

AttachmentFBenefitCostAnalysis

State of Alaska

AttachmentFBenefitCostAnalysis.pdf

Draft Attachment F

The following document provides available data for state of Alaska cover projects and activities, with estimated costs, benefits, and benefit cost analyses. Also see Exhibit E Soundness of Approach for covered project summaries of lifecycle costs, resiliency values, environmental value, social value and economic revitalization; description of ongoing risks and challenges in implementing the proposed activities and projects, proposals.

Galena

**Table 1--Value Categories as it relates to the project outcomes with Budget, Direct Leverage, and BCA Calculated Values.**

Project	Resiliency	Environmental	Social	Economic	Population	Project Funds Request	Leverage	Benefit
	Value Categories							
<b><i>Human and Environmental Health</i></b>								
Dust Control	X	X			X	\$1,121,545	\$18,500	\$4,041,304
Public Shower House/Laundry			X		X	\$466,379		\$2,606,426
Fire Hall Replacement	X				X	\$583,311		\$5,853,741
Abandoned Building Remediation	X	X	X	X	X	\$636,310	\$525,968	\$644,889
Landfill Compliance and Expansion		X				\$815,500		\$2,083,368
<b><i>Family Resilient and Community Growth</i></b>								

Land Development and Protection Plan	X			X		\$415,600		\$1,438,479
Community Development Planning	X			X		\$196,000		\$1,438,479
Early Childhood Development	X		X	X	X	\$365,225	\$1,371,000	\$3,990,000
Community Garden Improvement			X		X	\$62,992		\$76,312
Crow Creek Subdivision Evacuation Route	X				X	\$2,448,517	\$9,879,853	\$5,944,993
<b><i>Community Infrastructure Protection and Green Energy</i></b>								
Smart Grid	X			X		\$464,140		\$597,346
Electrical Generation Flood Protection	X			X	X	\$1,689,520	\$5,000,000	\$1,800,000
Alternative Energy/250-kW Wood Gasification System	X			X		\$878,200		\$13,106,267
2.6-mW Solar Array with Grid Scale Battery Storage	X			X		\$9,423,316		\$19,832,782
Water Treatment Plant Mitigation	X	X	X	X	X	\$547,668	\$675,000	\$1,428,479
Wastewater Treatment Plant Mitigation	X	X	X	X	X	\$1,600,100		\$3,083,368
Galena River Bank Stabilization/Erosion Prevention	X	X		X	X	\$34,188,725	\$8,100,000	\$38,743,750
<b><i>Tribal and Cultural</i></b>								
Tribal Office and Cultural Center	X		X		X	\$890,580	\$203,386	\$989,193
Home Elevation above the Base Flood Elevation	X		X		X	\$6,823,248	\$8,349,364	\$10,106,250

Yukon Elder Assisted Living Facility Expansion	X		X		X	\$4,238,223	\$140,000	\$9,982,882
<i>School Infrastructure</i>								
GILA Biomass Glycol Upgrades			X	X	X	\$3,129,806	\$3,096,898	\$33,119,349
Math and Science Building Upgrades			X	X	X	\$7,823,009		\$49,907,959
Sustainable Energy for Galena Alaska, Inc. (SEGA)	X		X	X	X	\$250,000	\$447,000	
Totals:						\$79,057,914	\$34,806,969	\$210,815,616

## Newtok/Mertarvik

*Value Categories as it relates to the project outcomes with Budget, Leverage, and Benefits*

Project	Resiliency	Environmental	Social	Economic	Vulnerable Population	Project Funds Requested	Leverage	Benefit
	Value Categories							
Subdivision Design & Record Plat	X	X	X	X	X	\$600,000.00		estimated greater than 1 Based on previous estimate from USACE
Construction Mancamp	X					\$500,000.00	ITR Buildings?	estimated greater than 1 Based on previous construction project mancamps (~\$10k per house)
Multi-Use Center Completion	X	X	X	X	X	\$5,487,400.00	Cost of Foundation?	estimated greater than 1 Based on Acooke's e-mail & Summits \$730/SF Acooke estimate plus 130 cy gravel pad @ \$50/cy and lifewater STP wastewater system - assumes quarry gravel
CCHRC Housing (50)	X	X				\$19,640,900.00		estimated greater than 1
Retrofit 12 Relocated Homes	X	X	X	X	X	\$742,800.00	relocation grant?	estimated greater than 1 Costs based on 5 days of retrofit work using Acooke's W&S numbers plus electrical
Existing Homes Demo (50)	X	X	X	X	X	\$4,650,000.00		estimated greater than 1 From Acquisition Grant Application (\$93k per demo)
Subdivision Roads (Phases 1 & 2)	X	X	X	X	X	\$24,532,000.00	BIA ?	estimated greater than 1 Durabase Roads using quote and shipping estimate \$0.30/lb - assumes barged gravel subbase
Bulk Fuel Tanks	X		X	X	X	\$4,500,000.00		estimated greater than 1 CRW estimate based on fuel demands for 65 homes and 4 commercial structures (generator loads, heating and ATV) and similar tank facilities in rural AK

Landfill	X	X	X	X	X	\$1,990,880.00	estimated greater than 1
<b>Total</b>						<b>\$62,643,980.00</b>	<b>estimated greater than 1</b>

DEC estimate with CRW-updated gravel and fence numbers - assumes barged gravel

## Emmonak

*Value Categories as it relates to the project outcomes with Budget, Leverage, and Benefits*

Project	Resiliency	Environmental	Social	Economic	Vulnerable Population	Project Funds Requested	Leverage	Benefit
	Value Categories							
Port Project	X	X	X	X	X	\$14,000,000.00	\$3,000,000.00	estimated greater than 1
Flood Protection Pad	X		X	X	X	\$4,683,000.00		estimated greater than 1
Airport Runway Extension	X		X	X	X	\$31,900,000.00	\$2,900,000.00	estimated greater than 1
New Bypass Road	X	X	X	X		Estimated \$1,000,000.00		estimated greater than 1
<b>Total</b>						<b>\$51,583,000.00</b>	<b>\$5,900,000.00</b>	<b>estimated greater than 1</b>

# Teller

*Value Categories as it relates to the project outcomes with Budget, Leverage, and Benefits*

Project	Resiliency	Environmental	Social	Economic	Vulnerable Population	Project Funds Requested	Leverage	Benefit
	Value Categories							
Wind Energy Project	X	X	X	X	X	\$4,072,500.00		estimated greater than 1
Seawall Improvements	X	X	X	X	X	\$4,542,500.00		estimated greater than 1
Road Improvements	X	X	X	X	X	\$2,974,800.00		estimated greater than 1
Debris Removal	X	X	X	X	X	\$90,000.00	\$90,000.00	estimated greater than 1
Water & Sewer Improvements	X	X	X	X	X	\$18,000,000.00	\$3,621,600.00	estimated greater than 1
Elder Food Pantry	X	X	X	X	X	\$60,000.00		estimated greater than 1
Community Garden	X	X	X	X	X	\$70,000.00		estimated greater than 1
Community Development Building	X	X	X	X	X	\$1,673,615.00	\$610,000.00	estimated greater than 1
Vocational Training	X	X	X	X	X	\$200,000.00	\$100,000.00	estimated greater than 1
Recovery & Resilience Study	X	X	X	X	X	\$250,000.00		estimated greater than 1
<b>Total</b>						<b>\$31,933,415.00</b>	<b>\$4,421,600.00</b>	<b>estimated greater than 1</b>

Estimate from AVEC

Engineers Estimate

Engineers Estimate

Info from Community/Trish

CE2 Master Plan Estimate

Info from Community/Trish plus additional for back-up generator

Using Galena's numbers rounded up

Cost from Stantech Design/Community receiving \$260k from NSEDC and cash match from Mary's Igloo \$350k

Numbers from Zender

WAG based on similar studies done previously