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## FINDING OF NO SIGNIFICANT IMPACT: Adaptively Manage Predation of Caspian Terns in the Lower Columbia River Estuary

I find that the selected course of action to adaptively manage predation of Caspian terns in the lower Columbia River Estuary will not significantly affect the quality of the human environment, and an Environmental Impact Statement is not required. The selected course of action is the *Alternative A, No Action* as described in the *Environmental Assessment- Adaptively Manage Predation on the Caspian Tern Colony in the Lower Columbia River Estuary* (Corps of Engineers, May 2013), otherwise known as the EA. With selection of this alternative there are certain environmental consequences. A summary of those consequences is provided below in this Finding of No Significant Impact.

### Introduction

Since the late 1990's the U.S Army Corps of Engineers, Portland District (Corps) has been researching, monitoring and managing Caspian terns (*Hydroprogne caspia*) (also referred to as terns) on islands the Corps owns and/or uses for placement of dredged material in the Columbia River Estuary.

In 2005 the Corps, U.S. Fish and Wildlife Service and National Oceanic Atmospheric Administration Fisheries completed the *Caspian Tern Management to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary Final Environmental Impact Statement* (USFWS 2005). The USFWS and Corps each issued their own record of decision in 2006. These documents are collectively referred to in this document as the Caspian Tern Plan.

In 2008 implementation of the Caspian Tern Plan began. Over the last 4 years, the Corps has constructed 8.3 acres of new habitat for terns in Oregon and California. In 2012 an inter-agency adaptive management team began meeting to discuss the effectiveness of the plan and to make recommendations to the Corps on taking new courses of actions. These recommendations are based upon the response Caspian terns are having to management efforts. Members of the AMT include USFWS, NOAA Fisheries, Bonneville Power Administration, and the Corps.

One factor not anticipated in the Caspian Tern Plan and of immediate concern to the AMT is the impact native predators are having on the East Sand Island tern colony's productivity (number of young raised per breeding pair). For the last three nesting seasons (2010-2012), productivity for the colony has been at an all time low. This low productivity is largely attributed to bald eagles disturbing the colony to the point that the adult terns abandon their nests at which point glaucous-winged/western gulls waiting on the outskirts of the colony move in to consume the tern eggs and chicks. In 2011 the colony did not produce a single fledgling. In 2012 the Corps lethally removed 50 gulls on the designated tern colony under permit from USFWS, which was described in a record of environmental consideration (Corps, May 2012).

In 2012, the lethal removal of gulls began on May 5<sup>th</sup> and lasted until June 15<sup>th</sup>. In spite of the efforts to remove predatory gulls, terns had very little reproductive success, raising only 400 young for the entire colony, estimated to be 6,416 breeding pairs. After the allowable number of gulls was removed there was still a considerable amount of nest predation by gulls but to a lesser degree which probably allowed for second nesting attempts and limited reproductive success on the tern colony.

In 2013, the AMT recommended the Corps continue to pursue options to lethally remove gulls on the East Sand Island tern colony and be prepared to act should combined bald eagle disturbance and nest predation by gulls contribute to low productivity. The AMT also recommended using green-light lasers and putting gull carcasses on stakes to create gull effigies on the colony as a deterrent to other gulls. These recommendations were based on concerns that consecutive years of low productivity on the tern colony could result in immediate abandonment of the colony and dispersal upriver to Rice Island or Miller Sands Spit where consumption on juvenile salmonids is known to be higher. Several literature references citing Caspian tern studies in the Great Lakes region were given to support this.

Acting on these recommendations, the Corps prepared a draft EA (*Draft Environmental Assessment-Adaptively Manage Predation on the Caspian Tern Colony in the Lower Columbia River Estuary*) in April 2013 with a proposed action (Alternative B) to lethally remove up to 150 gulls, use green-light lasers and place gull effigies on the colony to prevent the potential for nesting failure and abandonment ultimately to prevent potential for increased consumption of juvenile salmonids.

## **Public Involvement**

A notice of availability and a request for comments for the draft EA was posted on the Corps website April 24<sup>th</sup> 2013 and was made available for 10 days. Comment period ended on May 4<sup>th</sup> 2013. Several groups; Audubon Society of Portland, American Bird Conservancy, Pacific Seabird Group and the Wildlife Center of the North Coast requested the Corps extend the public comment period to 30 days. This request was denied.

- Substantive comments on the draft EA were submitted by Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, Oregon Department of State Lands, Columbia River Inter-Tribal Fish Commission, Portland Audubon Society, Pacific Seabird Group, Wildlife Center of the North Coast, Oregon Wild and 10 individuals.
- Comments resulted from Portland Audubon's Internet News Story written in response to their opposition to the proposed action. Seventy comments in total were emailed voicing their opposition to the Corps' proposal.

- The majority of those commenting (including the wildlife conservation groups) recommended selecting *Alternative A- No Action* primarily because need was not substantiated (i.e.: not clear the action would fulfill the need, and the need was not supported by the agency's own experience on East Sand Island with the tern colony).

Public comments were summarized, and a response is detailed in Appendix A in the EA. The EA includes revisions to the alternatives, affected environment and environmental consequences sections in response to these comments.

## **New Information Relevant to the Analysis and Decision**

New information received by the Corps during the public comment period questioned the fundamental assumption that Caspian terns likely are to immediately abandon the East Sand Island colony and therefore put into question the Corps' legal authority to take action. This information suggests that most of Caspian terns that come to the lower Columbia River Estuary, whether they are actively breeding or have failed at breeding, continue to utilize East Sand Island throughout their time in the estuary and in spite of consecutive years of low to no reproductive success, the terns continue to exhibit surprising nest site fidelity and continue to nest or attempt to nest at East Sand Island.

Surveys from 2010-2012 show that colony attendance and nesting density have remained high, even during periods of low productivity (measured as egg and chick survival) suggesting that Caspian terns (whether actively breeding or not) are committed to East Sand Island.

The lack of suitable habitat in the estuary is likely one driver for this (i.e.: hazed habitat at Rice Island, Miller Sands Spit and Pillar Rock Island); hence establishment of new colonies upriver is unlikely with on-going management actions. This is further corroborated by the most recent observations from the 2013 nesting season, where in the second week of May it was reported that nearly 9,800 terns have arrived on East Sand Island to initiate nesting (Bird Research Northwest or BRNW 2013). Another likely driver is the proximity of East Sand Island to a large prey base, specifically high availability of marine forage fish. This relationship between colony attendance by breeding adults (those caring for eggs and chicks), proximal foraging range and nesting success has been documented at East Sand Island.

In addition, this new information also confirmed that the bioenergetics models used to estimate consumption of juvenile salmonids captures consumption by Caspian terns actively nesting and roosting on East Sand Island. This information cast some doubt over the concerns or risk of increased predation on juvenile salmonids upriver due to nest failure and immediate colony abandonment during the 2013 nesting season.

## Environmental Consequences

While acknowledging the impacts discussed in the EA, the Corps is required by the National Environmental Policy Act to determine if the impacts of the selected alternative are significant. The term “significantly” is defined in NEPA’s implementing regulations. Significantly as used in NEPA requires consideration of both context and intensity. Consideration of context includes social, affected region and interests and the locality, as well as short and long-term effects. Intensity refers to the severity of impact. 40 Code of Federal Regulations § 1508.27 lists ten tests of significance identified below and addressed in the context of the Corps selection of the no-action alternative.

- 1) *Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.*

The effects of selecting the no-action alternative will effectively maintain the existing conditions for Caspian terns, glaucous-winged/western gulls and Columbia River Basin juvenile salmonids in the estuary.

- 2) *The degree to which the action affects public health or safety.*

The no-action alternative will not affect public health or safety.

- 3) *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

East Sand Island in the lower Columbia River Estuary is home to the some of the largest concentrations of coastal waterbirds in the United States. Because of the number and diversity of birds using the island it has been designated an Important Bird Area and Western Hemisphere Shorebird Reserve by American Bird Conservancy and Audubon Society. Its location and isolation from human presence and mammalian predators as well as its proximity to an abundance of marine forage fish and juvenile salmon (hatchery and wild) make it ideal habitat for a number of colonial waterbirds.

Throughout the Columbia River Basin, numerous salmon and steelhead (salmonids) are listed as threatened and endangered under the Endangered Species Act. Since their listing beginning in the 1990’s, considerable efforts have been made to help recover the populations. The Columbia River Estuary is critical to the development of juvenile salmonids, contributing to their viability by providing essential rearing habitat and migratory corridor for the various salmonid life history stages. Predation on juvenile salmonids from avian predators (Caspian terns) is listed as one of the factors potentially

limiting the recovery of: lower Columbia River Chinook, steelhead and coho; and Upper Willamette River Chinook and coho (NOAA Fisheries, 2008).

- 4) *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

The effects of the no action alternative are not likely to be highly controversial for the following reasons: The majority of the public comments from wildlife conservation groups including Portland Audubon Society, Pacific Seabird Group and Wildlife Center of the North Coast recommended selection of *Alternative A- No Action* even though there was acknowledgement that the implication of such a decision could mean another year of low to no productivity for the Caspian tern colony on East Sand Island. The effects of the no action will essentially maintain the existing conditions for Caspian terns, glaucous-winged/western gulls and Columbia River Basin juvenile salmonids in the estuary.

- 5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

The no-action alternative will not have effects on the human environment that are highly uncertain. The no-action alternative effectively maintains the existing conditions. It is likely that if disturbance by eagles and nest predation by gulls is consistent with previous years there could be low productivity on the East Sand Island colony. However, based on previous years of poor productivity and continued return to the East Sand Island colony, it is likely the tern colony will continue to utilize East Sand Island in 2013 where consumption of juvenile salmonids would likely be similar to previous year's average of approximately 5 million, fluctuating dependent upon the other factors influencing predation (river flows and availability of other forage fish).

- 6) *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

The no-action alternative will not establish a precedent for future actions with significant effects. The Corps will take no action in 2013 for the purposes of reducing the likelihood that terns will abandon the East Sand Island colony and move upriver where consumption on salmonids is known to be higher. The Caspian Tern Plan did call for an adaptive management plan to be written, but that plan has not been completed. Given the current circumstances and knowledge gained in implementation, the agencies involved in the decision making on the Caspian Tern Plan will be considering long term strategies to meet the objectives of the plan.

- 7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.*

The no-action alternative has no relation to other actions as no-action will be taken and the environmental baseline conditions for the Caspian terns, glaucous-winged/western gulls and Columbia River Basin juvenile salmonids in the estuary will be maintained.

- 8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

The no-action alternative will not cause adverse impacts to the type of structures or resources listed above as there will be no federal action, or undertaking. Per 36 Code of Federal Regulations Part 800.16 an undertaking is defined as a project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.

- 9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

As no action will be taken to minimize the potential for the tern colony to abandon the East Sand Island colony in 2013, it is likely (based on previous years of poor productivity and continued return to the East Sand Island colony) that the tern colony will continue to utilize East Sand Island in 2013 despite pressure from native predators. Because of this, tern consumption of juvenile salmonids in 2013 would likely be similar to previous year's average of approximately 5 million, fluctuating dependent upon the other factors influencing predation (river flows and availability of other forage fish). It is also possible that the downward trend of breeding pairs using East Sand Island will continue to decline with each passing year of poor productivity and that consumption of juvenile salmonids could decrease in the long term.

- 10) *Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.*

The no-action alternative does not threaten a violation of any law or requirements imposed for the protection of the environment.

## DETERMINATION

Based upon the EA prepared as described above, I find that the *Alternative A-No Action* alternative will not significantly affect the quality of the human environment and that an Environmental Impact Statement is not required. All beneficial and adverse impacts have been addressed to reach the conclusion of no significant impacts. This FONSI is based on the Corps' Final *Environmental Assessment-Adaptively Manage Predation on the Caspian Tern Colony in the Lower Columbia River Estuary*, which has been evaluated by the U.S. Army Corps of Engineers, Portland District.

John W. Eisenhower, P.E.

May 9, 2013

Colonel, Corps of Engineers

District Commander