

Draft Compatibility Determination

Title

Draft Compatibility Determination for research, Pierce National Wildlife Refuge

Refuge Use Category

Research and Surveys

Refuge Use Type(s)

Research
Scientific Collecting
Surveys

Refuge

Pierce National Wildlife Refuge

Refuge Purpose(s) and Establishing and Acquisition Authority(ies)

“...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds...” (Migratory Bird Conservation Act, as amended [16 U.S.C. 715-715d, 715e, 715f-715r]).

“...for the development, advancement, management, conservation and protection of fish and wildlife resources...” (Fish and Wildlife Act of 1956, as amended [16 U.S.C. 742a-742j, not including 742d-1])

National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System, otherwise known as Refuge 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 this an existing use?

Yes. This compatibility determination reviews and replaces the 2005 compatibility determination of research which was prepared concurrently with the CCP for Steigerwald Lake NWR, Franz Lake NWR, and Pierce NWR (USFWS 2005)

What is the use?

Research. Planned, organized, and systematic investigation of a scientific nature conducted by non-FWS personnel or authorized agent.

Scientific Collecting. Gathering of refuge natural resources or cultural artifacts for scientific purposes conducted by non-FWS personnel or authorized agent.

Surveys. Scientific inventory or monitoring conducted by non-FWS personnel or authorized agent.

Research would be allowed on the Refuge as requested by outside entities, where it is determined to be compatible with refuge management of natural resources. This will be determined by refuge staff on a case-by-case basis as requests are received in the form of study proposals.

Is the use a priority public use?

No

Where would the use be conducted?

Research would be allowed on the Refuge as requested by outside entities, where it is determined to be compatible with refuge management of natural resources. This will be determined by refuge staff on a case-by-case basis as requests are received in the form of study proposals. Research could occur throughout the Refuge if it is found to be compatible.

When would the use be conducted?

The timing, frequency, and duration of research on the Refuge would be project specific and will vary depending upon the nature and scope of the project. Research could occur year-round.

How would the use be conducted?

Types of research. The refuge staff receives periodic requests from non-Service entities (e.g., universities, State or territorial agencies, other Federal agencies, nongovernmental organizations) to conduct research on refuge lands. Priority would be given to studies that support refuge purposes, goals and objectives. Because research requests can involve a wide range of natural and cultural resources as well as public-use management issues, they may be conducted using a wide variety of methods, for example: basic absence/presence surveys, collection of animals or plants for identification, studies of habitat use and life-history requirements for specific species/species groups, studies of practical methods for habitat restoration, investigations into the extent and severity of environmental contaminants, techniques to control or eradicate pest species, studies of effects of climate change on environmental conditions and associated habitat/wildlife response, identification and analyses of paleontological specimens, modelling of wildlife populations,

bioprospecting, and assessing response of habitat/wildlife to disturbance from public uses. Projects may be species-specific or refuge-specific, or they may evaluate the relative contribution of the refuge lands to larger landscapes (e.g., ecoregion, region, flyway, national, international), issues, and trends.

Application Process. At least 1 month before initiation of any fieldwork, the project investigator(s) must submit a detailed project proposal using the *Research and Monitoring Special Use Permit* application (FWS Form 3-1383-R). A proposal template is available from the Refuge Manager on request.

Proposal review; selection criteria. Project proposals will be reviewed by refuge staff and others, as needed, to assess the potential impacts (short-term, long-term, and cumulative) relative to benefits of the investigation to refuge management issues and understanding of natural systems. This assessment will form the primary basis for allowing or denying a specific project. Special Use Permits (SUPs) will not be issued for projects that result in unacceptable refuge impacts.

SUP issuance; stipulations. The refuge manager will issue a SUP for accepted projects that includes stipulations (terms and conditions) required to avoid and/or minimize potential impacts to refuge resources and conflicts with public use activities and refuge field management operations. The SUP stipulations will ensure that proposed projects contribute to the enhancement, protection, conservation, and management of native wildlife populations and their habitats on the Refuge. As a result, these projects will help fulfill refuge purpose(s); contribute to the mission of the Refuge System; and maintain the biological integrity, diversity, and environmental health of the Refuge.

Measures to minimize spread of invasive species. Spread of invasive plants, animals, and/or pathogens would be minimized or eliminated by requiring proper cleaning of investigator equipment and clothing as well as quarantine methods, where necessary. If there is a significant risk of spread of invasive species despite these preventative measures, then the project proposal must include a restoration or mitigation plan in order to be permitted on the refuge.

Permit requirements. Investigator(s) are required to obtain the appropriate State, territorial, and/or Federal collecting permits to ensure that there would be minimal impacts to fish, wildlife, plants, and their habitats. Future projects that are outside the scope of the CCP may require additional National Environmental Protection Act (NEPA) documentation and compliance. For example, Section 7 consultation under the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884, as amended Public Law 93-205) would be required for activities that may affect a federally listed species and/or critical habitat. SUPs would be issued only for projects that would have no effect on, or not likely to adversely affect, listed species and critical habitat.

Why is this use being proposed or reevaluated?

Research at Pierce NWR was previously determined to be compatible (USFWS 2005).

Research is being reevaluated due to the 10-year renewal period ending (603 FW 2.11 H.).

The Service's Research and Management Studies (4 RM 6) and Appropriate Refuge Uses (603 FW 1.10D(4)) policies indicate priority for scientific investigatory studies that contribute to the enhancement, protection, use, preservation, and management of native wildlife populations and their habitat as well as their natural diversity. Thus, research that contributes toward achievement of refuge-specific resource management goals and objectives, where applicable, or elucidating the status and trends of its fish, wildlife, plants, and habitats would be given a higher priority over other requests.

Availability of Resources

Refuge staff responsibilities for oversight of research conducted by non-Service entities would include: reviewing proposals, preparing SUPs and addressing other applicable compliance (e.g., Section 7 of the Endangered Species Act of 1973, Section 106 of the National Historic Preservation Act, NEPA), and monitoring project implementation to ensure that impacts remain within acceptable levels. Additional administrative, logistical, and operational support may also be provided depending on each specific request. One-time (e.g., prepare SUP) and annual costs for administering research projects would depend upon the number of proposals received and the number of ongoing projects. The number of research projects conducted on the Refuge in any given year is dependent on staff capacity to manage them. Generally, the Refuge receives less than 6 requests to conduct research annually. Recurring annual expenses to evaluate research proposals, issue SUPS and administer and manage ongoing research projects is estimated at \$200. The Refuge currently has staffing and funding in its general operating budget to administratively support and monitor research at levels anticipated to take place on refuge lands. A substantial increase to the number of projects may create the need for additional resources to administer the use. Any additional costs to administer the use above those covered under the Refuge's general operating budget must be offset by the investigator(s), sponsoring agency, or organization.

Anticipated Impacts of the Use

This Compatibility Determination includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an "affected resource." Soils, Air, water, cultural resources, wilderness, and socioeconomic resources will not be more than negligibly impacted by the action and have been dismissed from further analyses.

Potential impacts of a proposed use on the refuge's purpose(s) and the Refuge System mission

Priority would be given to studies that support refuge purposes, goals and objectives. The selection criteria, along with the combination of stipulations and conditions included in any SUP will ensure that proposed projects contribute to the enhancement, protection, conservation, and management of native wildlife populations and their habitats on the Refuge. As a result, these projects will help fulfill refuge purposes; contribute to the Mission of the NWRS; and maintain the biological integrity, diversity, and environmental health of the refuge.

If project methods impact or conflict with refuge-specific resources, priority wildlife-dependent public uses, other high-priority research, or refuge habitat and wildlife management programs, then the project proposal will only be accepted, and SUP issued, if the project clearly demonstrates scientific findings that would contribute to resource management and cannot be conducted off refuge lands. The investigator(s) must identify methods/strategies in advance required to minimize or eliminate the potential impact(s) and conflict(s). If unacceptable impacts cannot be avoided, then a SUP would not be issued. Projects that represent economic use of the natural resources of any national wildlife refuge (e.g., bioprospecting), in accordance with 16 U.S.C. 715s, must contribute to the achievement of the refuge purposes or the Refuge System mission to be compatible (50 C.F.R. 29.1).

Short-term impacts

Impacts would be project- and site-specific and would vary depending upon nature and scope of the fieldwork. Depending on the project, migratory birds, waterfowl, and other wildlife may be impacted by the actions. Some research projects may directly interact with migratory birds, waterfowl, wildlife, and their habitat, potentially causing behavioral changes, negligible mortality, or minimal habitat alteration. Research not directly associated with wildlife may also cause disturbance through the presence of researchers and equipment or the alteration of habitat. However, these effects would be temporary, localized, and short-term. Oversight by refuge staff, where applicable, will prevent unacceptable or irreversible impacts to fish, wildlife, plants, and their habitats.

Data collection techniques would generally result in minimal animal mortality or disturbance, impacts to habitat, no introduction of contaminants, and minimal risk of introduction of non-native species. Research involving the collection of biotic (plants or animals) or abiotic (e.g., soil, water) samples, or requiring intensive ground-based data or sample collection would have short-term impacts. To reduce impacts, the study proposal must specify that the minimum number of samples (e.g., water, soils, vegetative litter, plants, macroinvertebrates, vertebrates) would be collected for identification and/or experimentation and statistical analysis. Where possible, researchers would coordinate and share collections to reduce sampling needed for

multiple projects.

There also could be localized and temporary effects from vegetation trampling, collecting of soil and plant samples, or trapping and handling of wildlife. Impacts may also occur from infrastructure necessary to support a project (e.g., transects or plot markers, enclosure devices, monitoring equipment, solar panels to power unattended monitoring equipment). Some level of disturbance is expected with these projects, especially if investigator(s) enter areas closed to the public and collect samples or handle wildlife. However, wildlife disturbance (including altered behavior) would usually be localized and temporary in nature.

Although the spread of invasive plants, animals, and/or pathogens is possible from ground disturbance and/or transportation of project equipment and personnel, this would be minimized or eliminated by requiring proper cleaning of investigator equipment and clothing as well as quarantine methods, where necessary.

Research activities may affect, but are unlikely to adversely affect, federally-listed species that occur on the refuge, specifically juvenile Columbia River populations of chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), chum salmon (*O. keta*) and steelhead (*O. mykiss*).

Research activities will not occur in areas used by juvenile salmonids except with permission and proper permits from National Marine Fisheries Service. The Refuge has completed an intra-service consultation pursuant to the Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) regarding the proposed use and these species.

Long-term impacts

As noted above, the terms and conditions of SUPs would be designed to minimize the risk of long-term negative impacts, and SUPs would not be issued for projects likely to have long-term negative impacts to refuge resources. Use of the Refuge to conduct research would generally provide information that would benefit fish, wildlife, plants, and their habitats. Scientific findings gained through these projects provide important information regarding life-history needs of species and species groups as well as identify or refine management actions to achieve resource management objectives in refuge management plans (especially CCPs). Reducing uncertainty regarding wildlife and habitat responses to refuge management actions in order to achieve desired outcomes reflected in resource management objectives is essential for adaptive management in accordance with 522 DM 1.

Public Review and Comment

The draft compatibility determination will be available for public review and comment for 14 days. The public will be made aware of this comment opportunity through our social media outlets and letters to potentially interested people such as neighbors and partner agencies. A hard copy of this document will be posted at the Refuge

Headquarters (28908 NW Main Avenue, Ridgefield WA 98642). It will be made available electronically on the refuge website: <https://www.fws.gov/refuge/Pierce/>. Please let us know if you need the documents in an alternative format. Concerns expressed during the public comment period will be addressed in the final Compatibility Determination.

Determination

Is the use compatible?

Yes

Stipulations Necessary to Ensure Compatibility

1. If the proposed research methods would impact or potentially impact refuge resources (habitat or wildlife), it must be demonstrated that the research contributes to the refuge purpose and the researcher must identify the issues in advance of the impact. Highly intrusive or manipulative research is generally not permitted in order to protect native plant and wildlife populations. Potential researchers must submit a written study proposal with their request.
2. Each research project would require one or more SUPs. Annual or other short-term SUPs are preferred; however, some permits would be for a longer period, if needed, to allow completion of the project. Every SUP would have a definite termination date in accordance with 5 RM 17.11. Renewals would be subject to refuge manager review and approval based on timely submission of and content in progress reports, compliance with SUP stipulations, and required permits.
3. Projects will adhere to scientifically defensible protocols for data collection, where available and applicable. Projects will address data management planning requirements as specified in 274 FW 1.
4. Project investigators must submit a study proposal at least 1 month in advance of proposed initiation for the refuge staff to have adequate time to review the study plan. For projects requiring other compliance (e.g., Section 7 consultation), study proposals may need additional processing time.
5. Investigators must possess and comply with conditions of State, territorial, and/or Federal permits for their projects.
6. If unacceptable impacts to natural resources or conflicts arise or are documented by refuge staff, then the refuge manager can suspend, modify conditions of, or terminate an ongoing project already permitted by SUP(s) on a refuge.
7. If cultural resources or artifacts are found during research all activities should stop and cultural resource specialist should be contacted.
8. Progress reports are required at least annually for multiple-year projects. The minimum required elements for a progress report will be provided to investigators.
9. Final reports will be due one year after completion of the project unless

negotiated otherwise with the Refuge Manager.

10. Continuation of existing projects will require approval by the Refuge Manager.
11. Refuge staff will be given the opportunity to review draft manuscript(s) from the project before being submitted to a scientific journal(s) for consideration of publication.
12. Refuge staff will be provided with copies (reprints) of all publications resulting from a refuge project.
13. Refuge staff will be provided with copies of raw data (preferably electronic database format) at the conclusion of the project.
14. Upon completion of the project or annually, all equipment and markers (unless required for long-term projects) must be removed and sites must be restored to the Refuge Manager's satisfaction. Conditions for clean-up and removal of equipment and physical markers will be stipulated in the SUP(s).
15. All samples collected on refuge lands are the property of the Service even while in the possession of the investigator(s). Any future work with previously collected samples not clearly identified in the project proposal will require submission of a subsequent proposal for review and approval. In addition, a new SUP will be required for additional project work. For samples or specimens to be stored at other facilities (e.g., museums), a memorandum of understanding will be necessary.
16. Sampling equipment as well as investigator(s) clothing and vehicles (e.g., ATVs, boats) will be thoroughly cleaned (free of dirt and plant material) before being allowed for use on refuge lands to prevent the introduction and/or spread of pests. Where necessary, quarantine methods specified by the Refuge Manager will be used.
17. The Refuge System, the specific refuge, and the names of refuge staff and other Service personnel that supported or contributed to the project will be appropriately cited and acknowledged in all written and oral presentations resulting from projects on refuge lands.
18. At any time, refuge staff may accompany investigator(s) in the field.
19. Investigator(s) and support staff will follow all refuge-specific regulations that specify access and travel on the Refuge.
20. Investigator(s) obtaining required State, and/or Federal collecting permits will also ensure minimal impacts to fish, wildlife, plants, and their habitats. If after incorporating the above strategies, projects will not be compatible if they will result in long-term or cumulative effects. A Section 7 consultation under the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884, as amended Public Law 93-205) will be required for activities that may affect a federally listed species and/or critical habitat. Only projects which have no effect or will result

in not likely to adversely affect determinations will be considered compatible.

Justification

The stipulations outlined above would help ensure that the use is compatible at Pierce National Wildlife Refuge. Research, as outlined in this compatibility determination, would not conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the refuge. Based on available science and best professional judgement, the Service has determined that research at Pierce National Wildlife Refuge, in accordance with the stipulations provided here, would not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose of the Pierce National Wildlife Refuge. Rather, appropriate and compatible research contribute to the Refuges purpose by providing valuable information and data to information management.

Signature of Determination

Refuge Manager Signature and Date

Signature of Concurrence

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date

2033

Literature Cited/References

USFWS. 2005. Steigerwald Lake National Wildlife Refuge, Franz Lake National Wildlife Refuge, and Pierce National Wildlife Refuge Final Comprehensive Conservation Plan. <https://ecos.fws.gov/ServCat/DownloadFile/18758>