Exxon Valdez Oil Spill Restoration Project Annual Report

Kenai River Habitat Restoration and Recreation Enhancement Project

Restoration Project 97180
Annual Report

This annual report has been prepared for peer review as part of the Exxon Valdez Oil Spill Trustee Council restoration program for the purpose of assessing project progress. Peer review comments have not been addressed in this annual report.

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Kenai River Habitat Restoration and Recreation Enhancement Project

Restoration Project 97180 Annual Report

Study History: The project effort was initiated under Restoration Project 96180. An annual report was issued in 1997 by Weiner, A., and M. Kuwada under the title Kenai River Habitat Restoration and Recreation Enhancement Project. The project effort was continued under Restoration Project 97180, the subject of this annual report. In 1997, the U.S. Forest Service was added as a co-manager of the project in conjunction with the Alaska Department of Fish and Game and the Alaska Department of Natural Resources.

Abstract: Seven restoration and recreation enhancement projects were initiated in 1997: Endicott, Kenai Beach Dunes, Big Eddy, Ciechanski, Funny River, Rotary Park, and Russian River. Four of the seven projects were completed during the summer of 1997, and the remaining three projects are scheduled for completion in the spring of 1998. Supplemental work is planned on several of the completed sites to repair unexpected damage caused by boat wakes and high water conditions. The completed projects appear to be functioning well (i.e., channelling recreationists away from sensitive habitats and allowing restored streambanks to revegetate). The exception is Rotary Park, where the design and size of the restoration/protection project was insufficient to prevent corollary damage in adjacent vegetated habitats.

<u>Key Words</u>: Bioengineering, *Exxon Valdez* oil spill, habitat protection, Kenai River, recreation, streambank restoration.

Project Data: (will be addressed in the final report)

Citation:

Kuwada, M.N., and A.H. Weiner. 1998. Kenai River habitat restoration and recreation enhancement project, *Exxon Valdez* Oil Spill Restoration Project Annual Report (Restoration Project 97180), Alaska Department of Fish and Game, Alaska Department of Natural Resources, Anchorage, Alaska.

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Executive Summary

The Kenai River Habitat Restoration and Recreation Enhancement Project was initiated in the fall of 1995. A detailed planning and evaluation process was implemented to identify and prioritize damaged public use sites along the Kenai River corridor for fish and wildlife habitat restoration and recreation enhancements. In 1996, 16 projects were nominated and evaluated. Of the 16 projects, four were later withdrawn and seven were selected from the remaining twelve based upon their evaluation score and available funds. Construction on one project began in the fall of 1996 and the remaining six projects were initiated the following summer. Project sites include: Kenai Beach Dunes, Big Eddy, Ciechanski, Funny River, Endicott, Rotary Park, Russian River (Phase I).

Based upon projected funding in FY97, a decision was made in the fall of 1996 to open the project to a second round of nominations. As a result, eight additional projects were evaluated and scored. One project was rejected, another project was eventually funded from another source, and the six remaining projects are to be constructed in 1998. Project sites include: Bing's Landing, Slikok Creek, Centennial Park, Russian River (Phase II and III), Kobylarz and Cone.

Project construction summaries for the 1997 summer field season are included in this report. In most cases, restoration included streambank bioengineering, exclosures, and access improvements in the form of elevated light-penetrating walkways, stairs and floating docks. The intent was to replace streambank vegetation, exclude recreation in certain areas, and channel public use so that access to and from the river could occur without creating additional damage.

Introduction

The Kenai River is one of Alaska's most important natural resources. Situated on the Kenai Peninsula, it is approximately 140 miles by road, or 70 miles by air, from Anchorage, the state's largest city. The river itself is 67 miles long and drains a watershed of approximately 2200 square miles. It is, for tens of thousands of Alaska residents and visitors alike, an essential recreation destination. The Kenai River is widely known for its chinook (king) salmon populations, which are among the largest of this species in the world. Additionally, the Kenai River produces millions of sockeye, coho, pink and chum salmon. Over the past 10 years, the Kenai River system has annually produced approximately 40 percent of the commercial sockeye salmon harvest in Cook Inlet and 30 percent of the commercial chinook salmon harvest. During this period, the chinook harvest ranged from 8,000 to 40,000 fish and the sockeye harvest ranged from 2.5 to 9.5 million fish. Combined, sport anglers and commercial fishermen provide as much as \$78 million to the state's economy each year (Liepitz, 1994).

However, many indicators suggest that that the Kenai River is in trouble. Sportfishing on the river has almost doubled from 1981 to 1994, climbing from 129,076 angler days to 340,904 angler days, respectively (Howe, 1995). This has led to a loss of vegetation and increasing rates of erosion as more anglers trample streambanks in search of fishing opportunities. Overcrowding and trespass have exacerbated user conflicts and resulted in more garbage and human waste being deposited along the river's shores. Private lands are being subdivided and developed at an alarming rate. And, fisheries allocation issues continue to erupt as use demographics change.

The riparian zone, the transitional area that lies between the river's channel and the uplands, provides important fish and wildlife habitat and plays a major role in the hydrology of the watershed by helping to control floods and erosion. This vegetated area functions as a buffer and filter system between upland development and the river, maintaining water quality by absorbing nutrients, accumulating and stabilizing sediments, and removing heavy metals and pollutants that result from urban development and enter the river as surface runoff. It is also the area where a significant portion of the Kenai River's sportfishing and other recreational activities are concentrated.

Fish, particularly juvenile salmon, depend heavily on the riparian zone for food, cover and migration. Undercut streambanks with overhanging vegetation provide hiding places for fish to avoid predation, to feed and to grow. Slower water velocities allow juveniles to conserve energy and maintain their orientation along the perimeter of the mainstem channel.

Recently, the Alaska Department of Fish and Game completed a study to evaluate what effect impacts to the riparian zone might be having on fish habitat. The Kenai River Cumulative Impacts Assessment of Development Impacts on Fish Habitat (Liepitz, 1994) was designed to identify and evaluate the cumulative impacts of development including public and private land use impacts on Kenai River fish habitat. Using chinook salmon as an indicator species and juvenile rearing habitat as a study variable, the study documented that: 11.1 percent to 12.4 percent (18.4 to 20.6 miles) of the river's 134 miles of upland and 32 miles of island shoreline and nearshore habitats have been impacted by bank trampling, vegetation denuding, and structural development along the river's banks. This amounts to a loss of approximately 2.2 percent of chinook rearing habitat. The amount of habitat loss for other fish species is unknown. Although 2.2 percent may not seem like a large loss, numerous research studies have documented significant declines in fish productivity long before most available habitat is lost. In the case of chinook salmon on the Kenai River, available rearing habitat (generally a 6.0 foot-wide corridor along the riverbanks) constitutes only 121 acres over 67 miles.

In response to this threat, the Exxon Valdez Trustee Council has funded restoration and recreational enhancements on public lands to provide a mechanism for education and advancement of better stewardship of the river. In the process, it is expected resources and services that were injured in the Exxon Valdez oil spill will benefit as well. These resources include pink salmon, sockeye salmon, Dolly Varden and many other fish species. Enhanced service values are principally directed at providing compatible recreational use.

Objectives

The following objectives were identified in the FY97 Detailed Project Description for the Kenai River Habitat Restoration and Recreation Enhancement Project:

- 1. Oversight and monitoring of on-going projects,
- 2. Finalizing cooperative agreements with public landowners for projects to be constructed in 1997,
- 3. Review and evaluation of nominations for projects on EVOS-acquired parcels,
- 4. Review and evaluation of new nominations for projects on other public lands,
- 5. Preparation of a supplement to the EA that reflects new nominations,
- 6. Design and development of educational and interpretive materials,
- 7. Preparation of an annual report.

Methods and Results

The restoration projects that were implemented in 1997 represent the culmination of a detailed planning and implementation process that began in late 1995. Every major public landowner along the Kenai River was involved in this process through participation in an Interdisciplinary Team (IDT) that was charged with establishing qualifying criteria and a priority ranking system for potential project funding. The IDT considered a variety of topics including: the origin and extent of damages at public use sites, trespass and access issues, zoning, the rights and concerns of private landowners, historical and current public use patterns, alternative funding sources, restoration techniques, agency management policies, research findings, permitting, and other topics. The IDT also provided a forum for debating various project designs and a mechanism for establishing best management practices for future project construction.

Because of the uncertainty of long term funding it was necessary to prioritize projects based upon a variety of restoration factors, or ranking criteria. The entire IDT conducted the scoring. This was done so that a programatic Environmental Assessment (EA) could be completed that would apply to all potential projects depending upon the amount of funding that might eventually be received. The alternative would have been to develop a new EA each year, or for each project.

This process, while necessary, delayed funding approval by the Restoration Office until late spring of 1996. By this time, water levels in the Kenai River had risen to the point that streambank restoration work could not be conducted, at least until fall when water levels dropped again. Moreover, feltleaf willow typically used in most Kenai River bioengineering projects would have needed to have been collected at least two months earlier. Regardless, the agencies seemed unprepared to begin the restoration projects and were, by then, committed to completing other responsibilities. This was not without some benefit. During the preceding winter all of the planning had been done without the ability to field inspect the sites that had been identified for restoration. Consequently, this was done and assisted considerably in refining project proposals during the remainder of the summer.

During the fall of 1996, the decision was made to open the project to a second round of nominations. As a consequence, the IDT reconvened and the planning process was reinstituted. Another EA was prepared. During this time, projects that had intially been approved were being constructed. Final modifications to other projects were being made in anticipation of the following field season. Administrative tasks included reviewing design changes, plans and specifications; preparing cooperative agreements; coordinating permitting; and participating in pre-construction and bid conferences.

In July,1997 the EVOS restoration office convened a meeting of science staff, peer reviewers and participating agencies in the Kenai Restoration Project. The purpose of the meeting was to review progress on the project, resolve administrative issues, and discuss project modifications, if needed. At that time, several 1997 projects had already been completed or were nearing substantial completion. The results of the meeting were incorporated into the FY 1998 workplan.

The following project narratives represent an update of the project summary document that was distributed at the July, 1997 meeting. For the sake of clarity, the narratives include both methods and results.

City of Kenai EVOS Restoration Project: Kenai Beach Dunes

Restoration Objective: Protect Kenai beach dunes, an anadromous fish stream, contiguous wetlands and associated vegetation near the north mouth of the Kenai River. Facilitate public access at approved sites on Kenai Avenue and Forest Drive.

Background: The beach area near the mouth of the Kenai River has become popular in recent years due to an expanding personal use dipnet fishery. In 1996, the Alaska Board of Fisheries liberalized dipnet regulations on the Kenai River in order to shift recreational pressure from fragile upstream habitats to the mouth of the river and Cook Inlet beaches. However, the beach dunes that protect a tributary to the Kenai River and nearby bluffs have been trampled by foot traffic and eroded by unauthorized 4-wheel drive and ATV use. Contiguous wetlands adjacent to an anadromous fish stream have been seriously damaged by automobiles using the area as a parking area and turnaround. Public access facilities on Forest Drive, a moderately steep bluff with embedded tires for steps, are inadequate to accommodate increased recreational use.

The work plan called for transporting 76 prestressed concrete pilings from the Kenai City boat dock to Kenai Avenue to be placed as barriers to vehicular and human foot traffic. The barriers weigh approximately 26,000 pounds apiece and would be installed along the edge of the road prism, adjacent to the beach dunes. A small turnaround would be designed at the head of Kenai Avenue to allow drop-offs and pick-ups. Two elevated light-penetrating walkways would be constructed at approved access points to funnel recreationists to the beach. A stairway would be constructed at the end of Forest Drive to facilitate easier access to the beach.

Discussion: National Environmental Policy Act (NEPA) requirements mandated that an Environmental Assessment (EA) be prepared for this project. A Finding of No Significant Impact (FONSI) was issued on May 29, 1996 and authorization to spend from the Exxon Valdez Restoration Office was received on June 4, 1996. Because of the timing of these approvals the City of Kenai was unable to begin work immediately. This was due in part to the City's commitment to other public works projects, and the lead time needed to get City Council approval and cooperative agreements, design engineering contracts, bid documents, etc.

In June, the Kenai City Council closed Kenai Avenue to vehicular traffic. The Council's resolution was opposed by ADF&G and the project administrator for two reasons: 1) it tended to undermine the Board of Fisheries attempt to facilitate greater recreational use near the mouth of the Kenai River; and 2) it created uncertainty concerning the status of the Dunes Restoration Project. The

project administrator and ADF&G Sportfish Division representatives requested that the Council clarify its intent and retract the resolution. The request was denied.

In July, after waiting several weeks for other public works projects to be completed, the project administrator informed the City that funding approval for the Dunes Restoration Project would be rescinded unless progress was made on design and budgeting requirements. This prompted the City to hire an engineer and begin the process of developing a cooperative agreement with the state.

The cooperative agreement and project design went through several iterations before being approved. Initially, the City proposed to install barriers only along one side of the road – adjacent to the beach and dunes complex. This left the wetlands and anadromous fish stream on the opposite side of the road unprotected. It would have also required that only 36 of the 76 barriers be used on the project. The City wanted to store the remaining barriers in another location using restoration funds. That idea was rejected and the project was redesigned to install barriers on both sides of the road and parking area. The City was also notified that they would only be reimbursed for the cost of transporting and installing barriers at the project site.

Further design modifications were needed to make the project conform to private property boundaries. For example, the existing turnaround on Kenai Avenue extended onto two private lots. Therefore, the reconstructed turnaround needed to be smaller, or include portions of the adjacent wetlands. Rather than fill in wetlands that the project was trying to protect, it was agreed that the turnaround would be configured to be smaller than initially planned. The stairway at Forest Drive also had to be redesigned to avoid private property that borders the project area.

Final project plans and a budget were approved in mid-August and a cooperative agreement was signed on September 12,1997. The project was bid on September 26, 1996 and work began immediately. The stairs at Forest Drive were constructed first, before the ground became too frozen to install support footings. Soon after, a large storm and high seas cut a bench across the beach near Kenai Avenue so that pathways through the dunes were left perched two-feet above the beach. This caused a minor problem when the contractor later bladed a flat path through the dunes to install footings for an elevated walkway. The snow/sand mixture on the path was pushed across the roadway into adjacent wetlands and two dunes were slightly notched. The City of Kenai immediately corrected the situation once it was brought to their attention and no significant damage to the dunes or wetlands was recorded. The only long term consequence may be that sand will be deposited on the walkway that needs to be periodically removed.

Weather permitting, construction continued through January until all of the barriers had been installed. Subsequent inspections during the remainder of the winter indicated the weight of the barriers was beginning to cause stress fracturing in some concrete support footings. The 70-foot long barriers also had a noticeable sag because of their extreme weight and length. In meetings with the project engineer and City of Kenai Public Works director it was decided to double the number of concrete footings to provide additional support on both ends of each barrier, and in the middle. This meant fabricating twice the number of support footings that had been planned, resuspending the barriers and reinstalling the additional footings along with replacement footings, as needed. Several barriers that had sunk into the soft sandy shoulder of Kenai Avenue or had slid off of the road prism also needed to be repositioned.

The additional work was conducted and the project was completed on May 22, 1997.

Kenai Beach Dunes: Pre-Project





Kenai Beach Dunes: Pre-Project





Kenai Beach Dunes: Pre-Project





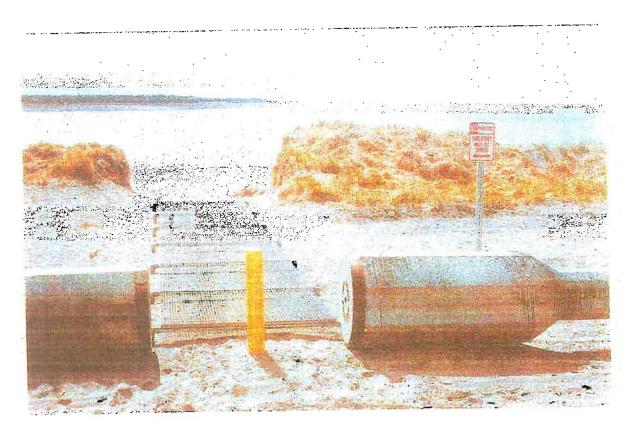
Kenai Beach Dunes: Post-Project



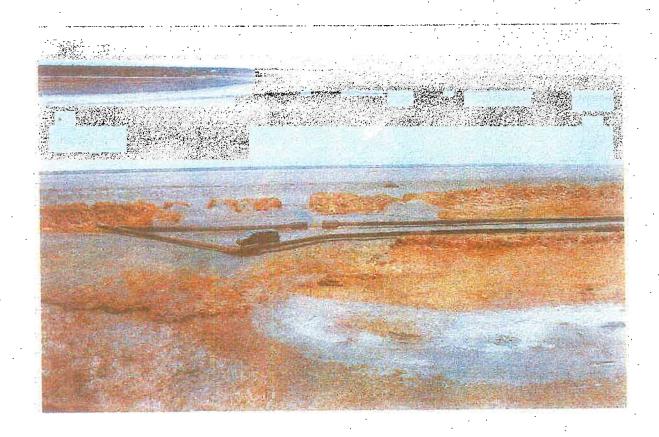


Kenai Beach Dunes: Post-Project





Kenai Beach Dunes: Post-Project





Endicott Sonar Site

Restoration Objective: Protect fragile streambank vegetation at the Alaska Department of Fish and Game (ADF&G) sonar site on the Kenai River.

Background: The ADF&G operates a sonar fish counting and sampling site at River Mile 19.1 on the Kenai River. The site consists of a floating dock, fish wheel, small shack with sonar equipment, transducer and weir. Each summer, technicians involved in the sonar counting and sampling work trample streambanks and damage vegetation. The site is characterized as a low, grassy floodplain terrace with undercut banks composed of silts and clays. This type of habitat is particularly vulnerable to trampling damage.

The ADF&G proposed to construct a 550-foot elevated, light-penetrating walkway that would stretch from the sonar transducer and weir at one end of the site to the fish wheel and weir at the other end of the site. Additionally, a roller system would be devised that would allow the fish wheel to be winched out of the water at the end of the season without damaging the adjacent streambank.

Discussion: National Environmental Policy Act (NEPA) requirements mandated that an Environmental Assessment (EA) be prepared for this project. A Finding of No Significant Impact (FONSI) was issued on May 29, 1996 and authorization to spend from the Exxon Valdez Restoration Office was received on June 4, 1996. Because of the timing of these approvals the ADF&G was unable to construct the project during the spring of 1996. The sonar site was operational by the time approval to spend was received, and the technicians that would construct the project had been committed for the remainder of the year.

Nevertheless, project design continued to be refined. For example, ADF&G proposed to install 12 Durafloat pontoon systems for the floating dock to provide stability for access to the project site. The project administrator determined that this was an unnecessary expense that could not be justified as streambank restoration. After some discussion the item was deleted. ADF&G staff and the project administrator also spent considerable time researching price/performance information for various types of decking material. Options included aluminum bargrate, steel bargrate and fiberglass unigrate with various qualities of light penetration. The project eventually settled on fiberglass unigrate with a light penetration of approximately 65 percent. This was an option that was also thought to require the least amount of maintenance. Bids were obtained for all necessary materials.

Permit applications were submitted in July, 1996 and permits were received the following month.

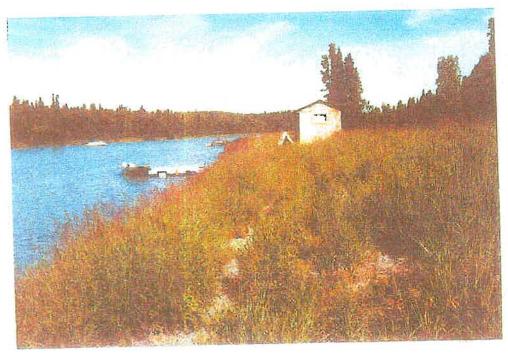
Recognizing that the project had progressed as far as it could, the project administrator began a process of encumbering funds to purchase equipment and supplies that would be needed in the spring of 1997. Personnel costs would have to be reauthorized by the Trustee Council as part of the FY 97 budget for the Kenai River Habitat Restoration and Recreation Enhancement Project. During the winter of 1996 the ADF&G manager for the Endicott project assumed new responsibilities within the department. As a result, several purchase requests for equipment and supplies that should have been submitted were not. Since the funds had lapsed at this point, additional funds from the ADF&G SB-183 EVOS criminal settlement account had to be authorized to supplement the project's budget and obtain the needed materials.

Construction began in April, 1997 and was completed the following month. The only remaining issue involved a Kenai Peninsual Borough (KPB) floodplain ordinance requirement that elevated walkways be constructed at least 18 inches above ground if light penetration was determined to be 75 percent or less. Due to the undulating nature of the streambank, uniform application of this requirement could not be achieved without excessively raising the entire boardwalk or leveling the streambank. The project administrator and ADF&G project manager both met with KPB permitting staff and were assured that the present design was consistent with the terms of the borough ordinance.

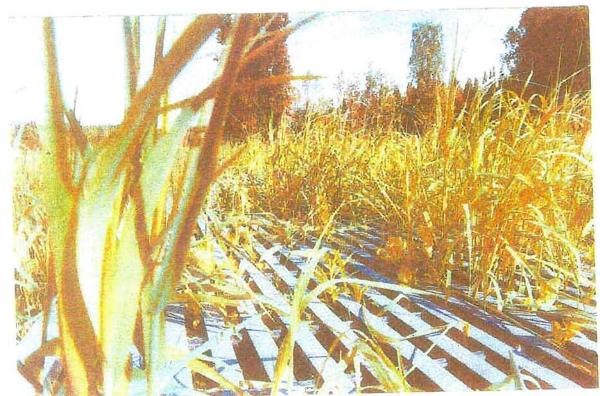
The completed project is lightweight, unintrusive, easily transportable and rests on the surface of the streambank so that no permanent support members are required. Project monitoring in June, 1997 found that grass was easily growing throught the fiberglass unigrate.

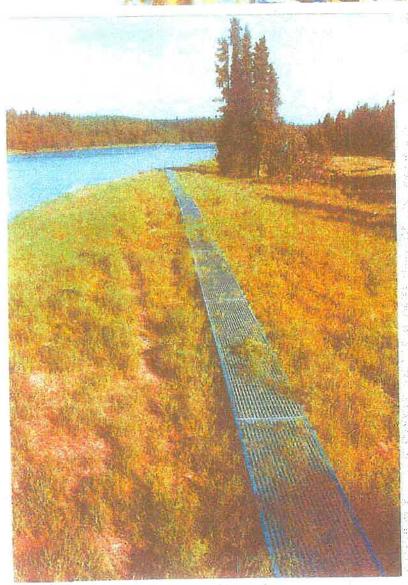
Endicott Sonar Site Pre-Project

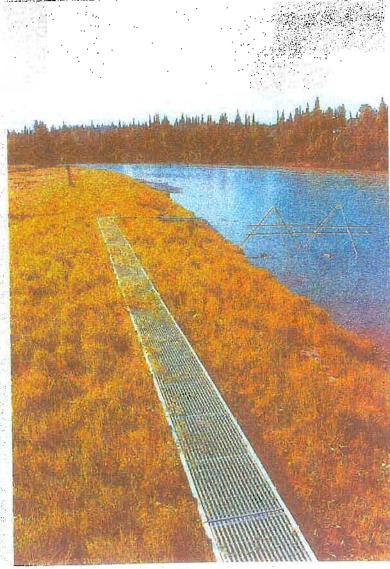




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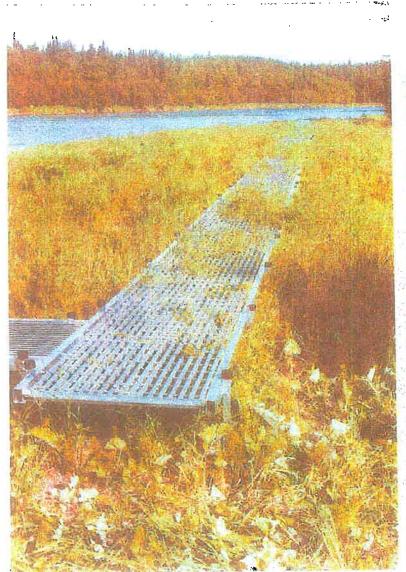


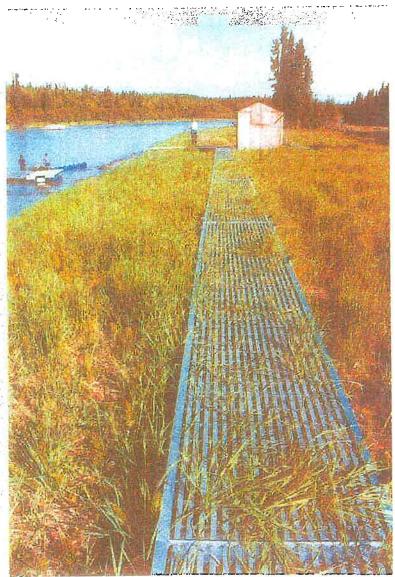




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Endicott Sonar Site







En Roott Sonar Site





City of Soldotna EVOS Restoration Project: Airport Rotary Park

Restoration Objective: Protect and restore streambank vegetation at a popular sockeye salmon fishing site near the Soldotna Airport. Provide recreational enhancements that focus sportfishing use and promote non-damaging access to the Kenai River.

Background: Until recently, Airport Rotary Park had been used primarily by local residents of the community of Soldotna. In 1993, the City of Soldotna, in conjunction with the U.S. Fish and Wildlife Service, funded a project to improve the area by installing a parking lot, a 2,500 foot trail, fencing, a picnic table, a pedestrian bridge, and approximately 350 feet of elevated gratewalk. The project was installed by contractors and volunteers, including the local Rotary Club. Hence the park's name. The improvements were designed to allow handicapped anglers access to the river in a location where there was a reasonable chance of catching fish.

In 1995, the Soldotna Visitor's Center began referring a large number of anglers to Rotary Park. The park is close to town, has good fishing, and, with the improvements, provides easy access for handicapped and elderly people. However, the large increase in use also had a damaging effect on the streambank and surrounding vegetation. Accelerated erosion, loss of vegetation, trespass, and undeveloped trails were the result.

The Airport Rotary Park project proposes to install approximately 300 feet of elevated light-penetrating walkway from the existing walkway upstream to the City property limit. Walkways also extend from an existing D-1 trail and connect two 12x12 elevated platforms that will support picnic tables and trash receptacles. Approximately 200 feet of fencing will be used to exclude anglers from designated protection areas. Habitat restoration will occur over approximately 105 linear feet of streambank and include a combination of coir logs, grass plugs, grass rolls, seeding, and willow sprigs. Spruce tree revetments will be installed over approximately 75 feet of streambank.

Discussion: The Airport Rotary Park project has been subject to a high degree of oversight ever since it was nominated. This scrutiny is due in part to problems that occurred when ADF&G administered another City of Soldotna project at Soldotna Creek, in 1994. The Soldotna Creek project was one of the earliest examples of a relatively new streambank restoration process now referred to as soil bioengineering. Because the technique was experimental, and because lines of authority were not well established, the project suffered numerous delays and cost overuns. In the end, much was learned, both technically and administratively.

National Environmental Policy Act (NEPA) requirements mandated that an Environmental Assessment (EA) be prepared for this project. A Finding of No Significant Impact (FONSI) was issued on May 29, 1996 and authorization to spend from the Kenai Habitat Restoration and Recreation Enhancement Project (Kenai Restoration Project) account was received on June 4, 1996 from the Exxon Valdez Restoration Office.

In March, 1996 the project administrator confirmed the City of Soldotna's intent to implement the Airport Rotary Park project during 1996. However, by the time funding approval was received on June 4, 1996 the City still had not prepared a final design or budget that would allow the project to proceed. In the project administrator's view, the City seemed unprepared for the administrative process required to successfully implement an EVOS project. Although they had been repeatedly informed that the project would be a reimbursable services contract, the City's project manager expressed surprise that funding was not immediately available.

As the summer of 1996 progressed, the project administrator made repeated requests of the City to provide final design drawings and a line-item budget. In every case, the response was that these items were in the process of being modified, reviewed or otherwise finalized. Initially, the project was to have been built in the spring. As water levels rose and it became apparent that the permitting window for streambank restoration would close, the plan shifted to phasing the project so that upland recreational enhancements would be completed first, while streambank restoration work would follow when water levels dropped in the fall. All the while, requests for a final design and budget went unfulfilled.

On July 24, 1996 a letter was sent to the project manager indicating that preliminary approval for project funding would be rescinded unless detailed design drawings and a line-item budget were submitted that would indicate progress toward implementation of the project. This resulted in further assurances that the project would be given full attention once the sockeye fishery was finished. Project construction was now anticipated to occur in late-August or early September. However, no design or budget was received, no cooperative agreement was developed, and no permits were issued. The fiscal year ended on September 30, 1996 and funds that might otherwise have been used to restore Airport Rotary Park were returned to the Trustee Council.

It was the intent of the ADF&G project administrator that no additional funds be allocated to the Airport Rotary Park project. However, after the 1997 Kenai Restoration Project was approved, the Kenai Peninsula Borough decided to withdraw its request to implement restoration projects at Camus Subdivision and

Rebel Run. Therefore, the Borough's funds became available for Airport Rotary Park, if a project design and budget could be developed.

In January, 1997 the City of Soldotna submitted conceptual plans for Airport Rotary Park. Over the next two months various project elements were refined including the siting of the proposed D-1 trail, the location of fish cleaning stations, redesigning stairway access, cantilevering walkways, modifying pipe supports, and establishing coir log installation and revegetation techniques. During March and April the ADF&G project administrator along with the City of Soldotna city manager, project manager and attorneys worked on several drafts of a cooperative agreement. Final project plans and a final budget were received on April 17, 1997 and the cooperative agreement was finalized on May 8, 1997. The project was bid on April 17, 1997. The ADF&G reviewed the bid proposals and approved selection of the contractor on April 22, 1997. A Fish Habitat Permit was issued on May 1, 1997 and DNR Parks and Kenai Peninsula Borough permits were issued shortly thereafter. Construction began on May 15, 1997.

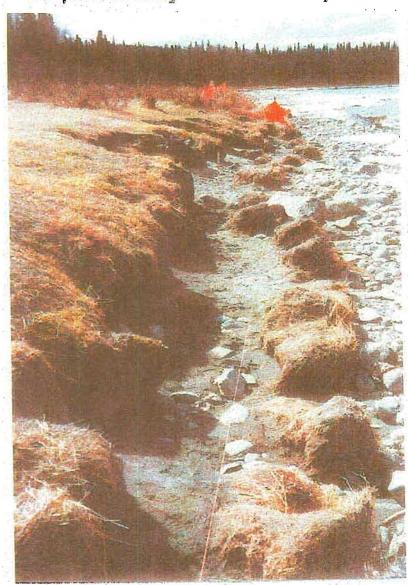
Construction of the project progressed fairly well until July. Streambank bioenineering was completed, the framework for the elevated light-penetrating fishing platform and walkways was installed, picnic tables and garbage containers were placed on-site. However, grating for the walkways and fishing platforms remained uninstalled, and river access stairs were still being constructed. As a consequence, the site suffered severe damage when the second run of sockeye salmon entered the river in mid-July. Vegetation surrounding the site was completely trampled, willow cuttings were pulled out of the streambank where they had been planted, barriers were destroyed, and streambank bioengineering was eroded by a combination of foot traffic, high water and boat wakes. During the fishery, the City of Soldotna placed sheets of plywood on the fishing platform foundation to allow anglers to fish, while attempting to protect the streambank. Unfortunately, the plywood was separated by large gaps, and anglers fished both on top and between the platforms on the bioengineered streambank. The damage occurred almost immediately and got worse as the sockeye run progressed.

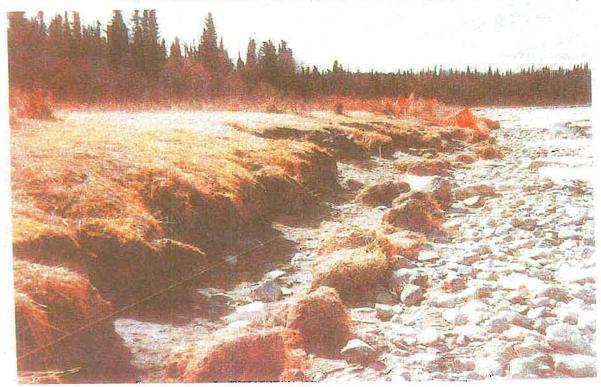
After two site inspections to assess the damage, the ADF&G project administrator sent a letter to the City of Soldotna (attached) requesting additional information and a commitment to restore the site to its intended function. There was no response from the City. Subsequent conversations with the City's project manager elicited a verbal commitment to rectify the damage, but no permit applications have been received to date. The issues in the August 12 letter remain valid. However, in retrospect, it is clear that the project's design was never well conceived. There were no barriers to prevent recreationists from simply walking around the walkway/fishing platform complex — which, in fact,

most did. This would have probably occurred even if the grating had been installed.

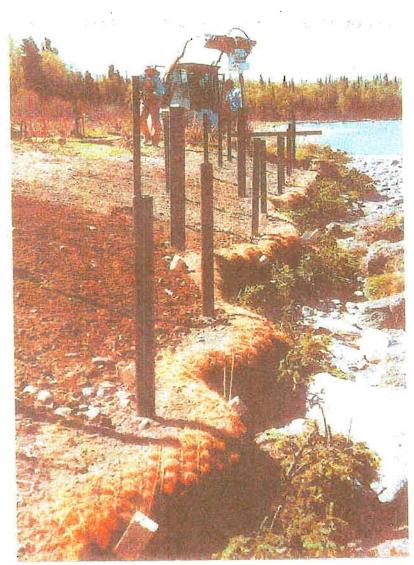
A final inspection of the project was conducted on September 30, 1997 (attached letter dated October 1, 1997). The City has been notified that the EVOS Trustee Council and ADF&G expect the additional repair work to be conducted in the spring, at the City's expense.

Airport Rotary Park: Pre-Project





Airport Rolary Park





Airport Rotary Park



