

Addressing Coastal Erosion Impacts in Alaska through Village Planning Groups



Three Most Challenging Climate Change Vulnerabilities

■ Erosion:

- Loss of “land buffer” protecting communities from coastal sea storms
- Increased vulnerability to impacts of coastal storms - ***storm surge and flooding***
- Threats to community infrastructure and facilities

■ Permafrost degradation:

- Can play a role in shoreline erosion
- Threats to community infrastructure and facilities
- Decreased food security – thawing of traditional ice cellars

■ Reduction in sea ice:

- Loss of “buffer” protecting communities from coastal sea storms
- Increased vulnerability to impacts of coastal storms - storm surge and flooding
- Decreased food security – walrus no longer present due to lack of ice



Top Three Most Pressing Priorities or Needs

- **Science-based hazard assessments:** *It's difficult for communities to make sound decisions without understanding the risk. It's difficult for communities to make "the case" to funding agencies without scientific data.*
- **Coordinated government framework** *to support and assist with community decisions, and to implement strategies*
- **Funding:** *No matter how good the framework and strategy, implementation cannot take place if funding isn't available*



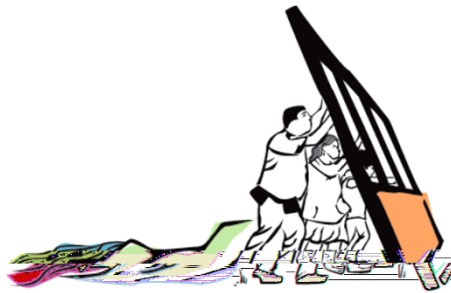
Alaska Community Coastal Protection Project



Strategic Management Plan

Newtok to Mertarvik

March 2012

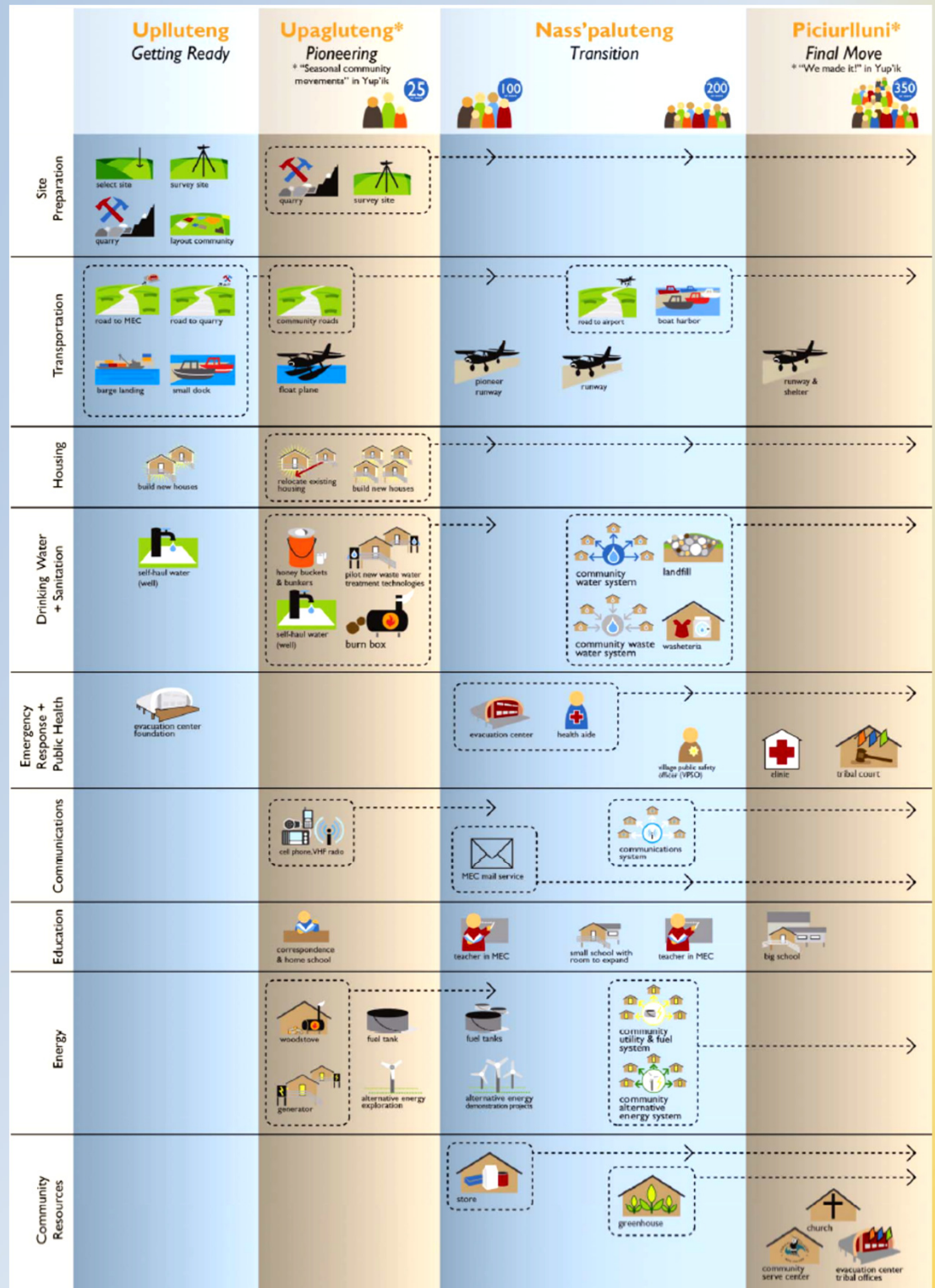


MERTARVIK

**Nunauilemteggun ikayuqulluta tamamta,
assirluta aknirtenritellerkamtenun,
nuggtarllemtenun ciunerkamteni**

*a community that builds together
for the safe and healthy future of Newtok*

- Developed by Newtok Village in coordination with Newtok Planning Group in 2012
- Living document which is guiding relocation effort
- Being updated in 2016 to reflect current conditions



Objective:

To increase community resilience to the impacts of natural hazards.

Essential Components:

- Strong community leadership
- Agency support and collaboration
- Careful, effective planning

Final Product:

- A Strategic Management Plan that provides a “blueprint” for how the community and agencies will work together to increase community resilience and implement adaptation actions over the short-term (0-5 years), mid-term (6-10 years) and long-term (11+ years).



Strong Community Leadership

Community grant for full-time Community Coordinator (2 years) to:

- Represents community at interagency working group meetings
- Works with project staff, inter-agency group, and planning contractor on resiliency plan
- Advocates for funding to carry out resiliency plan

*Funding for other community leaders to attend inter-agency meetings

DCRA provides training, technical assistance and other support to Community Coordinator



Agency Support and Collaboration

Organization of interagency working group (state/federal agencies and regional organizations):

- To coordinate resources and technical assistance to help community develop and implement SMP.

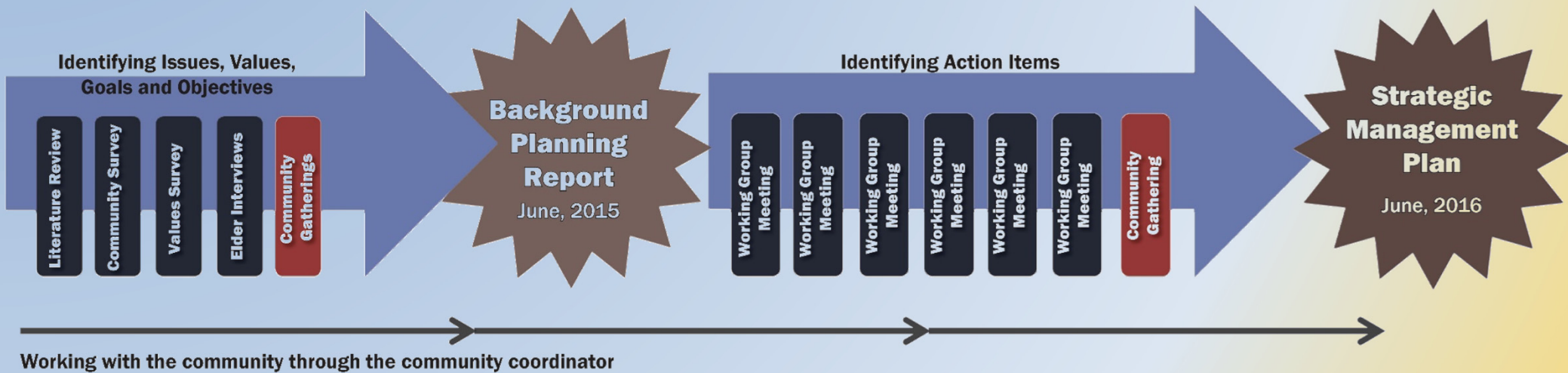


Careful, Effective Planning

Comprehensive Strategic Management Plan:

- ***Projected timelines and costs*** associated with projected tasks or activities relocation/shoreline protection and/or other community development activities
- ***The sequence of tasks and subtasks*** that must take place
- ***The entities responsible for specific tasks or activities.*** The roles of the stakeholders will be defined and clarified. Opportunities for agency collaboration will be identified
- ***The best construction windows*** to reduce environmental impacts
- ***The resources required***
- ***The schedule of activities.*** Development of a strategic management schedule for activities will be an important product.

The Process



Phase 1

Identifying Issues, Values, Goals and Objectives

Literature Review

Community Survey

Values Survey

Elder Interviews

Community Gatherings

Background
Planning
Report

June, 2015

- *Community Hazard Issues Survey* to understand what the great concerns are about erosion, flooding, storm surge
- *Community Values Survey* to understand what the key community values which will set priorities for the Strategic Management Plan
- *Interviews with Community Elders* to understand what elders valued the most about the community when they were growing up and what they would like to see for their great-great grandchildren
- *High School Classroom Exercise* to understand what the community youth wanted their community to be like in the future

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Background Planning Report

June, 2015

- Contains results of literature review, previous erosion-related projects, draft Vision Statement and guiding principles, and resilience-related issues
- A living document which will be updated as new information becomes available
- Provides the foundation for the Strategic Management Plan



Image courtesy of ShinaZine

Background Planning Report
Kivalina Strategic Management Plan

Kivalina, Alaska
July 17, 2015

DRAFT



Photo Credit: Steve Hamel

Background Planning Report
Shaktolik Strategic Management Plan

Shaktolik, Alaska
July 17, 2015

DRAFT



Background Planning Report
Shishmaref Strategic Management Plan

Shishmaref, AK
August 4, 2015

DRAFT

Phase 2



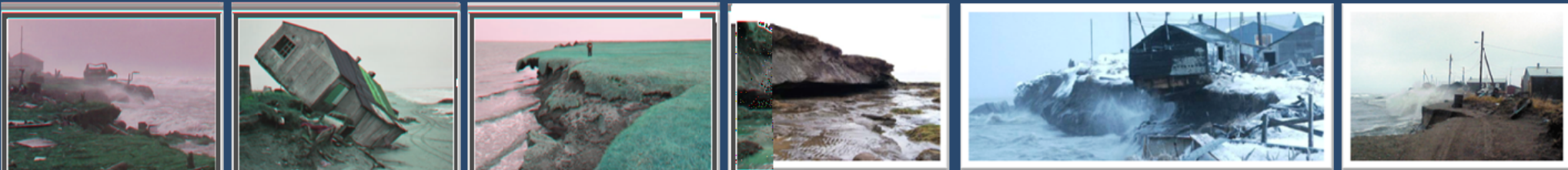
Community Inter-Agency Planning Groups

- Planning Team
- Community Coordinator
- Local leadership from Tribe, City, ANCSA Village Corporation
- Regional Organizations
 - ANCSA Regional Corporation, Native Non-Profit Regional Organization, Regional Health Organization, Regional Housing Authority ...
- State Agencies
 - DCRA, Village Safe Water, DOT/PF, DHS&EM, Alaska Energy Authority...
- Federal Agencies
 - Corps of Engineers, FEMA, FAA, HUD, EDA, USAD RD ...



Inter-Agency Planning Meetings

- Distribution of *Draft Background Planning Report* for review and comment
- Review of issues identified by community
- Identification of solutions to address community issues
- Formulation of action items from solutions
- Identification of *Strategic Focus Areas*



Inter-Agency Planning Meetings

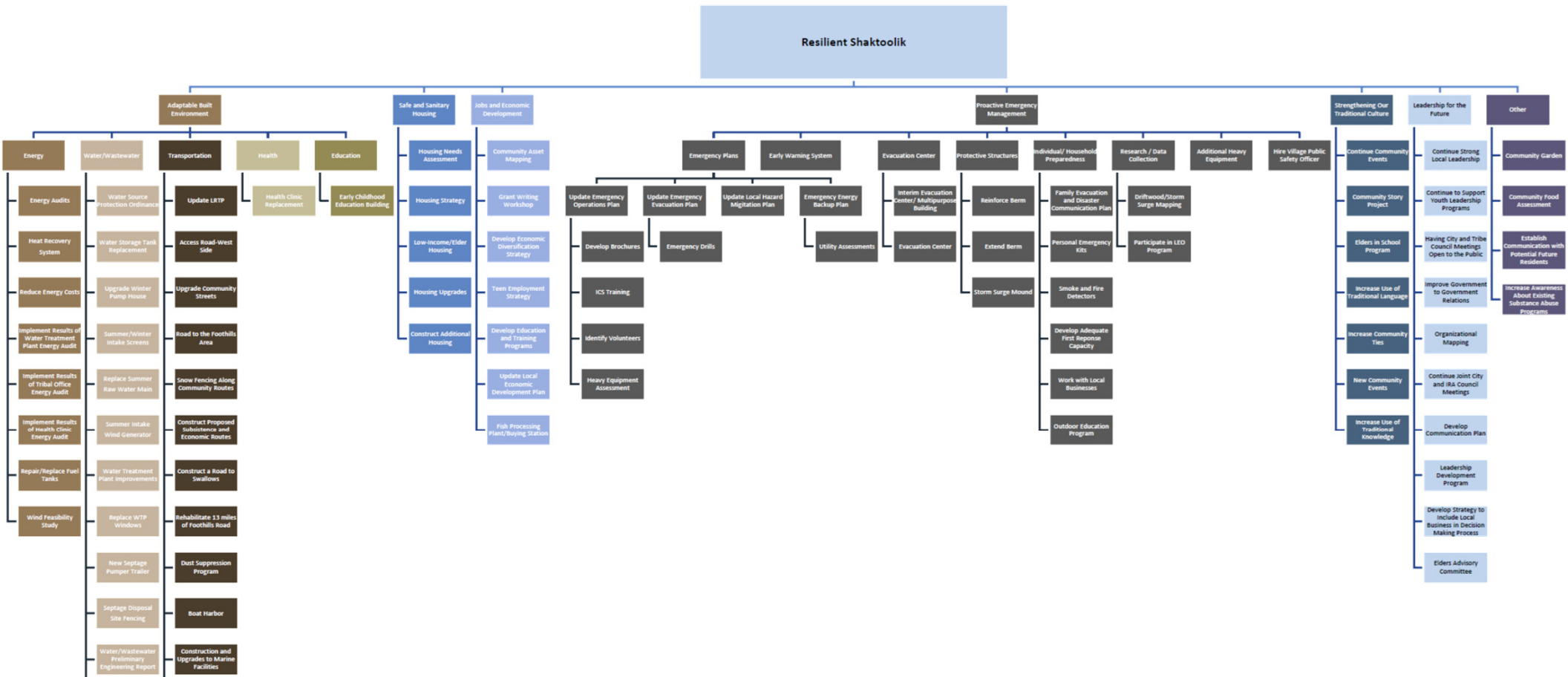
- Development of *Preliminary Planning Schedule* (short-term, mid-term and long-term actions) based on action items
- Development of Work Breakdown Structure
- Development of *Short-Term Action Plan* based on *Strategic Focus Area* priorities



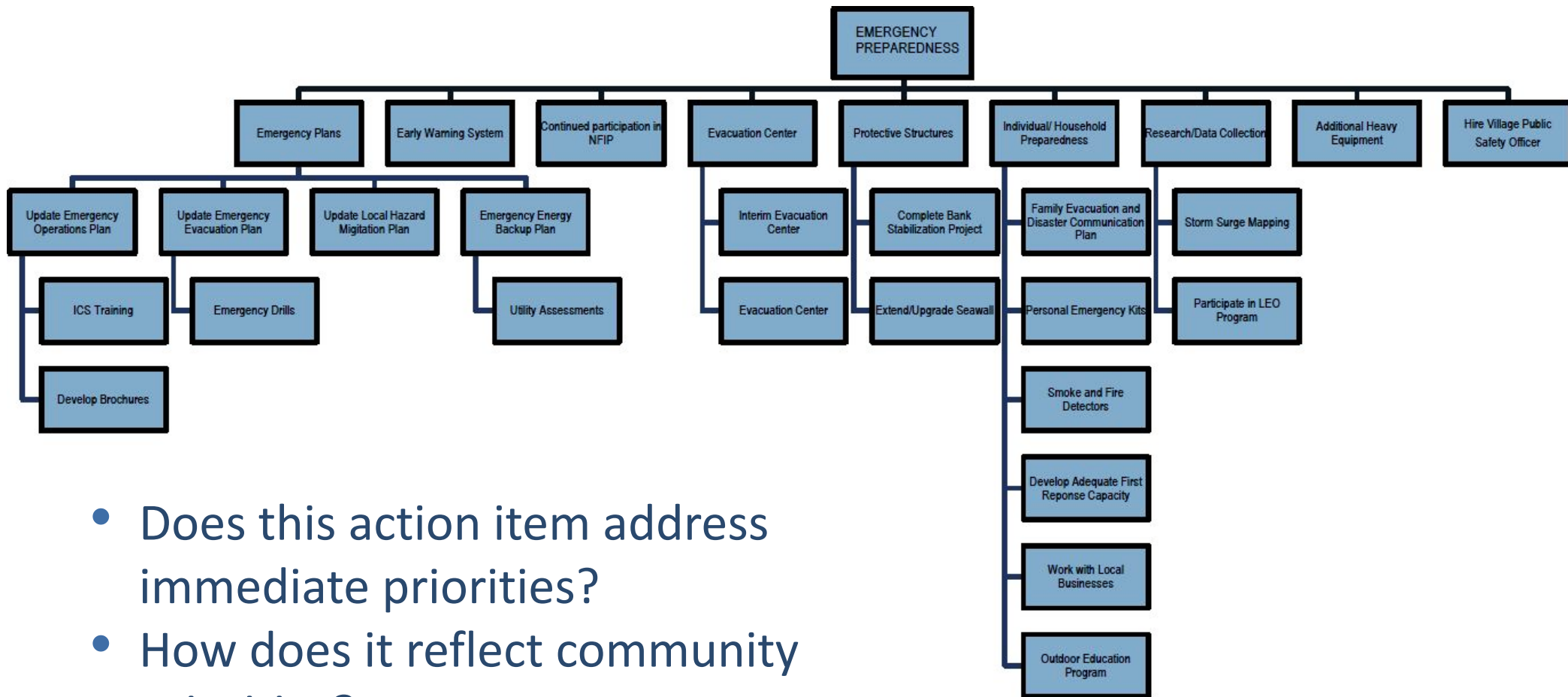
Kivalina Strategic Management Plan – Preliminary Planning Schedule - DRAFT

Topic Area	Short-Term (0-5 years)	Medium Term (6-10 years)	Long Term (11+years)
Emergency Preparedness	Update emergency operations plan	Evacuation Center	Update emergency operations plan
	Practice emergency operations plan/emergency drills	Update emergency operations plan	Practice emergency operations plan/emergency drills
	Informational material regarding emergency preparedness	Practice emergency operations plan/emergency drills	Update local hazard mitigation plan
	Interim evacuation center	Update local hazard mitigation	Update evacuation plan
	Evacuation plan	Update evacuation plan	
	Establish early warning system		
	Increase first response capacity		
	Business continuity planning		
	Family evacuation and disaster communications plans		
	Install smoke and fire detectors		
	First aid training		
	Outdoor education programs		
	Emergency energy backup plan		
	Update local hazard mitigation plan		
	Village Public Safety Officer		
Participate in Local Environmental Observer (LEO) program			
Relocation (If community decides to relocate)	Commitment to move	Develop access to new site	Develop remaining infrastructure
	Site Selection	Develop long range transportation plan	Develop remaining housing
	Acquire title to site	Build initial housing	Restoration of old village site
	Survey site	Develop initial infrastructure	
	Identify quarry site	Cultural resources plan	
	Identify and prioritize community needs	Well at new site	
	Develop community layout plan		
	Infrastructure feasibility studies		
	Identify water source		
	Inventory resources that can be used at new village site		
	Detailed construction and financing plan		
	Leadership agreement		
	Establish relocation committee*		

Work Breakdown Structure



Work Breakdown Structure



- Does this action item address immediate priorities?
- How does it reflect community priorities?
- Is there funding available?
- Can it be fully implemented?

Relocation

Site Selection Study

Decision to Relocation

Acquire Title

Survey Site

Identify Quarry Site

Identify and Prioritize Community Needs

Develop Community Layout Plan

Infrastructure Feasibility Studies

Identify Water Source

Identify Resources that can be Reused

Detailed Construction and Financing Plan

Leadership Agreement

Relocation Committee

Develop Access to New Site

Update

Build Initial Housing

Develop Initial Infrastructure

Develop remaining infrastructure

Develop remaining housing

Restoration of old village site

Protect-In-Place

Additional
Shoreline Erosion
Research

Identification of
Potential Expansion
Areas

Infrastructure
Assessment

Public Building
Assessment

Implementation of
Additional
Shoreline
Protection

Infrastructure
Upgrades

Update Strategic
Management Plan

Next Steps

- Review and revise Work Breakdown Structure
- Identifying funding, sequencing and potential synergies for priority adaptation actions
- Development of Draft Strategic Management Plan (SMP)
- Community Gatherings in each village to present Draft SMPs
- Finalize SMP (living document)

Contact

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