

## Proposed Compatibility Determination - Patuxent Research Refuge

**USE:** Horseback riding on the refuge trail and roadway system by individuals (non-formal groups)

**REFUGE NAME:** Patuxent Research Refuge

**ESTABLISHING AND ACQUISITION AUTHORITY(IES):** Executive Order 7514, dated Dec. 17, 1936; Executive Order 11724, dated June 27, 1973; Migratory Bird Conservation Act; 16 U.S.C. 1534; 16 U.S.C. 667b - An Act Authorizing the Transfer of Certain Real Property for Wildlife; and Public Law 101-519, 104 Stat. 2247.

**REFUGE PURPOSE(S):** "...as a wildlife experiment and research refuge" - Executive Order 7514, dated Dec. 17, 1936;

"...recreation, conservation, wildlife preservation, and related scientific and educational activities"- Executive Order 11724, dated June 27, 1973;

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

"...to conserve (A) fish or wildlife which are listed as endangered species or threatened species ... or (B) plants ..." 16 U.S.C. 1534;

"...particular value in carrying out the national migratory bird management program." 16 U.S.C. 667b (An Act Authorizing the Transfer of Certain Real Property for Wildlife, or other purposes); and

"...(b) The Secretary of the Interior shall administer the property transferred pursuant to subsection (a) consistent with wildlife conservation purposes and shall provide for the continued use of the property by Federal agencies to the extent such agencies are using it on the date of the enactment of this Act." Public Law 101-519, 104 Stat. 2247, dated Nov. 5, 1990.

**NATIONAL WILDLIFE REFUGE SYSTEM MISSION:** "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 Improvement Act of 1997.

### **DESCRIPTION OF USE:**

Horseback riding is considered to be the use of the refuge's trail and roadway system by the means of persons riding on the back of a horse when the activity itself is the primary use. Horseback riding was an allowable use on the North Tract of the refuge when the land was administered by the Department of Defense. Horseback riding is not a priority public use of the

National Wildlife Refuge System but was found as a compatible use of refuge lands in 1992. Further, the Department of the Army has a special use permit to operate an equestrian center which was transferred as part of the North Tract property. The transfer assembly, a document which officially transferred property between the Department of Defense and the Department of the Interior, allowed for certain activities which were occurring on the property to continue at the same level on the day of transfer (Public Law 101-519, 104 Stat. 2247).

It is hoped by allowing this activity that people will foster an understanding of the mission of Patuxent Research Refuge and the National Wildlife Refuge System. This activity will occur only on the North Tract trail and roadway system as stipulated in accordance with refuge publication North Tract Public Use Areas. Horseback riding is allowed on the following trails and roads: Wildlife Loop (8 miles shoulder use only); Green Trail (1.3 miles); Blue Trail (2.9 miles); Red Trail (1.7 miles); Yellow Trail (1.8 miles); Orange Trail (1.5 miles); Pine Trail (.75 mile); trail around Lake Allen (1.5 miles); and trail around Rieve's Pond (.5 mile). All persons wishing to horseback ride on the North Tract are required to check-in in accordance with the Public Use and Checking In/Out of the North Tract procedures. The trails and roads found on the North Tract of the refuge are open to the public during normal operational hours which varies seasonally. The refuge trail and roadway system are open to the horseback riding year-round with the exception of Thanksgiving, Christmas, and New Year's days. Portions of the road and trail system are temporarily closed to support priority public uses, wildlife management reasons, refuge operational needs, and during the refuge-specific hunting seasons.

Patuxent Research Refuge is located in the National Capital Region just below the fall line of the Patuxent River between the Northern Piedmont and the Upper Atlantic Coastal Plain. The majority of Patuxent's 12,790 acres is drained by the Big and Little Patuxent River, which run through the refuge. A small portion of the refuge (southwest corner) is drained by the Anacostia River. Habitat types include old fields, upland forest, marshes, constructed wetlands and water impoundments. The refuge provides habitat for at least 33 mammal species, 49 amphibians and reptiles, 25 orders of insects, and 250 bird species. The presence of the two rivers on the refuge provides a number of forested habitats including bottomland hardwoods and magnolia bogs.

The trail and roadway system was designed to support the 6 priority public uses and access all habitat types listed above. Persons engaged in horseback riding will use existing access points, parking lots, signage, and refuge roads to access the trail system.

#### **AVAILABILITY OF RESOURCES:**

The refuge has been open for a number of years to hunting, fishing, wildlife viewing, interpretation, environmental education, and photography. The refuge has existing infrastructure such as the trail and roadway system, parking lots, signage, and other facilities that support priority public uses which will also accommodate horseback riding. It is expected that the use of the trail and roadway system by horseback riders will slightly increase the general operating cost for the maintenance of these facilities. To administer, maintain, and survey the facilities and the use would require 50 staff days. (See below)

### Staff Cost

Task	Staff Days	Cost
Administration and management to facilitate activity	10	\$2,000/year
Maintenance of facilities	30	\$6,000/year
Surveying facilities (to include Law Enforcement)	10	\$2,000/year

**Total Staff Cost for these activities: \$10,000.00**

### Cost of Supplies/Services

#### Cost of Supplies/Services

Maintenance of buildings, roadways, trails and parking areas	\$10000/year
Office supplies and support	\$1500/year
Operation of equipment	\$10000/year

**Total Cost of supplies and Services: \$21,500.00**

**Total Cost: \$31,500.00**

**These tables represent only a portion of the cost of maintaining the trail and roadway system. This cost is prorated over various operational needs such as priority public uses, public safety, and other refuge operations.**

#### **ANTICIPATED IMPACTS OF THE USE:**

The presence of horseback riders on the refuge's trail and roadway system can lead to the displacement of animals, although disturbance usually is a negligible influence on large mammal distributions and movements (Boyle and Samson 1985). The effects on other forms of wildlife appear to be short term with the exception of breeding bird communities. Miller, Knight, and Miller (1998) study indicates that species composition and nest predation was altered adjacent to trails in both forested and grassland habitats. It appears that species composition changes are due to the presence of humans and not the preexisting trail or roadway. On the other hand, nest predation appears to be a function of the trail which allowed access to mammalian nest predators. The refuge has and will continue to close certain trails during the nesting season to protect breeding bird communities. The refuge will also continue its proven management strategies of educating trail and roadway users how their activities affect wildlife and how to modify their use to minimize impacts on wildlife (Miller, Knight, and Miller 1998).

The use of a trail and roadway system could lead to soil compaction, exposure of tree roots, and the modification of plant species 3 to 6 feet on either side of the trail which is a function of soil compaction, invasive species, and direct trampling of plants (Kuss 1986) and (Dale and Weaver 1978). All trail users do contribute to trail soil compaction and erosion, however Dale and

Weaver (1978) found horse use causes a greater loss of vegetation cover, wider and deeper trails, and greater soil compaction when compared to hiker use on trail conditions. Deluca et al (1998) points out that horses may cause trail erosion by loosening the soil and increasing soil particle detachment under both wet and dry trail conditions. The increase in soil moisture content of soils reduces the ability of the soil to support trail traffic (Kuss 1986). Summer (1986) recommends that horse trails be established on dry, well-drained sites. Currently all trails and roads used by horse traffic are located on well drained sections of the North Tract of the refuge. The refuge will continue its management practices of trimming vegetation, establishing erosion control, and repair erosion damage to protect trail soils from erosion and compaction. Current levels of horse use of the trails and roadways are not expected to cause significant impacts to soils through compaction or erosion. The refuge trail and roadway system could pose a threat to endangered or threatened species if such were found utilizing habitat near trail locations and in this case the trail would be closed or rerouted to ensure habitat protection. Potential conflict with priority public uses will be minimized by using trail head signs and other media to inform the various users about current public uses.

Another anticipated impact particular to horse use of the trails and roadways is the introduction of invasive plant species. Exposed soil and an abundance of sunlight along roadways and trails are ideal for the establishment of invasive plants which may be transported to the refuge by seeds in feed hay. A number of refuges in the western United States have established "Weed Free" feed requirements for horse use. As the U.S. Fish and Wildlife Service and the refuge implement the directions of Executive Order 13112 (Invasive Species) it is anticipated the refuge will develop a strategy to deal with the introduction of invasive plant species from horse feed hay. This noxious weed management plan will encompass three objectives: 1) prevent the introduction of new invasive plant species; 2) conduct early treatment of new infestations of invasive plant species; and 3) contain and control established infestations of invasive plant species. The trail and roadway system which will be used for horseback riding are already infested with invasive species.

The refuge believes that with the proper management, horseback riding will not result in any short or long-term impacts that will adversely affect the purpose of the refuge or the mission of the National Wildlife Refuge System.

**PUBLIC REVIEW AND COMMENT:** A notice of this Compatibility Determination will be printed in a local newspaper with a wide distribution area. It will be posted at the National Wildlife Visitor Center and the North Tract Visitor Contact Station for thirty days.

**DETERMINATION (CHECK ONE BELOW):**

- USE IS NOT COMPATIBLE  
 USE IS COMPATIBLE WITH THE FOLLOWING STIPULATIONS

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

The refuge will continue to protect and manage wildlife and their habitat especially breeding and wintering bird communities found on the refuge through the use of education, signage, and seasonal closure of the trail/roadway system.

The refuge continues to monitor trail and roadway conditions to determine the effects on adjacent plant communities and take necessary steps to protect habitat. This would include but is not limited to; protecting soil from compaction, seasonal closure of trails, and relocating trails.

All horseback riders will be restricted to the trail and roadway system.

Horses will not be staked, hobbled, tied to trees, or confined on the refuge in any way (with the exception of the Equestrian Center) and must be accompanied by riders at all times.

The refuge will develop a Noxious Weed Management Plan.

Horse trailers will be restricted to the Visitor Contact Station parking lot and other designated parking areas.

## **JUSTIFICATION:**

The Service and the National Wildlife Refuge System maintain goals of providing opportunities to view wildlife. Allowing the use of the trail system by persons engaging in horseback riding for the sake of riding will have the secondary chance to view wildlife and habitat. These users may take the time to learn more about the refuge as they pursue their activity on and become supporters of the National Wildlife Refuge System.

Horseback riding will not materially interfere with or detract from the fulfillment of the System mission or the purposes of the refuge.

## **Literature Cited:**

**Standard Operating Procedures, Patuxent Research Refuge, North Tract Public Use Areas, 2003.**

**Standard Operating Procedures, Patuxent Research Refuge, Public Use and Checking In/Out of the North Tract, 7/20/2003.**

**Miller, S.G., Knight R. L., and Miller C. K. 1998. Influence of Recreational Trails on Breeding Bird Communities. pp. 162-169 (8)1 Ecological Applications**

**Kuss. F. 1986. A review of major factors influencing plant responses to recreation impacts. Environmental Management. 10:638-650**

Boyle S.A., Samson F.B. 1985. Effects of Nonconsumptive Recreation on Wildlife: A Review .13:110-116.

Summer R., 1986. Geomorphic impacts of horse traffic on montane landforms. Journal of Soil and Water conservation. 41:126-128

Deluca et al. 1998. Influence of Llamas, Horse, and Hikers on Soil Erosion from Established Recreation Trails in Western Montana, USA. Environmental Management.22:255-262

Dale. D., Weaver. T. 1978. Sampling Effects on Vegetation of the Trail Corridors of North Rocky Mountain Forests. Journal of Applied Ecology 15:451-457

SIGNATURE: \_\_\_\_\_

REFUGE MANAGER: Brad Knutson 9/03/04  
(signature and date)

CONCURRENCE: \_\_\_\_\_

REGIONAL CHIEF: Anthony DeLegis 2/10/05  
(signature and date)

MANDATORY 10- OR 15-YEAR REEVALUATION DATE ~~2014~~

2/10/15

**MARIGELA CONSTANTINO**

08/17/2004 02:39 PM

To: Holliday Obrecht/R5/FWS/DOI@FWS  
cc:

Subject: Threatened & Endangered Species Review for Activities Occurring at Patuxent NWR

*RE: Update and Renewal of Compatibility Determinations for Recreational Activities (dog training, camping, hiking, jogging, bicycling, horseback riding, and cross country skiing) Occurring at the Patuxent National Wildlife Refuge, Anne Arundel County, MD*

Dear Mr. Obrecht:

This responds to your request for information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the Patuxent National Wildlife Refuge. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact me at the number below.

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Maricela A. Constantino, Biologist  
Threatened & Endangered Species Program  
USFWS/Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, Maryland 21401  
410-573-4542 (office); 410-269-0832 (fax)



NEPA COMPLIANCE CHECKLIST

Grant/Project Name: Patuxent Research Refuge

Compatibility Determination: Horseback Riding

This proposal  is;  is not completely covered by categorical exclusion \_\_\_\_\_ in 516 DM 2, Appendix \_\_\_\_\_; and/or 516 DM 6, Appendix \_\_\_\_\_.

(check (✓) one) (Review proposed activities. An appropriate categorical exclusion must be identified before completing the remainder of the Checklist. If a categorical exclusion cannot be identified, or the proposal cannot meet the qualifying criteria in the categorical exclusion, or an extraordinary circumstance applies (see below), an EA must be prepared.)

**Extraordinary Circumstances:**

Will This Proposal (check (✓) yes or no for each item below):

- | Yes                      | No                                  |   |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. Have significant adverse effects on public health or safety.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Have significant adverse effects on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds (Executive Order 13186); and other ecologically significant or critical areas under Federal ownership or jurisdiction. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Have a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. Have significant adverse effects on properties listed or eligible for listing on the National Register of Historic Places as determined by either the bureau or office, the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, or a consulting party under 36 CFR 800.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Have significant adverse effects on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant adverse effects on designated Critical Habitat for these species.   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. Have the possibility of violating a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. Have the possibility for a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 11. Have the possibility to limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 12. Have the possibility to significantly contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).   |

(If any of the above extraordinary circumstances receive a "Yes" check (✓), an EA must be prepared.)

Yes  No This grant/project includes additional information supporting the Checklist.

**Concurrences/Approvals:**

Project Leader: Brad Knudson

Date: 9/03/04

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the grant/agreement/amendment:

- is a categorical exclusion as provided by 516 DM 6, Appendix 1 and/or 516 DM 2, Appendix 1. No further NEPA documentation will therefore be made.
- is not completely covered by the categorical exclusion as provided by 516 DM 6, Appendix 1 and/or 516 DM 2, Appendix 1. An EA must be prepared.

**Service signature approval:**

RO or WO Environmental Coordinator: \_\_\_\_\_ Date: \_\_\_\_\_

Staff Specialist, Division of Federal Assistance: \_\_\_\_\_ Date: \_\_\_\_\_

(or authorized Service representative with financial assistance signature authority)

Public Notice  
Patuxent Research Refuge

The U.S. Fish and Wildlife Service (Service) is evaluating horseback riding on the Patuxent Research Refuge trail system at the North Tract. Horseback riding has been an integral part of the public use program at the refuge for the past 10 years. There are approximately 15 miles of trails that are currently open to horseback riding, including paved roadways and gravel/dirt trails.

Prior to allowing these uses to continue on the refuge, Federal law requires that the Service first determine that the proposed activity is a compatible use. A compatible use is a proposed or existing wildlife-dependant recreational use or any other use of a National Wildlife Refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the purposes for which the refuge was established and the National Wildlife Refuge System mission. The Service develops a compatibility determination to facilitate evaluation of proposed uses, including anticipated impacts and stipulations necessary to ensure compatibility. A draft compatibility determination is currently available for public review and comment.

The National Wildlife Refuge System mission 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. The purposes for establishing the Patuxent Research Refuge are provided on the first page of the draft compatibility determination.

The Service would like to know what you think of these proposed refuge uses. All comment received within 30 days following the date of this notice will be considered in finalizing this compatibility determination. We hope to make a final decision on this proposed use within 30 days following closure of the public comment period.

To request a copy of the compatibility determination, learn the final decision regarding these proposed uses, or for more information, contact the Patuxent Research Refuge office at 410-674-4625 or find it on our website at Patuxent.fws.gov.

Comments should be received no later than 30 days following the date of this notice and letters should be addressed to: Brad Knudsen, Refuge Manager, Patuxent Research Refuge, 10901 Scarlet Tanager Loop, Laurel, MD 20708; by email at Richard\_Potvin@fws.gov, or by telephone to Richard Potvin at 410-674-4625.

LL7/014 July 14 2004 10960

OFFICE OF



PATUXENT PUBLISHING COMPANY

615 MAIN STREET, LAUREL, MARYLAND 20707

7/8

Laurel, Maryland

THIS IS TO CERTIFY, that the annexed advertisement of

was inserted in the *Laurel Leader*, a weekly newspaper published in Laurel, Prince Georges County, Maryland, once a week for 1 successive weeks before the 2nd day of JULY 2004, that is to say, the same was inserted in the issues of 7/1

PATUXENT PUBLISHING COMPANY

By

LEGAL ADVERTISING

FOR PRINCE GEORGES COUNTY, IN EQUITY

Plaintiff

vs.

Defendant

CERTIFICATE OF PUBLICATION OF

## Public Notice

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