

**Birds and Burns Network
Pre-Treatment Vegetation Analysis
Snags, Stumps, and Trees
Progress Report
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**Lisa J. Bate, Research Wildlife Biologist
389 LaBrant Road, Kalispell, MT 59901
(lisabate@centurytel.net)**

and

**Vicki Saab, Research Biologist
Rocky Mountain Research Station
1648 South 7th Avenue, MSU Campus
Bozeman, MT 59717-2780
(vsaab@fs.fed.us)**

INTRODUCTION

This report summarizes snag, stump, and tree data that were collected at the nine locations involved with the Birds and Burns prescribed fire study in seven western states: Arizona, Colorado, Idaho, Montana, New Mexico, Oregon, and Washington. All snag, stump, and tree data were collected following the Birds and Burns Network vegetation protocol (<http://www.rmrs.nau.edu/lab/4251/birdsnburns/>). In this report we provide density estimates (stems per acre) of all snags, trees, and stumps, plus their sample sizes, confidence intervals (90 percent), and standard errors. All these data represent snag, tree, and stump densities in both control and treatment units before any treatments were applied.

ANALYSIS METHODS

Snags were divided into two major categories: 1) wildlife snags; and 2) fuel snags. We defined wildlife snags as any standing dead tree with a diameter at breast height (dbh) ≥ 9 in and ≥ 4.6 ft in height. We defined fuel snags as any standing dead tree with a dbh ranging from 0.1 to < 9 in. Similarly, we divided live trees into these same two major categories: 1) wildlife trees (> 9 in dbh); and 2) fuel trees (0.1 to < 9 in dbh). In addition, we collected information on stump densities. For data collected before 2003, we defined stumps as any natural or cut stump < 4.6 ft in height and ≥ 6 in at the top of its bole. Starting in 2003 and continuing in 2004, we refined our stump information by placing stumps into one of two categories: 1) natural; or 2) cut stumps.

We further divided wildlife snags and trees into two size classes in our analysis: 1) all snags and trees ≥ 9 in dbh; and 2) snags and trees ≥ 20 in dbh. Fuel snags and trees were also broken down into six smaller size classes: 1) 0 to < 1 in; 2) 1 to < 2 in; 3) 2 to < 3 in; 4) 3 to < 5 in; 5) 5 to < 6 in; and 6) 6 to < 9 in dbh. This yielded a total of eight size classes for both snags and trees and three stump categories: 1) all stumps; 2) natural stumps; and 3) cut stumps.

We calculated densities snag, stump and tree densities at four levels. The first level was the regional level. We had two regions: 1) southern; and 2) northern. Data from the states of Arizona and New Mexico represent the southern region. Data from Colorado, Idaho, Montana, Oregon, and Washington make up the northern region.

Our second level of analysis was at the state, or location, level. We had one location in each state with the exception of Arizona, where we had three locations on different National Forests: 1) Apache-Sitgreaves, 2) Coconino, and 3) the Kaibab. Our third level of analysis was at the unit level. Among the nine locations, we collected information from 35 individual units. A unit was defined as a landscape approximately 600 to 1000 acres in size. Units at each location were paired as a treatment and control unit. That is, one will be treated mechanically and/or with fire, whereas the other would not. Only locations in Oregon and Montana are scheduled for both mechanical and fire treatments. All others are only scheduled for prescribed fire. Our fourth level was at the stratum level. For this analysis we combined all data from each location into one of two strata: 1) open (< 40 percent canopy cover); and 2) closed (≥ 40 percent canopy cover).

For each size class within each of these four levels, we then calculated densities using the nest tree and random point data combined. In addition, we separated nest tree data from random point data. We used t-tests within each level of inquiry to indicate whether any differences existed for snag, stump, and tree

densities between nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species.

Treatments for a number of units began in 2004. The remaining treatment units are scheduled to be treated within the next one to two years. One-year post treatment, the vegetation at each unit will be re-sampled to examine any changes that have occurred as a result of mechanical treatments and/or prescribed fire.

We used t-tests to test for differences in densities between regions and between nest and random point within each of the above categories that contained sufficient sample sizes ($n = 20$ within each point type). Results are given in tables at two p-values: 1) $p < 0.01$; and 2) $p < 0.05$. We used ANOVA to test for differences in stem densities among units. We considered densities different that had p-values < 0.05 .

RESULTS

Regional Level

Snags (Regional)

The northern region collected vegetation data at 925 points during the pre-treatment period (Table 1). Of these, 445 were surrounding nests trees and 480 were at random points. In the southern region, a total of 410 points were sampled during the pre-treatment period. One-hundred and thirty-two sampling points were surrounding nest trees and 278 were at random locations.

Wildlife snag densities (> 9 in dbh) were twice as high in the northern region (mean = 4.9 snags/ac) compared to the southern region (mean = 2.3 snags/ac)(Table 1). Large snag densities (> 20 in dbh) were nearly four times higher in the northern region (mean = 1.5 snags/ac) compared to the southern region (mean = 0.4 snags/ac). Densities of wildlife snags ≥ 9 in dbh were higher around nest trees compared to random points in the northern region. Large snag (≥ 20 in dbh) densities were also higher around nest trees compared to random points in the northern region. In the southern region, however, only large snag (≥ 20 in dbh) densities were higher at nest trees compared to random points. We observed no difference in densities for all wildlife snags (≥ 9 in dbh) between point types in the southern region.

We observed very different patterns for all categories of fuel snags (< 9 in dbh) between regions. Fuel snags in the southern region were consistently higher at random points compared to surrounding nest trees in all six categories (Table 1). By contrast we observed no difference in any of the fuel snag categories in the northern region.

Stumps (Regional)

Densities of all stumps averaged about 13 more per acre in the southern region (mean = 29.3 stumps/ac) compared to the northern region (mean = 16.5 stumps/ac)(Table 2). In the southern region no natural stumps were recorded, rather only cut stumps were encountered. By contrast, we observed about equal densities of both natural and cut stumps in the northern region.

Densities of all stumps averaged about 10 more around nest trees compared to random points in the southern region (Table 2). We observed the opposite pattern in the northern region where we observed about seven more stumps per acre at random point compared to nest trees. We observed no difference

in natural stump densities between point types in the northern region. By contrast, cut stumps in the northern region were more than twice as high at random points compared to nest trees locations.

Trees (Regional)

Wildlife tree (≥ 9 in dbh) densities were higher (≈ 9 trees per acre) in the southern region (mean = 57.6 trees/ac) compared to the northern region (mean = 48.7 trees/ac)(Table 3). Wildlife trees in the largest category (≥ 20 in dbh), however, were more abundant in the northern region (≈ 4 trees per acre more).

The southern region had more fuel trees compared to the southern region in the 5 to < 6 and the 6 to < 9 in categories (Table 3). By contrast, the northern region had more fuel trees in the 1 to < 2 and 2 to < 3 in category. Fuel trees in the smallest size class (< 1 in dbh) were 58 percent higher (77 trees per acre more) in the southern region compared to the northern region.

Within the southern region, the only differences we observed between random and nest tree locations, were in the smallest (< 1 in dbh) and largest (> 20 in dbh) categories (Table 3). Small fuel trees were more abundant at random points and large wildlife trees were more abundant at nest tree locations.

In the northern region, wildlife trees (> 9 in dbh) were greater (≈ 12 trees per acre more) at random points compared to nest tree locations (Table 3). Fuel trees in the three largest (3 to < 9 in dbh) categories were also higher at random points compared to nest tree locations. By contrast, small (< 1 in dbh) fuel trees were more than twice as abundant (≈ 125 trees per acre more) at nest tree locations compared to random points.

Location Level

Snags (Location)

Wildlife snag densities (≥ 9 in dbh) among locations ranged from a high of 8.7 snags per acre in Colorado to a low of 1.1 snags per acre at the Kaibab location in Arizona (Table 4a). Table 4b gives snag densities in metric units. Idaho had the second highest wildlife snag densities (4.6 snags/ac), followed by Oregon (4.4 snags/ac), then Montana (4.1 snags/ac).

Large snag (≥ 20 in dbh) densities ranged from a high of 2.7 snags per acre in Colorado to a low of 0.3 snags per acre in Montana and on the Coconino (Table 4a). Idaho's large snag densities were not different from Colorado's at 2.4 snags per acre.

Idaho was unique, however, in that 52 percent of its wildlife snag (≥ 9 in dbh) population was comprised of large (≥ 20 in dbh) snags (Tables 4a and 4b). The Kaibab followed second with 36 percent of its wildlife snags comprised of the large snags. This was followed by Colorado (31 %), Washington (24 %), Oregon (20 %), New Mexico (18%), the Coconino (14%), the Apaches-Sitgreaves (13%), and finally, Montana (7%).

In our comparisons of wildlife (≥ 9 in dbh) snag densities, we observed that the Kaibab, Colorado, Idaho, Montana, Oregon, and Washington all had higher snag densities around nest trees compared to random points (Tables 4a and 4b). Large (≥ 20 in dbh) wildlife snag densities were also higher around nest trees compared to random points in five locations: 1) Coconino; 2) Colorado; 3) Kaibab; 4) Idaho; and 5) Washington.

We observed no differences in fuel snag densities in any categories between point types at four locations: 1) Colorado; 2) Kaibab; 3) Idaho; and 4) Washington (Tables 4a and 4b). By contrast, fuel snags on the Apache-Sitgreaves and the Coconino were higher at random points compared to around nest trees in all categories except for one each. In New Mexico, fuel snags in the 2 to 3 in dbh class were also higher at random points. In Oregon, random points had about twice as many small (< 1 in dbh) fuel snags as nest trees. By contrast, Montana had more than twice as many fuel snags around nest trees compared to random points. This was likely due to numerous dead aspen saplings.

Stumps (Location)

With all stumps combined, densities ranged from a high of 36.8 on the Kaibab to a low of 3.2 stumps per acre in Idaho (Table 5). Montana had the second highest stump densities with 32.8 stumps per acre. As mentioned above, no natural stumps were reported in Arizona and New Mexico. Natural stumps in other locations ranged from a high of 9.9 in Montana to a low of 4.4 stumps per acre in Idaho. Cut stumps were highest on the Kaibab, lowest in Colorado (mean = 0.2 cut stumps/ac) and Idaho (mean = 0.4 cut stumps/ac).

Between point types we observed that stump densities were higher at random points compared to surrounding nest trees in Washington (Table 5). By contrast, in Colorado and on the Kaibab, stump densities were higher around nests compared to random points. The only difference in natural stumps we observed was in Montana where random points had higher densities compared to around nest trees. Examining cut stumps, we observed that both Washington and Montana had higher densities of cut stumps at random points compared to around nest trees.

Trees (Location)

Densities of wildlife trees (≥ 9 in dbh) among locations ranged from a low of 30.6 in Idaho to a high of 76.2 trees per acre in Montana (Table 6a). Table 6b gives tree density results in metric. Colorado (mean = 14.8 trees/ac) and Idaho (mean = 13.8 trees/ac) had the highest large tree densities. The Coconino location had the lowest (mean = 3.7 trees/ac) large tree densities.

In our comparisons of tree densities between nest tree and random points, Washington and New Mexico were unique. Whereas we did not detect any differences in densities between point types in any of the tree classes in New Mexico, we observed differences in all size classes in Washington (Tables 6a and 6b). All classes of trees at random points had higher densities compared to around nest trees except for large trees (>20 in dbh).

The only difference in tree densities between point types at the Apache-Sitgreaves location was in the 6 to 9 in dbh class where random points had more trees (Tables 6a and 6b). On the Coconino, four fuel tree classes had higher densities at random point points compared to around nest trees. On the Kaibab we detected differences in two size classes with mixed results.

Montana had extremely high tree densities in the smallest (0 to 1 in dbh) size class around nest trees (mean = 1137 trees/ac)(Tables 6a and 6b). This compared to only 57.1 trees per acre at random points. This can be explained by the location of nest trees in Montana. All nests were in habitat containing aspen trees and numerous saplings, whereas most random points were in ponderosa pine/mixed conifer forests with few saplings. By contrast, trees in the 6 to 9 in and > 9 in dbh classes were higher at random points. In Oregon only trees in the 3 to 5 in dbh class revealed differences between point types where densities were higher at random points.

In Idaho wildlife trees (> 9 in dbh) were greater at random points compared to around nest trees (Table 6a and 6b). This pattern was the opposite in Colorado. Also in Colorado fuel trees were higher around nest trees compared to random points in four size classes.

Unit Level

Apache-Sitgreaves, AZ (Unit)

The Apache-Sitgreaves location had three units. The LK unit is the treatment unit. The PM and PT units are control units. Wildlife snag (≥ 9 in dbh) densities differed among units and ranged from a high of 5.4 on the LK unit to a low of 2.8 snags per acre on the PM unit (Table 7). Large (≥ 20 in dbh) snag densities were similar among units and averaged less than one snag per acre on all units. Fuel snag densities in all categories were similar between the PT and LK units. The PM unit consistently had lower fuel snag densities in all categories except for the 5 to 6 in dbh class.

No natural stumps were reported at the Apache-Sitgreaves location; therefore, results for all stumps combined and cut stumps are the same in all units (Table 8). Stump densities differed among units and ranged from a high of 39.5 on the LK unit to a low of 11 stumps per acre on the PT unit. The PM unit recorded an estimated 25.3 stumps per acre.

Wildlife tree densities differed among units and ranged from a high of 76.8 on the PM unit to a low of 50.3 trees per acre on the LK unit (Table 9). Large (≥ 20 in dbh) wildlife tree densities also differed and ranged from a high of 5.7 on the PM unit to a low of 3 trees per acre on the PT unit. Fuel tree densities differed only in the three smaller size classes where the PT unit had the lowest densities.

Coconino, AZ (Unit)

The Coconino location had two units. The IM unit is the treatment unit. The BU unit is the control. Wildlife snag (≥ 9 in dbh) densities did not differ between units and ranged from a high of 2.5 on the BU unit to a low of 1.8 snags per acre on the IM unit (Table 10). We observed no difference in large (> 20 in dbh) snag densities on either of the units. Small (< 1 in dbh) fuel snags were 10 times higher on the BU unit compared to the IM unit. Fuel snag densities in all other categories were similar except for in the 3 to 5 in dbh class. The IM treatment unit had more.

Stump densities on the BU unit were about 50 percent higher compared to the IM unit (Table 12). All of these were cut stumps.

The only difference we observed in wildlife tree densities was in the largest (> 20 in dbh) size class (Table 12). Large trees on the BU unit were more abundant. Small (< 1 in dbh) fuel trees were four times higher on the BU with an estimated 970 trees per acre. By contrast, fuel trees in the 5 to 6 in dbh class were higher on the IM unit.

Kaibab, AZ (Unit)

The Apache-Sitgreaves location had three units. The KE unit is the treatment unit. The BE and MO units are control units. The BE unit had no fuel snags recorded in the five smallest fuel classes (Table 13). Fuel snag densities between the KE and MO units in these same classes were similar and most densities were < 1 snag per acre. The only difference we observed in wildlife snag densities was

in the largest group (> 20 in dbh) where densities ranged from a high of 0.6 on the KE unit to only 0.1 snags per acre on the BE unit.

As with the other locations in Arizona, all stumps encountered on the Kaibab location were cut. Cut stump densities among the three units varied significantly and ranged from a high of 74.8 on the BE unit to a low of 45.6 stumps per acre on the MO unit.

The only difference in wildlife tree densities we observed was in the largest (> 20 in dbh) category where the MO unit had significantly fewer large trees than the BE or KE units. Fuel tree densities in the 6 to 9 in dbh class differed among units and ranged from a high of 28 on the MO unit to a low of 10.8 on the BE unit.

New Mexico (Unit)

There were only two units in New Mexico. The CP unit is the treatment unit and the LJ unit is the control. Snag densities within all size classes were remarkably similar in all size classes between units (Table 16). Stump densities, however, were more than three times higher on the CP unit compared to the LJ unit (Table 17). As with locations in Arizona, all stumps at our New Mexico location were reported as cut.

We did not detect any differences between units in wildlife tree densities (Table 18). In the three smallest fuel tree size classes, however, densities on the CP unit were consistently higher.

Colorado (Unit)

Colorado has four units: 1) DC; 2) PB; 3) SCN; and 4) SCS. It is undecided at this point which units will be paired with each other (G. Vos; pers. commun.) because of logistical concerns. Wildlife snag densities (≥ 9 in dbh) varied among the four Colorado units with densities ranging from a high of 13.8 on the SCN unit to a low of 5.7 snags per acre on the PB unit (Table 19). Differences in large (≥ 20 in dbh) snag densities also varied among units with the SCN and SCS units having the higher snag densities compared to the DC and PB units. The only difference we detected in fuel snag densities was for the 3 to 5 in dbh size class where densities ranged from a high of 22.4 on the DC unit to a low of 8 snags per acre on the SCS unit.

Colorado, along with Idaho, was one of the only locations that had few cut stumps (Table 20). Three units, DC, SCN, and SCS had no cut stumps. All stumps encountered were natural. Only the PB unit had a very low density of cut stumps. We detected no differences among the four units in any of the stump categories.

Wildlife tree (≥ 9 in dbh) densities varied among units and ranged from a high of 82 on the SCS unit to a low of 59.4 trees per acre on the DC unit (Table 21). We also observed a difference in large tree densities among units because of the PB unit where large tree densities approached 20 trees per acre. All other units had about 12 or 13 trees per acre. The only fuel tree size class that varied in densities among units was the largest (6 to 9 in dbh class). The SCS unit had the highest density (45.5 trees/ac) and the PB unit had the lowest (24.9 trees/ac).

Idaho (Unit)

Idaho has six units. BH is the control unit for FC. DM is the control unit for PC and WM is the control unit for DO. Nest data collection began in Idaho in 1999. Tests for differences in snag densities between the BH-FC units revealed higher wildlife snag densities on the BH unit compared to the FC

unit (Table 22). Wildlife snags in both the 9 (7 versus 3.3 snags/ac) and 20 (3.6 versus 1.8 snags/ac) in dbh classes were about twice as high on BH compared to FC. We observed no differences between the DM-PC and the WM-DO units in any of the fuel or wildlife snag size classes.

Sample sizes for stump data were reduced compared to snag and tree data for some Idaho units because prior to 2002, stump data were not collected. Rather, only snag and tree data were collected around nest trees in these first years of the project. The only unit that recorded any cut stumps was WM (Table 23). WM and its paired unit, DO, also were the only units where we observed any differences in stump densities. WM had higher stump densities than DO.

Wildlife (≥ 9 in dbh) tree densities were highest on the DM-PC units (about 44 trees/ac on each) among all the Idaho units (Table 24). Between these paired units, we did not observe any differences in tree densities among any of the size classes. By contrast, fuel trees in the three largest size classes (3 to 9 in dbh) were higher on the FC unit compared to the BH unit. The pattern was the opposite for large (> 20 in dbh) wildlife tree densities, however, where the BH unit had more compared to the FC unit. Between the DO and WM paired units, wildlife trees were more abundant in both size classes on the DO unit compared to the WM unit.

Montana (Unit)

Montana had four units. The MC unit is the control for the MT unit. The SC unit is the control for the ST unit. Between the MC and the MT units we observed that wildlife (≥ 9 in dbh) snag densities were more abundant on the MT unit (Table 25). Fuel snags in the largest size class (6 to 9 in dbh) were also higher on the MT unit compared to the MC unit. Between the ST and SC units we also observed a difference in wildlife snag (> 9 in dbh) densities where the ST unit had about three times more snags than the SC unit. There were no differences in any of the fuel snag categories.

The MC unit had significantly more stumps (36.4 more stumps/ac) than the MT unit (Table 26). The majority of these were cut stumps which were about 12 times higher on the MC unit compared to the MT unit. Between the SC and ST units, the ST unit had about twice the number of stumps as the SC unit.

We observed no differences in tree densities in any size classes between the MT and MC paired units (Table 27). Between the SC and ST units, fuel trees in the 1 to 2 and 2 to 3 in dbh classes were two to three times higher on the SC unit compared to the ST unit.

Oregon (Unit)

Oregon has four units. CN is the control unit for TN. CS is the control unit for TS. Between the CN and TN units we observed differences in wildlife snag densities for both size classes. The TN unit had nearly twice as many 9 in dbh snags as the control unit CN (Table 28). The TN unit also had nearly four times as many large (≥ 20 in dbh) snags as the CN unit. Fuel snag densities in the three smallest size classes were also higher on the TN unit compared to the CN unit. Between the CS and TS units, however, we observed no differences in densities among any of the size classes.

Stump densities between the TN and CN units were similar (Table 29). By contrast, the CS unit had about 12 more stumps per acre than the TS unit. The majority of these stumps were cut. Natural stumps, however, were more numerous on the TS unit compared to the CS unit.

Only the largest of the wildlife trees showed any differences in densities between the CN and TN units where the TN unit had more than twice as many large trees as the CN unit (Table 30). Fuel trees in the

1 to 2 and 2 to 3 in dbh categories were also significantly higher on the TN unit. We observed no difference in wildlife tree densities in either size class. Fuel trees in the four smallest (5 in dbh) size classes, however, were much higher on the TS unit.

Washington (Unit)

Washington has seven units. Vicki, at the time of this writing I do not know which units are paired together. For now, I have just included the tables for snags (Table 31), stumps (Table 32), and trees (table 33).

Stratum Level

Apache-Sitgreaves, AZ (Stratum)

The Apache-Sitgreaves location had 76 points or nests within the closed stratum and only one in the open stratum (Table 34). We only conducted t-tests for differences in stem densities within the closed stratum because of the sample sizes. Tests for differences in snag densities between point types in the closed stratum revealed higher densities of fuel snags in all size classes at random points compared to around nest trees except for the 1 to 2 in dbh class. Wildlife snag densities between point types within the closed stratum were similar. Stump densities within the closed stratum between point types were also the same (Table 35).

The only difference in tree densities within the closed stratum was for wildlife trees > 9 in dbh. The random points had higher densities (Table 36).

Coconino, AZ (Stratum)

The Coconino location had 88 points or nests within the closed stratum and 13 in the open stratum (Table 37). Wildlife snag densities were similar between strata. Fuel snags in the 1 to 2 and 3 to 5 in dbh class were more abundant in the closed stratum. Within the closed stratum, 18 points were nests and 70 were random. Fuel snags in the three smallest size classes were more abundant at random points compared to around nest trees. We observed the opposite pattern with large (> 20 in dbh) snags where densities around nest trees were more than three times higher than at random points. Stump densities were higher within the closed stratum on the Coconino (Table 38). There was no difference in stump densities between nest and random points within the closed stratum.

Wildlife tree (> 9 in dbh) densities were higher within the closed stratum compared to around nest trees on the Coconino (Table 39). Fuel trees in the three largest size classes (3 to 9 in dbh) were also more abundant within the closed stratum. Within the closed stratum, estimated fuel tree densities were higher at random points compared to around nest trees in four size classes: 1) 0 to 1; 2) 2 to 3; 3) 3 to 5; and 4) 5 to 6 in dbh.

Kaibab, AZ (Stratum)

The Kaibab location had 77 points or nests within the closed stratum and 55 in the open stratum (Table 40). The only difference we observed between strata on the Kaibab was in the wildlife snag (≥ 9 in dbh) class where the closed stratum had higher densities. Within the closed stratum wildlife life snag densities in both size classes were higher around nest trees compared to random points. There was no difference in stump densities between the open and closed strata on the Kaibab (Table 41). Within the closed stratum, however, stump densities around nest trees were nearly twice as high as at random points.

The Kaibab was distinct in its tree density patterns. Tree densities in all size classes except one for both wildlife and fuel trees were higher in the closed stratum compared to the open stratum (Table 42). Only the smallest fuel trees (< 1 in dbh) had higher densities within the open stratum. Within the closed stratum, random points had higher small (< 1 in dbh) tree densities compared to around nest trees. By contrast, fuel trees in the 5 to 6 and 6 to 9 in dbh classes were higher around nest trees compared to random points.

New Mexico (Stratum)

New Mexico had 92 points or nests within the closed stratum and only 8 in the open stratum (Table 43). We only conducted t-tests for differences in stem densities within the closed stratum because of the sample sizes. We observed no differences in wildlife snag densities in either size class. Fuel snags in three size classes (1 to 5 in dbh) were higher at random points compared to around nest trees. Stump densities within the closed stratum were similar (Table 44).

All densities between point types within the closed stratum in New Mexico were similar except in one size class. Small fuel trees (1 to 2 in dbh class) were twice as high at random points compared to around nest trees.

Colorado (Stratum)

Colorado had 148 points or nests within the closed stratum and only 6 in the open stratum (Table 46). We only conducted t-tests for differences in stem densities within the closed stratum because of the sample sizes. Wildlife snag densities (> 9 in dbh) in both size classes were higher around nest trees compared to at random points within the closed stratum in Colorado. The only difference we observed in fuel size classes was with the 3 to 5 in dbh class. Densities were higher around nest trees. Within the closed stratum in Colorado, stump densities were higher around nest trees compared to random points (Table 47).

Tree densities within the closed stratum revealed differences in densities between point types for three categories (Table 48). Wildlife tree densities (> 9 in dbh) were higher around nest trees compared to random points. Fuel trees in the smallest size class (< 1 in) and in the 2 to 3 in dbh class were also more abundant around nest trees.

Idaho (Stratum)

Idaho had 107 points or nests within the closed stratum and 141 in the open stratum (Table 49). This was our only location that had large enough sample sizes in both strata to examine for differences in densities. Snag densities within the closed stratum, compared to the open stratum, were higher in all size classes except for one. We did not detect any difference in large (> 20 in dbh) wildlife snag densities between strata. In the open stratum, wildlife snag densities in both size classes were higher around nest trees compared to random points. Fuel snags in the 2 to 3 in dbh class, however, were higher at random points. Within the closed stratum, the only differences we detected were for wildlife snags. In both size classes, snag densities were at least twice as high around nest trees compared to random points.

We observed no difference in stump densities between strata (Table 50). Within the closed stratum, stump densities were higher around nest trees compared to at random points. There was no difference in the open stratum between point types.

Like the Kaibab location, Idaho had distinctly different tree densities in all size classes between strata (Table 51). Tree densities were all higher in the closed stratum compared to the open stratum. Within the open stratum we observed higher wildlife snag (> 9 in dbh) densities at random points compared to around nest trees. Fuel trees in the 3 to 5 and 6 to 9 in dbh classes were also higher at random points compared to around nest trees.

Montana (Stratum)

All random points within Montana were in the closed stratum (Tables 25-27).

Oregon (Stratum)

Oregon had 146 points in the open stratum and 29 in the closed stratum (Table 52). We were not able to conduct t-tests for differences in stem densities within the closed stratum because of inadequate sample sizes. We observed no differences in stem densities between the strata in any of the snag size classes in Oregon (Table 52). Within the open stratum, wildlife snag densities in both categories were higher around nest trees compared to at random points. Fuel snags in the 1 to 2 in dbh class were higher at random points. With all stumps combined, densities were higher in the open stratum (Table 53). We observed no difference in stump densities within the open stratum.

Oregon was unique in its tree densities in that we observed no differences in any tree size classes (Table 54). This was true between strata within the open stratum.

Washington (Stratum)

Washington had 101 points in the open stratum and 123 in the closed stratum (Table 55). The only differences we observed in snag densities between strata were for the smaller size classes (< 5 in dbh). In each of these four size classes, fuel snag densities were higher within the closed stratum compared to the open stratum. We found no differences in size classes between point types within the closed stratum. Within the open stratum, wildlife snags in both size classes were more abundant around nest trees compared to at random points.

There was no difference in stump densities between the open and closed strata in Washington (Table 56). Within the open stratum, all stumps combined were higher at random points. By contrast, natural stump densities alone were higher around nests. Within the closed stratum, densities of all stumps combined were higher at random points. Densities of cut stumps were also higher at random points. There was no difference in natural stump densities between point types within the closed stratum.

Tree densities in all size classes except one in Washington were higher within the closed stratum compared to the open stratum (Table 57). Only with large (> 20 in dbh) trees did we not find a difference. Within the open stratum tree densities were higher at random points for four size classes: 1) 10 < 1; 2) 1 to 2; 3) 6 to 9; and 4) > 9 in dbh. Large trees (> 20 in dbh) were more abundant around nest trees. Within the closed stratum, tree densities were higher at random points compared to around nest trees in all size classes except for the smallest (< 1) and the largest (> 20 in dbh).

Wildlife Use

Snags

The number of snags available and the number with new woodpecker foraging signs among decay classes varied widely among all eight states (Table 58). Arizona and New Mexico locations had the smallest number of snags available in all decay classes. The majority of new foraging in these locations

were in decay class I snags. The Kaibab snags showed unique foraging patterns. That is, we observed equal amounts of foraging in all snags irregardless of decay class and percent use values were high in each class ($\geq 75\%$). Oregon and Montana were the only other locations that had relatively equal amounts of new foraging in the first three decay classes.

Most new cavities within each of nine locations were in snags in decay class II (Table 59). The Kaibab had the highest percentage of new cavities in all decay classes likely reflecting the overall low density of snags to begin with. Looking at snags with either an old or new cavity, the Kaibab again had some of the highest percent use values. Decay classes II and III supported the highest percentage of any type of cavity within all locations.

Ponderosa pine (PIPO) was the most available snag species available in all nine locations (Table 61). In New Mexico, QUGA snags were a close second ($n = 122$) compared to the 132 PIPO snags encountered. All snags on the Kaibab except for four (JUDE), were PIPO. PIPO snags showed the highest percent use values for new foraging in all locations except one (Table 61). In Montana, POTR snags had slightly higher values.

In most locations where at least 20 snags within each species class were encountered (not including unknown species), PIPO snags showed the highest percent use for new cavities (Table 62). Montana was an exception because POTR snags had the highest percentage of new cavities.

When considering both old and new cavities within snags of different species with at least 20 snags encountered, we observed once again that PIPO snags had the highest percent use in most locations (Table 63). Montana was again an exception with POTR having the highest percent use. In New Mexico PIPO and QUGA snags had similar percent use values. Oregon had a higher percent use value for snags species that were unknown. After this, however, PIPO snags once again had the highest values.

Trees

The number of trees available for foraging (Table 64), compared to the number of snags available, increased multiple times for every location. The Kaibab, Colorado, and Idaho recorded the highest number of sound trees (> 3000). Sound trees were the most abundant in all locations. Trees with some evidence of decay were the second highest available in all locations. Trees that showed some evidence of decay had the highest percentage of new foraging among structure classes in most locations. Broomed trees in Oregon, Colorado, and on the Coconino also had high percent use values.

Percent use values of trees with new cavities were quite low (Table 65). The Coconino had the highest percent use value for trees with sample sizes greater than 20. Around 9 percent of all broomed trees there had new cavities. When all cavities were considered, the percent use values only increased slightly in most states (Table 66). New Mexico was an exception with substantial increase in trees in structure classes II-IV.

Colorado had the largest number ($n = 8$) of tree species available (Table 67). Idaho, New Mexico, and Washington had seven different tree species. Ponderosa pine trees were the most abundant trees species in all nine locations. In four locations PIPO trees had the highest percent use with new foraging. On the Coconino, QUGA trees showed about twice as much foraging as PIPO. In Montana, POTR trees had more signs. In Oregon PICO trees did, and in Washington, PSME had the highest percent use.

In the southern region for all locations except the Kaibab, QUGA trees showed the highest percentage of new cavities (Table 68). Other than one new cavity in a PIEN tree in Colorado, POTR trees had the highest percent use of new cavities. This was also true in Montana. In Oregon, PICO trees had more cavities. In Idaho and Washington, PIPO trees had the highest percent use for species with at least 20 trees. For trees with any type of cavity, patterns were very similar (Table 69).

Table 1. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located in two geographic regions: northern and southern. The southern region includes three locations in Arizona ((Apache-Sitgreaves, Coconino, and Kaibab) and one in New Mexico. The northern region includes locations in Colorado, Idaho, Montana, Oregon, and Washington. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snag size class (in)	Snags per acre \pm 90% confidence interval (SE)					
	Southern region			Northern region		
	Combined (n = 410)	Nest (n = 132)	Random (n = 278)	Combined (n = 925)	Nest (n = 445)	Random (n = 480)
0 to < 1	15.8 \pm 3 (1.8)	5.8 \pm 1.8 ^a (1.1)	20.5 \pm 4.3 ^a (2.6)	18.1 \pm 2.9 (1.7)	18.5 \pm 4.7 (2.9)	17.8 \pm 3.4 (2.1)
1 to < 2	7.8 \pm 1.4 (0.8)	4.6 \pm 1.6 ^a (1)	9.3 \pm 1.8 ^a (1.1)	14.5 \pm 1.8 (1.1)	13.1 \pm 2.7 (1.6)	15.8 \pm 2.5 (1.5)
2 to < 3	6.9 \pm 1.3 (0.8)	3.3 \pm 1 ^a (0.6)	8.6 \pm 1.8 ^a (1.1)	10.2 \pm 1.2 (0.7)	9.9 \pm 1.8 (1.1)	10.4 \pm 1.5 (0.9)
3 to < 5	5.5 \pm 0.9 (0.6)	2.7 \pm 0.9 ^a (0.5)	6.9 \pm 1.3 ^a (0.8)	8.3 \pm 0.9 (0.5)	7.9 \pm 1.4 (0.8)	8.7 \pm 1.1 (0.7)
5 to < 6	1.4 \pm 0.3 (0.2)	0.7 \pm 0.3 ^a (0.2)	1.8 \pm 0.4 ^a (0.3)	2.5 \pm 0.4 (0.3)	2.4 \pm 0.6 (0.4)	2.6 \pm 0.6 (0.4)
6 to < 9	3.4 \pm 0.6 (0.4)	2.3 \pm 0.7 ^a (0.4)	3.9 \pm 0.8 ^a (0.5)	4.5 \pm 0.5 (0.3)	4.4 \pm 0.8 (0.5)	4.6 \pm 0.8 (0.5)
\geq 9	2.3 \pm 0.2 (0.1)	2.6 \pm 0.3 (0.2)	2.2 \pm 0.3 (0.2)	4.9 \pm 0.3 (0.2)	6.1 \pm 0.5 ^a (0.3)	3.7 \pm 0.4 ^a (0.2)
\geq 20	0.4 \pm 0.1 (0.01)	0.7 \pm 0.1 ^a (0.1)	0.3 \pm 0.1 ^a 0.01	1.5 \pm 0.1 (0.1)	2 \pm 0.2 ^a (0.1)	1.1 \pm 0.1 ^a 0.1

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 2. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for the two regions involved in the Birds and Burns study. The southern region includes three locations in Arizona (Apache-Sitgreaves, Coconino, and Kaibab) and one in New Mexico. The northern region includes locations in Colorado, Idaho, Montana, Oregon, and Washington. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied. Data collection on natural and cut stumps began in 2003.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	Southern region			Northern region		
	Combined	Nest	Random	Combined	Nest	Random
All stumps	29.3 \pm 2.6 (1.6) [410]	35.9 \pm 5 ^a (3) [132]	26.1 \pm 1.8 ^a (3)	16.5 \pm 1.5 (0.9) [818]	12.8 \pm 1.5 ^a (1) [389]	19.9 \pm 2.2 ^a (1.4) [429]
Natural stumps	0 [233]	0 [95]	0 [138]	6.4 \pm 0.8 (0.5) [488]	6.2 \pm 1.2 (0.7) [248]	6.6 \pm 1.1 (0.6) [240]
Cut stumps	29 \pm 2.7 (1.7) [233]	32.9 \pm 5.2 (3.1) [95]	26.3 \pm 2.9 (1.8) [138]	13.6 \pm 2 (1.2) [488]	8.2 \pm 2.2 ^a (1.4) [248]	19.2 \pm 3.2 ^a (1.9) [240]

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 3. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located in two geographic regions: northern and southern. The southern region includes three locations in Arizona (Apache-Sitgreaves, Coconino, and Kaibab) and one in New Mexico. The northern region includes locations in Colorado, Idaho, Montana, Oregon, and Washington. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Tree size class (in)	Trees per acre \pm 90% confidence interval (SE)					
	Southern region			Northern region		
	Combined (n = 410)	Nest (n = 132)	Random (n = 278)	Combined (n = 925)	Nest (n = 445)	Random (n = 480)
0 to < 1	210 \pm 32.3 (19.6)	123 \pm 31.6 ^a (19.1)	252 \pm 44.8 ^a (27.1)	133 \pm 23.8 (14.5)	198 \pm 44 ^a (26.7)	73.5 \pm 20.1 ^a (12.2)
1 to < 2	47 \pm 5.9 (3.6)	39.7 \pm 8 (4.8)	50.5 \pm 7.8 (4.7)	51.8 \pm 5.9 (3.6)	47.1 \pm 7 (4.2)	56.2 \pm 9.4 (5.7)
2 to < 3	34.7 \pm 3.6 (2.2)	32.8 \pm 5.4 (3.2)	35.6 \pm 4.7 (2.8)	47.1 \pm 4.4 (2.7)	43.5 \pm 6.4 (3.9)	50.3 \pm 6.2 (3.8)
3 to < 5	42.3 \pm 4 (2.4)	37.9 \pm 5.9 (3.6)	44.3 \pm 5.1 (3.1)	47.9 \pm 3.7 (2.2)	39.8 \pm 4.8 ^a (2.9)	55.3 \pm 5.5 ^a (3.3)
5 to < 6	18.3 \pm 1.7 (1)	16.5 \pm 2.7 (1.6)	19.1 \pm 2.2 (1.3)	15.3 \pm 1.2 (0.7)	13.1 \pm 1.6 ^a (1)	17.4 \pm 1.8 ^a (1.1)
6 to < 9	56.2 \pm 4 (2.4)	51.9 \pm 5.5 (3.3)	58.2 \pm 5.3 (3.2)	34.2 \pm 2.7 (1.6)	28.7 \pm 4.5 ^a (2.7)	39.3 \pm 3 ^a (1.8)
\geq 9	57.6 \pm 2.3 (1.4)	61.1 \pm 4.2 (2.5)	56 \pm 2.8 (1.7)	48.7 \pm 1.6 (1)	42.6 \pm 2.2 ^a (1.3)	54.4 \pm 2.3 ^a (1.4)
\geq 20	5.6 \pm 0.4 (0.3)	6.8 \pm 0.8 ^a (0.5)	5 \pm 0.5 ^a 0.3	9.4 \pm 0.5 (0.3)	9.6 \pm 0.7 (0.4)	9.1 \pm 0.7 0.4

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 4a. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for the three Birds and Burns study sites located in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snag size class (in)	Snags per acre \pm 90% confidence interval (SE)								
	Apache-Sitgreaves			Arizona Coconino			Kaibab		
	Combined (n = 77)	Nest (n = 19)	Random (n = 58)	Combined (n = 101)	Nest (n = 21)	Random (n = 80)	Combined (n = 132)	Nest (n = 42)	Random (n = 90)
0 to < 1	15.3 \pm 4.1 (2.5)	6.1 \pm 3.8 ^a (2.2)	18.3 \pm 5.2 ^a (3.1)	43.3 \pm 10.4 (6.3)	13.5 \pm 9.3 ^a (5.4)	51.2 \pm 12.6 ^a (7.6)	1.5 \pm 0.7 (0.4)	1.1 \pm 0.9 (0.6)	1.7 \pm 0.6 (1)
1 to < 2	16.9 \pm 4 (2.4)	10.4 \pm 9.1 (5.3)	19 \pm 4.5 (2.7)	8.8 \pm 3.4 (2)	2.7 \pm 3.1 ^b (1.8)	10.4 \pm 4.1 ^b (2.5)	0.5 \pm 0.3 (0.2)	0.2 \pm 0.3 (0.2)	0.6 \pm 0.4 (0.2)
2 to < 3	15.7 \pm 3.3 (2)	8 \pm 4.6 ^a (2.6)	18.2 \pm 4 ^a (2.4)	6.9 \pm 2.9 (1.8)	1.2 \pm 1.3 ^a (0.8)	8.4 \pm 3.6 ^a (2.2)	0.2 \pm 0.1 (0.1)	0.2 \pm 0.3 (0.2)	0.2 \pm 0.2 (0.1)
3 to < 5	13.2 \pm 2.9 (1.8)	5.9 \pm 2.9 ^a (1.7)	15.5 \pm 3.7 ^a (2.2)	6.8 \pm 2.1 (1.3)	1.7 \pm 1.3 ^a (0.7)	8.1 \pm 2.6 ^a (1.6)	0.3 \pm 0.2 (0.1)	0.6 \pm 0.7 (0.4)	0.1 \pm 0.1 (0.1)
5 to < 6	3.7 \pm 1.1 (0.6)	1.9 \pm 1.4 ^b (0.8)	4.3 \pm 1.3 ^b (0.8)	1.9 \pm 0.8 (0.5)	0.7 \pm 0.7 ^b (0.4)	2.2 \pm 1 ^b (0.6)	0.1 \pm 0.1 (0.1)	0.1 \pm 0.2 (0.1)	0.1 \pm 0.1 (0.1)
6 to < 9	9.7 \pm 2.2 (1.3)	4.8 \pm 3 ^a (1.8)	11.3 \pm 2.6 ^a (1.6)	2.8 \pm 1.1 (0.7)	1.5 \pm 1.4 (0.8)	3.2 \pm 1.4 (0.8)	0.3 \pm 0.2 (0.1)	0.6 \pm 0.5 (0.3)	0.1 \pm 0.1 (0.1)
\geq 9	4 \pm 0.6 (0.4)	4.2 \pm 1.3 (0.8)	4 \pm 0.7 (0.4)	2.1 \pm 0.3 (0.2)	2.1 \pm 0.7 (0.4)	2.1 \pm 0.4 (0.2)	1.1 \pm 0.2 (0.1)	1.9 \pm 0.4 ^a (0.2)	0.7 \pm 0.2 ^a (0.1)
\geq 20	0.5 \pm 0.1 (0.1)	0.7 \pm 0.3 (0.2)	0.4 \pm 0.1 (0.1)	0.3 \pm 0.1 (0.1)	0.7 \pm 0.2 ^a (0.1)	0.3 \pm 0.1 ^a (0.1)	0.4 \pm 0.1 (0.1)	0.7 \pm 0.2 ^a (0.1)	0.2 \pm 0.1 ^a (0.1)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 4a (con't). Mean snag densities per acre \pm 90% confidence interval (SE) for Birds and Burns study sites located in New Mexico, Colorado, and Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)									
Snag size class (in)	New Mexico			Colorado			Idaho		
	Combined (n = 100)	Nest (n = 50)	Random (n = 50)	Combined (n = 154)	Nest (n = 60)	Random (n = 94)	Combined (n = 248)	Nest (n = 138)	Random (n = 110)
0 to < 1	7 \pm 1.9 (1.1)	6.5 \pm 2.1 (1.3)	7.6 \pm 3.1 (1.9)	6.9 \pm 2.5 (1.5)	9 \pm 3.3 (2)	5.5 \pm 3.6 (2.2)	4.5 \pm 1.7 (1)	3.4 \pm 1.4 (0.8)	5.8 \pm 3.4 (2.1)
1 to < 2	9.5 \pm 2.5 (1.5)	6.9 \pm 1.9 (1.1)	12.1 \pm 4.7 (2.8)	8.3 \pm 2.1 (1.3)	10.2 \pm 3.7 (2.2)	7.2 \pm 2.6 (1.5)	4.8 \pm 2.1 (1.3)	4 \pm 2.1 (1.3)	5.7 \pm 4 (2.4)
2 to < 3	8.8 \pm 3 (1.8)	4.9 \pm 1.8 ^b (1.1)	12.8 \pm 5.6 ^a (3.3)	12.5 \pm 2.8 (1.7)	13.9 \pm 4 (2.4)	11.5 \pm 3.8 (2.3)	2 \pm 0.9 (0.6)	1.5 \pm 0.8 (0.5)	2.6 \pm 1.8 (1.1)
3 to < 5	5.3 \pm 1.6 (0.9)	3.6 \pm 1.8 (1.1)	7 \pm 2.6 (1.5)	14.6 \pm 2.8 (1.7)	18.2 \pm 5 (3)	12.2 \pm 3.2 (1.9)	1.7 \pm 0.6 (0.3)	1.4 \pm 0.6 (0.4)	2 \pm 1 (0.6)
5 to < 6	0.9 \pm 0.4 (0.2)	0.6 \pm 0.4 (0.2)	1.2 \pm 0.6 (0.4)	5.9 \pm 1.8 (1.1)	5.3 \pm 1.9 (1.2)	6.3 \pm 2.8 (1.7)	0.4 \pm 0.2 (0.1)	0.4 \pm 0.3 (0.2)	0.4 \pm 0.2 (0.1)
6 to < 9	3.1 \pm 0.9 (0.5)	3.1 \pm 1.2 (0.7)	3.1 \pm 1.3 (0.8)	8.9 \pm 1.8 (1.1)	11.3 \pm 3.4 (2.1)	7.4 \pm 1.9 (1.1)	1.4 \pm 0.4 (0.3)	1.2 \pm 0.5 (0.3)	1.7 \pm 0.8 (0.5)
\geq 9	2.8 \pm 0.5 (0.3)	2.7 \pm 0.6 (0.4)	2.8 \pm 0.8 (0.5)	8.7 \pm 1 (0.6)	12.4 \pm 2 ^a (1.2)	6.3 \pm 0.8 ^a (0.5)	4.6 \pm 0.5 (0.3)	5.7 \pm 0.8 ^a (0.5)	3.2 \pm 0.6 ^a (0.4)
\geq 20	0.5 \pm 0.1 (0.1)	0.6 \pm 0.2 (0.1)	0.3 \pm 0.2 (0.1)	2.7 \pm 0.3 (0.2)	3.4 \pm 0.6 ^b (0.3)	2.3 \pm 0.4 ^b (0.2)	2.4 \pm 0.3 (0.2)	3.3 \pm 0.4 ^a (0.2)	1.3 \pm 0.3 ^a (0.2)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 4a (con't). Mean snag densities per acre \pm 90% confidence interval (SE) for Birds and Burns study sites located in Montana, Oregon, and Washington states. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snag size class (in)	Snags per acre \pm 90% confidence interval (SE)								
	Montana			Oregon			Washington		
	Combined (n = 124)	Nest (n = 48)	Random (n = 76)	Combined (n = 175)	Nest (n = 95)	Random (n = 80)	Combined (n = 224)	Nest (n = 104)	Random (n = 120)
0 to < 1	71.9 \pm 17.1 (10.3)	106 \pm 36.2 ^b (21.6)	50.2 \pm 15.2 ^b (9.1)	20.8 \pm 5.6 (3.4)	13.9 \pm 4.9 ^b (2.9)	29 \pm 10.7 ^b (6.4)	9.1 \pm 2 (1.2)	7.5 \pm 2.9 (1.7)	10.5 \pm 2.7 (1.6)
1 to < 2	40.3 \pm 7.8 (4.7)	52.9 \pm 17 (10.1)	32.3 \pm 6.8 (4.1)	14 \pm 4 (2.4)	10.1 \pm 3.4 (2)	18.7 \pm 7.7 (4.6)	15.6 \pm 3.8 (2.3)	11.2 \pm 5.2 (3.1)	19.4 \pm 5.4 (3.3)
2 to < 3	23.3 \pm 4.2 (2.5)	29.9 \pm 9 (5.4)	19.1 \pm 3.8 (2.3)	9.9 \pm 2.3 (1.4)	9.1 \pm 3.2 (1.9)	11 \pm 3.5 (2.1)	10.6 \pm 2.9 (1.7)	10.3 \pm 5 (3)	10.8 \pm 3.2 (1.9)
3 to < 5	17.6 \pm 3 (1.8)	17.7 \pm 5.2 (3.1)	17.5 \pm 3.7 (2.2)	7.1 \pm 1.5 (0.9)	6.4 \pm 1.8 (1.1)	8 \pm 2.5 (1.5)	7.2 \pm 2 (1.2)	7.6 \pm 3.7 (2.2)	6.9 \pm 1.9 (1.1)
5 to < 6	3.8 \pm 0.9 (0.5)	2.7 \pm 1.5 (0.9)	4.4 \pm 1.1 (0.7)	2.3 \pm 0.7 (0.4)	2.7 \pm 1.1 (0.7)	1.8 \pm 0.8 (0.5)	1.8 \pm 0.9 (0.6)	2.7 \pm 1.9 (1.1)	1.1 \pm 0.6 (0.4)
6 to < 9	6.9 \pm 1.4 (0.9)	6.3 \pm 2.5 (1.5)	7.3 \pm 1.8 (1.1)	4.5 \pm 0.9 (0.6)	4.4 \pm 1.2 (0.7)	4.5 \pm 1.5 (0.9)	3.7 \pm 1.4 (0.8)	4 \pm 1.9 (1.1)	3.4 \pm 2 (1.2)
\geq 9	4.1 \pm 0.6 (0.3)	5.1 \pm 1.1 ^b (0.6)	3.5 \pm 0.6 ^b (0.4)	4.4 \pm 0.8 (0.5)	5.5 \pm 1 ^b (0.6)	3.2 \pm 1.2 ^b (0.7)	3.4 \pm 0.5 (0.3)	4.1 \pm 0.8 ^b (0.5)	2.7 \pm 0.5 ^b (0.3)
\geq 20	0.3 \pm 0.1 (0.1)	0.2 \pm 0.1 (0.1)	0.3 \pm 0.1 (0.1)	0.9 \pm 0.2 (0.1)	1 \pm 0.3 (0.2)	0.7 \pm 0.3 (0.2)	0.8 \pm 0.1 (0.1)	1.1 \pm 0.2 ^a (0.1)	0.5 \pm 0.2 ^a (0.1)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 4b. Mean snag densities per hectare \pm 90% confidence interval (SE) and sample size for the three Birds and Burns study sites located in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per hectare \pm 90% confidence interval (SE)									
Snag size class (cm)	Apache-Sitgreaves			Arizona Coconino			Kaibab		
	Combined (n = 77)	Nest (n = 19)	Random (n = 58)	Combined (n = 101)	Nest (n = 21)	Random (n = 80)	Combined (n = 132)	Nest (n = 42)	Random (n = 90)
0 to < 2.5	37.8 \pm 10.2 (6.1)	15.2 \pm 9.5 ^a (5.5)	45.3 \pm 12.9 ^a (7.7)	107 \pm 25.7 (15.5)	33.3 \pm 22.9 ^a (13.3)	126 \pm 31.1 ^a (18.7)	3.7 \pm 1.8 (1.1)	2.7 \pm 2.3 (1.4)	4.2 \pm 2.4 (1.4)
2.5 to < 5	41.7 \pm 9.9 (6)	25.7 \pm 22.6 (13)	47 \pm 11.1 (6.6)	21.7 \pm 8.3 (5)	6.6 \pm 7.7 ^b (4.4)	25.6 \pm 10.2 ^b (6.1)	1.2 \pm 0.7 (0.4)	0.6 \pm 0.7 (0.4)	1.5 \pm 0.9 (0.6)
5 to < 8	38.8 \pm 8.1 (4.9)	19.8 \pm 11.3 ^a (6.5)	45 \pm 9.9 ^a (5.9)	17.1 \pm 7.2 (4.3)	3 \pm 3.3 ^a (1.9)	20.8 \pm 8.9 ^a (5.4)	0.5 \pm 0.3 (0.2)	0.6 \pm 0.7 (0.4)	0.4 \pm 0.4 (0.2)
8 to < 13	32.5 \pm 7.2 (4.3)	14.5 \pm 7.1 ^a (4.1)	38.4 \pm 9.1 ^a (5.4)	16.7 \pm 5.2 (3.2)	4.2 \pm 3.1 ^a (1.8)	20 \pm 6.5 ^a (3.9)	0.7 \pm 0.6 (0.4)	1.5 \pm 1.8 (1.1)	0.3 \pm 0.3 (0.2)
13 to < 15	9.1 \pm 2.7 (1.6)	4.6 \pm 3.4 ^b (2)	10.6 \pm 3.3 ^{ba} (2)	4.7 \pm 2 (1.2)	1.8 \pm 1.7 ^b (1)	5.5 \pm 2.5 ^b (1.5)	0.2 \pm 0.2 (0.1)	0.3 \pm 0.5 (0.3)	0.1 \pm 0.2 (0.1)
15 to < 23	23.9 \pm 5.3 (3.2)	11.9 \pm 7.5 (4.3)	27.8 \pm 6.5 (3.9)	7 \pm 2.7 (1.6)	3.6 \pm 3.4 (2)	7.8 \pm 3.3 (2)	0.7 \pm 0.5 (0.3)	1.5 \pm 1.3 (0.8)	0.3 \pm 0.3 (0.2)
\geq 23	10 \pm 1.5 (0.9)	10.5 \pm 3.3 (1.9)	9.8 \pm 1.7 (1)	5.3 \pm 0.8 (0.5)	5.2 \pm 1.6 (0.9)	5.3 \pm 1 (0.6)	2.7 \pm 0.5 (0.3)	4.6 \pm 0.9 ^a (0.5)	1.8 \pm 0.5 ^a (0.3)
\geq 50	1.2 \pm 0.3 (0.2)	1.8 \pm 0.8 (0.5)	1 \pm 0.4 (0.2)	0.9 \pm 0.2 (0.1)	1.8 \pm 0.6 ^a (0.3)	0.6 \pm 0.2 ^a (0.1)	1 \pm 0.2 (0.2)	1.8 \pm 0.5 ^a (0.3)	0.6 \pm 0.2 ^a (0.1)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 4b (con't). Mean snag densities per hectare \pm 90% confidence interval (SE) for Birds and Burns study sites located in New Mexico, Colorado, and Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snag size class (cm)	Snags per hectare \pm 90% confidence interval (SE)								
	New Mexico			Colorado			Idaho		
	Combined (n = 100)	Nest (n = 50)	Random (n = 50)	Combined (n = 154)	Nest (n = 60)	Random (n = 94)	Combined (n = 247)	Nest (n = 137)	Random (n = 110)
0 to < 2.5	17.4 \pm 4.6 (2.8)	16 \pm 5.2 (3.1)	18.8 \pm 7.7 (4.6)	17 \pm 6.2 (3.8)	22.3 \pm 8 (4.8)	13.6 \pm 8.9 (5.4)	11.1 \pm 4.2 (2.5)	8.4 \pm 3.4 (2.1)	14.4 \pm 8.5 (5.1)
2.5 to < 5	23.5 \pm 6.2 (3.8)	17 \pm 4.6 (2.7)	30 \pm 11.6 (6.9)	20.6 \pm 5.2 (3.2)	25.2 \pm 9.2 (5.5)	17.7 \pm 6.3 (3.8)	11.8 \pm 5.2 (3.2)	10 \pm 5.2 (3.1)	14.1 \pm 9.8 (5.9)
5 to < 8	21.8 \pm 7.3 (4.4)	12 \pm 4.6 ^b (2.7)	31.5 \pm 13.8 ^b (8.2)	30.8 \pm 6.8 (4.1)	34.4 \pm 9.8 (5.8)	28.5 \pm 9.3 (5.6)	5 \pm 2.3 (1.4)	3.8 \pm 2.1 (1.3)	6.5 \pm 4.5 (2.7)
8 to < 13	13.1 \pm 3.9 (2.3)	9 \pm 4.5 (2.7)	17.3 \pm 6.3 (3.8)	36 \pm 6.8 (4.1)	45 \pm 12.4 (7.4)	30.2 \pm 8 (4.8)	4.1 \pm 1.4 (0.8)	3.4 \pm 1.5 (0.9)	5 \pm 2.5 (1.5)
13 to < 15	2.3 \pm 0.9 (0.5)	1.5 \pm 1 (0.6)	3 \pm 1.5 (0.9)	14.6 \pm 4.5 (2.7)	13.1 \pm 4.7 (2.8)	15.6 \pm 6.8 (4.1)	1 \pm 0.4 (0.3)	1.1 \pm 0.7 (0.4)	0.9 \pm 0.5 (0.3)
15 to < 23	7.8 \pm 2.2 (1.3)	7.8 \pm 3 (1.8)	7.8 \pm 3.2 (1.9)	22 \pm 4.4 (2.6)	27.9 \pm 8.5 (5.1)	18.2 \pm 4.7 (2.8)	3.5 \pm 1.1 (0.7)	2.9 \pm 1.2 (0.7)	4.3 \pm 2 (1.2)
\geq 23	6.8 \pm 1.2 (0.7)	6.6 \pm 1.5 (0.9)	7 \pm 1.9 (1.1)	21.5 \pm 2.4 (1.5)	30.7 \pm 4.8 ^a (2.9)	15.6 \pm 2 ^a (1.2)	11.3 \pm 1.3 (0.8)	14.1 \pm 1.9 ^a (1.2)	7.8 \pm 1.6 ^a (1)
\geq 50	1.1 \pm 0.3 (0.2)	1.4 \pm 0.4 (0.3)	0.8 \pm 0.5 (0.3)	6.8 \pm 0.8 (0.5)	8.3 \pm 1.4 ^b (0.8)	5.8 \pm 0.9 ^b (0.6)	6 \pm 0.7 (0.4)	8.2 \pm 1 ^a (0.6)	3.2 \pm 0.8 ^a (0.5)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 4b (con't). Mean snag densities per hectare \pm 90% confidence interval (SE) for Birds and Burns study sites located in Montana, Oregon, and Washington states. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per hectare \pm 90% confidence interval (SE)									
	Montana			Oregon			Washington		
Snag size class (cm)	Combined (n = 124)	Nest (n = 48)	Random (n = 76)	Combined (n = 175)	Nest (n = 95)	Random (n = 80)	Combined (n = 224)	Nest (n = 104)	Random (n = 120)
0 to < 2.5	178 \pm 42.2 (25.4)	263 \pm 89.5 ^b (53.3)	124 \pm 37.5 ^b (22.5)	51.4 \pm 13.8 (8.3)	34.3 \pm 12 ^b (7.2)	71.6 \pm 26.4 ^b (15.9)	22.5 \pm 4.9 (2.9)	18.6 \pm 7.1 (4.3)	10.5 \pm 2.7 (1.6)
2.5 to < 5	100 \pm 19.3 (11.7)	131 \pm 42 (25.1)	79.8 \pm 16.9 (10.1)	34.6 \pm 9.8 (5.9)	24.9 \pm 8.4 (5)	46.2 \pm 19.1 (11.4)	38.6 \pm 9.3 (5.6)	27.6 \pm 12.9 (7.7)	19.4 \pm 5.4 (3.3)
5 to < 8	57.6 \pm 10.4 (6.3)	73.9 \pm 22.3 (13.3)	47.2 \pm 9.3 (5.6)	24.6 \pm 5.8 (3.5)	22.4 \pm 7.8 (4.7)	27.2 \pm 8.7 (5.2)	26.1 \pm 7.1 (4.3)	25.4 \pm 12.3 (7.4)	10.8 \pm 3.2 (1.9)
8 to < 13	43.4 \pm 7.4 (4.5)	43.7 \pm 13 (7.7)	43.2 \pm 9.2 (5.5)	17.6 \pm 3.7 (2.2)	15.8 \pm 4.5 (2.7)	19.7 \pm 6.1 (3.7)	17.9 \pm 4.9 (3)	18.9 \pm 9.2 (5.6)	6.9 \pm 1.9 (1.1)
13 to < 15	9.3 \pm 2.2 (1.3)	6.8 \pm 3.7 (2.2)	10.9 \pm 2.8 (1.7)	5.6 \pm 1.7 (1)	6.7 \pm 2.7 (1.6)	4.4 \pm 2 (1.2)	4.5 \pm 2.3 (1.4)	6.6 \pm 4.6 (2.8)	1.1 \pm 0.6 (0.4)
15 to < 23	17.1 \pm 3.5 (2.1)	15.6 \pm 6.1 (3.6)	18.1 \pm 4.3 (2.6)	11 \pm 2.3 (1.4)	10.9 \pm 2.9 (1.8)	11.1 \pm 3.8 (2.3)	9 \pm 3.4 (2.1)	9.9 \pm 4.7 (2.8)	3.4 \pm 2 (1.2)
\geq 23	10.2 \pm 1.4 (0.8)	12.5 \pm 2.7 ^b (1.6)	8.7 \pm 1.5 ^b (0.9)	10.9 \pm 2 (1.2)	13.5 \pm 2.6 ^b (1.6)	7.9 \pm 3 ^b (1.8)	8.3 \pm 1.2 (0.7)	10.1 \pm 2 ^b (1.2)	2.7 \pm 0.5 ^b (0.3)
\geq 50	0.7 \pm 0.2 (0.1)	0.5 \pm 0.3 (0.2)	0.8 \pm 0.3 (0.2)	2.2 \pm 0.5 (0.3)	2.5 \pm 0.8 (0.5)	1.8 \pm 0.6 (0.4)	1.9 \pm 0.4 (0.2)	2.6 \pm 0.6 ^a (0.4)	0.5 \pm 0.2 ^a (0.1)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 5. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size for the three Birds and Burns study sites located in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied. Data collection on natural and cut stumps began in 2003.

Stumps per acre \pm 90% confidence interval (SE)									
Arizona									
Apache-Sitgreaves			Coconino			Kaibab			
Stump category	Combined (n = 77)	Nest (n = 19)	Random (n = 58)	Combined (n = 101)	Nest (n = 21)	Random (n = 80)	Combined (n = 132)	Nest (n = 42)	Random (n = 90)
All stumps	27.9 \pm 4.4 (2.7)	25 \pm 9.1 (5.2)	28.8 \pm 5.2 (3.1)	24.7 \pm 3 (1.8)	25.5 \pm 6.2 (3.6)	24.5 \pm 3.5 (2.1)	36.8 \pm 6.3 (3.8)	55.6 \pm 11 ^a (6.5)	28.1 \pm 7.3 ^a (4.4)
Natural stumps	0	0	0	0	0	0	0	0	0
Cut stumps	27.9 \pm 4.4 (2.7)	25 \pm 9.1 (5.2)	28.8 \pm 5.2 (3.1)	24.7 \pm 3 (1.8)	25.5 \pm 6.2 (3.6)	24.5 \pm 3.5 (2.1)	36.8 \pm 6.3 (3.8)	55.6 \pm 11 ^a (6.5)	28.1 \pm 7.3 ^a (4.4)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 5 (con't). Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study sites located in New Mexico, Colorado, and Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied. Data collection on natural and cut stumps began in 2003.

Stump category	Stumps per acre \pm 90% confidence interval (SE)								
	New Mexico			Colorado			Idaho		
	Combined (n = 100)	Nest (n = 50)	Random (n = 50)	Combined	Nest	Random	Combined	Nest	Random
All stumps	25 \pm 4.8 (2.9)	27.9 \pm 7 (4.2)	22 \pm 6.8 (4)	6.2 \pm 1.3 (0.8) [154]	8.5 \pm 2.5 ^a (1.5) [60]	4.8 \pm 1.3 ^a (0.8) [94]	3.2 \pm 0.9 (0.5) [141]	3.9 \pm 1.1 (0.6) [82]	2.1 \pm 1.5 (0.9) [59]
Natural stumps	0	0	0	8.5 \pm 1.9 (1.1) [94]	9.2 \pm 3.1 (1.8) [47]	7.7 \pm 2.3 (1.3) [47]	4.4 \pm 1.4 (0.9) [51]	4.4 \pm 1.4 (0.9) [51]	0
Cut stumps	25 \pm 4.8 (2.9)	27.9 \pm 7 (4.2)	22 \pm 6.8 (4)	0.2 \pm 0.3 (0.2) [94]	0.2 \pm 0.4 (0.2) [47]	0.2 \pm 0.4 (0.2) [47]	0.4 \pm 0.7 (0.4) [51]	0.4 \pm 0.7 (0.4) [51]	0

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 5 (con't). Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study sites located in Montana, Oregon, and Washington. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied. Data collection on natural and cut stumps began in 2003.

Stump category	Stumps per acre \pm 90% confidence interval (SE)								
	Montana			Oregon			Washington		
	Combined	Nest	Random	Combined	Nest	Random	Combined	Nest	Random
All stumps	32.8 \pm 5.9 (3.6) [124]	18.1 \pm 6.9 (4.1) [48]	42 \pm 8.3 (5) [76]	25.2 \pm 3.4 (2) [175]	23.1 \pm 4.8 (2.9) [95]	27.6 \pm 4.7 (2.8) [80]	16.3 \pm 2.1 (1.3) [224]	10.4 \pm 2.2 ^a (1.3) [104]	21.5 \pm 3.2 ^a (1.9) [120]
Natural stumps	9.9 \pm 2.5 (1.5) [84]	6.5 \pm 3.1 ^b (1.8) [48]	14.3 \pm 4 ^b (2.4) [36]	5.5 \pm 2 (1.2) [97]	6.5 \pm 3.7 (2.2) [48]	4.5 \pm 1.7 (1) [49]	4.6 \pm 1 (0.6) [162]	4.7 \pm 1.8 (1.1) [54]	4.5 \pm 1.2 (0.7) [108]
Cut stumps	22.8 \pm 7.5 (4.5) [84]	11.6 \pm 6.5 ^a (3.9) [48]	37.7 \pm 14.5 ^a (8.6) [36]	27.1 \pm 5 (3) [97]	24.2 \pm 8 (4.8) [48]	30 \pm 6.2 (3.7) [49]	12.7 \pm 2.4 (1.5) [162]	5.1 \pm 2.5 ^a (1.5) [54]	16.5 \pm 3.3 ^a (2) [108]

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 6a. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for the three Birds and Burns study sites located in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied. Data on natural and cut stumps began in 2003.

Trees per acre \pm 90% confidence interval (SE)									
Arizona									
	Apache-Sitgreaves			Coconino			Kaibab		
Tree size class (in)	Combined (n = 77)	Nest (n = 19)	Random (n = 58)	Combined (n = 101)	Nest (n = 21)	Random (n = 80)	Combined (n = 132)	Nest (n = 42)	Random (n = 90)
0 to < 1	118 \pm 21.2 (12.7)	92.2 \pm 23 (13.3)	127 \pm 27.1 (16.2)	612 \pm 103 (61.8)	379 \pm 154 ^b (89.1)	673 \pm 122 ^b (73.2)	24.4 \pm 6.9 (4.2)	20.1 \pm 18.6 (11.1)	26.4 \pm 5.6 (3.4)
1 to < 2	106 \pm 17.3 (10.4)	86.6 \pm 24.4 (14.1)	113 \pm 21.7 (13)	31.9 \pm 7.9 (4.7)	30.1 \pm 27.1 (15.7)	32.3 \pm 7.3 (4.4)	3.9 \pm 1.3 (0.8)	5.7 \pm 3.5 (2.1)	3 \pm 0.9 (0.6)
2 to < 3	64.9 \pm 9 (5.4)	53.8 \pm 17.1 (9.8)	68.5 \pm 10.7 (6.4)	27.6 \pm 4.9 (3)	16.6 \pm 8.1 ^b (4.7)	30.4 \pm 5.8 ^b (3.5)	4.7 \pm 1.5 (0.9)	6.6 \pm 3 (1.8)	3.8 \pm 1.6 (1)
3 to < 5	54.3 \pm 8.4 (5)	40.5 \pm 16.4 (9.5)	58.8 \pm 9.7 (5.8)	51.7 \pm 8.2 (4.9)	30.6 \pm 11.7 ^a (6.8)	57.3 \pm 9.7 ^a (5.8)	8.6 \pm 2.1 (1.2)	9.5 \pm 3.8 (2.3)	8.2 \pm 2.5 (1.5)
5 to < 6	23.5 \pm 4.3 (2.6)	18.6 \pm 11.1 (6.4)	25 \pm 4.5 (2.7)	28.9 \pm 4.1 (2.5)	19 \pm 6.5 ^b (3.7)	31.5 \pm 4.8 ^b (2.9)	4.9 \pm 1.2 (0.7)	8 \pm 2.4 ^a (1.4)	3.5 \pm 1.2 ^a (0.7)
6 to < 9	108 \pm 10.9 (6.5)	87.6 \pm 16.3 ^b (9.4)	115 \pm 13.3 ^b (7.9)	67.5 \pm 6.3 (3.8)	59.8 \pm 12.5 (7.3)	69.6 \pm 7.3 (4.4)	19.9 \pm 3.9 (2.3)	31.9 \pm 9.6 ^a (5.7)	14.3 \pm 3.2 ^a (1.9)
\geq 9	61.9 \pm 4.5 (2.7)	69.9 \pm 12 (6.9)	59.2 \pm 4.6 (2.8)	58.2 \pm 4 (2.4)	52.7 \pm 8.4 (4.9)	59.6 \pm 4.6 (2.7)	55.2 \pm 5.5 (3.3)	64.6 \pm 10.5 (6.2)	50.8 \pm 6.4 (3.9)
\geq 20	4.1 \pm 0.6 (0.4)	5.4 \pm 1.4 (0.8)	3.7 \pm 0.7 (0.4)	3.7 \pm 0.5 (0.3)	3.6 \pm 1.3 (0.7)	3.8 \pm 0.6 (0.4)	6.8 \pm 0.9 (0.5)	8 \pm 1.6 (1)	6.2 \pm 1.1 (0.6)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 6a (con't). Mean tree densities per acre \pm 90% confidence interval (SE) for Birds and Burns study sites located in New Mexico, Colorado, and Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)									
Tree size class (in)	New Mexico			Colorado			Idaho		
	Combined (n = 100)	Nest (n = 50)	Random (n = 50)	Combined (n = 154)	Nest (n = 60)	Random (n = 94)	Combined (n = 248)	Nest (n = 138)	Random (n = 110)
0 to < 1	120 \pm 24.7 (14.9)	113 \pm 31 (18.5)	126 \pm 39.3 (23.5)	123 \pm 35.2 (21.3)	225 \pm 73.6 ^a (44.1)	58.6 \pm 29.5 ^a (17.8)	15 \pm 4 (2.4)	17 \pm 5.5 (3.3)	12.5 \pm 5.6 (3.4)
1 to < 2	73.5 \pm 13.5 (8.1)	54.5 \pm 11.9 (7.1)	92.5 \pm 23.9 (14.2)	27.5 \pm 6.4 (3.9)	38.5 \pm 12.9 ^b (7.7)	20.6 \pm 6.4 ^b (3.8)	12.9 \pm 3.1 (1.9)	12.8 \pm 4.1 (2.5)	12.9 \pm 4.7 (2.8)
2 to < 3	58.2 \pm 8.7 (5.2)	53.5 \pm 8.9 (5.3)	62.9 \pm 15.1 (9)	16.4 \pm 3 (1.8)	22.9 \pm 5.4 ^a (3.2)	12.2 \pm 3.3 ^a (2)	11.2 \pm 2.6 (1.5)	11.2 \pm 3.6 (2.2)	11 \pm 3.7 (2.2)
3 to < 5	67.9 \pm 9.4 (5.6)	63.9 \pm 10.4 (6.2)	71.9 \pm 15.9 (9.5)	25.1 \pm 3.8 (2.3)	29.8 \pm 6.7 (4)	22.1 \pm 4.5 (2.7)	11.7 \pm 2.3 (1.4)	10.9 \pm 3.1 (1.8)	12.7 \pm 3.5 (2.1)
5 to < 6	21.1 \pm 3.2 (1.9)	21.8 \pm 4.5 (2.7)	20.5 \pm 4.7 (2.8)	9.8 \pm 1.5 (0.9)	12.1 \pm 2.4 ^b (1.4)	8.3 \pm 2 ^b (1.2)	3.7 \pm 0.8 (0.5)	3.3 \pm 1 (0.6)	4.1 \pm 1.3 (0.8)
6 to < 9	52.4 \pm 5.2 (3.1)	51.8 \pm 6.7 (4)	53 \pm 8.1 (4.8)	31.4 \pm 4.2 (2.6)	33.2 \pm 6.5 (3.9)	30.3 \pm 5.6 (3.4)	9 \pm 1.9 (1.1)	7.4 \pm 2.2 (1.3)	11 \pm 3.2 (1.9)
\geq 9	57.1 \pm 3.5 (2.1)	58.3 \pm 4.1 (2.4)	55.8 \pm 5.9 (3.5)	67.2 \pm 3.6 (2.2)	74.8 \pm 5.6 ^a (3.3)	62.4 \pm 4.6 ^a (2.8)	30.6 \pm 2.2 (1.3)	27.7 \pm 2.7 ^b (1.6)	34.2 \pm 3.5 ^b (2.1)
\geq 20	6.9 \pm 0.9 (0.6)	7.6 \pm 1.3 (0.8)	6.3 \pm 1.4 (0.8)	14.8 \pm 1.3 (0.8)	15.8 \pm 2.1 (1.2)	14.1 \pm 1.7 (1)	13.8 \pm 1 (0.6)	13.6 \pm 1.2 (0.8)	14 \pm 1.6 (1.2)

^a Mean densities differ between nest and random values P < 0.01.

^b Mean densities differ between nest and random values P < 0.05.

Table 6a (con't). Mean tree densities per acre \pm 90% confidence interval (SE) for Birds and Burns study sites located in Montana, Oregon, and Washington states. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Tree size class (in)	Trees per acre \pm 90% confidence interval (SE)								
	Montana			Oregon			Washington		
	Combined (n = 124)	Nest (n = 48)	Random (n = 76)	Combined (n = 175)	Nest (n = 95)	Random (n = 80)	Combined (n = 224)	Nest (n = 104)	Random (n = 120)
0 to < 1	475 \pm 141 (85)	1137 \pm 308 ^a (183)	57.1 \pm 14.4 ^a (8.7)	175 \pm 57 (34.5)	149 \pm 49.5 (29.8)	207 \pm 111 (67)	49.3 \pm 8 (4.9)	33.6 \pm 9.1 ^a (5.5)	62.9 \pm 12.5 ^a (7.6)
1 to < 2	49.5 \pm 8.8 (5.3)	63.3 \pm 17.4 (10.4)	40.8 \pm 9.1 (5.5)	124 \pm 26.1 (15.8)	100 \pm 25.9 (15.6)	152 \pm 48.2 (28.9)	56.7 \pm 7.8 (4.7)	41.5 \pm 9.6 ^a (5.8)	69.8 \pm 11.8 ^a (7.1)
2 to < 3	45.1 \pm 8.9 (5.3)	55.7 \pm 19.4 (11.6)	38.4 \pm 7.8 (4.7)	105 \pm 16.4 (9.9)	92 \pm 22.7 (13.7)	121 \pm 23.9 (14.4)	63.4 \pm 8.8 (5.4)	48.3 \pm 11.1 ^a (6.7)	76.5 \pm 13.2 ^a (8)
3 to < 5	47.7 \pm 5.7 (3.5)	40.5 \pm 8.1 (4.8)	52.3 \pm 7.8 (4.7)	90 \pm 11 (6.7)	75.5 \pm 15.9 ^b (9.6)	108 \pm 14.6 ^b (8.8)	70.7 \pm 9.5 (5.7)	51.2 \pm 10.3 ^a (6.2)	87.5 \pm 14.9 ^a (9)
5 to < 6	19.7 \pm 2.6 (1.6)	16.4 \pm 4.1 (2.4)	21.8 \pm 3.4 (2)	25.2 \pm 3.5 (2.1)	22.6 \pm 5.5 (3.3)	28.3 \pm 4.1 (2.5)	21.9 \pm 3.2 (1.9)	16.4 \pm 3.4 ^a (2.1)	26.6 \pm 5.1 ^a (3.1)
6 to < 9	50.9 \pm 5.5 (3.3)	31.2 \pm 5.6 ^a (3.4)	63.3 \pm 7.4 ^a (4.4)	59.7 \pm 10.7 (6.5)	60 \pm 18.6 (11.2)	60 \pm 8 (4.8)	34.7 \pm 3.8 (2.3)	24.9 \pm 4.1 ^a (2.5)	43.2 \pm 5.8 ^a (3.5)
\geq 9	76.2 \pm 5.2 (3.1)	53.6 \pm 6.6 ^a (3.9)	90.4 \pm 6.1 ^a (3.7)	49.9 \pm 3 (1.8)	49.2 \pm 4.6 (2.7)	50.7 \pm 3.8 (2.3)	40 \pm 2.3 (1.4)	32.6 \pm 3 ^a (1.8)	46.5 \pm 3.2 ^a (1.9)
\geq 20	6.5 \pm 0.9 (0.5)	6.5 \pm 1.6 (0.9)	6.4 \pm 1 (0.6)	5.3 \pm 0.8 (0.5)	5.1 \pm 1 (0.6)	5.4 \pm 1.4 (0.8)	5.6 \pm 0.6 (0.4)	6.4 \pm 0.9 ^b (0.5)	4.8 \pm 0.7 ^b (0.4)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 6b. Mean tree densities per hectare \pm 90% confidence interval (SE) and sample size for the three Birds and Burns study sites located in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per hectare \pm 90% confidence interval (SE)									
Arizona									
	Apache-Sitgreaves			Coconino			Kaibab		
Tree size class (cm)	Combined (n = 77)	Nest (n = 19)	Random (n = 58)	Combined (n = 101)	Nest (n = 21)	Random (n = 80)	Combined (n = 132)	Nest (n = 42)	Random (n = 90)
0 to < 2.5	293 \pm 52.3 (31.4)	228 \pm 56.8 (32.7)	314 \pm 67 (40.1)	1512 \pm 254 (153)	937 \pm 380 ^b (220)	1663 \pm 301 ^b (181)	60.3 \pm 17.1 (10.3)	49.7 \pm 45.9 (27.3)	65.3 \pm 13.8 (8.3)
2.5 to < 5	263 \pm 42.8 (25.7)	214 \pm 60.2 (34.7)	279 \pm 53.6 (32.1)	78.7 \pm 19.4 (11.7)	74.4 \pm 66.9 (38.8)	79.9 \pm 18.1 (10.9)	9.6 \pm 3.1 (1.9)	14 \pm 8.6 (5.1)	7.5 \pm 2.3 (1.4)
5 to < 8	160 \pm 22.2 (13.3)	133 \pm 42.1 (24.3)	169 \pm 26.3 (15.7)	68.1 \pm 12.2 (7.3)	41.1 \pm 20 ^b (11.6)	75.2 \pm 14.3 ^b (8.6)	11.6 \pm 3.6 (2.2)	16.4 \pm 7.4 (4.4)	9.3 \pm 4 (2.4)
8 to < 13	134 \pm 20.6 (12.4)	100 \pm 40.5 (23.4)	145 \pm 24 (14.4)	128 \pm 20.2 (12.2)	75.6 \pm 28.8 ^a (16.7)	141 \pm 23.9 ^a (14.4)	21.2 \pm 5.1 (3.1)	23.5 \pm 9.4 (5.6)	20.2 \pm 6.2 (3.7)
13 to < 15	58 \pm 10.6 (6.4)	46.1 \pm 27.4 (15.8)	61.9 \pm 11.2 (6.7)	71.4 \pm 10.1 (6.1)	47 \pm 15.9 ^b (9.2)	77.8 \pm 11.9 ^b (7.1)	12.1 \pm 2.9 (1.7)	19.6 \pm 6 ^a (3.5)	8.6 \pm 3 ^a (1.8)
15 to < 23	268 \pm 26.8 (16.1)	216 \pm 40.2 ^b (23.2)	285 \pm 32.7 ^b (19.6)	167 \pm 15.6 (9.4)	148 \pm 30.9 (17.9)	172 \pm 18 (10.8)	49.2 \pm 9.6 (5.8)	78.9 \pm 23.6 ^a (14)	35.3 \pm 8 ^a (4.8)
\geq 23	153 \pm 11.2 (6.7)	173 \pm 29.5 (17)	146 \pm 11.5 (6.9)	144 \pm 9.8 (5.9)	130 \pm 20.7 (12)	147 \pm 11.3 (6.8)	136 \pm 13.6 (8.2)	160 \pm 25.9 (15.4)	125 \pm 15.9 (9.5)
\geq 50	10.2 \pm 1.5 (0.9)	13.4 \pm 3.5 (2)	9.1 \pm 1.6 (1)	9.2 \pm 1.4 (0.8)	9 \pm 3.1 (1.8)	9.3 \pm 1.5 (0.9)	16.8 \pm 2.2 (1.3)	19.9 \pm 4 (2.4)	15.4 \pm 2.6 (1.6)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 6b (con't). Mean tree densities per hectare \pm 90% confidence interval (SE) for Birds and Burns study sites located in New Mexico, Colorado, and Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per hectare \pm 90% confidence interval (SE)									
Tree size class (cm)	New Mexico			Colorado			Idaho		
	Combined (n = 100)	Nest (n = 50)	Random (n = 50)	Combined (n = 154)	Nest (n = 60)	Random (n = 94)	Combined (n = 248)	Nest (n = 138)	Random (n = 110)
0 to < 2.5	295 \pm 61 (36.7)	280 \pm 76.6 (45.7)	311 \pm 97 (57.9)	305 \pm 86.9 (52.5)	556 \pm 182 ^a (109)	145 \pm 73 ^a (43.9)	37.1 \pm 9.8 (5.9)	42.1 \pm 13.7 (8.3)	30.8 \pm 13.9 (8.4)
2.5 to < 5	182 \pm 33.4 (20.1)	135 \pm 29.3 (17.5)	229 \pm 59 (35.2)	68 \pm 15.8 ^b (9.5)	95 \pm 31.9 ^b (19.1)	50.8 \pm 15.8 (9.5)	31.8 \pm 7.6 (4.6)	31.6 \pm 10.2 (6.1)	31.9 \pm 11.6 (7)
5 to < 8	144 \pm 21.5 (12.9)	132 \pm 22 (13.1)	155 \pm 37.4 (22.3)	40.4 \pm 7.3 (4.4)	56.5 \pm 13.3 ^a (7.9)	30.2 \pm 8.1 ^a (4.9)	27.6 \pm 6.3 (3.8)	27.8 \pm 8.8 (5.3)	27.3 \pm 9.1 (5.5)
8 to < 13	168 \pm 23.1 (13.9)	158 \pm 25.6 (15.2)	178 \pm 39.3 (23.4)	61.9 \pm 9.3 (5.6)	73.5 \pm 16.5 (9.9)	54.5 \pm 11 (6.6)	28.8 \pm 5.6 (3.4)	26.8 \pm 7.5 (4.6)	31.4 \pm 8.6 (5.2)
13 to < 15	52.1 \pm 7.9 (4.7)	53.8 \pm 11 (6.6)	50.5 \pm 11.5 (6.9)	24.1 \pm 3.8 (2.3)	29.8 \pm 6 ^b (3.6)	20.5 \pm 4.9 ^b (3)	9.1 \pm 2 (1.2)	8.2 \pm 2.5 (1.5)	10.2 \pm 3.3 (2)
15 to < 23	130 \pm 12.8 (7.7)	128 \pm 16.6 (9.9)	131 \pm 20 (11.9)	77.7 \pm 10.4 (6.3)	82.1 \pm 16.1 (9.6)	74.9 \pm 13.8 (8.3)	22.3 \pm 4.6 (2.8)	18.3 \pm 5.4 (3.3)	27.3 \pm 7.8 (4.7)
\geq 23	141 \pm 8.7 (5.3)	144 \pm 10.1 (6)	138 \pm 14.5 (8.7)	166 \pm 8.9 (5.4)	185 \pm 13.7 ^a (8.2)	154 \pm 11.3 ^a (6.8)	75.5 \pm 5.4 (3.3)	68.4 \pm 6.7 ^b (4)	84.4 \pm 8.7 ^b (5.2)
\geq 50	17.1 \pm 2.3 (1.4)	18.7 \pm 3.2 (1.9)	15.5 \pm 3.4 (2.1)	36.5 \pm 3.2 (1.9)	39 \pm 5.1 (3)	34.8 \pm 4.2 (2.5)	34.1 \pm 2.4 (1.5)	33.6 \pm 3.1 (1.9)	34.6 \pm 4 (2.4)

^a Mean densities differ between nest and random values P < 0.01.

^b Mean densities differ between nest and random values P < 0.05.

Table 6b (con't). Mean tree densities per hectare \pm 90% confidence interval (SE) for Birds and Burns study sites located in Montana, Oregon, and Washington states. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Tree size class (cm)	Trees per hectare \pm 90% confidence interval (SE)								
	Montana			Oregon			Washington		
	Combined (n = 124)	Nest (n = 48)	Random (n = 76)	Combined (n = 175)	Nest (n = 95)	Random (n = 80)	Combined (n = 224)	Nest (n = 104)	Random (n = 120)
0 to < 2.5	1174 \pm 349 (210)	2809 \pm 760 ^a (453)	141 \pm 35.6 ^a (21.4)	433 \pm 141 (85.2)	368 \pm 122 (73.6)	511 \pm 274 (165)	122 \pm 19.9 (12)	83 \pm 22.5 ^a (13.5)	155 \pm 30.9 ^a (18.7)
2.5 to < 5	122 \pm 21.7 (13.1)	156 \pm 43 (25.6)	101 \pm 22.6 (13.5)	306 \pm 64.4 (39)	248 \pm 64 (38.5)	375 \pm 119 (71.5)	140 \pm 19.4 (11.7)	103 \pm 23.6 ^a (14.2)	173 \pm 29.2 ^a (17.6)
5 to < 8	111 \pm 21.9 (13.2)	138 \pm 48 (28.6)	94.9 \pm 19.2 (11.6)	260 \pm 40.6 (24.5)	227 \pm 56 (33.7)	300 \pm 59.1 (35.5)	157 \pm 21.8 (13.2)	119 \pm 27.3 ^a (16.5)	189 \pm 32.7 ^a (19.7)
8 to < 13	118 \pm 14.1 (8.5)	100 \pm 20 (11.9)	129 \pm 19.3 (11.6)	223 \pm 27.2 (16.5)	186 \pm 39.4 ^b (23.7)	266 \pm 36 ^b (21.6)	175 \pm 23.4 (14.2)	127 \pm 25.5 ^a (15.4)	216 \pm 36.9 ^a (22.3)
13 to < 15	48.7 \pm 6.4 (3.9)	40.6 \pm 10 (6)	53.8 \pm 8.3 (5)	62.3 \pm 8.7 (5.2)	55.8 \pm 13.5 (8.1)	70 \pm 10.2 (6.1)	54 \pm 7.9 (4.8)	40.5 \pm 8.5 ^a (5.1)	65.7 \pm 12.7 ^a (7.7)
15 to < 23	126 \pm 13.6 (8.2)	77.1 \pm 13.9 ^a (8.3)	156 \pm 18.3 ^a (11)	148 \pm 26.4 (16)	147 \pm 46.1 (27.7)	148 \pm 19.7 (11.8)	85.7 \pm 9.3 (5.6)	61.4 \pm 10.1 ^a (6.1)	107 \pm 14.3 ^a (8.6)
\geq 23	188 \pm 12.9 (7.8)	132 \pm 16.3 ^a (9.7)	223 \pm 15 ^a (9)	123 \pm 7.4 (4.5)	122 \pm 11.3 (6.8)	125 \pm 9.3 (5.6)	98.9 \pm 5.7 (3.5)	80.6 \pm 7.3 ^a (4.4)	115 \pm 8 ^a (4.8)
\geq 50	15.9 \pm 2.1 (1.3)	16 \pm 3.9 (2.3)	15.9 \pm 2.5 (1.5)	13 \pm 2.1 (1.3)	12.6 \pm 2.6 (1.6)	13.4 \pm 3.5 (2.1)	13.7 \pm 1.4 (0.9)	15.8 \pm 2.2 ^b (1.3)	11.9 \pm 1.8 ^b (1.1)

^a Mean densities differ between nest and random values $P < 0.01$.

^b Mean densities differ between nest and random values $P < 0.05$.

Table 7. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located on the Apache-Sitgreaves National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% Confidence interval (SE)										
Snag size class (in)	LK			Combined (n = 19)	PM			Combined (n = 22)	PT	
	Combined (n = 36)	Nest (n = 7)	Random (n = 29)		Nest (n = 10)	Random (n = 9)	Nest (n = 2)		Random (n = 20)	
0 to < 1	20.1 \pm 7.7 (4.5)	8 \pm 7.1 (3.6)	23 \pm 9.2 (5.4)	2.4 \pm 1.9 (1.1)	2 \pm 1.5 (0.8)	2.8 \pm 4.2 (2.2)	18.6 \pm 6 (3.5)	20.3 \pm 95.7 (15.2)	18.5 \pm 6.4 (3.7)	
1 to < 2	16.4 \pm 5.3 (3.2)	5.1 \pm 4.3 (2.2)	19.2 \pm 6.3 (3.7)	5.6 \pm 3.2 (1.9)	5.1 \pm 4.6 (2.5)	6.2 \pm 5.4 (2.9)	27.4 \pm 10 (5.8)	55.7 \pm 288 (45.6)	24.5 \pm 8.8 (5.1)	
2 to < 3	15.5 \pm 4.4 (2.6)	9.4 \pm 5.4 (2.8)	16.9 \pm 5.3 (3.1)	4.3 \pm 2.4 (1.4)	1.5 \pm 1.4 (0.8)	7.3 \pm 4.7 (2.5)	26 \pm 7.5 (4.4)	35.5 \pm 31.9 (5.1)	25.1 \pm 8.2 (4.7)	
3 to < 5	14.1 \pm 5.2 (3.1)	6.5 \pm 5.5 (2.9)	15.9 \pm 6.3 (3.7)	5.1 \pm 2.6 (1.5)	3.1 \pm 2.8 (1.5)	7.3 \pm 4.7 (2.5)	18.6 \pm 4.8 (2.8)	17.7 \pm 15.8 (2.5)	18.7 \pm 5.3 (3.1)	
5 to < 6	3.9 \pm 1.5 (0.9)	2.2 \pm 2.9 (1.5)	4.4 \pm 1.7 (1)	1.9 \pm 1.4 (0.8)	1.5 \pm 2 (1.1)	2.3 \pm 2.3 (1.2)	4.8 \pm 2.7 (1.6)	2.6 \pm 16.1 (2.6)	5.1 \pm 3 (1.7)	
6 to < 9	10.7 \pm 3 (1.8)	8 \pm 8.3 4.3	11.3 \pm 3.4 (2)	3.5 \pm 2.9 (1.6)	1.5 \pm 1.4 (0.8)	5.6 \pm 6.2 (3.3)	13.3 \pm 4.9 (2.9)	10.1	13.7 \pm 5.5 (3.2)	
≥ 9	5.4 \pm 1.1 ^a (0.7)	6.9 \pm 3.1 (1.6)	5.1 \pm 1.2 (0.7)	2.8 \pm 0.9 ^a (0.5)	2.5 \pm 0.7 (0.4)	3 \pm 1.9 (1)	2.9 \pm 0.5 ^a (0.3)	3.6 \pm 9.8 (1.6)	2.8 \pm 0.5 (0.3)	
≥ 20	0.4 \pm 0.2 (0.1)	0.6 \pm 0.6 (0.3)	0.3 \pm 0.2 0.1	0.7 \pm 0.3 (0.2)	0.9 \pm 0.5 (0.3)	0.6 \pm 0.5 (0.3)	0.5 \pm 0.2 (0.1)	0.5 \pm 3.2 (0.5)	0.5 \pm 0.3 (0.2)	

^a Mean densities differ among units P < 0.05.

Table 8. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns study units located on the Apache-Sitgreaves National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stumps per acre \pm 90% confidence interval (SE)									
Apache-Sitgreaves									
Stump category	LK			PM			PT		
	Combined (n = 36)	Nest (n = 7)	Random (n = 29)	Combined (n = 19)	Nest (n = 10)	Random (n = 9)	Combined (n = 22)	Nest (n = 2)	Random (n = 20)
All stumps ^a	39.5 \pm 7.5* (4.4)	24.6 \pm 21.7 (11.2)	43.1 \pm 7.9 (4.6)	25.3 \pm 6.4* (3.7)	29.3 \pm 10.7 (5.8)	20.8 \pm 7.7 (4.2)	11 \pm 2.5* (1.5)	5.1 \pm 31.9 (5.1)	11.6 \pm 2.6 (1.5)
Natural stumps ^b	0	0	0	0	0	0	0	0	0
Cut stumps ^b	39.5 \pm 7.5 (4.4)	24.6 \pm 21.7 (11.2)	43.1 \pm 7.9 (4.6)	25.3 \pm 6.4 (3.7)	29.3 \pm 10.7 (5.8)	20.8 \pm 7.7 (4.2)	11 \pm 2.5 (1.5)	5.1 \pm 31.9 (5.1)	11.6 \pm 2.6 (1.5)

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ among units $P < 0.05$.

Table 9. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located on the Apache-Sitgreaves National Forests in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per hectare \pm 90% confidence interval (SE)									
Tree size class (in)	LK			PM			PT		
	Combined (n = 36)	Nest (n = 7)	Random (n = 29)	Combined (n = 19)	Nest (n = 10)	Random (n = 9)	Combined (n = 22)	Nest (n = 2)	Random (n = 20)
0 to < 1	159 \pm 39 (23.1)	62.2 \pm 14.2 (7.3)	183 \pm 45.8 (26.9)	118 \pm 24.9 (14.3)	128 \pm 32.2 (17.6)	107 \pm 44.2 (23.7)	51.8 \pm 17.1 (10)	20.3 \pm 128 (20.3)	54.9 \pm 18.3 (10.6)
1 to < 2	149 \pm 28.3 (16.7)	103 \pm 48.5 (24.9)	160 \pm 33.2 (19.5)	97 \pm 25 (14.4)	91.1 \pm 31.7 (17.3)	103.5 \pm 45.8 (24.7)	44.6 \pm 19.4 (11.3)	7.6 \pm 48 (7.6)	48.3 \pm 20.9 (12.1)
2 to < 3	73.4 \pm 12.1 (7.2)	62.2 \pm 19 (9.8)	76.1 \pm 14.6 (8.6)	75.6 \pm 21.2 (12.2)	57.2 \pm 30 (16.4)	96.2 \pm 30.9 (16.6)	41.6 \pm 15.5 (9)	7.6 \pm 15.8 (2.5)	45 \pm 16.6 (9.6)
3 to < 5	52.3 \pm 11.4 (6.7)	49.9 \pm 27.7 (14.2)	52.9 \pm 13.1 (7.7)	67.7 \pm 24 (13.8)	39 \pm 27.1 (14.8)	99.5 \pm 36.9 (19.9)	46 \pm 11.3 (6.6)	15.2 \pm 96 (15.2)	49.1 \pm 11.7 (6.8)
5 to < 6	17.9 \pm 5.2 (3.1)	9.4 \pm 7.3 (3.7)	19.9 \pm 6.2 (3.7)	30.9 \pm 12 (6.9)	28.3 \pm 20.6 (11.2)	33.7 \pm 15.4 (8.3)	26.2 \pm 7.2 (4.2)	2.6 \pm 16.1 (2.6)	28.6 \pm 7.3 (4.2)
6 to < 9	85.2 \pm 13.7 (8.1)	53.5 \pm 12.7 6.5	92.8 \pm 16.1 (9.5)	109 \pm 19 (11)	102 \pm 20.8 (11.4)	118 \pm 36.9 (19.9)	146 \pm 21.8 (12.7)	137 \pm 191 (30.4)	147 \pm 23.8 (13.8)
≥ 9	50.3 \pm 5.6 ^a (3.3)	44.8 \pm 17.6 (9.1)	51.6 \pm 5.9 (3.5)	76.8 \pm 9.4 ^a (5.4)	80.8 \pm 13.6 (7.4)	72.4 \pm 15 (8.1)	67.9 \pm 8 ^a (4.6)	103 \pm 26 (4.1)	64.4 \pm 7.5 (4.3)
≥ 20	3.9 \pm 0.7 ^a (0.4)	3.5 \pm 1.7 (0.9)	4 \pm 0.8 0.5	5.7 \pm 1.7 ^a (1)	6.3 \pm 2.3 (1.3)	5.2 \pm 3 (1.6)	3 \pm 1.1 ^a (0.6)	8.1 \pm 12.6 (2)	2.5 \pm 0.9 (0.5)

^a Mean densities differ among units P < 0.05.

Table 10. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located on the Coconino National Forests in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	BU			IM		
	Combined (n = 52)	Nest (n = 12)	Random (n = 40)	Combined (n = 49)	Nest (n = 9)	Random (n = 40)
0 to < 1	77.3 \pm 16.8 ^a (10)	21.1 \pm 15.4 (8.6)	94.1 \pm 19.4 (11.5)	7.3 \pm 3.1 ^a (1.8)	3.4 \pm 6.3 (3.4)	8.2 \pm 3.6 (2.1)
1 to < 2	7.3 \pm 3.3 (2)	1.3 \pm 2.3 (1.3)	9.1 \pm 4.2 (2.5)	10.3 \pm 6.1 (3.6)	4.5 \pm 7.3 (3.9)	11.6 \pm 7.3 (4.3)
2 to < 3	4.2 \pm 2.7 (1.6)	0.4 \pm 0.8 (0.4)	5.3 \pm 3.5 (2.1)	9.8 \pm 5.3 (3.1)	2.3 \pm 3.2 (1.7)	11.5 \pm 6.4 (3.8)
3 to < 5	3.1 \pm 1.5 ^a (0.9)	0.4 \pm 0.8 (0.4)	3.9 \pm 1.8 (1.1)	10.6 \pm 4 ^a (2.4)	3.4 \pm 2.7 (1.5)	12.3 \pm 4.7 (2.8)
5 to < 6	1.3 \pm 0.7 (0.4)	0.9 \pm 1 (0.6)	1.4 \pm 0.9 (0.5)	2.6 \pm 1.5 (0.9)	0.6 \pm 1.1 (0.6)	3 \pm 1.8 (1.1)
6 to < 9	1.9 \pm 1.2 (0.7)	0.4 \pm 0.8 0.4	2.3 \pm 1.5 (0.9)	3.8 \pm 1.9 (1.1)	2.8 \pm 3.2 (1.7)	4.1 \pm 2.3 (1.4)
\geq 9	2.5 \pm 0.4 (0.3)	2.4 \pm 1.1 (0.6)	2.5 \pm 0.5 (0.3)	1.8 \pm 0.5 (0.3)	1.7 \pm 0.8 (0.4)	1.8 \pm 0.6 (0.4)
\geq 20	0.4 \pm 0.1 (0.1)	0.7 \pm 0.3 (0.2)	0.3 \pm 0.1 0.1	0.3 \pm 0.1 (0.1)	0.8 \pm 0.4 (0.2)	0.2 \pm 0.1 (0.1)

^a Mean densities differ between units P < 0.05.

Table 11. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns study units located on the Coconino National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stumps per acre \pm 90% confidence interval (SE)						
Coconino National Forest						
	BU			IM		
Stump category	Combined (n = 52)	Nest (n = 12)	Random (n = 40)	Combined (n = 49)	Nest (n = 9)	Random (n = 40)
All stumps ^a	29.6 \pm 3.8* (2.3)	30.4 \pm 9 (5)	29.4 \pm 4.4 (2.6)	19.5 \pm 4.4* (2.6)	19.1 \pm 8.4 (4.5)	19.6 \pm 5.2 (3.1)
Natural stumps ^b	0	0	0	0	0	0
Cut stumps ^b	29.6 \pm 3.8 (2.3)	30.4 \pm 9 (5)	29.4 \pm 4.4 (2.6)	19.5 \pm 4.4 (2.6)	19.1 \pm 8.4 (4.5)	19.6 \pm 5.2 (3.1)

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between units $P < 0.05$.

Table 12. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located on the Coconino National Forests in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	BU			IM		
	Combined (n = 52)	Nest (n = 12)	Random (n = 40)	Combined (n = 49)	Nest (n = 9)	Random (n = 40)
0 to < 1	970 \pm 145 ^a (86.7)	519 \pm 216 (120)	1106 \pm 164 (97.6)	232 \pm 76.8 ^a (45.8)	193 \pm 207 (111)	241 \pm 85.5 (50.8)
1 to < 2	37.3 \pm 10.2 (6.1)	18.1 \pm 11.5 (6.4)	43 \pm 12.7 (7.5)	26.1 \pm 12.2 (7.3)	46.1 \pm 67.2 (36.1)	21.6 \pm 6.8 (4.1)
2 to < 3	29.9 \pm 6.8 (4.1)	19.8 \pm 12.3 (6.9)	32.9 \pm 8.2 (4.8)	25.1 \pm 7.3 (4.3)	12.4 \pm 11.4 (6.1)	28 \pm 8.5 (5.1)
3 to < 5	43.8 \pm 6.4 (3.8)	27.8 \pm 11.6 (6.5)	48.6 \pm 7.3 (4.3)	60.1 \pm 15.4 (9.2)	34.3 \pm 25.5 (13.7)	65.9 \pm 18 (10.7)
5 to < 6	22.9 \pm 3.9 ^a (2.3)	16 \pm 7.1 (3.9)	24.9 \pm 4.6 (2.7)	35.3 \pm 7.2 ^a (4.3)	23 \pm 13.1 (7.1)	38.1 \pm 8.3 (4.9)
6 to < 9	67.3 \pm 8.5 (5.1)	54.8 \pm 18.1 10.1	71.1 \pm 9.7 (5.8)	67.8 \pm 9.6 (5.8)	66.4 \pm 19.6 (10.5)	68.1 \pm 11.3 (6.7)
\geq 9	62.5 \pm 5.7 (3.4)	54 \pm 11.7 (6.5)	65 \pm 6.6 (3.9)	53.7 \pm 5.5 (3.3)	51.1 \pm 14.2 (7.7)	54.3 \pm 6.1 (3.6)
\geq 20	4.7 \pm 0.8 ^a (0.5)	4.2 \pm 1.9 (1)	4.8 \pm 0.9 0.6	2.7 \pm 0.7 ^a (0.4)	2.9 \pm 1.9 (1)	2.7 \pm 0.7 (0.4)

^a Mean densities differ between units P < 0.05.

Table 13. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located on the Kaibab National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)									
Snag size class (in)	BE			KE			MO		
	Combined (n = 14)	Nest (n = 4)	Random (n = 10)	Combined (n = 67)	Nest (n = 27)	Random (n = 40)	Combined (n = 51)	Nest (n = 11)	Random (n = 40)
0 to < 1	0	0	0	0.6 + 0.6 (0.3)	1.3 + 1.4 (0.8)	0.1 + 0.2 (0.1)	3.1 + 1.7 (1)	0.9 + 1.7 (0.9)	3.7 + 2.1 (1.2)
1 to < 2	0	0	0	0.2 + 0.2 (0.1)	0.2 + 0.3 (0.21)	0.1 + 0.2 (0.1)	1.1 + 0.6 (0.4)	0.5 + 0.8 (0.5)	1.3 + 0.8 (0.5)
2 to < 3	0	0	0	0.1 + 0.1 (0.1)	0.2 + 0.3 (0.2)	0	0.4 + 0.3 (0.2)	0.5 + 0.8 (0.5)	0.4 + 0.4 (0.2)
3 to < 5	0	0	0	0.1 + 0.1 (0.1)	0	0.1 + 0.2 (0.1)	0.6 + 0.6 (0.4)	2.3 + 2.9 (1.6)	0.1 + 0.2 (0.1)
5 to < 6	0	0	0	0.2 + 0.2 (0.1)	0.2 + 0.3 (0.2)	0.1 + 0.2 (0.1)	0	0	0
6 to < 9	0.7 + 1.3 (0.7)	2.5 + 5.9 2.5	0	0.1 + 0.1 (0.1)	0.2 + 0.3 (0.2)	0	0.4 + 0.3 (0.2)	0.9 + 1.1 (0.6)	0.3 + 0.3 (0.2)
≥ 9	1 + 0.5 (0.3)	2 + 1 (0.4)	0.6 + 0.5 (0.3)	1.3 + 0.3 (0.2)	2 + 0.5 (0.3)	0.9 + 0.3 (0.2)	0.8 + 0.3 (0.2)	1.5 + 0.4 (0.2)	0.6 + 0.3 (0.2)
≥ 20	0.1 + 0.3 ^a (0.1)	0	0.2 \pm 0.4 0.2	0.6 + 0.2 ^a (0.1)	0.8 + 0.3 (0.2)	0.4 + 0.2 (0.1)	0.2 + 0.1 ^a (0.1)	0.7 + 0.4 (0.2)	0.1 + 0.1 (0.1)

^a Mean densities differ among units $P < 0.05$.

Table 14. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study units located on the Kaibab National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)								
	BE			KE			MO		
	Combined	Nest	Random	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	74.8 \pm 19.5 (11) [14]	67.1 \pm 30.5 (13) [4]	77.9 \pm 27.1 (14.8) [10]	44.6 \pm 8.9 (5.3) [67]	53.8 \pm 13.8 (8.1) [27]	38.5 \pm 11.7 (7) [40]	16.2 \pm 7.9 (4.7) [51]	55.7 \pm 27.1 (14.9) [11]	5.3 \pm 4.5 (2.7) [40]
Natural stumps ^b	0 [14]	0 [4]	0 [10]	0 [13]	0 [13]	0 [40]	0 [6]	0 [6]	0 [40]
Cut stumps ^b	74.8 \pm 19.5* (11) [14]	67.1 \pm 30.5 (13) [4]	77.9 \pm 27.1 (14.8) [10]	58.8 \pm 19.5* (10.9) [13]	58.8 \pm 19.5 (10.9) [13]	38.5 \pm 11.7 (7) [40]	45.6 \pm 33.5* (16.6) [6]	45.6 \pm 33.5 (16.6) [6]	5.3 \pm 4.5 (2.7) [40]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between units $P < 0.05$.

Table 15. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located on the Kaibab National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)										
Tree size class (in)	BE			Combined (n = 67)	KE			MO		
	Combined (n = 14)	Nest (n = 4)	Random (n = 10)		Nest (n = 27)	Random (n = 40)	Combined (n = 51)	Nest (n = 11)	Random (n = 40)	
0 to < 1	6.2 \pm 4.3 (2.4)	0	8.6 \pm 5.7 (3.1)	20.1 \pm 12.4 (7.4)	23.8 \pm 28.6 (16.8)	17.6 \pm 8.9 (5.3)	35.1 \pm 7.2 (4.3)	18.4 \pm 17.6 (9.7)	39.7 \pm 7.7 (4.6)	
1 to < 2	0.4 \pm 0.6 (0.4)	0	0.5 \pm 0.9 (0.5)	3 \pm 1.7 (1)	4.1 \pm 3.7 (2.1)	2.3 \pm 1.6 (0.9)	6 \pm 2.4 (1.4)	11.5 \pm 10.4 (5.7)	4.4 \pm 1.4 (0.8)	
2 to < 3	0.7 \pm 0.9 (0.5)	1.3 \pm 3 (1.3)	0.5 \pm 0.9 (0.5)	4.2 \pm 2.2 (1.3)	5.3 \pm 3.3 (1.9)	3.4 \pm 3.1 (1.8)	6.5 \pm 2.3 (1.4)	12 \pm 8.5 (4.7)	4.9 \pm 2 (1.2)	
3 to < 5	2.2 \pm 1.8 (1)	1.3 \pm 3 (1.3)	2.5 \pm 2.5 (1.4)	8.7 \pm 3.2 (1.9)	8.3 \pm 4.7 (2.8)	9 \pm 4.5 (2.7)	10.2 \pm 3.3 (1.9)	15.6 \pm 9 (4.9)	8.7 \pm 3.5 (2)	
5 to < 6	2.2 \pm 2.2 (1.3)	6.3 \pm 8.9 (3.8)	0.5 \pm 0.9 (0.5)	4.7 \pm 1.7 (1)	4.7 \pm 2.4 (1.4)	4.7 \pm 2.5 (1.5)	6 \pm 1.8 (1.1)	16.6 \pm 5 (2.7)	3 \pm 1.1 (0.7)	
6 to < 9	10.8 \pm 6* (3.4)	19 \pm 22.4 (9.5)	7.6 \pm 4.8 (2.6)	15.6 \pm 4.3* (2.6)	16.3 \pm 7.7 (4.5)	15.2 \pm 5.3 (3.1)	28 \pm 8* (4.7)	75 \pm 19.4 (10.7)	15.1 \pm 5 (3)	
\geq 9	50.6 \pm 15.1 (8.5)	77.9 \pm 16.3 (6.9)	39.7 \pm 17.8 (9.7)	51.1 \pm 8.3 (5)	52.2 \pm 12.7 (7.4)	50.4 \pm 11.4 (6.7)	61.8 \pm 8.5 (5.1)	90.2 \pm 21.3 (11.8)	53.9 \pm 8.4 (5)	
\geq 20	8.7 \pm 2.9* (1.6)	9.1 \pm 6.9 (2.9)	8.5 \pm 3.8 (2.1)	8.7 \pm 1.4* (0.8)	10 \pm 1.9 (1.1)	7.7 \pm 1.9 (1.1)	3.9 \pm 0.9* (0.6)	2.8 \pm 2.3 (1.3)	4.2 \pm 1.1 (0.6)	

* Mean densities differ between units P < 0.05.

Table 16. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located in New Mexico. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	CP		Random (n = 25)	LJ		
	Combined (n = 55)	Nest (n = 30)		Combined (n = 45)	Nest (n = 20)	Random (n = 25)
0 to < 1	6.9 \pm 2.1 (1.3)	7.1 \pm 3 (1.8)	6.7 \pm 3.1 (1.8)	7.2 \pm 3.3 (2)	5.6 \pm 2.8 (1.6)	8.5 \pm 5.6 (3.3)
1 to < 2	9.7 \pm 2.7 (1.6)	6.9 \pm 2 (1.2)	13 \pm 5.4 (3.2)	9.3 \pm 4.7 (2.8)	6.8 \pm 3.8 (2.2)	11.3 \pm 8 (4.7)
2 to < 3	9 \pm 3.6 (2.2)	4.7 \pm 2.3 (1.4)	14.2 \pm 7.3 (4.3)	8.6 \pm 5.1 (3)	5.1 \pm 3.2 (1.9)	11.3 \pm 8.9 (5.2)
3 to < 5	5.5 \pm 2.1 (1.3)	4.6 \pm 2.7 (1.6)	6.7 \pm 3.5 (2)	5.1 \pm 2.4 (1.4)	2.3 \pm 2.1 (1.2)	7.3 \pm 3.9 (2.3)
5 to < 6	1 \pm 0.5 (0.3)	0.7 \pm 0.5 (0.3)	1.4 \pm 0.9 (0.6)	0.8 \pm 0.5 (0.3)	0.5 \pm 0.6 (0.4)	1 \pm 0.9 (0.5)
6 to < 9	3.9 \pm 1.5 (0.9)	3.7 \pm 1.9 1.1	4.1 \pm 2.4 (1.4)	2.3 \pm 0.8 (0.5)	2.3 \pm 1.2 (0.7)	2.2 \pm 1.1 (0.7)
\geq 9	2.9 \pm 0.7 (0.4)	2.7 \pm 0.9 (0.5)	3.2 \pm 1.3 (0.8)	2.5 \pm 0.6 (0.4)	2.7 \pm 0.9 (0.5)	2.4 \pm 0.9 (0.5)
\geq 20	0.5 \pm 0.2 (0.1)	0.5 \pm 0.3 (0.2)	0.4 \pm 0.3 0.2	0.4 \pm 0.2 (0.1)	0.6 \pm 0.2 (0.1)	0.3 \pm 0.2 (0.1)

Table 17. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study units located in New Mexico. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stumps per acre \pm 90% confidence interval (SE)						
Stump category	CP			LJ		
	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	34.6 \pm 7.7* (4.6) [55]	37.3 \pm 10.7 (6.3) [30]	31.4 \pm 11.8 (6.9) [25]	13.2 \pm 3.7* (2.2) [45]	13.9 \pm 4.3 (2.5) [20]	12.6 \pm 5.9 (3.5) [25]
Natural stumps ^b	0 [20]	0 [20]	0 [25]	0 [16]	0 [16]	0 [25]
Cut stumps ^b	43.3 \pm 13.6 (7.9) [20]	43.3 \pm 13.6 (7.9) [20]	31.4 \pm 11.8 (6.9) [25]	13.3 \pm 4.8 (2.8) [16]	13.3 \pm 4.8 (2.8) [16]	12.6 \pm 5.9 (3.5) [25]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between units $P < 0.05$.

Table 18. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located in New Mexico. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	CP		Random (n = 25)	LJ		
	Combined (n = 55)	Nest (n = 30)		Combined (n = 45)	Nest (n = 20)	Random (n = 25)
0 to < 1	161 \pm 39.4* (23.5)	141 \pm 45.2 (26.6)	185 \pm 69.9 (40.9)	68.8 \pm 21.9* (13)	72.1 \pm 36.3 (21)	66.2 \pm 28.7 (16.8)
1 to < 2	91.7 \pm 20.6* (12.3)	66.3 \pm 15.8 (9.3)	122 \pm 40.2 (23.5)	51.2 \pm 15.3* (9.1)	36.7 \pm 17 (9.8)	62.8 \pm 24.3 (14.2)
2 to < 3	69.5 \pm 11.2* (6.7)	65 \pm 11.9 (7)	74.9 \pm 20.8 (12.2)	44.4 \pm 13.2* (7.9)	36.4 \pm 11.5 (6.6)	50.8 \pm 22.5 (13.1)
3 to < 5	73.8 \pm 11.9 (7.1)	70.9 \pm 13.9 (8.2)	77.3 \pm 21.1 (12.4)	60.6 \pm 15.1 (9)	53.4 \pm 15.8 (9.1)	66.4 \pm 24.9 (14.6)
5 to < 6	23.7 \pm 4.6 (2.8)	26.1 \pm 6.5 (3.8)	20.9 \pm 6.9 (4)	17.9 \pm 4.3 (2.5)	15.2 \pm 5 (2.9)	20.1 \pm 6.7 (3.9)
6 to < 9	53.6 \pm 7.3 (4.4)	54.7 \pm 10.2 (6)	52.4 \pm 11.2 (6.5)	50.9 \pm 7.5 (4.5)	47.6 \pm 7.7 (4.5)	53.6 \pm 12.4 (7.3)
\geq 9	54.7 \pm 4.3 (2.6)	56.5 \pm 5.2 (3)	52.5 \pm 7.5 (4.4)	60 \pm 5.9 (3.5)	61 \pm 7 (4.1)	59.1 \pm 9.4 (5.5)
\geq 20	6.6 \pm 1.4 (0.8)	7.1 \pm 1.8 (1.1)	5.9 \pm 2.2 (1.3)	7.3 \pm 1.3 (0.8)	8.2 \pm 1.9 (1.1)	6.6 \pm 1.8 (1)

* Mean densities differ between units within size classes $P < 0.05$.

Table 19. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Colorado. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	DC			PB		
	Combined (n = 44)	Nest (n = 18)	Random (n = 26)	Combined (n = 45)	Nest (n = 14)	Random (n = 31)
0 to < 1	7.1 \pm 3.5 (2.1)	10.1 \pm 6.5 (3.7)	5.1 \pm 4.1 (2.4)	10.6 \pm 7.4 (4.4)	10.1 \pm 7.3 (4.1)	10.8 \pm 10.4 (6.1)
1 to < 2	9.5 \pm 4.2 (2.5)	10.7 \pm 6.9 (4)	8.8 \pm 5.6 (3.3)	10.6 \pm 4.6 (2.7)	14.1 \pm 7.8 (4.4)	9 \pm 5.8 (3.4)
2 to < 3	15.9 \pm 7.2 (4.3)	14.9 \pm 8.3 (4.7)	16.5 \pm 11.1 (6.5)	9.7 \pm 3.8 (2.3)	15.2 \pm 7 (3.9)	7.2 \pm 4.5 (2.7)
3 to < 5	22.4 \pm 7.2* (4.3)	25.3 \pm 11.9 (6.8)	20.4 \pm 9.6 (5.6)	8.9 \pm 3.2* (1.9)	13.7 \pm 7.5 (4.2)	6.7 \pm 3.2 (1.9)
5 to < 6	10.2 \pm 5.6 (3.3)	8.4 \pm 4.4 (2.5)	11.5 \pm 9.3 (5.4)	4 \pm 2 (1.2)	3.6 \pm 3 (1.7)	4.2 \pm 2.6 (1.5)
6 to < 9	12 \pm 4.4 (2.6)	16.6 \pm 9.1 (5.3)	8.8 \pm 4.2 (2.4)	4.9 \pm 2.4 (1.5)	4.3 \pm 5.5 (3.1)	5.2 \pm 2.7 (1.6)
\geq 9	7.2 \pm 1.4* (0.8)	9.2 \pm 2.3 (1.3)	5.8 \pm 1.7 (1)	5.7 \pm 1.2* (0.7)	8 \pm 2.3 (1.3)	4.7 \pm 1.3 (0.8)
\geq 20	2.1 \pm 0.5* (0.3)	2.5 \pm 1 (0.6)	1.9 \pm 0.6 (0.4)	2 \pm 0.5* (0.3)	3.1 \pm 1 (0.6)	1.5 \pm 0.5 (0.3)

* Mean densities differ between units within size classes $P < 0.05$.

Table 19 (con't.)

Snag size class (in)	Snags per acre \pm 90% confidence interval (SE)					
	SCN			SCS		
	Combined (n = 39)	Nest (n = 20)	Random (n = 19)	Combined (n = 26)	Nest (n = 8)	Random (n = 18)
0 to < 1	6.5 \pm 3.6 (2.1)	10.1 \pm 6.6 (3.8)	2.7 \pm 2.5 (1.4)	0.6 \pm 0.7 (0.4)	1.9 \pm 2.5 (1.3)	0
1 to < 2	7.8 \pm 4.2 (2.5)	11.1 \pm 8 (4.6)	4.3 \pm 2.6 (1.5)	3.3 \pm 2.6 (1.5)	0	4.8 \pm 3.7 (2.1)
2 to < 3	15.4 \pm 5.3 (3.2)	14.9 \pm 8.3 (4.8)	16 \pm 7.3 (4.2)	7 \pm 4.2 (2.5)	7 \pm 7.5 (3.9)	7 \pm 5.5 (3.2)
3 to < 5	16.6 \pm 5.3* (3.1)	21 \pm 9.3 (5.4)	12 \pm 5.2 (3)	8 \pm 4.1* (2.4)	3.2 \pm 3.1 (1.6)	10.1 \pm 5.8 (3.3)
5 to < 6	5.2 \pm 2.1 (1.3)	5.1 \pm 3.6 (2.1)	5.3 \pm 2.5 (1.4)	2.9 \pm 2.5 (1.5)	1.9 \pm 3.6 (1.9)	3.4 \pm 3.4 (2)
6 to < 9	9.6 \pm 3 (1.8)	13.2 \pm 4.6 (2.7)	5.9 \pm 3.4 (1.9)	9.5 \pm 4.3 (2.5)	7 \pm 6 (3.2)	10.7 \pm 5.8 (3.3)
\geq 9	13.8 \pm 2.8* (1.6)	19.8 \pm 4.3 (2.5)	7.6 \pm 1.3 (0.7)	8.8 \pm 1.5* (0.9)	9.2 \pm 1.5 (0.8)	8.5 \pm 2.1 (1.2)
\geq 20	3.8 \pm 0.7* (0.4)	4.4 \pm 1.1 (0.7)	3.2 \pm 0.9 (0.5)	3.5 \pm 0.8* (0.5)	3.2 \pm 1.3 (0.7)	3.6 \pm 1.1 (0.6)

Table 20. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study units located in Colorado. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	DC			PB		
	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	6.6 \pm 2.4 (1.4) [44]	5.1 \pm 3.5 (2) [18]	7.6 \pm 3.5 (2) [26]	7.1 \pm 2.1 (1.3) [45]	9 \pm 4.4 (2.5) [14]	6.2 \pm 2.5 (1.5) [31]
Natural stumps ^b	7.3 \pm 2.9 (1.7) [36]	5.4 \pm 4.2 (2.4) [15]	8.7 \pm 4.2 (2.4) [21]	7.6 \pm 2.2 (1.3) [37]	9.2 \pm 5.2 (2.9) [11]	7 \pm 2.5 (1.5) [26]
Cut stumps ^b	0 [36]	0 [15]	0 [21]	0.5 \pm 0.6 (0.4) [37]	0.9 \pm 1.7 (0.9) [11]	0.4 \pm 0.7 (0.4) [26]

Table 20 (con't).

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	SCN			SCS		
	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	5.3 \pm 2.9 (1.7) [39]	8.8 \pm 5.4 (3.1) [20]	1.6 \pm 1 (0.6) [19]	5.7 \pm 3.5 (2) [26]	14.6 \pm 9.8 (5.2) [8]	1.7 \pm 1.6 (0.9) [18]
Natural stumps ^b	9.5 \pm 6.3 (3.6) [17]	9.5 \pm 6.3 (3.6) [17]	N/A	22.8 \pm 17.9 (7.6) [4]	22.8 \pm 17.9 (7.6) [4]	N/A
Cut stumps ^b	0 [17]	0 [17]	N/A	0 [4]	0 [4]	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

Table 21. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Colorado. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Tree per acre \pm 90% confidence interval (SE)						
Tree size class (in)	DC			PB		
	Combined (n = 44)	Nest (n = 18)	Random (n = 26)	Combined (n = 45)	Nest (n = 14)	Random (n = 31)
0 to < 1	78.2 \pm 40.2 (23.9)	112 \pm 86.4 (49.6)	54.7 \pm 36.2 (21.2)	147 \pm 79.9 (47.5)	229 \pm 187 (106)	110 \pm 84.3 (49.7)
1 to < 2	23.5 \pm 9 (5.3)	21.1 \pm 13.8 (7.9)	25.1 \pm 12.4 (7.3)	30.9 \pm 11.9 (7.1)	29.6 \pm 18 (10.2)	31.5 \pm 15.8 (9.3)
2 to < 3	15.2 \pm 5 (3)	15.5 \pm 7.6 (4.4)	15 \pm 7.1 (4.1)	20.6 \pm 6.4 (3.8)	31.1 \pm 13.6 (7.7)	15.8 \pm 6.9 (4.1)
3 to < 5	26.4 \pm 6.5 (3.9)	29.2 \pm 8.6 (5)	24.5 \pm 9.6 (5.6)	30 \pm 7.4 (4.4)	31.8 \pm 13.5 (7.6)	29.2 \pm 9.2 (5.4)
5 to < 6	9.9 \pm 2.6 (1.6)	12.6 \pm 4 (2.3)	8 \pm 3.5 (2)	10.7 \pm 3.5 (2.1)	11.6 \pm 6.3 (3.5)	10.3 \pm 4.4 (2.6)
6 to < 9	34.5 \pm 7.6* (4.5)	45 \pm 14.8 (8.5)	27.3 \pm 7.7 (4.5)	24.9 \pm 5.7* (3.4)	22 \pm 10.5 (5.9)	26.1 \pm 7 (4.1)
\geq 9	59.4 \pm 6.7* (4)	69.2 \pm 9.8 (5.6)	52.7 \pm 8.8 (5.1)	61.2 \pm 5.3* (3.2)	62.7 \pm 9.6 (5.4)	60.5 \pm 6.7 (4)
\geq 20	12.3 \pm 2.4 * (1.4)	14.5 \pm 4.5 (2.6)	10.9 \pm 2.8 (1.6)	19.9 \pm 2.9* (1.7)	21.6 \pm 3.5 (2)	19.1 \pm 4 (2.4)

* Mean densities differ between units within size classes $P < 0.05$.

Table 21 (con't).

Tree size class (in)	Trees per acre \pm 90% confidence interval (SE)					
	SCN			SCS		
	Combined (n = 39)	Nest (n = 20)	Random (n = 19)	Combined (n = 26)	Nest (n = 8)	Random (n = 18)
0 to < 1	196 \pm 92.6 (54.9)	366 \pm 161 (92.8)	17.6 \pm 12.6 (7.2)	50 \pm 27.2 (15.9)	120 \pm 77.6 (41)	18.8 \pm 11.6 (6.7)
1 to < 2	30.6 \pm 17.4 (10.3)	54.4 \pm 32.5 (18.8)	5.6 \pm 3 (1.7)	23.9 \pm 13.2 (7.7)	53.1 \pm 40.5 (21.4)	11 \pm 5.6 (3.2)
2 to < 3	15.6 \pm 6.3 (3.7)	26.3 \pm 10.8 (6.3)	4.3 \pm 2.7 (1.6)	12.3 \pm 6 (3.5)	16.4 \pm 12.9 (6.8)	10.4 \pm 7.2 (4.1)
3 to < 5	24 \pm 9.2 (5.5)	36.9 \pm 16.2 (9.4)	10.4 \pm 5.8 (3.3)	15.8 \pm 5.9 (3.5)	9.5 \pm 4.9 (2.6)	18.6 \pm 8.3 (4.8)
5 to < 6	9.5 \pm 2.9 (1.7)	13.7 \pm 4.5 (2.6)	5.1 \pm 3 (1.7)	8.4 \pm 3.6 (2.1)	7.6 \pm 6.8 (3.6)	8.7 \pm 4.6 (2.6)
6 to < 9	26.2 \pm 7.1* (4.2)	33.1 \pm 11.2 (6.5)	18.9 \pm 8.5 (4.9)	45.5 \pm 16.1* (9.4)	26.6 \pm 17.7 (9.4)	54 \pm 22 (12.6)
\geq 9	73.1 \pm 8.8* (5.2)	84.8 \pm 11.6 (6.7)	60.8 \pm 12.3 (7.1)	82 \pm 6.8* (4)	83.7 \pm 10.7 (5.7)	81.3 \pm 9.1 (5.2)
\geq 20	12.6 \pm 1.9* (1.1)	12 \pm 3.2 (1.8)	13.3 \pm 2.3 (1.3)	13.1 \pm 2.1* (1.3)	18.2 \pm 5.5 (2.9)	10.9 \pm 1.6 (0.9)

Table 22. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snag size class (in)	Snags per acre \pm 90% Confidence interval (SE)								
	BH			DM			DO		
	Combined (n = 39)	Nest (n = 19)	Random (n = 20)	Combined (n = 39)	Nest (n = 19)	Random (n = 20)	Combined (n = 50)	Nest (n = 30)	Random (n = 20)
0 to < 1	5.1 \pm 4 (2.4)	4.4 \pm 5.6 (3.2)	5.8 \pm 6.1 (3.5)	6.9 \pm 7.5 (4.5)	3 \pm 2.9 (1.7)	10.6 \pm 14.9 (8.6)	2.1 \pm 1.9 (1.1)	1.6 \pm 1.5 (0.9)	3 \pm 4.4 (2.6)
1 to < 2	4.7 \pm 5.3 (3.1)	7 \pm 11.1 (6.4)	2.5 \pm 2 (1.1)	6.3 \pm 4.6 (2.7)	9.1 \pm 8.6 (4.9)	3.5 \pm 4.4 (2.5)	1.1 \pm 1.1 (0.6)	0.5 \pm 0.6 (0.3)	2 \pm 2.7 (1.5)
2 to < 3	1.9 \pm 2.3 (1.3)	2.7 \pm 4.6 (2.7)	1.3 \pm 1.4 (0.8)	2.3 \pm 1.8 (1)	2.6 \pm 2.9 (1.6)	2 \pm 2.3 (1.3)	0.8 \pm 1 (0.6)	0.1 \pm 0.2 (0.1)	1.8 \pm 2.6 (1.5)
3 to < 5	0.5 \pm 0.4 (0.2)	0.2 \pm 0.2 (0.1)	0.8 \pm 0.7 (0.4)	2.8 \pm 2 (1.2)	2.8 \pm 2.6 (1.5)	2.8 \pm 3.3 (1.9)	1 \pm 1 (0.6)	1.3 \pm 1.5 (0.9)	0.5 \pm 0.9 (0.5)
5 to < 6	0.5 \pm 0.4 (0.3)	0.1 \pm 0.1 (0.1)	1 \pm 0.8 (0.5)	0.4 \pm 0.5 (0.3)	0.6 \pm 0.9 (0.5)	0.3 \pm 0.4 (0.3)	0.01 \pm 0.01 (0.01)	0.01 \pm 0.1 (0.01)	0
6 to < 9	1.6 \pm 0.9 (0.6)	1.2 \pm 1.3 (0.7)	2 \pm 1.5 (0.9)	1.3 \pm 1.1 (0.7)	1.7 \pm 1.5 (0.9)	1 \pm 1.7 (1)	0.3 \pm 0.4 (0.2)	0.5 \pm 0.6 (0.4)	0
≥ 9	7 \pm 2.1 ^a (1.2)	8.9 \pm 3.6 (2.1)	5.3 \pm 2.3 (1.3)	4.6 \pm 1.1 (0.7)	6.8 \pm 1.8 (1)	2.6 \pm 1 (0.6)	3.7 \pm 1.1 (0.7)	4.1 \pm 1.3 (0.8)	3.1 \pm 2.1 (1.2)
≥ 20	3.6 \pm 1 ^a (0.6)	4.7 \pm 1.5 (0.9)	2.5 \pm 1.3 (0.7)	2.8 \pm 0.8 (0.5)	4.5 \pm 1.2 (0.7)	1.2 \pm 0.6 (0.3)	2.1 \pm 0.6 (0.4)	2.8 \pm 0.9 (0.5)	1 \pm 0.6 (0.4)

Table 22 (con't).

Snag size class (in)	Snags per acre \pm 90% confidence interval (SE)								
	FC			PC			WM		
	Combined (n = 43)	Nest (n = 23)	Random (n = 20)	Combined (n = 43)	Nest (n = 23)	Random (n = 20)	Combined (n = 34)	Nest (n = 24)	Random (n = 10)
0 to < 1	8.3 \pm 5.3 (3.1)	5.6 \pm 5 (2.9)	11.4 \pm 10.2 (5.9)	4 \pm 2.4 (1.4)	6.3 \pm 4.2 (2.4)	1.3 \pm 1.8 (1)	0.2 \pm 0.3 (0.2)	0.2 \pm 0.4 (0.2)	0
1 to < 2	13.7 \pm 10.1 (6)	6.2 \pm 5.5 (3.2)	22.3 \pm 21.3 (12.3)	2.6 \pm 1.6 (1)	3.9 \pm 2.6 (1.5)	1 \pm 1.7 (1)	0	0	0
2 to < 3	5 \pm 4.5 (2.7)	2.1 \pm 2.1 (1.2)	8.4 \pm 9.5 (5.5)	1.9 \pm 1.1 (0.6)	2.7 \pm 1.9 (1.1)	1 \pm 0.8 (0.5)	0	0	0
3 to < 5	2.4 \pm 1.8 (1)	1 \pm 1.1 (0.6)	4.1 \pm 3.6 (2.1)	3 \pm 1.7 (1)	3 \pm 1.9 (1.1)	3 \pm 3.1 (1.8)	0.01 \pm 0.1 (0.01)	0.01 \pm 0.1 (0.01)	0
5 to < 6	0.5 \pm 0.5 (0.3)	0.5 \pm 0.8 (0.4)	0.5 \pm 0.6 (0.4)	0.9 \pm 0.7 (0.4)	1.4 \pm 1.2 (0.7)	0.3 \pm 0.4 (0.3)	0.1 \pm 0.2 (0.1)	0.1 \pm 0.2 (0.1)	0
6 to < 9	2.2 \pm 1.3 (0.8)	1.1 \pm 1 (0.6)	3.5 \pm 2.5 (1.4)	2.7 \pm 1.7 (1)	2.4 \pm 1.9 (1.1)	3 \pm 3.1 (1.8)	0.3 \pm 0.5 (0.3)	0.5 \pm 0.7 (0.4)	0
\geq 9	3.3 \pm 0.8 ^a (0.5)	4 \pm 1.3 (0.8)	2.5 \pm 0.9 (0.5)	5.3 \pm 1.1 (0.7)	7 \pm 1.8 (1)	3.4 \pm 1 (0.6)	3.4 \pm 1.3 (0.8)	4.4 \pm 1.7 (1)	0.9 \pm 1 (0.5)
\geq 20	1.8 \pm 0.5 ^a (0.3)	2.1 \pm 0.6 (0.3)	1.6 \pm 0.7 (0.4)	2.1 \pm 0.7 (0.4)	3.3 \pm 1 (0.6)	0.8 \pm 0.5 (0.3)	2.3 \pm 0.7 (0.4)	3 \pm 0.8 (0.5)	0.5 \pm 0.5 (0.3)

^a Mean densities differ between units within size classes $P < 0.05$.

Table 23. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study units located in Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)								
	BH			DM			DO		
	Combined	Nest	Random	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	2.3 \pm 1.2 (0.7) [35]	5.1 \pm 2.3 (1.3) [15]	0.3 \pm 0.4 (0.3) [20]	1.6 \pm 1.3 (0.8) [16]	1 \pm 1.9 (1) [10]	2.6 \pm 2.3 (1.1) [6]	2 \pm 1.8 ^c (1) [23]	2.7 \pm 2.4 (1.4) [17]	0 [6]
Natural stumps ^b	6.1 \pm 3 (1.6) [10]	6.1 \pm 3 (1.6) [10]	N/A	1.4 \pm 2.8 (1.4) [7]	1.4 \pm 2.8 (1.4) [7]	N/A	4 \pm 4.1 (2.2) [10]	4 \pm 4.1 (2.2) [10]	N/A
Cut stumps ^b	0 [10]	0 [10]	N/A	0 [7]	0 [7]	N/A	0 [10]	0 [10]	N/A

Table 23 (con't).

Stump category	Stumps per acre \pm 90% confidence interval (SE)								
	FC			PC			WM		
	Combined	Nest	Random	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	3.1 \pm 1.3 (0.8) [38]	4.8 \pm 2.4 (1.4) [18]	1.5 \pm 1.3 (0.7) [20]	3.7 \pm 2.7 (1.5) [15]	2.8 \pm 2.8 (1.5) [9]	5.1 \pm 6.4 (3.2) [6]	9 \pm 6.2 ^c (3.5) [14]	6.2 \pm 4 (2.2) [13]	45.5 [1]
Natural stumps ^b	6.1 \pm 4.1 (2.2) [10]	6.1 \pm 4.1 (2.2) [10]	N/A	2.5 \pm 5.9 (2.5) [4]	2.5 \pm 5.9 (2.5) [4]	N/A	4 \pm 4.1 (2.2) [10]	4 \pm 4.1 (2.2) [10]	N/A
Cut stumps ^b	0 [10]	0 [10]	N/A	0 [4]	0 [4]	N/A	2 \pm 3.7 (2) [10]	2 \pm 3.7 (2) [10]	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

^c Mean densities differ between units within size classes $P < 0.05$.

Table 24. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Idaho. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)										
Tree size class (in)	BH			Combined (n = 39)	DM			DO		
	Combined (n = 39)	Nest (n = 19)	Random (n = 20)		Nest (n = 19)	Random (n = 20)	Combined (n = 50)	Nest (n = 30)	Random (n = 20)	
0 to < 1	7.9 \pm 7.9 (4.7)	1 \pm 1.1 (0.7)	14.4 \pm 15.5 (9)	20.9 \pm 10.6 (6.3)	21.6 \pm 9 (5.2)	20.2 \pm 19.8 (11.4)	5.6 \pm 4.3 (2.5)	6.3 \pm 6.6 (3.9)	4.6 \pm 4.6 (2.7)	
1 to < 2	10.6 \pm 8 (4.7)	6.6 \pm 8.4 (4.8)	14.4 \pm 13.9 (8)	19.6 \pm 10.3 (6.1)	19.5 \pm 11.4 (6.6)	19.7 \pm 17.8 (10.3)	4.4 \pm 2.4 (1.5)	3.5 \pm 2.4 (1.4)	5.8 \pm 5.2 (3)	
2 to < 3	10.4 \pm 8 (4.7)	10.1 \pm 14.8 (8.5)	10.6 \pm 8.2 (4.7)	13.8 \pm 7.5 (4.5)	13.4 \pm 8.5 (4.9)	14.2 \pm 12.9 (7.5)	2 \pm 1.4 (0.8)	1.4 \pm 1.1 (0.6)	3 \pm 3.1 (1.8)	
3 to < 5	9.7 \pm 5.1 ^a (3.1)	6.1 \pm 8.3 (4.8)	13.2 \pm 6.6 (3.8)	15.5 \pm 7.8 (4.7)	17.4 \pm 12.3 (7.1)	13.7 \pm 10.8 (6.2)	4.4 \pm 3.2 (1.9)	2.6 \pm 1.5 (0.9)	7.1 \pm 8 (4.6)	
5 to < 6	2.3 \pm 1.3 ^a (0.8)	0.8 \pm 1 (0.6)	3.8 \pm 2.3 (1.3)	5.8 \pm 2.7 (1.6)	6.7 \pm 4.1 (2.4)	5.1 \pm 4 (2.3)	1.8 \pm 1.2 (0.7)	1.5 \pm 1.1 (0.6)	2.3 \pm 2.7 (1.5)	
6 to < 9	6.6 \pm 3.1 ^a (1.8)	2.6 \pm 2.9 (1.7)	10.4 \pm 5.2 (3)	12.5 \pm 6.3 (3.7)	13.6 \pm 10.1 (5.8)	11.4 \pm 8.4 (4.9)	3.8 \pm 2.7 (1.6)	3.1 \pm 1.7 (1)	4.8 \pm 6.6 (3.8)	
\geq 9	25.8 \pm 4.5 (2.7)	20.2 \pm 4.7 (2.7)	31.2 \pm 7.3 (4.2)	44.2 \pm 7.2 (4.3)	44 \pm 8.9 (5.1)	44.4 \pm 12 (6.9)	27.7 \pm 4.8 ^c (2.9)	24.7 \pm 5.9 (3.5)	32.3 \pm 8.6 (5)	
\geq 20	13.7 \pm 1.9 ^a (1.1)	12 \pm 2.5 (1.5)	15.3 \pm 2.9 (1.7)	17.8 \pm 2.4 (1.4)	20.1 \pm 3.1 (1.8)	15.6 \pm 3.8 (2.2)	16.8 \pm 2.9 ^c (1.7)	15.1 \pm 3.3 (2)	19.3 \pm 5.5 (3.2)	

Table 24 (con't).

Tree size class (in)	Trees per acre + 90% confidence interval (SE)								
	FC			PC			WM		
	Combined (n = 43)	Nest (n = 23)	Random (n = 20)	Combined (n = 43)	Nest (n = 23)	Random (n = 20)	Combined (n = 34)	Nest (n = 24)	Random (n = 10)
0 to < 1	24.3 ± 14.1 (8.4)	28.1 ± 21.8 (12.7)	20 ± 18.9 (10.9)	20.8 ± 9.7 (5.7)	32.6 ± 16.9 (9.8)	7.3 ± 5.5 (3.2)	11.1 ± 10.5 (6.2)	14 ± 14.7 (8.6)	4.1 ± 7.4 (4.1)
1 to < 2	19 ± 10.3 (6.1)	17.6 ± 17.3 (10.1)	20.5 ± 11.4 (6.6)	16.3 ± 6 (3.6)	23.2 ± 9.3 (5.4)	8.4 ± 6.9 (4)	8.1 ± 7.2 (4.3)	9.5 ± 9.9 (5.8)	4.6 ± 8.3 (4.6)
2 to < 3	19.7 ± 7.7 (4.6)	13.9 ± 10.8 (6.3)	26.3 ± 11.4 (6.6)	16.1 ± 6.6 (3.9)	24.7 ± 11 (6.4)	6.3 ± 5.2 (3)	5.4 ± 4 (2.3)	7.4 ± 5.5 (3.2)	0.5 ± 0.9 (0.5)
3 to < 5	20.3 ± 6.8 ^a (4)	14.7 ± 9.3 (5.4)	26.8 ± 10 (5.8)	14.8 ± 5.5 (3.3)	21.1 ± 8.8 (5.1)	7.6 ± 5.8 (3.3)	5.4 ± 3.5 (2.1)	6.3 ± 4.6 (2.7)	3 ± 5.6 (3)
5 to < 6	6.5 ± 2.8 ^a (1.6)	4.1 ± 3.2 (1.9)	9.4 ± 4.7 (2.7)	4.2 ± 2 (1.2)	6.3 ± 3.3 (1.9)	1.8 ± 1.9 (1.1)	1.3 ± 0.9 (0.5)	1.4 ± 1.1 (0.6)	1 ± 1.9 (1)
6 to < 9	15.2 ± 5.6 ^a (3.3)	8.1 ± 5.9 (3.4)	23.3 ± 9.5 (5.5)	14.4 ± 5.3 (3.2)	17.4 ± 7.1 (4.1)	10.9 ± 8.4 (4.9)	1 ± 0.8 (0.5)	1.4 ± 1.2 (0.7)	0
≥ 9	23.6 ± 3.7 (2.2)	23.5 ± 5.3 (3.1)	23.8 ± 5.4 (3.1)	43.9 ± 4.1 (2.4)	41.9 ± 5.9 (3.4)	46.2 ± 6 (3.5)	16.4 ± 3.4 ^c (2)	14.8 ± 3.7 (2.1)	20 ± 8.5 (4.7)
≥ 20	8.6 ± 1.6 ^a (0.9)	9.1 ± 2 (1.2)	8.1 ± 2.6 (1.5)	14.1 ± 2.1 (1.2)	15.9 ± 2.9 (1.7)	12 ± 3.1 (1.8)	11.1 ± 2.7 ^c (1.6)	10 ± 2.9 (1.7)	13.6 ± 6.8 (3.7)

Table 25. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located in Montana. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	MC		Random (n = 19)	Combined (n = 43)	MT	
	Combined (n = 37)	Nest (n = 18)			Nest (n = 23)	Random (n = 20)
0 to < 1	86.2 \pm 34.6 (20.5)	137 \pm 62.4 (35.9)	37.8 \pm 25.5 (14.7)	96.3 \pm 33.2 (19.7)	84.9 \pm 49.4 (28.8)	109 \pm 46.7 (27)
1 to < 2	49.2 \pm 16.8 (9.9)	66.3 \pm 29.8 (17.1)	33 \pm 16.6 (9.6)	50 \pm 16.4 (9.8)	48.8 \pm 27.6 (16.1)	51.4 \pm 18.1 (10.5)
2 to < 3	25.2 \pm 8.9 (5.3)	27.6 \pm 15.4 (8.9)	22.9 \pm 10.6 (6.1)	31.9 \pm 8.4 (5)	36.5 \pm 14.6 (8.5)	26.6 \pm 7.5 (4.3)
3 to < 5	20.5 \pm 7.6 (4.5)	16.9 \pm 9.8 (5.6)	24 \pm 12.2 (7)	20.7 \pm 4.8 (2.9)	21.5 \pm 7.9 (4.6)	19.7 \pm 5.7 (3.3)
5 to < 6	4.6 \pm 2.1 (1.2)	3.4 \pm 3.5 (2)	5.8 \pm 2.4 (1.4)	3.4 \pm 1.3 (0.7)	2.6 \pm 1.6 (0.9)	4.3 \pm 2 (1.2)
6 to < 9	3.8 \pm 2 ^a (1.2)	1.7 \pm 1.6 (0.9)	5.9 \pm 3.6 (2.1)	8.8 \pm 2.4 ^a (1.4)	8.3 \pm 3.4 (2)	9.4 \pm 3.7 (2.1)
\geq 9	3.2 \pm 0.8 ^a (0.5)	3.1 \pm 1.1 (0.6)	3.4 \pm 1.2 (0.7)	5.3 \pm 1.2 ^a (0.7)	6.5 \pm 2 (1.2)	4 \pm 1.3 (0.7)
\geq 20	0.1 \pm 0.1 (0.01)	0	0.1 \pm 0.1 0.1	0.3 \pm 0.2 (0.1)	0.3 \pm 0.3 (0.2)	0.2 \pm 0.2 (0.1)

^a Mean densities differ between units within size classes $P < 0.05$.

Table 25 (con't).

Snag size class (in)	Snags per acre \pm 90% confidence interval (SE)					
	SC			ST		
	Combined (n = 18)	Nest (n = 1)	Random (n = 17)	Combined (n = 26)	Nest (n = 6)	Random (n = 20)
0 to < 1	24.7 \pm 8 (4.6)	0	26.2 \pm 8 (4.6)	44 \pm 33.9 (19.9)	113 \pm 164 (81.5)	23.3 \pm 12.6 (7.3)
1 to < 2	20.8 \pm 6.3 (3.6)	40.5	19.6 \pm 6.3 (3.6)	24.9 \pm 7.6 (4.4)	30.4 \pm 12.8 (25.8)	23.3 \pm 7.7 (4.5)
2 to < 3	9 \pm 5.5 (3.2)	20.2	8.3 \pm 5.7 (3.3)	16.3 \pm 4.9 (2.9)	13.5 \pm 16.4 (8.1)	17.2 \pm 5.1 (2.9)
3 to < 5	10.7 \pm 6.4 (3.7)	10.1	10.7 \pm 6.9 (3.9)	13 \pm 3.2 (1.9)	6.7 \pm 8.6 (4.3)	14.9 \pm 3.3 (1.9)
5 to < 6	3.4 \pm 2.8 (1.6)	0	3.6 \pm 3 (1.7)	3.3 \pm 1.7 (1)	1.7 \pm 3.4 (1.7)	3.8 \pm 2.1 (1.2)
6 to < 9	7.3 \pm 4 (2.3)	10.1	7.1 \pm 4.2 (2.4)	8 \pm 4 (2.3)	11.8 \pm 16.2 (8)	6.8 \pm 3.4 (2)
≥ 9	1.7 \pm 1 ^a (0.6)	4	1.6 \pm 1 (0.6)	5 \pm 1 ^a (0.6)	5.6 \pm 1.4 (0.7)	4.9 \pm 1.2 (0.7)
≥ 20	0.3 \pm 0.2 (0.1)	0	0.4 \pm 0.3 (0.1)	0.5 \pm 0.3 (0.2)	0.2 \pm 0.3 (0.2)	0.7 \pm 0.4 (0.2)

^a Mean densities differ between units within size classes P < 0.05.

Table 26. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study units located in Montana. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stumps per acre \pm 90% confidence interval (SE)						
Stump category	MC			MT		
	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	52.2 \pm 16.3 ^a (9.7) [37]	25.9 \pm 16.7 (9.6) [18]	77.2 \pm 25.2 (14.5) [19]	15.8 \pm 4.6 ^a (2.8) [43]	12.8 \pm 5.6 (3.3) [23]	19.2 \pm 7.9 (4.6) [20]
Natural stumps ^b	10.7 \pm 3.7 (2.2) [37]	3.4 \pm 3.2 (1.8) [18]	17.6 \pm 5.5 (3.2) [19]	9.2 \pm 5.6 (3.2) [23]	9.2 \pm 5.6 (3.2) [23]	N/A
Cut stumps ^b	41.6 \pm 15.4 ^a (9.1) [37]	22.5 \pm 16.8 (9.6) [18]	59.7 \pm 24.7 (14.2) [19]	3.5 \pm 2.3 ^a (1.4) [23]	3.5 \pm 2.3 (1.4) [23]	N/A

^a Mean densities differ between units within size classes $P < 0.05$.

Table 26 (con't).

Stumps per acre \pm 90% confidence interval (SE)						
Stump category	SC			ST		
	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	22.5 \pm 8.5* (4.9) [18]	0 [1]	23.8 \pm 8.7 (5) [17]	40.3 \pm 9.6* (5.6) [26]	18.6 \pm 17 (8.4) [6]	46.8 \pm 10.7 (6.2) [20]
Natural stumps ^b	10.1 \pm 5.7 (3.3) [18]	0 [1]	10.7 \pm 6 (3.4) [17]	6.8 \pm 10.1 (5) [6]	6.8 \pm 10.1 (5) [6]	N/A
Cut stumps ^b	12.4 \pm 6.5 (3.7) [18]	0 [1]	13.1 \pm 6.7 (3.9) [17]	11.8 \pm 12.3 (6.1) [6]	11.8 \pm 12.3 (6.1) [6]	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between units within size classes $P < 0.05$.

Table 27. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns unit located in Montana. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	MC		Random (n = 19)	Combined (n = 43)	MT	
	Combined (n = 37)	Nest (n = 18)			Nest (n = 23)	Random (n = 20)
0 to < 1	587 \pm 264 (156)	1140 \pm 462 (265)	62.3 \pm 40.5 (23.3)	798 \pm 320 (190)	1441 \pm 511 (297)	58.4 \pm 29.4 (17)
1 to < 2	62.1 \pm 21.9 (13)	92.2 \pm 34.9 (20)	33.6 \pm 24.7 (14.2)	41.1 \pm 13.1 (7.8)	51.1 \pm 22.7 (13.2)	29.6 \pm 11.3 (6.5)
2 to < 3	38.3 \pm 10.3 (6.1)	54.6 \pm 17.8 (10.2)	22.9 \pm 8.4 (4.8)	51.8 \pm 20.7 (12.3)	65.6 \pm 38.5 (22.4)	35.9 \pm 8.9 (5.1)
3 to < 5	46.5 \pm 8.8 (5.2)	42.2 \pm 11.6 (6.7)	50.6 \pm 13.8 (8)	44.1 \pm 8.5 (5.1)	43.1 \pm 13.5 (7.9)	45.3 \pm 10.9 (6.3)
5 to < 6	18.9 \pm 4.6 (2.7)	11.8 \pm 3.6 (2)	25.6 \pm 7.8 (4.5)	19.2 \pm 4.7 (2.8)	18.9 \pm 7.1 (4.1)	19.5 \pm 6.6 (3.8)
6 to < 9	51.2 \pm 11.5 (6.8)	25.3 \pm 9.3 (5.3)	75.7 \pm 16.1 (9.3)	44 \pm 7.3 (4.3)	35.6 \pm 8.7 (5.1)	53.6 \pm 11.8 (6.8)
≥ 9	84 \pm 10.3 (6.1)	61.1 \pm 8.8 (5)	106 \pm 14.4 (8.3)	69.6 \pm 9.1 (5.4)	53.1 \pm 11.3 (6.6)	88.7 \pm 11.7 (6.7)
≥ 20	6.7 \pm 1.7 (1)	8.2 \pm 2.1 (1.2)	5.3 \pm 2.6 1.5	6 \pm 1.7 (1)	5.7 \pm 2.8 (1.6)	6.3 \pm 1.8 (1.1)

Table 27 (con't).

Tree size class (in)	Trees per acre \pm 90% confidence interval (SE)					
	SC			ST		
	Combined (n = 18)	Nest (n = 1)	Random (n = 17)	Combined (n = 26)	Nest (n = 6)	Random (n = 20)
0 to < 1	88.3 \pm 25.8 (14.8)	50.6	90.5 \pm 27.2 (15.6)	50.6 \pm 38.7 (22.7)	145 \pm 181 (89.9)	22.3 \pm 12.9 (7.5)
1 to < 2	74.2 \pm 21.4 ^a (12.3)	30.4	76.8 \pm 22.3 (12.8)	28.4 \pm 8.8 (5.1)	28.7 \pm 23.8 ^a (11.8)	28.3 \pm 10.1 (5.8)
2 to < 3	65.2 \pm 26.1 ^a (15)	40.5	66.7 \pm 27.7 (15.8)	29.8 \pm 11 (6.5)	23.6 \pm 31.9 ^a (15.8)	31.6 \pm 12.3 (7.1)
3 to < 5	56.8 \pm 24.7 (14.2)	30.4	58.4 \pm 26.1 (14.9)	49.1 \pm 12.7 (7.4)	27 \pm 28.7 (14.2)	55.7 \pm 14.3 (8.3)
5 to < 6	19.7 \pm 8.1 (4.7)	20.2	19.6 \pm 8.6 (4.9)	21.8 \pm 5.4 (3.2)	20.2 \pm 19 (9.4)	22.3 \pm 5.5 (3.2)
6 to < 9	50.6 \pm 18 (10.3)	30.4	51.8 \pm 19 (10.9)	62.1 \pm 12.4 (7.3)	32.1 \pm 18.6 (9.2)	71.1 \pm 14 (8.1)
≥ 9	68.8 \pm 11.1 (6.4)	50.6	69.9 \pm 11.6 (6.7)	81 \pm 11.7 (6.9)	33.7 \pm 16.7 (8.3)	95.1 \pm 9.3 (5.4)
≥ 20	6.7 \pm 2 (1.2)	6.7	6.7 \pm 2.1 (1.2)	6.7 \pm 1.5 (0.9)	4 \pm 2.7 (1.4)	7.5 \pm 1.8 (1)

^a Mean densities differ between units within size classes P < 0.05.

Table 28. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Oregon. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	CN			TN		
	Combined (n = 50)	Nest (n = 30)	Random (n = 20)	Combined (n = 42)	Nest (n = 22)	Random (n = 20)
0 to < 1	10.7 \pm 4.7 ^a (2.8)	8.1 \pm 4.9 (2.9)	14.7 \pm 9.4 (5.4)	45.7 \pm 16.7 ^a (9.9)	33.1 \pm 16.9 (9.8)	59.5 \pm 30.4 (17.6)
1 to < 2	7.4 \pm 3.1 ^a (1.8)	7.6 \pm 4 (2.4)	7.1 \pm 5.2 (3)	39.3 \pm 14.1 ^a (8.4)	28.3 \pm 11.7 (6.8)	51.4 \pm 27.1 (15.7)
2 to < 3	6.7 \pm 2.7 ^a (1.6)	6.4 \pm 3.7 (2.2)	7.1 \pm 4.4 (2.6)	24.2 \pm 7.7 ^a (4.6)	22.5 \pm 11.5 (6.7)	26.1 \pm 10.9 (6.3)
3 to < 5	7.2 \pm 2.8 (1.7)	4.2 \pm 2.1 (1.2)	11.6 \pm 6.1 (3.5)	10.5 \pm 4 (2.4)	10.1 \pm 5.8 (3.4)	10.9 \pm 5.8 (3.3)
5 to < 6	1.9 \pm 1.3 (0.8)	2.2 \pm 1.9 (1.1)	1.5 \pm 1.4 (0.8)	2.5 \pm 1.3 (0.8)	2.1 \pm 1.9 (1.1)	3 \pm 1.9 (1.1)
6 to < 9	4.5 \pm 1.8 (1)	3.2 \pm 1.7 (1)	6.6 \pm 3.7 (2.1)	3.1 \pm 1.4 (0.9)	3.4 \pm 2.2 (1.3)	2.8 \pm 2 (1.1)
≥ 9	3.3 \pm 0.9 ^a (0.5)	3.6 \pm 0.8 (0.5)	2.7 \pm 1.8 (1)	6 \pm 1.6 ^a (0.9)	6.7 \pm 2.4 (1.4)	5.2 \pm 2.2 (1.3)
≥ 20	0.6 \pm 0.2 ^a (0.1)	0.7 \pm 0.3 (0.2)	0.5 \pm 0.3 (0.2)	2.2 \pm 0.7 ^a (0.4)	2.7 \pm 1.2 (0.7)	1.8 \pm 0.8 (0.5)

^a Mean densities differ between units within size classes $P < 0.05$.

Table 28 (con't).

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	CS		Random (n = 20)	Combined (n = 50)	TS	
	Combined (n = 33)	Nest (n = 13)			Nest (n = 30)	Random (n = 20)
0 to < 1	11 \pm 6.2 (3.7)	13.6 \pm 12.4 (7)	9.4 \pm 7.2 (4.2)	16.4 \pm 11.2 (6.7)	5.7 \pm 4.3 (2.5)	32.4 \pm 27.4 (15.8)
1 to < 2	4.9 \pm 4.9 (2.9)	3.1 \pm 3.3 (1.9)	6.1 \pm 8 (4.6)	5.5 \pm 2 (1.2)	2.2 \pm 1.3 (0.8)	10.4 \pm 4.2 (2.4)
2 to < 3	5.7 \pm 3.5 (2.1)	5.1 \pm 3.8 (2.1)	6.1 \pm 5.4 (3.2)	4.1 \pm 1.7 (1)	3.6 \pm 2.1 (1.2)	4.8 \pm 2.9 (1.7)
3 to < 5	2.6 \pm 1.9 (1.1)	2.7 \pm 2.4 (1.4)	2.5 \pm 2.8 (1.6)	7.2 \pm 2.6 (1.6)	7.4 \pm 3.3 (1.9)	6.8 \pm 4.8 (2.8)
5 to < 6	1.8 \pm 1.6 (0.9)	3.1 \pm 3.1 (1.8)	1 \pm 1.7 (1)	2.7 \pm 1.5 (0.9)	3.5 \pm 2.3 (1.4)	1.5 \pm 1.4 (0.8)
6 to < 9	3.2 \pm 1.9 (1.1)	1.9 \pm 1.9 (1.1)	4 \pm 3 (1.7)	6.3 \pm 2.2 (1.3)	7.4 \pm 2.8 (1.7)	4.6 \pm 3.9 (2.2)
\geq 9	4.6 \pm 3.1 (1.8)	5.9 \pm 5 (2.8)	3.7 \pm 4.2 (2.4)	4.2 \pm 1.2 (0.7)	6.2 \pm 1.8 (1.1)	1.2 \pm 0.5 (0.3)
\geq 20	0.5 \pm 0.3 (0.2)	0.5 \pm 0.4 (0.2)	0.5 \pm 0.4 0.2	0.2 \pm 0.1 (0.1)	0.3 \pm 0.2 (0.1)	0.1 \pm 0.1 (0.1)

Table 29. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study units located in Oregon. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	CN			TN		
	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	21.9 \pm 5.6 (3.3) [50]	21.4 \pm 7.4 (4.4) [30]	22.5 \pm 9.1 (5.3) [20]	22.8 \pm 8.4 (5) [42]	30.1 \pm 14.7 (8.6) [22]	14.7 \pm 7.4 (4.3) [20]
Natural stumps ^b	4.2 \pm 2.2 (1.3) [34]	3.4 \pm 2.8 (1.6) [15]	4.8 \pm 3.4 (2) [19]	1.8 \pm 3.3 (1.8) [11]	1.8 \pm 3.3 (1.8) [11]	8.4 \pm 3.8 (2.1) [12]
Cut stumps ^b	19.1 \pm 8.1 (4.8) [34]	21.6 \pm 15 (8.5) [15]	17 \pm 9.6 (5.5) [19]	39.6 \pm 25.9 (14.3) [11]	39.6 \pm 25 (14.3) [11]	32.1 \pm 13.6 (7.6) [12]

Table 29 (con't).

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	CS			TS		
	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	35.6 \pm 7.5* (4.4) [33]	26.5 \pm 12.9 (7.2) [13]	41.5 \pm 9.1 (5.3) [20]	23.6 \pm 5.8* (3.5) [50]	18.2 \pm 6.6 (3.9) [30]	31.6 \pm 10.7 (6.2) [20]
Natural stumps ^b	2 \pm 1.7 * (1) [25]	2.9 \pm 5.6 (2.9) [7]	1.7 \pm 1.6 (0.9) [18]	12 \pm 6.2* (3.6) [27]	14.8 \pm 11.1 (6.3) [15]	N/A
Cut stumps ^b	38.9 \pm 8.9 (5.2) [25]	30.4 \pm 25 (12.9) [7]	42.2 \pm 9.3 (5.3) [18]	21.4 \pm 7.2 (4.2) [27]	12.8 \pm 5.9 (3.3) [15]	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

^a Mean densities differ between units within size classes $P < 0.05$.

Table 30. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Oregon. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	CN			TN		
	Combined (n = 50)	Nest (n = 30)	Random (n = 20)	Combined (n = 42)	Nest (n = 22)	Random (n = 20)
0 to < 1	110 \pm 72.1 (43)	143 \pm 120 (70.8)	58.7 \pm 25.7 (14.9)	185 \pm 83.4 (49.6)	130 \pm 52.8 (30.7)	245 \pm 170 (98)
1 to < 2	79 \pm 29.3 ^a (17.5)	89.4 \pm 46.3 (27.3)	63.3 \pm 26.9 (15.5)	218 \pm 86.7 ^a (51.5)	126 \pm 57.7 (33.5)	320 \pm 170 (98.2)
2 to < 3	82.7 \pm 18 ^a (10.8)	79.6 \pm 24.2 (14.3)	87.3 \pm 28.9 (16.7)	156 \pm 42.1 ^a (25)	129 \pm 50 (29.1)	187 \pm 71.7 (41.5)
3 to < 5	81.8 \pm 16.8 (10)	69.8 \pm 21.2 (12.5)	99.7 \pm 28.3 (16.3)	102 \pm 21.4 (12.7)	104 \pm 32.2 (18.7)	100 \pm 30.5 (17.6)
5 to < 6	23.4 \pm 4.8 (2.9)	20.1 \pm 6.4 (3.8)	28.3 \pm 7.5 (4.3)	30.4 \pm 6.1 (3.6)	28.8 \pm 9.3 (5.4)	32.1 \pm 8.5 (4.9)
6 to < 9	55 \pm 11.3 (6.7)	46.1 \pm 14.8 (8.7)	68.3 \pm 17.5 (10.1)	52.2 \pm 9.7 (5.7)	62.1 \pm 12.9 (7.5)	41.2 \pm 14.5 (8.4)
\geq 9	44.1 \pm 5.3 (3.2)	41.8 \pm 5.9 (3.5)	47.6 \pm 10.4 (6)	50.4 \pm 5.3 (3.2)	47.7 \pm 8.5 (4.9)	53.3 \pm 6.8 (3.9)
\geq 20	5.1 \pm 1.5 ^a (0.9)	5.2 \pm 2 (1.2)	4.9 \pm 2.1 (1.2)	12.9 \pm 1.8 ^a (1.1)	10.6 \pm 2.4 (1.4)	15.5 \pm 2.6 (1.5)

^a Mean densities differ between units within size classes $P < 0.05$.

Table 30 (con't).

Tree size class (in)	Trees per acre \pm 90% confidence interval (SE)					
	CS			TS		
	Combined (n = 33)	Nest (n = 13)	Random (n = 20)	Combined (n = 50)	Nest (n = 30)	Random (n = 20)
0 to < 1	70.7 \pm 19.5 ^a (11.5)	60.3 \pm 24.7 (13.9)	77.4 \pm 29.1 (16.8)	303 \pm 173 ^a (103)	207 \pm 97.9 (57.6)	446 \pm 420 (243)
1 to < 2	44.5 \pm 12.6 ^a (7.4)	42 \pm 19.6 (11)	46.1 \pm 17.7 (10.2)	142 \pm 41.4 ^a (24.7)	118 \pm 55.1 (32.4)	178 \pm 65.2 (37.7)
2 to < 3	40.3 \pm 12.7 ^a (7.5)	37 \pm 20.2 (11.3)	42.5 \pm 17.5 (10.1)	128 \pm 38.4 ^a (22.9)	101 \pm 57.6 (33.9)	169 \pm 42.4 (24.5)
3 to < 5	56.4 \pm 18.2 ^a (10.8)	37.8 \pm 24 (13.5)	68.6 \pm 26.1 (15.1)	111 \pm 27 ^a (16.1)	76.4 \pm 39.1 (23)	162 \pm 26.1 (15.1)
5 to < 6	16.1 \pm 5.2 (3.1)	17.9 \pm 8.3 (4.6)	14.9 \pm 7.1 (4.1)	28.7 \pm 9.5 (5.7)	22.6 \pm 14.8 (8.7)	38 \pm 9 (5.2)
6 to < 9	41.1 \pm 9.7 (5.7)	37.8 \pm 18.8 (10.5)	43.3 \pm 11.5 (6.6)	83.2 \pm 34.3 (20.5)	80.6 \pm 57.3 (33.7)	87 \pm 16.4 (9.5)
≥ 9	55.3 \pm 6.1 (3.6)	50.6 \pm 10.6 (5.9)	58.3 \pm 7.8 (4.5)	51.7 \pm 6.9 (4.1)	57.1 \pm 11 (6.5)	43.6 \pm 4.5 (2.6)
≥ 20	1.8 \pm 0.9 (0.5)	3.7 \pm 1.7 (1)	0.5 \pm 0.6 (0.4)	1.3 \pm 0.5 (0.3)	1.6 \pm 0.8 (0.5)	0.9 \pm 0.6 (0.3)

^a Mean densities differ between units within size classes $P < 0.05$.

Table 31. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Washington. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)									
Snag size class (in)	FY			Combined (n = 24)	HR		Combined (n = 32)	LK	
	Combined (n = 35)	Nest (n = 15)	Random (n = 20)		Nest (n = 10)	Random (n = 14)		Nest (n = 12)	Random (n = 20)
0 to < 1	4.8 \pm 3.9 (2.3)	7.1 \pm 8.8 (5)	3 + 2.6 (1.5)	10.1 + 6.4 (3.7)	0.5 + 0.9 (0.5)	17 + 10.2 (5.8)	3.5 + 2.4 (1.4)	1.3 + 1.6 (0.9)	4.8 + 3.7 (2.1)
1 to < 2	9.5 + 6.2 (3.7)	7.4 + 8.9 (5.1)	11.1 + 9.1 (5.3)	17.7 + 11.5 (6.7)	1.5 + 2 (1.1)	29.3 + 18.7 (10.5)	5.5 + 3.3 (1.9)	0.8 + 1.5 (0.8)	8.3 + 5.1 (2.9)
2 to < 3	6.5 + 5.5 (3.3)	7.8 + 11.8 (6.7)	5.6 + 5 (2.9)	8.2 + 8 (4.7)	0.5 + 0.9 (0.5)	13.7 + 13.8 (7.8)	5.1 + 2.3 (1.4)	5.9 + 3.5 (2)	4.6 + 3.2 (1.9)
3 to < 5	6.5 + 6.6 (3.9)	9.1 + 15.4 (8.8)	4.6 + 3.9 (2.3)	6.1 + 3.4 (2)	1 + 1.9 (1)	9.8 + 5.4 (3)	2.4 + 1.5 (0.9)	2.1 + 2.1 (1.2)	2.5 + 2.1 (1.2)
5 to < 6	4.2 + 4.9 (2.9)	7.8 + 11.8 (6.7)	1.5 + 1.4 (0.8)	1.1 + 1 (0.6)	1.5 + 2 (1.1)	0.7 + 1.3 (0.7)	0.8 + 1 (0.6)	1.3 + 2.3 (1.3)	0.5 + 0.9 (0.5)
6 to < 9	3.5 + 4.4 (2.6)	7.1 + 10.6 (6)	0.8 + 1 (0.6)	2.7 + 1.8 (1.1)	3.5 + 3.9 (2.1)	2.2 + 1.8 (1)	4.4 + 3.1 (1.9)	4.2 + 4.6 (2.6)	4.6 + 4.5 (2.6)
≥ 9	2.4 + 0.8 (0.5)	2.6 + 0.8 (0.5)	2.2 + 1.3 (0.8)	3.2 + 1 (0.6)	3.1 + 2.1 (1.2)	3.2 + 1.1 (0.6)	2.7 + 1.3 (0.8)	3.1 + 2.1 (1.1)	2.5 + 1.8 (1)
≥ 20	0.8 + 0.3 (0.2)	0.9 + 0.4 (0.2)	0.7 + 0.4 (0.2)	0.8 + 0.3 (0.2)	1 + 0.6 (0.3)	0.6 + 0.4 (0.2)	0.9 + 0.5 (0.3)	1.3 + 1 (0.6)	0.7 + 0.6 (0.4)

Table 31 (con't).

Snags per acre \pm 90% confidence interval (SE)										
Snag size class (in)	MT			Combined (n = 35)	RY			TD		
	Combined (n = 34)	Nest (n = 14)	Random (n = 20)		Nest (n = 15)	Random (n = 20)	Combined (n = 39)	Nest (n = 19)	Random (n = 20)	
0 to < 1	31.1 \pm 8.3 (4.9)	27.8 \pm 15.7 (8.9)	33.4 \pm 9.8 (5.7)	3.9 \pm 1.9 (1.1)	5.4 \pm 3.9 (2.2)	2.8 \pm 1.7 (1)	5.2 \pm 2.9 (1.7)	4.3 \pm 4 (2.3)	6.1 \pm 4.5 (2.6)	
1 to < 2	61.6 \pm 17.3 (10.2)	53.5 \pm 33 (18.6)	67.3 \pm 20.4 (11.8)	1.4 \pm 1 (0.6)	1.7 \pm 1.7 (0.9)	1.3 \pm 1.2 (0.7)	4.9 \pm 2.8 (1.6)	5.3 \pm 4.5 (2.6)	4.6 \pm 3.7 (2.1)	
2 to < 3	42 \pm 14.1 (8.3)	46.3 \pm 32.5 (18.3)	39 \pm 11.2 (6.5)	2.6 \pm 2.1 (1.3)	4.4 \pm 4.8 (2.7)	1.3 \pm 1.2 (0.7)	4.2 \pm 2 (1.2)	5.3 \pm 3.3 (1.9)	3 \pm 2.6 (1.5)	
3 to < 5	20.1 \pm 9.1 (5.4)	24.9 \pm 21 (11.9)	16.7 \pm 7 (4)	2.7 \pm 2 (1.2)	2.4 \pm 2.4 (1.4)	3 \pm 3.1 (1.8)	7.4 \pm 3.7 (2.2)	7.7 \pm 6.1 (3.5)	7.1 \pm 4.9 (2.9)	
5 to < 6	2.4 \pm 2.4 (1.4)	4.3 \pm 5.8 (3.3)	1 \pm 1.2 (0.7)	0.3 \pm 0.5 (0.3)	0	0.5 \pm 0.9 (0.5)	3.1 \pm 2 (1.2)	3.7 \pm 3 (1.7)	2.5 \pm 2.8 (1.6)	
6 to < 9	2.8 \pm 1.6 (0.9)	4.7 \pm 3.3 (1.9)	1.5 \pm 1.4 (0.8)	1.4 \pm 1.1 (0.6)	1 \pm 1.3 (0.7)	1.8 \pm 1.7 (1)	8.6 \pm 6.2 (3.7)	6.9 \pm 5.5 (3.2)	10.1 \pm 11.4 (6.6)	
≥ 9	3.5 \pm 0.7 (0.4)	4.3 \pm 1.3 (0.7)	2.9 \pm 0.7 (0.4)	2.7 \pm 1.1 (0.6)	4 \pm 2.2 (1.3)	1.7 \pm 1 (0.6)	5.6 \pm 1.9 (1.1)	7.4 \pm 3.4 (1.9)	4 \pm 1.8 (1.1)	
≥ 20	0.9 \pm 0.4 (0.2)	0.9 \pm 0.7 (0.4)	0.8 \pm 0.4 (0.2)	0.3 \pm 0.2 (0.1)	0.7 \pm 0.3 (0.2)	0.1 \pm 0.1 (0.1)	0.8 \pm 0.5 (0.3)	1.3 \pm 0.9 (0.5)	0.4 \pm 0.5 (0.3)	

Table 31 (con't).

Snag size class (in)	Snags per acre \pm 90% confidence interval (SE)		
	Combined (n = 25)	ZR	
		Nest (n = 19)	Random (n = 6)
0 to < 1	5.1 \pm 3.4 (2)	5.6 \pm 4.4 (2.5)	3.4 \pm 4.3 (2.1)
1 to < 2	8.9 \pm 5 (2.9)	8 \pm 6.2 (3.6)	11.8 \pm 9.7 (4.8)
2 to < 3	4 \pm 2.6 (1.5)	3.2 \pm 2.6 (1.5)	6.7 \pm 8.6 (4.3)
3 to < 5	4 \pm 3.2 (1.8)	4.8 \pm 4.1 (2.4)	1.7 \pm 3.4 (1.7)
5 to < 6	0	0	0
6 to < 9	0.4 \pm 0.5 (0.3)	0.5 \pm 0.6 (0.4)	0
\geq 9	3.1 \pm 0.9 (0.5)	3.1 \pm 1 (0.6)	3.4 \pm 3.1 (1.5)
\geq 20	1 \pm 0.4 (0.2)	1.2 \pm 0.5 (0.3)	0.5 \pm 0.7 (0.3)

Table 32. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for Birds and Burns study units located in Washington. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stumps per acre \pm 90% confidence interval (SE)									
Stump category	FY			HR			LK		
	Combined	Nest	Random	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	26 \pm 5.5 (3.2) [35]	21.6 \pm 9.7 (5.5) [15]	29.3 \pm 6.6 (3.8) [20]	5.3 \pm 2.2 (1.3) [24]	5.6 \pm 3.8 (2.1) [10]	5.1 \pm 3 (1.7) [14]	21.7 \pm 7 (4.1) [32]	11.4 \pm 6.2 (3.5) [12]	27.8 \pm 10.2 (5.9) [20]
Natural stumps ^b	6.6 \pm 3.5 (2) [26]	6.7 \pm 7 (3.8) [9]	6.5 \pm 4.3 (2.4) [17]	4.8 \pm 2.7 (1.5) [17]	6.1 \pm 8.6 (4) [5]	4.2 \pm 2.7 (1.5) [12]	6 \pm 3.4 (2) [22]	12.1 \pm 10.6 (5) [5]	4.2 \pm 3.4 (2) [17]
Cut stumps ^b	17.9 \pm 6.2 (3.7) [26]	11.2 \pm 12.3 (6.6) [9]	21.4 \pm 7.4 (4.2) [17]	0.6 \pm 1 (0.6) [17]	0 [5]	0.8 \pm 1.5 (0.8) [12]	20.7 \pm 8.6 (5) [22]	4 \pm 5.3 (2.5) [5]	25.6 \pm 10.4 (6) [17]

Table 32 (con't).

Stumps per acre \pm 90% confidence interval (SE)									
Stump category	MT			RY			TD		
	Combined	Nest	Random	Combined	Nest	Random	Combined	Nest	Random
All stumps ^a	6.5 \pm 2 (1.2) [34]	4.3 \pm 2.5 (1.4) [14]	8.1 \pm 3 (1.7) [20]	20.1 \pm 5.6 (3.3) [35]	12.8 \pm 5.6 (3.2) [15]	25.6 \pm 8.7 (5) [20]	21.3 \pm 5.8 (3.5) [39]	10.4 \pm 5.1 (2.9) [19]	31.6 \pm 9.1 (5.2) [20]
Natural stumps ^b	7 \pm 2.5 (1.5) [26]	5.1 \pm 4.6 (2.3) [6]	7.6 \pm 3.1 (1.8) [20]	1.2 \pm 1.1 (0.7) [25]	1.4 \pm 2.8 (1.4) [7]	1.1 \pm 1.3 (0.8) [18]	2.9 \pm 1.8 (1.1) [31]	3.4 \pm 2.6 (1.4) [12]	2.7 \pm 2.6 (1.5) [19]
Cut stumps ^b	0.4 \pm 0.7 (0.4) [26]	0 [6]	0.5 \pm 0.9 (0.5) [20]	18.6 \pm 6.2 (3.6) [25]	10.1 \pm 8.6 (4.4) [7]	21.9 \pm 8 (4.6) [18]	19.6 \pm 6.8 (4) [31]	5.1 \pm 4.8 (2.6) [12]	28.8 \pm 9.2 (5.3) [19]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

Table 32 (con't).

Z/R			
Stump category	Combined	Nest	Random
All stumps ^a	6.9 ± 3.6 (2.1) [25]	6.1 ± 3.4 (2) [19]	9.3 ± 13 (6.5) [6]
Natural stumps ^b	3.4 ± 4.1 (2.4) [15]	2 ± 3.7 (2) [10]	6.1 ± 13 (6.1) [5]
Cut stumps ^b	2.7 ± 2.7 (1.5) [15]	2 ± 3.7 (2) [10]	4 ± 5.3 (2.5) [5]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

Table 33. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for Birds and Burns units located in Washington. Densities given for all points combined, and separated by nest tree and random points. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Tree size class (in)	Trees per acre \pm 90% confidence interval (SE)								
	FY			HR			LK		
	Combined (n = 35)	Nest (n = 15)	Random (n = 20)	Combined (n = 24)	Nest (n = 10)	Random (n = 14)	Combined (n = 32)	Nest (n = 12)	Random (n = 20)
0 to < 1	63 \pm 25.1 (14.8)	43.2 \pm 39.3 (22.3)	77.9 \pm 34.1 (19.7)	27 \pm 14 (8.2)	6.6 \pm 4.4 (2.4)	41.6 \pm 22.4 (12.6)	14.2 \pm 7.4 (4.3)	16.9 \pm 14.6 (8.2)	12.6 \pm 8.8 (5.1)
1 to < 2	49.4 \pm 19.7 (11.7)	27 \pm 24.1 (13.7)	66.3 \pm 29.3 (16.9)	52.5 \pm 23 (13.4)	11.1 \pm 10.1 (5.5)	82.1 \pm 34.2 (19.3)	17.4 \pm 9.4 (5.6)	19.4 \pm 19 (10.6)	16.2 \pm 11.2 (6.5)
2 to < 3	57 \pm 26.8 (15.9)	27 \pm 32.1 (18.2)	79.5 \pm 40.3 (23.3)	54.2 \pm 23.4 (13.6)	11.6 \pm 7.3 (4)	84.6 \pm 34.8 (19.6)	19.1 \pm 7.3 (4.3)	27 \pm 13.2 (7.4)	14.4 \pm 8.9 (5.2)
3 to < 5	44.2 \pm 19.1 (11.3)	25.3 \pm 22.3 (12.6)	58.5 \pm 29.2 (16.9)	80.1 \pm 33.3 (19.4)	21.3 \pm 10.4 (5.7)	122 \pm 50.2 (28.3)	36.5 \pm 13.3 (7.9)	41.8 \pm 25.1 (14)	33.4 \pm 16.6 (9.6)
5 to < 6	13.7 \pm 5.4 (3.2)	10.5 \pm 8.1 (4.6)	16.2 \pm 7.6 (4.4)	22.1 \pm 9.8 (5.7)	8.1 \pm 4.8 (2.6)	32.2 \pm 15.7 (8.8)	9.6 \pm 3.3 (1.9)	11 \pm 4.6 (2.6)	8.9 \pm 4.7 (2.7)
6 to < 9	21.3 \pm 7.2 (4.3)	9.1 \pm 7.7 (4.4)	30.4 \pm 10.3 (6)	36.7 \pm 13.2 (7.7)	17.7 \pm 10.8 (5.9)	50.3 \pm 20.1 (11.3)	34.8 \pm 8.2 (4.8)	33.3 \pm 13.8 (7.7)	35.7 \pm 11 (6.4)
\geq 9	41 \pm 7 (4.1)	32.7 \pm 9.7 (5.5)	47.2 \pm 9.8 (5.7)	42.3 \pm 7.3 (4.3)	35.1 \pm 12 (6.5)	47.4 \pm 9.5 (5.4)	45.6 \pm 5.9 (3.5)	35.5 \pm 6.3 (3.5)	51.7 \pm 8.2 (4.7)
\geq 20	5.9 \pm 1.5 (0.9)	6.7 \pm 3 (1.7)	5.3 \pm 1.7 (1)	6.2 \pm 1.7 (1)	7.7 \pm 1.9 (1)	5.2 \pm 2.7 (1.5)	6.4 \pm 1.8 (1)	5.8 \pm 2.5 (1.4)	6.7 \pm 2.6 (1.5)

Table 33 (con't).

Trees per acre \pm 90% confidence interval (SE)										
Tree size class (in)	MT			Combined (n = 35)	RY			Combined (n = 39)	TD	
	Combined (n = 34)	Nest (n = 14)	Random (n = 20)		Nest (n = 15)	Random (n = 20)	Nest (n = 19)		Random (n = 20)	
0 to < 1	58.3 \pm 18.6 (11)	59.3 \pm 35.9 (20.2)	57.7 \pm 22 (12.7)	53.1 \pm 20.8 (12.3)	31.4 \pm 9.8 (5.6)	69.3 \pm 35.7 (20.6)	88.8 \pm 27.2 (16.2)	49.5 \pm 26.8 (15.4)	126 \pm 44.2 (25.6)	
1 to < 2	115 \pm 26.6 (15.7)	100 \pm 44.4 (25.1)	126 \pm 35.1 (20.3)	42.8 \pm 17.1 (10.1)	31 \pm 10.2 (5.8)	51.6 \pm 29.6 (17.1)	66.6 \pm 18.8 (11.1)	44.5 \pm 21 (12.1)	87.6 \pm 30.2 (17.5)	
2 to < 3	166 \pm 29.6 (17.5)	128 \pm 49 (27.6)	193 \pm 36.3 (21)	32.7 \pm 9.8 (5.8)	32.4 \pm 15 (8.5)	32.9 \pm 13.8 (8)	51.3 \pm 11.5 (6.8)	39.4 \pm 16.6 (9.6)	62.5 \pm 15.9 (9.2)	
3 to < 5	194 \pm 31.8 (18.8)	131 \pm 44.3 (25)	238 \pm 38.3 (22.2)	34 \pm 9.1 (5.4)	34.7 \pm 17 (9.6)	33.4 \pm 10.9 (6.3)	49.2 \pm 10.3 (6.1)	38.1 \pm 11.9 (6.8)	59.7 \pm 16.4 (9.5)	
5 to < 6	56.6 \pm 12.7 (7.5)	33.3 \pm 13.3 (7.5)	72.9 \pm 17.7 (10.2)	12.3 \pm 4.6 (2.7)	17.5 \pm 8.6 (4.9)	8.3 \pm 5.1 (2.9)	16.5 \pm 4.7 (2.8)	12.8 \pm 4.5 (2.6)	20 \pm 8.2 (4.7)	
6 to < 9	65.8 \pm 12.6 (7.4)	40.5 \pm 11.5 (6.5)	83.5 \pm 17.5 (10.1)	21.8 \pm 7.9 (4.7)	21.3 \pm 12.8 (7.2)	22.3 \pm 10.8 (6.2)	31.4 \pm 6.5 (3.8)	22.6 \pm 6.8 (3.9)	39.7 \pm 10.4 (6)	
≥ 9	35.5 \pm 5.1 (3)	24.6 \pm 7.5 (4.3)	43.2 \pm 5.8 (3.3)	44.8 \pm 6.3 (3.7)	38.4 \pm 7.6 (4.3)	49.5 \pm 9.6 (5.5)	36.5 \pm 5.3 (3.2)	32.7 \pm 6.4 (3.7)	40 \pm 8.7 (5)	
≥ 20	4.1 \pm 1 (0.6)	2.5 \pm 1.2 (0.7)	5.2 \pm 1.5 (0.9)	6.2 \pm 1.9 (1.1)	9.7 \pm 3.8 (2.1)	3.5 \pm 1.2 (0.7)	4.4 \pm 1.3 (0.8)	6.3 \pm 1.8 (1.1)	2.7 \pm 1.6 (0.9)	

Table 33 (con't).

Trees per acre \pm 90% confidence interval (SE)			
Tree size class (in)	ZR		
	Combined (n = 25)	Nest (n = 19)	Random (n = 6)
0 to < 1	17.2 \pm 8.7 (5.1)	17.8 \pm 11.2 (6.4)	15.2 \pm 12.6 (6.3)
1 to < 2	45.3 \pm 18.3 (10.7)	45 \pm 22.7 (13.1)	46.4 \pm 36.5 (18.1)
2 to < 3	60.1 \pm 21.5 (12.6)	61 \pm 28.2 (16.3)	57.4 \pm 22.8 (11.3)
3 to < 5	59.1 \pm 21 (12.3)	60.7 \pm 27.3 (15.7)	54 \pm 28.7 (14.2)
5 to < 6	23.3 \pm 9.8 (5.7)	19.2 \pm 12 (6.9)	36.3 \pm 15.9 (7.9)
6 to < 9	32.4 \pm 11.3 (6.6)	29.3 \pm 12.3 (7.1)	42.2 \pm 33.5 (16.6)
\geq 9	34.5 \pm 7.1 (4.2)	30.6 \pm 8.7 (5)	46.8 \pm 9.3 (4.6)
\geq 20	6.3 \pm 1.7 (1)	6.3 \pm 1.9 (1.1)	6.2 \pm 5.1 (2.5)

Table 34. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located on the Apache-Sitgreaves National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	All points combined (n = 77)		Open (n = 1)		Closed (n = 76)	
	Open (n = 1)	Closed (n = 76)	Nests (n = 1)	Random (n = 0)	Nests (n = 18)	Random (n = 58)
0 to < 1	35.4	15.1 \pm 4.2 (2.5)	35.4	N/A	4.5 \pm 2.7 ^a (1.6)	18.3 \pm 5.2 ^a (3.1)
1 to < 2	10.1	17 \pm 4.1 (2.4)	10.1	N/A	10.4 \pm 9.7 (5.6)	19 \pm 4.5 (2.7)
2 to < 3	30.4	15.5 \pm 3.3 (2)	30.4	N/A	6.8 \pm 4.3 ^a (2.5)	18.2 \pm 4 ^a (2.4)
3 to < 5	20.2	13.1 \pm 3 (1.8)	20.2	N/A	5.1 \pm 2.7 ^a (1.5)	15.5 \pm 3.7 ^a (2.2)
5 to < 6	5.1	3.7 \pm 1.1 (0.7)	5.1	N/A	1.7 \pm 1.4 ^a (0.8)	4.3 \pm 1.3 ^a (0.8)
6 to < 9	10.1	9.7 \pm 2.2 (1.3)	10.1	N/A	4.5 \pm 3.2 ^a (1.8)	11.3 \pm 2.6 ^a (1.6)
\geq 9	5.1	4 \pm 0.6 (0.4)	5.1	N/A	4.2 \pm 1.4 (0.8)	4 \pm 0.7 (0.4)
\geq 20	0	0.5 \pm 0.1 (0.1)	0	N/A	0.8 \pm 0.3 (0.2)	0.4 \pm 0.1 (0.1)

^a Mean densities differ between nest points within size classes P < 0.05.

Table 35. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located on the Apache-Sitgreaves National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	10.1 [1]	28.1 \pm 4.5 (2.7) [76]	10.1 [1]	N/A	25.9 \pm 9.5 (5.5) [18]	28.8 \pm 5.2 (3.1) [58]
Natural stumps ^a	0 [1]	0 [76]	0 [1]	N/A	0 [18]	0 [58]
Cut stumps ^b	10.1 [1]	28.1 \pm 4.5 (2.7) [76]	10.1 [1]	N/A	25.9 \pm 9.5 (5.5) [18]	28.8 \pm 5.2 (3.1) [58]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

Table 36. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located on the Apache-Sitgreaves National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	All points combined (n = 77)		Open (n = 1)		Closed (n = 76)	
	Open (n = 1)	Closed (n = 76)	Nests (n = 1)	Random (n = 0)	Nests (n = 18)	Random (n = 58)
0 to < 1	40.5	120 \pm 21.4 (12.8)	40.5	N/A	95 \pm 23.8 (13.7)	127 \pm 27.1 (16.2)
1 to < 2	15.2	108 \pm 17.5 (10.5)	15.2	N/A	90.5 \pm 24.8 (14.3)	113 \pm 21.7 (13)
2 to < 3	5.1	66 \pm 9 (5.4)	5.1	N/A	56.5 \pm 17.4 (10)	68.5 \pm 10.7 (6.4)
3 to < 5	30.4	54.6 \pm 8.5 (5.1)	30.4	N/A	41 \pm 17.4 (10)	58.8 \pm 9.7 (5.8)
5 to < 6	5.1	23.7 \pm 4.3 (2.6)	5.1	N/A	19.4 \pm 11.7 (6.7)	25 \pm 4.5 (2.7)
6 to < 9	106	109 \pm 11 (6.6)	106	N/A	86.6 \pm 17.2 ^a (9.9)	115 \pm 13.3 ^a (7.9)
\geq 9	107	61.3 \pm 4.5 (2.7)	107	N/A	67.8 \pm 12.1 (7)	59.2 \pm 4.6 (2.8)
\geq 20	10.1	4 \pm 0.6 (0.4)	10.1	N/A	5.2 \pm 1.4 (0.8)	3.7 \pm 0.7 (0.4)

^a Mean densities differ between nest points within size classes P < 0.05.

Table 37. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located on the Coconino National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	All points combined (n = 101)		Open (n = 13)		Closed (n = 88)	
	Open (n = 13)	Closed (n = 88)	Nests (n = 3)	Random (n = 10)	Nests (n = 18)	Random (n = 70)
0 to < 1	44.4 \pm 24.5 (13.8)	43.2 \pm 11.5 (6.9)	21.9 \pm 32.3 (11.1)	51.1 \pm 31.7 (17.3)	12.1 \pm 10.5 ^b (6)	51.2 \pm 13.9 ^b (8.3)
1 to < 2	3.5 \pm 3 ^a (1.7)	9.5 \pm 3.8 ^a (2.3)	1.7 \pm 5 (1.7)	4.1 \pm 3.9 (2.1)	2.8 \pm 3.6 ^b (2.1)	11.3 \pm 4.7 ^b (2.8)
2 to < 3	2.7 \pm 2.4 (1.4)	7.5 \pm 3.3 (2)	5.1 \pm 14.8 (5.1)	2 \pm 2.1 (1.1)	0.6 \pm 0.7 ^b (0.4)	9.3 \pm 4.1 ^b (2.5)
3 to < 5	1.9 \pm 1.9 (1.1)	7.5 \pm 2.4 (1.4)	5.1 \pm 8.5 (2.9)	1 \pm 1.9 (1)	1.1 \pm 1.1 (0.7)	9.1 \pm 2.9 (1.8)
5 to < 6	1.9 \pm 1.9 ^a (1.1)	1.9 \pm 0.9 ^a (0.5)	0	2.5 \pm 2.5 (1.4)	0.9 \pm 0.8 (0.5)	2.2 \pm 1.1 (0.7)
6 to < 9	1.2 \pm 2.1 (1.2)	3.1 \pm 1.2 (0.7)	0	1.5 \pm 2.8 (1.5)	1.7 \pm 1.6 (0.9)	3.4 \pm 1.5 (0.9)
\geq 9	2 \pm 0.6 (0.3)	2.2 \pm 0.4 (0.2)	2.7 \pm 2.6 (0.9)	1.8 \pm 0.6 (0.3)	2 \pm 0.7 (0.4)	2.2 \pm 0.4 (0.3)
\geq 20	0.5 \pm 0.3 (0.2)	0.3 \pm 0.1 (0.1)	1 \pm 0.01 (0.01)	0.4 \pm 0.4 (0.2)	0.7 \pm 0.3 ^b (0.2)	0.2 \pm 0.1 ^b (0.1)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between nest points within size classes $P < 0.05$.

Table 38. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located on the Coconino National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	16 \pm 6.3*	26 \pm 3.3	21.9 \pm 19.7*	14.2 \pm 7.5	26.1 \pm 7.1	26 \pm 3.8
	(3.5)	(2)	(6.7)	(4.1)	(4.1)	(2.3)
	[13]	[88]	[3]	[10]	[18]	[70]
Natural stumps ^a	0	0	0	0	0	0
	[13]	[88]	[3]	[10]	[18]	[70]
Cut stumps ^b	16 \pm 6.3	26 \pm 3.3	21.9 \pm 19.7	14.2 \pm 7.5	26.1 \pm 7.1	26 \pm 3.8
	(3.5)	(2)	(6.7)	(4.1)	(4.1)	(2.3)
	[13]	[88]	[3]	[10]	[18]	[70]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between strata within size classes $P < 0.05$.

Table 39. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located on the Coconino National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
	All points combined (n = 101)		Open (n = 13)		Closed (n = 88)	
Tree size class (in)	Open (n = 13)	Closed (n = 88)	Nests (n = 3)	Random (n = 10)	Nests (n = 18)	Random (n = 70)
0 to < 1	546 \pm 226 (127)	622 \pm 114 (68.6)	391 \pm 574 (197)	592 \pm 286 (156)	377 \pm 175 ^b (101)	685 \pm 135 ^b (80.8)
1 to < 2	22.2 \pm 12.5 (7)	33.3 \pm 8.9 (5.3)	6.7 \pm 19.7 (6.7)	26.8 \pm 15.5 (8.5)	34 \pm 31.6 (18.2)	33.1 \pm 8.2 (4.9)
2 to < 3	16.8 \pm 11.3 (6.3)	29.2 \pm 5.4 (3.3)	6.8 \pm 13 (4.5)	19.8 \pm 14.7 (8)	18.3 \pm 9.3 ^b (5.4)	32 \pm 6.3 ^b (3.8)
3 to < 5	29.2 \pm 11.4 ^a (6.4)	55 \pm 9.1 ^a (5.5)	18.6 \pm 26 (8.9)	32.4 \pm 14.3 (7.8)	32.6 \pm 13.4 ^b (7.7)	60.8 \pm 10.8 ^b (6.5)
5 to < 6	14 \pm 6.8 ^a (3.8)	31.1 \pm 4.5 ^a (2.7)	13.5 \pm 39.4 (13.5)	14.2 \pm 6.6 (3.6)	20 \pm 6.8 ^b (3.9)	34 \pm 5.3 ^b (3.2)
6 to < 9	46.7 \pm 18.1 ^a (10.2)	70.6 \pm 6.7 ^a (4)	38.8 \pm 69.5 (23.8)	49.1 \pm 21.6 (11.8)	63.3 \pm 13 (7.5)	72.5 \pm 7.8 (4.7)
\geq 9	37.2 \pm 7.5 ^a (4.2)	61.3 \pm 4.2 ^a (2.5)	30.4 \pm 12.3 (4.2)	39.3 \pm 9.7 (5.3)	56.5 \pm 8.9 (5.1)	62.6 \pm 4.8 (2.9)
\geq 20	3.7 \pm 1.9 (1)	3.7 \pm 0.6 (0.3)	1.3 \pm 1.9 (0.7)	4.4 \pm 2.3 (1.3)	4 \pm 1.4 (0.8)	3.7 \pm 0.6 (0.4)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 40. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located on the Kaibab National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	All points combined (n = 106)		Open (n = 55)		Closed (n = 77)	
	Open (n = 55)	Closed (n = 77)	Nests (n = 9)	Random (n = 46)	Nests (n = 33)	Random (n = 44)
0 to < 1	1.2 \pm 1 (0.6)	1.7 \pm 1 (0.6)	0	1.4 \pm 1.2 (0.7)	1.4 \pm 1.2 (0.7)	2 \pm 1.5 (0.9)
1 to < 2	0.6 \pm 0.5 (0.3)	0.5 \pm 0.3 (0.2)	0	0.7 \pm 0.6 (0.4)	0.3 \pm 0.4 (0.2)	0.6 \pm 0.4 (0.2)
2 to < 3	0	0.3 \pm 0.2 (0.1)	0	0	0.3 \pm 0.4 (0.2)	0.3 \pm 0.3 (0.2)
3 to < 5	0.1 \pm 0.2 (0.1)	0.4 \pm 0.4 (0.2)	0	0.1 \pm 0.2 (0.1)	0.8 \pm 0.9 (0.5)	0.1 \pm 0.2 (0.1)
5 to < 6	0	0.1 \pm 0.2 (0.1)	0	0	0.2 \pm 0.3 (0.2)	0.1 \pm 0.2 (0.1)
6 to < 9	0.1 \pm 0.2 (0.1)	0.4 \pm 0.3 (0.2)	0	0.1 \pm 0.2 (0.1)	0.8 \pm 0.7 (0.4)	0.1 \pm 0.2 (0.1)
\geq 9	0.8 \pm 0.2 ^a (0.1)	1.3 \pm 0.3 ^a (0.2)	1.9 \pm 0.9 (0.5)	0.5 \pm 0.2 (0.1)	1.9 \pm 0.4 ^b (0.2)	0.9 \pm 0.3 ^b (0.2)
\geq 20	0.3 \pm 0.1 (0.1)	0.5 \pm 0.1 (0.1)	0.7 \pm 0.5 (0.3)	0.2 \pm 0.1 (0.1)	0.7 \pm 0.2 ^b (0.1)	0.3 \pm 0.2 ^b (0.1)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 41. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located on the Kaibab National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	31.9 \pm 9.9 (5.9) [55]	40.4 \pm 8.3 (5) [77]	64.1 \pm 21.7 (11.7) [9]	25.6 \pm 10.6 (6.3) [46]	53.2 \pm 13* (7.7) [33]	30.7 \pm 10.4* (6.2) [44]
Natural stumps ^a	0 [7]	0 [12]	0 [7]	N/A	0 [12]	N/A
Cut stumps ^b	68 \pm 28.9 (14.9) [7]	46.8 \pm 20.1 (11.2) [12]	68 \pm 28.9 (14.9) [7]	N/A	46.8 \pm 20.1 (11.2) [12]	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between point types within size classes $P < 0.05$.

Table 42. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located on the Kaibab National Forest in Arizona. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	All points combined (n = 132)		Open (n = 55)		Closed (n = 77)	
	Open (n = 55)	Closed (n = 77)	Nests (n = 9)	Random (n = 46)	Nests (n = 33)	Random (n = 44)
0 to < 1	35.8 \pm 15.1 ^a (9)	16.3 \pm 4.7 ^a (2.8)	60.2 \pm 92.8 (49.9)	31 \pm 8.8 (5.3)	9.2 \pm 5.8 ^b (3.4)	21.6 \pm 6.9 ^b (4.1)
1 to < 2	2.1 \pm 0.9 ^a (0.6)	5.1 \pm 2.1 ^a (1.2)	1.1 \pm 2.1 (1.1)	2.3 \pm 1.1 (0.6)	6.9 \pm 4.4 (2.6)	3.8 \pm 1.6 (0.9)
2 to < 3	2.2 \pm 1.2 ^a (0.7)	6.4 \pm 2.3 ^a (1.4)	2.2 \pm 4.2 (2.2)	2.2 \pm 1.3 (0.8)	7.8 \pm 3.7 (2.2)	5.4 \pm 3 (1.8)
3 to < 5	4.5 \pm 1.9 ^a (1.2)	11.5 \pm 3.2 ^a (1.9)	2.8 \pm 4.2 (2.2)	4.8 \pm 2.2 (1.3)	11.4 \pm 4.6 (2.7)	11.6 \pm 4.5 (2.7)
5 to < 6	1.3 \pm 1 ^a (0.6)	7.5 \pm 1.7 ^a (1)	0	1.5 \pm 1.2 (0.7)	10.1 \pm 2.8 ^b (1.6)	5.5 \pm 2 ^b (1.2)
6 to < 9	6.4 \pm 2.6 ^a (1.6)	29.5 \pm 5.8 ^a (3.5)	0	7.7 \pm 3.1 (1.8)	40.6 \pm 10.9 ^b (6.4)	21.2 \pm 5.3 ^b (3.2)
\geq 9	24.8 \pm 4.4 ^a (2.7)	76.9 \pm 6.3 ^a (3.8)	11 \pm 2.9 (1.6)	27.5 \pm 5.1 (3)	79.2 \pm 9.5 (5.6)	75.1 \pm 8.6 (5.1)
\geq 20	5.3 \pm 1.1 ^a (0.6)	7.9 \pm 1.3 ^a (0.8)	8.1 \pm 1.9 (1)	4.7 \pm 1.2 (0.7)	8 \pm 2 (1.2)	7.8 \pm 1.7 (1)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 43. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in New Mexico. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	All points combined (n = 100)		Open (n = 8)		Closed (n = 92)	
	Open (n = 8)	Closed (n = 92)	Nests (n = 3)	Random (n = 8)	Nests (n = 50)	Random (n = 42)
0 to < 1	0	7.6 \pm 2 (1.2)	21.9 \pm 32.3 (11.1)	0	6.5 \pm 2.1 (1.3)	9 \pm 3.6 (2.2)
1 to < 2	1.9 \pm 2.5 (1.3)	10.2 \pm 2.7 (1.6)	1.7 \pm 5 (1.7)	1.9 \pm 2.5 (1.3)	6.9 \pm 1.9 ^b (1.1)	14.1 \pm 5.5 ^b (3.2)
2 to < 3	1.3 \pm 1.6 (0.8)	9.5 \pm 3.2 (1.9)	5.1 \pm 14.8 (5.1)	1.3 \pm 1.6 (0.8)	4.9 \pm 1.8 ^b (1.1)	14.9 \pm 6.5 ^b (3.9)
3 to < 5	0.6 \pm 1.2 (0.6)	5.7 \pm 1.7 (1)	5.1 \pm 8.5 (2.9)	0.6 \pm 1.2 (0.6)	3.6 \pm 1.8 ^b (1.1)	8.2 \pm 2.9 ^b (1.7)
5 to < 6	0	1 \pm 0.4 (0.2)	0	0	0.6 \pm 0.4 (0.2)	1.5 \pm 0.7 (0.4)
6 to < 9	0.6 \pm 1.2 (0.6)	3.4 \pm 0.9 (0.6)	0	0.6 \pm 1.2 (0.6)	3.1 \pm 1.2 (0.7)	3.6 \pm 1.5 (0.9)
\geq 9	0.5 \pm 0.5 (0.3)	2.9 \pm 0.5 (0.3)	2.7 \pm 2.6 (0.9)	0.5 \pm 0.5 (0.3)	2.7 \pm 0.6 (0.4)	3.3 \pm 0.9 (0.5)
\geq 20	0	0.5 \pm 0.1 (0.1)	1 \pm 0.01 (0.01)	0	0.6 \pm 0.2 (0.1)	0.4 \pm 0.2 (0.1)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 44. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located in New Mexico. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	0.6 ± 1.2 (0.6) [8]	27.1 ± 5.1 (3.1) [92]	N/A	0.6 ± 1.2 (0.6) [8]	27.9 ± 7 (4.2) [50]	26 ± 7.6 (4.5) [42]
Natural stumps ^a	N/A	0 [36]	N/A	N/A	0 [36]	N/A
Cut stumps ^b	N/A	29.9 ± 8.7 (5.1) [36]	N/A	N/A	29.9 ± 8.7 (5.1) [36]	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

Table 45. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in New Mexico. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	All points combined (n = 100)		Open (n = 8)		Closed (n = 92)	
	Open (n = 8)	Closed (n = 92)	Nests (n = 0)	Random (n = 8)	Nests (n = 50)	Random (n = 42)
0 to < 1	12 \pm 7.9 (4.2)	129 \pm 26.3 (15.8)	N/A	12 \pm 7.9 (4.2)	113 \pm 31 (18.5)	147 \pm 44.9 (26.7)
1 to < 2	8.2 \pm 5.7 (3)	79.2 \pm 14.3 (8.6)	N/A	8.2 \pm 5.7 (3)	54.5 \pm 11.9 ^b (7.1)	109 \pm 26.6 ^b (15.8)
2 to < 3	7 \pm 9.2 (4.9)	62.7 \pm 9 (5.4)	N/A	7 \pm 9.2 (4.9)	53.5 \pm 8.9 (5.3)	73.5 \pm 16.7 (9.9)
3 to < 5	12.7 \pm 8.9 (4.7)	72.7 \pm 9.7 (5.9)	N/A	12.7 \pm 8.9 (4.7)	63.9 \pm 10.4 (6.2)	83.1 \pm 17.5 (10.4)
5 to < 6	1.9 \pm 1.8 (0.9)	22.8 \pm 3.3 (2)	N/A	1.9 \pm 1.8 (0.9)	21.8 \pm 4.5 (2.7)	24 \pm 5.1 (3)
6 to < 9	21.5 \pm 10.4 (5.5)	55.1 \pm 5.3 (3.2)	N/A	21.5 \pm 10.4 (5.5)	51.8 \pm 6.7 (4)	59 \pm 8.7 (5.2)
\geq 9	30.6 \pm 10.3 (5.4)	59.4 \pm 3.5 (2.1)	N/A	30.6 \pm 10.3 (5.4)	58.3 \pm 4.1 (2.4)	60.6 \pm 6.1 (3.6)
\geq 20	9.1 \pm 3.9 (2.1)	6.7 \pm 1 (0.6)	N/A	9.1 \pm 3.9 (2.1)	7.6 \pm 1.3 (0.8)	5.7 \pm 1.5 (0.9)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 46. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Colorado. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snag size class (in)	All points combined (n = 154)		Open (n = 6)		Closed (n = 148)	
	Open (n = 6)	Closed (n = 148)	Nests (n = 2)	Random (n = 4)	Nests (n = 58)	Random (n = 90)
0 to < 1	0	7.1 ± 2.6 (1.6)	0	0	9.3 ± 3.4 (2)	5.7 ± 3.8 (2.3)
1 to < 2	3.4 ± 6.8 (3.4)	8.5 ± 2.2 (1.3)	0	5.1 ± 11.9 (5.1)	10.6 ± 3.8 (2.3)	7.3 ± 2.6 (1.6)
2 to < 3	8.4 ± 11.1 (5.5)	12.6 ± 2.8 (1.7)	0	12.7 ± 17.9 (7.6)	14.4 ± 4.1 (2.4)	11.5 ± 3.9 (2.4)
3 to < 5	28.7 ± 32.6 (16.2)	14 ± 2.7 (1.6)	0	43 ± 49.9 (21.2)	18.8 ± 5.1^b (3.1)	10.9 ± 2.9^b (1.7)
5 to < 6	1.7 ± 3.4 (1.7)	6.1 ± 1.9 (1.1)	0	2.5 ± 5.9 (2.5)	5.5 ± 2 (1.2)	6.5 ± 2.9 (1.7)
6 to < 9	6.7 ± 6.8 (3.4)	9 ± 1.8 (1.1)	0	10.1 ± 9.7 (4.1)	11.7 ± 3.5 (2.1)	7.3 ± 2 (1.2)
≥ 9	9.8 ± 5 (2.5)	8.7 ± 1 (0.6)	9.1 ± 18.9 (3)	10.1 ± 8.6 (3.7)	12.6 ± 2^b (1.2)	6.2 ± 0.8^b (0.5)
≥ 20	2.7 ± 2.1 (1)	2.7 ± 0.3 (0.2)	4.1 ± 12.9 (2.1)	2 ± 2.9 (1.2)	3.3 ± 0.6^b (0.3)	2.3 ± 0.4^b (0.2)

Table 47. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located in Colorado. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stumps per acre \pm 90% confidence interval (SE)						
Stump category	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	15.2 \pm 11.5 (5.7) [6]	5.9 \pm 1.3 (0.8) [148]	25.3 \pm 96 (15.2) [2]	10.1 \pm 9.7 (4.1) [4]	7.9 \pm 2.4 (1.5) [58]	4.6 \pm 1.4 (0.8) [90]
Natural stumps ^a	15.2 \pm 11.5 (5.7) [6]	8 \pm 1.9 (1.1) [88]	25.3 \pm 96 (15.2) [2]	10.1 \pm 9.7 (4.1) [4]	8.5 \pm 3 (1.8) [45]	7.5 \pm 2.4 (1.4) [43]
Cut stumps ^b	0 [6]	0.2 \pm 0.3 (0.2) [88]	0 [2]	0 [4]	0.2 \pm 0.4 (0.2) [45]	0.2 \pm 0.4 (0.2) [43]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

Table 48. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Colorado. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	All points combined (n = 154)		Open (n = 6)		Closed (n = 148)	
	Open (n = 6)	Closed (n = 148)	Nests (n = 2)	Random (n = 4)	Nests (n = 58)	Random (n = 90)
0 to < 1	84.3 \pm 79.8 (39.6)	125 \pm 36.5 (22.1)	182 \pm 575 (91.1)	35.4 \pm 28.4 (12)	227 \pm 76.1 ^b (45.5)	59.6 \pm 30.9 ^b (18.6)
1 to < 2	38.8 \pm 33.1 (16.4)	27.1 \pm 6.6 (4)	86.1 \pm 95.7 (15.2)	15.2 \pm 20.6 (8.8)	36.8 \pm 13.2 (7.9)	20.8 \pm 6.6 (4)
2 to < 3	10.1 \pm 5.3 (2.6)	16.6 \pm 3.1 (1.9)	15.2 \pm 31.9 (5.1)	7.6 \pm 5.9 (2.5)	23.1 \pm 5.5 ^b (3.3)	12.4 \pm 3.4 ^b (2.1)
3 to < 5	20.2 \pm 7.5 (3.7)	25.3 \pm 3.9 (2.4)	15.2 \pm 31.9 (5.1)	22.8 \pm 11.4 (4.9)	30.3 \pm 6.9 (4.1)	22 \pm 4.7 (2.8)
5 to < 6	3.4 \pm 4.3 (2.1)	10 \pm 1.6 (1)	5.1 \pm 31.9 (5.1)	2.5 \pm 5.9 (2.5)	12.3 \pm 2.5 (1.5)	8.5 \pm 2.1 (1.2)
6 to < 9	18.6 \pm 17.8 (8.8)	32 \pm 4.4 (2.6)	30.4 \pm 128 (20.3)	12.7 \pm 22.6 (9.6)	33.3 \pm 6.7 (4)	31.1 \pm 5.8 (3.5)
\geq 9	67.5 \pm 27.2 (13.5)	67.2 \pm 3.7 (2.2)	103 \pm 75 (11.8)	49.8 \pm 25.8 (11)	73.8 \pm 5.6 ^b (3.4)	63 \pm 4.7 ^b (2.8)
\geq 20	18 \pm 4.9 (2.4)	14.6 \pm 1.3 (0.8)	23.6 \pm 21.5 (3.4)	15.2 \pm 5.1 (2.2)	15.5 \pm 2.1 (1.3)	14 \pm 1.8 (1.1)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 49. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Idaho. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	All points combined (n = 248)		Open (n = 141)		Closed (n = 107)	
	Open (n = 141)	Closed (n = 107)	Nests (n = 82)	Random (n = 59)	Nests (n = 56)	Random (n = 51)
0 to < 1	1.3 \pm 0.6 ^a (0.3)	8.7 \pm 3.8 ^a (2.3)	0.8 \pm 0.6 (0.3)	1.9 \pm 1.1 (0.7)	7.1 \pm 3.2 (1.9)	10.4 \pm 7.2 (4.3)
1 to < 2	1 \pm 0.5 ^a (0.3)	9.7 \pm 4.7 ^a (2.9)	0.5 \pm 0.4 (0.2)	1.8 \pm 1.2 (0.7)	9.2 \pm 5 (3)	10.2 \pm 8.5 (5.1)
2 to < 3	0.3 \pm 0.2 ^a (0.1)	4.3 \pm 2.1 ^a (1.3)	0.01 \pm 0.1 ^b (0.01)	0.6 \pm 0.4 ^b (0.2)	3.7 \pm 2 (1.2)	5 \pm 3.9 (2.3)
3 to < 5	0.7 \pm 0.5 ^a (0.3)	3 \pm 1.1 ^a (0.7)	0.5 \pm 0.5 (0.3)	0.9 \pm 1 (0.6)	2.7 \pm 1.2 (0.7)	3.3 \pm 1.9 (1.1)
5 to < 6	0.2 \pm 0.1 ^a (0.1)	0.7 \pm 0.4 ^a (0.2)	0.1 \pm 0.1 (0.1)	0.2 \pm 0.2 (0.1)	0.9 \pm 0.6 (0.4)	0.6 \pm 0.4 (0.2)
6 to < 9	0.6 \pm 0.3 ^a (0.2)	2.6 \pm 0.9 ^a (0.5)	0.4 \pm 0.3 (0.2)	0.9 \pm 0.7 (0.4)	2.4 \pm 1 (0.6)	2.8 \pm 1.5 (0.9)
\geq 9	3.4 \pm 0.5 ^a (0.3)	6.1 \pm 1 ^a (0.6)	4.1 \pm 0.7 ^b (0.4)	2.5 \pm 0.8 ^b (0.5)	8 \pm 1.5 ^b (0.9)	4 \pm 1 ^b (0.6)
\geq 20	2 \pm 0.3 (0.2)	2.9 \pm 0.5 (0.3)	2.8 \pm 0.5 ^b (0.3)	1 \pm 0.3 ^b (0.2)	4 \pm 0.7 ^b (0.4)	1.7 \pm 0.6 ^b (0.4)

Table 50. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located in Idaho. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	2.9 \pm 1.3 (0.8) [79]	3.5 \pm 1.2 (0.7) [62]	3 \pm 1.3 (0.7) [47]	2.9 \pm 2.6 (1.5) [32]	5.2 \pm 1.8* (1.1) [35]	1.3 \pm 1* (0.6) [27]
Natural stumps ^a	3.6 \pm 2 (1.1) [25]	5.1 \pm 2.2 (1.3) [26]	3.6 \pm 2 (1.1) [25]	N/A	5.1 \pm 2.2 (1.3) [26]	N/A
Cut stumps ^b	0 (0) [25]	0.8 \pm 1.3 (0.8) [26]	0 (0) [25]	N/A	0.8 \pm 1.3 (0.8) [26]	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between point types within size classes $P < 0.05$.

Table 51. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Idaho. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	All points combined (n = 248)		Open (n = 141)		Closed (n = 107)	
	Open (n = 141)	Closed (n = 107)	Nests (n = 82)	Random (n = 59)	Nests (n = 56)	Random (n = 51)
0 to < 1	5.6 \pm 2 ^a (1.2)	27.4 \pm 8.4 ^a (5.1)	5.8 \pm 2.9 (1.7)	5.5 \pm 2.7 (1.6)	33.6 \pm 12.2 (7.3)	20.5 \pm 11.7 (7)
1 to < 2	5.3 \pm 1.7 ^a (1)	22.8 \pm 6.5 ^a (3.9)	3.8 \pm 1.7 (1)	7.5 \pm 3.3 (2)	26 \pm 9.2 (5.5)	19.2 \pm 9.4 (5.6)
2 to < 3	4.7 \pm 1.4 ^a (0.9)	19.7 \pm 5.3 ^a (3.2)	3.6 \pm 1.6 (0.9)	6.1 \pm 2.7 (1.6)	22.4 \pm 8 (4.8)	16.8 \pm 7.2 (4.3)
3 to < 5	5.5 \pm 1.6 ^a (1)	19.9 \pm 4.5 ^a (2.7)	3.3 \pm 1.6 ^b (0.9)	8.4 \pm 3.2 ^b (1.9)	21.9 \pm 6.5 (3.9)	17.7 \pm 6.4 (3.8)
5 to < 6	1.6 \pm 0.5 ^a (0.3)	6.4 \pm 1.7 ^a (1)	1.3 \pm 0.6 (0.4)	2.1 \pm 1 (0.6)	6.2 \pm 2.2 (1.3)	6.5 \pm 2.6 (1.5)
6 to < 9	4.4 \pm 1.4 ^a (0.8)	15.1 \pm 3.7 ^a (2.2)	2.3 \pm 1 ^b (0.6)	7.4 \pm 3 ^b (1.8)	14.9 \pm 4.8 (2.9)	15.3 \pm 5.8 (3.5)
\geq 9	19.9 \pm 1.7 ^a (1.1)	44.7 \pm 3.4 ^a (2.1)	17.3 \pm 1.9 ^b (1.1)	23.4 \pm 3.2 ^b (1.9)	42.9 \pm 4.3 (2.6)	46.6 \pm 5.5 (3.3)
\geq 20	10.7 \pm 1.1 ^a (0.6)	17.8 \pm 1.6 ^a (1)	10.2 \pm 1.3 (0.8)	11.4 \pm 1.8 (1.1)	18.5 \pm 2 (1.2)	17.1 \pm 2.7 (1.6)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 52. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Oregon. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	All points combined (n = 175)		Open (n = 146)		Closed (n = 29)	
	Open (n = 146)	Closed (n = 29)	Nests (n = 74)	Random (n = 72)	Nests (n = 21)	Random (n = 8)
0 to < 1	20.3 \pm 5.8 (3.5)	23 \pm 17.7 (10.4)	14.4 \pm 6 (3.6)	26.4 \pm 10 (6)	12 \pm 6.9 (4)	51.9 \pm 68.2 (36)
1 to < 2	12.5 \pm 4.1 (2.5)	21.5 \pm 12.3 (7.2)	7.6 \pm 2.8 ^b (1.7)	17.6 \pm 7.8 ^b (4.7)	18.8 \pm 11.9 (6.9)	28.5 \pm 37.2 (19.6)
2 to < 3	8.1 \pm 2 (1.2)	19.4 \pm 9.8 (5.8)	6.4 \pm 2.3 (1.4)	9.8 \pm 3.3 (2)	18.6 \pm 11.7 (6.8)	21.5 \pm 22.2 (11.7)
3 to < 5	6.3 \pm 1.4 (0.8)	11.2 \pm 5.7 (3.3)	5.3 \pm 1.5 (0.9)	7.3 \pm 2.4 (1.4)	10.1 \pm 6.5 (3.8)	13.9 \pm 14 (7.4)
5 to < 6	2.1 \pm 0.8 (0.5)	3 \pm 1.7 (1)	2.5 \pm 1.2 (0.7)	1.8 \pm 0.9 (0.5)	3.6 \pm 2.3 (1.4)	1.3 \pm 1.6 (0.8)
6 to < 9	4.6 \pm 1 (0.6)	3.7 \pm 2.4 (1.4)	4.3 \pm 1.3 (0.8)	4.9 \pm 1.7 (1)	4.8 \pm 3.2 (1.9)	0.6 \pm 1.2 (0.6)
\geq 9	3.9 \pm 0.8 (0.5)	6.9 \pm 2.7 (1.6)	5.1 \pm 1 ^b (0.6)	2.7 \pm 1.3 ^b (0.8)	6.6 \pm 3.5 (2)	7.4 \pm 5.1 (2.7)
\geq 20	0.7 \pm 0.2 (0.1)	1.8 \pm 1 (0.6)	0.9 \pm 0.3 ^b (0.2)	0.5 \pm 0.2 ^b (0.1)	1.4 \pm 1.2 (0.7)	2.8 \pm 1.9 (1)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 53. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located in Oregon. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	27.3 \pm 3.8* (2.3) [146]	14.5 \pm 5.3* (3.1) [29]	26 \pm 5.9 (3.5) [74]	28.6 \pm 5 (3) [72]	13 \pm 5.3 (3.1) [21]	18.3 \pm 15.4 (8.1) [8]
Natural stumps ^a	5.5 \pm 2 (1.2) [97]	N/A	6.5 \pm 3.7 (2.2) [48]	4.5 \pm 1.7 (1) [49]	N/A	N/A
Cut stumps ^b	27.1 \pm 5 (3) [97]	N/A	24.2 \pm 8 (4.8) [48]	30 \pm 6.2 (3.7) [49]	N/A	N/A

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between strata within size classes $P < 0.05$.

Table 54. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Oregon. Densities given for all points combined, and separated by nest tree and random points within each stratum Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	All points combined (n = 175)		Open (n = 146)		Closed (n = 29)	
	Open (n = 146)	Closed (n = 29)	Nests (n = 74)	Random (n = 72)	Nests (n = 21)	Random (n = 8)
0 to < 1	169 \pm 64.1 (38.7)	208 \pm 126 (74.3)	148 \pm 59.6 (35.8)	191 \pm 116 (69.5)	153 \pm 84.1 (48.8)	353 \pm 457 (241)
1 to < 2	107 \pm 21.2 (12.8)	209 \pm 117 (68.8)	86.3 \pm 25.2 (15.1)	128 \pm 34.4 (20.6)	150.4 \pm 78.4 (45.5)	364 \pm 417 (220)
2 to < 3	100 \pm 18.3 (11)	133 \pm 38 (22.3)	84.7 \pm 26.5 (15.9)	116 \pm 25.3 (15.2)	118 \pm 44.6 (25.9)	173 \pm 82.5 (43.5)
3 to < 5	89.7 \pm 12.3 (7.4)	92.3 \pm 25.5 (15)	71.7 \pm 18.9 (11.4)	108 \pm 15.2 (9.1)	88.7 \pm 29.2 (17)	102 \pm 62.2 (32.8)
5 to < 6	25.5 \pm 3.9 (2.4)	23.9 \pm 8 (4.7)	22.4 \pm 6.4 (3.9)	28.6 \pm 4.5 (2.7)	23.1 \pm 10.7 (6.2)	25.9 \pm 11.2 (5.9)
6 to < 9	58.9 \pm 12.3 (7.4)	64 \pm 19.6 (11.5)	56.6 \pm 23 (13.8)	61.2 \pm 8.4 (5)	69.9 \pm 25.2 (14.6)	48.7 \pm 31.1 (16.4)
\geq 9	48.5 \pm 3.2 (1.9)	56.7 \pm 8.6 (5.1)	46.5 \pm 4.8 (2.9)	50.7 \pm 4.1 (2.5)	59 \pm 11.7 (6.8)	50.9 \pm 9.3 (4.9)
\geq 20	4.9 \pm 0.9 (0.5)	7.3 \pm 2.4 (1.4)	4.8 \pm 1.1 (0.7)	4.9 \pm 1.4 (0.9)	6.3 \pm 2.8 (1.6)	10.1 \pm 5.4 (2.9)

Table 55. Mean snag densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Washington. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Snags per acre \pm 90% confidence interval (SE)						
Snag size class (in)	All points combined (n = 224)		Open (n = 101)		Closed (n = 123)	
	Open (n = 101)	Closed (n = 123)	Nests (n = 48)	Random (n = 53)	Nests (n = 56)	Random (n = 67)
0 to < 1	3.6 \pm 1.4 ^a (0.9)	13.7 \pm 3.3 ^a (2)	2.3 \pm 1.7 (1)	4.7 \pm 2.3 (1.3)	12 \pm 5 (3)	15.1 \pm 4.4 (2.6)
1 to < 2	4.5 \pm 1.9 ^a (1.1)	24.7 \pm 6.4 ^a (3.9)	2.7 \pm 1.7 (1)	6.1 \pm 3.3 (2)	18.4 \pm 9.4 (5.6)	30 \pm 8.9 (5.3)
2 to < 3	3.4 \pm 1.2 ^a (0.7)	16.5 \pm 5 ^a (3)	2.6 \pm 1.5 (0.9)	4 \pm 1.8 (1.1)	16.8 \pm 9 (5.4)	16.2 \pm 5.4 (3.2)
3 to < 5	2.7 \pm 1.3 ^a (0.8)	11 \pm 3.4 ^a (2)	2.8 \pm 2.2 (1.3)	2.5 \pm 1.4 (0.8)	11.8 \pm 6.6 (3.9)	10.3 \pm 3 (1.8)
5 to < 6	1 \pm 0.5 (0.3)	2.6 \pm 1.6 (1)	1.2 \pm 0.8 (0.5)	0.8 \pm 0.6 (0.4)	4 \pm 3.4 (2)	1.4 \pm 0.9 (0.6)
6 to < 9	2.2 \pm 1.2 (0.7)	4.9 \pm 2.3 (1.4)	2.3 \pm 1.9 (1.1)	2.1 \pm 1.6 (1)	5.4 \pm 3.1 (1.9)	4.4 \pm 3.4 (2)
\geq 9	3.1 \pm 0.8 (0.5)	3.6 \pm 0.5 (0.3)	4.6 \pm 1.5 ^b (0.9)	1.8 \pm 0.7 ^b (0.4)	3.7 \pm 0.7 (0.4)	3.5 \pm 0.7 (0.4)
\geq 20	0.8 \pm 0.2 (0.1)	0.8 \pm 0.2 (0.1)	1.1 \pm 0.4 ^b (0.2)	0.4 \pm 0.2 ^b (0.1)	1 \pm 0.3 (0.2)	0.6 \pm 0.2 (0.1)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 56. Mean stump densities per acre \pm 90% confidence interval (SE) and sample size [n] for open and closed forest canopy strata located in Washington. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Stump category	Stumps per acre \pm 90% confidence interval (SE)					
	All points combined		Open		Closed	
	Open	Closed	Nests	Random	Nests	Random
All stumps	18.6 \pm 3.5 (2.1) [101]	14.5 \pm 2.5 (1.5) [123]	11.5 \pm 3.9* (2.3) [48]	25 \pm 5.3* (3.1) [53]	9.5 \pm 2.3* (1.4) [56]	18.6 \pm 4* (2.4) [67]
Natural stumps ^a	4 \pm 1.4 (0.8) [84]	5.2 \pm 1.5 (0.9) [78]	5.2 \pm 2.6* (1.5) [33]	3.2 \pm 1.5* (0.9) [51]	3.8 \pm 2.2 (1.3) [21]	5.7 \pm 1.9 (1.1) [57]
Cut stumps ^b	14.9 \pm 3.5 (2.1) [84]	10.2 \pm 3.3 (2) [78]	5.8 \pm 3.7 (2.2) [33]	20.8 \pm 4.9 (2.9) [51]	3.9 \pm 3.1* (1.8) [21]	12.6 \pm 4.3* (2.6) [57]

^a All stump information since 2002.

^b Natural and cut stump information since 2003.

* Mean densities differ between point types within size classes $P < 0.05$.

Table 57. Mean tree densities per acre \pm 90% confidence interval (SE) and sample size for open and closed forest canopy strata located in Washington. Densities given for all points combined, and separated by nest tree and random points within each stratum. Nest tree information is only for woodpeckers, Pygmy Nuthatches, and bluebird species. All data collected before any treatments applied.

Trees per acre \pm 90% confidence interval (SE)						
Tree size class (in)	All points combined (n = 224)		Open (n = 55)		Closed (n = 123)	
	Open (n = 101)	Closed (n = 123)	Nests (n = 48)	Random (n = 53)	Nests (n = 56)	Random (n = 67)
0 to < 1	30.4 \pm 7.8 ^a (4.7)	64.8 \pm 12.8 ^a (7.7)	15.6 \pm 5.7 ^b (3.4)	43.8 \pm 13.4 ^b (8)	49.1 \pm 15.6 (9.3)	78 \pm 19.5 (11.7)
1 to < 2	30.5 \pm 7.1 ^a (4.3)	78.2 \pm 12.2 ^a (7.4)	19.4 \pm 6.5 ^b (3.9)	40.6 \pm 12 ^b (7.1)	60.5 \pm 15.9 ^b (9.5)	93 \pm 17.8 ^b (10.7)
2 to < 3	32.2 \pm 6 ^a (3.6)	89 \pm 14.3 ^a (8.6)	27.3 \pm 8.9 (5.3)	36.7 \pm 8.3 (4.9)	66.3 \pm 18.4 ^b (11)	108 \pm 20.9 ^b (12.5)
3 to < 5	36.9 \pm 7.3 ^a (4.4)	98.4 \pm 15.1 ^a (9.1)	31.8 \pm 10.3 (6.1)	41.4 \pm 10.3 (6.2)	67.9 \pm 16.4 ^b (9.8)	124 \pm 23.2 ^b (13.9)
5 to < 6	13.4 \pm 2.8 ^a (1.7)	28.8 \pm 5.2 ^a (3.1)	12.4 \pm 4 (2.4)	14.2 \pm 4 (2.4)	19.8 \pm 5.4 ^b (3.2)	36.4 \pm 8.2 ^b (4.9)
6 to < 9	24 \pm 4.2 ^a (2.5)	43.5 \pm 5.6 ^a (3.4)	17.8 \pm 5.4 ^b (3.2)	29.6 \pm 6.2 ^b (3.7)	30.9 \pm 5.8 ^b (3.5)	54 \pm 8.7 ^b (5.2)
\geq 9	34.9 \pm 3.1 ^a (1.9)	44.3 \pm 3.3 ^a (2)	28.8 \pm 3.9 ^b (2.3)	40.4 \pm 4.5 ^b (2.7)	35.9 \pm 4.3 ^b (2.6)	51.3 \pm 4.4 ^b (2.6)
\geq 20	5.2 \pm 0.9 (0.6)	5.8 \pm 0.7 (0.4)	6.8 \pm 1.5 ^b (0.9)	3.9 \pm 1.1 ^b (0.7)	6.1 \pm 1.1 (0.7)	5.6 \pm 1 (0.6)

^a Mean densities differ between strata within size classes $P < 0.05$.

^b Mean densities differ between point types within size classes $P < 0.05$.

Table 58. Number of snags available and the number and percentage exhibiting signs of new foraging within four decay classes¹ for each of the nine locations involved with the Birds and Burns prescribed fire study. All data collected before any treatments applied.

Location	Decay class	Number of snags with new foraging signs	Number of snags available	Percent use
Apache-Sitgreaves (AZ)	1	47	133	35.3
	2	18	84	21.4
	3	15	84	17.9
	4	0	7	0.0
Coconino (AZ)	1	27	39	69.2
	2	22	77	28.6
	3	28	82	34.1
	4	6	17	35.3
Colorado	1	194	471	41.2
	2	194	498	39.0
	3	50	263	19.0
	4	10	90	11.1
Idaho	1	125	326	38.3
	2	215	433	49.7
	3	52	200	26.0
	4	6	86	7.0
Kaibab (AZ)	1	36	48	75.0
	2	28	36	77.8
	3	33	44	75.0
	4	12	16	75.0
Montana	1	101	215	47.0
	2	73	188	38.8
	3	40	87	46.0
	4	4	7	57.1
New Mexico	1	57	83	68.7
	2	34	82	41.5
	3	23	101	22.8
	4	2	7	28.6
Oregon	1	221	328	67.4
	2	241	331	72.8
	3	57	87	65.5
	4	8	15	53.3
Washington	1	188	328	57.3
	2	96	210	45.7
	3	52	184	28.3
	4	6	26	23.1

¹ Snag decay class definitions: 1) snags that have recently died; 2) snags that show some evidence of decay, have lost some bark, branches and a portion of the top; 3) snags that have extensive decay (Bull et. al 1997); and 4) burnt snag; almost entire outer shell is case-hardened by fire.

Table 59. Number of snags available and the number and percentage having new cavities within four decay classes¹ for each of the nine locations involved with the Birds and Burns prescribed fire study. All data collected before any treatments applied.

Location	Decay class	Number of snags with new cavities	Number of snags available	Percent use
Apache-Sitgreaves (AZ)	1	2	133	1.5
	2	7	84	8.3
	3	6	84	7.1
	4	0	7	0.0
Coconino (AZ)	1	3	39	7.7
	2	10	77	13.0
	3	9	82	11.0
	4	0	17	0.0
Colorado	1	18	471	3.8
	2	24	498	4.8
	3	10	263	3.8
	4	1	90	1.1
Idaho	1	25	326	7.7
	2	63	433	14.5
	3	26	200	13.0
	4	6	86	7.0
Kaibab (AZ)	1	4	48	8.3
	2	11	36	30.6
	3	13	44	29.5
	4	3	16	18.8
Montana	1	5	215	2.3
	2	12	188	6.4
	3	2	87	2.3
	4	0	7	0.0
New Mexico	1	6	83	7.2
	2	4	82	4.9
	3	4	101	4.0
	4	1	7	14.3
Oregon	1	14	328	4.3
	2	48	331	14.5
	3	21	87	24.1
	4	2	15	13.3
Washington	1	16	328	4.9
	2	21	210	10.0
	3	8	184	4.3
	4	0	26	0.0

- 1 Snag decay class definitions: 1) snags that have recently died; 2) snags that show some evidence of decay, have lost some bark, branches and a portion of the top; 3) snags that have extensive decay (Bull et. al 1997); and 4) burnt snag; almost entire outer shell is case-hardened by fire

Table 60. Number of snags available and the number and percentage having new cavities within four decay classes¹ for each of the nine locations involved with the Birds and Burns prescribed fire study. All data collected before any treatments applied.

Location	Decay class	Number of snags with either old or new cavities	Number of snags available	Percent use
Apache-Sitgreaves (AZ)	1	5	133	3.8
	2	20	84	23.8
	3	21	84	25.0
	4	1	7	14.3
Coconino (AZ)	1	4	39	10.3
	2	34	77	44.2
	3	37	82	45.1
	4	6	17	35.3
Colorado	1	32	471	6.8
	2	86	498	17.3
	3	50	263	19.0
	4	7	90	7.8
Idaho	1	33	326	10.1
	2	135	433	31.2
	3	69	200	34.5
	4	16	86	18.6
Kaibab (AZ)	1	6	48	12.5
	2	24	36	66.7
	3	28	44	63.6
	4	7	16	43.8
Montana	1	14	215	6.5
	2	30	188	16.0
	3	30	87	34.5
	4	1	7	14.3
New Mexico	1	9	83	10.8
	2	42	82	51.2
	3	33	101	32.7
	4	2	7	28.6
Oregon	1	20	328	6.1
	2	80	331	24.2
	3	48	87	55.2
	4	4	15	26.7
Washington	1	28	328	8.5
	2	66	210	31.4
	3	76	184	41.3
	4	4	26	15.4

¹ Snag decay class definitions: 1) snags that have recently died; 2) snags that show some evidence of decay, have lost some bark, branches and a portion of the top; 3) snags that have extensive decay (Bull et. al 1997); and 4) burnt snag; almost entire outer shell is case-hardened by fire.

Table 61. Number of snags available and the number and percentage exhibiting signs of new foraging for tree species found at each of the nine locations involved with the Birds and Burns prescribed study. All data collected before any treatments applied.

Location	Four-letter species code	Number of snags with new foraging signs	Number of snags available	Percent use
Apache-Sitgreaves (AZ)	JUDE	0	16	0.0
	PIPO	78	197	39.6
	QUGA	3	96	3.1
	UNKN	0	1	0.0
Coconino (AZ)	JUDE	1	3	33.3
	PIPO	69	134	51.5
	QUGA	14	79	17.7
Colorado	ABCO	25	105	23.8
	PIPO	339	752	45.1
	POTR	65	375	17.3
	PSME	23	53	43.4
	QUGA	0	41	0.0
	UNKN	0	7	0.0
	Idaho	ABGR	5	10
	PICO	0	33	0.0
	PIPO	316	884	35.7
	POTR	0	2	0.0
	PSME	77	295	26.1
	UNKN	3	44	6.8
Kaibab (AZ)	JUDE	1	4	25.0
	PIPO	108	140	77.1
Montana	PICO	28	71	39.4
	PIPO	110	244	45.1
	POTR	66	131	50.4
	PSME	17	39	43.6
	UNKN	1	19	5.3
New Mexico	JUDE	0	13	0.0
	PIPO	91	132	68.9
	PSME	6	8	75.0
	QUGA	19	122	15.6
Oregon	ABCO	82	136	60.3
	JUOC	0	1	0.0
	PICO	148	231	64.1
	PIPO	279	369	75.6
	POTR	4	6	66.7
	UNKN	15	33	45.5
Washington	PICO	38	45	84.4
	PIPO	217	477	45.5
	POTR	0	9	0.0
	POTR2	0	6	0.0
	PSME	85	202	42.1
	SASC	1	3	33.3
	UNKN	0	8	0.0

Table 62. Number of snags available and the number and percentage with new cavities for tree species found at each of the nine locations involved with the Birds and Burns prescribed study. All data collected before any treatments applied.

Location	Four-letter species code	Number of snags with a new cavity	Number of snags available	Percent use
Apache-Sitgreaves (AZ)	JUDE	0	16	0.0
	PIPO	11	197	5.6
	QUGA	5	96	5.2
	UNKN	0	1	0.0
Coconino (AZ)	JUDE	0	3	0.0
	PIPO	15	134	11.2
	QUGA	7	79	8.9
Colorado	ABCO	0	105	0.0
	PIPO	30	752	4.0
	POTR	22	375	5.9
	PSME	0	53	0.0
	QUGA	0	41	0.0
	UNKN	1	7	14.3
	ABGR	0	10	0.0
Idaho	PICO	0	33	0.0
	PIPO	112	884	12.7
	POTR	1	2	50.0
	PSME	4	295	1.4
	UNKN	4	44	9.1
	JUDE	0	4	0.0
	PIPO	31	140	22.1
Kaibab (AZ)	PICO	0	71	0.0
	PIPO	4	244	1.6
	POTR	11	131	8.4
Montana	PSME	5	39	12.8
	UNKN	0	19	0.0
	JUDE	0	13	0.0
	PIPO	15	132	11.4
	PSME	0	8	0.0
New Mexico	QUGA	0	122	0.0
	ABCO	6	136	4.4
	JUOC	0	1	0.0
	PICO	23	231	10.0
Oregon	PIPO	48	369	13.0
	POTR	3	6	50.0
	UNKN	6	33	18.2
	PICO	0	45	0.0
	PIPO	35	477	7.3
	POTR	1	9	11.1
	POTR2	3	6	50.0
Washington	PSME	5	202	2.5
	SASC	1	3	33.3

Table 63. Number of snags available and the number and percentage with either new or old cavities for tree species found at each of the nine locations involved with the Birds and Burns prescribed study. All data collected before any treatments applied.

Location	Four-letter species code	Number of snags with a new cavity	Number of snags available	Percent use
Apache-Sitgreaves (AZ)	JUDE	0	16	0.0
	PIPO	27	197	13.7
	QUGA	21	96	21.9
	UNKN	0	1	0.0
Coconino (AZ)	JUDE	0	3	0.0
	PIPO	58	134	43.3
	QUGA	24	79	30.4
Colorado	ABCO	2	105	1.9
	PIPO	129	752	17.2
	POTR	43	375	11.5
	PSME	1	53	1.9
	QUGA	0	41	0.0
	UNKN	1	7	14.3
	Idaho	ABGR	0	10
	PICO	0	33	0.0
	PIPO	232	884	26.2
	POTR	1	2	50.0
	PSME	15	295	5.1
	UNKN	7	44	15.9
Kaibab (AZ)	JUDE	0	4	0.0
	PIPO	65	140	46.4
Montana	PICO	3	71	4.2
	PIPO	14	244	5.7
	POTR	49	131	37.4
	PSME	11	39	28.2
	UNKN	1	19	5.3
New Mexico	JUDE	1	13	7.7
	PIPO	44	132	33.3
	PSME	0	8	0.0
Oregon	QUGA	41	122	33.6
	ABCO	11	136	8.1
	JUOC	0	1	0.0
	PICO	36	231	15.6
	PIPO	89	369	24.1
	POTR	6	6	100.0
	UNKN	10	33	30.3
Washington	PICO	0	45	0.0
	PIPO	123	477	25.8
	POTR	2	9	22.2
	POTR2	4	6	66.7
	PSME	42	202	20.8
	SASC	2	3	66.7
	UNKN	1	8	12.5

Table 64. Number of trees available and the number and percentage showing signs of new foraging by woodpeckers within the four structure classes¹ of live trees for each of the nine locations involved with the Birds and Burns prescribed study. All data collected before any treatments applied.

Location	Structure class	Number of trees with new foraging	Number of trees available	Percent use
Apache-Sitgreaves (AZ)	1	10	1607	0.6
	2	16	661	2.4
	3	0	81	0.0
	4	0	1	0.0
Coconino (AZ)	1	31	2163	1.4
	2	43	666	6.5
	3	7	65	10.8
	4	1	14	7.1
Colorado	1	90	3162	2.8
	2	54	668	8.1
	3	7	83	8.4
	4	0	3	0.0
Idaho	1	149	3025	4.9
	2	110	696	15.8
	3	3	22	13.6
	4	0	16	0.0
Kaibab (AZ)	1	176	3064	5.7
	2	102	496	20.6
	3	7	39	17.9
	4	0	1	0.0
Montana	1	58	2570	2.3
	2	31	946	3.3
	3	1	9	11.1
	4	0	0	0.0
New Mexico	1	52	2154	2.4
	2	91	584	15.6
	3	1	28	3.6
	4	10	52	19.2
Oregon	1	120	2806	4.3
	2	80	488	16.4
	3	8	40	20.0
	4	2	4	50.0
Washington	1	49	2277	2.2
	2	145	663	21.9
	3	12	121	9.9
	4	0	5	0.0

¹ Tree structure class definitions: 1) sound trees; 2) tree shows some evidence of decay (broken top/branch, fungi, fire scar, insect evidence); 3) broomed trees; 4) hollow trees (Bull et. al 1997).

Table 65. Number of trees available and the number and percentage having new cavities within four structure classes¹ for each of the nine locations involved with the Birds and Burns prescribed fire study. All data collected before any treatments applied.

Location	Structure class	Number of trees with new cavities	Number of trees available	Percent use
Apache-Sitgreaves (AZ)	1	0	1607	0.0
	2	1	661	0.2
	3	0	81	0.0
	4	0	1	0.0
Coconino (AZ)	1	1	2163	0.05
	2	6	666	0.9
	3	6	65	9.2
	4	0	14	0.0
Colorado	1	16	3162	0.5
	2	5	668	0.7
	3	1	83	1.2
	4	0	3	0.0
Idaho	1	2	3025	0.1
	2	13	696	1.9
	3	0	22	0.0
	4	0	16	0.0
Kaibab (AZ)	1	1	3064	0.03
	2	3	496	0.6
	3	1	39	2.6
	4	0	1	0.0
Montana	1	17	2570	0.7
	2	12	946	1.3
	3	0	9	0.0
	4	0	0	0.0
New Mexico	1	2	2154	0.1
	2	18	584	3.1
	3	1	28	3.6
	4	2	52	3.8
Oregon	1	7	2806	0.2
	2	16	488	3.3
	3	0	40	0.0
	4	2	4	50.0
Washington	1	4	2277	0.2
	2	28	663	4.2
	3	0	121	0.0
	4	0	5	0.0

¹ Tree structure class definitions: 1) sound trees; 2) tree shows some evidence of decay (broken top/branch, fungi, fire scar, insect evidence); 3) broomed trees; 4) hollow trees (Bull et. al 1997).

Table 66. Number of trees available and the number and percentage having either old or new cavities within four structure classes¹ for each of the nine locations involved with the Birds and Burns prescribed fire study. All data collected before any treatments applied.

Location	Structure class	Number of trees with either new or old cavities	Number of trees available	Percent use
Apache-Sitgreaves (AZ)	1	2	1607	0.1
	2	10	661	1.5
	3	0	81	0.0
	4	0	1	0.0
Coconino (AZ)	1	6	2163	0.3
	2	39	666	5.9
	3	7	65	10.8
	4	3	14	21.4
Colorado	1	20	3162	0.6
	2	9	668	1.3
	3	1	83	1.2
	4	0	3	0.0
Idaho	1	6	3025	0.2
	2	31	696	4.5
	3	0	22	0.0
	4	0	16	0.0
Kaibab (AZ)	1	1	3064	0.03
	2	7	496	1.4
	3	1	39	2.6
	4	0	1	0.0
Montana	1	26	2570	1.0
	2	20	946	2.1
	3	0	9	0.0
	4	0	0	0.0
New Mexico	1	14	2154	0.6
	2	97	584	16.6
	3	4	28	14.3
	4	25	52	48.1
Oregon	1	7	2806	0.2
	2	17	488	3.5
	3	0	40	0.0
	4	2	4	50.0
Washington	1	7	2277	0.3
	2	76	663	11.5
	3	2	121	1.7
	4	0	5	0.0

¹ Tree structure class definitions: 1) sound trees; 2) tree shows some evidence of decay (broken top/branch, fungi, fire scar, insect evidence); 3) broomed trees; 4) hollow trees (Bull et. al 1997).

Table 67. Number of trees available and the number and percentage exhibiting signs of new foraging for tree species found at each of the nine locations involved with the Birds and Burns prescribed study. All data collected before any treatments applied.

Location	Four-letter species code	No. of trees with new foraging signs	No. of trees available	Percent use	
Apache-Sitgreaves (AZ)	JUDE	1	249	0.4	
	PIPO	22	1897	1.2	
	QUAR	0	4	0.0	
	QUGA	3	202	1.5	
	UNKN	0	1	0.0	
Coconino (AZ)	JUDE	3	151	2.0	
	PIPO	63	2463	2.6	
	QUGA	16	289	5.5	
Colorado	ABCO	6	722	0.8	
	JUSC	0	5	0.0	
	PIEN	0	24	0.0	
	PIPO	108	2137	5.1	
	PIPU	0	6	0.0	
	POTR	27	593	4.6	
	PSME	10	346	2.9	
	QUGA	0	66	0.0	
	Idaho	ABGR	2	19	10.5
		LAOC	0	1	0.0
PICO		0	19	0.0	
PIEN		0	1	0.0	
PIPO		229	2106	10.9	
POTR		0	5	0.0	
PSME		31	892	3.5	
UNKN		0	4	0.0	
Kaibab (AZ)		JUDE	0	34	0.0
		JUMO	0	6	0.0
	PIPO	285	3557	8.0	
Montana	PICO	4	330	1.2	
	PIPO	23	1810	1.3	
	POAN	0	2	0.0	
	POTR	56	291	19.2	
	PSME	7	1042	0.7	
	New Mexico	JUDE	0	403	0.0
PIED		0	18	0.0	
PIPO		113	1778	6.4	
PIST		0	3	0.0	
PSME		8	127	6.3	
QUAR		0	1	0.0	
QUGA		34	489	7.0	
Oregon	ABCO	2	192	1.0	
	JUOC	2	13	15.4	
	PICO	86	746	11.5	
	PIEN	0	1	0.0	
	PILA	0	9	0.0	
	PIPO	119	2379	5.0	
	UNKN	0	8	0.0	
	Washington	LAOC	0	5	0.0
PICO		0	9	0.0	
PIPO		98	1842	5.3	
POTR		3	17	17.6	
POTR2		0	2	0.0	
PSME		105	1181	8.9	
SASC		0	7	0.0	

Table 68. Number of trees available and the number and percentage with new cavities for tree species found at each of the nine locations involved with the Birds and Burns prescribed study. All data collected before any treatments applied.

Location	Four-letter species code	No. of trees with new cavities	No. of trees available	Percent use
Apache-Sitgreaves (AZ)	JUDE	0	249	0.0
	PIPO	3	1897	0.2
	QUAR	0	4	0.0
	QUGA	9	202	4.5
	UNKN	0	1	0.0
Coconino (AZ)	JUDE	1	151	0.7
	PIPO	1	2463	0.0
	QUGA	53	289	18.3
Colorado	ABCO	0	722	0.0
	JUSC	0	5	0.0
	PIEN	1	24	4.2
	PIPO	2	2137	0.1
	PIPU	0	6	0.0
	POTR	18	593	3.0
	PSME	1	346	0.3
	QUGA	0	66	0.0
	Idaho	ABGR	0	19
LAOC		0	1	0.0
PICO		0	19	0.0
PIEN		0	1	0.0
PIPO		14	2106	0.7
POTR		1	5	20.0
PSME		0	892	0.0
UNKN		0	4	0.0
Kaibab (AZ)		JUDE	0	34
	JUMO	0	6	0.0
	PIPO	5	3557	0.1
Montana	PICO	0	330	0.0
	PIPO	0	1810	0.0
	POAN	0	2	0.0
	POTR	29	291	10.0
	PSME	0	1042	0.0
New Mexico	JUDE	0	403	0.0
	PIED	0	18	0.0
	PIPO	2	1778	0.1
	PIST	0	3	0.0
	PSME	0	127	0.0
	QUAR	0	1	0.0
	QUGA	21	489	4.3
Oregon	ABCO	1	192	0.5
	JUOC	0	13	0.0
	PICO	19	746	2.5
	PIEN	0	1	0.0
	PILA	0	9	0.0
	PIPO	5	2379	0.2
	UNKN	0	8	0.0
Washington	LAOC	0	5	0.0
	PICO	0	9	0.0
	PIPO	25	1842	1.4
	POTR	3	17	17.6
	POTR2	0	2	0.0
	PSME	4	1181	0.3
	SASC	0	7	0.0

Table 69. Number of trees available and the number and percentage with new cavities for tree species found at each of the nine locations involved with the Birds and Burns prescribed study. All data collected before any treatments applied.

Location	Four-letter species code	No. of trees with either old or new cavities	No. of trees available	Percent use
Apache-Sitgreaves (AZ)	JUDE	0	249	0.0
	PIPO	3	1897	0.2
	QUAR	0	4	0.0
	QUGA	9	202	4.5
	UNKN	0	1	0.0
Coconino (AZ)	JUDE	1	151	0.7
	PIPO	1	2463	0.04
	QUGA	53	289	18.3
Colorado	ABCO	0	722	0.0
	JUSC	0	5	0.0
	PIEN	1	24	4.2
	PIPO	6	2137	0.3
	PIPU	0	6	0.0
	POTR	21	593	3.5
	PSME	2	346	0.6
	QUGA	0	66	0.0
Idaho	ABGR	1	19	5.3
	LAOC	0	1	0.0
	PICO	0	19	0.0
	PIEN	0	1	0.0
	PIPO	32	2106	1.5
	POTR	1	5	20.0
	PSME	3	892	0.3
	UNKN	0	4	0.0
Kaibab (AZ)	JUDE	0	34	0.0
	JUMO	0	6	0.0
	PIPO	9	3557	0.3
Montana	PICO	0	330	0.0
	PIPO	2	1810	0.1
	POAN	0	2	0.0
	POTR	44	291	15.1
	PSME	0	1042	0.0
New Mexico	JUDE	1	403	0.2
	PIED	0	18	0.0
	PIPO	3	1778	0.2
	PIST	0	3	0.0
	PSME	1	127	0.8
	QUAR	0	1	0.0
	QUGA	137	489	28.0
Oregon	ABCO	1	192	0.5
	JUOC	0	13	0.0
	PICO	20	746	2.7
	PIEN	0	1	0.0
	PILA	0	9	0.0
	PIPO	5	2379	0.2
	UNKN	0	8	0.0
Washington	LAOC	0	5	0.0
	PICO	0	9	0.0
	PIPO	70	1842	3.8
	POTR	6	17	35.3
	POTR2	0	2	0.0
	PSME	9	1181	0.8
	SASC	0	7	0.0

