

2023 Annual Wolf Report – Briefing FWC April 20, 2024

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Listing Status

Federally Relisted Feb. 10, 2022

State Listed – Endangered where WDFW has jurisdiction

- Proposed Reclassification to Sensitive in February 2024

Wolf Conservation and Management Plan: 2011

- 3 recovery areas
- Delisting requirements

State and tribal management



Recovery Objectives

Pack: Two or more wolves traveling together in the winter.

Successful Breeding Pair (SBP): An adult male and an adult female with at least two pups surviving to December 31st in a given year.

Delisting Objectives in the Plan

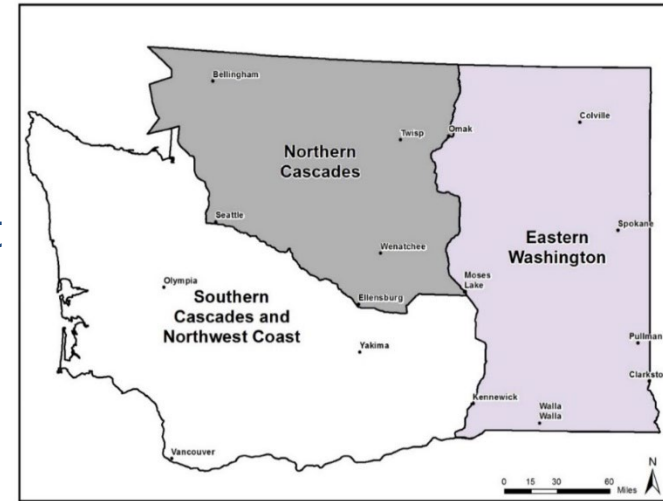
15 SBP's for 3 consecutive years with:

- 4 SBP's in Eastern WA Recovery Area
- 4 SBP's in North Cascades Recovery Area
- 4 SBP's in Southern Cascades and NW Coast
- 3 SBP's anywhere in the state

or

18 SBP's for 1 year with

- 4 SBP's in Eastern WA Recovery Area
- 4 SBP's in North Cascades Recovery Area
- 4 SBP's in Southern Cascades and NW Coast
- 6 SBP's anywhere in the state



Capture and Monitoring - 2023 Calendar Year

- Captured 33 wolves - From 22 different packs
- Monitored 52 wolves from 25 packs in 2023
- Currently monitoring 37 collared wolves (14% of minimum number of known wolves) from 15 packs (36% of known packs) in Washington

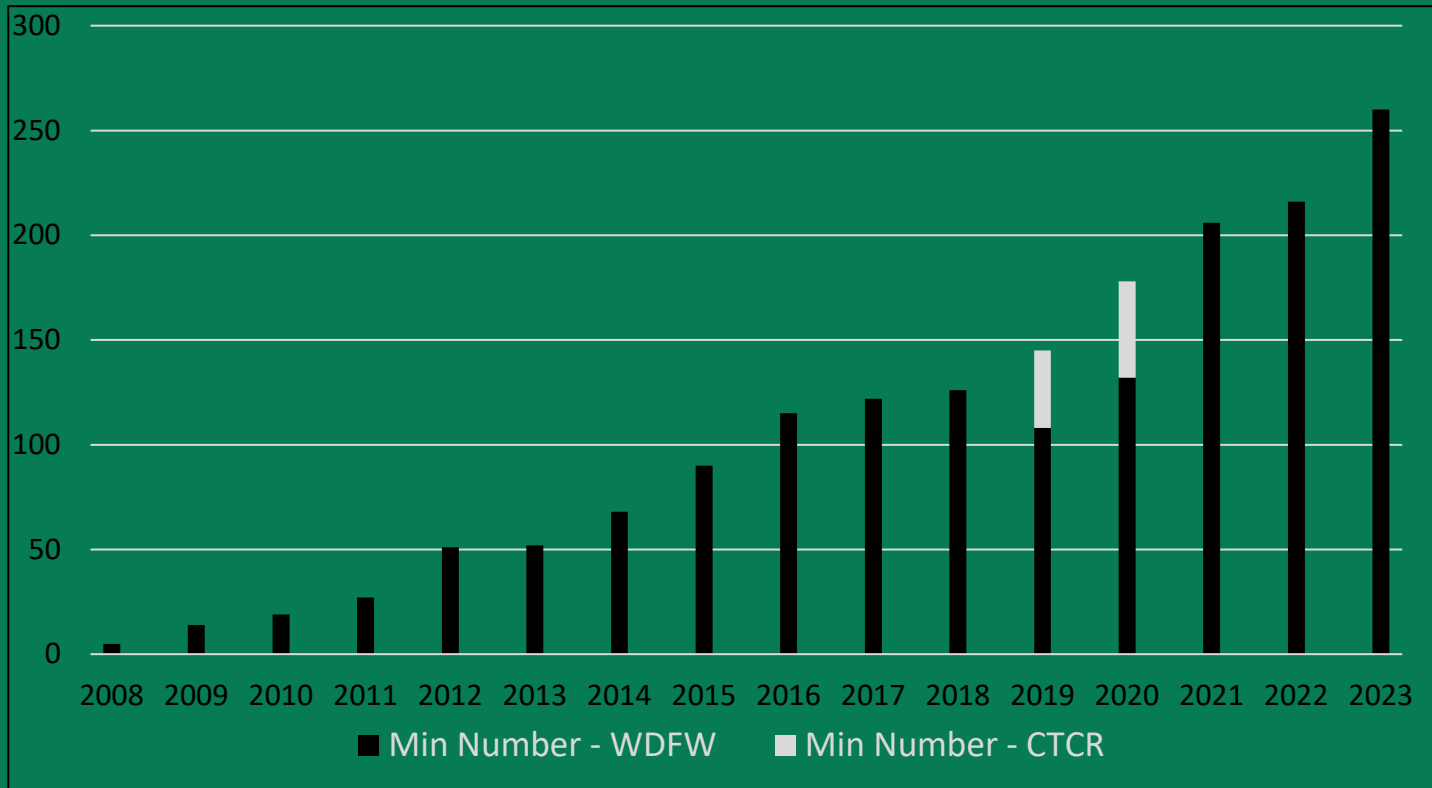


Wolf Population Status

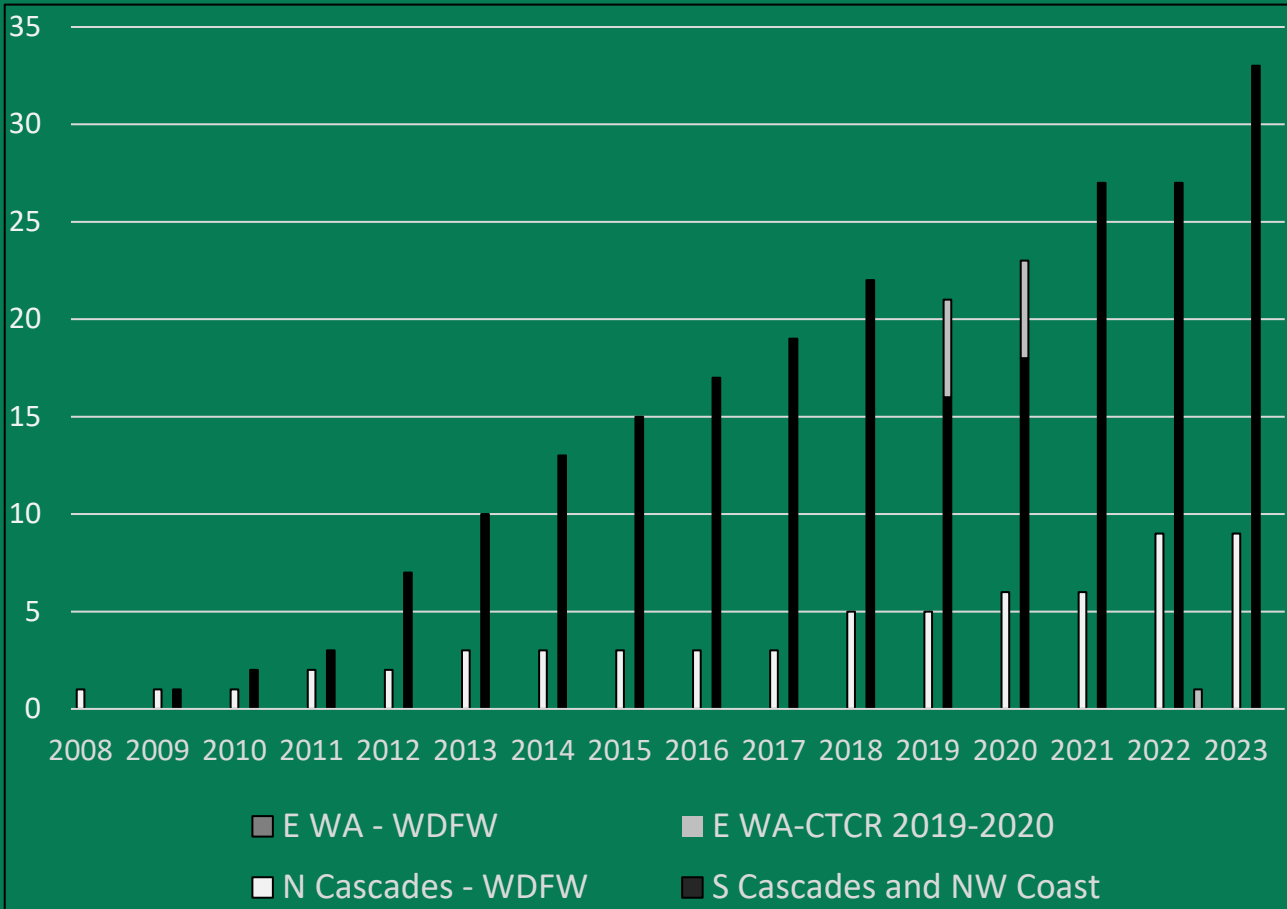
| Recovery Region | Successful Breeding Pairs | Minimum Count | Number of Packs |
|--|---------------------------|---------------|-----------------|
| Eastern – WDFW Co-managed | 20 | 209 | 33 |
| North Cascades | 5 | 50 | 9 |
| Southern Cascades / Northwest Coast | 0 | 1 | 0 |
| Total | 25 | 260 | 42 |



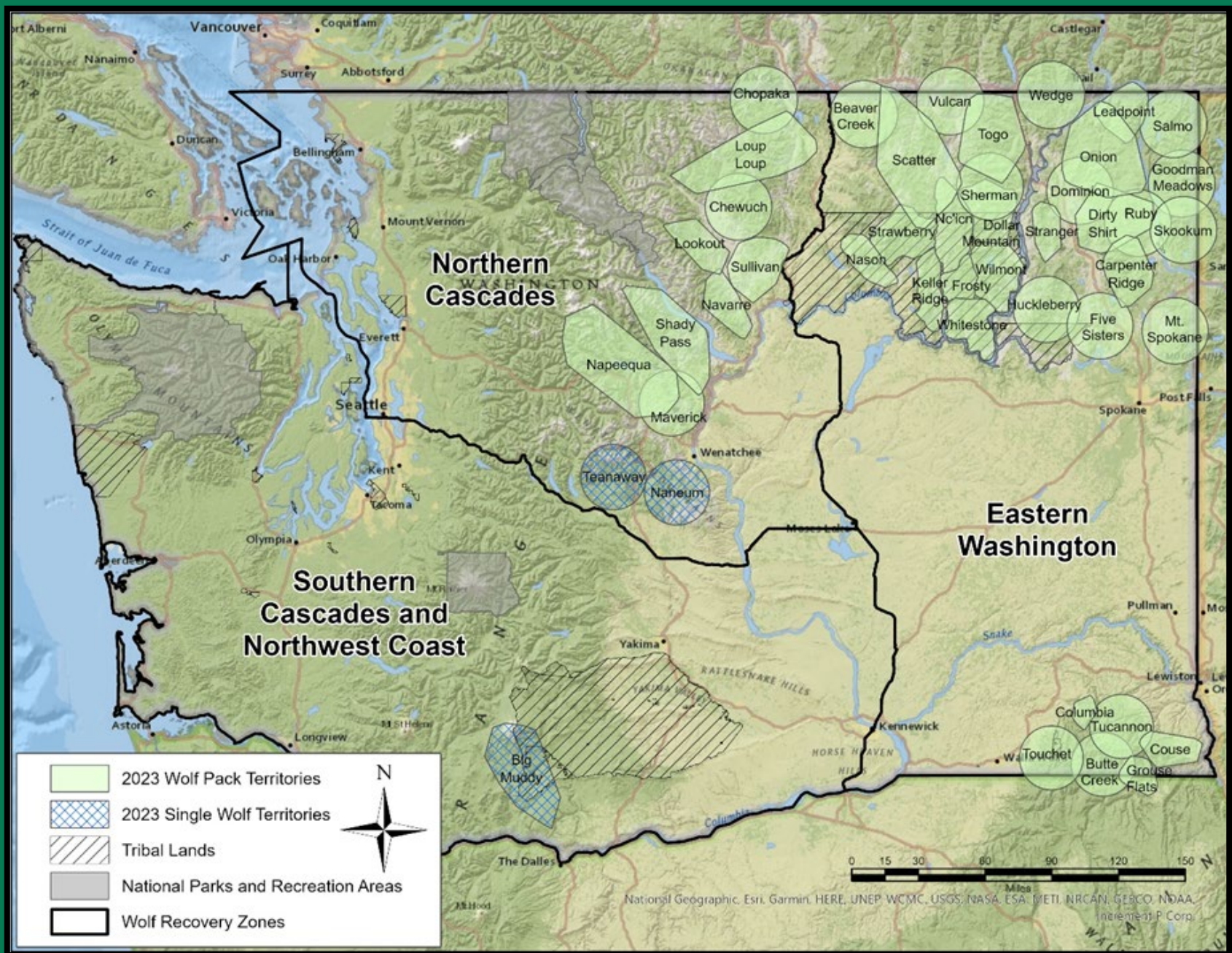
Trend in Minimum Number of Wolves



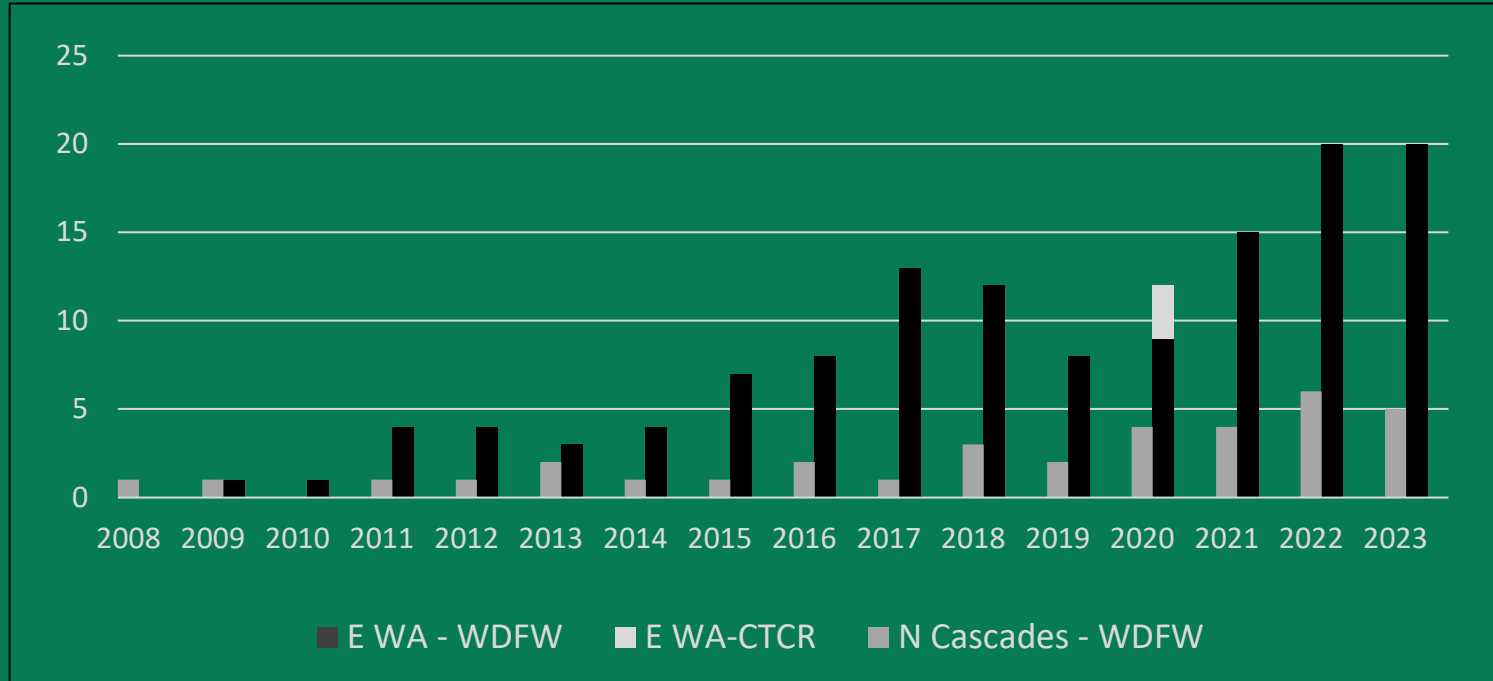
Trend in Minimum Number of Packs



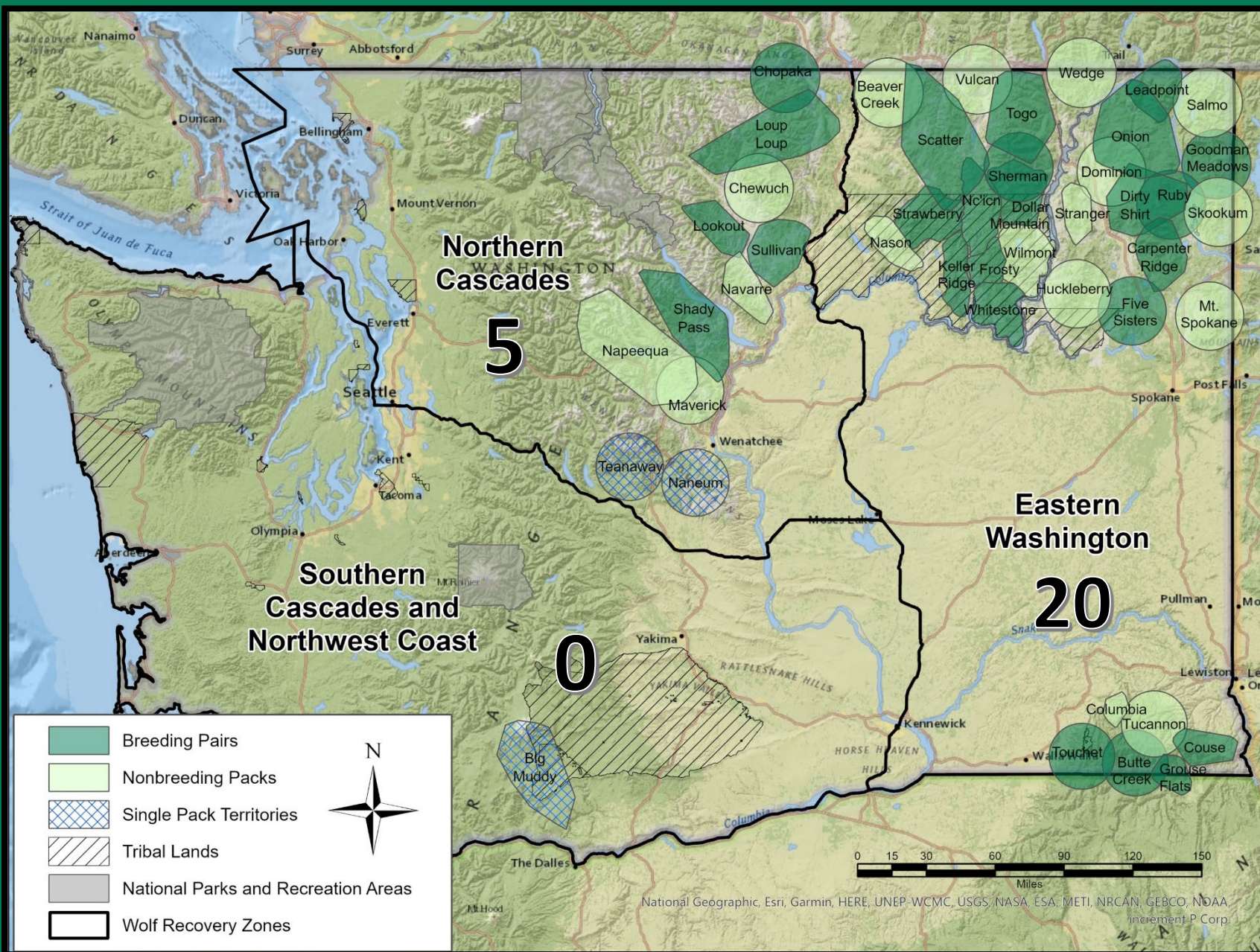
2023 Packs and Single Wolf Territories



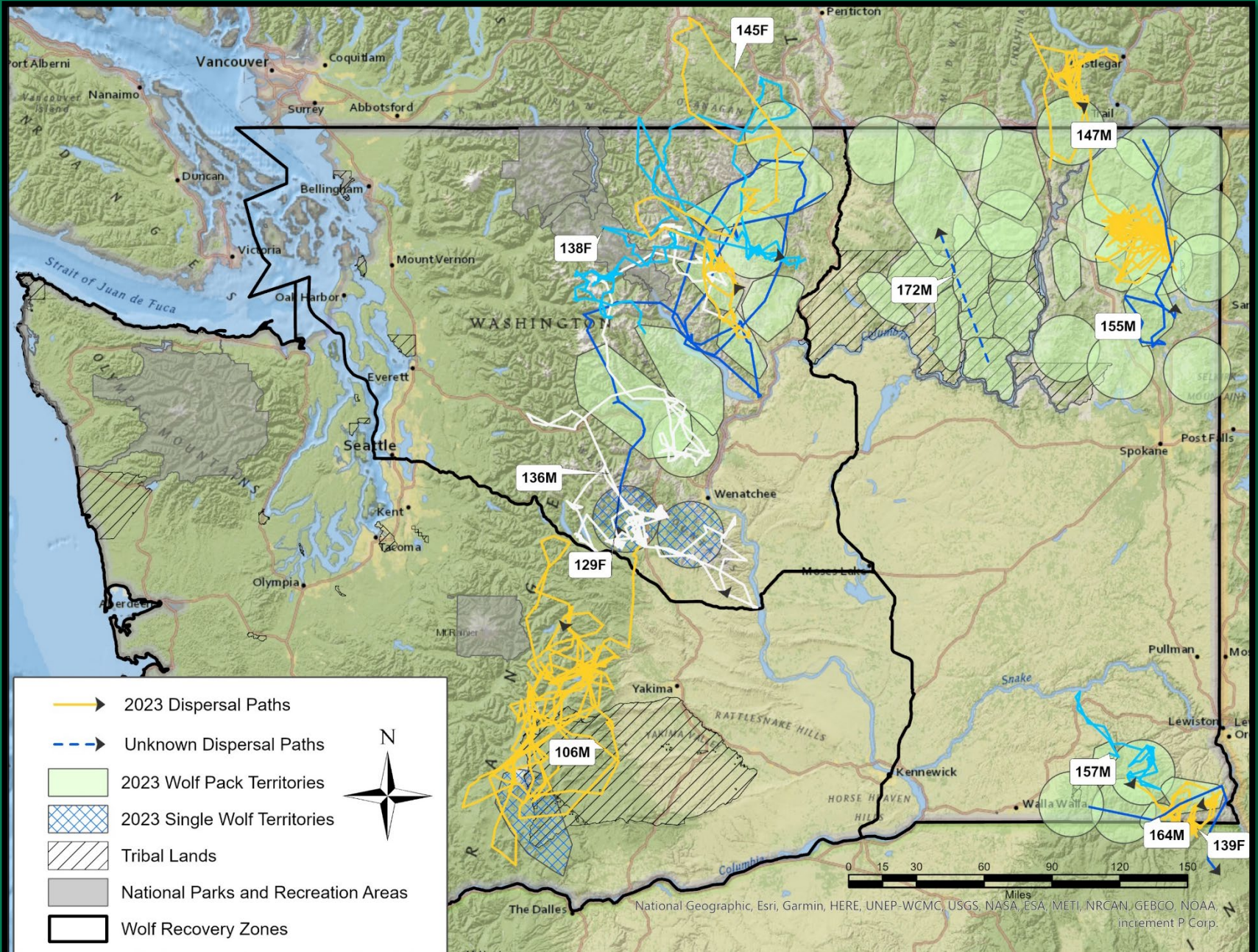
Trend in Minimum Number of Successful Breeding Pairs



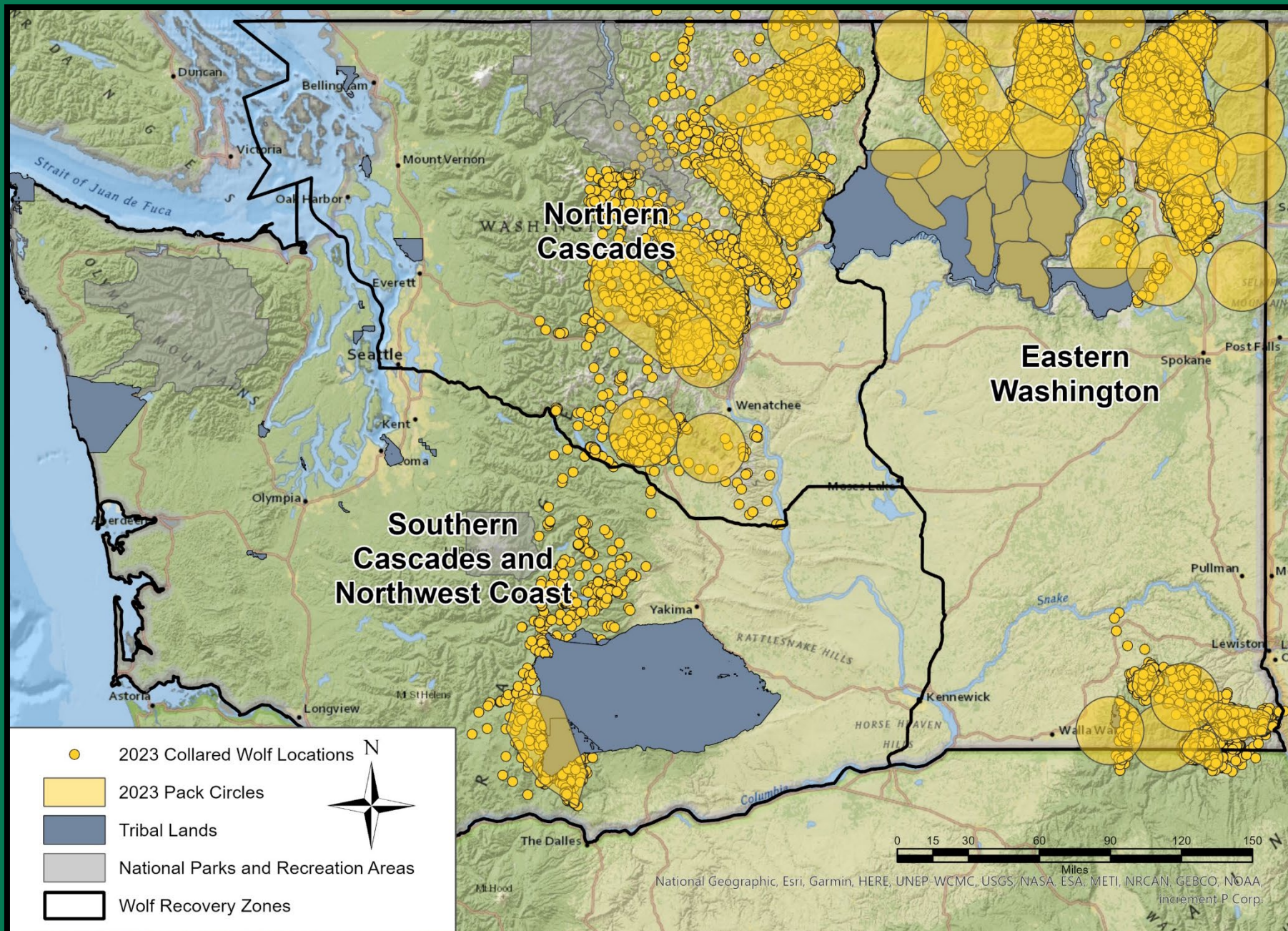
2023 Successful Breeding Pairs



2023 Known Wolf Dispersals



2023 Wolf Location Data



2023 Known Wolf Mortalities

| Cause | Legal Tribal Harvest | Agency Removal | Caught in the Act | Unlawful Take (under investigation) | Vehicle | Natural (killed by cougar) | Unknown | Total |
|--------------------------|----------------------|----------------|-------------------|-------------------------------------|---------|----------------------------|---------|-------|
| # of Mortalities in 2023 | 22 | 2 | 1 | 4 | 5 | 1 | 1 | 36 |



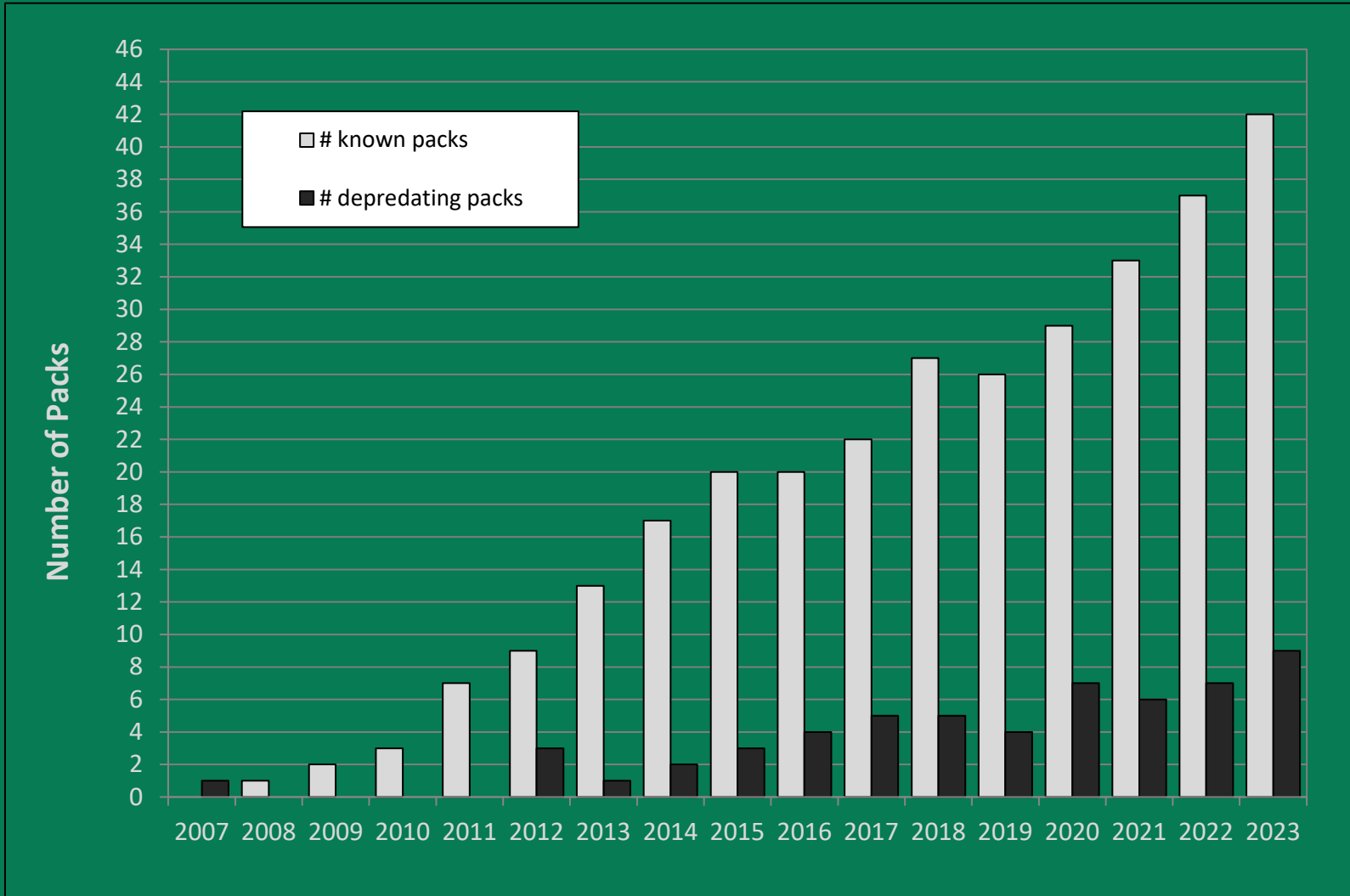
| YEAR | Minimum Count | # of Packs | # of SBP | Annual Growth Rate | Known Wolf Mortality | Depredating Packs (%) |
|-------------|---------------|------------|-----------|--------------------|----------------------|-----------------------|
| 2008 | 5 | 1 | 1 | -- | 0 | 0% |
| 2009 | 14 | 2 | 2 | -- | 0 | 0% |
| 2010 | 19 | 3 | 1 | 36% | 2 (11%) | 0% |
| 2011 | 35 | 7 | 5 | 84% | 0 | 0% |
| 2012 | 51 | 9 | 5 | 46% | 9 (18%) | 33% |
| 2013 | 52 | 13 | 5 | 2% | 5 (10%) | 8% |
| 2014 | 68 | 16 | 5 | 31% | 10 (15%) | 13% |
| 2015 | 90 | 18 | 8 | 32% | 7 (8%) | 22% |
| 2016 | 115 | 20 | 10 | 28% | 14 (12%) | 20% |
| 2017 | 122 | 22 | 14 | 6% | 14 (12%) | 23% |
| 2018 | 126 | 27 | 15 | 3% | 12 (10%) | 19% |
| 2019 | 145* | 26 | 10* | 14% | 21 (15%) | 14% |
| 2020 | 178* | 29 | 16* | 24% | 16 (9%) | 24% |
| 2021 | 206 | 33 | 19 | 16% | 30 (15%) | 18% |
| 2022 | 216 | 37 | 26 | 5% | 37 (17%) | 19% |
| 2023 | 260 | 42 | 25 | 20% | 36 (14%) | 21% |
| Avg | | | | 23% | | 15% 14 |



Wolf – Livestock Interactions



Wolf Packs Associated with Livestock Depredations vs Total Number of Packs in 2023



Reducing Livestock Depredations

DPCAL's: Cooperative agreements with 26 livestock producers – \$62,472.

- Range Riders
- Improved Sanitation Practices
- Daily Livestock Checks
- Fencing

WDFW Contracted Range Riders: 11 range riders - \$159,534.

Dept of Ag Grant (NE WA):

- CPOW – 8 Full-time/2 Part-time - \$220,000
- NEWWCC – 14 Full-time/13 Part-time - \$340,000

Direct Livestock Loss Claims:

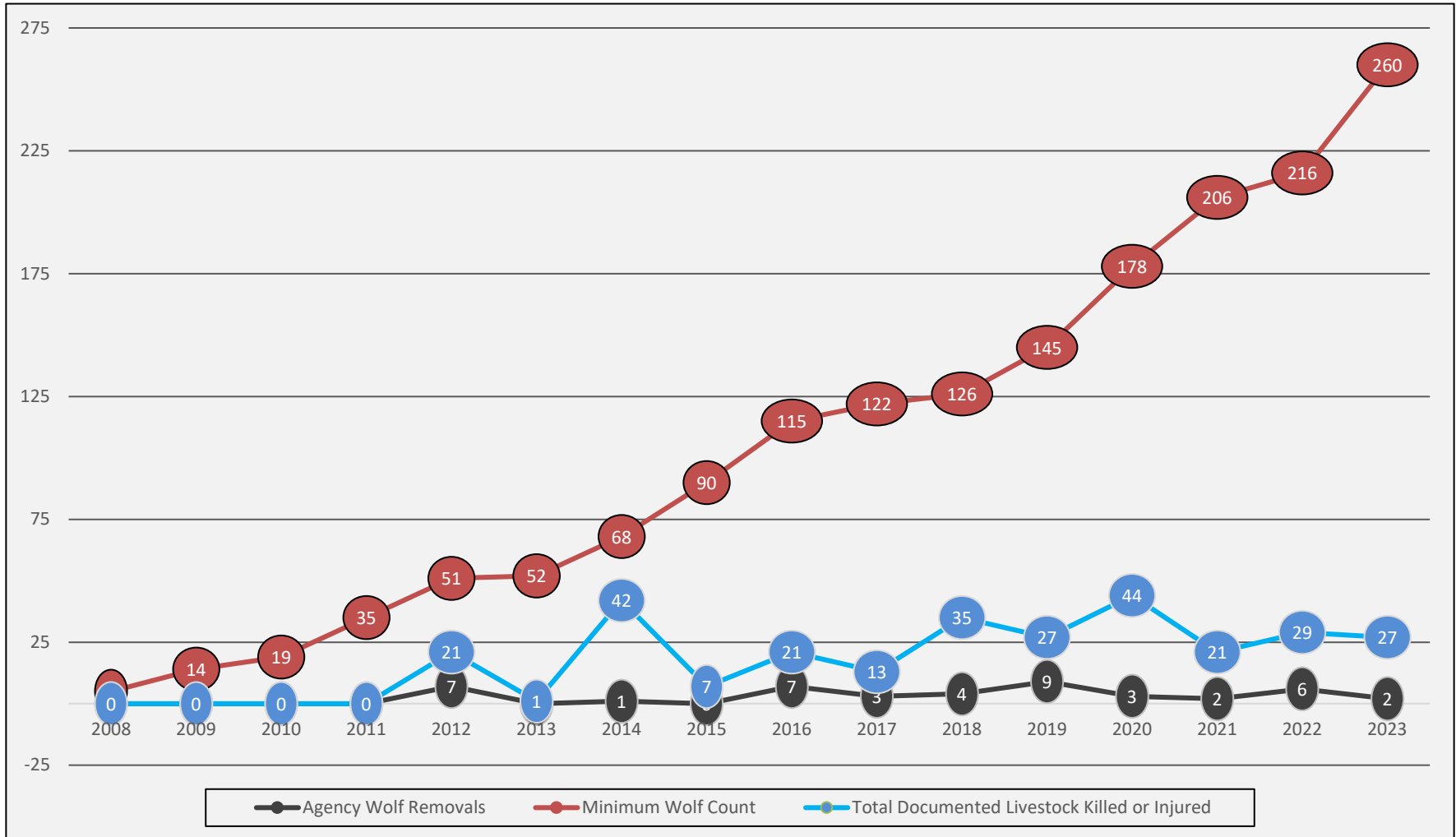
- **2022** – 1 claim paid \$2,107.14
- **2023** – 8 claims – 2 paid - \$10,850, 1 pending appeal, 5 remain under review

Indirect Livestock Loss Claims:

- **2021** – 2 in appeal process, 1 paid \$26,488.41
- **2022** – 1 in appeal process, 1 under review, 1 paid \$7,402.81
- **2023** – 5 still under review, 1 paid \$32,019.75



Depredations, Lethal Removal and Wolf Population, 2008 - 2023



Wolf Management Expenditures

(Jan 1, 2023 – Dec 31, 2023)

| Allocation | Use | Cost |
|--|------------------------------------|--------------------|
| Damage Prevention Cooperative Agreements – Livestock (DPCAL's) | 26 Livestock Producers | \$84,686 |
| Contracted Range Riders | 11 Range Riders | \$164,102 |
| Livestock Losses (Indirect and Direct) | Livestock Producers | \$28,596 |
| Lethal Removal Operations | Reducing Depredations on Livestock | \$31,602 |
| Wolf Management | Management and Research Activities | \$1,302,426 |
| Total | | \$1,611,412 |



Ongoing Research in Washington

R. Nickerson (USU) - Researching the effectiveness of Range Riding to Prevent Depredations on Livestock

B. Nickerson (Swinomish Indian Tribal Community) - Life on the Edge: Large Mammal Populations on a Wolf Recolonization Frontier

S. Wasser (UW) - Monitoring Impacts of Wolf Recovery on Medium to Large Carnivores and Their Prey in Washington State

Lara Volski and Vivan Hawkinson (UW) - A longitudinal Assessment of Social and Ecological Change Following the Establishment of Wolves in Klickitat County

Recent Publications:

Bassing, S.B., M. DeVivo, T.R. Ganz, B.N. Kertson, L.R. Prugh, T. Roussin, L. Satterfield, R. M. Windell, A.J. Wirsing, and B. Gardner. 2022. Are we telling the same story? Comparing inferences made from camera trap and telemetry data for wildlife monitoring. *Ecological Applications*. <https://doi.org/10.1002/eap.2745>

Ganz, Taylor R., Melia T. DeVivo, Brian N. Kertson, Trent Roussin, Lauren Satterfield, Aaron J. Wirsing, and Laura R. Prugh. 2022. Interactive effects of wildfires, season, and predator activity shape mule deer movements. *Journal of Animal Ecology*. <https://doi.org/10.1111/1365-2656.13810>

Ganz, Taylor, Melia T. DeVivo, Ellen M. Reese, Laura R. Prugh. 2022. Wildlife whodunnit: forensic identification of predators to inform wildlife management and conservation. *Wildlife Society Bulletin*. <https://doi.org/10.1002/wsb.1386>

Ganz, Taylor R., Melia T. DeVivo, Aaron J. Wirsing, Sarah B. Bassing, Brian N. Kertson, Savanah L. Walker, and Laura R. Prugh. 2024. "Cougars, wolves, and humans drive a dynamic landscape of fear for elk." *Ecology* e4255. <https://doi.org/10.1002/ecy.4255>

Petracca, L.P., Gardner, B., Maletzke, B.T., and S.J. Converse. 2024. Merging integrated population models and individual-based models to project population dynamics of recolonizing species. *Biological Conservation*. <https://doi.org/10.1016/j.biocon.2023.110340>

Petracca, L.P., Gardner, B., Maletzke, B.T., and S.J. Converse. In review. Forecasting dynamics of a recolonizing wolf population under different management strategies.

Prugh, L.P., C.X. Cunningham, R.M. Windell, B.N. Kertson, T.R. Ganz, S.L. Walker, and A.J. Wirsing. 2023. Fear of large carnivores amplifies human-caused mortality for mesopredators. *Science*. 380, 754-758.

Questions?

