United States Department of the Interior

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July 28, 2016

Mickey T. Sugg
Wilmington Regulatory Field Office
U. S. Army Corps of Engineers
69 Darlington Ave.
Wilmington, North Carolina 28403

Subject: Figure "8" Beach Homeowners Association, Inc., New Hanover County
USACE Action ID #SAW-2006-41158

Dear Mr. Sugg:

This is in response to your June 29, 2016 Public Notice, requesting comments on the proposed authorization of the Figure Eight Island Shoreline Management Project. Figure "8" Beach Homeowners Association, Inc. has applied for Department of Army (DA) authorization to construct a terminal groin and conduct beach nourishment along approximately 4,500 linear feet (lf) of oceanfront beach and 1,400 lf of back barrier shoreline on Figure Eight Island, in New Hanover County, North Carolina. The U.S. Fish and Wildlife Service, Raleigh Ecological Services office (Service) has reviewed the public notice and FEIS for the project and provided comments concerning the Final Environmental Impact Statement (FEIS) to the Department of Interior (DOI), for inclusion in DOI's comment letter. You should receive DOI's comments by August 1, 2016. The Service's comments concerning the authorization of the project are provided below. These comments are submitted in accordance with the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661-667d). Comments related to the FWCA are to be used in your determination of compliance with 404(b)(1) guidelines (40 CFR 230) and in your public interest review (33 CFR 320.4) in relation to the protection of fish and wildlife resources. Additional comments are provided regarding the District Engineer's determination of project impacts pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543). The Service previously provided comments to the 2012 Draft EIS for this project by letter dated July 3, 2012 and comments to the Supplemental EIS on September 9, 2015.

Project Area, Proposed Activities, and Anticipated Impacts

The project area is the northern end of Figure Eight Island and the adjacent Atlantic Ocean, Rich Inlet, and Nixon Channel. The purposes and needs stated in the FEIS for the project include: 1)

to reduce or mitigate erosion along 3.77 km (2.34 mi) of the Figure Eight Island oceanfront and 427 m (1,400 lf) of back barrier shoreline along Nixon Channel; 2) to provide reasonable short-term protection to residential structures in response to any unpredicted shoreline change within the next five years; 3) to provide long-term protection to Figure Eight Island homes and infrastructure over the next 30 years; 4) to acquire compatible beach material in compliance with the North Carolina State Sediment Criteria for shore protection projects; 5) to maintain navigation conditions within Rich Inlet and Nixon Channel; 6) to balance the needs of the human environment with the protection of existing natural resources; 7) to maintain existing recreational resources; and 8) to maintain the tax value of the homes and infrastructure on Figure Eight Island.

Eight alternatives are proposed: (1) No Action, (2) Abandon/ Retreat, (3) Rich Inlet Management with Beach Fill, (4) Beach Nourishment without Inlet Management, (5A) Terminal Groin with Beach Fill from Nixon Channel and a New Connector Channel, (5B) Terminal Groin with Beach Fill from Nixon Channel and Other Sources, (5C) Terminal Groin at a More Northerly Location with Beach Fill from Nixon Channel and a New Connector Channel, and (5D) Terminal Groin at a More Northerly Location with Beach Fill from Nixon Channel and Other Sources. The applicant's preferred alternative is Alternative 5D, which involves the construction of a 1,500-foot long terminal groin at the extreme north end of Figure Eight Island (south of Rich Inlet).

The Applicant's preferred alternative includes the construction of a 505 lf terminal groin with a 995 lf shore anchorage section. The preferred alternative 5D also proposes beach nourishment along approximately 4,500 lf of oceanfront, and along 1,400 linear feet of back barrier shoreline. Borrow materials would be derived from the maintenance of the existing permitted area in Nixon Channel. Three AIWW upland disposal sites would serve as contingency sediment sources if needed. The FEIS states that the project is proposed to be constructed between November 16 and March 31.

Federally-Protected Species

The FEIS lists the following federally- listed species (under the authority of the Service) within the project area: West Indian manatee (*Trichechus manatus*), piping plover (*Charadrius melodus*), seabeach amaranth (*Amaranthus pumilus*), and the Kemp's Ridley (*Lepidochelys kempi*), hawksbill (*Eretmochelys imbricata*), leatherback (*Dermochelys coriacea*), loggerhead (*Caretta caretta*), and green (*Chelonia mydas*) sea turtles.

Service Recommendations

The Service continues to recommend denial of the Corps permit for the project, based upon potential impacts to our trust resources; in particular, piping plover and red knot. A review of data provided by the applicant, North Carolina Wildlife Resources Commission (NCWRC), and others indicate very high usage of the project area by piping plovers and red knots over multiple seasons. Potential impacts to the Great Lakes population of piping plovers are particularly concerning.

Piping Plovers

Piping plovers are known to occur in the project area. North Carolina is the one of the only states where the piping plover's breeding and wintering ranges overlap and the birds are present year-round. Plovers may nest in the project area during the summer months, and overwinter in the project area during the winter months. The project area includes portions of Critical Habitat Unit NC-11 for wintering piping plovers, as described in 50 CFR Part 17 (66 FR 36038). Piping plovers from the federally endangered Great Lakes population as well birds from the threatened populations of the Atlantic Coast and Northern Great Plains overwinter on North Carolina beaches and have been recorded on Figure Eight Island (NCWRC shorebird database).

As proposed in the FEIS, the initial construction of the preferred alternative is proposed to take place during the winter months (November 15 to March 31), which may adversely affect overwintering piping plovers and the critical habitat unit. The Service has concerns for the potential losses of nesting and foraging habitat due to both direct and indirect impacts, particularly within the Critical Habitat Unit. Groins can act as barriers to longshore sand transport and cause downdrift erosion (Hayes and Michel 2008), which prevents piping plover habitat creation by limiting sediment deposition and accretion. Potential losses and degradation of critical habitat would include erosion or loss of unvegetated sand habitats above MLLW in the area downdrift of the groin (potentially including shoals and sandbars in Rich Inlet and Green Channel), and stabilization and increase in vegetation in the area updrift of the groin structure.

There were as many as 40 piping plover observations on one day in March 2015 in and near the project area. This number of observations is greater than any other beach in North Carolina outside of Cape Hatteras and Cape Lookout National Seashores (Seashores). Particularly during spring and fall migration, Rich Inlet has more observations of piping plover than any other North Carolina inlet south of Cape Lookout. Birds from all three piping plover populations (Great Plains, Great Lakes, and Atlantic Coast) utilize Rich Inlet and the project area.

Great Lakes Population

The Great Lakes population was listed as endangered under the Endangered Species Act (ESA) on December 11, 1985. The Service is currently conducting a consultation under Section 7 of the ESA to determine whether the project, as proposed, would jeopardize the existence of piping plovers. In 2016, there were 68 pairs of piping plovers nesting throughout the Great Lakes. Data from NCWRC and Audubon North Carolina indicate that at least nine (9) individual plovers from the Great Lakes breeding population have been documented at Rich Inlet in the winters of 2014 and 2015, and there have been anywhere from five to seven individuals from the Great Lakes population present in winter between 2009 to 2013. Nine birds represent approximately six percent (6%) of the entire population. Some of the individual plovers documented at Rich Inlet have made significant contributions to the recovery of the overall population: one banded female has successfully produced 18 chicks since 2009, including two that fledged this summer. The loss or substantial degradation of the wintering critical habitat at Rich Inlet is likely to have severe consequences for the piping plovers that consistently use the area for foraging and roosting habitat.

Atlantic Coast Population

The project area has supported a breeding population of piping plovers for each of the past three years. During the summers of 2014, 2015, and 2016, a piping plover nest was recorded on the north end of Figure Eight Island, within a few hundred feet of the proposed groin location. To date this summer, one chick has survived in the project area, and will hopefully fledge in the coming week.

South Carolina has historically been the most southern Atlantic state where piping plover nesting occurs. Nesting habitat for piping plovers is being lost incrementally in the Carolinas. In recent years, no piping plover nests have been observed in South Carolina. The nests on Figure Eight Island at Rich Inlet represent the southernmost documented nests in recent years. Because of the relatively undisturbed nature of Figure Eight Island at Rich Inlet, the project area provides one of the last best nesting habitats outside of the Seashores.

Piping Plover Critical Habitat

The loss of critical habitat due to the proposed project, particularly north of the proposed terminal groin, is of great concern. Critical habitat, including intertidal flats and shoals and unvegetated dry beach, is important for foraging and resting of migratory and overwintering piping plovers. Loss of critical habitat from construction and maintenance of the terminal groin

would be an adverse impact to critical habitat and to piping plovers. The Service is currently conducting a consultation under Section 7 of the ESA to determine whether or not the project would adversely modify piping plover critical habitat.

Red Knots

The Service also remains concerned for potential impact to migrating and overwintering red knots from the project. From the NCWRC database, there were as many as 189 red knot observations in May 2014 in the project area. According to the BA, personnel from the University of North Carolina at Wilmington have monitored Figure Eight Island for red knots since 2010. Red knots have been documented every year. Approximately 100 red knots were observed on Figure Eight Island migrating northward on April 17, 2012, and approximately 300 red knots were observed migrating southward on October 21, 2012 (including one banded individual).

The red knot has one of the longest distance migrations known in the animal kingdom, traveling up to 19,000 mi (30,000 km) annually between breeding grounds in the Arctic Circle and wintering grounds. Red knots undertake long flights that may span thousands of miles without stopping. Because there is so much distance between migration stops, the red knot depends upon known, reliable foraging and resting habitats, with adequate amounts of high-calorie prey. Red knots are vulnerable to loss of foraging and nesting habitat, particularly at highly-utilized migration stopover sites, such as Rich Inlet and Figure Eight Island. Rich Inlet and Figure Eight Island also appear to be highly-utilized overwintering sites.

Alternatives Analysis

The applicant states that the Rich Inlet management with beach fill alternative (Alternative 3) meets the purpose and needs of the project, and that it is practicable. It also appears from some of the modeling discussion in the Engineering Report that Alternative 4 (Beach Nourishment without Inlet Management) may provide adequate protection of homes from erosion even under the high-erosion scenario. However, the applicant believes that the terminal groin alternative will result in improved economic benefits and reduced environmental impacts. The Service believes that Alternative 5D will have greater impacts to our trust resources than Alternatives 3 or 4, particularly for the Great Lakes population of piping plovers and piping plover critical habitat unit NC-11. Based upon potential impacts to piping plovers and red knots from inlet management and from construction of a terminal groin, the Service recommends that the applicant consider pursuing Alternative 4 (Beach Nourishment without Inlet Management) instead.

Thank you for the opportunity to comment on this project. The Service expects to complete formal consultation by October 17, 2016. If you have any questions or comments, please contact Kathy Matthews at 919-856-4520, x27.

Sincerely yours,

For Pete Benjamin
Field Supervisor
Raleigh Ecological Services Office

cc: Ken Riley, NMFS, Beaufort, NC
Maria Dunn, NCWRC, Washington, NC
Doug Huggett, NCDCM, Morehead City, NC
Dan Holliman, USEPA
Todd Bowers, USEPA

References:

Hayes, M.O. and J. Michel. 2008. A coast for all seasons: A naturalist's guide to the coast of South Carolina. Pandion Books, Columbia, South Carolina. 285 pp.