

Kenai River Boat Wake Erosion Study**FY2003 Request: \$200,000****Reference No: 35934****AP/AL:** Appropriation**Project Type:** Planning**Category:** Natural Resources**Location:** Kenai**Contact:** James Stratton**House District:** Kenai, Nikiski (HD 9)**Contact Phone:** (907)269-8701**Estimated Project Dates:** 07/01/2002 - 09/30/2003**Brief Summary and Statement of Need:**

The Kenai River Boat Wake Erosion Study is Phase 2 of a two-phase study to evaluate the relative susceptibility of different Kenai River bank soils to erosion caused by boat wakes, and to quantify how that human-caused erosion affects fish habitat. Phase 1 identified the different types of wakes caused by different boat hull shapes, lengths, horsepower, and passenger loadings.

Funding:	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	Total
Gen Fund	\$200,000						\$200,000
Total:	\$200,000	\$0	\$0	\$0	\$0	\$0	\$200,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input checked="" type="checkbox"/> Phased Project	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
Totals:	0	0

Additional Information / Prior Funding History:

In 1998, \$120.0 was appropriated to the Department of Fish and Game for two separate studies, one of which was the Kenai River Boat Wake Study (Phase 1). \$60.0 was used to match with funding from the Army Corps of Engineers to complete the first phase in 2000. While that study was being planned, it became clear that additional studies would be needed to link how boats and their wakes affect the Kenai River banks and fish habitat, hence this request for funding to complete the study.

Project Description/Justification:

The Kenai River Boat Wake Erosion Study will help DNR's Division of Parks and Outdoor Recreation (DPOR) manage the Kenai River Special Management Area (KRSMA) consistently with one of the statutory purposes of the KRSMA, which is to provide for recreational use of the river while protecting the river's fish and wildlife habitat. Power boat wakes are a known source of erosion along this popular recreational river, and many state and federal agencies, organizations and individuals are interested in better understanding the extent to which boating traffic really affects the Kenai River's riparian fish habitat.

In 2000, phase one of a projected two-part study was completed. This study evaluated the contribution of various boating characteristics toward their contribution to boat wakes. Different hull shapes and boat lengths were evaluated, along with different horsepower engines, passenger loadings, and travel distances from the bank. This effort was intended to quantify the relative contribution of the different variables to producing wakes. The boats used were representative of boats used on the Kenai River.

Now that this information has been documented, the next phase will be to do a soils study to evaluate the relative susceptibility of various Kenai River bank soils to erosion caused by boat wakes. It is generally understood that some

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river banks are far more susceptible to erosion by boat wakes than other banks, and this study will classify the various soils and how likely they are to be affected by power boat wakes.

The second half of the project will link the soils and boat wake information to impacts on fish habitat. When the studies are completed, it is expected that agencies will better understand the relationship between boating activities and fish habitat on the Kenai River. Subsequent management decisions could then be made to reduce impacts on fish habitat that may be caused by certain combinations of boat shapes, sizes or passenger loading.

This project does not address a life, health or safety issue. Indirectly, it could reduce state operating costs by reducing boat wake caused erosion on DPOR KRSMA lands, thereby reducing the funding required to restore damaged river banks annually, estimated to cost approximately \$10.0 – \$20.0 each year.

The method used to project the cost was based upon an estimate from agency personnel within the US Geological Survey, as well as other state and federal agency personnel who estimate the total study cost to be approximately \$400.0.

An alternative that was considered included asking the federal government to fund the entire cost of this study. USGS is unable to perform work for a state or local entity without a 50/50 match, however, so this alternative was abandoned.

This project is unrelated to the operating budget for managing the KRSMA. No new positions will be created as a result of this project, nor will there be any increased operating expenses as a result.

This project is critical to better understanding the relationship between recreational use and associated impacts of that public use upon the fish and wildlife habitat of the Kenai River. In order to sustain a healthy system for fish and wildlife for this most popular of rivers, it is important to understand these relationships and have the tools to manage potentially negative impacts at the lowest level possible, while still providing for a quality, sustainable recreational experience on the Kenai River. Many people have demanded that something be done to restrict the level of boat wake caused erosion on the Kenai River, but before any action is taken, it is important to fully understand the causes of erosion and how it affects fish habitat, as well as the variables of boating that cause the most damaging boat wakes.

Specific Spending Detail: Professional Services by staff from the US Geological Survey – \$150.0 (matched 50/50 with federal funding); Professional service contract, managed by DNR – \$50.0.

Project Support: Kenai River Special Management Area Advisory Board, Kenai River Center, Kenai Watershed Forum

Project Opposition: unknown