

Appendix C

Compatibility Determinations

C.1 Refuge Information

REFUGE NAME

Lee Metcalf National Wildlife Refuge

DATE ESTABLISHED

February 4, 1964

ESTABLISHING AND ACQUISITION AUTHORITIES

Migratory Bird Conservation Act (16 United States Code [U.S.C.] 661–667e)

Refuge Recreation Act (16 U.S.C. 460k–1)

State of Montana approval under provisions of Public Law 87–383 (75 Stat. 813)

REFUGE PURPOSES

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

“suitable for (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” 16 U.S.C. 460k–1

“the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. 460k–2 (Refuge Recreation Act, as amended (16 U.S.C. 460k–460k–4))

C.2 National Wildlife Refuge System 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.

C.3 Description of Uses

The following uses are evaluated for compatibility within the Lee Metcalf National Wildlife Refuge:

- hunting
- fishing
- wildlife observation and noncommercial photography
- environmental education and interpretation
- commercial filming, audio recording, and still photography
- cooperative farming and prescriptive grazing
- research and monitoring

HUNTING

Hunting is one of six wildlife-dependent priority public uses specified in the Improvement Act. Hunting occurs in two forms on the refuge: waterfowl (by shotgun) and white-tailed deer (by bow). In addition to the site-specific regulations mentioned below, State hunting regulations will apply to all Lee Metcalf Refuge lands open to hunting. Hunters may only possess and use U.S. Fish and Wildlife Service (Service)–approved, nontoxic shot shells on the refuge, and vehicle travel and parking is restricted to public roads, pull-offs, and parking areas. The refuge Web site and public use brochures provide guidance on site-specific regulations. The general hunting regulations are available from Montana Fish, Wildlife & Parks (MFWP).

Waterfowl hunting is restricted to the southeast part of the refuge. This 654-acre area of the refuge encompasses five wetlands and is closed to the general public. Waterfowl hunters access this area from one parking area. According to 2005–2009 records, fourteen blinds together accommodate an average of 965 visits per year. Waterfowl hunting is conducted during the State hunting season, which usually occurs from the first week of October through first week of January. Waterfowl hunting is available on a first-come, first-served basis except for opening weekend, during which blinds are allocated by drawing.

Archery hunters access 2,275 acres of refuge lands from five archery hunting access parking areas. According to 2005–2009 records, archery hunting for white-tailed deer draws an average of 1,030 visits annually and an average of 33 deer are harvested each

year. Deer hunting season starts in early September and ends the second week in January. In addition to providing a compatible recreational activity, deer hunting assists the refuge in managing overbrowsing of native habitats.

The comprehensive conservation plan (CCP) for the Lee Metcalf National Wildlife Refuge proposes to continue the hunting uses described above.

Availability of Resources. Hunting will be administered by the refuge staff. Currently, refuge staff does not include a dedicated or collateral duty law enforcement officer or a refuge biologist to monitor deer populations. It is anticipated that the refuge would rely on the zone law enforcement officer or staff from other refuges. Also, the regional inventorying and monitoring biologist will assist with analysis and trend monitoring.

Infrastructure in place on the refuge includes the following:

- hunt information kiosk
- five parking area and check-in stations
- 14 waterfowl blinds (2 are universally accessible)

Anticipated Impacts of Use. The hunting program on Service lands will continue to provide hunters ample quality hunting opportunities without materially detracting from the mission and goals of the National Wildlife Refuge System (Refuge System) or from the establishing purposes of refuge lands. Public use brochures and the refuge Web site will be kept up-to-date and made readily available to hunters. Hunter success and satisfaction will continue to be monitored using the hunter registration kiosk sign-in sheet along with random contacts with hunters in the field and in the refuge office.

The National Wildlife Refuge System Act of 1966 (as amended), other laws, and the Service's policy permit hunting on a national wildlife refuge when it is compatible with the purposes for which the refuge was established and acquired. Habitat that normally supports healthy wildlife populations produces harvestable surpluses that are a renewable resource. As practiced on Lee Metcalf Refuge, hunting does not pose a threat to the wildlife populations and, in some instances, is necessary for sound wildlife management. However, by its very nature, hunting creates a disturbance to wildlife and directly affects the individual animal being hunted. Nonetheless, it is well recognized that this activity has given many people a deeper appreciation of wildlife and a better understanding of the importance of conserving their habitat, which has ultimately contributed to the Refuge System mission. Furthermore, despite the potential impacts of hunting, a goal of Lee Metcalf Refuge is to provide opportunities for quality wildlife-dependent recreation. Hunting will be designed and monitored to

offer a safe and quality program and to keep adverse effects within acceptable limits.

Although hunting directly affects the hunted animal and may indirectly disturb other animals, limits on hunting access and harvest will ensure that populations do not fall to unsustainable levels. Closed areas on the refuge provide sanctuary to migratory birds during the hunting season. In some cases, hunting can be used as a management tool to control elevated populations that are negatively affecting wildlife habitat (for example, through overbrowsing).

Additional impacts from hunting include conflicts with individuals participating in wildlife-dependent, priority public uses such as wildlife observation and photography.

Determination. Hunting is a compatible use on Lee Metcalf Refuge.

Stipulations Necessary to Ensure Compatibility

- Visitors participating in hunting will be provided the Service's public use regulations, including site-specific regulations and State hunting regulations.
- Hunters will continue to use approved nontoxic shot for waterfowl hunting.
- Vehicles will be restricted to county and designated public roads and parking areas in the refuge.
- Signage and brochures will be used to provide hunters information on where and how to hunt on the refuge to ensure compliance with public use regulations.

Justification. A secondary goal of the Refuge System is to provide opportunities, when found compatible, for the public to develop an understanding and appreciation for wildlife. Hunting is identified as a priority public use in the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act) and will help meet the above secondary goal with only minimal conflicts. Hunting can instill, in citizens of all ages, a greater appreciation for wildlife and its habitat. This appreciation may extend to the Refuge System, other conservation agencies, and to the individual personal land conservation ethic.

Based on anticipated biological impacts described above and in the environmental assessment (EA) that accompanied the draft CCP for Lee Metcalf Refuge, the Service has determined that hunting within the refuge will not interfere with the Service's habitat goals and objectives or purposes for which the refuge was established. Limiting access and monitoring the use will help limit any adverse effects.

Mandatory 15-year Reevaluation Date: 2027

FISHING

Fishing is one of six wildlife-dependent priority public uses specified in the Improvement Act. Fishing is

allowed within the wildlife viewing area (WVA) (145 acres), specifically along Francois Slough and the Bitterroot River. Fishing is available year-round, though limited in winter and during spring flooding. Fishing will be conducted in accordance with the rules and regulations set by the State of Montana. Additional refuge-specific regulations are printed in the refuge fishing brochure.

The CCP does not call for the implementation of any new fishing programs.

Availability of Resources. The refuge will continue to work with MFWP to conduct fish and creel surveys. The regional inventorying and monitoring biologist will assist with analysis and trend monitoring. The refuge will rely on the law enforcement officer, stationed at the refuge, and law enforcement staff from other refuges to enforce fishing regulations.

Anticipated Impacts of Use. Fishing and other human activities cause disturbance to wildlife and trampling of vegetation along the bank of rivers and streams. There will also be some mortality to those fish caught and then released. Refuge-specific regulations will assist in managing anglers and minimizing disturbance.

Determination. Fishing is a compatible use at designated fishing areas on Lee Metcalf Refuge.

Stipulations Necessary to Ensure Compatibility

- Visitors participating in fishing be provided the Service's public use regulations and State fishing regulations and limits. Rules specific to the refuge are published in the refuge fishing brochure.
- Vehicles will be restricted to county and designated public roads and parking areas.
- No boats may be used or launched at the WVA or anywhere else on the refuge, with the exception of boats launched off-refuge that then travel through the refuge on the Bitterroot River. Public fishing on the Bitterroot River by boat is restricted to below the high watermark, and boats cannot be launched onto the river from refuge lands.
- Boats, fishing equipment, and all other personal property must be removed at the end of each day.

Justification. Fishing is a priority public use identified in the Improvement Act. No long-term or significant adverse impacts of wildlife resources are expected from the primary or supporting uses. Based on the biological effects addressed above and in the EA that accompanied the draft CCP for Lee Metcalf Refuge, the Service has determined that fishing will not interfere with the Service's habitat goals and objectives or purposes for which the refuge was established.

Mandatory 15-year Reevaluation Date: 2027

WILDLIFE OBSERVATION AND NONCOMMERCIAL PHOTOGRAPHY

Wildlife observation and photography are two of six wildlife-dependent priority public uses identified in the Improvement Act. Wildlife observation and photography on the refuge are conducted at the following public use areas: (1) the WVA; (2) outside the visitor contact area; (3) the Kenai Nature Trail; and (4) Wildfowl Lane, a county road that runs through the refuge.

The WVA, located in the southwest corner of the refuge, has four trail segments that total 2.5 miles. The area is open to off-trail hiking and observation. The 0.55-mile accessible segment of the trail system is 10 feet wide and paved and has three concrete benches. The three other trail segments are soil or gravel and vary in width. The gravel parking area is three-quarters of an acre, large enough to accommodate recreational vehicles. There is also a designated paved parking area for visitors with disabilities. Additional facilities include an information kiosk, portapotties, and a shelter.

At the visitor contact area, visitors are provided a spotting scope to view waterfowl and other waterbirds and raptors on the adjacent ponds. This is one of the most popular wildlife observation and photography sites for visitors, including school groups.

The Kenai Nature Trail is 1.25 miles long. It starts at refuge headquarters and parallels the eastern edge of Ponds 6, 8, and 10. The areas immediately next to the trail are closed, so visitors must remain on the trail. The first quarter mile of this trail is asphalt and meets accessibility guidelines. Five benches and one spotting scope are positioned along this paved section of trail. The remaining trail is soil and gravel and is not considered accessible. An additional four benches, one overlook platform with spotting scope, boardwalk, two wooden bridges, and two permanent photo blinds are located along this part of the Kenai Nature Trail.

Two permanent photo blinds are located along the Kenai Nature Trail. Blind 1 is located one-third of a mile from the visitor contact area on Pond 8; it sits within 55 acres of open water and marsh land and is sheltered to the east by cottonwood and alder trees. Blind 2 is located 1 mile from the visitor contact area on approximately 85 acres of open water on Pond 10.

An "L"-shaped 2.8-mile section of Wildfowl Lane travels through the refuge on a south-central to east-central direction and has informally served as the refuge auto tour route. The southern and easternmost miles of the road are paved or covered with recycled asphalt. The remaining road is gravel. The road is wide—at least 33 feet in width—allowing motorists to pull over safely and observe wildlife.

Wildlife observation and photography will be conducted year-round at the WVA, the visitor contact area, Kenai Nature Trail, and Wildfowl Lane.

The CCP proposes to continue the above wildlife observation and noncommercial photography activities and add the following to improve opportunities for these uses:

- The refuge will work with the county to develop the 2.8 miles of Wildfowl Lane, described above, as an auto tour route, with observation sites and accompanying interpretation.
- Visitors using the Kenai Nature Trail could choose to walk on the upper bench of a small portion of the trail to access a more level walking surface.
- The Kenai Nature Trail will be extended westward using the Pond 8 dike road (near Potato Cellar Pond); it will then loop south, travel past a former residence site, and then connect to Wildfowl Lane. This trail addition measures 1.25 miles in length. The trail will be open seasonally for public use. The closure will provide refuge for migrating and nesting waterfowl and other waterbirds. This spur to the Kenai Nature Trail will provide additional opportunities for wildlife viewing and photography, environmental education, and interpretation.
- Through partnerships, the refuge will conduct an annual wildlife photography workshop highlighting how to photograph wildlife while minimizing disturbance.
- Waterfowl hunting Blind 2 will be upgraded to provide a photo blind for photographers, including those with disabilities. At least two portable photo blinds will be purchased and available for visitor use.
- Snowshoeing and cross-country skiing will be permitted on walking trails when adequate snow is available.

Availability of Resources. Wildlife observation and photography will be administered by refuge staff. The refuge will rely on the zone law enforcement officer and staff from other refuges for law enforcement. Signage and law enforcement will be used to keep visitors from crossing into areas closed to public use.

The porta-potties will be maintained twice a week, and paved trails will be sealed periodically to maintain a smooth surface.

Anticipated Impacts of Use. There will be temporary disturbance to wildlife near the WVA and along trails. This disturbance will be minimized through refuge regulations and education including brochures, signage, and staff- or volunteer-led wildlife walks that highlight the ethics of wildlife observation and photography.

Determination. Wildlife observation and photography are compatible uses on Lee Metcalf National Wildlife Refuge.

Stipulations Necessary to Ensure Compatibility

- Visitors participating in wildlife observation and photography will be strongly encouraged to follow all public use regulations.
- All users of the Kenai Nature Trail will be required to stay on the trail.
- Non-Service vehicles will be restricted to county and public access roads in the refuge.
- Viewing areas will be designed to minimize disturbance impacts on wildlife and all refuge resources while providing good opportunities to view wildlife in their natural environments.
- Visitors using permanent or portable observation and photography blinds will be provided with information on properly using these structures to minimize disturbance to wildlife, habitats, and other refuge visitors.
- Photography outside of public use sites is not allowed.
- Dogs are allowed only on leashes and only on trails in the WVA.
- Bicycles, horses, and off-road vehicles are not allowed on the refuge.

Justification. Wildlife observation and photography is a wildlife-dependent, priority public use. No unacceptable, long-term or significant adverse impacts on wildlife resources are expected from the primary or supporting uses.

Mandatory 15-year Reevaluation Date: 2027

ENVIRONMENTAL EDUCATION AND INTERPRETATION

Environmental education and interpretation are two of six wildlife-dependent priority public uses specified in the Improvement Act.

Most environmental education programs will be conducted at sites near refuge headquarters: (1) the visitor contact area, (2) Okefenokee Room, (3) environmental education shelter, (4) outdoor amphitheater, and (5) Kenai Nature Trail. The WVA will also be used for staff-led programs but even more so by self-directed environmental education partner organizations and school groups. Environmental education can be both formal and informal, and it can range from presentations to special events like festivals or fishing clinics. However, certain programming, usually special events, may involve additional refuge lands outside the headquarters area. The refuge will continue to organize and provide at least 15 on- and off-refuge annual and special events for adults and students.

The refuge has hosted an average of 2,300 students annually. Students come from communities as far as Darby to the south (approximately 40 miles) and Ronan to the north (about 85 miles). Most students are from grades 3–5. Environmental education will be conducted

year-round; however, most students visit the refuge in May, and these visits are typically limited by the individual schools to one visit per year.

Interpretation of the natural and cultural resources of the refuge and the Bitterroot Valley will be provided year-round in the same designated environmental education and wildlife observation and photography areas. Interpretation will be conducted through interpretive panels, revolving displays, videos, online materials, social media, brochures, flyers, handouts, and booklets. New displays will be professionally planned and produced.

Interpretive panels and brochures will be maintained and updated to reflect changes in information or policy and to meet the Service's graphic standards.

The CCP proposes to continue environmental education and interpretation and add the following to improve these programs:

- The Service will expand the programs and opportunities for environmental education and interpretation, reaching additional students and visitors. These programs will focus on the values and importance of the natural, historical, and cultural resources of the refuge and the Bitterroot Valley, including the refuge's efforts to maintain, enhance, and restore native plant and wildlife communities on the refuge.
- Partnerships will be developed with local universities to provide opportunities for students to conduct research and monitoring projects that are beneficial to the refuge, that help address management needs, and that provide an opportunity for students to work on the refuge and with refuge staff.
- The Service will expand opportunities to collaborate with universities to provide outdoor classrooms for students interested in the refuge, its management programs, its current issues, and the values of the Refuge System.
- A classroom and associated supplies will be added to the expanded visitor center for environmental education programs.
- The Service will continue to maintain and update the current four kiosks, including three with interpretive panels. An additional interpretive panel will be located along the river trail within the WVA explaining the migration of the Bitterroot River.
- Interpretation will be provided along the Kenai Nature Trail, within the WVA, and along the auto tour route.
- On the north end of the refuge, a kiosk will be constructed at a parking lot used by hunters; it will provide regulations as well as information on refuge purposes and resources.

Availability of Resources. The refuge's outdoor recreation planner and volunteers, supplemented by other

current Service staff, will continue to develop and lead these programs. Expanding current programs may require additional visitor services staff and volunteers.

Funding for environmental education and interpretation activities, directional signs, and brochures will be mainly supported by annual operation and maintenance money. Funding from other sources such as grants, regional project proposals, challenge cost-share agreements, and other temporary funding sources will also be sought and used as they became available.

Anticipated Impacts of Use. The bulk of environmental education and interpretation will take place in the refuge headquarters area. The use of the refuge for onsite activities by groups of teachers and students for environmental education or interpretation may impose a short-term, low-level impact on the immediate and surrounding area. Impacts may include trampling of vegetation and temporary disturbance to nearby wildlife species during the activities.

Refuge brochures, interpretive panels, and other educational materials will continue to be updated as needed to meet Service requirements. The Service will continue to promote a greater public understanding and appreciation of the refuge resources, programs, and issues through interpretive, outreach, and environmental educational programs. Presentations, both on and off Service lands, will be provided to refuge visitors, school groups, and organizations, allowing the Service to reach a broader audience. Onsite presentations will be managed to minimize disturbance to wildlife, habitat, and cultural resources.

Determination. Environmental education and interpretation are compatible uses on Lee Metcalf Refuge.

Stipulations Necessary to Ensure Compatibility. Onsite activities will be held where minimal impact on wildlife and habitats would occur. The Service will review new environmental education and interpretation activities to ensure that these activities meet program and refuge management objectives and are compatible.

- Visitors participating in environmental education and interpretation programs will be provided Service regulations. Compliance with regulations will be achieved through education, signage, and law enforcement and will minimize negative impacts on refuge habitat and wildlife.
- Environmental education may be limited to reduce disturbance to wildlife, particularly during the nesting seasons. The refuge manager will evaluate and, if appropriate, approve additional environmental education sites on the basis of potential impacts on wildlife. Access should be restricted around active bird nests and during other sensitive life history phases of refuge resources. Staff or volunteer-led programs may occur in areas not open to the public;

however, the location and timing of these activities must be approved by the manager.

- Educational activities will be commonly held in the Okefenokee Room, environmental education shelter, outdoor amphitheater, WVA, and the Kenai Nature Trail. On occasion and by special use permit only, environmental education activities may occur near dikes along Ponds 8 and 10, Grube Barn, and management areas I-4 and I-5. A number of stipulations will cover special events:
 - The Bitterroot and Five Valleys Audubon Societies' bird walk activities will be held on refuge-approved dates and times and located in public use areas.
 - The Great Backyard Bird Count in mid-February—a national “citizen science” event that promotes knowledge of native birds—will take place in areas open to the public. Event activities must be approved by the refuge manager.
 - Ground Hog Day, February 2, will include information and activities that emphasize the natural history of mammals, ecology, habitat, community processes, and the Refuge System; event activities must be approved by the refuge manager, and the location of this event will be restricted to the area around the Grube Barn. Other proposed locations will need to be approved by the refuge manager.
 - Montana Junior Duck Stamp Program activities (mid-April to early May) will take place at the outdoor amphitheater and environmental education shelter. The program will highlight the integration of science with the arts. Event activities must be approved by the refuge manager.
 - The Weed Pull in May or June is a public event targeting the removal of noxious weeds, which is compatible with refuge and management purposes. Staff will work with partners employing environmental education curriculum and outreach to educate visiting public on noxious weed identification and management. Event locations must be approved by the refuge manager.
 - For the Kid's Fishing Clinic, held in both June and September, all fishing and environmental education stations will be positioned for the purpose of safety and minimizing resource disturbance. Activities will primarily be located surrounding the Refuge Headquarters area, but may occur, with issuance of a special use permit, in areas currently closed to public use. Event locations and times must be approved by the refuge manager.
 - The spring and summer Hunter Safety Courses can be held at the Okefenokee Room, Kenai

Nature Trail, Grube Barn, and parts of management units I-4 and I-5 with issuance of a special use permit. Activities will be planned to ensure safety and minimize wildlife and visitor disturbance. Event activities and optional locations must be approved by the refuge manager.

- The Stevensville Audubon Christmas Bird Count is held in December or January every year. Refuge staff escort Audubon volunteers, counting and identifying all birds encountered on the refuge. Most bird identification activities will be conducted from refuge roads and dikes, minimizing wildlife disturbance; event activities and locations must be approved by the refuge manager. Unaccompanied individuals may not enter areas closed to the public without a special use permit.
- The refuge will continue to provide staff-led programs, in places and at times of day, that are not open to general public access. Typically these special programs will be planned during special celebrations such as National Wildlife Refuge Week or International Migratory Bird Day. Such events will be preplanned by the visitor services staff in the station annual work plan and publicized well in advance. Any special interpretive or wildlife observation programs offered will be open to the general public and will not be conducted for a select group.

Justification. A secondary goal of the Refuge System is to provide opportunities, when found compatible, for the public to develop an understanding and appreciation for wildlife.

Environmental education and interpretation can be used to help citizens of all ages build a land ethic and act responsibly in protecting wildlife and habitats, which in turn can enrich a person's life, provide an incentive for outdoor activity with associated health benefits, and potentially lessen the likelihood of that person violating laws protecting wildlife. Additionally, environmental education and interpretation are important tools for the refuge to provide visitors with an awareness of its purposes, values, and specific issues such as invasive species, habitat management, restoration of natural processes, and migratory bird management. These tools will provide visitors and students with a greater understanding of the mission and importance of the Refuge System to the American people.

Based on anticipated biological impacts described above and in the EA that accompanies the draft CCP for Lee Metcalf National Wildlife Refuge, the Service determines that environmental education and interpretation will not significantly detract from the Service's implementation of wildlife habitat goals and objectives, or with the purposes for which the refuge

was established. Managing areas used for conducting environmental education and interpretation, monitoring those areas, and mitigating impacts will help minimize potential adverse effects.

Mandatory 15-year Reevaluation Date: 2027

COMMERCIAL FILMING, AUDIO RECORDING, AND STILL PHOTOGRAPHY

Commercial filming is the digital or film capture of a visual image. Commercial audio recording is the capture of sound. Commercial still photography is the digital or film capture of a still image. Each of these activities is conducted by a person, business, or other entity for a market audience for use in a documentary, television program, feature film, advertisement, or similar project. It does not include news coverage or visitor use.

Lee Metcalf Refuge provides opportunities for commercial filming and still photography of migratory birds and other wildlife. Requests from commercial persons, businesses, or entities to conduct commercial activities will be evaluated on their merit in educating the public about the resources and purposes of the refuge and the Refuge System. Any issued special use permit for filming or photography will designate the specific areas that may be accessed and the activities that are allowed (refer to “Stipulations Necessary to Ensure Compatibility” below).

In rare cases the Service may permit access to areas closed to the public. The public benefit, as determined by the refuge manager, must outweigh the potential disturbance to wildlife resources.

Availability of Resources. Current staff will evaluate requests for commercial photography, filming, or audio recording. Administrative costs for reviewing applications, the issuance of subsequent special use permits, and staff time to monitor compliance may be offset by a fee.

Anticipated Impacts of Use. Wildlife filmmakers and photographers tend to create the greatest disturbance of all wildlife observers (Dobb 1998, Klein 1993, Morton 1995). While observers frequently stop to view wildlife, photographers are more likely to approach animals (Klein 1993). Even a slow approach by photographers tends to have behavioral consequences on wildlife (Klein 1993). Photographers often remain close to wildlife for extended periods of time in an attempt to habituate the subject to their presence (Dobb 1998). Furthermore, photographers with low-power lenses tend to get much closer to their subjects (Morton 1995). This usually results in increased disturbance to wildlife as well as habitat, including the trampling of plants. Handling of animals and disturbing vegetation (such as cutting plants and removing flowers) or cultural artifacts is strictly prohibited on Service lands.

Issuance of special use permits with strict guidelines and monitoring by refuge staff for compliance may help minimize or avoid these impacts. Permittees who do not follow the stipulations of their special use permits could have their permits revoked, and further applications for filming or photographing on refuge lands will be denied.

Determination. In rare circumstances, commercial filming, audio recording, and still photography will be compatible uses on Lee Metcalf Refuge.

Stipulations Necessary to Ensure Compatibility. Commercial filming or photography must (1) demonstrate a means to increase the public’s knowledge, appreciation, and understanding of the purposes of Lee Metcalf National Wildlife Refuge, the National Wildlife Refuge System, or the wildlife resources that are managed on these lands. Failure to fully demonstrate a measurable means to meet this criterion would likely result in a denial of the special use permit request.

Any commercial filming and audio recording will require a special use permit that will (1) identify conditions that protect the refuge’s values, purposes, resources, and public health and safety and (2) prevent unnecessary disruption of the public’s use and enjoyment of the refuge. Such conditions may be, but are not limited to, specifying road conditions when access would not be allowed, establishing time limitations, identifying routes of access, limiting the number of participants, and specifying the exact location participants are allowed. These conditions will be identified to prevent excessive disturbance to wildlife, damage to habitat or refuge infrastructure, or conflicts with other visitor services or management activities.

The special use permit will stipulate that imagery produced on refuge lands will be made available for use in environmental education and interpretation, outreach, internal documents, or other suitable uses. In addition, any commercial products must include appropriate credits to the Lee Metcalf National Wildlife Refuge, the National Wildlife Refuge System, and the U.S. Fish and Wildlife Service.

Still photography requires a special use permit (with specific conditions as outlined above) if one or more of the following would occur:

- It takes place at locations where or at times when members of the public are not allowed.
- It uses models, sets, or props that are not part of the location’s natural or cultural resources or administrative facilities.
- The Service would incur additional administrative costs to monitor the activity.
- The Service would need to provide management and oversight to avoid impairment of the resources and values of the site, limit resource damage, or minimize health and safety risks to the visiting public.

- The photographer intends to intentionally manipulate vegetation to create a shot (for example, cutting vegetation to create a blind).

To minimize the impact on Service lands and resources, refuge staff will ensure that all commercial filmmakers and commercial still photographers comply with policies, rules, and regulations. The staff will monitor and assess the activities of all filmmakers, audio recorders, and still photographers.

Justification. Commercial filming, audio recording, and still photography are economic uses that, if allowed, must contribute to the achievement of the refuge purposes, mission of the Refuge System, or the mission of the Service. Providing opportunities for these uses should result in an increased public awareness of the refuge's ecological importance as well as advancing the public's knowledge and support for the Refuge System and the Service. The stipulations outlined above and conditions imposed in the special use permits issued to commercial filmmakers, audio recorders, and still photographers will ensure that these wildlife-dependent activities occur with minimal adverse effects on resources or visitors.

Mandatory 10-year Reevaluation Date: 2022

COOPERATIVE FARMING AND PRESCRIPTIVE GRAZING

The Service has used cooperative farming and prescriptive livestock grazing in the past as a management tool to manage a variety of upland, riparian, and seasonal wetland habitats. These tools will be used to meet habitat objectives, control vegetative litter, promote native plant production and diversity, control the spread of invasive plant species, and help convert disturbed grasslands back to native plant species.

Cooperative farming is usually done on a share basis where the Service and the cooperator each receive a share of the crop. The Service will retain its share as standing cover for wildlife forage or in exchange for additional work from the cooperator such as invasive plant control, grass seeding, or provision of supplies such as herbicides and fence materials for habitat protection and improvement on the management unit. Any income received by the Service will be deposited in the Refuge Revenue Sharing Account. Cooperative farming will primarily be used to treat invasive species by continually farming specific areas until seedbed is reduced. Following this process, these areas will be restored to native species found on that site. The site will continue to be monitored for reinvasion.

Grazing by livestock has been a preferred management tool because the effect on habitat is controllable and measurable. Grazing may occur throughout the year as management needs dictate. For wetland units, the purpose of grazing will be to consume portions of

emergent vegetation and to break root rhizomes with hoof action. This will likely result in enhanced aeration of soils, removing portions of monotypic emergent vegetation. For upland units, grazing will be used to mimic the historical grazing patterns, most likely employing short-duration, intense grazing pressure with extended rest periods.

Fencing and controlling livestock is the responsibility of the cooperating rancher. The Service provides instruction and guidance within the special use permit for placement of fences, water tanks, and livestock supplements to ensure that sensitive habitats or refuge assets are protected. A temporary electric fence is used in most grazing applications. Current forage conditions, habitat objectives, and available water determine stocking rates in each grazing unit.

The Service will continue using cooperative farming and prescriptive livestock grazing to meet habitat objectives. Furthermore, the CCP establishes goals and objectives for specific habitat types where these tools may be used. In addition, the Service has identified target wildlife species (for example, grasshopper sparrow and marbled godwit) and their habitat requirements, which has resulted in objectives that guide these programs to achieve the habitat needs of these target species. The refuge will improve the monitoring and research programs for vegetation and wildlife to assess habitat and wildlife population responses to prescriptive livestock grazing.

Availability of Resources. Current refuge staff and funding resources are sufficient for the purposes of monitoring habitats and implementing research needs to understand the impacts of grazing on refuge habitats. One biological technician will be necessary to carry out the on-the-ground monitoring. These programs will continue to be conducted through special use permits or cooperative farming agreements, which minimize the need for staff time and Service assets to complete work. Permittees will be selected on their ability to accomplish refuge habitat goals and minimize expenditures of staff time and resources. Fencing, caring for, and all animal husbandry tasks are the responsibility of the permittee. The permittee is also responsible for keeping all animals within the management unit and preventing them from roaming at large. The Service provides direction on the placement of temporary fences, water tanks, livestock supplements, loading and off-loading panels and chutes to ensure the protection of sensitive habitats and refuge resources.

Anticipated Impacts of Use. The cooperative farming and prescriptive livestock-grazing program is used to meet habitat- and species-specific goals and objectives identified in the CCP. This program is intended to maintain and enhance habitat conditions for the benefit of a wide variety of migratory birds and other wildlife that use the refuge.

Some wildlife disturbance may occur during operation of noisy farming equipment, and some animals may be temporarily displaced. Wildlife will receive the short-term benefit of standing crops or stubble for food and shelter and the long-term benefit of having historical cropland or other poor-quality habitat converted to native grasses and shrubs. Reducing the number of invasive species and the existing seedbed will support future restoration efforts.

Some trampling of areas by livestock occurs around watering areas. It is anticipated that grazing will continue to be used to manage vegetative monocultures on a rotational basis. Grazing, as well as fire, is known to increase the nutrient cycling of nitrogen and phosphorus (Hauer and Spencer 1998, McEachern et al. 2000). Hoof action may break up the soil cap on upland fields, allowing moisture to infiltrate the soil and allowing native plant seeds to become established. However, cattle grazing would also increase the risk of invasive plants becoming established. Grazing in the spring could have adverse effects on grassland-bird nests due to trampling and loss of vegetation. In addition, the presence of livestock may disturb some wildlife species and some public users. The long-term benefits of this habitat management tool should outweigh the short-term negative effects.

Determination. Cooperative farming and prescriptive grazing as habitat management tools are compatible uses on Lee Metcalf National Wildlife Refuge.

Stipulations Necessary to Ensure Compatibility. To ensure consistency with management objectives, the Service will require general and specific conditions for each cooperative farming and grazing permit.

To minimize impacts on nesting birds and other wildlife, the refuge manager will determine and incorporate any necessary timing constraints on the permitted activity into the cooperative farming agreement or special use permit.

The cooperative farming agreement or special use permit will specify the type of crop to be planted. Farming permittees will be required to use Service-approved chemicals that are less detrimental to wildlife and the environment.

Control and confinement of livestock are the responsibility of the permittee, but the Service will continue to determine where fences, water tanks, and livestock supplements (if necessary) are placed within the management unit. Temporary electric fences are used to retain livestock within grazing cells as well as to protect sensitive habitat areas and refuge assets such as water control structures. Cooperators will be required to remove fences at the end of the grazing season.

When grazing fees are assessed, they are based on the current-year U.S. Department of Agriculture Statistics Board publication, “Grazing Fee Rates for

Cattle by Selected States and Regions.” Standard deductions for labor associated with the grazing permit may be included on the special use permit.

The refuge will monitor vegetation and soils to assess if habitat requirements of target species are being met. A minimum of one temporary biological technician is necessary to monitor and document these activities.

Justification. Habitat management needs to occur to maintain and enhance habitat for migratory birds and other wildlife in this altered landscape. When properly managed and monitored, cooperative farming and prescriptive livestock grazing can rejuvenate native grasses and help control the spread of some invasive plant species and some undesirable monoculture species like cattail. Prescriptive grazing is controlled and the results monitored (for example, vegetation monitoring) so that adjustments in the grazing program are made to meet habitat goals and objectives. The cooperative farming program will be monitored to determine the effectiveness and necessary duration and frequency of farming needed to control and reduce invasive species.

Using local cooperators to perform the work is a cost-effective method to accomplish habitat objectives. The long-term benefits of habitat restoration and management far outweigh any short-term impacts caused by grazing.

Mandatory 10-year Reevaluation Date: 2022

RESEARCH AND MONITORING

Lee Metcalf Refuge receives approximately 8–12 requests each year to conduct scientific research or monitoring on Service lands. Priority is given to studies that contribute to the enhancement, protection, preservation, and management of the refuge’s native plant, fish, and wildlife populations and their habitats. Non-Service applicants must submit a proposal that outlines the following:

- objectives of the study
- justification for the study
- detailed methodology and schedule
- potential impacts on wildlife and habitat including disturbance (short- and long-term), injury, or mortality
- description of measures the researcher would take to reduce disturbances or impacts
- staff required and their qualifications and experience
- status of necessary permits such as scientific collection permits and endangered species permits
- costs to the Service including staff time requested, if any
- anticipated progress reports and endproducts such as reports or publications

Refuge staff will review research and monitoring proposals on a case-by-case basis and issue special use permits if approved. Criteria for evaluation include, but are not limited to, the following:

- Research and monitoring that contribute to specific refuge management issues will be given higher priority over other requests.
- Research and monitoring that would cause undue disturbance or would be intrusive would likely not be approved. The degree and type of disturbance will be carefully weighed when evaluating a research request.
- Research projects that can answer the same questions yet be conducted off-refuge are less likely to be approved.
- Evaluations will determine if effort has been made to minimize disturbance through study design, including adjusting location, timing, scope, number of researchers, study methods, and number of study sites.
- If staffing or logistics make it impossible for the refuge to monitor researcher activity, this may be a reason to deny the request.
- The length of the project will be considered and agreed upon before approval. Projects will be reviewed annually.

Availability of Resources. Current resources are minimally adequate to administer research and monitoring efforts. A full-time biological science technician will assist in monitoring research proposals and projects. It is anticipated that approximately \$4,000 per year is required to administer and manage current research and monitoring projects. Coordination with a Service inventorying and monitoring biologist will be necessary to administer large or long-term projects, which generally require more in-depth evaluation of applications, management of permits, and oversight of projects. The refuge will work with this biologist to identify research and monitoring needs and work with other Service staff, universities, and scientists to develop studies that will benefit the refuge and address the goals and objectives in the CCP.

Anticipated Impacts of Use. Some degree of disturbance is expected with research activities, because most researchers enter areas and use Service roads that are closed to the public. In addition, some research requires collecting samples or handling wildlife. However, the overall impact on wildlife and habitats is expected to be minimal with research studies when special use permits include conditions to minimize those impacts.

Determination. Research and monitoring are compatible uses on the Lee Metcalf Refuge.

Stipulations Needed to Ensure Compatibility

- Extremely sensitive wildlife habitats and species are sufficiently protected from disturbance by limiting research activities in these areas.
- All refuge rules and regulations are followed unless otherwise exempted by refuge management.
- Refuge staff use the criteria for evaluating research and monitoring proposals as outlined above (“Description of Use”) when determining whether to approve a proposed project on the refuge. If proposed research methods are evaluated and determined to have potential impacts on refuge wildlife or habitat, it must be demonstrated that the research is necessary for refuge resource conservation management. All projects are reviewed annually.
- Measures to minimize potential impacts will need to be developed and included as part of the project and study design. These measures, with potential modifications or additions, will be listed as conditions on the special use permit.
- The length of the project will be considered and agreed on before approval.
- Projects will be reviewed annually and any modifications made as appropriate.
- Refuge staff will monitor research and monitoring activities to ensure compliance with all conditions of the special use permit. At any time, refuge staff may accompany the researchers to determine potential impacts. Staff may determine that previously approved research and special use permits be terminated due to observed impacts.
- No unauthorized individuals may accompany the researcher without prior consent from the refuge.
- The special use permit is nontransferable from one researcher to any other individual.
- The refuge manager will have the ability to cancel a special use permit if the researcher is out of compliance or to ensure wildlife and habitat protection.

Justification. The program as described is determined to be compatible. Potential impacts of research activities on refuge resources will be minimized through restrictions included as part of the study design, and research activities will be monitored by refuge staff. Results of research projects will contribute to the understanding, enhancement, protection, preservation, and management of the refuge’s wildlife populations and their habitats.

Mandatory 10-year Reevaluation Date: 2022