

Appendix B. Compatibility Determinations

B.1 Introduction

The compatibility determinations (CDs) we developed during the comprehensive conservation planning process evaluate uses projected to occur under Alternative 2, the Preferred Alternative in the Deer Flat National Wildlife Refuge Comprehensive Conservation Plan/Environmental Impact Statement (CCP/EIS).

The evaluation of funds needed for management and implementation of each use also assumes implementation as described under Alternative 2. Chapter 6 of the CCP/EIS also contains a cumulative effects analysis of the impacts related to wildlife, habitats, and public uses.

B.1.1. Uses Evaluated at This Time

The following section includes CDs for all refuge uses that are required to be evaluated at this time. According to Service policy, CDs will be completed for all uses proposed under a CCP. Existing wildlife-dependent recreational uses must also be reevaluated and new CDs prepared during development of a CCP or every 15 years, whichever comes first. Uses other than wildlife-dependent recreational uses are not explicitly required to be reevaluated in concert with preparation of a CCP, unless conditions of the use have changed or unless significant new information relative to the use and its effects have become available or the existing CDs are more than 10 years old. However, the Service planning policy recommends preparing CDs for all individual uses, specific use programs, or groups of related uses associated with the proposed action. Accordingly, the following CDs are included in this document for public review.

Refuge Use	Compatible	Next Year Due for Reevaluation	Page
Farming and grazing	Yes	2024	B-5
Fishing	Yes	2029	B-17
Horseback riding, jogging, and bicycling	Yes	2024	B-31
Hunting deer	Yes	2029	B-43
Hunting waterfowl and upland birds	Yes	2029	B-51
Recreational boating	Yes	2024	B-65
Research	Yes	2024	B-77
Sailing regattas	Yes	2024	B-85
Swimming, beach use, and picnicking	Yes	2024	B-97
Walking with pets (other than hunting dogs)	Yes	2024	B-107
Wildlife observation, photography, interpretation, and environmental education	Yes	2029	B-117
Mosquito Management	Yes	2024	B-131

B.1.2 Compatibility—Legal and Historical Context

Compatibility is a tool refuge managers use to ensure that recreational and other uses do not interfere with wildlife conservation, the primary focus of refuges. Compatibility is not new to the National Wildlife Refuge System (NWRS or Refuge System); the concept dates back to 1918. As policy, it has been used since 1962. The Refuge Recreation Act of 1962 directed the Secretary of the Interior to allow only those public uses of refuge lands that were “compatible with the primary purposes for

which the area was established” (16 U.S.C. 460k-460k-4). If a general public use is determined to be appropriate, the use must then undergo a compatibility review. A compatibility review is required for all appropriate public uses, including wildlife-dependent recreational uses.

The term *compatible use* is defined as a wildlife-dependent recreational use or any other use of a refuge that, in the sound professional judgment of the Refuge Manager, would not materially interfere with or detract from the fulfillment of the mission of the Refuge System or the purposes of the refuge.

The National Wildlife Refuge System Administration Act (Administration Act) defines *sound professional judgment* as a finding, determination, or decision that is consistent with principles of sound fish and wildlife management and administration, available science and resources, and adherence to other applicable laws. Included in this finding, determination, or decision is a refuge manager’s field experience and knowledge of the particular refuge’s resources.

Part [603 FW 2](#) of the Fish and Wildlife Service Manual sets forth the policy and guidelines for determining compatibility of proposed uses and provides procedures for documentation and periodic review of existing uses. In addition, the policy requires an opportunity for public review and comment on all CDs. When prepared in conjunction with a CCP, CDs are distributed for public review along with the Draft CCP/EIS.

Under compatibility policy, each use is defined as a recreational, economic/commercial, or management use of a refuge by the public or a non-Refuge System entity. Uses generally providing an economic return (even if conducted for the purposes of habitat management) are also subject to CDs. The Service does not prepare CDs for uses over which the Service does not have jurisdiction. For example, the Service may have limited jurisdiction over refuge areas where property rights are vested by others; where legally binding agreements exist; or where there are treaty rights held by Tribes. In addition, aircraft overflights, emergency actions, some activities on navigable waters, and activities by other Federal agencies on “overlay refuges” are exempt from the compatibility review process.

New compatibility policy, developed in response to the 1997 amendments to the Administration Act, was adopted by the Service in October 2000 (<http://refuges.fws.gov/policymakers/nwrpolicies.html>). The policy requires that a use must be compatible with both the mission of the System and the purposes of the individual refuge. This standard helps to ensure consistency in application across the Refuge System.

The Service recognizes that CDs are complex. For this reason, refuge managers are required to consider “principles of sound fish and wildlife management” and “best available science” in making these determinations (House of Representatives Report 105-106). Evaluations of the existing uses on Deer Flat National Wildlife Refuge are based on the professional judgment of refuge personnel including observations of refuge uses and reviews of appropriate scientific literature.

The Refuge Manager has the authority to determine, by exercising sound professional judgment, what is a compatible use. In addition to determining if a use would materially interfere with or detract from the fulfillment of the System mission or the purposes of the refuge, the Refuge Manager must also evaluate the direct and indirect impacts of a use on refuge resources. Further, the cumulative impacts of the use when conducted in conjunction with other existing or planned uses of the refuge must also be considered. After evaluating the anticipated impacts of a proposed use and

determining if any stipulations (terms or conditions) are needed to avoid or minimize potential adverse impacts, the Refuge Manager will determine whether or not the use is compatible. This determination is documented in writing and is available for review by the public.

A proposed use can be denied without determining compatibility under certain circumstances, such as instances in which:

- 1) a proposed use would conflict with other applicable laws or regulations;
- 2) the use would result in conflicts with the goals or objectives of an approved CCP; or
- 3) a use is determined to be inconsistent with public safety.

Refuges are closed to all public uses until officially opened. Regulations require that adequate funds be available for administration and protection of refuges before opening them to any public uses. However, wildlife-dependent recreational uses (hunting, fishing, wildlife observation and photography, environmental education, and interpretation) are to receive enhanced consideration and cannot be rejected simply for lack of funding resources unless the refuge has made a concerted effort to seek out funds from all potential partners. Once found compatible, wildlife-dependent recreational uses are deemed the priority public uses at a refuge. If a proposed use is found not compatible, the use must be modified to be compatible or if the use cannot be modified to be compatible, then the use may not be allowed. Economic uses that are conducted by or authorized by the refuge also require CDs.

B.1.3 References

House of Representatives Report 105-106 (on National Wildlife Refuge System Improvement Act):

<http://refuges.fws.gov/policyMakers/mandates/HR1420/part1.html>

Compatibility regulations, adopted by the Service in October 2000:

<http://refuges.fws.gov/policymakers/nwrpolicies.html>.

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B.2 Compatibility Determination for Farming and Grazing

RMIS Database Use: Farming and Grazing

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge (NWR or Refuge) was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (Executive Order [E.O.] 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

The discussion below is applicable only to the Lake Lowell Unit of the Refuge and is not applicable to the Snake River Islands Unit.

Farming. Deer Flat NWR currently uses production methods that include cooperative agreement farming, which involves a negotiated agreement between the Refuge and a private farmer (the cooperator) to produce crops for both parties. The cooperator is responsible for all the costs of production except for maintenance of underground irrigation systems and pumps. In return for producing a specified amount of crops for the Refuge, the cooperator is allowed to harvest and sell the remaining crops. In the current cooperative farming program, the cooperative farmers keep 75 percent of the crop and leave the remaining 25 percent for wildlife. All crop selections are agreed to by the Refuge, and special conditions are documented in each cooperative agreement.

Currently, 255 acres are in cooperative farming programs on Deer Flat NWR. The agriculture fields on the Refuge are referred to as Farm Field 1, Farm Field 5, and the Marsh Field, and all of them are on the north side of Lake Lowell. Crops are grown in concert with proper timing for the particular type of crop. The typical growing season varies from 120 to 200 days. Crops grown include cereal grains and green forage for migratory and wintering waterfowl use. Grain crops grown to meet the high energy demands of migratory and wintering waterfowl consist of corn and wheat. Green forage crops, which provide for the fall, winter, and spring Canada goose population, consist of alfalfa and winter wheat.

Farming operations that surround the Refuge participate in “clean farming,” in which fields are tilled in the fall to reduce the amount of invasive weeds and to ready the field for spring planting outside of the wet season. This practice limits the amount of waste grains available in the area to migrating waterfowl. Areas farmed by the cooperator for their share provide additional benefit (not included in the Refuge share) to waterfowl by providing waste grains and/or green forage in harvested fields.

Grazing. The only area where grazing is currently permitted on the Refuge is the Leavitt Tract. The previous land owner historically used the Leavitt Tract to graze his personal cattle. The cooperator is charged a fee based on the number of Animal Unit Months (AUM) that are grazed. An AUM equals the amount of forage required by an animal unit (e.g., one cow or a cow-calf pair) multiplied by the number of months that the animal unit is allowed to graze on the Refuge. The cooperator is allowed to graze 25 and 30 head of cattle from mid-April through September and occasionally 15 to 20 head of horses in the winter. Much of the tract is flooded from a failing irrigation system and backwater from Lake Lowell. Cattle drink from the flooded portion of the field or a runoff ditch also located on the parcel.

Wintering Canada geese benefit from this use because grazing is an effective way to maintain short grasses. Geese prefer young shoots that are higher in protein and lower in fiber than mature stems (McLandress and Raveling 1981). To provide high-quality forage for wintering and migrating geese, the Refuge has managed grazing to ensure that young shoots less than 6 inches tall are available by early October each year and to reduce the accumulation of thatch, which can reduce the number of shoots.

Proposed Use

Farming. Under the Preferred Alternative, cooperative farming would continue under similar conditions. Other than increasing the focus on best management practices, only two major changes are proposed: an additional well on Farm Field 5 and the reimplementation of a shoreline planting program. At one time, approximately 400 acres were farmed on the Refuge, which included planting millet along some of the lake shorelines. Because lakeshore plantings can be less labor intensive and do not require irrigation, they can be a less costly option than expanding cooperative farming in upland areas. However, according to Refuge Narratives, historic attempts at shoreline plantings have been mixed in their success due to the unpredictability of moisture. This strategy was eliminated due to budget constraints at the time. As housing development continues to increase and foraging space is becomes even more limited around the lake, this strategy may be implemented to achieve Refuge goals and objectives.

Special conditions currently in place would continue (see Stipulations section below), including restrictions on pesticide uses, the use of best management practices, limits to the types of crops grown, no grass-crop harvesting from April 15 through June 15 (to reduce the risk of destroying nests of ground-nesting birds), and a requirement to have 6 inches of green browse by October 1.

Grazing. Proposed changes to the grazing program consist of herd rotations as a mechanism to reduce soil compaction and control invasive/undesirable plant species in grazing lands, cleaning and updating irrigation infrastructure (cleaning ditches, redoing corrugations, and replacing irrigation checks) to provide better water control, reestablishing permanent goose pasture by seeding cool season perennial grasses, changing the grazing period to April 1 through August 15, and managing short grasses by activities such as haying, mowing, and burning.

These changes would be highlighted in cooperative land management agreements and grazing plans that would be completed. The Refuge would also conduct a grazing fee market analysis to aid in evaluation of current grazing fees.

Availability of Resources

The following funding for annual costs would be required to administer and manage cooperative agreement farming and grazing, as described above.

Most of the costs associated with carrying out the improvements described in the Preferred Alternative are one-time expenses (see Table B-1). The farming and grazing programs could continue in their current state without additional upgrades. However, these programs would be enhanced greatly by these potential projects. The farming and grazing programs can be managed with current funds. Additional projects to upgrade the programs would require new funding sources. The Service would explore all available options to obtain funding to implement these projects, including partnership efforts.

Because there would be a minimal expansion in farmed/grazed acreage, the program would continue to be managed by current staff.

Table B-1. Costs to Implement Improvements to the Farming and Grazing Programs

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
Install new well in Farm Field 5	\$80,000-\$100,000	
Update irrigation in Leavitt Tract	\$12,000	
Interseed grass in Leavitt Tract	\$48,000	
Plant crops on shoreline		\$70,000
Maintain short grass in Leavitt Tract		\$12,000
Total	\$140,000-\$160,000	\$82,000

Anticipated Impacts of Uses

The discussion below analyzes impacts of the use as proposed under the Preferred Alternative.

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from farming and grazing would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Impacts from Farming

Deer Flat NWR is located within the Columbia Basin, which was once dominated by shrub-steppe habitat. The basin is now dominated by cropland farming, which represents approximately 25 percent of the total upland area on the Refuge.

Direct impacts of cropland management include exposure of soils to wind erosion and impacts from machinery. In general, tillage and cropping that leaves soil bare for portions of the year negatively affect soil quality indicators (Nelson et al. 2006) such as aggregate stability, infiltration rates, and available water capacity. Compaction can result from the use of farming equipment for seeding, causing undesirable increases in bulk density, while tilling may also prevent the accumulation or accelerate the decomposition of organic matter and can diminish earthworm populations (Natural Resources Conservation Service [NRCS] 2012).

Farming may also result in the use and introduction into the environment of chemical agents from pesticide usage and the potential exacerbation of weed issues through ground disturbance and field-to-field movement of cultivating and harvesting equipment. In addition, small mammals, reptiles, and amphibians may be occasionally subject to mortality from farm machinery, and nesting birds may be occasionally disrupted and nests destroyed.

One study claims that globally, due to habitat loss, farming is already the greatest extinction threat to birds (the best known taxon), and its adverse impacts are likely to increase with the growing human

population and demand for food (Green et al. 2005). The same study advocates for wildlife-friendly farming that encourages wildlife use but results in lower yields, similar to the Refuge's cooperative farming program.

Farming activities such as plowing, haying, and cultivating can create a disturbance to migratory birds and other resident wildlife. Timing pasture management activities appropriately provides Canada geese, other migratory birds, and wildlife optimum habitat conditions when they most need it, in the fall through winter seasons.

Impacts from Grazing

The impacts of grazing depend on many factors including timing, habitat type, and stocking rate. Numerous studies, gathered in a review of grazing literature, found that grazing has negative impacts on various grassland birds, nesting waterfowl, and small mammals (Fleischner 1994). These species are not only subject to injury and mortality from trampling during the nesting season, but the conversion of tall pasture grasses to short-cropped grasses results in habitat loss for some species. Fleishcher (1994) also enumerated other negative impacts of grazing such as altering species composition, decreasing density and biomass of individual species, reducing species richness, and changing community organization. Vavra (2005) found similar results also showing that grazing can alter species composition.

Negative impacts from grazing are mostly associated with difficulties in containing the cattle that are attracted to water and can therefore damage sensitive wetland areas if they gain access to those sites. In a review of grazing impacts, Kauffman and Krueger (1984) pointed to studies that showed cattle can cause damage in riparian forest sites and waterways by trampling the understory, compacting soils, degrading water quality, and making areas undesirable for other wildlife. Overgrazing can lead to bank instability, increased runoff, and erosion (Behnke and Raleigh 1978).

Grazing has been shown to be beneficial for single-species management such as for foraging geese. Some refuges use grazing in improved pasture in an attempt to increase the amount of edible green shoots available for wintering geese (Greenwalt 1978). Geese use refuge pastures for foraging, preferring young shoots that are higher in protein and lower in fiber than mature stems (McLandress and Raveling 1981). Pasture grasses serve as an important source of amino acids and carbohydrates to meet the energy and nutrient requirements of geese (Baldassarre and Bolen 2006). Grazing by livestock simulates some of the effects of natural disturbances by removing woody vegetation, reducing thatch, and encouraging the production of young shoots, which are preferred forage for Canada and cackling geese (Raveling 1979). Grazing can be used to set back succession, increase native annual forb species and cover, and decrease vegetation height and litter depth (Hayes and Holl 2003); all of which are beneficial to foraging Canada geese.

Refuge-specific Impacts

The introduction and spread of weeds are expected to be mitigated partly through such practices as equipment cleaning, mowing to prevent seed set and dispersal, and treatments to any source populations that have the potential to infest agricultural fields (usually windborne seed dispersal). Cooperators would be required to follow the same procedures as Refuge equipment operators by cleaning equipment before moving between fields when working in areas of weed infestations to minimize the spread of undesirable plants as per cooperative land use agreements. The Refuge would continue to monitor farming and grazing sites for invasive weeds and would maintain an aggressive

approach to invasive plant control and restoring sites to vegetation with high wildlife value. In addition, the Refuge would continue to work with Canyon County Weed Control to prevent, identify, and eradicate new infestations.

For weed species that are or become established, mechanical, cultural, and biological controls methods would be evaluated. If these methods are not expected to be effective or would have undesirable consequences (such as impacting nests of grassland-nesting birds), then the Refuge may decide to use an herbicide. Chemical usage would be subject to provisions of the Refuge Integrated Pest Management (IPM) Plan (Appendix G). Among other provisions, this plan provides direction that “the most efficacious pesticide available with the least potential to degrade environmental quality (soils, surface water, and groundwater) as well as least potential effect to native species ... would be acceptable for use on the refuge.” Each approved pesticide would undergo a chemical profile analysis; active ingredients would be analyzed for their risk quotient and this value compared to a level of concern for surrogate species, as established by the Environmental Protection Agency. All applications of herbicides would conform to the specific pesticide label requirements. Employment of this approach would provide for a moderate to minor risk from chemical exposure. However, unquantified risks may still occur via factors not assessed under current protocols, such as species-specific sensitivity that differs from surrogate species sensitivity; exposure through inhalation, exposure through ingestion of pesticide-contaminated soil, and other factors (see Appendix G).

Activities associated with farming practices may have some impact on birds using farm fields. For example, silage activities in the Upper Dam Marsh field may cause geese to move from the immediate area where the farming equipment is operating. However, because these disturbances are short-term and localized, geese, other migratory birds, and wildlife can easily move to an adjacent undisturbed location. Both farming and grazing can have an impact on nesting birds and cause habitat degradation and soil compaction as indicated above. Refuge-specific studies to determine the timing of local birds using farm fields to nest would be conducted in order to reduce impact. Impacts to habitat and soil would also be monitored as noted in stipulations listed below.

Positive effects are also anticipated. In addition to providing high-carbohydrate forage for wintering and migrating waterfowl, per the purpose of the farming program, crop fields planted in small grains such as winter wheat can indirectly benefit a variety of seed-eating migratory bird species by providing some foraging habitat. The Refuge’s farmed and grazed lands provide areas of high-energy grain crops and green forage grasses to meet the energy needs of waterfowl and other wildlife and reduce crop depredation in nearby agricultural lands.

Impacts to Priority Public Uses

Currently, the public occasionally encounters farming operations while recreating on Refuge lands. Although some aspects of farming operations—including noise, dust, spraying, sight of grazing animals, and temporary traffic congestion—may be occasional annoyances to members of the public, conflicts and impacts are expected to remain minor over the life of the CCP.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register
- Distributed approximately 1,300 copies of Planning Update #1
- Provided informational presentations to 26 local organizations
- Held evening call-in hours the second and fourth Wednesdays of the month
- Held open houses July 28, August 20, and August 21
- Contacted visitors over eight days in July and August and handed out over 700 flyers
- Over 1,000 comments were received

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues

May 27, 2011-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list
- Provided informational presentations to 28 local organizations
- Held open houses on June 3, June 4, July 8, and July 9
- Attended local festivals
- Almost 350 comments were received

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

_____ Use is Not Compatible
 X Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

Cooperative land management agreements would contain the following special conditions to ensure compatibility.

Farming Stipulations

- The cooperative farmer is required to perform habitat maintenance work to sustain the field conditions for the benefit of wildlife. Work may include mechanical weed control and fertilization.
- By October 1, alfalfa must be cut to a maximum of 6 inches tall, and winter wheat cut to 3 to 6 inches tall.
- The agreement does not imply or establish a use precedent. Future use of the area would be based on the most satisfactory use of the land for wildlife benefits, cooperator performance, habitat management needs, and administrative needs.

- The cooperative farmer would exercise care to prevent fire and would assume responsibility for fire, which may result from his/her operations.
- No Refuge equipment would be provided for use by the cooperator.
- At the end of the permit period, cooperator is responsible for removing all equipment from Refuge lands.
- The cooperator shall be responsible for repairing damage to Refuge facilities or habitat beyond normal wear and tear resulting from his/her operation.
- Cropland farming would be done under an approved cooperative land management plan and annual cropland management plan per agency policy.
- Pest plants and weeds would be controlled by crop rotations, mechanical treatments, and biological controls where practical; herbicides must be approved by the Refuge Manager on a case-by-case basis.
- Pesticide use must be in compliance with the Service policy requirements for completing an approved pesticide use proposal, and pesticide use must meet other State and Federal requirements.
- The cooperator would provide a record of herbicides used including chemical name, amount used, date, location, and how applied.
- Pesticide applicators must meet all State, Federal, and agency requirements.
- Diligence shall be exercised in the control of County-listed invasive weeds.
- Monitoring of the cropland farming program would be performed by qualified Refuge staff.
- The share of crops left for wildlife would be at least 25 percent.

Grazing Stipulations

- Fencing and ditching would be used to contain cattle and focus grazing on specific pastures during the dry season.
- Season of use shall be from April 1 to August 15 to minimize disturbance to waterfowl and to avoid grazing under wet soil conditions. The Refuge reduces impacts of pasture management by limiting grazing operations and restricting the introduction of cattle during the breeding season in areas where significant impacts to nesting birds would occur.
- The permittee shall remove all cattle, equipment, and materials from the Refuge by the end of the grazing season.
- The selected grazing cooperator must deliver cattle to the Leavitt Tract by way of the Tio Lane entrance.
- Permittees shall be required to leave fields with 2 or more inches of grass and forbs growth at season's end.
- The agreement does not imply or establish a use precedent. Future use of the area would be based on the most satisfactory use of the land for wildlife benefits, cooperator performance, habitat management needs, and administrative needs.
- Subleasing is prohibited. Animals must be the property of the cooperator.
- At the end of the permit period, the cooperator shall be responsible for removing all livestock from Refuge lands.
- The cooperator shall be responsible for repairing damage to Refuge facilities or habitat beyond normal wear and tear resulting from his/her operation.
- Stocking rates of livestock may be altered should pasture conditions warrant, dependent upon judgment of the Refuge Manager.

- The cooperator would notify the Refuge Manager or designee, at least three days in advance of the date cattle are to be turned in or removed from the Refuge. Any changes in the number of animals shall be immediately reported to the Refuge Manager, or designee. All changes would be documented in writing by the cooperator and provided to the Refuge Manager or designee at the end of the season. Livestock would be contained in assigned units, and fences must be maintained by the cooperator.
- The cooperator is responsible for removing dead livestock carcasses from the Refuge within 24 hours of discovery.
- The cooperator shall comply with the livestock regulations of the State of Idaho relating to health and sanitation requirements.
- Monitoring of the grazing program would be performed by qualified Refuge staff, including surveys to determine if grazing is adversely impacting ground-nesting birds.
- Before using grazing as a tool to rehabilitate cheatgrass-infested uplands, more study would be completed, and experts in this area would be contacted. If grazing is used in upland rehabilitation, a small area would be used as a test area before grazing is allowed in large sage-steppe areas.

Justification

The Refuge farm fields are an important food source for waterfowl and other wildlife when natural foods are limited. With the exception of the smartweed beds, Lake Lowell contains minimal submerged aquatic food for feeding waterfowl. Current crops provide food for wintering waterfowl (primarily geese), quail, pheasant, deer, and mourning doves. Ducks and pheasant use or have historically used Refuge alfalfa fields for nesting. The crops on the Refuge provide a consistent food source for the wintering waterfowl and therefore are important to continue. The conversion from agriculture to low-density development, and changes to local agricultural practices in the area surrounding the Refuge have resulted in food loss for wintering waterfowl. These changes to local agriculture include growing higher-valued specialty crops such as seed alfalfa, onions, and mint; using more efficient harvesting equipment so little waste grain remains in the field; and fall plowing and tilling often by mid-November, which is prior to the peak of waterfowl concentrations. As a result, the availability of winter browse and nutritional foods off-refuge has been substantially reduced. Because this trend is likely to continue in the future, cropland management would be essential for waterfowl management in future years. Although wintering waterfowl numbers have declined over time, numerous waterfowl still winter at Deer Flat NWR.

As a management tool, cooperative land management use is a beneficial Refuge operation in meeting purposes of the Refuge as well as goals and objectives established in the CCP. The farming and grazing activities within the cooperative land management program contribute to achieving Refuge purposes and goals identified in the CCP as well as the National Wildlife Refuge System mission by providing valuable foraging areas for wintering and migrating waterfowl. The combination of management practices and stipulations identified above would ensure that farming and grazing contribute to the enhancement, protection, conservation, and management of native wildlife populations and their habitats on the Refuge. Therefore, farming and grazing are considered to be compatible Refuge uses.

Grazing contributes by economically providing weed control and other habitat maintenance functions that are not feasible for limited Refuge staff to accomplish. A grazed short-grass pasture would

complement the marsh habitat on the Leavitt Tract and provide forage and resting habitat for migrating and wintering geese.

The cooperative land management plan will be written after the CCP is complete and will include a description of the agreement between the Refuge and the private farmer to manage the land for both parties. The grazing management plan will better define the objectives of grazing, the amount of stock grazed, and any time restrictions necessary to meet biological management goals. These management plans will also identify what habitat and/or wildlife will be monitored to determine the benefits and/or impacts of the grazing program. Monitoring would prevent unacceptable or irreversible impacts to fish, wildlife, plants, and their habitats. Thus, allowing farming and grazing to occur with stipulations would not materially detract or interfere with the purposes for which the Refuge was established or the Refuge System mission.

Mandatory reevaluation Date

2024 Mandatory 10-year reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Refuge Compatibility Determination for Farming and Grazing (B.2)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.3 Compatibility Determination for Fishing

RMIS Database Use: Fishing

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655).
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)]).
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended).

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

Fishing is allowed on both the Lake Lowell and the Snake River Islands Units and is the most popular of the priority wildlife-dependent recreational activities. Fishing from above mean high water level on the Snake River Islands is not closely monitored and is thought to be infrequent. Fishing from boats in the Snake River is outside of the jurisdiction of the Service. The Lake Lowell Unit received approximately 46,000 fishing visits in Fiscal Year (FY) 2011.

At the Lake Lowell Unit, the majority of fishing occurs from boats and is allowed from April 15 through September 30. Fishing from open shoreline is allowed any time. During waterfowl hunting season fishing from human-powered boats is allowed in Fishing Areas A and B. When Lake Lowell freezes, ice fishing would be allowed in Fishing Areas A and B within 200 yards of the dams, subject to areas posted by the Bureau of Reclamation. It is the angler's responsibility to confirm and understand the hazards associated with this activity. Fishing from the Snake River Islands Unit is allowed from June 1 through January 31.

At the Lake Lowell Unit, spring and summer fishing are focused on fishing for large and smallmouth bass from boats. The majority of bank fishing is focused on catfish with some anglers fishing for perch, crappie, and bluegill.

There are five boat launches (three of which are improved and maintained) on the Lake Lowell Unit from which fisherman can launch motorized boats. Individuals can also launch human-powered boats from a variety of formal and informal locations along the shore. Current and proposed boating regulations are described in the Recreational Boating Compatibility Determination.

In 2011, four Special Use Permits (SUPs) were issued for fishing tournaments, with tournaments occurring from April 15 through September 30, excluding May 14 through July 9. Fishing tournaments are allowed only every other weekend to provide opportunities for nontournament anglers. Tournaments range in size from small club tournaments of five to 10 boats, to a maximum of 100 boats. Participants in tournaments are required to abide by all no-wake zones, area closures, and State fishing regulations. All bass tournaments must launch from the Lower Dam Recreation Area. The Refuge charges a fee of \$100 for each bass tournament.

Proposed Changes to Described Uses

Under the Preferred Alternative, the Refuge would improve and expand facilities and programming to enhance these opportunities as follows.

- Access to Snake River Islands Unit is restricted to June 15 through January 31 on goose-nesting islands and from July 1 through January 31 on heron- and gull-nesting islands. Access to islands would be clearly delineated in Refuge brochure.
- Access to Lake Lowell Unit:
 - To protect nesting birds, access would be allowed only on maintained roads and trails from February 1 through July 31 in the North Side and South Side Recreation Areas. During these months, lakeshore access is restricted to 100 yards on either side of trails accessing the lakeshore. Off-trail travel would be allowed August 1 through January 31.
 - Anglers would be allowed off-trail in the East Side Recreation Area all year.
 - Anglers would be allowed off-trail at Gotts Point February 1 through September 30.

- Anglers would be allowed access to Murphy's Neck through the walk-through on Orchard Avenue from March 15 to September 30.
- Gotts Point would be fully open to vehicle access upon completion of a memorandum of understanding with Canyon County to resolve law enforcement issues.
- Lower Dam Recreation Area would be open from April 15 through September 30.
- The following seasonal closures would be implemented and clearly marked at the Lake Lowell Unit as necessary to protect sensitive wildlife habitat:
 - Up to 300-yard buffer around eagle nests February 15 through July 15.
 - Winter waterfowl closure at Gotts Point October 1 through January 31.
 - Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures would be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a global positioning system (GPS) capable of sub-meter accuracy as part of the regular colony studies. These data points would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes nest, the closure would be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.
 - Up to 250-yard buffer around heron rookeries from February 1 through July 1
 - Up to 100-yard closure around shorebird feeding areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
- No-wake zones would be implemented as follows to protect sensitive wildlife habitat and provide no-wake recreational opportunities:
 - Protect emergent plant beds on south side of the lake with a 200-yard no-wake zone measured from the edge of the shoreline or emergent vegetation, whichever is closest to the center of the lake.
 - Establish no-wake area in the Narrows between the East and West Pools.
 - Establish no-wake zone east from line between Parking Lot 1 and Gotts Point.
- Provide designated, ADA-accessible fishing access trails, for example:
 - From parking areas at Gotts Point.
 - At Parking Lots 4 and 7.
 - From proposed 0.65-mile ADA-accessible interpretive loop trail in riparian habitat between Lower Dam Recreation Area and Murphy's Neck.
- Provide multipurpose (e.g., fishing, observation), ADA-accessible docks or platforms, for example:
 - At north end of Lower Dam Recreation Area near existing Environmental Education Building.
 - Just west of boat launch at east end of the Upper Dam.
 - Along proposed 2-mile ADA-accessible interpretive elevated boardwalk between Parking Lots 1 and 3.
- Remove walk-through access to Murphy's Neck from Orchard Avenue after installing Murphy's Neck Trail with fishing access from Lower Dam Recreation Area to provide alternate, safer access.

- Provide fishing line receptacles.

Availability of Resources

Deer Flat NWR is open to all of the priority, wildlife-dependent recreational activities, including fishing, and the infrastructure is there for all of these user groups. Even though fishing is the most popular visitor activity, to date only a limited number of facilities have been developed specifically for fishing. Most of the costs associated with carrying out the improvements described in the Preferred Alternative are one-time expenses (see Table B-2). Because the Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service will explore all available options to obtain funding to implement these projects, including partnership efforts.

Currently, most on-water law enforcement and boating-related dock maintenance is provided by the Canyon County Sheriff’s Office. If the Sheriff’s Office ever decided to discontinue this assistance, there would be additional costs associated with maintaining this use. Because the Sheriff’s Office is not currently able to provide law enforcement for Refuge-specific regulations, it would be important for the Refuge to increase its law enforcement presence and/or work with Canyon County to enable County deputies to enforce these regulations.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CD for activities using the same resource. For instance, installing new docks would benefit fisherman, but the docks may also be used by visitors engaged in wildlife observation, photography, and interpretation. This same cost has been shown in all CDs that may use the new docks.

Table B-2. Costs to Implement Improvements to the Fishing Program

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Install new docks	\$44,600	
*Install seasonal public use regulation signs	\$1,400	
*Install public use in hunt area signs	\$200	
*Open Gotts Point to vehicles and create accessible trails to water	\$62,400	
*New trail at Murphy’s Neck	\$95,200	
*Print/reprint general Refuge brochures	\$3,200	\$800
*Seasonal nesting closure signs (Lake Lowell and Snake River Islands Units)	\$11,000	
*Install buoys for seasonal closures and permanent no-wake areas	\$4,300	
*Buoy and dock maintenance		\$7,400
*Replace 25% of regulatory and directional signs		\$5,200
*Maintain Murphy’s Neck and Gotts Point Trails		\$1,000
*Visitor contact station	\$480,000	\$1,600
*Install and maintain comfort station and vault toilet at Lower Dam Recreation Area (LDRA) and Parking Lot 1	\$208,200	\$3,000
*Rehabilitate LDRA parking area	\$50,000	
*LDRA site plan	\$40,000	
*Quality of wildlife-dependent public uses survey	\$75,000-\$80,000	
*Human/wildlife interaction disturbance studies	\$140,000	
*Law enforcement officer		\$62,400
Total	\$1,215,500-\$1,220,500	\$81,400

Anticipated Impacts of the Use

The discussion below analyzes impacts of the use as proposed under Preferred Alternative 2.

General Impacts to Habitat

A number of studies have investigated the impacts of boats on aquatic plants, including reduced biomass, shorter canopies, reduced overall coverage, and increased scours compared to sites with restricted boat use (Asplund and Cook 1997; Wagner 1991; Zieman 1976). While exclusion zones and closures may not prevent habitat degradation, they can have an effect on minimizing damage to this important habitat (Asplund and Cook 1997). Boating can also have effects on shoreline erosion (Johnson 1994; Nanson et al. 1994), resuspension of sediments leading to water clarity issues (Garrad and Hey 1987; Johnson 1994; Yousef et al. 1980), and water pollution (Mastran et al. 1994).

Shoreline fishing has been shown to have environmental consequences in the way of soil compaction, degradation of plant communities, and increased contribution to pollution in the form of litter (O'Toole et al. 2009). Shoreline activities, such as human noise, can cause some birds to flush and go elsewhere. In addition, vegetation trampling and deposition of human waste and litter are expected to commonly occur (Liddle and Scorgie 1980). Disturbance and destruction of riparian vegetation, and impacts to bank stability and water quality, may result from high levels of bank fishing activities.

General Impacts to Wildlife

Recreational angling has the potential to cause disturbance to birds and other wildlife using the open waters and flooded emergent vegetation of the Refuge. Fishing activities may influence the composition of bird communities, as well as distribution, abundance, and productivity of waterbirds (Bell and Austin 1985; Bouffard 1982; Cooke 1987; Edwards and Bell 1985; Tydeman 1977). In one study, an increase in the number of anglers and associated shoreline activity discouraged waterfowl from using otherwise suitable habitat (Jahn and Hunt 1964). Anglers can also influence the numbers, behavior, and diurnal distribution of avian scavengers (Knight et al. 1991).

Boating associated with fishing can alter bird distribution, reduce use of particular habitats or entire areas by waterfowl and other waterbirds, alter feeding behavior and nutritional status, and cause premature departure from areas. Impacts of motorized boating can occur even at low densities, given their noise and speed (Knight and Cole 1995). Both motorized and nonmotorized boating have been shown to change wildlife distribution and use of particular habitats, alter feeding behavior and nutritional status, and cause premature departure from desirable habitat (Bouffard 1982; Kaiser and Fritzell 1984; Korschgen et al. 1985). Studies have also shown that boating disturbance may cause increased flight time and flushing distances in waterfowl species (Havera et al. 1992; Kahl 1991; Kenow et al. 2003; Knapton et al. 2000). Wildlife species that are more sensitive to recreation-related disturbances (e.g., bald eagles, shorebirds, grebes) may find it increasingly difficult to secure adequate food or loafing sites as their preferred habitat becomes fragmented by disturbance (Burger 1997; Pfister et al. 1992; Skagen et al. 1991).

Motorized boats can cover a larger area in a relatively short time in comparison to nonmotorized boats, affecting a greater area and providing less time for wildlife to react. Compared to motorboats, human-powered boats like canoes and kayaks appear to cause fewer disturbances to most wildlife species (Huffman 1999). However, canoes and kayaks can cause measurable disturbance effects

because they can access shallower and more densely vegetated areas of a marsh (Speight 1973). Slow-moving boats in close proximity to nesting great blue herons can cause temporary nest abandonment (Vos et al. 1985), and Huffman (1999) found that nonmotorized boats within 30 meters (98 feet) of the shoreline in south San Diego Bay caused all wintering waterfowl to flush between the craft and shore. There have been several studies documenting impacts to birds native to Deer Flat NWR. One study showed a decrease in use of a bald eagle feeding site when human activity (including motorized boating) occurred within 200 meters (Skagen 1980). Another disturbance study showed that motorboats were more likely to elicit response in wintering bald eagles than nearby automatic weapons fire, small arms fire, ordnance impacts, and helicopter flights associated with a military installation (Stalmaster and Kaiser 1997). Rodgers and Schwikert (2002) measured flushing distances from motorized watercraft for 23 waterbird species, of which the great blue heron was one of the more sensitive, flushing between distances of 8 and 137 meters.

Fishing also results in the direct take of fish. Fishing regulations and harvest are coordinated with the Idaho Department of Fish and Game (IDFG) to avoid excess pressure on populations. The State also conducts the stocking program on Lake Lowell. Fishing would be permitted by angling only unless an SUP is issued. Outreach materials such as fishing brochures, informational panels, and public education on best fishing practices would help educate anglers on fishing regulations and ethical behavior. Working in cooperation with the State of Idaho and requiring the anglers to comply with State regulations would ensure that harvesting of fish does not harm long-term populations and fits well within the public's expectations and local fishing culture.

Local Impacts

Many of the wildlife species that frequent Deer Flat NWR rely on aquatic vegetation. Herons and egrets forage in smartweed beds; grebes make their nests from and in emergent vegetation and ducks raise their broods in the protection that its cover provides. The shallow water and marshy habitat are vital to the survival of wildlife species that call Deer Flat NWR home.

Colonial-nesting birds may be among the most sensitive species subjected to potential disturbance from fishing and fishing-associated boating. Lake Lowell is one of only three lakes in Idaho that routinely sees colonies of nesting western and Clark's grebes whose breeding population is considered imperiled in the state (IDFG 2005). IDFG has printed pamphlets for public distribution that provide information on conflicts between boaters and grebes and the importance of responsible boating. Anglers at Lake Lowell often fish in the shallow, heavily vegetated areas that birds prefer and may negatively impact distribution and abundance of breeding grebes. It is inevitable that there would be some impact to wildlife species from fishing. However, the overall effect of this impact is anticipated to be adequately mitigated by implementing the stipulations listed below.

According to a recent visitor use study done on Lake Lowell (see Appendix L), 38 percent of boaters on the lake were actively engaged in fishing activities during the time of the survey. Between 83 percent and 100 percent of boaters located in the emergent bed or on the edge of the emergent bed were actively involved in fishing. The estimated number of angling visits at the Refuge has increased in recent years (from 33,500 in FY07 to 46,000 in FY11). However, the 2006 National Survey of Fishing, Hunting and Wildlife-associated Recreation showed that between 1996 and 2006, the number of state-resident anglers decreased by 28 percent (USFWS and U.S. Census Bureau 2007). Because both the national and Idaho State trends appear to show a decline in participation in fishing, it is anticipated that future levels of fishing would not materially interfere with the purposes of the Refuge.

In 2011 the estimated number of annual shoreline or dock fishing visits to Deer Flat NWR was 18,300. The impact of these visitors is not monitored, but there is evidence in the way of social trails and litter. Popular shoreline fishing areas have well-worn paths through the vegetation, which fragment and impact habitat in the surrounding area. Careless anglers also leave trash that can have an impact on wildlife. For instance, discarded tangled fishing line can be attractive to a nesting bird that attempts to use it and instead becomes ensnared. By maintaining closed areas, increasing law enforcement, and working with local advocacy groups, these impacts can be reduced. It is anticipated that by implementing the stipulations listed below, this use can coexist with wildlife needs.

Refuge staff would monitor the number of anglers and their effects on wildlife, especially nesting birds. Ongoing monitoring of angling activities on Deer Flat NWR would allow managers to apply adaptive management and address issues as they come up. Monitoring efforts would be a part of an overall fisheries management plan that would help guide fisheries management on the Refuge into the future.

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from fishing would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Impacts to Other Priority Public Uses

Fishing is considered a priority public use under the 1997 Refuge Improvement Act ([Public Law 105-57](#)). Conflicts between anglers and hunters are not common as they typically happen in separate seasons. The majority of Lake Lowell is closed to fishing during most of the hunting season. Wildlife photographers and observers may have limited contact with bank anglers, but a majority of fishermen are in boats. Groups involved with environmental education and interpretation are typically located around the Visitor Center and are removed from anglers. Conflicts between fishermen and nonwildlife-dependent recreational boaters are more common.

Under the Preferred Alternative, fishing would continue as it has historically, with a few minor changes. There would be more no-wake zones where anglers would have to slow down sooner to get to popular fishing areas. Sensitive wildlife areas would also be closed off to any entry including anglers. These areas would change annually based on wildlife surveys, which would present a moving target for anglers to keep track of.

Trash associated with fishing activities leaves an unsightly environment that is unpleasant for other Refuge visitors. Placing trash receptacles and restroom facilities in strategic locations, placing fishing docks in high use areas, and creating improved trails to popular spots are planned in the Preferred

Alternative. These improved facilities would mitigate negative impacts associated with concentrated shoreline fishing and allow other areas with limited access to receive reduced angler use and minimal disturbance to wildlife. An appropriate level of cooperative law enforcement would also provide layers of protection for trust resources.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register
- Distributed approximately 1,300 copies of Planning Update #1
- Provided informational presentations to 26 local organizations
- Held evening call-in hours the second and fourth Wednesdays of the month
- Held open houses July 28, August 20, and August 21
- Contacted visitors over eight days in July and August and handed out over 700 flyers
- Over 1,000 comments were received

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues

May 27, 2011-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list
- Provided informational presentations to 28 local organizations
- Held open houses on June 3, June 4, July 8, and July 9
- Attended local festivals
- Almost 350 comments were received

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

<u> </u>	Use is Not Compatible
<u> X </u>	Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

- Refuge staff would monitor impacts of these activities annually to assess compliance with these stipulations, impacts to wildlife and wildlife habitat, conflicts between user groups, and user satisfaction. Monitoring data would be used to modify these stipulations if necessary to ensure continued compatibility of these activities.

- All fishing on the Refuge would require the appropriate State license and would occur consistent with applicable Refuge and State regulations designated by IDFG or Oregon Department of Fish and Wildlife (ODFW) as appropriate.
- Access to Snake River Islands Unit is restricted to June 15 through January 31 on goose-nesting islands and from July 1 through January 31 on heron- and gull-nesting islands. Access to islands would be clearly delineated in the Refuge brochure.
- Use would be restricted to official daylight hours only.
- Access to Lake Lowell Unit:
 - To protect nesting birds, access would be allowed only on maintained roads and trails from February 1 through July 31 in the North Side and South Side Recreation Areas. During these months, lakeshore access is restricted to 100 yards on either side of trails accessing the lakeshore. Off-trail travel would be allowed August 1 through January 31.
 - Anglers would be allowed off-trail in the East Side Recreation Area all year.
 - Anglers would be allowed off-trail at Gotts Point from February 1 through September 30.
 - Anglers would be allowed access to Murphy's Neck through the walk-through on Orchard Avenue from March 15 to September 30.
 - Gotts Point would be fully open to vehicle access upon completion of a memorandum of understanding with Canyon County to resolve law enforcement issues
 - Lower Dam Recreation Area would be open from April 15 through September 30.
- Seasonal closures would be implemented as necessary to protect sensitive wildlife habitat. For example:
 - Up to 300-yard buffer around eagle nests from February 15 through July 15.
 - Up to 150-yard seasonal closure around osprey nests from March 15 through August 1.
 - Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures would be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a GPS capable of sub-meter accuracy as part of the regular colony studies. These data points would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes nest, the closure would be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.
 - Up to 250-yard buffer around heron rookeries from February 1 through July 1.
 - Up to 100-yard closure around shorebird feeding and resting areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
 - Wildlife closure at Gotts Point from October 1 through January 31.
 - Wildlife closure at Murphy's Neck from October 1 through March 15.
 - Wildlife closure at Lower Dam Recreation Area from October 1 through April 14.

- No-wake zones would be implemented as follows to protect sensitive wildlife habitat and provide no-wake recreational opportunities:
 - Protect emergent plant beds on south side of the lake with a 200-yard no-wake zone measured from the edge of the shoreline or emergent vegetation, whichever is closest to the center of the lake.
 - Establish no-wake area in the Narrows between the East and West Pools.
 - Establish no-wake zone east from line between Parking Lot 1 and Gotts Point.
- No live, nonnative aquatic bait would be allowed as per Service policy ([605 FW 3](#)).
- Fishing line receptacles would be provided.
- Fishing tournaments allowed during boating season (April 15 through October 1) except May 14 through July 9. All no-wake zones, area closures, and State fishing regulations must be followed (except catch-and-release before end of June). Bass tournaments only allowed every other weekend (to provide opportunities for nontournament anglers). All bass tournaments must launch from the Lower Dam Recreation Area. The fee would be \$100, and there would be a limit of 100 boats. The 30 boat trailer parking spots closest to the ramp would be marked and made available to non-tournament participants.
- No live, nonnative aquatic bait would be allowed as per Service policy ([605 FW 3](#)).
- Open fires would be prohibited.
- Ice fishing would be allowed in Fishing Areas A and B within 200 yards of the dams, subject to areas posted by the Bureau of Reclamation. Anglers would be responsible for checking ice conditions and confirming that they are safe.

Justification

Fishing, when compatible, is considered a priority public use for the National Wildlife Refuge System. Angling brings visitors to the Refuge and often enhances their appreciation of natural resources. Parts of Deer Flat NWR are closed to all public use to provide areas of undisturbed habitat for fish and wildlife. The stipulations listed above would provide protections that reduce disturbances to colonial waterbirds and other wildlife. The combination of closed areas, seasonal use areas, minimally used areas, and seasonal high use areas, allows quality fishing opportunities and high-quality fish and wildlife habitat to coexist on the Refuge.

Fishing is a priority wildlife-dependent use for the National Wildlife Refuge System through which the public can develop an appreciation for fish and wildlife (E.O. 12996, March 25, 1996) and the National Wildlife Refuge System Improvement Act of 1997 ([Public Law 105-57](#)). The Service's policy is to provide expanded opportunities for wildlife-dependent uses when compatible and consistent with sound fish and wildlife management and to ensure that they receive enhanced attention during planning and management. Although these activities can result in disturbance to wildlife and habitat, disturbances on the Refuge related to fishing are expected to be intermittent and minor and are not expected to diminish the value of the Refuge for its stated purposes. The stipulations stated above would ensure proper control of the use and provide management flexibility should detrimental impacts develop. Facilitating this use on the Refuge would increase visitor knowledge and appreciation of fish and wildlife resources. This enhanced understanding would foster increased public stewardship of natural resources and support for the Service's management actions in achieving the Refuge purposes and the mission of the National Wildlife Refuge System.

It is anticipated that wildlife populations would find sufficient food resources, nesting and breeding areas, and resting places such that their abundance and use of the Refuge would not be measurably

lessened from allowing fishing at Lake Lowell and from islands in the Snake River Unit. The relatively limited number of individuals expected to be adversely affected due to fishing would not cause wildlife populations to materially decline, the physiological condition and production of wildlife species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted. Thus, allowing fishing would not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Mandatory reevaluation Date

2029 Mandatory 15-year reevaluation (for priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Refuge Compatibility Determination for Fishing (B.3)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.4 Compatibility Determination for Horseback Riding, Jogging, and Bicycling

RMIS Database Uses: Horseback Riding, Jogging, and Bicycling

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Uses

These uses rarely, if ever, occur on the Snake River Islands Unit. Several trails at Deer Flat NWR’s Lake Lowell Unit are used extensively by the public for activities including horseback riding, jogging, and bicycling. Existing trails used for these activities are primarily on the north side of the lake and include the East Dike and Kingfisher Trails in the East Side Recreation Area, the Gotts Point Trail, and the Observation Hill Trail System and the Centennial and Nature Trails in the North Side Recreation Area. While trails on the south side do exist, they are short, go directly from the parking lots to the lake edge, and are typically not used by joggers, cyclists, or horseback riders. Horseback riders do sometimes use the fire breaks in the South Side Recreation Area. Refuge trails are maintained gravel roads and single-track dirt paths, with the exception of the concrete Centennial Trail. Trails are easily accessed from existing parking areas. Spring and summer months have the highest rates of these kinds of usage. Based on Refuge staff counts we estimated the number of walkers/joggers to be 16,500 in 2010, but there are no data for equestrians or cyclists. All three of the uses described in this CD were addressed and deemed compatible in a previous CD.

Proposed Uses

Under Preferred Alternative 2, the Refuge would continue to allow horseback riding, jogging, and bicycling on designated trails with stipulations to maintain public safety, reduce conflicts between wildlife-dependent user groups, and ensure compatibility with the Refuge’s purpose and National Wildlife Refuge System mission. Through these uses, the Refuge would reach out to nontraditional Refuge user groups with information about the Refuge and Refuge System. Due to the close proximity of Deer Flat NWR to the cities of Nampa and Caldwell, the number and variety of users to this urban refuge is expected to grow. For many of these people, multiple-use trails may provide an introduction to a national wildlife refuge. More details for the proposed uses follows.

Horseback Riding. Horseback riding would be allowed only on designated trails (the East Dike, Kingfisher, and Gotts Point Trails and the Observation Hill Trail System) to prevent soil erosion and trail widening that commonly occurs with equestrian trails. In addition to enforcing Refuge restrictions, the Refuge staff would seek the cooperation of users and develop partnerships with interested groups to ensure compliance with compatibility stipulations and protection of Refuge resources.

Groups of more than 10 horses and riders would be required to obtain an SUP, because equestrian groups could restrict use for other wildlife-dependent users due to limited space both on trails and in parking lots. Special group events such as competitions, poker rides, and the like would not be allowed on the Refuge. Riders would not be allowed to tie a horse to any physical structure or vegetation and must remain with their horses at all times. The Refuge would not provide support facilities such as trailer parking, hitching posts, and water access. Per multiuse trail etiquette, pedestrians and bicyclists must yield to equestrians.

Jogging. Jogging would be allowed on all trails in open areas. Groups of more than 10 joggers would be required to obtain an SUP, because large groups may restrict use for other wildlife-dependent users due to limited trail space. Special events such as competitions, training, and practice meets

would not be allowed on the Refuge because they are not wildlife-dependent events and would potentially impact visitors participating in wildlife-dependent recreational activities.

Bicycling. Bicycling would be allowed only on designated trails including the East Dike, Kingfisher, and Gotts Point Trails and the Observation Hill Trail System. Based on limited survey data, bicycling is not a common use on Refuge trails, and conflicts with other users have not been reported. However, bicycling sometimes has occurred off-trail, which is not allowed.

Special events such as racing (or other competitions) and/or practice would not be allowed on the Refuge. In addition, bicycling competitions would not be allowed to use Refuge parking areas for race preparations, starting lines, finish lines, or refreshment areas because the resulting congestion limits access by wildlife-dependent users and could cause automobile/bicycle safety concerns. Groups of more than 10 cyclists would be required to obtain an SUP, because large groups may restrict use for other wildlife-dependent users due to limited trail space. Bikes must be ridden at a safe speed, and cyclists must yield to horses and pedestrians. Refuge staff would seek the voluntary cooperation of users and would also rely on law enforcement to ensure compliance with these stipulations and to ensure safety of all user groups on trails.

Availability of Resources

Most of the costs associated with carrying out the improvements, as described in the Preferred Alternative, are one-time expenses (see Table B-3). Because the Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts.

Increased volunteer assistance, strengthened existing partnerships, and new partnerships would be sought to support these programs in an effective, safe, and compatible manner. Refuge staff would increase volunteer recruitment efforts. When provided appropriate training, Refuge volunteers, interns, and various user groups could assist with monitoring, education, and interpretation programs, and maintenance projects. With additional assistance as described above, staffing and funding is expected to be sufficient to manage these uses.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CDs for activities using the same resource. For instance, upgrading the fire break to a multiuse trail would benefit horseback riding, jogging, and bicycling, but the trail could also be used by visitors engaged in wildlife observation, photography, and interpretation. This same cost has been shown in all CDs that would use the new trail facility.

Table B-3. Costs to Implement Improvements Necessary to Allow Horseback Riding, Jogging, and Bicycling

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Install multiple-use trail regulation signs	\$7,800	\$300
*Upgrade fire break	\$37,000	\$800
Safety upgrade to Tio Lane walk-through	\$1,000	
*Print/reprint general Refuge brochures	\$3,200	\$800
*Human/wildlife interaction disturbance studies	\$140,000	
Miscellaneous management		
Total	\$189,000	\$1,900

Anticipated Impacts of the Use

The discussion below analyzes impacts of the use as proposed under Preferred Alternative 2.

Impacts to Habitat

Unpaved or unsurfaced trails are susceptible to a variety of trail impacts from horseback riding, jogging, and bicycling, including vegetation loss due to trampling and soil compaction and erosion (Adkison and Jackson 1996; Dale and Weaver 1974; Leung and Marion 2000). Trail widening and creation of side trailing (social trailing) increases the area of disturbed land (Liddle 1975). Horses, pedestrians (including joggers), and cyclists can all cause structural damage to plants and increase soil compaction and erosion (DeLuca et al. 1998; Whittaker 1978). Vegetation and soil compaction and erosion impacts can be much more pronounced from horses than hikers (Bainbridge 1974; Hammitt and Cole 1987; Hendee et al. 1990), with soil compaction as much as 1,500 pounds per square inch exerted on the soil surface with each step (Hendee et al. 1990). Hikers tend to flatten vegetation while horses tend to chum up soil, thus cutting plants off at the rootstalk (Whittaker 1978). Trail widening is also a consideration as horses tend to walk on the downslope sides of trails (Whitson 1974), creating a much wider area of disturbance and increasing trail maintenance problems. This can increase the spread of previously established nonnative species by providing loose, disturbed soil for germination and spreading reproductive plant structures.

These impacts are unlikely to occur on the well-defined, gravel surface of the East Dike, Kingfisher, and Gotts Point Trails and the Observation Hill Trail System trails, which is why they have been designated for these uses. Although equestrians, cyclists, and joggers would be required to remain on designated trails, if some users travel off-trail to access the lakeshore, a scenic vista, or other points of interest, then the habitat impacts noted above would result from development of social trails. Use of social trails would also cause wildlife disturbance.

Control of invasive plant species on the Refuge is a difficult and never-ending challenge. Roads and trails often function as conduits for movement of plant species, including nonnative, invasive species (Benninger-Truax et al. 1992; Hansen and Clevenger 2005). Horse droppings are a source of nonnative plant seeds that are capable of germination and growth on disturbed sites (Campbell and Gibson 2001). Bicycles are another potential seed dispersal mechanism. Refuge visitors can inadvertently carry propagules from invasive plants on their clothing or equipment, spreading those plants to new areas. Once established, invasive plants can out-compete native plants, thereby altering habitats and indirectly impacting wildlife. Invasive plants on or near these trails would be controlled and monitored as part of the Refuge's IPM Plan (Appendix G).

Impacts to Wildlife

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species

that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from these uses would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

General Response of Wildlife to Disturbance

Immediate responses by wildlife to recreational activity can range from behavioral changes including nest abandonment, altered nest placement, and change in food habits to physiological changes such as elevated heart rates, increased energetic costs due to flight or flushing, or even death (Belanger and Bedard 1990; Kight and Swaddle 2007; Knight and Cole 1995; Miller and Hobbs 2000; Miller et al. 1998; Morton et al. 1989). The long-term effects are more difficult to assess but may include altered behavior, vigor, productivity, or death of individuals; altered population abundance, distribution, or demographics; and altered community species composition and interactions.

According to Knight and Cole (1991), there are three wildlife responses to human disturbance: avoidance, habituation, and attraction. The magnitude of the avoidance response may depend on a number of factors including the type, distance, movement pattern, speed, and duration of the disturbance; the time of day, time of year, weather; and the animal's access to food and cover, energy demands, and reproductive status (Fernández-Juricic et al. 2007; Gabrielsen and Smith 1995; Knight and Cole 1991).

Habituation is defined as a form of learning in which individuals stop responding to stimuli that carry no reinforcing consequences for the individuals that are exposed to them (Alcock 1993). A key factor for predicting how wildlife would respond to disturbance is predictability. Often, when a use is predictable—following a trail or boardwalk or at a viewing deck—wildlife will habituate to and accept human presence (Oberbillig 2000). Gabrielsen and Smith (1995) suggest that most animals seem to have a greater defense response to humans moving unpredictably in the terrain than to humans following a distinct (and repeated) path.

Burger (1999) as cited by Oberbillig (2000) suggests that viewing distances can serve as useful guides for managers lacking good site-specific information and serve as a starting point in determining what is appropriate elsewhere. Other factors that affect disturbance impact include the numbers of viewers, the time of day, and noise level. When exposing nonbreeding waterbirds to four types of human disturbances (walking, all-terrain vehicle, automobile, and boat), Rodgers and Smith (1997) conclude that a buffer zone of 330 feet would minimize flushing of foraging or loafing waterbirds. Vos et al. (1985) recommend buffer zones of 820 feet on land and 490 feet over water for great blue herons. Miller et al. (1998) found that the trail zone of influence for forest and grassland birds appears to be approximately 250 feet. Beyond this distance, bird abundance, species composition, and nest predation was not affected by even heavily used recreational trails. Knight and Cole (1991) suggest that sound may elicit a much milder response from wildlife if animals are visually buffered from the disturbance.

Horseback Riding. Horseback riding may influence the behavior of various wildlife species. Observations by Owen (1973) and others suggest that many species of wildlife are habituated to livestock and are less likely to flee when approached by an observer on horseback than by an observer on foot. In one study (Owen 1973), equestrians could approach geese up to a distance of

150 feet without noticeable behavioral changes in the geese. This is compared to a suggested hiking trail distance of 250 feet (Miller et al. 1998).

Jogging. As cited in Bennett and Zuelke (1999), joggers and landscapers caused birds to flush more than fishermen, clammers, sunbathers, and some pedestrians, possibly because joggers move quickly and landscapers create more noise. The latter groups tend to move more slowly or stay in one place for longer periods, and thus birds likely perceive these activities as less threatening (Burger 1981, 1986; Burger et al. 1995; Knight and Cole 1995). However, joggers tend to spend less time in a particular area than pedestrians and are less likely to directly approach or otherwise disturb wildlife. The effects of human disturbance can be reduced by restricting jogging to an established trail because wildlife show greater flight response to humans moving unpredictably than to humans following a distinct (and repeated) path (Gabrielsen and Smith 1995). Joggers would be restricted to an established, designated trail to prevent significant disturbance.

Bicycling. Rapid movement directly toward wildlife frightens animals, while movement away from or at an oblique angle to animals is less disturbing (Knight and Cole 1995). Human-caused noise, including road noise, has been shown to negatively affect wildlife (Bowles 1995), although the response is often difficult to assess because it may be confounded by responses to visual stimulus. Pease et al. (2005) showed that bicycles (and pedestrians) disturbed more dabbling ducks than did other means of transportation. Stalmaster and Newman (1978) suggest that sound may elicit a much milder response from wildlife if animals are visually buffered from the disturbance. Bicycling on designated trails is not anticipated to disturb wildlife because riders tend to stay on the trail and the noise source is predictable. In addition, group size would be limited by prohibiting special events and training on the Refuge, thereby reducing the potential for substantial disturbance to wildlife.

Potential Impacts to Priority Public Uses

Trails on public lands often attract a variety of user groups with conflicting needs. For instance, slow-moving uphill hikers may reduce the quality of experience of cyclists who enjoy the speed on a downhill single-track trail. Some trail users who meet horses or see, smell, or step in evidence of their use say it detracts from their experience (Watson et al. 1993), while some trail users may enjoy seeing and meeting horses. The number of encounters that create conflict at Deer Flat NWR is unknown. Horseback riding is an occasional use at Deer Flat NWR currently, and available parking for horse trailers would continue to limit its use. Should increased equestrian use of the Refuge result in conflicts for parking space, we would reassess the number of horses allowed on the Refuge at any given time.

Bicycles and horses using the same trail as pedestrians can sometimes create safety hazards for other visitors. Although user groups are not physically separated on the trails designated for bicycles and horses, the designated trails proposed for bicycles and horses are wide (between 12 and 20 feet), have good visibility, and should accommodate safe, shared use by pedestrians and joggers, as well as equestrians and bicyclists traveling at a safe speeds. If the number of trail users increases significantly, the potential for accidents or user group conflicts may also increase. Measures to reduce potential conflicts between equestrians and other user groups would include providing information at the trailhead kiosks, and in the Refuge's brochure that clearly indicates permitted users and rules of conduct. Providing signs that clearly indicate which users have the right-of-way would help mitigate conflict, as is evident on other public lands in the area (e.g., Military Park in Boise). Trail etiquette signing would state the proper hierarchy of yields and other rules of the trail.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register.
- Distributed approximately 1,300 copies of Planning Update 1.
- Provided informational presentations to 26 local organizations.
- Held evening call-in hours the second and fourth Wednesdays of the month.
- Held open houses July 28, August 20, and August 21.
- Contacted visitors over eight days in July and August and handed out over 700 flyers.
- Over 1,000 comments were received.

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues.

May 27, 2011-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list.
- Provided informational presentations to 28 local organizations.
- Held open houses on June 3, June 4, July 8, and July 9.
- Attended local festivals.
- Almost 350 comments were received.

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

Use is Not Compatible
 Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

- Horseback riding, jogging, and bicycling would be allowed only on designated trails to minimize disturbance to wildlife and pedestrian users. Designated trails would be:
 - Observation Hill Trail System in the North Side Recreation Area.
 - East Dike and Kingfisher Trails in the East Side Recreation Area.
 - Gotts Point Trail
- The Refuge would not improve designated trails or provide additional trails or facilities to accommodate increased use by equestrians, joggers, or cyclists.

- Horses and cyclists would be required to maintain safe speeds conducive to multiuse trails. Pedestrians and bicyclists must yield to equestrians.
- Organized horseback riding, bicycling, or jogging groups of more than 10 people may be permitted under an SUP issued to the group leader. Groups involved in competitive events or training for competitive events (e.g., cross-country training or cross-country meets) would not be allowed.
- Equestrians would be required to remain with their horses at all times and not tie a horse to any physical structure or vegetation while on the Refuge.
- Use would be restricted to daylight hours only.
- Seasonal closures would be implemented as necessary to protect sensitive wildlife habitat.

For example:

- Up to 300-yard buffer around eagle nests from February 15 through July 15.
- Up to 150-yard seasonal closure around osprey nests from March 15 through August 1.
- Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures would be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a GPS capable of sub-meter accuracy as part of the regular colony studies. These data points would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes nest, the closure would be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.
- Up to 250-yard buffer around heron rookeries from February 1 through July 1.
- Up to 100-yard closure around shorebird feeding and resting areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
- Wildlife closure at Gotts Point from October 1 through January 31.
- Wildlife closure at Murphy's Neck from October 1 through March 15.
- Wildlife closure at Lower Dam Recreation Area from October 1 through April 14.
- Refuge staff would monitor impacts of these activities annually to assess compliance with these stipulations, impacts to wildlife and wildlife habitat, and conflicts between user groups. Monitoring data would be used to modify these stipulations or remove the use if necessary to ensure continued compatibility of these activities.

Justification

Horseback riding, jogging, and bicycling are not wildlife-dependent public uses of the Refuge, as defined by statute ([16 U.S.C. 668dd](#) et seq.). However, these uses of the existing trails are secondary uses that can facilitate wildlife-dependent uses. Managed under the stipulations listed above, these uses are expected to result in only minor additional impacts to wildlife. Restricting the disturbance to an established trail would increase predictability of public use patterns on the Refuge, allowing wildlife to habituate to nonthreatening activities.

Although horseback riding, jogging, and bicycling can result in disturbance to wildlife, disturbance is expected to occur in limited areas of the Refuge. There are adequate amounts of undisturbed habitat available to wildlife for escape and cover.

It is anticipated that wildlife populations would find sufficient food resources and resting places such that their abundance and use of the Refuge would not be measurably lessened from these activities. The relatively limited number of individuals expected to be adversely affected due to disturbance would not cause wildlife populations to materially decline, the physiological condition and production of wildlife species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted. Thus, allowing these uses to occur with stipulations would not materially detract or interfere with the purposes for which the Refuge was established or the Refuge System mission.

Mandatory reevaluation Date

2024 Mandatory 10-year reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Compatibility Determination for Horseback Riding, Jogging, and Bicycling (B.4)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.5 Compatibility Determination for Hunting Deer

RMIS Database Uses: Hunting (deer)

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge, respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assumed the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

Hunting is considered a wildlife-dependent public use of the Refuge, as defined by statute ([16 U.S.C. 668dd](#) et seq.) and must be given priority over nonwildlife-dependent uses. Despite the direct and indirect impacts associated with sport-hunting, regional deer populations are not likely to be affected significantly by hunting on the Snake River Islands or Lake Lowell Unit of the Refuge.

Deer hunting takes place between Parking Lot 8 and the New York Canal on Lake Lowell Unit and on all islands in the Snake River Islands Unit. A limited number of doe and buck tags are issued to hunters for use at Lake Lowell Unit. These hunters are also required to follow special conditions outlined in their Refuge hunt permit. The Snake River Islands fall within several big game hunting units and follow hunting regulations published by Oregon Department of Fish and Wildlife (ODFW) and Idaho Department of Fish and Game (IDFG) for the unit in which each island is located.

Proposed Changes to Described Uses

There are no changes proposed to the deer hunting program as described above.

Availability of Resources

The proposed deer hunt would not require any additional infrastructure. Hunter access to the proposed hunt area would be accommodated at existing Parking Lots 1 to 8 and from on-water access to the islands. Permanent blinds, additional trails, and roadway pullouts would not be constructed to support the hunt program. Hunter access would be restricted to pedestrian access only; all-terrain vehicles (ATVs) and pack animals are not permitted.

Administration of the hunt program would add workload for existing staff. The Refuge would incur the annual expense of editing and producing media related to the deer hunting opportunity. Monitoring efforts would need to be increased to determine the program’s impacts to Refuge deer populations and other Refuge resources. The simple administration of the program would add annual workload to the biological, management, and public use staff. It is expected that the Service and IDFG law enforcement personnel would assist with any enforcement-related problems. The Refuge has adequate staff and base funding to cover the additional workload and costs. For a breakdown of anticipated cost of the deer hunting program, see Table B-4.

Table B-4. Costs to Implement Improvements to the Deer Hunting Program

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
Coordination with IDFG and program management		\$5,000
Deer monitoring, resource monitoring, hunt plan updates, coordination, program management		\$5,000
Coordination with IDFG and patrols		\$5,000
*Outreach, production of media, program management	\$7,000	\$5,000
*Quality of wildlife-dependent public uses survey	\$75,000-\$80,000	
*Human/wildlife interaction disturbance studies	\$140,000	
*Law enforcement officer		\$62,400
Maintain signage		\$300
Total	\$222,000-\$227,000	\$82,700

Anticipated Impacts of the Use

Impacts to Habitat

Foot travel associated with deer hunting could potentially result in trampling of vegetation and minor impacts to subcanopy riparian cover. Since deer hunting would involve small numbers of spatially dispersed hunters, and primarily take place during the time of year when most understory plants are dormant, this activity would likely have little direct impact on any native plant species. Although impacts to habitats within the hunt area are expected to be minor, as noted above, other habitats could be impacted from increased grazing and browsing should deer move away from the hunt zone. The redistribution of deer from the hunting zone may increase deer density within other nearby suitable habitat areas. Through trampling and direct herbivory, habitat conditions could be reduced within riparian, shrub-steppe, and agricultural areas. Higher densities over prolonged times can have impacts to habitat structure as young plants are consumed, suppressing the number of potential recruits into older age classes.

Impacts to Soil and Water

Minimal disturbance is anticipated to soils and water due to the dispersed nature of the activity. Additionally, the hunt uses existing infrastructure for parking and pedestrian access.

Impacts to Wildlife

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species, only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from hunting would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Impacts of Hunting on Deer

Hunting by its nature results in the direct take of individual animals, as well as wounding and disturbance. In all cases, the Refuge would seek to minimize needless deer mortality, while providing a quality hunt experience. With regional deer populations exceeding 55,000 animals (McDonald 2011), deer hunting on Deer Flat NWR would not result in negative cumulative impacts to deer populations.

Deer hunting can have indirect impacts to habitat by reducing populations or redistributing deer, thereby changing densities of deer in a given area. Mule deer are largely dependent upon the fat stored during the spring, summer, and fall to survive winter. Even in the best winter range, deer lose

weight throughout the winter. A main strategy for winter survival is securing habitat with adequate thermal cover to conserve energy by becoming sedentary. Energy loss would be minimized by the presence of sufficient food resources in close proximity to cover habitat (IDFG 2010). Due to the limited number of hunters using the Snake River Islands for deer hunting and the existence of areas of Lake Lowell that are off limits to deer hunting, deer would continue to find adequate thermal cover.

Impacts to Nontarget Species

The activity of hunting deer on the Refuge could also disturb some wildlife species. Periodic firearm discharge in close proximity to wetlands or other waterfowl roosting and feeding areas can result in behavioral responses by waterfowl and other wetland birds. This disturbance would be limited in scope by the limited number of hunters in an area at any given time. The rate of gunfire disturbance is expected to be infrequent and random, based upon opportunistic individual shots or shot clusters at deer in range. The frequency of gunfire may be only a few shots per day causing temporary and short-term disturbance to wintering waterfowl and waterbirds.

The controlled deer hunt season may impose some short-term effects to wintering bald eagle use within hunted areas. Wintering populations of bald eagles have shown susceptibility to disturbance, resulting in disrupted foraging behavior and changes in social dynamics between other species in the avian scavenger guild (Skagen et al. 1991) and avoidance of areas with high disturbance (Stalmaster and Newman 1978). Stalmaster and Newman (1978) also found that recreational activities occurring within 250 meters of roosting and foraging areas resulted in changes in distribution patterns by displacement to areas of lower human activity. With regard to hunting, Stalmaster and Newman (1978) found that gunshots were the only noises that elicited overt escape behavior by eagles in their study. The areas open to hunting incorporate riparian woodlands that could serve as roosting habitat for wintering eagles. The hunted area at Lake Lowell is adjacent to an area that is used by bald eagles for foraging, potentially placing hunters within 250 meters of roosting and foraging eagles. As a result of hunting disturbance, perches and foraging areas within closed areas or islands with lower hunting pressure may see a higher frequency of eagle use during the hunt season.

Site selection and nesting activity for bald eagle nests and heron colonies may initiate in late January. The general hunting seasons are complete before this timeframe. If a late-season depredation hunt occurred at Lake Lowell Unit, a regulated number of hunters may be introduced to suitable habitat during this period. The depredation season is anticipated to have low hunter density, producing only few shots per depredation permit. The impact to nesting eagles and herons is not likely to be major. The framework of the depredation hunt additionally allows the Refuge to selectively close areas, as detected, to protect sensitive wildlife resources within the hunt area with spatial buffers. Resource buffers would be employed using current research to sufficiently safeguard nests or colonies from abandonment. As closures are implemented, the Refuge would supply hunt permit holders maps of closures to hunting activity.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register.
- Distributed approximately 1,300 copies of Planning Update 1.
- Provided informational presentations to 26 local organizations.
- Held evening call-in hours the second and fourth Wednesdays of the month.
- Held open houses July 28, August 20, and August 21.
- Contacted visitors over eight days in July and August and handed out over 700 flyers.
- Over 1,000 comments were received.

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues.

May 27-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list.
- Provided informational presentations to 28 local organizations.
- Held open houses on June 3, June 4, July 8, and July 9.
- Attended local festivals.
- Almost 350 comments were received.

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

_____ Use is Not Compatible
 X Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

Deer Flat NWR General Deer Hunt Stipulations

- Hunters must comply with the applicable provisions of State and Federal laws, as well as the hunting regulations of the State of Idaho.
- No permanent structures would be constructed on Service lands.
- Use of dogs to hunt or pursue big game is prohibited.
- No person including, but not limited to, a guide, guide service, outfitter, club, or other organization would provide assistance, services, or equipment on the Refuge to any other person for compensation unless such guide, guide service, outfitter, club, or organization has obtained a Special Use Permit from the Refuge.
- Hunting by aid of or distribution of any feed, salt, other mineral, or electronic device, including game cameras, is prohibited.

- Deer hunters may enter the Refuge no earlier than two hours before shooting time and must leave the Refuge within two hours after shooting time. Unless retrieving a deer, retrieval times extend five hours past shooting time.

Lake Lowell Unit Deer Hunt Stipulations

- Deer hunting is permitted only in the areas between the shoreline of Lake Lowell and the Refuge's southern boundary, and extending from Parking Lot 8 southeasterly to the New York Canal.
- The use of flagging, blazing, or trail-marking devices to locate hunting area(s) or for any other purpose is prohibited.
- Hunters must obtain a Refuge-specific permit to hunt deer on the Lake Lowell Unit of the Refuge, which must be signed and carried in the field while hunting.
- Deer hunting would be limited to short-ranged weapons, as allowed in IDFG Game Management Unit 38. These weapons currently include muzzleloaders, archery equipment, crossbow, shotgun using slugs or shot of size #00 buck or larger, or a handgun using straight-walled cartridge not originally developed for rifles.
- All Lake Lowell Unit deer hunting would be from temporary tree stands.
- Each hunter is allowed to install non-damaging portable tree stands up to the maximum number allowed under [50 C.F.R. 32](#). The tree stands may be erected on, or after, the first day of their hunting season and must be removed by the last day of their season. Hunters must permanently affix their name, contact phone number, and address to their deer stand(s).
- Use of nails, wires, screws, or bolts to attach a stand to a tree, or hunting from a tree into which a metal object has been driven, is prohibited.
- Lake Lowell Unit deer hunters must use a Fall-Arrest System (FAS)/Full Body Harness meeting Treestand Manufacturers Association (TMA) standards while using a tree stand. It shall be unlawful to use a tree stand without permission of the owner.
- Lake Lowell Unit deer permit holders would be limited to designated parking areas. Access would be walk-in only from existing Parking Lots 1 through 8.
- Lake Lowell Unit hunting permit holders must be accompanied by a Refuge employee or State Game Warden to retrieve a wounded or expired deer from a Closed Area.
- Terrestrial-based stalking and/or still hunting is not permitted at any time. Shooting (firearm or bow) from the ground is not permitted, except to dispatch wounded deer.
- Deer drives are prohibited.

Justification

Hunting, when compatible, is defined as one of the priority public uses of the Refuge System by the National Wildlife Refuge System Improvement Act of 1997. The Refuge hunt program will be designed to provide a quality hunt and a safe experience, with a reasonable opportunity to harvest game species. No habitat degradation would be anticipated by continuing the deer hunt program; disturbance to birds and other wildlife, if any, would be temporary and localized, and ample amounts of additional quality habitat for these wildlife species exist on the Refuge. Thus, it is anticipated that wildlife populations would find sufficient food resources and resting places such that their abundance and use of the Refuge and local area would not be measurably lessened from hunting activities. The number of individuals expected to be removed from the deer population due to hunting would not impair the physiological condition and production of hunted species.

The Refuge environment includes wildlife, soils, vegetation, air quality, and water quality. Some disturbance to the Refuge environment is anticipated, but impacts would be minor due to the dispersed nature of the activity, entailing a limited number of participants over the duration of the hunt season. State and Federal regulations and Refuge-specific special conditions would help reduce or eliminate any unwanted impacts of the use to nontarget species. The Refuge would implement, as needed, spatial and/or temporal closures to protect sensitive nontarget wildlife resources such as eagle nests or wintering waterfowl. The proposed hunt is not anticipated to have any impact on threatened or endangered species, as none are known to occur in the hunting area.

Specific Refuge regulations help safeguard Refuge habitat and adjoining private property. Disturbance to other wildlife would occur, but this disturbance is generally short term, with sufficient habitat being present in adjacent areas. The deer harvest would not significantly affect the regional population of deer. For these reasons, deer hunting would not prevent the Refuge from fulfilling the purposes of the Fish and Wildlife Act, Executive Order 7655, the Migratory Bird Conservation Act, the Refuge Recreation Act, or the mission of the National Wildlife Refuge System for conserving, managing, restoring, and protecting wildlife resources. In addition, the proposed hunt is anticipated to have a positive benefit to adjoining agricultural lands by alleviating localized depredation impacts.

In summary, deer hunting at Deer Flat NWR would not have any significant impacts to hunted species, to the regional populations of these species, to the Refuge environment, to adjacent lands, or to nearby residents. By allowing public hunting, the Refuge is fulfilling the mission of the National Wildlife Refuge System by administering Refuge resources for the benefit of present and future generations. For these reasons, we have determined that deer hunting would not materially interfere with or detract from fulfilling Refuge purposes and the mission of the National Wildlife Refuge System.

Mandatory reevaluation Date

2029 Mandatory 15-year reevaluation (for priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

References

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Skagen, S.K., R.L. Knight, and G.H. Orians. 1991. Human disturbance of an avian scavenging guild. *Ecological Applications* 1:215-225.

Stalmaster, M.V. and J.R. Newman. 1978. Behavioral responses of wintering bald eagles to human activity. *Journal of Wildlife Management* 42:506-513.

Compatibility Determination for Hunting Deer (B.5)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.6 Compatibility Determination for Hunting Waterfowl and Upland Birds

RMIS Database Uses: Hunting (waterfowl), Hunting (upland bird), Hunting (other migratory birds)

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

Hunting is considered a wildlife-dependent public use of the Refuge, as defined by statute ([16 U.S.C. 668dd](#) et seq.) and must be given priority over nonwildlife-dependent uses. Waterfowl, upland game bird, and other migratory bird hunting are defined as priority public uses under the National Wildlife Refuge Improvement Act of 1997 ([Public Law 105-57](#)). Despite the direct and indirect impacts associated with sport-hunting waterfowl, upland game birds, and other migratory birds, flyway populations are not likely to be affected significantly by the hunting program on the Refuge. Changes in regional land uses (e.g., agriculture versus housing) are more likely to influence population trends than localized hunting programs.

Waterfowl and upland game bird hunting is open on both units of the Refuge during the general seasons designated by the Idaho Department of Fish and Game (IDFG) or Oregon Department of Fish and Wildlife (ODFW) as appropriate. Regulations for these hunts generally follow the respective state’s rules. Where the Snake River is the boundary between Idaho and Oregon, hunters from either state may hunt the islands according to the regulations of the state for which they are licensed. Hunters are allowed off-trail use within designated Refuge hunting areas. Nontoxic shot is required, and hunters may not possess lead shot in the field. While hunter use of these areas has not been closely monitored, the 2006 National Survey of Fishing, Hunting and Wildlife-associated Recreation showed that between 1996 and 2006, the number of state-resident hunters decreased by 33 percent (USFWS and U.S. Census Bureau 2007). Given this trend, it is unlikely that hunting would increase substantially in the near future. However, the number of hunters and their impacts would be monitored, and, if necessary, additional measures will be developed in coordination with IDFG and ODFW to protect Refuge resources.

Waterfowl Hunting on the Lake Lowell Unit

The Lake Lowell Unit falls completely within a goose hunting closure area designated by IDFG. Waterfowl hunting (duck, coot, and common snipe but excluding goose) takes place in the South Side Recreation Area between Parking Lots 1 and 8 and in the East Side Recreation Area from the Leavitt Tract to the east side of Gotts Point. Waterfowl seasons are consistent with the State season and typically start the first of October and run through the end of January. Lake Lowell is closed to recreational boaters during the hunting season. Walk-in hunting is allowed in both areas, and hunters may use a human- or electric-powered boat up to 200 yards from the shore in the South Side Recreation Area. An estimated 2,518 acres (24 percent) of the Lake Lowell Unit is open to waterfowl hunting. Hunters may use Parking Lots 1 through 8 to access the South Side Recreation Area. To access the East Side Recreation Area, hunters can use the Tio Parking Lot at the end of Tio Lane and park at the end of Greenhurst Road near Gotts Point. There were approximately 5,100 waterfowl hunting visits to the Refuge in the 2010 to 2011 hunting season.

Waterfowl Hunting on the Snake River Islands Unit

Currently all islands in the Snake River Islands Unit (approximately 1,200 acres) are open to waterfowl hunting (ducks, geese, coot, and common snipe). Waterfowl seasons are consistent with the State season and typically start the first of October and run through the end of January. No facilities are offered on any of the islands, but hunters are permitted to launch their boats from

various access points along both of the outer banks of the Snake River. Other public uses of the Snake River Islands Unit are thought to be low and would not conflict with this use.

Upland Game Bird Hunting on the Lake Lowell Unit

Upland game bird hunting (dove, ring-necked pheasant, California and bobwhite quail, and chukar and gray partridge) is allowed in both the South Side and East Side Recreation Areas at the Lake Lowell Unit. An estimated 2,518 acres of the Lake Lowell Unit is open to upland game bird hunting, though some portions are seasonally flooded. Seasons are consistent with the State seasons and typically start the first of September (for dove) and run through the end of January (for partridge). Hunters may use Parking Lots 1 through 8 to access the South Side Recreation Area. To access the East Side Recreation Area hunters can use the Tio Parking Lot at the end of Tio Lane and park at the end of Greenhurst Road near Gotts Point. Hunting is allowed in both the South Side Recreation Area and the East Side Recreation Area. Kingfisher Trail in the East Side Recreation Area is frequented by visitors other than hunters, which may cause minor conflicts. There were approximately 1,200 upland game bird hunting visits to the Refuge in the 2010 to 2011 hunting season.

Upland Game Bird Hunting on the Snake River Islands Unit

Upland game bird hunting (dove, ring-necked pheasant, California and bobwhite quail, and chukar and gray partridge) is allowed on all islands in the Snake River Islands Unit. Seasons are consistent with the State seasons and typically start the first of October and run through the end of January. No facilities are offered on any of the islands, but hunters are permitted to launch their boats from various access points on the Snake River. Other public uses of the Snake River Islands Unit are thought to be low and would not conflict with this use.

Proposed Changes to Described Uses

Under Preferred Alternative 2, hunting on Deer Flat NWR would not change from current conditions except for the following:

- Hunters would be required to stay out of any seasonal closures around important wildlife areas (e.g., shorebird feeding areas).
- Waterfowl hunting:
 - A limit of 25 shotgun shells per day per hunter would be implemented.
 - The waterfowl hunt season on Snake River Islands would be shortened if it is shown to be necessary by analysis/study of goose nesting.
 - An ADA-compliant hunting blind would be provided at appropriate location(s) available to parties with at least one IDFG-issued disabled hunt licensed hunter.

Availability of Resources

Deer Flat NWR is open to all of the priority, wildlife-dependent recreational activities, including hunting, and the infrastructure is there for all of these user groups. Improvements and projects described in the Preferred Alternative should increase the quality and safety of the Refuge hunt program. Most of the costs associated with carrying out the improvements described in the Preferred Alternative are one-time expenses (see Table B-5). Because the Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CDs for activities using the same resource. For instance, installing a new accessible dock would benefit hunters, but the dock may also be used by visitors engaged in wildlife observation, photography, interpretation, and fishing. This same cost has been shown in all CDs that may use the new dock.

Table B-5. Costs to Implement Improvements to the Hunting Program

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Install hunt area signs	\$1,100	\$300
*Install and maintain accessible hunting dock	\$25,000	\$2,000
*Install and maintain vault toilet at Parking Lot 1	\$60,000	\$1,500
*Quality of wildlife-dependent public uses survey	\$75,000-\$80,000	
*Human/wildlife interaction disturbance studies	\$140,000	
*Law enforcement officer		\$62,400
Total	\$301,000-\$306,100	\$66,200

Anticipated Impacts of the Use

The discussion below analyzes impacts of the proposed use under Preferred Alternative 2.

General Impacts to Habitat

The primary impact hunters have on habitat is the trampling of vegetation and creation of social trails. Trail widening and creation of social trails increases the area of disturbed land (Adkison and Jackson 1996; Dale and Weaver 1974; Liddle 1975). Pedestrians can potentially cause structural damage to plants and increase soil compaction and erosion (DeLuca et al. 1998; Whittaker 1978). These impacts are unlikely to occur on the well-defined, gravel surface of Refuge trails; however, social trails associated with off-trail use remain an issue for refuge managers because plants are trampled and wildlife is disturbed. Because hunting requires off-trail use in the pursuit and/or recovery of game, this concern is difficult to mitigate.

Control of invasive plant species on the Refuge is a difficult and never-ending battle. Roads and trails often function as conduits for movement of plant species, including nonnative, invasive species (Benninger-Truax et al. 1992; Hansen and Clevenger 2005). Propagules of nonnative plants can be transported into new areas on hunters’ boots, clothing, dogs, and equipment. Once established, invasive plants can out-compete native plants, thereby altering habitats and indirectly impacting wildlife. Invasive plants would be controlled and monitored as part of the Refuge’s IPM Plan (Appendix G).

Local Impacts to Waterfowl Habitat

The impact of waterfowl hunters on the waterfowl habitat of both Refuge units is expected to be minor. The hunting season starts and ends outside of the growing season of most plants, so trampling and the spread of invasive plants are not major issues. There is a possibility of boats used for waterfowl hunting aiding in the spread of aquatic invasive species into the waters of the Refuge. Informational media in hunting brochures, placards at Refuge launch areas, periodic inspections, and early detection monitoring help reduce the likelihood of infestation. The creation of social trails in the soil may be more of an issue but is still expected to be minor because most hunters spread out in available habitat as a way to reduce overcrowding. Impacts to the water in waterfowl hunting come

mostly from the deposition of trash (including shell casings) by hunters; this problem would be mitigated through proper law enforcement.

Local Impacts to Upland Bird Habitat

At current levels, impacts to upland bird habitat are expected to be minor. Upland bird hunters do not consider either unit of Deer Flat NWR a destination hunt area, and local use is relatively low compared to the surrounding area. The hunting season starts and ends outside of the growing season of most plants, so trampling and the spread of invasive plants are not expected to be major issues. The creation of social trails may be more of an issue but is still expected to be minor because most hunters follow the irregular patterns of their quarry.

Impacts to Wildlife

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from hunting would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

General Impacts to Wildlife

Hunting, by its nature, results in the intentional take of individual animals, as well as wounding and disturbance (DeLong 2002). It can also alter behavior (e.g., foraging time), population structure, and distribution patterns of wildlife (Bartelt 1987; Madsen 1995; Owens 1977; Raveling 1979; White-Robinson 1982). In addition to loss of individual target species, hunting causes disturbance to nontarget species because of noise (most notably the report of a firearm), human presence, and general disturbance associated with the activity. Hunting results in the increase of nontarget species being injured or killed (accidentally or intentionally) in addition to target species being crippled or killed and not retrieved. Disturbances to waterfowl caused by human activity (including hunting) are manifested by alertness, fright (obvious or unapparent), flight, swimming, disablement, or death in nontarget species (Korschgen and Dolgren 1992).

Immediate responses by wildlife to recreational activity can range from behavioral changes including nest abandonment, altered nest placement, and change in food habits to physiological changes such as elevated heart rates, increased energetic costs due to flight or flushing, or even death (Belanger and Bedard 1990; Kight and Swaddle 2007; Knight and Cole 1995; Miller and Hobbs 2000; Miller et al. 1998; Morton et al. 1989). The long-term effects are more difficult to assess but may include altered behavior, vigor, productivity or death of individuals; altered population abundance, distribution, or demographics; and altered community species composition and interactions.

According to Knight and Cole (1991), there are three wildlife responses to human disturbance: avoidance, habituation, and attraction. The magnitude of the avoidance response may depend on a number of factors including the type, distance, movement pattern, speed, and duration of the disturbance; the time of day, time of year, weather; and the animal's access to food and cover, energy demands, and reproductive status (Fernández-Juricic et al. 2007; Gabrielsen and Smith 1995; Knight and Cole 1991).

Habituation is defined as a form of learning in which individuals stop responding to stimuli that carry no reinforcing consequences for the individuals that are exposed to them (Alcock 1993). A key factor for predicting how wildlife would respond to disturbance is predictability. Often, when a use is predictable—following a trail or boardwalk or at a viewing deck—wildlife will habituate to and accept human presence (Oberbillig 2000). Gabrielsen and Smith (1995) suggest that most animals seem to have a greater defense response to humans moving unpredictably in the terrain (as hunters do) than to humans following a distinct (and repeated) path.

Hunting can contribute indirectly to the well-being of wildlife by providing financial, educational, and sociological benefits to hunters. Hunting has given many people a deeper appreciation of wildlife and a better understanding of the importance of wildlife and habitat conservation, which ultimately contributes to the NWRs mission. The hunting community remains the largest support base for funding wildlife management programs, and refuges provide an opportunity for a high-quality waterfowl hunting experience to all citizens regardless of economic standing. Many individual refuges have developed extensive public information and education programs bringing hunters into contact with refuge activities and facilitating awareness of wildlife issues beyond hunting. Hunting is one of the six priority public uses of the NWRs.

Impacts of Hunting on Waterfowl

Waterfowl are wary, seeking refuge from all forms of disturbance but particularly those associated with loud noise and rapid movement (Korschgen and Dolgren 1992). Numerous studies show human activities associated with hunting (boating, vehicle disturbance, human presence) cause increased flight time in waterfowl species, which requires a considerable amount of energy (Havera et al. 1992; Kahl 1991; Kenow et al. 2003; Knapton et al. 2000). Human disturbance compels waterfowl to change feeding habits, so that they may feed only at night or may desert feeding areas entirely, resulting in weight loss (Korschgen and Dolgren 1992).

The hunting of waterfowl in the United States is based upon a thorough regulatory setting process that involves numerous sources of waterfowl population and harvest monitoring data. Waterfowl populations throughout the United States are managed through an administrative process known as flyways, of which there are four (Pacific, Central, Mississippi, and Atlantic). Idaho is included in the Pacific Flyway. A review of the policies, processes, and procedures for waterfowl hunting is covered in a number of documents.

Because the Migratory Bird Treaty Act stipulates that all hunting seasons for migratory game birds be closed unless specifically opened by the Secretary of the Interior, the Service annually promulgates regulations ([50 C.F.R. 20](#)) establishing the Migratory Bird Hunting Frameworks. The frameworks are essentially permissive, in that hunting of migratory birds would not be permitted without them. Thus, in effect, annual Federal regulations both allow and limit the hunting of migratory birds. The Migratory Bird Hunting Frameworks provide season dates, bag limits, and other options for states to select from, which should result in the level of harvest determined to be

appropriate based upon Service-prepared annual biological assessments detailing the status of migratory game bird populations. In North America, the process for establishing waterfowl hunting regulations is conducted annually. In the United States, the process involves a number of scheduled meetings (e.g., Flyway Study Committees, Flyway Councils, Service Regulations Committee) in which information regarding the status of waterfowl populations and their habitats is presented to individuals within the agencies responsible for setting hunting regulations. In addition, public hearings are held and the proposed regulations are published in the Federal Register to allow public comment.

For waterfowl, annual assessments used in establishing the Frameworks include the Breeding Population and Habitat Survey, which is conducted throughout portions of the United States and Canada. This survey is used to establish an annual Waterfowl Population Status Report. In addition, the number of waterfowl hunters and resulting harvest are closely monitored through both the Harvest Information Program and the Parts Survey (in which biologists gather at “wing bees” to identify duck wings and goose tails submitted by hunters). Since 1995, such information has been used to support the adaptive harvest management (AHM) process for setting duck-hunting regulations. Under AHM, a number of decision-making protocols determine the choice (package) of predetermined regulations (appropriate levels of harvest) that make up the framework offered to states that year. Each state’s wildlife commission then selects season dates, bag limits, shooting hours, and other options from their respective Flyway package. Their selections can be more restrictive but cannot be more liberal than AHM allows. Thus, the level of hunting opportunity afforded each state increases or decreases each year in accordance with the annual status of waterfowl populations.

Season dates and bag limits for national wildlife refuges open to hunting are never longer or larger than the state regulations. In fact, based upon the findings of an environmental assessment developed when a refuge opens a new hunting activity, season dates and bag limits may be more restrictive than the state allows. Each national wildlife refuge considers the cumulative impacts to hunted migratory species through the Migratory Bird Frameworks published annually in the Service’s regulations on migratory bird hunting.

Local Impacts to Waterfowl

Hunting on refuges as a whole or on Deer Flat Refuge specifically is not likely to have an adverse effect on the status of any recognized waterfowl population in North America. Several points support this contention: (1) the proportion of national waterfowl harvest that occurs on national wildlife refuges is small; (2) there are no waterfowl populations that occur wholly or exclusively on national wildlife refuges; (3) annual hunting regulations within the United States are established to levels consistent with the current population status; (4) refuges cannot permit more liberal seasons than provided for in Federal frameworks; and (5) there are sufficient sanctuaries that exist on the Lake Lowell Unit to allow for undisturbed feeding and resting.

Waterfowl hunting on the north side of Lake Lowell is allowed only in the East Side Recreation Area. There are two sanctuaries, one on the southeastern end of the lake and the other on the northeastern side of the West Pool. These are closed to public entry (with the exception of a small number of permitted deer hunters in the southeastern sanctuary) throughout the year. These established sanctuaries on the Lake Lowell Unit in Refuge wetlands and fields ensure that wintering and migrating waterfowl, upland game birds, and other migratory birds, as well as nontarget species, can find food and rest areas on the Refuge even during the hunting season. Hunt regulations and

sanctuary would be continually monitored and evaluated to ascertain their value in balancing the disturbance caused by allowing hunting on the Refuge. Under the stipulations outlined above, this activity does not materially detract from meeting Refuge purposes or the Refuge System mission. Refuge-specific regulations are designed to minimize impacts and would be evaluated for their effectiveness annually.

Population and Harvest Data: The Federal Harvest Information Program estimates that 16,800 hunters in Idaho spent an average of 102,700 days hunting and harvested 225,100 ducks annually from 2001 through 2010. Over that same time period, the harvest information program estimates Idaho hunters harvested 59,800 Canada geese annually. This is the third highest total in the Pacific Flyway, behind Oregon and Washington, respectively. The number of waterfowl harvested on Deer Flat NWR is unknown; however, it is thought to be a small percentage of total numbers harvested in the state and even smaller in the Flyway.

Wintering Populations: Waterfowl use in and around the Refuge has been well documented and has seen some changes over time. Long-time residents fondly recall when the skies around Lake Lowell used to be “black with ducks.” Annual Refuge narratives mirror these sentiments with photos and documentation of duck numbers in excess of half a million during the peak of migration. Those numbers have not been seen in the Treasure Valley since the late 1970s, probably due to the advent of “clean farming,” conversion of farmland to housing development, natural shifts in the Flyway, and/or a variety of other factors. Numbers of ducks and geese in the valley continue to provide a quality hunting experience, and Deer Flat NWR is a waterfowl hunting destination for both local and out-of-state hunters.

The staff at Deer Flat NWR has performed winter waterfowl surveys since 1951, including ground-based point counts on the Lake Lowell Unit and aerial surveys on both units. Because birds can move long distances over short periods of time during the winter migration, these surveys are not considered an accurate measurement. Regional and local population surveys like the one performed at the Refuge are best understood as an index (best used to measure trends over time) and not a true census at any particular time. In recent years (from 2001 to 2010) peak numbers of geese (typically seen in November) on the Lake Lowell Unit averaged 11,892 annually. In the same decade, peak numbers of ducks (typically seen in December) averaged 61,535 on Lake Lowell annually.

Local Impact to Upland Birds

Population and Harvest Data: IDFG personnel perform surveys for California quail, pheasant, chukar, and grey partridge and assist in the mourning dove call counts. IDFG’s 2010 Upland Game Progress Report notes that populations of the species of upland game birds that are legal to hunt on Deer Flat NWR are considered stable. The Refuge does not contribute any significant harvest numbers to the total estimated for the southwest region of the state and even less statewide. Of the previously listed species, mourning doves and California quail are thought to be hunted most, because the other species are here intermittently due to marginal habitat or are escaped farmed birds that do not survive the hunting season or the winter. Refuge staff does not currently perform any inventory or monitoring for any of the upland game bird species.

Impacts to Nontarget Species

It is expected that impacts to nontarget species would be minimal because hunting seasons do not coincide with nesting seasons, so reproduction would not be reduced by hunting. Disturbance to the

daily activities, such as feeding and resting, of wintering nonhunted birds might occur. Because the Refuge maintains sanctuary areas where no hunting is permitted, this effect is likely a minor negative effect. Refuge regulations further mitigate possible disturbance by hunters to nonhunted wildlife. Vehicles are restricted to roads and the harassment or taking of any nontarget wildlife is not permitted. Although ingestion of lead shot by nonhunted wildlife could be a cumulative impact, it is not relevant at the Refuge because nontoxic shot would be required.

Potential Impacts to Priority Public Uses

Trails on public lands attract a variety of user groups who often have conflicting needs. During the scoping period, some of the public expressed safety concerns with hunters using the same trails and small public use areas that are also accessed by wildlife observers and photographers. However, it is believed that this conflict is not a major concern. Even though nonhunters use the same trails as hunters, the proposed designated trails for the former are wide (between 12 and 20 feet) and have adequate visibility. If the number of nonhunters using trails open to hunting increases significantly, the potential for accidents or user group conflicts may also increase. There is also the potential for conflict between nonhunters, waterfowl hunters, and upland hunters using the same off-trail areas. Conflicts between hunters and nonhunters and between different types of hunters would be monitored and addressed if necessary. Measures to reduce potential conflicts between hunters and other user groups would include providing information at the trailhead kiosks, and in the Refuge's brochure that clearly indicates permitted users and rules of conduct.

No significant effects to roads, trails, or other infrastructure from the hunting program are foreseen. Normal road, trail, and facility upkeep and maintenance would continue to be necessary. Additional facility construction or upgrade, if needed, is addressed in the Availability of Resources section.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register
- Distributed approximately 1,300 copies of Planning Update #1
- Provided informational presentations to 26 local organizations
- Held evening call-in hours the second and fourth Wednesdays of the month
- Held open houses July 28, August 20, and August 21
- Contacted visitors over eight days in July and August and handed out over 700 flyers
- Over 1,000 comments were received

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues

May 27, 2011-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list

- Provided informational presentations to 28 local organizations
- Held open houses on June 3, June 4, July 8, and July 9
- Attended local festivals
- Almost 350 comments were received

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

_____ Use is Not Compatible
 X Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

- All hunting on the Refuge would require the appropriate State license and would occur consistent with applicable regulations designated by IDFG or ODFW as appropriate.
- Waterfowl and upland hunting would be allowed in the East Side and South Side Recreation Areas of the Lake Lowell Unit. Walk-in hunting would be allowed in both areas, and hunters may use a human- or electric-powered boat up to 200 yards from the shore in the South Side Recreation Area. Waterfowl hunting would not be allowed on foot from the ice.
- Waterfowl and upland hunting would be allowed on all islands in the Snake River Islands Unit. Where the Snake River is the boundary between Idaho and Oregon, hunters from either state may hunt the islands according to the regulations of the state for which they are licensed.
- Hunters would be required to stay out of any seasonal closures around important wildlife areas (e.g., shorebird feeding areas).
- Hunters are allowed off-trail use within designated hunting areas.
- Hunting would be provided on a first-come, first-served basis. Hunters would be allowed to operate motorized vehicles only on designated roads and parking areas.
- Nontoxic shot is required, and hunters may not possess lead shot in the field.
- Dogs may be used for waterfowl and upland game hunting. Dogs must be leashed unless actively hunting and remain under strict voice control at all times.
- Dog training other than that which occurs while actively hunting is prohibited on the Refuge.
- To improve safety and minimize conflict with other priority uses, signs would be posted at Refuge access points to notify Refuge users when a hunt is underway.
- Waterfowl hunting:
 - Although use of permanent blinds is prohibited, portable blinds are allowed if they are removed at the end of each day. Temporary blinds may be constructed from natural vegetation less than 3 inches in diameter and are available on a first-come, first-served basis.
 - A limit of 25 shotgun shells per day per hunter would be implemented.
 - There may be a shortened waterfowl season on Snake River Islands if it is shown to be necessary by analysis/study of goose nesting.
 - Youth hunt would be allowed within all designated waterfowl hunt zones.

- Use would be restricted to waterfowl hunting shooting hours designated by IDFG or ODFW as appropriate.
- There would be an evaluation to determine whether to charge a fee and/or institute a more structured hunt opportunity.
- Upland game bird hunting:
 - Use would be restricted to upland game bird hunting shooting hours designated by IDFG or ODFW as appropriate.
 - There would be an evaluation to determine whether to implement more restricted hunting hours to reduce conflicts with waterfowl hunters.
- Open fires would be prohibited.
- Seasonal closures would be implemented as necessary to protect sensitive wildlife habitat. For example:
 - Up to 300-yard buffer around eagle nests from February 15 through July 15.
 - Up to 150-yard seasonal closure around osprey nests from March 15 through August 1.
 - Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures would be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a GPS capable of sub-meter accuracy as part of the regular colony studies. These data points would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes nest, the closure would be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.
 - Up to 250-yard buffer around heron rookeries from February 1 through July 1.
 - Up to 100-yard closure around shorebird feeding and resting areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
 - Wildlife closure at Gotts Point from October 1 through January 31.
 - Wildlife closure at Murphy's Neck from October 1 through March 15.
 - Wildlife closure at Lower Dam Recreation Area from October 1 through April 14.
- Refuge staff would monitor impacts of these activities annually to assess compliance with these stipulations, impacts to wildlife and wildlife habitat, conflicts between user groups, and user satisfaction. Monitoring data would be used to modify these stipulations if necessary to ensure continued compatibility of these activities. Adjustments to timing of upland hunting or the use of hunt areas by nonhunters may be needed to ensure the use remains safe and compatible.

Justification

By following established State guidelines, implementing stipulations, and maintaining closed areas, this waterfowl and upland game bird hunting program would not interfere with the Refuge achieving its purposes of providing sanctuary and as a refuge and breeding grounds for migratory birds and

other wildlife. It is anticipated that wildlife populations would find sufficient food resources and resting places such that their abundance and use of the Refuge would not be measurably lessened from allowing hunting to occur on the Refuge. The relatively limited number of individuals expected to be adversely affected due to hunting would not cause wildlife populations to materially decline, the physiological condition and production of wildlife species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted. Thus, allowing hunting to occur with stipulations would not materially detract or interfere with the purposes for which the Refuge was established or the Refuge System mission.

Mandatory reevaluation Date

2029 Mandatory 15-year reevaluation (for priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Compatibility Determination for Hunting Waterfowl and Upland Birds (B.6)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.7 Compatibility Determination for Recreational Boating

RMIS Database Use: Non-competitive recreational boating (motorized, human powered, electric, and wind-driven)

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

This CD addresses the subject uses for the Lake Lowell Unit of the Refuge. The Service's jurisdiction over surface water uses on the Snake River Islands Unit is limited to areas above mean high water. Since there are no navigable areas above mean high water, recreational boating is not allowed on the Snake River Islands Unit.

Types of Boating

Recreational boating addressed in this CD includes use of motorized (jetboats, outboard and inboard motorboats, personal watercraft), human-powered (kayaks, canoes, paddleboards, rowboats, float-tubes), and electric/wind-driven (boats powered by trolling motors, sailboats, windsurfing boards, and kiteboards) craft on all waters of the Lake Lowell Unit. Tow-behind activities (e.g., waterskiing, wake boarding) are allowed in areas open to wake (see below) activities.

Boating itself is not considered a wildlife-dependent public use. However, it occurs as an integral part of wildlife-dependent public uses such as hunting, fishing, wildlife observation, and photography.

Current Location of Use

Boating producing a wake is allowable anywhere in the lake during the summer season (see below). Only no-wake boating may occur in the zone east from the line between Parking Lot 1 and the shore to the northeast. No boats are allowed in a closed area around the osprey nesting platform south of the Visitor Center.

Associated Facilities

There are five boat launches, consisting of the launches at Upper Dam East, Upper Dam West, Lower Dam Recreation Area, and Parking Lots 1 and 7. Individuals can also launch human-powered boats from a variety of formal and informal locations along the shore.

Number of Visitors and Seasonal Patterns

It is estimated that there were 76,400 nonwildlife-dependent recreational boating visits to Lake Lowell in FY 2011 with a majority of these being motorized boats. In FY 2011, approximately 35 percent of the boaters were anglers, and the rest were participating in other recreational activities.

Boating is allowed on the Refuge between April 15 and September 30, during daylight hours only. Lake Lowell is closed to recreational boating during the winter waterfowl season to provide refuge to migrating waterfowl in closed areas and high-quality hunts in open areas. Motorized boat use peaks in July before tapering off in the fall. Declining water levels often require closure of the Upper Dam West and Lower Dam Recreation Area boat launches in July or August. The water quality of the lake is also a concern to recreationists and partially accounts for falling use in August and September, since green and potentially toxic blue-green algae blooms are frequent in the late summer and early fall.

Proposed Uses

Under the Preferred Alternative 2, the Refuge would continue to provide recreational boating opportunities with an emphasis on supporting wildlife-dependent priority public uses. Boating would be allowed as follows (see Map 5):

- The no-wake zone on the east end of the lake would be expanded to go east from a line between Parking Lot 1 and Gotts Point rather than east from a line between Parking Lot 1 and the shore to the northeast.
- To protect emergent beds for nesting grebes and other wildlife, institute the following no-wake zones or closures:
 - Protect emergent plant beds on south side of the lake with a 200-yard no-wake zone measured from the edge of the shoreline or emergent vegetation, whichever is closest to the center of the lake.
 - No-wake area in Narrows between East Pool and West Pool (see Map 5).
 - Protect all active and historical grebe nesting colonies by establishing a 500-yard area not open to public use during boating season (Berg et al. 2004). If there is no nesting in a colony by July 15 of the following year, the closure around that colony would be reopened. Upland portions of the closures would be open to use from October 1 through January 31.
- The following seasonal closures would be implemented at the Lake Lowell Unit as necessary to protect sensitive wildlife habitat:
 - Up to 300-yard buffer around eagle nests from February 15 through July 15.
 - Winter waterfowl closure at Gotts Point from October 1 through January 31.
 - Up to 250-yard buffer around heron rookeries from February 1 through July 1.
 - Up to 100-yard closure around shorebird feeding areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
- To protect mudflat habitat and migrating shorebirds, institute the following closures.
 - Shorebird area at northern shoreline of the East Pool east of Tio Lane access (see Map 5) would be open to boating April 15 through July 14 and closed seasonally (July 15 through September 30) when water level falls below 2,522 feet in elevation.
- Tow-behind activities (e.g., waterskiing, wake boarding) would be allowed in areas open to wake activities.
- Kiteboarders and windsurfers would be allowed to launch from any open shoreline but must comply with speed limits in no-wake zones. Wind sport enthusiasts would be allowed to launch from any open shoreline but must comply with speed limits in no-wake zones.
- A kayak/canoe launch at Gotts Point would be provided for access to prime wildlife-observation areas.

Availability of Resources

Deer Flat NWR is open to a variety of recreational boating opportunities under the Preferred Alternative. Most of the costs associated with carrying out the improvements described in the Preferred Alternative are one-time expenses (see Table B-6). Because the Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts.

Currently, most on-water law enforcement and boating-related dock maintenance is provided by the Canyon County Sheriff’s Office. If the Sheriff’s Office ever decided to discontinue this assistance, there would be additional costs associated with maintaining this use. Because the Sheriff’s Office is not currently able to provide law enforcement for Refuge-specific regulations, it will be important for the Refuge to increase its law enforcement presence and/or work with Canyon County to enable County deputies to enforce these regulations.

Funding would be sought through the Service budget process. Other sources would be sought through strengthened partnerships, grants, coordination with other law enforcement agencies, and additional Refuge operations funding to support a safe, quality public use program. Increased volunteer assistance, strengthened existing partnerships, and new partnerships would be sought to support these programs in an effective, safe, and compatible manner. Refuge staff would increase volunteer recruitment efforts. When provided the appropriate training, Refuge volunteers, interns, and various user groups can assist with monitoring, education and interpretation programs, and maintenance projects. With additional assistance as described above, staffing and funding is expected to be sufficient to manage these uses.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CDs for activities using the same resource. For instance, rehabilitating the Lower Dam Recreation Area would benefit boaters but it would also benefit picnickers, swimmers, fisherman, and other visitors. This same cost has been shown in all CDs that may use the new Lower Dam Recreation Area.

Table B-6. Costs to Implement Improvements to the Recreational Boating Program

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Install new kiosks and signs at access points and maintain signs	\$261,000	\$2,700
*Visitor contact station	\$480,000	\$1,600
*Install and maintain comfort station and vault toilet at Lower Dam Recreation Area (LDRA) and Parking Lot 1	\$208,200	\$3,000
*Rehabilitate LDRA parking area	\$50,000	
*LDRA site plan	\$40,000	
*Print/reprint general Refuge brochures	\$3,200	\$800
*Seasonal nesting closure signs (Lake Lowell and Snake River Islands Units)	\$11,000	\$5,200
*Install and maintain buoys for seasonal closures and permanent no-wake areas	\$4,300	\$500
*Human/wildlife interaction disturbance studies	\$140,000	
*Law enforcement officer		\$62,400
Total	\$1,197,700	\$76,200

Anticipated Impacts of Use

The discussion below analyzes impacts of the use as proposed under Preferred Alternative 2.

The Lake Lowell Unit of Deer Flat National Wildlife Refuge provides valuable nesting, foraging, and resting habitat for migratory birds, including wintering waterfowl, shorebirds, secretive marsh birds, and other waterbirds. The lake is open to recreational use during critical nesting times for a variety of avian species.

General Impacts to Wildlife

Disturbance Effects: Both motorized and nonmotorized boating have been shown to change wildlife distribution and use of particular habitats, alter feeding behavior and nutritional status, and cause premature departure from desirable habitat (Bouffard 1982; Kaiser and Fritzell 1984; Korschgen et al. 1985). Studies have also shown that boating disturbance may cause increased flight time and flushing distances in waterfowl species (Havera et al. 1992; Kahl 1991; Kenow et al. 2003; Knapton et al. 2000). Wildlife species that are more sensitive to recreation-related disturbances (e.g., bald eagles, shorebirds, grebes) may find it increasingly difficult to secure adequate food or loafing sites as their preferred habitat becomes fragmented by disturbance (Burger 1997; Pfister et al. 1992; Skagen et al. 1991).

Motorized boats can cover a larger area in a relatively short time in comparison to nonmotorized boats, affecting a greater area and providing less time for wildlife to react. Compared to motorboats, human-powered boats like canoes and kayaks appear to cause fewer disturbances to most wildlife species (Huffman 1999). However, canoes and kayaks can cause measurable disturbance effects because they can access shallower and more densely vegetated areas of a marsh (Speight 1973). Slow-moving boats in close proximity to nesting great blue herons can cause temporary nest abandonment (Vos et al. 1985), and Huffman (1999) found that nonmotorized boats within 30 meters (98 feet) of the shoreline in south San Diego Bay caused all wintering waterfowl to flush between the craft and shore. There have been several studies documenting impacts to birds native to Deer Flat NWR. One study showed a decrease in use of a bald eagle feeding site when human activity (including motorized boating) occurred within 200 meters (Skagen 1980). Another disturbance study showed that motorboats were more likely to elicit responses in wintering bald eagles than nearby automatic weapons fire, small arms fire, ordnance impacts, and helicopter flights associated with a military installation (Stalmaster and Kaiser 1997). Rodgers and Schwikert (2002) measured flushing distances from motorized watercraft for 23 waterbird species, of which the great blue heron was one of the more sensitive, flushing between distances of 8 and 137 meters.

Effects to Water Quality

In addition to noise and speed, motorized boats pollute waters with gas and oil. Older two-stroke engines, in which the gas and oil are combined, can discharge as much as 25 percent of the unspent mixture gas directly into the water. Hydrocarbons in gas and oil float on the surface of the water and bioaccumulate in the food web, posing a threat to sensitive shallow lacustrine habitats (Tjarnlund et al. 1995). Hoffman (1998) reviewed several studies, concluding that petroleum hydrocarbons can also be transferred to eggs from the plumage of incubating birds and can be toxic even in small amounts.

There is a possibility of boats aiding in the spread of aquatic invasive species into the waters of the Refuge. Informational media in hunting brochures, placards at launch sites (including Refuge launches), registration requirements, systematic and periodic inspections, and early detection monitoring help reduce the likelihood of infestation. The Idaho State Department of Agriculture is at the forefront of preventing the spread of aquatic invasive species into the waters of Idaho and works in concert with various agencies including the Service.

Refuge-specific Impacts

This section evaluates the likely impact at the Refuge, considering the scientific studies discussed above and considering the uses within the context of Deer Flat Refuge.

Loss of Habitat from Facility Construction: In the Preferred Alternative, the addition of three fishing docks and one shorebird viewing blind is expected to affect approximately 5 acres or less of open water habitat.

Vegetation, Soil, and Water Impacts: As described above, the potential for water quality impacts and contaminants in the food web stemming from the release of gas and oil hydrocarbons into Refuge waters would continue to exist. The Refuge would promote the use of CARB star-rated motors at the level of two stars and above to reduce impacts from petroleum hydrocarbons. A total maximum daily load (TMDL) assessment for the Lake Lowell watershed was prepared by the Idaho Department of Environmental Quality (IDEQ) that explored water quality concerns in Lake Lowell. Petroleum hydrocarbon pollution from boats was not explored in the TMDL because the focus was on pollution loads associated with agriculture runoff and other nonpoint sources. Even though oil and grease are listed as pollutants of concern in the Boise River (Lower) Subbasin Hydrologic Subunit, dissolved oxygen, sediment, and nutrients are the focus of the TMDL, because the presence of these pollutants at current levels likely render hydrocarbon levels insignificant (IDEQ 2010).

Disturbance Effects to Wintering and Migrating Wildlife: The wintertime closure is expected to adequately protect wintering and migrating birds using Lake Lowell. It is critical for waterfowl to conserve energy during migration and the cold winter months. Closed areas provide unmolested space for birds as they are resting and refueling for the journey ahead of them.

Disturbance Effects to Colonial-nesting Birds: Colonial-nesting birds at Lake Lowell may be among the most sensitive species subjected to potential disturbance from boating. Lake Lowell is one of only three lakes in Idaho that routinely hosts colonies of nesting western and Clark's grebes, whose breeding population is considered imperiled in the state (IDFG 2005). Idaho Fish and Game has printed pamphlets for public distribution that provide information on conflicts between boaters and grebes and the importance of responsible boating. High-speed boating displaces grebes from preferred habitats, disrupts nesting and feeding, and even causes loss of young (Burger 1997). Grebe adults and chicks are often killed by boats (Ivey 2004; Shaw 1998), and small chicks can become separated from their parents and die of exposure if adults have to dive to avoid motorboats (Storer and Nuechterlein 1992).

Disturbance Effects to Other Species: The Lake Lowell Unit includes riparian forest, emergent vegetation, and open water habitats that are used extensively by a variety of bird species. The disturbance effects to wildlife described in the General Impacts section above applies to the anticipated effects to wildlife on Deer Flat NWR. It is anticipated that wildlife species using the open water and emergent plant habitats of the Refuge would benefit from the reduced disturbances that restricted use areas would provide.

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is

currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from boating would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Impacts to Priority Public Uses

Boating, whether motor-, wind-, or human-powered, may provide additional wildlife-dependent recreational opportunities by opening up areas of the Refuge inaccessible to foot traffic. However, as described above, given the tendency of birds to flush when subjected to a high intensity of disturbance, wildlife viewing opportunities would be expected to be poor in wake zones between April and September.

The majority of habitats used by priority species on the Refuge can be protected from undue impacts by separating boat use from wildlife use in time and space. During winter, nearly the entire lake would be protected from motorized boating use, providing protection during this season. During the breeding season, an adequate amount of habitat would be available to the majority of waterfowl and other wetland birds because nesting areas for the most sensitive wildlife species would be closed to boating; some additional areas used for nesting, feeding, and resting would be encompassed in no-wake zones. The Stipulations section below also provides parameters under which this use can be allowed in order to ensure compatibility.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register.
- Distributed approximately 1,300 copies of Planning Update 1.
- Provided informational presentations to 26 local organizations.
- Held evening call-in hours the second and fourth Wednesdays of the month.
- Held open houses July 28, August 20, and August 21.
- Contacted visitors over eight days in July and August and handed out over 700 flyers.
- Over 1,000 comments were received.

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues.

May 27, 2011–July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list.
- Provided informational presentations to 28 local organizations.
- Held open houses on June 3, June 4, July 8, and July 9.
- Attended local festivals.
- Almost 350 comments were received.

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

 Use is Not Compatible
 X Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

- Boaters must abide by all applicable Refuge, U.S. Coast Guard, and State of Idaho laws.
- Boaters would not be allowed to anchor or pull onto land adjacent to closed areas.
- No competitive activities are allowed, with the exception of sailing regattas (see Sailing Regattas CD).
- To minimize disturbance to shoreline vegetation and on-water nesting species, no internal or external wake generating devices (e.g., ballasts) would be allowed on motorized boats.
- Boats that are specifically designed to operate in mud or emergent vegetation, using above-water propulsion devices (e.g., boats equipped with “mud motors” or air boats) are not permitted on the Refuge.
- To reduce the likelihood of introducing invasive species, the use of internal or external ballasts would not be allowed.
- To minimize noise disturbance to wildlife, Idaho State noise ordinances would be enforced on Lake Lowell.
- Promote the use of CARB star-rated motors at the level of two stars and above.
- Use would be restricted to daylight hours only.
- Seasonal closures would be implemented as necessary to protect sensitive wildlife habitat. For example:
 - Up to 300-yard buffer around eagle nests from February 15 through July 15.
 - Up to 150-yard seasonal closure around osprey nests from March 15 through August 1.
 - Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures would be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a GPS capable of sub-meter accuracy as part of the regular colony studies. These data points

would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes nest, the closure will be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.

- Up to 250-yard buffer around heron rookeries from February 1 through July 1.
- Up to 100-yard closure around shorebird feeding and resting areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
- No-wake zones would be implemented as follows to protect sensitive wildlife habitat and provide no-wake recreational opportunities:
 - Protect emergent plant beds on south side of the lake with a 200-yard no-wake zone measured from the edge of the shoreline or emergent vegetation, whichever is closest to the center of the lake.
 - Establish no-wake area in the Narrows between the East and West Pools.
 - Establish no-wake zone east from line between Parking Lot 1 and Gotts Point.
- Wind sport enthusiasts would be allowed to launch from any open shoreline but must comply with speed limit in no-wake zones.
- Refuge staff would monitor impacts of boating activities annually to assess compliance with these stipulations, impacts to waterfowl, shorebirds, waterbirds (especially *Aechmophorus* grebes), and other migratory birds as well as wildlife habitat, and conflicts between user groups. Monitoring data would be used to modify these stipulations if necessary to ensure continued compatibility of these activities.

Justification

Providing opportunities for priority wildlife-dependent recreational activities is in keeping with provisions under the National Wildlife Refuge System Administration Act of 1966 as amended. Although boating itself is not a wildlife-dependent recreational activity, wildlife-dependent activities like fishing and wildlife observation may be enhanced with boating.

A significant proportion of Lake Lowell Unit visitors are boaters. Educational programs targeting boaters on Lake Lowell are expected to help reduce the negative impacts associated with boating activities. Nonwildlife-dependent boating visitors provide the opportunity for the Refuge to reach out to nontraditional Refuge user groups and to encourage boating users to observe wildlife and to learn about the National Wildlife Refuge System. Due to the close proximity of Deer Flat NWR to the cities of Nampa and Caldwell, the number and variety of users to this urban refuge is expected to grow. For many people, boating at Lake Lowell may provide an introduction to a national wildlife refuge.

Although motorized boating has been documented to impact wildlife and the habitats on which they rely, implementing the stipulations described above would reduce these impacts. It is anticipated that wildlife populations would find sufficient food resources and resting places such that their abundance and use of the Refuge would not be measurably lessened from allowing boating to occur on the Refuge. With the proposed protections in place, number of individuals expected to be adversely affected due to boating would not cause wildlife populations to materially decline, the physiological

condition and production of wildlife species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted. Thus, allowing boating to occur with stipulations would not materially detract or interfere with the purposes for which the Refuge was established or the Refuge System mission.

Mandatory Reevaluation Date

2024 Mandatory 10-year Reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Compatibility Determination for Recreational Boating (B.7)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.8 Compatibility Determination for Research

RMIS Database Use: Research

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

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, scientific collecting, and surveys on Refuge lands. These project requests can involve a wide range of natural and cultural resources as well as public-use management issues including basic absence/presence surveys, collection of new species for identification, habitat use and life-history requirements for specific species/species groups, practical methods for habitat restoration, extent and severity of environmental contaminants, techniques to control or eradicate pest species, effects of climate change on environmental conditions and associated habitat/wildlife response, identification and analyses of paleontological specimens, wilderness character, modeling 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.

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. Projects that contribute to Refuge-specific needs for resource and/or wilderness management goals and objectives, where applicable, would be given a higher priority over other requests.

Availability of Resources

Refuge staff responsibilities for projects by non-Service entities would be primarily be limited to the following: review of proposals, prepare SUPs and other compliance documents (e.g., for Section 7 of the Endangered Species Act of 1973, Section 106 of the National Historic Preservation Act), and monitor project implementation to ensure that impacts and conflicts remain within acceptable levels (compatibility) over time. Additional administrative, logistical, and operational support may also be provided depending on each specific request. Estimated costs for one-time (e.g., prepare a SUP) and annually reoccurring tasks by Refuge staff and other Service employees would be determined for each project. Sufficient funding in the general operating budget of the Refuge must be available to cover expenses for these projects. In cases where the Refuge staff is asked to act as a cooperator on research projects, funding may be cost-shared or specially designated funds may be used for the operation and administration of the projects. The terms and conditions for funding and staff support necessary to administer each project on the Refuge would be clearly stated in every SUP.

The Refuge has the following staffing and funding to administratively support and monitor research that is currently taking place on Refuge lands (see Table B-7). Any substantial increase in the number of projects would create a need for additional resources to oversee the administration and monitoring of the investigators and their projects. Any substantial additional costs above those itemized below may result in finding a project not compatible unless expenses are offset by the investigator(s), sponsoring agency, or organization.

New costs associated with carrying out the enhanced research, inventory, and assessment programs includes annual costs to hire a biological technician to carry out Refuge projects, and one-time costs that would be provided to contractors tasked with specific projects. New research, inventory, and assessment needs as described in the Preferred Alternative are listed in Table B-7. Because the

Service has limited capacity to fund new positions and projects, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CDs for activities that would be affected by the research. For instance, studies that determine the quality of wildlife-dependent recreation opportunities would help the Refuge better manage these uses and improve programs. Therefore, the cost would also be reflected in the CDs for each of the wildlife-dependent uses.

Table B-7. Costs to Implement Enhanced Research, Inventory, and Assessment Projects

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
Hire biological technician, who would conduct: <ul style="list-style-type: none"> • breeding and migratory bird inventories of shrub steppe and riparian habitats • inventory of wildlife use of wetlands • early detection of and rapid response to new/spreading invasive plants/animals • collecting baseline habitat and wildlife information • waterfowl, shorebird, ground-nesting birds, passerines, and grebe surveys, Biological technician would assist with the following research, monitoring, and information assessment projects: <ul style="list-style-type: none"> • human/wildlife interaction disturbance studies <ul style="list-style-type: none"> ○ prioritization of Refuge islands for wildlife value • analyzing historic biological data to assess long-term population trends • contaminants studies • mule deer studies • cheatgrass removal studies • surveys of wetland topography • soil surveys of shrub steppe and creation of GIS mapping layers 		\$51,000
*Disturbance studies		
Prioritization of Refuge islands		
Analysis of historical biological data		
Contaminants studies	\$450,000	
Mule deer studies		
Cheatgrass removal studies		
Wetland topography surveys		
Soil surveys of shrub-steppe and creation of GIS mapping layers		
*Quality of wildlife-dependent public use programs	\$75,000-\$80,000	
Total	\$525,000-\$530,000	\$51,000

Anticipated Impacts of the Use

Use of the Refuge to conduct research, scientific collecting, and surveys 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.

If a research project's methods impact or conflict with Refuge-specific resources, priority wildlife-dependent public uses, other high-priority research, wilderness, or Refuge habitat and wildlife management programs, then it must be clearly demonstrated that the project's scientific findings would contribute to resource management and that the project cannot be conducted off of Refuge lands for the project to be compatible. The investigator(s) must identify in advance methods/strategies required to minimize or eliminate the potential impact(s) and conflict(s). If unacceptable impacts cannot be avoided, then the project would not be compatible. Projects that represent public or private 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 national wildlife refuge purposes or the National Wildlife Refuge System mission to be compatible ([50 C.F.R. 29.1](#)).

Impacts would be project- and site-specific, where they would vary depending upon nature and scope of the fieldwork. Data collection techniques would generally have minimal animal mortality or disturbance, habitat destruction, no introduction of contaminants, or no introduction of nonindigenous species. In contrast, projects involving the collection of biotic samples (plants or animals) or requiring intensive ground-based data or sample collection would have short-term impacts. To reduce impacts, the minimum number of samples (e.g., water, soils, vegetative litter, plants, macroinvertebrates, and 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. For example, if one investigator collects fish for a diet study and another research examines otoliths, then it may be possible to accomplish sampling for both projects with one collection effort.

Investigator(s) obtaining required State and Federal collecting permits would also ensure minimal impacts to fish, wildlife, plants, and their habitats. If after incorporating the above strategies a project would still result in long-term or cumulative effects, the project would not be considered compatible. A 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. Only projects that have no effect or would result in not likely to adversely affect determinations would be considered compatible.

Spread of invasive plants and/or pathogens is possible from ground disturbance and/or transportation of project equipment and personnel, but it would be minimized or eliminated by requiring proper cleaning of investigator equipment and clothing as well as quarantine methods, where necessary. If after all practical measures are taken and unacceptable spread of invasive species is anticipated to occur, then the project would be found not compatible without a restoration or mitigation plan.

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 projects (e.g., permanent transects or plot markers, exclosure 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. When long-term or cumulative unacceptable effects cannot be avoided, the project would not be found compatible.

At least six months before initiation of fieldwork (unless an exception is made by prior approval of the Refuge Manager), project investigator(s) must submit a detailed proposal using a format provided by the Refuge. Project proposals would 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 would form the primary basis for allowing or denying a specific project. Projects that result in unacceptable Refuge impacts would not be found compatible. If allowed and found compatible after approval, all projects also would be assessed during implementation to ensure impacts and conflicts remain within acceptable levels.

If the proposal is approved, then the Refuge Manager would issue a SUP with required stipulations (terms and conditions) of the project to avoid and/or minimize potential impacts to Refuge resources as well as conflicts with other public-use activities and Refuge field management operations. After approval, projects also are monitored during implementation to ensure impacts and conflicts remain within acceptable levels based upon documented stipulations.

The combination of stipulations identified above and conditions included in any SUP would 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 would help fulfill the Refuge's purposes; contribute to the mission of the NWRS; and maintain the biological integrity, diversity, and environmental health of the Refuge.

Projects that are not covered by the CCP (objectives under Goal 6, Gather sufficient scientific information to guide responsible adaptive management decisions for the Refuge's trust resources) would require additional NEPA documentation.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register.
- Distributed approximately 1,300 copies of Planning Update #1.
- Provided informational presentations to 26 local organizations.
- Held evening call-in hours the second and fourth Wednesdays of the month.
- Held open houses July 28, August 20, and August 21.
- Contacted visitors over eight days in July and August and handed out over 700 flyers.
- Over 1,000 comments were received.

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues.

May 27, 2011–July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list.
- Provided informational presentations to 28 local organizations.
- Held open houses on June 3, June 4, July 8, and July 9.
- Attended local festivals.
- Almost 350 comments were received.

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

 Use is Not Compatible
 X Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

Each project would require a SUP. Annual or other short-term SUPs are preferred; however, some permits would be a longer period, if needed, to allow completion of the project. All SUPs would have a definite termination date in accordance with 5 RM 17.11. Renewals would be subject to the Refuge Manager's review and approval based timely submission of and content in progress reports, compliance with SUP stipulations, and required permits.

- Projects would adhere to scientifically defensible protocols for data collection, where available and applicable.
- Investigators must possess appropriate and comply with conditions of State and Federal permits for their projects.
- If unacceptable impacts to natural resources or conflicts arise or are documented by the Refuge staff, then the Refuge Manager can suspend, modify conditions of, or terminate an ongoing project already permitted by SUP on the Refuge.
- Progress reports are required at least annually for multiple-year projects. The minimum required elements for a progress report would be provided to investigator(s).
- Final reports are due one year after completion of the project unless negotiated otherwise with the Refuge Manager.
- Continuation of existing projects would require approval by the Refuge Manager.
- The Refuge staff would be given the opportunity to review draft manuscript(s) from the project before manuscripts are submitted to a scientific journal(s) for consideration of publication.
- The Refuge staff would be provided with copies (reprints) of all publications resulting from a Refuge project.
- The Refuge staff would be provided with copies of raw data (preferably electronic database format) at the conclusion of the project.
- 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 would be stipulated in the SUP.

- 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 would require submission of a subsequent proposal for review and approval. In addition, a new SUP would be required for additional project work. For samples or specimens to be stored at other facilities (e.g., museums), a memorandum of understanding would be necessary.
- Sampling equipment as well as investigator clothing and vehicles (e.g., all-terrain vehicles, boats) would be thoroughly cleaned (free of dirt and plant material) before being allowed for use Refuge lands to prevent the introduction and/or spread of pests. Where necessary, quarantine methods would be used.
- The NWRS, Deer Flat Refuge, Refuge staff and other Service personnel that supported or contributed to the project would be appropriately cited and acknowledged in all written and oral presentations resulting from projects on Refuge lands.
- At any time, Refuge staff may accompany investigator(s) in the field.
- Any proposed project in wilderness areas must comply with provisions of an existing minimum requirements analysis (MRA). Investigators not acting as agents of Service and requesting to conduct projects in wilderness must prepare an MRA consistent with Service Policy and adhere to the requirements of the Wilderness Act of 1964 ([16 U.S.C. 1131-1136](#)).
- Investigator(s) and support staff would follow all Refuge-specific regulations that specify access and travel on the Refuge.

Justification

Research, scientific collecting, and surveys on Refuge lands are inherently valuable to the Service because they expand scientific information available for resource management decisions. In addition, only projects that directly or indirectly contribute to the enhancement, protection, use, preservation, and management of Refuge wildlife populations and their habitats generally would be authorized on Refuge lands. In many cases, if it were not for the Refuge staff providing access to Refuge lands and waters along with some support, the project would never occur and less scientific information would be available to the Service to aid in managing and conserving the Refuge resources. By allowing the use to occur under the stipulations described above, it is anticipated that wildlife species that could be disturbed during the use would find sufficient food resources and resting places so their abundance and use would not be measurably lessened on the Refuge. Additionally, it is anticipated that monitoring, as needed, would prevent unacceptable or irreversible impacts to fish, wildlife, plants, and their habitats. As a result, these projects would not materially interfere with or detract from fulfilling the Refuge's purposes (including wilderness); contributing to the mission of the NWRS; and maintaining the biological integrity, diversity, and environmental health of the Refuge.

Mandatory reevaluation Date

2024 Mandatory 10-year Reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision: (check one below)

X Environmental Impact Statement and Record of Decision

Compatibility Determination for Research (B.8)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.9 Compatibility Determination for Sailing Regattas

RMIS Database Use: Sailing Regattas

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge (NWR or Refuge) was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (Executive Order [E.O.] 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

Sailing regattas currently take place in the center of the West Pool of the Lake Lowell Unit during the months of April and May. Sailing regattas occur by Special Use Permit on opposite weekends of bass tournaments. Southern Idaho Sailing Association is the only group actively sponsoring regattas at this time.

The race course is set the morning of the regatta by the race committee. On Saturday, at approximately 9:30 am, regatta participants meet at the Lower Dam Recreation Area to set up and launch their boats, parking them on the outside of the docks. A “skippers’ meeting” is held adjacent to the docks at approximately 11:00 am, where boats are registered, safety is stressed and guests are paired up with boats for the day. Regatta participants then motor out to the start line in preparation for the 12:00 start of the first race. Each race starts approximately 15 minutes after the end of the last race. No races start after 4:00 pm. The first race starts at 10:00 am on Sunday with no race starting after 3:00 pm.

The race course is designated by three race buoys and a starting buoy. The starting line is designated by the area between the starting buoy and the race committee boat. The committee boat selects the course (or manner that the sailors would navigate the race buoys) and posts this selection on placards visible to the participants. Sailors begin at the starting line and then race to and around the race buoys according to the selected course. The starting line is also the finish line. At the end of the day’s racing, participants return to the ramp and pull their boats out of the water.

These regattas are governed by the “International Sailing Federation rules” and boating rules set forth by the U.S. Coast Guard and the State of Idaho. The race committee normally requires all participants to wear personal flotation devices (PFDs) when whitecaps are present (wind approximately 10 knots). Races are postponed or abandoned by the race committee when winds are in excess of 20 knots (approximately 23 mph). Twenty or fewer boats have competed in all recent sailing regattas at Lake Lowell.

Proposed Use

Sailing regattas would take place in the West Pool of the Lake Lowell Unit with the issuance of a Special Use Permit. The regattas would be required to launch from the Lower Dam Recreation Area. The course would be set in water that is 15 feet in depth or greater.

To reduce impacts to wildlife-dependent users and other non-regatta Refuge users, regattas would launch from the Lower Dam Recreation Area. Twenty-five or fewer boats would be allowed at each regatta to provide adequate parking and dock space for other users. The first 60 feet on the inside of each dock at the Lower Dam Recreation Area must be available for non-regatta users at all times. Regatta participants may dock their boats on the rest of the dock during the morning briefing and retrieval of vessels at the end of the day.

Because large groups and high speeds impact wildlife more than individuals traveling at low speeds, sailing vessels that have a hull shape and/or sail configuration that would allow them to reach speeds greater than 20 mph for the wind conditions would not be allowed to compete in the regatta.

To decrease the exclusion of the general public to large areas of the Refuge that often occurs with competitive events, the course must remain open to other Refuge users during the racing activities.

Because most sailing vessels are large and highly visible, and the course has large amounts of open area, safety issues should not arise from the dual use of the race area. If the use of the racing area does create a safety issue in the future, this use would need to be reevaluated. The opportunity that is provided to the general public to be passengers on sailing vessels that are participating in sailing regattas is appreciated and encouraged.

All regattas must follow the International Sailing Federation rules, any boating rules set forth by the U.S. Coast Guard and the State of Idaho, as well as all Refuge rules and regulations. Races would be postponed or abandoned when winds are in excess of 20 knots (approximately 23 mph).

Availability of Resources

The following funding for annual costs would be required to administer and manage sailing regattas.

Because sailing regattas would use the same facilities as other on-water users and would need to have a full understanding of the no-wake zones, closure areas, and all other Refuge-specific regulations, the costs associated are very similar to those associated with all other recreational boating activities. Most of the costs associated with allowing sailing regattas are one-time expenses (see Table B-8). Because the Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts.

Currently, most on-water law enforcement and boating-related dock maintenance is provided by the Canyon County Sheriff's Office. If the Sheriff's Office ever decided to discontinue this assistance, there would be additional costs associated with maintaining this use, and the ability of the Refuge to provide this use may be impaired. Because the Sheriff's Office is not currently able to provide law enforcement for Refuge-specific regulations, it will be important for the Refuge to increase its law enforcement presence and/or work with Canyon County to enable County deputies to enforce these regulations.

Funding would be sought through the Service budget process. Other sources would be sought through strengthened partnerships, grants, coordination with other law enforcement agencies, and additional Refuge operations funding to support a safe, quality public use program. Increased volunteer assistance, strengthened existing partnerships, and new partnerships would be sought to support these programs in an effective, safe, and compatible manner. Refuge staff would increase volunteer recruitment efforts. When provided appropriate training, Refuge volunteers, interns, and various user groups can assist with monitoring, education and interpretation programs, and maintenance projects. With additional assistance as described above, staffing and funding is expected to be sufficient to manage these uses.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CDs for activities using the same resource. For instance, rehabilitating the Lower Dam Recreation Area would benefit boaters but it would also benefit picnickers, swimmers, fisherman, and other visitors. This same cost has been shown in all CDs that may use the new Lower Dam Recreation Area.

Table B-8. Costs to Implement Improvements to the Recreational Boating Program

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Install new kiosks and signs at access points and maintain signs	\$60,000	\$100
*Visitor contact station	\$480,000	\$1,600
*Install and maintain comfort station and vault toilet at Lower Dam Recreation Area (LDRA) and Parking Lot 1	\$208,200	\$3,000
Rehabilitate LDRA parking area	\$50,000	
*LDRA site plan	\$40,000	
*Print/reprint general Refuge brochures	\$3,200	\$800
*Seasonal nesting closure signs (Lake Lowell and Snake River Islands Units)	\$11,000	\$5,200
*Install and maintain buoys for seasonal closures and permanent no-wake areas	\$4,300	\$500
*Human/wildlife interaction disturbance studies	\$140,000	
*Law enforcement officer		\$62,400
Total	\$996,700	\$72,200

Anticipated Impacts of Uses

The discussion below analyzes impacts of the use as proposed under the Preferred Alternative.

General Impacts to Wildlife

Disturbance Effects: Both motorized and nonmotorized boating have been shown to change wildlife distribution and use of particular habitats, alter feeding behavior and nutritional status, and cause premature departure from desirable habitat (Bouffard 1982; Kaiser and Fritzell 1984; Korschgen et al. 1985). Studies have also shown that boating disturbance may cause increased flight time and flushing distances in waterfowl species (Havera et al. 1992; Kahl 1991; Kenow et al. 2003; Knapton et al. 2000). Wildlife species that are more sensitive to recreation-related disturbances (e.g., bald eagles, shorebirds, grebes) may find it increasingly difficult to secure adequate food or loafing sites as their preferred habitat becomes fragmented by disturbance (Burger 1997; Pfister et al. 1992; Skagen et al. 1991).

Restricting sailing regattas to a speed of less than 20 mph and to an area within the middle of the West Pool should reduce some of the disturbance that is seen by vessels using shallow waters and traveling at high rates of speed. The regatta course would be greatly removed from bald eagle, heron, and grebe nesting areas.

Effects to Water Quality

In addition to noise and speed, motorized boats pollute waters with gas and oil. Older two-stroke engines, in which the gas and oil are combined, can discharge as much as 25 percent of the unspent mixture gas directly into the water. Hydrocarbons in gas and oil float on the surface of the water and bioaccumulate in the food web, posing a threat to sensitive shallow lacustrine habitats (Tjarnlund et al. 1995). Hoffman (1998) reviewed several studies, concluding that petroleum hydrocarbons can also be transferred to eggs from the plumage of incubating birds and can be toxic even in small amounts.

There is a possibility of boats aiding in the spread of aquatic invasive species into the waters of the Refuge. Informational media in hunting brochures, placards at launch sites (including Refuge

launches), registration requirements, systematic and periodic inspections, and early detection monitoring help reduce the likelihood of infestation. The Idaho State Department of Agriculture is at the forefront of preventing the spread of aquatic invasive species into the waters of Idaho and works in concert with various agencies including the Service.

Because sailing regatta participants only use their motors to reach the start line from the dock and to return to the dock at the end of the day, these effects would be less than those created by general motorized boat users.

Refuge-specific Impacts

This section evaluates the likely impact at the Refuge, considering the scientific studies discussed above and considering the uses within the context of Deer Flat Refuge.

Vegetation, Soil, and Water Impacts: As described above, the potential for water quality impacts and contaminants in the food web stemming from the release of gas and oil hydrocarbons into Refuge waters would continue to exist. The Refuge would promote the use of CARB star-rated motors at the level of two stars and above to reduce impacts from petroleum hydrocarbons. A total maximum daily load (TMDL) assessment for the Lake Lowell watershed was prepared by the Idaho Department of Environmental Quality (IDEQ) that explored water quality concerns in Lake Lowell. Petroleum hydrocarbon pollution from boats was not explored in the TMDL because the focus was on pollution loads associated with agriculture runoff and other nonpoint sources. Even though oil and grease are listed as pollutants of concern in the Boise River (Lower) Subbasin Hydrologic Subunit, dissolved oxygen, sediment, and nutrients are the focus of the TMDL, because the presence of these pollutants at current levels likely render hydrocarbon levels insignificant (IDEQ 2010).

Disturbance Effects to Wintering and Migrating Wildlife: The wintertime closure is expected to adequately protect wintering and migrating birds using Lake Lowell. It is critical for waterfowl to conserve energy during migration and the cold winter months. Closed areas provide unmolested space for birds as they are resting and refueling for the journey ahead of them.

Disturbance Effects to Colonial-nesting Birds: Colonial-nesting birds at Lake Lowell may be among the most sensitive species subjected to potential disturbance from boating. Lake Lowell is one of only three lakes in Idaho that routinely hosts colonies of nesting western and Clark's grebes, whose breeding population is considered imperiled in the state (IDFG 2005). IDFG has printed pamphlets for public distribution that provide information on conflicts between boaters and grebes and the importance of responsible boating. High-speed boating displaces grebes from preferred habitats, disrupts nesting and feeding, and even causes loss of young (Burger 1997). Grebe adults and chicks are often killed by boats (Ivey 2004; Shaw 1998), and small chicks can become separated from their parents and die of exposure if adults have to dive to avoid motorboats (Storer and Nuechterlein 1992).

Restricting sailing regattas to the middle of the West Pool and to speeds of less than 20 mph should reduce disturbance to colonial nesting birds.

Disturbance Effects to Other Species: The Lake Lowell Unit includes riparian forest, emergent vegetation, and open water habitats that are used extensively by a variety of bird species. The disturbance effects to wildlife described in the General Impacts section above applies to the anticipated effects to wildlife on Deer Flat NWR. It is anticipated that wildlife species using the open

water and emergent plant habitats of the Refuge would benefit from restricting sailing regattas to the middle of the West Pool and to speeds of less than 20 mph.

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from boating would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Impacts to Priority Public Uses

Boating, whether motor-, wind-, or human-powered, may provide additional wildlife-dependent recreational opportunities. However, as described above, given the tendency of birds to flush when subjected to a high intensity of disturbance, wildlife viewing opportunities would be expected to be poor within the portions of the race course that are occupied by up to 25 sailing vessels at one time.

The restriction of sailing regattas to the middle of the West Pool would allow wildlife-dependent users to use the vast majority of the lake without any impacts from this activity. The ability of wildlife-dependent users to cross the race course to reach their destination also reduces any impacts to these users. If safety within the race course becomes an issue in the future, the course may need to be closed to other users, which would create undue impacts to wildlife-dependent and other user groups.

The restriction of sailing regattas to the months of April and May would reduce impacts to wildlife-dependent users because refuge visitation is low during this time. The further restriction of 25 sailing vessels would also reduce impacts by ensuring adequate parking and docking availability.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register.
- Distributed approximately 1,300 copies of Planning Update 1.
- Provided informational presentations to 26 local organizations.
- Held evening call-in hours the second and fourth Wednesdays of the month.
- Held open houses July 28, August 20, and August 21.
- Contacted visitors over eight days in July and August and handed out over 700 flyers.

- Over 1,000 comments were received.

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues.

May 27, 2011-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list.
- Provided informational presentations to 28 local organizations.
- Held open houses on June 3, June 4, July 8, and July 9.
- Attended local festivals.
- Almost 350 comments were received.

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

_____ Use is Not Compatible
 X Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

Cooperative land management agreements would contain the following special conditions to ensure compatibility.

Sailing Regatta Stipulations

- Sailing regattas are required to comply with International Sailing Federation rules, boating rules set forth by the U.S. Coast Guard and the State of Idaho, and all Refuge rules and regulations.
- Sailing regattas are allowed only by Special Use Permit.
- Sailing regattas are allowed only during the months of April and May.
- Sailing regattas are allowed only on weekends that are not being used for bass tournaments (i.e., every other weekend).
- Sailing regattas must be postponed or abandoned when winds are in excess of 20 knots (approximately 23 mph).
- No sailing vessel with hull shape and/or sail configuration that would allow it to reach speeds greater than 20 mph for the wind conditions would be allowed to compete in the regatta.
- Non-regatta users must be allowed to enter into and cross the regatta race course.
- The 30 boat trailer parking spots closest to the ramp would be marked and made available to non-regatta participants.
- The first 60 feet on the inside of each dock at the Lower Dam Recreation Area must be available for non-regatta users at all times. Regatta participants may dock their boats on the rest of the dock during the morning briefing and retrieval at the end of the day.

- Only 25 or fewer sailing vessels are allowed in each regatta.
- Race course buoys must be highly visible to other boaters.
- The race course must be set in waters that reach a depth of 15 feet or greater.

Justification

There are several concerns that must be addressed before any type of competitive group event is allowed on the Refuge.

Safety

Due to the size of the vessels and the height of their sails, sailboats are highly visible to other users. This reduces the likelihood of collisions with other Refuge visitors and allows the area within the racing buoys to be open to other users. Safety is also increased by following all International Sailing Federation rules, boating rules set forth by the U.S. Coast Guard and the State of Idaho, and all Refuge rules and regulations. The speed restriction of 20 mph or less would also help to reduce potential safety issues with other sailors or non-regatta users.

Impacts to Wildlife-Dependent Users

The exclusion of other users from the area in which a competitive activity is occurring can negatively impact other Refuge users. Because sailing vessels are not greatly impacted by wake and because they are very visible to other users, it is not necessary to close their racing course to other Refuge users. Other users can boat within or through the course as needed. If the course were required to be closed in the future, the lack of use of a large area of the lake would be an undue burden for other users.

Use of the docks and parking area could exclude other users. The small number of sailing vessels that would be allowed in each regatta (25) and the requirement to provide the first 60 feet of the inside of each dock for non-regatta users and to provide the 30 boat trailer parking spots closest to the ramp for non-regatta participants should reduce impacts to wildlife-dependent users wanting to launch at the Lower Dam Recreation Area. The requirements to hold regattas only in April and May when visitation is low and to hold them only when no bass tournaments are occurring should also reduce the likelihood of excluding other users through lack of parking or launch spaces.

Impacts to Wildlife

High-speed boating can increase disturbance for many wildlife species. Since sailing regattas by their nature require that a large group of boats all travel in close proximity to one another for at least a portion of the race, the ability of wildlife to retreat from regatta participants may be hindered by the sheer number of vessels and the area that they cover. Restricting the speed of regattas to 20 mph or less would increase the time that wildlife have to respond to approaching vessels.

Open water habitats at Lake Lowell are highly used by a variety of bird species for mating displays, feeding, and loafing and may be impacted by activities taking place in the middle of the lake. Restricting regattas to April and May allows the use to occur during lower visitation periods. Because visitation is lower, there is more open water available outside of the racing area than there would be later in the summer. The reduced use of these other areas allows adequate open water habitat for wildlife during sailing regattas.

Wildlife is especially vulnerable to disturbance during the nesting period, which for many species occurs during the months of April and May. Requiring sailing regattas to use the middle of the West Pool and keeping boats in water that is 15 feet or greater in depth should remove them from any potential nesting areas. Because the course is open to use by other boaters, there is no concern that the regatta would push other users to the periphery and increase disturbance.

Conclusion

Because sailing regattas are able to occur with an open race course, at speeds of 20 mph or less, in water that is 15 feet deep or more, and at a time of year when visitation is low, the impacts to wildlife and wildlife-dependent users, as well as safety concerns, are adequately addressed. Although sailing regattas can result in disturbance to wildlife, disturbance is expected to be intermittent and short term and limited in time and space. There is an adequate amount of undisturbed habitat available to the majority of wildlife for escape and cover.

It is anticipated that wildlife populations would find sufficient food resources and resting places such that their abundance and use of the Refuge would not be measurably lessened from this activity. The relatively limited number of individuals expected to be adversely affected due to this use would not cause wildlife populations to materially decline, the physiological condition and production of species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted. Thus, allowing sailing regattas to occur with stipulations would not materially detract from or interfere with the purposes for which the Refuge was established or the Refuge System mission.

This compatibility determination is specific to sailing regattas at Deer Flat NWR and does not create a precedent for any other competitive group activities.

Mandatory Reevaluation Date

2024 Mandatory 10-year Reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

References

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Compatibility Determination for Sailing Regattas (B.9)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

Document continues on the following page.

B.10 Compatibility Determination for Swimming, Beach Use, and Picnicking (including Lower Dam Recreation Area Use)

RMIS Database Use: Swimming, Beach Use, and Picnicking

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

Swimming, sunbathing, and picnicking on easily accessible beaches are popular activities during the summer months at the Lake Lowell Unit. There are two designated, buoyed swimming areas: at the east end of the Upper Dam and at the Lower Dam Recreation Area. At the Upper Dam designated swimming area, the buoy line is stretched between two docks used by swimmers and sunbathers. There is a buoy line running parallel to the beach at the Lower Dam Recreation Area as well. Swimming is common at both of these areas but also occurs from any open shoreline. Visitors also regularly swim from and sunbathe on boats in the open water and at Gotts Point and at Parking Lot 7.

The most popular swimming areas at the Upper and Lower Dams are in close proximity to the dams and water control structures associated with those dams. Signs and buoys are posted near these structures to warn swimmers about the dangers of swimming near the outlets or jumping off the control structures.

Proposed Uses

In the Preferred Alternative, swimmers and beach users would be directed to the existing designated swimming areas near the Upper Dam and at the Lower Dam Recreation Area. This would reduce potential disturbance from swimmers and beach users to anglers, who are to be given priority under the National Wildlife Refuge Administration Act of 1966, as amended, and to improve emergency response to swimming-related incidents. Although there have been several drowning-related incidents (mostly near-drownings, but there was one swimming fatality in Fiscal Year 2011) at Lake Lowell in the past few years, the Refuge is hopeful that directing shoreline swimmers to designated areas that are easily accessible to rescue personnel would help to minimize safety issues. There would be no lifeguards stationed at the swimming areas. Efforts would also be made at the Upper Dam swim area to further separate swimmers and beach users from anglers by strategic placement of docks and enforcement of designated areas. Swimming would also be allowed in the open water of Lake Lowell from boats outside of no-wake zones. Swimming would not be allowed around fishing or other wildlife-dependent facilities (e.g., docks), or immediately adjacent to boat launch areas. These changes would ensure that the majority of highly used fishing areas would be free of swimming activity.

In the Preferred Alternative, picnicking would be allowed in designated areas at the east end of the Upper Dam and at the Lower Dam Recreation Area. Nonwildlife-dependent group events (e.g., weddings, reunions, birthday parties, and other gatherings) would be allowed only at the Lower Dam Recreation Area because of the availability of parking, restroom, picnic, and trash facilities. Such group events would be required to comply with the stipulations listed below to reduce impacts to visitor safety or the ability of other visitors to use the Refuge in an unobstructed and undisturbed way.

Availability of Resources

Most swimming at Deer Flat NWR would take place at the Upper Dam East and Lower Dam Recreation Areas under the Preferred Alternative. Most of the costs associated with carrying out the improvements described in the Preferred Alternative are one-time expenses (Table B-9). Because the

Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts. Increased volunteer assistance, strengthened existing partnerships, and new partnerships would be sought to support these programs in an effective, safe, and compatible manner. Refuge staff would increase volunteer recruitment efforts. When provided the appropriate training, Refuge volunteers, interns, and various user groups can assist with monitoring, education and interpretation programs, and maintenance projects. The Canyon County Sheriff’s Office currently purchases, installs, and maintains the swimming buoys. With additional assistance as described above, staffing and funding is expected to be sufficient to manage these uses.

Currently, most maintenance of recreational facilities at the Lower Dam Recreation Area (e.g., irrigating and mowing lawns, cleaning restrooms, and maintaining buoys) is provided by Canyon County Department of Parks, Recreation, and Waterways and the Canyon County Sheriff’s Office. If the County ever decided to discontinue this assistance, there would be additional costs associated with maintaining this use.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CDs for activities using the same resource. For instance, rehabilitating the Lower Dam Recreation Area would benefit swimmers and picnickers, but it would also benefit boaters, fisherman, and other visitors. This same cost has been shown in all CDs that may use the new docks.

Table B-9. Costs to Implement Improvements for Lower Dam Recreation Area Users, Swimmers, and Beach Users

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Print/reprint general Refuge brochures	\$3,200	\$800
*Construct and maintain a visitor contact station	\$480,000	\$1,600
*Install and maintain comfort station at Lower Dam Recreation Area (LDRA)	\$150,000	\$1,500
*Rehabilitate LDRA parking area	\$50,000	
*LDRA site plan	\$40,000	
*Construct and maintain a nature play area	\$40,000	
*Install new kiosks and signs at access points and maintain signs	\$261,000	\$2,700
*Volunteer coordinator to manage enough volunteers for additional outreach at LDRA		\$51,000
*Law enforcement officer		\$62,400
Total	\$1,024,200	\$120,000

Anticipated Impacts of the Use

The discussion below analyzes impacts of the use as proposed under Preferred Alternative 2.

General Response of Wildlife to Disturbance

Immediate responses by wildlife to recreational activity can range from behavioral changes including nest abandonment, altered nest placement, and change in food habits, to physiological changes such as elevated heart rates, increased energetic costs due to flight or flushing, or even death (Belanger and Bedard 1990; Kight and Swaddle 2007; Knight and Cole 1995; Miller and Hobbs 2000; Miller et al. 1998; Morton et al. 1989). The long-term effects are more difficult to assess but may include

altered behavior, vigor, productivity or death of individuals; altered population abundance, distribution, or demographics; and altered community species composition and interactions.

According to Knight and Cole (1991), there are three wildlife responses to human disturbance: avoidance, habituation, and attraction. The magnitude of the avoidance response may depend on a number of factors including the type, distance, movement pattern, speed, and duration of the disturbance; the time of day, time of year, weather; and the animal's access to food and cover, energy demands, and reproductive status (Fernández-Juricic et al. 2007; Gabrielsen and Smith 1995; Knight and Cole 1991).

Habituation is defined as a form of learning in which individuals stop responding to stimuli that carry no reinforcing consequences for the individuals that are exposed to them (Alcock 1993). A key factor for predicting how wildlife would respond to disturbance is predictability. Often, when a use is predictable—following a trail or boardwalk or at a viewing deck—wildlife will habituate to and accept human presence (Oberbillig 2000). Gabrielsen and Smith (1995) suggest that most animals seem to have a greater defense response to humans moving unpredictably in the terrain than to humans following a distinct (and repeated) path.

Knight and Cole (1991) suggest that sound may elicit a much milder response from wildlife if animals are visually buffered from the disturbance. Burger (1999 as cited by Oberbillig 2000) suggests that viewing distances can serve as useful guides for managers lacking good site-specific information and serve as a starting point in determining what is appropriate elsewhere. Some factors that affect viewing distances include the numbers of viewers, the time of day, and noise level. When exposing nonbreeding waterbirds to four types of human disturbances (walking, all-terrain vehicle, automobile, and boat), Rodgers and Smith (1997) concluded that a buffer zone of 330 feet would minimize flushing of foraging or loafing waterbirds. Vos et al. (1985) recommended buffer zones of 820 feet on land and 490 feet over water for great blue herons. Miller et al. (1998) found that the trail zone of influence for forest and grassland birds appears to be approximately 250 feet. Beyond this distance, bird abundance, species composition, and nest predation was not affected by even heavily used recreational trails.

Although swimming areas often include erratic movement and elevated human noise levels, the designated swimming areas on Lake Lowell are not of great concern for wildlife concentrations. Keeping most shoreline swimming contained to designated areas would reduce the amount of wildlife disturbance associated with the activity. The park-like features of the Lower Dam Recreation Area as well as the open water of the Lake Lowell attract wintering and migrating geese in the fall, winter, and early spring. In order to eliminate impacts to wintering and migrating waterfowl in both of these areas, the lake and Lower Dam Recreation Area are closed to all activities October 1 through April 14, with the exception of hunting and fishing within 200 yards of certain shoreline areas during a portion of the closure.

Impacts to Habitat

With use directed to designated beaches, there would be only minimal disturbance to habitat. However, illegal activities on designated beaches do pose threats to wildlife. Litter and human waste are expected problems as well as trespass in the form of visitors violating the daylight-hours-only regulation. Wildfires resulting from beach users are another threat, with fire ignitions potentially resulting from campfires, fireworks, or other sources. Campfires and use of fireworks, although

prohibited, have historically occurred on the beaches and pose a significant threat to habitat and wildlife resources.

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from swimming and beach use would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Human Health

Although there have been several drowning-related incidents (mostly near-drownings, but there was one swimming fatality in Fiscal Year 2011) at Lake Lowell in the past few years, the Refuge is hopeful that directing swimmers to two designated areas that are easily accessible to rescue personnel would help to minimize safety issues. There would be no lifeguards stationed at the swimming areas.

There are human health concerns related to swimming in Lake Lowell. During certain conditions, blue-green algae, the parasites that cause swimmer's itch, and fecal coliform levels can exceed State health standards. The Refuge would work with the Idaho Department of Environmental Quality (IDEQ) and Southwest District Health (SDH) to monitor water quality and, if necessary, close the swimming beaches. When testing at the swimming beach indicates health concerns, testing would also be conducted at other sites around the lake, and the Refuge would work with IDEQ and SDH to institute warnings and closures about water contact at other locations around the lake.

Impact to Priority Public Uses

Swimming and beach use are not wildlife-dependent or priority public uses as designated by the National Wildlife Refuge Administration Act of 1966, as amended. In areas where swimming and beach use occur regularly, fishing is essentially precluded by the noise and commotion, which are not conducive to catching fish or a quality fishing experience. Wildlife observation, education, and interpretation are priority uses that can also be negatively impacted by the presence of swimmers and other beach users.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register.

- Distributed approximately 1,300 copies of Planning Update 1.
- Provided informational presentations to 26 local organizations.
- Held evening call-in hours the second and fourth Wednesdays of the month.
- Held open houses July 28, August 20, and August 21.
- Contacted visitors over eight days in July and August and handed out over 700 flyers.
- Over 1,000 comments were received.

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- Invited stakeholders to brainstorm potential solutions to key management issues.

May 27, 2011–July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

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- Provided informational presentations to 28 local organizations.
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- Attended local festivals.
- Almost 350 comments were received.

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

Use is Not Compatible
 Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

- Visitors engaged in beach activities, including swimming and picnicking, would be directed to two designated areas at the east end of the Upper Dam and at the Lower Dam Recreation Area from April 15 through September 30.
- Shoreline swimming would be allowed in these designated areas and elsewhere, with the exception of around fishing or other wildlife-dependent facilities (e.g., docks) or immediately adjacent to boat launch areas.
- Swimming would be allowed in the open waters of Lake Lowell from boats outside of no-wake zones.
- Designated swim beaches would be monitored for water quality affecting human health.
- Nonwildlife-dependent noncompetitive group events (e.g., weddings, birthday parties, reunions, memorial services, retreats, and other gatherings) with 20 or more participants would be allowed only at the Lower Dam Recreation Area with the following stipulations.
 - Events are first come, first served. Facilities cannot be reserved in advance or by posted notice.
 - Tent size cannot exceed a total of 20 feet by 20 feet to allow access for general visitors.

- Group events cannot exceed 50 participants to allow access and parking facilities for general visitors.
- Use of audio devices (e.g., radios, recording and playback devices, loudspeakers, television sets, public address systems, and musical instruments) cannot cause unreasonable disturbance to others in the vicinity and must comply with [50 C.F.R. 27.72](#).
- Participants may not be under the influence of alcohol to a degree that may endanger themselves or other persons or property or unreasonably annoy persons in the vicinity. They must comply with [50 CFR 27.81](#).
- Participants must place all event trash into the dumpster provided or remove it from the site. No glass containers are allowed.
- No portable recreational equipment (e.g., inflatable bounce houses, on-water trampolines, zip lines, etc.) are allowed.
- Participants must park in designated spaces or in a single layer along the cable barrier to ensure that emergency personnel can access the area in case of emergency.
- Use would be restricted to daylight hours only.
- Open fires and fireworks would be prohibited.
- Seasonal closures would be implemented as necessary to protect sensitive wildlife habitat.

For example:

- Up to 300-yard buffer around eagle nests from February 15 through July 15.
- Up to 150-yard seasonal closure around osprey nests from March 15 through August 1.
- Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures would be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a GPS capable of sub-meter accuracy as part of the regular colony studies. These data points would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes nest, the closure would be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.
- Up to 250-yard buffer around heron rookeries from February 1 through July 1
- Up to 100-yard closure around shorebird feeding and resting areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
- Wildlife closure at Gotts Point from October 1 through January 31.
- Wildlife closure at Murphy's Neck from October 1 through March 15.
- Wildlife closure at Lower Dam Recreation Area from October 1 through April 14.
- Refuge staff would monitor impacts of these activities annually to assess compliance with these stipulations, impacts to wildlife and wildlife habitat, and conflicts between user groups. Monitoring data would be used to modify these stipulations or remove the use if necessary to ensure continued compatibility.

Justification

Swimming and beach use are not priority public uses as defined by the National Wildlife Refuge System Administration Act of 1966, as amended. Due to the limited area where most swimming and beach use would occur, these uses are expected to result in a low impact to wildlife and wildlife habitat. It is anticipated that wildlife populations would find sufficient food resources and resting places such that their abundance and use of the Refuge would not be measurably lessened from allowing swimming to occur under the prescribed conditions. The relatively limited number of individuals expected to be adversely affected due to swimming would not cause wildlife populations to materially decline, the physiological condition and production of wildlife species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted. Thus, under these conditions, we do not expect the use to materially interfere with or detract from the mission of Deer Flat NWR or the Refuge System, diminish the purposes for which the Refuge was established, pose significant adverse effects on Refuge resources, or cause any undue administrative burden. Visitor safety would be increased by directing most shoreline swimmers to designated beaches. For many visitors, swimming and beach use at Lake Lowell may provide an introduction to a national wildlife refuge and good opportunity to reach out to them.

Mandatory Reevaluation Date

2024 Mandatory 10-year Reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Compatibility Determination for Swimming, Beach Use, and Picnicking (including Lower Dam Recreation Area Use) (B.10)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

B.11 Compatibility Determination for Walking with Pets (other than hunting dogs)

RMIS Database Use: Pets

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

The Refuge currently allows dogs on-leash at the Lake Lowell Unit. This use currently occurs primarily at the Lake Lowell Unit on all Refuge roads and trails, as well as off-trail in the North Side, East Side, and South Side Recreation Areas. For information about use of dogs while hunting, see the Hunting Compatibility Determination.

The Code of Federal Regulations states that no dog shall be permitted to roam at large on refuge lands ([50 C.F.R. 26.21\(b\)](#)). Refuge regulations would also be consistent with the following local municipal codes for Canyon County that require a dog that is off the property of the owner to be on a physical leash of 6 feet or less. One end of the leash must be attached to the dog, and the other end must be in the hand of a person capable of controlling the dog. (Ord. 83-006, 6-30-83, eff. 7-11-83; Ord. 91-004, 6-24-91). No person owning, harboring, controlling or keeping any dog shall permit the dog to deposit fecal material on any public property without the owner or custodian immediately bagging and removing the material and disposing of it in a proper trash receptacle (City of Nampa Municipal Code 9-5-9).

Proposed Uses

Under the Preferred Alternative, the Refuge would allow people walking with leashed pets to use designated multi-use trails and the Lower Dam Recreation Area during daylight hours and at times of year when walking access is allowed. Visitors walking with their pets would be required to remove feces from the Refuge. This public use would be monitored to ensure it does not interfere with wildlife-dependent uses or impact wildlife resources. If Refuge personnel observe that visitors with pets are routinely not complying with the above requirements, the Service would evaluate the possibility of prohibiting pet walking. This CD will be revised in 10 years or possibly sooner to incorporate additional data and new information.

Availability of Resources

Most of the costs associated with carrying out the improvements, as described in the Preferred Alternative, are one-time expenses (see Table B-10). Because the Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts. Increased volunteer assistance, strengthened existing partnerships, and new partnerships would be sought to support these programs in an effective, safe, and compatible manner. Refuge staff would increase volunteer recruitment efforts. When provided the appropriate training, Refuge volunteers, interns, and various user groups can assist with monitoring, education and interpretation programs, and maintenance projects. With additional assistance as described above, staffing and funding is expected to be sufficient to manage these uses.

Currently, most maintenance of recreational facilities at the Lower Dam Recreation Area (e.g., irrigating and mowing lawns and cleaning rest rooms) is provided by Canyon County Department of Parks, Recreation, and Waterways. If the County ever decided to discontinue this assistance, there would be additional costs associated with maintaining this facility to the current quality.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other CDs for activities using the same resource. For instance, upgrading the fire break to a multiuse trail would benefit people walking with pets, but the trail could also be used by visitors engaged in wildlife observation, photography, and interpretation. This same cost has been shown in all CDs that would use the new trail facility.

Table B-10. Costs to Implement Improvements Necessary to Allow Pet Walking on Designated Trails and in the Lower Dam Recreation Area

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Install multiple-use trail regulation signs	\$7,800	\$300
*Upgrade fire break	\$37,000	\$800
Pet feces removal station	\$400	\$500
*Print/reprint general Refuge brochures	\$3,200	\$800
*Human/wildlife interaction disturbance studies	\$140,000	
*Law enforcement officer		\$62,400
Total	\$188,400	\$64,800

Anticipated Impacts of the Use

The discussion below analyzes the impact of this use as proposed under the Preferred Alternative.

Authors of many wildlife disturbance studies conclude that dogs with people, on-leash dogs, or loose dogs provoked a more pronounced disturbance reactions from wildlife than humans alone (Sime 1999). The disturbance effects of human intrusion increased when people were accompanied by dogs in studies of different species including shorebirds (Hoopes 1993; Yalden and Yalden 1989, 1990), passerines (Knight and Miller 1996), upland game birds (Baydack 1986) and small mammals (Mainini et al. 1993). Another study suggests that harassment of wildlife by domestic dogs is opportunistic and is associated with the concentration of wildlife in a given area (Jones & Stokes 1977). A follow-up study suggests that dog-induced wildlife flushes increase with the increased density of dogs (Abraham 2001). Free-running and feral dogs have been known to kill quail, rabbits, and deer (Bowers 1953; Lowry and McArthur 1978; Nelson and Woolf 1987). Pure-bred dogs trained to hunt can also ferret out ground-nesting birds and small game animals when left to roam free (Bowers 1953).

Domestic dogs can introduce diseases like parvovirus, canine distemper, and plague to wildlife populations. Diseases like giardia infection and rabies can be transmitted to wildlife and to humans. Muscle cysts can be transmitted through dog feces to ungulate species including mule deer (Sime 1999). Dog waste is also known to host endo- and ecto-parasites and wildlife can contract diseases from contact with dogs or dog wastes (Sime 1999). To reduce this effect on wildlife and people, pet owners would be required to pick up their pet's feces and dispose of it properly, as is also required by local county and city ordinances.

Nussear et al. (2008) inadvertently showed that unleashed dogs increase the zone of coverage (or zone of influence) beyond what it would be solely by the handler, thereby increasing the potential to disturb or harm wildlife. When wildlife react by moving away from the disturbance or alter behavior by hiding they would be less likely to be observed. Users of a national wildlife refuge should be able to expect to see wildlife during their visit. Because expectations of seeing wildlife and the amount of wildlife actually seen factor into the quality of experience for wildlife-dependent users (Hammit et al. 1993), the reduction in observable wildlife that would be caused by allowing nonwildlife-dependent uses could result in avoidance of the Refuge by wildlife-dependent users. To reduce this

potential negative effect on wildlife and wildlife-dependent visitors, dogs would still be required to be leashed on the Refuge. The National Wildlife Refuge System Administration Act, as amended, requires that priority consideration be given to wildlife-dependent users, and the presence of dogs is not necessary for nonhunting, wildlife-dependent recreational activities.

These studies are important when considering human/dog disturbance on refuges that have a high concentration of wildlife. Because Deer Flat NWR is an urban refuge with potentially high concentrations of dogs, people walking with dogs would only be allowed to use designated trails and the Lower Dam Recreation Area to reduce their interactions with high concentrations of wildlife and to provide ample quantities of sanctuary where wildlife can find cover.

Although Refuge regulations and Canyon County municipal codes require dogs to be under complete control by an adequate leash, it is common to see unleashed dogs on Deer Flat NWR trails. In fact, the most common violation noted in the Refuge law enforcement logs is “dog(s) off leash.”

The potential adverse effects associated with pet/wildlife interactions would be minimized by requiring that dogs always be on a leash and remain on multiuse trails or in the Lower Dam Recreation Area. Visitor safety should be increased and dog fighting and negative pet/visitor interactions should be reduced by requiring that pets be on leash at all times. In addition, pet feces would be required to be removed. Impacts from pets would be monitored and enforced by Refuge staff to ensure it does not interfere or have any undue negative impacts to wildlife resources or compatible, wildlife-dependent uses.

To reduce impacts to visitors engaging in wildlife-dependent activities, especially those involved in environmental education and interpretive programs, pets would not be allowed on the Nature, Centennial, Murphy’s Neck, or Boardwalk Trails. These trails are, for the most part, narrower than the patrol road trails (East Dike, Kingfisher, Gotts Point, and Observation Hill Trail System), and therefore do not lend themselves to multiple uses. The Centennial and Nature Trails are currently used for environmental education and interpretive programs. To reduce disturbance to these programs and provide adequate space for multiple uses, on-leash pets would only be allowed on the entrance road and the East Dike, Kingfisher, and Gotts Point Trails; the Observation Hill Trail System, and in the Lower Dam Recreation Area. Keeping pets on designated trails and in the Lower Dam Recreation Area would allow wildlife-dependent visitors the opportunity to use several trails without having to interact with pets.

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard’s milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from pet walking would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register
- Distributed approximately 1,300 copies of Planning Update #1
- Provided informational presentations to 26 local organizations
- Held evening call-in hours the second and fourth Wednesdays of the month
- Held open houses July 28, August 20, and August 21
- Contacted visitors over eight days in July and August and handed out over 700 flyers
- Over 1,000 comments were received

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues

May 27, 2011-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list
- Provided informational presentations to 28 local organizations
- Held open houses on June 3, June 4, July 8, and July 9
- Attended local festivals
- Almost 350 comments were received

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

Use is Not Compatible
 Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

- Pets would be required to stay on designated multiuse trails and in the Lower Dam Recreation Area, in personally owned vehicles, and in parking lots only. Designated multiuse trails consist of:
 - Observation Hill Trail System in the North Side Recreation Area;
 - East Dike and Kingfisher Trails in the East Side Recreation Area; and
 - Gotts Point Trail.
- Pets would be required to be on a physical leash (6 feet or less) at all times. One end of the leash must be attached to the pet and the other in the hand of a person capable of controlling the pet.

- Other than what is compliant with stipulation above, training of pets would not be allowed on the Refuge.
- Visitors, walking with leashed pets on designated trails and in the Lower Dam Recreation Area, would be required to immediately bag and remove fecal material and dispose of it in the proper trash receptacles.
- Seasonal closures would be implemented as necessary to protect sensitive wildlife habitat. For example:
 - Up to 300-yard buffer around eagle nests from February 15 through July 15.
 - Up to 150-yard seasonal closure around osprey nests from March 15 through August 1.
 - Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures will be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a GPS capable of sub-meter accuracy as part of the regular colony studies. These data points would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes nest, the closure would be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.
 - Up to 250-yard buffer around heron rookeries from February 1 through July 1.
 - Up to 100-yard closure around shorebird feeding and resting areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
 - Wildlife closure at Gotts Point from October 1 through January 31.
 - Wildlife closure at Murphy's Neck from October 1 through March 15.
 - Wildlife closure at Lower Dam Recreation Area from October 1 through April 14.
- Use would be restricted to daylight hours only.

Justification

Walking with pets is not generally considered a wildlife-dependent use of a refuge as defined by statute ([16 U.S.C. 668dd](#) et seq.). However, this use on Deer Flat NWR facilities is secondary and conducted in conjunction with wildlife-dependent uses like wildlife observation, photography, and interpretation. Potential for wildlife disturbance is minimal when the use is conducted as required by the stipulations, including restricting the use to designated trails and the Lower Dam Recreation Area, requiring pets to be on-leash, and mandating the removal of pet waste.

Potential for wildlife and habitat disturbance is minimal given the indirect approach of this activity, the enforcement of the short leash rule, and the mandatory removal of pet feces. Restricting the disturbance to established trails and the Lower Dam Recreation Area would increase the predictability of public use on the Refuge, allowing wildlife to habituate to nonthreatening activities. These impacts would be monitored and if they, or other impacts, are discovered, this CD would be reevaluated. It is anticipated that wildlife populations would find sufficient food resources and

resting places such that their abundance and use of the Refuge would not be measurably lessened from allowing pet walking on designated trails and in the Lower Dam Recreation Area. The relatively limited number of individuals expected to be adversely affected due to pet walking would not cause wildlife populations to materially decline, the physiological condition and production of wildlife species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted.

Refuge users with pets provide the opportunity for the Refuge to reach out to nontraditional Refuge user groups and to encourage people walking their pets to observe wildlife and to learn about the National Wildlife Refuge System. Due to the close proximity of Deer Flat NWR to the cities of Nampa and Caldwell, the number and variety of users to this urban refuge is expected to grow. For many of these people, using the multiple-use trails and Lower Dam Recreation Area may provide an introduction to a national wildlife refuge.

By enforcing Refuge regulations that are consistent with local municipal codes, as well as designating appropriate facilities, this use would not interfere with fulfilling the purposes of Deer Flat National Wildlife Refuge. The potential for minimal impacts to Refuge resources from this use, when carried out as specified in the stipulations above, would not detract from fulfilling the Refuge purposes, vision, and goals or the NWRS mission.

Mandatory Reevaluation Date

2024 Mandatory 10-year Reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Compatibility Determination for Walking with Pets (other than hunting dogs) (B.11)

Use is compatible with stipulations.

Prepared by: _____
(Signature) (Date)

Refuge Manager/
Project Leader
Approval: _____
(Signature) (Date)

Concurrence:

Refuge
Supervisor: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System: _____
(Signature) (Date)

Document continues on the next page.

B.12 Compatibility Determination for Wildlife Observation, Photography, Interpretation, and Environmental Education

RMIS Database Use: Wildlife Observation, Photography (wildlife), Interpretation and Environmental Education (teaching students)

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette, and Washington Counties, Idaho, and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuges’ names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

- “to further the purposes of the Migratory Bird Conservation Act” and “as a refuge and breeding grounds for migratory birds and other wildlife” (E.O. 7655)
- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act [[16 U.S.C. 715d](#)])
- “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](#)) and “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 [[16 U.S.C. 460k-460k-4](#)], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [[16 U.S.C. 668dd-668ee](#) et seq.]).

Description of Use

Four nonconsumptive wildlife-dependent recreational activities are defined as priority public uses under the National Wildlife Refuge Administration Act of 1966, as amended: wildlife observation, photography, interpretation, and environmental education. These activities can enhance the users’ appreciation of the Refuge, the National Wildlife Refuge System, wildlife, their habitats, and the human environment. Because of its proximity to urban areas, Deer Flat NWR is considered an urban refuge and provides an opportunity for many nontraditional refuge users to be exposed to wildlife, habitat, and the National Wildlife Refuge System.

Deer Flat NWR is a popular destination for local visitors as well as tourists from outside the area. In FY11, total Refuge visitation was estimated at 228,000, with the majority of visitation occurring during the summer months. Further broken down, visitation numbers for the four nonconsumptive wildlife-dependent recreational activities are as follows.

- Wildlife observation and photography: 23,900
- Interpretation: 21,000
- Environmental education: 11,000

The Snake River Islands Unit is also open to the public for wildlife observation and photography from June 15 through January 31 on goose-nesting islands and from July 1 through January 31 on heron- and gull-nesting islands. Access to islands would be clearly delineated in the Refuge brochure. The only way to access these islands is with a boat and the amount of use for this activity is unknown.

Wildlife Observation and Photography

On the Lake Lowell Unit, a variety of trails and facilities provide opportunities for visitors who wish to view and photograph wildlife while minimizing disturbance to wildlife, including the East Dike and Kingfisher Trails in the East Side Recreation Area, the Gotts Point Trail, and the Observation Hill Trail System and Centennial and Nature Trails in the North Side Recreation Area. These hiking trails allow visitors to walk in close proximity to riparian, lake, wetland, and upland Refuge habitats. There are wildlife viewing platforms on the Observation Hill Trail and on the Centennial Trail. There is also a bird viewing blind on the Nature Trail where visitors can photograph or observe wildlife. The Refuge also has a 29.5-mile driving tour that highlights birding stops and circumnavigates the Lake Lowell Unit, as well as a 47-mile driving tour that highlights wildlife viewing opportunities at both the Lake Lowell and Snake River Islands Units. When the lake is open to the public, visitors can also observe and photograph wildlife on the open water with the use of motorized and nonmotorized boats. During the winter, visitors can also observe and photograph wildlife from cross-country skis.

Interpretation and Environmental Education

Interpretation and environmental education (EE) opportunities are designed to increase the public’s knowledge and understanding of wildlife and wildlife conservation. Many members of the public are not familiar with national wildlife refuges and confuse them with other Federal lands (e.g., National Parks, Bureau of Land Management lands) or with State and County parks. Locally, the Refuge is

commonly referred to as “Lake Lowell,” and much of the public does not know that it is a national wildlife refuge that is part of a nationwide system. Providing information through educational programs, written materials, and interpretive panels helps to build an understanding and appreciation of the unique purposes and activities of national wildlife refuges. Providing information regarding the mission of the Service and the purposes of the Refuge, along with specific resource information, to Refuge visitors may alleviate potential negative impacts of visitors on wildlife.

Most interpretive and EE activities occur at or near the Refuge Visitor Center. Guided activities include staff- and volunteer-conducted environmental education programs, teacher workshops, interpretive programs, and special events. Unguided activities include interpretive displays in the Visitor Center, interpretive panels along the Centennial Trail and at Snake River Islands Unit access points, and self-guided trail brochures. The Refuge offers a variety of both on- and off-site hands-on EE programs. The Refuge also puts on an annual BioBlitz festival celebrating biodiversity, a Creepy Critters Halloween event, and a monthly Wild About Life lecture series.

Proposed Uses

Under the Preferred Alternative, the Refuge would improve and expand facilities and programming to enhance wildlife observation, photography, interpretation, and environmental education opportunities as follows:

Wildlife Observation and Photography

- Provide a visitor contact station at the Lower Dam Recreation Area to place a welcome/interpretive facility in an area that currently sees a majority of the Refuge’s nonwildlife-dependent users.
- Provide an additional canoe/kayak launch site at Gotts Point to allow users access to an expanded no-wake zone.
- Provide additional trails, for example:
 - 2-mile ADA-accessible interpretive elevated boardwalk between Parking Lots 1 and 3 to provide better access to riparian and lake habitat not only for people with impaired mobility but also for users requesting easier access through the thick riparian vegetation at Lake Lowell.
 - 0.65-mile ADA-accessible interpretive loop trail in riparian habitat between Lower Dam Recreation Area and Murphy’s Neck.
 - 0.6-mile bike/walking path from the entrance to the Visitor Center along the entrance road to provide connectivity to possible bike paths.
 - Interpretive trail through restored native area at Lower Dam Recreation Area.
 - A trail between loops of the existing patrol road west of Visitor Center to provide a loop trail experience during eagle nesting season.
 - A trail or improved trail to the Observation Platform from the entrance road parking lot.
 - Additional trails from parking lots to the lakeshore on the south side of Lake Lowell and at Gotts Point to provide the public increased viewing and educational opportunities in riparian habitat types.
 - 1.5-mile self-guided on-water trail looping to the east from Parking Lot 1.
- Maintain existing observation facilities (e.g., towers, platforms) and develop new facilities, for example:

- A fishing dock/observation platform at north end of Lower Dam Recreation Area near existing Environmental Education Building.
- Multipurpose (i.e., Big Six) docks along proposed 2-mile ADA-accessible interpretive elevated boardwalk between Parking Lots 1 and 3.
- Seasonal shorebird observation/photography blind on the northern shoreline of the East Pool east of Tio Lane access for reservation with an SUP. Implement a fee for use comparable to fees at other refuges.
- Photography blind at Upper Dam Marsh for reservation with an SUP. Implement a fee for use comparable to fees at other refuges.
- Provide observation opportunities through wildlife webcams, for example:
 - Maintain existing osprey nest webcam; and
 - Add grebe, heron, or eagle webcams.

Environmental Education and Interpretation

- Increase interpretation opportunities for visitors at high-use access points, for example:
 - Use staff and volunteers to facilitate guided/roving interpretive programs (e.g., bird walks, nocturnal walks, canoe/kayak paddles); and
 - Develop a nature play area at Lower Dam Recreation Area.
- Update and replace Visitor Center interpretive materials, for example:
 - Develop Refuge video to show at Visitor Center; and
 - Update and replace existing Visitor Center interpretive signs.
- Provide at least 4 on-site outreach events (e.g., BioBlitz, Creepy Critters, National Wildlife Refuge Week) annually to expand public awareness of interpretive themes.
- Update EE program to match themes identified in the CCP.
- Work with local teachers to identify target grades for Refuge EE programs.
- Focus on moving from off-site to on-site EE programs.

Access

- To improve the quality of the nonconsumptive wildlife-dependent recreational activities provided at the Refuge and reduce disturbance to wildlife, the following changes would be made to Refuge access.
- Access to Snake River Islands Unit is restricted to June 15 through January 31 on goose-nesting islands and from July 1 through January 31 on heron- and gull-nesting islands.
- Access to Lake Lowell Unit:
 - Wildlife-dependent users would be allowed off-trail in the East Side Recreation Area all year.
 - Wildlife-dependent users would be allowed off-trail at Gotts Point from February 1 through September 30.
 - To protect nesting birds, access would be allowed only on maintained roads and trails from February 1 through July 31 in the North Side and South Side Recreation Areas and at Murphy's Neck. During these months, lakeshore access is restricted to 100 meters on either side of trails accessing the lakeshore. Off-trail travel would be allowed August 1 through January 31.
 - Seasonal closures would be in place surrounding important wildlife areas, such as eagle and osprey nests, grebe colonies, heron rookeries, and shorebird feeding areas.

Availability of Resources

Deer Flat NWR is open to all of the priority, wildlife-dependent recreational activities under the Preferred Alternative. Most of the nonstaff costs associated with carrying out the improvements described in the Preferred Alternative are one-time expenses (see Table B-11). Because the Service has limited capacity to staff and maintain facilities and provide law enforcement, the Service would explore all available options to obtain funding to implement these projects, including partnership efforts.

Increased volunteer assistance, strengthened existing partnerships, and new partnerships would be sought to support these programs in an effective, safe, and compatible manner. Refuge staff would increase volunteer recruitment efforts. When provided the appropriate training, Refuge volunteers, interns, and various user groups can assist with monitoring, education and interpretation programs, and maintenance projects. With additional assistance as described above, staffing and funding is expected to be sufficient to manage these uses.

Currently, mowing and irrigation of the EE building lawn at the Lower Dam Recreation Area is conducted by Canyon County Department of Parks, Recreation, and Waterways. If the County ever decided to discontinue this assistance, there would be additional costs associated with maintaining this facility to the current quality.

Costs marked with an asterisk (*) in Table B-11 represent costs that are also entered into other CDs for activities using the same resource. For instance, rehabilitating the Lower Dam Recreation Area would benefit wildlife-dependent visitors but it would also benefit picnickers, swimmers, and other visitors. This same cost has been shown in all CDs that may use the Lower Dam Recreation Area.

Table B-11. Costs to Administer and Manage Updates to Public Use Programs

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Provide and maintain season off-trail use signs	\$1,400	\$400
*Provide 4.5 miles of new trails for pedestrian access	\$396,800	
*Provide and maintain interpretive and directional signage for new trails	\$28,900	\$1,600
Provide and maintain interpretive and directional signage for new observation/photography blinds	\$2,900	\$500
*Provide and maintain signs allowing public use in hunt areas	\$1,100	\$300
Provide and maintain directional signage	\$6,500	
*Install and maintain new docks and buoys	\$69,600	\$7,400
Install new observation/photography blinds	\$120,000	
*Install new kiosks and signs at access points and maintain signs	\$261,000	\$2,700
*Seasonal nesting closure signs (Lake Lowell and Snake River Islands Units)	\$11,000	\$5,200
*Maintain new trails and observation/photography blinds		\$4,000
Covered learning facilities	\$135,600	
*Construct and maintain visitor contact station	\$480,000	\$1,600
*Install and maintain comfort stations and vault toilet at Lower Dam Recreation Area (LDRA) and Parking Lot 1	\$208,200	\$3,000
*Create LDRA site plan	\$40,000	
*Rehabilitate LDRA parking area	\$50,000	

Refuge Activity Required to Allow Use	Estimated One-time Cost	Estimated Annual Cost
*Print/reprint general Refuge brochures	\$3,200	\$5,200
Update/rehabilitate Visitor Center	\$425,000	
Structural evaluation of Visitor Center	\$25,000	
*Nature play area	\$40,000	
*Volunteer coordinator		\$51,000
Environmental education specialist		\$51,000
*Law enforcement officer		\$62,400
Total	\$2,306,200	\$196,300

Anticipated Impacts of Uses

A primary concern for allowing any public use to occur on Deer Flat NWR is to ensure that impacts to wildlife and habitat are maintained within acceptable limits and potential conflicts between user groups are minimized. The discussion below analyzes impacts of the use as proposed under the Preferred Alternative.

General Impacts to Wildlife

After a review of 536 references, Boyle and Sampson (1985) concluded that nonconsumptive outdoor recreation activities often have negative impacts to wildlife and their habitat. Immediate responses by wildlife to recreational activity can range from behavioral changes including nest abandonment, altered nest placement, and change in food habits to physiological changes such as elevated heart rates and increased energetic costs due to flight or flushing, or even death (Belanger and Bedard 1990; Kight and Swaddle 2007; Knight and Cole 1995a; Miller and Hobbs 2000; Miller et al. 1998; Morton et al. 1989; Smith-Castro and Rodewald 2010). The long-term effects are more difficult to assess but may include altered behavior, vigor, productivity, or death of individuals; altered population abundance, distribution, or demographics; and altered community species composition and interactions.

Human activities along trails disturb wildlife, often resulting in flushing from roosting, feeding, nesting, or resting areas. Flushing may result in expenditure of energy reserves, abandonment of preferred habitat, and increased exposure to predation during relocation. Wildlife photographers tend to have significant disturbance impacts because they may remain close to wildlife for prolonged periods (Klein 1993). Casual photographers with low-power lenses may approach wildlife closer than other users. Cole (2004) suggests the following factors as most important in determining recreation impacts: amount of use, type and behavior of use, timing of use, resistance and resilience of the environment, and spatial distribution of use. Specialized wildlife viewers, particularly birders, seek out specific and often rare species. Because these activities may occur during sensitive times of the year (e.g., nesting), and because they often involve close approaches to wildlife for purposes of identification or photography, there is a potential for negative effects (Knight and Cole 1995b).

According to Knight and Cole (1991), there are three wildlife responses to human disturbance: avoidance, habituation, and attraction. The magnitude of the avoidance response may depend on a number of factors including the type, distance, movement pattern, speed, and duration of the disturbance; the time of day, time of year, weather; and the animal's access to food and cover, energy demands, and reproductive status (Fernández-Juricic et al. 2007; Gabrielsen and Smith 1995; Knight and Cole 1991).

Habituation is defined as a form of learning in which individuals stop responding to stimuli that carry no reinforcing consequences for the individuals that are exposed to them (Alcock 1993). A key factor for predicting how wildlife would respond to disturbance is predictability. Often, when a use is predictable—following a trail or boardwalk or at a viewing deck—wildlife will habituate to and accept human presence (Oberbillig 2000). Gabrielsen and Smith (1995) suggest that most animals seem to have a greater defense response to humans moving unpredictably in the terrain than to humans following a distinct (and repeated) path.

Knight and Cole (1991) suggest that sound may elicit a much milder response from wildlife if animals are visually buffered from the disturbance. Burger (1999 as cited by Oberbillig 2000) suggests that viewing distances can serve as useful guides for managers lacking good site-specific information and serve as a starting point in determining what is appropriate elsewhere. Some factors that affect viewing distances include the numbers of viewers, the time of day, and noise level. When exposing nonbreeding waterbirds to four types of human disturbances (walking, all-terrain vehicle, automobile, and boat), Rodgers and Smith (1997) concluded that a buffer zone of 330 feet would minimize flushing of foraging or loafing waterbirds. Vos et al. (1985) recommended buffer zones of 820 feet on land and 490 feet over water for great blue herons. Miller et al. (1998) found that the trail zone of influence for forest and grassland birds appears to be approximately 250 feet. Beyond this distance, bird abundance, species composition, and nest predation was not affected by even heavily used recreational trails.

Refuge-specific Impacts

Refuge visitation that has an emphasis on wildlife observation, photography, education, and interpretation are projected to increase under the Preferred Alternative and therefore disturbance effects are likely to be somewhat higher than present. However, it is anticipated that the design of Refuge facilities and the stipulations associated with these uses would be sufficient to mitigate these impacts.

People who visit Deer Flat NWR and engage in wildlife observation, photography, environmental education and/or interpretation typically access the Refuge by motorized vehicles using the surrounding public roads and Refuge parking lots. Because of the close proximity to houses and an urban setting, some visitors can easily access the Refuge by walking or biking from their place of residence.

Once on the Refuge, visitors have access to a variety of multiuse trails on which to participate in these nonconsumptive wildlife uses. Foot travel can potentially create disturbance in or near any habitat and result in vegetation trampling as noted above. The current and proposed trails system has been designed to minimize disturbance to wildlife and habitat and the stipulations presented below are intended to further mitigate any potential impacts stemming from these uses. Restricting the disturbance to an established trail during the nesting season would increase predictability of public use patterns on the Refuge, allowing nesting wildlife to habituate to nonthreatening activities. Providing seasonal closures around sensitive wildlife areas would reduce impacts to wildlife while providing recreational opportunities in these areas when the wildlife is less vulnerable.

Under the Preferred Alternative, two photography/wildlife observation blinds and associated access trails would be built, one in the Upper Dam Marsh area and the other near the New York Canal. The construction of these blinds may cause a temporary, short-term impact on wildlife species in the immediate area. Minimal long-term effects are expected to occur as a result of construction.

Increased use of the blind areas is expected to occur adding to the likelihood of disturbance but should be compensated for by the creation of predictable and concentrated visitation. Educational materials that inform visitors of ethical use could reduce impacts and careful placement and camouflaging of blinds would reduce disturbance from this user group.

Most of Deer Flat NWR's education and interpretation programs are large, organized special events that differ from informal day-to-day observation and interpretive activities in that they take place at the existing Visitor Center. These programs have the can overflow parking facilities to the point where parking lots fill and off-site parking and shuttle service is necessary to avoid safety issues. The disturbance associated with these programs are restricted to the area surrounding the Visitor Center and are kept in check by Refuge staff or volunteer leaders who are vigilant about minimizing undue disturbances.

Although disturbance to wildlife from these activities would be higher than at present, the overall effect to Refuge wildlife is expected to be minor. In addition, if disturbance to wildlife or damage to habitat reaches unacceptable levels, the Refuge would limit access to areas where unacceptable impacts occur (see Stipulations section).

Impacts to Listed Species

There are no listed species known to occur on the Refuge. The counties that surround both units of the Refuge have a variety of listed species historically or currently occurring within each county. Of these species only the yellow-billed cuckoo has ever been documented on Deer Flat NWR, and it is currently considered a vagrant because sightings are highly unusual. The Columbia spotted frog could conceivably exist on the Refuge but has not been documented. The condition of habitat for both of these species is either unknown or marginal. The likelihood of any other of the listed species that occur in the surrounding counties existing on the Refuge is slim. Most of these other species have known populations that occur off-Refuge (e.g., Bruneau hot springs snail, Packard's milkvetch) or roam great distances and/or will not find suitable habitat on the Refuge (e.g., North American wolverine, greater sage-grouse). It is anticipated that impacts from nonconsumptive, wildlife-dependent recreation would be negligible. If any use results in unacceptable adverse effects to candidate species or habitats, the Refuge would impose restrictions to mitigate disturbance.

Impact to Habitat

Miller et al. (1998) showed that bird species composition was altered near trails in both forested and grassland ecosystems. Unpaved or unsurfaced trails are susceptible to a variety of trail impacts including vegetation loss and compositional changes to soil structure including compaction and erosion (Adkison and Jackson 1996; Dale and Weaver 1974; Leung and Marion 2000). Trail widening and creation of side trails (social trails) increase the area of disturbed land (Liddle 1975). Impacts that are commonly noted on trails like vegetation damage and soil erosion are unlikely to occur on the well-defined, gravel surface of the East Dike, Kingfisher, Gotts Point, Observation Hill, and Nature Trails or the concrete surface of the Centennial Trail. Allowing off-trail use may cause trampling of plants and disturbance of wildlife. Even though this user group would be required to remain on designated trails during sensitive seasons, some users may disturb wildlife by wandering off to access the lakeshore or a scenic vista or in pursuit of observational/photographic quarry.

Control of invasive plant species on the Refuge is a difficult and never-ending battle. Roads and trails often function as conduits for movement of plant species, including nonnative, invasive species

(Benninger-Truax et al. 1992; Hansen and Clevenger 2005). Refuge visitors can inadvertently carry propagules from invasive plants on clothing or equipment, spreading those plants to new areas. Once established, invasive plants can out-compete native plants, thereby altering habitats and indirectly impacting wildlife. Invasive plants on or near these trails would be controlled and monitored as part of the Refuge's IPM Plan (Appendix G).

Providing and maintaining access points and trails indirectly impacts wildlife by creating barriers to movement through vegetation removal and abrupt edge creation, which may lead to increased predation (Ratti and Reese 1988).

Public Review and Comment

This CD was prepared concurrent with the Deer Flat NWR CCP. The following is a summary of public outreach from July 2010 through September 2012.

July 15-September 10, 2010: First Outreach and Comment Period

- Published Notice of Intent in the Federal Register
- Distributed approximately 1,300 copies of Planning Update #1
- Provided informational presentations to 26 local organizations
- Held evening call-in hours the second and fourth Wednesdays of the month
- Held open houses July 28, August 20, and August 21
- Contacted visitors over eight days in July and August and handed out over 700 flyers
- Over 1,000 comments were received

September 23-25, 2010: Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues

May 27, 2011-July 29, 2011: Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list
- Provided informational presentations to 28 local organizations
- Held open houses on June 3, June 4, July 8, and July 9
- Attended local festivals
- Almost 350 comments were received

Winter 2013: Draft CCP/EIS Outreach and Comment Period

Public review and comments were solicited in conjunction with release of the Draft CCP/EIS in order to comply with the National Environmental Policy Act and with Service policy.

Determination

Use is Not Compatible
 Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility

- Proposed changes to boating regulations and facilities are described in the Recreational Boating Compatibility Determination.
- To minimize disturbance to wildlife during the nesting season, pedestrian travel would be restricted to designated trails from February 1 through July 31 in the North Side and South Side Recreation Areas and at Murphy's Neck. During these months, lakeshore access is restricted to 100 meters on either side of trails accessing the lakeshore. Off-trail travel would be allowed August 1 through January 31.
- In the East Side Recreation Area, off-trail travel would be allowed all year because it is a less biologically sensitive area.
- In the Gotts Point area, off-trail travel would be allowed February 1 through September 30.
- Cross-country skiing access would be allowed only on land. Skiing on ice would be prohibited.
- Walking on ice for wildlife observation, photography, interpretation, and environmental education opportunities would be prohibited. Ice access would be allowed only to access ice fishing opportunities in Fishing Areas A and B within 200 yards of the dams, subject to areas posted by the Bureau of Reclamation.
- Lower Dam Recreation Area is open from April 15 through September 30.
- On the Snake River Islands Unit, off-trail travel would be allowed from June 15 through January 31 on goose-nesting islands and from July 1 through January 31 on heron- and gull-nesting islands.
- Recreational access to closed areas would be allowed only under provisions of an SUP with stipulations set by the Refuge Manager.
- Use would be restricted to daylight hours only.
- Open fires would be prohibited.
- Pedestrians should yield right of way to equestrians.
- Collection of plants and animals would be prohibited unless an SUP is obtained from the Refuge (except fish captured while engaged in recreational fishing).
- The Refuge would require an SUP for wildlife-dependent groups of over 20 people to avoid conflicts with other users and management activities.
- Seasonal closures would be implemented as necessary to protect sensitive wildlife habitat. For example:
 - Up to 300-yard buffer around eagle nests from February 15 through July 15.
 - Up to 150-yard seasonal closure around osprey nests from March 15 through August 1.
 - Up to 500-yard closure around grebe colonies (Berg et al. 2004) until July 15 of the following year. If the birds have not re-nested in the closed area by July 15 of the following year, the closure would be removed. Upland portions of the closures would be open to use from October 1 through January 31.
 - To determine grebe colony boundaries, the staff biologist would mark nests within, and especially on the periphery of, a colony using a GPS capable of sub-meter accuracy as part of the regular colony studies. These data points would be exported to a geo-referenced mapping system, and a 500-yard buffer would be drawn around the colony. Buoy locations would then be mapped every 100 to 150 yards and exported back into the GPS unit to be used to place the buoys in the proper location. In the first year that grebes

nest, the closure would be based on nests established early in the nesting season. In the second year of a grebe nesting closure, the closure would be based on the full extent of the colony in the first year.

- Up to 250-yard buffer around heron rookeries from February 1 through July 1.
- Up to 100-yard closure around shorebird feeding and resting areas from July 15 through September 30 during years when the lake level elevation is lower than 2,522 feet.
- Wildlife closure at Gotts Point from October 1 through January 31.
- Wildlife closure at Murphy's Neck from October 1 through March 15.
- Wildlife closure at Lower Dam Recreation Area from October 1 through April 14.
- Refuge staff would monitor impacts of these activities annually to assess compliance with these stipulations, impacts to wildlife and wildlife habitat, conflicts between user groups, and user satisfaction. Monitoring data would be used to modify these stipulations if necessary to ensure continued compatibility of these activities.

Justification

Wildlife photography, observation, interpretation, and environmental education, when compatible, are wildlife-dependent recreational activities considered priority public uses for the National Wildlife Refuge System. Although these activities can result in disturbance to wildlife, disturbance would be intermittent and short-term when activities are conducted according to the stipulations described above. It is anticipated that wildlife populations would find sufficient food resources and resting places such that their abundance and use of the Refuge would not be measurably reduced from allowing these activities to occur. The relatively limited number of individual animals and plants expected to be adversely affected would not cause wildlife populations to materially decline, the physiological condition and production of Refuge species would not be impaired, their behavior and normal activity patterns would not be altered dramatically, and their overall welfare would not be negatively impacted. Thus, allowing wildlife photography, observation, interpretation and environmental education to occur under the stipulations described above would not materially detract or interfere with the purposes for which the Refuge was established or the mission of the National Wildlife Refuge System.

Mandatory Reevaluation Date

2029 Mandatory 15-year Reevaluation (for priority public uses)

NEPA Compliance for Refuge Use Decision

X Environmental Impact Statement and Record of Decision

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Compatibility Determination for Wildlife Observation, Photography, Interpretation, and Environmental Education (B.12)

Use is compatible with stipulations.

Prepared by: _____ (Signature) _____ (Date)

Refuge Manager/
Project Leader
Approval: _____ (Signature) _____ (Date)

Concurrence:

Refuge
Supervisor: _____ (Signature) _____ (Date)

Regional Chief,
National Wildlife
Refuge System: _____ (Signature) _____ (Date)

B.13 Compatibility Determination for Mosquito Management

RMIS Database Use: Mosquito management

Refuge Name: Deer Flat National Wildlife Refuge

Location: Canyon, Owyhee, Payette and Washington Counties, Idaho and Malheur County, Oregon

Date Established: 1909

Establishing and Acquisition Authorities

Deer Flat National Wildlife Refuge was originally established in 1909 by President Theodore Roosevelt as Deer Flat Bird Reservation as a “preserve and breeding grounds for native birds” (E.O. 1032). In 1937, President Franklin D. Roosevelt revoked Executive Order 1032 and reestablished the Refuge as the Deer Flat Bird Reservation to “further the purposes of the Migratory Bird Conservation Act” and, “as a refuge and breeding ground for migratory birds and other wildlife” (E.O. 7655). Also in 1937, 36 islands in the Snake River were designated as the Snake River Migratory Bird Refuge (E.O. 7691).

In 1940, the Refuge names were changed by Presidential Proclamation No. 2416, to Deer Flat National Wildlife Refuge and Snake River National Wildlife Refuge respectively. In 1963, Public Land Order 3110 transferred all lands of the Snake River National Wildlife Refuge (consisting of 74 islands) to the direct jurisdiction of Deer Flat National Wildlife Refuge. Any lands (including those in the Snake River Islands National Wildlife Refuge) that were added to Deer Flat National Wildlife Refuge assume the purposes for which Deer Flat National Wildlife Refuge was established as well as keeping any individual purposes that were provided at the time of their establishment or acquisition.

Refuge Purposes

“...to further the purposes of the Migratory Bird Conservation Act” and as a refuge and breeding grounds for migratory birds and other wildlife...” E. O. 7655

“... 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 and “... 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 [16 U.S.C. §§ 460k-460k-4], as amended)

National Wildlife Refuge System Mission

“The mission of the National Wildlife 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” (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use

This use is not a priority public use as defined by the National Wildlife Refuge System Improvement Act. Mosquito monitoring and treatment on the Lake Lowell Unit of the Refuge would be conducted by the Canyon County Mosquito Abatement District (CCMAD). The mosquito species documented to be breeding on, or residing on the Refuge, and targeted for monitoring and treatment, are *Culex inornata*, *Culex pipiens*, *Culex tarsalis*, *Culex erythrothorax*, *Ochlerotatus nigromaculus*, *Aedes vexans*, and *Anopheles freebornii*.

The Refuge would allow the CCMAD to continue access to the Refuge for monitoring and controlling mosquitoes to address human health concerns in neighboring communities wherever it does not directly conflict with resource protection needs. The Lake Lowell sector of the Refuge is located in Canyon County near the communities of Nampa and Caldwell, Idaho. CCMAD has been managing the mosquito population around the Lake Lowell Sector of the Refuge since 1998. The presence of Western Equine Encephalitis (WEE) was detected in cattle on ranch property that borders the south boundary of the refuge in 1999. Active arbovirus surveillance in the adult mosquito population was initiated in 2000. In 2006 there was a West Nile Virus outbreak in Idaho. The Lake Lowell Unit accounted for 40% of the positive West Nile pools detected and tested in Canyon County during the 2006 epidemic. In 2010 and again in 2011 there was no disease activity noted in the mosquito population on the Refuge.

CCMAD utilizes Integrated Pest Management principles in controlling mosquito population levels on Deer Flat National Wildlife Refuge and only uses *Bacillus thuringiensis israelensis* (Bti) within Refuge boundaries. CCMAD bases all its mosquito abatement decisions on a comprehensive inspection and surveillance program. Both the larval and adult populations are monitored daily during the mosquito production season. Treatments to the mosquito larvae population are made when dip counts of *Culex tarsalis* reach 5 mosquito larvae per dip/10 dips. Only those areas where monitoring has shown that larval mosquito populations have reached or exceeded predetermined species-specific thresholds would be targeted for treatment.

Mosquito Monitoring

To determine pesticide use on the Refuge larval surveillance is first conducted. Larval surveillance locations are throughout the Refuge in both open areas and areas closed to the public. Thresholds are determined by standard mosquito dipping techniques done in open water, along banks, under vegetation, flooded areas, standing water pools that are shallow, catch basins and shoreline habitat.

A two person inspection team is assigned to the Refuge to monitor mosquito population densities. Inspections are conducted on a daily basis starting in late March or early April, depending on spring time weather conditions. CCMAD monitors larval stage mosquito populations and identifies species using the dipper method which entails using a long-handled ladle dipper to collect water samples from pools potentially serving as mosquito sources. Dipping occurs about every 1-2 weeks wherever there are pools of standing water. Dip counts are used to estimate the numbers of immature mosquitoes and to determine the need for mosquito control.

The monitoring activities described above are conducted under an annual special use permit (SUP) granted by the Service to CCMAD. The Refuge proposes to allow the CCMAD to continue these activities under special conditions set forth in the annual SUP. Post treatment monitoring to determine efficacy of control is conducted in the same way, using dip method for larval counts and mosquito light traps for adults, but more frequently and at and around the specific treatment sites.

Density determinations for *Culex* species (primary disease vectors):

Low: 1-4 larvae per dip.

Medium: 5-10 larvae per dip.

High: > than 10 larvae per dip.

The larvae density action level can be used to determine how much, if any, larval control products are to be used. The following is the Action Level Threshold used by CCMAD on the Refuge:

Low population density: No action taken.

Medium population density: Use 5-7 lbs. per acre of Bti.

High population density: Use 7-10 lbs. per acre of Bti.

Mosquito Control

Currently the only biological control agents used on the Refuge is *Bacillus thuringiensis israelensis* and *B. sphaericus*.

Bti/Bs Agents used:

- VectoMax FG. EPA reg. no 73049-429
- Vectobac GR. EPA Reg. No. 73049-486
- Teknar CG. EPA Reg. No. 73049-19
- Aquabac G. EPA Reg. No. 62637-3

1. Bti liquid products are applied by backpack sprayer or hydraulic power spray equipment if large areas are treated.
2. Before aerial applications are conducted CCMAD will notify the Refuge Manager with action threshold data and map location of proposed aerial application.
3. Treatment site would be posted 24 hours before aerial application is made with the following information and when feasible, applications will be scheduled in the early morning at sunrise.
 - Date and approximate time of application.
 - Pesticide used.
 - Contact Phone Number of CCMAD for any questions.
 - Method of Application: example: Low Flying Aircraft dropping granular product.

Mosquito Treatment (Larvicides/Pupacides)

There are currently five general categories of larvicides/pupacides used for mosquito control in the United States-biological, organophosphate, insect growth regulator, oil and monomolecular film. Temephos is an organophosphate insecticide with broad-spectrum activity and high toxicity toward birds and fish and will therefore not be considered further. Methoprene and diflubenzuron are insect growth regulators. Methoprene poses reduced ecological risk and equivalent efficacy compared to diflubenzuron. Therefore, diflubenzuron will not be considered further. GB 1111 is a petroleum distillate, categorized as an oil. Monomolecular films are an isostearyl alcohol compound.

Larvicides (Bti). Bti is a microbial insect pathogen used to control larval stages of mosquitoes and black flies. It is a naturally occurring anaerobic spore forming bacteria that is mass produced using modern fermentation technology. Formulated Bti products contain bacterial spores and protein endotoxins that are activated in the alkaline mid-gut of insect species and subsequently bind to protein-specific receptors of susceptible insect species, resulting in the lethal response (Lacey and Mulla 1990). Therefore, Bti must be ingested by the target insect to be effective; mosquito pupa and adults are not affected. Bti is available in granular and liquid formulations. The granular formulations are applied at rates of 5-20 pounds of formulated product per acre. The liquid formulations are applied at rates of 0.25-2 pints of formulated product per acre.

Larvicides (Bsp). Like Bti, Bsp is a microbial insect pathogen with a similar mode of action (Walton et al. 1998). Formulated Bsp products used as mosquito larvicides consist of bacterial spores and protein endotoxins. Bsp is available in two granular formulations, Vectolex CG and Vectolex WDG. Vectolex CG is applied at rates of 5-20 pounds of formulated product per acre. Vectolex WDG is applied at rates of 0.5-1.5 pounds of formulated product per acre. Both Bti and Bsp may be applied as a spot treatment to small areas or broadcast over larger areas by ground (e.g., backpack, truck mounted broadcasters) and/or aerial (fixed-wing or helicopter) equipment.

Proposed Use

The Refuge would allow the CCMAD to continue access to the Refuge for monitoring and controlling mosquitoes to address human health concerns in neighboring communities wherever it does not directly conflict with resource protection needs. The Lake Lowell sector of the Refuge is located in Canyon County near the communities of Nampa and Caldwell, Idaho. The Canyon County Mosquito Abatement District has been managing the mosquito population around the Lake Lowell Sector of the Refuge since 1998.

Availability of Resources

Refuge staff responsibilities for projects by non-Service entities will primarily be limited to the following: review of proposals, preparation of Special Use Permit(s) and monitoring of projects to ensure that impacts and conflicts remain within acceptable levels. Administrative, logistical, and operational support may be provided within the station's general operating budget.

Costs marked with an asterisk (*) in the table below represent costs that are also entered into other Compatibility Determinations for activities that will be affected by the research. For instance, studies that determine the quality of wildlife-dependent recreation opportunities will help the Refuge better manage these uses and improve programs. Therefore, the cost will also be reflected in the Compatibility Determinations for each of the wildlife-dependent uses.

Anticipated Impacts of the Use

Specific areas treated, and the aerial extent of treatment, would vary from year to year, depending on mosquito populations and environmental conditions. While most disturbances would be confined to the targeted wetland, some disturbance related to accessing the monitoring and treatment sites is expected to occur in upland and riparian areas. A primary concern for allowing any use to occur on Deer Flat NWR is to ensure that impacts to wildlife and habitat are maintained within acceptable

limits and potential conflicts between user groups are minimized. The discussion below analyzes impacts of the use as proposed under Preferred Alternative 2.

Researchers and scientists are not exempt from the negative impacts that human presence has on wildlife and wildlife habitat. Even death of animals due to the use of lethal collection methods as well as accidental death and injury from trapping, handling and other invasive procedures (pit-tagging, force feeding, and blood collection) can occur. During duck banding efforts it is not uncommon for the rocket nets to kill a few (>5) ducks when deployed. In an extreme example, a study conducted in Utah looking at pronghorn fawn mortality noted that 20% of the fawns died due to abandonment as a result of researcher handling (Beale and Smith 1973). Some level of disturbance is expected with the monitoring and treatment of mosquitos on the Refuge since some of these activities would be conducted in areas that are normally closed to the public. These impacts to Refuge wildlife and habitats will be minimized because Special Use Permits will include conditions to ensure that impacts to wildlife and habitats are kept to a minimum.

The mere presence of humans can cause disturbance to wildlife. The magnitude of the avoidance response may depend on a number of factors including the type, distance, movement pattern, speed, and duration of the disturbance, as well as the time of day, time of year, weather; and the animal's access to food and cover, energy demands, and reproductive status (Knight and Cole 1991; Gabrielsen and Smith 1995, Fernandez-Juricic 2007). Knight and Cole (1991) suggest that sound may elicit a much milder response from wildlife if animals are visually buffered from the disturbance.

Habituation is defined as a form of learning, in which individuals stop responding to stimuli that carry no reinforcing consequences for the individuals that are exposed to them (Alcock 1993). A key factor for predicting how wildlife would respond to disturbance is predictability. Often, when a use is predictable—following a trail or boardwalk or at a viewing deck—wildlife will accept human presence (Oberbillig 2000). Gabrielsen and Smith (1995) suggest that most animals seem to have a greater defense response to humans moving unpredictably in the terrain than to humans following a distinct path.

Some effects would occur through disturbance which is expected with some activities, especially where researchers are entering sanctuaries or sensitive island habitat with colonial nesting birds. Disturbance to breeding, resting and feeding wildlife and their habitats may occur through frequent contact with technicians performing monitoring activities. Results of disturbance could include the abandonment of nest resulting from frequent visitation to nest or breeding sites. Staff (and contracted professionals) conducting research also have the propensity to disturb wildlife with equipment used in current and future inventory and monitoring surveys. Grebes are particularly vulnerable to boats which are used extensively when studying them. Trucks and high powered spotlights may disrupt and confuse nocturnal feeding deer as well as foraging owls during spotlight surveys. Low flying aircraft toting FLIR surveying equipment may also cause a disturbance to Refuge wildlife.

Control of invasive plant species on the Deer Flat NWR is a difficult and never ending battle. Roads and trails often function as conduits for movement of plant species, including nonnative, invasive species (Hansen and Clevenger 2005). Invasive plants on or near these trails would be controlled as part of the Refuge's noxious weed abatement program. Monitoring of invasive species would also be a part of this plan, reducing the potential for invasive species to become newly established on the

trail. Introduction of invasive plants is possible from ground disturbance associated with the transportation of source seed on equipment and personnel.

The majority of negative impacts associated with mosquito abatement at this station would be offset by the positive effects of a strong and viable mosquito control program. Health and human safety both on the Refuge and in the surrounding community are a necessary part of this plan. The mosquito abatement program is an important tool in maintaining environmental health as well as ensuring the quality wildlife-dependent recreation opportunities.

Public Review and Comment

The following is a summary of public outreach from July 2010 – September 2012.

July 15 - September 10, 2010 - First Outreach and Comment Period

- Published Notice of Intent in the Federal Register
- Distributed approximately 1300 copies of Planning Update #1
- Provided informational presentations to 26 local organizations
- Held evening call-in hours the 2nd and 4th Wednesdays of the month
- Held open houses July 28, and August 20 & 21
- Contacted visitors over 8 days in July and August - Handing out over 700 flyers
- Over 1000 comments were received

September 23- 25, 2010 - Work Sessions

- Invited stakeholders to brainstorm potential solutions to key management issues.

May 27, 2011 - July 29, 2011 - Preliminary Draft Alternatives Outreach and Comment Period

- Distributed Planning Update #3 to the mailing list
- Provided informational presentations to 28 local organizations,
- Held open houses on June 3 & 4, July 8 & 9,
- Attended local festivals
- Almost 350 comments were received

April 2012 – May 2012 - Draft Alternatives Outreach and Comment Period

Determination

Use is Not Compatible

Use is Compatible With Following Stipulations

Stipulations Necessary to Ensure Compatibility

Mosquito monitoring and abatement activities have the potential to disturb wildlife and the habitat on which they rely. In order to minimize impacts, to the greatest extent possible, the following stipulations would be put in place to ensure compatibility:

- The minimum number of samples (e.g., water, soils, vegetative litter, plants, macroinvertebrates, and vertebrates) will be collected for any project.
- Mosquito abatement will be conducted under a Special Use Permit which will have additional project-specific stipulations. All Special Use Permits will have a definite termination date in accordance with 5 RM 17.11. Renewals will be subject to Refuge Manager–review of research data, status reports, compliance with compatibility determination, Special Use Permit stipulations, and other permits
- All chemicals used for mosquito abatement activities must be presented as part of the annual SUP and approved by USFWS personnel prior to use.
- CCMAD are responsible for acquiring and/or renewing any necessary state and federal permits prior to beginning or continuing their project.
- A Section 7 consultation under the Endangered Species Act would be required for activities that may affect a federally threatened, endangered, or proposed species.
- If monitoring or spraying can only be conducted during a sensitive or critical time, (i.e. the breeding season) it will only be permitted where there are specific protocols to minimize disturbance.
- If unacceptable impacts or issues arise or are noted by Refuge staff, the Refuge Manager can suspend/modify conditions/terminate on-refuge activities that is already permitted and in progress.
- Status updates and situation reports are required at least annually, and final reports are due within one year of the completion of the seasonal abatement efforts, unless negotiated otherwise.
- At any time, Refuge staff may accompany the mosquito abatement technicians.
- Highly intrusive or manipulative activities are generally not permitted in order to protect wildlife populations and habitat.
- Mosquito abatement or monitoring activities in sensitive areas may be denied, depending on the specific circumstances.
- All Refuge rules and regulations (CFR 50) must be followed unless otherwise accepted in writing by Refuge management.
- Extremely sensitive wildlife habitat areas will be avoided unless sufficient protection is implemented to limit the area and/or wildlife potentially impacted by activities.
- Research activities will be modified to avoid harm to sensitive wildlife and habitat when unforeseen impacts arise, such as a wildfire altering landscape conditions or large declines in a population.

- All samples and specimens collected from the Refuge are Refuge property. Service personnel shall be provided access to the samples and specimens at any time at no cost (unless arrangements are made to the contrary).
- The Refuge Biologist will review all research proposals and identify any conditions of the research permits that eliminate or minimize negative impacts to any one area, species, or habitat of the Refuge. The Refuge Biologist will make a recommendation to the Refuge Manager on whether the research should occur, based on weighing of benefits and impacts.
- Research requiring the collection of animals will only be authorized after careful consideration by the Refuge Biologist and Refuge Manager as to the importance of Refuge populations to the conservation of the species, the possible adverse impacts to the Refuge populations, and the humaneness of the collection methodology.
- Refuge staff will monitor mosquito abatement projects to ensure that on-going research is not causing long term habitat damage or impacting any animal populations.

Justification

Mosquito inventory/monitoring and abatement efforts on refuge lands are inherently valuable to the Service because they will expand scientific and environmental health information available for resource management decisions. By allowing the use to occur under the stipulations described above, it is anticipated that wildlife species that could be disturbed during the use would find sufficient food resources and resting places outside of disturbed areas, so their abundance and use will not be measurably lessened on the Refuge.

Refuge monitoring and research can contribute to improved management of fish, wildlife, plants and their habitat, visitor services programs, and cultural resources through the application of knowledge gained. Biological integrity, diversity and environmental health will benefit from scientific research conducted on natural resources at the Refuge as provided in the 1997 Improvement Act. It is anticipated that monitoring of research projects, as needed, will prevent unacceptable or irreversible impacts to wildlife and their habitats, and therefore, these projects will not materially interfere with or detract from fulfilling refuge purposes; contributing to the mission of the NWRS; and maintaining the biological integrity, diversity, and environmental health of the Refuge or the National Wildlife Refuge System.

The Refuge manager and biologist will ensure that proposed monitoring and research investigations will contribute to the enhancement, protection, conservation, and management of native wildlife populations and their habitats on the Refuge, thereby helping the Refuges fulfill the purposes for which they were established, as well contributing to the mission of the Refuge System.

Mandatory Reevaluation Date

 X/XXXX Mandatory 10-year Reevaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision

 X Environmental Impact Statement and Record of Decision

References

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- Knight, R. L. and D. N. Cole. 1991. Effects of recreational activity on wildlife in wildlands *in* *Transactions of the North American Wildlife and Natural Resources Conference*. 56:238-247.
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Compatibility Determination for Mosquito Management (B.13)

Prepared by: _____
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Concurrence:

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