

**Alaska Department of Fish and Game  
Wildlife Restoration Grant**

**Grant Number:** W-53-D-1 **Segment Number: 1**  
**Project Number:** 1.0  
**Project Title:** Refuge access and public use facility development  
**Project Duration:** August 1, 2011 to June 30, 2016  
**Report Period:** August 1, 2011 to June 30, 2016  
**Report Due Date:** September 28, 2016  
**Cooperator:** Alaska Department of Fish and Game (ADF&G)  
**PRINCIPAL INVESTIGATOR:** Joe Meehan, Fish and Game Coordinator  
**WORK LOCATION:** Statewide

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**I. PROBLEM OR NEED THAT PROMPTED THIS RESEARCH**

There are 34 state wildlife refuges, sanctuaries, critical habitat areas and ranges (collectively termed “Special Areas”) managed by ADF&G. Included within these areas are a total of 3.4 million acres (5,356 square miles) of rich fish and wildlife habitat including marine and estuarine waters, tidelands and eelgrass beds; freshwater marshes and wetlands, coastal marshes and mudflats; anadromous fish waterways; and upland forests and meadows. These areas protect some of Alaska’s most outstanding wildlife resources including habitats used by millions of waterfowl, shorebirds and seabirds; moose; brown and black bears; marine mammals; marine and freshwater fish; and an assortment of other wildlife species. The primary management emphasis of these areas is to protect wildlife habitat and populations, consistent with their legislative purpose.

An equally important management responsibility that has received less attention is the need to enhance public access, facilities and other aspects addressing public use of these areas. In 2010, well over 1 million visits were recorded in these areas and visitor use is expected to increase annually. Visitor activities include hunting, fishing, wildlife viewing, natural and cultural history education, and other recreational, subsistence and commercial activities.

The division’s Strategic Plan encourages active management of these areas consistent with their legislative purposes: “Actively manage refuges, critical habitat areas and sanctuaries to allow for continued public use and protection of fish and wildlife and their habitats” (Strategic Plan, Alaska Department of Fish and Game, Division of Wildlife Conservation, 2002, page 18: Part II – Challenges and Strategies for the Future: Issue #5 – Wildlife Management and Research).

Individual Special Area management plans allows for development of access and public use facilities provided it is consistent with protection of wildlife habitats and populations. For those

areas with management plans, the stated intent is to promote public and, where appropriate, commercial uses of the area for wildlife and recreation related activities including hunting, trapping, fishing, wildlife viewing and others. Examples include the management goals and policies of the Palmer Hay Flats State Game Refuge revised management plan (2002) which direct the department to manage the refuge to:

- 1) “Maintain and encourage a variety of recreational, educational and scientific uses of the refuge fish and wildlife resources, ...” (Goal 2, page 6),
- 2) To provide for specific public access and use “To ensure adequate public access to refuge lands at appropriate locations....” (Access guideline, page 7), and
- 3) “To promote public awareness, understanding and enjoyment of refuge resources, the department will 1) evaluate and develop facilities such as interpretive signs, boardwalks, trails and parking area.... ; 2) develop public information products such as pamphlets, guidebooks, maps and media programs; ... (Information/Education guideline, page 8).

Likewise, the goals in the Anchorage Coastal Wildlife Refuge management plan (1991) state that management will “Allow public use of the refuge where consistent with protection of fish and wildlife populations and their habitat” (Goal II. Public Use, page 7). Various polices (Fish and Wildlife Viewing, Waterfowl Hunting, and Public Access, page 8) within this plan provide additional direction on maintaining or enhancing access and opportunities for the public to use the resources of the refuge including hunting and wildlife viewing. Other refuge management plans provide similar guidance and for those areas without management plans, the interim management policies are similar.

The need exists to enhance access and public use related facilities to help manage the increasing demand to provide opportunities to utilize these important wildlife resources. This project will help build an understanding and appreciation of these areas and their wildlife resources to promote their continued protection. They will also direct or manage public uses so that those uses minimize detrimental impacts to habitats and wildlife resources, and where impacts have occurred it will restore those areas. This project has been supported by four local community-based refuge support organizations who will partner and offer in-kind contributions to these projects in the form of volunteer labor and assistance in organizing and planning. The project is also supported by the Alaska State Legislature and State of Alaska as evidenced by providing matching funds in the state’s FY2012 budget in the form of a Capitol Improvement Project “State Game Refuge Access and Development”.

## **II. REVIEW OF PRIOR RESEARCH AND STUDIES IN PROGRESS ON THE PROBLEM OR NEED**

There is an ongoing need to create, enhance and/or repair public access and visitor use facilities in state Special Areas. As the use and demands for these areas increase by Alaska residents and visitors for an array of wildlife and recreation oriented activities, managers will continually be challenged to provide appropriate opportunities and facilities while minimizing impacts to wildlife resources, habitats and existing public uses. This project and others addressed these issues and attempted to address management issues as they were identified.

### **III. APPROACHES USED AND FINDINGS RELATED TO THE OBJECTIVES AND TO PROBLEM OR NEED**

Through staff observations, public input, and consultations with organizations and local, state and federal agencies, we identified management and visitor use issues, concerns and needs. Projects were prioritized based on partner funding, visitor use levels, existing or potential resource impacts, user conflicts and other criteria. Projects not completed through this project will be carried into the future and possibly completed as funding becomes available.

### **IV. MANAGEMENT IMPLICATIONS**

The overall objective of this project was successful: as sites were developed, expanded or improved, it reduced impacts to surrounding habitats, attracted more refuge users engaged in compatible activities (which in turn displaced the habitat damaging activities), and enhanced the public's understanding and appreciation of these areas. As a result, these area were better managed, better protected, and better appreciated and understood by the public.

Future work to continue these types of enhancements are desirable and are dependent on future funding and partner contributions.

### **V. SUMMARY OF WORK COMPLETED ON JOBS.**

#### **Objectives:**

**Objective 1:** Provide the public with the facilities, knowledge and encouragement to access and use special areas.

**Job/activity 1a:** Evaluate all 34 Special Areas to assess and prioritize needs to physically access these areas including the need for development of improvement of access roads and trails, directional signage, and information outlets (brochures, posters, web pages, etc.). Implement high priority items as funding and management decisions allow. Previously identified priority items include access road and parking improvements, directional signage at Goose Bay, Susitna Flats (Horseshoe Lake, Middle Lake) and Palmer Hay Flats refuges. Previously identified trail improvement priorities include Scout Ridge, Reflections Lake and Cottonwood Creek trails in the Palmer Hay Flats refuge; winter trails in the Susitna Flats refuge; and access trails in the Goose Bay refuge.

**Accomplishments:** The evaluation of 32 state refuges, sanctuaries and critical habitat areas identified 104 potential projects to develop, enhance, repair and/or promote public access. This evaluation, in the form of a spreadsheet, is designed to be a working document with completed priority projects being removed and additional project being added as additional access needs are identified or created.

Implemented projects included creation of volunteer refuge host sites at two locations in the Palmer Hay Flats refuge; boundary markings, road, trail, parking, signage and other access improvements in the following areas: Goose Bay, Palmer Hay Flats, Susitna Flats, Anchorage Coastal, and Creamer's Field refuges; and Dude Creek Critical Habitat Area.

Several of these projects resulted in restoration of impacted habitats by creating designated vehicle use sites and limiting their operations over wider and undefined areas. Other projects such as the Cottonwood Creek ATV trail improvements (Palmer Hay Flats refuge) hardened sections of a trail making it conducive to ATV travel and preventing the spread of ATV use into sensitive wetland areas.

**Job/Activity 1b:** Evaluate all 34 areas to assess and prioritize needs for infrastructure or other management actions within or near these areas to accommodate public uses and to protect area resources. Implement high priority items as funding and management decisions allow. Previously identified priority items include assessment and repair or replacement of the Cottonwood Creek ATV bridge in the Palmer Hay Flats refuge.

**Accomplishments:** The evaluation identified in Job/Activity 1a above included potential projects related to improvements, replacements or additions to infrastructure and other management actions to accommodate or enhance public access and protect natural resources. Specifically, the Cottonwood Creek ATV and pedestrian bridge (Palmer Hay Flats refuge) was found to be in disrepair so it was condemned, removed and replaced by a new 85 foot-long bridge at a nearby location. Also at Cottonwood Creek, soils testing identified an area of lead contamination (from unregulated target shooting) and a fence was constructed to isolate this area from refuge users. Similar tests were conducted at Goose Bay refuge with contaminated sites being mitigated to state and federal standards.

Other projects included the development of design concept plans and engineer's cost estimates for visitor facility improvements and habitat enhancements at Potter Marsh in the Anchorage Coastal refuge. A contractor was engaged to provide a trail assessment and repair recommendations for several ATV trails in the Fox River Flats and Willow Mountain critical habitat areas. Trail repair and rerouting work was conducted on the Watermelon ATV Trail in the Anchor River-Fritz Creek critical habitat area.

**Objective 2:** Protect wildlife habitats and populations, and maintain existing public uses by restoring impacted areas.

**Job/activity 2a:** Evaluate all 34 areas to assess sites impacted by human activities including vehicle and debris dumping, off-road vehicle use, and other impacts from users. Implement restoration and mitigation programs at high priority sites as funding and management decisions allow. Previously identified priority areas include vehicle barriers at access sites in the Goose Bay, Susitna Flats and Palmer Hay Flats refuges which will prevent habitat impacts from off-road vehicle use.

**Accomplishments:** The evaluation identified in Job/Activity 1a above included potential projects related to reducing impacts from refuge users. The road, trail, parking and other improvements identified in 1a and 1b above also reduced impacts by corralling and encouraging users into improved limited areas and preventing their impacts from spreading into previously undisturbed areas. This was also accomplished by installing traffic control structures such as bollards, boulders and through signage. Boundary and informational signs have been placed in many areas including Goose Bay, Palmer Hay

Flats, Anchorage Coastal and Susitna Flats refuges; and Fox River Flats, Anchor River-Fritz Creek, Homer Airport and Willow Mountain critical habitat areas.

Large amounts of dumped household and construction waste was removed from the Palmer Hay Flats and Goose Bay refuges; however, with continual cleanups, increased signage, increased visitor improvements and resulting increase in public use, the amount of garbage dumping has significantly declined.

**Objective 3:** Improve the public's understanding and appreciation of these areas through educational outlets which will result in more awareness and protection of the area's wildlife habitats and populations.

**Job/activity 3a:** Evaluate all 34 areas to assess and prioritize needs for educational materials including brochures, signs, interpretive panels, kiosks, pavilions, and other outlets. Previously identified priority projects include interpretive panels addressing management actions at Creamer's Field refuge, and an educational pavilion at Potter Marsh in the Anchorage Coastal refuge.

**Accomplishments:** In addition to the above mentioned project evaluation and project list (in 1-a), educational interpretive panels were designed, produced and installed at Reflections Lake in the Palmer Hay Flats refuge (4 panels), Mendenhall Wetlands refuge (6 panels), and Kachemak Bay Critical Habitat Area (1 panel for installation at multiple sites). These panels address natural history topics as well as refuge management and history topics.

Standardized refuge entrance sign were developed and installed at the 3 main access sites in the Palmer Hay Flats refuge. Informational signs were produced and installed at Goose Bay, Palmer Hay Flats and Susitna Flats refuges to assist hunters and other refuge users when locating access points, trails, parking areas, refuge boundaries and allowed refuge activities.

Informational kiosks were retrofitted or constructed at four sites within the Palmer Hay Flats refuge and stocked with brochures and other information relevant to refuge users. Improvements to the department's Special Areas webpages were implemented and are ongoing.

## **VI. PUBLICATIONS** None

### **I. ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT**

None.

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**DATE:** November 1, 2016