Signed Compatibility Determinations

Cooperative Farming as a Habitat Management Tool to Enhance and Restore Refuge Grasslands
Environmental Education, Interpretation, and Special Events
Haying for Habitat Management
Prescribed Grazing for Habitat Management
Recreational Fishing
Recreational Hunting
Research, Scientific Collecting, and Surveys by Third Parties
Walleye Rearing in Clifford Lake
Wildlife Observation and Non-Commercial Photography
Wood Cutting and Timber Removal

COMPATIBILITY DETERMINATION

Use: Cooperative farming as a habitat management tool to enhance and restore refuge grasslands

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: Cooperative farming is the term used for cropping activities done by a third party on land which is owned or controlled by the U.S. Fish and Wildlife Service (Service) through a restrictive easement. This type of activity is usually done on a short-term basis (five years or less) to prepare an optimum seed bed for the establishment of native prairie species.

The cropping is done under the terms and conditions of a Special Use Permit issued by the Refuge Manager. The term of the Permit ensure that all current Service and refuge guidelines and restrictions are followed. Permittee selection and associated determination of cost will follow relevant Refuge Manual guidance (5 RM 17 and 6 RM9.11) and Region 3-specific guidance for farming.

Cooperative farming activities are only compatible on previously disturbed areas which have unacceptable levels of chemical residue, noxious weeds, or non-native plant species or ecotypes or to honor the land use clauses of a purchase agreement. To ensure that all Service policies are met, all such land use clauses must be approved by the Refuge Manager prior to Service acceptance of the purchase agreement.

Recent refuge parcel acquisitions in Minnesota average less than 200 acres in size and are often intermingled with private and other public lands. Although the specific acreage of fields to be cooperatively farmed will vary by unit, they will typically range from a few acres to 200 acres.

Contracts are typically written for 3-5 years. In many cases the Service acquires new land that

is currently being cropped. The cropland needs to be restored to native habitat once the land is purchased. When converting poor quality habitat to better quality habitat, the cooperator breaks up the ground the first year and then farms it for the following 2-4 years. The last year of the agreement, in both cases requires the cooperator to seed the field to soybeans. Soybean stubble is the preferred substrate to seed native grasses and forbs into the soil.

Farming entails the use of mechanical equipment such as tractors, disks, and seeders. Each site is tilled prior to spring planting. Tilling requires 1-2 days per site. Some sites may also be treated with herbicide prior to planting. Crops such as corn and soybeans are planted. Typically, planting is completed in one day or less on any individual site and planting on all sites usually begins as early as late April and is completed as late as mid-June, depending on soil conditions and type of crop planted. Cooperators are limited to using only FWS approved herbicides. The use of Genetically Modified Crops (GMO crops), specifically Glyphosate-tolerant corn and soybeans, will be authorized on refuge lands consistent with current Regional policy. The use of genetically modified, Glyphosate-tolerant corn and soybeans will be used only for the purpose of habitat restoration.

As of 2016, the use of neonicotinoid treated seeds is not allowed in farming programs within Region 3 of the Service.

Harvest techniques are the same for both no-till and traditional farming practices. Harvest begins in the fall, using a self-propelled harvesting implement such as a combine, and usually takes about one day per site and is complete on all sites by late October.

Availability of Resources: The needed staff time for development and administration of cooperative farming programs is already committed and available. Most of the needed work to prepare for this use would be done as part of routine grassland management duties. The decision to use a cooperative farmer would occur as part of strategies developed under grassland development and management discussions. The additional time needed to coordinate issuance and oversight of the needed Special Use Permit is relatively minor and within existing station resources.

The cooperative farming of Service land will in most cases generate income for the Service. In accordance with Service policy, some of the farming income may be reduced to achieve the ultimate purpose of the agreement (grassland cover) by having the cooperator purchase seed or apply herbicide for the grassland restoration as the final step of the farming agreement. All farming income received will be submitted for deposit in the Refuge Revenue Sharing Account and is not available at the Refuge level to offset station costs incurred in administration of this use. All Service employees involved in the administration of the program must however be sensitive to the primary purpose of cooperative farming; providing an optimum seed bed for native prairie plant species. The Service should receive a fair market value from cooperative farmers, but generation of income is a secondary consideration when developing the terms and conditions of a cooperative farming agreement.

To lessen any appearance of favoritism or impropriety Refuge Managers should document how cooperators were selected and how rental rates were derived (see Refuge Manual).

Anticipated Impacts of the Use:

How does farming affect Refuge purposes and the NWRS mission? The use of farming provides Refuge staff with a management tool that allows them to meet their goals and objectives. Service policy calls for maintaining or restoring refuge habitats to historic conditions if doing so does not conflict with refuge purposes (U.S. Fish and Wildlife Service 2001).

How does farming affect fish, wildlife, plants, and their habitats; and the biological integrity, diversity, and environmental health of the refuge/NWRS? Cooperative farming to prepare suitable seed beds for native prairie plantings will result in short-term disturbances and long-term benefits to both resident and migratory wildlife using refuges. Short-term impacts will include disturbance and displacement typical of any noisy heavy equipment operation. Cropping activities in old fields or abandoned croplands will also result in short-term loss of habitat for any animal or insect species using those areas for nesting, feeding, or perching. Long-term benefits are extremely positive due to establishment of diverse nesting cover, including native tallgrass species. The resulting habitat will greatly improve conditions for most of the same species affected by the short-term impacts. Strict time constraints placed on this use will limit anticipated impacts to these relatively minor areas.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the CDs. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Cooperative farming agreements will be limited to five years or less.
2. Farming activity will only take place on previously altered tracts of land within the refuge and must meet specific habitat and related wildlife objectives and contribute to the purposes of the Refuge.
3. Cooperative farmers will be subject to Service policy and regulation regarding use of chemicals. Herbicide and pesticide use is restricted by type and to the minimum necessary amount applied.
4. Special conditions of Special Use Permits will address unique local conditions as applicable.
5. Planting and harvest activities are restricted to minimize disturbance of wildlife species.
6. The use of GMO crops is limited to Glyphosate-tolerant corn and soybeans.
7. The use of genetically modified, Glyphosate-tolerant corn and soybeans will be used only for the purpose of habitat restoration.
8. Adhere to the Region 3 Farming Program Guidelines, including the prohibited use of neonicotinoid treated crop seeds.

Justification: Farming, both conventional and with the use of Glyphosate-tolerant corn and soybeans, contributes to the achievement of the station's purposes and the NWRS mission because it helps enhance and restore grassland habitat for migratory birds and resident wildlife. The cooperative farming of previously disturbed areas which are owned or under easement by the Service and have acceptable levels of chemical residue, noxious weeds, or non-native plant species or ecotypes or are being farmed to honor the land use clauses of a purchase agreement to prepare an optimum seed bed

for the establishment of native prairie species, will not materially interfere with or detract from the fulfillment of the NWRS mission or the purposes of Rydell or Glacial Ridge NWRs for the following reasons:

1) Only areas that have already been significantly manipulated or altered by cropping activates will be affected. These areas contain few if any native plants and offer extremely limited value to the ecological integrity of the unit or landscape.

2) Cooperative farming activities, in most cases, provide the fastest, most cost-effective way to establish native prairie species on areas that have unacceptable levels of chemical residue, noxious weeds, or non-native species or ecotypes. Refuge staff could complete all work, but for many refuges that would require additional equipment and/or staff to efficiently break up non-native brome sod, or to cultivate and control weeds on small tracts of land. Hiring contractors to do this work at rates which can approach $100/acre is a possibility, but would require additional funds in years when farming acres are high. By using local farmers to conduct these farming activities, refuge budgets and staff time can be better allocated to completing the needed restoration (seeding native grasses and forbs) on lands which have completed the farming cycle and are in good condition for seeding.

3) Short-term impacts of farming small tracts of land are minor. No wildlife or habitat losses occur when land purchased in row crop is farmed for an additional period of 2-5 years. Low quality grassland which is farmed as a first step to conversion to higher-value native grasslands will result in habitat loss for trust resources during the farming period. However, the long-term benefits to the ecological integrity of the refuge and the landscape by restoring these degraded or row-cropped areas to native prairie plant species are significant and exceed the short-term losses incurred through the cropping process.

Signature: Refuge Manager: Gregory A. Knutsen 1/4/2016
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2026

COMPATIBILITY DETERMINATION

Use: Environmental Education, Interpretation, and Special Events

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: Presently, environmental education and interpretation activities contribute nearly 850 visitors each year to the Rydell NWR alone. Typically, use occurs between September and June, by both individual school classes and large groups during educational field days (e.g., Envirathon). Environmental education and interpretation programs focus on prairie and wetland habitat including, but not limited to, wildlife, history, archaeology, and culture. Wildlife ecology programs address a number of wildlife conservation issues including wetland and prairie conservation, migratory bird management, and endangered species conservation. Programs also relate to the development of outdoor skills, which enhance appreciation of wildlife and the habitats they live in. Over the last 10 years, Rydell NWR has become increasingly popular as an outdoor classroom. Non-staffed activities include bird watching, and plant and animal observation. The Refuge provides public facilities which support environmental education and interpretation, including a visitor center, observation decks, and hiking trails. Students and teachers may also choose to participate in coordinated restoration, and monitoring programs through educational long-term monitoring studies. Special events may include, but are not limited to refuge "open houses" that allow for educational opportunities to the general public on a variety of topics, hunting and/or fishing workshops for area youth, and Citizen Science events, such as the Audubon Christmas Bird Count.

Availability of Resources: The current staffing level allows for the current level of environmental education, interpretation, and special events, if permanent refuge staff are supplanted with support from Agassiz NWR's Visitor Service Specialist, and seasonal employees. Expansion (e.g., depth and

number of programs) of the above services are limited by the current staff level. Maintaining the public use facilities which support environmental education is part of routine management duties and staff and funding is available. In an effort to maintain environmental education, interpretation, and special event programs, refuge staff may work with partners to identify training opportunities for volunteers to help maintain or broaden wildlife- and habitat-based programing.

Anticipated Impacts of the Use: There is some temporary disturbance to wildlife due to environmental education activities, interpretation, and special events. However, the disturbance is local, temporary, and not thought to be detrimental to individual animals or wildlife populations. Minimal habitat is disturbed during activities and the impacts are short-term. Future increases in facilities and participants would cause some displacement of habitat and increase in disturbance, but this is negligible given the controlled nature of environmental education programs and the large size of the NWR landbase. Control of the areas used by groups would avoid or minimize intrusion into sensitive habitats or wildlife areas.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the compatibility determinations. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Environmental education/interpretation activities not lead by Refuge staff will require, at a minimum, verbal approval by the Refuge Manager to minimize conflicts with other groups, safeguard students and resources, and to allow tracking of use levels. A special use permit may be utilized by the Refuge Manager, at his/her discretion.
2. Students and teachers will continue to be instructed on the best methods to view wildlife with minimal disturbance.
3. Youth educational groups are required to have a sufficient number of adults to supervise their groups.
4. Increased communication with teachers who conduct their own activities on the Refuge will help to educate them about minimizing wildlife disturbance.

Justification: Most environmental education will occur at, or be directed to, existing and future facilities in strategic locations providing quality opportunities, while limiting wildlife and habitat disturbance. Disturbance to wildlife is also limited by the size and remote nature of the refuges. Many species have also grown tolerant of human presence, due to railroads and right-of-ways. Disturbance is also generally short-term and only temporarily displaces wildlife, and adequate adjacent habitat is usually available for them. The approval process for groups will limit disturbance to wildlife and ensure avoidance of sensitive areas. Numerous other stipulations will be in place to facilitate these uses, while reducing direct and indirect impacts.

As one of the six Priority Public Uses of the Refuge System, this use is to be encouraged when compatible with the purposes of Rydell and Glacial Ridge NWRs. The refuges provide outstanding environmental education opportunities and interpretation opportunities, due to the diversity of wildlife and habitat that exist, as well as the number of natural resource "issues" refuge staff face. For example, increasing concerns with invasive species provides a subject for environmental education exploration. The extensive educational community which borders the refuges desires more opportunities for hands-on experimental learning. Educating students of all ages about the refuges' natural resources and related challenges is an important way to influence the future well-being of priority habitats. Only through understanding and appreciation will people be moved to personal and collective action to ensure healthy public lands for the future.

Signature: Refuge Manager: Gregory A. Knutsen 12/1/15
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2030

COMPATIBILITY DETERMINATION

Use: Haying for habitat management

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: Glacial Ridge and Rydell NWRs will allow haying by private individuals for the purpose of habitat management on refuge land.

Is this use a priority public use? Haying is not a priority public use of the NWRS.

Where would the use be conducted? The decision to use haying as a management tool on refuge lands will occur as part of strategies developed under specific program or unit habitat management planning. The total area on which haying will be permitted during any one year will typically be less than 1,000 acres.

When would the use be conducted? Haying operations typically occur after August 1 with bales and equipment being removed no more than 7 days post-haying. In some cases where certain "weed species" (e.g., sweet clover) have invaded an area, earlier haying may be allowed.

How would the use be conducted? The station will allow haying by private individuals for the purpose of habitat management. Permittee selection and associated determination of cost will follow relevant Refuge Manual guidance (5 RM 17 and 6 RM9.11) and Region 3-specific guidance for haying and grazing. Haying is the cutting and processing (typically baling) of grass, forbs, cattails, or woody vegetation, with subsequent removal to an off-refuge location. Haying of an area is usually conducted as a single event during any one year, but may be repeated periodically to: remove undesirable grasses or forbs; remove accumulated plant biomass; remove or reduce woody vegetation; provide a desired vegetative condition

(such as short grass browse); reduce vegetation fuel levels where wildfires are a concern; prepare sites for establishment of desired vegetation, including prairie or wetland communities, reduction of dense emergent growth and invasive plant suppression in wetlands; or may be a best management option should other planned management alternatives (e.g., grazing, fire) not be available or feasible.

Haying activities will be subject to the terms and conditions of a Special Use Permit issued by the Refuge Manager. The terms of the Permit will ensure compatibility through implementation of Service policy and refuge-specific stipulations.

The haying process typically required 3-4 visits to each site with heavy equipment over a period of 7-10 days. Haying begins in late July when standing grasses and forbs are cut and gathered into windrows using a tractor, mower, and rake; or a swather – a self-propelled mowing machine. The hay cures for 3-7 days to reduce moisture content, and is occasionally turned once with a tractor-drawn rake to speed and even drying. Once cured, a tractor-drawn baler is used to package the windrows into bales of hay. A tractor-drawn wagon is typically used to collect the bales and remove them from the site.

Why is this use being proposed? Haying is a necessary management tool to maintain and restore refuge grassland and wetland habitats.

Availability of Resources:

What resources are needed to properly (considering quality and compatibility) and safely administer use? Most of the needed work to prepare for this use would be done as part of routine management duties. The decision to use haying as a management tool would occur as part of strategies developed under specific program or unit habitat management planning. The additional time needed to coordinate issuance and oversight of the needed Special Use Permit is relatively minor and within existing station resources. The need to monitor having effects will take additional time; however, it will be incorporated into the existing grassland monitoring program.

Are existing refuge resources adequate to properly and safely administer the use? No additional fiscal resources are needed to conduct this use. The needed staff time is already committed and available. Most of the needed work to prepare for this use would be done as part of routine grassland management duties. The decision to use a private operator for haying would only follow as part of the strategies developed under grassland management discussions. The additional time needed to coordinate issuance and oversight of the needed Special Use Permit for haying is relatively minor and within existing refuge resources. Monitoring haying effects will be a part of the existing grassland monitoring program.

Anticipated Impacts of the Use:

How does haying affect Refuge purposes and the NWRS mission? The use of haying provides Refuge staff with a management tool that allows them to meet their goals and objectives. Service policy calls for maintaining or restoring refuge habitats to historic conditions if doing so does not conflict with refuge purposes (U.S. Fish and Wildlife Service 2001).

How does haying affect fish, wildlife, plants, and their habitats; and the biological integrity, diversity, and environmental health of the refuge/NWRS? Haying will result in short-term disturbance and benefits as well as long-term benefits to both resident and migratory wildlife. Short-term impacts will include disturbance and displacement typical of any noisy heavy equipment operation. Cutting and

removal of standing grasses will also result in short-term loss of habitat for those species requiring tall grasses for feeding and perching , such as obligatory grassland bird species. Short-term benefits may include creating open water pockets for spring migrating waterfowl and shorebirds; setting back invasive emergent wetland vegetation, and creating short grass patches within a prairie landscape for bird species that prefer structural diversity in the landscape.

Long-term benefits will accrue due to the increased vigor of newly established grasses or the establishment of highly desirable native tallgrass prairie species, which will improve conditions for those same species affected by the short-term negative impacts. Longer-term negative impacts may occur to resident wildlife species, such as prairie grouse, which may lose over-wintering habitat in hayed areas. This is offset by the fact that the entire refuge will not be hayed, leaving unhayed blocks containing suitable winter habitat near the area that will be hayed.

Some nest destruction or nesting hen mortality may occur. Strict time constraints, such as delaying haying until after August 1 will limit the potential for these types of negative effects to occur within hayed areas. Refuges are managed first and foremost for wildlife (USFWS 2001). But, the focus is on wildlife populations, not individuals (USFWS 1992). Haying is likely to cause mortality of some individual animals, but is not expected to negatively affect the perpetuation of wildlife populations.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the CDs. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Haying must help meet specific habitat and related wildlife objectives and contribute to the purposes of Glacial Ridge and Rydell NWRs.
2. Haying will typically be initiated after August 1 to minimize disturbance to nesting birds, unless an earlier initiation date is documented by a specific management objective in a station plan or a written justification by the project leader is attached to the current CD. Haying should be delayed as late as possible to minimize negative effects to wildlife.
3. Windrowed grass left lying to dry prior to baling must be raked and moved every two days if left on newly seeded native grass and in no cases should remain on the ground more than six days prior to being baled.
4. All equipment and bales must be removed from the refuge within 7 days of baling.
5. A goal of 30-50% of similar habitat type in the management unit or adjacent areas should be left unhayed when feasible to serve as refugia for pollinators and other wildlife. Refugia locations should be planned taking foraging flight ranges of pollinators into consideration.
6. No single area should be hayed more than once per year to allow time and space for pollinator populations to recover, unless there's a specific management objective identified in a station plan or a written justification by the refuge manager is attached to the current CD.

Signature: Refuge Manager: Gregory A. Knutsen 1/4/2016
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2026

COMPATIBILITY DETERMINATION

Use: Prescribed Grazing for Habitat Management

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: Glacial Ridge and Rydell NWRs will permit prescription grazing by domestic livestock, chiefly cattle but potentially including other domestic livestock, on refuge lands to improve grassland vigor and health. The use of grazing as a management tool must include a habitat management purpose.

Is the use a priority public use? Grazing is not a public priority use as defined in the Refuge Improvement Act.

Where would the use be conducted? The decision to use grazing as a management tool on either Glacial Ridge NWR or Rydell NWR will occur as part of strategies developed under specific program or unit habitat management planning.

When would the use be conducted? Grazing may take place any time from April through November. Most commonly, we will use short duration grazing pulses lasting from four to eight weeks and then require livestock removal from a specific cell or unit. We will typically allow three different seasons of use. One season will be spring (mid-April to early June) on native prairie or seeded native grasses designed to reduce the vigor of exotic species and increase the vigor of native species. Summer grazing (July 15 – September 1) maybe used to stimulate the grassland after the peak nesting season, yet allow vegetative regrowth in the fall. Fall grazing (September 1 – October 31) will be designed to have effects similar to spring grazing, mostly on native prairie remnants of fields seeded with native tallgrass prairie species.

How would the use be conducted? The Refuge will allow grazing by private individuals for the purpose of habitat management. Permittee selection and associated determination of cost will follow relevant Refuge Manual guidance (5 RM 17 and 6 RM9.11) and Region 3-specificguidance for grazing.

Prescribed grazing is recognized as a valuable tool to stimulate forbs, suppress non-native grasses, remove standing vegetation, reduce vegetative litter, and suppress woody vegetation. The timing and duration of a grazing prescription will depend on the grassland type and condition. In native prairie, a technique referred to a "spring flash grazing" is often used, where a unit is grazed at a relatively high stocking rate for a short duration (4-6 weeks). Spring grazing is useful in a grassland system where the goal is to reduce invasive cool-season grasses and promote native warm-season plants. It has a similar effect as a spring fire, helping to reduce cool-season grasses (especially smooth brome), while promoting native warm-season plants. Typically, a grazing plan will include a flash graze in consecutive springs.

In low diversity, seeded grasslands that are dominated by either warm-season or cool-season grasses, a summer graze may be used. In these situations the intent of the graze is to stimulate the grass stand and reduce litter build-up, rather than to reduce the cover of a target species. The duration and intensity would be fairly similar to that of a spring graze (high stocking rate, 4-6 weeks).

Grazing with domestic cattle is most common; however we can use other livestock, such as sheep or goats, depending on the grazing goals for a specific unit. It is important to understand which plant species are preferred by the type of livestock being used. For example cattle will favor herbaceous species over woody vegetation, whereas goats aggressively target woody vegetation, making them an excellent option for shrub control.

Grazing activities will be subject to the terms and conditions of a Special Use Permit issued by the Refuge Manager. The terms of the Permit will ensure compatibility through implementation of Service policy and refuge-specific stipulations. Frequency of grazing on any unit will be based on site-specific evaluation of the grassland unit being managed.

Why is this use being proposed? Grazing is a necessary management tool to maintain and restore refuge grassland and wetland habitats. Some alternative grassland management is required if we do not use grazing as a tool. Typically, these other tools include prescribed burning, mowing, and haying. Haying has comparable costs to controlled grazing since it also requires administering a Special Use Permit. Mowing is often more expensive, since all costs are typically the responsibility of the agency. Prescribed burning is an effective grassland management tool, but staff limitations prevent us from burning our desired number of acres.

Availability of Resources:

What resources are needed to properly (considering quality and compatibility) and safely administer use? Most of the needed work to prepare for this use would be done as part of routine management duties. The decision to use grazing as a management tool would occur as part of strategies developed under specific program or unit habitat management planning. The additional time needed to coordinate issuance and oversight of the needed Special Use Permits is relatively minor and within existing station resources. The need to monitor grazing effects will take additional time; however, it will be incorporated into the existing grassland monitoring program at this station. Many partners are available to assist with grazing plan development, such as our local NRCS grazing specialists.

Are existing refuge resources adequate to properly and safely administer the use? Additional fiscal resources are needed in order to install much of the needed infrastructure to implement this use. Many times the cooperator is willing to commit labor to the project, thus materials for fencing are typically the greatest expense. Grans and partner funds can also assist with this need. The needed staff time is already committed and available. Most of the needed work to prepare for this use would be done as part of routine grassland management duties. The decision to use a private operator for grazing would only follow as part of strategies developed under grassland management discussions. The additional time needed to coordinate issuance and oversight of the needed Special Use Permit for grazing is relatively minor and within existing refuge resources. Monitoring grazing effects will be a part of the existing grassland monitoring program.

Anticipated Impacts of the Use:

How does grazing affect Refuge purposes and the NWRS mission? The use of grazing provides Refuge staff with a management tool that allows them to meet their goals and objectives. Service policy calls for maintaining or restoring refuge habitats to historic conditions if doing so does not conflict with refuge purposes (U.S. Fish and Wildlife Service 2001).

How does grazing affect fish, wildlife, plants, and their habitats; and the biological integrity, diversity, and environmental health of the refuge/NWRS? Grazing by domestic livestock has substantial short-term effects on grassland communities. Many of these effects are desirable and are designed to maintain and improve healthy grassland/wet meadow communities. Some of these effects include removing standing vegetation, trampling of other vegetation, and reducing populations of pioneering woody plants. Other effects, such as where livestock may frequently congregate, are more harmful but generally short-lived. Grazing in the spring can cause direct loss of grassland bird nests due to trampling and loss of standing vegetation. Grazing at any time of the year creates an aesthetic issue of concern for some people who enjoy using the Refuge; seeing public land being grazed by domestic livestock reduces the appeal of the visit for some people. Short-term benefits may include creating open water pockets for spring migrating waterfowl and shorebirds, setting back invasive emergent wetland vegetation, and creating short-grass patches within a prairie landscape for bird species that prefer the structural diversity in the landscape.

Some nest destruction may occur. Refuges are managed first and foremost for wildlife (USFWS 2001). But, the focus is on wildlife populations, not individuals (USFWS 1992). Grazing is likely to cause mortality to some individual animals, but it is not expected to negatively affect the perpetuation of wildlife populations.

Long-term benefits will accrue due to the increased vigor stimulated grasses or the establishment of highly desirable native tallgrass prairie species, which will improve conditions for those same species affected by short-term negative impacts. Prescribed grazing is recognized as a valuable tool to stimulate forbs, suppress non-native grasses, remove standing vegetation, reduce vegetative litter, and suppress woody vegetation. These are all important grassland management objectives that can be met by utilizing grazing as a habitat management tool.

Grazing livestock can create minor direct disturbance of wildlife, such as causing nearby birds to take flight. Also, there is a slight potential for conflict between members of the public and livestock or the permittee.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the CDs. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Grazing must help meet specific habitat and related wildlife objectives and contribute to the purposes of the Refuge.
2. Grazing will not occur more frequently than three out of every five years on any tract unless there is a specific management objective identified in a station plan or a written justification by the project leader is attached to the current CD.
3. Control and maintenance of the livestock will be the responsibility of the permittee.
4. All livestock grazing will be conducted under strict control of a Special Use Permit.
5. Fencing, water supply, and other livestock management infrastructure needs and costs will be outlined on a site by site basis in the Special Use Permit.
6. Any use of cattle insecticides must adhere to current Region 3 Pesticide Use Guidance.
7. No supplemental feeding will be allowed, unless specified in the Special Use Permit.
8. A goal of 30-50% of similar habitat type in the management unit or adjacent areas should be left ungrazed when feasible to serve as refugia for pollinators and other wildlife.
9. Consider the needs of pollinators and other wildlife when placing range improvements on the landscapes, such as salt/mineral blocks, watering tanks, and holding corals.

Justification: Prescribed grazing by domestic livestock will not materially interfere with or detract from the purposes for which the units were established. Limited livestock grazing creates temporary disturbances to vegetation. Many of these disturbances are desirable for grassland management. Grazing produces an undesirable short-term impact to grassland bird nesting and site aesthetics. Controlled grazing is an alternative management tool that can be used to replace or compliment prescribed burning, mowing, or haying on grasslands. Without occasional disturbance caused by mowing, haying, burning, or grazing, the health of the grassland community would decline, as would the areas' potential for waterfowl production.

Signature: Refuge Manager: Gregory A. Knutsen 1/4/2016
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2026

COMPATIBILITY DETERMINATION

Use: Recreational Fishing

Refuge Name: Rydell National Wildlife Refuge

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

Description of Use: The Refuge allows public recreational fishing in accordance with state regulations and seasons and applicable Refuge regulations. Fishing activities are restricted to access from the established accessible fishing piers on Tamarac Lake. The fishing season on the Refuge runs from May 1 to November 1 each year. The area which is open to fishing can only be accessed on foot or bicycle. Vehicle access to the fishing area is not allowed.

Availability of Resources: Anglers use the existing network hiking trails to access the piers on Tamarac Lake fishing. The Refuge provides adequate signage to assist anglers. The Refuge provides staff to maintain facilities, disseminate information to visitors, and enforce regulations. Fisheries management is conducted in cooperation with the Minnesota DNR. Adequate resources are available to manage the existing fishing program at the current level of participation.

Anticipated Impacts of the Use: Allowing this activity will not likely result in negligible environmental impact to the Refuge, its habitats or wildlife species. Concerns primarily center on the possibility of impacting non-target species through excessive disturbance. With restrictions limiting fishing access to one specific portion of the Refuge and only from designated piers, disturbance is greatly minimized. Disturbance to wildlife is limited to occasional flushing of non-target species and the harvest of individual members of the species open to the recreational fishing. Harvests during fishing activities are covered by state regulations. Restrictions to the fishing program will assure that this activity has no adverse impacts on other wildlife species and little adverse impact to other public use programs. The activities follow all applicable laws, regulations and policies; including Migratory Bird Conservation Act, 50 CFR, National Wildlife Refuge System Manual, National Wildlife Refuge System goals and objectives, and Rydell NWR goals and objectives. These activities are consistent with the purpose of the Refuge and the National Wildlife Refuge System Mission.

Fishing is a priority public use listed in the National Wildlife Refuge System Improvement Act. By facilitating fishing on the Refuge, we will increase knowledge and appreciation of fish and wildlife among program participants, which will lead to increased public stewardship of wildlife and their habitats. The

increased public stewardship will support and complement the Service's actions in achieving the Refuge's purposes and the mission of the National Wildlife Refuge System.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the CDs. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. This use must be conducted in accordance with state and federal regulations, and applicable special Refuge regulations.
2. Access by designated trails only.
3. No motorized vehicles or boats are allowed.

Justification: Fishing seasons and limits are established by the state and adopted by the Refuge. These restrictions ensure the continued well-being of overall populations of fish. Fishing does result in the taking of many individuals within the overall population, but restrictions are designed to safeguard adequate population and recruitment from year to year. Disturbance to other fish and wildlife does occur, but this disturbance is generally short-term and adequate habitat occurs in adjacent areas.

Allowing this use also furthers the mission of the National Wildlife Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources on the Refuge.

Signature: Refuge Manager: Gregory A. Knutsen 12/1/15
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2030

COMPATIBILITY DETERMINATION

Use: Recreational Hunting

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: As described in the Glacial Ridge NWR Hunt Plan, allow the hunting of white-tailed deer, waterfowl (ducks, geese and coots), other migratory birds (rails, snipe, woodcock, mourning doves) and upland game (prairie chicken and sharp-tailed grouse) as compatible with the purpose for the establishment of the Refuge and where appropriate, in concurrence with State of Minnesota regulations.

As described in the Rydell NWR Hunt Plan, allow the hunting of white-tailed deer during a special hunt for disabled persons, a special hunt for mentored youth hunters under the age of 16, and hunts during the regularly established hunting seasons as necessary, through a drawing. Numbers of hunters allowed to access Rydell NWR will depend on the estimated desired harvest of deer to maintain the herd within the carrying capacity of the Refuge. Additional special management hunts may be conducted through special drawings and permits.

The above hunting will occur on Refuge lands, specifically identified within the Congressionally approved boundary and as outlined in the Hunting Management Plans and as indicated on the Rydell and Glacial Ridge NWR hunt maps. Adding new lands, species, or hunts requires submission of an opening package through established channels, including announcement in the Federal Register.

All hunting activities follow applicable state & federal laws and seasons, except where the Refuge administers further restrictions to ensure compliance with Refuge-specific laws and compatibility issues. All hunting activities can only occur in designated areas identified in Hunting Management Plans and as indicated on the Rydell and Glacial Ridge NWR hunt maps.

Availability of Resources: The Rydell and Glacial Ridge NWRs are complexed under the Detroit Lakes Wetland Management District and Glacial Ridge NWR Complex. Funding allotted to Rydell and Glacial Ridge NWRs will be used to manage the hunt, including: coordination with Minnesota Department of Natural Resources, completion of necessary surveys, and placement of signs. Law enforcement activities would be completed through a Service Law Enforcement Officer stationed in Detroit Lakes and Minnesota DNR Conservation Officers. The availability of station resources (e.g., funding, staff) to continue to support hunting programs at their current levels on both Rydell and Glacial Ridge NWRs will be re-evaluated on an annual basis.

Anticipated Impacts of the Use: Disturbance to wildlife during the hunting season by hunters is an anticipated effect. Disturbance by vehicles will be limited, as off-road travel will not be permitted on either refuge. Special access accommodations for persons with disabilities will be minimal, utilizing existing trails.

As indicated in the Rydell and Glacial Ridge NWR Hunting Plans, adjustments to the species hunted and harvestable limits will be annually evaluated by both Minnesota DNR and Service staff, based on the best available information. For both Rydell and Glacial Ridge NWRs, a portion of each refuge is closed to hunting to provide a non-hunting sanctuary area, as well as recognize potential safety issues (e.g., hunting proximity to occupied refuge facilities). These areas are outlined in the respective Hunt Plans.

Determination:

_____ Use is not compatible

__X___ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

- Annually review all hunting activities and operations to ensure compliance with all applicable State and Federal laws, regulations, and policies.

Justification: Hunting recognized by the Service as one of the six priority public uses. As such, special consideration is used to evaluate its compatibility with the refuges. The Rydell and Glacial Ridge NWR Hunt Plans provide the management needed to ensure compatibility with the goals of the refuges and to maintain compliance with the 1997 National Wildlife Refuge System Improvement Act. Annual wildlife surveys and/or population modeling exercised conducted by the Minnesota DNR and the U.S. Fish and Wildlife Service provide the data to ensure that hunting of these species doesn't jeopardized their long- range population goals.

Signature: Refuge Manager: Gregory A. Knutsen 12/1/15
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10 or 15 year Re-evaluation Date: 2030

COMPATIBILITY DETERMINATION

Use: Research, Scientific Collecting, and Surveys by Third Parties

- Research: Planned, organized and systematic investigation of a scientific nature.
- Scientific collecting: Gathering of refuge natural resources or cultural artifacts for scientific purposes.
- Surveys: Scientific inventory or monitoring.

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: Refuge staff receive 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 Rydell and Glacial Ridge NWRs. 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, modeling of wildlife populations, bio-prospecting, and assessing response of habitat/wildlife to disturbance from public uses. Projects may be species-specific, refuge-specific, or evaluate the relative contribution of USFWS lands to larger landscape (e.g. northern tallgrass prairie ecoregion, Prairie Pothole Region, flyway, national, international) issues and trends.

The Service's Research and Management Studies (4 RM 6) and Appropriate Uses (603 FW1.10D(4)) policies indicate priority for scientific investigatory studies that contribute to the enhancement,

protection, use, preservation, and management of native wildlife populations and their habitats in their natural diversity. Projects that contribute to refuge-specific needs for resource and/or management goals and objectives will be given a higher priority over other requests. A signed special use permit (SUP) will be required for each of these "third-party uses".

Where would the use be conducted? Sites for this use would depend on the particular action (research, collecting, or survey) being conducted and could occur in a variety of habitat types within the Rydell or Glacial Ridge NWR boundaries. Access would be restricted by SUP to the minimum sample size or study sites needed to meet stated objectives of the research, scientific collection, or survey project.

When would the use be conducted? The timing of research, collecting and survey activities would depend on the individual project, but currently most research occurs during day-light hours in the growing season (April – August). The timing, duration, number of staff, and visits by permittees may be restricted by SUP at the discretion of the Refuge Manager.

How would the use be conducted? Projects will adhere to scientifically defensible protocols for data collection, where available and applicable. Any research study site(s), collection and sampling location(s), and transect(s) can be temporarily marked by highly visible wooden or metal posts or other pre-approved method and must be removed when the project is complete. Access to study sites is by foot, truck, all-terrain vehicle, boat, airboat, canoe, or other watercraft. Vehicle use is allowed on refuge roads, trails, and parking lots that ate normally open to the public or other locations, as specified by the SUP.

Why is this use being proposed? Research, scientific collecting, and survey activities conducted by non-Service entities that do not expand knowledge of natural systems or inform refuge management decisions are considered a "refuge use" and are therefore, subject to provisions of Appropriate Use and Compatibility policies. However, refuge staffs recognize these activities may indirectly contribute to the enhancement, protection, use, preservation, and management of refuge wildlife populations and their habitats or directly advance scientific knowledge of a particular species or species-group or otherwise provide information beneficial to conservation.

Availability of Resources: Refuge staff responsibilities for projects by non-Service entities will be primarily limited to the following: review of proposals, preparation of SUP(s) and other compliance documents (e.g., Section 7 of the Endangered Species Act of 1973, Section 106 of the National Historic Preservation Act), and monitoring of project implementation to ensure impacts and conflicts remain within acceptable levels (compatible) over time. Additional administrative support, logistical and operational support may also be provided depending on each specific request. Facilities and staff are currently available to provide access, maintain roads, parking lots, secondary access roads, as well as to issue SUPs for research, collecting, and survey projects. Staff resources are deemed adequate to manage this use at anticipated levels.

Anticipated Impacts of the Use: Impacts would be specific to the project and the site, and will vary depending upon the nature and scope of the field work. Data collection techniques will generally have minimal animal morality or disturbance, habitat destruction, no introduction of contaminants, or no introduction of non-indigenous species. In contrast, projects involving the collection of biotic samples (plants or animals) or requiring intensive ground-based data or sample collection will have short-term

impacts. To reduce impacts, the minimum number of samples (e.g., water, soils, vegetation, invertebrates, and vertebrates) will be collected for identification and/or experimentation and statistical analysis.

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 projects (e.g., temporary 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) will usually be localized and temporary in nature. Where long-term or cumulative unacceptable effects cannot be avoided, the project will not be found compatible. Project proposals will be reviewed by Refuge staff and others, as needed, to assess the potential impacts (short, long-term, and cumulative) relative to benefits of the investigation to refuge management issues and understanding of natural systems.

If project methods impact or conflict with refuge-specific resources, priority wildlife-dependent public uses, other high-priority research and refuge habitat and wildlife management programs, then it must be 1) clearly demonstrated that its scientific findings will contribute to resource management and 2) that the project cannot be conducted off refuge lands, in order for the project to be compatible. The investigator(s) must identify methods/strategies in advance required to minimize or eliminate potential impact(s) and conflict(s). If unacceptable impacts cannot be avoided, then the project will not be compatible. Projects that represent public or private economic use of the natural resources of any national wildlife refuge (e.g., bio-prospecting), 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). A separate compatibility determination will not be prepared for each request, but rather a project-specific SUP will outline various restrictions and requirements.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the compatibility determinations. No comments were received.

Determination:

_____ Use is not compatible.

____**X**____ Use is compatible, with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Prior to conducting investigations, researchers will obtain a SUP from the Refuge Manager that makes specific stipulations related to when, where, and how the research will be conducted. The Refuge Manger retains the option to prohibit research on the property which does not contribute to the purposes or the mission of the Refuge System, or causes undo resource disturbance or harm.

2. Research applicants must submit a study plan to the Refuge Manager that includes:
    a) justification and objectives of the study;

b) relevance to resource management;
c) methods, schedule, and personnel;
d) potential impacts on Refuge wildlife and/or habitat;
e) provisions to minimize disturbance, injury, or mortality and prevent the introduction of invasive or pest species;
f) compliance with established standards for proper animal care and use;
g) data standards and data management plan;
h) costs to Refuge, if any; and
i) anticipated end products (i.e., reports, publications, recommendations)

3. Research plans will be reviewed by Refuge staff. Evaluation criteria will include, but not be limited to, the following:
   a) Research that has direct relevance to management will have higher priority than other requests
   b) Research requests that conflict with higher priority research, monitoring, or management programs may not be granted.
   c) Research that causes undue disturbance or is intrusive, will likely not be granted.
   d) If staffing or logistics make it difficult for Refuge staff to monitor researcher activity in a sensitive area, this may be reason to deny the request.
   e) The length of the project will be considered and agreed upon before approval. Projects will not be open-ended and at a minimum, will be reviewed annually.

4. Researchers must possess all applicable state and federal permits for the capture and possession of protected species, for conducting regulated activities in wetlands, and for other regulated activities (e.g., banding). Researchers must demonstrate they have approval from the Animal Care and Use Committee, if such approval is required by their research institution.

5. Archeological researchers must obtain an Archeological Resource Protection Act permit from the Regional Director prior to obtaining a SUP from the Refuge Manager.

6. Sampling equipment as well as investigator(s) clothing and vehicles (e.g., ATV, boats) will be thoroughly cleaned (free of dirt and plant material) before being allowed on Refuge lands, to prevent the introduction and/or spread of pests and invasive species.

7. Researchers, scientific collectors, and surveyors will submit annual progress reports, a final report, and copies of publications resulting from the work to the Refuge Manager.

8. Researchers, scientific collectors, and surveyors will submit an electronic copy of all raw data collected on Refuge lands to the Refuge Manager with the understanding that the researcher will have the opportunity to produce publications based on the data.

9. In unacceptable impacts to natural resources or conflicts arise or are documented by the Refuge staff, the Refuge Manager can suspend, modify conditions of, or terminate an on-going project already permitted by an SUP.

Justification: Use of the Refuges to conduct research, scientific collecting, and surveys will generally provide information that would benefit fish, wildlife, plants, and their habitats because they will expand scientific information available for resource management decisions. 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 Comprehensive Conservation Plans). 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.

It is anticipated that wildlife species which could be disturbed during the use would find sufficient food resources and resting places so their abundance and use of habitats will not be measurably reduced. Additionally, it is anticipated that project oversight, as needed, will prevent unacceptable or irreversible impacts to fish, wildlife, plants, and their habitats. As a result, these projects will not materially interfere with or detract from fulfilling refuge purpose(s); contributing to the Mission of the National Wildlife Refuge System; and maintaining the biological integrity, diversity, and environmental health of refuge lands.

Signature: Refuge Manager: Gregory A. Knutsen 12/1/15
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2025

COMPATIBILITY DETERMINATION

Use: Walleye Rearing in Clifford Lake

Refuge Name: Rydell National Wildlife Refuge

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

Description of Use: The use in question is raising walleye fry to fingerlings in Clifford Lake, which is located in the south part of Rydell NWR. The Service's Division of Fisheries (i.e., Midwest Regional Office, La Crosse Fishery Resource Office, Genoa National Fish Hatchery staff) will place walleye fry in Clifford Lake in the spring (typically May) of each year and will subsequently work to remove as great a percentage as possible of those walleyes at the fingerling stage during the fall (typically late September or early October) of each year. Fingerling removal is conducted using 20-25 fyke (trap) nets. Prior to fingerling removal, a sample of ~ 60 walleyes are collected using a similar netting procedure in early to mid-August and delivered "on ice" to the Regional Fish Health Center to be tested for a variety of diseases (pathogens) and must be certified "disease free" prior to the granting of the required distribution permit from the State of Minnesota. All of the above activities closely follow a Region 3 Division of Fisheries Annual Walleye Rearing Cycle protocol.

Availability of Resources: Since these activities are associated with the Service's Division of Fisheries, there are no additional expectations of Refuge staff to support the activity. If and when necessary, Refuge staff will assist from a logistical standpoint, if possible.

Anticipated Impacts of the Use: There will be a limited amount of disturbance caused by access and collection of fingerlings, because the activity is infrequent. Initially, the walleye fry may potentially have a negative impact on the spring invertebrate population in Clifford Lake before they are big enough to start eating minnows. This has the potential to consequently impact waterfowl production. However, the subsequent reduction of the minnow population in the lake, as the young walleyes eventually switch their forage base to minnows, may result in an increase in available invertebrates for diving ducks during the fall migration. The program provides approximately 8,000 to 20,000 walleye fingerlings to Service and tribal lands each year. The overall long-term impacts of this activity to the waterfowl resource are likely negligible.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the compatibility determinations. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Walleye rearing will only occur in Clifford Lake only.
2. No other species of fish will be stocked.
3. In past years, when the Service's Division of Fisheries determines that they have collected a lower than desired number of fingerlings in the fall, they have extended an invitation for the Minnesota DNR Area Fisheries Office to conduct a follow-up collection effort on Clifford Lake. The rationale for this follow-up collection effort is that it is beneficial for the future of this stocking program to remove as high a percentage of fingerlings as possible in a given year. The Minnesota DNR Area Fisheries Office will use a similar collection protocol to that of the Service's Division of Fisheries. The Rydell NWR Manager will have the final decision authority on whether to allow this follow-up collection activity to occur. If the Minnesota DNR is allowed to collect walleye fingerlings, a special use permit will be required.

Justification: Allowing walleye rearing on Rydell NWR, within the above stipulations, will have minimal impact on the wildlife resources of the Refuge. Waterfowl use of Clifford Lake has not appeared to suffer for the current ongoing use of the lake for rearing purposes. A normal complement of breeding waterfowl, equal to that found on wetlands of similar size/type on the Refuge, are observed on Clifford Lake each year and this lake is presently one of the Refuge's main staging areas for migrating diving ducks and Canada geese each spring and fall.

Additionally, this activity is part of the Service's federal-tribal trust responsibility. Tribal trust resources are those natural resources, either on or off Indian lands, retained by, or reserved by or for Indian tribes through treaties, statutes, judicial decisions, and executive orders, which are protected by a fiduciary obligation on the part of the United States. *Principle 1* – The Departments shall work directly with Indian tribes on a government-to-government basis to promote healthy ecosystems.

Signature: Refuge Manager: Gregory A. Knutsen 12/1/15
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2025

COMPATIBILITY DETERMINATION

Use: Wildlife Observation and Non-Commercial Photography (still and moving; including the means of access such as hiking, snowshoeing, and cross-country skiing)

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: Allow general public access 30 minutes before sunrise until 30 minutes after sunset for the observation and photographing of associated flora and fauna. The Refuges will be open to the public for the observation and photography of wildlife and their habitats unless specifically closed by the manager. Allowable forms of access to the Refuges include hiking, snowshoeing, cross-country skiing, canoes, and non-motorized boats. Limited access by bicycle, and motorized vehicles will be allowed on designated driving routes only. Motorized boats, including those with electric motors, will not be allowed. Entry on all or portions of individual areas may be suspended by posting during occasions of unusual or critical conditions affecting land, water, vegetation, wildlife populations, or public safety.

Access for wildlife observation and photography will provide public enjoyment of scenic views and an array of wildlife including waterfowl, other migratory birds, tallgrass prairie plants, and indigenous wildlife. The Refuges provide opportunities for wildlife enjoyment not usually available on adjacent private land.

Wildlife observation and photography will be open to the public in accordance with relevant regulations within the National Wildlife Refuge Act 50CFR 25 – 32), 43 CFR part 5 subpart A, and each Refuge's special regulations as defined within 50 CFR 32.42 or otherwise posted in accordance with 50 CFR 26.22 ("Any person entering or using any national wildlife refuge will comply with ... the provisions of any special regulation and any other official notification ..."). Under 43 CFR 5.2, still photography does not require a permit unless: (1) It uses a model, set, or prop as defined in §5.12.

Availability of Resources: Wildlife observation and non-commercial photography require minimal resources. Access trails, parking lots, signs, and other facilities as well as staff to enforce regulations and maintain these facilities have been provided by the Service.

Anticipated Impacts of the Use: Wildlife observation and photography pose minimal impacts on the purposes for which Wildlife Refuges were established. Access is typically by individuals or small groups on foot or using snowshoes or skies. Damage to habitat by walking is generally minimal and temporary. There may be minor disturbances to wildlife due to human activity on the land during these activities. The most likely impact would be during spring and early summer nesting and brood rearing but the expected sporadic and limited use by the public during this time period should not create unreasonable impacts. Winter wildlife observation and non-commercial photography pose no impacts to nesting waterfowl and little impact to dormant vegetation. Any unreasonable harassment would be grounds for the manager to close the area to these uses or restrict the uses to minimize harm.

Parking lots and access trails have also are minimally impacted by these activities because they are relatively small in size, generally have established cover on them, and typically are mowed after the nesting season is complete. They also allow for safe use of these public lands.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the CDs. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Certain modes of access such as motorized vehicle and bicycles will be limited to designated trails, public roads, and parking lots.
2. Camping, overnight use, and fires are prohibited.
3. No models, sets, props, photography equipment, recording devices, or viewing blinds may be left over night.
4. Harassment of wildlife or excessive damage to vegetation is prohibited.
5. Observing or photographing flora or fauna does not provide an individual the right to enter closed areas.
6. Any photography, filming, recording, or wildlife observation that an individual would like to do, outside of the described stipulations must first obtain a permit.
7. Commercial Photography requires a separate Compatibility Review by the Refuge Manger.

Justification: This use has been determined compatible because wildlife viewing and photography will not materially interfere with or detract from unit purposes, including waterfowl production. The level of use for wildlife observation and photography is moderate. The associated disturbance to wildlife is

temporary and minor. Wildlife observation and photography are priority public uses and inculcate visitors with the joys of abundant wildlife and wild lands. These uses also help fulfill the mission of the National Wildlife Refuge System.

Signature: Refuge Manager: Gregory A. Knutsen 12/1/15
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2030

COMPATIBILITY DETERMINATION

Use: Wood Cutting and Timber Removal

Refuge Name: Rydell and Glacial Ridge National Wildlife Refuges

Establishing and Acquisition Authorities: Rydell National Wildlife Refuge (NWR) was established in January 1992 under the authority of the Fish and Wildlife Act of 1956, as amended; and Recreational Use of Conservation Areas Act of 1962, as amended.

Glacial Ridge NWR was established in 2004 under the Migratory Bird Conservation Act (16 U.S.C. § 715-715r, as amended) and the Emergency Wetlands Resources Act of 1986 (P.L. 99-645).

National Wildlife Refuge System Mission: The Mission is to administer a national network of land 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.

Refuge Purpose: Rydell NWR was established "...for the development, advancement, management, conservation and protection of fish and wildlife resources... 16 U.S.C. 742f (a) (4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." 16 U.S.C. 742 (b) (1) (Fish and Wildlife Act of 1956, 16 U.S.C. 742 (a) – 754, as amended).

The primary purpose for which Glacial Ridge NWR was established was, under the Migratory Bird Conservation Act, "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."

Description of Use: The use is removal of standing or fallen trees by private individuals or contractors to meet management objectives. This covers all wood removal activities regardless of the ultimate use of the wood (e.g., firewood, pulp, biomass). Individuals and contractors are permitted to remove wood from there refuges in order to control trees that are invading native prairies or oak savannahs or are otherwise provide a negative impact to trust wildlife species and their habitats. This activity includes the cutting of standing trees including understory species; removal of tree piles as a result of previous tree removal projects; or removing fallen timber that is interfering in the logistics of habitat management or is causing damage to priority wildlife or habitats.

Contractors are frequently hired to conduct tree removal activities. Often the contract includes the requirement of complete removal of trees off-site. Complete removal of trees from a refuge allows for more efficient and more effective restoration of a site.

Tree removal activities of private individuals will be governed under a special use permit (SUP), which will be specific to the allowed activity.

The scope of the activity will be determined by the management objective for the area and by the quantity and quality of available wood. This activity will only occur where the Refuge Manager has determined that a management need exists to remove wood from the property consistent with the CCP,

HMP, and regional guidance documents. Harvest sites will vary in size dependent upon the site and management objectives.

Wood removal activities may be authorized throughout the year but will be implemented so as not to impact grassland-nesting birds. Most often, wood removal activities will occur during the winter months when frozen ground facilitates access and affords protection to underlying soils and vegetation from unnecessary disturbance caused by heavy equipment. Wood cutting will not be allowed during periods when the activity will cause damage to roads, grassland, and wetland habitat or disturb nesting birds. Any activities that might cause an effect to a historic property would be subject to a case-by-case Section 106 review.

This use could be allowed in any portion of Rydell or Glacial Ridge NWRs, depending upon the management objective-defined needs.

Availability of Resources: Planning, issuing SUPs, or contracts, and monitoring a wood harvest program would require a minimal commitment of staff hours. Much of this work is discussed as management decisions are made during work planning efforts. All harvest sites are mapped by refuge staff and detailed permit conditions are added to the SUP for each site, in order to protect the local identified resources. In undertaking a wood harvest project, the Refuge Manager has identified a management need and will have secured and prioritized the necessary station resources to implement the use.

Anticipated Impacts of the Use: In permitting this type of activity, the potential exists to directly impact migratory bird production through displacement of birds from localized areas due to disturbance, or crushing of nests as a result of vehicle movement for this activity. These impacts will be minimized by adjusting seasonal timing of the permitted activity in accordance with site-specific characteristics. In limited and rare instances, a small number of individuals of tree-nesting species (e.g., wood duck, hooded merganser) may be displaced from a local area when trees used for nesting are removed.

Both Rydell and Glacial Ridge NWRs lie within the white-nose syndrome buffer zone for the federally threatened northern long-eared bat. Therefore, no cutting of standing trees that are >3 inches diameter at breast height (DBH) will occur between June 1 and July 31, without conducting a previous Section 7 consultation/determination with the Service's Division of Ecological Resources. Avoiding cutting of the above trees during the specified timeframe protects potential northern long-eared bat roost trees during the pup season.

Indirect impacts to grassland-nesting bird production will occur as a result of removing woody vegetation. In nearly every instance, these impacts will be positive. The removal of woody vegetation from historic prairie habitats positively impacts waterfowl production and the System mission by facilitating the restoration of tallgrass prairie, reducing habitat fragmentation, and removing avian predator perch sites from grassland habitats.

Access for the purpose of removing wood may impact habitat by rutting soils, destroying ground cover, creating weed seed beds, and increasing sedimentation due to runoff in nearby wetlands. These impacts will be minimized by adjusting seasonal schedule for the permitted activity. Other short-term impacts include the creation of mammalian predator den sites when trees are piled instead of moved off site. Species such as raccoon and skunk often inhabit these wood piles and are primary predators for ground nesting birds. The piles are removed, often through prescribed burning after several years of curing.

Anticipated long-term impacts include the reduction of woody species in Refuge grasslands which benefits grassland-dependent birds.

Impacts to the habitat from access for wood removal purposes are potentially significant, but also easily avoided. Areas where woody species are removed for the purpose of conversion of the habitat type to prairie will likely receive follow-up treatments of burning, spraying, or farming and eventual restoration through seeding. Ground disturbance in these areas is less problematic and possibly desirable depending on the specific site. Access to and from these areas will need to be carefully controlled via a SUP to avoid impacts such as rutting and increased sedimentation into adjacent wetlands due to runoff. When existing roads are not present, access can be restricted to seasonal periods when the ground is frozen to avoid or minimize impacts to underlying vegetation and soils.

Other indirect impacts are generally considered positive and thus do not materially interfere with or detract from the purpose of migratory bird production or the System mission. The removal of trees along trails, in shelter belts, and within old home sites will benefit migratory bird production by assisting with the restoration of prairie habitat, reducing fragmentation and eliminating predator habitat and perch sites. Individuals participating in the wood harvest program will adhere to special conditions specified in a SUP to ensure resource protection and achievement of management goals. Control of woody species encroachment on prairie habitats is a necessary management activity when converting areas back to their historic habitat composition.

Public Review and Comment: A press release to the local newspapers in the area and television stations was made on June 19th, 2014. The purpose of the press release was to inform interested members of the public of the open comment period for the CDs. No comments were received.

Determination:

_____ Use is not compatible.

__X__ Use is compatible with the following stipulations.

Stipulations Necessary to Ensure Compatibility:

1. Work will be generally be restricted to areas where soil types indicate that habitat was historically comprised of native prairie vegetation, associated habitats, or in existing non-native woodlots associated with abandoned farm sites.
2. If work is in an area where grassland-dependent migratory bird nesting is likely, no cutting operations will be permitted from May 15 through July 15.
3. Vehicle access for wood removal will be limited to existing trails or restricted to seasonal periods when the ground is frozen or dry to limit rutting and damage to growing vegetation.
4. A SUP will be issued to private individuals so stipulations can be established to reduce or eliminate site-specific impacts and ensure Service management goals are met.
5. Purchase Orders/Task Orders will be issued to commercial operations to ensure site specific impacts and Service management goals are met.
6. Consultation has occurred with the Service's Region 3 Ecological Services Staff prior to implementation of a commercial cutting project to ensure the scope of the project is acceptable to local populations of T&E Species. Specifically, between June 1 and July 31, trees >3 inches in DBH will not be cut without a prior Section 7 consultation/determination.

7. Any activities that might cause an effect to a historic property would be subject to a case-by-case Section 106 review.

Justification: Direct impacts on migratory bird production (take, disturbance, etc.) can be largely avoided by timing the activity so that it does not coincide with the primary nesting season. Removal of trees in certain instances will, on occasion, eliminate cavity-nesting species habitat. This would be an irregular and occasional impact and, since most wood harvest will be associated with restoration sites, it is unlikely that these areas would have provided historic nesting sites. Due to the benefits that would be realized by other migratory bird species, and the abundance of artificial and natural nest sites for cavity-nesting species in the area, these impacts would not significantly detract from either the refuges' purpose or Service mission.

Signature: Refuge Manager: Gregory A. Knutsen 12/1/15
(Signature and Date)

Concurrence: Regional Chief: 1-11-16
(Signature and Date)

Mandatory 10- or 15-year Re-evaluation Date: 2025