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Hovercraft Transportation in Alaska: CZM & NEPA Hurdles

ABSTRACT

The United States Postal Service (USPS) received an unsolicited proposal from Alaska Hovercraft Joint Venture for a two-year demonstration program for the transport of bypass and non-priority mail by Hovercraft on a year-round basis from the city of Bethel to eight remote Alaskan villages. The demonstration program evaluated the merits of using a Hovercraft to replace fixed wing airplanes to reliably transport mail. An Environmental Assessment (EA), Finding of No Significant Impact (FONSI) and Alaska Coastal Management Program (ACMP) Consistency Determination were completed for the two-year demonstration program. The Alaska Department of Government Coordination (DGC) concurred the EA and FONSI. The Trustees of Alaska, on behalf of seven Alaska Native villages, or their representative councils, and the Association of Village Council Presidents (AVCP), brought legal action claiming the EA and Determination were inadequate. Legal proceedings and an appeal resulted in rulings in favor of the USPS. The USPS consequently considered adopting permanent service using this unique mode of marine transportation. A Supplemental EA, FONSI and ACMP Consistency Determination were completed for permanent service to nine villages. The local Coastal Zone Management (CZM) office did not concur that the action was consistent with regional ACMP policies. Alaska DGC concurred with the local CZM office. The USPS initiated an elevated review process to reconsider the merits of the determination. After public hearings and implementing mitigation permanent service was allowed to proceed. This case study highlights some of the complex environmental, CZM and Environmental Justice issues and successful measures involved with the introduction of a new mode of water related transportation in remote coastal Alaska.

INTRODUCTION

Implementing an alternative marine transportation mode in the remote regions of Alaska is not only technically challenging, but environmental regulations and traditional and cultural belief present additional complexities. This paper provides a case study that outlines some of the critical regulatory and social challenges faced by the project proponents and the options that help with the successful implementation of a unique alternative mode of marine transport.

DEMONSTRATION PROGRAM

The USPS conducted a two-year demonstration project from July 1997 through June 1999 to transport bypass and non-priority mail on a year-round basis by Hovercraft from the city of Bethel to eight remote Alaskan villages along the Kuskokwim, Johnson, and Pikmiktalik rivers. The eight villages were Atmautluak, Kasigluk, Napakiak, Napaskiak, Nunapitchuk, Akiachak, Akiak, and Kwethluk (see Figure 1). The purpose of the project was to determine the reliability of Hovercraft technology as a method of transporting bypass mail in this region of Alaska.

The Demonstration Program was subsequently extended to June 2000 in order to complete ecological monitoring and allow for transition to permanent transport service. The demonstration project partially replaced the daily transportation method of using fixed-wing airplanes.

Prior to the beginning of the Demonstration Program the proposed action had to comply with

the National Environmental Policy Act (NEPA) and ACMP policies. A Demonstration Program EA, FONSI and ACMP Consistency Determination were completed with the help of the John A.Volpe National Transportation Systems Center, U.S. Department of Transportation. Mitigation was established in the form of an ecological monitoring program and formation of a Hovercraft Resolution Committee. The Alaska DGC concurred with the documents and mitigation actions. A court suit was filled by the Trustees of Alaska, on behalf of seven Alaska Native villages, or their representative councils, and AVCP, against the Demonstration Program claiming the EA and ACMP Consistency Determination were not appropriate. A court decision and appeal upheld the validity of these documents.

Based on the positive results of the demonstration project and an ecological monitoring program, the USPS considered transporting bypass mail by Hovercraft on a permanent, year-round basis from the city of Bethel to nine Alaskan villages along the Kuskokwim, Johnson, and Pikmiktalik rivers. This action was proposed to begin in July of 2000, following the end of the demonstration Program. A Supplemental EA, FONSI and ACMP Consistency Determination were completed for the proposed action. The local CZM office did not concur that the action was consistent with regional ACMP policies. Alaska DGC did not concur with the USPS Consistency Determination and found in favor of the local CZM office in-part by applying the concept of "due deference" to local knowledge and tradition. The USPS initiated an elevated review process to reconsider the merits of the determination, focusing on the science of the ecological monitoring and Hovercraft Resolution Committee proceedings. Subsequent informal and formal public hearings during the elevated review process, combined with suggested mitigation actions by all parties, resulted in a reversal of the DGC finding. Permanent transport service began July 2000.

Bypass Mail Transport Procedures

Bypass mail is third class or bulk mail and non-priority mail that would arrive from Anchorage in the Postal Hub of Bethel and is transported directly to the villages, thus "bypassing" processing within the Bethel Post Office. The Hovercraft transports bypass mail to the villages on an every-other day schedule, which is less than the everyday schedule of airplane delivery, but is within USPS Bypass mail service standards. The USPS continues to transport First-class, Express and Priority mail daily by aircraft to the villages. While transporting mail, the Hovercraft stays within the banks of the Kuskokwim, Johnson, and Pikmiktalik rivers, and adjacent tributaries and sloughs. Weather and river conditions dictate the Hovercraft operational speeds. Speed is reduced during periods of heavy river traffic and inclement weather, and at bends in the rivers. Some river sections are opened for a short time for commercial fishing, an activity referred to as a Commercial Opening. Hovercraft operations are suspended in areas where Commercial Openings are taking place from one hour before to one hour after the Opening.

At each village, a landing site was designated for the Hovercraft to off-load mail. Local villagers landing their boats already disturbed these selected landing sites. No docks, piers, or ramps were constructed. The selected landing sites allow the Hovercraft to comply with the Federal Aviation Administration (FAA) and Federal Transit Administration (FTA) recommended maximum noise level criteria. If a landing site or route back to the village flooded in the spring, an alternate previously disturbed landing site would be substituted pending concurrence of the village. Hovercraft approach, landing, and exit procedures depend on these site-specific features.

An agent meets the Hovercraft at the river's edge to accept the mail for transport to the villagers and to transfer outgoing mail to the Hovercraft. The agent either has access to a vehicle or uses an all-terrain vehicle, tractor, or snowmobile and trailer to haul the mail and any other freight, as is done with shipments arriving

by airplane or barge. Access from the landing sites to each village is over established trails, roads, or waterways. Non-priority mail is delivered to the post office, while bypass and any other freight is delivered directly to the consignee, usually the village store.

Hovercraft Design Characteristics

The British Hovercraft model AP.1-88 was used during the demonstration (Figure 2). The AP.1-88 has an overall width and length of approximately 36 feet by 70 feet and is powered by two Deutz 390 hp marine diesel engines, which provide lift, and two Deutz 500 hp diesel marine engines, which propel the craft. The AP.1-88 can obtain a cruising speed of 50 miles per hour (mph) and has a load capacity (passengers plus freight) of 8 tons. The Hovercraft can travel during most severe inclement weather conditions and navigates using radar as well as GPS. The Hovercraft participated in many successful medical evacuations when weather conditions precluded emergency evacuation by airplane.

Environmental Assessment

The Demonstration Project was environmentally reviewed in the July 1997 *Final Alaska Hovercraft Demonstration Project Environmental Assessment* **(**USPS, 1997b**)**. Although the USPS did not anticipate any significant impacts, ecological and safety monitoring were conducted during the demonstration project in order to obtain additional empirical data on potential impacts of the Hovercraft mail transport activity. Part of USPS decision to complete the monitoring was in respect for the culture and tradition of the Alaska Natives and the sincee issues surrounding subsistence resource use of fish and waterfowl in the project area. In addition, the USPS offered to assemble a Hovercraft Resolution Committee. Several other recommendations developed during the ACMP Consistency Determination review process were added as conditions to the Demonstration Program.

Near the completion of the first two years of the demonstration project, it was evident that more time was needed to complete the ecological monitoring and evaluate Hovercraft mail transport. A Categorical Exclusion for the continuation of the Alaska Hovercraft Demonstration Project was executed (USPS, 1999b), thereby extending the two-year demonstration project until June 30, 2000.

Finding of No-Significant Impacts

The EA concluded that there would be no significant impact on the environment from use of the Hovercraft to transport bypass and non-priority mail and the USPS subsequently issued a FONSI. The ecological monitoring and Hovercraft Resolution Committee were mentioned in the conditions of the FONSI. These conditions were further supplemented by the ACMP Consistency Determination process with ADGC.

CZM Consistency Determination

During the ACMP Consistency Determination process discussion between the USPS and ADGC lead to several additional procedures. Alaska DGC concurred that with these additional concessions (see Demonstration Program Legal Proceedings below) that the Demonstration Program was consistent with ACMP policies (ADGC, 1997). The Demonstration Program began transporting bypass mail July 1997.

ECOLOGICAL MONITORING & RESOLUTION COMMITTEE

The Demonstration Program EA found that no significant adverse impacts were likely during the two-year project. NEPA regulations do not require monitoring if no significant adverse impact is found. However, after careful consideration of the Yupik tradition and culture and the importance of fish and waterfowl as subsistence resources the USPS decided that mitigation should be established for the Demonstration Program. The USPS

implemented ecological monitoring procedures and established a Hovercraft Resolution Committee. The willingness of the USPS to offer mitigation demonstrated their consideration of Environmental Justice issues and respect for the people within the project area. In retrospect, these two actions by the USPS turned out to provide valuable information to address the permanent use of the Hovercraft during ensuing Coastal Zone Consistency Determination public hearings. It should also be noted that as part of the respect for local knowledge and tradition the USPS approached AVCP before starting the Demonstration Program for their help hiring Native Alaskan local ecological observers and boat operators. AVCP declined helping based on their involvement in the initial court suit.

Ecological Monitoring

The July 1997 Demonstration Program EA/FONSI declared fish, waterfowl and subsistence monitoring to obtain data on actual impacts of the Hovercraft project (USPS, 1997b). The successful scoping of the monitoring effort was aided by considerable input from local residents and regulatory agencies. To guide the ecological monitoring efforts and to ensure that the monitoring addressed concerns expressed by the public and regulatory agencies, the USPS prepared a programmatic monitoring plan to investigate impacts to wildlife, fish, and subsistence *(*USPS, 1997c). Upon completion of the monitoring described in the 1997 plan, a second monitoring plan was developed to refine and focus the second year of monitoring based upon local input and the results of the monitoring conducted during 1998-99 (USPS, 1999). The results of all the monitoring was summarized in *U.S. USPS Hovercraft Transportation of Alaska Bypass Mail Ecological Monitoring Summary Report, March 2000* (USPS, 2000a*)*.

The Alaska Hovercraft Ecological Monitoring Program evaluated the nature and extent of impacts from use of the Hovercraft to fish, waterfowl, and subsistence efforts. The intent was not to quantify the exact number of fish or birds that might be affected by the Hovercraft. The monitoring was designed to provide information to test the hypothesis that there was no significant adverse impact to bird and fish resources and thus to subsistence efforts focused on those resources.

Waterfowl resources were evaluated by determining flushing reactions in response to the Hovercraft and motorboats, waterfowl use of habitats along the riverbanks, and waterfowl use of habitats outside of the riverbanks. The study conducted surveys of waterfowl abundance along sections of the rivers traveled by the Hovercraft (test areas) and compare these to sections where the Hovercraft did not operate (reference areas). The study gave some insight into whether or not waterfowl were “leaving the area” as a result of the Hovercraft and thus not available to subsistence hunters. Aerial transects were surveyed over test and reference areas using fixed-wing aircraft to document breeding pairs and general waterfowl use of habitats in areas near the rivers. This enabled an evaluation of whether or not the Hovercraft adversely affects the use of nearby habitats by waterfowl, and thus potentially the breeding capacity of the birds.

The flushing responses of approximately 9,000 birds, nearly half of which were waterfowl, were observed over four monitoring campaigns. Waterfowl, which are important subsistence animals, were found to flush almost 100 percent of the time in response to both the Hovercraft and motorboats.

A total of 1,311 waterfowl were observed along Hovercraft routes on the Kukowkwim and Johnson Rivers using a motorboat to compare waterfowl abundance in reference areas along the Pikmiktalik and Gweek Rivers. The results of these observations suggest that the Hovercraft is not affecting waterfowl abundance along the Kuskokwim and Johnson Rivers. Thus, there should be an insignificant impact on the availability of waterfowl for subsistence harvest along rivers where the Hovercraft travels.

Aerial surveys for breeding waterfowl and general waterfowl use of habitats on and near the rivers were conducted during which 4,865

waterfowl were observed. Waterfowl numbers on, adjacent and away from the rivers were collected for both test and reference areas. Essentially, the same numbers of birds were found in the areas where the Hovercraft operated and in areas where it did not operate. Thus, it can be concluded that the presence or absence of the Hovercraft does not have a significant effect on breeding waterfowl nor on general use of habitat.

The potential for mortality to adult fish in the rivers was assessed by watching for floating (i.e., injured or dead) fish behind the Hovercraft and in its wake. To assess the potential impact of the Hovercraft on juvenile fish in shallow areas, study areas were established where the Hovercraft was intentionally routed onto shallow beaches where small fish were known to be present. Beach seining was used to collect fish at these sites immediately following passage of the Hovercraft to determine if the Hovercraft was injuring fish in shallow areas. The investigation into potential fish stranding caused by the Hovercraft's wake was based on the measurement of wave heights from the Hovercraft's wake and on observations of dead or stranded fish on low-gradient beaches and at Hovercraft landing sites. To assess if the Hovercraft might be having an effect on subsistence gillnet fishing, test fishing studies were conducted to discern possible differences in catch rates when the Hovercraft travels by a gillnet. Lastly, there was local concern that winter Blackfish fishing success was decreased in areas where the Hovercraft operated.

The monitoring team trailed directly behind the Hovercraft for a total of 263 miles on the Kuskokwim and Johnson Rivers during ten surveys from 1997 to 1999 in an effort to observe the Hovercraft's effect on adult fish mortality. These observations were a result of reports from Native Alaskan's that significant numbers of adult fish came floating to the surface as the Hovercraft passed. No fish mortality or injury was observed directly behind the Hovercraft during the monitoring. To augment these surveys each monitoring team member was asked to record any injured or dead fish while working on the Hovercraft route.

Only eight fish were found dead from observing 3,690 miles of river. Direct mortality from the Hovercraft of the eight fish was suspect. The conclusion from approximately 4,000 miles of observations is that the Hovercraft has an insignificant impact on adult fish as it passes.

A total of 87 beach seinings were conducted, including 49 reference seinings (immediately after the Hovercraft passed) and 38 control seinings (fish were observed prior to the Hovercraft passing) on the Kuskokwim (Figure 3) and Johnson Rivers (Figure 4). Approximately 9,000 juvenile fish were individually identified and vitality assessed. There were no significant differences in the rates of injury to juvenile fish captured in the test seines (80) to those in reference seines (119) (Figure 5). This result shows there is an insignificant impact to juvenile fish in shallow water as the Hovercraft passes over them.

A total of 85 stranded fish were observed at 73 Hovercraft landing events. These few stranded fish would not represent a significant adverse impact on the population.

A total of 101 paired netting tests, including both set nets and drift nets, were conducted on the Kuskokwim and Johnson Rivers. No significant difference resulted between the number of fish caught when the Hovercraft passed or did not pass the nets (Figure 6). Hovercraft passing subsistence nets does not significantly change the number of fish caught.

Seventeen ice-fishing holes were observed during winter blackfish surveys along the hovercraft route on the Johnson River. Underwater observations of blackfish behavior in response to the hovercraft traveling past the fishing hole were recorded for a total of twenty pass-bys. The results of the underwater observations revealed that during the majority of the pass-bys, there was very little or no reaction from the blackfish. None of the blackfish appeared to be injured. An interesting anecdotal note is that, although there were local claims that the hovercraft decreased fishing success, so many fish were caught during the season that local fisherman suspended fishing.

Hovercraft Resolution Committee

Great care was taken to select optimum routes and loading sites that were acceptable to both residents and wildlife regulatory agencies. Fine-tuning of the Hovercraft's operation is anticipated as experience is gained, which should lead to a less impacts. An additional avenue for the refinement of the operational parameters would result from the use of a voluntary Hovercraft Resolution Committee. The Committee monitors the project, suggest operational changes to mitigate potential problems, and advise the USPS of any other concerns regarding the project. The Committee was chaired by the USPS and met monthly for three years. Invitations were extended to local representatives of US Fish and Wildlife Service, US Coast Guard, Yukon Delta National Wildlife Refuge, Cenaliulriit CZM Office, Alaska Fish and Game, Alaska DEC, Alaska DGC, AVCP, USPS, Hovercraft Operator, and representatives of Bethel and each village.

Teleconferencing was established to allow village representatives to participate from their homes or village offices. The meetings were open to the public and to encourage public input a specific time was established during each meeting for public commenting. A standard Issue Report was developed for accountability that allowed Committee Members to record concerns and have these concerns addressed by the Committee. Feedback to the originator of the Report was an important part of the process to make sure they knew that the regulatory agencies and the Committee heard their concern. Approximately 75 Issue Reports were received and addressed (not all of these were concerns, some were in favor of the operation) by the Committee. The issues were predominantly on ecological and safety concerns and mail service.

DEMONSTRATION PROGRAM LEGAL PROCEEDINGS

Close cooperation between Alaska DGC and the USPS prior to the start up of transport service resulted in concurrence of the ACMP Consistency Determination for the Hovercraft Demonstration Project. However, a court suit was filed claiming the Determination and EA were unsatisfactory. A ruling and appeal followed.

CZM Consistency Determination

The USPS worked closely with the Alaska DGC during May through July 1997 to fully address concerns raised during the NEPA and CZM review process. The USPS attempted, for the sake of expediency, to comply voluntarily on several issues identified by local concern (USPS, 1997a). The concessions developed between the USPS and Alaska DGC further defined the mitigation outlined in the EA/FONSI. The concessions included: 1) an enhanced discussion of subsistence fishing and hunting issues in the Final EA; 2) establishing the ecological monitoring program to consider fish, waterfowl and subsistence issues; 3) inviting representatives of the Bethel office of Alaska Department of Fish and Game to be on the Hovercraft Committee, with membership offers to each of the villages, and AVCP; 4) monthly Committee meetings; 5) the USPS agreed to share any relevant data that was collected with the Alaska Department of Fish and Game; 6) semi annual reporting on the progress of the Demonstration Program to Alaska DGC; and 7) an observer would be on board the Hovercraft during start-up to identify any immediate impacts. Some of these same concessions were identified by the Alaska Department of Fish and Game for CZM Consistency concurrence (ADFG, 1997). The Alaska DGC and USPS concurred that with these additional concessions the Demonstration Program was consistent with ACMP policy (ADGC, 1997). The USPS fulfilled the actions and the Hovercraft began transporting bypass mail in July 1997.

Legal Proceedings

Shortly after the Hovercraft began transporting bypass mail the Trustees for Alaska, on behalf of AVCP, contacted the Hovercraft Operator and USPS during July 1997 to informally discuss stopping the Demonstration Program. Their “initial review of the project reveals that the

proposal does not comply with the Coastal Zone Management Act…and the National Environmental Policy Act" (TOA, 1997). The USPS and Alaska DGC considered the concerns raised by the Trustees of Alaska and did not agree. A formal lawsuit citing these same concerns was entered in August 1997 against the USPS by the Trustees of Alaska, which represented AVCP, seven Alaska Native villages, or their representative councils.

On March 20, 1998 the court declared "that the villages have not demonstrated any compelling reason to ignore the DGC's determination of consistency…It follows that the Villages' assertions that the project violates the CZMA or the habitat and subsistence standards of the ACMP and the CCMP are without merit" (USDC, 1998). Furthermore, "the FEA rationally and persuasively explains why the Project will not have a significant impact on the environment…is not arbitrary and capricious or an abuse of discretion….USPS's decision must be upheld" (USDC, 1998). The ruling found the USPS to be in compliance with ACMP Policies and NEPA (USDC,1998). The Hovercraft Demonstration Program continued to transport mail to the villages of the Kuskokwim delta.

Appeal and Final Ruling

An appeal by Trustees of Alaska, on behalf of AVCP, seven Alaska Native villages, or their representative councils, followed the District Court's summary judgment. According to the Appeal Court's finding (USCA, 2000) the Alaska Native communities contend in their appeal "that the Project violated CZMA because it is inconsistent with Alaska's coastal management program…and violates NEPA because the USPS's Final Environmental Assessment contains errors, omissions, and failures of analysis that invalidates its 'Finding of No Significant Impact'" (USCA, 2000). A compelling reason to overturn the ruling on the CZMA could not be established by the Alaska Native Communities. In addition, a review of the substantive conclusions of the Final EA was shown not to be flawed. Furthermore, it was "concluded that the Environmental Assessment is sufficiently well-documented and explained." Because the Alaska Native Communities could not show violations of ACMP Policies or NEPA, the Appeal Court affirmed the District Court's summary judgment in favor of the USPS on May 25, 2000 (USCA, 2000).

PERMANENT TRANSPORT SERVICE

Based on the positive results of the two-year demonstration project and the ecological monitoring program, the USPS considered transporting bypass mail by Hovercraft on a permanent, year-round basis from the city of Bethel to nine Alaskan villages along the Kuskokwim, Johnson, and Pikmiktalik rivers. This action was proposed to begin in July of 2000, following the Demonstration Program. A supplemental EA and ACMP Consistency Determination were completed for the proposed permanent Transport service.

Supplemental EA

A "Supplemental EA" (SEA) was completed in Draft and Final form on the proposed action of permanent service (USPS,2000b). Although USPS regulations do not specifically require the preparation of SEA for this proposed action, the USPS determined that an SEA would be useful due to the subtle changes in the proposed action being considered. These proposed changes include the status of the program from a demonstration project to a permanent service and the addition of one village (Tuluksak) to the transport route. Alternate modes, such as trucks, snowmobiles, boats, all terrain vehicles, and planes, are used on an incidental basis to supplement Hovercraft transport. First-class, express, and priority mail continues to be primarily transported by aircraft. All other conditions established during the two-year demonstration program concerning landing sites, operating within the river banks, agent help at the landing sites, and commercial fishing openings continue with permanent transport service. The ecological monitoring completed during the Demonstration Program helped

understand potential impacts to waterfowl, fish and subsistence activities based on technical observations rather than speculation, traditional beliefs, or inference.

Mitigation Measures

Based on the SEA no measures are required to mitigate because the proposed action would result in no significant adverse impacts. Operations were, however, designed to reduce the level of impact and to provide benefits to the public when possible. During the demonstration project, the Hovercraft project implemented a number of mitigation measures to ensure that impacts are avoided to the maximum extent possible. These mitigation measures have been effective, as evidenced by the fact that the insignificant impacts of the project were further reduced and/or compensated. These actions were indicated as part of the proposed permanent service. The more important mitigation actions implemented were: 1) Only disturbed sites would be used for landings areas; 2) Only existing disturbed paths would be used to bring the bypass mail to the village from the landing site; 3) No piers or other structures would be constructed at the villages or in the water; 4) Winter fish net poles would be provided to those who want them; 5) The Hovercraft would not operate from one hour before to one hour after a commercial fishing opening; 6) The Hovercraft would take all practical measures to avoid driving over subsistence fish nets; 7) The Hovercraft would suspend operations during fall freeze up to allow ice to thickly freeze; 8) The Hovercraft would avoid cracking ice during winter ice up by observing ice conditions behind the Hovercraft from a snow machine; 9) Operation would be coordinated with the US Fish and Wildlife Service to minimize potential impact to caribou migrations; 10) The Hovercraft would use all practical measures to avoid fish camps; 11) At the request of villages, landing sites would be changed during winter; 12) The Hovercraft would offer medical evacuation services; 13) Upon request the Hovercraft would brake ice in front of villages to improve river access in the spring; 14) The Hovercraft would be restricted to travel within the banks of the river; 15) The daily Hovercraft operations would be planned to minimize passbys of sensitive locations such as villages and fish camps; and 16) The Hovercraft would not operate during spring ice out to prevent unsafe conditions on the rivers.

Finding of No Significant Impact

During the Hovercraft Demonstration Project, the Hovercraft Resolution Committee, consisting of federal regulatory agencies, state regulatory agencies, community representatives, and the USPS, met monthly to discuss the operation of the Hovercraft. During the three years these meetings were held, the government agencies have never alleged the Hovercraft operation to be in non-compliance with their respective regulations. Not once was the Hovercraft operation found to implicate safety, subsistence, commercial fishing, oil spills, or any other operational concerns. After careful and thorough consideration of the ecological monitoring results, Hovercraft Resolution Committee actions, and other facts contained in the SEA, the USPS found that the proposed federal action was consistent with the NEPA. Therefore, the USPS issued a FONSI (USPS, 2000b) with respect to the proposed action. Because no significant adverse impacts were expected from the proposed action, an environmental impact statement was not prepared. Consequential contract proposals lead to contractor being selected who chose to use an AP.1-88 style Hovercraft.

CZM Consistency Determination

The villages receiving permanent bypass mail transport service by Hovercraft are within the Ceñaliulriit Coastal Zone Management (CZM) District. After careful analysis and consideration of issues submitted by the public and federal and state agencies, the USPS determined that the proposed action is consistent with enforceable ACMP Policies. The Ceñaliulriit CZM District Office did not concur with the USPS Consistency Determination and Alaska DGC supported the District Office finding (CCMD, 2000). The USPS respectfully requested reconsideration of the Alaska DGC

determination and an elevated review process followed.

PERMANENT TRANSPORT CZM ISSUES

On February 13, 2000 the USPS submitted an ACMP Consistency Determination (USPS, 2000c) for the permanent transport of bypass mail by Hovercraft to nine villages outlined in the Supplemental EA. The USPS had concluded that the proposed action was consistent with the relevant enforceable policies contained within CZM Management Plan. The Ceñaliulriit Coastal Zone Management (CZM) District Office did not concur with the Determination (CCMD, 2000). After citing "due deference" to the local Ceñaliulriit District Office, Alaska DGC found the USPS Determination was not consistent with ACMP Policies. The USPS respectfully requested reconsideration of the finding and the process for an elevated review began.

ACMP Consistency

The State of Alaska's CZM program sets standards and develops procedures to guide coastal development throughout the state. The program is a land-use planning tool to ensure that coastal resources are preserved, protected, enhanced, and, where necessary, restored. The program details standards for various land uses, including transportation facilities and navigational facilities and systems. The Alaska CZM Program divides the state into regional offices governed by a Board of Directors made up of local representatives of the region. The Ceñaliulriit Coastal Zone Management District Office, with a Board of Directors made up of local Alaskan Natives, reviewed the USPS's Consistency Determination.

Alaska DGC is responsible for regulating state CZM policy and relies upon each District Office for their help interpreting enforceable policies. It is ADGC policy to give extra weight to the local CZM Office opinions based on their local knowledge. This weighted policy is referred as "due deference" and local CZM offices and regulatory agencies opinions are extended more significance in the decision process.

During the initial review of the USPS's Consistency Determination Alaska DGC relied upon the local Ceñaliulriit Coastal Zone Management District Office for their expertise, experience and judgment to interpret CZM Policies (CCMD, 2000). The District Office declared that the proposed action was inconsistent with Ceñaliulriit Costal Management Program enforceable Policies A-1 Subsistence Use, A-2 Access to Resources, F-2 Coastal/Riverine Erosion. G-1 Minimize Impacts, G-4 Facility Siting and Design, G-7 Location of shipping Routes, N-1 Mitigation, and N-2 Public Need (CCMD, 2000). Based on input from the villages the Ceñaliulriit District Office Board found significant adverse effects to subsistence use areas.

After the Ceñaliulriit District Office submitted their opinion, Alaska DGC issued a draft "proposed" finding. Alaska DGC concluded that the Hovercraft operation was not consistent with CZM policies based on the "due deference" given to the Ceñaliulriit District Office. However, it also concluded that the proposal would be consistent if the Hovercraft was only used in the winter and winter fishing poles would be replaced if damaged by the Hovercraft. No other stipulations for landing sites, noise, and other operational parameters were provided.

It is interesting to note that the Alaska Department of Fish and Game (DFG), at the request of Alaska DGC, reviewed the USPS's Determination and found the proposed action "to be consistent with the standards of the Alaska Coastal Management Program" (ADFG, 2000). As a local regulatory agency (offices in Bethel and member of the Hovercraft Resolution Committee), with local knowledge, their statement carries "due deference" status. However, the Alaska DFG conclusion was not mentioned in the Alaska DGC finding.

Informal Negotiations

An appeal of the "proposed" finding was discussed between Alaska DGC and USPS.

Informal teleconferences were convened during the spring of 2000 to include representatives of AVCP, USPS, Ceñaliulriit Coastal Zone Office, Hovercraft Contractor and Alaska DGC. Issues were discussed and options considered. Alaska DGC issued a final "Proposed" Consistency Determination on June 16, 2000 (ADGC, 2000a) indicating non-conformance based on the issued cited above. Furthermore, Alaska DGC cited villagers who subsist in the areas along the Hovercraft route identified significant adverse impacts to their use of subsistence resources and that the villagers no longer had comfortable access to their subsistence resources with the Hovercraft intimidating them and disrupting their activities. "The hovercraft affects local subsistence user access to fish because it affects how they view the river and their access to it…at issue are impacts to activities on the river rather than impacts to river resources" (ADGC, 200a). An elevated review process to reconsider the finding was respectfully requested by the USPS (USPS, 2000d).

At the suggestion of Alaska DGC, an informal meeting took place on August 16, 2000 in Bethel, Alaska, to allow an opportunity for explanation of ideas and concerns about the Hovercraft Project, identify areas of agreement and disagreement, and use a consensus approach to resolve outstanding issues (ADGC, 2000b). AVCP, USPS, Ceñaliulriit Coastal Zone Office, and the Hovercraft Contractor were invited by Alaska DGC to attend the meeting. After AVCP contacted residents of all of the affected villages to attend this meeting Alaska DGC concurred with the invitations. No local federal or state regulatory agencies, that may have had "due deference" on the issues being discussed, were invited to speak at the meeting and reporters were not allowed to attend. Ample time was given to present information, ask question and discuss options. Alaska DGC allowed any statements of concern regardless of applicability to ACMP Polices.

The USPS explained service mandates, cost of service, and alternative modes of transport mandates. Three years of ecological monitoring was summarized showing little impact, the extensive public outreach to listen and resulting actions, and the results of the Hovercraft Resolution Committee (in-part identifying that concern of significant adverse impact was not raised by the local CZM office or other regulatory agencies during the three years of monthly Hovercraft Resolution Committee meetings).

AVCP, Ceñaliulriit District Office, and village representatives presented how they perceived significant adverse impact and gave examples of actual impacts (first or second hand). Some of the issues identified were: monitoring results were not consistent with local knowledge; Hovercraft impacts fish and birds; Hovercraft shakes water and produces strong winds; Hovercraft swamps boats; river is too narrow for the Hovercraft; delivery is not prompt; village stores are not well stocked; the Hovercraft Resolution Committee is biased; passengers using the Hovercraft do not have timely trips (compared to airplanes); and Villages oppose the Hovercraft.

There were differences in opinion whether or not the Hovercraft causes significant adverse impact. At the conclusion of the meeting approximately 14 items to mitigate concerns of year-round Hovercraft operation were offered by the USPS. The Ceñaliulriit Coastal Zone Office counter offered with winter operation of the Hovercraft and declined the mitigation offered by the USPS.

Although the USPS could refute claims of significant impact with the ecological monitoring that was accomplished during the Demonstration Program, Alaska DGC was inclined to give "due deference" to the traditional and cultural knowledge presented by the Ceñaliulriit CZM Office and other attendees at the informal meeting. The initial finding of Alaska DGC remained unchanged. An impasse was evident and the USPS respectfully requested the decision be elevated through the appeal process to a Director-Level Public Hearing.

Director-Level Public Hearing and Finding

A Director-Level Public Hearing was convened on September 5, 2000 in Bethel, Alaska. ADGC invited the USPS, Hovercraft Contractor, and Ceñaliulriit District Office to attend. Several Native Alaskans did come to the meeting and spoke in favor of the Hovercraft. The USPS defense was based on the results of the ecological monitoring showing little impact, little expressed concern by federal and state regulatory agencies (including Alaska DGC, Alaska DF&G, USF&WS, and local Ceñaliulriit Coastal Management Office) during the three years of monthly Hovercraft Resolution Committee meetings, and concurrence by the Alaska DF&G on consistency of the proposed action with CZM policies. The USPS offered 14 mitigation items to help alleviate concerns of the year-round service. The Ceñaliulriit CZM Office cited local knowledge and tradition indicated a significant adverse impact would occur from the operation of the Hovercraft. "Due deference" was stressed as personal accounts were offered of how the Hovercraft impacted local resident's lives. The Ceñaliulriit CZM Office declined mitigation offered by the USPS and counter-offered with winter operation of the Hovercraft as a compromise. The USPS contractor indicated that they could not operate economically with only winter transport and leaving the Hovercraft idol the remainder of the year.

On September 15, 2000 Alaska DGC issued a Proposed Director-Level Consistency Finding (ADGC,2000c) based on the regional-level Public Hearing, file information, and Director-Level elevation meeting. The finding disagreed with the USPS's Consistency Determination. However, if the mitigation items offered by the USPS were incorporated as part of the Consistency Determination Application, the project could proceed. The mitigation items were: Hovercraft operator would help break up ice in front of the village during the spring on request by the villages; operations will be planned to minimize pass-bys; adequate public notice of the mail delivery schedule will be provided; disturbed sites will be used for landings and existing paths to the village will be used; structures will not be constructed in the landing areas; winter fish net poles will be replaced; commercial fishing openings will be avoided; avoid fish nets; will not operate during fall freeze up; avoid cracking ice in winter; and travel only within the banks of the river. The USPS agreed to the mitigation items as part of their proposed action. Further elevation procedures were halted and the USPS Consistency Determination was accepted.

It is interesting to note that if the USPS did need to elevate the decision it would go to the Commissioners Level of review. This would entail another public hearing with a Commissioner level panel convened to hear the merits of the appeal. The location of the meeting would have most likely taken place in Juneau, Alaska.

CONCLUSIONS

This case study highlights some of the complex environmental, CZM and Environmental Justice issues and successful measures involved with the introduction of a new mode of water related transportation. The following "lessons learned" highlight the key conclusions of studying this project's implementation.

Environmental Justice

The most significant lesson to be gained by studying this marine transportation project is to properly address the needs of local communities. Actions that take in consideration Environmental Justice issues and other environmental regulations and guidelines were implemented to protect unique segments of the population. The USPS, from the very inception of the Demonstration Program, took extra steps to respect the culture and tradition of the Alaskan Native people. This not only included a significant public outreach and involvement program of listening and discussions, but major actions such as the ecological monitoring program and the Hovercraft Resolution Committee. Based on initial scoping pubic meetings in each of the villages and Bethel,

three years of monthly Hovercraft Resolution Committee meetings, meetings in each of the villages and Bethel during 1998 and 1999 to explain the monitoring results, public review of the monitoring plans prior to commencement of the field work, invitations to join the monitoring teams when they were in the field, meetings with village elders to refine the monitoring plans, and other outreach activities the USPS has an impressive record of **respect and listening**.

Allegations and court suits can plague any project. However, the actual record will always defend how well Environmental Justice issues were considered. Those actions can be a direct function of a program's ultimate success or failure.

Ecological Monitoring

In consideration to the Alaskan Native tradition and culture the USPS agreed to implement ecological monitoring even though it was not required under the NEPA. The technical information developed during that program and the public involvement incorporated as part of that work played a pivotal roll during the NEPA and ACMP review process. With the science that was obtained with the monitoring, claims of significant impact could be considered in the context of factual documented and peer reviewed information. The monitoring effort was designed to respond to local reports of observed or suspected impact (this was effectively accomplished with the help of the Hovercraft Resolution Committee's Issue Reports). Thus, local knowledge and traditional concerns directed the monitoring effort and not strictly the scientists or federal and state regulatory agencies.

Anticipating the need of factual information for use in the context of anecdotal or real claims that may surface during a project is critical to the success of a project. Making the decision to implement the action of obtaining technical information based on societal reasons of respect, when it is not strictly warranted by statute or regulation, takes wisdom and vision and - in particular - compassion.

Public Involvement

The USPS believes that public involvement is fundamental to understanding the culture and tradition of the local people as well as understanding the environmental process and proposed actions. As a consequence, the USPS made an extraordinary effort to engage the native Alaskans, local residents, general public, and resource agencies. Toward this end, the USPS conducted numerous public meetings and information exchange opportunities in support of the EA, established a Hovercraft Resolution Committee and requested public and resource agency input into the ecological monitoring and SEA.

Information and views from federal, state, and local agencies and the public are important in providing insight on the issues pertinent to the proposed action and ultimately a project's implementation. Without the clear action of public outreach early in the planning and decision stages a project is unlikely to be successfully implemented.

Regulatory Agencies

Close working relations with federal and state regulatory agencies help focus concern and assist the regulatory agencies carefully monitor the project. Initial scoping meetings were held to focus the EA and begin a working relation with each of the local Federal and State regulatory agency's representatives. Additional meetings and consultations were held throughout the project. In addition, the monthly meetings of the Hovercraft Resolution Committee provided the regulatory agencies with a continuous feedback of the overall operation of the Hovercraft project. Each month representatives from the villages, AVCP, and the public were allowed a voice to express their concerns. The regulatory agencies could be alerted to any potential or actual problems and take immediate action. Furthermore, by involving the regulatory agencies in the review and comment of proposed monitoring methodology they could be assured that proper techniques would result in the collection of appropriate data. The review of the draft monitoring reports also provided the

regulatory agencies an opportunity to make sure data interpretation and conclusions were consistent with the data.

The support of regulatory agencies, gained through close working rapport and involving them early in the planning process, can facilitate a project's implementation.

Streamlining NEPA with Resolution Committees

Introducing a controversial project or one of unfamiliar technology is difficult from both the regulatory agency and public perspectives. Early in the planning process regulatory agencies must comment on the proposed action and may know little of the technology or potential impacts. The public would like some control after they have "bought into" the project. Offering a resolution committee where both the regulatory agencies and public can meet and monitor the project as well as offer operational suggestions allows a committed action of structured oversight after agreeing to the project's implementation. Thus, offering the resolution committee as part of the proposed action can facilitate the review and acceptance by the regulatory agencies and public. In some instances this could streamline a proposed project's National Environmental Policy Act (NEPA) review process.

In the strict legal context of the NEPA resolution committees are not necessarily considered as a form of mitigation. However, regulatory agency approval and public acceptance of the proposed action by committing to a resolution committee as a form of mitigation for the Hovercraft Demonstration Project was successful in agency and public NEPA review and eventual implementation of the project. The process of selecting committee members, establishing committee protocol, the dynamics of committee work, selecting committee chair, and other pertinent subjects necessary to successfully implement resolution committees all need to be considered before proposing to establish a Resolution Committee. None the less, if properly established a resolution committee can streamline the NEPA process and lead to project implementation.

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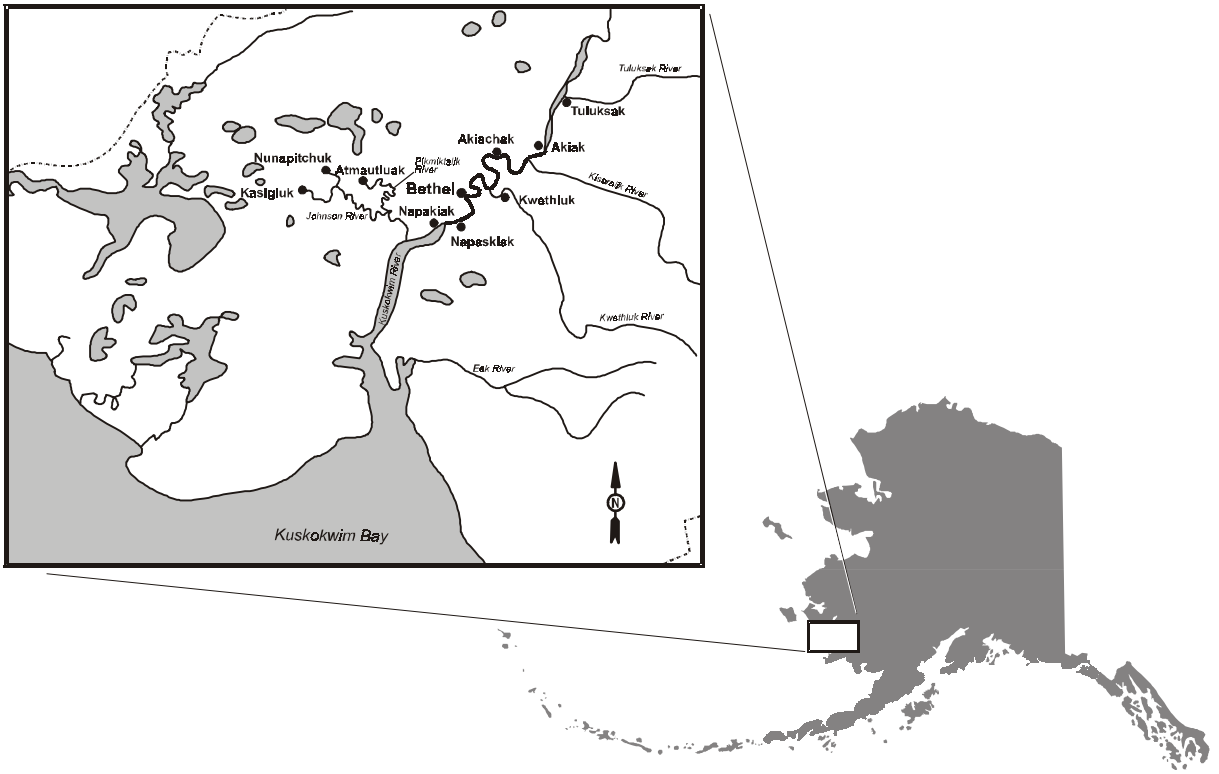
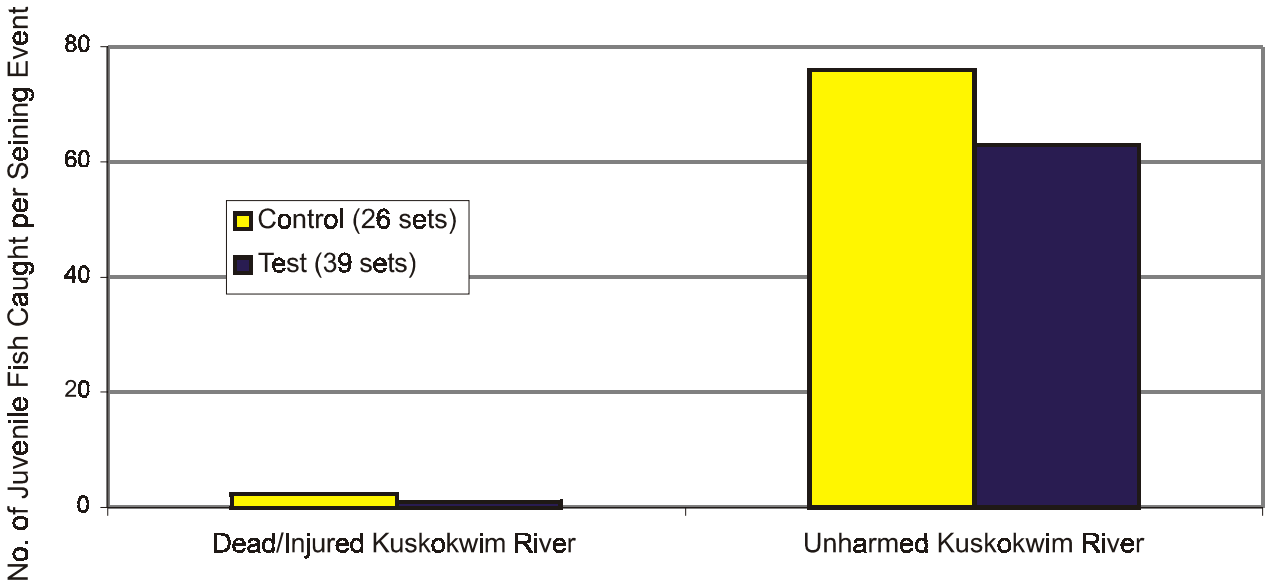


Source: *Alaska Hovercraft Demonstration Project Ecological Summary Report, USPS, March 2000*

Figure 1 Project Location

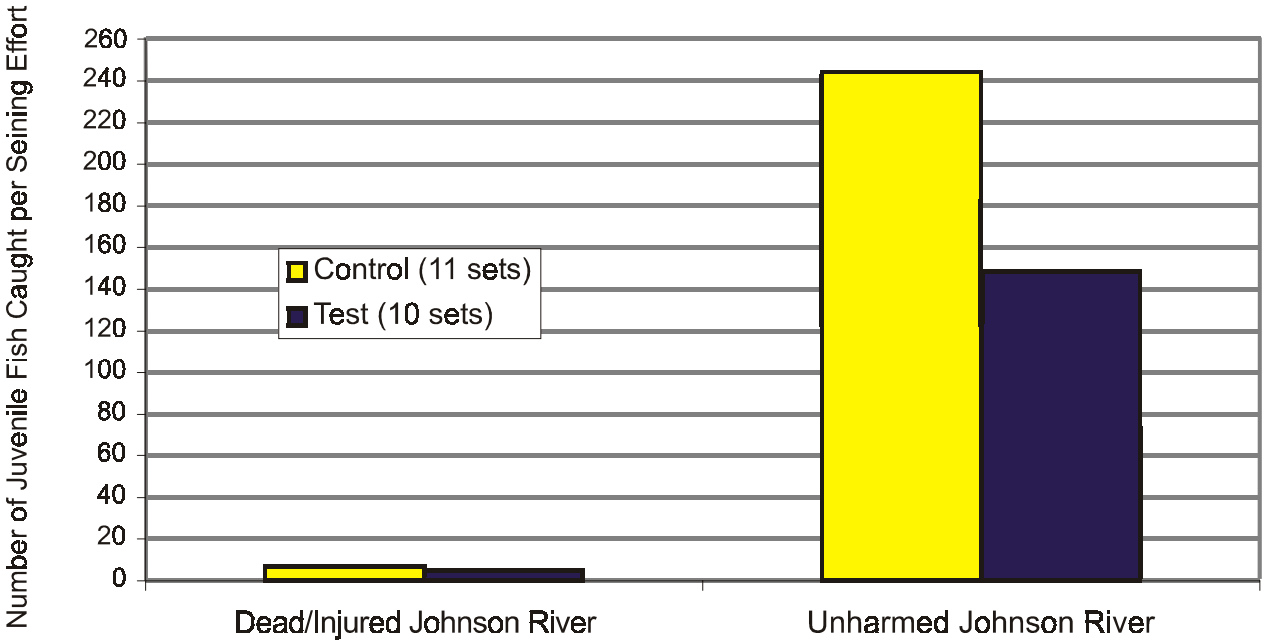
Source: *Alaska Hovercraft Demonstration Project Ecological Summary Report, USPS, March 2000*

Figure 2 API-88 Hovercraft



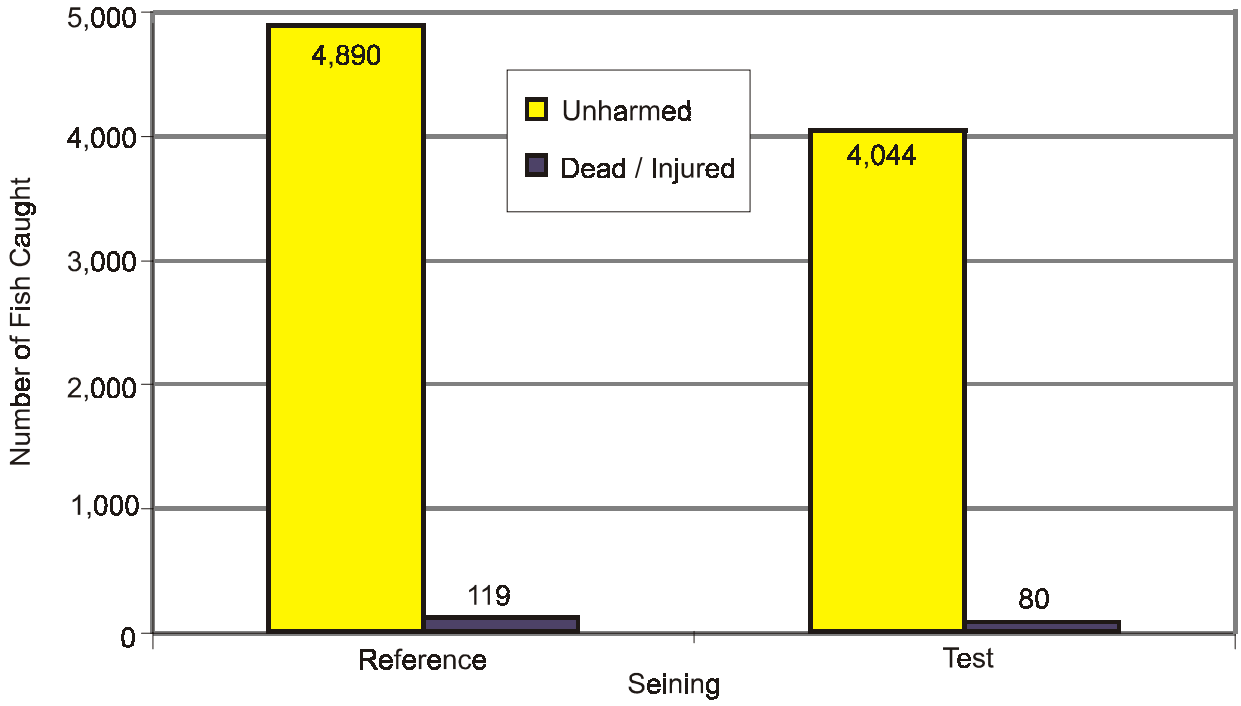
Source: *Alaska Hovercraft Demonstration Project Ecological Summary Report, USPS, March 2000*

Figure 3 Average Number of Harmed vs Unharmed Fish Collected with Beach Seines on the Kuskokwim River



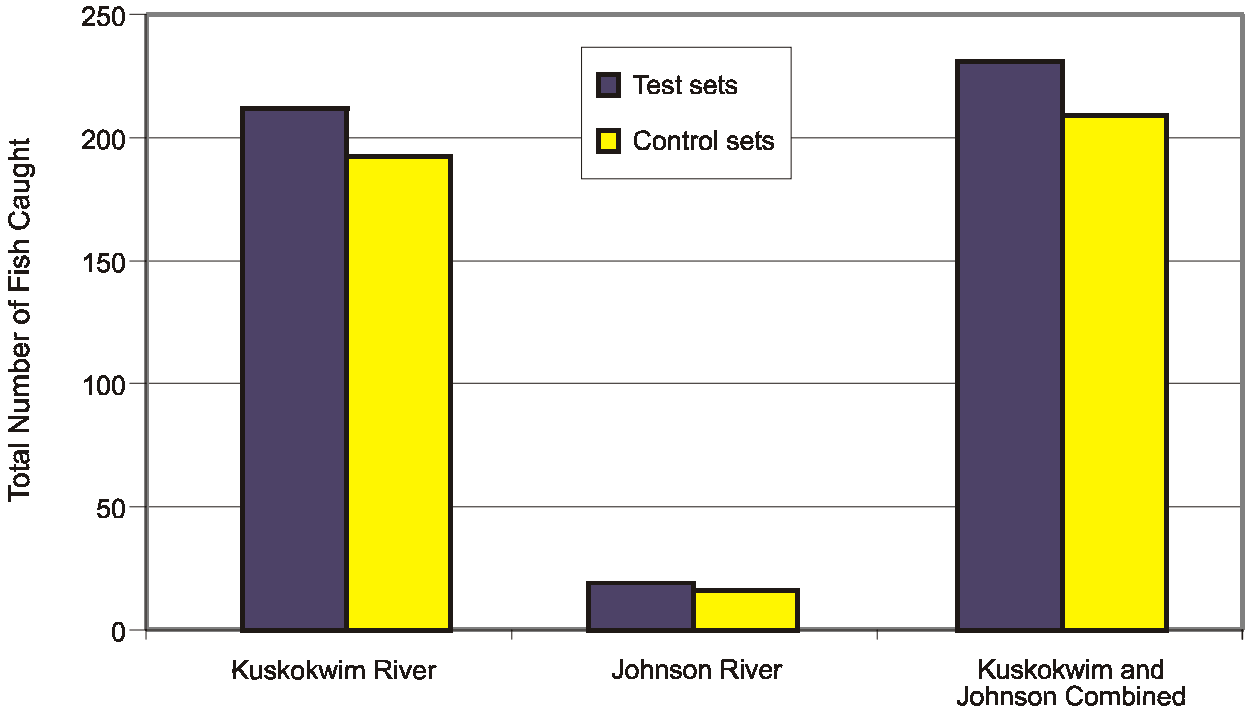
Source: *Alaska Hovercraft Demonstration Project Ecological Summary Report, USPS, March 2000*

Figure 4 Average Number of Harmed vs Unharmed Fish Collected with Beach Seines on the Johnson River



Source: *Alaska Hovercraft Demonstration Project Ecological Summary Report, USPS, March 2000*

Figure 5 Shallow Water Mortality



Source: *Alaska Hovercraft Demonstration Project Ecological Summary Report, USPS, March 2000*

Figure 6 Gillnet Fishing Experiment Results