

Draft Compatibility Determination

Title

Compatibility Determination for Natural Resource Collection – Plant gathering (commercial) at San Luis National Wildlife Refuge

Refuge Use Category

Natural Resource Collection

Refuge Use Type(s)

Plant gathering (commercial)

Refuge

San Luis 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.”
16 U.S.C. Sec. 715d (Migratory Bird Conservation Act)

“...shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements ... and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ...” 16 U.S.C. Sec. 664 (Fish and Wildlife Coordination Act)

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 (16 U.S. Code § 668dd(a)(2)).

Description of Use

Is this an existing use?

No

This use is being evaluated at the request of the Seeds of Success Program partners.

What is the use?

Plant gathering is the collection of plant parts or plant products for sale or commercial use. Plant product collection may occur on San Luis NWR only with the approval of a Special Use Permit. This activity must occur under the stipulations of a valid Special Use Permit (SUP) and approval from the Refuge Manager or equivalent Refuge personnel.

The Seeds of Success (SOS) Program is led by the Bureau of Land Management (BLM) in close partnership with the USFWS and the National Park Service (NPS), and a variety of other federal agencies, Tribal Nations and non-federal organizations who help with seeds collection, seed cleaning and testing, seed storage, data management, processing voucher specimens, and more. Once the seeds are collected, they belong 1/3 to BLM, 1/3 to USFWS and 1/3 to NPS. The collected seeds could be sent to a seed extractory for cleaning, then to a lab for long-term storage. The seeds could also be put into production and grown out for use in post-fire recovery on DOI lands or DOI directed habitat restoration. Growing the seeds may be done by an agency or contracted out to a non-profit, small business or university grower. Because the seeds may be grown commercially and used on lands that are not Refuge lands, this use is considered commercial plant gathering.

Is the use a priority public use?

No

Where would the use be conducted?

This use will occur on San Luis NWR, only in locations that are pre-approved in a corresponding SUP.

When would the use be conducted?

This use will occur only during times and seasons that are pre-approved in a corresponding SUP. The SOS Program will gather seeds during the ideal summer and early fall, June through September, only in areas that will either not impact or minimally impact wildlife.

How would the use be conducted?

Seeds for non-sensitive plant species may be collected if the activities do not adversely affect wildlife species, habitat, or Refuge property, as permitted in an approved SUP. The SUP will outline the specific location(s) and time(s) by which collection may occur. Individuals can submit a General Special Use Permit application (FWS Form 3-1383-G2020) or a Research Special Use Permit Form (3-1383-R) to the Refuge Manager for approval. Seeds will be collected manually, throughout the species' dispersal season, and no more than 20% of the viable seed available will be collected. Collection sites will be access by vehicle and by foot. All collection is done by hand or aided by the use of hand tools. Primary tools used include shears, or snips, scythes, tweezers, and fingers. Additionally, as the species dictates, researchers may use baskets, bags or buckets to collect seed that needs to be beaten into a vessel. More specific details of how an appropriate target species population will be determined can be found in the SOS Technical Protocol (BLM 2023).

Why is this use being proposed or reevaluated?

The U.S. Fish and Wildlife Service (USFWS) is working with other federal agencies and partners to implement the National Seed Strategy for Rehabilitation and Restoration (Seed Strategy). A key aim of the Seed Strategy is to increase the supply of genetically appropriate (i.e., locally adapted) native plant species needed to restore healthy, resilient, and adaptive ecosystems.

Wildland native seed collections are the foundation for native plant materials development (NPMD) and are essential for the successful restoration of working landscapes and wildlife habitat after natural disasters and other damage. Refuge lands can both provide and use native plant material for rehabilitation or restoration activities. Many National Wildlife Refuges (NWRs) and complexes have been/are engaged in NPMD, including participating in both Seeds of Success (SOS) and non-SOS seed collection activities.

In 2023, USFWS entered an interagency SOS MOU with the BLM and NPS and is currently working to implement the SOS program agency wide. Seed collected by SOS teams is safeguarded by long-term germplasm conservation and used for research, development, seed increase (i.e., production to increase seed supply), and ecological restoration activities. The collection and removal of certain native plants from the refuges for habitat restoration activities and contribution to a native wild seed bank are appropriate and beneficial purposes.

Availability of Resources

Adequate funding and staff exist to manage plant and animal product collection activities at San Luis NWR. Administrative staff costs associated with this use consists of Refuge Complex staff time to review proposals, process SUPs, evaluate impacts, oversee collection activities, and ensure that the plant collection activities comply. Annual monetary costs expended by the Refuge Complex to administer this use averages \$1,000 per request. Refuge Complex operational funds are currently available through the Service budget process to administer this program.

Anticipated Impacts of the Use

The effects and impacts of the proposed use to refuge resources, whether adverse or beneficial, are those that are reasonably foreseeable and have a reasonably close causal relationship to the proposed use. This CD 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.” Only the impacts to soils, vegetation, and wildlife are discussed below; all other 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

As stated above, the refuge was established to conserve migratory birds and other wildlife. We anticipate the following impacts to wildlife (including migratory birds), and their habitats.

Wildlife

Disturbance to wildlife, such as the flushing of feeding, resting, or nesting birds, may occur during natural resource collection activities. There is some temporary disturbance to wildlife due to human activities, however, the disturbance is generally localized and will not adversely impact overall populations. Increased disturbance would cause some displacement of habitat and increase some disturbance to wildlife, although this is expected to be minor given the size of the Refuges and by avoiding or minimizing intrusion into critical wildlife habitat.

Individual animals may be disturbed by human contact to varying degrees. Human activities on the Refuge can result in direct effects on wildlife through harassment, a form of disturbance that can cause physiological effects, behavioral modifications, or death (Smith and Hunt 1995). Many

studies have shown that birds can be impacted from human activities when they are disturbed and flushed from feeding, resting, or nesting areas. Flushing, especially repetitive flushing, can strongly impact habitat use patterns of many bird species. Flushing from an area can cause birds to expend more energy, be deterred from using desirable habitat, affect resting or feeding patterns, and increase exposure to predation or cause birds to abandon sites with repeated disturbance (Smith and Hunt 1995). Migratory birds were observed to be more sensitive than resident species to disturbance (Klein 1989).

Hérons and shorebirds were observed to be the most easily disturbed (when compared to gulls, terns and ducks) by human activity and flushed to distant areas away from people (Burger 1981). A reduced number of shorebirds were found near people who were walking or jogging, and about 50 percent of flushed birds flew elsewhere (Burger 1981). In addition, the foraging time of sanderlings decreased and avoidance (e.g., running, flushing) increased as the number of humans within 100 meters increased (Burger and Gochfeld 1991). Nest predation for songbirds (Miller et al. 1998), raptors (Glinski 1976), colonial nesting species (Buckley and Buckley 1976), and waterfowl (Boyle and Samson 1985) tends to increase in areas more frequently visited by people. In addition, for many passerine species, primary song occurrence and consistency can be impacted by a single visitor (Gutzwiller et al. 1994). In areas where primary song was affected by disturbance, birds appeared to be reluctant to establish nesting territories (Reijnen and Foppen 1994). Depending on the species (especially migrants vs. residents), some birds may habituate to some types of disturbance and either are not disturbed or will immediately return after the initial disturbance (Hockin et al. 1992; Burger et al. 1995; Knight and Temple 1995; Madsen 1995; Fox and Madsen 1997). Rodgers and Smith (1997) calculated buffer distances that minimize disturbance to foraging and loafing birds based on experimental flushing distances for 16 species of waders and shorebirds. They recommended 100 meters as an adequate buffer against pedestrian traffic, however, they suggest this distance may be reduced if physical barriers (e.g., vegetation screening) are provided, noise levels are reduced, and traffic is directed tangentially rather than directly toward birds. Screening may not effectively buffer noise impacts, thus visitors should be educated on the effects of noise and noise restrictions should be enforced (Burger 1981, 1986; Klein 1993; Bowles 1995; Burger and Gochfeld 1998).

All bags that have collected seed stored in them should be allowed to remain open and provide escape for any bugs trapped in the collected seed. Bags can also be left open during the first few days after harvest to allow the seed to dry.

Soils and vegetation

Those collecting plant materials could directly impact the plants and soils on the refuge by trampling. Knight and Gutzwiller (1995) found that the main effect on vegetation and soil is human trampling caused by walking on- and off-trail. Excessive travel by foot can crush, bruise, shear off, and uproot vegetation (Cole and Landres 1995). Vegetation in trampled areas may be reduced in height, stem length, leaf area, flower and seed production, and carbohydrate reserves (Liddle 1975, as cited in Cole and Landres 1995). Plants growing in wet or moist soils are the most sensitive to disturbance from trampling effects (Kuss 1986).

Foot travel may also result in compacted soils and diminished soil porosity, aeration, and nutrient availability (Kuss 1986). This can in turn affect plant growth and survival. Pedestrians may also affect soils by decreasing organic surface material, compacting mineral soil, reducing infiltration, increasing soil erosion, and increasing fluctuation in soil moisture content (Knight and Gutzwiller 1995). Hammitt and Cole (1998) note that soil compaction limits the ability of plants to revegetate affected areas.

Collectors can be vectors for invasive plants when seeds or other parts of the plant are moved from one area to another. Once established, invasive species can outcompete native plants, thereby altering habitats and indirectly affecting wildlife. The threat of invasive plant establishment will always be an issue requiring annual monitoring and, when necessary, treatment.

Collection activities directly remove plant material from the Refuge, but the SUP and stipulations will ensure that the removal will not affect population levels.

Public Review and Comment

The draft compatibility determination will be available for public review and comment for 7 days from 5/1/2024 to 5/8/2024. The public will be made aware of this opportunity to comment through a post on the Refuge's social media platforms. A hard copy of this document will be posted at the San Luis NWR Visitor Center, 7376 Wolfsen Rd, Los Banos, CA 93635. It will be made available electronically on the refuge website (<https://www.fws.gov/refuge/san-luis/what-we-do>). 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

The following stipulations are required to ensure compatibility of this activity:

1. A Special Use Permit application is required for any plant or animal product collection activity.
2. The application is reviewed by San Luis NWR Complex staff as to its potential value and impacts to the Refuge Complex's natural resources.
3. A Special Use Permit is issued to approved plant collection activities.
4. Restrictions regarding the specific specimens collected are listed in the Special Use Permit.
5. The principal authority must submit a Special Use Permit application for approval to the Complex.
6. All work will be coordinated with the project leader, or designated staff member.
7. Collections will adhere to the requirements indicated in the Special Use Permit.
8. Complex staff may be present during times of natural resource collections to assess potential impacts; to ensure Special Use Permits are adhered to; and to determine if approved activities and Special Use Permits should be terminated because of adverse impacts.
9. No more than 20% of the viable seed available for the target species will be collected.
10. All Refuge Complex rules and regulations must be followed unless otherwise exempted, in writing, by the project leader.

Failure to comply with the provisions of the Special Use Permit will result in revocation of permit privileges.

Justification

The stipulations outlined above would help ensure that the use is compatible at San Luis National Wildlife Refuge. Plant product gathering, 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 plant product gathering at San Luis NWR, 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.

Signature of Determination

Refuge Manager Signature and Date

Signature of Concurrence

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date

2034

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