

# **Managing Utility Rights-of-Way for Wildlife Habitat**

*NCTC COURSE NUMBER: TEC7179*

A Self Study Guide



*Produced to Accompany the U.S. Fish and Wildlife Service  
Training DVD: "Managing Utility Rights-of-Way for Wildlife Habitat"*

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National Conservation Training Center**

# **- Study Guide Contents -**

**Introduction/Overview:** Course Objectives

## **Section 1: Managing Utility Rights-of-Way for Wildlife Habitat**

### **Part 1: Engineering and Wildlife Concerns**

- A. Engineering Concerns
  - Engineering Discussion Points on Electric Utility Rights-of-Way
  - Engineering Discussion Points on Pipeline Utility Rights-of-Way
- B. Wildlife Concerns

Review of Part 1 – Comprehension Question and Answer

### **Part 2: Types of Habitat in Utility Corridors**

- A. Meadow
- B. Old Field
- C. Emergent Wetland
- D. Wildlife Movement Crossing Corridors
- E. Arrested Shrub Layer

Review of Part 2 – Comprehension Question and Answer

### **Part 3: Land Manager and Utility Partnerships**

Review of Part 3 – Comprehension Question and Answer

## **Section 2: Utility Rights-of-Way Habitat Management Examples on Natural Resource Lands**

Comprehension Question and Answer for following video segments:

- A. Nulhegan Basin, Silvio O. Conte National Wildlife Refuge
- B. John Heinz National Wildlife Refuge (Pipeline Corridor)
- C. Nassawango Creek: The Nature Conservancy Preserve
- D. Habitat Management on Utility Rights-of Way in the West

## **Appendix:**

Answers to Comprehension Questions and Answers

Application for TEC7179 Course Credit & NCTC Course Application

# Introduction/Overview

This study guide is designed to accompany the NCTC training video/DVD:

## *Managing Utility Rights-of-Way for Wildlife Habitat*

The purpose of the training is to provide instruction to U.S. Fish and Wildlife Service refuge personnel and other natural resource managers who are responsible for lands crossed by utility corridors. The video/DVD was produced in two sections and identifies basic rights-of-way management issues, describes various habitat conditions possible on utility corridors, presents techniques for producing different habitat types, and discusses integrated planning and partnership approaches. The training in Section 1 is presented using the backdrop of Patuxent Research Refuge where different management techniques are researched on the utility corridors. Section 2 presents habitat management and utility partnership examples from other selected refuge and natural resource lands, and overviews rights-of-way habitat issues in electric utility corridors on western lands.

*Note: The **Managing Utility Rights-of-Way for Wildlife Habitat** training video/DVD and this Study Guide are designed to meet the requirements for the National Conservation Training Center course: **Rights-of-Way Habitat Management (TEC7179)**. If you would like to receive credit from NCTC for completing TEC7179, then please be sure to use the questions in this guide as a learning aide and follow the instructions at the end of the guide to apply for the course. Also note that any reference, mention, or discussion of specific products, companies, web sites, studies, or management techniques in this Study Guide or the training video/DVD, does not imply endorsement by the U.S. Fish and Wildlife Service, or the National Conservation Training Center.*

## **Objectives**

After completing the *Managing Utility Rights-of-Way for Wildlife Habitat* video lesson along with the “question and answer” sections in this study guide, you will be able to:

- ✓ Identify basic rights-of-way management issues,
- ✓ Describe various wildlife habitat conditions possible in utility corridors,
- ✓ Learn techniques for producing different habitat types in rights-of-way, and
- ✓ Discuss integrated management planning and partnership approaches for managing rights-of-way habitat.

# **SECTION 1: Managing Rights-of-Way for Wildlife Habitat**

Utility rights-of-ways exist on most U.S. Fish and Wildlife Service refuges and other public and private lands managed for natural resource values.

## **Utility companies have primary concerns in managing right-of-ways:**

- ❖ Providing reliable, uninterrupted customer service
- ❖ Providing safety for their employees, crews and customers
- ❖ Limiting liability from accidents and outages

## **Refuge and other land managers are concerned about potential negative effects of rights-of-ways on their management goals and objectives.**

### **For example, effects such as:**

- ❖ Habitat fragmentation
- ❖ The introduction of invasive and exotic species

**In summary, these concerns and others presented in the video can present a gap between the needs of utility rights-of-way managers and conservation land managers.**

### **This gap can be lessened through:**

- ❖ Understanding basic rights-of-way management issues, including utility engineering issues and wildlife concerns;
- ❖ Knowledge of different habitat conditions possible in utility corridors and the techniques for producing these habitats; and
- ❖ Observation of integrated management planning and partnership approaches that have been used on other conservation and Refuge lands.

# Part 1: Engineering and Wildlife Concerns

## A. Engineering Concerns

### Engineering Discussion Points on Electric Utility Rights-of-Way:

- Transmission lines are the lines that carry power from generators to substations.
- Power from the transmission lines is stepped down to smaller sizes to serve businesses and homes.
- High voltage transmission lines can have multiple conductors (conductor = wire) and each tower can have more than one circuit.
- High voltage transmission amounts typically range from 138,000 volts to 500,000 volts (higher voltages are possible).
- If one tree were to compromise high voltage transmission lines, it could trip out an entire city.
- Power outages could also “cascade” (one line goes out and the remaining lines cannot handle the load, tripping off back to substations and generators).
- Insulators, the bell shaped structures that hang between the towers and the lines, prevent the power from conducting into the tower and down to the ground.
- The number of insulators that are present indicates the amount of power that the transmission line was designed to carry.
- The smaller wires that run along the top of high voltage transmission lines are called “static wires” (they protect the conductors from lightning).
- Static wires do not carry power, but can carry fiber optic cables internally for communication applications.
- Large amounts of power running through the conductors heats up the wire and can cause them to stretch.
- Stretching causes the lines to sag, which can cause the conductors to come dangerously close to vegetation.
- High winds can also cause the conductor lines and vegetation to sway, which can additionally reduce the separation between the conductors and vegetation.
- Conductors do not have to actually touch vegetation to cause an outage, but high voltage can jump (or “arc”) from a conductor to vegetation if it is close enough.

### **Engineering Discussion Points on Pipeline Utility Rights-of-Way:**

- Pipeline companies have similar concerns as electric utilities (e.g., reliability of service, safety, liability).
- Vegetation roots can also impact the integrity of pipelines.
- Pipeline companies like to maintain their corridors in meadow types of habitat for visibility and access.
- Pipeline companies will often use aerial inspection of their lines to observe potential leaks.
- A gas leak can be evidenced by a die-off in meadow vegetation.
- A primary mode of modern power generation is with natural gas, transmitted to generation sites through pipelines.

### **B. Wildlife Concerns:**

#### **Discussion Points in Video:**

- Habitat fragmentation
- Introduction of invasive and exotic species
- Direct impact or collisions between the wildlife and utility equipment
- The effect maintenance can have on nesting and breeding habitats
- The application of chemicals (herbicides) to maintain rights-of-ways

(Note: Concerns involving wildfire potential and control are discussed at other points in the video.)

### **Part 1 Reference Sites:**

Avian Powerline Interactions Committee: <http://www.aplic.org>  
Edison Electric Institute: [http://www.eei.org/industry\\_issues/environment](http://www.eei.org/industry_issues/environment)  
Department of Transportation, Pipeline Safety: <http://ops.dot.gov>  
FERC Electric/Oil/Gas Regulation: <http://www.ferc.gov/industries/industries.asp>  
FERC 2003 Blackout Utility Vegetation Management Final Report:  
<http://ferc.gov/cust-protect/moi/uvm-final-report.pdf>

## **Review of Part 1:**

1. What are the primary concerns of utility companies in maintenance of rights-of-ways?
2. Why are refuge and other conservation land managers concerned with proper maintenance of utility corridors?
3. What does it mean when a power outage cascades?
4. Why do pipelines desire the ability to aerially inspect lines?

## **Part 2: Types of Habitat in Utility Corridors**

- **Meadow**
- **Old Field**
- **Emergent Wetland**
- **Wildlife Movement Crossing Corridors**
- **Arrested Shrub Layer**

These five, rights-of-way wildlife habitat types are presented in the training video/DVD while showing research sites at Patuxent Wildlife Research Refuge in Maryland. As the above five types are presented in the video and this Study Guide, the pros and cons of these habitats in right-of-way corridors, and the management techniques that may be used by utility companies and land managers to produce them, are introduced and discussed.

*Note that the habitats and most of methodologies presented in this section are applicable throughout the country with some modifications for species, climate, soils, and other local issues. In addition, a segment addressing rights-of-way habitat issues in electric utility corridors on western lands is included at the end of the training video (Section 2).*



## A. Meadow Habitat

*(Meadow Habitat = An open area of grassland and other low growing vegetation, commonly with a rolling to flat terrain, characterized by grazing and burrowing species.)*

### Pros:

- Has value for ungulate and other grazing species, some small mammals, and small mammal predators.
- Habitat has value for grassland breeding birds if it is a large enough block (>10 hectares, and not overly linear in shape).

### Cons:

- Right-of-way corridors managed for a meadow habitat within a forest may not have much value for grassland breeding birds.
- Invasive and exotic species can be established easily in meadows.
- Various saplings can be easily established as well, potentially interfering with power lines and pipelines.
- Hard edges can occur if the right-of-way is in meadow and the borders are abruptly another vegetation type. (*“Hard edges” are sometimes associated with reduced wildlife diversity and could increase habitat fragmentation impacts.*)
- Soft or “feathered” edges can be used to provide a transition from forested habitat into the meadow area and may lessen the impact of fragmentation. (*Establishing a transition on both sides of a meadow habitat corridor that bisects a forested area is sometimes called the “U effect”, with a medium height “border zone” along the edges, and a lower vegetated “wire zone” in the center of the corridor.*)

### Management Techniques:

#### 1. Mowing

- Not very selective (desired/valued species could be impacted).
- You have to mow often to maintain a meadow habitat.
- Timing of mowing is important (e.g., impact on breeding birds).
- Contamination from oil, gasoline, and hydraulic fluid from equipment.
- Introduction of invasive and exotic species can be facilitated by mowing.

#### 2. Broadcast Herbicide *(Applying herbicides to the entire right-of-way)*

- Not very selective
- Broadcast may be better for starting meadows, than for maintaining

#### 3. Selective Herbicides *(Applying herbicides only to vegetation you want removed)*

- More selective than a broadcast treatment and uses less product

## **B. Old Field Habitat**

*(Old Field Habitat = Habitat that generally develops in a previously farmed or mowed field that has been left fallow, with no use for several years. Through natural plant succession, the field will start to grow up and transition into taller species.)*

### **Pros:**

- Flowering plants and forbs occur, which also have value for wildlife.
- Open, intermixed structure contributes to diversity.
- Most old field plants do not grow very high which is compatible with management under an electric utility line.

### **Cons:**

- Through time, exotics will establish themselves.
- Requires managing the edges and corridor for encroaching trees.

### **Management Techniques:**

1. Selective foliar application of herbicides from a truck (*foliar = using herbicide on leaves of just the target species*) (*note: While “selective” - some spray drift or drip can impact areas around the target – particularly if sprayed from crews on a truck.*)
2. Selective foliar application of herbicides from a backpack (*more accurate*)
3. Selective basal treatments (*basal treatment = treating the circumference of the base of the shrub or tree with a herbicide that includes a penetrating oil*) (*most accurate*)
4. Selective mowing in alternating strips, providing edge habitat for wildlife
5. Edge management:
  - > Mechanical equipment using a boom (aerial or ground).
  - > Applying bud inhibitors to inhibit encroachment of edge vegetation.
  - > Girdling (*cutting the tree cambium layer to kill the tree in place*) and/or topping (*cutting down only the top part of the tree*) may be used to address specific trees that threaten utility lines/equipment.
  - > Brush piling cut logs and vegetation along the edges to provide habitat for reptiles, amphibians and birds (*also called “windrowing”*).

## C. Emergent Wetland Habitat

*(Emergent Wetland Habitat = Vegetated areas where there is standing surface water, or where the ground water comes into close proximity to the surface and saturates the soil.)*

### Pros:

- Wildlife value for amphibians, reptiles and a variety of water bird species such as waterfowl and wading species.
- Some bird species use emergent wetlands for breeding.
- Snags (*dead standing trees*) provide good habitat.

### Cons:

- High labor costs can be associated with management techniques in emergent wetland areas.
- Areas are difficult for crews to work in.
- Birds like to nest on the utility structures in many wetland areas.
- Beavers can flood access roads and could threaten tower support integrity.
- Species and habitats may be more sensitive to management in wetland areas.

### Management Techniques:

1. Providing area will freeze, execute mowing in the wintertime to lessen the disturbance to the soil. Can use mowing equipment that is mounted on tracks.
2. Selective herbicidal treatments could be considered, but must use products that are registered for use with water.
3. Can use “lop and drop” method to control tall trees. (*lop & drop = cutting trees and leaving them where they fell*)
4. Herbicides may be used to kill taller trees through “frilling”. (*frilling = making a saw or ax cut in the bole and then treating the cut area with a herbicide*) (*special tools – lances/axes/guns - are also manufactured to individually inject herbicides*)
5. Preventing collision/direct interference with electric transmission lines by use of bugs, balls, diverters, or other devices on the lines to discourage nesting and/or divert flight from lines. Substitute platforms are also used to move nests.

## **D. Wildlife Movement Crossing Corridor**

*(Wildlife Movement Crossing Corridor = A vegetated area across a corridor that essentially bridges two fragmented habitats on either side of the corridor. These might typically be established near the base of tall towers or in deep valleys between towers.)*

### **Pros:**

- A densely vegetated or forested area in the corridor may make it easier or safer for certain species to traverse from one side of the corridor to the other.
- Vegetation bridges may reduce the habitat fragmentation impact caused by a right-of-way for some species.

### **Cons:**

- Movement crossing corridors can be costly to maintain.
- In an electric utility corridor, sagging lines could cause outages if the movement corridor is not properly placed or maintained. *(In a pipeline corridor, reliable root barriers would need to be engineered.)*
- Vegetation around towers could present fire dangers, particularly in the west.

### **Management Techniques:**

1. Some topping may be required *(can be costly)*
2. Selective application of herbicides *(can be labor intensive)*

## **E. Arrested Shrub Layer Habitat**

*(Arrested Shrub Layer Habitat = A dense habitat, sometimes referred to as scrub-shrub or scrub habitat, that is generally dominated by low-growing, bushy vegetation and young trees, and is maintained in that state without allowing succession to taller species.)*

### **Pros:**

- Excellent habitat for neo-tropical and migrant land birds.
- Scrub-shrub dependent species are proven to use the habitat.
- Provides cover for nesting birds.
- Birds that occupy the adjacent habitat have been observed using the habitat.
- Provides good habitat for reptiles and amphibians.
- Can create a somewhat self-sustaining environment over time.

### **Cons:**

- Overall intensity of controlling individual species that can grow too tall in electric corridors *(maintaining access roads must also be considered)*
- Labor intensity of using the basal treatment method and having crews individually identify target vs. non-target species

### **Management Techniques:**

1. Manage the vegetation height to be about three and a half meters specifically for favorable, native scrub-shrub species.
2. Use selective basal management to accurately target species to be removed.
3. Selective topping and cutting can be used for taller shrubs and trees. If more than a third of the shrub or tree's canopy needs to be removed, then the entire shrub or tree is generally cut down. This opens the area up for new scrub-shrub species.
4. Selective foliar application of herbicides, using a paraffinic oil that causes the herbicide to stick to the target leaves, could also be used.

## **Part 2 Reference Sites:**

Weed Science Society Products [Herbicide Handbook]: <http://www.wssa.net>  
EPA Pesticide Information/Stewardship Program: <http://epa.gov/pesticides>  
National Roadside Vegetation Management Organization: <http://www.nrvma.org>  
Bramble & Byrnes research: <http://www.dowagro.com/ivm/railroad/bio/brambles.htm>

## **Review of Part 2:**

1. What are the five main types of habitat that are managed in the right-of-way corridors of the Patuxent Research Refuge?
2. Along meadow right-of-way edges that are next to forested habitats, why is it important to consider managing for a feathered edge?
3. In an old field succession habitat, what is a benefit of strip mowing?
4. What two concerns did beaver activity pose?
5. What are some of the concerns that were discussed with managing wildlife movement crossing corridors?
6. What formula did Patuxent use to ascertain if taller trees and shrubs should be topped or totally removed, in an arrested shrub layer habitat?
7. Why did the utility forester recommend foliar application of herbicides for certain situations?

## **Part 3: Land Manager and Utility Partnerships**

- Work to understand each others points of view and understand the land management objectives for the refuge or conservation land area.
- Develop a working relationship to coordinate, plan, and monitor land management practices on the right-of-ways needing habitat management.
- Meet on a regular basis to communicate needs and issues and to adjust right-of-way management practices as necessary.
- Industry has adopted a term, Integrated Vegetation Management (IVM) which is an environmental stewardship strategy for managing right-of-way vegetation.

### **INTEGRATED VEGETATION MANAGEMENT**

- Provides principles for managers to minimize overall risk to people and the environment while providing safe and reliable electric service
- Designed to protect wildlife, groundwater, surface water, soils, utility customers, utility workers and the general public

#### **IVM has the following objective:**

- Select vegetation management practices which balance environmental concerns, public needs, safety, and cost-effectiveness
- Use integrated pest management methods that are supported through scientific research as minimizing the risk and increasing the effectiveness for use in right-of-way vegetation management programs
- Adopts best management practices for herbicide applications based on the latest scientific research among utilities, manufacturers, applicators, regulators, and universities.

### **PART 3 Reference Sites:**

Conectiv Environmental Brochures: [http://www.conectiv.com/civ/our\\_environment](http://www.conectiv.com/civ/our_environment)

Patuxent Research Refuge: <http://patuxent.fws.gov>

Utility Industry Organizations:

International Rights-of-Way Association: <http://www.irwaonline.org>

Utility Arborists Association: <http://www.utilityarborist.org>

Edison Electric Institute: <http://www.eei.org>





## **SECTION 2: Utility Rights-of-Way Habitat Management Examples on Natural Resource Lands**

### **A. Nulhegan Basin, Silvio O. Conte National Wildlife Refuge**

#### **Study Questions:**

1. How did the utility adjust management practices to meet a refuge need?
2. What was the benefit in communicating with the utility about the Refuge's data collection efforts?

### **B. John Heinz National Wildlife Refuge**

#### **Study Questions:**

1. Why was it important for the Refuge to have accurate visitor count information?
2. In what ways did the oil spill and clean-up impact refuge visitation?
3. What "lessons learned" did the Refuge Manager present at the conclusion of this segment?

## **C. Nassawango Creek: The Nature Conservancy Preserve**

### **Study Questions:**

1. Why was selective use of herbicides requested at this particular site as opposed to a broadcast treatment?
2. Why did the utility company install gates and cables across the right-of-way?
3. What benefits do MOUs (Memorandum of Understandings) or management agreements have when managing right-of-way corridors?

## **D. Habitat Management on Utility Rights-of-Way in the West**

### **Study Questions:**

#### **Desert:**

1. Can vegetation impact electric utility lines in a western environment?
2. Why are electric utility lines a potential issue with raptor species like the red-tailed hawk or the great horned owl?

#### **Riparian:**

1. Why is the management of utility corridors that cross riparian areas critical?

#### **Grassland:**

1. What are the biggest concerns for land resource managers in grassland type habitats?

#### **Forest:**

1. Why did the Apache-Sitgreaves National Forest ask the power company to leave some smaller growing trees between the two power lines?
2. What did Apache-Sitgreaves request for the border areas of the right-of-way?

# **APPENDIX**

## **Answers to Comprehension Questions and Answers**

### **Answers to Comprehension Q & A Section 1, Part 1:**

1. What are the primary concerns of utility companies in maintenance of rights-of-ways? Utility companies strive to provide reliable service for their customers, maintain a safe environment for their crews and customers, and they want to limit any liability associated with the corridor.
2. Why are refuge and other conservation land managers concerned with proper maintenance of utility corridors? Land managers are concerned about the effects right-of-way corridors can have on their management goals and objectives, including habitat fragmentation, invasive or exotic species, contamination, and direct impacts on wildlife.
3. What does it mean when a power outage cascades? Cascading occurs when one transmission line goes out and the remaining lines cannot handle the load, which causes the lines to trip off back to substations and generators.
4. Why do pipelines desire the ability to aerially inspect lines? They can sometimes detect breaks in pipelines from the air through changes in the meadow vegetation color.

## **Answers to Comprehension Q & A Section 1, Part 2:**

1. What are the five main types of habitat that are managed in the right-of-way corridors of the Patuxent Research Refuge? **The five main types of habitat are meadow, old field, emergent wetland, wildlife movement crossing corridors, and arrested shrub layers.**
2. Along meadow right-of-way edges that are next to forested habitats, why is it important to consider managing for a feathered edge? **A feathered edge would provide a transition from the forested habitat into the meadow vegetation and could lessen the impact of fragmentation.**
3. In an old field succession habitat, what is a benefit of strip mowing? **Strip mowing can provide edge habitat, where some species can benefit through foraging in the mowed areas while still being close to cover.**
4. What two concerns did beaver activity pose? **Cutting off maintenance roads for utility access and causing flooding that could impact tower foundation integrity.**
5. What are the some of the concerns that were discussed with managing wildlife movement crossing corridors? **Special concerns included the cost of maintaining the corridors, fire danger around towers, and the sag of power lines into movement corridor vegetation if the vegetation height were not maintained.**
6. What formula did Patuxent use to ascertain if taller trees and shrubs should be topped or totally removed, in an arrested shrub layer habitat? **In maintaining an arrested shrub layer, Patuxent instructs the utility to remove the entire tree, if more than a third of the total canopy would have to be removed.**
7. Why did the utility forester recommend foliar application of herbicides for certain situations? **When using foliar herbicides that contain paraffinic oils for improved adherence to leaves, there is the potential for using less volume than with other methods, lower labor costs, and less impact to the surrounding, desirable species.**

## **Answers to Comprehension Q & A Section 1, Part 3:**

1. Why is it important to communicate land management goals and issues to a utility company? **A utility may be willing to adjust practices or cooperate to address a land management goal or concern if they are aware of it.**
2. What is IVM? **Integrated Vegetation Management. IVM is the practice of applying the right combination of the most appropriate management techniques to produce a desired habitat, rather than using just one management technique for all circumstances.**

## **Answers to Comprehension Q & A Section 2:**

### **A. Nulhegan Basin, Silvio O. Conte National Wildlife Refuge**

1. How did the utility adjust management practices to meet a refuge need? **The utility established crossing corridors, trained its crews to detect and control invasive plant species, and is helping control invasives on adjacent areas as well.**
2. What was the benefit in communicating with the utility about the Refuge's data collection efforts? **The utility was able to adopt the Refuge's protocols for data collection, enabling the Service to compare and utilize data for better wildlife monitoring.**

### **B. John Heinz National Wildlife Refuge**

1. Why was it important for the Refuge to have accurate visitor count information? **This information was needed to determine impacts of a pipeline break that disrupted refuge operations and visitor access.**
2. In what ways did the oil spill and clean-up impact refuge visitation? **The clean up noise, visual impact, difficulty of trail access and parking, and having to shut down areas of the refuge all impacted the number of visits and the quality of the visit experience.**
3. What "lessons learned" did the Refuge Manager present at the conclusion of this segment? **Have written agreements in place, plan for worst-case scenarios, be prepared, and be sure the lines are being inspected.**

### **C. Nassawango Creek: The Nature Conservancy Preserve**

1. Why was selective use of herbicides requested at this particular site as opposed to a broadcast treatment? **Selective management was requested because the bog contained sensitive plants that were being encroached by invasive vegetation. A broadcast treatment would have killed the sensitive plants, so selective techniques were needed.**
2. Why did the utility company install gates and cables across the right-of-way? **The Preserve communicated that it was having a problem with trespassing by four-wheel drive vehicles causing erosion.**
3. What benefits do MOUs (Memorandum of Understandings) or management agreements have when managing right-of-way corridors? **With an agreement in place, management practices and concerns do not have to be re-established or re-communicated if there is a personnel change in the utility or the land management agency.**

## **D. Habitat Management on Utility Rights-of-Way in the West**

### **Desert:**

1. Can vegetation impact electric utility lines in a western environment? **Yes. Cacti, salt-cedar, and other species growing in washes or other suitable areas can grow high enough to cause an outage and possibly create a wildfire.**
2. Why are electric utility lines a potential issue with raptor species like the red-tailed hawk or the great horned owl? **The utility lines are an attractive perching and nesting site in open landscapes. Birds can be electrocuted and raptor nests can interfere with lines and maintenance.**

### **Riparian:**

1. Why is the management of utility corridors that cross riparian areas critical? **These areas are sensitive and support wildlife diversity in western environments. They would be significantly damaged by a utility caused fire or spillage.**

### **Grassland:**

1. What are the biggest concerns for land resource managers in grassland type habitats? **Construction and maintenance could introduce or encourage the growth of exotic species.**

### **Forest:**

1. Why did the Apache-Sitgreaves National Forest ask the power company to leave some smaller growing trees between the two power lines? **To provide some screening for wildlife to travel through the corridors for security from predators and hunters.**
2. What did Apache-Sitgreaves request for the border areas of the right-of-way? **To leave low growing shrub species to create a transition between the forest and the open right-of-way areas (*note: the increased wildlife diversity or use of this transition zone is sometimes referred to as “edge effect”*).**

## Application for TEC7179 Course Credit

By completing this video and guide, you may be eligible to receive credit for the National Conservation Training Center course: **TEC7179, Rights-of-Way Habitat Management**.

If you would like to receive certification for completion of TEC7179, you must do the following:

1. Register for the course. This can be done online through the "DOI LEARN" system <http://training.fws.gov/catalog/coursecontents.html> (Search for course code "TEC7179"), or manually, by completing and faxing in the application found on the next page.\*
2. View both Sections 1 and 2 of the **Managing Utility Rights-of-Way for Wildlife Habitat Management** video/DVD. (*Note: If you have registered for the class, but do not have the video/DVD, please call 304-876-7446 or 7456, and one will be sent to you.*)
3. Complete the comprehension question and answer pages in this Study Guide.
4. Document your completion of steps 2 and 3 by marking the checking-offs, signing, and returning this page only, to the mailing address or fax number at the bottom of this page.

\*Note: You may register for this course (per Step 1) in advance online, or at completion by including the application page when you return this page. As of this printing, the charge for TEC7179 in this "correspondence" form is \$50 (free to FWS, NPS, and BLM employees). Current information on NCTC courses and prices may be found at: <http://training.fws.gov>

**Please indicate that you completed the following parts of the video/DVD and Guide:**

- Section 1, Part 1: Engineering and Wildlife Concerns
- Section 1, Part 2: Types of Habitat in Utility Corridors
- Section 1, Part 3: Land Manager and Utility Partnerships
- Section 2: Utility Rights-of-Way Habitat Management, Examples on N.R. Lands

*Note: The original course notebook, from the first classroom offering of this course, has been converted to an electronic format. The material in the original course notebook was obtained exclusively for training and may not be used for any other purpose. In addition, the notebook was developed in 1999, and much of the material assembled is significantly earlier in date; however, it does provide information on managing utility rights-of-way in a historic context. If you have completed this course as indicated above, and would like a CD of the original course notebook included when we send you your certificate, check here: \_\_\_\_.*

**Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Organization:** \_\_\_\_\_

Send This Page To: (*If you have not previously registered as in step 1, also include your completed application.*)

**U.S. Fish and Wildlife Service**  
**National Conservation Training Center**  
**Division of Training** (Attn: Glenn Gravatt/Technical Training Course: TEC7179)  
**698 Conservation Way**  
**Shepherdstown, WV 25443**

OR fax to: **304-876-7225** (Attn: Glenn Gravatt/Technical Training Course: TEC7179)



# Application

Mail or fax application to:  
Registrar, USFWS-NCTC  
698 Conservation Way  
Shepherdstown, WV 25443  
304/876 7200 Fax: 304/876 7202  
<http://training.fws.gov>

U.S. Fish & Wildlife Service

## National Conservation Training Center



### Course Information

Course Code \_\_\_\_\_ Course Name \_\_\_\_\_

Course Date \_\_\_\_\_ Course Location \_\_\_\_\_

### Applicant Information

Affiliation: Check One

FWS     BLM     NPS     USDA-FS     Other Federal     State  
 University     Private     Not-for-profit     Other Public     Tribal     International

Name \_\_\_\_\_ SSN\* \_\_\_\_\_ Federal Series/Grade \_\_\_\_\_

\*This information is voluntary and applications will not be rejected if omitted. The information will be used internally for registration and billing and will not be disclosed to other sources.

Organization Code/Name \_\_\_\_\_ Organization Tax ID/ ALC Number \_\_\_\_\_

Division/ Duty Station \_\_\_\_\_ Job Title \_\_\_\_\_

Mailing Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_ Region \_\_\_\_\_

E-mail Address \_\_\_\_\_ Business Phone ( ) \_\_\_\_\_ Business Fax ( ) \_\_\_\_\_

Supervisor's Name \_\_\_\_\_ Supervisor's Phone ( ) \_\_\_\_\_ Supervisor's Signature \_\_\_\_\_

Special Needs \_\_\_\_\_

### Billing Information — Must be Complete to Process Your Application

Federal SF182     IA Agreement     Purchase Order     Check

\*\* If you prefer, you may contact the registrar's office directly and provide this billing information verbally

Credit Card Number\*\* \_\_\_\_\_ Expiration Date \_\_\_\_\_  Visa     Discover     MasterCard

Organization Code/Name \_\_\_\_\_ Organization Tax ID/ ALC Number \_\_\_\_\_

Mailing Address \_\_\_\_\_ City/State \_\_\_\_\_ Zip \_\_\_\_\_

Billing Contact \_\_\_\_\_ Business Phone ( ) \_\_\_\_\_ Business Fax ( ) \_\_\_\_\_

**Cancellation Procedures:** If you need to cancel, please check the appropriate box below and fax form back to NCTC Registrar. You may also cancel by email message to [NCTC\\_Registrar@fws.gov](mailto:NCTC_Registrar@fws.gov) as soon as possible.

Is your cancellation due to  Mission Requirement     Schedule Conflict     Funding Limitation     Other    Supervisor Directed Yes or No?

The Privacy Act of 1974; Statute Title 5, US Code, Chapter 41; Section 5, C.F.R., part 410; and 131 & 231 FW1 Training Management Policy and Responsibilities, authorizes the collection of this information. This data will be used to validate training records and meet statistical reporting requirements to Office of Personnel Management, Human Resources, and Office of Management and Budget.

# Application for Federal National Conservation Training Center Fish and Wildlife Training

*NOTE: This page does not need to accompany the application when submitted to the registrar*

## Paperwork Reduction Act and the Privacy Act - Notices

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, et seq.) and the Privacy Act of 1974 (5 U.S.C. 552a), please be advised that:

1. The gathering of information on personnel training activities is authorized by:
  - (a) The Privacy Act of 1974;
  - (b) Statute Title 5, US Code, Chapter 41;
  - (c) Section 5, C.F.R., part 410;
  - (d) and 231 FW1 Training Management Policy and Responsibilities, authorizes the collection of this information.
2. Information requested in this form is purely voluntary, however, submission of requested information is required in order to process applications for training courses authorized under the above acts. Failure to provide all requested information is sufficient cause for the U.S. Fish and Wildlife Service, National Conservation Training Center to deny an applicant a place in a course. (Response is not required unless a currently valid Office of Management and Budget (OMB) control number is displayed.)
3. The National Conservation Training Center - Training Application training authorized under (a) The Privacy Act of 1974; (b) Statute Title 5, US Code, Chapter 41; (c) Section 5, C.F.R., part 410; (d) and 231 FW1 Training Management Policy and Responsibilities, authorizes the collection of this information and will be published in the Federal Register as required.
4. Routine use disclosures are used solely for statistical research or reporting and is transferred in a form that is not individually identifiable. Non routine use disclosures will follow the requirements of "The Privacy Act of 1974 5 U.S.C. 522a (b) conditions of disclosure" such as under the following conditions:

To officers and employees who have a need in performance of their duties;  
To representatives for civil or criminal law relating to enforcement activity or pursuant to the order of a court;  
To the House of Congress or committee or joint committee of Congress;  
To the Comptroller General or any of her authorized representatives;
5. For individuals, personal information such as home address and telephone number, financial data, and personal identifiers (social security number, birth date, etc.) will be removed prior to any release of the application.
6. The public reporting burden for this information collection varies on the specific activity use being requested. The relevant burden for the Training application is 3 to 12 minutes. This burden estimate includes time for reviewing instructions, gathering and maintaining data, and completing and reviewing form. Direct comments regarding the burden estimate or any other aspect of the form to the Service Information Clearance Officer, Fish and Wildlife Service, Mail Stop 222, Arlington Square, U.S. Department of the Interior, 1849 C Street, NW, Washington, D.C. 20240.

## Freedom of Information Act - Notice

For organizations, businesses, or individuals operating as a business, we request that you identify any information that should be considered privileged and confidential business information to allow the Service to meet its responsibilities under FOIA. Confidential business information must be clearly marked "Business Confidential" at the top of the letter or page and each succeeding page, and must be accompanied by a non-confidential summary of the confidential information. The non-confidential summary and remaining documents may be made available to the public under FOIA [43 CFR 2.13(c)(4), 43 CFR 2.15(d)(1)(i)].

## Application Processing Fee

The US Fish and Wildlife Service, National Conservation Training Center does not collect an application processing fee.