Western States Wolverine Project

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Photo: Mark Packila
Wolverines have a circumpolar distribution that used to extend to Arizona and New Mexico.
Threats to wolverines
Conservation issues identified in Wyoming's SWAP

• Geographic isolation of existing populations may leave them vulnerable to demographic and genetic stochasticity

• Disagreement about current and historic status and distribution

• Population densities and trends are not well known
$15 \text{ km} \times 15 \text{ km}$

$\geq 50\%$ modeled wolverine habitat
Survey locations based upon accessibility, proximity to alpine tree-line, and location of natural movement corridors
Surveyed 18 cells from February through June 2015

- Total days sampled: 1,618
- Total photos taken: 70,036
- Total wolverine pictures: 8,213
- Total wolverine ‘visits’: 53
- Total genetic samples: 65
- Total cells with wolverines: 5
- Total unique wolverines: ≥3

Probability of detection: 0.321 (95% CI: 0.128 to 0.575)
Probability of occupancy: 0.629 (95% CI: 0.362 to 0.837)
Probability of detection over 5-month period: 85.6%
Tosi Creek, Gros Ventre Range
Bonneville Pass, Southern Absarokas
Additional wolverine sightings
Multistate wolverine working group
Why multi-state?
Multi-state monitoring – sample frame

180 cells total
1 station per cell
Multi-state monitoring – survey stations

December 1 – March 31
Multi-state monitoring – survey stations

December 1 – March 31
Multi-state monitoring – survey stations

December 1 – March 31
The Numbers:

Total days sampled: 3,650
Total photos taken: 77,712
Total wolverine pictures: 1,406
Total genetic samples: 60
Total cells with wolverines: 3
Total unique wolverines: ≥2
Total sampling occasions with wolverines: 5 (of 100)
2015-2017 Wolverine survey locations

- ★ 2014-2015 Wolverine detections
- ▲ 2014-2015 No wolverine detections
- ● 2015-2016 Wolverine detections
- <<< 2015-2016 No wolverine detections
- □ 2016-2017 Cells to survey
Bonneville Pass & Five Pockets, Southern Absarokas
Bonneville Pass & Five Pockets, Southern Absarokas
Where do we go from here?
Wolverine monitoring and conservation is a multi-state effort

1. Model connectivity to focus and prioritize habitat conservation

1. Connect
Wolverine monitoring and conservation is a multi-state effort

1. Model connectivity to focus and prioritize habitat conservation
2. Evaluate the potential for translocation of wolverines as a conservation tool

2. Restore
Wolverine monitoring and conservation is a multi-state effort

1. Model connectivity to focus and prioritize habitat conservation
2. Evaluate the potential for translocation of wolverines as a conservation tool
3. Develop a coordinated multi-state monitoring strategy

3. Monitor
Wolverine monitoring and conservation is a multi-state effort

1. Model connectivity to focus and prioritize habitat conservation
2. Evaluate the potential for translocation of wolverines as a conservation tool
3. Develop a coordinated multi-state monitoring strategy
4. Define wolverine baseline distribution

3. Monitor
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Multi-state Wolverine Working Group

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