

Kodiak Regional Aquaculture Association

104 Center Ave.; Suite 200
Kodiak, AK 99615

(907) 486-6555
fax (907) 486-4105



May 23, 2011

Gary Byrne
Kodiak Regional Aquaculture Association
104 Center Avenue, Suite 200
Kodiak, Alaska 99615

Dear Interested Parties:

The Kodiak Regional Aquaculture Association and the U.S. Fish and Wildlife Service are seeking your input on a proposal to permit, implement, and monitor a lake nutrient enrichment program to restore the productivity of Karluk Lake.

The Service has received a project proposal and request for a Special Use Permit from KRAA for the controlled addition of nitrogen and phosphorus into Karluk Lake. The proposed project would entail weekly introduction of nutrients to the surface of Karluk Lake over fourteen weeks in May through August for a period of not less than five years, to be followed by continued monitoring for an additional period of not less than two years. It is proposed to begin the program in 2012.

Why is the Kodiak Regional Aquaculture Association Proposing Nutrient Enrichment of Karluk Lake?

Returns of sockeye salmon to Karluk Lake declined steeply in 2008, and remained low the following two years. The poor sockeye salmon returns are having a negative impact on the ecology, culture, and economy associated with Karluk salmon. It is well established that the decomposing carcasses of salmon provide important nutrients to the freshwater systems they enter, and that these nutrients are essential to biological productivity in both the aquatic and surrounding terrestrial habitats. Concentrations of essential nutrients and phytoplankton in Karluk Lake were measured at low levels in 2009 and 2010, indicating depressed freshwater productivity following the low sockeye salmon escapements of 2008 and 2009. Low freshwater productivity limits the fitness and survival of sockeye salmon smolt that migrate to sea, and thus limits future returns of adult fish. In turn, low adult returns fail to deliver adequate essential nutrients to restore freshwater productivity, and a cycle of depressed productivity can become established.

In order to prevent a long-term period of depressed biological productivity within the Karluk system, a lake nutrient enrichment program is proposed. The introduction of nutrients by this program will establish conditions favorable to system productivity, allowing improved survival and fitness of juvenile sockeye salmon, and contributing to increased adult returns. With improved adult sockeye salmon escapement, decomposing salmon carcasses can once again deliver adequate marine-derived nutrients to support historic levels of productivity in Karluk Lake, allowing the active nutrient enrichment program to be phased out.

What is the Kodiak Regional Aquaculture Association Proposing?

The proposed action is to deliver to the surface of Karluk Lake measured and appropriate amounts of nitrogen and phosphorus via fixed-wing aircraft in order to restore the habitat and biological productivity of the freshwater system. In Karluk Lake, phosphorus is the limiting nutrient to phytoplankton growth and abundance. Phytoplankton is at the base of the aquatic food chain, and phytoplankton abundance is thus a limiting factor in the abundance of zooplankton, which is in turn a limit to productivity of planktivorous fish, including sockeye salmon. In lakes like Karluk Lake, increasing nutrient levels is a proven method of increasing system productivity at all levels, and it is by this means that KRAA proposes to restore Karluk productivity.

Analysis of Karluk Lake history, physical characteristics, limnological data, and productivity trends has identified the system as a strong candidate to respond positively to a program of nutrient enrichment and led to the development of the proposed project. The proposal to this point has been developed in consultation with the Alaska Department of Fish and Game and with expert limnologists working in the private sector, and adheres to the ADF&G Lake Fertilization Policy. The proposed program is very similar to one that was conducted in Karluk Lake from 1986 through 1990.

The proposal for Karluk Lake nutrient enrichment includes provisions for a monitoring program to be in place throughout the period of active enrichment, and for a minimum of two additional years. Parameters to be examined include water chemistry and clarity, phosphorus and nitrogen concentrations, and productivity and species compositions within the phytoplankton, zooplankton, and fish communities. KRAA will be working closely with ADF&G to collect and analyze samples, and also with the Kodiak National Wildlife Refuge to interpret monitoring data.

What happens next?

At this time, we are contacting you so that you may share comments, issues, and concerns that might help shape or further develop the project proposal. A copy of the proposal in its current form is available at the KRAA website (kraakodiak.org), or via mail or email by request. Alternatives to the proposed action may be developed depending on issues identified during this initial “scoping” period.

There will also be a public “scoping” meeting to solicit public input not only on the proposed Karluk Lake project, but also regarding potential nutrient enrichment projects for Frazer and Spiridon lakes, for which proposals are currently in draft. This meeting is scheduled to be held 7:00p.m. Tuesday, May 31, 2011 at the KNWR Visitors Center, 402

Center Avenue, Kodiak, AK 99615. Your comments will be most useful if they are received by June 30, 2011. However, comments will be accepted and reviewed up until the time the decisions on the proposed project are made.

Following the scoping period, KRAA and the Service will comply with the National Environmental Policy Act through the preparation of an Environmental Assessment which will be available for public review. The EA will evaluate potential environmental impacts of the proposed project, including effects upon the aquatic and associated terrestrial habitats.

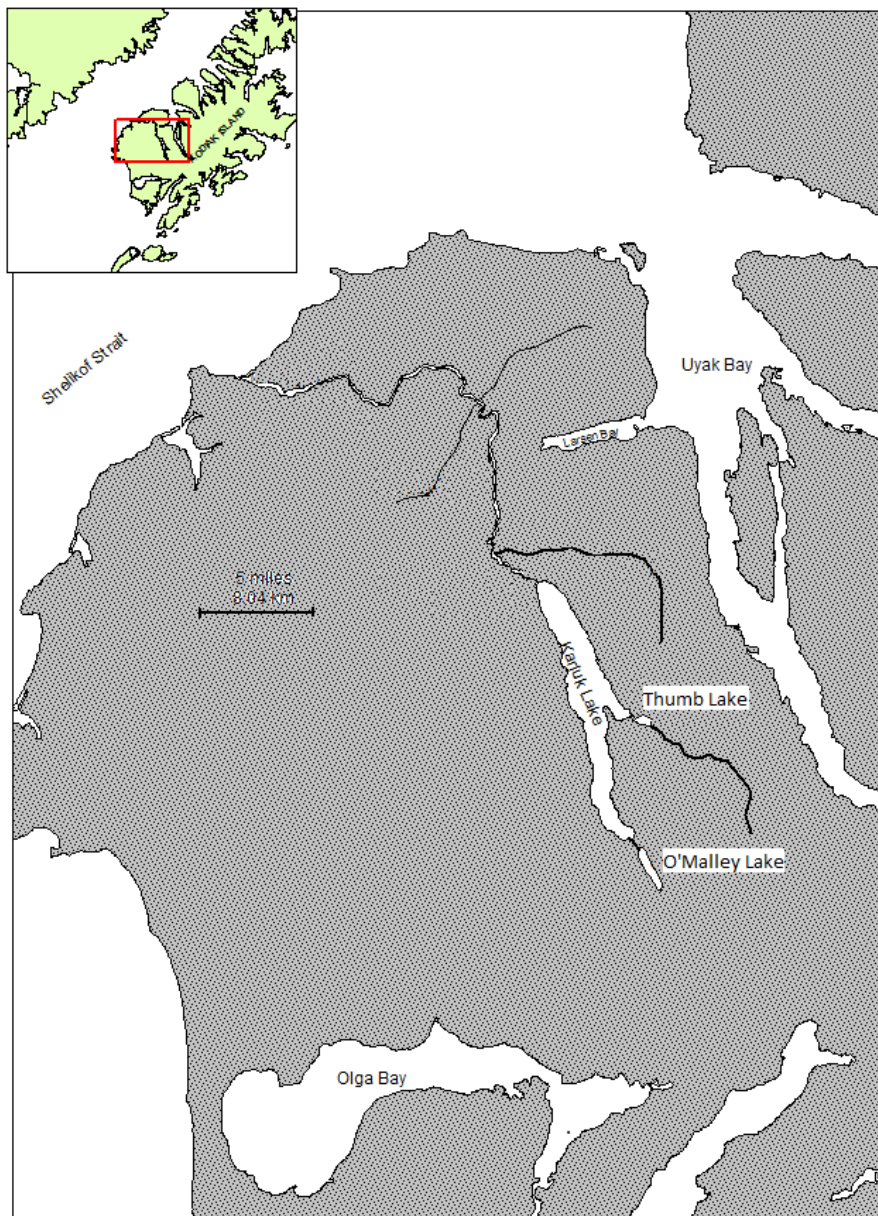
Please send comments to Gary Byrne, Kodiak Regional Aquaculture Association, 104 Center Avenue, Suite 200, Kodiak, AK 99615. Comments may be written, sent by email (kraa.byrne@gci.net), or faxed to this address at 907-486-4105 (Attention: Karluk Nutrient Enrichment). Questions may be directed to Gary Byrne at 907-486-6555.

This is not the only opportunity you will have to comment on this project. When the EA has been prepared and distributed you will have an opportunity to make further comments. If you would like to be kept informed about this project, please complete and return the attached "Interest Response Form" and you will be placed on the mailing list.

All written submissions in response to this notice will be made available for public inspection, including the submitter's name and contact information, unless the submitter specifically requests confidentiality. If you wish to withhold your name or address from public review or from disclosure under the Freedom of Information Act, you must state this at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses submitted on official letterheads, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Sincerely,

Gary Byrne
Production/Operations Manager
Kodiak Regional Aquaculture Association
Kodiak, Alaska



Map illustrating location of Karluk Lake.

Interest Response Form

Please include me on the mailing list for

- ENVIRONMENTAL ASSESSMENT FOR PROPOSED
NUTRIENT ENRICHMENT OF KARLUK LAKE

as described in the attached letter.

Complete this form and return to:

Kodiak Regional Aquaculture Association
104 Center Avenue, Suite 200
Kodiak, AK 99615

Please Print Clearly:

Name: _____

Street: _____

City, State, Zip Code: _____

Email address: _____

We are trying to save paper and conserve resources. Please respond if you wish to be kept informed and receive future mailings for this project. Please indicate if you would like a paper copy, CD, or can download website copy of notices, documents, and decision records.

Paper copy

CD

Download web content