,846	29,000	1,661,889	83,000	12,800
2018	363,927	41,495	29,000	1,688,175	83,000	12,800
2019	363,927	43,212	29,000	1,714,876	83,000	12,800
2020	363,927	45,000	29,000	1,742,000	83,000	12,800
2021	363,927	46,862	29,000	1,769,553	83,000	12,800
2022	363,927	48,801	29,000	1,797,541	83,000	12,800
2023	363,927	50,820	29,000	1,825,972	83,000	12,800
2024	363,927	51,000	29,000	1,854,853	83,000	12,800
2025	363,927	51,000	29,000	1,884,191	83,000	12,800
<i>Source: projections constrained by "sustainable capacity" estimates in Table 1.2 of this EA.</i>						

Cargo and Cruise Passenger Projections						
Impacts of No Action						
<i>Year</i>	<i>Containers (TEUs)</i>	<i>Break-Bulk (tons)</i>	<i>Autos (vehicles)</i>	<i>Liquid-Bulk (tons)</i>	<i>Dry-Bulk (tons)</i>	<i>Cruise Ships (passengers)</i>
2005	-85,073	0	-15,000	0	-23,000	0
2006	-98,452	0	-15,957	0	-24,364	0
2007	-112,229	0	-16,936	0	-25,746	0
2008	-126,417	0	-17,935	0	-27,146	0
2009	-141,027	0	-18,956	0	-28,564	0
2010	-156,073	0	-20,000	0	-30,000	-1,200
2011	-170,759	0	-21,167	0	-31,595	-2,150
2012	-185,859	0	-22,361	0	-33,212	-3,165
2013	-201,387	0	-23,584	0	-34,852	-4,249
2014	-217,352	0	-24,836	0	-36,516	-5,406
2015	-233,769	0	-26,118	0	-38,202	-6,642
2016	-250,649	0	-27,430	0	-39,913	-7,962
2017	-268,006	0	-28,774	0	-41,648	-9,371
2018	-285,853	0	-30,150	0	-43,407	-10,876
2019	-304,204	0	-31,558	0	-45,191	-12,484
2020	-323,073	0	-33,000	0	-47,000	-14,200
2021	-342,475	0	-34,476	0	-48,835	-16,033
2022	-362,425	0	-35,987	0	-50,696	-17,990
2023	-382,939	0	-37,534	0	-52,583	-20,080
2024	-404,032	-1,923	-39,118	0	-54,497	-22,312
2025	-425,721	-4,113	-40,740	0	-56,438	-24,695
<i>Source: calculated as the differences between with-Project and without-Project projections.</i>						

RESULTS FOR CONSTRUCTION

**OUTPUT, EMPLOYMENT, INCOME, AND GROSS STATE PRODUCT
EFFECTS OF CONSTRUCTION SPENDING, 2005-2011**

Total Economic Output Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars) Alternative A: Construction by Sheet Pile Design - Phasing Option 1										
	2005	2006	2007	2008	2009	2010	2011	Total		
TOTAL EFFECTS (Direct and Indirect/Induced)										
1. Agriculture	\$42	\$39	\$40	\$57	\$45	\$40	\$3	\$266		
2. Agricultural Services, Forestry, & Fishing	\$92	\$90	\$97	\$146	\$105	\$94	\$10	\$634		
3. Mining	\$3,850	\$3,160	\$3,606	\$3,711	\$3,693	\$3,222	\$360	\$21,602		
4. Construction	\$18,329	\$15,540	\$17,214	\$27,207	\$21,875	\$20,248	\$1,791	\$122,204		
5. Manufacturing	\$6,131	\$5,657	\$8,033	\$8,285	\$6,878	\$5,962	\$1,362	\$42,308		
6. Transportation & Public Utilities	\$11,316	\$3,901	\$13,931	\$5,632	\$5,993	\$5,324	\$551	\$46,648		
7. Wholesale	\$2,204	\$1,690	\$2,447	\$3,114	\$2,211	\$1,865	\$231	\$13,762		
8. Retail Trade	\$6,124	\$5,626	\$6,556	\$8,257	\$6,612	\$5,917	\$573	\$39,665		
9. Finance, Ins., & Real Estate	\$9,726	\$8,350	\$10,961	\$12,016	\$9,774	\$8,791	\$884	\$60,502		
10. Services	\$25,348	\$31,305	\$30,820	\$37,748	\$29,556	\$26,201	\$2,792	\$183,770		
11. Government	\$520	\$449	\$586	\$643	\$527	\$473	\$51	\$3,249		
Total Effects	\$83,682	\$75,807	\$94,291	\$106,818	\$87,268	\$78,138	\$8,609	\$534,610		
TOTAL EFFECTS (Direct and Indirect/Induced)										
1. Direct Effects	\$44,620	\$39,989	\$50,160	\$56,678	\$46,293	\$41,381	\$4,560	\$283,681		
2. Indirect and Induced Effects	\$39,062	\$35,817	\$44,131	\$50,140	\$40,975	\$36,757	\$4,048	\$250,930		
3. Total Effects	\$83,682	\$75,807	\$94,291	\$106,818	\$87,268	\$78,138	\$8,609	\$534,613		
4. Multipliers (3/1)	1.88	1.90	1.88	1.88	1.89	1.89	1.89	1.88		

Total Employment Effects of Port of Anchorage Marine Terminal Redevelopment Construction Expenditures Alternative A: Construction by Sheet Pile Design - Phasing Option 1										
	2005	2006	2007	2008	2009	2010	2011	Total		
TOTAL EFFECTS (Direct and Indirect/Induced)										
1. Agriculture	0.2	0.2	0.2	0.3	0.2	0.2	0.0	1.3		
2. Agricultural Services, Forestry, & Fishing	3.9	3.9	4.2	6.2	4.5	4.0	0.5	27.2		
3. Mining	28.5	25.2	23.0	29.7	29.0	25.1	2.1	162.6		
4. Construction	253.5	218.0	221.8	395.6	308.0	267.5	22.9	1,687.3		
5. Manufacturing	42.5	42.2	52.7	70.6	52.0	44.8	7.6	312.4		
6. Transportation & Public Utilities	94.5	27.0	117.4	39.1	44.9	39.8	4.0	366.7		
7. Wholesale	23.4	17.7	26.1	32.4	23.1	19.6	2.4	144.7		
8. Retail Trade	117.9	108.4	126.4	159.1	127.4	114.0	11.1	764.3		
9. Finance, Ins., & Real Estate	122.5	107.4	136.9	155.9	126.2	113.6	11.4	773.9		
10. Services	341.2	401.9	409.3	496.5	390.4	346.7	36.7	2,422.7		
11. Government	1.2	1.1	1.4	1.6	1.3	1.1	0.1	7.8		
Total Effects	1,029.4	953.0	1,119.3	1,386.9	1,106.9	976.4	98.7	6,670.9		
DISTRIBUTION OF EFFECTS/MULTIPLIER										
1. Direct Effects	506.4	461.9	532.7	696.2	549.4	476.1	46.5	3,269.2		
2. Indirect and Induced Effects	523.1	491.0	586.6	690.7	557.6	500.3	52.3	3,401.6		
3. Total Effects	1,029.4	953.0	1,119.3	1,386.9	1,106.9	976.4	98.7	6,670.6		
4. Multipliers (3/1)	2.03	2.06	2.10	1.99	2.01	2.05	2.13	2.04		

Total Income Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)										
Alternative A: Construction by Sheet Pile Design - Phasing Option 1										
	2005	2006	2007	2008	2009	2010	2011	Total		
TOTAL EFFECTS (Direct and Indirect/Induced)										
1. Agriculture	\$6	\$6	\$6	\$8	\$6	\$6	\$0	\$38		
2. Agricultural Services, Forestry, & Fishing	\$69	\$68	\$73	\$110	\$79	\$71	\$8	\$478		
3. Mining	\$1,219	\$1,054	\$1,033	\$1,241	\$1,218	\$1,058	\$98	\$6,921		
4. Construction	\$13,992	\$11,794	\$13,063	\$20,872	\$16,749	\$15,526	\$1,354	\$93,350		
5. Manufacturing	\$1,110	\$1,164	\$1,469	\$1,861	\$1,453	\$1,235	\$275	\$8,567		
6. Transportation & Public Utilities	\$3,064	\$1,017	\$3,780	\$1,463	\$1,577	\$1,404	\$140	\$12,445		
7. Wholesale	\$842	\$638	\$937	\$1,171	\$834	\$706	\$87	\$5,215		
8. Retail Trade	\$2,148	\$1,973	\$2,294	\$2,899	\$2,321	\$2,076	\$200	\$13,911		
9. Finance, Ins., & Real Estate	\$3,284	\$2,826	\$3,675	\$4,113	\$3,339	\$3,007	\$301	\$20,545		
10. Services	\$9,893	\$12,002	\$11,979	\$14,572	\$11,429	\$10,138	\$1,076	\$71,089		
11. Government	\$226	\$195	\$254	\$280	\$229	\$206	\$22	\$1,412		
Total Effects	\$35,852	\$32,737	\$38,563	\$48,589	\$39,235	\$35,433	\$3,562	\$233,971		
DISTRIBUTION OF EFFECTS/MULTIPLIER										
1. Direct Effects	\$22,237	\$20,100	\$23,210	\$30,893	\$24,857	\$22,533	\$2,176	\$146,006		
2. Indirect and Induced Effects	\$13,615	\$12,638	\$15,353	\$17,696	\$14,378	\$12,899	\$1,386	\$87,965		
3. Total Effects	\$35,852	\$32,737	\$38,563	\$48,589	\$39,235	\$35,433	\$3,562	\$233,971		
4. Multipliers (3/1)	1.61	1.63	1.66	1.57	1.58	1.57	1.64	1.60		

Total Gross State Product Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)										
Alternative A: Construction by Sheet Pile Design - Phasing Option 1										
	2005	2006	2007	2008	2009	2010	2011	Total		
TOTAL EFFECTS (Direct and Indirect/Induced)										
1. Agriculture	\$27	\$25	\$26	\$37	\$29	\$26	\$2	\$172		
2. Agricultural Services, Forestry, & Fishing	\$88	\$86	\$93	\$139	\$100	\$90	\$10	\$606		
3. Mining	\$3,000	\$2,497	\$2,732	\$2,932	\$2,907	\$2,534	\$269	\$16,871		
4. Construction	\$16,166	\$13,692	\$15,121	\$24,064	\$19,344	\$17,916	\$1,578	\$107,881		
5. Manufacturing	\$3,255	\$2,888	\$4,318	\$3,989	\$3,489	\$3,053	\$696	\$21,688		
6. Transportation & Public Utilities	\$4,915	\$1,808	\$6,034	\$2,611	\$2,697	\$2,397	\$246	\$20,708		
7. Wholesale	\$1,592	\$1,210	\$1,771	\$2,221	\$1,582	\$1,337	\$165	\$9,878		
8. Retail Trade	\$3,539	\$3,252	\$3,785	\$4,776	\$3,824	\$3,421	\$331	\$22,928		
9. Finance, Ins., & Real Estate	\$7,274	\$6,263	\$8,199	\$9,004	\$7,321	\$6,584	\$663	\$45,308		
10. Services	\$14,694	\$17,730	\$17,783	\$21,598	\$16,952	\$15,048	\$1,599	\$105,404		
11. Government	\$212	\$183	\$238	\$262	\$215	\$193	\$21	\$1,324		
Total Effects	\$54,760	\$49,633	\$60,100	\$71,633	\$58,460	\$52,600	\$5,580	\$352,768		
DISTRIBUTION OF EFFECTS/MULTIPLIER										
1. Direct Effects	\$29,982	\$26,837	\$32,028	\$39,821	\$32,460	\$29,274	\$3,007	\$193,409		
2. Indirect and Induced Effects	\$24,778	\$22,796	\$28,072	\$31,812	\$26,000	\$23,326	\$2,573	\$159,357		
3. Total Effects	\$54,760	\$49,633	\$60,100	\$71,633	\$58,460	\$52,600	\$5,580	\$352,766		
4. Multipliers (3/1)	1.83	1.85	1.88	1.80	1.80	1.80	1.86	1.82		
COMPOSITION OF GROSS STATE PRODUCT										
1. Wages--Net of Taxes	\$29,334	\$27,499	\$32,151	\$39,597	\$31,943	\$28,724	\$2,948	\$192,196		
2. Taxes	\$9,128	\$8,204	\$10,133	\$12,015	\$9,631	\$8,631	\$894	\$58,636		
a. Local	\$1,609	\$1,356	\$1,797	\$2,084	\$1,633	\$1,444	\$156	\$10,079		
b. State	\$844	\$707	\$955	\$1,000	\$834	\$746	\$84	\$5,170		
c. Federal	\$6,674	\$6,141	\$7,381	\$8,931	\$7,164	\$6,441	\$654	\$43,386		
d. General	\$3,601	\$3,278	\$3,985	\$4,763	\$3,832	\$3,443	\$351	\$23,253		
e. Social Security	\$3,074	\$2,862	\$3,396	\$4,167	\$3,332	\$2,999	\$303	\$20,133		
3. Profits, dividends, rents, and other	\$16,298	\$13,930	\$17,817	\$20,021	\$16,885	\$15,245	\$1,738	\$101,934		
4. Total Gross State Product (1+2+3)	\$54,760	\$49,633	\$60,100	\$71,633	\$58,460	\$52,600	\$5,580	\$352,766		

Total Economic Output Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)									
Alternative A: Construction by Sheet Pile Design - Phasing Option 2									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	\$42	\$39	\$60	\$40	\$45	\$40	\$3	\$269	
2. Agricultural Services, Forestry, & Fishing	\$92	\$90	\$153	\$94	\$105	\$97	\$10	\$641	
3. Mining	\$3,850	\$3,160	\$3,923	\$3,222	\$3,693	\$3,606	\$360	\$21,814	
4. Construction	\$18,329	\$15,540	\$28,479	\$20,248	\$21,875	\$17,214	\$1,791	\$123,476	
5. Manufacturing	\$6,131	\$5,657	\$8,968	\$5,962	\$6,878	\$8,033	\$1,362	\$42,991	
6. Transportation & Public Utilities	\$11,316	\$3,901	\$5,885	\$5,324	\$5,993	\$13,931	\$551	\$46,901	
7. Wholesale	\$2,204	\$1,690	\$3,224	\$1,865	\$2,211	\$2,447	\$231	\$13,872	
8. Retail Trade	\$6,124	\$5,626	\$8,586	\$5,917	\$6,612	\$6,556	\$573	\$39,994	
9. Finance, Ins., & Real Estate	\$9,726	\$8,350	\$12,513	\$8,791	\$9,774	\$10,961	\$884	\$60,999	
10. Services	\$25,348	\$31,305	\$39,194	\$26,201	\$29,556	\$30,820	\$2,792	\$185,216	
11. Government	\$520	\$449	\$672	\$473	\$527	\$586	\$51	\$3,278	
Total Effects	\$83,682	\$75,807	\$111,656	\$78,138	\$87,268	\$94,291	\$8,609	\$539,451	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	\$44,620	\$39,989	\$59,234	\$41,381	\$46,293	\$50,160	\$4,560	\$286,237	
2. Indirect and Induced Effects	\$39,062	\$35,817	\$52,422	\$36,757	\$40,975	\$44,131	\$4,048	\$253,212	
3. Total Effects	\$83,682	\$75,807	\$111,656	\$78,138	\$87,268	\$94,291	\$8,609	\$539,451	
4. Multipliers (3/1)	1.88	1.90	1.89	1.89	1.89	1.88	1.89	1.88	1.88

Total Employment Effects of Port of Anchorage Marine Terminal Redevelopment Construction Expenditures Alternative A: Construction by Sheet Pile Design - Phasing Option 2									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	0.2	0.2	0.3	0.2	0.2	0.2	0.0	1.3	
2. Agricultural Services, Forestry, & Fishing	3.9	3.9	6.5	4.0	4.5	4.2	0.5	27.5	
3. Mining	28.5	25.2	31.1	25.1	29.0	23.0	2.1	164.0	
4. Construction	253.5	218.0	410.3	267.5	308.0	221.8	22.9	1,702.0	
5. Manufacturing	42.5	42.2	76.3	44.8	52.0	52.7	7.6	318.1	
6. Transportation & Public Utilities	94.5	27.0	40.8	39.8	44.9	117.4	4.0	368.4	
7. Wholesale	23.4	17.7	33.5	19.6	23.1	26.1	2.4	145.8	
8. Retail Trade	117.9	108.4	165.4	114.0	127.4	126.4	11.1	770.6	
9. Finance, Ins., & Real Estate	122.5	107.4	162.4	113.6	126.2	136.9	11.4	780.4	
10. Services	341.2	401.9	515.7	346.7	390.4	409.3	36.7	2,441.9	
11. Government	1.2	1.1	1.6	1.1	1.3	1.4	0.1	7.8	
Total Effects	1,029.4	953.0	1,443.9	976.4	1,106.9	1,119.3	98.7	6,727.8	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	506.4	461.9	723.5	476.1	549.4	532.7	46.5	3,296.5	
2. Indirect and Induced Effects	523.1	491.0	720.4	500.3	557.6	586.6	52.3	3,431.3	
3. Total Effects	1,029.4	953.0	1,443.9	976.4	1,106.9	1,119.3	98.7	6,727.6	
4. Multipliers (3/1)	2.03	2.06	2.00	2.05	2.01	2.10	2.13	2.04	

Total Income Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)									
Alternative A: Construction by Sheet Pile Design - Phasing Option 2									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	\$6	\$6	\$8	\$6	\$6	\$6	\$0	\$38	
2. Agricultural Services, Forestry, & Fishing	\$69	\$68	\$116	\$71	\$79	\$73	\$8	\$484	
3. Mining	\$1,219	\$1,054	\$1,303	\$1,058	\$1,218	\$1,033	\$98	\$6,983	
4. Construction	\$13,992	\$11,794	\$21,837	\$15,526	\$16,749	\$13,063	\$1,354	\$94,315	
5. Manufacturing	\$1,110	\$1,164	\$2,019	\$1,235	\$1,453	\$1,469	\$275	\$8,725	
6. Transportation & Public Utilities	\$3,064	\$1,017	\$1,527	\$1,404	\$1,577	\$3,780	\$140	\$12,509	
7. Wholesale	\$842	\$638	\$1,212	\$706	\$834	\$937	\$87	\$5,256	
8. Retail Trade	\$2,148	\$1,973	\$3,013	\$2,076	\$2,321	\$2,294	\$200	\$14,025	
9. Finance, Ins., & Real Estate	\$3,284	\$2,826	\$4,284	\$3,007	\$3,339	\$3,675	\$301	\$20,716	
10. Services	\$9,893	\$12,002	\$15,131	\$10,138	\$11,429	\$11,979	\$1,076	\$71,648	
11. Government	\$226	\$195	\$292	\$206	\$229	\$254	\$22	\$1,424	
Total Effects	\$35,852	\$32,737	\$50,744	\$35,433	\$39,235	\$38,563	\$3,562	\$236,123	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	\$22,237	\$20,100	\$32,264	\$22,533	\$24,857	\$23,210	\$2,176	\$147,377	
2. Indirect and Induced Effects	\$13,615	\$12,638	\$18,480	\$12,899	\$14,378	\$15,353	\$1,386	\$88,749	
3. Total Effects	\$35,852	\$32,737	\$50,744	\$35,433	\$39,235	\$38,563	\$3,562	\$236,126	
4. Multipliers (3/1)	1.61	1.63	1.57	1.57	1.58	1.66	1.64	1.60	

Total Gross State Product Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)										
Alternative A: Construction by Sheet Pile Design - Phasing Option 2										
DISTRIBUTION OF EFFECTS/MULTIPLIER	2005	2006	2007	2008	2009	2010	2011	Total		
1. Agriculture	\$27	\$25	\$38	\$26	\$29	\$26	\$2	\$173		
2. Agricultural Services, Forestry, & Fishing	\$88	\$86	\$146	\$90	\$100	\$93	\$10	\$613		
3. Mining	\$3,000	\$2,497	\$3,094	\$2,534	\$2,907	\$2,732	\$269	\$17,033		
4. Construction	\$16,166	\$13,692	\$25,190	\$17,916	\$19,344	\$15,121	\$1,578	\$109,007		
5. Manufacturing	\$3,255	\$2,888	\$4,372	\$3,053	\$3,489	\$4,318	\$696	\$22,071		
6. Transportation & Public Utilities	\$4,915	\$1,808	\$2,725	\$2,397	\$2,697	\$6,034	\$246	\$20,822		
7. Wholesale	\$1,592	\$1,210	\$2,300	\$1,337	\$1,582	\$1,771	\$165	\$9,957		
8. Retail Trade	\$3,539	\$3,252	\$4,966	\$3,421	\$3,824	\$3,785	\$331	\$23,118		
9. Finance, Ins., & Real Estate	\$7,274	\$6,263	\$9,377	\$6,584	\$7,321	\$8,199	\$663	\$45,681		
10. Services	\$14,694	\$17,730	\$22,431	\$15,048	\$16,952	\$17,783	\$1,599	\$106,237		
11. Government	\$212	\$183	\$274	\$193	\$215	\$238	\$21	\$1,336		
Total Effects	\$54,760	\$49,633	\$74,912	\$52,600	\$58,460	\$60,100	\$5,580	\$356,048		
TOTAL EFFECTS (Direct and Indirect/Induced)										
1. Direct Effects	\$29,982	\$26,837	\$41,652	\$29,274	\$32,460	\$32,028	\$3,007	\$195,240		
2. Indirect and Induced Effects	\$24,778	\$22,796	\$33,260	\$23,326	\$26,000	\$28,072	\$2,573	\$160,805		
3. Total Effects	\$54,760	\$49,633	\$74,912	\$52,600	\$58,460	\$60,100	\$5,580	\$356,045		
4. Multipliers (3/1)	1.83	1.85	1.80	1.80	1.80	1.88	1.86	1.82		
COMPOSITION OF GROSS STATE PRODUCT										
1. Wages--Net of Taxes	\$29,334	\$27,499	\$41,336	\$28,724	\$31,943	\$32,151	\$2,948	\$193,935		
2. Taxes	\$9,128	\$8,204	\$12,519	\$8,631	\$9,631	\$10,133	\$894	\$59,140		
a. Local	\$1,609	\$1,356	\$2,169	\$1,444	\$1,633	\$1,797	\$156	\$10,164		
b. State	\$844	\$707	\$1,047	\$746	\$834	\$955	\$84	\$5,217		
c. Federal	\$6,674	\$6,141	\$9,303	\$6,441	\$7,164	\$7,381	\$654	\$43,758		
d. General	\$3,601	\$3,278	\$4,964	\$3,443	\$3,832	\$3,985	\$351	\$23,454		
e. Social Security	\$3,074	\$2,862	\$4,340	\$2,999	\$3,332	\$3,396	\$303	\$20,306		
3. Profits, dividends, rents, and other	\$16,298	\$13,930	\$21,057	\$15,245	\$16,885	\$17,817	\$1,738	\$102,970		
4. Total Gross State Product (1+2+3)	\$54,760	\$49,633	\$74,912	\$52,600	\$58,460	\$60,100	\$5,580	\$356,045		

Total Economic Output Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)									
Alternative B: Construction by Pile-Supported Dock Design - Phasing Option 1									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	\$53	\$53	\$49	\$66	\$54	\$50	\$3	\$328	
2. Agricultural Services, Forestry, & Fishing	\$133	\$140	\$130	\$181	\$140	\$130	\$10	\$864	
3. Mining	\$4,676	\$4,262	\$4,265	\$4,382	\$4,362	\$3,938	\$360	\$26,245	
4. Construction	\$24,266	\$23,091	\$21,945	\$32,158	\$26,813	\$25,386	\$1,791	\$155,450	
5. Manufacturing	\$10,767	\$11,109	\$11,723	\$12,313	\$10,900	\$9,970	\$1,362	\$68,144	
6. Transportation & Public Utilities	\$12,648	\$5,554	\$14,996	\$6,767	\$7,125	\$6,479	\$551	\$54,120	
7. Wholesale	\$2,733	\$2,360	\$2,871	\$3,560	\$2,655	\$2,324	\$231	\$16,734	
8. Retail Trade	\$7,613	\$7,544	\$7,750	\$9,505	\$7,857	\$7,209	\$573	\$48,051	
9. Finance, Ins., & Real Estate	\$12,161	\$11,431	\$12,913	\$14,076	\$11,830	\$10,905	\$884	\$74,200	
10. Services	\$32,735	\$40,621	\$36,778	\$44,089	\$35,883	\$32,634	\$2,792	\$225,532	
11. Government	\$665	\$630	\$702	\$766	\$650	\$599	\$51	\$4,063	
Total Effects	\$108,450	\$106,795	\$114,122	\$127,864	\$108,268	\$99,623	\$8,609	\$673,731	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	\$57,643	\$56,299	\$60,586	\$67,736	\$57,327	\$52,678	\$4,560	\$356,829	
2. Indirect and Induced Effects	\$50,807	\$50,497	\$53,536	\$60,127	\$50,940	\$46,945	\$4,048	\$316,900	
3. Total Effects	\$108,450	\$106,795	\$114,122	\$127,864	\$108,268	\$99,623	\$8,609	\$673,731	
4. Multipliers (3/1)	1.88	1.90	1.88	1.89	1.89	1.89	1.89	1.89	

Total Employment Effects of Port of Anchorage Marine Terminal Redevelopment Construction Expenditures Alternative B: Construction by Pile-Supported Dock Design - Phasing Option 1									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	0.3	0.3	0.2	0.3	0.3	0.3	0.0	1.7	
2. Agricultural Services, Forestry, & Fishing	5.7	6.1	5.6	7.7	6.0	5.6	0.5	37.2	
3. Mining	31.8	30.4	25.6	32.1	31.4	28.0	2.1	181.4	
4. Construction	307.2	290.8	264.6	438.7	350.9	314.0	22.9	1,989.1	
5. Manufacturing	81.0	87.5	83.4	104.1	85.4	78.1	7.6	527.1	
6. Transportation & Public Utilities	103.2	38.0	124.4	46.6	52.4	47.4	4.0	416	
7. Wholesale	29.0	24.7	30.5	37.1	27.8	24.4	2.4	175.9	
8. Retail Trade	146.7	145.5	149.4	183.2	151.4	138.9	11.1	926.2	
9. Finance, Ins., & Real Estate	154.2	147.5	162.3	182.8	152.9	141.1	11.4	952.2	
10. Services	438.7	525.0	487.9	580.0	473.7	431.7	36.7	2,973.7	
11. Government	1.6	1.5	1.6	1.8	1.5	1.4	0.1	9.5	
Total Effects	1,299.5	1,297.3	1,335.7	1,614.4	1,333.8	1,210.8	98.7	8,190.2	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	628.3	619.7	630.4	798.0	650.9	582.0	46.5	3,955.8	
2. Indirect and Induced Effects	671.2	677.6	705.3	816.4	682.9	628.9	52.3	4,234.6	
3. Total Effects	1,299.5	1,297.3	1,335.7	1,614.4	1,333.8	1,210.8	98.7	8,190.2	
4. Multipliers (3/1)	2.07	2.09	2.12	2.02	2.05	2.08	2.13	2.07	

Total Income Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)									
Alternative B: Construction by Pile-Supported Dock Design - Phasing Option 1									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	\$8	\$8	\$7	\$9	\$8	\$7	\$0	\$47	
2. Agricultural Services, Forestry, & Fishing	\$102	\$109	\$100	\$138	\$107	\$100	\$8	\$664	
3. Mining	\$1,398	\$1,316	\$1,176	\$1,379	\$1,355	\$1,213	\$98	\$7,935	
4. Construction	\$18,461	\$17,488	\$16,624	\$24,594	\$20,461	\$19,392	\$1,354	\$118,374	
5. Manufacturing	\$2,210	\$2,452	\$2,345	\$2,818	\$2,409	\$2,186	\$275	\$14,695	
6. Transportation & Public Utilities	\$3,398	\$1,432	\$4,047	\$1,747	\$1,861	\$1,694	\$140	\$14,319	
7. Wholesale	\$1,043	\$893	\$1,097	\$1,339	\$1,003	\$880	\$87	\$6,342	
8. Retail Trade	\$2,666	\$2,642	\$2,710	\$3,333	\$2,754	\$2,526	\$200	\$16,831	
9. Finance, Ins., & Real Estate	\$4,122	\$3,886	\$4,346	\$4,821	\$4,045	\$3,734	\$301	\$25,255	
10. Services	\$12,737	\$15,591	\$14,272	\$17,012	\$13,864	\$12,616	\$1,076	\$87,168	
11. Government	\$289	\$274	\$305	\$333	\$282	\$260	\$22	\$1,765	
Total Effects	\$46,433	\$46,091	\$47,028	\$57,524	\$48,149	\$44,608	\$3,562	\$293,395	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	\$28,829	\$28,452	\$28,480	\$36,439	\$30,389	\$28,247	\$2,176	\$183,012	
2. Indirect and Induced Effects	\$17,604	\$17,639	\$18,549	\$21,085	\$17,760	\$16,361	\$1,386	\$110,384	
3. Total Effects	\$46,433	\$46,091	\$47,028	\$57,524	\$48,149	\$44,608	\$3,562	\$293,395	
4. Multipliers (3/1)	1.61	1.62	1.65	1.58	1.58	1.58	1.64	1.60	

Total Gross State Product Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)									
Alternative B: Construction by Pile-Supported Dock Design - Phasing Option 1									
	2005	2006	2007	2008	2009	2010	2011	Total	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Agriculture	\$34	\$34	\$31	\$42	\$35	\$32	\$2	\$210	
2. Agricultural Services, Forestry, & Fishing	\$127	\$134	\$124	\$172	\$133	\$124	\$10	\$824	
3. Mining	\$3,584	\$3,292	\$3,198	\$3,401	\$3,374	\$3,040	\$269	\$20,158	
4. Construction	\$21,417	\$20,371	\$19,306	\$28,442	\$23,710	\$22,460	\$1,578	\$137,284	
5. Manufacturing	\$5,911	\$6,000	\$6,432	\$6,300	\$5,798	\$5,349	\$696	\$36,486	
6. Transportation & Public Utilities	\$5,506	\$2,546	\$6,508	\$3,115	\$3,200	\$2,911	\$246	\$24,032	
7. Wholesale	\$1,972	\$1,691	\$2,075	\$2,541	\$1,901	\$1,667	\$165	\$12,012	
8. Retail Trade	\$4,398	\$4,359	\$4,474	\$5,496	\$4,542	\$4,167	\$331	\$27,767	
9. Finance, Ins., & Real Estate	\$9,097	\$8,570	\$9,660	\$10,547	\$8,860	\$8,166	\$663	\$55,563	
10. Services	\$18,949	\$23,094	\$21,213	\$25,247	\$20,594	\$18,753	\$1,599	\$129,449	
11. Government	\$270	\$256	\$285	\$312	\$264	\$244	\$21	\$1,652	
Total Effects	\$71,266	\$70,347	\$73,306	\$85,616	\$72,411	\$66,913	\$5,580	\$445,439	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	\$39,020	\$38,221	\$39,254	\$47,451	\$40,072	\$37,109	\$3,007	\$244,134	
2. Indirect and Induced Effects	\$32,246	\$32,125	\$34,052	\$38,166	\$32,339	\$29,804	\$2,573	\$201,305	
3. Total Effects	\$71,266	\$70,347	\$73,306	\$85,616	\$72,411	\$66,913	\$5,580	\$445,439	
4. Multipliers (3/1)	1.83	1.84	1.87	1.80	1.81	1.80	1.86	1.82	
COMPOSITION OF GROSS STATE PRODUCT									
1. Wages--Net of Taxes	\$37,944	\$38,353	\$39,045	\$46,885	\$39,214	\$36,194	\$2,948	\$240,583	
2. Taxes	\$11,606	\$11,335	\$12,118	\$14,111	\$11,723	\$10,781	\$894	\$72,568	
a. Local	\$2,027	\$1,883	\$2,131	\$2,437	\$1,985	\$1,806	\$156	\$12,425	
b. State	\$1,086	\$1,009	\$1,148	\$1,205	\$1,039	\$956	\$84	\$6,527	
c. Federal	\$8,493	\$8,442	\$8,838	\$10,469	\$8,698	\$8,020	\$654	\$53,614	
d. General	\$4,578	\$4,515	\$4,768	\$5,590	\$4,656	\$4,291	\$351	\$28,749	
e. Social Security	\$3,915	\$3,927	\$4,070	\$4,878	\$4,042	\$3,729	\$303	\$24,864	
3. Profits, dividends, rents, and other	\$21,715	\$20,659	\$22,143	\$24,620	\$21,474	\$19,937	\$1,738	\$132,286	
4. Total Gross State Product (1+2+3)	\$71,266	\$70,347	\$73,306	\$85,616	\$72,411	\$66,913	\$5,580	\$445,439	

For Option 2 under Alternative B, the total results are the same as Option 1. The Option 2 results for 2007, 2008, and 2010 are identical to the Option 1 results for 2010, 2007, and 2008, respectively. The results for all other years are the same in both options.

Total Economic Output Effects of Port of Anchorage MTR Construction (in thousands of dollars) Alternative C: Construction by Combined Design - Phasing Option 1										
	2005	2006	2007	2008	2009	2010	2011	Total		
TOTAL EFFECTS (Direct and Indirect/Induced)										
1. Agriculture	\$42	\$39	\$40	\$74	\$45	\$40	\$3	\$283		
2. Agricultural Services, Forestry, & Fishing	\$92	\$90	\$97	\$195	\$105	\$94	\$10	\$683		
3. Mining	\$3,850	\$3,160	\$3,606	\$5,095	\$3,693	\$3,219	\$360	\$22,983		
4. Construction	\$18,329	\$15,540	\$17,214	\$35,515	\$21,875	\$20,234	\$1,791	\$130,498		
5. Manufacturing	\$6,131	\$5,657	\$8,033	\$12,738	\$6,878	\$5,952	\$1,362	\$46,751		
6. Transportation & Public Utilities	\$11,316	\$3,901	\$13,931	\$7,273	\$5,993	\$5,318	\$551	\$48,283		
7. Wholesale	\$2,204	\$1,690	\$2,447	\$3,830	\$2,211	\$1,863	\$231	\$14,476		
8. Retail Trade	\$6,124	\$5,626	\$6,556	\$10,390	\$6,612	\$5,908	\$573	\$41,789		
9. Finance, Ins., & Real Estate	\$9,726	\$8,350	\$10,961	\$15,244	\$9,774	\$8,778	\$884	\$63,717		
10. Services	\$25,348	\$31,305	\$30,820	\$47,069	\$29,556	\$26,136	\$2,792	\$193,026		
11. Government	\$520	\$449	\$586	\$829	\$527	\$473	\$51	\$3,435		
Total Effects	\$83,682	\$75,807	\$94,291	\$138,252	\$87,269	\$78,015	\$8,608	\$565,924		
DISTRIBUTION OF EFFECTS/MULTIPLIER										
1. Direct Effects	\$44,620	\$39,989	\$50,160	\$73,286	\$46,293	\$41,318	\$4,560	\$300,226		
2. Indirect and Induced Effects	\$39,062	\$35,817	\$44,131	\$64,965	\$40,975	\$36,698	\$4,048	\$265,696		
3. Total Effects	\$83,682	\$75,807	\$94,291	\$138,251	\$87,268	\$78,016	\$8,609	\$565,924		
4. Multipliers (3/1)	1.88	1.90	1.88	1.89	1.89	1.89	1.89	1.89		

Total Employment Effects of Port of Anchorage Marine Terminal Redevelopment Construction Expenditures Alternative C: Construction by Combined Design - Phasing Option 1									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	0.2	0.2	0.2	0.4	0.2	0.2	0.0	1.4	
2. Agricultural Services, Forestry, & Fishing	3.9	3.9	4.2	8.3	4.5	4.0	0.5	29.3	
3. Mining	28.5	25.2	23.0	38.8	29.0	25.1	2.1	171.7	
4. Construction	253.5	218.0	221.8	491.6	308.0	267.3	22.9	1,783.1	
5. Manufacturing	42.5	42.2	52.7	107.7	52.0	44.7	7.6	349.4	
6. Transportation & Public Utilities	94.5	27.0	117.4	50.0	44.9	39.7	4.0	377.5	
7. Wholesale	23.4	17.7	26.1	39.9	23.1	19.5	2.4	152.1	
8. Retail Trade	117.9	108.4	126.4	200.2	127.4	113.8	11.1	805.2	
9. Finance, Ins., & Real Estate	122.5	107.4	136.9	198.0	126.2	113.4	11.4	815.8	
10. Services	341.2	401.9	409.3	620.6	390.4	345.9	36.7	2,546.0	
11. Government	1.2	1.1	1.4	2.0	1.3	1.1	0.1	8.2	
Total Effects	1,029.3	953.0	1,119.4	1,757.5	1,107.0	974.7	98.8	7,039.7	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	506.4	461.9	532.7	874.1	549.4	475.5	46.5	3,446.5	
2. Indirect and Induced Effects	523.1	491.0	586.6	883.4	557.6	499.5	52.3	3,593.5	
3. Total Effects	1,029.4	953.0	1,119.3	1,757.4	1,106.9	975.0	98.7	7,039.7	
4. Multipliers (3/1)	2.07	2.09	2.12	2.02	2.05	2.08	2.13	2.07	

Total Income Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars) Alternative C: Construction by Combined Design - Phasing Option 1									
	2005	2006	2007	2008	2009	2010	2011	Total	
TOTAL EFFECTS (Direct and Indirect/Induced)									
1. Agriculture	\$6	\$6	\$6	\$10	\$6	\$6	\$0	\$40	
2. Agricultural Services, Forestry, & Fishing	\$69	\$68	\$73	\$148	\$79	\$71	\$8	\$516	
3. Mining	\$1,219	\$1,054	\$1,033	\$1,646	\$1,218	\$1,057	\$98	\$7,325	
4. Construction	\$13,992	\$11,794	\$13,063	\$27,178	\$16,749	\$15,515	\$1,354	\$99,645	
5. Manufacturing	\$1,110	\$1,164	\$1,469	\$2,896	\$1,453	\$1,233	\$275	\$9,600	
6. Transportation & Public Utilities	\$3,064	\$1,017	\$3,780	\$1,878	\$1,577	\$1,403	\$140	\$12,859	
7. Wholesale	\$842	\$638	\$937	\$1,441	\$834	\$705	\$87	\$5,484	
8. Retail Trade	\$2,148	\$1,973	\$2,294	\$3,645	\$2,321	\$2,073	\$200	\$14,654	
9. Finance, Ins., & Real Estate	\$3,284	\$2,826	\$3,675	\$5,225	\$3,339	\$3,003	\$301	\$21,653	
10. Services	\$9,893	\$12,002	\$11,979	\$18,176	\$11,429	\$10,114	\$1,076	\$74,669	
11. Government	\$226	\$195	\$254	\$361	\$229	\$206	\$22	\$1,493	
Total Effects	\$35,853	\$32,737	\$38,563	\$62,604	\$39,234	\$35,386	\$3,561	\$247,938	
DISTRIBUTION OF EFFECTS/MULTIPLIER									
1. Direct Effects	\$22,237	\$20,100	\$23,210	\$39,813	\$24,857	\$22,506	\$2,176	\$154,899	
2. Indirect and Induced Effects	\$13,615	\$12,638	\$15,353	\$22,790	\$14,378	\$12,879	\$1,386	\$93,039	
3. Total Effects	\$35,852	\$32,737	\$38,563	\$62,604	\$39,235	\$35,384	\$3,562	\$247,937	
4. Multipliers (3/1)	1.61	1.63	1.66	1.57	1.58	1.57	1.64	1.60	

Total Gross State Product Effects of Port of Anchorage Marine Terminal Redevelopment Construction (in thousands of dollars)								
Alternative C: Construction by Combined Design - Phasing Option 1								
	2005	2006	2007	2008	2009	2010	2011	Total
DISTRIBUTION OF EFFECTS/MULTIPLIER								
1. Agriculture	\$27	\$25	\$26	\$47	\$29	\$26	\$2	\$182
2. Agricultural Services, Forestry, & Fishing	\$88	\$86	\$93	\$185	\$100	\$90	\$10	\$652
3. Mining	\$3,000	\$2,497	\$2,732	\$3,985	\$2,907	\$2,532	\$269	\$17,922
4. Construction	\$16,166	\$13,692	\$15,121	\$31,421	\$19,344	\$17,904	\$1,578	\$115,226
5. Manufacturing	\$3,255	\$2,888	\$4,318	\$6,488	\$3,489	\$3,048	\$696	\$24,182
6. Transportation & Public Utilities	\$4,915	\$1,808	\$6,034	\$3,349	\$2,697	\$2,395	\$246	\$21,444
7. Wholesale	\$1,592	\$1,210	\$1,771	\$2,734	\$1,582	\$1,336	\$165	\$10,390
8. Retail Trade	\$3,539	\$3,252	\$3,785	\$6,008	\$3,824	\$3,416	\$331	\$24,155
9. Finance, Ins., & Real Estate	\$7,274	\$6,263	\$8,199	\$11,421	\$7,321	\$6,573	\$663	\$47,714
10. Services	\$14,694	\$17,730	\$17,783	\$26,973	\$16,952	\$15,012	\$1,599	\$110,743
11. Government	\$212	\$183	\$238	\$338	\$215	\$193	\$21	\$1,400
Total Effects								
	\$54,762	\$49,634	\$60,100	\$92,949	\$58,460	\$52,525	\$5,580	\$374,010
DISTRIBUTION OF EFFECTS/MULTIPLIER								
1. Direct Effects	\$29,982	\$26,837	\$32,028	\$51,737	\$32,460	\$29,236	\$3,007	\$205,287
2. Indirect and Induced Effects	\$24,778	\$22,796	\$28,072	\$41,213	\$26,000	\$23,288	\$2,573	\$168,720
3. Total Effects	\$54,760	\$49,633	\$60,100	\$92,950	\$58,460	\$52,524	\$5,580	\$374,007
4. Multipliers (3/1)	1.83	1.85	1.88	1.80	1.80	1.80	1.86	1.82
COMPOSITION OF GROSS STATE PRODUCT								
1. Wages--Net of Taxes	\$29,334	\$27,499	\$32,151	\$50,892	\$31,943	\$28,681	\$2,948	\$203,448
2. Taxes	\$9,128	\$8,204	\$10,133	\$15,292	\$9,631	\$8,618	\$894	\$61,900
a. Local	\$1,609	\$1,356	\$1,797	\$2,636	\$1,633	\$1,441	\$156	\$10,628
b. State	\$844	\$707	\$955	\$1,305	\$834	\$745	\$84	\$5,474
c. Federal	\$6,674	\$6,141	\$7,381	\$11,351	\$7,164	\$6,431	\$654	\$45,796
d. General	\$3,601	\$3,278	\$3,985	\$6,063	\$3,832	\$3,437	\$351	\$24,547
e. Social Security	\$3,074	\$2,862	\$3,396	\$5,288	\$3,332	\$2,994	\$303	\$21,249
3. Profits, dividends, rents, and other	\$16,298	\$13,930	\$17,817	\$26,767	\$16,885	\$15,225	\$1,738	\$108,660
4. Total Gross State Product (1+2+3)	\$54,760	\$49,633	\$60,100	\$92,950	\$58,460	\$52,524	\$5,580	\$374,007

For Option 2 under Alternative C, the total results are the same as Option 1. The Option 2 results for 2007, 2008, and 2010 are identical to the Option 1 results for 2010, 2007, and 2008, respectively. The results for all other years are the same in both options.

RESULTS FOR OPERATIONS

OUTPUT, EMPLOYMENT, INCOME, AND GROSS STATE PRODUCT EFFECTS OF CONSTRUCTION SPENDING, 2005, 2010, 2015, 2020, 2025

Total Economic Output Effects of Port of Anchorage Operations (in thousands of dollars) With Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	\$88	\$117	\$139	\$168	\$203
2. Agricultural Services, Forestry, & Fishing	\$318	\$495	\$614	\$768	\$969
3. Mining	\$13,068	\$22,973	\$29,011	\$37,002	\$47,650
4. Construction	\$10,580	\$20,929	\$27,126	\$35,450	\$46,686
5. Manufacturing	\$35,190	\$63,474	\$80,619	\$103,394	\$133,840
6. Transport. & Public Utilities	\$215,361	\$267,940	\$314,135	\$369,753	\$437,189
7. Wholesale	\$11,224	\$16,467	\$20,086	\$24,714	\$30,682
8. Retail Trade	\$21,310	\$27,736	\$32,910	\$39,272	\$47,162
9. Finance, Ins., & Real Estate	\$38,819	\$49,730	\$58,754	\$69,773	\$83,337
10. Services	\$37,063	\$48,969	\$58,317	\$69,876	\$84,295
11. Government	\$3,264	\$4,222	\$4,979	\$5,906	\$7,051
Total Effects	\$386,286	\$523,052	\$626,691	\$756,075	\$919,063
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	\$206,684	\$281,949	\$338,460	\$409,194	\$498,535
2. Indirect and Induced Effects	\$179,602	\$241,102	\$288,231	\$346,881	\$420,528
3. Total Effects	\$386,286	\$523,052	\$626,691	\$756,075	\$919,063
4. Multipliers (3/1)	1.87	1.86	1.85	1.85	1.84

Total Employment Effects of Port of Anchorage Operations With Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	0.4	0.6	0.7	0.9	1.0
2. Agricultural Services, Forestry, & Fishing	14.1	20.0	24.3	29.7	36.6
3. Mining	35.6	63.0	79.7	101.9	131.4
4. Construction	40.3	76.1	97.8	126.9	166.0
5. Manufacturing	116.5	198.1	249.6	317.4	407.4
6. Transport. & Public Utilities	1,976.1	2,410.2	2,809.8	3,285.6	3,855.6
7. Wholesale	120.2	177.6	217.0	267.4	332.6
8. Retail Trade	410.1	533.4	632.7	754.8	906.2
9. Finance, Ins., & Real Estate	488.4	624.5	737.5	875.3	1,044.9
10. Services	649.3	865.4	1,033.0	1,240.9	1,501.1
11. Government	22.2	26.9	30.9	35.6	41.2
Total Effects	3,873.3	4,995.7	5,913.0	7,036.5	8,424.0
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	1,797.1	2,277.9	2,683.5	3,176.4	3,780.0
2. Indirect and Induced Effects	2,076.1	2,717.9	3,229.5	3,860.1	4,644.1
3. Total Effects	3,873.3	4,995.7	5,913.0	7,036.5	8,424.0
4. Multipliers (3/1)	2.16	2.19	2.20	2.22	2.23

Total Income Effects of Port of Anchorage Operations (in thousands of dollars)					
With Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	\$13	\$17	\$20	\$24	\$29
2. Agricultural Services, Forestry, & Fishing	\$225	\$321	\$390	\$477	\$589
3. Mining	\$2,336	\$4,117	\$5,202	\$6,639	\$8,554
4. Construction	\$5,121	\$10,252	\$13,313	\$17,429	\$22,991
5. Manufacturing	\$3,862	\$7,039	\$8,972	\$11,543	\$14,985
6. Transport. & Public Utilities	\$64,906	\$80,276	\$93,981	\$110,431	\$130,308
7. Wholesale	\$4,312	\$6,359	\$7,766	\$9,566	\$11,891
8. Retail Trade	\$7,395	\$9,612	\$11,401	\$13,600	\$16,325
9. Finance, Ins., & Real Estate	\$12,851	\$16,442	\$19,421	\$23,055	\$27,527
10. Services	\$15,685	\$20,822	\$24,827	\$29,787	\$35,985
11. Government	\$1,659	\$2,116	\$2,482	\$2,926	\$3,471
Total Effects	\$118,367	\$157,373	\$187,774	\$225,478	\$272,655
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	\$60,076	\$79,215	\$94,337	\$113,034	\$136,351
2. Indirect and Induced Effects	\$58,290	\$78,159	\$93,437	\$112,444	\$136,304
3. Total Effects	\$118,367	\$157,373	\$187,774	\$225,478	\$272,655
4. Multipliers (3/1)	1.97	1.99	1.99	1.99	2.00

Total Gross State Product Effects of Port of Anchorage Operations (in thousands of dollars) With Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	\$57	\$76	\$90	\$109	\$131
2. Agricultural Services, Forestry, & Fishing	\$303	\$471	\$584	\$730	\$921
3. Mining	\$8,929	\$15,714	\$19,848	\$25,321	\$32,613
4. Construction	\$6,934	\$13,841	\$17,964	\$23,509	\$30,998
5. Manufacturing	\$20,401	\$36,445	\$46,183	\$59,102	\$76,350
6. Transport. & Public Utilities	\$96,241	\$121,621	\$143,246	\$169,494	\$201,596
7. Wholesale	\$8,143	\$11,995	\$14,643	\$18,033	\$22,410
8. Retail Trade	\$12,250	\$15,931	\$18,899	\$22,547	\$27,069
9. Finance, Ins., & Real Estate	\$29,206	\$37,406	\$44,191	\$52,475	\$62,671
10. Services	\$24,970	\$33,041	\$39,363	\$47,184	\$56,945
11. Government	\$1,661	\$2,106	\$2,465	\$2,900	\$3,432
Total Effects	\$209,095	\$288,646	\$347,478	\$421,402	\$515,136
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	\$96,810	\$136,852	\$165,690	\$202,193	\$248,817
2. Indirect and Induced Effects	\$112,285	\$151,794	\$181,787	\$219,208	\$266,319
3. Total Effects	\$209,095	\$288,646	\$347,478	\$421,402	\$515,136
4. Multipliers (3/1)	2.16	2.11	2.10	2.08	2.07
COMPOSITION OF GROSS STATE PRODUCT					
1. Wages--Net of Taxes	\$105,147	\$139,039	\$165,667	\$198,624	\$239,773
2. Taxes	\$36,654	\$48,792	\$58,216	\$69,909	\$84,543
a. Local	\$7,278	\$9,971	\$11,980	\$14,497	\$17,680
b. State	\$4,088	\$5,807	\$7,033	\$8,587	\$10,575
c. Federal	\$25,288	\$33,013	\$39,204	\$46,825	\$56,288
d. General	\$14,185	\$18,715	\$22,285	\$26,699	\$32,204
e. Social Security	\$11,103	\$14,299	\$16,919	\$20,126	\$24,083
3. Profits, dividends, rents, and other	\$67,294	\$100,816	\$123,594	\$152,869	\$190,820
4. Total Gross State Product (1+2+3)	\$209,095	\$288,646	\$347,478	\$421,402	\$515,136

Total Economic Output Effects of Port of Anchorage Operations (in thousands of dollars)					
Without Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	\$72	\$87	\$87	\$87	\$88
2. Agricultural Services, Forestry, & Fishing	\$268	\$388	\$389	\$389	\$390
3. Mining	\$11,411	\$19,007	\$19,151	\$19,308	\$19,474
4. Construction	\$9,266	\$17,464	\$17,490	\$17,519	\$17,547
5. Manufacturing	\$30,780	\$52,670	\$53,009	\$53,380	\$53,767
6. Transport. & Public Utilities	\$175,444	\$193,618	\$193,984	\$194,408	\$194,781
7. Wholesale	\$9,425	\$12,786	\$12,846	\$12,914	\$12,982
8. Retail Trade	\$17,485	\$20,449	\$20,503	\$20,564	\$20,619
9. Finance, Ins., & Real Estate	\$31,766	\$36,423	\$36,519	\$36,628	\$36,727
10. Services	\$30,472	\$36,347	\$36,484	\$36,644	\$36,782
11. Government	\$2,656	\$3,119	\$3,143	\$3,169	\$3,195
Total Effects	\$319,046	\$392,359	\$393,604	\$395,011	\$396,351
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	\$170,867	\$212,058	\$212,727	\$213,484	\$214,204
2. Indirect and Induced Effects	\$148,179	\$180,301	\$180,877	\$181,527	\$182,147
3. Total Effects	\$319,046	\$392,359	\$393,604	\$395,011	\$396,351
4. Multipliers (3/1)	1.87	1.85	1.85	1.85	1.85

Total Employment Effects of Port of Anchorage Operations					
Without Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	0.4	0.4	0.4	0.4	0.4
2. Agricultural Services, Forestry, & Fishing	11.7	15.2	15.2	15.3	15.3
3. Mining	31.1	52.2	52.6	53.1	53.5
4. Construction	35.0	62.8	62.9	63.0	63.1
5. Manufacturing	99.9	160.0	160.6	161.1	161.7
6. Transport. & Public Utilities	1,601.5	1,723.2	1,726.6	1,730.5	1,733.9
7. Wholesale	101.1	138.3	139.0	139.7	140.5
8. Retail Trade	336.5	393.1	394.1	395.3	396.4
9. Finance, Ins., & Real Estate	399.7	457.1	458.3	459.6	460.8
10. Services	534.4	644.4	646.8	649.7	652.1
11. Government	17.7	19.4	19.7	20.1	20.4
Total Effects	3,168.9	3,666.3	3,676.3	3,687.9	3,698.1
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	1,463.9	1,657.1	1,661.7	1,667.0	1,671.6
2. Indirect and Induced Effects	1,705.0	2,009.2	2,014.7	2,020.9	2,026.5
3. Total Effects	3,168.9	3,666.3	3,676.3	3,687.9	3,698.1
4. Multipliers (3/1)	2.16	2.21	2.21	2.21	2.21

Total Income Effects of Port of Anchorage Operations (in thousands of dollars)					
Without Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	\$10	\$13	\$13	\$13	\$13
2. Agricultural Services, Forestry, & Fishing	\$187	\$244	\$245	\$245	\$246
3. Mining	\$2,040	\$3,408	\$3,433	\$3,461	\$3,490
4. Construction	\$4,496	\$8,579	\$8,592	\$8,607	\$8,621
5. Manufacturing	\$3,366	\$5,820	\$5,847	\$5,876	\$5,906
6. Transport. & Public Utilities	\$52,820	\$57,819	\$57,918	\$58,035	\$58,133
7. Wholesale	\$3,625	\$4,948	\$4,972	\$4,998	\$5,025
8. Retail Trade	\$6,066	\$7,083	\$7,102	\$7,123	\$7,142
9. Finance, Ins., & Real Estate	\$10,519	\$12,039	\$12,069	\$12,105	\$12,136
10. Services	\$12,903	\$15,484	\$15,546	\$15,618	\$15,679
11. Government	\$1,344	\$1,556	\$1,570	\$1,586	\$1,602
Total Effects	\$97,377	\$116,992	\$117,306	\$117,666	\$117,993
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	\$49,329	\$58,636	\$58,782	\$58,951	\$59,099
2. Indirect and Induced Effects	\$48,048	\$58,356	\$58,524	\$58,715	\$58,894
3. Total Effects	\$97,377	\$116,992	\$117,306	\$117,666	\$117,993
4. Multipliers (3/1)	1.97	2.00	2.00	2.00	2.00

Total Gross State Product Effects of Port of Anchorage Operations (in thousands of dollars)					
Without Marine Terminal Redevelopment					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	\$47	\$56	\$57	\$57	\$57
2. Agricultural Services, Forestry, & Fishing	\$255	\$369	\$370	\$370	\$371
3. Mining	\$7,799	\$13,006	\$13,105	\$13,213	\$13,326
4. Construction	\$6,084	\$11,574	\$11,591	\$11,611	\$11,629
5. Manufacturing	\$17,843	\$30,226	\$30,438	\$30,670	\$30,914
6. Transport. & Public Utilities	\$78,527	\$88,385	\$88,541	\$88,724	\$88,879
7. Wholesale	\$6,844	\$9,328	\$9,373	\$9,422	\$9,473
8. Retail Trade	\$10,050	\$11,742	\$11,773	\$11,808	\$11,840
9. Finance, Ins., & Real Estate	\$23,898	\$27,394	\$27,465	\$27,548	\$27,622
10. Services	\$20,533	\$24,540	\$24,638	\$24,751	\$24,848
11. Government	\$1,342	\$1,546	\$1,561	\$1,578	\$1,595
Total Effects	\$173,221	\$218,166	\$218,911	\$219,752	\$220,553
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	\$80,488	\$104,345	\$104,721	\$105,146	\$105,551
2. Indirect and Induced Effects	\$92,733	\$113,822	\$114,190	\$114,605	\$115,002
3. Total Effects	\$173,221	\$218,166	\$218,911	\$219,752	\$220,553
4. Multipliers (3/1)	2.15	2.09	2.09	2.09	2.09
COMPOSITION OF GROSS STATE PRODUCT					
1. Wages--Net of Taxes	\$86,424	\$103,128	\$103,401	\$103,715	\$103,999
2. Taxes	\$30,193	\$36,342	\$36,451	\$36,576	\$36,693
a. Local	\$6,026	\$7,520	\$7,546	\$7,575	\$7,603
b. State	\$3,410	\$4,450	\$4,469	\$4,491	\$4,512
c. Federal	\$20,758	\$24,372	\$24,436	\$24,510	\$24,577
d. General	\$11,662	\$13,876	\$13,914	\$13,957	\$13,996
e. Social Security	\$9,095	\$10,495	\$10,523	\$10,554	\$10,582
3. Profits, dividends, rents, and other	\$56,604	\$78,696	\$79,058	\$79,460	\$79,861
4. Total Gross State Product (1+2+3)	\$173,221	\$218,166	\$218,911	\$219,752	\$220,553

Total Economic Output Effects of Port of Anchorage Operations (in thousands of dollars)					
Impacts of No Action					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	-\$15	-\$30	-\$52	-\$80	-\$115
2. Agricultural Services, Forestry, & Fishing	-\$50	-\$107	-\$225	-\$378	-\$578
3. Mining	-\$1,657	-\$3,966	-\$9,860	-\$17,694	-\$28,176
4. Construction	-\$1,314	-\$3,465	-\$9,636	-\$17,931	-\$29,139
5. Manufacturing	-\$4,410	-\$10,804	-\$27,610	-\$50,015	-\$80,072
6. Transport. & Public Utilities	-\$39,917	-\$74,321	-\$120,151	-\$175,345	-\$242,408
7. Wholesale	-\$1,799	-\$3,681	-\$7,240	-\$11,800	-\$17,700
8. Retail Trade	-\$3,826	-\$7,286	-\$12,407	-\$18,708	-\$26,542
9. Finance, Ins., & Real Estate	-\$7,053	-\$13,307	-\$22,236	-\$33,145	-\$46,610
10. Services	-\$6,590	-\$12,622	-\$21,833	-\$33,232	-\$47,514
11. Government	-\$609	-\$1,103	-\$1,836	-\$2,737	-\$3,856
Total Effects	-\$67,240	\$130,693	-\$233,086	-\$361,064	-\$522,712
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	-\$35,817	-\$69,892	-\$125,733	-\$195,710	-\$284,331
2. Indirect and Induced Effects	-\$31,423	-\$60,801	-\$107,353	-\$165,354	-\$238,381
3. Total Effects	-\$67,240	\$130,693	-\$233,086	-\$361,064	-\$522,712
4. Multipliers (3/1)	1.88	1.87	1.85	1.84	1.84

Total Employment Effects of Port of Anchorage Operations					
Impacts of No Action					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	-0.1	-0.2	-0.3	-0.4	-0.6
2. Agricultural Services, Forestry, & Fishing	-2.4	-4.8	-9.0	-14.4	-21.3
3. Mining	-4.5	-10.8	-27.1	-48.8	-77.9
4. Construction	-5.3	-13.3	-34.9	-63.9	-102.9
5. Manufacturing	-16.7	-38.1	-89.0	-156.3	-245.7
6. Transport. & Public Utilities	-374.6	-686.9	-1,083.2	-1,555.1	-2,121.7
7. Wholesale	-19.1	-39.3	-78.0	-127.7	-192.1
8. Retail Trade	-73.7	-140.2	-238.6	-359.5	-509.8
9. Finance, Ins., & Real Estate	-88.7	-167.4	-279.2	-415.7	-584.1
10. Services	-114.9	-221.0	-386.1	-591.2	-849.0
11. Government	-4.5	-7.5	-11.2	-15.6	-20.8
Total Effects	-704.4	-1,329.4	-2,236.7	-3,348.6	-4,725.9
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	-333.2	-620.8	-1,021.8	-1,509.4	-2,108.4
2. Indirect and Induced Effects	-371.2	-708.6	-1,214.8	-1,839.2	-2,617.5
3. Total Effects	-704.4	-1,329.4	-2,236.7	-3,348.6	-4,725.9
4. Multipliers (3/1)	2.11	2.14	2.19	2.22	2.24

Total Income Effects of Port of Anchorage Operations (in thousands of dollars)					
Impacts of No Action					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	-\$2	-\$4	-\$8	-\$12	-\$17
2. Agricultural Services, Forestry, & Fishing	-\$38	-\$76	-\$145	-\$232	-\$343
3. Mining	-\$296	-\$710	-\$1,769	-\$3,178	-\$5,064
4. Construction	-\$625	-\$1,673	-\$4,721	-\$8,823	-\$14,370
5. Manufacturing	-\$496	-\$1,219	-\$3,125	-\$5,667	-\$9,079
6. Transport. & Public Utilities	-\$12,086	-\$22,457	-\$36,063	-\$52,396	-\$72,175
7. Wholesale	-\$687	-\$1,412	-\$2,794	-\$4,568	-\$6,866
8. Retail Trade	-\$1,329	-\$2,529	-\$4,300	-\$6,477	-\$9,183
9. Finance, Ins., & Real Estate	-\$2,332	-\$4,404	-\$7,351	-\$10,951	-\$15,391
10. Services	-\$2,782	-\$5,338	-\$9,281	-\$14,169	-\$20,307
11. Government	-\$316	-\$560	-\$912	-\$1,340	-\$1,870
Total Effects	-\$20,989	-\$40,382	-\$70,468	-\$107,812	-\$154,663
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	-\$10,747	-\$20,579	-\$35,556	-\$54,083	-\$77,252
2. Indirect and Induced Effects	-\$10,242	-\$19,803	-\$34,913	-\$53,729	-\$77,410
3. Total Effects	-\$20,989	-\$40,382	-\$70,468	-\$107,812	-\$154,663
4. Multipliers (3/1)	1.95	1.96	1.98	1.99	2.00

Total Gross State Product Effects of Port of Anchorage Operations (in thousands of dollars)					
Impacts of No Action					
	2005	2010	2015	2020	2025
TOTAL EFFECTS (Direct and Indirect/Induced)					
1. Agriculture	-\$10	-\$19	-\$34	-\$52	-\$75
2. Agricultural Services, Forestry, & Fishing	-\$48	-\$102	-\$214	-\$359	-\$550
3. Mining	-\$1,130	-\$2,708	-\$6,744	-\$12,108	-\$19,288
4. Construction	-\$850	-\$2,267	-\$6,373	-\$11,898	-\$19,369
5. Manufacturing	-\$2,558	-\$6,219	-\$15,745	-\$28,431	-\$45,436
6. Transport. & Public Utilities	-\$17,714	-\$33,236	-\$54,706	-\$80,770	-\$112,718
7. Wholesale	-\$1,299	-\$2,667	-\$5,271	-\$8,611	-\$12,937
8. Retail Trade	-\$2,200	-\$4,189	-\$7,126	-\$10,739	-\$15,229
9. Finance, Ins., & Real Estate	-\$5,308	-\$10,012	-\$16,726	-\$24,927	-\$35,049
10. Services	-\$4,437	-\$8,501	-\$14,725	-\$22,433	-\$32,097
11. Government	-\$318	-\$560	-\$904	-\$1,322	-\$1,837
Total Effects	-\$35,874	-\$70,480	-\$128,567	-\$201,650	-\$294,584
DISTRIBUTION OF EFFECTS/MULTIPLIER					
1. Direct Effects	-\$16,322	-\$32,507	-\$60,969	-\$97,047	-\$143,267
2. Indirect and Induced Effects	-\$19,552	-\$37,973	-\$67,598	-\$104,603	-\$151,317
3. Total Effects	-\$35,874	-\$70,480	-\$128,567	-\$201,650	-\$294,584
4. Multipliers (3/1)	2.20	2.17	2.11	2.08	2.06
COMPOSITION OF GROSS STATE PRODUCT					
1. Wages--Net of Taxes	-\$18,723	-\$35,911	-\$62,266	-\$94,909	-\$135,774
2. Taxes	-\$6,461	-\$12,450	-\$21,765	-\$33,332	-\$47,850
a. Local	-\$1,252	-\$2,451	-\$4,433	-\$6,921	-\$10,077
b. State	-\$678	-\$1,357	-\$2,564	-\$4,097	-\$6,063
c. Federal	-\$4,530	-\$8,642	-\$14,767	-\$22,314	-\$31,711
d. General	-\$2,523	-\$4,839	-\$8,371	-\$12,742	-\$18,209
e. Social Security	-\$2,008	-\$3,803	-\$6,396	-\$9,572	-\$13,502
3. Profits, dividends, rents, and other	-\$10,690	-\$22,120	-\$44,536	-\$73,409	-\$110,959
4. Total Gross State Product (1+2+3)	-\$35,874	-\$70,480	-\$128,567	-\$201,650	-\$294,584

APPENDIX H

ISSUES AND RESPONSES

APPENDIX H ISSUES AND RESPONSES

<i>Issues Raised by Agencies and the Public</i>	<i>Response</i>
Compensatory mitigation may be required for negative, unavoidable impacts to resources. (USFWS)	A section on Management Actions has been added to Chapter 2 of the EA (section 2.2.2). These are part of the Proposed Action and have been incorporated into the impact analyses for all resource areas. They include compensatory habitat restoration for loss of EFH habitat and wetlands to be established through the USACE Section 404 Permitting Process.
Agencies would like to see mitigation measures/plans for all resource areas. (USFWS, NOAA Fisheries)	A section on Management Actions has been added to Chapter 2 of the EA (section 2.2.2). These are part of the Proposed Action and have been incorporated into the impact analyses for all resource areas.
Agencies wished definition criteria for qualifiers of the impact analysis results (negligible, minor, minimal, significant, and not significant) within Table ES-1, and Table 2.8, Environmental Consequences, and Chapter 4, Cumulative Effects. They requested consistent treatment for the proposed action and no-action alternative. (USFWS, NOAA Fisheries)	These terms were removed from the table, and the language was made to be more consistent with the impact conclusions in Chapter 3. This table has been moved to the end of Chapter 3. A detailed analysis of the no-action alternative has been presented in Chapter 3.
A commenter wanted the Summary of Environmental Consequences shifted from Chapter 2 to Chapter 3. (NOAA Fisheries)	This table has been moved to the end of Chapter 3 (section 3.5). Phrases were added to indicate more detailed discussion of the environmental consequences in Chapter 3.
The U.S. Army Garrison would like the EA to address more than the Army's Stryker Brigade Combat Team such as the role of the USARAK and Airborne BCT. (U.S. Army)	Comments were incorporated in relevant discussions in Chapters 1 and 2 and related sections of the Executive Summary, "and other USARAK combat forces" was added where appropriate.
Commenters wanted more alternatives examined, including one involving an expansion westward to deeper water or a 100 percent pile-supported design. (USFWS, NOAA Fisheries)	Additional alternatives such as expanding into deeper water to the west and perpendicular to the existing POA; expanding using a bridge/island concept; and expanding with 100 percent of the new facility using pile-supported dock design are now addressed in section 2.1.1, along with 22 other alternatives. The Alternatives Screening Process used to determine which alternatives would be carried forward for detailed analysis has been expanded in section 2.1.
Is Fire Island being considered as an alternative? (Preston Black)	Relocation of the POA to Fire Island is now addressed in section 2.1.1, Alternatives Considered but not Carried Forward.
There appears to be no difference between Alternative A and Alternative C. More accurate descriptions for Alternatives B and C were suggested. (USFWS, NOAA Fisheries, Cook Inlet Keeper)	Chapter 2 of the final EA includes an expanded description of all alternatives, including the reasons for selecting these alternatives and carrying them forward for detailed analysis.

<i>Issues Raised by Agencies and the Public</i>	<i>Response</i>
The predicted environmental effects for each of the alternatives do not significantly vary. (USFWS)	Chapter 2 of the final EA includes an expanded description of all alternatives. The alternatives differ in several components that could affect the environment, including amount of fill in tidelands, numbers of steel piles, use of impact vs. vibratory pile drivers, and use of utilities and drainage systems. The EA now includes an expanded description of these components (section 2.2).
The Cook Inlet Keeper suggested that MARAD and the POA should be producing an environmental impact statement. (Cook Inlet Keeper)	MARAD and the POA have taken a "hard look" at the impacts due to the proposed action and the no-action alternative as required under NEPA.
Where will the fill material be obtained? What if the borrow source material is contaminated? (Elmendorf AFB)	These questions have been addressed in the Geology and Soils Section, which addresses sources of fill material, as well as in the Environmental Consequences portion of section 3.2.3, Hazardous Wastes. The discussion of fill borrow sources has also been expanded in the description of the proposed action, section 2.2.
How many acres will be dredged for construction? What is the acreage required to be dredged annually for operations? Analyze use of dredge material as fill including explanation of reasoning and how much of the dredge material will be suitable as fill material. (USFWS)	A figure has been added to section 2.2 depicting existing maintenance dredging areas, the POA Project dredge area, and expanded POA operational dredging areas, including total acreage for each area. Where appropriate, areas impacted by dredging have been reported in the document by acres. As stated in section 2.2, dredge materials would be used as fill when appropriate and to the extent feasible.
The MOA Planning Department and Cook Inlet Keeper expressed concern for air quality as the MOA is a nonattainment area for CO. Suggest consideration for projected CO increases from mobile and stationary sources as the MOA continues to grow under Cumulative Effects. (MOA Planning Department, Cook Inlet Keeper)	Anchorage is now in attainment for CO. Revisions to the air quality section have been made to reflect this change in status (section 3.2.1). Air quality emissions were considered under the Cumulative Effects section (Chapter 4).
Noise in the MOA and Anchorage Bowl would increase under the proposed action. Need to address and summarize short term increases in noise levels due to pile-driving and construction operations and long term changes in noise levels from operations for each of the resources under each alternative. (MOA Planning Department)	Noise effects from construction and operations have been analyzed under sections 3.2.2, Noise; 3.3.4, Biological Resources; 3.4.2, Recreation and Visual Resources; 3.4.7, Cultural Resources; and 4.4, Cumulative Resources.

<i>Issues Raised by Agencies and the Public</i>	<i>Response</i>
Commenters requested additional analysis that would address use of hazardous materials and the increased risk of spills from expansion of POA activities. (Cook Inlet Keeper, USFWS)	Additional information on hazardous materials and spills was added to section 3.2.3. Although the increase in operations and use of hazardous materials would seem to increase the likelihood of spills, this would not be the case. Improvements to existing infrastructure, the ability for newer ships built with more stringent environmental controls to call on the POA, and enforcement of updated spill prevention and response procedures would result in expanded POA operations with no increase in spill potential.
The analysis should consider migratory birds in the Project area. Amend bird species list. (MOA Planning Department, USFWS)	Since essentially all bird species found at the POA and in the vicinity are considered migratory birds (except pigeons), migratory birds have been discussed (section 3.3.4).
Include evaluation of mudflat habitat. Its importance to shorebirds, waterfowl, juvenile fish and mammals has not been evaluated. (USFWS)	Expanded information on mudflats in the area has been included in the final EA. Although providing an "evaluation" of mudflat habitat is difficult due to lack of information on project-specific mudflats, the recent fish sampling effort at the POA and in the vicinity has gathered some preliminary data on invertebrate occurrence and abundance in the Project area. These limited data have been incorporated as appropriate into the discussion (section 3.3.4).
Several agencies recommend fish studies (due to lack of data). Analyze impact to recreational fishing industry. (NOAA Fisheries, USFWS, ADNR)	In conjunction with the fish study for the KABATA project in the vicinity, the POA has initiated a fish study that includes periodic sampling of fish and invertebrates at selected locations in the vicinity of the POA. In addition, a salmon migration study is slated to begin in the spring of 2005 and fish sampling would continue into next year as well. Impacts to recreational fishing have been added to the recreation resource analysis (section 3.3.4).
Include discussion of algal mats and tideland grasses and sedges. (USFWS)	Discussion has been provided based up the best available data for the area (section 3.3.4).

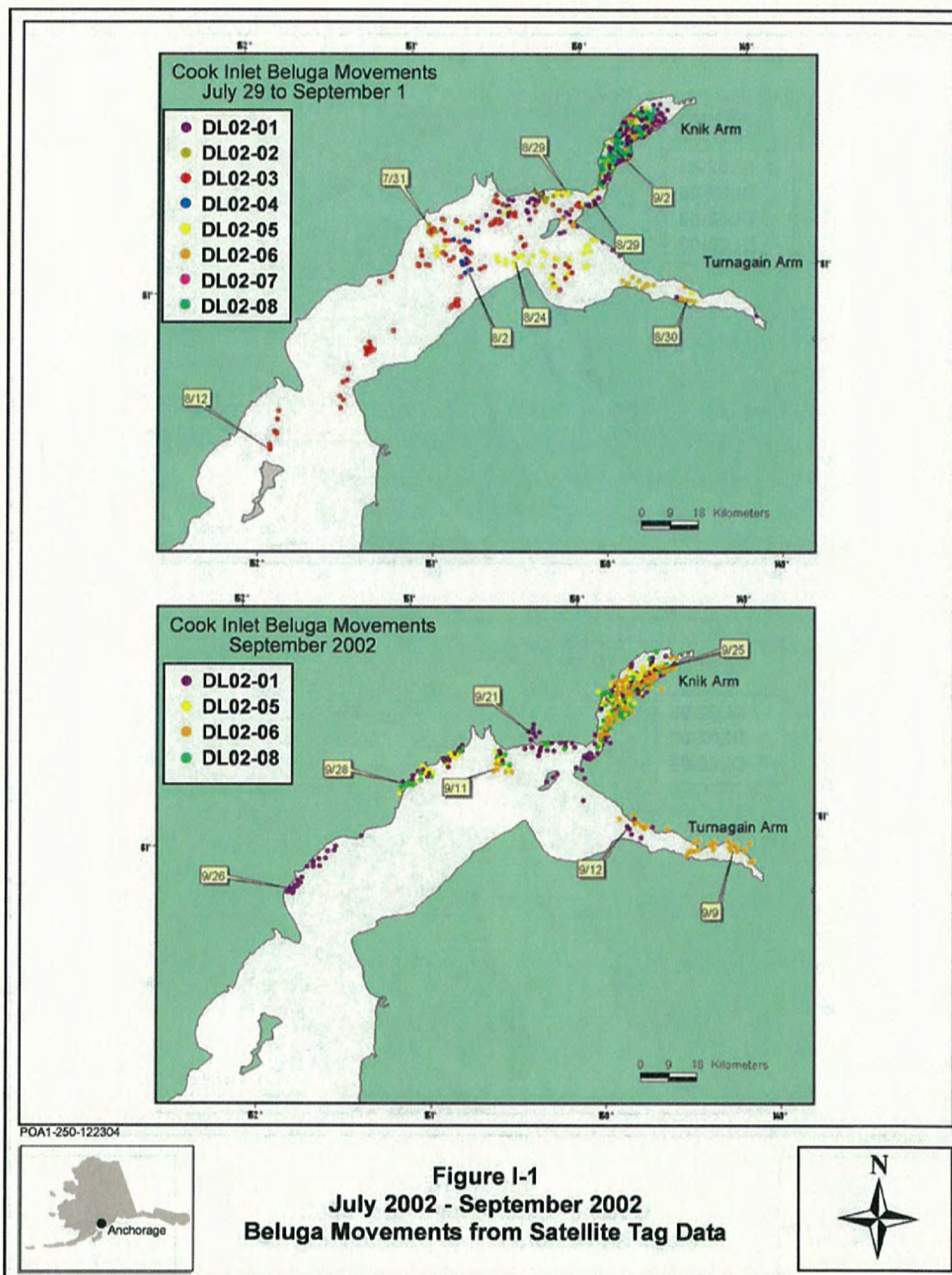
<i>Issues Raised by Agencies and the Public</i>	<i>Response</i>
Agencies have expressed concern for loss of 135 acres of marine habitat and EFH in the Project area. (USFWS, NOAA Fisheries) Agencies wanted additional information on general salmon biology and habitat use, as well as acknowledgement that data are limited. (MOA Planning Department, NOAA Fisheries, USFWS)	Direct and cumulative impacts to 135 acres of EFH for seven fish species have been addressed (section 3.3.5). The discussion of salmon biology and habitat use has been expanded (section 3.3.4).
Several commenters were concerned about effects to beluga whales including effects from the noise from pile driving, and from vessel noise with an expanded POA. (NOAA Fisheries, USFWS, Cook Inlet Keeper)	The discussion of impacts to beluga whales includes information on noise effects due to pile driving and from vessel noise (section 3.3.4).
NOAA Fisheries was interested in developing a beluga whale monitoring/mitigation plan which would address pre-, Project-, and post-construction monitoring to include mitigation measures for protection of the beluga whale. (NOAA Fisheries)	A beluga monitoring plan is being developed in cooperation with NOAA Fisheries/NMML. This plan will outline pre-construction, Project-construction, and post-construction monitoring studies (section 3.3.4).
MOA Planning wanted inclusion of a discussion of harbor seals found at the mouth and lower sections of Ship Creek throughout the summer season. (MOA Planning Department)	No documentation or data concerning the occurrence of harbor seals at Ship Creek has been provided; only anecdotal evidence. According to data from the NOAA Fisheries aerial surveys from 1993-2004, harbor seals are rare in Knik Arm and none were sighted at Ship Creek (see Figure 3-28: Incidental Marine Mammal Sightings) (section 3.3.4).
Cook Inlet Keeper questioned the hydrodynamic modeling results pertaining to water movement, sediment transfer and sedimentation. They noted that Upper Cook Inlet is one of the most dynamic areas in the world for hydrodynamics, and its inherently complex circulation patterns are not readily quantified through basic modeling. They also suggested that with the anticipated continuation in Alaska's warming trend from natural and/or anthropogenic processes, glacial recession would likely lead to increased sediment loading in the Project area. (Cook Inlet Keeper)	The hydrodynamic modeling was performed by ERDC Coastal and Hydraulics Laboratory, located at the Waterways Experiment Station, Vicksburg, Mississippi. ERDC used the most recent information on currents, depths, and tides for the Project area. Prior to running models on the proposed action, ERDC scientists verified the modeled current conditions with actual conditions at each of 14 stations from Cairn Point to Point Woronzof. The agreement between the existing conditions and modeled conditions for every station suggests that the model accurately reflects the hydrodynamics for the area. The impact analysis does examine the recent increases in sedimentation in this area. The modeling results suggest that sedimentation around the POA could decrease under the proposed action (section 3.3.2).

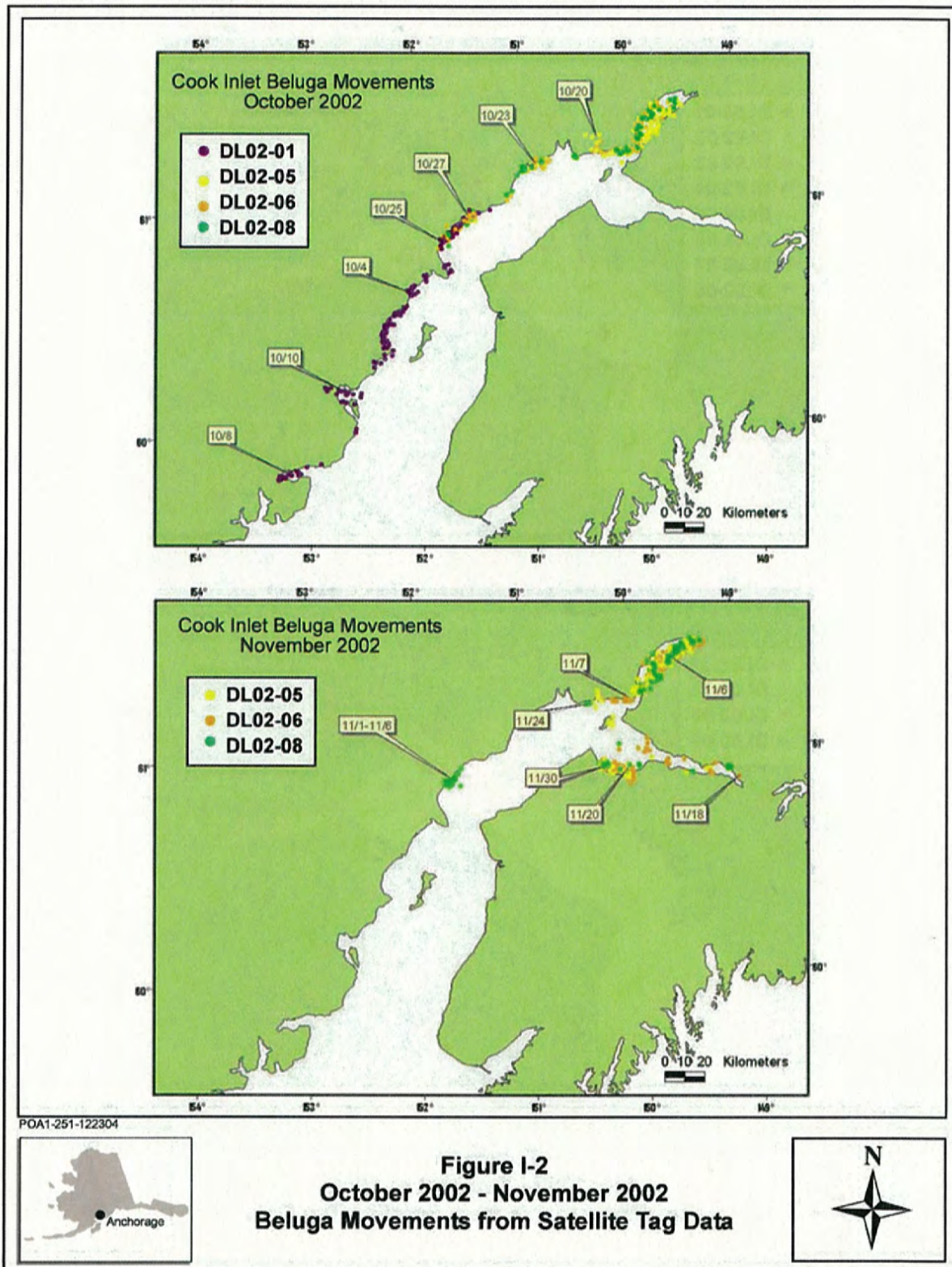
<i>Issues Raised by Agencies and the Public</i>	<i>Response</i>
Mitigation measures to reduce short term impacts to water quality from dredging should be addressed. Water quality standards will be violated by increased nonpoint source pollution from created impervious surface. Provide or reference examples of BMPs that will be used to mitigate effects to water quality. (USFWS)	Implementation of the action would include the application of site-specific BMPs and engineering to meet all applicable water quality regulations (section 2.2.2). The act of putting fill into the area would temporarily impact water quality as material is placed on the former shoreline/inlet bed, but these impacts could be minimized through BMPs, in accordance with all applicable regulations, and would be temporary. Site-specific BMPs, when applied correctly, have been proven to significantly reduce the level of pollutants to below violation levels when the stormwater reaches receiving water bodies. The action proponent will follow all established regulations and standards through proven methods to meet stormwater quality objectives. Through coordination with applicable agencies, permits for stormwater discharges will only be granted when the action proponent demonstrates that "no adverse affect" to fish habitat would occur.
The MOA has its own Coastal Management Plan. Clarify the sections on coastal zone consistency and coastal zone determination. (MOA Planning Department)	Comment incorporated, changes made to sections 2.4.2, Coastal Zone Consistency Determination, and 3.4.1, Coastal Zone Consistency.
Provide additional analysis to adequately address impacts to cultural resources. (Nancy Yaw Davis)	As part of the Section 106 process of the National Historic Preservation Act, MARAD submitted a Cultural Resources Summary Report that provided more detailed information on the significance and integrity of known archaeological sites and the Project effects on significant archaeological and architectural sites. The Alaska SHPO has concurred with MARAD's determination that the proposed action would not affect any significant cultural resources (section 3.4.7).
Native Village of Eklutna requested an extension for review of the draft EA to consider effects to cultural resources. (Native Village of Eklutna)	The comment period was not extended beyond an additional week. However, MARAD is participating with the Native Village of Eklutna in determining significance of cultural resources via Section 106 of the NHPA.

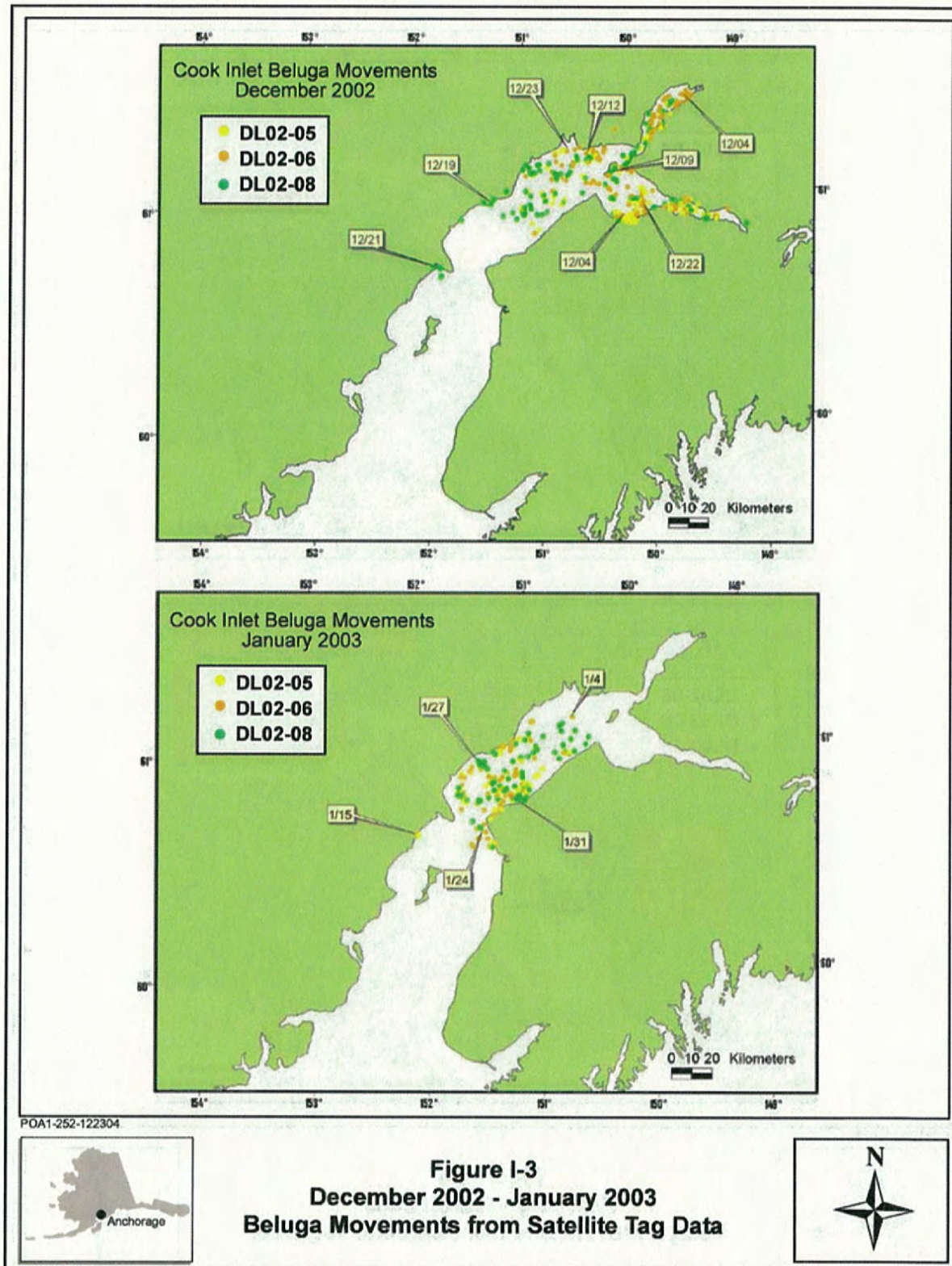
<i>Issues Raised by Agencies and the Public</i>	<i>Response</i>
Cumulative impacts of past, present, and future development to all resource areas needs to be addressed. Agencies concerned most with cumulative effects to biological resources. (USFWS, NOAA Fisheries)	A more comprehensive set of past, present, and reasonably foreseeable projects has been added to Chapter 4. A detailed cumulative impact analysis has been added for each resource section.
NOAA Fisheries disagrees with the statements on page 4-6 that most cumulative impacts from the proposed Project are short-term and temporary or longer lasting, but negligible. (NOAA Fisheries)	The cumulative impact section (section 4.4) has been expanded in the final EA. Impacts to EFH are considered to be adverse, but mitigated to less than significant levels.
Consider cumulative impacts to wetlands from past, present, and future development. Provide wetland acreage within the POA. Define and cite wetland classification system. (USFWS)	There are no impacts to terrestrial wetlands under any of the proposed alternatives. Only intertidal and subtidal areas will be affected and a cumulative analysis of loss of EFH has been provided. A discussion of terrestrial wetlands at the POA, including acreages and an explanation of the MOA wetland classification system has been added to section 3.3.4.
Agencies disagree with the Hydrodynamics and Sedimentation conclusion in Table ES-1. Include Knik Arm Bridge construction in analysis of Cumulative Effects. (USFWS, NOAA Fisheries)	Table ES-1 has been modified to reflect specific conclusions from the Hydrodynamics and Sedimentation section. The Knik Arm Bridge is discussed under the Cumulative Impacts section as a "speculative" project (section 4.3).

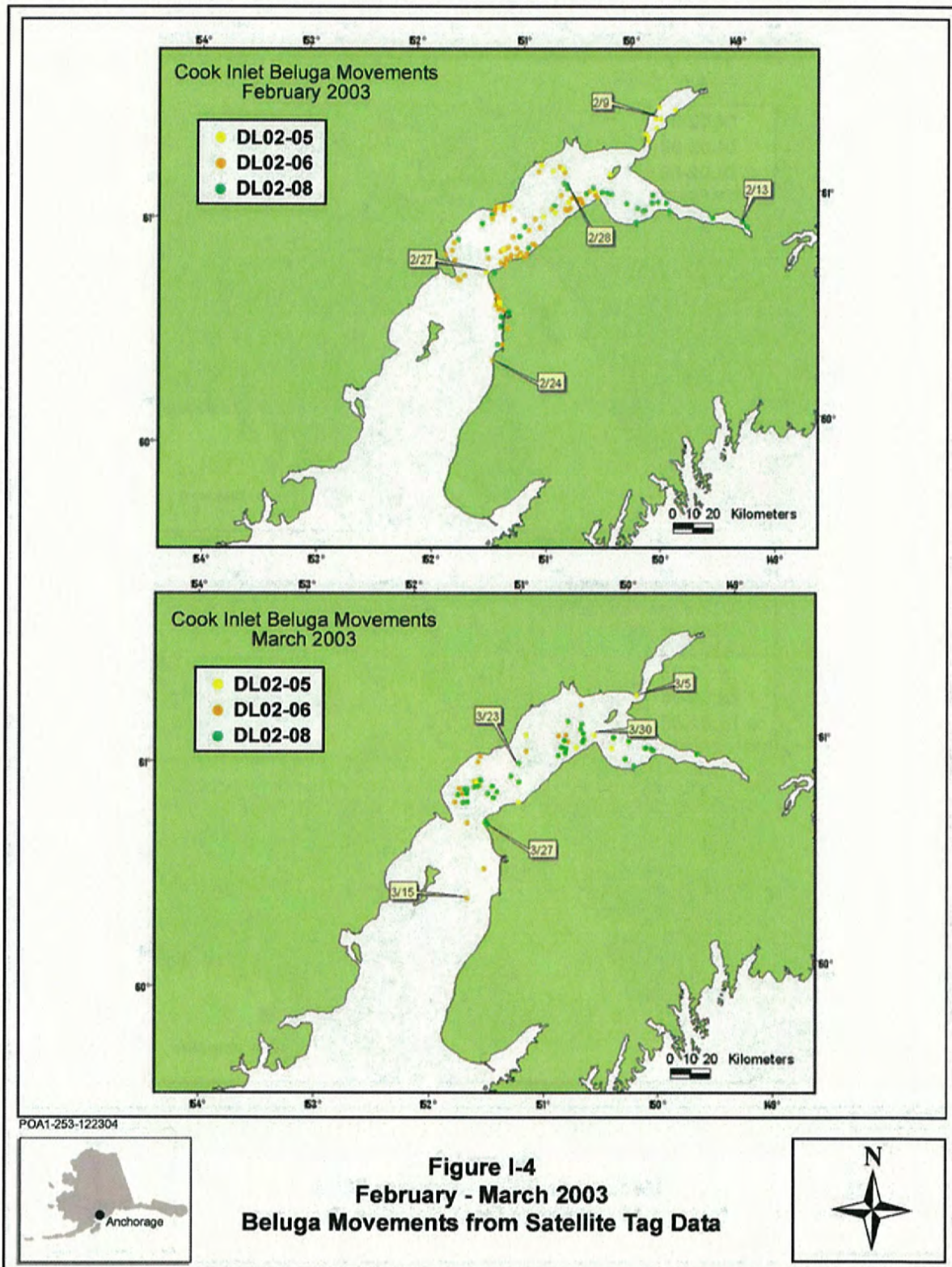
APPENDIX I

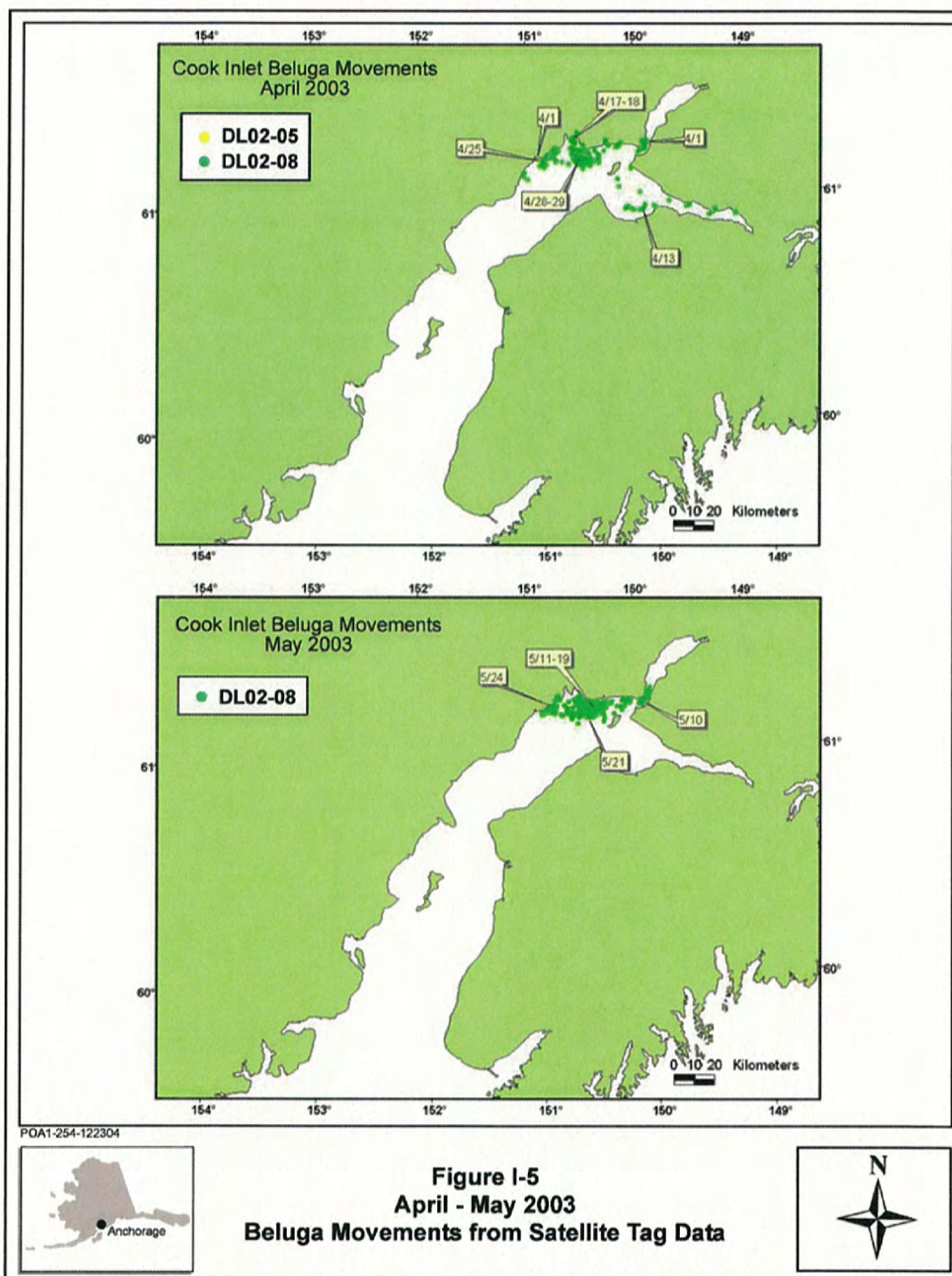
**NOAA FISHERIES BELUGA SATELLITE TAG
DATA 2002-2003**











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LIST OF ACRONYMS AND ABBREVIATIONS

ACMP	Alaska Coastal Management Program	MLLW	Mean Lower Low Water
ADCIRC-2DDI	Advanced CIRCulation	MMPA	Marine Mammal Protection Act
ADEC	Alaska Department of Environmental Conservation	MOA	Municipality of Anchorage
ADFG	Alaska Department of Fish and Game	MPC	Maximum Practicable Capacity
		Mph	Miles per hour
ADNR	Alaska Department of Natural Resources	MSA	Magnuson-Stevens Fishery Conservation Management Act
AEC	Alaska Engineering Commission	MSL	Mean Sea Level
AFB	Air Force Base	MTSA	Maritime Transportation Security Act
AMATS	Anchorage Metropolitan Area Transportation Solutions	NAAQS	National Ambient Air Quality Standards
		National Register	National Register of Historic Places
AOHA	Alaska Office of History and Archaeology	NEPA	National Environmental Policy Act
APE	Area of Potential Effect	NHPA	National Historic Preservation Act
APZ	Accident Potential Zone	NMML	National Marine Mammal Laboratory
ARRC	Alaska Railroad Corporation	NO ₂	Nitrogen Dioxide
ASIG	Aircraft Service International Group	NOAA	National Oceanic and Atmospheric Administration
BCT	Brigade Combat Team		
BMP	Best Management Practice	NPDES	National Pollutant Discharge Elimination System
CAA	Clean Air Act		
CEQ	Council on Environmental Quality	NSTSC	North Star Terminal & Stevedore Company
		O ₃	Ozone
CFR	Code of Federal Regulations	OPMP	Office of Project Management and Permitting
CO	Carbon Monoxide		
COC	Contaminants of Concern	OSHA	Occupational Safety and Health Administration
CZ	Clear Zone	Pb	Lead
dB	Decibel	PCB	Polychlorinated Biphenyls
dBA	A-Weighted Decibel	PM ₁₀	Particulate Matter less than 10 microns
DoD	Department of Defense	PM _{2.5}	Particulate Matter less than 2.5 microns
EA	Environmental Assessment	POA	Port of Anchorage
EEZ	U.S. Exclusive Economic Zone	POL	Petroleum, Oil, and Lubricant
		Project	Marine Terminal Redevelopment Project
EFH	Essential Fish Habitat	ROD	Record of Decision
EMI	Electromagnetic Interference	RO-RO	Roll On-Roll Off
EO	Executive Order	rms	root-mean-squared
ESA	Endangered Species Act	SHPO	State Historic Preservation Office(r)
FONSI	Finding of No Significant Impact	SIP	State Implementation Plan
FTA	Federal Transit Administration	SO ₂	Sulfur Dioxide
GIS	Geographic Information System	SPC	Sustainable Practicable Capacity
GSP	Gross State Product	TEU	20-Foot-Equivalent Unit
Hz	Hertz	TOFC	Trailer-on-Flat-Car
ISM	Industrial, Scientific, and Medical	TOTE	Totem Ocean Trailer Express
ITC	Intermodal Transit Center	USACE	U.S. Army Corps of Engineers
KABATA	Knik Arm Bridge and Toll Authority	USARAK	U.S. Army Alaska
kHz	Kilohertz	USDOT	U.S. Department of Transportation
KWH	Kilowatt-hour(s)	USEPA	U.S. Environmental Protection Agency
Ldn	Day-Night Average Sound Level		
Leq	Equivalent Sound Level	USFWS	U.S. Fish and Wildlife Service
LF04	Knik Bluff Landfill	μPa	micropascal
LMSR	Large, Medium Speed, Roll On-Roll Off	VdB	Vibration velocity level
LO-LO	Load On-Load Off	VOC	Volatile Organic Compound
LOS	Level of Service		
MARAD	U.S. Department of Transportation, Maritime Administration		
ML&P	Municipal Light and Power		