



# Potter Marsh

## Master Interpretive Plan





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—Potter Marsh—  
on the urban edge of the last frontier

Prepared by:  
The Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation, Interpretation and Education

Prepared for:  
The Alaska Department of Fish and Game

Funded by:  
ConocoPhillips



Summer 2007

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## EXECUTIVE SUMMARY

Potter Marsh, a coastal freshwater and brackish marsh located at the southern end of the Anchorage Coastal Wildlife Refuge (ACWR) and approximately seven miles south of downtown Anchorage, is one of the most accessible and spectacular wildlife viewing areas in Southcentral Alaska. Managed by the Alaska Department of Fish and Game (ADF&G), this 564-acre wetland is bordered by spruce, cottonwoods, and alders, and maintained by winding creeks that originate in the majestic Chugach Mountains. Spawning and juvenile salmon, raptors, waterfowl, and shorebirds flourish here, along with resident and transient mammals, amphibians, and invertebrates. The Seward Highway, a nationally designated All-American Road, abuts Potter Marsh to the west, and then snakes around Turnagain Arm, where highway travelers frequently delight in the sight of bore tides and Cook Inlet beluga whales.

Existing interpretation at the marsh is limited to the northern region, where six interpretive panels reveal only a fraction of the area's natural resources and diverse recreational opportunities. Access to the marsh is also limited. While an existing 1,550 foot-long boardwalk provides visitors with a chance to intimately experience one region of the marsh, access to three other ecologically interesting areas of the marsh is lacking. An unpaved parking lot in the south and three small gravel pullouts along the Seward Highway offer restricted viewing and photographic opportunities. And, although a little-known primitive trail off the Old Seward Highway in East Potter Marsh provides panoramic views and a chance to glimpse a pair of nesting bald eagles, site parking is insufficient and cannot accommodate more than a few vehicles.

The Potter Marsh Master Interpretive Plan provides a vision for interpretive opportunities at Potter Marsh and recommends actions that should occur over the next ten years. It defines interpretive management goals and objectives, identifies interpretive themes, and describes visitor experience goals. The plan also suggests implementing three different programs that will enhance visitor experience and provide visitors with opportunities to learn about Potter Marsh's natural, scenic, historical, cultural, and recreational qualities. These programs include:

- a personal services program that incorporates naturalist tours, roving interpretation, and scheduled special events;
- a non-personal services program that incorporates audiovisual projects, a brochure, improved outreach, and site-specific interpretive exhibits; and
- a wetlands education program that includes teacher trainings and wetlands kits.





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Figure 1. Potter Marsh Overview Map

# INTRODUCTION

## Purpose of the Plan



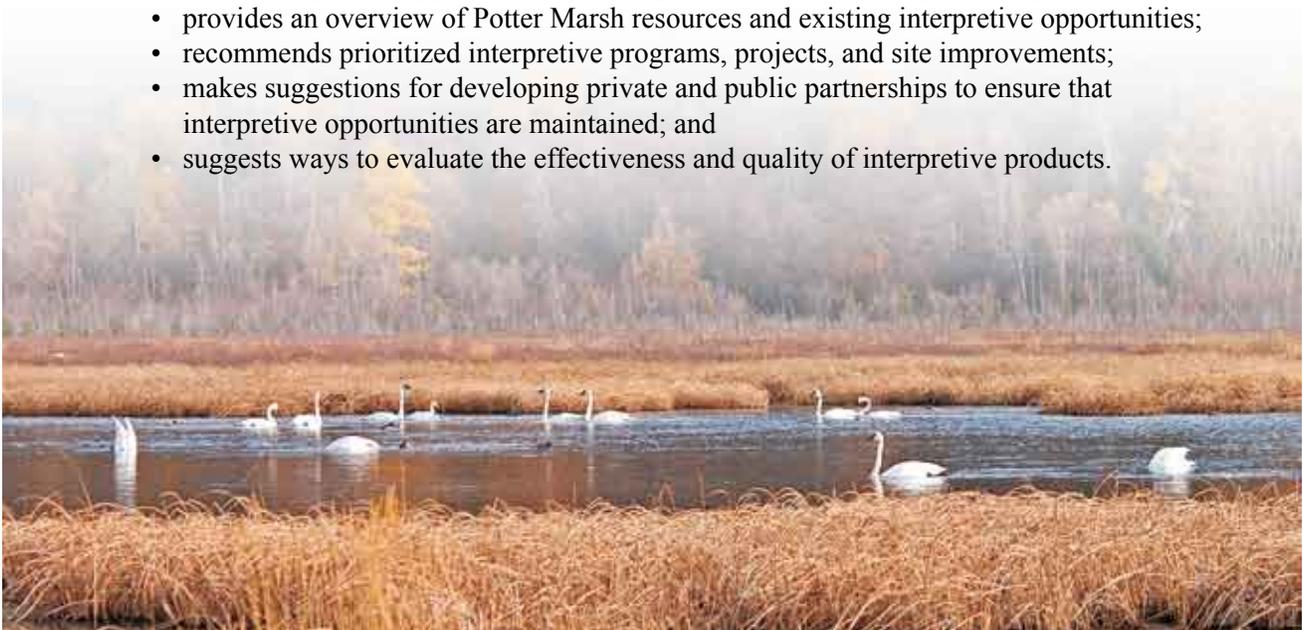
*Potter Marsh is a popular birdwatching area*

Potter Marsh is a safe and convenient haven where visitors from all over the world can experience Alaska’s scenic beauty and abundant natural resources. Potter Marsh is also an important community gathering place; residents visit the marsh year-round for its superb wildlife viewing and educational and recreational opportunities. The marsh also contains important fish and wildlife habitat, which is becoming increasingly valuable to these populations as community expansion, and consequently habitat reduction, continues.

The purpose of the Potter Marsh Master Interpretive Plan is to establish planning guidelines and a detailed, long-range vision for developing interpretive opportunities in this unique urban wetland, while at the same time conserving and maintaining the marsh’s ecological integrity. Interpretation has been defined as “a communication process that forges emotional and intellectual connections between the interests of the audience and the inherent meanings of the resource” (Brochu, 2005). With this goal in mind, interpretation at the marsh will be creative, enjoyable, and educational. Interpretation will not only tell visitors what is interesting about Potter Marsh, but also aim to foster conservation values and an appreciation of the area, while encouraging responsible behavior and community stewardship.

The Potter Marsh Master Interpretive Plan:

- supports and reaffirms the goals of the Anchorage Coastal Wildlife Refuge Management Plan;
- provides relevant background information;
- outlines interpretive goals, objectives, and themes;
- incorporates the needs and demographics of current and potential visitors to ensure that future interpretive opportunities are designed to meet visitor experience goals;
- provides an overview of Potter Marsh resources and existing interpretive opportunities;
- recommends prioritized interpretive programs, projects, and site improvements;
- makes suggestions for developing private and public partnerships to ensure that interpretive opportunities are maintained; and
- suggests ways to evaluate the effectiveness and quality of interpretive products.

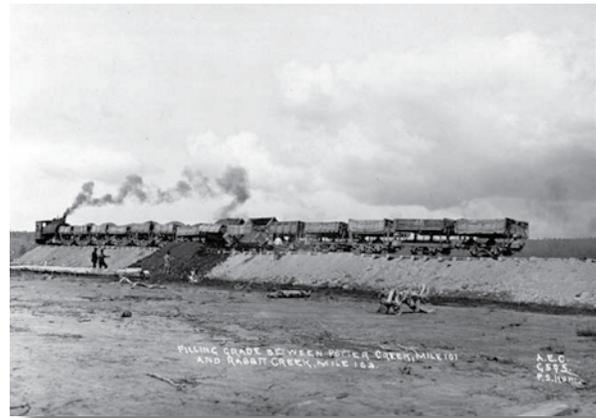


## Background

### Creation of Potter Marsh

The Alaska Railroad created Potter Marsh in 1916-17 when they built an embankment across Turnagain Arm. Although a bridge over Rabbit Creek allowed water to flow beneath the embankment, fresh water from other sources, especially Little Survival Creek, was impounded and marsh vegetation began to grow. Freshwater ponds developed where deeper holes along the inside of the embankment had been excavated for fill. The ponds and marsh vegetation attracted migrating waterfowl and shorebirds, many of which stayed to nest at the marsh. The wildlife, in turn, attracted waterfowl hunters and trappers and Potter Marsh soon became a popular local destination. By the 1960s, Potter Marsh had also become popular for wildlife viewing. Subsequent construction of the New Seward Highway in 1970-71 resulted in further water impoundment.

Potter Marsh settled approximately one meter during the 1964 “Good Friday” earthquake, drowning much of the forest community on the marsh’s eastern border and increasing the open water habitat throughout. The hydrologic and structural diversity that resulted from the earthquake contributes to the present quality of Potter Marsh habitat for nesting waterbirds. The drowned forest community attracts raptors, songbirds, and shorebirds, which utilize the deadwood snags as elevated perches above the wetland vegetation.



*The Alaska Railroad built the Rabbit Creek embankment in 1916-17*



*The Alaska Railroad traverses the shores of Turnagain Arm, present day*

### Anchorage Coastal Wildlife Refuge

In 1971, Potter Marsh became part of the Potter Point State Game Refuge, which extended from Point Campbell to Potter Creek and included mudflats and wetlands adjacent to the toe of Potter Bluff. In 1983, a planning task force was established to develop a comprehensive management plan for Potter Marsh. Subsequently, the Alaska Legislature expanded and renamed the game refuge the Anchorage Coastal Wildlife Refuge (ACWR) in 1988, with Potter Marsh as the primary wildlife viewing site. In 1991, a management plan for the refuge was written by the ADF&G that provided guidance on management of the marsh and other Anchorage coastal wetlands in the refuge. This plan identifies the goals of the agency for maintaining Potter Marsh and the ACWR as a valuable education and recreation resource for the Anchorage community. With regard to waterbird habitat and wildlife viewing, the following long-term management goals were established:

- maintain, protect and where appropriate, enhance the quality and quantity of habitat for resident and migrant wildlife, particularly nesting, rearing, and staging habitat for waterfowl and shorebirds;
- protect and where appropriate, enhance water quality, water quantity, and circulation patterns to maintain growth and propagation of wildlife;
- recognize cumulative impacts when considering effects of small incremental developments and actions affecting refuge resources;
- maintain and where appropriate enhance opportunities for viewing, photography, and

- hunting as allowed by the Alaska Board of Game, and other forms of recreation; and
- design and locate wildlife viewing facilities to maximize viewing opportunities and to minimize harmful disturbance.



*The Anchorage Coastal Wildlife Refuge is one of over 30 wildlife refuges, sanctuaries, and critical habitat areas managed by the Alaska Department of Fish and Game*

### **Seward Highway All-American Road**

Potter Marsh lies at mile 117 of the Seward Highway All-American Road, which runs from the city of Seward in the south to the city of Anchorage in the north. In June 2000, the Federal Highway Administration designated the 127-mile Seward Highway as an All-American Road, an honor reserved for the nation's highways that have outstanding scenic, natural, recreational, archeological, cultural, and historic resources. The Seward Highway's classification as an All-American Road may benefit Potter Marsh by providing another avenue for funding and promotional opportunities.



## Planning Process

Work on this plan began in September of 2006 with the inception of an interpretive planning team and identification of project partners and consultants, selected to include interpretive specialists, wildlife biologists, ornithologists, educators, hydrologists, and landscape architects (see Appendix B for a complete list of individuals). The goals, objectives, and recommendations in this plan represent a consensus of those involved in the planning process, which included inventorying resources, compiling research, and soliciting public input. Interpretive plans written for the Anchorage Coastal Wildlife Refuge and the Seward Highway All-American Road were consulted and referenced in order to provide an integrated and coordinated regional interpretive strategy. The result is a thorough examination of Potter Marsh's interpretive characteristics and needs, and a detailed, long-range plan of action to meet those needs.

The planning foundation expressed therein—purpose, goals and objectives, interpretive themes, and visitor experience goals—will remain constant over the life of the plan. Specific recommendations concerning interpretive programs and projects may need to be updated as staffing, funding, or resource conditions change. Further design documents may need to be prepared to implement some of the recommendations. The plan should be revisited in five to ten years and updated to ensure that new technology and changing market and site characteristics are incorporated.



*The Potter Marsh planning team prepares to scout out the location of a new boardwalk*



*The Potter Marsh planning team meets for a field trip*

## Mission and Vision Statements

### Alaska Department of Fish and Game Mission Statement:

The Alaska Department of Fish and Game's mission is to manage, protect, maintain, and improve the fish, game, and aquatic resources of Alaska.

### Potter Marsh Vision Statement:

Potter Marsh is a unique destination that offers year-round accessible wildlife viewing and opportunities for outdoor recreation. Interpretation at Potter Marsh will provide visitors with the opportunity to learn about wetland ecosystems and to understand and appreciate the important role the marsh fulfills for both wildlife and the community. Potter Marsh will demonstrate the value of managed wild places within urban landscapes and serve as a model of resource stewardship and interpretation for outdoor recreation sites elsewhere.

### Potter Marsh Master Interpretive Plan Mission Statement:

The mission of the Potter Marsh Master Interpretive Plan is to establish a long-range vision for enhancing visitor experience by providing educational opportunities through the improvement, development, and maintenance of interpretive media, programs, sites, and services while maintaining the natural functions and values of this unique and important wetland.



## Goals and Objectives

Interpretive goals for Potter Marsh will keep managers focused on their overall vision while supporting the mission of the Alaska Department of Fish and Game. Measurable objectives indicate how interpretation will be used as a management tool by providing specific time frames and other measurable parameters. Efficient and engaging interpretation will satisfy interpretive goals, while evaluative techniques provided later in the document will measure objectives to evaluate the effectiveness of the Potter Marsh Master Interpretive Plan and its products. Each interpretive goal numbered below is followed by related objectives.

1. **Provide year-round interpretive opportunities that facilitate outdoor education programs, enhance visitor understanding and appreciation of the ecological significance of Potter Marsh, and demonstrate the value of managed, wild places within urban landscapes**
  - Within five years, at least ten classrooms and five community groups will use the marsh annually for field trips and education programs.
  - Within one year, the majority of visitors will confirm they received adequate information to have an educational and enjoyable visit.
  - Within one year, the majority of visitors will confirm that Potter Marsh is being adequately managed.
2. **Provide opportunities for visitors to assume responsibility for personal safety and protection of private property**
  - Interpretive messages and regulatory signs will annually decrease negative human-wildlife interactions.
3. **Decrease management costs by encouraging preservation and protection of site resources**
  - Interpretive messages, regulatory signs, and on-site staff will annually decrease both vandalism and littering.
4. **Foster support and stewardship of Potter Marsh resources through partnerships**
  - Within five years, at least five separate partners will be assisting in interpretive programs.
5. **Serve as a model for interpretive sites elsewhere**
  - Within five years, innovative, unique, and accessible interpretative programs and products not employed elsewhere will be implemented and/or installed.
6. **Increase awareness of Potter Marsh as part of the Anchorage Coastal Wildlife Refuge and as a site along the Seward Highway All-American Road**
  - Within five years, the majority of visitors will recognize Potter Marsh as part of the Anchorage Coastal Wildlife Refuge and as a site along the Seward Highway All-American Road.



## OVERVIEW OF RESOURCES

Potter Marsh encompasses a rare combination of scenic, natural, recreational, cultural, historic, and educational resources. Visitors to Alaska expect to see something spectacular, while residents take pride in the state's diversity of landscape and recreational opportunities. Potter Marsh does not disappoint. Rather, it offers both visitors and residents an experience to remember. Potter Marsh is where people go to view large gatherings of trumpeter swans in the fall. In the summer, out-of-state visitors may catch their only glimpse of spawning salmon. Birders flock to the area to view a multitude of birds, including rare Asian migrants. Photographers take satisfaction in capturing arctic terns in flight, moose wading belly-deep through ponds, and seasonal color changes.

### Cultural and Historic History

#### Dena'ina Athabascans

Athabaskan-speaking Dena'ina can be archaeologically identified in the Upper Cook Inlet basin for the first time 1,500 to 1,000 years ago (Kari & Fall, 1987). To some extent, prior use of the Potter Marsh area can be traced through Native place names. The area that became Potter Marsh was called *Hkaditali*, meaning "Drift Lumber," because its beach was a good place to collect debris deposited by storms and tides. Potter Creek was called *Hkaditali Betnu*, or "Drift Lumber Creek" and Rabbit Creek was called *Ggeh Betnu*, meaning "Rabbit Creek," one of the few places where the meaning of a Native place was preserved (or inadvertently chosen) by later residents. (Kari & Fall, 1987).

#### Historic Names

Potter Creek was first surveyed in 1912 by the U.S. Coast and Geodetic Survey (Orth, 1971) and named after a trapper who lived there around the turn of the century (Carberry & Lane, 1986). Other area names were likely derived from the name of Potter Creek. Potter Trail, part of the Iditarod Historic trail system, crossed the Anchorage Bowl and connected with the Johnson Trail at Potter Creek. Potter Marsh was also most likely named after the creek, but record of when it was first used is undocumented.

#### Alaska Railroad

Potter Marsh was formed when construction of the Alaska Railroad embankment limited tidal ingress to a bridge over Rabbit Creek. This embankment impounded the creek and consequently formed the marsh. The railroad built a large camp at Potter Creek at the same time the embankment was built across the tideflats (Prince, 1964). The Potter Section House served as a residence for railroad foremen and crews from 1929 into the 1970s and is the only remaining one of its type. The house is on the National Register of Historic Places and currently functions as the Chugach State Park Headquarters.



Top photo-Potter Section House in 1948

Middle photo-Excursionists at Potter Creek, July 1, 1917

Bottom photo-Alaska Engineer Commissions (AEC) railway freight shed, Potter Creek, mi. 101  
Courtesy of Anchorage Museum of History and Art at the Rasmuson Center

## Natural History

### Geology

Glaciers and tides were the major natural forces that shaped the land that became Potter Marsh. The silt and sand that covers the area is primarily of glacial origin, deposited by ocean currents and tides. The coastal bluffs above the marsh consist of colluvium—chiefly gravel, with some sand, silt, and clay. Several outcrops of bedrock define the eastern edge of Potter Marsh. In the northern part of the marsh the gravel alluvial fans of Rabbit and Little Rabbit creeks are dominant features (MOA, 1980).

The Municipality of Anchorage designated an andesitic dike, located just east of Potter Marsh along the Old Seward Highway, as an Area Meriting Special Attention (AMSA). The dike, which shows andesitic lithology, weathering, and joint patterns, is the only known igneous exposure in the municipality. The feature is described as: (1) an area of unique, scarce, fragile, and vulnerable natural habitat, physical features, and scenic importance; (2) an area of unique geologic significance, that is susceptible to industrial or commercial development; and (3) an area with special scientific values and opportunities (MOA, 2006).



*Andesitic dike*

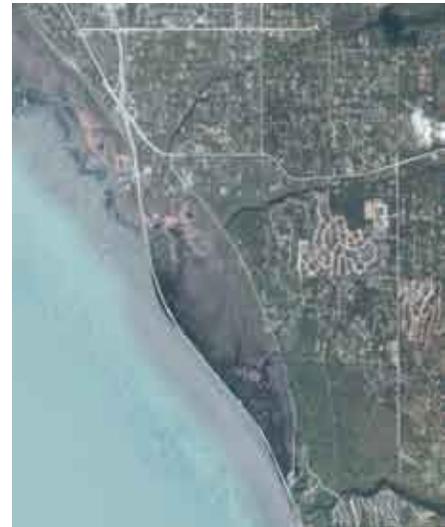
### Soils

Glacial silt is the dominant surficial deposit underlying Potter Marsh (Walsh & Tankersley, 1998). The soil in Potter Marsh is Salamatof peat, a poorly drained soil 63 inches thick consisting of fibrous peat material composed of dark reddish-brown, coarse sphagnum moss and sedge fibers (SCS, 1979; MOA, 1980). The soil is saturated most of the time (SCS, 1979) and increases in organic content with distance from the railroad embankment (Ross, 1964). The outwash plains of Rabbit and Little Rabbit creeks are composed of Moose and Chena river silt loams, poorly drained soils that are frequently flooded for brief periods (SCS, 1979; MOA, 1980).

### Wetlands and Hydrology

Potter Marsh is one of the Municipality of Anchorage's most significant and high-value freshwater wetlands (MOA, 1996). Although three different creeks feed the marsh, approximately three-fourths of the standing surface water in the marsh comes from Little Survival Creek (ADF&G, 1991). Little Survival Creek enters the southeastern portion of the marsh and flows generally northward. This South Potter Marsh drainage basin maintains the water level for most of the ponds used by wetland birds, wildlife, and fish. At the northern end of the marsh, Rabbit and Little Rabbit creeks supply approximately one-fourth of the standing surface water, remaining largely channelized as they flow through the marsh. Interestingly, Potter Creek, just south of the wetland, does not actually flow into the marsh.

Potter Marsh is a tidally influenced place of transition, where freshwater creeks regularly mix with the brackish seawater of Turnagain Arm. During high tides, saline water from Cook Inlet backs into the marsh and inundates the Rabbit Creek delta. The effects of this inundation are limited to the delta area, resulting in higher conductivity, dissolved solids, and salinity levels than elsewhere in the marsh (Walsh & Tankersley, 1998).



*Potter Marsh wetland*



Soft-stemmed bulrush

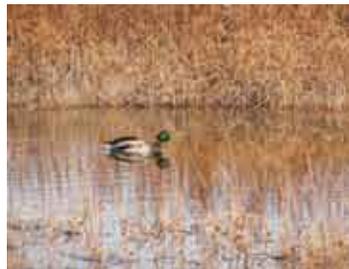
**Vegetation**

Emergent vegetation in Potter Marsh is dominated by bluejoint grass and sedge species in the north and soft-stemmed bulrush in the south (Walsh & Tankersley, 1998). Extensive areas of shrub-bog community are located east of the soft-stemmed bulrush community, where the dominant species are sweet gale and silverweed. Closer to the Rabbit Creek culverts, tidal influx supports a halophytic *Carex* community. Lyngbye sedge is the dominant sedge in this area. Silverweed, marsh arrowgrass, common marehail, pondweed, and soft-stemmed bulrush are also associated with this community. Submerged aquatic plants in open water areas throughout the marsh include water milfoil, greater and lesser bladderwort, pondweed, and narrow-leaved bur reed.

A deciduous forest community fringes the northern and eastern edges of Potter Marsh. Paper birch is the most abundant overstory tree, followed by spruce and black cottonwood, with alder and willow dominating the understory. Also present in the understory are highbush cranberry, American red current, and dwarf birch. See Appendix C for a more extensive list of species.



Horned grebe



Mallard



Northern pintail

**Birds**

In 2003, the Audubon Society nominated Potter Marsh and the rest of the Anchorage Coastal Wildlife Refuge as an Important Bird Area (IBA) of continental significance due to the high concentrations of migrating and nesting waterfowl and shorebirds. Landbirds, including songbirds and raptors, also occur regularly at Potter Marsh in all seasons. See Appendix C for an extensive list of bird species known to visit the marsh.

Potter Marsh supports the highest density of breeding waterfowl in Anchorage (North, 1991). The diverse assemblage of birds that nest in the marsh includes Canada geese, green-winged teals, northern pintails, mallards, American wigeons, northern shovelers, gadwalls, greater and lesser scaups, canvasbacks, red-necked grebes, lesser yellowlegs, red-necked phalaropes, arctic terns, and mew gulls. One of the most conspicuous breeders is the Canada goose, whose numbers comprise approximately 40-60 nesting pairs, while perhaps the rarest breeding bird is the Pacific loon—only a single pair has been known to nest in the marsh.

The clamor of gulls during breeding season at Potter Marsh is a dissonant melody not easily forgotten. The most abundant gull species is the mew gull, whose population has grown from 18 nesting pairs in 1985 to

over 100 pairs (Burger & Gochfield, 1988; Walsh, 1998). A small colony of glaucous-winged gulls nests immediately north of the mew gull colony. Both mew and glaucous-winged gulls prey on the eggs of other species at Potter Marsh (Walsh & Tankersley, 1998). Herring gulls are occasionally noted throughout the marsh; however, no nesting birds have been identified.

At least nine species of shorebirds breed in the marsh; some, like the short-billed dowitcher, prefer the wetland habitats for nesting whereas others, such as the solitary sandpiper, are associated with shrub and forest dominated habitats on the landward side of the marsh. In May and June, the marsh rings with the breeding songs and calls of shorebirds and perhaps the most distinctive sound is the “winnowing” made by Wilson’s snipe during their aerial breeding display flights. An additional 19 species of shorebirds use the marsh as a stopover site during their migrations. Many of these migrants are on their way to non-breeding areas in South America or breeding areas on the North Slope.



*Red-breasted nuthatch*

Over thirty species of songbirds regularly occur at Potter Marsh. Tree and violet-green swallows, among the most numerous songbirds, are highly visible from the boardwalk. Other common songbirds include black-capped chickadees, ruby-crowned kinglets, yellow-rumped and orange-crowned warblers, and fox, song, and white-crowned sparrows. The marsh is one of the few places in Southcentral Alaska where nesting red-winged blackbirds can be found. A breeding pair has been observed in cattail stands at the south end of the marsh (Walsh, 1998).

Northern harriers, bald eagles, great horned owls, and short-eared owls are the most frequently seen raptors. A pair of bald eagles has nested in the cottonwoods of East Potter Marsh for many years.

### **Amphibians**

Potter Marsh provides habitat for one of only two known species of amphibians found in Southcentral Alaska—the wood frog (the other, the boreal toad, has been observed in Prince William Sound). The wood frog can be found in ponds of the deciduous community framing the marsh.



*Wood frog*

### **Mammals**

Potter Marsh supports a diverse population of resident and transient mammals (see Appendix C for a complete list of species). Moose can sometimes be seen wading through ponds, feeding on aquatic or shrubby vegetation. A resident muskrat community is evidenced by the numerous “pushups,” or piles of vegetation used for feeding and resting. A beaver lodge, which can be seen from the existing boardwalk, is a reminder of beaver presence. Least weasels, mink, snowshoe hares, red squirrels, voles, and shrews also dwell in the marsh. Lynx, coyotes, river otters, red foxes, black bears, and porcupines are occasional visitors, and use the marsh as part of their range. Brown bears visit the marsh to feed on salmon during annual runs. These massive mammals favor a small section of Rabbit Creek hidden in the woods between the treeline and Potter Bluff.



*An inquisitive moose*

**Fish**

Potter Marsh contains a mixture of fresh and salt water, which combined with a nutrient-rich environment, contributes to the importance of the marsh as a juvenile fish-rearing area. Rabbit, Little Rabbit, and Little Survival creeks support five populations of salmon: sockeye, chum, pink, coho, and Chinook. Juvenile salmon hatch and live in Potter Marsh up to two years before migrating to sea for maturity. Salmon fry, sticklebacks, and sculpins are found throughout the marsh, providing food for summer birds. Threespine stickleback were the most abundant fish caught in minnow traps in 1996-97 (Walsh, 1998). Small numbers of ninespine stickleback were also present. Dolly Varden trout are sometimes seen tailing salmon in order to consume spawned eggs. Arctic grayling and rainbow trout are also denizens of the marsh.



*Spawning salmon*

Urbanization activities, especially road construction, can prevent fish passage upstream. The ADF&G's Fish Passage Improvement Program determined the extent to which road culverts blocked fish passage in watersheds throughout the state. It was found that the Rabbit Creek culverts on the Seward Highway may be partial barriers to fish passage, but that additional data and further analysis was needed to determine if conditions adversely affected fish populations. Of the two Rabbit Creek culverts on the Old Seward Highway above the marsh, one was found to be inadequate for fish passage and the other needed further analysis. Similarly, of the two Little Rabbit Creek culverts on the Old Seward Highway, one was found to be inadequate for fish passage while the other needed further analysis. The culvert on Little Survival Creek was considered adequate for fish passage.

**Invertebrates**

Aquatic insects and other invertebrates are numerous. Several species have been identified in the marsh including mosquitoes, dragonflies, biting midges, shore flies, predacious diving beetles, and spiders (Wolf, 1983).



*Arctic tern feeding its young a dragonfly*

## Recreation

Potter Marsh offers many year-round recreation opportunities and is generally recognized within the Anchorage community and elsewhere as an indispensable recreation area. Part of the appeal of Potter Marsh is its safe and accessible location; it is easily reached by automobile and provides a reliable location for viewing wildlife on foot or wheelchair. Potter Marsh is a bird-watcher's paradise, with many visitors delighting in the different species represented. Throughout the year, the marsh also provides opportunities for viewing other wildlife species, such as spawning salmon and moose. In winter months, the frozen ponds allow for Nordic skiing, kiteskiing, sledding, hockey, and ice-skating. Year-round, the marsh is an idyllic place for photographers.



*Potter Marsh is an important winter recreation area for local residents*

## Research

Scientists have studied Potter Marsh birds, mammals, invertebrates, and plants. Past research topics include waterbird habitat use, brown bears, invertebrate diets of juvenile fish, and wetland indicator plants. Additionally, the United States Fish and Wildlife Service and Geological Survey maintained a bird-banding station in the eastern part of the marsh from 1992-97.



*Potter Marsh's abundant natural resources provide fodder for scientific research*

## INTERPRETIVE THEMES

Interpretive themes are those ideas, concepts, and stories central to the nature and significance of Potter Marsh. Themes provide the foundation for all interpretive products, while guiding every facet of interpretive program development and delivery. These themes are essential to visitor understanding and appreciation, and although they do not include everything that may be interpreted, they do address ideas that are critical to understanding and appreciating Potter Marsh’s importance.

The following themes and theme statements provide the basis for interpretation at Potter Marsh and offer direction to designers, planners, managers, and partners. The central theme provides the basic context for interpreting and understanding each of the following sub-themes.

### Central Theme

#### PEOPLE AND WILDLIFE COEXISTING

*The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*

Potter Marsh demonstrates the value of managed wild places within urban landscapes, and is a showcase for urban wildlife, drawing both Anchorage residents and tourists during all seasons.



Visitors can view spawning salmon and other wildlife at Potter Marsh

#### Sub-Themes

#### ARTIFICIAL WETLANDS

*Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*

Artificial wetlands may provide similar ecological functions and recreational opportunities as natural wetlands, such as providing flood control, reducing erosion, filtering pollutants, recycling nutrients, and providing a variety of important fish and wildlife habitat for many species and recreational space and scenery for people.



Seward Highway culverts

#### BIRDS

*Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

Resident bird species use Potter Marsh resources to raise their young; for some species this is one of the only sites in the area that provides the right balance of quiet, shelter, and food necessary for nesting and breeding. Migratory birds use the area as a refueling stop and depend on marsh resources to prepare for their long trips. Resident and migratory birds serve important functions in the ecosystem, are indicators of environmental health, and provide recreational opportunities and aesthetics for people.



Mated trumpeter swans at the marsh

## MAMMALS

***Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.***

Many small to moderate-sized mammals live entirely within the marsh and for some large mammals, Potter Marsh is an important part of their range. These mammals serve important ecosystem functions, are indicators of environmental health, and provide recreation and aesthetics for people.



Muskrat

## FISH

***Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.***

Potter Marsh ponds and creeks provide excellent fish rearing habitat. Many species of birds and mammals depend on these fish for food. Salmon species spawn and rear in the marsh and subsistence, sport, and commercial fisherman harvest these salmon.



Salmon alevins

## MULTIPLE-USE

***Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.***

Potter Marsh is a multiple-use area that provides visitors with a range of recreational experiences, while serving as an important place to learn about managed wild places within urban landscapes, urban wildlife, and marsh ecosystems. Potter Marsh is also an important area for research, offering scientists and students the opportunity to design and conduct meaningful social, ecological, and biological research projects.



A winter walk to see the eagles' nest and the sunset

## CHANGE

***Potter Marsh is a dynamic ecosystem.***

Influenced by the seasons and rising visitor numbers, Potter Marsh is a dynamic place, with wildlife and plant community composition reflecting changing water levels affected by deposition. Without human intervention, this deposition would lead to the establishment of new plant communities and eventually Potter Marsh would come to resemble the surrounding forest.



Potter Marsh is scenic during all seasons

## VISITOR PROFILES

Understanding the social characteristics of visitors is just as essential as inventorying physical and biological characteristics. Knowing who Potter Marsh visitors are and their motives for visiting the area helps to best determine the most appropriate interpretive programs and projects to employ. Generally, the attitudes, demographics, knowledge, and needs of Potter Marsh visitors are undocumented. In 1996, the ADF&G attempted to define some of these characteristics for birdwatchers and other wildlife viewers, but the study is becoming outdated. The Potter Marsh Master Interpretive Plan uses information from this study, and from additional interviews and reports, to make assumptions about current Potter Marsh visitors.

### Visitor Demographics

The ADF&G estimates that over 45,000 visits were made to Potter Marsh during the summer of 1997. This number is likely to increase as the number of out-of-state visitors predictably grows, with the fastest growth calculated to be in wildlife viewing sites, like Potter Marsh, that provide for activities that offer a combination of comfort and outdoor recreation-based excitement (Brooks & Haynes, 2001).

In 1996, the majority of summer visitors to Potter Marsh were from the lower 48 or another country (60%), with 56% of respondents female and 44% male. Many respondents were repeat users, with 37% claiming they had previously been to Potter Marsh.

Many people that visit Potter Marsh are self-proclaimed birdwatchers. Survey results found that 72% of respondents claimed they were either beginner or intermediate birdwatchers, while only six percent saw themselves as advanced birdwatchers. Most respondents traveled to Potter Marsh by personal (63%) or rental vehicle (34%). One respondent indicated that they arrived by tour bus. One bicyclist and two walkers were surveyed.

### Visitor Activities

Survey results demonstrated that roughly half of respondents first learned about Potter Marsh from a brochure or guidebook; a friend or relative referred the rest. For many, Potter Marsh was only somewhere they visited on the way to somewhere else (64%), indicating that in the summer Potter Marsh is not a destination in itself. Most respondents revealed that their main reason for stopping at the marsh was to birdwatch (58%). Respondents also came to view wildlife in general (15%), spawning salmon (10%), and mammals (2%). Other reasons people visited the marsh included exercise, photography, relaxation, scenery, and to spend time outdoors with their children. The majority of respondents brought at least one pair of binoculars (57%), and only three percent brought spotting scopes. Most respondents did not bring bird identification guides (73%). Although the average amount of time spent at Potter Marsh was only about 30 minutes, 99% of visitors said their visit to Potter Marsh was worth their time.



## VISITOR EXPERIENCE GOALS

Visitor experience goals describe what physical, intellectual, and emotional experiences will be available to Potter Marsh visitors of all ages and abilities, including those with visual, auditory, mobility, or cognitive impairments. These goals provide direction for the design of interpretive programs and projects.

Visitors to Potter Marsh will have access to interpretation that will:

- help them meet their personal goals in visiting the marsh;
- enhance understanding of Potter Marsh's significance;
- present accurate and consistent information from a variety of sources;
- expand their knowledge and appreciation of urban recreation areas, artificial wetlands, wetland ecology, plant and wildlife communities of Potter Marsh, and stewardship opportunities;
- increase their willingness and ability to incorporate knowledge and appreciation into appropriate conduct and actions; and
- develop a sense of responsibility that will result in actions to protect, support, and promote Potter Marsh and other wetland areas.



*Imprint in snow of an owl striking its prey*

## EXISTING CONDITIONS

The following presents a description of visitor services and conditions as they existed at the onset of the interpretive planning process. This section provides a baseline by which to justify many of the plan's recommendations. Existing conditions are separated into two different categories:

- Personal Services
- Non-Personal Services

### Personal Services

Personal services interpretation is defined as those programs and activities that are presented by paid or volunteer staff.

#### Oral Interpretation

In the past, the Friends of the Anchorage Coastal Wildlife Refuge (FoACWR), formerly known as the Friends of Potter Marsh, sponsored a successful volunteer naturalist program, where naturalists scheduled talks and answered visitors' questions about wildlife. The FoACWR was initially formed to ensure the integrity of Potter Marsh and the rest of the Anchorage Coastal Wildlife Refuge through education and conservation. The revised and updated mission of the organization is to preserve the integrity and biological diversity of the ACWR. This easily damaged subarctic saltmarsh system supports an unusual diversity of plants, birds, mammals, and invertebrates, and is of regional conservation importance. The proximity of the refuge next to Alaska's largest city makes it important for public education and enjoyment but also makes it highly vulnerable.



### Non-Personal Services

Non-personal services interpretation includes interpretive techniques that do not require the presence of staff.

#### Brochure

A brochure about the Anchorage Coastal Wildlife Refuge is available at the ADF&G that includes a map, mission statement, a short description of the refuge, the most common birds, fish and mammals, public access points, and examples of recreational use. Potter Marsh is mentioned frequently throughout the brochure. Another brochure geared specifically towards Potter Marsh was created in the 1980s. Although the brochure is dated and no longer distributed, it contains useful information on bird and mammal species, along with a key to plant communities.



#### Website

Potter Marsh is featured on the ADF&G *Wildlife Viewing Guide* web page. A brief description of the marsh is given and viewing information is provided along with informative links to 14 of the most common bird and mammal species. Several other Internet websites, most sponsored by travel companies, provide information on access, best wildlife viewing times, and species lists.

## Travel Guides

Information on Potter Marsh can be found in publications such as *The Milepost* and *Fodor's*, two popular commercial travel guides. Potter Marsh is also described as one of Anchorage's 'wildlife viewing hotspots' in a viewing guide available in local bookstores (ADF&G, 2004). For visitors researching travel opportunities on the web, online travel guides such as *Virtual Tourist* and *Yahoo Travel* feature Potter Marsh as a not-to-miss destination.



## Field Guide

In 2007, the United States Fish and Wildlife Service and the Anchorage Soil and Water Conservation District published a revision of the *Field Guide to Anchorage Area Wetlands*. The field guide, which highlights Potter Marsh, features information on many local plants and animals found in five generalized wetland types in the Anchorage area. It also describes the ecology and hydrology of wetlands and watersheds, and provides a general overview of wetland regulations and reference information.

## Interpretive Sites

Visitors can access Potter Marsh at four different sites—North, South, East, and West Potter Marsh.

*North Potter Marsh.* In order to provide a safe, accessible, and educational viewing location for wildlife enthusiasts, a 1,550 foot-long boardwalk was constructed at North Potter Marsh in 1985. Paralleling the Seward Highway, this boardwalk traverses the northwestern edge of Potter Marsh. Benefits of this structure include concentration of visitor activity, minimal disturbance to wetland vegetation and nesting waterbirds, salmon viewing without disruption of the riparian zone, and access to the wetland for all levels of physical ability. The most notable shortcomings of the boardwalk are the low amount of adjacent open water for viewing waterbirds, lack of easy access to the marsh for sampling water or vegetation, vibration from boardwalk pedestrians (which disrupts the use of spotting scopes and photography), and traffic noise from the Seward Highway. The six existing interpretive panels have been vandalized and are badly damaged. The boardwalk ends abruptly, with minimal room for visitors to turn around.

To provide for additional wildlife viewing opportunities, a 100 foot-long boardwalk and viewing platform was built in 2006. Similar to the 1,550 foot-long boardwalk, this marsh addition is accessed from the north. One benefit of this boardwalk is its proximity to a deepwater pond frequented by diving bird species.



A North Potter Marsh viewing platform overlooks deep-water ponds



*South Potter Marsh.* Visitors can access the southern portion of the marsh via the Old Seward Highway, where a small pullout area lined with mailboxes serves as the parking lot. This part of the marsh is especially significant because Little Survival Creek, the main feeder creek of the marsh, enters through this region. In winter, many local residents access frozen ponds from here; frosty weekends find the small lot crowded with vehicles and strewn with hockey sticks, sleds, and visitors donning skis and ice skates. South Potter Marsh provides for different wildlife viewing opportunities than other areas of the marsh. In summer, different species of birds visit the deepwater ponds and the muskrat pushups and beaver lodge are viewed best from here.



*Beaver lodge, South Potter Marsh*



*Muskrat pushup, South Potter Marsh*

*East Potter Marsh.* The ADF&G estimates that approximately 200 people visit East Potter Marsh annually via the Old Seward Highway, hoping to view a pair of bald eagles that regularly nest here. The eagles’ nest site sits high up on Potter Bluff, overlooking the entire marsh. Visitors access the viewing area by parking on the narrow highway shoulder and picking their way down an unmaintained dirt trail to the edge of Potter Bluff. From here, visitors are afforded a clear view of a large eagles’ nest atop a towering spruce tree, approximately 350 feet to the southwest.

This area provides a completely different experience from other areas of the marsh for two reasons: visitors are virtually guaranteed to see eagles nesting in their natural habitat and are also provided with the opportunity to view a hardwood forest community. This is one of several nests that an eagle pair has built in the vicinity; prior nests fell down during storms and it is likely the same pair of eagles rebuilt the existing nest. Many visitors that access the eagles’ nest are from out of town—a local tour company advertises this location as part of a scheduled tour. Unfortunately, this area was used as a dumping ground in the past and visitors looking down from the bluff are presented with a view of a massive junk pile. Road signs announcing the site are missing.



*Adult bald eagle feeding its young*



*Two juvenile bald eagles*

*West Potter Marsh.* Three small pullouts on the Seward Highway provide perhaps the most convenient access to Potter Marsh. Highway travelers, looking for photographic opportunities or hoping to spot waterbirds, frequently utilize this popular site. Two of the pullouts are very small and can accommodate only two or three cars. The center pullout is larger and can hold up to ten cars. However, it is not large enough for cars to gain enough speed when accelerating out of the pullout to comply with Alaska Department of Transportation regulations. The highway pullouts are not maintained and lack identification signs.



*West Potter Marsh highway pullout*

### **Information and Orientation**

Information differs from interpretation in presentation style—information is a dispersal of facts while interpretation reveals a story or larger message. Orientation describes how visitors are directed to a site.

*Information.* There are two informational signs on the existing boardwalk at North Potter Marsh. One details regulations prohibiting the feeding of waterfowl. The other presents background and species information on the Anchorage Coastal Wildlife Refuge. Another sign at South Potter Marsh, posted near the southern edge of the parking lot, announces parking lot hours.

*Orientation.* Orientation is a crucial information service that leads visitors to a site easily and safely. Current highway signage on the Seward and Old Seward highways and access roads is limited, especially for visitors accessing the southern and eastern regions of the marsh. Entrance, safety, and regulatory signs are insufficient at all sites.



## RECOMMENDATIONS

The following recommended projects are designed to further define, support, and realize the mission, goals, objectives, and interpretive themes of Potter Marsh. The discussion of each project identifies its purpose and special considerations. Recommendations are prioritized in one of three different phases in the *Implementation Priorities* section of the plan. Recommendations, when implemented, will reach out to a broader audience by employing innovative interpretive techniques, while helping visitors make their own connections with the meanings and significance of Potter Marsh's resources. Target audiences for all projects include school and youth groups, disabled youth and adults, national and international visitors, commercial tour operators, community members, and wildlife and outdoor enthusiasts. Interpretive recommendations are listed on the following pages in four categories:

- Personal Services
- Non-Personal Services
- Education
- Staffing

It is important to recognize these recommendations are only suggestions and should not in any way limit the creativity essential to the project planning and design process. On the other hand, suggestions will be specific enough to provide meaningful guidelines and define parameters within which creative energies can flow.



## Personal Services Recommendations

- Implement guided naturalist tours
- Create a roving interpretive program
- Plan and present a series of special events

### Naturalist Tours

Scheduled naturalist tours given by the ADF&G, the FoACWR, and other partners will give visitors the opportunity to make a personal connection with someone knowledgeable about Potter Marsh, while encouraging visitor appreciation, protection, and stewardship of site resources. This recommendation is predicated by the need to expand interpretive staff at the marsh, a need that is further described in the *Staffing* section of this document. To augment naturalist tours, partnerships will be pursued with other agencies and organizations, including the United States Fish and Wildlife Service, the United States Geological Survey, Audubon Alaska, Anchorage Audubon, the King Career Center, and the Anchorage School District. Meanwhile, current staff will work closely with the FoACWR to re-implement their naturalist program by helping to design regularly scheduled naturalist tours that will incorporate all of Potter Marsh's interpretive themes. Additionally, an on-site volunteer caretaker will help account for staffing shortages by organizing and leading interpretive talks. The caretaker will experiment with the frequency, theme emphasis, group size, and time and length of these tours.

### Roving Interpretation

Roving interpretation is an informal, unstructured, personalized communication between the visitor and interpreter. ADF&G staff, the FoACWR, and the on-site caretaker will practice thematic roving interpretation. Roving interpretation at the marsh will create a greater management presence, which will serve to reduce vandalism and at the same time provide spontaneous and impromptu interpretation to visitors. Basic interpretation of all Potter Marsh themes will be provided to visitors through these unscheduled patrols, which will also serve to welcome and orient visitors, offer assistance, give advice, and provide resource management. Roving interpretation should incorporate all of Potter Marsh's interpretive themes.

### Special Events

Special events sponsored or supported by managers will reach out to a broader audience, thereby invoking increased support of marsh resources. Special events cosponsored by the community will be especially important for local audiences and will serve to integrate Potter Marsh within the community of which it is a part. The proposed outdoor education area is the ideal location for special events. Each event should be compatible with interpretive themes. Suggested events include rehabilitated bird releases, a migratory bird festival that coincides with the City of Homer's annual Shorebird Festival, a spawning salmon day, and a spring bear festival timed with the end of hibernation that highlights the ways that humans and bears coexist.



*A frosty Saturday morning hockey game at South Potter Marsh*

## Non-Personal Services Recommendations

- Implement an audiovisual program that includes podcasting, earthcaching, cell phone interpretation, an enhanced website and blog, and wildlife webcams
- Generate a Potter Marsh brochure
- Improve outreach by partnering with commercial tour operators and through radio, television, and newspaper advertising
- Improve access to the marsh through interpretive site improvements
- Improve information and orientation signage
- Create and install site-specific interpretive exhibits

### Audiovisual Program

In the future, all audiovisual programs created for Potter Marsh will take advantage of the newest digital technology for these reasons: potential for audience diversification, ease of future editing changes, reduced cost, minimal impact, and increased lifespan.

*Podcasting.* A podcast is a digital audio recording made available on the Internet for downloading to a personal computer, iPod, MP3 player, or other personal audio device. One advantage of podcasts is that they can be easily changed and uploaded to the Internet for broadcasting updated information. Another benefit of this technology is that podcasts can be created in different languages, which will dramatically improve site accessibility to Potter Marsh. Multiple podcasts, featuring all of Potter Marsh's interpretive themes, could include a 'what wildlife is in the marsh this week' series, seasonal interpretive messages, bird calls, wood frog calls, and Dena'ina Athabascan words for wildlife species and place names. Links to podcasts will be provided on the Potter Marsh web page.

For more information on podcasts and to listen to examples visit the following websites:

<http://www.ipodder.org>

<http://www.yellowstonepark.com/podcasts/>

*Earthcaching.* Earthcaching is an exciting educational offshoot of the already popular sport of geocaching, an outdoor adventure game in which participants search for a 'cache' that has been hidden by another player. The difference between geocaching and earthcaching is the reward; instead of a cache, earthcachers find the latitude and longitude of special geographic sites around the world. Sites are developed with educational notes, which are posted on the web; earthcachers then visit these sites and leave a log on the web describing their experience. Creating an earthcache at Potter Marsh will help to attract a more diverse audience, educate participants in wetland ecology, and foster support for wild places in urban environments.

For more information on earthcaches visit <http://www.earthcache.org>

*Cell Phone Interpretation.* Cell phones can offer easy, ready access to interpretation. Cell phone audio tours are quickly growing in popularity and currently used throughout the country in outdoor recreation areas, museums, and historic sites. This new technology leverages the visitor's cell phone and provides innovative, cost effective interpretation that can expand and enrich visitor experience, with major advantages being that the tour can be easily updated and provided in different languages. After dialing a phone number, users are offered instructions on how to use the service, which entails entering digits that correspond to the resource they want to learn more about. Some site enhancement would be necessary to implement cell phone tours; one sign informing visitors of the service will be installed at the beginning of the boardwalk and small numbered signs that correspond to cell phone messages may be posted at different sites in the marsh. Cell phone tours will introduce all of Potter Marsh's interpretive themes.

For more information on cell phone interpretation visit <http://www.guidebycell.com>, or call (703) 286-6525 to listen to an example cell phone tour.

*Potter Marsh Web Page and Blog.* Basic information, including common species and contact information, will continue to be available on the ADF&G's Potter Marsh web page: <http://www.wc.adfg.state.ak.us/index.cfm?adfg=viewing.potter>. However, expanding the website would greatly improve visitor services and reach out to a broader audience. Recommended web page links include information on special events, an updated bird list, scheduled interpretive activities, links to other wildlife viewing opportunities in the area, podcasts, earthcache information, webcam images, and a blog for people to record wildlife sightings. Educational and interpretive materials could also be added to the web page. An enhanced website should introduce all Potter Marsh interpretive themes.

*Wildlife Webcams.* Small cameras, mounted at a place with consistent wildlife traffic, will give potential visitors and students the opportunity to observe current viewing opportunities on a minute-to-minute basis. Suggested locations and times include inside the beaver lodge in summer, a muskrat pushup in winter, a bald eagle or other bird nest in summer, and near the Rabbit Creek culvert during salmon spawning season. Webcam output, either real-time still picture or live video, might also be used on local television programs to announce wildlife species using the marsh on a particular day. Furthermore, webcams could provide valuable research needs to biologists by collecting information on the number of salmon passing through the culverts (if live video is used) and documenting the presence of rare migrant birds. Wildlife webcams would incorporate many of Potter Marsh's interpretive themes. Vandalism will be addressed by placing webcams in areas not visible from the boardwalks.



Interpretive panels slated for installment at North Potter Marsh

### Brochure

A Potter Marsh brochure will provide introductory and general information about Potter Marsh and may be used as a marketing tool to attract potential visitors. Interpretive messages on ecological and recreational resources and enough foldouts to display needed text, a detailed map, and photographs may be included. A Potter Marsh brochure incorporating all of Potter Marsh's interpretive themes will be distributed widely to tour operators, rental car businesses, and chambers of commerce. A digital copy of the brochure will be available on the web.

### Outreach

Many Anchorage residents who do not have the opportunity to visit the marsh may not realize the importance of this area and might be better reached through radio, television, and newspaper announcements. Media interactions could include a weekly radio spot featuring wildlife spotted that particular week, advertisements of programs, and a short spot on the Alaska tourist television channel. Also, the ADF&G will work with commercial tour operators to develop materials—Potter Marsh information packets—that can be distributed to commercial tour clients. Care should be taken that outreach does not precede development of services.

### Interpretive Site Improvements

Improvements to interpretive sites will greatly improve access to marsh resources. The installation of enhanced visitor services such as new boardwalks, viewing areas, and facilities will allow managers to reach out to a broader audience by providing for different experiences through multiple access points. A summary of prioritized site improvements on a site by site basis can be found within the *Site-Specific Interpretive Plan* in Appendix D.

### Information and Orientation

Posting additional information and orientation signs will improve visitor experience by minimizing potential frustration caused by inefficient signage. Within interpretive sites, regulatory signs will be posted that will encourage responsible and safe behavior. A summary of suggested sign topics and a locator map can be found within the *Site-Specific Interpretive Plan* in Appendix D.

### Site-Specific Exhibits

Interpretive site-specific exhibits interpret resources 24 hours per day, seven days a week. Located close to the features they interpret, these exhibits readily answer visitors' questions, nurture curiosity, and help facilitate intellectual and emotional connections between visitors and resources. Exhibit topics will avoid being purely informational by addressing interpretive themes' intangible meanings in subtle ways. A prioritized *Site-Specific Interpretive Plan*, recommending interpretive exhibits such as panels, wildlife-shaped benches and bicycle racks, metal bird silhouettes, wildlife track impressions, and bird identification signs can be found in Appendix D.



An interpretive team creates impressions in concrete

## Education Recommendations

- Create a wetlands education program
- Provide teacher trainings
- Create and distribute wetland kits

### Wetlands Education Program

An interpretive wetlands education plan, with specific goals, objectives, and assessment tools, will fill a missing niche in resources available to both the local school district and the larger community. By reinstating the elementary classroom services for springtime visits and paid and/or volunteer staff to serve as boardwalk naturalists, educational opportunities at Potter Marsh will be greatly improved. Additional and complementary educational materials may be provided on the website, to be downloaded and used by educators. Along with this recommendation is the need to expand staff to develop and manage an education program, a need that is further described in the *Staffing and Training* section of this document. One recommended partnership includes the Alaska Association of Conservation Water Education for Teachers (WET) program. Incorporating wetlands educational tools from the ADF&G's award-winning Project WILD would also serve to enhance the current wetland education opportunities available to educators.

### Teacher Trainings

A well-developed education program available to the entire area school district would constitute a huge audience—far beyond the capacity of even an expanded staff system. One way to address this would be to offer teacher training programs. The main outcome of these trainings would be to prepare teachers to take their classes to the marsh and conduct pre-site, on-site, and post-site activities with minimal assistance from staff. This recommendation also predicates the need for additional staff and a structure that could accommodate large groups.

### Wetlands Kit

Wetlands kits will provide educators with a hands-on wetlands education resource. Kits could include a net, a screen for use as a stream trap, a screened bucket, ocular aids, inexpensive hand-held microscopes, a shovel for sampling soil, a thermometer, a core sampler, laminated wildlife ID cards, and the *Wetlands and Wildlife Volume* of the Alaska Wildlife Curriculum. Kits may be expanded to include an activity guide and information on wetlands in winter to promote year-round educational use of the marsh. Wetland kits will be available for checkout at the Alaska Resources Library Information Services (ARLIS) and through the Anchorage School District's science programs.



Turnagain Arm at low tide

## Staffing Recommendations

- Create an on-site volunteer caretaker position
- Task an existing or new ADF&G employee to establish an education program
- Task an existing ADF&G employee to act as the FoACWR liaison

To fully implement the Potter Marsh Master Interpretive Plan, additional staff are necessary to expand and improve the quality of interpretation and education programming.

### Potter Marsh Caretaker

A seasonal caretaker will advertise programs and provide naturalist tours. This individual will also provide security and litter control. To accommodate the caretaker, who will live seasonally in a recreational vehicle, the northern parking lot will be expanded. Training in interpretation and communication skills will be provided.

### Education Position

An existing or new ADF&G employee will develop a wetlands education program for Potter Marsh. Duties will include writing the plan, providing teacher trainings, and developing wetland kits. The key to success in establishing an education program for Potter Marsh is assigning the project to a dedicated employee to oversee the program's development.

### Friends of the Anchorage Coastal Wildlife Refuge Liaison

The FoACWR represent a tremendous resource for Potter Marsh managers. This passionate group of volunteers cares deeply about Potter Marsh and rest of the Anchorage Coastal Wildlife Refuge and is willing to donate time and energy for the conservation of marsh resources. An ADF&G liaison will ensure that the Friends continue to be inspired and that their passion is utilized in the most efficient way possible.



*The existing North Potter Marsh boardwalk and the Chugach Mountains in mid-winter*

## IMPLEMENTATION PRIORITIES

Implementation of the recommendations in this plan will be phased over the next ten years. The projects listed below are separated into priorities based on available funding and current staffing levels. Many items will require additional planning and design efforts. Other actions will be implemented immediately, within existing funding and staffing levels. Changes in staffing, funding, and other unforeseen circumstances may alter priorities. Consequently, the following table shows only general priorities and recommended project launch dates, which may be altered depending on the situation. Specific descriptions of each item can be found in the narrative sections of the document.

	2007-09	2010-13	2014-17
<b>Personal Services</b>			
Naturalist Tours	●		
Roving Interpretation	●		
Special Events	●		
<b>Non-Personal Services</b>			
Audiovisual Program			
Podcasts	●		
Earthcache	●		
Cell Phone Interpretation		●	
Website and Blog		●	
Wildlife Webcams			●
Brochure	●		
Outreach	●		
Interpretive Site Improvements (see Appendix D)	●		
Information and Orientation (see Appendix D)	●		
Site-specific Exhibits (see Appendix D)	●		
<b>Education</b>			
Wetland Education Program		●	
Teacher Trainings			●
Wetland Kits	●		
<b>Staffing and Training</b>			
Caretaker	●		
Education Position		●	
FoACWR Liaison	●		

Table 1. Potter Marsh Interpretive Implementation Priorities

## ISSUES AND INFLUENCES

**M**anagers should keep the following issues and influences in mind when implementing recommendations in this plan.



### Interpretive Issues

#### Package Tourism

Package tourism is growing in popularity and can create funding opportunities to assist in implementing this plan, which will complement some needs and desires of package tourism users. Managers should consider establishing mutually beneficial relationships with package tourism companies to supplement funding and to increase Potter Marsh's marketability and visitation.

#### Electronic Media

Growing reliance on electronic media creates a unique opportunity to develop electronic interpretive messages that not only reach out to a broader audience but are also independent of interpretive staff. The Potter Marsh web page is available to provide access to digital interpretive media such as podcasts and earthcaching links. New technologies will be reevaluated on a regular basis to ensure interpretive media is updated.

### Resource Management Issues

#### Bears

Potter Marsh contains important bear habitat, and uninformed humans may unintentionally infringe on bears' personal space, which could result in human harm. Increased wildlife encounters with bears may also lead to the death of habituated bears. Human safety is a major concern of managers, as is protection of wildlife from human activities. Feeding wildlife, unrestrained pets, and intrusive behavior may negatively affect Potter Marsh wildlife and result in human harm. Interpretation, regulatory messages, and an intensive pack it in pack it out campaign will be implemented to address this potential managerial problem. Additionally, design standards will be strongly mindful of bear and human safety issues. The boardwalk design, including boardwalk elevation, materials, routing, and use of barriers or fencing will discourage dismounts from the boardwalk in the hardwood forest area, especially in areas where bears are known to congregate.



*Brown bears use the marsh during annual salmon runs*

#### Visitor Statistics

A professional, updated visitor study needs to be conducted at Potter Marsh. The most recent visitor study was conducted almost ten years ago and is likely outdated.

## Vandalism

Vandalism of personal property and interpretive media is a problem at Potter Marsh, in part due to lack of surveillance and on-site staff. Vandalism of interpretive panels will be mitigated by installing media fabricated with a high-pressure, vandal-resistant laminate. Two efforts that will be employed to stymie potential vandals include hiring an on-site caretaker and installing ‘neighborhood watch signs.’ Installing digital video or time-lapse cameras may also be effective in discouraging vandals and protecting site resources. Additionally, building strong community partnerships by working with other organizations and agencies to implement naturalist tours and other interpretive programs will foster civic ownership of the marsh, thereby potentially reducing vandalism.



Existing signs at North Potter Marsh



Bird vetch smothers an aspen seedling at South Potter Marsh

## Invasive Species

Invasive species on land and in water can cause significant impacts to native plants and wildlife. Pernicious invasive plant species populations in the beginning stages of establishment at Potter Marsh include *Vicia cracca* (bird vetch) and *Linaria vulgaris* (butter and eggs). *Lythrum salicaria* (purple loosestrife), discovered in other wetland areas in Anchorage but not yet found in the marsh, is an invasive species catastrophic to wetland ecosystems. Preventive and early eradication efforts are important in order to prevent and minimize resource impacts.

## Succession

Succession at the marsh may be affected by external processes, such as a change in water levels, or internal processes, in which vegetative communities create an environment favorable for colonization by other plant and animal species through the process of decay and deposition. Without human intervention, the Potter Marsh wetland will come to resemble the surrounding forest, and the freshwater wetland habitat important to so many people, resident and migratory birds, mammals, amphibians, and invertebrates will be lost. If funding is available, and if it can be shown that dredging projects are consistent with other marsh functions and values, ponds may be periodically dredged. This will ensure that the marsh continues to serve as an important place for people and wildlife.

## External Influences

### Bird Treatment and Learning Center

The Bird Treatment and Learning Center (BTLC) is a private, non-profit organization dedicated to the treatment and rehabilitation of injured wild birds. Their proposed facility would sit on the bluff overlooking Potter Marsh and incorporate a trail system and a boardwalk extension that would link up to the Potter Marsh boardwalk system. In addition to rehabilitating sick, injured, and/or orphaned wild birds and providing avian education programs to the public, BTLC will also offer complementary educational and informational services to visitors.



Dr. Scott, of the BTLC, examines a juvenile goshawk



A BTLC volunteer releases a bald eagle

### Seward Highway All-American Road

Potter Marsh lies at the northernmost end of the nationally designated Seward Highway All-American Road. Since congressional support for All-American Roads ensures a continual stream of funding for prioritized projects, communication and coordination with regional and national Seward Highway All-American Road committee members is important. Partnering with this committee would bring lasting impacts in the way of further visibility, increased marketing opportunities, and linking of Potter Marsh interpretive messages with other sites along the road.

### Seward Highway Realignment

The Alaska Department of Transportation and Public Facilities (DOT&PF) plans significant Seward Highway road realignments within the vicinity of Potter Marsh. Preliminary plans have the highway placed further west, on the other side of the existing railroad embankment out onto the tide flats. There is community support for creating a multi-use trail on the existing roadbed if the road is realigned. However, realignment plans are currently on hold for an undisclosed period due to a lack of available funding. If funding were allocated for implementation of this project, access and aesthetics of Potter Marsh would be affected.

### Watershed Development

The Potter Marsh watershed has experienced significant residential development since the formation of the marsh. Within the past 50 years, substantial proportions of the immediate watershed have been converted from forested land to residences and associated roads (Walsh & Tankersley, 1998). Increasing development of Anchorage's Hillside area may negatively impact Potter Marsh's natural and scenic resources. Further human development in this area could divide wildlife corridors, divert feeder creeks, and contribute to an increase in light and non-point source water pollution.

### Noise

Noise levels in Potter Marsh are highest on the existing boardwalk, likely due to the proximity of the boardwalk to the Seward Highway (Walsh & Tankersley, 1998). Vehicle pullouts along the New Seward Highway experience similar noise disturbance. Providing visitors with additional access opportunities will enhance visitor experience by offering visitors an alternative to the existing traffic-influenced boardwalk. The proposed Seward Highway realignment would minimize noise levels on the existing boardwalk by diverting the highway further away from the marsh.



*The existing boardwalk is just feet away from the Seward Highway All-American Road*

## EVALUATION

While evaluation of any interpretive product is a critical factor to its ongoing success, it is often the most overlooked component. Evaluation of interpretive products helps managers measure whether interpretive goals and objectives are being met. Evaluation will inform managers what's working, what's not working, and enable them to make appropriate changes. Evaluation often saves time and money by allowing managers to avoid management problems by bringing unrealized issues to the forefront.

There are typically six main steps involved in the evaluation process (Veverka, 1998):

- (1) identify the objectives you want to evaluate;
- (2) select the most appropriate evaluation technique or tool;
- (3) apply evaluation techniques and obtain results;
- (4) compare the actual results to those outlined in your objectives;
- (5) analyze the results; and
- (6) make appropriate recommendations for improvement.

The following quantitative and qualitative methods provide several alternatives that could be adapted for use, either formally or informally, on an ongoing basis.

### Quantitative Methods

Quantitative data can provide insight on a breadth of different topics relating to both visitor experience and effectiveness of interpretive methods. In quantitative research, the researcher is ideally an objective observer that neither participates in nor influences what is being studied. One example of a method used to collect quantitative data is a visitor survey questionnaire.

#### Survey Questionnaires

The advantage to this method is that it can be given in multiple ways that typically yield accurate, measurable data. Survey questionnaires can be administered directly to visitors, which is especially effective if the survey contains only multiple-choice questions, or given to the visitor upon leaving the site, to be mailed back anonymously or filled out at the end of the visit and dropped into a collection box. Survey questionnaires can also be given to a large group at one time, with little skill needed to perform the data collection. The disadvantage is that visitors may interpret the questions inaccurately, not return the survey, or be subjected to response bias if administered incorrectly by a researcher.



*The marsh's frozen ponds are perfect for playing hockey*

## Qualitative Methods

Qualitative methods are useful for adding depth and richness to evaluative studies. In qualitative research it is thought that researchers can learn the most about a situation by participating and/or being immersed in it.

### Visitor Observation

Visitors are observed and their behavior and interactions are recorded during application of this method. Different variables chronicled might include the time of day, age groups observed, time spent at particular exhibits, and conversations overheard. Spreadsheets can be developed to log the number of occurrences of certain behaviors and what provoked them.

### Interviews

Sometimes the most obvious and accurate way of measuring visitors' moods, thoughts, attitudes, and behavior is to directly ask what they are thinking, how they feel, and what they would like to see at a specific location. A written set of questions administered orally to visitors can be updated and conducted every three to five years. The interviews should be designed and implemented by an outside agency or individual to account for researcher bias.



*Existing boardwalk in use at Potter Marsh*





# APPENDIX A

## References

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# APPENDIX B

## Planning Team, Partners, and Consultants

# PLANNING TEAM, PARTNERS, AND CONSULTANTS

## Planning Team

### Alaska State Parks

Penny Bauder, Interpretive Planner  
 Bill Evans, Landscape Architect  
 Bill Kiger, Natural Resource/Interpretive Manager

### Alaska Department of Fish and Game

Elizabeth Manning, Wildlife Education and Outreach Specialist  
 Joe Meehan, Wildlife Biologist  
 Rick Sinnott, Wildlife Biologist

## Partners And Consultants

### Anchorage School District

Robby Bear, Secondary Science Support Teacher  
 Joanna Hubbard, Science Specialist

### Audubon Alaska

Rich Capitan, Education Specialist

### Bird Treatment and Learning Center

Rachel Morse, Executive Director  
 Mary Beth Wright, Vice-President

### ConocoPhillips

Caryn Rea, Senior Staff Biologist

### Friends of the Anchorage Coastal Wildlife Refuge

Barbara Carlson, President and Executive Director  
 L. James (Smiley) Shields, Ph.D., Board Member  
 Lee Tibbitts, Board Member  
 Vivian Mendenhall, Ph. D., Board of Directors Secretary

### Great Land Trust

David Mitchell, Conservation Director

### U.S. Fish and Wildlife Service

Kevin Painter, Interpretive and Environmental Education Specialist  
 William Rice, Hydrologist  
 Maureen deZeeuw, Fish and Wildlife Biologist

# APPENDIX C

## Potter Marsh Species Lists

## SPECIES LISTS

### NATIVE PLANTS, SHRUBS, AND TREES (list is not comprehensive)

<i>Alnus tenuifolia</i>	thinleaf alder
<i>Alnus viridis</i>	green alder
<i>Aster junciformis</i>	rush aster
<i>Atriplex gmelinii</i>	Gmelin's saltbrush
<i>Atriplex patula</i>	spear saltbrush
<i>Betula nana</i>	dwarf birch
<i>Betula papyrifera</i>	paper birch
<i>Calamagrostis canadensis</i>	bluejoint grass
<i>Carex lyngbei</i>	lyngbye sedge
<i>Carex ramenskii</i>	Ramensk's sedge
<i>Cicuta virosa</i>	northern water hemlock
<i>Equisetum fluviatile</i>	water horsetail
<i>Glyceria striata</i> var. <i>stricta</i>	fowl mannagrass
<i>Hippuris vulgaris</i>	common maretail
<i>Lemna minor</i>	common duckweed
<i>Lysimachia thyrsoiflora</i>	tufted loosestrife
<i>Maianthemum stellatum</i>	starry false lily of the valley
<i>Malaxis paludosa</i>	bog adder's-mouth orchid
<i>Myrica gale</i>	sweet gale
<i>Oplopanax horridus</i>	devil's club
<i>Pedicularis labradorica</i>	Labrador lousewort
<i>Poa palustris</i>	fowl bluegrass
<i>Myriophyllum</i> spp.	water milfoil
<i>Picea</i> spp.	spruce
<i>Populus trichocarpa</i>	black cottonwood
<i>Potamogeton</i> spp.	pondweed
<i>Potentilla anserine</i>	silverweed
<i>Potentilla palustris</i>	marsh cinquefoil
<i>Puccinellia phryganodes</i>	creeping alkaligrass
<i>Ranunculus aquatilis</i>	white water-buttercup
<i>Ranunculus sceleratus</i>	cursed buttercup
<i>Ribes hudsonianum</i>	northern black current
<i>Ribes triste</i>	American red current
<i>Rosa acicularis</i> subsp. <i>sayi</i>	prickly rose
<i>Rubus arcticus</i>	arctic blackberry
<i>Rubus idaeus</i>	American red raspberry
<i>Ruppia cirrhosa</i>	spiral ditchgrass
<i>Salicornia europaea</i>	grasswort
<i>Salix</i> spp.	willow
<i>Sambucus racemosa</i>	red elderberry
<i>Scirpus maritimus</i>	cosmopolitan bulrush
<i>Scirpus validus</i>	soft-stemmed bulrush
<i>Sorbus scopulina</i>	Greene's mountain ash
<i>Sparganium angustifolium</i>	narrow-leaved bur reed
<i>Stellaria crassifolia</i>	fleshy starwort
<i>Streptopus amplexifolius</i>	claspleaf twisted stalk



<i>Stuckenia filiformis</i>	fineleaf pondweed
<i>Stuckenia pectinata</i>	sago pondweed
<i>Stuckenia vaginata</i>	sheathed pondweed
<i>Typha latifolia</i>	narrow-leafed cattail
<i>Sphagnum</i> spp.	sphagnum moss
<i>Triglochin palustris</i>	marsh arrowgrass
<i>Utricularia minor</i>	lesser bladderwort
<i>Utricularia vulgaris</i>	greater bladderwort
<i>Viburnum edule</i>	squashberry
<i>Zannichellia palustris</i>	horned pondweed

## NON-NATIVE PLANTS

<i>Alopecurus pratensis</i>	meadow foxtail
<i>Linaria vulgaris</i>	butter and eggs
<i>Taraxacum officinalis</i>	dandelion
<i>Trifolium hybridum</i>	alsike clover
<i>Trifolium repens</i>	white clover
<i>Vicia cracca</i>	bird vetch

## FISH

<i>Gasterosteus aculeatus</i>	threespine stickleback
<i>Leptocottus armatus</i>	staghorn sculpin
<i>Oncorhynchus keta</i>	chum salmon
<i>Oncorhynchus kisutch</i>	coho salmon
<i>Oncorhynchus gorbuscha</i>	pink salmon
<i>Oncorhynchus mykiss</i>	rainbow trout
<i>Oncorhynchus nerka</i>	sockeye salmon
<i>Oncorhynchus tshawytscha</i>	Chinook salmon
<i>Pungitius pungitius</i>	ninespine stickleback
<i>Salvelinus malma</i>	Dolly Varden char
<i>Thymallus arcticus</i>	arctic grayling



## BIRDS

### ANSERIFORMES—Family Anatidae: Geese, Swans, and Ducks

#### Geese:

*Anser albifrons*  
*Branta canadensis*  
*Branta hutchinsii*  
*Chen caerulescens*

greater white-fronted goose (R)  
 Canada goose (C\*)  
 cackling goose (R)  
 snow goose (U)



#### Swans:

*Cygnus buccinator*  
*Cygnus columbianus*

trumpeter swan (R)  
 tundra swan (U)



#### Dabbling Ducks:

*Anas acuta*  
*Anas americana*  
*Anas clypeata*  
*Anas crecca*  
*Anas cyanoptera*  
*Anas discors*  
*Anas penelope*  
*Anas platyrhynchos*  
*Anas strepera*  
*Anas querquedula*

northern pintail (C\*)  
 American wigeon (C\*)  
 northern shoveler (U\*)  
 green-winged teal (C\*)  
 cinnamon teal (CA)  
 blue-winged teal (CA)  
 Eurasian wigeon (R)  
 mallard (C\*)  
 gadwall (R\*)  
 garganey (CA)



#### Diving and Seaducks:

*Aythya affinis*  
*Aythya marila*  
*Aythya americana*  
*Aythya collaris*  
*Aythya valisineria*  
*Bucephala albeola*  
*Bucephala clangula*  
*Bucephala islandica*  
*Clangula hyemalis*  
*Melanitta fusca*  
*Mergus serrator*

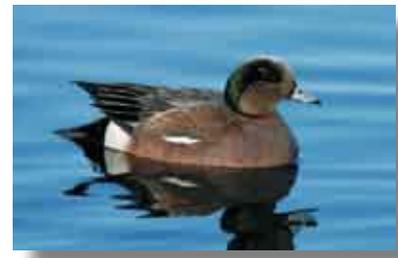
lesser scaup (R\*)  
 greater scaup (U\*)  
 redhead (CA)  
 ring-necked duck (R)  
 canvasback (U\*)  
 bufflehead (R)  
 common goldeneye (U\*)  
 Barrow's goldeneye (U\*)  
 long-tailed duck (CA)  
 white-winged scoter (CA)  
 red-breasted merganser (R)



### GALLIFORMES—Family Phasianidae: Grouse

*Falcipecten canadensis*  
*Lagopus lagopus*

spruce grouse (C\*)  
 willow ptarmigan (R)



#### Status

C Common  
 U Uncommon  
 R Rare  
 CA Casual or accidental  
 \* Known or probable breeder

**GAVIIFORMES—Family Gaviidae: Loons**

*Gavia pacifica* Pacific loon (R\*)



**PODICIPEDIFORMES—Family Podicipedidae: Grebes**

*Podiceps auritus* horned grebe (U\*)  
*Podiceps grisegena* red-necked grebe (C\*)  
*Podilymbus podiceps* pied-billed grebe (CA)

**CICONIIFORMES—Family Ardeidae: Herons and Bitterns**

*Ardea herodias* great blue heron (CA)

**FALCONIFORMES—Family Accipitridae: Hawks, Eagles, and Allies**

*Accipiter gentilis* northern goshawk (U\*)  
*Accipiter striatus* sharp-shinned hawk (U)  
*Aquila chrysaetos* golden eagle (R)  
*Buteo jamaicensis* red-tailed hawk (U\*)  
*Buteo lagopus* rough-legged hawk (U)  
*Circus cyaneus* northern harrier (U\*)  
*Haliaeetus leucocephalus* bald eagle (U\*)  
*Pandion haliaetus* osprey (R)



**FALCONIFORMES—Family Falconidae: Falcons**

*Falco columbarius* merlin (U\*)  
*Falco peregrinus* peregrine falcon (R)  
*Falco sparverius* American kestrel (CA)  
*Falco rusticolus* gyrfalcon (CA)

**GRUIFORMES—Family Rallidae: Rails and Coots**

*Fulica americana* American coot (CA)

**GRUIFORMES—Family Gruidae: Cranes**

*Grus canadensis* sandhill crane (R\*)

**CHARADRIIFORMES—Family Charadriidae: Plovers**

*Charadrius semipalmatus* semipalmated plover (C\*)  
*Charadrius vociferous* killdeer (R\*)  
*Pluvialis dominica* American golden plover (R)  
*Pluvialis fulva* Pacific golden plover (U)  
*Pluvialis squatarola* black-bellied plover (R)



Status

- C Common
- U Uncommon
- R Rare
- CA Casual or accidental
- \* Known or probable breeder

**CHARADRIIFORMES—Family Scolopacidae: Sandpipers, Phalaropes, and Allies**

<i>Actitis macularius</i>	spotted sandpiper (U*)
<i>Aphriza virgata</i>	surfbird (U)
<i>Arenaria interpres</i>	ruddy turnstone (R)
<i>Arenaria melanocephala</i>	black turnstone (R)
<i>Calidris alpina</i>	dunlin (R)
<i>Calidris bairdii</i>	Baird's sandpiper (R)
<i>Calidris mauri</i>	western sandpiper (C)
<i>Calidris melanotos</i>	pectoral sandpiper (U)
<i>Calidris minutilla</i>	least sandpiper (C*)
<i>Calidris pusilla</i>	semipalmated sandpiper (U)
<i>Calidris ptilocnemis</i>	rock sandpiper (CA)
<i>Calidris acuminata</i>	sharp-tailed sandpiper (CA)
<i>Gallinago delicata</i>	Wilson's snipe (C*)
<i>Limnodromus griseus</i>	short-billed dowitcher (C*)
<i>Limnodromus scolopaceus</i>	long-billed dowitcher (U)
<i>Limosa haemastica</i>	Hudsonian godwit (R)
<i>Numenius phaeopus</i>	whimbrel (R)
<i>Phalaropus lobatus</i>	red-necked phalarope (U*)
<i>Philomachus pugnax</i>	ruff (CA)
<i>Tringa incana</i>	wandering tattler (R)
<i>Tringa melanoleuca</i>	greater yellowlegs (C)
<i>Tringa flavipes</i>	lesser yellowlegs (C*)
<i>Tringa solitaria</i>	solitary sandpiper (U*)

**CHARADRIIFORMES—Family Laridae: Skuas, Gulls, and Terns**

<i>Larus hyperboreus</i>	glaucous gull (CA)
<i>Larus glaucescens</i>	glaucous-winged gull (C*)
<i>Larus argentatus</i>	herring gull (U*)
<i>Larus canus</i>	mew gull (C*)
<i>Larus philadelphia</i>	Bonaparte's gull (U*)
<i>Stercorarius parasiticus</i>	parasitic jaeger (CA)
<i>Sterna paradisaea</i>	arctic tern (C*)

**COLUMBIFORMES—Family Columbidae: Pigeons and Doves**

<i>Columba livia</i>	rock pigeon (R)
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**STRIGIFORMES—Family Strigidae: Typical Owls**

<i>Aegolius funereus</i>	boreal owl (R)
<i>Aegolius acadicus</i>	northern saw-whet owl (CA)
<i>Asio flammeus</i>	short-eared owl (R*)
<i>Bubo virginianus</i>	great horned owl (U*)

**Status**

C	Common
U	Uncommon
R	Rare
CA	Casual or accidental
*	Known or probable breeder

*Surnia ulula* northern hawk owl (CA)

**CORACIIFORMES—Family Alcedinidae: Kingfishers**

*Ceryle alcyon* belted kingfisher (U\*)

**PICIFORMES—Family Picidae: Woodpeckers and Allies**

*Colaptes auratus* northern flicker (U\*)  
*Picoides pubescens* downy woodpecker (U\*)  
*Picoides villosus* hairy woodpecker (U\*)

**PASSERIFORMES—Family Tyrannidae: Tyrant Flycatchers**

*Contopus cooperi* olive-sided flycatcher (U\*)  
*Contopus sordidulus* western wood-pewee (U\*)  
*Empidonax alnorum* alder flycatcher (C\*)

**PASSERIFORMES—Family Laniidae: Shrikes**

*Lanius excubitor* northern shrike (U\*)

**PASSERIFORMES—Family Corvidae: Crows and Jays**

*Corvus corax* common raven (C\*)  
*Cyanocitta stelleri* Steller's jay (R)  
*Perisoreus canadensis* gray jay (R)  
*Pica hudsonia* black-billed magpie (C\*)

**PASSERIFORMES—Family Hirundinidae: Swallows**

*Hirundo pyrrhonota* cliff swallow (U)  
*Hirundo rustica* barn swallow (CA)  
*Riparia riparia* bank swallow (C)  
*Tachycineta bicolor* tree swallow (U\*)  
*Tachycineta thalassina* violet-green swallow (C\*)



Status

C	Common
U	Uncommon
R	Rare
CA	Casual or accidental
*	Known or probable breeder

**PASSERIFORMES—Family Paridae: Chickadees**

<i>Poecile atricapillus</i>	black-capped chickadee (C*)
<i>Poecile hudsonica</i>	boreal chickadee (U*)

**PASSERIFORMES—Family Sittidae: Nuthatches**

<i>Sitta canadensis</i>	red-breasted nuthatch (U*)
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**PASSERIFORMES—Family Certhiidae: Creepers**

<i>Certhia americana</i>	brown creeper (U*)
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**PASSERIFORMES—Family Regulidae: Kinglets**

<i>Regulus calendula</i>	ruby-crowned kinglet (C*)
<i>Regulus satrapa</i>	golden-crowned kinglet (U)

**PASSERIFORMES—Family Turdidae: Thrushes**

<i>Catharus guttatus</i>	hermit thrush (U*)
<i>Catharus minimus</i>	gray-cheeked thrush (R)
<i>Catharus ustulatus</i>	Swainson's thrush (U*)
<i>Ixoreus naevius</i>	varied thrush (U*)
<i>Turdus migratorius</i>	American robin (U*)

**PASSERIFORMES—Family Motacillidae: Wagtails and Pipits**

<i>Anthus rubescens</i>	American pipit (U)
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**PASSERIFORMES—Family Sylviidae: Wood-Warblers**

<i>Dendroica coronata</i>	yellow-rumped warbler (C*)
<i>Dendroica petechia</i>	yellow warbler (U*)
<i>Dendroica striata</i>	blackpoll warbler (R*)
<i>Dendroica townsendi</i>	Townsend's warbler (U*)
<i>Geothlypis trichas</i>	common yellowthroat (CA)
<i>Seiurus noveboracensis</i>	northern waterthrush (R*)
<i>Vermivora celata</i>	orange-crowned warbler (C*)
<i>Wilsonia pusilla</i>	Wilson's warbler (U*)

**Status**

C	Common
U	Uncommon
R	Rare
CA	Casual or accidental
*	Known or probable breeder

**PASSERIFORMES—Family Emberizidae: Emberizids**

<i>Calcarius lapponicus</i>	lapland longspur (U)
<i>Junco hyemalis</i>	dark-eyed junco (C*)
<i>Melospiza lincolnii</i>	Lincoln’s sparrow (C*)
<i>Passerella iliaca</i>	fox sparrow (C*)
<i>Melospiza melodia</i>	song sparrow (R*)
<i>Melospiza georgiana</i>	swamp sparrow (CA)
<i>Passerculus sandwichensis</i>	savannah sparrow (C*)
<i>Plectrophenax nivalis</i>	snow bunting (R)
<i>Spizella arborea</i>	American tree sparrow (R)
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow (U*)
<i>Zonotrichia leucophrys</i>	white-crowned sparrow (C*)



**PASSERIFORMES—Family Icteridae: Blackbirds**

<i>Agelaius phoeniceus</i>	red-winged blackbird (R*)
<i>Euphagus carolinus</i>	rusty blackbird (U*)
<i>Molothrus ater</i>	brown-headed cowbird (CA)
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird (CA)



**PASSERIFORMES—Family Fringillidae: Fringilline and Cardueline Finches**

<i>Carduelis flammea</i>	common redpoll (U*)
<i>Carduelis pinus</i>	pine siskin (U*)
<i>Loxia leucoptera</i>	white-winged crossbill (R*)
<i>Pinicola enucleator</i>	pine grosbeak (U*)

Status

- C Common
- U Uncommon
- R Rare
- CA Casual or accidental
- \* Known or probable breeder

**MAMMALS****INSECTIVORA—Family Soricidae: Shrews**

<i>Sorex cinereus</i>	masked shrew
<i>Sorex vagrans</i>	vagrant shrew

**CARNIVORA—Family Ursidae: Bears**

<i>Ursus americanus</i>	black bear
<i>Ursus arctos</i>	brown bear

**CARNIVORA—Family Mustelidae: Weasels, Skunks, etc.**

<i>Lutra canadensis</i>	river otter
<i>Mustela erminea</i>	short-tailed weasel
<i>Mustela rixosa</i>	least weasel
<i>Mustela vison</i>	mink

**CARNIVORA—Family Canidae: Dogs, Wolves, and Foxes**

<i>Canis latrans</i>	coyote
<i>Vulpus vulpus</i>	red fox

**CARNIVORA—Family Felidae: Cats**

<i>Felis canadensis</i>	lynx
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**RODENTIA—Family Sciuridae: Squirrels**

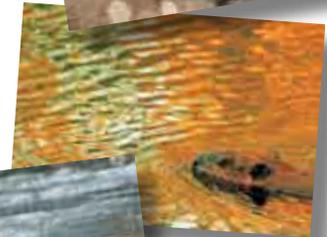
<i>Tamiasciurus hudsonicus</i>	red squirrel
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**RODENTIA—Family Castoridae: Beaver**

<i>Castor canadensis</i>	beaver
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**RODENTIA—Family Cricetidae: Mice, Rats, Lemmings, and Voles**

<i>Clethrionomys rutilus</i>	red-backed vole
<i>Microtus pennsylvanicus</i>	meadow vole
<i>Ondatra zibethicus</i>	muskrat
<i>Zapus hudsonius</i>	meadow jumping rat



**RODENTIA—Family Erethizontidae: Porcupine**

*Erethizon dorsatum* porcupine



**LAGOMORPHA—Family Leporidae: Hares and Rabbits**

*Lepus americanus* snowshoe hare



**ARTIODACTYLA—Family Cervidae: Deer**

*Alces alces* moose  
*Odocoileus hemionus* Sitka black-tailed deer





# APPENDIX D

## Potter Marsh Site-Specific Interpretive Plan

## POTTER MARSH SITE-SPECIFIC INTERPRETIVE PLAN

Recommendations to develop and enhance on the ground interpretation at Potter Marsh are divided into the following six sections on the following pages:

- Interpretive site improvements
- Information and orientation signs
- Interpretive exhibits
- Site-specific implementation priorities
- Interpretive panel topic summary
- Interpretive panel design guidelines

Improvements are first recommended for each of the four different interpretive sites at Potter Marsh: North, South, East, and West Potter Marsh. Second, suggestions are provided on content and placement of information and orientation signs. Third, recommendations are supplied for 35 interpretive exhibits, including suggestions on placement, topic, interpretive theme focus, media type, objectives, and implementation priority. Interpretive exhibits are numbered and mapped to provide a visual overview of each project. Implementation priorities, a summary of proposed interpretive panel topics, and panel design guidelines are presented after project recommendations.

Suggested site-specific interpretive projects are categorized into one of five different phases, based in part on location, with phase one being the highest priority. Available funding and visitor use data was also taken into consideration when placing recommendations into phases. It is important to remember that this is not a fixed schedule, but should be used as a guideline for implementation—the phased projects may be implemented in any order at any time.

Funding has already been acquired for many interpretive projects in phases I, II, and III. Additional funding and interpretive evaluation may provoke managers to make changes to recommended projects. Additional design documents will need to be created to implement many of the recommendations.

## Interpretive Site Improvements

Improving and updating access at the four different interpretive sites at Potter Marsh—North, South, East, and West Potter Marsh—will enrich visitor experience by increasing accessibility to marsh ecosystems. For implementation priorities of specific improvements, see table D-1.

### North Potter Marsh Recommendations

- Add interpretation in northern parking lot
- Replace interpretation on existing boardwalk
- Build 800 foot-long boardwalk extension
- Install loop trail
- Build Bird Treatment and Learning Center (BTLC)
- Extend boardwalk to the proposed BTLC
- Build outdoor education facility

#### Parking Lot Interpretation

Improving interpretation in the parking lot will serve to set an initial positive impression on visitors by reaching them the moment they arrive at Potter Marsh (figs. D-1 and D-2). Funding has already been allocated for this recommendation and the project is in the design phase. See the *Interpretive Exhibits* section of this document for further information on proposed interpretive projects.

#### Existing Boardwalk

Damaged interpretive panels on the existing boardwalk will be removed and replaced (fig. D-3). Funding has already been allocated to replace the panels. A small viewing platform may be constructed at the end of the boardwalk to improve visitor traffic flow and facilitate a more pleasurable visitor experience. See the *Interpretive Exhibits* section of this document for further information on proposed interpretive projects.

#### 800 Foot-Long Boardwalk Extension

An additional 800 foot-long ADA accessible boardwalk will greatly enhance the quality of visitor experience in Potter Marsh by providing visitors with an alternative viewing experience, while minimizing possible noise disturbance by virtue of being placed further away from the Seward Highway (fig. D-4). The proposed boardwalk extension will allow for increased wildlife viewing opportunities at Potter Marsh by providing for visitor access to the different vegetative communities in the marsh. In addition, extending the boardwalk will provide enhanced viewing of a beaver dam and nesting bald eagles. Creating viewing platforms that overlook ponds and installing interpretation will allow visitors to experience and learn about wetland ecology and the different types of bird species associated with these deepwater ponds. Funding has already been allocated for this recommendation and the project is in the design phase. See the *Interpretive Exhibits* section of this document for further information on proposed interpretive projects.

#### Loop Trail

Adding a loop trail from the middle of the proposed 800 foot-long boardwalk to the parking lot will provide visitors with a different recreational and educational experience by guiding them off the boardwalk and through a deciduous forest community (fig. D-4). Trail users will have the opportunity to experience marsh succession and salmon migrating up creeks, encounter signs of large mammals, and view woodland birds. Giving visitors two different alternatives to return to the parking lot will improve traffic flow on the boardwalk. Keeping the trail free of interpretive displays will provide for a different type of experience by allowing visitors to interpret for themselves the sights and sounds they encounter on the trail. Potential negative human/wildlife interactions will be mitigated through trail design and interpretive and management signs at the trailhead.

### **Bird Treatment and Learning Center**

A Bird Treatment and Learning Center (BTLC) complex on Potter Bluff will link up to the Potter Marsh boardwalk system via a boardwalk extension (fig. D-5). Besides a 15,000-20,000 square-foot facility, the BTLC complex will also include trails, a botanical garden, and native plant landscaping. In addition to rehabilitating sick, injured, and/or orphaned wild birds and providing avian education programs to the public, the BTLC will also offer interpretive and informational services complementary to Potter Marsh themes and programs. The BTLC has the potential to attract a variety of birds and mammals throughout the year. Moose, bears, eagles, ravens, and magpies have all been observed utilizing the bluff overlooking Potter Marsh. The auxiliary parking that the BTLC will provide will mitigate potential parking problems at Potter Marsh. Other potential sites for the BTLC besides the property on Potter Bluff include private property north of the unused runway and on the runway itself.

### **Boardwalk Extension to the BTLC**

Once the BTLC is constructed, the boardwalk could be extended up the bluff to connect with the center, providing a direct link between the two areas (fig. D-5). See the *Interpretive Exhibits* section of this document for further information on proposed interpretive projects.

### **Outdoor Education Facility**

A sheltered outdoor education facility constructed on the unused runway will offer a much-needed resource to the community and provide a perfect setting for special events (fig. D-4). This facility would offer visitors a crucial link to the different ecosystems within the marsh and serve as a complement to the proposed BTLC. By situating the education facility on the unused runway, easy access to parking lot bathrooms will be afforded, which will make the area more usable for school groups. Other benefits of locating the education area on the runway include low building costs (since the area is already cleared), water access, and proximity to different marsh ecosystems and transition zones. Installing benches, wooden box ‘desks’ ideal for groups to gather around, and a locked, educator’s ‘toolbox’ (which could house educational materials) will increase the facility’s appeal to educators. An online calendar on the Potter Marsh web page would allow users to check for facility availability and prevent potential time conflicts.

## **South Potter Marsh Recommendations**

- Improve parking lot
- Build boardwalk and wildlife viewing tower

### **Parking Lot Improvements**

Low-impact upgrades at South Potter Marsh will provide additional interpretive opportunities for visitors (fig. D-6). Paving the pullout area and moving the mailboxes will better accommodate visitors by facilitating traffic flow and providing more room for parking. Highway signs may be installed to inform travelers of this interpretive site. The Alaska Department of Transportation will need to be consulted to approve any recommended upgrades at this location.

### **Wildlife Viewing Tower**

A short, winter-friendly boardwalk terminating at a small, elevated viewing tower will provide visitors with additional wildlife viewing opportunities. Designing the viewing tower to overlook deeper ponds and installing a wildlife blind and vibration-resistant spotting scopes will accommodate bird watchers and other wildlife viewing enthusiasts; interpretative installations will further improve visitor experience. Benches and a removable burn barrel would enhance visitor experience for winter enthusiasts. Addressing current trail erosion in the site plans will ensure boardwalk longevity. See the *Interpretive Exhibits* section of this document for further information on proposed interpretive projects.

## East Potter Marsh Recommendations

- Install interpretive trail
- Build wildlife viewing platform

### Interpretive Trail

Installing a trail from the BTLC property would improve access to East Potter Marsh and the eagles' nest (fig. D-5). This trail will offer visitors a chance to stretch their legs, experience the hardwood forest community, and catch panoramic views of Potter Marsh and Turnagain Arm. One major benefit of routing visitors to the eagles' nest from the BTLC property is the ample parking the site provides. Another option is to install a small parking area off the Old Seward Highway, adjacent to the eagles' nest trailhead. However, due to the small shoulder, the area would not be able to accommodate more than a few cars. The Alaska Department of Transportation will need to be consulted to approve this parking area.

### Wildlife Viewing Platform

The trail from the Old Seward Highway to the eagles' nest will be improved by upgrading the dirt path to a gravel walkway. A small, low-impact, temporary viewing platform at ground level, approximately 10 to 15 feet wide, will provide visitors with the ideal setting in which to view the nesting bald eagles. The platform, placed the recommended 300 feet away from the nest so as not to disturb eagle brood-rearing, may include a visual barrier or a lattice on the back side of the platform to shield visitors from highway traffic. Cleaning up the trash dump at the toe of the bluff, brushing branches from the trail and the view site, and installing interpretation will further facilitate an excellent wildlife viewing experience. It is important to keep in mind that all upgrades to this site should be temporary and portable, as the eagles have had to relocate their nest several times in the past decade. However, if the eagles do move their nest, based on past behavior it is likely that they would locate it somewhere between the BTLC property and the current site. See the *Interpretive Exhibits* section of this document for further information on proposed interpretive projects.

## West Potter Marsh Recommendations

- Improve center Seward Highway pullout
- Rehabilitate southern Seward Highway pullout

### Center Seward Highway Pullout

Improving the center highway pullout will result in outreach to a broader audience by encouraging visitors traveling the Seward Highway to spontaneously stop at the marsh (fig. D-6). Enlarging and paving the pullout and installing proper highway signage will address safety concerns. Interpretation will offer visitors educational and informational opportunities while at the same time link Potter Marsh to the Seward Highway All-American Road. Interpretive panels should be low enough so as not to block the view of the marsh, but high enough not to become a traffic hazard. Panels may need to be removed to accommodate snow plows. See the *Interpretive Exhibits* section of this document for further information on proposed interpretive projects.

### Southern Seward Highway Pullout

As compensation for improving and upgrading the center highway pullout, the southern Seward Highway pullout will be removed. The Alaska Department of Transportation will need to be consulted to approve any recommended upgrades at this location.

## Information and Orientation Signs

Installing additional information signs at interpretive sites within Potter Marsh may improve visitor compliance with management regulations. Installation of orientation signs will promote visitor safety and site accessibility. See figure D-7 for recommended sign placement.

### Information Signs

- Bikes and skateboarding prohibited
- Pack it in, pack it out
- Neighborhood watch

#### Bikes and Skateboarding Prohibited

Two signs posted at North Potter Marsh, one on the bulletin board and another near boardwalk entrances, will inform visitors that wheeled recreation activities are prohibited on boardwalks and near display areas.

#### Pack It In, Pack It Out

Pack it in, pack it out signs posted at North, South, and East Potter Marsh access points will address potential negative wildlife encounters resulting from unsecured garbage. Additionally, signs suggesting appropriate behavior during specific types of wildlife encounters may also be posted on the orientation kiosk bulletin board.

#### Neighborhood Watch

Installation of Potter Marsh ‘neighborhood watch’ signs at access points may mitigate destruction of site resources by vandals.

### Orientation Signs

- Seward Highway
- Old Seward Highway
- Entrance areas

#### Seward Highway

Replacing the two existing highway signs that currently direct visitors to North Potter Marsh with signs that have improved visibility and identify Potter Marsh as part of the Anchorage Coastal Wildlife Refuge will assist in routing visitors safely to the marsh. The installation of two additional signs directing north and southbound visitors to South Potter Marsh will improve visitor orientation and circulation. The Alaska Department of Transportation will need to be consulted to approve highway signs.

#### Old Seward Highway

To inform visitors of the eagles’ nest trail, two signs will be installed on the highway both north and south of the trailhead. The Alaska Department of Transportation will need to be consulted to approve highway signs.

#### Entrance Areas

Installing entrance and/or welcome signs at all four access points will let visitors know they have reached their destination and are about to enter a special place. Signs may inform visitors that the ADF&G manages the marsh.

## Interpretive Exhibits

The following 35 recommended interpretive exhibits are driven by Potter Marsh's seven interpretive themes. These themes are central to the nature and significance of Potter Marsh and provide the basic foundation for all interpretive exhibits.

### Central Theme

#### PEOPLE AND WILDLIFE COEXISTING

*The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*

#### Sub-Themes

##### ARTIFICIAL WETLANDS

*Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*

##### BIRDS

*Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

##### MAMMALS

*Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

##### FISH

*Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*

##### MULTIPLE-USE

*Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*

##### CHANGE

*Potter Marsh is a dynamic ecosystem.*

**Project #1**

**Location:** North Potter Marsh parking lot (figs. D-1 and D-2)

**Working Title:** Wildlife Track, Feather, and Leaf Impressions

**Recommended Interpretive Media:**

- Wildlife track replicas of lynx, snowshoe hare, owl, porcupine, fox, shrew, river otter, brown and black bear, sparrow, raven, and Canada goose
- Bird feather impressions
- Birch, alder, cottonwood, and aspen leaf impressions

**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will identify Potter Marsh as important wildlife habitat. The majority of visitors will also identify Potter Marsh as a place to learn about wildlife.

**Description:**

Impressions of wildlife tracks, feathers, and leaves will be created in drying concrete adjacent to the boardwalk entrance and in the planter on the southern end of the parking lot. Materials will need to be placed into the concrete within one hour of pouring in order to create impressions before the concrete hardens. The following impressions will be created in the concrete ground adjacent to the boardwalk entrance:

- Lynx stalking a snowshoe hare
- Owl striking a shrew
- Porcupine walking
- Fox walking, sniffing, then urinating on the concrete planter
- Canada goose walking
- River otter running and sliding
- Brown and black bears walking

The following impressions will be created on the concrete planter:

- Porcupine, lynx, fox, shrew, raven, and Canada goose tracks
- Bird feathers
- Tree leaves

### **Implementation Priority: Phase I**



**Project #2****Location:** North Potter Marsh parking lot (figs. D-1 and D-2)**Working Title:** Interpretive Bike Racks**Recommended Interpretive Media:** Two interpretive bike racks shaped like a pair of mated swans**Interpretive Theme:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will identify Potter Marsh as bird habitat. The majority of visitors will also gain an appreciation of the size and shape of trumpeter swans.

**Description:**

Two interpretive bike racks shaped like a pair of mated swans will be installed at the southern end of the northern parking lot, just west of the boardwalk entrances.

**Implementation Priority: Phase I**

**Project #3a**

**Location:** North Potter Marsh boardwalk entrance (fig. D-2)

**Working Title:** Did you know you're visiting the Anchorage Coastal Wildlife Refuge?

**Recommended Interpretive Media:** 30.5" x 36.5" interpretive panel

**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*

**Text Direction:**

A short text block orients people to Potter Marsh, within the context of the Anchorage Coastal Wildlife Refuge. Another text block informs visitors when and why the refuge was established and that it is managed by the Alaska Department of Fish and Game. Text also describes what other recreation opportunities are available at the refuge.

**Suggested Graphics:**

Images may include an overview map of the Anchorage Coastal Wildlife Refuge, an inset map of other refuges in the state, and an inset map of Potter Marsh, which should highlight area creeks and the Seward Highway All-American Road.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will recognize Potter Marsh as part of the Anchorage Coastal Wildlife Refuge.

**Description:**

This panel will be part of a four-paneled type-B interpretive kiosk (fig. D-8).

**Implementation Priority: Phase I**

**Project #3b**

**Location:** North Potter Marsh boardwalk entrance (fig. D-2)

**Working Title:** Anchorage's Wild Side

**Recommended Interpretive Media:** 30.5" x 36.5" interpretive panel

**Interpretive Theme:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*

**Text Direction:**

A short text block presents Potter Marsh and Anchorage as unique places where people and wildlife can successfully coexist. Another text block lists different ways that preserving wildlife habitat is good not only for the environment, but also for people. A third text block briefly talks about what visitors can do both at home and at the marsh to live in harmony with wildlife.

**Suggested Graphics:**

Panel images might include both moose and bears, with people in the background.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to give three reasons why wild places in urban landscapes are important to wildlife, the community, and/or the environment. The majority of visitors will also be able to list three things they can do to help protect wildlife and wildlife habitat.

**Description:**

This panel will be part of a four-paneled type-B interpretive kiosk (fig. D-8).

**Implementation Priority: Phase I**

### **Project #3c**

**Location:** North Potter Marsh boardwalk entrance (fig. D-2)

**Working Title:** Creation of Potter Marsh: from Estuary to Freshwater Marsh

**Recommended Interpretive Media:** 30.5” x 36.5” interpretive panel

#### **Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Potter Marsh is a dynamic ecosystem.*

#### **Text Direction:**

A short text block offers the viewer a history of the Alaska Railroad and gives specific examples of activities that led to the development of the marsh. Another text block emphasizes the importance of artificial wetlands, highlighting that Potter Marsh is a dynamic ecosystem, that without specific management practices will come to resemble the surrounding forest. Other text explains the importance of the estuary and salt marsh habitat that Potter Marsh replaced, which was an ecosystem just as productive and valuable as the current wetland.

#### **Suggested Graphics:**

Panel images may include historic images of the Alaska Railroad and an areal image of the entire marsh.

#### **Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that humans unintentionally created Potter Marsh. The majority of visitors will also be able to list two different management practices that must be performed in order to maintain the marsh for wildlife habitat.

#### **Description:**

This panel will be part of a four-paneled type-B interpretive kiosk (fig. D-8).

#### **Implementation Priority: Phase I**

**Project #3d**

**Location:** North Potter Marsh boardwalk entrance (fig. D-2)

**Working Title:** Potter Marsh Information and Regulations

**Recommended Interpretive Media:** 30.5" x 36.5" bulletin board

**Interpretive Theme:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*

**Text Direction:**

Professional-looking, removable fliers will be produced on the following topics and installed on the bulletin board: safety concerns (moose and bear), regulations on dogs and feeding wildlife, viewing ethics, invasive species prevention (purple loosestrife and bird vetch), species lists, volunteer opportunities, upcoming events, contact information, trail descriptions, what to expect on each trail, and other sites to visit in the marsh.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least three different management regulations. The majority of visitors will also be able to state that there are four different sites to visit at Potter Marsh, each offering unique wildlife viewing opportunities.

**Description:**

This panel will be part of a four-paneled type-B interpretive kiosk (fig. D-8).

**Implementation Priority: Phase I**

**Project #4**

**Location:** North, South, and East Potter Marsh boardwalks (figs. D-2, D-3, D-4, and D-5)

**Working Title:** Burned-in Wildlife Tracks

**Recommended Interpretive Media:** Propane branding iron and dies shaped like muskrat, mink, beaver, and sandpiper tracks

**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to identify Potter Marsh as important wildlife habitat.

**Description:**

Wildlife tracks will be burned into boardwalk floors, simulating natural gaits. The burned-in tracks should be lined to prevent premature decay of the wood due to pooling of water in the track depressions. Muskrat, mink, and beaver tracks will be placed only in pullout areas to prevent traffic problems. Sandpiper tracks will be burned into the top of boardwalk railings. Additional design documents are necessary in order to implement this project.

**Implementation Priority: Phase III**

**Project #5**

**Location:** North and South Potter Marsh viewing areas (figs. D-2, D-3, D-4, D-5, and D-6)

**Working Title:** Bird-themed Benches

**Recommended Interpretive Media:** Interpretive benches shaped like bird wings

**Interpretive Theme:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to identify Potter Marsh as important bird habitat.

**Description:**

Interpretive benches shaped like bird wings will be installed in North and South Potter Marsh viewing areas. Additional design documents are necessary in order to implement this project.

**Implementation Priority: Phase III**

## Project #6

**Location:** North Potter Marsh existing boardwalks and proposed viewing areas (figs. D-4 and D-5)

**Working Title:** Wildlife Silhouettes

**Recommended Interpretive Media:** Life-sized steel wildlife silhouettes of eagle, goose, mallard, Pacific loon, arctic tern, sandhill crane, chickadee, sandpiper, beaver, muskrat, porcupine, owl, fox, snowshoe hare, and salmon

### Interpretive Themes:

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*

### Interpretive Objective:

As a result of viewing this exhibit, the majority of visitors will be able to identify Potter Marsh as important wildlife habitat.

### Description:

Steel wildlife silhouettes will be placed on the proposed boardwalk viewing area railings in North Potter Marsh (figs. D-9, D-10, and D-11). Silhouettes will be painted black and constructed and installed with safety in mind.

### Implementation Priority: Phase III

**Project #7****Location:** North Potter Marsh boardwalk (fig. D-2)**Working Title:** Benefits of Wetlands**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*

**Text Direction:**

The first text block details the ecologic benefits of wetlands (flood control, reduce erosion, water storage, filter pollutants, recycle nutrients, etc.) and mentions that artificial wetlands may provide similar ecological functions and recreational opportunities as natural wetlands. Another text blocks emphasizes that wetlands provide a variety of important fish and wildlife habitat for many species and that commercial fisheries depend on wetlands as nurseries for young salmon. A third text block acknowledges that due to their high productivity and dynamic qualities, wetlands are a perfect place for outdoor education and research. Text also acknowledges that there are psychological, spiritual, and aesthetic benefits to be gained by visiting wetlands.

**Suggested Graphics:**

Panel graphics might include wetland images and a depiction of nutrient recycling.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least two different benefits of wetlands.

**Implementation Priority: Phase I**

**Project #8****Location:** North Potter Marsh boardwalk extension juncture (fig. D-2)**Working Title:** Future Boardwalk**Recommended Interpretive Media:** Foam core laminate temporary sign**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in an urban setting.*
- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Potter Marsh's diverse resources provide important opportunities for education and research.*
- *Potter Marsh is a dynamic ecosystem.*

**Text Direction:**

A short text block illustrates the proposed future boardwalk, trails, and additional interpretive opportunities on the way. Another text block discusses wise wetland management practices and informs visitors what to expect in terms of future interpretive and educational projects. Text encourages visitors to imagine what the proposed improvements will look like and the different types of opportunities these upgrades will bring.

**Suggested Graphics:**

Panel images should include a site plan of the future boardwalk.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to describe at least two future Potter Marsh projects.

**Implementation Priority: Phase I**

**Project #9****Location:** North Potter Marsh viewing area 'A' (fig. D-2)**Working Title:** Why do birds come to Alaska?**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Theme:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

A short text block talks about the differences between migratory and resident birds. A second text block list reasons why birds migrate to Alaska, including long hours of sunlight and abundant insects. Other text describes the different types of birds that migrate, such as waterfowl and songbirds, and highlights the migratory routes of Canada geese, trumpeter swans, and/or arctic terns.

**Suggested Graphics:**

Panel images should include illustrations of the migratory routes of Canada geese, trumpeter swans, and/or arctic terns.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to list two reasons birds migrate to Alaska. The majority of visitors will also be able to name two different migratory birds that frequent Potter Marsh.

**Implementation Priority: Phase I**

**Project #10****Location:** North Potter Marsh viewing area 'A' (fig. D-2)**Working Title:** Wetland Ecology and Food Web**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Potter Marsh is a dynamic ecosystem.*

**Text Direction:**

A text block describes the different trophic levels of a wetland food web (producers, the different levels of consumers, and decomposers) in a simple and entertaining way.

**Suggested Graphics:**

Panel images should include diagrams that highlight examples of the different wetland trophic levels.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state at least two different trophic levels and also be able to give examples of at least one species that exists on each level.

**Implementation Priority: Phase I**

**Project #11****Location:** North Potter Marsh viewing area 'A' (fig. D-2)**Working Title:** Natural Places in Urban Areas**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*

**Text Direction:**

The first text block describes why urban recreation areas are important to humans: these areas can dissolve economic and racial boundaries, bring communities together, increase tourism, enhance the quality of life, and serve as open air classrooms for environmental education. Another text block lists reasons that natural places in urban areas benefit wildlife. Text also highlights ways that people use Potter Marsh, especially for bird-watching, ice-skating, skiing, and education.

**Suggested Graphics:**

Panel images may include people recreating at Potter Marsh: bird-watchers, school groups, ice-skaters, and skiers. A map of Potter Marsh could highlight the development surrounding the marsh.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to describe two different reasons that natural places in urban areas are important to both humans and wildlife. The majority of visitors will also be able to list at least two different activities people can participate in at Potter Marsh.

**Implementation priority: Phase I**

**Project #12**

**Location:** North Potter Marsh existing boardwalk (fig. D-3)

**Working Title:** Cultural History: Dena'ina Place Names

**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)

**Interpretive Themes:**

- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*
- *Potter Marsh is a dynamic ecosystem.*

**Text Direction:**

The first text block reminds visitors that Potter Marsh is not a natural system and that it was once an estuary and salt marsh used by the Dena'ina Athabascans, who collected wood and other debris deposited by storms and tides from the shore and may also have used the area seasonally as a summer fish camp. Another text block describes some of the native names of the area: Potter Marsh as 'Drift Lumber,' Potter Creek as 'Drift Lumber Creek,' and Rabbit Creek as 'Rabbit Creek' (one of the few places where the meaning of a native place was preserved, or inadvertently chosen, by later residents).

**Suggested Graphics:**

Panel graphics might include images of the Rabbit Creek embankment pre-construction, people collecting driftwood, and Dena'ina Athabascans.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that the Dena'ina name for Potter Marsh is translated in English as 'Drift Lumber'.

**Implementation Priority: Phase II**

**Project #13**

**Location:** North Potter Marsh existing boardwalk at the Rabbit Creek crossing (fig. D-3)

**Working Title:** Salmon: Life Underwater

**Recommended Interpretive Media:** Non-traditional interpretive panel employing cut-outs, interactive elements, sculpture, and/or 3-dimensional objects

**Interpretive Themes:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*

**Text Direction:**

Text describes the five different species of salmon (Chinook, pink, sockeye, chum, and coho) that can be found in the marsh and lists identifying characteristics of each. Text also explains that salmon which spawn in the marsh are essential to the diversity of the wetland. Text may also highlight other fish that can be found in the marsh, such as sticklebacks.

**Suggested Graphics:**

Panel images should include graphics of the five different species of salmon that can be found in the marsh.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to state the five different species of salmon that can be found in the marsh.

**Implementation Priority: Phase II**

**Project #14****Location:** North Potter Marsh existing boardwalk (fig. D-3)**Working Title:** Tides and Plants**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*
- *Potter Marsh is a dynamic ecosystem.*

**Text Direction:**

The first text block describes the nature of tides in Turnagain Arm, touching briefly on the bore tide. Interpretation should complement existing interpretation done on the bore tide in Turnagain Arm without replication. A second text block discusses impacts of saltwater to the marsh ecosystem, highlighting that although Potter Marsh is primarily freshwater with freshwater vegetative communities (shrub bog and bulrush) the tides reach just inside the Rabbit Creek culvert to support a Lyngbye sedge community.

**Suggested Graphics:**

Panel images might include Turnagain Arm during different tides, the bore tide, and a Lyngbye sedge community.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to state at least one way that tides impact the marsh.

**Implementation Priority: Phase II**

**Project #15****Location:** North Potter Marsh existing boardwalk (fig. D-3)**Working Title:** Frozen Solid—the Wood Frog**Recommended Interpretive Media:** Non-traditional interpretive panel employing cut-outs, interactive elements, sculpture, and/or 3-dimensional objects**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*
- *Potter Marsh is a dynamic ecosystem.*

**Text Direction:**

The first text block introduces the wood frog, the most widely distributed amphibian in Alaska, and the only amphibian in the world found north of the Arctic Circle. Another text block talks about how these frogs have evolved a truly unique adaptation for surviving the extreme cold of Arctic winters: they can freeze solid! Text also explains that amphibian species are declining drastically worldwide, while reports of malformed wood frogs are on the rise in Alaska and across the rest of the country. Text emphasizes that amphibians are excellent indicators of environmental health because they are very sensitive to environmental contamination, pollution, habitat loss, and climate change, and that problems with amphibians are often our first warning of problems in our environment.

**Suggested Graphics:**

Panel images should include a wood frog, a frozen wood frog, and maybe a malformed wood frog.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that one of the unique characteristics of the wood frog is that it can freeze solid. The majority of visitors will also be able to recognize amphibians as an indicator of environmental health.

**Implementation Priority: Phase II**

**Project #16****Location:** North Potter Marsh viewing area 'B' (fig. D-4)**Working Title:** Salmon, Glaciers, and Gravel**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*

**Text Direction:**

Text emphasizes that salmon need clean gravel for spawning habitat. Other text describes the connection between the gravel salmon need to spawn in and glaciers (gravel is typically deposited by glaciers). Text also describes that in Potter Marsh salmon habitat was enhanced by adding artificial gravel beds.

**Suggested Graphics:**

Panel images should include glaciers and salmon spawning in gravel.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that clean gravel is necessary for salmon to spawn.

**Implementation Priority: Phase III**

**Project #17****Location:** North Potter Marsh viewing area 'B' (fig. D-4)**Working Title:** Dabblers versus Divers**Recommended Interpretive Media:** Non-traditional interpretive panel employing cut-outs, interactive elements, sculpture, and/or 3-dimensional objects**Interpretive Themes:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*

**Text Direction:**

Text describes the difference between dabbling and diving birds, including comparisons of diet, physical characteristics, habitat, and methods of taking flight. Other text outlines how dabblers and divers share limited water space and adapt to competition with each other. Text showcases the different species of dabblers (northern pintail, northern shoveler, and/or mallards) and divers (greater scaup and Barrow's goldeneye) in the marsh.

**Suggested Graphics:**

Panel images should include the dabblers (northern pintail, northern shoveler, and/or mallards) and divers (greater scaup and Barrow's goldeneye) that can be found at the marsh.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to name at least one dabbling bird and one diving bird.

**Implementation Priority: Phase III**

**Project #18****Location:** North Potter Marsh viewing area 'C' (fig. D-4)**Working Title:** Urban-dwelling Brown Bears**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

The first text block talks about how some brown bears live in Anchorage's green spaces, including Potter Marsh, the entire summer, fishing and avoiding human contact. Other text describes these urban brown bears as tolerant, adapting to urban life by weaving their way through green space, living next to neighborhoods and busy streets. Text states that Anchorage is the only known city in the world with a resident brown bear population, which numbers somewhere between 12-50 individuals. Text explains how humans rarely encounter these bears. Auxiliary text mentions that black bears are even more numerous than brown bears at Potter Marsh. Text also addresses bear safety.

**Suggested Graphics:**

Panel images should include Anchorage's bears.

**Interpretive Objectives:**

The majority of visitors will be able to state that Anchorage is the only known city in the world with a resident brown bear population. The majority of people will also be able to describe at least two ways they can modify their behavior to better protect themselves and bears in case of an encounter.

**Implementation Priority: Phase III**

**Project #19****Location:** North Potter Marsh viewing area 'D' (fig. D-4)**Working Title:** Mosquitoes, Damselflies, and Dragonflies**Recommended Interpretive Media:** Non-traditional interpretive panel employing cut-outs, interactive elements, sculpture, and/or 3-dimensional objects**Interpretive Themes:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*

**Text Direction:**

The first text block talks about ecosystem benefits of invertebrates and describes identifying characteristics of mosquitoes, damselflies, and dragonflies. Other text describes that these invertebrates benefit birds, fish, mammals, and amphibians by being an important part of the food chain. Text also explains why invertebrates are so plentiful in Alaska.

**Suggested Graphics:**

Panel images should include mosquitoes, damselflies, and dragonflies.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that invertebrates are an important component to the wetland food chain. The majority of visitors will also be able to differentiate between mosquitoes, damselflies, and dragonflies.

**Implementation Priority: Phase III**

**Project #20****Location:** North Potter Marsh viewing area 'D' (fig. D-4)**Working Title:** Succession—from Marsh to Wooded Uplands**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Potter Marsh is a dynamic ecosystem.*

**Text Direction:**

Text explains that wetlands are constantly evolving as their plant life changes. Text illustrates how succession is manifesting in Potter Marsh, offers the reader a chance to look around, and calls attention to the shrub bog community in the northeastern part of the marsh that is in a transitory stage. Another text block warns that without human intervention, such as pond dredging, the Potter Marsh wetland will come to resemble the surrounding deciduous forest.

**Suggested Graphics:**

Panel graphics may include illustrations of the different stages of wetland succession in addition to images of pond dredging.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that succession is a natural phenomenon and that without human intervention Potter Marsh will eventually evolve into a forest.

**Implementation Priority: Phase III**

**Project #21****Location:** North Potter Marsh viewing area 'E' (see Figure D-4)**Working Title:** Beavers, Bald Eagles, and Salmon**Recommended Interpretive Media:** Removable, low profile, modified type-C interpretive panel**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*

**Text Direction:**

The first text block draws attention to the fact that many wildlife species are connected to each other. The relationship between beavers, salmon, and eagles is given as an example. Text describes how beavers provide food for the bald eagle indirectly by providing habitat for fish, one the eagle's favorite meals. Further text informs that young beavers are sometimes hunted by the bald eagle. Text explains that humans are also connected to these species in that we protect bald eagles, have hunted and trapped beavers, and eat salmon.

**Suggested Graphics:**

Panel images should include eagles, beavers, and salmon.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to state at least one relationship between the beaver, salmon, and bald eagle.

**Implementation Priority: Phase III**

**Project #22****Location:** North Potter Marsh viewing area 'E' (fig. D-4)**Working Title:** Water Homes: Aquatic Mammals**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

Text cites that Potter Marsh provides great habitat for aquatic mammals, especially for muskrat, beaver, mink, and river otter. Text describes the different types of aquatic mammal homes in Potter Marsh: beaver dams, muskrat pushups, and underground river otter and mink dens. Text also prompts the reader to look around in order to identify a beaver dam, a muskrat pushup, and good habitat for river otter and mink dens.

**Suggested Graphics:**

Panel images should include muskrat, beaver, mink, and river otters in their corresponding homes and direction on track identification.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least two different species of aquatic mammals that live in Potter Marsh and the types of homes they inhabit.

**Implementation Priority: Phase III**

**Project #23****Location:** North Potter Marsh viewing area 'E' (fig. D-4)**Working Title:** Songbirds: what's in a song?**Recommended Interpretive Media:** Non-traditional interpretive panel employing cut-outs, interactive elements, sculpture, and/or 3-dimensional objects**Interpretive Themes:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*

**Text Direction:**

Text describes how a songbird's vocal organs, developed in such a way as to produce various sound notes, are similar to human vocal chords. Text may compare a songbird syrinx with that of a sandhill crane. Text also describes other ways birds project sound, such as in the case of the beak, which is mostly used to broadcast the song in a specific direction. Other text highlights that bird songs are mostly territorial and that although many songbirds have songs which are delightful to the human ear, not all bird songs are pleasing. Text lists a few species of songbirds people can look for in Potter Marsh, such as the violet-green swallow and the yellow-rumped warbler.

**Suggested Graphics:**

Panel images should include violet-green swallows and yellow-rumped warblers.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least two different species of songbirds that frequent the marsh.

**Implementation Priority: Phase III**

**Project #24****Location:** North Potter Marsh viewing area 'E' (fig. D-4)**Working Title:** Wildlife Corridors—a Lifeline Between Habitats**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

The first text block defines a wildlife corridor as a bridge between fragmented habitats, and cites Rabbit Creek as an important wildlife corridor that links Potter Marsh with Chugach State Park. Other text gives examples of species that use the Potter Marsh wildlife corridor (large and mid-size mammals). Text cites that wildlife corridors are susceptible to edge effect and that certain species do not prosper near the edge of an ecosystem. However, text also states that the edge effect sometimes creates extremely productive habitat and that certain species actually thrive on the edge of ecosystems. Text highlights that many wildlife species are unlikely to survive in urban areas unless important wildlife corridors and other natural areas are preserved.

**Suggested Graphics:**

Panel images might include bears and moose using the Rabbit Creek wildlife corridor.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state the definition of a wildlife corridor. The majority of visitors will also be able to list at least two different species that use the Rabbit Creek wildlife corridor.

**Implementation Priority: Phase III**

**Project #25****Location:** East Potter Marsh viewing platform (fig. D-5)**Working Title:** Eagles—Hunters and Providers**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Potter Marsh provides habitat for many species of salmon and other fish, which have ecological, recreational, subsistence, and commercial values.*

**Text Direction:**

Text lists three special adaptations that bald eagles exhibit: exceptional vision, sharp talons, and a hooked upper beak. Further text describes how these characteristics are employed to build nests and feed helpless young their preferred diet of small marsh mammals (mice, shrews, voles, and hares), birds, fish, and amphibians.

**Suggested Graphics:**

Panel graphics should include images of adult raptors feeding their young.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least two different adaptations that bald eagles exhibit. The majority of visitors will also be able to list at least two different species that bald eagles feed their young.

**Implementation Priority: Phase IV**

**Project #26**

**Location:** North Potter Marsh boardwalk extension to the proposed BTLC (fig. D-5)

**Working Title:** Coyote—the Song Dog

**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)

**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

The first text block details a few facts about coyotes, including that they were unknown in Alaska until the early 1900s, and that they sometimes pursue their prey in relays. Other text highlights their tenacious ability to adapt to a changing world, coexisting with humans and even expanding their range, despite massive predator control programs launched against them. Additional text focuses on characteristics of their howl and their nickname ‘song dog.’

**Suggested Graphics:**

Panel images should include coyotes singing and traveling in a small family group.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that coyotes are sometimes called ‘song dogs.’ The majority of visitors will reflect that coyotes are adaptable enough to successfully coexist with humans.

**Implementation Priority: Phase IV**

**Project #27****Location:** North Potter Marsh boardwalk extension to the proposed BTLC (fig. D-5)**Working Title:** The Lynx and the Hare**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Theme:**

- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

The first text block highlights that the lynx is the only feline species native to Alaska and that people mistakenly think they are scarce because they are shy and unobtrusive. Additional text focuses on the relationship between the lynx and the snowshoe hare and describes how the birth and survival of lynx kittens is influenced dramatically by cyclic changes in snowshoe hare and other small game populations.

**Suggested Graphics:**

Panel images should include lynx, lynx kittens, and a lynx chasing a snowshoe hare.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to state that a relationship exists between the lynx and the snowshoe hare.

**Implementation Priority: Phase IV**

**Project #28**

**Location:** North Potter Marsh boardwalk extension to the proposed BTLC (fig. D-5)

**Working Title:** Non-point Source Pollution

**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)

**Interpretive Theme:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*

**Text Direction:**

The first text block defines non-point source pollution, and explains that what residents allow to flow down their driveways (anti-freeze, car wash soap, fertilizers, etc.) may inadvertently pollute Potter Marsh and adversely affect wildlife populations. Other text lists what people can do to prevent or minimize non-point source pollution.

**Suggested Graphics:**

Panel graphics should include illustrations of the different types of things that can generate non-point source pollution.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least two contributors of non-point source pollution. The majority of visitors will also be able to list at least two ways that they can minimize or prevent non-point source pollution.

**Implementation Priority: Phase IV**

**Project #29**

**Location:** North Potter Marsh boardwalk extension to the proposed BTLC (fig. D-5)

**Working Title:** Munchin' Moose

**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)

**Interpretive Theme:**

- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

The first text block highlights that moose are occasional visitors to the marsh, using the area primarily for food. Another text block focuses on moose seasonal movements, mentioning that the moose population increases substantially in the fall when the animals move into the area from the Chugach Mountain foothills. Other text describes what type of vegetation moose eat at Potter Marsh, while pointing out interesting moose behavior, such as wading through chest-high water at the marsh to feed on choice vegetation.

**Suggested Graphics:**

Panel images might include a moose wading through deep water.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to state that moose use the marsh as only part of their habitat.

**Implementation Priority: Phase IV**

**Project #30**

**Location:** North Potter Marsh boardwalk extension to the proposed BTLC (fig. D-5)

**Working Title:** Human Encroachment: Upstream Affects Downstream

**Recommended Interpretive Media:** Low profile, type-D Interpretive panel (fig. D-12)

**Interpretive Theme:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*

**Text Direction:**

The first text block lists ways that human encroachment may affect marsh resources: through non-point source pollution, light pollution, and diversion and alteration of feeder streams and creeks. The second text block describes ways that encroachment may specifically affect plants and wildlife of the marsh: by degrading water quality, changing water levels, and displacing wildlife.

**Suggested Graphics:**

To illustrate increasing development, panel graphics should include before and after maps of the Hillside area.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state three ways that increasing development could affect marsh resources. The majority of visitors will also be able to list three ways plants and wildlife of the marsh are specifically affected by human encroachment.

**Implementation Priority: Phase IV**

**Project #31****Location:** South Potter Marsh viewing tower (fig. D-6)**Working Title:** Alaskan Ice**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*
- *Potter Marsh's diverse resources provide important opportunities for recreation, education, and research.*
- *Potter Marsh is a dynamic ecosystem.*

**Text Direction:**

The first text block states that ice, when subjected to higher pressures and varying temperatures, can form in roughly a dozen different phases, differentiated by crystalline structure, ordering, and density. Examples are given of rime, aufeis, icicles, and pancake ice. Another text block describes ways humans use the different forms of ice. For example, humans use ice to travel, as a surface for sports, as a medium for art, to melt for water, and as cold storage for food.

**Suggested Graphics:**

Panel images may include the different phases of ice commonly encountered in the area, the different forms of ice crystals, people traveling on ice, a hockey game, and an ice carver creating an sculpture.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least two different phases of ice. The majority of visitors will also be able to state at least two ways people use ice.

**Implementation Priority: Phase V**

**Project #32****Location:** South Potter Marsh viewing tower (fig. D-6)**Working Title:** Hydrology of Potter Marsh**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *The story of Potter Marsh revolves around the interaction of people and wildlife successfully coexisting in a managed, wild place within an urban setting.*
- *Potter Marsh is an artificial wetland, that wisely managed may provide similar benefits to wildlife and the community as a natural wetland.*

**Text Direction:**

The first text block describes how approximately three quarters of the water in the marsh is sustained by direct precipitation and groundwater inputs from Little Survival Creek. Text states that this South Potter Marsh drainage basin maintains the water level for most of the ponds used by wetland birds, wildlife, and fish. Other text details the threats that Potter Marsh faces if Little Survival Creek is diverted or polluted upstream.

**Suggested Graphics:**

Panel images should include Little Survival Creek.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to state that water inputs from Little Survival Creek sustains Potter Marsh.

**Implementation Priority: Phase V**

**Project #33****Location:** South Potter Marsh viewing tower (fig. D-6)**Working Title:** Muskrats**Recommended Interpretive Media:** Low profile, type-D interpretive panel (fig. D-12)**Interpretive Themes:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*
- *Mammals large and small depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

The first text block describes identifying characteristics and adaptations of the muskrat. Another text block explains that muskrats are important to the marsh ecosystem—they are meal for foxes, mink, harriers, coyotes, and hawks and they stimulate new vegetative growth of wetland plants.

**Suggested Graphics:**

Images should include muskrats and muskrat pushups.

**Interpretive Objectives:**

As a result of viewing this exhibit, the majority of visitors will be able to state that muskrats live in the marsh. The majority of visitors will also be able to recognize a muskrat pushup.

**Implementation Priority: Phase V**

**Project #34****Location:** West Potter Marsh Seward Highway center pullout (fig. D-6)**Working Title:** Birds Common to West Potter**Recommended Interpretive Media:** Removable, low profile, modified type-C interpretive panel**Interpretive Theme:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

Text provides information on birds common to this portion of the marsh, with a focus on swans and terns. Text explains why these birds are attracted to this part of the marsh. Additional text calls attention to the other interpretive sites within Potter Marsh.

**Suggested Graphics:**

Panel images should include swans, terns, and a map of the other interpretive sites within the marsh.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will be able to list at least three different birds that frequent this part of the marsh. The majority of visitors will also be able to describe the other interpretive sites within Potter Marsh.

**Implementation Priority: Phase V**

**Project #35 (a-p)**

**Location:** North and South Potter Marsh boardwalk railings (figs. D-2, D-3, D-4, D-5, and D-6)

**Recommended Interpretive Media:** 17” x 11” bird identification signs

**Interpretive Theme:**

- *Resident and migratory birds depend on the food, water, and/or shelter available within Potter Marsh for part or all of the year, and are valuable and essential parts of the ecosystem.*

**Text Direction:**

Each of the following bird species will be represented per individual identification sign:

- Northern Pintail
- Greater and Lesser Yellowlegs
- Canada Goose
- Trumpeter Swan
- Green-winged Teal
- Short-billed Dowitcher
- Red-necked Grebe
- Arctic Tern
- Great-horned Owl
- Violet-green Swallow
- Hairy Woodpecker
- Black-capped Chickadee
- Yellow-rumped Warbler
- Ruby-crowned Kinglet
- Mew Gull
- Canvasback

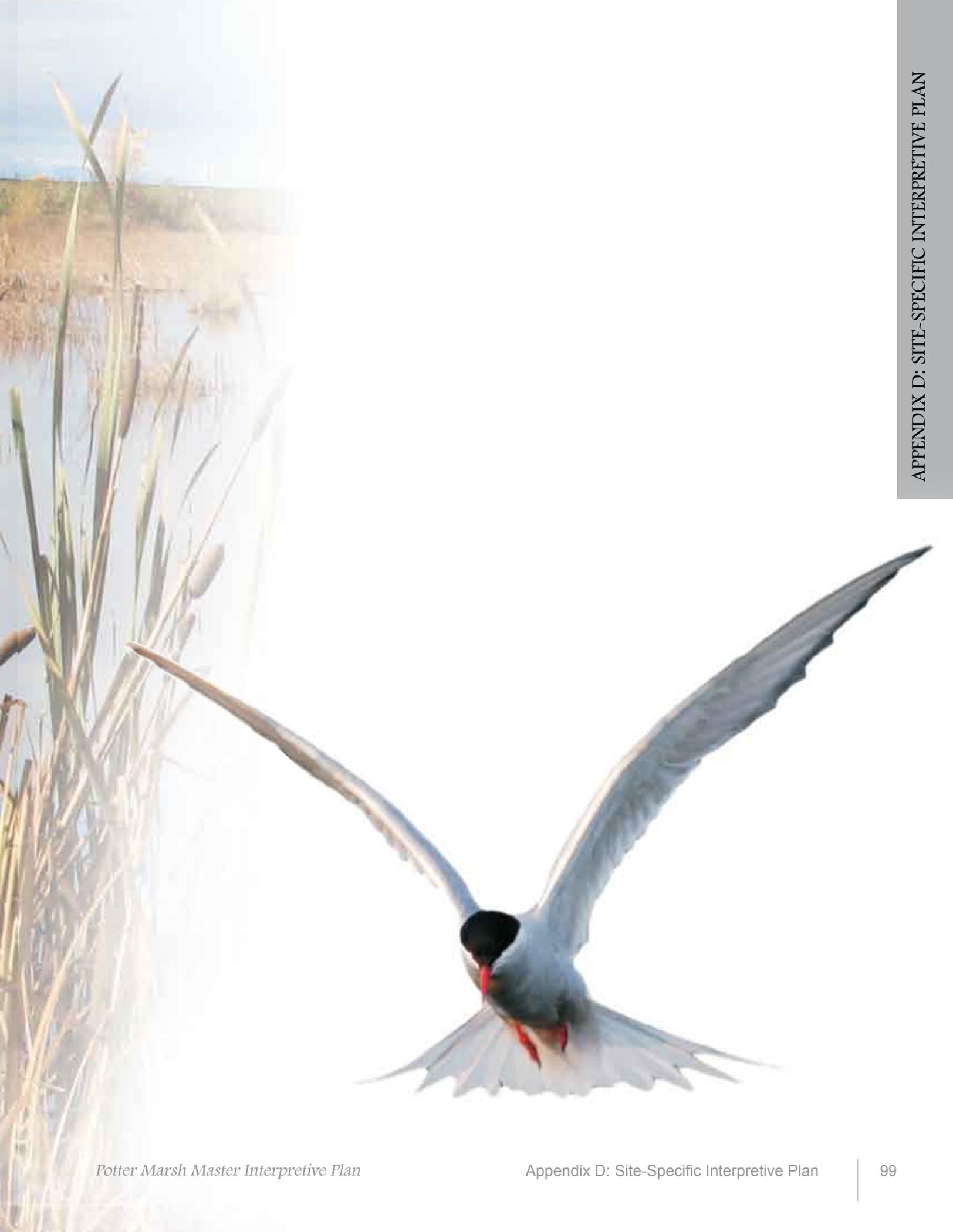
**Suggested Graphics:**

Panel graphics should include identifying characteristics of highlighted species.

**Interpretive Objective:**

As a result of viewing this exhibit, the majority of visitors will describe Potter Marsh as important bird habitat.

**Implementation Priority: Phase III**



### Site-Specific Implementation Priorities

Project Number(s)	Project Description	Location	Phase I Spring 2007	Phase II Summer 2007	Phase III Fall 2007	Phase IV 2010-2013	Phase V 2014-2017
		N. Potter 800' boardwalk extension			●		
		N. Potter existing boardwalk platform addition				●	
		N. Potter loop trail					●
		N. Potter Bird Treatment and Learning Center				●	
		N. Potter boardwalk extension to BTLC				●	
	Interpretive site improvements	N. Potter outdoor education facility					●
		S. Potter parking lot					●
		S. Potter boardwalk and viewing tower					●
		E. Potter trail				●	
		E. Potter platform				●	
		W. Potter center Seward Highway pullout					●
		W. Potter southern Seward Highway pullout					●
		N. Potter		●			
		S. Potter					●
		E. Potter				●	
		W. Potter					●
		Seward Highway			●		
		Old Seward Highway				●	
		Entrance signs			●		
1	Wildlife track, feather, and leaf impressions	N. Potter parking lot	●				
2	Interpretive bike racks	N. Potter parking lot	●				
3 (a-d)	Orientation kiosk	N. Potter parking lot	●				

4	Wildlife tracks burned into boardwalks	N. and S. Potter boardwalks				●	
5	Bird-themed benches	N. and S. Potter boardwalks				●	
6	Wildlife silhouettes installed on boardwalk railings	N. Potter boardwalk railings				●	
7	Interpretive panel	N. Potter boardwalk	●				
8	Temporary sign	N. Potter boardwalk	●				
9, 10, 11	Interpretive panels	N. Potter viewing area 'A'	●				
12, 13, 14, 15	Interpretive panels	N. Potter existing boardwalk		●			
16, 17	Interpretive panels	N. Potter viewing area 'B'				●	
18	Interpretive panel	N. Potter viewing area 'C'				●	
19, 20	Interpretive panels	N. Potter viewing area 'D'				●	
21, 22, 23, 24	Interpretive panels	N. Potter viewing area 'E'				●	
25	Interpretive panel	E. Potter eagles' nest platform					●
26, 27, 28, 29, 30	Interpretive panels	N. Potter boardwalk to proposed BTLC					●
31, 32, 33	Interpretive panels	S. Potter viewing tower					●
34	Interpretive panel	W. Potter Seward Highway					●
35 (a-p)	Bird identification signs	N. and S. Potter boardwalks				●	

Table D-1 . Site-Specific Interpretive Project Implementation Priorities

## Interpretive Panel Topic Summary

### Phase I

#### North Potter Marsh: Orientation kiosk in parking lot

Did you know you're visiting the Anchorage Coastal Wildlife Refuge?  
Anchorage's Wild Side  
Creation of Potter Marsh: from Estuary to Freshwater Marsh

#### North Potter Marsh: Boardwalk turnout

Benefits of Wetlands

#### North Potter Marsh: Viewing area 'A'

Why do birds come to Alaska?  
Wetland Ecology and Food Web  
Natural Places in Urban Areas  
Bird identification sign: Northern Pintail  
Bird identification sign: Greater and Lesser Yellowlegs

### Phase II

#### North Potter Marsh: Existing boardwalk panel replacement

Cultural History: Dena'ina Place Names  
Salmon: Life Underwater  
Influence of Tides on Plant Communities  
Frozen Solid—the Wood Frog  
Bird identification sign: Canada Goose  
Bird identification sign: Trumpeter Swan

### Phase III

#### North Potter Marsh: Viewing area 'B'

Salmon, Glaciers, and Gravel  
Dabblers versus Divers  
Bird identification sign: Green-winged Teal  
Bird identification sign: Short-billed Dowitcher

#### North Potter Marsh: Viewing area 'C'

Urban-dwelling Brown Bears

North Potter Marsh: Viewing area ‘D’

Mosquitoes, Damselflies, and Dragonflies  
 Succession—from Marsh to Wooded Uplands  
 Bird identification sign: Red-necked Grebe  
 Bird identification sign: Arctic Tern

North Potter Marsh: Viewing area ‘E’

Beavers, Bald Eagles, and Salmon  
 Water Homes: Aquatic Mammals  
 Songbirds: what’s in a song?  
 Wildlife Corridors—a Lifeline Between Habitats  
 Bird identification sign: Great-horned Owl  
 Bird identification sign: Violet-green Swallow

**Phase IV**East Potter Marsh: Eagles’ nest viewing platform

Eagles—Hunters and Providers

North Potter Marsh: Boardwalk continuation to the proposed BTLC

Coyote—the Song Dog  
 The Lynx and the Hare  
 Non-point Source Pollution  
 Munchin’ Moose  
 Human Encroachment: Upstream Affects Downstream  
 Bird identification sign: Hairy Woodpecker  
 Bird identification sign: Black-capped Chickadee  
 Bird identification sign: Yellow-rumped Warbler  
 Bird identification sign: Ruby-crowned Kinglet

**Phase V**South Potter Marsh viewing tower

Alaskan Ice  
 Hydrology of Potter Marsh  
 Muskrats  
 Bird identification sign: Mew Gull  
 Bird identification sign: Canvasback

West Potter Marsh: Seward Highway pullout

Birds Common to West Potter

## Interpretive Panel Design Guidelines

Four different styles of interpretive panels will be installed at Potter Marsh: low-profile type-D (fig. D-12), removable, modified type-C, non-traditional, and a type-B interpretive kiosk (fig. D-8). Further design documents will need to be created to install removable and non-traditional.

Low profile, type-D interpretive panels are recommended for most individual interpretive panels. Suggested panel size is 36.5" x 30.5", which is a recognizable standard that will not only link thematic elements of Potter Marsh, but also connect marsh interpretation with other interpretive sites throughout the area. Removable, modified type-C panels are recommended for those sites that call for temporary interpretation or seasonal removal of panels. A certain percentage of interpretive panels will be non-traditional, that is, these panels will incorporate unique design elements like cut-outs, three-dimensional objects, and interactive elements. A type-B interpretive kiosk is recommended for the parking lot orientation kiosk.

The following interpretive panel guidelines suggest unifying design elements for the different styles of interpretive panels in order to connect interpretive sites and media, develop a sense of continuity, and give Potter Marsh a distinctive appearance. The content of an interpretive panel, including theme and topic, should determine the type and style of graphics to be used. Panel backgrounds will be driven by topic, but a common background will be created and used for panels needing a background in a pinch. Panels will not be bordered in order to keep signs as inconspicuous as possible. It is recommended that all interpretive panels have the following visual threads:

- Identical fonts
- Drop shadows on panel titles
- Similar color palettes

Interpretation at the marsh will be supplemented with bird identification signs that will be mounted on top of boardwalk railings. Suggested sign size is 17" x 11".



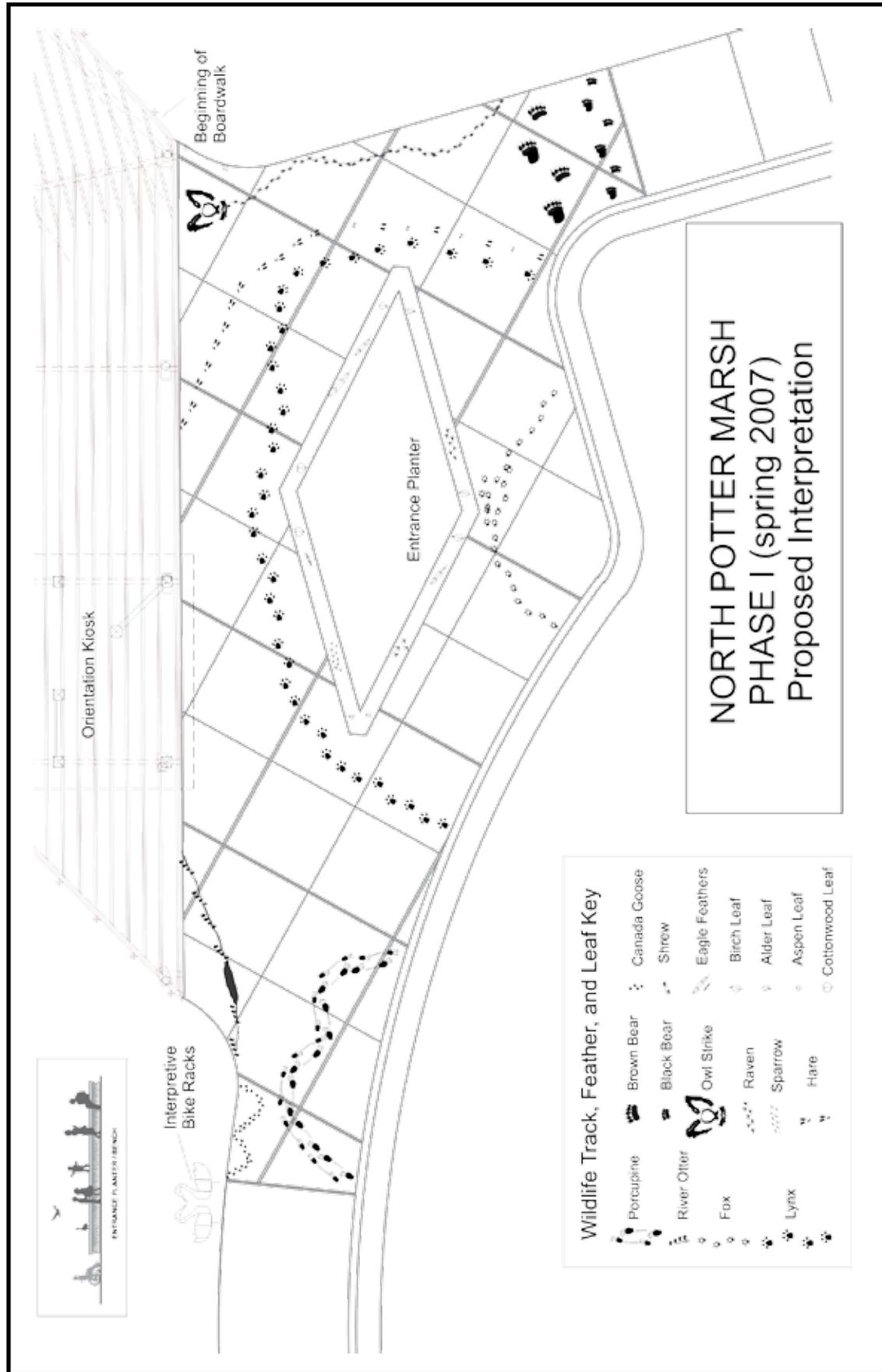


Figure D-1. North Potter Marsh planter and concrete sidewalk

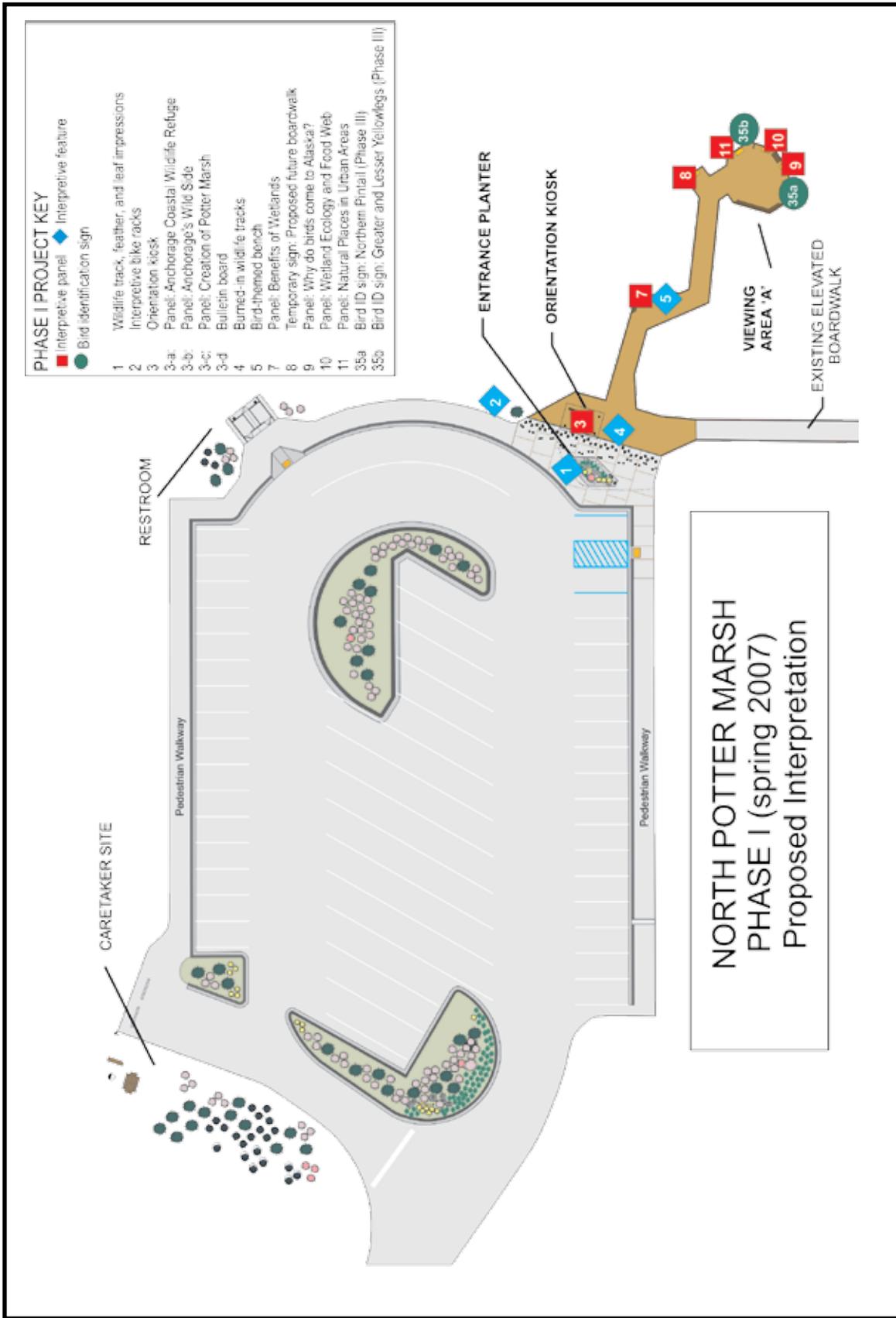


Figure D-2. North Potter Marsh parking lot, 100' of boardwalk, and viewing area 'A'

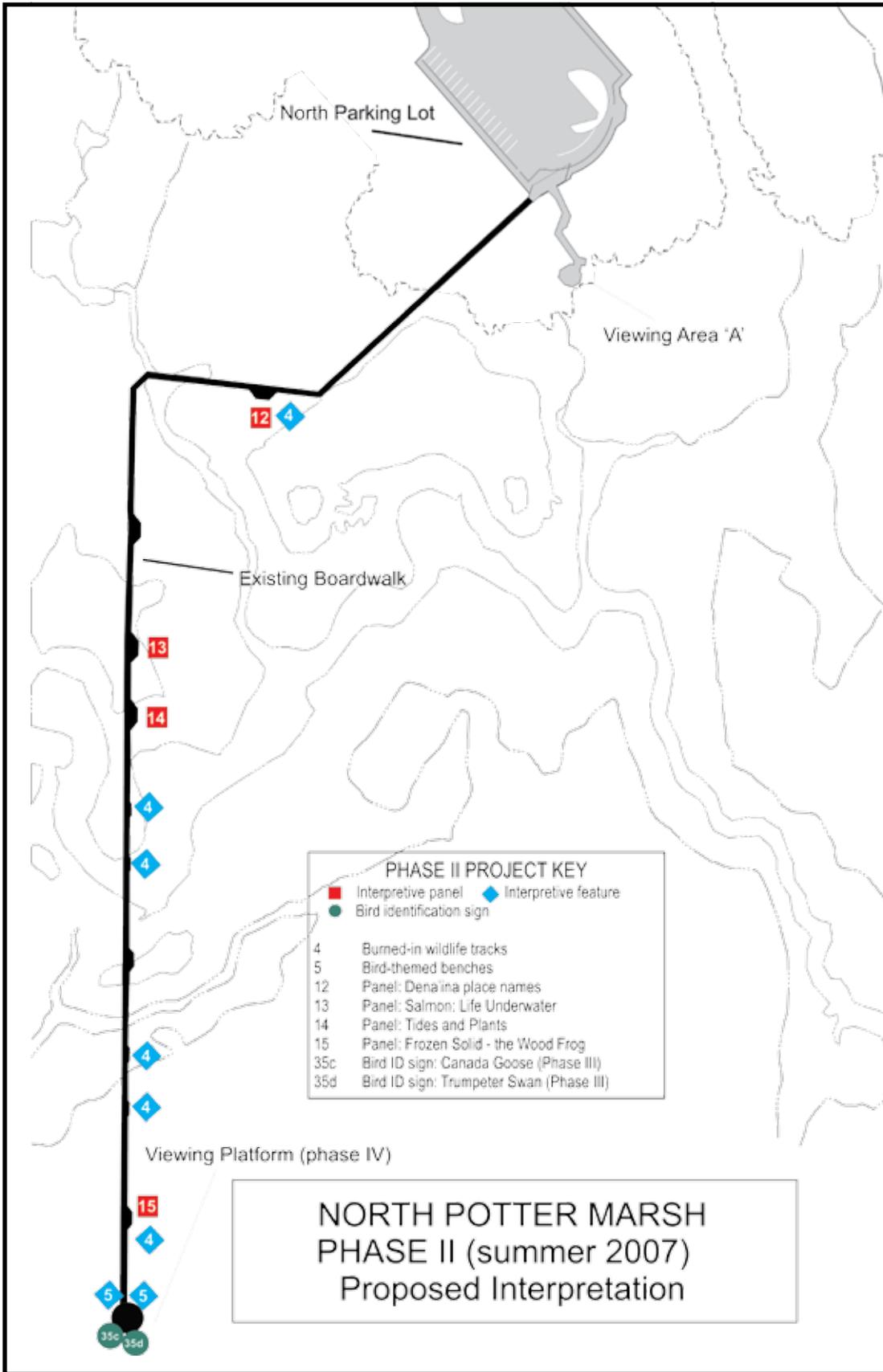


Figure D-3. North Potter Marsh existing boardwalk

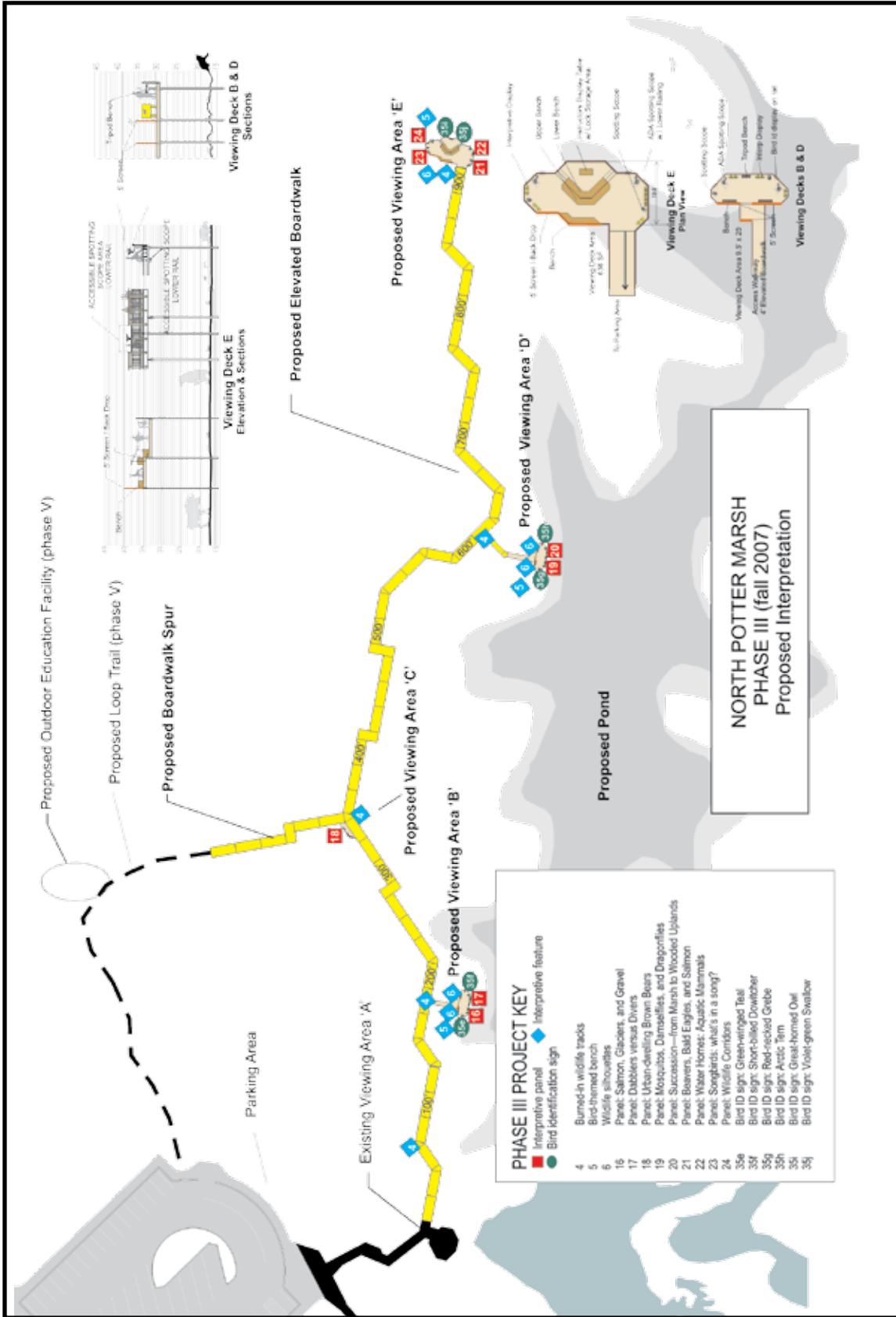


Figure D-4. North Potter Marsh boardwalk extension and viewing areas 'B', 'C', 'D', and 'E'

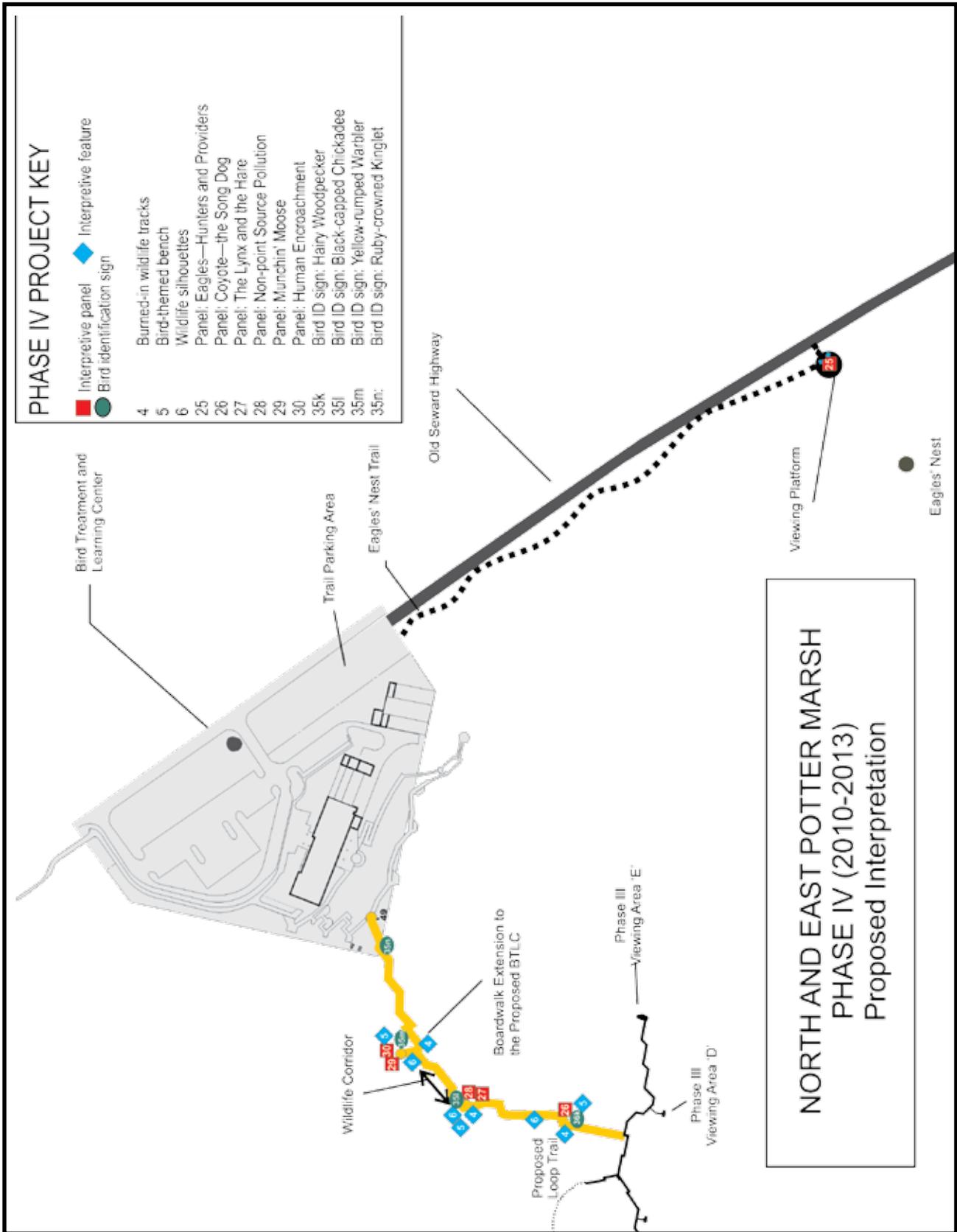


Figure D-5. North and East Potter Marsh, eagles' nest, Bird Treatment and Learning Center, and eagles' nest trail

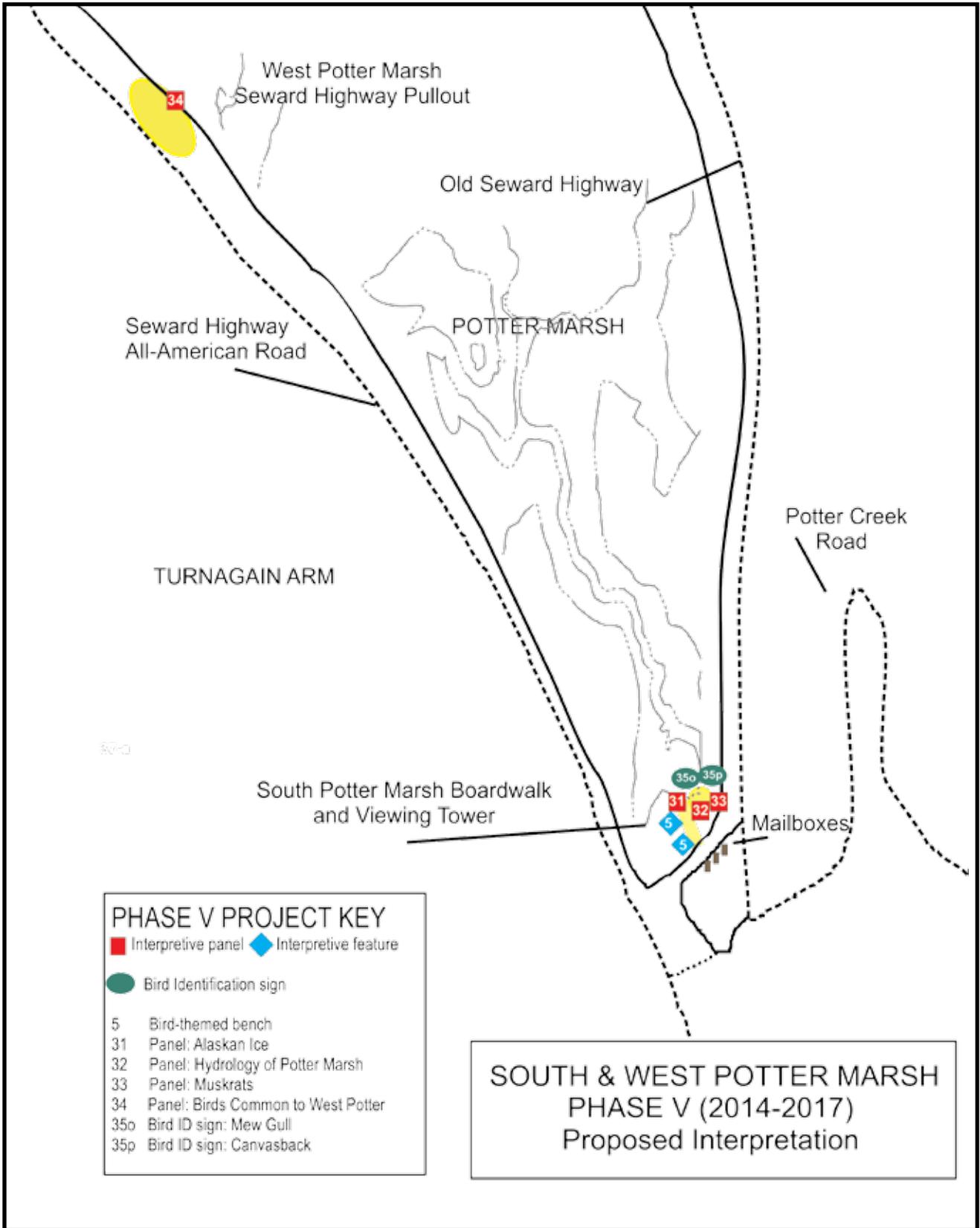


Figure D-6. South and West Potter Marsh

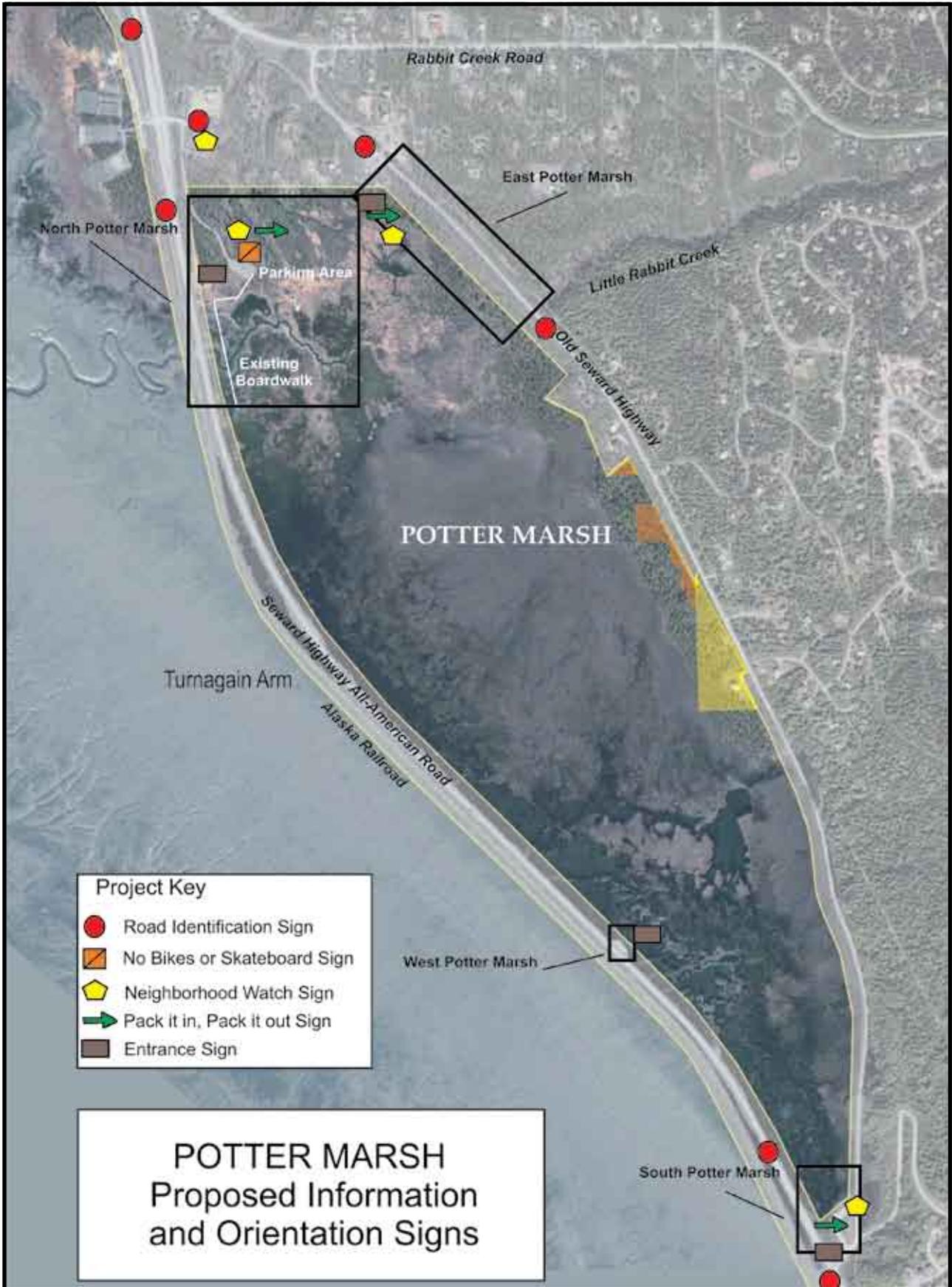
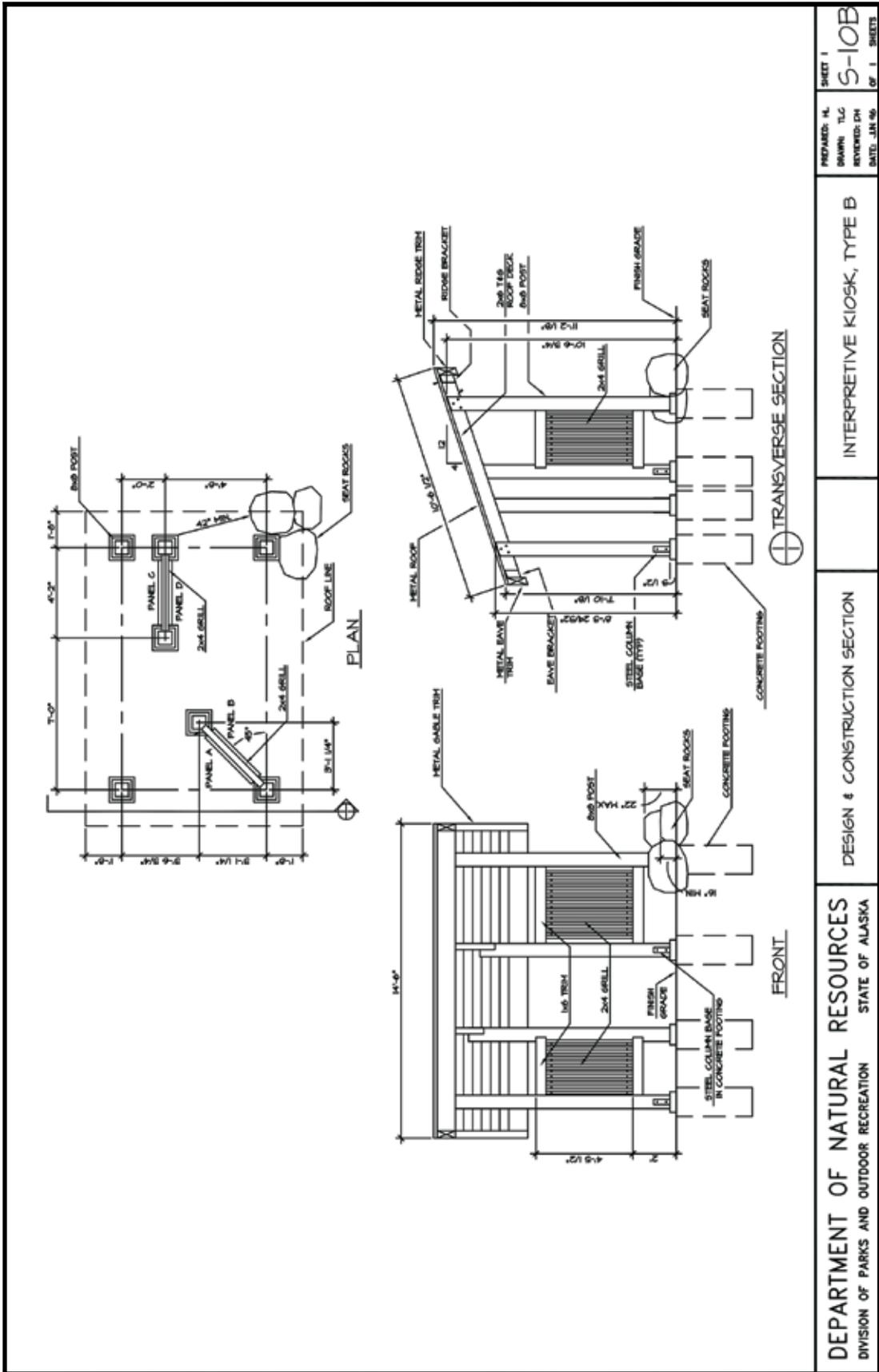


Figure D-7. Information and orientation sign locator map



DEPARTMENT OF NATURAL RESOURCES DIVISION OF PARKS AND OUTDOOR RECREATION STATE OF ALASKA	DESIGN & CONSTRUCTION SECTION	INTERPRETIVE KIOSK, TYPE B	PREPARED BY: H.L. DRAWN BY: T.L.C. REVIEWED BY: D.H. DATE: JAN 96	SHEET 1 S-10B OF 1 SHEETS
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Figure D-8. Type-B Interpretive Kiosk

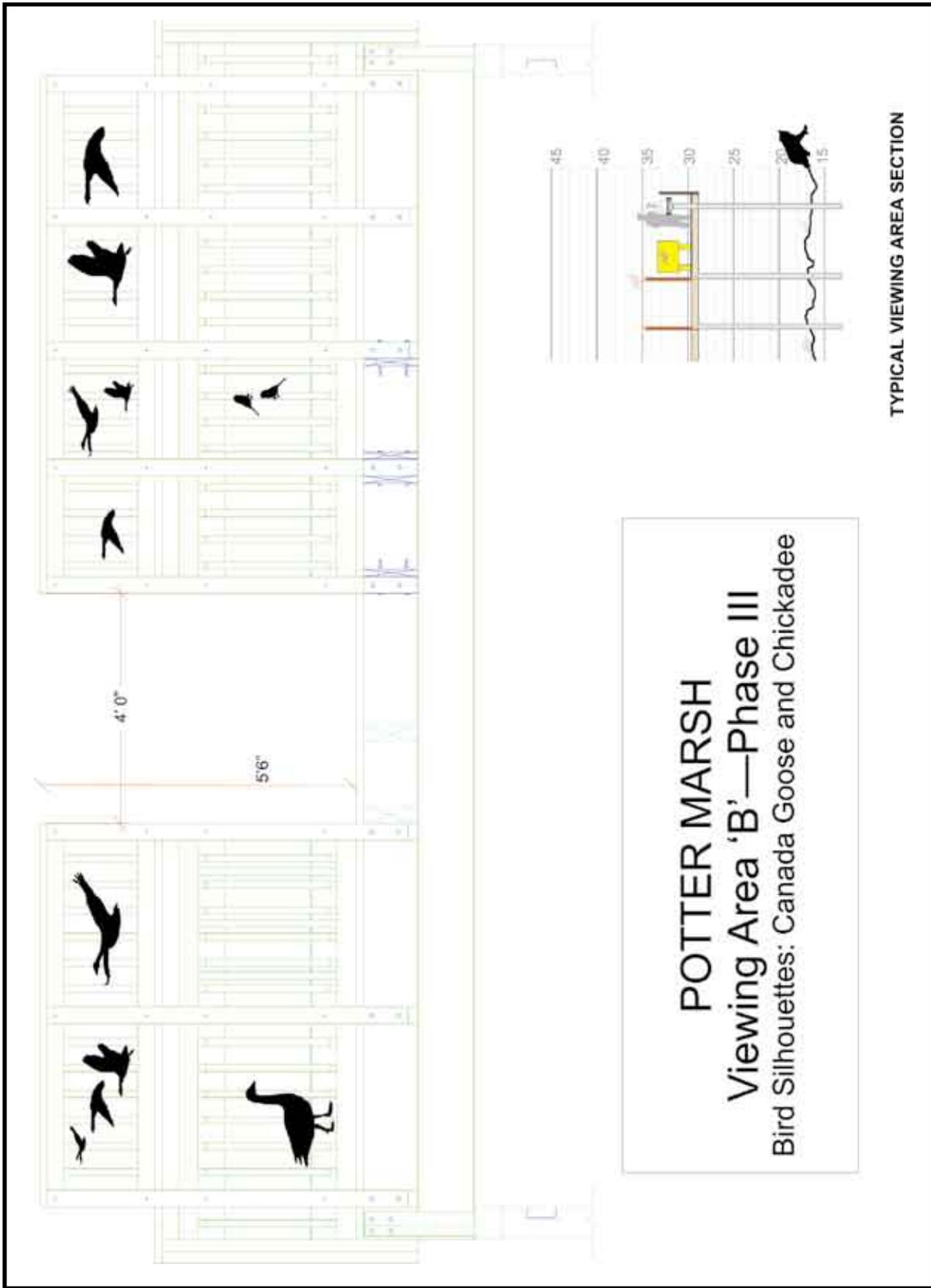


Figure D-9. Bird silhouettes on viewing area 'B' boardwalk railings

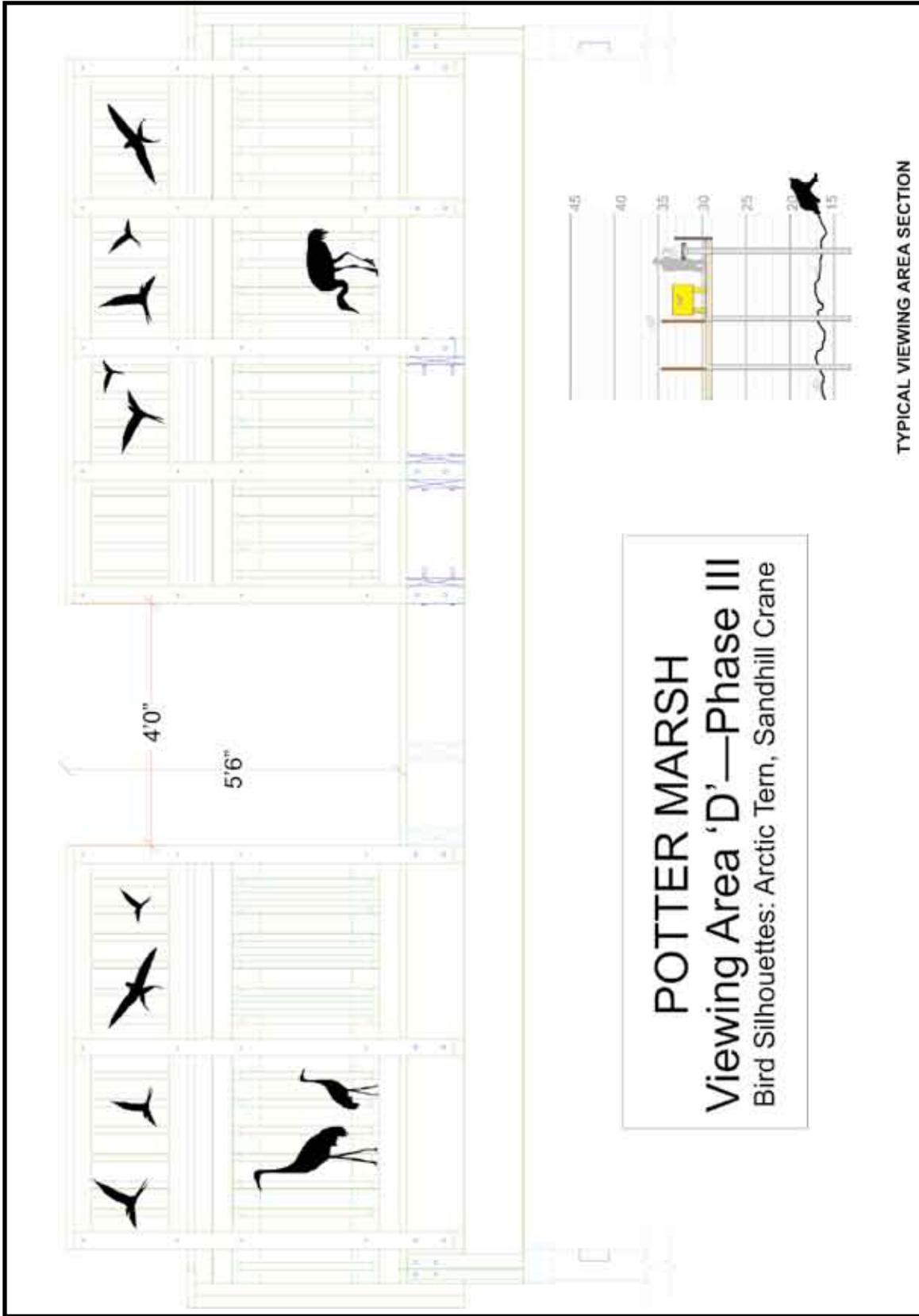


Figure D-10. Bird silhouettes on viewing area 'D' boardwalk railings

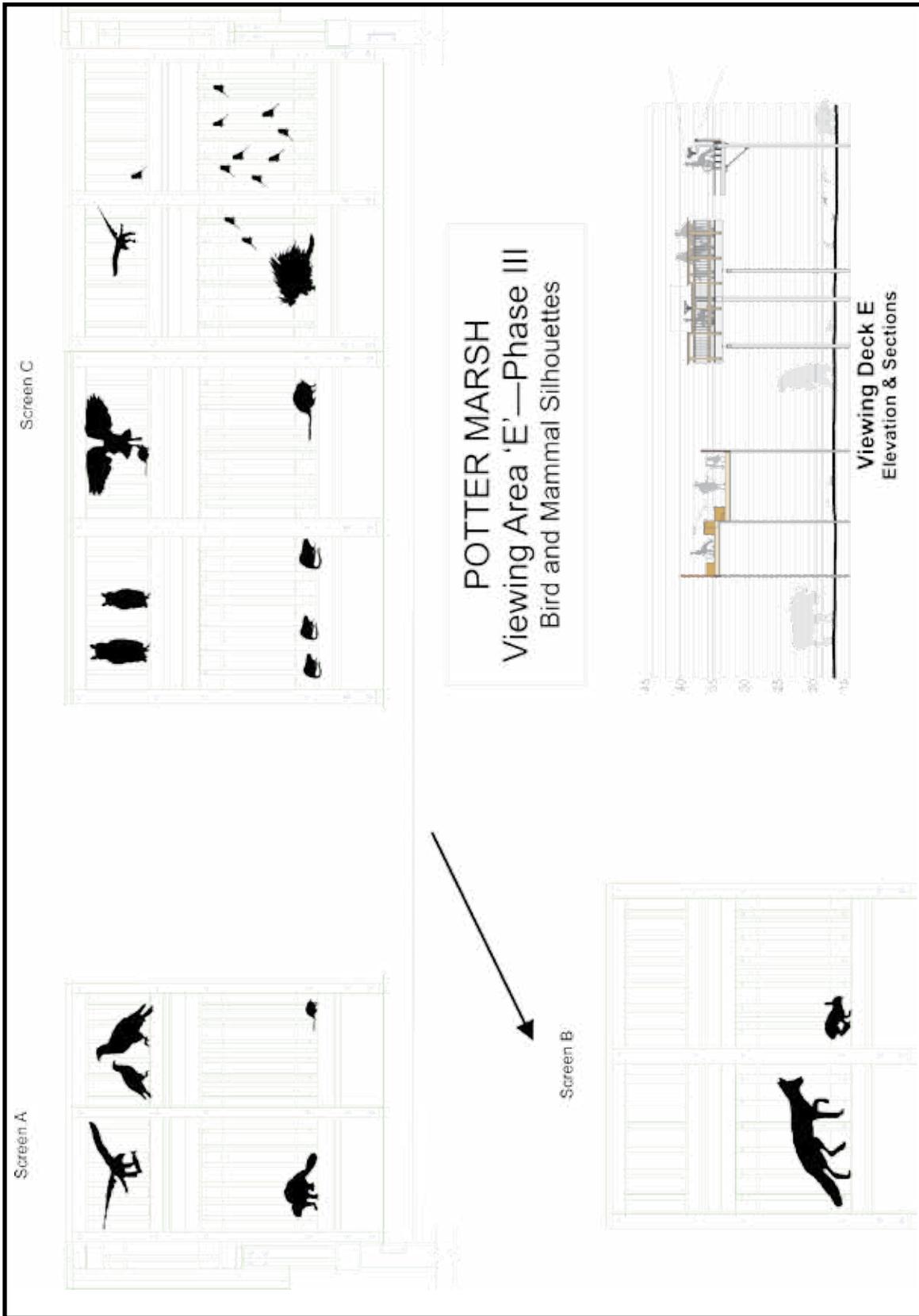


Figure D-11. Bird silhouettes on viewing area 'E' boardwalk railings





