

# Appendix F: Compatibility Determinations

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## COMPATIBILITY DETERMINATION

**Use:** Farming and Haying

**Refuge Name:** Muscatatuck National Wildlife Refuge (Refuge)

**Establishing and Acquisition Authority:**

The Refuge was established and land was acquired under authority of the Migratory Bird Conservation Act (16 U.S.C. 7.14-714r). The Refuge was officially established on October 6, 1966. Acquisition funds were derived from federal duck stamp sales.

**Refuge Purpose:**

The Refuge purpose “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” derives from the Migratory Bird Conservation Act.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended (16U.S.C. 668dd-668ee).

**Description of Use:**

*What is the use?* Farming and Haying. Farming and haying are not priority public uses of the National Wildlife Refuge System.

*Where is the use conducted?* Farming and haying occurs on existing farm fields confined to the west side of the Refuge. Farming acres comprise less than 5% of total Refuge acreage.

*When is the use conducted?* Farming occurs in accordance with farming schedules and practices identified in the Station's Cropland Management Plan. Cropping takes place during the growing season, and associated field work takes place in the spring and fall. Haying is restricted until after July 15.

*How is the use conducted?* Management of all farming activities is conducted by cooperative farmers. All cooperators' requirements are documented in cooperative agreements based on the Station's Cropland and Grassland Management Plans. Haying on Refuge properties will be conducted on an as needed basis in accordance with the Grassland Management Plan. Herbicide use will be approved by the Refuge Manager only as a last resort, and specific herbicides will be approved by the Regional IPM coordinator.

*Why is the use proposed?* The Refuge uses farming as a low cost means to maintain open habitat and add diversity to a mostly forested refuge. Canada geese, waterfowl, sandhill cranes, wintering raptors and resident species forage on the Refuge share of the crop. The fields also create good wildlife viewing along Refuge roads and the auto tour route.

**Availability of Resources:**

Current staffing levels/funding are available to manage this activity. This-use will not require significant increase in staff maintenance or expenditures. The Service will not have to provide special equipment.

**Anticipated Impacts of the Use:**

Refuge croplands attract migratory waterfowl, help control noxious weeds, reduce depredation to neighboring farmlands and provide a high energy food source for migratory birds during extreme weather conditions. Re-sprouting grain, cover crops and Refuge haylands provide green browse and invertebrate sources for a variety of species requiring habitat in this early successional stage. While Refuge farming may have positive impacts to some wildlife species (Wintering waterfowl, cranes, some raptor species, and resident wildlife), resulting forest fragmentation may have negative impacts to declining species of forest-dependent migratory birds. Continued monitoring of these wildlife populations will help further define anticipated impacts of continuing this management practice. Using approved herbicides only as a last resort will minimize potential impacts to surface and groundwater resources.

**Public Review and Comment:**

This compatibility determination is part of the Muscatatuck Draft Comprehensive Conservation Plan and environmental assessment. Public notification and review includes a notice of availability published in the Federal Register, 30-day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses will be included in the final version of the Muscatatuck Comprehensive Conservation Plan.

**Determination:**

- Use is Not Compatible
- Use is Compatible with the following stipulations.

**Stipulations Necessary to Ensure Compatibility:**

To ensure compatibility with the purposes of the Refuge and the mission of the National Wildlife Refuge System, farming and haying can only occur with the following stipulations:

- Cooperative fanning practices and crop rotations will take place in accordance with the Station's approved cropland management plan. These shall be clearly identified in signed cooperative agreements, and be closely monitored by the Refuge Manager.
- Annual review of all farming and haying operations will take place to ensure compliance with all laws, regulations and policies.
- No herbicide use will take place without the prior approval of the Refuge Manager/Regional IPM coordinator.
- Haying will not take place on Refuge haylands prior to Sept. 1 to avoid impacts to ground nesting birds.
- Minimum tillage-techniques will be required to avoid impacts to water, soil, and any potential archeological resources.
- Only existing farm fields on the west side of the Refuge will be farmed, previously abandoned or disturbed sites will not be farmed.

**Justification:**

Cooperative farming and haying will result in annual, short-term disturbances, but there will be long-term benefits to resident and migratory

wildlife and increased appreciation of wildlife. Croplands provide a winter food resource for migrating waterfowl and reduce to some degree depredation impacts to surrounding farmlands. This also facilitates wildlife observation, one of the priority public uses, and will encourage increased appreciation of wildlife.

**Signature:**

Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:**

Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:**

## COMPATIBILITY DETERMINATION

**Use:** Wild Food/Shed Antler Collecting

**Refuge Name:** Muscatatuck National Wildlife Refuge (Refuge)

**Establishing and Acquisition Authority:**

The Refuge was established and land was acquired under authority of the Migratory Bird Conservation Act (16 U.S.C. 7.14-714r). The Refuge was officially established on October 6, 1966. Acquisition funds were derived from federal duck stamp sales.

**Refuge Purpose:**

The Refuge purpose “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” derives from the Migratory Bird Conservation Act.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended (16U.S.C. 668dd-668ee).

**Description of Use:**

*What is the use?* Wild food and shed antler collecting Wild food and shed antler collecting are not priority public uses of the National Wildlife Refuge System.

*Where is the use conducted?* Wild food and shed antler collecting will occur on approximately 90 percent of the nearly 8,000 acre Refuge. Collecting will not be allowed on the remaining 10 percent which includes the waterfowl sanctuary area in the southwest portion of the Refuge that is closed to the public.

*When is the use conducted?* In accordance with Refuge hours, 1 hour before sunrise to 1 hour after sunset, year-round.

*How is the use conducted?* Hand collection of natural food items including mushrooms, fruits and nuts, but not living roots or green plant material for personal consumption only will be allowed. No digging of root materials such as ginseng, yellow root, or blood root will be allowed.

*Why is the use being proposed?* This use has historically been allowed on the Refuge and has become a custom of the local community. The Refuge is open to the public during the time periods that the use is allowed so no additional disturbance is created by allowing this use. Gathering allows the public to build a connection to the Refuge through personal outdoor experiences that engage the senses and foster an appreciation of the outdoors. The Refuge along with the nearby Hoosier National Forest, state fish and wildlife areas, and state forest are public lands located in the area that provide the public this type of use. Otherwise opportunities exist on private lands where access is limited for the public.

**Availability of Resources:**

Existing funding levels are adequate to manage this activity. Public use facilities will be routinely maintained to meet the needs of the visiting public and will be used incidentally by that portion of the public involved in this activity. This use will not require significant increase in staff maintenance or expenditures. The Service will not have to provide special equipment.

**Anticipated Impacts of the Use:**

Historically, public participation in the collection of wild foods and shed antlers has been low to moderate and is expected to remain so in the future. The amount and frequency of hand collecting of wild foods and shed antlers is not expected to result in significant wildlife disturbance, nor diminish wildlife food sources, or jeopardize wildlife survival. Short-term disturbance to wildlife may occur during these activities, but will be insignificant.

**Public Review and Comment:**

This compatibility determination is part of the Muscatatuck Draft Comprehensive Conservation Plan and environmental assessment. Public

notification and review includes a notice of availability published in the Federal Register, 30-day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses will be included in the final version of the Muscatatuck Comprehensive Conservation Plan.

**Determination:**

- Use is Not Compatible
- Use is Compatible with the following stipulations.

**Stipulations Necessary to Ensure Compatibility:**

To ensure compatibility with the purposes of the Refuge and the mission of the National Wildlife Refuge System, wild food and shed antler collecting can only occur with the following stipulations:

- Collection can occur only within the specified area of the Refuge.
- Items collected are for personal use and cannot be sold.
- Digging of roots, and collection of living green plant material or food plant material is prohibited.
- Tapping or damaging trees is prohibited.
- No threatened or endangered species, or parts thereof may be harvested.
- Annually review all collection activities and operations to ensure compliance with all laws, regulations and policies.
- Use of motorized vehicles and bicycles is limited to public vehicle roads and parking areas.
- Overnight use and fires are prohibited.

**Justification:**

This use has been determined compatible as it will not materially interfere with or detract from Refuge purposes, provided the above stipulations are implemented. This use will not diminish the primary purposes of the refuge for migratory birds: This use will meet 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 these lands.

**Signature:**

Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:**

Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:**

## COMPATIBILITY DETERMINATION

**Use:** Hunting

**Refuge Name:** Muscatatuck National Wildlife Refuge (Refuge)

**Establishing and Acquisition Authority:**

The Refuge was established and land was acquired under authority of the Migratory Bird Conservation Act (16 U.S.C. 7.14-714r). The Refuge was officially established on October 6, 1966. Acquisition funds were derived from federal duck stamp sales.

**Refuge Purpose:**

The Refuge purpose “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” derives from the Migratory Bird Conservation Act.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended (16U.S.C. 668dd-668ee).

**Description of Use:**

*What is the use?* Hunting of rabbit, squirrel, quail, deer and turkey. The use is a priority public use.

*Where is the use conducted?* Deer and turkey hunting will occur on approximately 75 percent of the Refuge. Rabbit, quail and squirrel hunting will occur on approximately 20 percent of the Refuge located in the southeastern portion of the Refuge.

*When is the use conducted?* Deer hunting will occur during the State archery seasons. (Hunting during the early archery will commence no sooner than the first Saturday following National Wildlife Refuge Week and late archery season will commence the day following the State muzzleloader season.) A special muzzleloader permit hunt will

occur during the State muzzleloader season. Turkey hunting will occur during the State spring season. All hunting will occur within state-regulated hunting hours.

*How is the use conducted?* State regulations will apply, except where Refuge regulations are more restrictive. A special permit will be issued to each hunter selected in a random drawing conducted by the State for the special muzzleloader deer hunt and the spring turkey hunt. Authorized weapons will include conventional shotgun, muzzleloader and bow and arrow for turkey. Authorized weapons for deer are bow, muzzleloader during the permit hunt and crossbow as approved for handicapped hunters. Only shotguns with non-toxic shot shells will be allowed for squirrel, rabbit and quail hunting. No check-in or check-out of deer hunters will be required, however successful deer hunters are requested to fill out a harvest card when leaving the Refuge. Successful turkey hunters are required to check-out at the Refuge headquarters. No check-in, or out or reporting of harvest is required for squirrel, rabbit, or quail.

*Why is the use being proposed?* Hunting is a priority general public use of the Refuge System that is also an important wildlife management tool. The Service recognizes hunting as a healthy, traditional outdoor pastime, deeply rooted in the American heritage (USFWS 2006). Hunting can instill a unique understanding and appreciation of wildlife, their behavior, and their habitat needs. Hunting programs can promote understanding and appreciation of natural resources and their management on lands and waters in the Refuge System. Public hunting opportunities are also available near the Refuge at Big Oaks National Wildlife Refuge, Hoosier National Forest, Atterbury and Crosley Fish and Wildlife Areas, the Jackson-Washington and Selmer State Forests, Brush Creek and Hardy Lake Reservoirs, Starve Hollow Recreation Area, and Brown County State Park (deer only).

**Availability of Resources:**

Existing funding levels are adequate to manage this activity. This use will require some increase in staff time and expenditures for sign maintenance and law enforcement. The Service will not have to provide special equipment.

**Anticipated Impacts of the Use:**

There will be no adverse impacts to threatened and endangered species resulting from this program. Hunting causes mortality and temporary disturbance to wildlife; however, harvesting wildlife populations to the carrying capacity of their habitats ensures the continued health and survival of Refuge wildlife populations. Disturbance to waterfowl will be minimal. Conflict with other public uses on the Refuge will be minimal. The Visitor Center, Office and most hiking trails are in an area closed to hunting. This tends to separate hunting activities from most other public uses.

**Public Review and Comment:**

This compatibility determination is part of the Muscatatuck Draft Comprehensive Conservation Plan and environmental assessment. Public notification and review includes a notice of availability published in the Federal Register, 30-day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses will be included in the final version of the Muscatatuck Comprehensive Conservation Plan.

**Determination:**

- Use is Not Compatible
- Use is Compatible with the following stipulations.

**Stipulations Necessary to Ensure Compatibility:**

To ensure compatibility with the purposes of the Refuge and the mission of the National Wildlife Refuge System, hunting only occurs with the following stipulations:

- State hunting regulations apply, except when Refuge regulations are more restrictive; for example permits are required for deer hunting during the muzzleloader season and for turkey hunting.
- All shot used for rabbit, quail and squirrel hunting shall be non-toxic.

- Hunting is allowed only within specified areas of the Refuge.
- Dog running on the Refuge is limited to the use of them during rabbit and quail hunting; however, they must be under the control of the handler.
- Use of motorized vehicles and bicycles is limited to public vehicle roads and parking areas.
- Overnight use and fires are prohibited.
- The Refuge Manager shall annually review all hunting activities and operations to ensure compliance with all laws, regulations and policies.

**Justification:**

Hunting is priority public use of the NWRS and a vital management tool to protect Refuge habitat. This use will meet the mission of the NWRS by providing renewable resources for the benefit of the American public while conserving fish, wildlife and plant resources on these lands.

**Signature:**

Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:**

Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:**

U. S. Fish and Wildlife Service, 2006. Wildlife-Dependent Recreation: Hunting. 605 FW 2. National Wildlife Refuge System, Department of Interior.

## COMPATIBILITY DETERMINATION

**Use:** Interpretation and Environmental Education

**Refuge Name:** Muscatatuck National Wildlife Refuge (Refuge)

**Establishing and Acquisition Authority:**

The Refuge was established and land was acquired under authority of the Migratory Bird Conservation Act (16 U.S.C. 7.14-714r). The Refuge was officially established on October 6, 1966. Acquisition funds were derived from federal duck stamp sales.

**Refuge Purpose:**

The Refuge purpose “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” derives from the Migratory Bird Conservation Act.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended (16U.S.C. 668dd-668ee).

**Description of Use:**

*What is the use?* Interpretation and environmental education. These uses are a priority public uses. Formal programs include activities prepared, scheduled, and organized for school-aged children and organized groups by U.S. Fish and Wildlife Service Staff and Volunteers. Informal programs include self-guided auto tour routes and nature trails, impromptu presentations and discussions of wildlife conservation issues the NWRs With interested citizens, casual visitors and unscheduled groups. This use also includes the development and maintenance of indoor interpretive areas/exhibits within the Refuge Visitor Center and Conservation Learning Center. Educational programs also include activities

conducted during International Migratory Bird Day weekend, National Fishing Week, National Public Lands Day, and National Wildlife Refuge Week.

*Where is the use conducted?* Refuge Visitor Center, Conservation Learning Center and all areas of the Refuge, except those closed to public use, unless permitted by special use permit.

*When is the use conducted?* In accordance with Refuge hours, 1 hour before sunrise to 1 hour after sunset, year-round.

*How is the use conducted?* Formally and informally for individuals and groups in conjunction with staff and volunteers.

*Why is the use conducted?* Interpretation and environmental education are priority general public uses of the National Wildlife Refuge System. The programs promote understanding and appreciation of natural and cultural resources and their management on all lands and waters of the Refuge System. Interpretation and environmental education opportunities are also available nearby at the Hoosier National Forest, Starve Hollow Recreation Area, and the Clifty Falls and Brown County State Parks.

**Availability of Resources:**

Current staffing and funding levels are adequate to conduct existing activities. A limited number of programs are provided to visiting groups by Refuge personnel and volunteers.

**Anticipated Impacts of the Use:**

The overall impacts to the Refuge and its associated wildlife populations from this use will be minimal. There will be some disturbance to wildlife and vegetation, but at levels that will not likely materially interfere with or detract from Refuge purposes. School buses and personal vehicles will utilize developed roads and parking areas to access trails which are already in place. Large events may sometimes create temporary traffic problems which will be managed by Refuge staff.

**Public Review and Comment:**

This compatibility determination is part of the Muscatatuck Draft Comprehensive Conservation Plan and environmental assessment. Public notification and review includes a notice of availability published in the Federal Register, 30-day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses will be included in the final version of the Muscatatuck Comprehensive Conservation Plan.

**Determination:**

- Use is Not Compatible
- Use is Compatible with the following stipulations.

**Stipulations Necessary to Ensure Compatibility:**

To ensure compatibility with the purposes of the Refuge and the mission of the National Wildlife Refuge System, interpretation and environmental education can occur with the following stipulations:

- The Refuge is open to public access year-round, 1 hour before sunrise to 1 hour after sunset.
- Any exception to normal Refuge regulations concerning special events must be approved by Refuge manager, and may require issuance of a special use permit.

**Justification:**

This use has been determined to be compatible provided the above stipulations are implemented. The level of these uses is moderate and generally concentrated in the developed public-use areas (roads, parking lots visitor center/conservation learning center and trails). The associated disturbance to wildlife is temporary and minor. Interpretation and environmental education are priority public uses and helps fulfill the mission of the Refuge.

**Signature:**

Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:**

Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:**

## COMPATIBILITY DETERMINATION

**Use:** Wildlife Observation and Photography (including the means of access such as automobile, hiking, biking, jogging/running, canoeing, boating, and the incidental use of picnicking).

**Refuge Name:** Muscatatuck National Wildlife Refuge (Refuge)

### Establishing and Acquisition Authority:

The Refuge was established and land was acquired under authority of the Migratory Bird Conservation Act (16 U.S.C. 7.14-714r). The Refuge was officially established on October 6, 1966. Acquisition funds were derived from federal duck stamp sales.

### Refuge Purpose:

The Refuge purpose "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds" derives from the Migratory Bird Conservation Act.

### National Wildlife Refuge System Mission:

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended (16U.S.C. 668dd-668ee).

### Description of Use:

*What is the use?* Wildlife Observation and Photography.

*Where is the use conducted?* Wildlife observation and photography are allowed year-round, except in closed areas of the Refuge.

*When is the use conducted?* In accordance with Refuge hours, 1 hour before sunrise to 1 hour after sunset, year-round.

*How is the use conducted?* Allowable forms of access for these uses include automobile, hiking, biking, jogging and running, canoeing, and boating.

Canoeing and boating are allowed year-round, but are limited to Stanfield Lake and Richart Lake as facilities permit. The only motorized watercraft permitted on the Refuge are boats powered by electric motors on Stanfield Lake. Picnicking occurs as an incidental use to wildlife observation and photography and picnic sites are available for visitors at the Refuge Visitor Center.

*Why is the use being proposed?* Wildlife observation and photography are priority general public uses of the Refuge System. Wildlife observation and photography programs can promote understanding and appreciation of natural resources and their management on lands and waters in the Refuge System. There are also opportunities to observe and photograph wildlife nearby at Big Oaks National Wildlife Refuge, Hoosier National Forest, Atterbury and Crosley Fish and Wildlife Areas, the Jackson-Washington and Selmer State Forests, Brush Creek and Hardy Lake Reservoirs, Starve Hollow Recreation Area, Brown County and Clifty Falls State Parks, and Muscatatuck County Park.

### Availability of Resources:

Existing funding levels are adequate to manage this activity at present levels. The Refuge has developed parking areas, a wildlife auto tour route, boat ramp, observation deck, overlook structure, hiking trails, boardwalk, roads, and picnic tables that are used for wildlife observation/photography; however, maintenance of these facilities will require staff resources. The Refuge will maintain these facilities with the existing staff. Vehicle parking/boat launching facilities are needed at Richart Lake to support this activity.

### Anticipated Impacts of the Use:

Wildlife observation and photography as proposed will not materially interfere with, or detract from Refuge purposes. Access is typically by individuals or small groups and the impact to the land and water is minimal. Most hikers, joggers, and runners stay on hiking trails or roads and the damage to the habitat is minimal and temporary. Automobiles and bicycles are confined to public vehicle roads. There is some temporary disturbance

to wildlife due to human activity on the land, but that is inherent in these activities and is generally not malicious or damaging. Any unreasonable harassment of wildlife would be grounds for the manager to close the area to these uses or restrict the uses to minimize harm.

**Public Review and Comment:**

This compatibility determination is part of the Muscatatuck Draft Comprehensive Conservation Plan and environmental assessment. Public notification and review includes a notice of availability published in the Federal Register, 30-day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses will be included in the final version of the Muscatatuck Comprehensive Conservation Plan.

**Determination:**

- Use is Not Compatible
- Use is Compatible with the following stipulations.

**Stipulations Necessary to Ensure Compatibility:**

To ensure compatibility with the purposes of the Refuge and the mission of the National Wildlife Refuge System, wildlife observation and photography can only occur with the following stipulations:

- Motorized vehicles and bicycles will be limited to public vehicle roads, and parking lots.
- Overnight use and fires are prohibited.
- Non-motorized boating is restricted to Stanfield Lake.
- No photo or viewing blinds may be left overnight.
- The activity can only take place during the Refuge's regular hours of 1 hour before sunrise to 1 hour after sunset.

**Justification:**

This use has been determined compatible because wildlife viewing and photography will not materially interfere with or detract from Refuge purposes. The associated disturbance to wildlife is temporary and minor. Wildlife observation and photography are priority public uses with the National Wildlife Refuge System and provide visitors with opportunities to enjoy and learn about our lands and wildlife.

**Signature:**

Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:**

Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:**

## COMPATIBILITY DETERMINATION

**Use:** Recreational Fishing

**Refuge Name:** Muscatatuck National Wildlife Refuge (Refuge)

**Establishing and Acquisition Authority:**

The Refuge was established and land was acquired under authority of the Migratory Bird Conservation Act (16 U.S.C. 7.14-714r). The Refuge was officially established on October 6, 1966. Acquisition funds were derived from federal duck stamp sales.

**Refuge Purpose:**

The Refuge purpose “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” derives from the Migratory Bird Conservation Act.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended (16U.S.C. 668dd-668ee).

**Description of Use:**

*What is the use?* Recreational Fishing. The use is a priority public use.

*Where is the use conducted?* Richart Lake. Stanfield Lake, Sand Hill Ponds, Persimmon Ponds. Lake Linda, Lake Sheryl, and the Muscatatuck River are open to bank fishing and wading year-round. All fishing is in accordance with State regulations. Boating is restricted to Stanfield Lake. The only motorized watercraft permitted on the Refuge are boats powered by electric motors on Stanfield Lake. A Refuge-sponsored “Take A Kid Fishing Day” will be offered once a year. Office Pond will be available for use this day, and only to children participating in the event.

*When is the use conducted?* In accordance with State regulations and Refuge hours of 1 hour before sunrise to 1 hour after sunset year-round.

*How is the use conducted?* In accordance with State regulations for fishing and boating, except the taking of frogs and turtles is prohibited.

*Why is the use being proposed?* Fishing is a priority general public use of the Refuge System. The Service recognizes fishing as a traditional outdoor pastime, deeply rooted in the American heritage (USFWS 2006). Fishing programs promote understanding and appreciation of natural resources and their management on all lands and waters in the Refuge System. Public fishing opportunities are also available nearby at Big Oaks National Wildlife Refuge, Hoosier National Forest, Atterbury and Crosley Fish and Wildlife Areas, the Jackson-Washington and Selmer State Forests, Brush Creek and Hardy Lake Reservoirs, Starve Hollow Recreation Area, Brown County and Clifty Falls State Parks, Muscatatuck County Park, Cypress Lake, and the Muscatatuck and White Rivers.

**Availability of Resources:**

Existing funding levels should be adequate to manage this activity.

**Anticipated Impacts of the Use:**

There is an abundant fisheries resource on the Refuge which is considered sufficient for both wildlife consumption and public recreational fishing. No significant wildlife disturbance will occur with this activity. Fishing areas are monitored for litter/water pollution and violation of fishing regulations. Littering by fisherman is considered the most significant impact. Fish populations will be monitored by the Refuge in Stanfield Lake to facilitate management.

**Public Review and Comment:**

This compatibility determination is part of the Muscatatuck Draft Comprehensive Conservation Plan and environmental assessment. Public notification and review includes a notice of availability published in the Federal Register, 30-

day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses will be included in the final version of the Muscatatuck Comprehensive Conservation Plan.

**Determination:**

- Use is Not Compatible
- Use is Compatible with the following stipulations.

**Stipulations Necessary to Ensure Compatibility:**

To ensure compatibility with the purposes of the Refuge and the mission of the National Wildlife Refuge System, fishing ;and boating can only occur with the following stipulations:

- All State and Federal regulations shall apply.
- The harvesting of frogs and turtles is prohibited.
- Fishing allowed year-round in public fishing areas noted, 1 hour before sunrise to 1 hour after sunset.
- Boats are allowed on Stanfield Lake only. Electric trolling motors are allowed, but gasoline-powered motors cannot be used or attached to boats. No use of gasoline-powered boat motors by the public is permitted on the property.
- All fishing is hook and line only. No trot lines, limb lines, float fishing, bow fishing, or spear fishing is allowed.
- Littering shall be prohibited
- Annually review all fishing and boating activities to ensure compliance with all laws, regulations, and policies.

**Justification:**

This use has been determined compatible as it will not materially interfere with or detract from Refuge purposes, provided the above stipulations are implemented. This use will provide an excellent recreational opportunity for visitors with minimal disturbance to wildlife. This use will not diminish the primary purposes of the Refuge for migratory birds. Fishing has been identified as a primary public use, helping to fulfill the mission of the NWRS by providing renewable resources for the benefit of the American public while conserving fish, wildlife and plant resources on these lands.

**Signature:**

Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:**

Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:**

U. S. Fish and Wildlife Service. 2006. Wildlife-Dependent Recreation: Fishing. 605 FW 3. National Wildlife Refuge System, Department of Interior.

## COMPATIBILITY DETERMINATION

**Use:** Research projects by third parties

**Refuge Name:** Muscatatuck National Wildlife Refuge (Refuge)

**Establishing and Acquisition Authority:**

The Refuge was established and land was acquired under authority of the Migratory Bird Conservation Act (16 U.S.C. 7.14-714r). The Refuge was officially established on October 6, 1966. Acquisition funds were derived from federal duck stamp sales.

**Refuge Purpose:**

The Refuge purpose “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” derives from the Migratory Bird Conservation Act.

**National Wildlife Refuge System Mission:**

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. (National Wildlife Refuge System Administration Act of 1966, as amended (16U.S.C. 668dd-668ee).

**Description of Use:**

*What is the use?* The Refuge allows research investigations on a variety of biological, physical, archeological, and social components to address Refuge management information needs or other issues not related to Refuge management. Studies are or may be conducted by federal, state, and private entities, including the U.S. Geological Survey, state departments of natural resources, state and private universities, and independent researchers and contractors. This is not a wildlife-dependent use.

Examples of past biological research include:

- copper-bellied water snakes
- Emerald ash borer

- Indiana bat

*Where would the use be conducted?* Sites for this use would depend on the particular study being conducted and could occur in a variety of habitat types. Access would be restricted by Special Use Permit to only the study sites needed to meet the objectives of the research.

*When would the use be conducted?* The timing of research activities would depend on the individual project, but currently most research occurs during the growing season. The entire Refuge is open for allowed research activities throughout the year in conjunction with the issuance of a Special Use Permit. The timing and number of visits by researchers may be restricted by Special Use Permit.

*How would the use be conducted?* Any research study sites, sampling locations, and transects can be temporarily marked by highly visible wooden or metal posts and must be removed when research ceases. Access to study sites is by foot, truck, all-terrain vehicle, boat, airboat, canoe, and other watercraft. Vehicle use is allowed on Refuge roads, trails, and parking lots normally open to the public.

*Why is this use being proposed?* Most research by third parties is done to address Refuge management information needs or to contribute to a larger knowledge base about resources of concern to the Refuge.

**Availability of Resources:**

Facilities and staff are currently available to provide access, maintain roads, parking lots, secondary access roads, as well as to issue Special Use Permits for research projects. Staff resources are deemed adequate to manage this use at anticipated use levels.

Access points, boats, vehicles, miscellaneous equipment, and limited logistical support are available on the Refuge. Housing is not available.

### **Anticipated Impacts of the Use:**

#### *Short-term impacts:*

Research activities may disturb fish and wildlife and their habitats. For example, the presence of researchers can cause waterfowl to flush from resting and feeding areas, cause disruption of birds and turtles on nests or breeding territories, or increase predation on nests and individual animals as predators follow human scent or trails. Efforts to capture animals can cause disturbance, injury, or death to groups of wildlife or to individuals. In addition, some projects require the collection of animals and plants for study. To wildlife, the energy cost of disturbance may be appreciable in terms of disruption of feeding, displacement from preferred habitat, and the added energy expended to avoid disturbance.

Sampling activities can cause compaction of soils and the trampling of vegetation, the establishment of temporary foot trails and boat trails through vegetation beds, disruption of bottom sediments, and minor tree damage when temporary observation platforms are built or when tree climbers access bird nests.

The removal of vegetation or sediments by core sampling methods can cause increased localized turbidity and disrupt non-target plants and animals. Installation of posts, equipment platforms, collection devices and other research equipment in open water may present a hazard if said items are not adequately marked and/or removed at appropriate times or upon completion of the project.

#### *Long-term impacts:*

Long-term effects should generally be beneficial by gaining information valuable to Refuge management. No long-term negative impacts are expected and the Refuge Manager can control the potential for long-term impacts through Special Use Permits.

#### *Cumulative impacts:*

Cumulative impacts would occur if multiple research projects were occurring on the same resources at the same time or the duration of the research is excessive. No cumulative impacts are expected and the Refuge Manager can control the potential for cumulative impacts through Special Use Permits. Managers retain the option to prohibit research on the Refuge which does not contribute to

the purposes of the Refuge or the mission of the Refuge System, or causes undo resource disturbance or harm.

### **Public Review and Comment:**

This compatibility determination is part of the Muscatatuck Draft Comprehensive Conservation Plan and environmental assessment. Public notification and review includes a notice of availability published in the Federal Register, 30-day comment period, local media announcements, and a public meeting near the Refuge. Comments received and agency responses will be included in the final version of the Muscatatuck Comprehensive Conservation Plan.

### **Determination:**

- Use is Not Compatible
- Use is Compatible with the following stipulations.

### **Stipulations Necessary to Ensure Compatibility:**

- Prior to conducting investigations, researchers will obtain Special Use Permits from the Refuge that make specific stipulations related to when, where, and how the research will be conducted. Managers retain the option to prohibit research on the Refuge which does not contribute to the purposes of the Refuge or the mission of the Refuge System, or causes undo resource disturbance or harm.
- 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.
- Archeological researchers must obtain an Archeological Resource Protection Act permit from the Regional Director prior to obtaining a special use permit from the Refuge Manager.
- Researchers will submit annual status reports and a final report concerning Refuge research to the Refuge Manager.

### **Justification:**

Research by third parties may play an integral role in Refuge management by providing information needed to manage the Refuge on a sound scientific basis. Investigations into the

biological, physical, archeological, and social components of the Refuge provide a means to analyze management actions, impacts from internal and outside forces, and ongoing natural processes on the Refuge environment.

Adverse impacts of research that cause localized vegetation trampling or disruption of wetland bottom sediments are often short-term and would be minimized through stipulations above. Any research equipment that remains in the field for the duration of the project would be clearly marked to avoid potential hazards presented to other Refuge users and/or Refuge staff.

**Signature:**

Refuge Manager \_\_\_\_\_

(Signature and Date)

**Concurrence:**

Regional Chief \_\_\_\_\_

(Signature and Date)

**Mandatory 10-Year Re-Evaluation Date:**

