

Discovery Report

FEMA Region X

Kotzebue, Alaska



FEMA

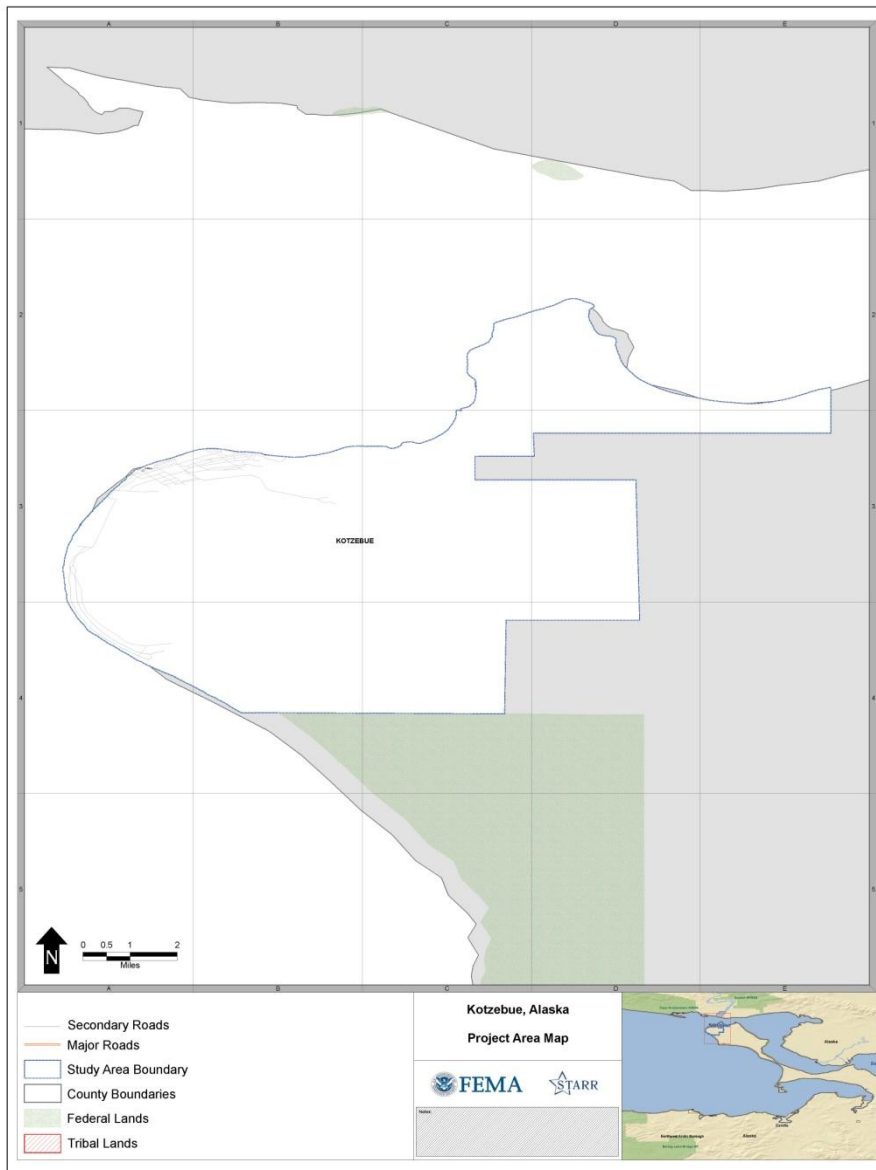
Prepared by



I. Watershed Description

Kotzebue is a small National Flood Insurance Program participating community in Northwest Arctic Borough, Alaska. The community lies on a gravel spit at the end of the Baldwin Peninsula in the Kotzebue Sound. It is 33 miles north of the Arctic Circle on Alaska's western coast. Kotzebue has a subarctic climate, with long, somewhat snowy, and very cold winters, and short, mild summers. Monthly daily average temperatures range from -3.5°F in February to 54.7°F in July.

Map 1: Image of Kotzebue Project Area Map (full size maps in appendix)



II. Project Description and Methodology

Discovery is the process of data collection, including information exchange between all governmental levels of stakeholders, spatial data presentation, and cooperative discussion with stakeholders to better understand the area, decide whether a flood risk project is appropriate, and if so, to collaborate on the project planning in detail. At this time, Discovery processes and requirements are still being defined; however, draft guidance is available from the draft *Appendix I – Discovery (fall 2010)*, and the draft *Meetings Guidance for FEMA Personnel (October 2010)*. In addition, there are several draft tools and templates at various stages of completion that were used to support the effort.

Region X initiated an extensive Discovery project in October 2010, with the Discovery of 24 watersheds/project areas in Idaho, Oregon, Washington, and Alaska, involving almost 200 communities. Essentially a pilot project for the Discovery process itself, RX Discovery involved data collection, community interviews, a meeting with stakeholders in the watershed, and development of recommendations based on an analysis of data and information gathered throughout the process.

Figure 1. Data Sources for Region X Discovery (project-specific data sources in Appendix)

Alaska State Geospatial Data Clearinghouse	FEMA Regional Office	National Oceanic and Atmospheric Administration (NOAA)
Oregon Department of Transportation	FEMA Map Service Center	NOAA Fisheries Service
Idaho Department of Transportation	FEMA Publications	NOAA National Geophysical Data Center
Idaho State Geospatial Data Clearinghouse	FEMA Community Information System	U.S. Army Corps of Engineers National Levee Database
Washington State Department of Transportation	FEMA Coordinated Needs Management System (CNMS)	U.S. Census Bureau
Community data, where available	FEMA HAZUS	U. S. Census - TIGER
Local, Regional, State website search	FEMA RX Inventory	U.S. Department of Agriculture
Developed based on community interview/meeting	FEMA Legacy Data	U.S. Fish and Wildlife Service
STARR	Data.gov	U.S. Geologic Survey
ESRI	National Atlas of the United States	

The Region X Discovery data collection entailed a massive collection of tabular and spatial data for all communities from Federal and State sources, as well as information collected through interviews with each community. The tabular data file in the Appendix provides detailed information about the data and its use in Discovery for this specific watershed. Data was used primarily in two ways – tabular data was documented on a Community Fact Sheet, and spatial data was included in the Discovery Geodatabase, and is displayed on the

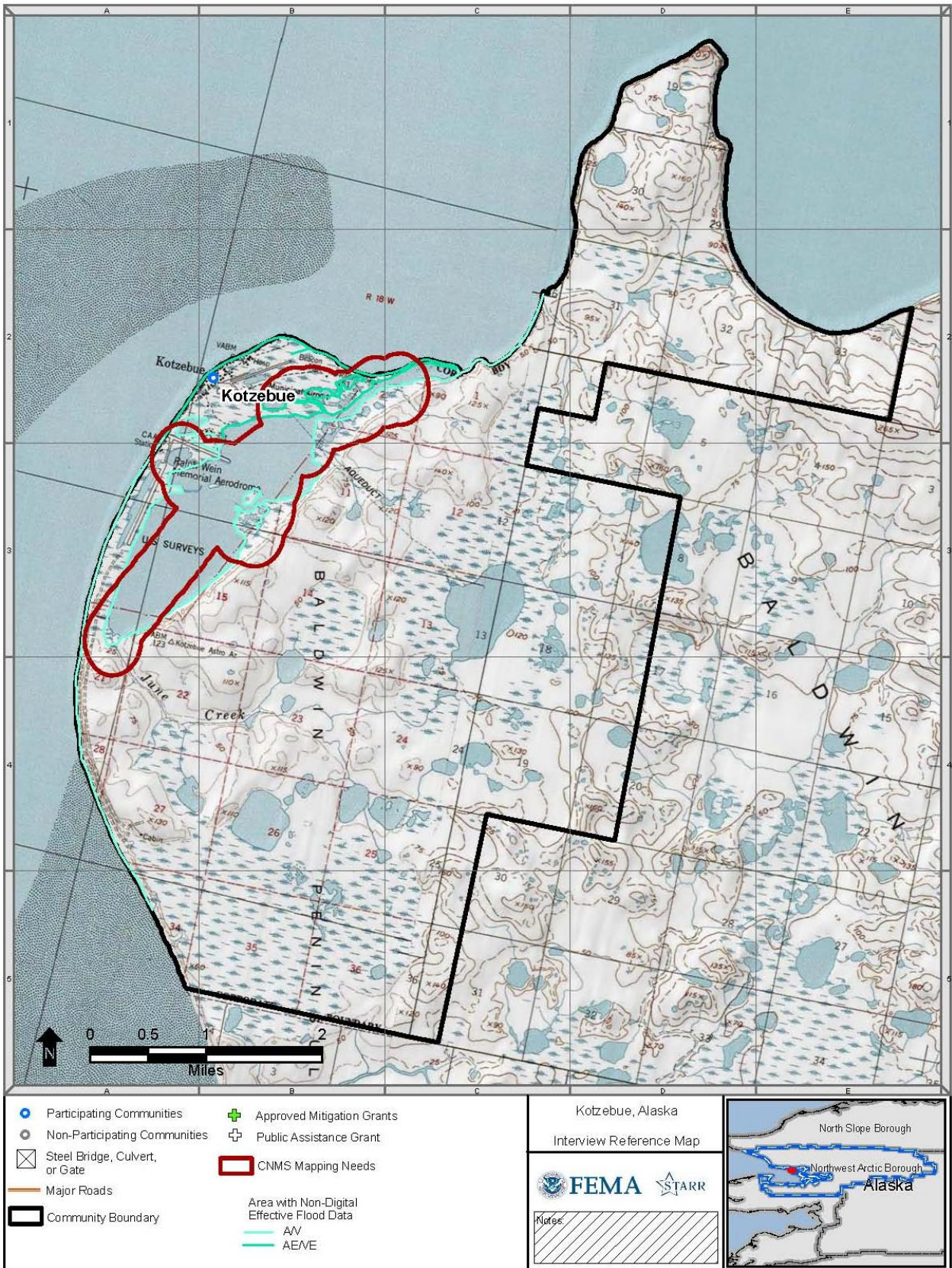
Discovery maps, where appropriate. Full-sized Discovery maps are included in the appendix.

The second phase of the Region X Discovery effort involved a review of the collected data with community officials through a phone interview, and a request for additional information. Prior to the interview, community officials received information about the Discovery process, and a Fact Sheet and Interview Reference Map for their community. Communities were asked to identify “Areas and Points of Concern” based on their local knowledge and analysis of the data shown on the map. The Areas and Points of Concern (mapping needs, desired mitigation projects, etc.) were documented in the Discovery Geodatabase and discussed during the Discovery Meeting.

Figure 1. Fact Sheet, page 1, for Kotzebue. (tabular data in appendix)

RX Discovery 2011: Kotzebue Coastal Watershed		Page 1	
Fact Sheet: Kotzebue, Alaska			
CID:	020059	FIS/FIRM:	Effective Date: 1/8/1983 Level of Study: Detailed Study, A4/V4 Last Community Meeting: 9/22/1981
LOMCs:	0	Last CAV/CAC Date:	9/17/2010, 10/30/2009
CRS Status			
Class:	n/a	SFHA Discount:	n/a
Effective:	n/a	Non-SFHA Discount:	n/a
Demographics			
Population:	3,082	Social Characteristics	
Median Age:	26	Non-English Speakers:	8%
Elderly (65+):	4%	High School+ Education:	76%
Native:	71%	Bachelors+ Education:	18%
Industrial			
Population in labor force:	63.1%		
Median income:	\$57,163		
Top 5 Industries:			
Educational, health and social serv	39%		
Transportation and warehousing, r	13%		
Public Administration	11%		
Other services (except public adm	9%		
Retail trade	8%		
Presidentially-Declared Disasters			
Flood-related total:	19	(August 1967 - October 2009)	
Recent flood related:	10	(April 2002 - October 2009)	
Other hazards:	Earthquake, Fire, Severe Storms, Landslides, Mudslides, Tidal Surges, Severe Winter Storms, Coastal Erosion, High Winds, Severe freezing, Heavy rains and landslide, Avalanches		
Insurance			
Total Premiums:	\$16,766	Variances:	0
Total Coverage:	\$4,878,500	Rep Losses:	0
Total Policies:	20	BCX Zone Claims:	0
A Zone Policies:	11	A Zone Claims:	0
V Zone Policies:	0	AE/A# Zone Claims:	0
Retention:	1 policy, \$0 coverage	V Zone Claims:	0
		D Zone Claims :	0
Mitigation Projects and Other Grants			
Acquisition Project:	n/a		
Mitigation Plans:			
	City of Kotzebue, Local Hazards Mitigation Plan		
Effective:	June 2008		
Expires:	June 2013		
Other Plans:			
	Alaska State Hazard Mitigation Plan, October 2010.		
Levees and Other Flood Control Structures			
Identifier:	None known to be 65.10 compliant		
Accreditation Status:			
Environmentally Sensitive Areas:			
Critical Species:			
Environmentally Sensitive Index:			
Wetlands:			
CoBRAs:	n/a		
OPAs:	n/a		
Tribal Areas:			
Tribe:	None identified		
Flooding Source:	n/a		

Map 2. Image of Interview Reference Map for Kotzebue



The third step was to hold a watershed-wide Discovery Meeting and facilitate discussion and data analysis of study needs, mitigation project needs, desired compliance support, and local flood risk awareness efforts. The discussion was stimulated using the Discovery Geodatabase display of relevant data. Attendees, including all affected communities and selected other stakeholders, cooperatively identified possible solutions for the Areas and Points of Concern shown on the Discovery Meeting Map. Solutions included recommendations of floodplain studies, mitigation projects, compliance issues, and ideas on how to improve the local flood risk communication programs.

Map 3. Image of the Kotzebue Discovery Meeting Map



The fourth phase of the Discovery effort involved an analysis of the data and information collected and discussed at the meeting, and recommendations as to the future relationship and activities between FEMA and the watershed communities. The Final Discovery Map indicates desired study areas and mitigation project locations, and the Discovery Report documents the results of data collection and conversation. If a Risk MAP project is to be initiated in this watershed, Discovery will be concluded with the finalization of a project scope and signed Project Charters, which indicate that all affected stakeholders agree to the terms of a funded project, including communication and data responsibilities.

Map 4. Image of Kotzebue Final Discovery Map



III. Risk MAP Needs

The results of the data collection and interviews were thoroughly discussed at the Discovery Meeting. The following sections include issues and situations that exist in Kotzebue that can be considered Risk MAP Needs, to be addressed with Risk MAP projects. Details and background on all issues can be found in the interview notes, meeting notes, and other files included in the appendix.

i. Floodplain Studies

Kotzebue’s Flood Insurance Study and Flood Insurance Rate Map (FIRM) were last updated in 1983. Kotzebue has both detailed coastal and riverine analysis. The last community meeting was held in September 1981.

The CNMS data indicated that the Kotzebue Lagoon may need restudy, which was confirmed by the community. The City of Kotzebue did not identify any LOMA’s or flooding occurring in the B, C, or X zones. There was limited spatial data available for the area, so the majority of Risk MAP need identification was through community knowledge.

During the City of Kotzebue’s interview, the community identified that the Alaska Department of Transportation (DOT) has likely conducted a study for the new seawall construction along Shore Avenue. The community also indicated that the local airport is proposing to extend their runway out into Kotzebue Sound and to produce such a plan, a flood study has likely been completed.

Table 2: Kotzebue Mapping Needs

STAKEHOLDER PRIORITY	FLOODING SOURCE	STUDY LENGTH (miles)	STUDY LIMITS	STUDY TYPE
1	Kotzebue Sound	2.64	Shoreline study within city limits	Coastal Detailed
2	Kotzebue Lagoon	6.76	Along the shoreline of the Kotzebue lagoon	Detailed
3	Swan Lake	0.59	Shoreline study within city limits	Detailed
4	Ponding Areas	<1	Low areas within the city limits subject to flooding from ice thaw	Approximate

ii. Mitigation Projects

The Kotzebue Mitigation Plan, prepared by the City of Kotzebue, became effective June 2008 and expires June 2013. In addition to the mitigation projects identified in the plan, two other potential mitigation projects were discussed during Discovery:

Phase II of the Shore Avenue seawall: The City is looking into funding for extending the wall to the northeast near the Crowley property.

Water Removal: Method of removing water from areas of low elevation that see ponding of water during the spring thaw.

iii. Compliance

Data collected from CIS indicated that City of Kotzebue did not have any variances to their floodplain management ordinances, so it may be assumed that the communities are regulating to at least the minimum criteria required by FEMA. The most recent Community Assistance Visit was in September 2010. It was mentioned during the interview that the majority of existing homes have been voluntarily elevated due to permafrost. The residents of Kotzebue are well informed of the flood risk since they see flooding frequently.

iv. Communications

During the interview, the community indicated that they were interested in learning more about Risk MAP's communications support, and were open to a future meeting with FEMA to learn about how they can improve their flood risk communication programs. Currently, Kotzebue is not in the Community Rating System (CRS) program. The community should be introduced to the program and encouraged to join. The community already works with the residents to communicate flood information and desires to expand their current outreach efforts.

Kotzebue is comprised of approximately 3,802 residents (U.S. Census, 2000). The median age of residents is 26 years, with approximately 4% of the population over 65 years old, an average of 8% non-English speakers, and 71% of the population Native American. An average of 76% of the population holds a high school diploma while 18% have a college degree. As of 2000, approximately 63% of residents over age 16 that desired employment were working, with a median annual income of approximately \$57,163. Residents work in educational, health, and social services; retail trade; and public administration.

The demographics data indicates that there may be a need for special outreach strategies for the City of Kotzebue, given the majority Native American, and young, population. The local officials were all interested in learning more about how to provide flood risk information to residents.

IV. Close

Local officials in the communities were interested in the Discovery process and Risk MAP, and are open to learning more about how they can begin to develop resiliency to flood events. They identified several areas for map updates and areas in which they could use additional FEMA support. It is recommended that the guidance document outlining the types of Mitigation Planning Technical Support that can be included in Risk MAP projects be evaluated with communities, once finalized. The local officials in the City of Kotzebue would benefit from the implementation of Risk MAP projects.

V. Appendix – Discovery Files

Communications

- Contacts
 - Stakeholders: Names, Titles, Phone, Email, Website
 - Notification Dates
- Notifications/Invitations
 - A National Notification
 - B Regional Notification
 - C State Legislator Notification
 - C Congressional Notification
 - D Community Notification
 - E Floodplain Administrator Interview Request
 - Meeting Notes Distribution

Community Interviews

- Fact Sheet
- ***Interview Reference Maps***
- Interview Notes
- Locally-Provided Documents

Discovery Meeting

- Agenda
- Presentation
- Sign-In Sheet
- ***Discovery Meeting Map***
- Meeting Notes
- Draft Project Charter

Report

- Report
- ***Project Area Map***
- ***Final Discovery Map***
- Tabular Data, including Data Sources and Mapping Needs
- Geodatabase
- Database Updates