



WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES



Washington
Department of
**FISH and
WILDLIFE**

2020 Annual Report to the Forest Practices Board

The Status of a Voluntary Protection Approach for the Western Gray Squirrel August 11, 2021

SPECIES BACKGROUND

The Washington Fish and Wildlife Commission listed the western gray squirrel (WGS) as state threatened effective November 14, 1993.

In Washington State, the species occurs in three primary areas: oak and conifer forests of Klickitat and southern Yakima counties; low to mid-elevation dry conifer forests in Okanogan and Chelan counties; and oak and conifer forests on Joint Base Lewis-McChord in Pierce and Thurston counties.

The WGS inhabits transitional forests of mature Oregon white oak, Ponderosa pine, Douglas-fir, and various riparian tree species (Linders and Stinson 2007). Habitat quality in Washington is assumed to be relatively poor compared to other parts of the species' range due to lower numbers of oak species and degradation of pine and oak habitats. Cumulative effects of land conversion, logging, sheep grazing, and fire suppression largely eliminated open-grown stands of mature and old growth pine and have degraded oak woodlands (Linders and Stinson 2007). The most recent population estimate for Washington was based on data gathered over sixteen years ago (1994 to 2005 by Linders and Stinson, 2007). At that time, the population was estimated to be between 468 and 1,405 squirrels. Population size can fluctuate dramatically due to disease and changes in food supply and is extremely difficult to assess range wide. WDFW is currently analyzing the results of occupancy surveys conducted from 2018 through 2020 to assess WGS distribution within available habitat in core areas. The proportion of occupied habitat will be used as a surrogate for estimating population size. WDFW is also analyzing the results of a comprehensive assessment of habitat change in the North and South Cascades using updated Geographic Information System (GIS) information and High-Resolution Change Detection (HRCD) techniques.

HISTORY OF FOREST PRACTICES BOARD ACTIONS

In 2013, staff from the Department of Natural Resources (DNR) and Washington Department of Fish and Wildlife (WDFW) collaborated on administrative and operational improvements to facilitate voluntary WGS conservation measures as part of approved Forest Practice Applications/Notifications (FPA/N). DNR staff incorporated these improvements into FPA/N processing which has since been applied to all FPA/Ns potentially having WGS present within the proposal area or possessing suitable WGS habitat. Key components of this guidance include:

- DNR notes the presence of WGS or their habitat on the DNR *Office Checklist Page #2*, which becomes part of the FPA/N.
- DNR provides WDFW a courtesy email that an FPA/N has triggered a “hit” for potential WGS presence within the vicinity of the FPA/N. This provides notification on all new FPA/Ns sent out for review to DNR forest practices foresters, WDFW biologists, and interested stakeholders that WGS or their habitat may be present within the proposed forest practices activity area.
- DNR includes a “note” on the FPA/N *Notice of Decision* page acknowledging the presence of WGS or their habitat within the harvest vicinity and refers applicants to WDFW staff for assistance. Though this note is not a condition of the application, it is expected to inform the proponent of the potential occurrence of WGS and/or their habitat and to provide WDFW contact information. This note further improves communication and increases the likelihood of voluntary WGS protection during forest practices.

On November 12, 2013, the Board directed DNR and WDFW to report annually on the number of FPAs that might involve WGS conservation needs and the effectiveness of the voluntary protection approach. For the May 2020 Board meeting, DNR and WDFW staff provided the 2019 WGS Annual Report. This report for 2020 marks the seventh annual report to the Board.

2020 FOREST PRACTICES APPLICATIONS/NOTIFICATIONS (FPA/Ns)

WDFW and DNR continue screening FPA/Ns for potential WGS impacts using WDFW’s GIS data for documented WGS presence, nests, and/or potentially suitable habitat. DNR notifies WDFW via email for all FPA/Ns with documented WGS presence, WGS nests, or suitable habitat, as well as FPA/Ns that are within ¼-mile of these locations. Then, WDFW further evaluates the FPA/Ns for potential WGS conflicts, working with the landowner/land manager to conduct WGS nest surveys (as needed), discuss forest management goals, and develop voluntary measures to help protect WGS. Typically, forest management strategies incorporate conservation measures identified in WDFW’s *Priority Habitats and Species Management Recommendations for Western Gray Squirrel* (August 2010) (PHS).

WDFW tracks WGS-associated FPA/N information using its WGS Survey Application (*Survey123*, supported by ArcGIS Online resources). Information collected includes FPA/N number, proponent name, forest practice location (county), whether the applicant is a large or small landowner, results of a WGS nest survey (presence/absence), WGS conservation measures, and any additional pertinent information.

The following provides a summary of FPA/Ns that triggered a WGS “hit” from January 1, 2020 through December 31, 2020:

- A total of 102 FPA/Ns were identified as potentially being associated with WGS.
- Of these 102 WGS-related FPA/Ns, 88 FPA/Ns were in Klickitat County, 7 were in Skamania County, four were in Okanogan County, two were in Thurston County, one was in Pierce County.

- Of the total FPA/Ns, 79 were associated with large/industrial landowners, and 23 were associated with small forest landowners.

WESTERN GRAY SQUIRREL CONSERVATION

During 2020, WDFW continued its WGS conservation efforts with landowners/land managers, conducting WGS nest surveys and coordinating with proponents to implement voluntary WGS conservation measures. Industrial timber management companies implement WGS conservation on their lands by following guidance in WDFW's PHS recommendations for WGS. They typically incorporate nest surveys and habitat retention strategies into harvest planning and layout. Due to the large volume of FPA/Ns large landowners may file each year, WGS nest surveys are not conducted by WDFW staff for every industrial landowner FPA/N. Rather, WDFW relies on each company to voluntarily conduct surveys and incorporate management strategies into harvest plans.

WDFW staff frequently work with small forest landowners, conducting WGS nest surveys and developing conservation strategies with them when WGS presence is confirmed on their land. The goal is to develop voluntary management strategies that meet landowner needs while also protecting WGS and their habitat, which can be challenging depending on the type of harvest (thinning versus a clear-cut), the intended post-harvest forest conditions, and/or the economic interests of the landowner.

The following is a summary of WGS-related forest management activity for January 1 through December 31, 2020.

Of the total 102 WGS-related FPA/Ns:

- All 102 FPA/Ns involved the need for further review, including such tasks as:
 - Additional GIS analysis
 - Confirmation of WGS presence or absence (e.g., conducting a WGS nest survey)
 - Confirmation that appropriate WGS protection and/or habitat conservation strategies would be implemented during forest practice activities
- All FPA/Ns in need of WGS management considerations incorporated adequate conservation measures.

Due to ongoing limited staff resources, WDFW has not been able to conduct post-harvest FPA/N compliance or effectiveness monitoring regarding implementation of the voluntary WGS management strategies that incorporate current *Priority Habitats and Species* (PHS) recommendations. Ultimately, knowing more about how the PHS management recommendations may be influencing continued WGS occupancy of sites after harvests are completed would allow WDFW to enhance its adaptive management approach for WGS conservation.

2020 WDFW SURVEYS AND CONSERVATION EFFORTS

In 2020, WDFW continued work on a state-wide survey for WGS with the goal of estimating the occupancy rate of suitable habitat within each of the three known extant populations. WDFW surveyed 27 sites in 2020, bringing the total number of sites surveyed to 138 from 2018 through 2020. Occupancy rates for the three-year timeframe ranged from 27 to 44% across the three core

population areas. Current plans are to finalize analysis and results of the occupancy surveys in fall of 2021.

WDFW also continued work on a project intended to assess the change in extent of WGS habitat from 1993 (state threatened listing year) to 2017 (the latest year suitable orthoimagery data were available). The assessment focuses on lands comprising the North and South Cascades populations and evaluation of areas where forestlands have changed as the result of wildfire, timber management, reforestation, or other factors. Preliminary work accomplished in 2017 included: defining discrete focus areas for the assessment, compilation and assessment of all existing land cover layers, and development of an approach to use orthophotographs to aid in detecting habitat change. Analysis of habitat change began in 2018 and was completed in early 2020. The results of this endeavor will also be analyzed and completed in fall of 2021.

Additionally, WDFW continued work with Joint Base Lewis-McChord (JBLM) to conserve WGS habitat on the base. WDFW Science staff consulted with JBLM forestry and wildlife staff when timber harvests were planned in areas occupied by WGS, helping them accommodate for WGS habitat in their prescriptions. WDFW Science staff also worked with JBLM wildlife staff to survey for WGS on parts of the Base where squirrels were reintroduced (2009-2012) as part the species recovery effort.

PROTECTION BY COUNTIES

Washington's *Growth Management Act* (chapter 36.70A RCW) requires that local jurisdictions protect critical areas, including fish and wildlife habitat conservation areas. Regulations (WAC 365-190-130(4)(a)) specify that counties should identify and classify habitat for federal and state listed and sensitive species and should utilize WDFW's *Priority Habitats and Species* (PHS) database when doing so. The PHS database contains GIS location data for WGS and is routinely requested by counties to support land use planning. This is the same data that WDFW and DNR staff use to screen FPA/Ns, as well as other proposals going through the State Environmental Policy Act (SEPA) process, for potential project impacts to WGS.

SUMMARY

Throughout 2020, all proposed forest practice activities identified as potentially affecting WGS were screened by WDFW and DNR. WDFW, DNR, landowners (or their consultants), and/or Yakima tribal staff conducted WGS nest surveys as needed and worked with proponents to conserve WGS when present within a harvest area. FPA/N-associated WGS nest surveys, combined with screening of FPA/Ns, allows WDFW and DNR to continue evaluating the effectiveness of the voluntary protection approach in achieving WGS conservation. Updated information on compliance and effectiveness monitoring of the current voluntary protection approach is a recognized need and would be useful for refining forest practices protection strategies for WGS in Washington.

As a state threatened species, WGS remain a high priority for conservation by WDFW. Given the species' relatively small population size overall, and limited information on the extent and distribution of the three core populations, WDFW continues conducting surveys to confirm current WGS distribution, occupancy of available suitable habitat, and further assess the species' status and habitat conditions. These collective efforts will inform the next WDFW Periodic Status Review (PSR) for WGS, scheduled for completion in early 2022.