A Time for Change: A Review of US Forest Service Policies on Snag Cutting and its Impacts on Cavity-nesting Species in Eastern Washington

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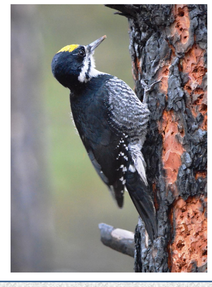
Introduction

- In western conifer forests, snags are important to woodpeckers because most species require snags in which to excavate cavities and they forage extensively on recently dead trees for insect prey. In turn, their cavities provide nesting and roosting sites for other cavity-nesting species. In total, at least 96 wildlife species are associated with snags in forests of WA and OR (Beschta et al. 2004).

- In WA, the Okanogan-Wenatchee National Forest (OWNF) includes more than 1.6 million ha along the eastern side of the crest of the Cascade Range. The OWNF is managed under a multiple use concept to provide the public with a variety of benefits (water, wildlife, wood, recreation, etc.) and where management emphasizes the maintenance and enhancement of sustainable ecosystems. It is also home to several woodpeckers that are listed as WA Species of Concern (Fig. 1).

- One public use of the OWNF is the harvest of firewood requiring a Forest Products Removal Permit ($20). This permit allows the removal of ≤10 cords of wood for personal use and allows the cutting of snags unless they are marked with paint, plastic ribbon and/or signs, or they contain cavities, nests, or broken tops. Firewood cutting is not allowed within 300 ft of streams, lakes, ponds or wet areas. However, we have documented multiple instances where these conditions have been violated Fig. 2, 3, Table 1).

Figure 1. A male Black-backed woodpecker (left), White-headed Woodpecker (center) and American Three-toed Woodpecker (right). All three are WA Candidate Species and keystone cavity excavators that may be detrimentally affected by woodcutting practices on National Forest Lands.



Detrimental to Habitat Restoration?

- The OWNF is implementing a Dry Forest Restoration Strategy where the White-headed Woodpecker (WHWO; *Picoides albolarvatus*) and the Black-backed Woodpecker (BBWO; *P. arcticus*) are focal species. The OWNF intends to improve WHWO habitat by removing understory trees, retaining large diameter trees, and conducting understory burning in the ponderosa pine (*Pinus ponderosa*) cover type.

- However, much of the area designated for restoration also falls within firewood cutting areas. For example, 72% of WHWO and 79% of BBWO nests we monitored were in woodcutting areas and 50 % of forest dominated by Ponderosa Pine are in woodcutting areas.

•Additionally, plies of slash and logs left by woodcutters present a potential fire hazard that maycounter the efforts of the OWNF to restore natural fire regimes (Fig. 3, 4). These piles also can create habitat for potential nest predators, including chipmunks (*Tamias* sp..) and pine squirrels (*Tamiasciurus* spp.) (citations).

Figure 2. A burn where we documented illegal woodcutting (left) and illegal off-road driving by woodcutters (right) in 2013. These photos were taken within 75 m of a black-backed woodpecker nest and 250 m of a white-headed woodpecker nest. In this area, woodcutters selectively cut the largest diameter snags – the same snags favored by woodpeckers.


Figure 3. A cut white-headed woodpecker nest, which contained three nestlings when felled (left), and large pile of slash left in-place from a felled ponderosa pine snag (right). Both practices violate permits, which forbid cutting of snags with holes and require woodcutters to scatter slash after snag-felling.


Figure 4. A burn previously used for nesting by Black-backed and American Three-toed Woodpecker. The areain the foreground was used heavily by woodcutters in 2013, resulting in a decline in snag densities up to 95% - a decline similar to those resulting from salvage-logging.

Potential Impacts of USFS Firewood Cutting Policy

- **LARGE SNAGS ARE TARGETS** – The largest snags are often selected for by woodcutters, while research shows that such large-diameter snags are preferred by wildlife for foraging and nesting (Christman and Dhondt 1997, Everett et al. 1999, Ganey and Vojta 2004). In some areas, we documented mean diameter of cut snags was 42.2 cm (n = 169) while the mean diameter of standing snags was 11.7 cm (n = 121) (Fig. 2).

- **SPRING HARVEST** –Firewood cutting occurs during the nesting season for birds and often occurs in close proximity to active nests or results in the falling of snags containing active nest cavities (Kozma 2011; Fig. 3).

- **ANY SNAG MAY BE CUT** – Aside from firewood cutting permits, the OWNF allows the cutting of any snag year-round as long as it is not transported off site. Consequently, many snags are felled during hunting season for campfire wood and snags be felled anywhere on the National Forest, including in Northern Spotted Owl LSRs.

- **LACK OF ENFORCEMENT** – We have documented multiple violations of wood-cutting permits each year while conducting field research. Thus, it appears that woodcutters cannot be trusted to police themselves, while the OWNF is not adequately staffed to enforce firewood cutting policies.

•**NO LIMIT ON PERMITS ISSUED** – The OWNF does not limit the number of firewood cutting permits issued in a given year and does not monitor snag densities in areas used for woodcutting. This may lead to the overharvest of snags. For example, we have seen snag densities decline from 640 to 115 snags/ha in a recent burn on the OWNF (Fig 4). This is lower than the 200-300 snags/ha recommended in salvage-logged forests for wildlife(Saab and Dudley 1998, Hutto 2006, Saab et al. 2009, 2011).

Table 1. Firewood cutting violations observed on the Naches, Ranger District, Okanogan-Wenatchee National Forest

Violation	Year	Location
Firewood cutting outside designated woodcutting areas	Yearly (2004 – 2013)	Junction of USFS Road 1600 and 1605, USFS Road 1611
Firewood cutting within 300 ft of water	2010, 2013	USFS Road 1611/Nile Creek
Firewood cutting outside designated woodcutting areas	2013	Wildcat Creek, Oak Creek
Cutting of snags with holes and/or broken tops	2008, 2009, 2012, 2013	USFS Road 1600 and 214, Oak Creek, Rattlesnake Creek, Tieton Basin
Firewood cutting within 200 ft. of Tieton Rd and US HWY 12	2013	Tieton Road
Cutting of a snag containing an active White-headed Woodpecker nest	2009	USFS Road 214

Recommendations

- The OWNF should not allow the cutting of standing snags, instead allowing only downed and dead wood to be removed for firewood; a policy already in place on state managed land.
- To further reduce negative impacts of firewood cutting on cavity-nesting species, the OWNF should close firewood cutting from May 1- July 15.
- Only allow wood-cutting in areas adequately staffed by Law Enforcement Officers, to ensure that all Forest Policies are followed by the public
- Add signage to main USFS roads indicating entering and leaving of firewood harvest areas.