

DRAFT Periodic Status Review for the Gray Wolf Briefing and Discussion June 22, 2023

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WDFW released the first-ever draft status review for wolves in Washington. The wolf's state status has not been reviewed since their original listing in 1980.

Engagement with Commission

Activity	Period
CR-101 filed	October 1, 2018
Wolf Committee discussed PSR process and development in depth (>10 meetings)	2019 – 2020
WDFW meets with panel of external experts to discuss modeling approach	August 22, 2019
Dr. Lisanne Petracca from UW leads development of wolf population model, the first of its kind ever developed using data from Washington's wolves	2020 – 2022
Commission receives three UW model progress updates with opportunity for discussion, questions, and direction	2020 – 2021
Draft wolf model scenarios for simulations in UW wolf model presented to Wolf Committee; discussion with UW team of metrics used to inform wolf recovery	2021 – 2022
UW scientists presented results of the population model and potential conservation and management scenarios to Commission	February 19, 2022
WDFW shared the final report from the University of Washington with Commissioners along with a release date for the PSR and proposed timeline	March 28, 2023
WDFW shared the final report from the University of Washington in the March 2023 monthly wolf update	April 10, 2023
Public release of Draft PSR and start of 90-day public comment period	May 18, 2023

1980



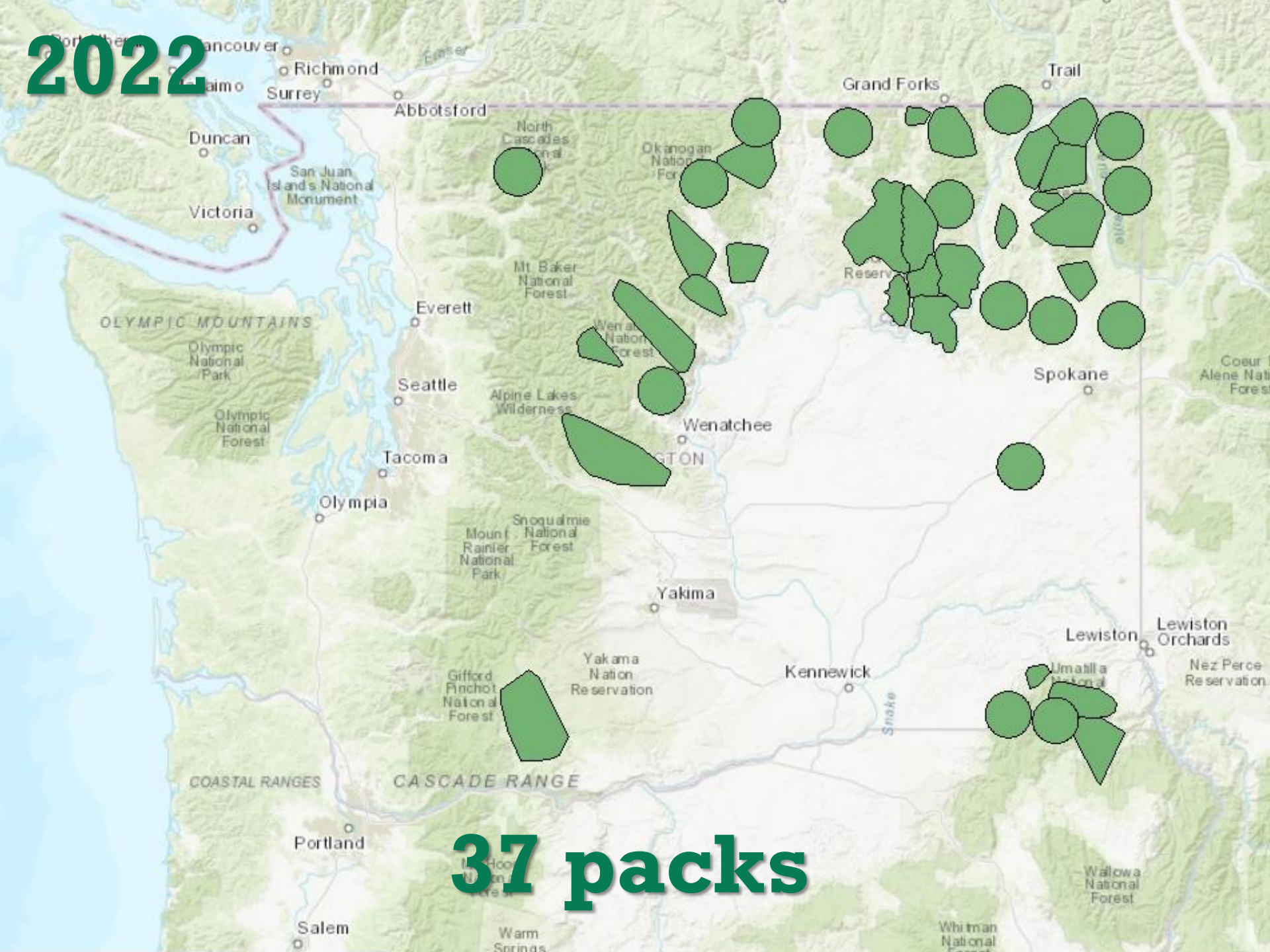
No known wolf packs

2011



5 packs

2022



37 packs

Eastern WA: 3 packs → 27, 2 SBP → 20

Fed. listed area:
2 packs → 10
1 SBP → 6

- 2022 Breeding Pairs
- 2022 Nonbreeding Packs
- Single Wolf Territories
- Tribal Lands
- National Parks and Recreation Areas
- Wolf Recovery Regions



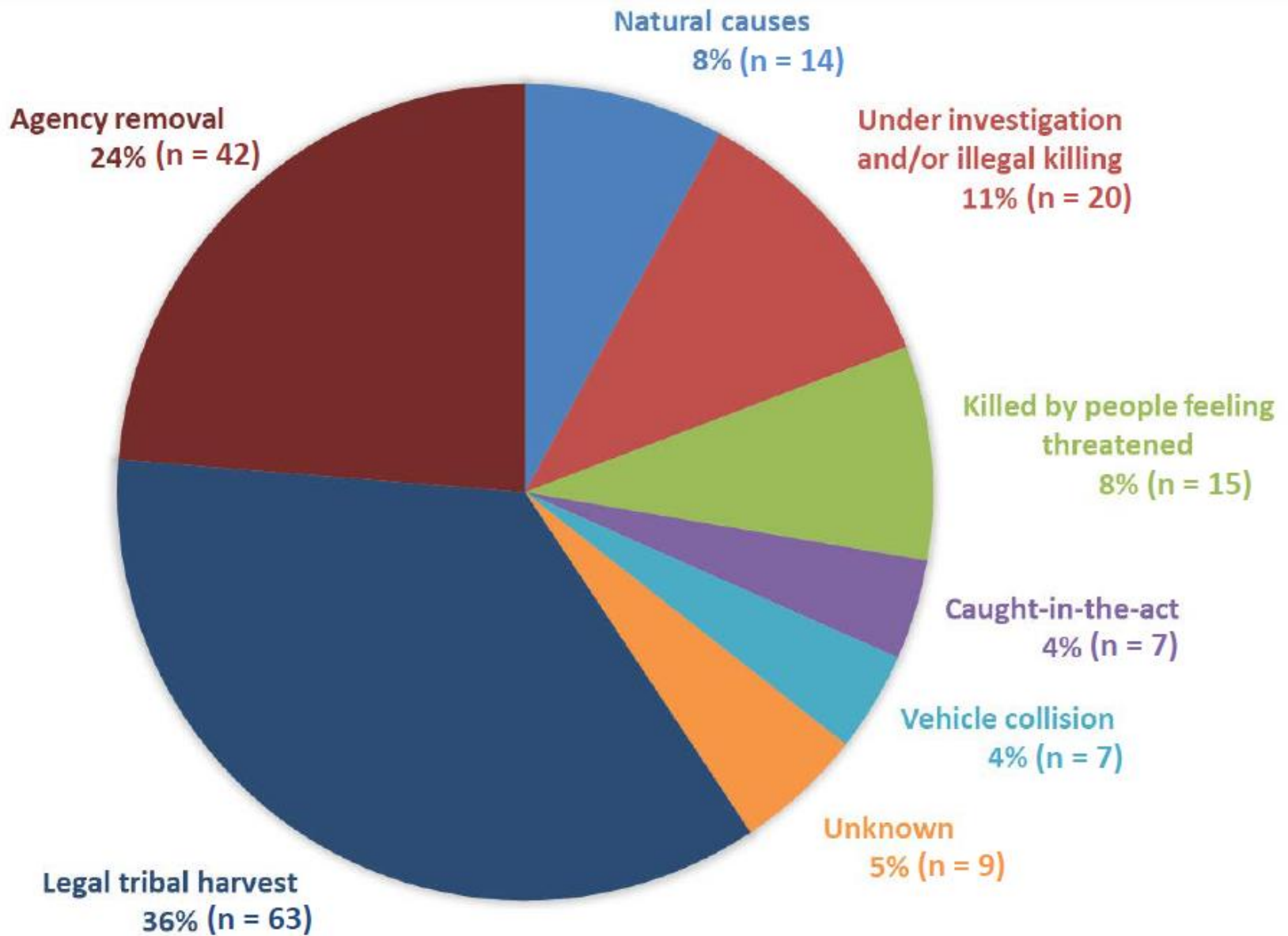



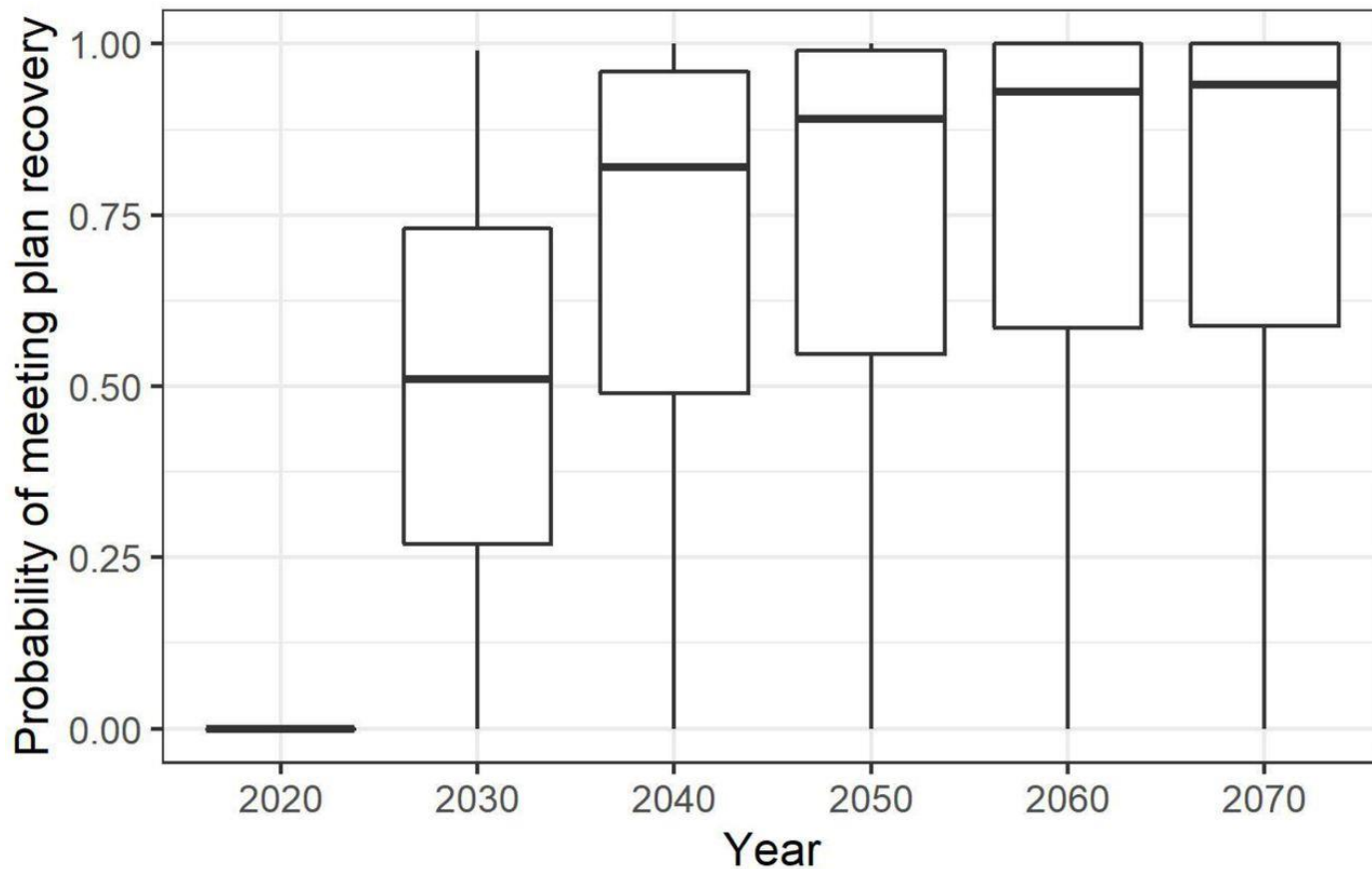
Figure 7. Causes of documented wolf mortality in Washington, 2008-2022. The extent of undocumented mortality is not known or represented.



“The expectation is that over time, as wolves recolonize Washington, WDFW will be able to collect data from within the state to determine whether the model assumptions are appropriate. If future data reveal that the population dynamics of wolves in Washington are significantly different from those used in the model, these conclusions will need to be reevaluated. Incorporating wolf demographic data specific to Washington will allow WDFW to update predictions of population persistence during wolf recovery phases and to revise the recovery objectives, if needed” (Wolf Plan, pg. 67-68).

- Petracca et al. developed a model to estimate current and project future population dynamics of wolves in Washington
- This model is the first effort of its kind developed using data from Washington's wolf population rather than data from wolves in other states, as was done for the 2011 Wolf Plan
- They used data from 74 collared wolves and yearly pup and pack counts to parameterize the model
- Projected statewide dynamics over 50 years





- Median probability of recovery (4 breeding pairs in each recovery region, with 3 additional breeding pairs anywhere in the state) across all years (2021-2070) was 0.72
- Probability of recovery increased over time, from 0% in 2020 to 94% in 2070
- Model projections show mean pop. growth of 1.29 during initial recolonization from 2009-2020 decreasing to 1.03 in the projection period (2021-2070)



Table 3. Objectives for downlisting and delisting wolves in Washington by **number**, **duration of occupancy**, and **geographic distribution** of successful breeding pairs (Wiles et al. 2011). As of 2022, all plan recovery objectives have been met with the exception of a minimum of four breeding pairs in the Southern Cascades and Northwest Coast recovery region.

Successful breeding pair number and duration objectives	2011 WOLF PLAN DOWNLISTING AND DELISTING OBJECTIVES								
	Eastern Washington		Northern Cascades		Southern Cascades and Northwest Coast		Anywhere in state		Duration of occupancy
	<i>Objective</i>	<i>As of 2022</i>	<i>Objective</i>	<i>As of 2022</i>	<i>Objective</i>	<i>As of 2022</i>	<i>Objective</i>	<i>As of 2022</i>	
Threatened (6 pairs/ 3 years)	2	20	2	6	2	0	N/A	N/A	Objective met
Sensitive (12 pairs/ 3 years)	4		4		4		N/A	N/A	Objective met
Delist (15 pairs/ 3 years)	4		4		4		3	Objective met	Objective met
Delist (18 pairs)	4		4		4		6	Objective met	Objective met

Wolf Plan objectives

- “Recovery is...likely to happen more quickly through the reoccupation of eastern Washington than waiting for wolves to reach far western Washington” (Wolf Plan, pg. 60)
- Did not predict exceeding the recovery objective in eastern Washington by 5x prior to meeting geographic distribution objectives
- Wolf Plan’s recovery objectives were established to address the status of the wolf population across a “significant portion of their range”
- “That portion of a species' range likely to be essential to the long term survival of the population in Washington” (WAC 220-610-110)
- Wolf Plan down/delisting criteria set to describe the population’s status based on occupancy by successful breeding pairs (SBP) across three recovery areas (SBP needed per recovery region identified to describe the status of wolves given a statewide distribution)
- Area in Washington currently occupied by wolves has greatly exceeded those minimum SBP numbers

Wolf Plan objectives

- Model projections indicate Washington's wolf population currently occupies an area essential to their long-term survival
- Not in danger of extinction or becoming endangered with their current distribution and population trend
- Although current wolf distribution in Washington is not what was predicted in the Wolf Plan, the numbers of wolves and SBP in the areas they do occupy represent a significant portion of the range to the extent that they are no longer seriously threatened with extinction or likely to be threatened with extinction in the foreseeable future in Washington

Wolf Plan predictions

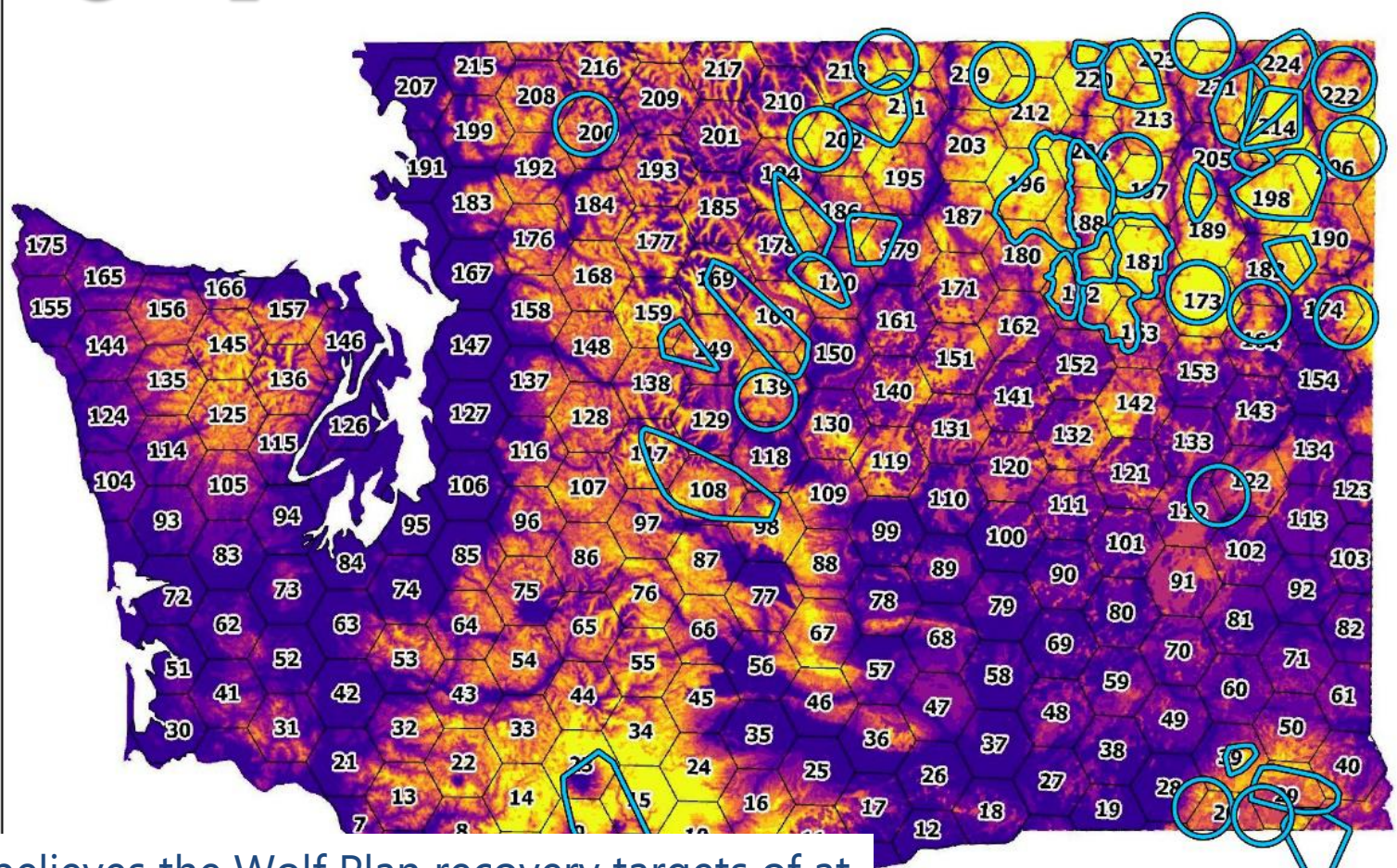
Table 4. Range of numbers of packs, lone wolves, and total number of wolves that might correspond to numbers of successful breeding pairs at different recovery stages in Washington.

	Endangered to threatened	Threatened to sensitive	Sensitive to delisted	
No. of successful breeding pairs	6	12	15	26
Estimated equivalent no. of packs	7-17	14-33	17-42	
Estimated no. of wolves in all packs combined	36-124	71-241	87-307	
Estimated no. of lone wolves	4-22	8-43	10-54	
Total estimated no. of wolves present	40-146	79-284	97-361	
Total estimated no. of wolves present, using 14 wolves per successful breeding pair ^e	84	168	210	

Wolf Plan, pg. 65




Geographic distribution



WDFW believes the Wolf Plan recovery targets of at least four SBP in each recovery region for **delisting** are still appropriate, attainable through natural recolonization, and ensure adequate distribution of reproducing wolves throughout the state

Figure reproduced from Petracca et al. 2023a

A photograph of a snowy forest path. The path is covered in a thick layer of snow, and numerous wolf tracks are visible, leading from the foreground into the distance. The trees are mostly bare, suggesting a winter or late autumn setting. The sky is overcast.

Factors affecting continued existence

- **Immigration** - Unknown how efforts to reduce wolf populations in neighboring states may affect immigration and dispersal of wolves from other states
- Petracca et al. (2023b) modeled scenarios including reducing immigration of wolves into Washington by 50% and 100%
- Under the 50% immigration scenario, 69% probability that the population would still meet recovery criteria projected over the next 50 years
- Under the scenario of no immigration, the probability was 27%
- Total cessation of all wolf immigration is highly unlikely given the connectivity of Washington's wolves to a much larger population in Canada and the NRM
- Both scenarios showed a geometric mean of population growth ≥ 1 , indicating long-term population stability or growth
- **Wolf poaching/illegal killing** - A significant increase in poaching adding to overall wolf mortality in the state could be unsustainable in the future depending on the extent

Definitions in WAC 220-610-110

- "Endangered" means any wildlife species native to the state of Washington that is **seriously threatened with extinction** throughout all or a significant portion of its range within the state.
- "Threatened" means any wildlife species native to the state of Washington that is **likely to become an endangered species within the foreseeable future** throughout a significant portion of its range within the state without cooperative management or removal of threats.
- "Sensitive" means any wildlife species native to the state of Washington that is **vulnerable or declining and is likely to become endangered or threatened** in a significant portion of its range within the state without cooperative management or removal of threats.



If wolves were downlisted, what would stay the same?

- Wolves remain protected
- Wolves managed for recovery
- WDFW goal of minimizing both livestock losses and wolf removals and commitment to proactive non-lethal conflict mitigation strategies
- Process of considering/authorizing lethal removal to mitigate livestock depredation
- Law enforcement investigations/investment in illegally killed wolves
- No hunting (excluding tribal)
- Wolf Plan goals for delisting



Conservation/management action (source)	Endangered	Threatened	Sensitive
Criminal enforcement penalty for illegal take (RCW 77.15.120, RCW 77.15.130)	RCW 77.15.120 protects endangered species from hunting, possession, malicious harassment, and killing; penalties for illegally killing a state endangered species range up to \$5,000 and/or one year in jail.	RCW 77.15.130(1)(c) prohibits the hunting, possession or malicious harassment of threatened or sensitive wildlife unless authorized by rule of the commission, a WDFW permit, or a federal permit; the maximum penalty for violations is 90 days in jail and/or a \$1,000 fine.	
WDFW permits for lethal control by livestock owners (including family members and authorized employees) of wolves to resolve repeated wolf-livestock conflicts (2011 Wolf Plan)	Typically not issued, except WDFW may consider issuing a permit to a livestock owner (including family members and authorized employees) to conduct lethal control if WDFW does not have the resources to address control.		May be issued to livestock owners (including family members and authorized employees) with an issued permit on private lands and public grazing allotments they own or lease.
WDFW authorization for livestock owners and grazing allotment holders (and their agents) to use non-lethal injurious harassment (2011 Wolf Plan)	May grant authorization to strike wolves with non-lethal projectiles if WDFW required training is completed. Under the endangered classification, an authorization would be reconsidered if used inappropriately or a mortality occurs.	Allowed with a permit and training from WDFW.	
Title 222 WAC (Forest Practices Board): Critical habitats (state) of threatened and endangered species (WAC 222-16-080)	Harvesting, road construction, or site preparation within 1 mile of a known active den site, documented by the department of fish and wildlife, between the dates of March 15 and July 30 or 0.25 mile from the den site at other times of the year.		Does not apply

The public is invited to comment on the **DRAFT Periodic Status Review for the Gray Wolf** by submitting written comments at **publicinput.com/psr-gray-wolf**

OR

emailing comments to **psr-gray-wolf@PublicInput.com**

OR

by leaving a comment via voicemail message by calling 855-925-2801 and entering project code 2573. WDFW will accept comments until 11:59 p.m. on Aug. 16, 2023.



**For general information on wolves in
Washington:**

wdfw.wa.gov/wolves

**If you are interested in receiving
e-mail notifications of wolf activity
updates, you can sign up here:**

wdfw.wa.gov/about/lists



Questions and discussion



References

- Petracca L.S., B. Gardner, B.T. Maletzke, and S.J. Converse. 2023a. Merging integrated population models and individual-based models to project population dynamics of recolonizing species. bioRxiv doi: 10.1101/2023.03.14.532675.
Available at:
<https://www.biorxiv.org/content/10.1101/2023.03.14.532675v1>
- Petracca L.S., B. Gardner, B.T. Maletzke, and S.J. Converse. 2023b. Forecasting dynamics of a recolonizing wolf population under different management strategies. bioRxiv doi: 10.1101/2023.03.23.534018.
Available at:
<https://www.biorxiv.org/content/10.1101/2023.03.23.534018v1>

