

CONSERVATION ENHANCEMENT ACTIVITY

E666P



Summer roosting habitat for native forest-dwelling bat species

Conservation Practice 666: Forest Stand Improvement

APPLICABLE LAND USE: Forest, Associated Ag Land, Farmstead

RESOURCE CONCERN: Animals

ENHANCEMENT LIFE SPAN: 10 Years

Enhancement Description

Create new potential roost trees within upland and riparian forests to achieve desired summer habitat for forest-dwelling bat species.

<u>Criteria</u>

- States will apply general criteria from the NRCS National Conservation Practice Standard Forest Stand Improvement (Code 666) as listed below, and additional criteria as required by the NRCS State Office.
- These criteria and any tree removal activities will be coordinated with U.S. Fish and Wildlife Service (USFWS). This includes the establishment of minimum criteria to meet the habitat requirements of the bat species of concern while avoiding potentially detrimental disturbances during the maternity period.
- Create additional snags within the forested acres by girdling/killing live trees. When
 choosing trees to kill, consider that the majority of snag-roosting bats prefer the largest
 available snags, which often extend above the forest canopy and retain bark for a longer
 period of time. Also focus on killing trees that are undesirable for quality forest products
 due to species or form.
- Promote use of live trees with loose or exfoliating bark by killing all trees adjacent
 (canopies within 15 feet of habitat tree) to trees determined to have desired bark
 characteristics, as defined by NRCS state technical staff. Larger diameter trees should be
 considered as habitat trees, as desirable bark characteristics tend to improve with the

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size and age of the tree. Large/mature trees also develop splits, breaks, dead limbs, and cavities that serve as roosting areas.



- Habitat trees should be distributed evenly across the treated acres.
- The combined snags and live, loose bark trees should be created or maintained at a combined rate as determined to be necessary to meet the habitat requirements of the bat species of concern and the specific forest type, as defined by the USFWS and NRCS state technical staff.
- The enhancement will comply with all applicable federal, state, and local laws and regulations, and with States' Forestry Best Management Practices for Water Quality.
- When determining which trees will be killed for snag creation, and/or used to create loose/exfoliating bark, consider effects on the remaining stand.
 - Identify and retain preferred tree and understory species to achieve all planned purposes and landowner objectives.
 - Use available guidelines for species and species groups to determine spacing, density, size-class distribution, number of trees, and amount of understory species to be retained. Schedule treatments to avoid overstocked conditions using approved silvicultural stocking guides.
 - Implement forest stand improvement activities in ways that avoid or minimize soil erosion, compaction, rutting, and damage to remaining vegetation, and that maintain hydrologic conditions.



Documentation and Implementation Requirements:

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Participant will:

o Digital photographs.

Prior to implementation, work with NRCS to complete a				
Wil	dlife habitat evaluation guide or State equivalent.			
	or to implementation, obtain a wildlife habitat management plan for the targeted species te which includes:			
0	Wildlife Habitat Evaluation Guide scores for benchmark and desired conditions.			
0	The minimum criteria to meet the targeted species habitat requirements.			
0	A plan map indicating the stands and individual trees selected for the treatment.			
0	A list of NRCS Conservation Practice Standards that will be applied to reach the desired habitat conditions			
During implementation, keep a field log which includes:				
0	Treatment dates			
0	Count of treated (girdled) trees and treatment actions completed (i.e. removal of canopies within 15 feet of habitat tree).			
During implementation, notify NRCS of any planned changes, notify NRCS of any planned changes to verify they meet the enhancement criteria.				
After implementation, notify NRCS that implementation has been completed.				
After implementation, make the follow items available for NRCS review to verify implementation of the enhancement:				
0	Wildlife Habitat Management Plan.			
0	Wildlife habitat plan treatment map.			
0	Field log.			



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NRCS will:

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	Prior to implementation, assist the participant in completing the state's approved NRCS Wildlife Habitat Evaluation Guide (WHEG) or State equivalent. Target Bat Species of concern: Current/Existing Condition WHEG score: Planned WHEG score after implementation:	=
	Prior to implementation, provide participant assistance in habitat management plan.	
	Prior to implementation, provide participant with addition requested.	nal technical assistance to the, as
	During implementation, as needed, evaluate any planned enhancement criteria.	changes to verify they meet the
	After implementation, verify implementation of the wildling reviewing field log records kept and digital photographs to implementation.	9 .
	After implementation, complete the state's approved NRC (WHEG) or State equivalent. WHEG score after implementation	
NRO	CS Documentation Review:	
	ve reviewed all required participant documentation and hall lemented the enhancement and met all criteria and require	· · · · · · · · · · · · · · · · · · ·
Par	ticipant Name Contra	ct Number
Tota	al Amount Applied Fiscal Year C	ompleted
	NRCS Technical Adequacy Signature Date	

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WASHINGTON SUPPLEMENT TO

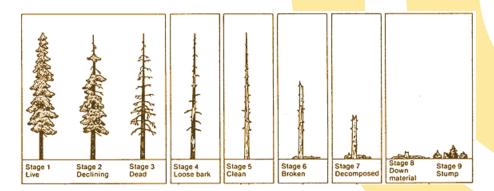
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Additional Criteria for Washington

- In addition to the criteria specified in the National job sheet E666P the following
 additional criteria apply in Washington:
 Bats need 3 distinct types of habitat for different life functions: reproduction,
 hibernations and roosting. This enhancement focuses on the elements of roosting
 habitat.
 - Habitat features that promote Roosting opportunities for local bat species and populations:
 - Dead Snags and living cavity trees. See Decay stages 1-4 below. For the purposes of this Enhancement, the prefered attributes of snags or cavity trees are 8" DBH or larger and for snags 10' tall and taller



Large diameter hollow trees. Hollow center in trees are often caused by heart rot. Broken tops in trees and snag (Snag decay stages 6&7) indicate potential hollow centers. Also, conks on trees or snags can indicate decayed or hollow centers. For the purposes of this Enhancement, prefered attributes of a hollow tree/snag are 20" DBH and larger and 10' tall and taller.



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Trees species that can provide bark crevices. Bark crevices become useful for roosting usually when the tree is larger and mature. Conifers like Douglas fir,

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- Ponderosa pine, Western Larch, and Grand Fir, as well as hardwoods like Big leaf maple, White oak and Oregon ash, potentially could provide useable crevices in their bark when they are larger (20"+ DBH).
- Large, old stumps hollowed out stumps that are at left at least 3' high (heart rot or root rot).
- Old bridges or buildings
- Prime locations for these roosting habitat features in order to increase their value and use are:
 - Proximity to surface water for drinking and foraging insects (always protect riparian areas);
 - **♣** If they are in or on the edge of a forest opening;
 - and in a forest with a variety of species and canopy layers (age classes).
- o For the purposes of this Enhancement, the target is 5 7 roosting habitat features in prime locations.
- For young forest stands that have limited availability of these roosting habitat features, bat boxes of varing sizes can be substituted for missing features. For example if you only have 2 qualifying snags, a qualifying hallow tree and a qualifying stump then you should add 1-3 bat boxes.
- For more information on the habitat needs of local species see Woodland Fish and Wildlife publication, "Habitat Management for Bats on Small Woodlands":
- o Based on WebSoil Survey soil suitabilities and limitations, protect soils sensitive to rutting, compaction and erosion, by using machinery only when the soil is dry or frozen, managing water runoff on the road surface, and/or vegetating the roads, trails and landing. All work done on Forest roads will be in compliace with WA Forest Practices Regulations (See WAC 222-24 and guidelines in Board Manual Section III).

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 In addition to the documentation requirements specified in the National job sheet E666P the following additional documentation requirements apply in Washington:

 Since NRCS WA does not have a Wildlife Habitat Guide specific to bats, document the source of the wildlife habitat guidance used to develop wildlife habitat plan.

