# THE 2006 ANNUAL REPORT OF THE MONITORING AVIAN PRODUCTIVITY AND SURVIVORSHIP (MAPS) PROGRAM IN USDA FOREST SERVICE REGION SIX

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**January 4, 2007** 

# **INTRODUCTION**

Since 1989, <u>The Institute for Bird Populations</u> has coordinated the <u>Monitoring Avian</u> <u>Productivity and Survivorship (MAPS) Program</u>, a cooperative effort among public and private agencies and individual bird banders in North America, to operate a continent-wide network of over 500 constant-effort mist-netting and banding stations. MAPS was designed to provide critically needed information on the vital rates (productivity or birth rate, and survivorship or death rate) of landbirds, crucial for efforts to identify demographic causes of the severe and sometimes accelerating population declines documented for many North American species (Robbins et al. 1989; Terborgh 1989; Peterjohn et al.1995; DeSante 1992; DeSante et al. 1995, 1999, <u>2001</u>). Such data on vital rates are also critically needed in efforts to identify management strategies to reverse such population declines (DeSante 1995, DeSante and Rosenberg 1998).

MAPS is organized to fulfill three tiers of goals and objectives: monitoring, research, and management:

The specific **monitoring** goals of MAPS are to provide, for over 100 target species, including Neotropical-wintering migrants, temperate-wintering migrants, and permanent residents: (a) annual indices of adult population size and post-fledging productivity from data on the numbers and proportions of young and adult birds captured; and (b) annual estimates of adult population size, adult survival rates, proportions of residents, and recruitment into the adult population from modified Cormack- Jolly-Seber analyses of mark-recapture data on adult birds.

The specific **research** goals of MAPS are to identify and describe: (a) temporal and spatial patterns in these demographic indices and estimates at a variety of spatial scales ranging from the local landscape to the entire continent; and (b) relationships between these patterns and ecological characteristics of the target species, population trends of the target species, station-specific and landscape-level habitat characteristics, and spatially-explicit weather variables.

The specific **management** goals of MAPS are to use these patterns and relationships, at the appropriate spatial scales, to: (a) identify thresholds and trigger points to notify appropriate agencies and organizations of the need for further research and/or management actions; (b) determine the proximate demographic cause(s) of population change; (c) suggest management actions and conservation strategies to reverse population declines and maintain stable or increasing populations; and (d) evaluate the effectiveness of the management actions and conservation strategies actually implemented through an adaptive management framework.

All of these monitoring, research, and management goals are in agreement with the USDA Forest Service's Partners-in-Flight strategy and with the Forest Service's own avian monitoring efforts. Moreover, because bird populations are excellent indicators of the health of ecological systems, they can serve as sensitive barometers of the overall effectiveness of efforts to maintain the biodiversity and ecological integrity of National Forests. Accordingly, the MAPS program was initiated in several National Forests beginning in 1992 and soon became one of the focus projects of the USDA Forest Service Partners-in-Flight program. It was expected that information from the MAPS program would be capable of aiding research and management efforts on these National Forests to protect and enhance the forest's avifauna and ecological integrity, while allowing them to fulfill their multi-use purposes.

In USDA Region 6, six stations were established on each of six national forests (Mt. Baker/ Snoqualmie, Wenatchee, Umatilla, Willamette, Siuslaw, and Fremont) in 1992. Within each forest, an effort was made to establish two or three stations in more heavily managed landscapes, two or three stations in less heavily managed landscapes of the same forest type, and perhaps one or two additional stations in other forest types of high or unique importance to landbird populations. The overall goal of the initial establishment of the MAPS program in Region 6 was to provide high quality information on the demographics of landbirds on the forests that could be used to aid research and management efforts, on all national forests in the Region, to protect and enhance the forests' avifauna and ecological integrity. With the completion of ten years of data collection during the summer of 2001 and the submission of the ensuing report (<u>DeSante et al.</u> <u>2002</u>), this initial objective was accomplished.

A second objective was to provide for a comprehensive analysis of the ten years of demographic data as a function of landscape-level habitat characteristics and spatially explicit weather data. Through funding from the DoD Legacy Resources Management Program, important analytical techniques were developed and evaluated to accomplish these latter analyses and major reports on the results of such analyses were completed using data from 78 MAPS stations operated on 13 DoD installations (or groups of nearby installations) in southeastern United States (Nott 2000, 2001; Nott et al. 2003). Some of these new analytical models were then applied to data from the 36 MAPS stations on Forest Service Region Six and resulted in major new understandings of the relationships between large-scale climate cycles, including the El Niño Southern Oscillation and the North Atlantic Oscillation, and landbird productivity in the Pacific Northwest (Nott et al. 2002). In response to these reports, funding was secured through a challenge grant from the National Fish and Wildlife Foundation (federal share supplied by the USDA Forest Service) to complete additional analyses of ten years (1992-2001) of MAPS data from 36 stations located on six national forests in Region Six (and six stations on the Flathead National Forest in region One) as a function of GIS-based, remote-sensed, landscape-scale habitat data. These analyses have recently been completed (Nott et al. 2005).

A third objective of this work was to formulate management guidelines and conservation strategies for reversing population declines and maintaining stable and increasing populations of bird species of conservation concern in the Pacific Northwest. The formulation of these guidelines and strategies was to be achieved by modeling the population and demographic parameters such as adult population size, numbers of young, and productivity (young to adult ratio), as well as trends in these parameters, as a function of landscape-level habitat characteristics. Funding for this aspect of the work was also obtained through the above-mentioned challenge grant from the National Fish and Wildlife Foundation, and these management and conservation strategies have been completed (<u>Nott et al. 2005</u>). Management guidelines involve efforts to modify the habitat from characteristics associated with low population size, negative population trends, and or low productivity to characteristics associated

with high values for these parameters. Because these guidelines and strategies are based on vital rates as well as population size, they will avoid the potential pitfall of creating sink habitat, a common result of basing management decisions solely on population sizes.

The current objective of the MAPS Program on national forests such as those in Region 6 is to integrate the management guidelines and conservation strategies to reverse the population declines of 13 landbird species of conservation concern into new or on-going forest management actions that will be implemented on the forests. During 2005 we began to integrate our avian management guidelines and strategies into management actions that have already been implemented or will be implemented during or after 2007 on the six national forests in Region Six on which we have MAPS stations. We will continue to a) monitor the effectiveness of those avian management guidelines and strategies through MAPS stations established in 2004 or 2005 within appropriately managed forests; b) look for opportunities to relocate existing "slow" stations; and (3) operate the remaining existing MAPS stations to serve as controls for the new stations sited and to monitor the effectiveness of management. However, the total number of stations operated will remain the same (e.g., six stations will be run on each of the six national forests in Region Six where stations are now being operated). We began this process in 2004 with the switching of one station in Siuslaw and we switched an additional four stations in 2005, one each at Mount Baker, Wenatchee, Willamette, and Fremont. In 2007, a new station, Fritz Creek will be established to replace Major Prairie on Willamette NF. Because Umatilla NF is still recovering from massive pest infestation we are not moving the stations in the hope of documenting widespread increases that we expect to see in population sizes and reproductive success of several target species.

A complete summary of the results of the MAPS Program in Region Six National Forests from 1992-2001 was presented by <u>DeSante et al. (2002)</u> and data from 2002-2004 was summarized by Desante et al. (2004, 2005) and Pyle et al. (2006). This report briefly updates those reports and documents the operation of the 36 MAPS stations on six Region Six National Forests during the 2006 breeding season.

# **METHODS**

Thirty-six MAPS stations were operated in 2006 on Region-6 National Forests, most of them in the same locations where they were first established in 1992. They were operated in accordance with the highly standardized banding protocols established by The Institute for Bird Populations for use by the MAPS Program throughout North America and detailed in the MAPS Manual (DeSante et al. 2006) banding protocol. On each day of operation each year, one 12-m long, 30-mm mesh, 4-tier nylon mist net was erected at each of ten fixed mist-netting sites within the interior eight ha of each 20-ha station. These ten nets at each station were operated for six morning hours per day (beginning at local sunrise), and for one day in each of seven or eight consecutive 10-day periods between May 21 and August 8. The operation of stations occurred on schedule in each of the ten-day periods and was carried out by Institute for Bird Populations biologists and interns (mentioned by name in the Acknowledgments).

With few exceptions, all birds captured during the course of the study were identified to species, age, and sex and, if unbanded, were banded with USGS/BRD numbered aluminum bands. Birds were released immediately upon capture and before being banded or processed if situations arose where bird safety would be comprised. The following data were taken on all birds captured, including recaptures, according to MAPS guidelines using standardized codes and forms:

- (1) capture code (newly banded, recaptured, band changed, unbanded);
- (2) band number;
- (3) species;
- (4) age and how aged;
- (5) sex (if possible) and how sexed (if applicable);
- (6) extent of skull pneumaticization;
- (7) breeding condition of adults (i.e., extent of cloacal protuberance or brood patch);
- (8) extent of juvenal plumage in young birds;
- (9) extent of body and flight-feather molt;
- (10) extent of primary-feather wear;
- (11) presence of molt limits and plumage characteristics;
- (12) wing chord;
- (13) fat class and body mass;
- (14) date and time of capture (net-run time);
- (15) station and net site where captured; and
- (16) any pertinent notes.

Effort data (i.e., the number and timing of net-hours on each day of operation) were also collected in a standardized manner. In order to allow constant-effort comparisons of data to be made, the times of opening and closing the array of mist nets and of beginning each net check were recorded to the nearest ten minutes. The breeding (summer residency) status (confirmed breeder, likely breeder, non-breeder) of each species seen, heard, or captured at each MAPS station on each day of operation was recorded using techniques similar to those employed for breeding bird atlas projects.

The computer entry, proofing, and verification of all banding, effort, and breeding status data were completed by IBP biologists using specially designed data entry, verification, and editing programs. The critical data for each banding record (capture code, band number, species, age, sex, date, capture time, station, and net number) were proofed by hand against the raw data and any computer-entry errors were corrected. All banding data were then run through a series of verification programs as follows:

- (1) Clean-up programs to check the validity of all codes entered and the ranges of all numerical data;
- (2) Cross-check programs to compare station, date, and net fields from the banding data with those from the effort and breeding status data;
- (3) Cross-check programs to compare species, age, and sex determinations against degree of skull pneumaticization, breeding condition (extent of cloacal protuberance and brood patch), extent of juvenal plumage, extent of body and flight-feather molt, extent

of primary-feather wear, and presence of molt limits and plumage characteristics;

- (4) Screening programs which allow identification of unusual or duplicate band numbers or unusual band sizes for each species; and
- (5) Verification programs to screen banding and recapture data from all years of operation for inconsistent species, age, or sex determinations for each band number.

Any discrepancies or suspicious data identified by any of these programs were examined manually and corrected if necessary. Wing chord, weight, fat content, date and station of capture, and any pertinent notes were used as supplementary information for the correct determination of species, age, and sex in all of these verification processes. The proofed, verified, and corrected banding data from each year were then run through a series of analysis programs that calculated for each species and for all species pooled at each station and for all stations pooled on each forest:

- (1) the numbers of newly banded birds, recaptured birds, and birds released unbanded;
- (2) the numbers and capture rates (per 600 net-hours) of first captures (in each year) for individual adult and young birds; and
- (3) the reproductive index.

Following the procedures pioneered by the British Trust for Ornithology (BTO) in their CES Scheme (Peach et al. 1996), the number of adult birds captured was used as an index of adult population size. As our index of post-fledging productivity we are now using "reproductive index" (number of young divided by number of adults) as opposed to "proportion of young in the catch," which we used prior to 2004. Reproductive index is a more intuitive value for productivity, and is comparable to other calculated MAPS parameters such as recruitment.

# RESULTS

# MOUNT BAKER/SNOQUALMIE NATIONAL FOREST, WASHINGTON

Within Mt. Baker/Snoqualmie National Forest, the six stations are located (from highest to lowest elevation) as follows: (1) The Monte Cristo Lake station at 610 m; (2) the Skull Creek station at 552 m; (3) the Perry Creek station at 512 m; (4) the Bench Thin station at 354 m; (5) the Frog Lake station at 317 m; and (6) the Beaver Lake station at 299 m. Four of the stations have been in operation every year since 1992, the Bench Thin station was established in 1993. The Skull Creek station was established in 2005 in an area that was thinned in spring 2005, to monitor the post-thinning demographics of three declining species of concern at Mount Baker, Hammond's Flycatcher, Winter Wren, and MacGillivray's Warbler (Nott et al. 2005). This new station replaces the unproductive Murphy's Creek Station, where few of these species were captured. All stations are on the Darrington Ranger District. Table 1 details the habitats and the 2006 operation of the Mt. Baker stations.

A total of 2205.2 net-hours was accumulated at the six MAPS stations operated on Mt. Baker National Forest in 2006 (Table 1), representing 87.5% of the maximum possible effort at this

station. Of these, 1784.7 net-hours could be compared with data from 2005 in a constant-effort manner.

The 2006 capture summary of the numbers of newly-banded, unbanded, and recaptured birds at Mt. Baker National Forest is presented for each species at each of the six stations individually in Table 2 and for all stations combined in Table 4. A total of 637 captures of 33 species was recorded during the summer of 2006. Newly banded birds comprised 46.8% of the total captures. The greatest number of total captures (192) was recorded at the Monte Cristo Lake station and the smallest number of total captures (52) was recorded at the Skull Creek station. The highest species richness occurred at Monte Cristo Lake (25 species) whereas the lowest species richness occurred at Skull Creek(11 species).

The capture rates (per 600 net-hours) of individual adult and young birds and the reproductive index are presented for each species and for all species pooled at each station (Table 3) and for all stations combined (Table 4). We present capture rates (captures per 600 net-hours) of adults and young in this table so that the data can be compared among stations which, because of the vagaries of weather and accidental net damage, can differ from one another in effort expended (see Table 1). These capture indices indicate that the total adult population size in 2006 was greatest at Monte Cristo Lake, followed in descending order by Beaver Lake, Frog Lake, Bench Thin, Perry Creek, and Skull Creek. The capture rate of young (Table 3) of all species pooled at each station in 2006 was highest at Monte Cristo Lake and lowest at Perry Creek. The reproductive index at the stations in 2006 (Table 3), i.e., the number of young per adult, was highest at Bench Thin (0.44), followed by Monte Cristo Lake (0.35), Skull Creek (0.23), Beaver Lake (0.17), Perry Creek (0.10), and Frog Lake (0.08). The adult-capture rate at all six stations combined was 77.5 adults per 600 net-hours and the productivity was 0.22 young per adult (Fig. 4). This compares with 59.7 adults per 600 net-hours and 0.37 young per adult in 2005, indicating that breeding populations increased but productivity decreased between 2005 and 2006 at Mount Baker.

Among individual species, Swainson's Thrush was by far the most frequently captured, followed in descending order by Rufous Hummingbird, Song Sparrow, American Robin, Winter Wren, Varied Thrush, Dark-eyed Junco, MacGillivray's Warbler, and Wilson's Warbler (Table 4). Overall, the most abundant breeding species at the six Mt. Baker MAPS stations in 2006 (according to adults captured/600 net hrs), in decreasing order, were Swainson's Thrush, American Robin, Song Sparrow, Winter Wren, Varied Thrush, Red-breasted Sapsucker, Chestnut-backed Chickadee, and MacGillivray's Warbler (Table 4; the number of individual adult Rufous Hummingbirds captured could not be determined since the birds were not banded). The following is a list of the common breeding species (captured at a rate of at least 5.0 adults per 600 net-hours), in decreasing order, at each station in 2006 (species of concern, as noted above, in italics):

## Monte Cristo Lake

Swainson's Thrush Song Sparrow American Robin Yellow Warbler\* *MacGillivray's Warbler*\* Common Yellowthroat Steller's Jay\* Varied Thrush\* Red-breasted Sapsucker\* Warbling Vireo\* Wilson's Warbler\* Cedar Waxwing<sup>†</sup>

## **Beaver Lake**

Swainson's Thrush Song Sparrow Western Flycatcher\* American Robin Red-breasted Sapsucker *Winter Wren* Common Yellowthroat<sup>†</sup>

#### **Frog Lake**

Swainson's Thrush American Robin Varied Thrush\* Song Sparrow<sup>†</sup> *Winter Wren*<sup>†</sup>

#### Skull Creek

Dark-eyed Junco Swainson's Thrush\* American Robin\* *Winter Wren*<sup>†</sup>

#### Perry Creek

Swainson's Thrush Varied Thrush Song Sparrow \* American Robin<sup>†</sup> *Winter Wren*<sup>†</sup>

#### **Bench Thin**

Swainson's Thrush Winter Wren MacGillivray's Warbler<sup>†</sup> American Robin<sup>†</sup>

\* At least 5.0 adults per 600 net hours in 2006 but not in 2005.

<sup>+</sup> At least 5.0 adults per 600 net hours in 2005 but not in 2006.

Last year we reported that the newly established Skull Creek station had the lowest capture rates of adults and young and the lowest reproductive index of any of the six stations at Mount Baker, which is to be expected since the area was severely thinned in spring 2005 (Pyle et al. 2006). It was of interest to note that young captured and productivity were higher in 2006 relative to the other stations, suggesting that the management actions of 2005 are beginning to be realized. Interestingly, no Winter Wrens were captured in 2006, after adult capture rates in 2005 were higher than any other species at Skull Creek. But capture rates of adult Winter Wrens declined at Frog Lake and Perry Creek as well (see above), perhaps indicating a region-wide dynamic. As noted last year, adult Winter Wrens are typically associated with the brush piles left behind after the thinning process and this may be a cause for their disappearance.. It will be interesting to see how this and the other target species respond to vegetational succession as the thinned forest develops more vertical complexity. Hammond's Flycatcher, another target species, was captured for the first time here in 2006.

#### WENATCHEE NATIONAL FOREST, WASHINGTON

Within Wenatchee National Forest, the six stations are located (from highest to lowest elevation) as follows: (1) The Two Point station at 1512 m; (2) the Little Rattlesnake station at 1280 m; (3) the Pleasant Valley station at 1000 m; (4) the Timothy Meadow station at 951 m; (5) the Quartz Creek 2 station at 853 m; and (6) the Rattlesnake Spring station at 817 m. Four of the stations have been in operation since 1992. The Little Rattlesnake station was newly established in 2005 in a montane area that includes a regenerating clear-cut (from 20-25 years ago) to increase our ability to monitor four species of concern at Wenatchee: Warbling Vireo, MacGillivray's Warbler, Lincoln's Sparrow, and Song Sparrow (<u>Nott et al. 2005</u>). This new station replaces the

Deep Creek station, at which few of these target species were captured. The Quartz Creek 2 station was established in 1993 to replace the original Quartz Creek station which was discontinued after 1992 because of heavy human interference and a history of vandalism. The Quartz Creek 2 station is very close to the original Quartz Creek station but is located farther from the Quartz Creek campground. All stations are on the Naches Ranger District. See Table 5 for a summary of the habitats and 2006 operation of these stations.

A total of 2302.3 net-hours was accumulated at the six MAPS stations operated in Wenatchee National Forest in 2006 (Table 5), representing 91.4% of the maximum possible effort at this station. Of these, 2175.3 net-hours could be compared with data from 2005 in a constant-effort manner.

The 2006 capture summary of the numbers of newly-banded, unbanded, and recaptured birds at Wenatchee National Forest is presented for each species at each of the six stations individually in Table 6 and for all stations combined in Table 8. A total of 1241 captures of 58 species was recorded during the summer of 2006. Newly banded birds comprised 64.7% of the total captures. The greatest number of total captures (291) was recorded at the Two Point station and the smallest number of total captures (121) was recorded at the Timothy Meadow station. The highest species richness (39 species) occurred at Quartz Creek 2 and the lowest species richness (21 species) occurred at Pleasant Valley.

The capture rates (per 600 net-hours) of individual adult and young birds and the reproductive index are presented for each species and for all species pooled at each station (Table 7) and for all stations combined (Table 8). We present capture rates (captures per 600 net- hours) of adults and young in this table so that the data can be compared among stations which, because of the vagaries of weather and accidental net damage, can differ from one another in effort expended (see Table 5). These capture indices indicate that the total adult population size in 2006 was greatest at Quartz Creek 2, followed in descending order by Little Rattlesnake, Rattlesnake Spring, Two Point, Pleasant Valley, and Timothy Meadow. The capture rate of young of all species pooled at each station in 2006 was highest at Two Point and lowest at Timothy Meadow. The reproductive index at the stations in 2006, i.e., the number of young per adult, was highest at Two Point (0.89), followed by Timothy Meadow and Rattlesnake Springs (0.41 each), Little Rattlesnake (0.37), Quartz Creek 2 (0.25), and Pleasant Valley (0.13). The adult-capture rate at all six stations combined was 159.8 adults per 600 net-hours and the productivity was 0.40 young per adult (Fig. 8). This compares with 205.5 adults per 600 net-hours and 0.36 young per adult in 2005, indicating that breeding populations decreased but productivity increased between 2005 and 2006.

Among individual species, MacGillivray's Warbler was the most frequently captured, followed by Chipping Sparrow, Dark-eyed Junco, Rufous Hummingbird, Song Sparrow, Yellow-rumped Warbler, Lincoln's Sparrow, Western Tanager, Warbling Vireo, American Robin, and Yellow Warbler (Table 8). Overall, the most abundant breeding species at the six Wenatchee MAPS stations in 2006 (according to adults captured/600 net hrs), in decreasing order, were Chipping Sparrow, Dark-eyed Junco, MacGillivray's Warbler, Yellow-rumped Warbler, American Robin, Western Tanager, Warbling Vireo, Evening Grosbeak, Lincoln's Sparrow, and Yellow Warbler

(Table 8; numbers of adult Rufous Hummingbirds captured could not be determined since these birds were not banded). The following is a list of the common breeding species (at least 8.0 adults per 600 net-hours), in decreasing order, at each station in 2006 (species of concern, as noted above, in italics):

#### **Two Point**

MacGillivray's Warbler Chipping Sparrow Dark-eyed Junco Yellow-rumped Warbler Dusky Flycatcher American Robin Warbling Vireo<sup>†</sup> Lincoln's Sparrow<sup>†</sup>

# Quartz Creek 2

Yellow Warbler *Warbling Vireo\* MacGillivray's Warbler* Western Wood-Pewee *Song Sparrow* Evening Grosbeak\* Yellow-rumped Warbler American Robin Dusky Flycacther Pine Siskin Dark-eyed Junco<sup>†</sup> Cassin's Finch<sup>†</sup> Hammond's Flycatcher<sup>†</sup>

# Little Rattlesnake

Chipping Sparrow Dark-eyed Junco Yellow-rumped Warbler Western Tanager Hermit Thrush Hammond's Flycatcher *Warbling Vireo*\* American Robin *MacGillivray's Warbler*<sup>†</sup> *Lincoln's Sparrow*<sup>†</sup>

# **Timothy Meadow**

Evening Grosbeak\* Lincoln's Sparrow Townsend's Warbler Dark-eyed Junco Pine Siskin<sup>†</sup> Chipping Sparrow<sup>†</sup>

## **Pleasant Valley**

Chipping Sparrow American Robin Yellow-rumped Warbler *Lincoln's Sparrow* Evening Grosbeak\* Dark-eyed Junco\* Western Tanager<sup>†</sup> Pine Siskin<sup>†</sup>

# **Rattlesnake Springs**

Western Tanager Dark-eyed Junco *Warbling Vireo MacGillivray's Warbler* Chipping Sparrow Hammond's Flycatcher Black-headed Grosbeak\* Yellow-rumped Warbler<sup>†</sup> Dusky Flycacther<sup>†</sup> Nashville Warbler<sup>†</sup> *Song Sparrow*<sup>†</sup> Evening Grosbeak<sup>†</sup>

\* At least 8.0 adults per 600 net hours in 2006 but not in 2005.
<sup>†</sup> At least 8.0 adults per 600 net hours in 2005 but not in 2006.

The newly established Little Rattlesnake station appears to be effective at monitoring at least two of the four target species of concern (Table 7). During the two years of operation capture rates of Warbling Vireo, MacGillivray's Warbler, and Lincoln's Sparrow were adequate to effectively monitor these species, in an area similar to Timothy Meadow that receives pressure from some grazing and recreational use. Capture rates of Song Sparrow were lower, but indicate presence of both species, and data for these species will complement those collected at other stations. Little Rattlesnake has produced excellent capture rates of 184.3 and 148.2 adults per 600 net-hours in 2005 and 2006, respectively, and had the highest reproductive index observed at Wenatchee in 2005 and tied for second-highest in 2006 (Table 7). This suggests that the continuation of this station will enhance our ability to monitor target species and others at this forest.

# UMATILLA NATIONAL FOREST, OREGON

Within Umatilla National Forest, the six stations are located (from highest to lowest elevation) as follows: (1) The Buzzard Creek station at 1524 m; (2) the Buck Mountain Meadow station at 1378 m; (3) the Coyote Ridge station at 1341 m; (4) the Fry Meadow station at 1280 m; (5) the Brock Meadow station at 1244 m; and (6) the Phillips Creek station at 975 m. No stations were switched at Umatilla in 2005, in order to continue to document the dramatic, forest-wide declines that have been occurring there (<u>Nott et al. 2005</u>). Thus, all stations were established in 1992, and all are located on the Walla Ranger District. See Table 9 for a summary of the habitats and 2006 operation of these stations.

A total of 2310.0 net-hours was accumulated at the six MAPS stations operated in Umatilla National Forest in 2006 (Table 9), representing 91.7% of the maximum possible effort at this station. Of these, 2065.8 net-hours could be compared with data from 2005 in a constant-effort manner.

The 2006 capture summary of the numbers of newly-banded, unbanded, and recaptured birds at Umatilla National Forest is presented for each species at each of the six stations individually in Table 10 and for all stations combined in Table 12. A total of 948 captures of 48 species was recorded during the summer of 2006. Newly banded birds comprised 67.7% of the total captures. The greatest number of captures (226) was recorded at Buck Mountain Meadow and the smallest number of captures (88) was recorded at Coyote Ridge. Species richness was greatest at Brock Meadow (28 species) and lowest at Coyote Ridge (21 species).

The capture rates (per 600 net-hours) of individual adult and young birds and the reproductive index are presented for each species and for all species pooled at each station (Table 11) and for all stations combined (Table 12). We present capture rates (captures per 600 net-hours) in this table so that the data can be compared among stations which, because of the vagaries of weather and accidental net damage, can differ from one another in effort expended (see Table 9). These indices indicate that the adult population size in 2006 was greatest at Browck Meadow, followed in descending order by Buck Mountain Meadow, Buzzard Creek, Fry Meadow, Phillips Creek, and Coyote Ridge. The capture rate of young of all species pooled was highest at Buck Mountain Meadow. Productivity, i.e., the number of young per adult, was highest at Buck Mountain Meadow (0.50), followed by Buzzard Creek (0.46), Coyote Ridge (0.41), Fry Meadow (0.36), Phillips Creek (0.24), and Brock Meadow (0.10). The adult-capture rate at all six stations combined was 135.6 adults per 600 net hours and the productivity was 0.33 young per adult (Fig. 12). This compares with 149.9 adults per 600 net-hours and 0.83 young per adult in 2005, indicating that both breeding populations and (especially) productivity decreased between 2005 and 2006.

Among individual species, Dark-eyed Junco was the most frequently captured, followed by Golden-crowned Kinglet, Swainson's Thrush, MacGillivray's Warbler, Townsend's Warbler, Wilson's Warbler, Ruby-crowned Kinglet, and Yellow-rumped Warbler (Table 12). Overall, the most abundant breeding species at the six Umatilla MAPS stations in 2006 (according to adults captured/600 net hrs), in decreasing order, were Swainson's Thrush, Dark-eyed Junco, Townsend's Warbler, MacGillivray's Warbler, Ruby-crowned Kinglet, Yellow-rumped Warbler,

and Golden-crowned Kinglet (Table 12). The following is a list of the common breeding species (captured at a rate of at least 6.0 adults per 600 net-hours), in decreasing order, at each station in 2006 (species of concern, as noted above, in italics):

#### **Buzzard Creek**

Townsend's Warbler Dark-eyed Junco Yellow-rumped Warbler Wilson's Warbler\* Chipping Sparrow Ruby-crowned Kinglet\* Warbling Vireo\* Dusky Flycatcher\* Swainson's Thrush<sup>†</sup> Hermit Thrush<sup>†</sup>

## **Fry Meadow**

Ruby-crowned Kinglet Swainson's Thrush Lincoln's Sparrow Dark-eyed Junco MacGillivray's Warbler\* Yellow-rumped Warbler\* Chest.-backed. Chickadee\* Golden-crowned Kinglet Townsend's Warbler Pine Siskin<sup>†</sup>

# **Buck Mountain Meadow**

Golden-crowned Kinglet Townsend's Warbler Swainson's Thrush Wilson's Warbler Chipping Sparrow Winter Wren\* Dark-eyed Junco Ruby-crowned Kinglet Yellow-rumped Warbler Western Tanager<sup>†</sup> Pine Siskin<sup>†</sup>

#### **Phillips Creek**

MacGillivray's Warbler Swainson's Thrush Dark-eyed Junco American Robin\* Red-breasted Nuthatch\*

#### **Coyote Ridge**

MacGillivray's Warbler Yellow-rumped Warbler\*

#### **Brock Meadow**

Swainson's Thrush Ruby-crowned Kinglet MacGillivray's Warbler Wilson's Warbler Lincoln's Sparrow "Traill's" Flycatcher Song Sparrow\* Warbling Vireo\* Yellow-rumped Warbler\* Dark-eyed Junco\* Townsend's Warbler Fox Sparrow\* Orange-crowned Warbler<sup>†</sup> Pine Siskin<sup>†</sup>

\* At least 6.0 adults per 600 net hours in 2006 but not in 2005. <sup>+</sup> At least 6.0 adults per 600 net hours in 2005 but not in 2006.

#### WILLAMETTE NATIONAL FOREST, OREGON

Within Willamette National Forest, the six stations are located (from highest to lowest elevation) as follows: (1) the Mosquito Creek station at 1381 m elevation, (2) the Clearcut station at 1292 m; (3) the Fingerboard Prairie station at 1195 m; (4) the Ikenick station at 1006 m; (5) the Brock Creek station at 792 m; and (6) the Major Prairie station at 701 m. The Mosquito Creek station was newly established last year, in an area that was clear cut 20-30 years ago, to monitor landbird response to on-going successional changes and, hopefully, to better monitor three species of concern at Willamette: Swainson's Thrush, MacGillivray's Warbler, and Dark-eyed Junco (Nott et al. 2005). This new station replaces the unproductive Strube Flat station, where few of these species were captured. All other stations have been operated since 1992. The Clearcut, Brock Creek, and Major Prairie stations are on the Oakridge Ranger District and Mosquito Creek, Fingerboard Prairie, and Ikenick are on the McKenzie Ranger District. See Table 13 for details of the habitats and 2006 operation of these stations.

A total of 2549.2 net-hours was accumulated at the six MAPS stations operated in Willamette National Forest in 2006 (Table 13), representing 88.5% of the maximum possible effort at this station. Of these, 2240.0 net-hours could be compared with data from 2005 in a constant-effort manner.

The 2006 capture summary of the numbers of newly-banded, unbanded, and recaptured birds at Willamette National Forest is presented for each species at each of the six stations individually in Table 14 and for all stations combined in Table 16. A total of 1332 captures of 49 species was recorded during the summer of 2006. Newly banded birds comprised 60.5% of the total captures. The greatest number of total captures (275) was recorded at the Clearcut station and the smallest number of total captures (137) was recorded at the Brock Creek station. The greatest species richness occurred at Ikenick (32 species) and the lowest species richness occurred at Major Prairie (19 species).

The capture rates (per 600 net-hours) of individual adult and young birds and the reproductive index are presented for each species and for all species pooled at each station (Table 15) and for all stations combined (Table 16). We present capture rates (captures per 600 net-hours) of adults and young in this table so that the data can be compared among stations, which can differ from one another in effort expended (see Table 13). These capture indices indicate that the total adult population size in 2006 was greatest at Ickenick, followed in decreasing order by Clearcut, Mosquito Creek, Fingerboard Prairie, Major Prairie, and Brock Creek.. The capture rate of young of all species pooled at each station in 2006 was highest at Mosquito Creek and lowest at Brock Creek. The reproductive index observed at the Willamette stations in 2006, i.e., the number of young per adult, was highest at Mosquito Creek (1.49), followed by Fingerboard Prairie (0.87), Clearcut (0.74), Major Prairie (0.49), Ikenick (0.33), and Brock Creek (0.32). The adult-capture rate at all six stations combined was 117.0 adults per 600 net-hours and the productivity was 0.67 young per adult (Fig. 16). This compares with 87.0 adults per 600 net-hours and productivity increased substantially between 2005 and 2006.

Among individual species, Dark-eyed Junco was the most frequently captured, followed by MacGillivray's Warbler, Swainson's Thrush, Orange-crowned Warbler, Rufous Hummingbird, Common Yellowthroat, Hermit Warbler, Song Sparrow, Chestnut-backed Chickadee, Goldencrowned Kinglet, and Western Flycacther (Table 16). Overall, the most abundant breeding species at the six Willamette MAPS stations in 2006 (according to adults captured/600 net hrs), in decreasing order, were Swainson's Thrush, MacGillivray's Warbler, Dark-eyed Junco, Common Yellowthroat, Hermit Warbler, Traill's Flycatcher, Western Tanager, Chestnut-backed Chickadee, Song Sparrow, and Hammond's Flycatcher (Table 16; the number of individual adult Rufous Hummingbirds captured could not be determined since the birds were not banded). The following is a list of the common breeding species (captured at a rate of at least 6.0 adults per 600 net-hours), in decreasing order, at each station in 2006 (species of concern, as noted above, in italics):

#### **Mosquito Creek**

MacGillivray's Warbler Dark-eyed Junco Orange-crowned Warbler Chest.-backed Chickadee Swainson's Thrush Hermit Warbler Nashville Warbler\* Black-headed Grosbeak<sup>†</sup>

#### **Brock Creek**

Swainson's Thrush MacGillivray's Warbler Dark-eyed Junco Chest.-backed Chickadee\*

#### <u>Clearcut</u>

Swainson's Thrush MacGillivray's Warbler Dark-eyed Junco Western Tanager\* Wilson's Warbler\* Warbling Vireo\* Hermit Warbler Chest.-backed Chickadee<sup>†</sup>

#### Major Prairie

Swainson's Thrush Western Flycatcher\* MacGillivray's Warbler Dark-eyed Junco Song Sparrow<sup>†</sup>

#### **Fingerboard Prairie**

Swainson's Thrush MacGillivray's Warbler Dark-eyed Junco\* Hammond's Flycatcher\* Lincoln's Sparrow\* Golden-crowned Kinglet\* Chest.-backed Chickadee<sup>†</sup>

#### <u>Ikenick</u>

Common Yellowthroat Song Sparrow Traill's Flycacther Yellow Warbler\* *Swainson's Thrush* Western Flycacther\* Western Tanager\* Dark-eyed Junco\* Lincoln's Sparrow<sup>†</sup>

\* At least 6.0 adults per 600 net hours in 2006 but not in 2005.

<sup>+</sup> At least 6.0 adults per 600 net hours in 2005 but not in 2006.

The Mosquito Creek station, recently established in 2005, continues to be effective at monitoring all three target species of concern, with excellent capture rates of Dark-eyed Junco, MacGillivray's Warbler, and Swainson's Thrush (Table 15). When all species were pooled, Mosquito Creek produced a capture rate of 107.2 adults per 600 net-hours and had an excellent reproductive index of 1.49, the highest index recorded at Willamette (Table 15). This suggests that the continuation of this station will enhance our ability to monitor target species and others at this forest in light of on-going successional changes at this station.

#### SIUSLAW NATIONAL FOREST, OREGON

Within Siuslaw National Forest, the six stations are located (from highest to lowest elevation) as follows: (1) the Cougar Creek station at 259 m; (2) the Crab Creek station at 219 m; (3) the Homestead station at 207 m; (4) the Beaver Ridge station at 158 m; (5) the Cape Creek station at 122 m; and (6) the Salvation Meadow station at 122 m. Salvation Meadow was established in 1993 to replace the 1992 Nettle Creek station which, because of its extremely rugged terrain, was too difficult to operate. In 2004 the Cape Creek station replaced the Mary's Peak station because the latter was not in a productive area and we wanted to assess landbird dynamics in a successional habitat to more fully understand the effects of forest thinning. The new Cape Creek station is located in similar geographic terrain to Mary's Peak but was thinned in 2001. In addition, the Crab Creek station had been thinned since the 2003 season but we have left the station in place to monitor the effects of this thinning. All stations are on the Alsea Ranger

District. See Table 17 for details on the habitats and 2006 operation of these stations.

A total of 2643.3 net-hours was accumulated at the six MAPS stations operated in Siuslaw National Forest in 2006 (Table 17), representing 91.8% of the maximum possible effort at this station. Of these, 2221.3 net-hours could be compared with data from 2005 in a constant-effort manner.

The 2006 capture summary of the numbers of newly-banded, unbanded, and recaptured birds at Siuslaw National Forest is presented for each species at each of the six stations individually in Table 18 and for all stations combined in Table 20. A total of 712 captures of 26 species was recorded during the summer of 2006. Newly banded birds comprised 42.6% of the total captures. The greatest number of total captures (169) was recorded at the Cougar Creek station and the smallest number of total captures (53) was recorded at the Cape Creek station. The greatest species richness (14 species) was recorded at Crab Creek and the lowest species richness (9 species) was recorded at Cape Creek.

The capture rates (per 600 net-hours) of individual adult and young birds and the reproductive index are presented for each species and for all species pooled at each station (Table 19) and for all stations combined (Table 20). We present capture rates (captures per 600 net-hours) of adults and young in this table so that the data can be compared among stations which, because of the vagaries of weather and accidental net damage, can differ from one another in effort expended (see Table 17). These capture indices indicate that the total adult population size in 2006 was greatest at Cougar Creek, followed by Salvation Meadow, Beaver Ridge, Homestead, Crab Creek, and Cape Creek. The capture rate of young of all species pooled at each station in 2006 was highest at Homestead and lowest at Cape Creek. The reproductive index at the Siuslaw stations in 2006, i.e., the number of young per adult, was highest at Homestead (0.33) followed by Crab Creek (0.30), Cougar Creek (0.20), Beaver Ridge and Salvation Meadow (0.17), and Cape Creek (0.11). The adult-capture rate at all six stations combined was 78.5 adults per 600 net-hours and 0.22 young per adult (Table 20). This compares with 99.6 adults per 600 net-hours and 0.22 young per adult in 2005, indicating that breeding populations decreased but productivity remained at similar levels between 2005 and 2006.

Among individual species, Swainson's Thrush was the most frequently captured by far, followed by Wilson's Warbler, Winter Wren, Dark-eyed Junco, Unidentified *Selasphorus* hummingbirds, Song Sparrow, and Western Flycacther (Table 20). Overall, the most abundant breeding species at the six Siuslaw MAPS stations in 2006 (according to adults captured/600 net hrs), in decreasing order, were Swainson's Thrush, Wilson's Warbler, Winter Wren, Dark-eyed Junco, Western Flycatcher, Brown Creeper, Western Tanager (Table 20; the number of individual adult *Selasphorus* hummingbirds captured could not be determined since the birds were not banded). The following is a list of the common breeding species (captured at a rate of at least 6.0 adults per 600 net-hours), in decreasing order, at each station in 2006 (species of concern, as noted above, in

italics):

## Cougar Creek

Swainson's Thrush Wilson's Warbler *Winter Wren* Brown Creeper\* *Chest.-backed Chickadee*<sup>†</sup>

# Crab Creek

Swainson's Thrush Wilson's Warbler Dark-eyed Junco

## **Salvation Meadow**

Swainson's Thrush Wilson's Warbler Song Sparrow Western Flycacther<sup>†</sup> Winter Wren<sup>†</sup> Black-headed Grosbeak<sup>†</sup>

 $\frac{Cape Creek}{Dark-eyed Junco}$ *Winter Wren*<sup> $\dagger$ </sup>

# Homestead

Swainson's Thrush Wilson's Warbler Winter Wren Western Flycacther<sup>†</sup>

## **Beaver Ridge**

Swainson's Thrush Wilson's Warbler  $Winter Wren^{\dagger}$ 

\* At least 6.0 adults per 600 net hours in 2006 but not in 2005.

<sup>†</sup> At least 6.0 adults per 600 net hours in 2005 but not in 2006.

At Crab Creek, which was thinned in 2003, breeding population sizes declined by 34% between 2003 and 2004, increased by 15% between 2004 and 2005, and decreased by 21.6% to 48.9 adults per 600 net hours in 2006. Reproductive index increased by 400% between 2003 and 2004 and by another 60% between 2004 and 2005, but decreased by 31% to 0.33 in 2006. These figures are fairly encouraging regarding the effects of thinning on landbird productivity, and we anticipate that population sizes will increase or stablize at a higher rate than pre-thinning levels. At the recently established Cape Creek station, breeding population sizes increased by 38% between 2004 and 2005 but decreased by 35% (to 26.1 adults per 600 net hours) between 2005 and 2006. Productivity dropped by 42% between 2004 and 2005 and decreased by another 39% (to 0.11) 2006. It will be interesting to see how populations and productivity continue to respond to on-going habitat succession at this station. So far the new station and recently thinned stations have not effectively monitored species of concern at Siuslaw.

# FREMONT NATIONAL FOREST, OREGON

Within Fremont National Forest, the six stations are located (from highest to lowest elevation) as follows: (1) The Sycan River station at 2005 m; (2) the Deadhorse station at 1944 m; (3) the Augur Creek station at 1847 m; (4) the Deer Creek station at 1724 m; (5) the Swamp Creek station at 1658 m; and (6) the Island station at 1628 m. The Deer Creek station was newly established in 2005 in a riparian meadow slated for future management, to increase our ability to monitor two declining species of concern at Fremont: Warbling Vireo and Lincoln's Sparrow (Nott et al. 2005). This new station replaces the unproductive Cold Creek station, at which few of these target species were captured. All other stations were established in 1992 and all stations are on the Paisley Ranger District. See Table 21 for details on the habitats and 2006 operation of these stations.

A total of 2037.5 net-hours was accumulated at the six MAPS stations operated in Fremont National Forest in 2006 (Table 21), representing 80.9% of the maximum possible effort at this station. Of these, 1609.3 net-hours could be compared with data from 2005 in a constant-effort

#### manner.

The 2006 capture summary of the numbers of newly-banded, unbanded, and recaptured birds at Fremont National Forest is presented for each species at each of the six stations individually in Table 22 and for all stations combined in Table 24. A total of 1101 captures of 51 species was recorded during the summer of 2006. Newly banded birds comprised 68.0% of the total captures. The greatest number of total captures (320) was recorded at the Deadhorse station and the smallest number of total captures (81) was recorded at the Swamp Creek station. Species richness was highest at Deadhorse (37 species) and lowest at Swamp Creek (16 species).

The capture rates (per 600 net-hours) of individual adult and young birds and the reproductive index are presented for each species and for all species pooled at each station (Table 23) and for all stations combined (Table 24). We present capture rates (captures per 600 net-hours) of adults and young in this table so that the data can be compared among stations which, because of the vagaries of weather and accidental net damage, can differ from one another in effort expended (see Table 21). These capture indices indicate that the total adult population size in 2006 was greatest at Deadhorse, followed in descending order by Sycan River, Deer Creek, Island, Augur Creek, and Swamp Creek. The capture rate of young of all species pooled at each station in 2006 was highest at Deadhorse and lowest at Swamp Creek. Reproductive index at the Fremont stations in 2006, i.e., the number of young per adult, was highest at Deadhorse (0.61), followed by Augur Creek and Island (0.51 each), Sycan River and Deer Creek (0.40 each), and Swamp Creek (0.15). The adult-capture rate at all six stations combined was 157.5 adults per 600 nethours and the productivity was 0.46 young per adult (Fig. 24). This compares with 152.8 adults per 600 nethours and 0.24 young per adult in 2005, indicating that breeding populations remained at similar levels but productivity increased substantially between 2005 and 2006.

Among individual species, Dark-eyed Junco was the most frequently captured, followed by Warbling Vireo, American Robin, Yellow-rumped Warbler, MacGillivray's Warbler, Lincoln's Sparrow, Orange-crowned Warbler, and White-crowned Sparrow (Table 24). Overall, the most abundant breeding species at the six Fremont MAPS stations in 2006 (according to adults captured/600 net hrs), in decreasing order, were Dark-eyed Junco, Warbling Vireo, American Robin, MacGillivray's Warbler, White-crowned Sparrow, Dusky Flycatcher, Red-breasted Sapsucker, Lincoln's Sparrow, and Western Flycacther (Table 24). The following is a list of the common breeding species (captured at a rate of at least 6.0 adults per 600 net-hours), in decreasing order, at each station in 2006 (species of concern, as noted above, in italics):

## Sycan River

Dark-eyed Junco White-crowned Sparrow *Warbling Vireo* Dusky Flycacther *Lincoln's Sparrow* Yellow-rumped Warbler MacGillivray's Warbler American Robin RN x RB Sapsucker\* Red-breasted Sapsucker

#### **Deer Creek**

Warbling Vireo Dark-eyed Junco Yellow-rumped Warbler American Robin Western Tanager MacGillivray's Warbler Lincoln's Sparrow Song Sparrow\*

#### **Deadhorse**

American Robin Warbling Vireo MacGillivray's Warbler Dark-eyed Junco **Dusky Flycatcher** Western Wood Pewee White-crowned Sparrow\* Yellow-rumped Warbler Lincoln's Sparrow Cassin's Finch\* **Red-breasted Sapsucker\*** Western Flycacther\* RN x RB Sapsucker Purple Finch Mountain Chickadee<sup>†</sup> Western Tanager<sup>T</sup> Wilson's Warbler<sup>†</sup>

#### Swamp Creek

Dark-eyed Junco Red-breasted Sapsucker Western Flycacther American Robin MacGillivray's Warbler Yellow-rumped Warbler<sup>†</sup>

#### Augur Creek

Warbling Vireo Yellow-rumped Warbler Dark-eyed Junco American Robin\* MacGillivray's Warbler Mountain Chickadee<sup>†</sup> Hermit Thrush<sup>†</sup> Western Wood-Pewee<sup>†</sup> Dusky Flycacther<sup>†</sup> Western Flycacther<sup>†</sup>

#### **Island**

Dark-eyed Junco American Robin Yellow-rumped Warbler Hammond's Flycacther\* Warbling Vireo\* Brown Creeper<sup>†</sup>

\* At least 6.0 adults per 600 net hours in 2006 but not in 2005.

<sup>+</sup> At least 6.0 adults per 600 net hours in 2005 but not in 2006.

The newly established Deer Creek station appears to be effective at monitoring both target species of concern, with excellent capture rates of Warbling Vireo and good capture rates of Lincoln's Sparrow (Table 23). Deer Creek also produced an excellent capture rate of 153.5 adults per 600 net-hours (down from 180.0 in 2005) and had a reproductive index of 0.40, twice that recorded in 2005 (0.20). This suggests that the continuation of this station will enhance our ability to monitor target species and others at this forest.

# DISCUSSION

Populations of many species of landbirds breeding on six national forests in Region 6 declined substantially and often significantly between 1992 and 2001. The decline for all species pooled over all six national forests was a substantial -1.5% per year. Declines were most pronounced on Siuslaw, Willamette, and especially, Umatilla National Forest where avian populations have declined by nearly 50% since 1992. Productivity also declined on Region 6 National Forests during this period, and productivity appears to be an important factor in driving population trends for many declining species in the region. For many species, especially Neotropical-wintering migrants, the trend in global climate during the 1990's, as characterized by a 5% per annum decrease in the March-May El Niño/Southern Oscillation Precipitation Index, appears to have contributed to the decreasing trends in productivity (Nott et al. 2002) which, in turn, have likely contributed to the population declines. For most declining species, however, low overall productivity (regardless of the productivity trend) or low average survival rates (or both), that are unrelated to climate, appear to provide the major cause(s) of the population declines. We suspect that the ultimate environmental cause for these deficient vital rates, especially low productivity, relates to habitat loss and/or degradation.

The population declines in landbirds that we have documented on Region Six national forests, especially those that appear to be caused by low productivity on the breeding grounds in the absence of weather related stressors, are potentially within the ability of the U.S. Forest Service to correct. As mentioned above, a major objective of the MAPS program on Region Six national forests was to provide for a comprehensive analysis of the ten years of demographic data as a function of landscape-scale habitat characteristics and spatially-explicit weather data. These analyses have now been completed, and management guidelines and conservation strategies to reverse the population declines and maintain stable or increasing populations of landbird species of conservation concern have been formulated (Nott et al. 2005). These management strategies will involve efforts to modify the habitat from characteristics associated with low productivity to characteristics associated with high productivity (for species for which low productivity is driving the population decline), and monitor the effects of existing management on adult populations and productivity. The goal is to create or maintain "source" population of target species such that the birth rate exceeds the death rate such that the excess survivors disperse to unoccupied territories or newly formed habitat. A similar analysis has been completed for DoD Military Installations (Nott et al. 2003) and active management to reverse population declines has begun on these installations.

At Siuslaw, two stations were altered in 2004 to help understand population dynamics as related to forest thinning practices, and four more stations (one each at Mount Baker, Wenatchee, Willamette, and Fremont) were altered in 2005. Thus far our objectives are being met at most of these altered stations. Because of the large defoliation-driven declines at Umatilla, no changes were made so as to continue to document recovering population dynamics at each station there. The current objective of the MAPS Program on Region 6 National Forests is to implement these

strategies in an adaptive management framework to reverse population declines of landbird species of conservation concern into new or on-going forest management actions. We have begun this process and look forward to monitoring the effectiveness of those avian management strategies in Region Six National Forests in future years.

# ACKNOWLEDGMENTS

All data presented in this report were collected by field biologist interns of the Institute for Bird Populations. In 2006, these were Megan Schwender and Elizabeth Milward at Mt. Baker/Snoqualmie; Ken McEnaney and Chris Hansen at Wenatchee; Holly Harris and Mike Denny at Umatilla; Jeff Hayes and Carlos Vinueza at Willamette; Jaime Pawlak and Ben Robel at Siuslaw; and Will Egan and Imelda Nurwisah at Fremont. All interns in 2006 were trained and supervised by Institute Biologists Tim Pitz and Bernadette Emmons. Also, IBP staff biologist Victor Sepulveda trained the interns and field biologists to collect cloacal swab samples as part of IBP's collaboration with University of California Los Angeles to investigate spatiotemporal patterns of avian influenzas. We thank all these people for their excellent and dedicated work.

We thank Barb Bresson, Forest Service Neotropical Migratory Bird Coordinator for USDA Forest Service Region Six, for her enthusiastic ongoing support and kind assistance with all of the logistic and administrative aspects of this work. We thank Grant Gunderson, retired of Forest Service Region Six, for his excellent cooperation with all aspects of the inception of this program. We also thank Lisa Norris and Robert Alvarado, both formerly with the Region Six office, and Dennis Vroman of the Siskiyou National Forest, for their support over the past 14 years. We thank the following people on the participating forests for their excellent help and kind assistance with the numerous logistical details that arose: Phyllis Reed at Mt. Baker/Snoqualmie, Colin Leingang at Wenatchee, Rod Johnson at Umatilla, Ruby Seitz and Laura Hoffman at Willamette, Paul Thomas at Siuslaw, and Marilyn Elston at Fremont. Financial support for this program was provided by the Pacific Northwest Region (Region 6) of the USDA Forest Service; housing for the field biologist interns was provided by the individual participating forests. This report is Contribution Number 309 of The Institute for Bird Populations.

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Table 1. Summary of the 2006 MAPS program on Mount Baker National Forest.

						200	)6 operatio	n
Stat	Code	No.	Major Habitat Type	Latitude-longitude	Avg Elev. (m)	Total number of net-hours <sup>1</sup>	No. of periods	Inclusive dates
Monte Cristo Lake	MCLA	11144	Wet open meadow, riparian alder corridor, dense mixed coniferous forest	48°03'03"N,121°25'57"W	610	352.2 (262.0)	7	5/31 - 8/06
Skull Creek	SKCR	11265	Steep well drained managed hemlock forest	48°07'49"N,121°24'15"W	552	345.3 (302.0)	7	6/01 - 8/04
Perry Creek	PECR	11143	Dense mixed coniferous forest, riparian alder corridor	48°03'49"N,121°30'58"W	512	357.7 (288.0)	7	5/30 - 8/05
Bench Thin	BETH	11908	Thinned mixed coniferous forest, dense mixed coniferous forest	48°10'05"N,121°26'43"W	354	404.3 (369.3)	7	5/28 - 8/02
Frog Lake	FRLA	11139	Dense mixed coniferous lacustrine forest	48°12'30"N,121°34'33"W	317	379.3 (328.7)	7	5/29 - 8/03
Beaver Lake	BELA	11141	Semi-wet dense mixed coniferous forest, wet open swampland, beaver pond	48°09'47"N,121°26'50"W	299	366.3 (234.7)	7	5/27 - 8/01
ALL STATIONS C	OMBINEI	)				2205.2(1784.7)	7	5/27 - 8/06

<sup>1</sup> Total net-hours in 2006. Net-hours in 2006 that could be compared in a constant-effort manner to 2005 are shown in parentheses.

	Mc	nte C Lake		Sk	ull Cı	reek	Р	erry C	reek	Be	ench T	`hin	F	rog La	ıke	Be	aver I	Lake
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Sharp-shinned Hawk								1									1	
Ruffed Grouse								1										
Spotted Sandpiper		1																
Rufous Hummingbird		44			9			13			6			9			8	
Unidentified Hummingbird		2									1							
Red-breasted Sapsucker	3		1	1						1			1			3		2
Downy Woodpecker	1	1																
Hairy Woodpecker	1	1		1		1	1			1			1					
Western Wood-Pewee	2																	
Traill's Flycatcher	1									4		1	1		4			
Hammond's Flycatcher	1			1			1											
Western Flycatcher													2			6		1
Unident. Empidonax Flyc.		3						2			1			3				
Hutton's Vireo										1								
Warbling Vireo	3	1														1		
Steller's Jay	4		1						1							3		
Tree Swallow	1																	
Chestnut-backed Chickadee	3	1	1	2			1						3	1	1	3	1	
Brown Creeper				2	1													
Winter Wren	1						2			4	1	8	3	2	2	5	8	3
Swainson's Thrush	10	1	9	6	1		9	2	11	12		16	17	1	24	16	1	29
Unidentified Thrush																	5	1
American Robin	3	1	5	4			2	3		4			11	4	8	4	3	2
Varied Thrush	6	1	1	2			4			1			6	1	2	1		
Cedar Waxwing	1																	

Table 2. Capture summary for the six individual MAPS stations operated on Mount Baker National Forest in 2006. N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

	Мо	onte Ci Lake		Sk	ull Cr	eek	Pe	rry Cı	eek	Be	ench T	Thin	F	rog La	ake	Be	aver I	lake
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Orange-crowned Warbler	1																	
Yellow Warbler	12		2															
Black-throated Gray Warbler																1		
MacGillivray's Warbler	7		4				1			4						1		
Common Yellowthroat	5	3	6															2
Wilson's Warbler	8	1	1										3	1	1	2		
Western Tanager	1						1			2		1	2					
Spotted Towhee				2	1					1								
Song Sparrow	14	1	8				2		3				3		3	15	2	9
Dark-eyed Junco				11	3	4	1	1										
Black-headed Grosbeak	2									1								
ALL SPECIES POOLED	91	62	39	32	15	5	25	23	15	36	9	26	53	22	45	61	29	49
Total Number of Captures		192			52			63			71			120			139	
Number of Species	23	12	11	10	5	2	11	6	3	12	2	4	12	7	8	13	7	7
Total Number of Species		25			11			15			13			13			16	

Table 2. (cont.) Capture summary for the six individual MAPS stations operated on Mount Bak	er National Forest in 2006.
N = Newly Banded, $U =$ Unbanded, $R =$ Recaptures of banded birds.	

Table 3. Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Mount Baker National Forest in 2006.

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	Monte	Cristo	Lake	Sku	ull Cre	ek	Per	ry Cre	ek	Be	nch Th	in	Fr	og Lak	te	Bea	iver La	ıke
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Red-breasted Sapsucker	5.1	1.7	0.33	1.7	0.0	0.00				1.5	0.0	0.00	1.6	0.0	0.00	6.6	0.0	0.00
Downy Woodpecker	0.0	1.7	und.1															
Hairy Woodpecker	1.7	0.0	0.00	3.5	0.0	0.00	1.7	0.0	0.00	0.0	1.5	und. <sup>1</sup>	1.6	0.0	0.00			
Western Wood-Pewee	3.4	0.0	0.00															
Traill's Flycatcher	1.7	0.0	0.00							4.5	1.5	0.33	3.2	0.0	0.00			
Hammond's Flycatcher	1.7	0.0	0.00	1.7	0.0	0.00	1.7	0.0	0.00									
Western Flycatcher													3.2	0.0	0.00	9.8	0.0	0.00
Hutton's Vireo										1.5	0.0	0.00						
Warbling Vireo	5.1	0.0	0.00													1.6	0.0	0.00
Steller's Jay	6.8	0.0	0.00				1.7	0.0	0.00							4.9	0.0	0.00
Tree Swallow	1.7	0.0	0.00															
Chestnut-backed Chickadee	3.4	3.4	1.00	3.5	0.0	0.00	1.7	0.0	0.00				4.7	0.0	0.00	3.3	1.6	0.50
Brown Creeper				0.0	3.5	und. $^1$												
Winter Wren	1.7	0.0	0.00				1.7	1.7	1.00	7.4	3.0	0.40	4.7	0.0	0.00	6.6	1.6	0.25
Swainson's Thrush	25.6	0.0	0.00	10.4	0.0	0.00	21.8	1.7	0.08	22.3	10.4	0.47	34.8	0.0	0.00	34.4	8.2	0.24
American Robin	8.5	0.0	0.00	7.0	0.0	0.00	3.4	0.0	0.00	3.0	3.0	1.00	20.6	4.7	0.23	8.2	1.6	0.20
Varied Thrush	6.8	1.7	0.25	0.0	3.5	und.	5.0	1.7	0.33	0.0	1.5	und.	9.5	0.0	0.00	1.6	0.0	0.00
Cedar Waxwing	1.7	0.0	0.00															
Yellow Warbler	8.5	10.2	1.20															
Black-throated Gray Warbler																1.6	0.0	0.00
MacGillivray's Warbler	8.5	1.7	0.20				1.7	0.0	0.00	4.5	1.5	0.33				1.6	0.0	0.00

Table 3. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Mount Baker National Forest in 2006.

	Monte	Cristo	Lake	Sk	ull Cre	ek	Per	ry Cre	ek	Be	nch Th	in	Fr	og Lak	te	Bea	aver La	ıke
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Common Yellowthroat	8.5	0.0	0.00													1.6	0.0	0.00
Wilson's Warbler	5.1	6.8	1.33										4.7	0.0	0.00	3.3	0.0	0.00
Western Tanager	1.7	0.0	0.00				1.7	0.0	0.00	3.0	0.0	0.00	3.2	0.0	0.00			
Spotted Towhee				3.5	0.0	0.00				1.5	0.0	0.00						
Song Sparrow	10.2	15.3	1.50				5.0	0.0	0.00				3.2	3.2	1.00	22.9	4.9	0.21
Dark-eyed Junco				13.9	3.5	0.25	1.7	0.0	0.00									
Black-headed Grosbeak	3.4	0.0	0.00							1.5	0.0	0.00						
ALL SPECIES POOLED	121.0	42.6	0.35	45.2	10.4	0.23	48.6	5.0	0.10	50.5	22.3	0.44	94.9	7.9	0.08	108.1	18.0	0.17
Number of Species	21	8		8	3		12	3		10	7		12	2		14	5	
Total Number of Species		22			10			12			12			12			14	

<sup>1</sup> Reproductive index (young/adult) is undefined because no adults of this species were captured at this station in this year.

		Birds captur	red	Birds/600	nethours	
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod. Index
Sharp-shinned Hawk		2				
Ruffed Grouse		1				
Spotted Sandpiper		1				
Rufous Hummingbird		89				
Unidentified Hummingbird		3				
Red-breasted Sapsucker	9		3	2.7	0.3	0.10
Downy Woodpecker	1	1		0.0	0.3	und.1
Hairy Woodpecker	5	1	1	1.4	0.3	0.20
Western Wood-Pewee	2			0.5	0.0	0.00
Traill's Flycatcher	6		5	1.6	0.3	0.17
Hammond's Flycatcher	3			0.8	0.0	0.00
Western Flycatcher	8		1	2.2	0.0	0.00
Unidentified Empidonax Flyc.		9				
Hutton's Vireo	1			0.3	0.0	0.00
Warbling Vireo	4	1		1.1	0.0	0.00
Steller's Jay	7		2	2.2	0.0	0.00
Tree Swallow	1			0.3	0.0	0.00
Chestnut-backed Chickadee	12	3	2	2.7	0.8	0.30
Brown Creeper	2	1		0.0	0.5	und.
Winter Wren	15	11	13	3.8	1.1	0.29
Swainson's Thrush	70	6	89	24.8	3.3	0.13
Unidentified Thrush		5	1			
American Robin	28	11	15	8.4	1.4	0.16
Varied Thrush	20	2	3	3.8	1.4	0.36
Cedar Waxwing	1			0.3	0.0	0.00
Orange-crowned Warbler	1					
Yellow Warbler	12		2	1.4	1.6	1.20
Black-throated Gray Warbler	1			0.3	0.0	0.00
MacGillivray's Warbler	13		4	2.7	0.5	0.20
Common Yellowthroat	5	3	8	1.6	0.0	0.00
Wilson's Warbler	13	2	2	2.2	1.1	0.50
Western Tanager	6		1	1.6	0.0	0.00
Spotted Towhee	3	1		0.8	0.0	0.00
Song Sparrow	34	3	23	6.8	3.8	0.56

Table 4. Summary of results for all six Mount Baker National Forest MAPS stations combined in 2006.

Table 4. (cont.) Summary of results for all six Mount Baker National Forest MAPS stations combined in 2006.

		Birds captur	red	D: 1 /600		
	Newly	Un-	Recap-	Birds/600		Reprod.
Species	banded	banded	tured	Adults	Young	Index
Dark-eyed Junco	12	4	4	2.4	0.5	0.22
Black-headed Grosbeak	3			0.8	0.0	0.00
ALL SPECIES POOLED	298	160	179	77.5	17.1	0.22
Total Number of Captures		637				
Number of Species	29	18	17	26	15	
Total Number of Species		33			28	

<sup>1</sup> Reproductive index (young/adult) is undefined because no adults of this species were captured at this location in this year.

						200	)6 operatio	n
Sta  Name	tion Code	No.	Major Habitat Type	Latitude-longitude	Avg Elev. (m)	Total number of net-hours <sup>1</sup>	No. of periods	Inclusive dates
Two Point	TWPO	11147	Dry grazed montane meadow, open disturbed mixed coniferous forest	46°57'42"N,120°55'30"W	1512	412.0 (377.3)	7	6/06 - 8/06
Little Rattlesnake	LIRA	11264	Douglas fir woodland with bisecting stream, montane meadow, young regenerating clearcut	46°44'35"N,121°05'16"W	1280	371.5 (371.5)	7	6/04 - 8/04
Pleasant Valley	PLVA	11148	Wet open meadow, riparian alder corridor, open spruce forest, dense mixed coniferous forest	46°56'55"N,121°18'25"W	1000	342.7 (326.7)	7	6/01 - 8/01
Timothy Meadow	TIME	11145	Wet alder/huckleberry marshland, open spruce woodland, mixed coniferous forest	47°04'47"N,121°15'29"W	951	389.2 (355.5)	7	6/02 - 8/02
Quartz Creek 2	QCR2	11902	Riparian alder river-bottom, open mixed coniferous forest, beaver ponds, open shrubland	47°01'19"N,121°08'15"W	853	378.0 (353.3)	7	6/03 - 8/03
Rattlesnake Spring	RASP	11149	Riparian alder/aspen grove, chaparral, mixed coniferous forest	46°48'20"N,121°03'09"W	817	409.0 (391.0)	7	6/05 - 8/05
ALL STATIONS C	COMBINE	 D				2302.3(2175.3)	7	6/01 - 8/06

Table 5. Summary of the 2006 MAPS program on Wenatchee National Forest.

<sup>1</sup> Total net-hours in 2006. Net-hours in 2006 that could be compared in a constant-effort manner to 2005 are shown in parentheses.

	T	wo Po	int	Little	Rattl	esnake	Plea	sant V	alley	Timo	thy M	leadow	Qua	rtz Cı	reek 2		ttlesn Sprin	
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Sharp-shinned Hawk				1						2								
Ruffed Grouse		1																
Spotted Sandpiper							2											
Vaux's Swift							2											
Calliope Hummingbird		2			3									3			8	
Rufous Hummingbird		37			4			8			16			14			8	
Unidentified Hummingbird																	2	
Williamson's Sapsucker	1												3					
Red-naped Sapsucker													5		2	3		1
Red-breasted Sapsucker							1						1					
Downy Woodpecker													1		2			
Hairy Woodpecker										1								
Northern Flicker		1		1									1					
Western Wood-Pewee													6		4	3		3
Traill's Flycatcher				1									1					
Hammond's Flycatcher				5		1				2	1	1	2			4		6
Dusky Flycatcher	5		4	1									5		4	1		2
Western Flycatcher	2									1			2			1		
Unident. Empidonax Flyc.		3			2						1			2				
Cassin's Vireo	2																	
Warbling Vireo	4		1	6	1		1		1				13		5	8		7
N. Rough-winged Swallow							2											
Mountain Chickadee	5		3	3									_					
Chestnut-backed Chickadee				1			1			1			3					
Red-breasted Nuthatch	2		1	1									2		1	3		

Table 6. Capture summary for the six individual MAPS stations operated on Wenatchee National Forest in 2006.
N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

	T	wo Po	oint	Little	Rattle	esnake	Pleas	sant V	Valley	Timo	thy M	leadow	Qua	rtz Cr	reek 2		ttlesn Sprin	
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
White-breasted Nuthatch																1		
Brown Creeper	3	1		2									1					
House Wren				2									5					
Golden-crowned Kinglet	21		2	2			3	1		2			6		1			
Ruby-crowned Kinglet										2			1					
Townsend's Solitaire				1												1		
Veery																1		
Swainson's Thrush				3		1							3		3			
Hermit Thrush	8	1	1	5		1				2						2		
American Robin	7			5		1	11	2	2	1			9	1	1	6		
Varied Thrush										2								
Cedar Waxwing													1			1		
Orange-crowned Warbler	8												1			1		
Nashville Warbler	17		1	3						1			1			1		1
Yellow Warbler							1			2			14		18	3		4
Yellow-rumped Warbler	14		3	12		1	7		2	11			7	1	1	3		
Townsend's Warbler	13			5		2	2			11			2			1		
MacGillivray's Warbler	31	2	29	10		4	1			2			16		17	9		23
Common Yellowthroat													1					
Wilson's Warbler													3	1		1		
Western Tanager	3			7		1	2			1			3			30		2
Spotted Towhee																2		
Chipping Sparrow	16	1	2	40	2	13	16		7	3		1	4			11		1
Fox Sparrow	1																	
Song Sparrow	1			1		1	3	1	2	5		4	17	1	30	2		1

Table 6. (cont.) Capture summary for the six individual MAPS stations operated on Wenatchee National Forest in 2006.
N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

Species	Two Point			Little Rattlesnake			Pleasant Valley			Timothy Meadow			Qua	artz Cı	eek 2	R	Rattlesnake Spring		
	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	
Lincoln's Sparrow	6		2	3		3	10		8	7		15							
White-crowned Sparrow							1		1				2	1	3				
Dark-eyed Junco	14		5	28	1	16	8		2	10		1	1		4	11		7	
Black-headed Grosbeak				4									3			6	1	1	
Lazuli Bunting	2			4															
Brown-headed Cowbird										1									
Purple Finch																1			
Cassin's Finch	1			3			4						5		2				
Pine Siskin	1									1			4						
Evening Grosbeak				1			7			10			10			6			
ALL SPECIES POOLED	188	49	54	161	13	45	85	12	25	81	18	22	165	24	98	123	19	59	
Total Number of Captures		291			219			122			121			287			201		
Number of Species	25	8	12	29	5	12	20	4	8	23	2	5	37	7	16	28	3	13	
Total Number of Species		29			31			21			24			39			30		

Table 6. (cont.) Capture summary for the six individual MAPS stations operated on Wenatchee National Forest in 2006. N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

Table 7. Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Wenatchee National Forest in 2006. \_\_\_\_\_

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Species	Two Point			Little Rattlesnake			Pleasant Valley			Timothy Meadow			Quartz Creek 2			Rattlesnake Spring		
	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Sharp-shinned Hawk				1.6	0.0	0.00				3.1	0.0	0.00						
Spotted Sandpiper							3.5	0.0	0.00									
Vaux's Swift							3.5	0.0	0.00									
Williamson's Sapsucker	1.5	0.0	0.00										0.0	4.8	und.1			
Red-naped Sapsucker													1.6	6.3	4.00	4.4	0.0	0.00
Red-breasted Sapsucker							1.8	0.0	0.00				1.6	0.0	0.00			
Downy Woodpecker													3.2	0.0	0.00			
Hairy Woodpecker										1.5	0.0	0.00						
Northern Flicker				0.0	1.6	und.1							1.6	0.0	0.00			
Western Wood-Pewee													15.9	0.0	0.00	5.9	1.5	0.25
Traill's Flycatcher				0.0	0.0	0.00							0.0	1.6	und.			
Hammond's Flycatcher				8.1	1.6	0.20				4.6	0.0	0.00	3.2	0.0	0.00	8.8	2.9	0.33
Dusky Flycatcher	8.7	0.0	0.00	1.6	0.0	0.00							9.5	0.0	0.00	4.4	0.0	0.00
Western Flycatcher	1.5	1.5	1.00							1.5	0.0	0.00	1.6	0.0	0.00	0.0	1.5	und.1
Cassin's Vireo	0.0	2.9	und.1															
Warbling Vireo	4.4	1.5	0.33	8.1	0.0	0.00	3.5	0.0	0.00				20.6	0.0	0.00	14.7	0.0	0.00
Northern Rough-winged Swallow							3.5	0.0	0.00									
Mountain Chickadee	2.9	5.8	2.00	4.8	0.0	0.00												
Chestnut-backed Chickadee				0.0	1.6	und.	0.0	1.8	und.1	1.5	0.0	0.00	4.8	0.0	0.00			
Red-breasted Nuthatch	1.5	2.9	2.00	1.6	0.0	0.00							1.6	1.6	1.00	0.0	4.4	und.

Table 7. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Wenatchee National Forest in 2006.

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Species	Ту	wo Poin	nt	Little Rattlesnake			Pleasant Valley			Timothy Meadow			Quartz Creek 2			Rattlesnake Spring		
	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
White-breasted Nuthatch																0.0	1.5	und.
Brown Creeper	0.0	4.4	und.	1.6	1.6	1.00							1.6	0.0	0.00			
House Wren													6.3	1.6	0.25			
Golden-crowned Kinglet	5.8	24.8	4.25	0.0	3.2	und.	5.3	0.0	0.00	0.0	3.1	und.1	1.6	7.9	5.00			
Ruby-crowned Kinglet										3.1	0.0	0.00	1.6	0.0	0.00			
Townsend's Solitaire				0.0	1.6	und.										0.0	1.5	und.
Veery																1.5	0.0	0.00
Swainson's Thrush				6.5	0.0	0.00							6.3	0.0	0.00			
Hermit Thrush	2.9	8.7	3.00	9.7	0.0	0.00				3.1	0.0	0.00				1.5	1.5	1.00
American Robin	8.7	1.5	0.17	8.1	1.6	0.20	19.3	1.8	0.09	1.5	0.0	0.00	11.1	1.6	0.14	7.3	1.5	0.20
Varied Thrush										1.5	1.5	1.00						
Cedar Waxwing													1.6	0.0	0.00	1.5	0.0	0.00
Nashville Warbler										0.0	1.5	und.	0.0	1.6	und.	2.9	0.0	0.00
Yellow Warbler							1.8	0.0	0.00	3.1	0.0	0.00	23.8	3.2	0.13	4.4	0.0	0.00
Yellow-rumped Warbler	14.6	7.3	0.50	16.2	3.2	0.20	14.0	1.8	0.13	4.6	12.3	2.67	12.7	0.0	0.00	4.4	0.0	0.00
Townsend's Warbler	5.8	13.1	2.25	4.8	4.8	1.00	1.8	1.8	1.00	10.8	6.2	0.57	3.2	0.0	0.00	0.0	1.5	und.
MacGillivray's Warbler	30.6	29.1	0.95	6.5	9.7	1.50	1.8	0.0	0.00	3.1	0.0	0.00	20.6	7.9	0.39	13.2	5.9	0.44
Common Yellowthroat													0.0	0.0	0.00			
Wilson's Warbler													1.6	0.0	0.00	0.0	0.0	0.00
Western Tanager	2.9	1.5	0.50	12.9	0.0	0.00	3.5	0.0	0.00	1.5	0.0	0.00	4.8	0.0	0.00	27.9	17.6	0.63
Spotted Towhee																2.9	0.0	0.00

Table 7. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Wenatchee National Forest in 2006.

Species	Two Point			Little	Little Rattlesnake			Pleasant Valley			thy Me	adow	Quartz Creek 2			Rattlesnake Spring		
	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Chipping Sparrow	21.8	4.4	0.20	48.5	21.0	0.43	33.3	1.8	0.05	4.6	1.5	0.33	6.3	0.0	0.00	11.7	5.9	0.50
Fox Sparrow	1.5	0.0	0.00															
Song Sparrow	0.0	1.5	und.	1.6	0.0	0.00	3.5	1.8	0.50	6.2	4.6	0.75	15.9	17.5	1.10	1.5	1.5	1.00
Lincoln's Sparrow	4.4	5.8	1.33	4.8	1.6	0.33	14.0	5.3	0.38	13.9	4.6	0.33						
White-crowned Sparrow							3.5	0.0	0.00				3.2	1.6	0.50			
Dark-eyed Junco	16.0	8.7	0.54	30.7	19.4	0.63	10.5	3.5	0.33	10.8	4.6	0.43	6.3	0.0	0.00	16.1	4.4	0.27
Black-headed Grosbeak				6.5	0.0	0.00							4.8	0.0	0.00	8.8	1.5	0.17
Lazuli Bunting	2.9	0.0	0.00	6.5	0.0	0.00												
Brown-headed Cowbird										1.5	0.0	0.00						
Purple Finch																0.0	1.5	und.
Cassin's Finch	1.5	0.0	0.00	4.8	0.0	0.00	7.0	0.0	0.00				9.5	0.0	0.00			
Pine Siskin	1.5	0.0	0.00							1.5	0.0	0.00	6.3	0.0	0.00			
Evening Grosbeak				1.6	0.0	0.00	12.3	0.0	0.00	15.4	0.0	0.00	15.9	0.0	0.00	4.4	4.4	1.00
ALL SPECIES POOLED	141.3	125.2	0.89	197.0	72.7	0.37	147.1	19.3	0.13	98.7	40.1	0.41	230.2	57.1	0.25	148.2	60.1	0.41
Number of Species	20	17		22	13		19	8		21	9		32	12		20	17	
Total Number of Species		23			26			20			23			35			26	

<sup>1</sup> Reproductive index (young/adult) is undefined because no adults of this species were captured at this station in this year.

		Birds captur	red	Birds/600	nothours	
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod. Index
Sharp-shinned Hawk	3			0.8	0.0	0.00
Ruffed Grouse		1				
Spotted Sandpiper	2			0.5	0.0	0.00
Vaux's Swift	2			0.5	0.0	0.00
Calliope Hummingbird		16				
Rufous Hummingbird		87				
Unidentified Hummingbird		2				
Williamson's Sapsucker	4			0.3	0.8	3.00
Red-naped Sapsucker	8		3	1.0	1.0	1.00
Red-breasted Sapsucker	2			0.5	0.0	0.00
Downy Woodpecker	1		2	0.5	0.0	0.00
Hairy Woodpecker	1			0.3	0.0	0.00
Northern Flicker	2	1		0.3	0.3	1.00
Western Wood-Pewee	9		7	3.6	0.3	0.07
Fraill's Flycatcher	2			0.0	0.3	und.
Hammond's Flycatcher	13	1	8	4.2	0.8	0.19
Dusky Flycatcher	12		10	4.2	0.0	0.00
Western Flycatcher	6			0.8	0.5	0.67
Unidentified Empidonax Flyc.		8				
Cassin's Vireo	2			0.0	0.5	und.
Warbling Vireo	32	1	14	8.6	0.3	0.03
N. Rough-winged Swallow	2			0.5	0.0	0.00
Mountain Chickadee	8		3	1.3	1.0	0.80
Chestnut-backed Chickadee	6			1.0	0.5	0.50
Red-breasted Nuthatch	8		2	0.8	1.6	2.00
White-breasted Nuthatch	1			0.0	0.3	und.
Brown Creeper	6	1		0.5	1.0	2.00
House Wren	7			1.0	0.3	0.25
Golden-crowned Kinglet	34	1	3	2.1	6.8	3.25
Ruby-crowned Kinglet	3			0.8	0.0	0.00
Fownsend's Solitaire	2			0.0	0.5	und.
Veery	1			0.3	0.0	0.00
Swainson's Thrush	6		4	2.1	0.0	0.00
Hermit Thrush	17	1	2	2.9	1.8	0.64
American Robin	39	3	4	9.1	1.3	0.14

Table 8. Summary of results for all six Wenatchee National Forest MAPS stations combined in 2006.

		Birds captur	red	Birds/600		
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod Index
Varied Thrush	2			0.3	0.3	1.00
Cedar Waxwing	2			0.5	0.0	0.00
Orange-crowned Warbler	10					
Nashville Warbler	23		2	0.5	0.5	1.00
Yellow Warbler	20		22	5.5	0.5	0.09
Yellow-rumped Warbler	54	1	7	10.9	4.2	0.38
Townsend's Warbler	34		2	4.4	4.7	1.06
MacGillivray's Warbler	69	2	73	13.0	9.1	0.70
Common Yellowthroat	1			0.0	0.0	und.
Wilson's Warbler	4	1		0.3	0.0	0.00
Western Tanager	46		3	9.1	3.4	0.37
Spotted Towhee	2			0.5	0.0	0.00
Chipping Sparrow	90	3	24	20.6	5.7	0.28
Fox Sparrow	1			0.3	0.0	0.00
Song Sparrow	29	2	38	4.7	4.4	0.94
Lincoln's Sparrow	26		28	6.0	2.9	0.48
White-crowned Sparrow	3	1	4	1.0	0.3	0.25
Dark-eyed Junco	72	1	35	15.1	6.8	0.45
Black-headed Grosbeak	13	1	1	3.4	0.3	0.08
Lazuli Bunting	6			1.6	0.0	0.00
Brown-headed Cowbird	1			0.3	0.0	0.00
Purple Finch	1			0.0	0.3	und.
Cassin's Finch	13		2	3.6	0.0	0.00
Pine Siskin	6			1.6	0.0	0.00
Evening Grosbeak	34			8.1	0.8	0.10
ALL SPECIES POOLED	803	135	303	159.8	63.8	0.40
Total Number of Captures		1241				
Number of Species	55	18	25	48	34	
Total Number of Species		58			53	

Table 8. (cont.) Summary of results for all six Wenatchee National Forest MAPS stations combined in 2006.

Table 9. Summary of the 2006 MAPS program on Umatilla National Forest.

						200	06 operatio	'n
St  Name	ation  Code	No.	Major Habitat Type	Latitude-longitude	Avg Elev. (m)	Total number of net-hours <sup>1</sup>	No. of periods	Inclusive dates
Buzzard Creek	BUCR	11151	Disturbed coniferous forest, successional alder scrub	45°50'14"N,117°56'56"W	1524	355.0 (324.3)	7	6/09 - 8/06
Buck Mountain Meadow	BMME	11155	Montane meadow, dense coniferous forest	45°40'43"N,118°06'54"W	1378	414.0 (380.7)	7	6/01 - 8/04
Coyote Ridge	CORI	11154	Successional disturbed mixed coniferous forest	45°44'48"N,118°10'16"W	1341	414.0 (376.7)	7	5/31 - 8/05
Fry Meadow	FRME	11153	Montane meadow, coniferous forest	45°47'36"N,117°50'29"W	1280	366.0 (287.0)	7	5/30 - 8/02
Brock Meadow	BRME	11152	Montane meadow, coniferous forest, riparian willows	45°49'01"N,117°51'53"W	1244	376.0 (354.7)	7	6/02 - 8/03
Phillips Creek	PHCR	11156	Riparian willow/alder, dry chaparral, open mixed conifer/oak forest	45°35'08"N,118°01'43"W	975	385.0 (342.5)	7	5/29 - 8/01
ALL STATIONS	COMBINEI	)				2310.0(2065.8)	 7	5/29 - 8/06

<sup>1</sup> Total net-hours in 2006. Net-hours in 2006 that could be compared in a constant-effort manner to 2005 are shown in parentheses.

	Buz	zard (	Creek		k Mou Aeado	intain w	Соу	ote R	idge	Fry	/ Mea	dow	Broo	ck Me	eadow	Phil	lips C	reek
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Sharp-shinned Hawk				1		·												
Ruffed Grouse																	1	
Northern Pygmy-Owl							1		1									
Northern Saw-whet Owl											1							
Calliope Hummingbird		3			4			4			1			3			4	
Rufous Hummingbird					3													
Unidentified Hummingbird					2			1										
Red-naped Sapsucker													1			2		
Unidentified Sapsucker														1				
Hairy Woodpecker	2																	
Northern Flicker	1																	
Pileated Woodpecker		1																
Western Wood-Pewee										1		1				1		
Traill's Flycatcher													4		7			
Least Flycatcher													1					
Hammond's Flycatcher				3									2		2	1		
Gray Flycatcher	1									1			1		1	1		
Dusky Flycatcher	3		1	1		2	2						1					
Western Flycatcher	2									1			1			1		
Unident. Empidonax Flyc.		1			2									1				
Cassin's Vireo				2			2						1			1		
Warbling Vireo	4		4			1	3		4	1			5		4	1		
Gray Jay	3		1							1								
Black-capped Chickadee							2											
Mountain Chickadee				2						3								

Table 10. Capture summary for the six individual MAPS stations operated on Umatilla National Forest in 2006. N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

	Buz	zard (	Creek		c Mou Aeado	intain w	Co	yote R	lidge	Fry	/ Mea	dow	Broo	ck Me	adow	Phil	lips C	Creek
Species	Ν	U	R	Ν	U	R	Ν	U	R	N	U	R	Ν	U	R	N	U	R
Chestnut-backed Chickadee				1		1				4								
Red-breasted Nuthatch	1			4	1					3			4			5		
Brown Creeper	3					2	3			2						2		
House Wren																1		
Winter Wren				7	1	10							1			1		
Golden-crowned Kinglet	16	2		50	3	4	2		5	8		1	2					
Ruby-crowned Kinglet	8		1	10		1	1			12		1	11	1	3	1		
Swainson's Thrush	1		4	7		18	2		3	7		5	12		10	9		14
Hermit Thrush	2		3	1			2			1								
American Robin				1									2	1		5	1	1
Varied Thrush				2														
Orange-crowned Warbler	9	1	1	5			4		1				1			4		
Nashville Warbler							1									1		
Yellow-rumped Warbler	10	1	1	5		3	9		1	5	1		6		1			
Townsend's Warbler	22	2	7	17	1	3	5		4	4			5			1		
MacGillivray's Warbler	3			5			10		2	8		1	13	1	10	16	2	14
Wilson's Warbler	9			12	2		1		1	1			9	1	14	1		
Unidentified Warbler		1																
Western Tanager	3			2		1	2		1	2		1	1			4		
Spotted Towhee																1	1	1
Chipping Sparrow	7		3	8		2	2									1		
Fox Sparrow							1			2		1	5		1	_		
Song Sparrow										1			8		7	3		5
Lincoln's Sparrow			_	_	1					9		4	10	2	3			
Dark-eyed Junco	16	1	7	5	3	4	4	1		28	6	6	6	2	4	19	1	1

Table 10. (cont.) Capture summary for the six individual MAPS stations operated on Umatilla National Forest in 2006.	
N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.	

	Buz	zard (	Creek		k Mou Meado		Coy	yote R	idge	Fr	y Mea	dow	Bro	ck Me	adow	Phi	llips C	reek
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Black-headed Grosbeak Lazuli Bunting													2 2			1		
ALL SPECIES POOLED Total Number of Captures	126	13 172	33	151	23 226	52	59	6 88	23	105	9 135	21	117	13 197	67	84	10 130	36
Number of Species Total Number of Species	21	7 23	11	22	9 27	13	20	2 21	10	22	4 24	9	27	7 28	13	25	6 27	6

Table 10. (cont.) Capture summary for the six individual MAPS stations operated on Umatilla National Forest in 2006.	
N = Newly Banded, $U =$ Unbanded, $R =$ Recaptures of banded birds.	

Table 11. Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Umatilla National Forest in 2006. \_\_\_\_\_

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	Buzz	zard C	reek		Mour eadow		Соу	ote Rie	lge	Fry	Mead	ow	Broc	k Mea	dow	Phil	lips Cr	eek
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Sharp-shinned Hawk				1.4	0.0	0.00												
Northern Pygmy-Owl							1.4	0.0	0.00									
Red-naped Sapsucker													1.6	0.0	0.00	3.1	0.0	0.00
Hairy Woodpecker	1.7	1.7	1.00															
Northern Flicker	0.0	1.7	und.1															
Western Wood-Pewee										1.6	0.0	0.00				1.6	0.0	0.00
Traill's Flycatcher													12.8	0.0	0.00			
Least Flycatcher													0.0	1.6	und.1			
Hammond's Flycatcher				1.4	2.9	2.00							4.8	0.0	0.00	1.6	0.0	0.00
Gray Flycatcher	1.7	0.0	0.00							1.6	0.0	0.00	3.2	0.0	0.00	1.6	0.0	0.00
Dusky Flycatcher	6.8	0.0	0.00	1.4	1.4	1.00	1.4	1.4	1.00				1.6	0.0	0.00			
Western Flycatcher	3.4	0.0	0.00							0.0	1.6	$und.^1$	1.6	0.0	0.00	1.6	0.0	0.00
Cassin's Vireo				2.9	0.0	0.00	2.9	0.0	0.00				0.0	0.0	0.00	1.6	0.0	0.00
Warbling Vireo	8.5	0.0	0.00	1.4	0.0	0.00	5.8	0.0	0.00	1.6	0.0	0.00	11.2	0.0	0.00	1.6	0.0	0.00
Gray Jay	0.0	5.1	und.							1.6	0.0	0.00						
Black-capped Chickadee							0.0	1.4	und.1									
Mountain Chickadee				1.4	0.0	0.00				3.3	0.0	0.00						
Chestnut-backed Chickadee				2.9	0.0	0.00				6.6	0.0	0.00						
Red-breasted Nuthatch	1.7	0.0	0.00	0.0	5.8	und.1				4.9	0.0	0.00	4.8	1.6	0.33	6.2	1.6	0.25
Brown Creeper	1.7	3.4	2.00	2.9	0.0	0.00	1.4	2.9	2.00	0.0	3.3	und.				0.0	3.1	und.1

Table 11. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Umatilla National Forest in 2006. 

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	Buz	zard Ci	reek		k Mour Ieadow		Coy	ote Rio	lge	Fry	Meado	ow	Broc	k Mea	dow	Phil	lips Cr	eek
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
House Wren																1.6	0.0	0.00
Winter Wren				10.1	0.0	0.00							0.0	1.6	und.	1.6	0.0	0.00
Golden-crowned Kinglet	5.1	20.3	4.00	21.7	44.9	2.07	2.9	0.0	0.00	6.6	6.6	1.00	3.2	0.0	0.00			
Ruby-crowned Kinglet	10.1	3.4	0.33	8.7	5.8	0.67	1.4	0.0	0.00	18.0	1.6	0.09	19.1	0.0	0.00	0.0	1.6	und.
Swainson's Thrush	5.1	0.0	0.00	20.3	0.0	0.00	4.3	0.0	0.00	18.0	0.0	0.00	22.3	0.0	0.00	18.7	1.6	0.08
Hermit Thrush	5.1	0.0	0.00	1.4	0.0	0.00	2.9	0.0	0.00	0.0	1.6	und.						
American Robin				1.4	0.0	0.00							3.2	0.0	0.00	7.8	1.6	0.20
Varied Thrush				2.9	0.0	0.00												
Orange-crowned Warbler	3.4	10.1	3.00	0.0	5.8	und.	2.9	4.3	1.50				0.0	1.6	und.	4.7	0.0	0.00
Yellow-rumped Warbler	13.5	3.4	0.25	8.7	2.9	0.33	11.6	1.4	0.13	8.2	0.0	0.00	9.6	0.0	0.00			
Townsend's Warbler	35.5	5.1	0.14	21.7	4.3	0.20	4.3	4.3	1.00	6.6	0.0	0.00	8.0	0.0	0.00	1.6	0.0	0.00
MacGillivray's Warbler	0.0	3.4	und.	4.3	2.9	0.67	13.0	2.9	0.22	13.1	1.6	0.13	19.1	4.8	0.25	23.4	4.7	0.20
Wilson's Warbler	11.8	3.4	0.29	15.9	0.0	0.00	0.0	1.4	und.	0.0	1.6	und.	16.0	1.6	0.10	1.6	0.0	0.00
Western Tanager	5.1	0.0	0.00	2.9	1.4	0.50	2.9	0.0	0.00	3.3	0.0	0.00	1.6	0.0	0.00	6.2	0.0	0.00
Spotted Towhee																0.0	1.6	und.
Chipping Sparrow	11.8	3.4	0.29	11.6	0.0	0.00	2.9	0.0	0.00							1.6	0.0	0.00
Fox Sparrow							0.0	1.4	und.	4.9	0.0	0.00	6.4	1.6	0.25			
Song Sparrow										1.6	0.0	0.00	12.8	0.0	0.00	4.7	0.0	0.00
Lincoln's Sparrow										18.0	1.6	0.09	16.0	1.6	0.10			
Dark-eyed Junco	23.7	6.8	0.29	10.1	0.0	0.00	1.4	4.3	3.00	18.0	29.5	1.64	9.6	1.6	0.17	18.7	10.9	0.58

Table 11. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Umatilla National Forest in 2006.

	Buz	zard Cı	eek		t Mour Ieadow		Соу	ote Rie	dge	Fry	Mead	ow	Broc	k Mea	dow	Phil	lips Cr	eek
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Black-headed Grosbeak Lazuli Bunting													3.2 1.6	0.0 1.6	0.00 1.00	1.6	0.0	0.00
ALL SPECIES POOLED	155.5	71.0	0.46	158.0	78.3	0.50	63.8	26.1	0.41	137.7	49.2	0.36	193.1	19.1	0.10	112.2	26.5	0.24
Number of Species Total Number of Species	18	13 21		22	10 24		16	10 19		18	9 22		23	10 26		21	8 24	

		Birds captur	red	Birds/600	nethours	
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod. Index
Sharp-shinned Hawk	1			0.3	0.0	0.00
Ruffed Grouse		1				
Northern Pygmy-Owl	1		1	0.3	0.0	0.00
Northern Saw-whet Owl		1				
Calliope Hummingbird		19				
Rufous Hummingbird		3				
Unidentified Hummingbird		3				
Red-naped Sapsucker	3			0.8	0.0	0.00
Unidentified Sapsucker		1				
Hairy Woodpecker	2			0.3	0.3	1.00
Northern Flicker	1			0.0	0.3	und.1
Pileated Woodpecker		1				
Western Wood-Pewee	2		1	0.5	0.0	0.00
Traill's Flycatcher	4		7	2.1	0.0	0.00
Least Flycatcher	1			0.0	0.3	und.
Hammond's Flycatcher	6		2	1.3	0.5	0.40
Gray Flycatcher	4		1	1.3	0.0	0.00
Dusky Flycatcher	7		3	1.8	0.5	0.29
Western Flycatcher	5			1.0	0.3	0.25
Unidentified Empidonax Flyc.		4				
Cassin's Vireo	6			1.3	0.0	0.00
Warbling Vireo	14		13	4.9	0.0	0.00
Gray Jay	4		1	0.3	0.8	3.00
Black-capped Chickadee	2			0.0	0.3	und.
Mountain Chickadee	5			0.8	0.0	0.00
Chestnut-backed Chickadee	5		1	1.6	0.0	0.00
Red-breasted Nuthatch	17	1		2.9	1.6	0.54
Brown Creeper	10		2	1.0	2.1	2.00
House Wren	1			0.3	0.0	0.00
Winter Wren	9	1	10	2.1	0.3	0.13
Golden-crowned Kinglet	78	5	10	6.8	12.2	1.81
Ruby-crowned Kinglet	43	1	6	9.4	2.1	0.22
Swainson's Thrush	38		54	14.8	0.3	0.02
Hermit Thrush	6		3	1.6	0.3	0.17

Table 12. Summary of results for all six Umatilla National Forest MAPS stations combined in 2006.

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Table 12. (cont.) Summary of results for all six Umatilla National Forest MAPS stations combined in 2006.

		Birds captur	red			
	Newly	 Un-	Recap-	Birds/600	nethours	Reprod.
Species	banded	banded	tured	Adults	Young	Index
American Robin	8	2	1	2.1	0.3	0.13
Varied Thrush	2			0.5	0.0	0.00
Orange-crowned Warbler	23	1	2	1.8	3.6	2.00
Nashville Warbler	2					
Yellow-rumped Warbler	35	2	6	8.6	1.3	0.15
Townsend's Warbler	54	3	14	12.7	2.3	0.18
MacGillivray's Warbler	55	3	27	12.2	3.4	0.28
Wilson's Warbler	33	3	15	7.5	1.3	0.17
Unidentified Warbler		1				
Western Tanager	14		3	3.6	0.3	0.07
Spotted Towhee	1	1	1	0.0	0.3	und.
Chipping Sparrow	18		5	4.7	0.5	0.11
Fox Sparrow	8		2	1.8	0.5	0.29
Song Sparrow	12		12	3.1	0.0	0.00
Lincoln's Sparrow	19	3	7	5.5	0.5	0.09
Dark-eyed Junco	78	14	22	13.2	8.6	0.65
Black-headed Grosbeak	3			0.8	0.0	0.00
Lazuli Bunting	2			0.3	0.3	1.00
ALL SPECIES POOLED	642	74	232	135.6	44.9	0.33
Total Number of Captures		948				
Number of Species	43	18	28	38	28	
Total Number of Species		48			42	

						200	)6 operatio	n
Name Sta	ation Code	No.	Major Habitat Type	Latitude-longitude	Avg Elev. (m)	Total number of net-hours <sup>1</sup>	No. of periods	Inclusive dates
Mosquito Creek	MOCR	11263	Regenerating clear cut of douglas fir forest with dense understory, mature douglas fir forest	 44°03'45"N,122°03'00"W	1381	402.8 (321.2)	8	6/07 - 8/05
Clearcut	CLCU	11160	Disturbed open mixed coniferous forest with dry mixed evergreen shrub component	43°57'29"N,122°12'46"W	1292	463.0 (425.8)	8	6/08 - 8/06
Fingerboard Prairie	FIPR	11158	Disturbed wet open meadow complex with alder/ willow thickets, fairly open mixed coniferous forest, dense deciduous/coniferous forest	44°11'57"N,121°57'22"W	1195	400.0 (321.0)	8	5/22 - 8/04
Ikenick	IKEN	11157	Very wet open meadow, mature mixed coniferous forest edge, disturbed mixed coniferous forest	44°22'15"N,122°00'59"W	1006	415.7 (360.0)	8	5/21 - 8/03
Brock Creek	BRCR	11162	Thinned mixed coniferous forest, dense mixed coniferous forest	43°52'55"N,122°12'00"W	792	443.3 (413.3)	8	5/18 - 8/01
Major Prairie	MAPR	11161	Dense buckthorn meadow, mixed coniferous forest	43°53'21"N,122°15'54"W	701	424.3 (398.7)	8	5/19 - 8/02
ALL STATIONS	COMBIN	ED				2549.2(2240.0)	8	5/18 - 8/06

Table 13. Summary of the 2005 MAPS program on Willamette National Forest.

<sup>1</sup> Total net-hours in 2006. Net-hours in 2006 that could be compared in a constant-effort manner to 2005 are shown in parentheses.

	Mos	quito	Creek	(	Clearc	ut		ngerbo Prairi			Ikenic	k	Br	ock Cı	reek	Ma	jor Pr	airie
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Sharp-shinned Hawk				1														
Northern Saw-whet Owl														1				
Calliope Hummingbird								1										
Rufous Hummingbird		19			13			12			25			5			7	
Unident. Selasphorus Hum.		3			5													
Unidentified Hummingbird											1						1	
Red-breasted Sapsucker	4			1			2			5		2		1	1	7		2
Hairy Woodpecker										2		1				3		2
Northern Flicker				1									1					
Traill's Flycatcher				2			1			6		6	4		1	4		2
Hammond's Flycatcher	3			2			7		1	1	1	1	1			4		5
Dusky Flycatcher				1		1	2		1	1								
Western Flycatcher	1			2		2	5		1	7			1		1	8		
Unident. Empidonax Flyc.		1						2			1			1				
Cassin's Vireo				1	1	1												
Hutton's Vireo																4		6
Warbling Vireo	1			5		1	1			2		3	2		1	5		
Gray Jay	1			1						2								
Steller's Jay	1			1			1			1								1
Black-capped Chickadee							1											
Chestnut-backed Chickadee	10	1	1	3			2			2			6		2	3		
Red-breasted Nuthatch	1						1											
Brown Creeper							1						-		-			
Bewick's Wren								_					2	1	2			
Winter Wren	1	1					13	2		1	1		1				1	

Table 14. Capture summary for the six individual MAPS stations operated on Willamette N	ational Forest in 2006.
N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.	

	Moso	quito	Creek	(	Clearc	ut		ngerbo Prairi			Ikenic	k	Bro	ock C	reek	Ma	jor Pr	airie
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Golden-crowned Kinglet	8			9	1		9		1	1								
Swainson's Thrush	5	1	7	15		14	8		14	5		6	21		18	17	1	16
Hermit Thrush	2			5		4	2	1	1									
American Robin	2	1		1	2					2			4	1	2	1		
Varied Thrush		2		3		1	1											
Cedar Waxwing										3								
Orange-crowned Warbler	30	11	6	25			17	1	5	10								
Nashville Warbler	7	3		5			6			3								
Yellow Warbler										7	1	4						
Yellow-rumped Warbler				4	1			1		1								
Townsend's Warbler										1								
Hermit Warbler	12	3		6	1	2	7		1	3			2		1	3		
MacGillivray's Warbler	28	2	11	11	1	13	20	1	22	8	1	2	15		4	9		10
Common Yellowthroat										33	6	36						
Wilson's Warbler	6	1		12	1	7	4		1	3								
Unidentified Warbler		1									1			1				
Western Tanager	1			7		1	1			5		2	1			7		
Spotted Towhee													1	1				
Chipping Sparrow				1	2								1					
Fox Sparrow	1			3		2				1								
Song Sparrow				1			2			13	3	22	4		2	8		9
Lincoln's Sparrow							5		4	1								
Dark-eyed Junco	40	10	8	45	5	13	19	2	7	10		1	11	1	6	8		5
Unidentified Sparrow											1							
Black-headed Grosbeak	1		1	3		1												

Table 14. (cont.) Capture summary for the six individual MAPS stations operated on Willamette National Forest in 2006. N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

	Mos	quito	Creek	(	Clearc	ut	Fi	ngerbo Prairi	ard e		Ikenic	k	Br	ock C	reek	Ма	jor Pr	airie
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Lazuli Bunting Red-winged Blackbird Purple Finch Evening Grosbeak	1	1	1	2			1 1			1 2			3			2		2
ALL SPECIES POOLED Total Number of Captures	168	61 264	35	179	33 275	63	140	23 222	59	143	42 271	86	83	13 137	41	93	10 163	60
Number of Species Total Number of Species	24	13 26	7	30	10 31	14	27	8 30	12	31	7 32	12	19	7 22	12	16	3 19	11

Table 14. (cont.) Capture summary for the six individual MAPS stations operated on Willamette National Forest in 2006.	
N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.	

Table 15. Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Willamette National Forest in 2006.

	Mosq	luito C	reek	С	learcu	t	Fingerl	ooard I	Prairie	Ι	kenick		Bro	ock Cre	ek	Maj	or Pra	irie
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Sharp-shinned Hawk				1.3	0.0	0.00												
Red-breasted Sapsucker	1.5	4.5	3.00	0.0	1.3	und.1	3.0	0.0	0.00	5.8	1.4	0.25	1.4	0.0	0.00	5.7	4.2	0.75
Hairy Woodpecker										2.9	0.0	0.00				1.4	2.8	2.00
Northern Flicker				1.3	0.0	0.00							1.4	0.0	0.00			
Traill's Flycatcher				1.3	0.0	0.00	1.5	0.0	0.00	13.0	0.0	0.00	5.4	0.0	0.00	4.2	0.0	0.00
Hammond's Flycatcher	1.5	3.0	2.00	2.6	0.0	0.00	7.5	4.5	0.60	2.9	0.0	0.00	0.0	0.0	0.00	4.2	1.4	0.33
Dusky Flycatcher				1.3	0.0	0.00	3.0	0.0	0.00	1.4	0.0	0.00						
Western Flycatcher	1.5	0.0	0.00	3.9	0.0	0.00	4.5	3.0	0.67	8.7	1.4	0.17	1.4	0.0	0.00	9.9	1.4	0.14
Cassin's Vireo				1.3	0.0	0.00												
Hutton's Vireo																2.8	4.2	1.50
Warbling Vireo	1.5	0.0	0.00	6.5	0.0	0.00	1.5	0.0	0.00	4.3	0.0	0.00	4.1	0.0	0.00	7.1	0.0	0.00
Gray Jay	0.0	1.5	und.1	0.0	1.3	und.				2.9	0.0	0.00						
Steller's Jay	1.5	0.0	0.00	1.3	0.0	0.00	1.5	0.0	0.00	1.4	0.0	0.00				1.4	0.0	0.00
Black-capped Chickadee							1.5	0.0	0.00									
Chestnut-backed Chickadee	8.9	7.4	0.83	2.6	1.3	0.50	0.0	3.0	und.1	1.4	1.4	1.00	8.1	0.0	0.00	1.4	2.8	2.00
Red-breasted Nuthatch	0.0	1.5	und.				0.0	1.5	und.									
Brown Creeper							0.0	1.5	und.									
Bewick's Wren													1.4	1.4	1.00			
Winter Wren	0.0	1.5	und.				0.0	19.5	und.	1.4	0.0	0.00	1.4	0.0	0.00			
Golden-crowned Kinglet	4.5	7.4	1.67	3.9	7.8	2.00	6.0	7.5	1.25	1.4	0.0	0.00						
Swainson's Thrush	8.9	3.0	0.33	18.1	5.2	0.29	18.0	1.5	0.08	10.1	0.0	0.00	32.5	9.5	0.29	25.5	7.1	0.28

Table 15. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Willamette National Forest in 2006. 

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	Moso	quito C	reek	C	Clearcu	t	Finger	board I	Prairie	Ι	kenick		Bro	ock Cre	eek	Ma	jor Pra	irie
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Hermit Thrush	0.0	3.0	und.	5.2	1.3	0.25	3.0	0.0	0.00									
American Robin	1.5	1.5	1.00	1.3	0.0	0.00				2.9	0.0	0.00	4.1	2.7	0.67	1.4	0.0	0.00
Varied Thrush				2.6	1.3	0.50	0.0	1.5	und.									
Cedar Waxwing										4.3	0.0	0.00						
Orange-crowned Warbler	11.9	34.3	2.88															
Nashville Warbler	6.0	4.5	0.75	1.3	5.2	4.00	3.0	6.0	2.00	4.3	0.0	0.00						
Yellow Warbler										11.5	0.0	0.00						
Yellow-rumped Warbler				1.3	3.9	3.00				0.0	1.4	und.1						
Townsend's Warbler										1.4	0.0	0.00						
Hermit Warbler	8.9	8.9	1.00	6.5	3.9	0.60	4.5	6.0	1.33	2.9	1.4	0.50	2.7	0.0	0.00	2.8	1.4	0.50
MacGillivray's Warbler	22.3	25.3	1.13	18.1	2.6	0.14	18.0	12.0	0.67	5.8	5.8	1.00	13.5	9.5	0.70	9.9	5.7	0.57
Common Yellowthroat										37.5	23.1	0.62						
Wilson's Warbler	3.0	6.0	2.00	7.8	9.1	1.17	4.5	1.5	0.33	1.4	2.9	2.00						
Western Tanager	1.5	0.0	0.00	9.1	0.0	0.00	0.0	1.5	und.	7.2	0.0	0.00	1.4	0.0	0.00	4.2	5.7	1.33
Spotted Towhee													0.0	1.4	und.1			
Chipping Sparrow				1.3	0.0	0.00							1.4	0.0	0.00			
Fox Sparrow	1.5	0.0	0.00	5.2	0.0	0.00				1.4	0.0	0.00						
Song Sparrow				0.0	1.3	und.	0.0	3.0	und.	14.4	7.2	0.50	2.7	2.7	1.00	5.7	9.9	1.75
Lincoln's Sparrow							7.5	0.0	0.00	1.4	0.0	0.00						
Dark-eyed Junco	14.9	46.2	3.10	15.6	45.4	2.92	13.5	18.0	1.33	7.2	8.7	1.20	10.8	5.4	0.50	9.9	2.8	0.29
Black-headed Grosbeak	3.0	0.0	0.00															

Table 15. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Willamette National Forest in 2006.

	Mos	quito C	reek	C	learcu	t	Finger	board I	Prairie	I	kenick		Bro	Brock Creek		Maj	or Pra	irie
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Lazuli Bunting Red-winged Blackbird	1.5	0.0	0.00	2.6	0.0	0.00	1.5	0.0	0.00	1.4	0.0	0.00	4.1	0.0	0.00			
Purple Finch Evening Grosbeak	1.5	0.0	0.00				1.5	0.0	0.00	2.9	0.0	0.00	2.7	0.0	0.00	2.8	0.0	0.00
ALL SPECIES POOLED	107.2	159.4	1.49	123.1	90.7	0.74	105.0	91.5	0.87	166.0	54.9	0.33	100.2	32.5	0.32	100.4	49.5	0.49
Number of Species Total Number of Species	20	16 24		25	14 28		19	16 26		29	10 30		18	7 19		17	12 17	

		Birds captur	red	Birds/600	nethours	
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod. Index
Sharp-shinned Hawk	1			0.2	0.0	0.00
Northern Saw-whet Owl		1				
Calliope Hummingbird		1				
Rufous Hummingbird		81				
Unident. Selasphorus Hum.		8				
Unidentified Hummingbird		2				
Red-breasted Sapsucker	19	1	5	2.8	1.9	0.67
Hairy Woodpecker	5		3	0.7	0.5	0.67
Northern Flicker	2			0.5	0.0	0.00
Traill's Flycatcher	17		9	4.2	0.0	0.00
Hammond's Flycatcher	18	1	7	3.1	1.4	0.46
Dusky Flycatcher	4		2	0.9	0.0	0.00
Western Flycatcher	24		4	4.9	0.9	0.19
Unidentified Empidonax Flyc.		5				
Cassin's Vireo	1	1	1	0.2	0.0	0.00
Hutton's Vireo	4		6	0.5	0.7	1.50
Warbling Vireo	16		5	4.2	0.0	0.00
Gray Jay	4			0.5	0.5	1.00
Steller's Jay	4		1	1.2	0.0	0.00
Black-capped Chickadee	1			0.2	0.0	0.00
Chestnut-backed Chickadee	26	1	3	3.8	2.6	0.69
Red-breasted Nuthatch	2			0.0	0.5	und.1
Brown Creeper	1			0.0	0.2	und.
Bewick's Wren	2	1	2	0.2	0.2	1.00
Winter Wren	16	5		0.5	3.3	7.00
Golden-crowned Kinglet	27	1	1	2.6	3.8	1.46
Swainson's Thrush	71	2	75	19.1	4.5	0.24
Hermit Thrush	9	1	5	1.4	0.7	0.50
American Robin	10	4	2	1.9	0.7	0.38
Varied Thrush	4	2	1	0.5	0.5	1.00
Cedar Waxwing	3			0.7	0.0	0.00
Orange-crowned Warbler	82	12	11	1.9	5.4	2.88
Nashville Warbler	21	3		2.4	2.6	1.10
Yellow Warbler	7	1	4	1.9	0.0	0.00

Table 16. Summary of results for all six Willamette National Forest MAPS stations combined in 2006.

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Table 16. (cont.) Summary of results for all six Willamette National Forest MAPS stations combined in 2006.

		Birds captur	red	Birds/600	nethours	
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod. Index
Yellow-rumped Warbler	5	2		0.2	0.9	4.00
Townsend's Warbler	1			0.2	0.0	0.00
Hermit Warbler	33	4	4	4.7	3.5	0.75
MacGillivray's Warbler	91	5	62	14.6	9.9	0.68
Common Yellowthroat	33	6	36	6.1	3.8	0.62
Wilson's Warbler	25	2	8	2.8	3.3	1.17
Unidentified Warbler		3				
Western Tanager	22		3	4.0	1.2	0.29
Spotted Towhee	1	1		0.0	0.2	und.
Chipping Sparrow	2	2		0.5	0.0	0.00
Fox Sparrow	5		2	1.4	0.0	0.00
Song Sparrow	28	3	33	3.8	4.0	1.06
Lincoln's Sparrow	6		4	1.4	0.0	0.00
Dark-eyed Junco	133	18	40	12.0	21.2	1.77
Unidentified Sparrow		1				
Black-headed Grosbeak	4		2	0.5	0.0	0.00
Lazuli Bunting	7		1	1.6	0.0	0.00
Red-winged Blackbird	1			0.2	0.0	0.00
Purple Finch	5		2	1.2	0.0	0.00
Evening Grosbeak	3	1		0.7	0.0	0.00
ALL SPECIES POOLED	806	182	344	117.0	78.8	0.67
Total Number of Captures		1332				
Number of Species	46	27	31	43	27	
Total Number of Species		49			46	

Table 17. Summary of the 2006 MAPS program on Siuslaw National Forest.

						200	nours1       periods       d         472.0)       8       5/17         358.3)       8       5/19         305.5)       8       5/30         383.3)       8       5/21         316.0)       8       5/24	n
Stat	Code	No.	Major Habitat Type	Latitude-longitude	Avg Elev. (m)	Total number of net-hours <sup>1</sup>		Inclusive dates
Cougar Creek	COUC	11167	Mature semi-dense Douglas fir forest, young disturbed Douglas fir forest, post- clearcut vine maple grove	44°16'20"N,123°51'46"W	259	472.0 (472.0)	8	5/17 - 8/01
Crab Creek	CRCR	11168	Young dense disturbed Douglas fir forest	44°15'11"N,123°51'39"W	219	454.3 (358.3)	8	5/19 - 8/03
Homestead	HOME	11165	Mature Douglas fir forest, mature red alder stands, grassy meadow	44°30'23"N,123°37'48"W	207	431.3 (305.5)	8	5/30 - 8/06
Beaver Ridge	BERI	11166	Young dense disturbed Douglas fir forest	44°18'45"N,123°50'19"W	158	421.7 (383.3)	8	5/21 - 8/02
Cape Creek	CCRE	11241	Thinned douglas fir stand on coastal hill	44°08'18"N,124°01'25W	122	414.3 (316.0)	8	5/24 - 8/05
Salvation Meadow	SAME	11903	Wet meadow, riparian corridor, second-growth Douglas fir- dominated mixed coniferous forest	44°15'33"N,123°44'32"W	122	449.7 (386.2)	8	5/18 - 8/04
ALL STATIONS C	OMBINEI	 D				2643.3(2221.3)	8	5/17 - 8/06

<sup>1</sup> Total net-hours in 2006. Net-hours in 2006 that could be compared in a constant-effort manner to 2005 are shown in parentheses.

	Cougar Creek		Cr	Crab Creek		Homestead			Beaver Ridge			Cape Creek				alvati Aeado		
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Rufous Hummingbird		1												1				
Unident. Selasphorus Hum.		5			5			3			1			16			2	
Belted Kingfisher Hairy Woodpecker				1									1				1	
Pileated Woodpecker				1				1					1					
Hammond's Flycatcher	1			1			1											
Western Flycatcher	1			2			3		2	2		1	1			2		2
Unident. Empidonax Flyc.																	2	
Warbling Vireo				1		1										2		
Gray Jay										1								
Steller's Jay	1									1						2		
Chestnut-backed Chickadee	3	3		2			2									2		
Brown Creeper	5		2							1		1						
Winter Wren	14	8	9	1	1		17	5	5	10		4	3		1	5		3
Swainson's Thrush	22	2	53	7	1	11	22	1	34	25	1	54	2		1	20	2	57
Unidentified Thrush																	2	
American Robin				1			1			1								
Wrentit	2		6															
Hermit Warbler	2									1								
MacGillivray's Warbler																2		
Common Yellowthroat																1		
Wilson's Warbler	13	3	11	9		2	13		13	10	1	12	5		1	15	3	12
Western Tanager	2			1			2						1					
Spotted Towhee					1													
Song Sparrow				2		1	6	1		1						6		6

Table 18. Capture summary for the six individual MAPS stations operated on Siuslaw National Forest in 2006.
N = Newly Banded, $U = Unbanded$ , $R = Recaptures of banded birds$ .

	Cou	ıgar C	Creek	Cr	ab Cr	eek	Н	omeste	ead	Bea	aver R	idge	Ca	ape Cı	eek		Salvati Meado	
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
White-crowned Sparrow Dark-eyed Junco Black-headed Grosbeak Evening Grosbeak				1 9	1	8	4		2 2 2				1 1	3	15	1		
ALL SPECIES POOLED Total Number of Captures	66	22 169	81	38	9 70	23	73	11 142	58	53	3 128	72	15	20 53	18	58	12 150	80
Number of Species Total Number of Species	11	5 12	5	13	4 14	5	11	4 12	6	10	2 10	5	8	2 9	4	11	3 12	5

Table 18. (cont.) Capture summary for the six individual MAPS stations operated on Siuslaw National Forest in 2006.
N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

Table 19. Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Siuslaw National Forest in 2006. \_\_\_\_\_

	Cou	gar Cr	eek	Cra	ab Cree	ek	Нс	mestea	ıd	Bea	ver Rie	lge	Ca	pe Cre	ek	Salvat	ion Me	adow
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Hairy Woodpecker				1.3	0.0	0.00							1.4	0.0	0.00			
Hammond's Flycatcher	1.3	0.0	0.00	1.3	0.0	0.00	1.4	0.0	0.00									
Western Flycatcher	1.3	0.0	0.00	2.6	0.0	0.00	5.6	0.0	0.00	2.8	0.0	0.00	1.4	0.0	0.00	4.0	0.0	0.00
Warbling Vireo				1.3	0.0	0.00										2.7	0.0	0.00
Gray Jay										1.4	0.0	0.00						
Steller's Jay	1.3	0.0	0.00							1.4	0.0	0.00				2.7	0.0	0.00
Chestnut-backed Chickadee	5.1	1.3	0.25	1.3	1.3	1.00	2.8	0.0	0.00							2.7	0.0	0.00
Brown Creeper	6.4	0.0	0.00							2.8	0.0	0.00						
Winter Wren	11.4	8.9	0.78	1.3	0.0	0.00	11.1	15.3	1.38	5.7	10.0	1.75	4.3	0.0	0.00	2.7	5.3	2.00
Swainson's Thrush	47.0	6.4	0.14	13.2	1.3	0.10	38.9	5.6	0.14	62.6	4.3	0.07	4.3	0.0	0.00	52.0	4.0	0.08
American Robin				1.3	0.0	0.00	1.4	0.0	0.00	1.4	0.0	0.00						
Wrentit	3.8	1.3	0.33															
Hermit Warbler	2.5	0.0	0.00							1.4	0.0	0.00						
MacGillivray's Warbler																2.7	0.0	0.00
Common Yellowthroat																1.3	0.0	0.00
Wilson's Warbler	17.8	2.5	0.14	9.2	4.0	0.43	20.9	1.4	0.07	19.9	1.4	0.07	4.3	2.9	0.67	20.0	6.7	0.33
Western Tanager	2.5	0.0	0.00	1.3	0.0	0.00	2.8	0.0	0.00				1.4	0.0	0.00			
Spotted Towhee				1.3	0.0	0.00												
Song Sparrow				1.3	2.6	2.00	2.8	5.6	2.00	0.0	1.4	und.1				8.0	1.3	0.17
White-crowned Sparrow				1.3	0.0	0.00							1.4	0.0	0.00			
Dark-eyed Junco				10.6	5.3	0.50	2.8	2.8	1.00				7.2	0.0	0.00			

Table 19. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Siuslaw National Forest in 2006.

	Cou	gar Cr	eek	Cra	ab Cree	ek	Нс	mestea	ıd	Bea	ver Rie	lge	Caj	pe Cre	ek	Salvat	ion Me	eadow
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Black-headed Grosbeak Evening Grosbeak							2.8	0.0	0.00							1.3	0.0	0.00
ALL SPECIES POOLED	100.4	20.3	0.20	48.9	14.5	0.30	93.2	30.6	0.33	99.6	17.1	0.17	26.1	2.9	0.11	100.1	17.3	0.17
Number of Species Total Number of Species	11	5 11		14	5 14		11	5 11		9	4 10		8	1 8		11	4 11	

		Birds captur	red			
				Birds/600	nethours	
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod. Index
Rufous Hummingbird		2				
Unidentified Selasphorus Hum.		32				
Belted Kingfisher		1				
Hairy Woodpecker	2			0.5	0.0	0.00
Pileated Woodpecker		1				
Hammond's Flycatcher	3			0.7	0.0	0.00
Western Flycatcher	11		5	3.0	0.0	0.00
Unidentified Empidonax Flyc.		2				
Warbling Vireo	3		1	0.7	0.0	0.00
Gray Jay	1			0.2	0.0	0.00
Steller's Jay	4			0.9	0.0	0.00
Chestnut-backed Chickadee	9	3		2.0	0.5	0.22
Brown Creeper	6		3	1.6	0.0	0.00
Winter Wren	50	14	22	6.1	6.6	1.07
Swainson's Thrush	98	7	210	36.5	3.6	0.10
Unidentified Thrush		2				
American Robin	3			0.7	0.0	0.00
Wrentit	2		6	0.7	0.2	0.33
Hermit Warbler	3			0.7	0.0	0.00
MacGillivray's Warbler	2			0.5	0.0	0.00
Common Yellowthroat	1			0.2	0.0	0.00
Wilson's Warbler	65	7	51	15.4	3.2	0.21
Western Tanager	6			1.4	0.0	0.00
Spotted Towhee		1		0.2	0.0	0.00
Song Sparrow	15	1	7	2.0	1.8	0.89
White-crowned Sparrow	2			0.5	0.0	0.00
Dark-eyed Junco	14	4	25	3.4	1.4	0.40
Black-headed Grosbeak	1			0.2	0.0	0.00
Evening Grosbeak	2		2	0.5	0.0	0.00
ALL SPECIES POOLED	303	77	332	78.5	17.3	0.22
Total Number of Captures		712				
Number of Species	22	10	10	23	7	
Total Number of Species		26			23	

Table 20. Summary of results for all six Siuslaw National Forest MAPS stations combined in 2006.

Name         Sycan River         Deadhorse         Augur Creek         Deer Creek         Swamp Creek         Island						200	)6 operatio	n
	tation Code	No.	Major Habitat Type	Latitude-longitude	Avg Elev. (m)	Total number of net-hours <sup>1</sup>	No. of periods	Inclusive dates
Sycan River	SYRI	11169	Wet willow/bogbirch riparian meadow, mixed coniferous forest	42°40'23"N,120°48'59"W	2003	298.7 (264.5)	7	6/09 - 8/07
Deadhorse	DEAD	11170	Dense willow-dominated meadow, mixed coniferous forest	42°35'27"N,120°48'51"W	1944	351.8 (246.0)	7	6/08 - 8/06
Augur Creek	AUCR	11172	Semi-wet riparian meadow with aspen groves, sage brushland and mixed coniferous forest	42°31'12"N,120°42'38"W	1847	371.8 (293.2)	7	6/07 - 8/08
Deer Creek	DCRK	11266	Well drained mixed coniferous forest, willow riparian meadow, dry ponderous pine woodland	42°27'51"N,120°44'50"W	1724	347.8 (268.8)	7	6/05 - 8/02
Swamp Creek	SWCR	11174	Riparian meadow, mahogany shrubland, mixed pine forest	42°25'05"N,120°34'00"W	1658	331.3 (282.2)	7	6/04 - 8/01
Island	ISLA	11173	Open riparian meadow with willow thickets, mixed coniferous forest and dry brushland	42°30'19"N,120°39'40"W	1628	336.0 (254.7)	7	6/06 -8/03
ALL STATIONS	COMBINE	D				2037.5(1609.3)	7	6/04 - 8/08

Table 21. Summary of the 2006 MAPS program on Fremont National Forest.

<sup>1</sup> Total net-hours in 2006. Net-hours in 2006 that could be compared in a constant-effort manner to 2005 are shown in parentheses.

	Syd	can R	iver	Deadhorse			Au	gur C	reek	Deer Creek			Swamp Creek				Island	1
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Spotted Sandpiper											2						6	
Calliope Hummingbird		1			2			1						1			1	
Rufous Hummingbird		3			5			12			4			8			3	
Unident. Selasphorus Hum.											1							
Williamson's Sapsucker				1			2		1				1			2		1
Red-naped Sapsucker				3		1				1								
RN x RB Sapsucker Hybrid	4		2	5		6	2			1								
Red-breasted Sapsucker	3			6		3	4		2				4		2	1		
Downy Woodpecker				1			1											
Hairy Woodpecker				1						2						1		1
Northern Flicker	2				1					1						1	1	1
Western Wood-Pewee	2			4		3												
Traill's Flycatcher	1			1			1											
Hammond's Flycatcher	2		1				1			3						5		3
Gray Flycatcher	1									1						1		
Dusky Flycatcher	9		4	9		3	3			2		3				2		
Western Flycatcher				5			4						4		2	1		
Unident. Empidonax Flyc.		1			4						6			1			1	
Cassin's Vireo				2														
Hutton's Vireo					2													
Warbling Vireo	12		8	9	2	7	16		5	14	2	17	2		1	4		3
Gray Jay	1												1					
Steller's Jay	1				1					1								
Mountain Chickadee	2			1		1	12	2		5					1	3		
Red-breasted Nuthatch White-breasted Nuthatch							2						1			1 2		1

Table 22. Capture summary for the six individual MAPS stations operated on Fremont National Forest in 2006.
N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

	Sy	can R	iver	Deadhorse		Augur Creek			Deer Creek			Swamp Creek				Islan	d	
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Brown Creeper	2						5				1		3			3		2
House Wren				3	3													
Golden-crowned Kinglet							4		2									
Ruby-crowned Kinglet	2																	
Townsend's Solitaire	1			2						1			1			1		
Hermit Thrush			1				2											
Unidentified Thrush		1																
American Robin	3		2	22	2	3	9		1	10	1		5	1	2	26	1	3
Orange-crowned Warbler	13		2	20	1	2	6			3	2					3		
Nashville Warbler	1		2				2			1								
Yellow Warbler				1														
Yellow-rumped Warbler	12			17	6		12			15		2	2		1	15		7
MacGillivray's Warbler	7	1	7	12	1	13	6		1	3		6	5		7			
Wilson's Warbler				1		3												
Western Tanager				1			1			9			1					
Chipping Sparrow				13						2		1						
Brewer's Sparrow	1			2														
Fox Sparrow							2											
Song Sparrow	3	1	1	6						8		3						
Lincoln's Sparrow	14	1	8	10	1	8	1			5	1	6						
White-crowned Sparrow	17	2	8	10	2	4	5		3									
Dark-eyed Junco	31	1	3	30	4	5	16	1	7	23		7	16	1	7	26	4	13
Black-headed Grosbeak							2											
Lazuli Bunting	1			5														
Brown-headed Cowbird	2																	
Purple Finch				4						2								

Table 22. (cont.) Capture summary for the six individual MAPS stations operated on Fremont National Forest in 2006. N = Newly Banded, U = Unbanded, R = Recaptures of banded birds.

	Sy	vcan R	iver	D	eadho	rse	Aı	igur C	reek	D	eer Cr	eek	Swa	amp C	Creek		Island	1
Species	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R	N	U	R
Cassin's Finch Pine Siskin				9 3	2		2		·									
ALL SPECIES POOLED Total Number of Captures	150	12 211	49	219	39 320	62	123	16 161	22	113	20 178	45	46	12 81	23	98	17 150	35
Number of Species Total Number of Species	27	7 30	13	32	15 37	14	26	4 28	8	22	7 25	8	13	4 16	8	18	6 21	10

Table 22. (cont.) Capture summary for the six individual MAPS stations operated on Fremont National Forest in 2006.
N = Newly Banded, $U =$ Unbanded, $R =$ Recaptures of banded birds.

Table 23. Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Fremont National Forest in 2006.

	Sycan River		Deadhorse		Augur Creek		De	er Cre	ek	Swamp Creek			Island					
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
 Williamson's Sapsucker				1.7	0.0	0.00	3.2	0.0	0.00				0.0	1.8	und. <sup>1</sup>	0.0	3.6	und. <sup>1</sup>
Red-naped Sapsucker				3.4	1.7	0.50				0.0	1.7	und.1						
RN x RB Sapsucker Hybrid	8.0	0.0	0.00	6.8	3.4	0.50	1.6	1.6	1.00	1.7	0.0	0.00						
Red-breasted Sapsucker	6.0	0.0	0.00	8.5	3.4	0.40	3.2	3.2	1.00				10.9	0.0	0.00	1.8	0.0	0.00
Downy Woodpecker				1.7	0.0	0.00	1.6	0.0	0.00									
Hairy Woodpecker				1.7	0.0	0.00				3.5	0.0	0.00				3.6	0.0	0.00
Northern Flicker	2.0	2.0	1.00							0.0	1.7	und.				1.8	1.8	1.00
Western Wood-Pewee	4.0	0.0	0.00	11.9	0.0	0.00												
Traill's Flycatcher	2.0	0.0	0.00	1.7	0.0	0.00	0.0	1.6	und.1									
Hammond's Flycatcher	4.0	0.0	0.00				1.6	0.0	0.00	5.2	0.0	0.00				10.7	0.0	0.00
Gray Flycatcher	2.0	0.0	0.00							1.7	0.0	0.00				1.8	0.0	0.00
Dusky Flycatcher	16.1	4.0	0.25	15.3	3.4	0.22	4.8	0.0	0.00	3.5	0.0	0.00				3.6	0.0	0.00
Western Flycatcher				8.5	0.0	0.00	4.8	1.6	0.33				10.9	0.0	0.00	1.8	0.0	0.00
Cassin's Vireo				3.4	0.0	0.00												
Warbling Vireo	26.1	0.0	0.00	20.5	1.7	0.08	27.4	0.0	0.00	34.5	0.0	0.00	3.6	0.0	0.00	7.1	0.0	0.00
Gray Jay	2.0	0.0	0.00										0.0	1.8	und.			
Steller's Jay	0.0	2.0	und.1							0.0	1.7	und.						
Mountain Chickadee	4.0	0.0	0.00	3.4	0.0	0.00	3.2	16.1	5.00	0.0	8.6	und.	1.8	0.0	0.00	5.4	0.0	0.00
Red-breasted Nuthatch							3.2	0.0	0.00				1.8	0.0	0.00	3.6	0.0	0.00
White-breasted Nuthatch																3.6	0.0	0.00
Brown Creeper	4.0	0.0	0.00				4.8	3.2	0.67	1.7	0.0	0.00	3.6	1.8	0.50	5.4	3.6	0.67

Table 23. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Fremont National Forest in 2006. \_\_\_\_\_

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	Sycan River		De	eadhors	se	Aug	gur Cre	eek	De	er Cre	ek	Swamp Creek			Island			
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Golden-crowned Kinglet							1.6	4.8	3.00									
Ruby-crowned Kinglet	4.0	0.0	0.00															
Townsend's Solitaire	0.0	2.0	und.	0.0	3.4	und.1				1.7	0.0	0.00	1.8	0.0	0.00	0.0	1.8	und.
Hermit Thrush	2.0	0.0	0.00				1.6	1.6	1.00									
American Robin	10.0	0.0	0.00	30.7	10.2	0.33	16.1	0.0	0.00	15.5	1.7	0.11	10.9	0.0	0.00	26.8	21.4	0.80
Yellow Warbler				0.0	1.7	und.												
Yellow-rumped Warbler	12.1	12.1	1.00	10.2	18.8	1.83	19.4	0.0	0.00	19.0	8.6	0.46	3.6	0.0	0.00	21.4	12.5	0.58
MacGillivray's Warbler	12.1	4.0	0.33	20.5	8.5	0.42	6.5	3.2	0.50	8.6	0.0	0.00	9.1	0.0	0.00			
Wilson's Warbler				3.4	0.0	0.00												
Western Tanager				0.0	1.7	und.	1.6	0.0	0.00	15.5	0.0	0.00	1.8	0.0	0.00			
Chipping Sparrow				8.5	13.6	1.60				1.7	1.7	1.00						
Brewer's Sparrow	2.0	0.0	0.00	0.0	3.4	und.												
Fox Sparrow							0.0	3.2	und.1									
Song Sparrow	2.0	6.0	3.00	3.4	6.8	2.00				6.9	8.6	1.25						
Lincoln's Sparrow	16.1	18.1	1.13	10.2	8.5	0.83	0.0	1.6	und.	8.6	1.7	0.20						
White-crowned Sparrow	32.1	6.0	0.19	11.9	5.1	0.43	3.2	4.8	1.50									
Dark-eyed Junco	38.2	30.1	0.79	20.5	34.1	1.67	17.8	14.5	0.82	20.7	25.9	1.25	25.4	7.2	0.29	35.7	23.2	0.65
Black-headed Grosbeak							1.6	1.6	1.00									
Lazuli Bunting	2.0	0.0	0.00	5.1	3.4	0.67												
Brown-headed Cowbird	4.0	0.0	0.00															
Purple Finch				6.8	0.0	0.00				3.5	0.0	0.00						

Table 23. (cont.) Numbers of adult and young individual birds captured per 600 net-hours and reproductive index (young/adult) at the six individual MAPS stations operated on Fremont National Forest in 2006.

	Syc	can Riv	ver	D	eadhors	se	Aug	gur Cre	ek	De	er Cre	ek	Swa	ımp Cr	eek		Island	
Species	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index	Ad.	Yg.	Repr. index
Cassin's Finch Pine Siskin				10.2 1.7	5.1 3.4	0.50 2.00	0.0	3.2	und.									
ALL SPECIES POOLED	217.0	86.4	0.40	231.9	141.5	0.61	129.1	66.2	0.51	153.5	62.1	0.40	85.1	12.7	0.15	133.9	67.9	0.51
Number of Species Total Number of Species	24	10 26		26	20 30		20	15 24		17	10 21		12	4 14		15	7 17	

		Birds captur	-ed	Birds/600			
Species	Newly banded	Un- banded	Recap- tured	Adults	Young	Reprod. Index	
Spotted Sandpiper		8					
Calliope Hummingbird		6					
Rufous Hummingbird		35					
Unidentified Selasphorus Hum.		1					
Williamson's Sapsucker	6		2	0.9	0.9	1.00	
Red-naped Sapsucker	4		1	0.6	0.6	1.00	
RN x RB Sapsucker Hybrid	12		8	2.9	0.9	0.30	
Red-breasted Sapsucker	18		7	5.0	1.2	0.24	
Downy Woodpecker	2			0.6	0.0	0.00	
Hairy Woodpecker	4		1	1.5	0.0	0.00	
Northern Flicker	4	2	1	0.6	0.9	1.50	
Western Wood-Pewee	6		3	2.7	0.0	0.00	
Traill's Flycatcher	3			0.6	0.3	0.50	
Hammond's Flycatcher	11		4	3.5	0.0	0.00	
Gray Flycatcher	3			0.9	0.0	0.00	
Dusky Flycatcher	25		10	7.1	1.2	0.17	
Western Flycatcher	14		2	4.4	0.3	0.07	
Unidentified Empidonax Flyc.		13					
Cassin's Vireo	2			0.6	0.0	0.00	
Hutton's Vireo		2					
Warbling Vireo	57	4	41	20.0	0.3	0.02	
Gray Jay	2			0.3	0.3	1.00	
Steller's Jay	2	1		0.0	0.6	und.1	
Mountain Chickadee	23	2	2	2.9	4.4	1.50	
Red-breasted Nuthatch	4		1	1.5	0.0	0.00	
White-breasted Nuthatch	2			0.6	0.0	0.00	
Brown Creeper	13	1	2	3.2	1.5	0.46	
House Wren	3	3					
Golden-crowned Kinglet	4		2	0.3	0.9	3.00	
Ruby-crowned Kinglet	2			0.6	0.0	0.00	
Townsend's Solitaire	6			0.6	1.2	2.00	
Hermit Thrush	2		1	0.6	0.3	0.50	
Unidentified Thrush		1					
American Robin	75	5	11	18.6	5.6	0.30	

Table 24. Summary of results for all six Fremont National Forest MAPS stations combined in 2006.

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Table 24. (cont.) Summary of results for all six Fremont National Forest MAPS stations combined in 2006.

		Birds captur	red	D: 1 /(00		
Species	Newly banded	Un- banded	Recap- tured	Birds/600 r	Young	Reprod. Index
Orange-crowned Warbler	45	3	4			
Nashville Warbler	4		2			
Yellow Warbler	1			0.0	0.3	und.
Yellow-rumped Warbler	73	6	10	14.4	8.5	0.59
MacGillivray's Warbler	33	2	34	9.4	2.7	0.28
Wilson's Warbler	1		3	0.6	0.0	0.00
Western Tanager	12			3.2	0.3	0.09
Chipping Sparrow	15		1	1.8	2.7	1.50
Brewer's Sparrow	3			0.3	0.6	2.00
Fox Sparrow	2			0.0	0.6	und.
Song Sparrow	17	1	4	2.1	3.5	1.71
Lincoln's Sparrow	30	3	22	5.6	4.7	0.84
White-crowned Sparrow	32	4	15	7.4	2.7	0.36
Dark-eyed Junco	142	11	42	25.9	22.4	0.86
Black-headed Grosbeak	2			0.3	0.3	1.00
Lazuli Bunting	6			1.2	0.6	0.50
Brown-headed Cowbird	2			0.6	0.0	0.00
Purple Finch	6			1.8	0.0	0.00
Cassin's Finch	11	2		1.8	1.5	0.83
Pine Siskin	3			0.3	0.6	2.00
ALL SPECIES POOLED	749	116	236	157.5	73.0	0.46
Total Number of Captures		1101				
Number of Species	47	19	27	41	32	
Total Number of Species		51			44	

Appendix I. Numerical listing (in AOU checklist order) of all the species sequence numbers, species alpha codes, and species names for all species banded or encountered during the 15 years, 1992-2006, of the MAPS Program on the eight stations ever operated on **Mount Baker National Forest.** 

Cumulative breeding status for all years in which each station was operated are also included (B = Regular Breeder (all years); U = Usual Breeder (>½, not all, years); O = Occasional Breeder ( $\leq$ ½ years); T = Transient; M = Migrant; A= Altitudinal Disperser; ? = Uncertain Species ID

NUMB	SPEC	SPECIES NAME	Monte Cristo Lake (MCLA)	Skull Creek (SKCR)	Perry Creek (PECR)	Bench Thin (BETH)	Frog Lake (FRLA)	Beaver Lake (BELA)	Murphy Creek (MUCR)	Copper Creek (COPC)
01010	GBHE	Great Blue Heron	T				T	T	Т	
01300	TUVU	Turkey Vulture				Т				
01460	CANG	Canada Goose	Т		Т			Т		
01570	WODU	Wood Duck						0		
01630	MALL	Mallard	Т				Т	0		
01680	BWTE	Blue-winged Teal						0		
01690	CITE	Cinnamon Teal						Т		
01870	HADU	Harlequin Duck	Т		0		Т		Т	
01970	HOME	Hooded Merganser					Т			
01980	COME	Common Merganser			Т		Т	Т	Т	
02020	OSPR	Osprey	Т			Т	Т	Т	Т	
02200	SSHA	Sharp-shinned Hawk	Т		Т	Т	Т	Т	Т	
02460	RTHA	Red-tailed Hawk	Т				Т			
02940	RUGR	Ruffed Grouse	Т	Т	0	0	0	0	0	
03000	BLUG	Blue Grouse			Т	0	0	Т	Т	
04020	SPSA	Spotted Sandpiper	U		U			Т	0	
05220	MAMU	Marbled Murrelet	Т		Т					
05440	BTPI	Band-tailed Pigeon	Т	Т	Т	Т	Т	Т		
06830	NOPO	Northern Pygmy-Owl	Т			Т	0	Т	Т	
06940	SPOW	Spotted Owl						Т		
06950	BADO	Barred Owl	Т			Т	0	0	Т	
07040	NSWO	Northern Saw-whet Owl	Т							
07080	CONI	Common Nighthawk	Т		Т	U	Т	U	Т	
07330	BLSW	Black Swift	Т		Т	Т		Т	Т	
07410	VASW	Vaux's Swift	0	Т	Т	Т	Т	Т	Т	
08690	CAHU	Calliope Hummingbird			Т					
08730	RUHU	Rufous Hummingbird	В	В	В	В	U	В	В	Т
08775	UNHU	Unidentified Hummingbird	?			?	?			
09110	BEKI	Belted Kingfisher	0		0	Т	0	U	0	
09590	RNSA	Red-naped Sapsucker	Т			Т				
09600	RBSA	Red-breasted Sapsucker	В	0	0	0	0	U	0	

Appendix I.	Continued.
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09650				SKCR	PECR	BETH	FRLA	BELA	MUCR	COPC
		Downy Woodpecker	0		T	T	T	0	Т	
09660	HAWO	Hairy Woodpecker	U	В	U	U	U	U	U	
09800	RSFL	Red-shafted Flicker	U	Т	0	Т	Т	0		
09860	PIWO	Pileated Woodpecker	0	Т	0	0	0	U	0	
11340	OSFL	Olive-sided Flycatcher	0	Т	Т			0	Т	
11380	WEWP	Western Wood-Pewee	U	Т	0	Т	Т	0	0	
11475	TRFL	Traill's Flycatcher	U		Т	0	0	0	0	
11475	WIFL	Willow Flycatcher	U		Т	0	0	0	0	
11510	HAFL	Hammond's Flycatcher	U	0	U	В	U	U	U	
11515	HDFL	Hammond's/Dusky Flycatcher	?			?				
11530	DUFL	Dusky Flycatcher	0		Т	Т		Т	0	
11555	PSFL	Pacific-slope Flycatcher	U	В	В	В	В	В	В	В
11555	WEFL	Western Flycatcher	U	В	В	В	В	В	В	
11595	UEFL	Unidentified Empidonax Flycatcher	?		?	?	?	?	?	
12085	UNFL	Unidentified Flycatcher	?			?				
12710	CAVI	Cassin's Vireo	Т			Т	Т	0		
12740	HUVI	Hutton's Vireo	Т			Т				
12760	WAVI	Warbling Vireo	В	Т	U	0	U	0	0	
12790	REVI	Red-eyed Vireo						0		
12910	GRAJ	Gray Jay	0	Т		0	Т	Т		
12920	STJA	Steller's Jay	U	В	U	U	В	U	U	В
13190	AMCR	American Crow	Т	Т	Т	Т	0	0	0	
13300	CORA	Common Raven	0	Т	0	0	0	U	В	
13410	TRES	Tree Swallow	U	Т	0	Т	Т	0	0	
13440	VGSW	Violet-green Swallow	Т				Т		U	
13490	NRWS	Northern Rough-winged Swallow	0					0	U	
13510	BANS	Bank Swallow							Т	
13540	BARS	Barn Swallow					Т		0	
13570	BCCH	Black-capped Chickadee		Т	Т	Т		0		
13580	MOCH	Mountain Chickadee			Т				0	
13600	CBCH	Chestnut-backed Chickadee	В	В	U	В	В	U	В	В
13690	RBNU	Red-breasted Nuthatch	0	В	0	U	0	U	0	
13730	BRCR	Brown Creeper	0	В	0	U	0	0	0	
14070		House Wren	Т							
14110	WIWR	Winter Wren	В	В	В	В	В	В	В	В
14130	MAWR	Marsh Wren	Т							
14210	AMDI	American Dipper	0		U			Т	0	
14240	GCKI	Golden-crowned Kinglet	0	Т	U	U	U	U	U	В
14250	RCKI	Ruby-crowned Kinglet	Т		Т					
14810	SWTH	Swainson's Thrush	В	В	В	В	В	В	В	В

NUMB	SPEC	SPECIES NAME	MCLA	SKCR	PECR	BETH	FRLA	BELA	MUCR	COPC
14820	HETH	Hermit Thrush	T		Т					Т
14835	UNTH	Unidentified Thrush						?		
15000	AMRO	American Robin	В	В	В	В	В	В	В	
15060	VATH	Varied Thrush	В	В	В	В	В	В	В	В
15370	EUST	European Starling						0		
15550		Cedar Waxwing	В	Т	Т	U	0	U	U	
15660		Orange-crowned Warbler	А		Т	Т	Т		Т	
15670	NAWA	Nashville Warbler	Т							
15750	YWAR	Yellow Warbler	В		0	Т	Т	0	Т	
15800	AUWA	Audubon's Warbler	0		Т		Т	Т		
15810	BTYW	Black-throated Gray Warbler	0	0	Т	U	0	U	U	
15840	TOWA	Townsend's Warbler			0	0	Т	Т	Т	
15850	HEWA	Hermit Warbler	Т		Т	Т	0	Т	0	
16040	AMRE	American Redstart			Μ					
16080	OVEN	Ovenbird				Μ				
16140	MGWA	MacGillivray's Warbler	U	0	0	В	0	U	0	
16150	COYE	Common Yellowthroat	В		Т		Т	U	Т	
16290	WIWA	Wilson's Warbler	U		0	0	U	U	U	В
16495	UNWA	Unidentified Warbler						?		
16840	WETA	Western Tanager	U	В	0	U	В	U	U	
17810	SPTO	Spotted Towhee	Т	0	0	U	Т	Т	Т	
18020	CHSP	Chipping Sparrow		0		0	Т			
18230	SOSP	Song Sparrow	В		U	0	U	В	0	Т
18240	LISP	Lincoln's Sparrow	Т				Т			
18320	ORJU	Oregon Junco	0	В	U	U	0	0	U	В
18610	BHGR	Black-headed Grosbeak	0		Т	0	0	U	0	
18660	LAZB	Lazuli Bunting				Т				
18730	RWBL	Red-winged Blackbird	U					Т		
18960	BHCO	Brown-headed Cowbird	0			Т	0	0	Т	
19105	BUOR	Bullock's Oriole						Т		
19380	RECR	Red Crossbill	Т		0	0	0	Т	0	
19430	PISI	Pine Siskin	0		Т	Т	Т	0	Т	
19510	AMGO	American Goldfinch	Т		Т	Т		Т	Т	
19580	EVGR	Evening Grosbeak	0		Т	Т		0	Т	
20085	UNBI	Unidentified Bird				?	?			

Appendix II. Numerical listing (in AOU checklist order) of all the species sequence numbers, species alpha codes, and species names for all species banded or encountered during the 15 years, 1992-2006, of the MAPS Program on the eight stations ever operated on **Wenatchee National Forest**.

NUMB	SPEC	SPECIES NAME	Two Point (TWPO)	Little Rattlesnake (LIRA)	Pleasant Valley (PLVA)	Timothy Meadow (TIME)	Quartz Creek 2 (QCR2)	Rattlesnake Spring (RASP)	Quartz Creek 1 (QUCR)	Deep Creek (DECR)
01010	GBHE	Great Blue Heron	Т		Т	Т	Т			Т
01300	TUVU	Turkey Vulture	0	Т	Т	Т	Т	0		
01460	CANG	Canada Goose			Т		U	Т		Т
01570	WODU	Wood Duck					Т			Т
01610	AMWI	American Wigeon					Т			
01630	MALL	Mallard	Т		0	Т	U	Т		0
01760	CANV	Canvasback			Т					
01870	HADU	Harlequin Duck			0					
01950	BAGO	Barrow's Goldeneye					0			
01980	COME	Common Merganser			0	Т	0			
02020	OSPR	Osprey			Т	Т	Т			
02130	BAEA	Bald Eagle	Т		Т					
02200	SSHA	Sharp-shinned Hawk	Т	Т	Т	Т	Т			0
02210	COHA	Cooper's Hawk	Т	Т	Т		Т			Т
02240	NOGO	Northern Goshawk		0			Т	Т		
02460	RTHA	Red-tailed Hawk	0	Т	Т	Т	Т	0		Т
02510	GOEA	Golden Eagle	Т							
02630	AMKE	American Kestrel	0							
02710	PRFA	Prairie Falcon	Т							
02940	RUGR	Ruffed Grouse	0			Т	0	0		
03000	BLUG	Blue Grouse	Т	0		0	0	Т		
03100		Mountain Quail					Т			
03130	CAQU	California Quail					Т	Т		
04020	SPSA	Spotted Sandpiper			В		U			Т
05570	MODO	Mourning Dove			Т	Т	Т			
06800	GHOW	Great Horned Owl	Т			Т	Т			
06830	NOPO	Northern Pygmy-Owl	Т			Т		0		Т
07040	NSWO	Northern Saw-whet Owl				Т	Т			
07080	CONI	Common Nighthawk	Т	Т		Т	0	U		Т
07110	COPO	Common Poorwill								Т
07410	VASW	Vaux's Swift		0	U	0	0	Т		0

Appendix II.	Continued.
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NUMB	SPEC	SPECIES NAME	TWPO	LIRA	PLVA	TIME	QCR2	RASP	QUCR	DECR
07530	WTSW	White-throated Swift						T		
08640	BCHU	Black-chinned Hummingbird	М							
08690	CAHU	Calliope Hummingbird	0	0	0	Т	0	В		Т
08730	RUHU	Rufous Hummingbird	В	В	U	0	В	U	Т	В
08774	USHU	Unidentified Selasphorus Humming	bird		?	?				
08775	UNHU	Unidentified Hummingbird	?		?	?	?	?		?
09110	BEKI	Belted Kingfisher			В	U	U			0
09390	LEWO	Lewis's Woodpecker	Т							
09570	WISA	Williamson's Sapsucker	U		Т		0	Т		0
09590	RNSA	Red-naped Sapsucker	0	0	0	0	U	В		U
09595	RRSH	Red-naped X Red-breasted Saps. Hy	brid		0		0	0		
09600	RBSA	Red-breasted Sapsucker		0	0	Т	Т	0		0
09650	DOWO	Downy Woodpecker	0	Т	Т	0	U	0		
09660		Hairy Woodpecker	U	0	U	U	В	U	В	В
09690		White-headed Woodpecker				Т		0		
09700	ATTW	American Three-toed Woodpecker				Т		Т		0
09800	RSFL	Red-shafted Flicker	В	В	U	U	В	В		U
09860	PIWO	Pileated Woodpecker	0	Т	U	0	0	Т		0
09915		Unidentified Woodpecker					?			
11340	OSFL	Olive-sided Flycatcher	0	0	0	Т	0	Т		В
11380	WEWP		0	0	В	0	В	В		В
11475	TRFL	Traill's Flycatcher		Т	Т	Т	Т			
11475	WIFL	Willow Flycatcher		Т	Т		Т			
11510	HAFL	Hammond's Flycatcher	U	В	В	В	В	В	В	В
11515	HDFL	Hammond's/Dusky Flycatcher			?	?	?	?		
11530	DUFL	Dusky Flycatcher	U	0	0	0	В	U		0
11555	PSFL	Pacific-slope Flycatcher	0		0	0	0	0	В	0
11555	WEFL	Western Flycatcher	0		0	0	0	0		0
11595	UEFL	Unidentified Empidonax Flycatcher	?	?	?	?	?	?		?
12085	UNFL	Unidentified Flycatcher					?	?		?
12710	CAVI	Cassin's Vireo	0	Т	Т	0	0	0		Т
12740	HUVI	Hutton's Vireo	-		Т	Т	Т	-		
12760	WAVI	Warbling Vireo	В	В	В	0	В	U	В	0
12790	REVI	Red-eyed Vireo				-	T	Т		-
12910	GRAJ	Gray Jay	U		Т	0	0	Т		В
12920	STJA	Steller's Jay	B	В	0	0	Ū	Ū		U
13150	CLNU	Clark's Nutcracker	0	-	Ť	Ť	T	0		0
13190	AMCR	American Crow	Ť		T	Т	0	Ť		-
13300	CORA	Common Raven	Ū	В	Ū	Ū	Ŭ	Ū		0
13410	TRES	Tree Swallow	e	2	Ŭ	T	0	T		0

Appendix II.	Continued.
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13440VGSWViolet-green SwallowTUTUOT13400NRWSNorthern Rough-winged SwallowBTUTT13520CLSWCliff SwallowTTTTTT13540BARSBars NawllowOOUTT13570BCCHBlack-capped ChickadeeBBOTUBU13580MOCHMountain ChickadeeBBOTUBU13600CBCHChestnut-backed ChickadeeOBUBBBBBBU1013600CBCHChestnut-backed NuthatchTTT <th>NUMB</th> <th>SPEC</th> <th>SPECIES NAME</th> <th>TWPO</th> <th>LIRA</th> <th>PLVA</th> <th>TIME</th> <th>QCR2</th> <th>RASP</th> <th>QUCR</th> <th>DECR</th>	NUMB	SPEC	SPECIES NAME	TWPO	LIRA	PLVA	TIME	QCR2	RASP	QUCR	DECR
13490NRWSNorthern Rough-winged SwallowBTUT13520CLSWCliff SwallowTTTT13540BARSBarn SwallowO0UTT13570BCCHBlack-capped ChickadeeTTOOBU13500CBCHChestnut-backed ChickadeeBBOTUBO13600RBNURed-breasted NuthatchBBBBBBUBUBUA13700WBNUPyNUPygmy NuthatchTT <td>13440</td> <td>VGSW</td> <td>Violet-green Swallow</td> <td>Т</td> <td></td> <td>U</td> <td>Т</td> <td>U</td> <td>0</td> <td></td> <td>Т</td>	13440	VGSW	Violet-green Swallow	Т		U	Т	U	0		Т
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13490		-			В	Т	U	Т		
13570       BCCH       Black-capped Chickadee       T       T       T       T       O       T       T         13580       MOCH       Mountain Chickadee       B       B       O       T       U       B       O         13600       CBCH       Chestnut-backed Chickadee       O       B       U       B       B       B       B       B       B       B       B       D       T	13520	CLSW						Т	Т		
13580MOCHMountain ChickadeeBBOTUBO13600CBCHChestnut-backed ChickadeeOBUBUOBU13600RBNURed-breasted NuthatchBBBBBBBBUDBU13700WBNUWhite-breasted NuthatchTTT	13540	BARS	Barn Swallow			0	0	U			Т
13600CBCHChestnut-backed ChickadeeOBUBUOBU13600RBNURed-breasted NuthatchTTTTTTT13710PYNUPygmy NuthatchTT <td>13570</td> <td>BCCH</td> <td>Black-capped Chickadee</td> <td>Т</td> <td>Т</td> <td></td> <td>Т</td> <td>0</td> <td>Т</td> <td></td> <td>Т</td>	13570	BCCH	Black-capped Chickadee	Т	Т		Т	0	Т		Т
13690RBNURed-breasted NuthatchBBBBBBBBBBBDU13700WBNUWhite-breasted NuthatchTT <td>13580</td> <td>MOCH</td> <td>Mountain Chickadee</td> <td>В</td> <td>В</td> <td>0</td> <td>Т</td> <td>U</td> <td>В</td> <td></td> <td>0</td>	13580	MOCH	Mountain Chickadee	В	В	0	Т	U	В		0
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13600	CBCH	Chestnut-backed Chickadee	0	В	U	В	U	0	В	U
13710       PYNU       Pygny Nuthatch       T       T         13730       BRCR       Brown Creeper       O	13690	RBNU	Red-breasted Nuthatch	В	В	В	В	В	В	В	U
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13700	WBNU	White-breasted Nuthatch				Т	Т	Т		Т
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13710	PYNU	Pygmy Nuthatch				Т		Т		
14110WIWRWinter WrenOBOOTTBU14210AMDIAmerican DipperOTTTSBBBBBBBBBBBBBBBBBBBBBBBBBBBBLSBBBLSBBBBBDCCTTT </td <td>13730</td> <td>BRCR</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>В</td> <td>0</td>	13730	BRCR		0	0	0	0	0	0	В	0
14210AMDIAmerican DipperOT14240GCKIGolden-crowned KingletBBBBBUBB14250RCKIRuby-crowned KingletUOOOTTT	14070	HOWR	<u> </u>	А	А	А	А	U	U		А
14240GCKIGolden-crowned KingletBBBBBBUBB14250RCKIRuby-crowned KingletUOOOTTT14570WEBLWestern BluebirdTTTTTTTT14580MOBLMountain BluebirdTTT </td <td>14110</td> <td>WIWR</td> <td>Winter Wren</td> <td>0</td> <td>В</td> <td>0</td> <td>0</td> <td>Т</td> <td>Т</td> <td>В</td> <td>U</td>	14110	WIWR	Winter Wren	0	В	0	0	Т	Т	В	U
14240GCKIGolden-crowned KingletBBBBBBUBB14250RCKIRuby-crowned KingletUOOOTT14570WEBLWestern BluebirdTTTTTT14580MOBLMountain BluebirdTTTTTTT14590TOSOTownsend's SolitaireTTTTTOT14780VERVeeryTTTTOUBU14810SWTHSwainson's ThrushOBUUBUBU14835UNTHUnidentified ThrushBBOUOUBU14835UNTHUnidentified ThrushTUUTTBB15000AMRO American RobinBBBBBUBB15550CEDWCedar WaxwingTTTTTT15660OCWAOrange-crowned WarblerAAAAAA15670NAWANashville WarblerBBBBBBBOOOUBA15750YWARYellow WarblerBBBBBBBBBOOOODDDDDDD<	14210	AMDI	American Dipper			0		Т			
14250RCKIRuby-crowned KingletUOOOOT14570WEBLWestern BluebirdTTTTTT14580MOBLMountain BluebirdTTTTTTT14590TOSOTownsend's SolitaireTTTTTOT14780VEERVeeryTTTTTOT14810SWTHSwainson's ThrushOBUUBUBU14835UNTHUnidentified ThrushBBOUOUBU14835UNTHUnidentified ThrushTUUTTBB15000AMROAmerican RobinBBBBBUBB15550CEDWCedar WaxwingTTTTTTT15660OCWAOrange-crowned WarblerAAAAAA15670NAWANashville WarblerAAAAAAA15670NAWANashville WarblerBBBBBBBOOO15800AUWAAudubon's WarblerBBBBBBBBBBBBBBBBBBBBBBBB <td>14240</td> <td>GCKI</td> <td></td> <td>В</td> <td>В</td> <td>В</td> <td>В</td> <td>В</td> <td>U</td> <td>В</td> <td>В</td>	14240	GCKI		В	В	В	В	В	U	В	В
14570WEBLWestern BluebirdTTTT14580MOBLMountain BluebirdTTTTTT14590TOSOTownsend's SolitaireTTTTTO14780VEERVeeryTTTTTOU14810SWTHSwainson's ThrushOBUUBUBU14820HETHHermit ThrushBBBOUOUBU14835UNTHUnidentified ThrushTUUTTBB15000AMROAmerican RobinBBBBBUBB15060VATHVaried ThrushTUUUTTBB15570EUSTEuropean StarlingTTTTTTT15560OCWAOrange-crowned WarblerAAAAAAA15670NAWANashville WarblerAAOOUBA15750YWARYellow WarblerBBBBBBOO15800AUWAAudubon's WarblerTTTTUT15800BTYWBlack-throated Gray WarblerTTTOUU15810BTWBlack-and-white WarblerT <t< td=""><td>14250</td><td>RCKI</td><td>-</td><td>U</td><td></td><td>0</td><td>0</td><td>0</td><td>Т</td><td></td><td></td></t<>	14250	RCKI	-	U		0	0	0	Т		
14590TOSOTownsend's SolitaireTTTTTO14780VEERVeeryTTTTO14810SWTHSwainson's ThrushOBUUBUBU14820HETHHermit ThrushBBOUOUBU14835UNTHUnidentified ThrushFTUUOUBU14835UNTHUnidentified ThrushTUUTTBB15000AMROAmerican RobinBBBBBUBB15000VATHVaried ThrushTUUUTTBB15000CEDWCedar WaxingTTTTTTTT15550CEDWCedar WaxingTTTOUUTT15660OCWAOrange-crowned WarblerAAAAAA15670NAWANashville WarblerAAOOUUBA15670NAWANashville WarblerAAAAAAAA15670NAWAAuduon's WarblerBBBBBBBBBBBBBBBBBBBBBBBB<											Т
14780       VEER       Veery       T         14810       SWTH       Swainson's Thrush       O       B       U       U       B       U       B       U         14820       HETH       Hermit Thrush       B       B       O       U       O       U       B       U         14835       UNTH       Unidentified Thrush       B       C       C       D	14580	MOBL	Mountain Bluebird	Т		Т					
14810SWTHSwainson's ThrushOBUUBUBU14820HETHHermit ThrushBBOUOUBU14835UNTHUnidentified Thrush?15000AMROAmerican RobinBBBBBUBB15000VATHVaried ThrushTUUTTBB15000VATHVaried ThrushTUUTTBB15370EUSTEuropean StarlingTTTOUUTT15550CEDWCedar WaxwingTTTOUUTT15660OCWAOrange-crowned WarblerAAAAAAA15670NAWANashville WarblerOUUOUBA15750YWARYellow WarblerOUUOBOO15800AUWAAudubon's WarblerBBBBBBBBB15840TOWATownsend's WarblerTTTOUUII15840TOWATownsend's WarblerTTTOUUII15850HEWAHermit WarblerTTTOUUII <td>14590</td> <td>TOSO</td> <td>Townsend's Solitaire</td> <td>Т</td> <td>Т</td> <td>Т</td> <td></td> <td>Т</td> <td>0</td> <td></td> <td></td>	14590	TOSO	Townsend's Solitaire	Т	Т	Т		Т	0		
14820HETHHermit ThrushBBCUOUBU14835UNTHUnidentified Thrush	14780	VEER	Veery						Т		
14835UNTHUnidentified Thrush?15000AMROAmerican RobinBBBBBUBB15060VATHVaried ThrushTUUTTBB15370EUSTEuropean StarlingTTTTTT15550CEDWCedar WaxwingTTTOUUTT15660OCWAOrange-crowned WarblerAAAAAAA15670NAWANashville WarblerAAAAAAA15670YWARYellow WarblerOUOBOOO15800AUWAAudubon's WarblerBBBBBBBOO15810BTYWBlack-throated Gray WarblerTTTUUBB15840TOWATownsend's WarblerBBBBBUBB15845THWHTownsend's x Hermit Warbler HybridTTTUUT15850HEWAHermit WarblerTTTDTUU15850HEWAHermit WarblerTTTOUUD16030BAWWBlack-and-white WarblerTTTOTUT16140MGWAMacGillivray's Warbler	14810	SWTH	Swainson's Thrush	0	В	U	U	В	U	В	U
15000AMROAmerican RobinBBBBBBUBB15060VATHVaried ThrushTUUTTBB15370EUSTEuropean StarlingTTTTTT15550CEDWCedar WaxwingTTTOUUTT15660OCWAOrange-crowned WarblerAAAAAAA15670NAWANashville WarblerAAAAAAA15670NAWANashville WarblerOUOBOO15800AUWAAudubon's WarblerBBBBBBBO15810BTYWBlack-throated Gray WarblerTTTUUT15850HEWAHermit WarblerTTTOUU15850HEWAHermit WarblerTTTUU15850HEWAHermit WarblerTTTOUU16030BAWWBlack-and-white WarblerMMMHH16140MGWAMacGillivray's WarblerBBBUBBO16140COYECommon YellowthroatTOTOUUT	14820	HETH	Hermit Thrush	В	В	0	U	0	U	В	U
15060VATHVaried ThrushTUUUTTBB15370EUSTEuropean StarlingTTTTTTT15550CEDWCedar WaxwingTTTOUUTT15660OCWAOrange-crowned WarblerAAAAAAAA15670NAWANashville WarblerAAAAAAAA15670YWARYellow WarblerOUOBOOOBA15750YWARYellow WarblerOUOBOOOOAA15810AUWAAudubon's WarblerBB<	14835	UNTH	Unidentified Thrush						?		
15370EUSTEuropean StarlingTTTTT15550CEDWCedar WaxwingTTTOUUT15660OCWAOrange-crowned WarblerAAAAAAA15670NAWANashville WarblerAAAOOUBA15750YWARYellow WarblerOUOBOOO15800AUWAAudubon's WarblerBBBBBBBOO15810BTYWBlack-throated Gray WarblerTTTTTU15840TOWATownsend's WarblerBBBBBUBB15850HEWAHermit WarblerTTTOUUU15850HEWAHermit WarblerTTTOUU16030BAWWBlack-and-white WarblerTTTOUU16140MGWAMacGillivray's WarblerBBBUBBBO16150COYECommon YellowthroatTTOTOTU	15000	AMRO	American Robin	В	В	В	В	В	U	В	В
15550CEDWCedar WaxwingTTTOUUT15660OCWAOrange-crowned WarblerAAAAAAAA15670NAWANashville WarblerAAAOOUBA15670NAWANashville WarblerAAAOOUBA15750YWARYellow WarblerOUOBOO15800AUWAAudubon's WarblerBBBBBBOO15810BTYWBlack-throated Gray WarblerTTTTU15840TOWATownsend's WarblerBBBBBUBB15850HEWAHermit WarblerTTTOUUU15850HEWAHermit WarblerTTTOUU16030BAWWBlack-and-white WarblerMMMMNNN16040AMREAmerican RedstartMMMMMNNN16140MGWAMacGillivray's WarblerBBBUBBO16150COYECommon YellowthroatTOTOU	15060	VATH	Varied Thrush	Т		U	U	Т	Т	В	В
15660OCWAOrange-crowned WarblerAAAAAAAA15670NAWANashville WarblerAAAOOUBA15770YWARYellow WarblerOUOBOO15800AUWAAudubon's WarblerBBBBBBBOO15800AUWAAudubon's WarblerBBBBBBBOO15810BTYWBlack-throated Gray WarblerTTTTTTI15840TOWATownsend's WarblerBBBBBUBB15845THWHTownsend's x Hermit Warbler HybridTTTTU15850HEWAHermit WarblerTTTOTU16030BAWWBlack-and-white WarblerMMMHHHH16040AMREAmerican RedstartMMBBBBBBBBBDO16140MGWAMacGillivray's WarblerTTOTOTOTO	15370	EUST	European Starling			Т	Т	Т			
15670NAWANashville WarblerAAOOUBA15750YWARYellow WarblerOUOBOOO15800AUWAAudubon's WarblerBBBBBBBOO15810BTYWBlack-throated Gray WarblerTTTTTOD15840TOWATownsend's WarblerBBB	15550	CEDW	Cedar Waxwing	Т		Т	0	U	U		Т
15750YWARYellow WarblerOUOBOO15800AUWAAudubon's WarblerBBBBBBBOO15810BTYWBlack-throated Gray WarblerTTTTTTD15840TOWATownsend's WarblerBBBBBBUBB15845THWHTownsend's X Hermit Warbler HybridTTTUU15850HEWAHermit WarblerTTTOT16030BAWWBlack-and-white WarblerTTTOT16040AMREAmerican RedstartMMMMNNN16140MGWAMacGillivray's WarblerBBBUBBDO16150COYECommon YellowthroatTTOTOTO	15660	OCWA	Orange-crowned Warbler	А	А	А	А	А	А		А
15800AUWAAudubon's WarblerBB<	15670	NAWA	Nashville Warbler	А	А	0	0	0	U	В	А
15810BTYWBlack-throated Gray WarblerTT15840TOWATownsend's WarblerBBBBBUBB15845THWHTownsend's x Hermit Warbler HybridTTTUUU15850HEWAHermit WarblerTTTOU16030BAWWBlack-and-white WarblerTTTOU16040AMREAmerican RedstartMMHHHH16140MGWAMacGillivray's WarblerBBBUBBBO16150COYECommon YellowthroatTOTOTOT	15750	YWAR	Yellow Warbler	0		U	0	В	0		0
15840TOWATownsend's WarblerBBBBBBUBB15845THWHTownsend's x Hermit Warbler HybridTTTU15850HEWAHermit WarblerTTTOU16030BAWWBlack-and-white WarblerTTTOU16040AMREAmerican RedstartMMNNNN16140MGWAMacGillivray's WarblerBBBUBBBO16150COYECommon YellowthroatTOTOTOT	15800	AUWA	Audubon's Warbler	В	В	В	В	В	В		0
15845THWHTownsend's x Hermit Warbler HybridTTU15850HEWAHermit WarblerTTTOT16030BAWWBlack-and-white WarblerMMMTDT16040AMREAmerican RedstartMMMDDD16140MGWAMacGillivray's WarblerBBBUBBBO16150COYECommon YellowthroatTOTOTO	15810	BTYW	Black-throated Gray Warbler				Т				
15850HEWAHermit WarblerTTTO16030BAWWBlack-and-white WarblerMMM16040AMREAmerican RedstartMM16140MGWAMacGillivray's WarblerBBBUBBBO16150COYECommon YellowthroatTOTOTO	15840	TOWA	Townsend's Warbler	В	В	В	В	В	U	В	В
16030BAWW Black-and-white WarblerM16040AMREAmerican RedstartM16140MGWAMacGillivray's WarblerBBBUBBBO16150COYECommon YellowthroatTOTOTO	15845	THWH	Townsend's x Hermit Warbler Hybrid	ł			Т				U
16040AMREAmerican RedstartM16140MGWAMacGillivray's WarblerBBBUBBBO16150COYECommon YellowthroatTOTOT	15850	HEWA	Hermit Warbler	Т			Т	Т	0		
16140MGWA MacGillivray's WarblerBBBUBBO16150COYECommon YellowthroatTOTOT	16030	BAWW	Black-and-white Warbler					Μ			
16150 COYE Common Yellowthroat T O T O	16040	AMRE	American Redstart					Μ			
16150 COYE Common Yellowthroat T O T O	16140	MGWA	MacGillivray's Warbler	В	В	В	U	В	В	В	0
16290WIWAWilson's WarblerTOTOOT	16150		-		Т	0	Т	0			
	16290	WIWA	Wilson's Warbler	Т		0	Т	0	0		Т

Appendix II.	Continued.
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16460       YBCH       Yellow-breasted Chat       T       T         16495       UNWA       Unidentified Warbler       ?       ?       ?         16840       WETA       Western Tanager       B       B       U       U       U       B       B         17810       SPTO       Spotted Towhee       O       T       O       O       O         18020       CHSP       Chipping Sparrow       B       B       U       B       U       B         18080       VESP       Vesper Sparrow       O       T       T       T       T         18130       SAVS       Savannah Sparrow       T       T       T       T       T         18220       FOSP       Fox Sparrow       T       T       T       O       O       U       T         18230       SOSP       Song Sparrow       U       B <th>NUMB</th> <th>SPEC</th> <th>SPECIES NAME</th> <th>TWPO</th> <th>LIRA</th> <th>PLVA</th> <th>TIME</th> <th>QCR2</th> <th>RASP</th> <th>QUCR</th> <th>DECR</th>	NUMB	SPEC	SPECIES NAME	TWPO	LIRA	PLVA	TIME	QCR2	RASP	QUCR	DECR
16840       WETA       Western Tanager       B       B       U       U       U       U       B       B         17810       SPTO       Spotted Towhee       O       T       O       O       O       O         18020       CHSP       Chipping Sparrow       B       B       U       B       U       B       I         18080       VESP       Vesper Sparrow       O       T       T       T       T         18130       SAVS       Savannah Sparrow       T       T       T       T       T         18220       FOSP       Fox Sparrow       T       T       T       T       T         18230       SOSP       Song Sparrow       U       B       B       B       B       U       T         18240       LISP       Lincoln's Sparrow       B       U       T       T       T       T       S       T       B       B       B       B       B	16460	YBCH	Yellow-breasted Chat					Т			
17810SPTOSpotted TowheOTOOO18020CHSPChipping SparrowBBUBUBUB18080VESPVesper SparrowOTTTT18130SAVSSavannah SparrowTTTTT18220FOSPFox SparrowTTTTT18230SOSPSong SparrowUBBBBUT18240LISPLincoln's SparrowBBBBOOT18230ORJUOregon JuncoBBBBBBBB18335UNSPUnidentified Sparrow???TTT18610BHGRBlack-headed GrosbeakUBOOUUII18660LAZBLazuli BuntingUOTTTTTIII<	16495	UNWA	Unidentified Warbler	?		?		?			
18020Chipping SparrowBBUBUB18080VESPVesper SparrowOTTT18130SAVSSavannah SparrowTTT18220FOSPFox SparrowTTT18230SOSPSong SparrowUBBBBUT18240LISPLincoln's SparrowBBBBOOT18240DISPPuget Sound White-crowned Spar.TOOUT18320ORJUOregon JuncoBBBBBBBB18335UNSPUnidentified Sparrow??****18660LAZBLazuli BuntingUOTTTT**18730RWBLRed-winged BlackbirdTOUU*****18860BRBLBrewer's BlackbirdTOUU******18860BRBLBrewer's BlackbirdTOUU***<	16840	WETA	Western Tanager	В	В	U	U	U	В	В	Ο
1000Vesper SparrowOTT18130SAVSSavannah SparrowTT18220FOSPFox SparrowTT18230SOSPSong SparrowUBBBUT18240LISPLincoln's SparrowBBBBOOT18240LISPLincoln's SparrowBBBBOOU1829018290PSWSPuget Sound White-crowned Spar.TOOUU18320ORJUOregon JuncoBBBUTT<	17810	SPTO	Spotted Towhee	0		Т	0	0	0		Т
18130SAVSSavanah SparrowT18220FOSPFox SparrowT18230SOSPSong SparrowUBBBBUT18230SOSPSong SparrowUBBBBUT18240LISPLincoln's SparrowBBBBBOOU18290PSWSPuget Sound White-crowned Spar.TOOUU18320ORJUOregon JuncoBBBBBBBB18335UNSPUnidentified Sparrow??** <t< td=""><td>18020</td><td>CHSP</td><td>Chipping Sparrow</td><td>В</td><td>В</td><td>U</td><td>В</td><td>U</td><td>В</td><td></td><td>Ο</td></t<>	18020	CHSP	Chipping Sparrow	В	В	U	В	U	В		Ο
18220FOSPFox SparrowT18230SOSPSong SparrowUBBBBUT18240LISPLincoln's SparrowBBBBOOU18290PSWSPuget Sound White-crowned Spar.TOOUU18320ORJUOregon JuncoBBBBBBBB18335UNSPUnidentified Sparrow???1118610BHGRBlack-headed GrosbeakUBOOU1118660LAZBLazuli BuntingUOTTTT1118730RWBLRed-winged BlackbirdTOU111 <td>18080</td> <td>VESP</td> <td>Vesper Sparrow</td> <td>0</td> <td></td> <td>Т</td> <td></td> <td></td> <td>Т</td> <td></td> <td></td>	18080	VESP	Vesper Sparrow	0		Т			Т		
18230SOSPSong SparrowUBBBBBUT18240LISPLincoln's SparrowBBBBBBOO18290PSWSPuget Sound White-crowned Spar.TOOUU18320ORJUOregon JuncoBBBBBBBB18335UNSPUnidentified Sparrow?????18610BHGRBlack-headed GrosbeakUBOOU118660LAZBLazuli BuntingUOTTTT18730RWBLRed-winged BlackbirdTO01118810WEMEWestern MeadowlarkTO1118860BRBLBrewer's BlackbirdTO0119060BHCOBrown-headed CowbirdBBBUU119105BUORBullock's OrioleTTT119300PIGRPine GrosbeakTTT119301HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch???19380RECRRed CrossbillOOOO019430PISIPine SiskinUBBUUU19580EVGREvening GrosbeakO	18130	SAVS	Savannah Sparrow			Т					
18240LISPLincoln's SparrowBBBBBBOO18290PSWSPuget Sound White-crowned Spar.TOOUU18320ORJUOregon JuncoBBDNNN </td <td>18220</td> <td></td> <td>Fox Sparrow</td> <td>Т</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	18220		Fox Sparrow	Т							
18290PSWSPuget Sound White-crowned Spar.TOOU18320ORJUOregon JuncoBBAAA <td>18230</td> <td>SOSP</td> <td>Song Sparrow</td> <td>U</td> <td>В</td> <td>В</td> <td>В</td> <td>В</td> <td>U</td> <td>Т</td> <td>U</td>	18230	SOSP	Song Sparrow	U	В	В	В	В	U	Т	U
18320ORJUOregon JuncoBBBDD	18240	LISP	Lincoln's Sparrow	В	В	В	В	0	0		В
18335UNSPUnidentified Sparrow?18610BHGRBlack-headed GrosbeakUBOOU18610BHGRBlack-headed GrosbeakUOTTT18600LAZBLazuli BuntingUOTTTT18730RWBLRed-winged BlackbirdTOTTTT18810WEMEWestern MeadowlarkTOTTO118860BRBLBrewer's BlackbirdTOOTTT18960BHCOBrown-headed CowbirdBBUUBUT19105BUORBullock's OrioleTTTTTT19330PIGRPine GrosbeakTTTTTT19350PUFIPurple FinchOOOOOO119370HOFIHouse FinchTTTTTTT19375UCFIUnidentified Carpodacus Finch?????19380RECRRed CrossbillOOOOOO119430PISIPine SiskinUBBUUUUUU19580EVGREvening GrosbeakOBUUUUUUU	18290	PSWS	Puget Sound White-crowned Spar.	Т		0	0	U			
18610BHGRBlack-headed GrosbeakUBOOOU18660LAZBLazuli BuntingUOTTTT18730RWBLRed-winged BlackbirdTOTTTT18810WEMEWestern MeadowlarkTTOTTO18860BRBLBrewer's BlackbirdTODDD<	18320	ORJU	Oregon Junco	В	В	В	В	В	В	В	В
18660LAZBLazuli BuntingUOTTT18730RWBLRed-winged BlackbirdTOTO18810WEMEWestern MeadowlarkTTO18860BRBLBrewer's BlackbirdTOD18960BHCOBrown-headed CowbirdBBUUBU19105BUORBullock's OrioleTTTT19330PIGRPine GrosbeakTTTT19350PUFIPurple FinchOOOO19360CAFICassin's FinchUOUUU19370HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch???19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUB19580EVGREvening GrosbeakOBUUOU	18335	UNSP	Unidentified Sparrow								
18730RWBLRed-winged BlackbirdTO18810WEMEWestern MeadowlarkTT18860BRBLBrewer's BlackbirdTO18960BHCOBrown-headed CowbirdBBUUBU19105BUORBullock's OrioleTTTT19330PIGRPine GrosbeakTTTT19350PUFIPurple FinchOOOO19360CAFICassin's FinchUOUUU19370HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch???19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUBU19580EVGREvening GrosbeakOBUUOU	18610	BHGR	Black-headed Grosbeak	U	В	0	0	0	U		Т
18810WEMEWestern MeadowlarkT18860BRBLBrewer's BlackbirdTO18960BHCOBrown-headed CowbirdBBUUBU19105BUORBullock's OrioleTTT19330PIGRPine GrosbeakTTT19350PUFIPurple FinchOOOO19360CAFICassin's FinchUOUU19370HOFIHouse FinchTTT19375UCFIUnidentified Carpodacus Finch??19380RECRRed CrossbillOOO19430PISIPine SiskinUBBU19580EVGREvening GrosbeakOBUU	18660	LAZB	Lazuli Bunting	U	0	Т		Т	Т		Т
18860BRBLBrewer's BlackbirdTO18960BHCOBrown-headed CowbirdBBUUBU19105BUORBullock's OrioleTTTT19330PIGRPine GrosbeakTTTT19350PUFIPurple FinchOOOO19360CAFICassin's FinchUOUOU19370HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch???19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUB19580EVGREvening GrosbeakOBUUOU	18730	RWBL	Red-winged Blackbird			Т		0			Т
18960BHCOBrown-headed CowbirdBBUUBU19105BUORBullock's OrioleTTT19330PIGRPine GrosbeakTTT19350PUFIPurple FinchOOOO19360CAFICassin's FinchUOUOU19370HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch???19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUB19580EVGREvening GrosbeakOBUUOU	18810	WEME	Western Meadowlark			Т					
19105BUORBullock's OrioleT19330PIGRPine GrosbeakT19350PUFIPurple FinchOOO19360CAFICassin's FinchUOUU19370HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch???19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUB19580EVGREvening GrosbeakOBUUOU	18860	BRBL	Brewer's Blackbird			Т		0			
19330PIGRPine GrosbeakT19350PUFIPurple FinchOOO19360CAFICassin's FinchUOUU19370HOFIHouse FinchTTT19375UCFIUnidentified Carpodacus Finch??19380RECRRed CrossbillOOO19430PISIPine SiskinUBBU19580EVGREvening GrosbeakOBUU	18960	BHCO	Brown-headed Cowbird	В	В	U	U	В	U		Т
19350PUFIPurple FinchOOOOO19360CAFICassin's FinchUOUOUU19370HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch??19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUB19580EVGREvening GrosbeakOBUUOU	19105	BUOR	Bullock's Oriole					Т			
19360CAFICassin's FinchUOUOUU19370HOFIHouse FinchTTTT19375UCFIUnidentified Carpodacus Finch??19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUB19580EVGREvening GrosbeakOBUUOU	19330	PIGR	Pine Grosbeak					Т			Т
19370HOFIHouse FinchTTT19375UCFIUnidentified Carpodacus Finch??19380RECRRed CrossbillOOO19430PISIPine SiskinUBBU19580EVGREvening GrosbeakOBUU	19350	PUFI	Purple Finch	0		0		0	0		Т
19375UCFIUnidentified Carpodacus Finch??19380RECRRed CrossbillOOOO19430PISIPine SiskinUBBUBU19580EVGREvening GrosbeakOBUUOU	19360	CAFI	Cassin's Finch	U	0	U	0	U	U		0
19380RECRRed CrossbillOOOOO19430PISIPine SiskinUBBUBU19580EVGREvening GrosbeakOBUUOU	19370	HOFI	House Finch	Т		Т			Т		
19430PISIPine SiskinUBBUBU19580EVGREvening GrosbeakOBUUOU	19375	UCFI	Unidentified Carpodacus Finch					?	?		
19580 EVGR Evening Grosbeak O B U U O U	19380	RECR	Red Crossbill	0		0	0	0	0		0
	19430	PISI	Pine Siskin	U	В	В	U	В	U		U
	19580	EVGR	Evening Grosbeak	0	В	U	U	0	U		U
20085 UNBI Unidentified Bird ? ?	20085	UNBI	Unidentified Bird					?	?		

Appendix III. Numerical listing (in AOU checklist order) of all the species sequence numbers, species alpha codes, and species names for all species banded or encountered during the 15 years, 1992-2006, of the MAPS Program on the six stations ever operated on **Umatilla National Forest**.

NUMB	SPEC	SPECIES NAME	Buzzard Creek (BUCR)	Buck Mountain Meadow (BMME)	Coyote Ridge (CORI)	Fry Meadow (FRME)	Brock Meadow (BRME)	Phillips Creek (PHCR)
01010	GBHE	Great Blue Heron					Т	Т
01300	TUVU	Turkey Vulture	Т		Т	Т	Т	Т
01460	CANG	Canada Goose				Т		
01630	MALL	Mallard				Т	Ο	0
02015	UNDU	Unidentified Duck					?	
02130	BAEA	Bald Eagle		Т				
02170	NOHA	Northern Harrier			Т			
02200	SSHA	Sharp-shinned Hawk	0	Ο	Т	Ο		Т
02210	COHA	Cooper's Hawk		Т	Т			Т
02240	NOGO	Northern Goshawk	Т	Т	Т		Т	
02245	UNAH	Unidentified Accipiter Hawk	?					
02460	RTHA	Red-tailed Hawk	Т	Т	Ο	Ο	Ο	U
02470	FEHA	Ferruginous Hawk	Т					
02510	GOEA	Golden Eagle			Т			
02630	AMKE	American Kestrel			Ο	Ο	Т	Т
02830	CHUK	Chukar			Т			
02920	RNEP	Ring-necked Pheasant				Т		
02940	RUGR	Ruffed Grouse	U	Ο	U	U	U	U
02960	SPGR	Spruce Grouse			Т	Т	Т	Т
03000	BLUG	Blue Grouse		Т			Т	
03040	WITU	Wild Turkey		Т				
03100	MOUQ	Mountain Quail			Т			
03370	VIRA	Virginia Rail					Т	
04020	SPSA	Spotted Sandpiper					Т	Ο
04460	WISN	Wilson's Snipe				Т	Ο	
05570	MODO	Mourning Dove			Т	Т	Т	Ο
06670	WESO	Western Screech-Owl					Т	
06830	NOPO	Northern Pygmy-Owl		Т	Т		Т	
06980	LEOW	Long-eared Owl				Т		
07040	NSWO	Northern Saw-whet Owl		Т		Т		
07080	CONI	Common Nighthawk	Т		Т	Т		Т

Appendix III.	Continued.
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NUMB	SPEC	SPECIES NAME	BUCR	BMME	CORI	FRME	BRME	PHCR
07410	VASW	Vaux's Swift	Т	Т	Т	0	0	0
08690	CAHU	Calliope Hummingbird	Ο	0	U	0	0	0
08730	RUHU	Rufous Hummingbird	Т	U	U	0	Т	U
08775	UNHU	Unidentified Hummingbird	?	?	?	?	?	?
09110	BEKI	Belted Kingfisher					Ο	Ο
09570	WISA	Williamson's Sapsucker	Т	U	0	0	Т	Т
09590	RNSA	Red-naped Sapsucker	Ο	U	U	U	В	U
09595	RRSH	Red-naped X Red-breasted Saps. Hyb	orid				0	
09600	RBSA	Red-breasted Sapsucker		Т		0		
09605	UNSA	Unidentified Sapsucker		?		?	?	?
09650	DOWO	Downy Woodpecker	0	0	0	0	0	Т
09660	HAWO	Hairy Woodpecker	U	0	U	U	U	U
09700	ATTW	American Three-toed Woodpecker	Т				Т	
09710	BBWO	Black-backed Woodpecker		Т				
09800	RSFL	Red-shafted Flicker	U	U	В	U	U	U
09860	PIWO	Pileated Woodpecker	U	U	0	U	U	U
11340	OSFL	Olive-sided Flycatcher	0	U	0	U	U	U
11380	WEWP	Western Wood-Pewee	Т	Т	0	U	0	0
11475	TRFL	Traill's Flycatcher	Т	Т	Т	Т	U	Т
11475	WIFL	Willow Flycatcher	Т	Т	Т	Т	U	Т
11500	LEFL	Least Flycatcher					Т	
11510	HAFL	Hammond's Flycatcher	0	U	U	U	U	U
11515	HDFL	Hammond's/Dusky Flycatcher	Т	?		Т	0	Т
11520	GRFL	Gray Flycatcher	Т	Т	0	Т	Т	Т
11530	DUFL	Dusky Flycatcher	U	U	В	U	0	U
11555	COFL	Cordilleran Flycatcher						U
11555	PSFL	Pacific-slope Flycatcher						U
11555	WEFL	Western Flycatcher	Т	Ο	Ο	Ο	Ο	U
11595	UEFL	Unidentified Empidonax Flycatcher	?	?	?		?	?
12085	UNFL	Unidentified Flycatcher		?	?		?	
12710	CAVI	Cassin's Vireo	0	0	U	Ο	Ο	U
12760	WAVI	Warbling Vireo	U	0	U	В	В	U
12910	GRAJ	Gray Jay	U	U	Т	Ο	Ο	
12920	STJA	Steller's Jay	Ο	U	U	Ο	U	В
13150	CLNU	Clark's Nutcracker			Т	Т		Т
13190	AMCR	American Crow		Т		Т		
13300	CORA	Common Raven	U	U	U	U	U	U
13410	TRES	Tree Swallow			Т			
13490	NRWS	Northern Rough-winged Swallow		Т				
13570	BCCH	Black-capped Chickadee	0	0	0	0	0	0

NUMB	SPEC	SPECIES NAME	BUCR	BMME	CORI	FRME	BRME	PHCR
13580	MOCH	Mountain Chickadee	В	В	В	В	В	U
13600	CBCH	Chestnut-backed Chickadee	0	U	Т	Ο	Ο	Ο
13690	RBNU	Red-breasted Nuthatch	В	В	В	В	В	В
13700	WBNU	White-breasted Nuthatch	0	Т	Ο	Т	Т	Ο
13730	BRCR	Brown Creeper	U	В	U	U	Ο	U
13840	ROWR	Rock Wren			Ο	Ο		
14070	HOWR	House Wren	Т		Ο	Ο	Ο	Ο
14110	WIWR	Winter Wren	Ο	U	Ο	Ο	U	U
14210	AMDI	American Dipper						Т
14240	GCKI	Golden-crowned Kinglet	В	В	В	В	В	В
14250	RCKI	Ruby-crowned Kinglet	В	В	U	В	U	Ο
14570	WEBL	Western Bluebird				Т		
14580	MOBL	Mountain Bluebird	Т	Т		Т		
14590	TOSO	Townsend's Solitaire	Т	Ο	Ο	Ο		Т
14780	VEER	Veery						Ο
14810	SWTH	Swainson's Thrush	В	В	В	В	В	В
14820	HETH	Hermit Thrush	U	В	U	Ο	Ο	Ο
15000	AMRO	American Robin	U	U	В	В	В	В
15060	VATH	Varied Thrush	Ο	U	Т	Ο	Ο	0
15130	GRCA	Gray Catbird				Т		
15550	CEDW	Cedar Waxwing					Т	
15660	OCWA	Orange-crowned Warbler	Ο	Т	В	Т	Т	U
15670	NAWA	Nashville Warbler	А	А	А	А	А	А
15750	YWAR	Yellow Warbler			Ο	Т		Т
15800	AUWA	Audubon's Warbler	В	В	В	В	В	U
15840	TOWA	Townsend's Warbler	В	В	В	В	В	В
16140	MGWA	MacGillivray's Warbler	U	U	В	В	В	В
16150	COYE	Common Yellowthroat		Т		Т		
16290	WIWA	Wilson's Warbler	U	В	Ο	Ο	В	U
16495	UNWA	Unidentified Warbler	?				?	
16840	WETA	Western Tanager	U	В	В	U	U	В
17790	GTTO	Green-tailed Towhee	Т		Т			
17810	SPTO	Spotted Towhee		Т	0	Т	Т	U
18020	CHSP	Chipping Sparrow	В	В	В	U	U	U
18220	FOSP	Fox Sparrow	Ο	U	U	В	U	Ο
18230	SOSP	Song Sparrow	Т	0	Ο	0	U	0
18240	LISP	Lincoln's Sparrow	Т	В	0	В	В	0
18320	ORJU	Oregon Junco	В	В	В	В	В	В
18335	UNSP	Unidentified Sparrow	?	?				?
18610	BHGR	Black-headed Grosbeak	0	0	0	Т	0	U

Appendix III. Continued.

NUMB	SPEC	SPECIES NAME	BUCR	BMME	CORI	FRME	BRME	PHCR
18660	LAZB	Lazuli Bunting	Т	0	0	0	0	Т
18730	RWBL	Red-winged Blackbird		Т				
18960	BHCO	Brown-headed Cowbird	Ο	Ο	U	U	$\mathbf{U}$	0
19360	CAFI	Cassin's Finch	Т	Ο	0	Ο	Ο	0
19370	HOFI	House Finch		Т				Т
19380	RECR	Red Crossbill	0	Ο	0	Ο	Ο	0
19430	PISI	Pine Siskin	U	U	U	U	U	0
19510	AMGO	American Goldfinch		Т			Т	Т
19580	EVGR	Evening Grosbeak	0	0			0	0
20085	UNBI	Unidentified Bird		?	?			?

Appendix IV. Numerical listing (in AOU checklist order) of all the species sequence numbers, species alpha codes, and species names for all species banded or encountered during the 15 years, 1992-2006, of the MAPS Program on the seven stations ever operated on **Willamette National Forest**.

NUMB	SPEC	SPECIES NAME	Mosquito Creek (MOCR)	Clear Cut (CLCU)	Fingerboard Prairie (FIPR)	Ikenik (IKEN)	Brock Creek (BRCR)	Major Prairie (MAPR)	Strube Flat (STFL)
01010	GBHE	Great Blue Heron				Т	Т		Т
01300	TUVU	Turkey Vulture	Т	0	Т	0	0	0	0
01460	CANG	Canada Goose				Т	Т		Т
01570	WODU	Wood Duck							Т
01630	MALL	Mallard				0			0
01750	AGWT	American Green-winged Teal				Т			
01980	COME	Common Merganser				Т			Т
02020	OSPR	Osprey				0	Т	Т	U
02130	BAEA	Bald Eagle							Т
02200	SSHA	Sharp-shinned Hawk	Т	Т	Т	0	Т	Т	0
02210	COHA	Cooper's Hawk		Т	Т	Т	Т		Т
02380	RSHA	Red-shouldered Hawk			Μ				
02420	SWHA	Swainson's Hawk		Т					
02460	RTHA	Red-tailed Hawk	Т	Т	Т	Т	Т	Т	
02630	AMKE	American Kestrel				Т			
02940	RUGR	Ruffed Grouse	Т	0	0	0	U	U	0
03000	BLUG	Blue Grouse	Т	Т	U		Т		Т
03100	MOUQ	Mountain Quail		0					
03130	CAQU	California Quail				Т			0
03600	SACR	Sandhill Crane	Т			Т			
04020	SPSA	Spotted Sandpiper				Т			
04360	DUNL	Dunlin				Μ			
04460	WISN	Wilson's Snipe			Т	0			
05440	BTPI	Band-tailed Pigeon		Т			Т	0	Т
05570	MODO	Mourning Dove		Т		Т	Т	Т	
06800	GHOW	Great Horned Owl						Т	
06830	NOPO	Northern Pygmy-Owl		Т	Т	0	0	0	Т
06950	BADO	Barred Owl					Т		Т
06970	GGOW	Great Gray Owl						Т	
07040	NSWO	Northern Saw-whet Owl					Т		
07080	CONI	Common Nighthawk		0	Т	Т	0	0	Т
07110	COPO	Common Poorwill					Т		

Appendix IV. Cor	ntinued.
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NUMB	SPEC	SPECIES NAME	MOCR	CLCU	FIPR	IKEN	BRCR	MAPR	STFL
07410	VASW	Vaux's Swift				T		T	
08670	ANHU	Anna's Hummingbird					Т		
08690	CAHU	Calliope Hummingbird	Т	Т	Т	Т	Т	Т	Т
08720	BTAH	Broad-tailed Hummingbird							Т
08730	RUHU	Rufous Hummingbird	В	В	В	В	U	U	U
08774	USHU	Unidentified Selasphorus Hummingbird	?	?	?	?	?	?	?
08775	UNHU	Unidentified Hummingbird				?	?	?	
09110	BEKI	Belted Kingfisher				Т	Т	Т	0
09570	WISA	Williamson's Sapsucker				Т			
09590	RNSA	Red-naped Sapsucker		0	Т	0		0	
09600	RBSA	Red-breasted Sapsucker	В	0	U	U	U	U	U
09605	UNSA	Unidentified Sapsucker		?	?	?	?	?	?
09640	NUWO	Nuttall's Woodpecker							Т
09650	DOWO	Downy Woodpecker	Т	0	0		Т	0	0
09660	HAWO	Hairy Woodpecker	0	U	U	U	U	U	U
09700	ATTW	American Three-toed Woodpecker			Т				
09800	RSFL	Red-shafted Flicker	0	U	U	U	U	U	U
09860	PIWO	Pileated Woodpecker	0	0	0	U	U	U	В
11340	OSFL	Olive-sided Flycatcher	В	В	0	0	U	0	Т
11380	WEWP	Western Wood-Pewee	Т	Т		0	Т		0
11475	TRFL	Traill's Flycatcher		U	0	В	В	0	0
11475	WIFL	Willow Flycatcher		U	0	В	В	0	0
11500	LEFL	Least Flycatcher					Μ		
11510	HAFL	Hammond's Flycatcher	Т	U	В	В	U	В	В
11515	HDFL	Hammond's/Dusky Flycatcher		Т	?	?	Т	?	
11520	GRFL	Gray Flycatcher					Μ		
11530	DUFL	Dusky Flycatcher	Т	U	0	0	0	U	0
11555	PSFL	Pacific-slope Flycatcher	В	U	U	0	U	U	U
11555	WEFL	Western Flycatcher	0	U	U	0	U	U	U
11595	UEFL	Unidentified Empidonax Flycatcher	?	Т	?	?	Т	Т	?
11740	ATFL	Ash-throated Flycatcher			Т				
12085	UNFL	Unidentified Flycatcher				?			
12710	CAVI	Cassin's Vireo	Т	0	Т	Т	U	0	0
12740	HUVI	Hutton's Vireo		Т		Т	0	0	Т
12760	WAVI	Warbling Vireo	0	В	U	U	U	0	0
12910	GRAJ	Gray Jay	В	0	U	0	0	Т	Т
12920	STJA	Steller's Jay	В	В	В	В	В	В	В
13150	CLNU	Clark's Nutcracker			Т				
13190	AMCR	American Crow	Т	Т	0	Т	0	0	0
13300	CORA	Common Raven	Т	0	U	U	U	U	U

NUMB	SPEC	SPECIES NAME	MOCR	CLCU	FIPR	IKEN	BRCR	MAPR	STFL
13410	TRES	Tree Swallow	Т	Т		U	Т		0
13440	VGSW	Violet-green Swallow	Т	Т		0			Т
13555	UNSW	Unidentified Swallow							?
13570	BCCH	Black-capped Chickadee	Т	Т	Т	Т	Т		Т
13580	MOCH	Mountain Chickadee			Т				
13600	CBCH	Chestnut-backed Chickadee	В	В	В	В	В	В	В
13680	BUSH	Bushtit		Т	Т	Т		Т	
13690	RBNU	Red-breasted Nuthatch	В	В	В	В	В	В	U
13700	WBNU	White-breasted Nuthatch		Т		Т	Т		Т
13730	BRCR	Brown Creeper	Т	Т	U	0	U	0	U
14040	BEWR	Bewick's Wren					0		
14070	HOWR	House Wren		А	А	Т	Т		Т
14110	WIWR	Winter Wren	0	0	В	U	В	U	В
14130	MAWR	Marsh Wren				0		Т	
14210	AMDI	American Dipper							0
14240	GCKI	Golden-crowned Kinglet	В	В	В	В	U	U	U
14570	WEBL	Western Bluebird		Т					
14590	TOSO	Townsend's Solitaire			Т		0	Т	
14780	VEER	Veery			Μ	Μ			Μ
14810	SWTH	Swainson's Thrush	В	В	В	В	В	В	В
14820	HETH	Hermit Thrush	В	0	В	0	0	Т	Т
15000	AMRO	American Robin	В	U	В	В	В	В	В
15060	VATH	Varied Thrush	В	U	U	Т	0	0	U
15110	WREN	Wrentit						Т	
15370	EUST	European Starling					Т		
15550	CEDW	Cedar Waxwing	Т	Т	Т	0	0	0	Т
15660	OCWA	Orange-crowned Warbler	В	А	А	А	А	0	
15670	NAWA	Nashville Warbler	0	0	0	0	0	Т	Т
15750	YWAR	Yellow Warbler		Т	0	В	Т	0	
15800	AUWA	Audubon's Warbler		0	U	U	Т	0	
15810		Black-throated Gray Warbler		Т	0	0	U	0	U
15840		Townsend's Warbler		0	Т	0	Т	0	
15845		Townsend's x Hermit Warbler Hybrid		Т				0	
15850		Hermit Warbler	В	В	В	В	U	В	U
16080	OVEN	Ovenbird							Μ
16140		MacGillivray's Warbler	В	В	В	В	В	В	Т
16150	COYE	Common Yellowthroat		Т	Т	В	0	Т	
16290		Wilson's Warbler	В	U	В	U	0	0	0
16460		Yellow-breasted Chat				Т			
16495	UNWA	Unidentified Warbler	?	?		?	?		

NUMB	SPEC	SPECIES NAME	MOCR	CLCU	FIPR	IKEN	BRCR	MAPR	STFL
16840	WETA	Western Tanager	0	U	U	U	В	U	U
17810	SPTO	Spotted Towhee		Т	Т	Т	U	U	
18020	CHSP	Chipping Sparrow	Т	Т	Т		0	Т	Т
18080	VESP	Vesper Sparrow		Т					
18130	SAVS	Savannah Sparrow				Μ			
18220	FOSP	Fox Sparrow	Ο	В	0	0	Т	0	Т
18230	SOSP	Song Sparrow	Т	0	0	В	В	В	U
18240	LISP	Lincoln's Sparrow		0	U	В	0	0	
18290	MWCS	Mountain White-crowned Sparrow		0	0	0	0		
18290	PSWS	Puget Sound White-crowned Sparrow				0	Т		
18290	WCSP	White-crowned Sparrow				0		Т	Т
18320	ORJU	Oregon Junco	В	В	В	В	В	В	U
18335	UNSP	Unidentified Sparrow				?			
18610	BHGR	Black-headed Grosbeak	В	А	0	0	U	0	0
18660	LAZB	Lazuli Bunting	0	0	0	0	0	Т	
18730	RWBL	Red-winged Blackbird				U			
18820	YHBL	Yellow-headed Blackbird				0			
18960	BHCO	Brown-headed Cowbird		Т		0	0		
19300	GCRF	Gray-crowned Rosy-Finch		Т					
19330	PIGR	Pine Grosbeak				Т			
19350	PUFI	Purple Finch	Т	0	0	0	U	U	Т
19360	CAFI	Cassin's Finch		0	Т	Т	0	0	
19370	HOFI	House Finch				Т	Т		
19375	UCFI	Unidentified Carpodacus Finch		?					
19380	RECR	Red Crossbill	Т	0	0	Т	Т	0	Т
19430	PISI	Pine Siskin		U	U	U	0	0	Т
19510	AMGO	American Goldfinch							Т
19580	EVGR	Evening Grosbeak	Т	0	0	0	0	0	Т
20085	UNBI	Unidentified Bird						?	

Appendix V. Numerical listing (in AOU checklist order) of all the species sequence numbers, species alpha codes, and species names for all species banded or encountered during the 15 years, 1992-2006, of the MAPS Program on the eight stations ever operated on **Siuslaw National Forest**.

NUMB	SPEC	SPECIES NAME	Cougar Creek (COUC)	Crab Creek (CRCR)	Homestead (HOME)	Beaver Ridge (BERI)	Cape Creek (CCRE)	Salvation Meadow (SAME)	Mary's Peak (MAPE)	Nettle Creek (NECR)
01010	GBHE	Great Blue Heron		Т				Т		
01300	TUVU	Turkey Vulture		Т	Т	Т	Т	Т	Т	
01460	CANG	Canada Goose	Т	Т	Т	Т		Т		
01630	MALL	Mallard			Т			Т	Т	
02020	OSPR	Osprey	Т			Т		Т	Т	
02200	SSHA	Sharp-shinned Hawk	Т	Т	Т	Т	Т	Т		
02210	COHA	Cooper's Hawk		0		Т		Т		
02240	NOGO	Northern Goshawk			Т	Т				
02460	RTHA	Red-tailed Hawk	0	Т	0	Т	Т	Т	Т	
02545	UNHA	Unidentified Hawk					?	?		
02940	RUGR	Ruffed Grouse		Т	Т	0	0	0	Т	
03000	BLUG	Blue Grouse	0	Т	0	0		0	0	
03100	MOUQ	Mountain Quail					0	Т		
03130	CAQU	California Quail	Т	Т	Т	Т				
05440	BTPI	Band-tailed Pigeon	U	U	U	U	U	U	0	
05570	MODO	Mourning Dove		Т	Т		Т	Т		
06670	WESO	Western Screech-Owl	Т	Т	Т	Т		Т	Т	
06800	GHOW	Great Horned Owl			Т					
06830	NOPO	Northern Pygmy-Owl	0	0	0	0		0	0	
06940	SPOW	Spotted Owl				Т			Т	
07040	NSWO	Northern Saw-whet Owl	Т	0	Т	Т		Т	Т	
07055	UNOW	Unidentified Owl	?	?						
07080	CONI	Common Nighthawk							Т	
08670	ANHU	Anna's Hummingbird						Т		
08690	CAHU	Calliope Hummingbird						Т		
08730	RUHU	Rufous Hummingbird	U	0	0	U	0	U	U	
08740	ALHU	Allen's Hummingbird	Μ	Μ			Μ	Μ		
08774	USHU	Unidentified Selasphorus Humming.	Т	0	Т	?	0	0		
08775	UNHU	Unidentified Hummingbird			?		?	?		
09110	BEKI	Belted Kingfisher						0		
09600	RBSA	Red-breasted Sapsucker	0	0	0	0		0	0	

NUMB	SPEC	SPECIES NAME	COUC	CRCR	HOME	BERI	CCRE	SAME	MAPE	NECR
09650	DOWO	Downy Woodpecker	0	Т	0	Т		0	0	
09660		Hairy Woodpecker	U	0	U	U	0	0	U	В
09800	RSFL	Red-shafted Flicker	0	Т	0	0		0	0	
09860	PIWO	Pileated Woodpecker	U	U	U	U	U	0	U	
09915	UNWO	Unidentified Woodpecker	?		?	?		?		
11340	OSFL	Olive-sided Flycatcher	В	0		Т	Т			
11380	WEWP	Western Wood-Pewee	U	0	0	Т		0	Т	
11475	TRFL	Traill's Flycatcher	Т		Т	Т		U	Т	
11475	WIFL	Willow Flycatcher	Т		Т	Т		U	Т	
11510	HAFL	Hammond's Flycatcher	U	U	U	U	U	0	0	
11530	DUFL	Dusky Flycatcher		Т	Т					
11555	PSFL	Pacific-slope Flycatcher	В	В	В	В	В	В	В	В
11555	WEFL	Western Flycatcher	В	В	В	В	В	В	В	
11595	UEFL	Unidentified Empidonax Flycatcher		?	?	?	?	?	?	
12085	UNFL	Unidentified Flycatcher		?						
12710	CAVI	Cassin's Vireo						Т		
12740	HUVI	Hutton's Vireo	U	U	0	U	U	U	0	В
12760	WAVI	Warbling Vireo	Т	U	0	U	0	В		
12910	GRAJ	Gray Jay	0	0	0	Т	0	Т	0	
12920	STJA	Steller's Jay	В	В	В	В	В	В	В	В
13150	CLNU	Clark's Nutcracker			Т					
13190	AMCR	American Crow	Т	Т	Т	Т	Т	Т	Т	
13300	CORA	Common Raven	0	0	0	0	0	Т	В	
13410	TRES	Tree Swallow						Т	Т	
13440	VGSW	Violet-green Swallow				0		Т		
13570	BCCH	Black-capped Chickadee		Т	Т			0	Т	
13600	CBCH	Chestnut-backed Chickadee	В	U	В	В	В	U	В	В
13680	BUSH	Bushtit	Т	Т		0		Т	Т	
13690	RBNU	Red-breasted Nuthatch	В	0	В	0	0	Т	В	В
13700	WBNU	White-breasted Nuthatch	0	Т	Т			Т	0	
13730	BRCR	Brown Creeper	В	0	В	U	0	0	В	
14040		Bewick's Wren	Т			Т		Т	Т	
14070		House Wren		Т	Т			Т		
14110	WIWR	Winter Wren	В	В	В	В	В	В	В	В
14130		Marsh Wren		Т						
14240	GCKI	Golden-crowned Kinglet	U	В	В	U	В	0	U	
14250	RCKI	Ruby-crowned Kinglet	0		0	Т		Т	Т	
14810	SWTH	Swainson's Thrush	В	В	В	В	В	В	В	В
14820	HETH	Hermit Thrush	0	0	Т	Т			Т	
14835	UNTH	Unidentified Thrush			?			?		

	SDEC		COUC	CRCR	HOME	BERI	CCRE	SAME	MAPE	NECR
NUMB	SPEC	SPECIES NAME	· 1		[1]					,
15000	AMRO	American Robin	U	U	U	В	В	В	0	Т
15060	VATH	Varied Thrush	В	В	В	U	0	U	В	Т
15110	WREN	Wrentit	В	0	0	U	Т	U	0	Т
15550	CEDW	Cedar Waxwing	Т	Т	0	Т	Т	0	Т	
15660		Orange-crowned Warbler	Т	Т			Т	0		Т
15670		Nashville Warbler		Т		Т			Т	
15750	YWAR	Yellow Warbler		Т				Т		
15800	AUWA	Audubon's Warbler	Т	Т						
15810	BTYW	Black-throated Gray Warbler	U	U	0	U	U	U	Т	
15840	TOWA	Townsend's Warbler							Т	
15845	THWH	Townsend's x Hermit Warbler Hybrid	1			Т				
15850		Hermit Warbler	В	В	U	В	U	0	U	
16140	MGWA	MacGillivray's Warbler	0		0	0	0	0	Т	
16150	COYE	Common Yellowthroat		Т	0			0		
16290	WIWA	Wilson's Warbler	В	В	В	В	В	В	В	В
16495	UNWA	Unidentified Warbler			?					
16840	WETA	Western Tanager	U	U	U	U	В	0	Т	Т
17810	SPTO	Spotted Towhee	Т	0	0	Т		0	Т	
18020	CHSP	Chipping Sparrow		Т	Т			Т		
18230	SOSP	Song Sparrow	0	0	U	U	Т	В	0	В
18240	LISP	Lincoln's Sparrow						Т		
18290	PSWS	Puget Sound White-crowned Sparrow	/	Т			0			
18320	ORJU	Oregon Junco	0	В	0	0	В	Т	0	
18335	UNSP	Unidentified Sparrow		?						
18610	BHGR	Black-headed Grosbeak	0	U	U	U	U	В	Т	В
18960	BHCO	Brown-headed Cowbird						Т		
19350	PUFI	Purple Finch	Т	0	Т	Т	0	Т		
19370	HOFI	House Finch			Т					
19375	UCFI	Unidentified Carpodacus Finch		?						
19380	RECR	Red Crossbill	Т	Т	Т	Т	Т		Т	
19430	PISI	Pine Siskin	Т		Т			Т	Т	
19490	LEGO	Lesser Goldfinch						Т		
19510	AMGO	American Goldfinch	Т					Т		
19580	EVGR	Evening Grosbeak	0	0	0	0	Т	Т	0	Т
19920	HOSP	House Sparrow	Т			Т				
20085	UNBI	Unidentified Bird	?	?		?		?		

Appendix VI. Numerical listing (in AOU checklist order) of all the species sequence numbers, species alpha codes, and species names for all species banded or encountered during the 15 years, 1992-2006, of the MAPS Program on the seven stations ever operated on **Fremont National Forest**.

NUMB	SPEC	SPECIES NAME	Sycan River (SYRI)	Deadhorse (DEAD)	Augur Creek (AUCR)	Deer Creek (DCRK)	Swamp Creek (SWCR)	Island (ISLA)	Cold Creek (COLC)
00820	AWPE	American White Pelican	T						
01010	GBHE	Great Blue Heron	Т	Т					
01300	TUVU	Turkey Vulture	Т	Т	Т	Т	Т	Т	Т
01460	CANG	Canada Goose	Т		Т		Т		
01630	MALL	Mallard	0	Т	Т		0	0	
01750	AGWT	American Green-winged Teal					Т	0	
01980	COME	Common Merganser	0	Т		Т		Т	
02020	OSPR	Osprey		Т			Т	0	
02130	BAEA	Bald Eagle	Т						
02200	SSHA	Sharp-shinned Hawk	Т	Т	Т	Т	Т	Т	Т
02210	COHA	Cooper's Hawk	Т		Т			Т	
02240	NOGO	Northern Goshawk	Т				Т	Т	Т
02245	UNAH	Unidentified Accipiter Hawk	?			?	?		
02420	SWHA	Swainson's Hawk	Т		Т				
02460	RTHA	Red-tailed Hawk	0	0	U	В	U	U	0
02470	FEHA	Ferruginous Hawk		Μ					
02630	AMKE	American Kestrel	Т	Т	Т			0	
02940	RUGR	Ruffed Grouse		Т			Т		
03000	BLUG	Blue Grouse	Т	0			0	0	
03600	SACR	Sandhill Crane	0	U	Т		Т	Т	Т
03780	KILL	Killdeer						0	
04020	SPSA	Spotted Sandpiper	В		0	В	Т	U	
04460	WISN	Wilson's Snipe		0	Т				
04690	RBGU	Ring-billed Gull	Т						
05370	ROPI	Rock Pigeon	Т		Т				
05570	MODO	Mourning Dove		Т	Т	Т	Т	Т	Т
06800	GHOW	Great Horned Owl	Т	Т	Т				
06830	NOPO	Northern Pygmy-Owl		Т	Т	Т	0		Т
06970	GGOW	Great Gray Owl	Т					Т	0
07080	CONI	Common Nighthawk	0	Т	Т		0	0	Т
07410	VASW	Vaux's Swift	Т	Т	Т	Т	Т	Т	
08690	CAHU	Calliope Hummingbird	U	0	Т	Т	0	Т	Т
08720	BTAH	Broad-tailed Hummingbird			Μ				

NUMB	SPEC	SPECIES NAME	SYRI	DEAD	AUCR	DCRK	SWCR	ISLA	COLC
08730	RUHU	Rufous Hummingbird	U	U	0	0	0	0	0
08774	USHU	Unidentified Selasphorus Hummingbird			?	?			
08775	UNHU	Unidentified Hummingbird	?	?	?			?	
09110	BEKI	Belted Kingfisher	U	Т		0	0	U	
09570	WISA	Williamson's Sapsucker	0	0	U	Т	0	0	Ο
09590	RNSA	Red-naped Sapsucker	0	U	U	Т	U	0	Ο
09595	RRSH	Red-naped X Red-breasted Saps. Hybrid	U	В	U	Т	0	U	U
09600	RBSA	Red-breasted Sapsucker	U	В	U	Т	В	U	U
09605	UNSA	Unidentified Sapsucker	?	?	?	?	?	?	
09650	DOWO	Downy Woodpecker	Т	U	U		Т	0	Ο
09660	HAWO	Hairy Woodpecker	U	U	U	0	U	U	U
09690	WHWO	White-headed Woodpecker					Т	0	
09710		Black-backed Woodpecker	0		Т		Т	0	Ο
09800	RSFL	Red-shafted Flicker	В	В	В	В	U	В	В
09860	PIWO	Pileated Woodpecker		0	0	В	Т	Т	Т
11340	OSFL	Olive-sided Flycatcher	Т		Т		0	0	
11380	WEWP	Western Wood-Pewee	0	В	U	В	0	U	U
11475	TRFL	Traill's Flycatcher	Т	Т	Т		Т	Т	Т
11475	WIFL	Willow Flycatcher	Т	Т	Т		Т	Т	
11510	HAFL	Hammond's Flycatcher	U	0	U	В	0	В	Ο
11515	HDFL	Hammond's/Dusky Flycatcher	?	?				Т	?
11520	GRFL	Gray Flycatcher	0	0	0	Т	Т	Т	Т
11530	DUFL	Dusky Flycatcher	В	В	0	В	0	U	U
11555	COFL	Cordilleran Flycatcher		U		0	В		
11555	PSFL	Pacific-slope Flycatcher		U	U		В	U	
11555	WEFL	Western Flycatcher	U	U	U	В	В	U	U
11595	UEFL	Unidentified Empidonax Flycatcher	?	?		?	?	?	
12020	WEKI	Western Kingbird			Т				
12085	UNFL	Unidentified Flycatcher	?					?	
12710	CAVI	Cassin's Vireo	Т	0	0	Т	0	0	Т
12740	HUVI	Hutton's Vireo	Т	Т					
12760	WAVI	Warbling Vireo	U	В	В	В	U	В	U
12910	GRAJ	Gray Jay	0	U	0	Т	0		U
12920	STJA	Steller's Jay	0	U	U	В	В	U	0
13110	WESJ	Western Scrub-Jay			Т				
13150	CLNU	Clark's Nutcracker	0	0	U		0	U	Т
13190		American Crow	Т		Т		Т		Т
13300	CORA	Common Raven	Ū	Т	0	0	Т	Т	0
13410	TRES	Tree Swallow	Ū	Ū	В	Т	0	Ū	0
13440	VGSW	Violet-green Swallow	Т	0	Ō		-	-	-
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Appendix VI. Continued.

NUMB	SPEC	SPECIES NAME	SYRI	DEAD	AUCR	DCRK	SWCR	ISLA	COLC
13510	BANS	Bank Swallow	Т						
13540	BARS	Barn Swallow	Т						
13580	MOCH	Mountain Chickadee	В	В	В	В	В	В	В
13680	BUSH	Bushtit					Т		
13690	RBNU	Red-breasted Nuthatch	U	В	В	В	U	В	В
13700	WBNU	White-breasted Nuthatch	Т	0	U	Т	0	0	0
13710	PYNU	Pygmy Nuthatch			U		0	Т	Т
13730	BRCR	Brown Creeper	U	В	В	В	U	В	В
13840	ROWR	Rock Wren					Т		
14070	HOWR	House Wren	Α	А	А		А	А	Α
14110	WIWR	Winter Wren		Т					
14210	AMDI	American Dipper	Т	Т				0	
14240	GCKI	Golden-crowned Kinglet	0	0	U	0	0	0	0
14250	RCKI	Ruby-crowned Kinglet	U	0	0	Т	Т	Т	Т
14580	MOBL	Mountain Bluebird			U		Т	0	Т
14590	TOSO	Townsend's Solitaire	0	0	0	Т	U	0	0
14810	SWTH	Swainson's Thrush		Т	Т			Т	
14820	HETH	Hermit Thrush	U	0	U	Т	Т	U	U
14835	UNTH	Unidentified Thrush	?						
15000	AMRO	American Robin	В	В	В	В	В	В	В
15370	EUST	European Starling	Т	0	U		Т	0	
15550	CEDW	Cedar Waxwing	Т		Т			Т	
15660	OCWA	Orange-crowned Warbler	А	А	А	А	А	А	А
15670		Nashville Warbler	А	А	А	А	А	А	А
15750	YWAR	Yellow Warbler	Т	Т	Т			Т	
15800		Audubon's Warbler	В	U	В	В	В	В	U
15810		Black-throated Gray Warbler		Т			Т		
15840		Townsend's Warbler	0	0				0	
15850		Hermit Warbler	Т	Т	Т		Т	Т	Т
16110		Kentucky Warbler		Μ					
16140		MacGillivray's Warbler	В	В	В	В	U	0	0
16150	COYE	Common Yellowthroat	Т	Т	Т		Т		
16290		Wilson's Warbler	0	U	0	Т	0	Т	0
16495		Unidentified Warbler		?	?				
16840	WETA	Western Tanager	0	U	U	В	0	0	Т
17790	GTTO	Green-tailed Towhee	Т	Т	Т		0	Т	Т
17810	SPTO	Spotted Towhee		Т					
18020	CHSP	Chipping Sparrow	0	0	0	В	0	0	0
18040	BRSP	Brewer's Sparrow	0	0	0		Т	Т	Т
18080	VESP	Vesper Sparrow		Т	Т			0	Т

Appendix VI. Continued.

NUMB	SPEC	SPECIES NAME	SYRI	DEAD	AUCR	DCRK	SWCR	ISLA	COLC
18130	SAVS	Savannah Sparrow			Т				0
18220	FOSP	Fox Sparrow	Т	Т	Т		Т		
18230	SOSP	Song Sparrow	0	0	Т	В		0	Т
18240	LISP	Lincoln's Sparrow	В	В	0	В	Т	0	В
18290	MWCS	Mountain White-crowned Sparrow	В	В	U	0	Т	0	U
18320	ORJU	Oregon Junco	В	В	В	В	В	В	В
18610	BHGR	Black-headed Grosbeak	Т	0	Т			0	
18660	LAZB	Lazuli Bunting	0	0	0	Т		Т	Ο
18730	RWBL	Red-winged Blackbird	0	0	0			Т	
18810	WEME	Western Meadowlark			Т				
18860	BRBL	Brewer's Blackbird	0	Т	Т	0		U	Т
18960	BHCO	Brown-headed Cowbird	U	0	U	В	0	U	U
19350	PUFI	Purple Finch	0	0	0	Т			
19360	CAFI	Cassin's Finch	U	U	U	0	Т	0	0
19370	HOFI	House Finch		Т	Т				
19380	RECR	Red Crossbill	0	0	0	Т	0	Т	0
19430	PISI	Pine Siskin	U	U	0	0	0	0	U
19490	LEGO	Lesser Goldfinch	Т		Т				
19510	AMGO	American Goldfinch	Т						
19580	EVGR	Evening Grosbeak	Т	0	0	В	Т	Т	Т
20085	UNBI	Unidentified Bird	?						?