EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL

RESTORATION UPDATE

Spring 2000 Volume 7 Number 2

GEM remains a 'work in progress'

Draft program forwarded to National Research Council for review

Six months of review and comment from the public, spill area user groups, scientists, and resource agencies was just the beginning for the program known as Gulf Ecosystem Monitoring or GEM. This long-term research and monitoring effort, being established as an ecological early warning system for the Gulf of Alaska, still has a long way to go before it takes over as the next generation of the *Exxon Valdez* oil spill restoration program.

"In concept, at least, GEM could be with us for 100 years or more," said Executive Director Molly McCammon. "We're going to continue reviewing and revising it for another 18 months so that it gets the best possible start when it's finally implemented."

The Trustee Council set aside at least $120 million to establish a long-term research and monitoring effort. That fund, after inflation-proofing, is expected to provide $6 million annually for GEM, beginning October 1, 2002. GEM will be funded at the $6 million level for the first few years, with that amount slated to grow as the fund grows.

The next step for the Draft GEM program is an 18-month review by the National Research Council in Washington, D.C. The Trustee Council has contracted with the NRC to obtain advice from independent scientists and nationally-recognized experts. The NRC report will be due in November 2001

Submitting the document to the NRC does not mean that public comment is over, McCammon emphasized. Input from the public on GEM will be accepted until the day the Trustee Council votes to implement the program. Until then, she said, GEM will be a work in progress.

It's important to understand, however, that the draft GEM program is about "principles and policies" to guide the research and monitoring effort. It does not specifically detail what research or monitoring will be conducted, she said. But

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Trustees hope to extend Karluk River conservation easement

A conservation easement along the popular Karluk and Sturgeon rivers on Kodiak Island would be renewed for another 10 years under a protection plan being negotiated between Koniag Corporation and the Trustee Council.

The Trustee Council listened to details of the plan during its May 22 meeting. The plan under negotiation calls for Koniag to extend the current conservation easement until December 2011 and for the Trustee Council to place $29.55 million into a special interest-bearing fund. Some of the earnings from that fund would be used as payment for the temporary conservation easement from Koniag.

"This would not be a land purchase," said Molly McCammon, executive director of the Trustee Council. "Indeed, for the first 10 years of the easement, there can be no land purchase."

After 10 years, Koniag, at its sole dis-

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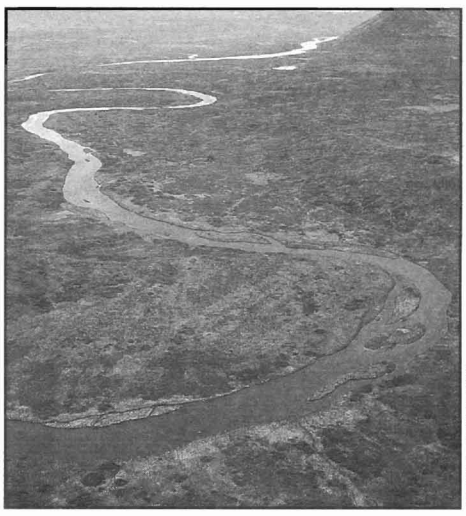
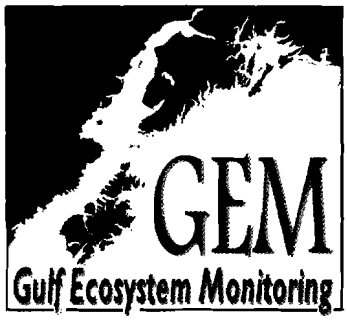


Photo by Calvin Hall

Karluk River

Executive Summary

(excerpts from the Draft GEM program)



The following is an excerpt from the Executive Summary of the Draft GEM document. This summary and the entire document is available on the web at: www.oilspill.state.ak.us.

The mission of the GEM program is "to sustain a healthy and biologically diverse marine ecosystem in the northern Gulf of Alaska and the human use of the marine resources in that ecosystem through greater understanding of how its productivity is influenced by natural changes and human activities."

> "In the end, GEM must be justified on what it can teach policy makers, resource managers and the public about options for directing human behavior toward achieving sustainable resource management goals."

GEM has five major programmatic goals. These are to:

DETECT: Serve as a sentinel (early warning) system by detecting annual and long-term changes in the marine ecosystem, from coastal watersheds to the central gulf;

UNDERSTAND: Identify causes of change in the marine ecosystem, including natural variation, human influences, and their interaction;

PREDICT: Develop the capacity to predict the status and trends of natural resources for use by resource managers and consumers;

INFORM: Provide integrated and synthesized information to the public, resource managers, industry and policy makers in order for them to respond to changes in natural resources; and

SOLVE: Develop tools, technologies, and information that can help resource managers and regulators improve management of marine resources and address problems that may arise from human activities.

Obviously the annual earnings from a $120 million endowment will not be able to fund all that needs to be done to achieve the above goals. Instead, the Trustee Council will focus a large part of its efforts in providing leadership in identifying monitoring and research gaps and priorities; encouraging efficiency and integration through leveraging of funds, coordination, and partnerships; and involving stakeholders in local stewardship by having them help guide and carry out the program.

Recognizing that the gulf ecosystem under consideration is extremely complex, consisting of thousands of species, it also will not be possible for GEM to answer all, or even most, of the questions that could be posed about the Gulf of Alaska. GEM instead, will be focused to a large extent, on key species and ecological processes in the system. These would be picked on the basis of ecological importance, human relevance, and their ability to indicate ecosystem disturbance, as well as their importance for understanding the physical and biological basis for production. In the end, GEM must be justified on what it can teach policy makers, resource managers and the public about options for directing human behavior toward achieving sustainable resource management goals.

The GEM program will continue to work with resource managers, stakeholders, the scientific community and the public to refine a common set of priorities for research, monitoring and protection in the northern Gulf. In order to do that, we must share an understanding of which marine resources of the northern Gulf are valued and what stressors, or potential threats, could affect their overall health. The GEM program will then build a matrix of who is monitoring what, where, and when and identify gaps in monitoring these things that are important to us. GEM will fill in the important gaps.

The long-term monitoring element of GEM will be complemented by strategically chosen research projects. These projects will follow up on lingering effects of the *Exxon Valdez* oil spill; explore questions and concerns that arise out of interpretation of the monitoring data especially in trying to understand the causes of change; and provide key information and tools for management and conservation purposes.

The Trustee Council believes that encour-

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GEM goes to NRC

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it does provide an outline describing what the Trustees want to achieve through GEM.

"At this stage, it's a program, not a plan," McCammon said.

The idea behind GEM is to build on the ecosystem knowledge gained through 10 years of post-spill research in the northern Gulf of Alaska. At the same time, the scope would be broadened to learn more about the physical forces that impact the region, such as the *El Ninos*, and the human activities that could threaten the area's resources now and in the future.

"We see the northern gulf as one system, and everything must be considered," said Chief Scientist Bob Spies. He pointed to the vast changes in plankton production in the Gulf of Alaska from one decade to the next. The fluctuation appears to be weather driven and this could be a primary explanation for the rise and fall of salmon as well as for changes in forage fish, the survival of seabirds, and declines of harbor seals.

GEM has no intention of becoming solely an oceanography-based program, McCammon said. Its goal is to watch over the entire northern gulf from its river watersheds to estuaries, to nearshore areas to open ocean. Its role is to provide leadership in coordinating the agencies that are already doing that work, identifying gaps in the information, leveraging funds as a way of filling in some of those gaps, and gathering the data.

GEM can best be described through a series of questions that illustrate the priorities in the program:

1. What are the resources most important to the people and the economies of the spill-impacted region and the functioning of the ecosystem?

2. What are the interacting resources? (For example, mussels as food for sea otters or pollock as predators of salmon fry.)

3. What are the physical processes impacting the primary and interacting resources (i.e. currents, climate, pollution)?

4. What are indicators of disturbance or human-caused change?

5. What research has been done? What studies are underway as part of an established agency or university program?

6. Can those studies provide the data necessary to answer specific questions about the resources?

If the answer to number six is yes, then GEM could gather the information and, perhaps, fund an analysis of the data. If the answer is no, then GEM could leverage funds with those agencies to monitor certain criteria or, in some cases, fund a specific study.

"The Trustee Council's strength over the last 10 years is that it has the unique ability to coordinate between agencies to get a specific job done," McCammon said. "We plan to use that asset to make GEM a model program for ecosystem research and monitoring."

The research side of GEM would seek out answers to specific and timely questions generated by the monitoring data. Where do pink salmon go when they leave the sound as fry? When they return, do hatchery salmon stray into local streams and spawn?

The goal of the research would be to provide tools and information that fish, wildlife, and land managers can use to maintain the health of the resources. In turn, that protects the people and the economies of the region.

Executive Summary

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aging local awareness and participation in research and monitoring enhances long-term stewardship of living marine resources. Traditional and local knowledge can provide important observations and insights about changes in the status and health of marine resources and should be incorporated into the GEM program. Citizen monitoring efforts are already underway in several communities in the GEM region and should be looked to for future collaboration.

Independent peer review of the GEM program is essential for a high caliber scientific program. Participation in research and monitoring is expected to be completely open to competition. All data must be archived, maintained, and readily accessible to other scientific users and the public. In order for GEM to be successful, it will be necessary to integrate, synthesize, and interpret monitoring and research results to form and present a "big picture" of the status of and trends in the northern Gulf of Alaska ecosystem. One approach is through the use of models, as well as periodic "State of the Gulf" and "State of the North Pacific" workshops, reports and a GEM website. The Trustee Council is committed to public input and outreach as vital components of the long-term GEM program.

Kodiak students get a marine education

Teri Schneider, Alutiiq studies coordinator with the Kodiak Island School District, left, and teachers Teresa Hedges, Larsen Bay, and Charles Power, Old Harbor, study charts during the Youth Area Watch conference at the Fisheries Industrial Technology Center.

Story and Photos by Mike Rostad

Eyes wide open, a group of Kodiak Island youngsters are watching the ocean for signs of life: the tiniest, microscopic plants and animals that float inconspicuously in the water columns, to attention-getting macro-organisms, such as whales and porpoises.

The students are participating in the Youth Area Watch program, which originated in Prince William Sound in the wake of the 1989 *Exxon Valdez* oil spill. The project was expanded in 1999 to include the Kodiak region and the lower Cook Inlet communities of Port Graham and Nanwalek.

Teri Schneider, the Kodiak school district Alutiiq studies coordinator who oversees the project, says it combines local knowledge with scientific expertise in reaching a greater understanding of the marine environment. "People are learning the value of local knowledge and information that hasn't been tapped before," Schneider said. "This is a great opportunity to work with the scientific community and assist in some sort of monitoring."

Monitoring involves a large number of activities, such as tracking the migration of whales, determining water turbidity, collecting tissue samples of subsistence harvested seals, finding the best place to get shellfish, and then interpreting the data and putting the information on a web site.

As students go about these projects, oral history, cultural appreciation, geography, and other skills and topics come into play, Schneider said.

Recently, at the Fisheries Industrial Technology Center, students listened to scientific experts discuss paralytic shellfish poisoning, *El Nino*, various methods of sealife monitoring, and other issues important to those who depend on the sea for survival.

Student Brandon Steele gives temperature readings to Dr. Brian Himelbloom as students learn to use equipment.

Guest speakers included Dr. Brad Stevens with the National Marine Fisheries Service; professor Brian Himelbloom, University of Alaska (Fairbanks); Bob Pfutzennreuter, FITC lab technician; Bob Foy, UAF research associate; and Susan Payne, with the National Oceanic and Atmospheric Administration.

Addressing a life-and-death topic that has plagued many islanders who are fond of clams and other shellfish, the scientists noted there is a difference between "red tide," which occurs in warm water, and PSP (paralytic shellfish poisoning), which is caused by an organism known as *Alexandrian*.

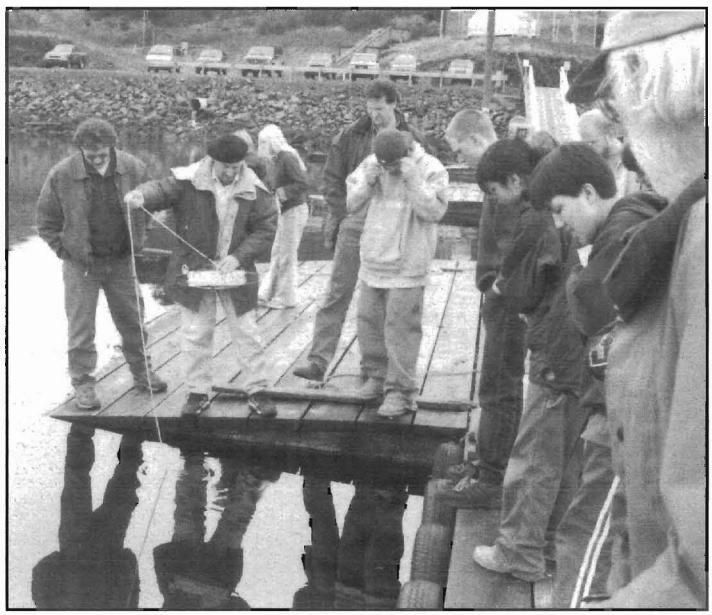
Every summer plankton bloom is bound to occur and, with the aid of a microscope, observers can identify the organism in the plankton.

The scientists also discussed the latest in marine monitoring devices. Foy marveled over a little gadget that records ocean temperatures over a long period of time and said it was able to show a significant two-degree temperature increase in gulf waters during the summer of 1997.

After several hours of quietly taking in lectures and video presentations, asking questions and presenting their own observations, the students went to the Trident Basin dock to test some of the monitoring equipment that was demonstrated in the conference room. It was here, surrounded by ducks and seagulls, and refreshed by a brisk easterly breeze, where some of the youngsters clearly noticed the connection between textbook science and traditional lifeways learned from their elders.

Although "secchi disks" and "temperature loggers" have not been part of their vocabulary, many of the students have been directly affected by the things these instruments measure -- water turbidity, temperature and plankton blooms, biological clouds of microscopic critters which the bigger fish and marine mammals eat.

In more academic terms, students were told the same thing that fathers, mothers, uncles and grandparents have drilled into them for years: pay attention to what's going on around you.



Dr. Brad Stevens with the National Marine Fisheries Service demonstrates the secchi disck at Trident Basin.

When taking water samples, students should take note of precipitation, sky conditions, wind, activity on the water and other things, Himelbloom said.

"Did you see fish feeding? Did you see a whale? Observations might tell us something when we throw it into the pool of information."

On the following day, the group participated in the biopsy of a seal. The operation, done in cooperation with the Native Harbor Seal Commission, may help scientists determine reasons for the decline of seals in the area.

Nominees sought for Public Advisory Group

Nominations are being accepted for two-year terms on the Trustee Council's Public Advisory Group. This broad-based group brings representatives of different interests together, providing a direct link between the Trustee Council and user groups throughout the spill area.

The 17-member PAG provides input on key decisions related to planning, funding and carrying out restoration projects. Its members review specific issues as well as make recommendations concerning overall direction of the restoration effort.

All Public Advisory Group members and alternates must be unanimously approved by the Trustee Council. Nominations may be submitted by any source, including yourself, and must be received by 5 p.m. August 25.

Nominations will be accepted for five public-at-large members and one member each from the following principal interests:

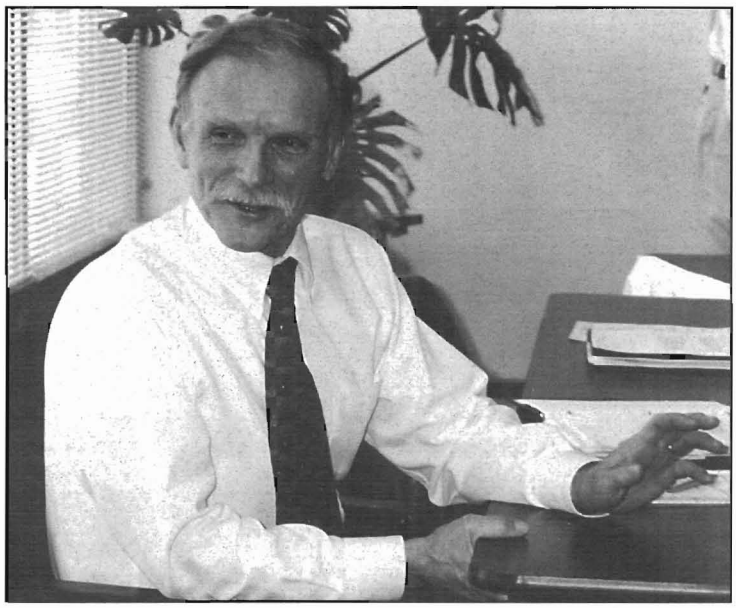
- aquaculture
- commercial tourism
- conservation
- local government
- recreation users
- subsistence
- commercial fishing
- environmental
- forest products
- native landowners
- sport hunting/fishing
- science/academic

Two *ex officio* members representing the Alaska State House and Senate have non-voting seats.

To learn more about the PAG and nomination procedures, contact Cherri Womac at 907-278-8012 or 800-478-7745.

Original Trustee Steve Pennoyer says farewell . . . retires as director of NMFS in Alaska

Just two months after Steve Pennoyer took over as director of the Alaska Region of the National Marine Fisheries Service, the *Exxon Valdez* ran aground on Bligh Reef. Pennoyer was still learning the demanding position as chief overseer of federal fisheries and marine mammals in Alaska when everything changed. He was in Seattle, he said, attending meetings when a reporter questioned him about the ship running aground. It was the first he'd heard about it.



Steve Pennoyer chaired his last Trustee Council meeting before retiring in May.

From that point on, Pennoyer became the National Oceanic and Atmospheric Administration's voice in the long process of restoring the damaged ecosystem. No one has attended more Trustee Council meetings. He was part of the original Trustee Council that oversaw the Natural Resource Damage Assessment process. And, after the October 1991 civil settlement with Exxon, Pennoyer was at the table for the first official meeting of the current Trustee Council.

Pennoyer, the last of the original trustees, announced his plans to retire at the end of May. During his last Trustee Council meeting May 22, his fellow trustees, both current and past, paid tribute to Pennoyer as a key, moving force within the Council.

Former attorney general Charlie Cole said that it was Pennoyer's influence that has allowed the multi-agency council to keep agency or government turf wars at bay, while always keeping the restoration of injured resources in focus. Creating a Trustee Council that required unanimity among six members for all decisions was a risky strategy, he said.

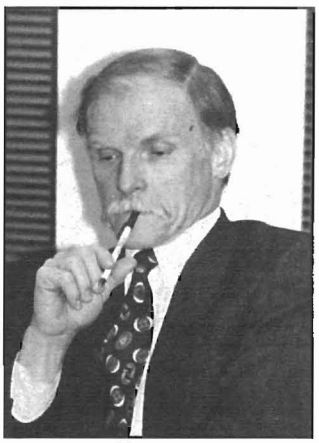
"But it worked because of Steve Pennoyer's support and his willingness to work with others," he said. "You were always well-prepared, congenial, understanding, and able to accomplish so many things."

Another former trustee, Deborah Williams, referred to Pennoyer as the ambassador for the federal trustees in working out disagreements with the state trustees and resolving many difficult issues. His background as a scientist also played an important role in species recovery, she said.

"I again and again and again looked to Steve for his wisdom on the topic, and it was never wrong," Williams said. "The restoration process would not have been as thoughtful, would not have been as cordial without your leadership. You really have been an indispensible leader in the process."

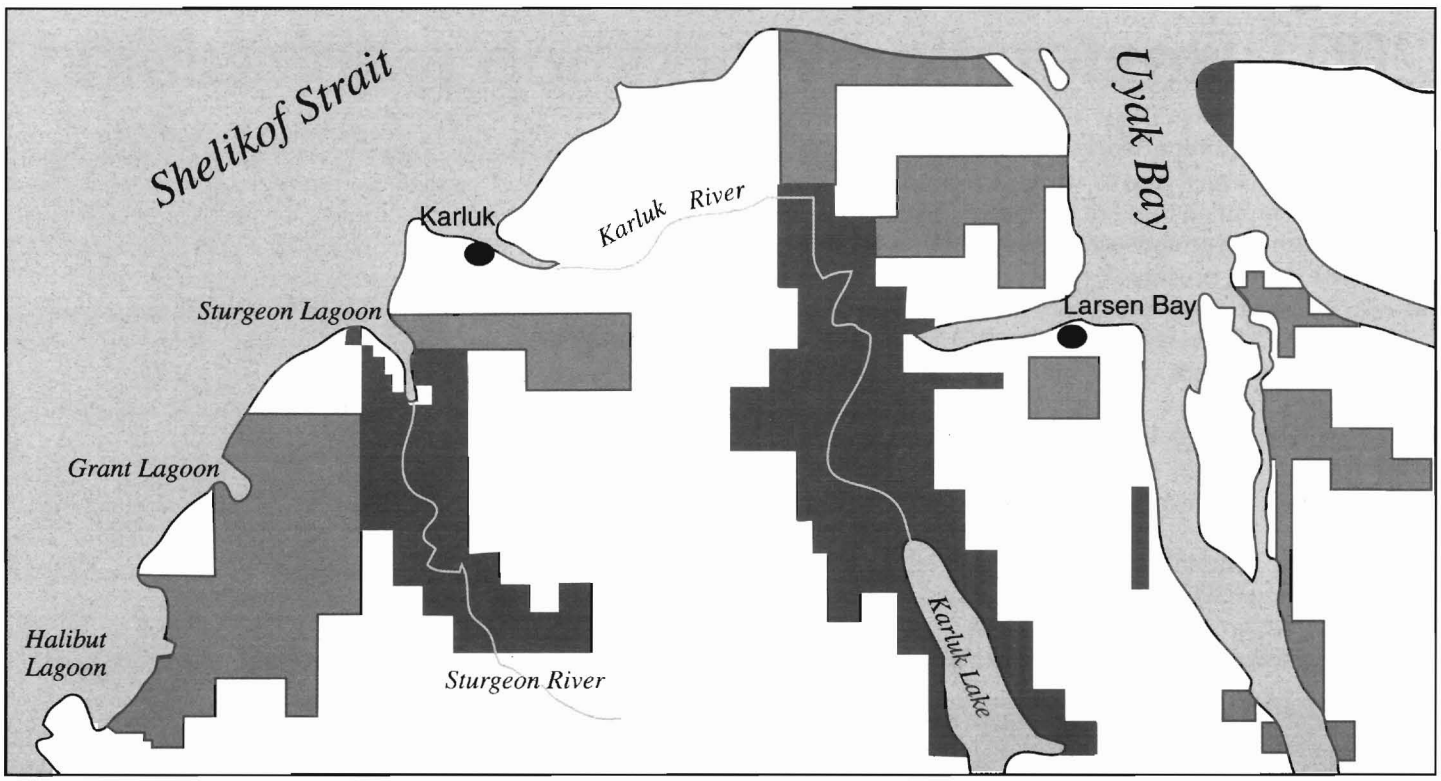
Trustee representative Craig Tillery noted that the Council was lucky in that the person with the longest run as a trustee was also the one person most respected for his scientific perspective. "You are a scientist who knows what he's talking about, someone with common sense, someone with vision, always looking a couple steps ahead, someone with knowledge the rest of us can respect," Tillery said.

Speaker after speaker thanked Pennoyer for putting the public and the recovery of injured resources as his first priorities in the restoration process.



Pennoyer

Before continuing the meeting as its chair, Pennoyer told the gathering that he has enjoyed every step of the Trustee Council process. "This has been an exciting process," he said. "This is one of a few places in the North Pacific that I know of, and maybe worldwide, where a whole lot of groups got together and had to come up with a common viewpoint and design a common program, where research was done not as a separate enterprise, but in a coordinated fashion with workshops and researchers talking with one another."



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cretion, would be able to terminate the easement or extend the easement for an additional 10 years," McCammon explained. In addition, after 10 years, Koniag could choose to sell its holdings for the balance on the investment account. "But there would be no obligation to sell," she said.

If Koniag chooses not to exercise its option, then the fund and its accumulated earnings would revert to the Trustee Council's long-term fund for habitat protection.

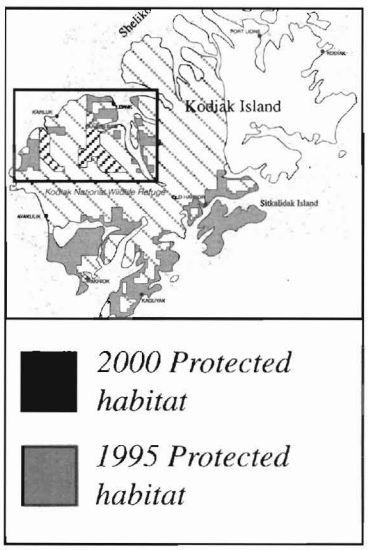
The Trustee Council provided funds in December 1994 to buy 59,674 acres in western Kodiak Island from Koniag Corporation. That package included a 7-year conservation easement on an additional 55,402 acres surrounding the Karluk and Sturgeon rivers. The extension currently under negotiation would include those lands plus some additional Koniag lands, including Camp Island on Karluk Lake. If Koniag elects to sell its land after 10 years, Camp Island would not be sold, but the Camp Island conservation easement would become permanent.

Koniag and the Department of the Interior are negotiating joint management and enforcement provisions to better protect the lands, water, fish, and wildlife of the area, said Dennis Metrokin, president of Koniag. Subsistence uses in the area will be protected, he said.

"The easement would provide economic opportunities for Koniag shareholders in the nearby villages of Larsen Bay and Karluk through visitor services," Metrokin said. "An internship program is being planned to provide training for young people in the villages and Koniag will continue to manage the bear viewing program at Thumb Lake and may develop additional visitor facilities at Camp Island."

The final details of the Koniag conservation easement are still under negotiation. The entire package is expected to be presented to the Trustee Council and the Koniag Board in the near future.

"The Karluk is one of the premier salmon streams in Alaska and maybe the world," said Marilyn Heiman, Assistant to the Secretary of the Interior for Alaska. "Protection of this world-class fishery and its watershed has been a high priority. It offers some of the best wilderness values, recreational, subsistence and bear viewing opportunities in Alaska. Maintaining it in this wild state is best for all users of the river and for the nation."



Karluk River conservation easement

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2001 Restoration Workshop rescheduled

The next Restoration Workshop, originally scheduled for January, has been moved up to October of this year. The idea is to get input on the Gulf Ecosystem Monitoring (GEM) program from the scientists and researchers who are closest to the restoration process. A GEM science program must be developed and forwarded to the National Research Council by March 2001. The early Restoration Workshop will be dedicated to development of the first research and monitoring plan, using short plenary sessions and work groups.

The workshop is tentatively scheduled for October 10-12, 2000. It will be held in Anchorage at the Regal Alaska Hotel on Lake Hood. All principal investigators are expected to attend.

The change in timing is essential to keep implementation of GEM by October 2002 on track. Ideas addressed at the workshop must be incorporated into a draft plan that is already under development. The draft plan is being developed through a series of public meetings and work sessions this summer. After the October workshop, the revised draft plan will be subject to public review/comment, revisions, and final Trustee Council action. The first invitation for FY 03 funding for GEM projects is scheduled to be issued mid-February 2002.

Principal investigators will not be required to make project presentations at the October workshop. However, for those investigators who may be able to do so, a voluntary poster session will be scheduled in conjunction with a reception on the first night.

Special hotel rates are available for the workshop at $74 plus tax for a single and $94 plus tax for a double. Rooms must be reserved by September 26. The Regal Alaska Hotel is located at 4800 Spenard Road, Anchorage, 99517-3236. The reservations phone number is 907-243-2300.

More details will be posted on the web site and sent to principal investigators as plans for the workshop develop.