

Draft Compatibility Determination

Title:

Seal Beach National Wildlife Refuge, Research and Surveys

Refuge:

Seal Beach National Wildlife Refuge

Refuge Use Category:

Research and Surveys

Refuge Use Type(s):

Research, Scientific Collecting, Surveys

Establishing and Acquisition Authorities and Refuge Purpose(s):

The Seal Beach National Wildlife Refuge (NWR or refuge) was established under the authority of the National Wildlife Refuge System Administration Act of 1966, as amended (80 Stat. 927; 16 U.S.C. 668dd-668ee). Public Law 92-408, authorizing the establishment of the Seal Beach National Wildlife Refuge, was signed by President Nixon on August 29, 1972. The law states, "The Secretary of the Interior shall administer the refuge in accordance with the National Wildlife Refuge System Administration Act of 1966, as amended, and pursuant to plans which are mutually acceptable to the Secretary of the Interior and the Secretary of the Navy."

The purpose of the Seal Beach NWR is to preserve and manage the habitat necessary for the perpetuation of two endangered species, the light-footed Ridgway's rail (*Rallus obsoletus levipes*) and California least tern (*Sternula antillarum browni*), and to preserve habitat used by migratory waterfowl, shorebirds, and other waterbirds (1974 Management Plan for Seal Beach National Wildlife Refuge, prepared pursuant to Public Law 92-408).

NWRS Mission:

The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (Pub. L. 105-57; 111 Stat. 1252).

Description of Use:

Is it a priority Public Use:

No.

What is the Use:

This use involves research, scientific collecting, and surveys of natural resources conducted by non-FWS personnel or authorized agents, but does not address research related to cultural resources. Natural resources related research, consisting of planned, organized, and systematic investigations and/or collecting, would be conducted when the proposed research would provide data and/or results that would contribute to the management, restoration, and/or protection of the refuge natural resources, particularly listed and sensitive species and their habitats.

Where would the Use be conducted:

Research activities related to natural resources may occur anywhere within the boundaries of the Seal Beach NWR, however, the specific locations for conducting research activities will be determined based on the type of research proposed, the species and/or natural environments on which the research is to be conducted, and any restrictions imposed by the U.S. Navy to protect the mission of Naval Weapons Station Seal Beach. Habitat types that could be affected include coastal wetlands (e.g., intertidal mudflats and low, mid, and high coastal salt marsh), subtidal open water areas, eelgrass beds, and disturbed and restored native upland habitats, as described in the Seal Beach NWR Comprehensive Conservation Plan (CCP) (USFWS 2012).

When would the Use be conducted:

The Refuge Manager receives periodic requests to conduct natural resources research and surveys on the refuge. These proposals are reviewed and approved by the Refuge Manager when it is determined that a proposed research activity would provide benefits to refuge fish, wildlife, plant populations, and/or their habitats, or expand our understanding of natural ecosystem processes and/or functions occurring on the refuge. In so doing, the research would support refuge purposes and the mission of the National Wildlife Refuge System. Specific start and end dates for a particular research proposal would consider time of year (e.g., avoiding the nesting season or sensitive plant growing season) and any restrictions related to time of day necessary to minimize disturbance to habitat and species or to avoid conflicts with ongoing operations conducted by Naval Weapons Station Seal Beach.

How would the Use be conducted:

Research would be conducted in accordance with the procedures, conditions, and case-specific stipulations included in an approved refuge Special Use Permit (SUP).

The SUP process requires applicants to submit the details of the research proposal for review and approval, including:

- objectives of the study;
- justification for the study;
- detailed study methodology and schedule;
- research personnel required and their qualifications and experience;
- status of necessary permits (i.e., scientific collecting permits, endangered species permit);
- costs to refuge and refuge staff time requested, if any; and
- anticipated end products (i.e., reports, publications).

Once a proposal is submitted, the Refuge Manager would review the details of the proposal and if acceptable, would prepare a SUP that includes a complete project description, conditions, and project-specific stipulations to be followed during implementation of the proposal. Stipulations would be developed after considering the following factors:

- will information gained from the research or survey provide insight into current or future refuge management;
- is there a potential for short- and/or long-term disturbance, injury, and/or mortality to any listed species and/or other refuge wildlife and/or habitats; and if so, are there measures that can be implemented to avoid or minimize such impacts;
- could the proposal conflict with other ongoing research, monitoring, or management programs; if so, are there measures that can be implemented to avoid such conflicts;
- could the research or survey be implemented elsewhere, or does the refuge provide the only option for carrying out the specified research; and
- is the proposal designed to minimize disturbance by taking into consideration location, timing, and scope of the study, as well as the number of participants, study methods, and number of study sites.

Proposals for open-ended research projects would not be considered.

If a proposal is approved, a SUP will be prepared that specifies rules of conduct, all permitted procedures, case-specific stipulations, and data reporting requirements. Projects would be reviewed annually to assess whether they:

- continue to meet the specified criteria or require additional stipulations,
- continue to operate as originally proposed, and
- can provide data to confirm that the objectives of the study are being accomplished.

Why would the Use be conducted:

Research proposals conducted by non-FWS personnel or authorized agents allow for independent examination of natural processes occurring on the refuge, as well as for focused research on issues important to refuge management such as listed and sensitive species, invasive species, habitat functions and values, predator management, sea level rise, and changes in tidal inundation. Pertinent results from research investigations can inform management recommendations in step-down plans, comprehensive conservation plan updates, and compatibility determinations. They can also inform the development and updating of monitoring protocols in habitat and species management plans. Research was most recently determined to be a compatible use on the Seal Beach NWR in 2011 and is addressed in the refuge's CCP (USFWS 2012).

Resources:

Existing Management Capability - Adequate funding exists to manage some level of research on the Seal Beach NWR, but staffing is limited, which would limit the number of research proposals that could be implemented at any one time. Therefore, discretionary use of staff time would be weighed through a cost-benefit analysis. Direct costs to administer research activities are primarily in the form of staff time.

Maintenance - No costs associated with maintenance are anticipated.

Monitoring - The availability of staff to monitor research activities will be taken into consideration when determining which and how many research proposals to approve for implementation on the refuge.

Special Equipment - No need for special equipment is anticipated.

Facilities - The refuge has some capacity to provide facilities for storing research-related materials and/or equipment, but adequate availability of temporary storage needs would have to be taken into consideration when determining which and how many research proposals to approve.

Improvements to Support the Use - No need for improvements to support research is anticipated.

Offsetting Revenue - No offsetting revenue would be provided for or from research activities occurring on the refuge.

Impacts:

Human activity in natural habitats, including activities associated with research and surveys, can have adverse impacts on plants and wildlife as described in the environmental assessment prepared for the Seal Beach NWR CCP (USFWS 2012). Of particular concern are impacts to federally listed species. Research activities on the Seal Beach NWR have the potential to disrupt bird nesting or foraging activities for species such as the endangered California least tern (*Sternula antillarum browni*) (Carney and Sydeman 1999) and light-footed Ridgway's rail (*Rallus obsoletus levipes*) (USFWS 2009). Usage of equipment in or near the water could also affect the threatened east Pacific green turtle (*Chelonia mydas*). Therefore, all research proposals will be evaluated to ensure that no adverse effects to listed species or their habitat would occur as a result of the study design and/or implementation, or to ensure that if adverse effects occur, they are minimal and are outweighed by the benefit to the management of the species. Researchers working directly with federally listed species would be required to comply with section 10(a)(1)(A) of the Endangered Species Act and possess the appropriate permit.

In addition to potential impacts to listed species, human disturbance associated with research and surveys of natural resources, particularly in refuge's wetland habitats, can affect other plant and wildlife species, as well as overall habitat quality. Many migratory birds, shorebirds, and marshbird species are sensitive to disturbance (Huffman 1999, Trulio and Sokale 2008, Fernández-Juricic et al. 2009) and salt marsh habitats that support the California State endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) are prone to degradation by foot traffic. Upland habitats support wildlife species that can be affected by noise, trampling, and other forms of disturbance. Therefore, the degree and type of disturbance that could occur must be carefully weighed when evaluating a research request.

Through the SUP process, project-specific conditions, including but not limited to where, when, and how access can occur on the refuge during research activities, will be included in each SUP's case-specific stipulations. Some level of disturbance is expected with all research activities since most researchers will be entering areas that are normally closed to the public and may be collecting samples or handling wildlife. However, stipulations included in the SUP will be tailored to specific work sites and research proposals. In addition to addressing potential impacts to biological resources, SUP stipulations will also

address the need to minimize soil disturbance and avoid activities that could impact water quality, prohibit ground disturbing activities where sensitive cultural resources are known to be present, minimize translocating invasive species, and require monitoring during ground disturbance in areas where cultural resources may be present.

The environmental assessment for the CCP (USFWS 2011) evaluated the potential effects of research on refuge resources and concluded that the project-specific stipulations required in research SUPs would adequately ensure that no significant adverse effects to the environment would result from research and survey activities conducted on the Seal Beach NWR.

Determination:

Determination Status:

Compatible

Mandatory Re-evaluation Date:

July 2030

Public Review and Comment:

This compatibility determination will be available for public review and comment for a period of 30 days. Comments received from the public will be considered prior to completing this compatibility determination.

Stipulations:

Protection of the Refuge's listed and sensitive species and the integrity of its habitats requires that staff frequently monitor research activities on the Refuge. To minimize the potential for adverse effects, the following stipulations, as applicable, would be included in research SUPs:

- research will be permitted at the discretion of the Refuge Manager, who will consider the compatibility of the proposed research with refuge purposes, proximity of research activities to sensitive habitats, potential for impacts to resources, and availability of staff for monitoring;
- research will occur consistent with the description in the proposal as agreed to by the Refuge Manager; (e.g., research purpose, proposed actions, refuge benefits, number of participants, times of the year when activities will occur, research procedures, areas to be accessed, measures to minimize impacts);
- all research will be conducted per the approved SUP and project-specific stipulations;
- renewals of SUPs will be subject to Refuge Manager review and approval, and will consider the current status of the study, compliance with the conditions in the SUP, and the extent to which the project resulted in any impacts;
- highly intrusive or manipulative research and research methods with the potential to adversely affect refuge resources will generally not be permitted (however, if a proposal can demonstrate that the research will provide significant benefits in terms of achieving refuge purposes despite potential impacts, the Refuge Manager has the discretion to permit such research provided potential impacts can be identified in advance of their occurrence, measures can be implemented to minimize such impacts, and all conditions in the SUP can be met);

- refuge staff may be present at any time to assess study methods and potential impacts to resources;
- Refuge Manager can suspend/modify conditions or terminate research that is already permitted and in progress, should unacceptable impacts/issues be identified;
- researchers will be responsible for acquiring and/or renewing required State and Federal permits prior to beginning or continuing their project;
- researchers will be responsible for acquiring and/or renewing entry approval onto Naval Weapons Station Seal Beach and adhering to all access restrictions;
- research should adhere to current species protocols for data collection to ensure that data collected on the refuge is standardized for comparison across a species range;
- if the phenology of the phenomenon being studied allows, research will generally be conducted outside of the bird breeding season;
- researchers will avoid any unnecessary trampling of vegetation and/or disturbance of wildlife and no take of plants, animals, or their parts will be permitted unless specified in the SUP; and
- all data, reports, and publications related to the approved research shall be provided to the Refuge Manager and shared with the landowner (U.S. Navy) in a timely manner.

Justification:

Research and surveys are not refuge uses identified by the National Wildlife Refuge System Improvement Act of 1997 as wildlife-dependent recreational uses; however, conducting research and surveys on the refuge can benefit refuge resources through facilitation of informed management decisions. Based on the refuge purposes for the Seal Beach NWR, priority would be given to research and surveys that contribute to the enhancement, protection, and management of listed and sensitive species and their habitats. However, research that addresses migratory birds, fish, sea turtles, marine mammals, native marsh vegetation, invasive species, changes in site elevations, sea level rise, and other issues that affect wildlife and habitat management would all benefit the refuge and support refuge purposes. Research plays an important role in the development of management actions on the Seal Beach NWR, particularly with respect to monitoring strategies, understanding the phenology and life cycle processes of listed and sensitive species, control of invasive species, and the effects of sea level rise. The knowledge gained through research can also contribute to environmental educational and interpretation.

All research proposals will be fully vetted and project-specific stipulations will be incorporated into the SUP to ensure that adequate protections are in place for refuge resources. Refuge staff will monitor each research project to ensure compliance with the SUP and to ensure that no unanticipated impacts arise during project implementation. The number of research projects to be conducted on the refuge at any given time would consider the cumulative effects to all refuge resources from the range of research and/or survey activities proposed or underway, the availability of refuge staff to monitor these activities, and any potential conflicts with ongoing wildlife dependent recreational uses. Implementing these procedures will ensure that research and survey activities support efforts to achieve refuge goals and objectives.

References:

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Huffman, K. 1999. San Diego South Bay Survey Report – Effects of Human Activity and Water Craft on Wintering Birds in the South San Diego Bay.

Trulio, Lynne and Jana Sokale. 2008. Foraging Shorebird Response to Trail Use around San Francisco Bay. *Journal of Wildlife Management* 72(8):1775-1780.

U.S. Fish and Wildlife Service (USFWS). 2009. Light-footed Clapper Rail (*Rallus longirostris levipes*) 5-Year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California, USA.

U.S. Fish and Wildlife Service (USFWS). 2011. Finding of No Significant Impact and Environmental Assessment for the Seal Beach National Wildlife Refuge Comprehensive Conservation Plan.

U.S. Fish and Wildlife Service (USFWS). 2012. Comprehensive Conservation Plan for the Seal Beach National Wildlife Refuge.

Signature Page:

Refuge Manager: _____

Approval Date: _____

Regional Chief: _____

Concurrence Date: _____