

Agency: Commerce, Community and Economic Development

Grants to Municipalities (AS 37.05.315)

Grant Recipient: Ketchikan (City of)

Project Title:

Ketchikan (City of) - Design of Baranof Water Reservoir Replacement

State Funding Requested: \$ 150,000

House District: 1 - A

Future Funding May Be Requested

Brief Project Description:

Funding for design study of Ketchikan Public Utilities' Baranof Water Reservoir.

Funding Plan:

Total Cost of Project: \$4,250,000						
	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Local Funds	\$4,100,000	2009				
Total	\$4,100,000					

Detailed Project Description and Justification:

Funding is for the design phase for the replacement of Ketchikan Public Utilities' Baranof Water Reservoir. In 2007, Ketchikan Public Utilities acquired property at a cost of \$290,000 for the construction of a new 750,000-gallon reservoir. Funding in the amount of \$150,000 is requested to undertake the design of a modern concrete and appropriately sized replacement structure.

The Baranof Reservoir is the source of fire-flow protection for schools in Ketchikan including Revilla High School, Houghtaling Elementary, the University of Alaska's 7th Avenue campus and several church-sponsored schools. The reservoir serves residences in this area of the City, as well as several churches, the State Public Health Center and Youth Detention Centers, and several large apartment complexes. It is also the back-up source of water for Ketchikan General Hospital. The 200,000-gallon reservoir is undersized and at the end of its useful life.

The Baranof Reservoir was constructed in 1973 and is reaching the end of its useful service life. The reservoir was hastily constructed after the Carlanna Lake Dam failure, and suffers several structural deficiencies. Reservoir currently consists of 200,000-gallon redwood tank. The emergency nature of its construction meant the lack of a proper foundation which over time has caused distortions, rot, and leaks. The reservoir does not meet present Building Code requirements and is not anchored in any manner. With Ketchikan located in Seismic Zone 3 (Major Damage), this type of wooden reservoir will not survive a significant earthquake nor can it be economically retrofitted for protection. Failure of the reservoir is inevitable.

Ketchikan Public Utilities is seeking an appropriation of \$150,000 to design an appropriately sized, concrete replacement

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reservoir. Upon completion of the design, KPU will fund the cost of the new reservoir through a combination of utility revenue bonds and state/federal grants.

Project Timeline:

FY09

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Ketchikan Public Utilities

Grant Recipient Contact Information:

Contact Name: Karl Amylon, Manager
Phone Number: (907) 225-3111
Address: 344 Front Street KTN, AK

Has this project been through a public review process at the local level and is it a community priority? Yes No

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THE COMMUNITY OF KETCHIKAN



Design of Baranof Water Reservoir Replacement

FUNDING REQUEST	
REQUESTED	\$150,000
MATCHING/LOCAL	\$4,100,000
TOTAL	\$150,000

PROJECT SUMMARY:

This project represents the design phase for the replacement of Ketchikan Public Utilities' Baranof Water Reservoir. The Baranof Reservoir is the source of fire-flow protection for almost every school located within the City Limits including the Ketchikan and Revilla High Schools, Houghtaling Elementary, the University's 7th Avenue campus and several church-sponsored schools. The reservoir serves all the residences in this area of the City, as well as the Public Health Center complex, the Youth Detention Center, several churches and many large apartment complexes. It is also the back-up source of water for Ketchikan General Hospital. The 200,000-gallon reservoir is undersized and at the end of its useful life. In 2007, Ketchikan Public Utilities acquired property at a cost of \$290,000 for the construction of a new 750,000-gallon reservoir. Funding in the amount of \$150,000 is requested to undertake the design of a modern concrete and appropriately sized replacement structure.

PROJECT HISTORY/STATUS:

The Baranof Reservoir was constructed in the aftermath of the October 1973 Carlanna Lake Dam failure. After thirty-four years it is reaching the end of its useful service life. Located at the intersection of Fairview Avenue/ Jackson Street, the reservoir was constructed as a hasty, temporary solution to provide water to residents from Fourth Avenue and above who had formerly been served from Carlanna Lake.

At the time of the Carlanna Lake Dam failure, Ketchikan Public Utilities was able to acquire a 200,000-gallon redwood tank to serve as a replacement reservoir. Given that the winter was imminent, there was insufficient time to put in a proper foundation at the time of installation. The site was simply backfilled, graded flat and the redwood tank was erected on a treated timber foundation. Consequently, as the timber foundation has settled, the wooden floor has become distorted placing additional stress where the staves are notched. Over the years, the formerly tight fitting joints between the floor and the tank wall have begun to open up and leaks have developed. The timbers have deteriorated and, despite periodic cleaning and disinfection, rot is developing in portions of the untreated redwood. The wooden Baranof Reservoir does not meet present Building Code requirements and is not anchored in any manner. With Ketchikan located in Seismic Zone 3 (Major Damage), this type of wooden reservoir will not survive a significant earthquake nor can it be economically retrofitted with additional shear protection. Failure of the reservoir is inevitable.

PROJECT FUNDING REQUEST:

Ketchikan Public Utilities is seeking an appropriation of \$150,000 to be applied towards the cost of designing a concrete and appropriately sized replacement reservoir. Upon completion of the design, KPU will fund the cost of the new reservoir through a combination of utility revenue bonds and state/federal grants.