

## Compatibility Determination

**Use: Right-of-way (ROW - utility).** The right to use and possibly alter the landscape through construction, maintenance, and operation of water or fuel pipeline, power line, telecommunications line or tower, or other utility.

**Refuge Name:** Nestucca Bay National Wildlife Refuge (NWR)

**City/County and State:** Oretown and Neskowin, Tillamook County, OR

### **Establishing and Acquisition Authorities:**

1. Endangered Species Act of 1973, as amended [16 U.S.C. 1531-1544]
2. Fish and Wildlife Act of 1956, as amended [16 U.S.C. 742a-742j]
3. Migratory Bird Conservation Act [16 U.S.C.].
4. Consolidated Farm and Rural Development Act [7 U.S.C. 2002].
5. Emergency Wetlands Resources Act of 1986 [16 U.S.C. 39 100 Stat 3583].
6. Refuge Recreation Act of 1962, as amended [16 U.S.C. 460k-4] (Neskowin Marsh Unit)

### **Refuge Purpose(s):**

“....to conserve (a) fish or wildlife which are listed as endangered species or threatened species...or (b) plants” [16 U.S.C. 1534 (Endangered Species Act of 1973)].

“....for the development, advancement, management, conservation, and protection of fish and wildlife resources” [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. 742f(b)(1) (Fish and Wildlife Act of 1956)].

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

“....for conservation purposes” [7 U.S.C. 2002 (Consolidated Farm and Rural Development Act)].

“....the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to fulfill international obligations contained in various migratory bird treaties and conventions” [16 U.S.C. 39 100 Stat 3583 (Emergency Wetlands Resources Act of 1986)].

### **National Wildlife Refuge System Mission:**

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

## **Description of Use(s):**

The proposed use is a “**Right-of-way (utility)**”: The right to use and possibly alter the landscape through construction, maintenance, and operation of water or fuel pipeline, power line, telecommunications line or tower, or other utility. The U.S. Fish and Wildlife Service (Service) proposes to allow the Neskowin Regional Water District (NRWD) to replace a failed portion of a waterline that runs underneath the Neskowin Marsh Unit of Nestucca Bay NWR, at a greater depth and in a partially revised trajectory, under the terms of a Special Use Permit to be issued by the Service. The Service will concurrently grant a Right of Way (ROW) to accommodate this revised waterline placement. The Service-issued ROW will replace the Permanent Easement (see attached Permanent Easement) that is currently in place. The use of the NWR for utility purposes is not a wildlife-dependent public use; therefore, an Appropriateness Finding has been completed prior to developing this Compatibility Determination.

NRWD proposes to underground bore and place a ten (10) inch high density polyethylene (HDPE) waterline underneath the Neskowin Marsh Unit of Nestucca Bay NWR. The boring will begin on privately owned lands and will continue east onto Refuge tracts 15 and 16 (see attached Location Map) in the N½, Section 24, T5S, R11W. The western portion of the existing Permanent Easement is on the refuge within a bulrush marsh, while the eastern portion is forested wetland that grades into a grasslands area dominated by invasive species including Armenian blackberry and Scotch broom. The existing waterline easement (see Sheet C1, Waterline Crossing Overview) is ten (10) feet wide and extends from private lands east through Refuge lands, ending at the refuge’s east boundary.

The new underground waterline will be placed within a ten (10) inch bore that will be at a twenty (20) feet minimum depth under the marsh, beginning on privately owned lands and extending east for approximately 1700 feet, of which 1500 feet is on Refuge lands. Burial of the line will be partially within the existing 10’ wide waterline easement. The line will deviate significantly into a new 10’ wide ROW beginning approximately 450 feet east of the bore entry pit and returning to the original easement location approximately 150 feet west of the bore exit pit. (See attachments: Potential HDD Pipe Alignment; Sheet C2, Waterline Crossing Plan and Profile; and Sheet C3, Waterline Crossing New Alignment) The existing failed 6 inch PVC waterline, which is located a minimum of three (3) feet underground, will be end-plugged and abandoned in place, instead of removing this waterline which would necessitate extensive ground disturbance within the sensitive wetlands.

The bore entrance pit will be located on privately owned lands adjacent to the refuge, and will not be analyzed in this Compatibility Determination. The bore exit pit will be constructed on refuge lands, in blackberry-invaded grassland. The dimensions of the bore exit pit will be 10’L x 3’W x 4’D (See Sheet C6, Connection Details). Within the bore exit pit, a concrete anchor wall will be constructed to anchor the new waterline in place. Trench excavation (See Sheet D1, Trench Detail) for the bore exit pit will be conducted with all required bracing and shoring, and on completion of waterline connection the trench will be backfilled. The top layer of the bore exit pit will consist of a compacted aggregate base covered with a minimum 8-inch layer of topsoil.

Prior to new waterline construction, the contractor will pothole within the bore exit pit site to locate the tie-in location of the existing waterline and confirm fitting requirements for connection to the existing waterline. Potholing will likely entail use of a portable vacuum excavator with high-pressure water or air to quickly dig a small, precisely controlled hole to uncover the existing failed waterline tie-in location, and will take place within the existing easement. The existing waterlines will be protected in place until completion of new waterlines. After boring is completed and all testing and connections have been made, the existing failed waterline is to be abandoned in place, temporary connections, valves, and covers removed, and end caps or plugs provided as required for abandonment.

The work will be accomplished through use of a boring machine on rubber tracks. There will also be a rubber tired backhoe or excavator on site to construct the bore exit pit. The boring machine will operate only from the bore entrance pit on private land. The backhoe or excavator will remain within the ROW during waterline boring. The machine will sit anchored at the bore entrance pit as a rod is pushed forward to create the tunnel for the waterline, with more rods added as needed. The waterline pipe sections will be pre-fused together and stationed on refuge lands within the existing easement and adjacent to the east boundary, and when boring is completed, the bore head will be removed from the drill and the machine will begin to pull the waterline back through the tunnel to the bore entrance pit. Very little earth will be displaced during the boring process, as the rods are pushed through underground. Any displaced earth that cannot be used to refill the bore exit pit site will be disposed of offsite. During construction the horizontal directional drilling contractor will provide electronic monitoring of the horizontal and vertical drilling head location, recording position readings at a maximum of 10 foot intervals. These will be used to generate an accurate alignment of the new pipeline, which will form the basis for the documented ROW to be issued by the Service.

This work will be scheduled for September 2011 and is not planned to take more than two weeks to complete from start to finish. On completion of the waterline replacement the ground disturbance area of the bore exit pit will be filled with native soil, graded to existing contours, and seeded with a weed free native perennial vegetative cover.

This use is being proposed because it is the least disruptive option for replacing a failed municipal waterline that runs underneath the Neskowin Marsh Unit of Nestucca Bay NWR. The community of Neskowin is adjacent to the Neskowin Marsh Unit, and the waterline and accompanying Permanent Easement (see attached "Easement") existed prior to Refuge establishment. The water source for Neskowin is the headwaters of Hawk Creek, a fish-bearing stream which also runs through this refuge unit. The failed waterline supplied water to the community of Neskowin through a circular loop system. The critical section that crosses the marsh has failed and is shut off. Replacement of the line in place would require open trenching, the construction and operation of which would cause unacceptable impacts to the sensitive and rare wetlands, and to fish and wildlife. Instead of open trenching, the NRWD proposes to bore and place the new line underneath the marsh at sufficient depth to avoid negative impacts to the marsh. Partial realignment of a portion of the waterline is required to avoid underground rock formations as well as layers of sand and peat. This realignment necessitates establishment of a new ROW. There is no viable alternative for boring the replacement waterline to maintain water delivery to the community of Neskowin that does not cross Refuge land.

#### **Availability of Resources:**

The issuance of this Right-of-way (utility) Permit to bore and place a waterline under Neskowin Marsh will require the minimal expenditure of Refuge resources in the form of Refuge staff time to research and develop the Appropriate Use Finding, Compatibility Determination, and associated NEPA compliance documents to allow this activity. Administrative costs will also include preparation of a ROW to reflect the proposed relocation of the existing easement trajectory. During construction, a minimal amount of staff time will be required to monitor excavation of the bore exit pit during construction and following completion of the project. These expenditures of Refuge staff time can be accomplished during routine visits to Neskowin Marsh Unit of Nestucca Bay NWR and will not require any additional funding. Cultural resource investigation and compliance will be the responsibility of the NRWD prior to commencement of the project.

#### **Anticipated Impacts of the Use(s):**

Refuge purpose and other uses: The Neskowin Marsh Unit was established for fish and wildlife and to provide long-term protection for the biological integrity of unique marsh and bog habitats. This use will contribute to fulfillment of that goal by honoring a preexisting commitment (the Permanent Easement) in a manner that avoids impacts to the marsh and bog habitats. This refuge unit is closed

to public access so there are no existing public uses that will be affected by this use. No management activities are conducted on this tract, so there are no anticipated impacts to refuge management activities.

The underground waterline will be located within a revised 10 foot wide ROW. Along with the existing section of waterline that has not failed and is not being replaced, this bored waterline will serve only the community of Neskowin and will be operated by the Neskowin Regional Water District. The proposed use will benefit public safety through the maintenance of a reliable water supply for the community of Neskowin, which would become critical in case of fire.

**Wildlife and Habitat:** The presence of NRWD-hired contractors and their trucks and equipment during construction of the bore exit pit, the boring process, and the walking inspection and line surveying and could cause minor short term disturbance to any wildlife on site when the proposed action begins. All ground disturbance is expected to take place in previously disturbed ground within the easement. No trees will be removed or damaged during or as a result of the proposed action. Once the new waterline is underground, it is not expected to require maintenance or access except for occasional foot access to adjust valves, so there are very minimal anticipated impacts to refuge resources due to access and subsequent disturbance by waterline operators or employees of the NRWD. The proposed action would have a negligible short term effect on refuge habitat along the proposed ROW since the excavation of the bore exit pit will take place within a previously disturbed and degraded upland vegetated primarily with invasive Armenian blackberry, and the boring of the new waterline will be almost entirely underground. Since any dirt disturbed will be restored to pre-construction condition as a condition of this CD, long term negative impacts to wildlife and habitat would be negligible.

There are no anticipated impacts to unique marsh and bog habitats since the waterline will be bored and placed a minimum of twenty (20) feet underground. This placement will avoid sand and peat layers as well as solid rock formations, and will not cause any impacts to unique marsh and bog habitats nor wildlife.

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

The period of public review began MM/DD/YYYY and ended MM/DD/YYYY.

The following methods *will be* used to solicit public review and comment:

- Posted on Refuge Complex website
- Posted notices in public places within community of Neskowin
- Letter to other interested entities including Neskowin Community Association
- Letter and request for review sent to Neskowin Regional Water District
- Letter to Tillamook County Commissioners

Why was this level of public review and comment selected?

Proposed use is a replacement of a failed waterline supplying the community of Neskowin and concurrent granting of a Right-of-Way to replace the existing Permanent Easement authorizing this waterline. The replacement involves a minor change in the trajectory of the existing waterline. The proposed method (boring a minimum of 20 feet underground) will protect wildlife and habitat resources. There is no expectation of any controversial issues.

Summarize comments received and any actions taken or not taken because of comments received.

*(to be completed after public review period)*

**Determination:** (check one below)

Use is Not Compatible

Use is Compatible with the Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

1. Proposed work will take place beginning in September 2011 following the primary breeding season for Neskowin Marsh wildlife and during the driest period of the year.
2. Access for NRWD and its contractor(s) for boring activities, bore exit pit construction, HDPE placement, and subsequent marking and surveying of the new waterline will be restricted to the existing Easement location and proposed new 10 foot wide ROW within tracts 15 and 16 of the Neskowin Marsh Unit.
3. All ground disturbed will be returned to pre-construction condition prior to completion of the project and exit from the site by NRWD and its contractor(s). This will include setting excavated materials carefully to the side of the area being dug, returning as much of the soil/peat as possible to the bore exit pit site when the boring is completed, compacting and grading the site to natural contours, and seeding the site with a weed free native perennial vegetative mix before departure.
4. During and after construction, Best Management Practices (BMPs) such as silt fences, wattles and other actions will be used to prevent erosion / sedimentation from leaving the bore and exit pits.
5. Spill kits will be located on site to contain and treat any accidental discharge of fuel or oil from construction equipment. Equipment will not be refueled within the wetlands area.
6. Timing of construction activity will be communicated to the refuge Project Leader or his designee prior to any initiation of excavation activity. Project Leader and/or his designee will be onsite during excavation activity.
7. The boring contractor will design the project to prevent frac-out and will develop a Frac-out Contingency Plan that is approved by the Refuge prior to initiation of work. If a frac-out occurs all activity is to cease and the Project Leader or his designee is to be contacted immediately. Implementation of the frac-out contingency plan will require concurrence and oversight by the Project Leader or designee.
8. All equipment will be washed and cleaned prior to arrival on site to remove the potential for introduction of invasive species such as New Zealand mud snail.
9. NRWD will be responsible for obtaining all federal, state and county permits necessary for the project.
10. NRWD will be responsible for a cultural resources inventory of the project site and will be responsible for any monitoring necessary during construction. Project Leader and/or his designee will also be present and monitor for cultural resources.

**Justification:**

The existing waterline and accompanying easement on the Neskowin Marsh Unit of Nestucca Bay NWR were acquired prior to the establishment of the refuge. The section of the circular loop waterline that crosses the marsh has failed and must be replaced to maintain a secure water supply for the community of Neskowin. Failure to grant a ROW (to replace the permanent easement) and allow replacement of this failed waterline would result in elimination of a secure water supply for Neskowin and would create a safety/health hazard for the community and the Service because the water supply is needed not only for community use but for fire response as well. In addition, forcing NRWD to stay within the existing easement would necessitate an open trenching system that would have serious impacts to fish and wildlife and to sensitive wetlands. Location of the replacement waterline off-refuge is not a feasible alternative since it needs to be connected to the remainder of the

water delivery system. Instead of replacing the waterline in its existing alignment and depth, the NRWD has proposed replacing the failed line with a larger line bored at a greater depth to avoid harm to wildlife and habitats. This new trajectory requires a revised ROW. The project will have minimal impact wildlife and unique habitat resources of the refuge; will be completed entirely at the expense of NRWD; and will require only minimal Service staff time to complete the required environmental analysis, NEPA documentation, and oversight.

The proposed issuance of a Rights-of-way (utility) to use and possibly alter the landscape through construction, maintenance, and operation of a replacement waterline, on lands under control by the Service, would contribute to the Service's ability to continue to protect unique marsh and bog habitats as well as provide fire response capability for the Neskowin Marsh Unit of Nestucca Bay NWR.

Based on the limited scope of the project and implementation of stipulations both in the Compatibility Determination and the subsequent Special Use Permit, it is anticipated that wildlife populations will find sufficient food resources and resting places such that their abundance and use of the Refuge will not be measurably lessened due to construction activities. The relatively limited number of individuals expected to be adversely affected due to project construction will not cause wildlife populations to materially decline, the physiological condition and production of species present will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall welfare will not be negatively impacted. Thus, allowing this revised Right-of-Way utility project to occur will not materially detract or interfere with the purposes for which the refuge was established or the refuge mission and will contribute to the Service's ability to continue to protect unique marsh and bog habitats as well as provide fire response capability for the Neskowin Marsh Unit of Nestucca Bay NWR.

**Mandatory 10- or 15-Year Re-evaluation Date:** (provide month and year for "allowed" uses only)

\_\_\_\_\_ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

Mandatory 10-year reevaluation date (for all uses other than wildlife-dependent public uses)

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

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

**Attachments:**

Permanent Easement – Neskowin Regional Water District  
Location map  
Sheet C1, Waterline Crossing Overview  
Potential HDD Pipe Alignment  
Sheet C2, Waterline Crossing Plan and Profile  
Sheet C3, Waterline Crossing New Alignment  
Sheet C6, Connection Details  
Sheet D1, Trench Detail

**Refuge Determination:**

Prepared by: \_\_\_\_\_ (Signature) \_\_\_\_\_ (Date)

Refuge Manager/  
Project Leader  
Approval: \_\_\_\_\_ (Signature) \_\_\_\_\_ (Date)

**Concurrence:**

Refuge Supervisor: \_\_\_\_\_ (Signature) \_\_\_\_\_ (Date)

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