

Transportation & Energy Infrastructure Village Cluster Consolidated Services Plan

presented by:

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Community Sustainability - Page 2

- History shows America's towns had booms/busts: Towns can come & go if unsustainable, 2,700+ towns disappeared in the last 100+ years, mostly in SW USA
- Alaska has this history too: 1800's to mid-1900's Alaska Packers ruled Salmon Industry, providing 80% of territory tax revenue, 37 cannery towns are now gone, "baby" state of Alaska had 22 towns/villages 'disappear' since 1900
- Which towns in Alaska survived best? i.e. Ketchikan in SE survived many difficult times repeatedly. Its economy used available resources and adapted. From Salmon processing 1880's+; Mining 1900's-'50; Salmon & Halibut Cold Storage of '30's+; Forestry '50-'97; Tourism '80+, seafood, recently some mining again
- **Stabilizing factors: Transportation** and affordable **Energy** through early HYDROPOWER (1903) made the community affordable and competitive
- Both of these factors lead to, create and feed a sustainable economy with jobs

Today Ketchikan has one highest resident State per-capita income from:

- 1. Transportation Accessibility
- 2. Stable Affordable Energy
- 3. Natural resource extraction for Jobs and an Economy



Calista Region – Page 3

As budgets tighten at federal/state levels, communities with little infrastructure struggle **Calista region:** lacks infrastructure and is still being developed

- 57,000 square mile area with little to NO infrastructure, and the highest cost living
- Greatest number of citizens in a remote area ~25,735 people
- Largest number (56) of rural communities with populations ranging from ~ 200 to ~6,100+ and a GROWING young population – up 6.9% from 2010 to 2013
- NO interconnecting roads, or transmission grids prevents cost-sharing of assets

Nearly every community in the Yukon-Kuskokwim region has:

 a K-12 school, but only one true high school at Bethel. Leads to low graduation rates, low scores, many dropouts, few electives – often poor quality and high teacher turnover, due in part to an inability to build home equity in villages

Statewide Graduation Rate: 65.26%

LYSD 2005-2014 Graduation Rate: 43.81% Teacher Turnover: 29.7%

LKSD 2010-2014 Graduation Rate: 42.75%

Source: Lower Yukon School District (LYSD) and Lower Kuskokwim School District (LKSD)

- Independent, aging diesel generation systems for village power
- Airports i.e. Marshall 3,200' x 100'
- Health clinics
- Basically limited access to State Troopers and VPSOs



Lower Yukon Port Needed - Page 4

Intermodal linkage with Nenana/Fairbanks:

i.e. Marshall shipped housing material from Seattle via Fairbanks using Nenana barges

The Calista region is divided:

Geographically – the Yukon, Kuskokwim and coastal areas

Politically: represented by Dillingham, Nome & Bethel House Districts

Administratively: State DOT&PF divides region into the Northern & Central Regions

Proposed 650' Dock vs. Existing Barge Landing – Page 5

The Port project in Emmonak will facilitating the safe and efficient offloading of cargo from barges. Emmonak is faced with the following challenges:

Overcrowding

The current unimproved condition of the barge landing facility and inefficient offloading operations create periods of significant overcrowding and barge backup

Erosion and Flooding

Persistent riverbank erosion and flooding pose a significant threat to the existing physical infrastructure of local maritime industry businesses

Supporting Economic Diversity and Stability

Maritime industry growth and expansion in Emmonak develops a more diverse economic base that would reduce local reliance on fisheries and government employment

Current Emmonak Projects:

\$ 5.8 Million-FEMA Erosion Control

\$18.7 Million-SOA/USDA-RD/FEMA Water/Sewer Upgrades

\$10.5 Million SOA local service road project

\$ 3.9 Million USDA-RD new landfill

Each project requires cargo to pass through the Emmonak 'dock' – really a riverbank.



Yukon Delta Fisheries Dev. Association - Page 6

Despite the lack of a port facility in Emmonak, the Yukon Delta Fisheries Development Association (YDFDA) maritime industry businesses have demonstrated significant growth. These businesses establish Emmonak as an economic center for the region, providing employment, income, and services to residents throughout the lower Yukon

Kwik'pak Fisheries - from 2002-2013

- bought 21,578,968 lbs of salmon infusing \$21,000,127 directly to 451 fishermen
- paid through 2014 \$15,173,221 in aggregate wages

Kwik'pak Youth Employment Program provides summer employment to 14-17 year olds

• paid \$1,082,528 to youth in the last four years.

Yukon Marine Manufacturing since 1999 built and sells 243 20' – 24' skiffs

employs local welders to build/repair boats for area residents

Yukon River Towing employees built a bunkhouse in Emmonak which sleeps 30 people

- used siding from logs delivered by local residents and milled at local sawmill
- built one four-bedroom home in Emmonak and a large pole-barn for boat yard
- developed log and "stick-frame" home kits for Lower Yukon residents
- YRT uses a program offered by US HUD which offers low interest mortgage loans



Marshall Dock & Quarry Road – Page 7

- Marshall Final Engineering Design & Permits: provide final road design & permits for complete port and road access. Phase 1 Request: \$1.34 Million
- The lower Yukon region must purchase material from Nome at exorbitant cost
- Constructing a quarry in Marshall would result in an estimated cost savings of \$20-24 Million for DOT & PF identified region airport upgrade projects
- Additional savings are anticipated for future regional infrastructure with local high grade gravel/armor rock at a significantly lower cost
- Native Village of Marshall identifies Indian Reservation Roads funds as a 10% federal match

St. Mary's / Mountain Village Road Rehabilitation – rehabilitating the 15 mile road at St. Mary's and Mountain Village.

Engineer's Estimate Range: \$13,000,000

Pilot Station Airport Relocation – this project will construct a new airport and a 3 mile airport access road.

Engineer's Estimate Range: \$10,000,000 and \$20,000,000

St. Mary's Airport Improvements – this project will resurface the runway, taxiways and apron, and make other improvements

Engineer's Estimate Range: \$10,000,000 and \$20,000,000

Nunam Iqua (Sheldon Point) Runway Extension – this project will extend the runway embankment and construct a new access road to the airport.

Engineer's Estimate Range: \$2,500,000 and \$5,000,000



Solution: Village Cluster Consolidated Services-Page 8

Develop a more robust energy/transportation infrastructure for Western Alaska Intent: Consolidate public services and infrastructure to support sustainability

1. Community Sustainability:

- Areas with small rural communities and little infrastructure have extremely high living costs, they must share and leverage resources to ensure community sustainability
- Calista Region is a good model (large # of small villages, lack of basic infrastructure, and the highest energy heat/electricity costs in nation)

2. Village Cluster Consolidation Model Proposed:

- Public Infrastructure & Services Master Plan for Three groups of closely located villages
- Sub-regions and hubs in the larger Yukon-Kuskokwim area
- Identify costs and develop an Implementation Plan

3. Benefit of Village Clusters with road linkages

- State Departments would consolidate & share resources, build regional infrastructure at lower cost
- Reduce duplication of infrastructure and services located closely together
- Provide better quality of required public services (i.e.) regional high schools with elective classes
- Reduce rural cost of living, while improving student education, training, and workforce development

Calista's solution is to create village clusters of consolidated infrastructure



Village Cluster Consolidated Services - Page 9 Self-explanatory

Donlin Creek Mine brings Affordable Energy - Page 10

Natural resource development requires affordable energy – if affordable energy was available, the Donlin Creek mine would already be in production.

The proposed 315 mile Gas Pipeline Project would transport natural gas from the Beluga Natural Gas Pipeline system 30 miles west of Anchorage to the Donlin Creek mine.

Completing the gas pipeline project provides an opportunity for a federal-state public private partnership to expand a natural gas-powered electric inter-tie network into the region

Potential to expand the natural gas pipeline into the region thus reducing reliance upon subsidized electricity from Power Cost Equalization.

Thank you – Quyana!