

Summary of
Threats Workshop,
Actions Workshop,
& Prioritization of
Actions Meeting:
NSO Recovery Plan

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1. Threats Workshop (June 1–2, 2006)

Threat

A condition or influence that is known to, or has the potential to, reduce NSO populations by adversely affecting survival or reproduction of NSOs at the provincial scale or greater

1. Threats Workshop (cont.)

An assumption

- Given that we cannot predict how existing regulatory mechanisms may change in the future, it is common practice in the FWS, when discussing future threats, to assume that existing regulatory mechanisms will continue
- We explicitly made this assumption for the Threats Workshop

1. Threats Workshop (cont.)

7 Panelists

- **Joe Buchanan** (WDFW)
- **Eric Forsman** (USFS Pacific NW Research Station)
- **Rocky Gutiérrez** (University of MN)
- **Richy Harrod** (USFS, Wenatchee-Okanogan NF)
- **Dale Herter** (Raedeke Associates)
- **Larry Irwin** (National Council for Air and Stream Improvement)
- **Marty Raphael** (USFS Pacific NW Research Station)

1. Threats Workshop (cont.)

Tasks

- Identify threats to NSOs
- Rank the threats relative to effects on NSO populations at two scales (rangewide and province):
0 = no threat to 10 = highest threat
- Describe the effect of the threat on NSOs (e.g., reduced foraging opportunities; reduced occupancy, survival, reproduction)
- Categorize the type of evidence
 - 1 = peer-reviewed publications
 - 2 = reports, indirect inference
 - 3 = professional judgment or anecdotal observation

1. Threats Workshop (cont.)

- Panelists identified 19 threats
- For rankings for each threat, we took:
 - means for range-wide
 - means for each province
 - mean of means for all provinces
- Variation in ranking of threats was due to many factors:
 - individual experience and knowledge of a particular threat or of a particular province
 - scientific uncertainty of the influence of a threat
 - real variation in how a particular threat may play out
 - how threats were described and grouped

1. Threats Workshop (cont.)

- Due to this variation and imprecision, we placed the mean ranking of threats into 3 categories
 - Low (mean rank 0–3; green)
 - Medium (mean rank 4–6; yellow)
 - High (mean rank 7–10; red)
- ... and the amount of variation into 2 categories
 - Low (≤ 5 -rank spread; turquoise)
 - High (> 5 -rank spread; purple)

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8 examples (range-wide)

Mean rank Range of ranks

Loss of habitat from past activities

8

5

Habitat fragmentation

6

3

Loss of habitat heterogeneity

6

5

Ongoing habitat loss to timber harvest

8

5

Ongoing habitat loss to wildfire

6

2

Competition with Barred Owls

9

2

Direct mortality from Barred Owls

4

7

Hybridization with Barred Owls

2

2

8 examples (range-wide)

Mean rank Range of ranks

Loss of habitat from past activities

High

Low

Habitat fragmentation

Med

Low

Loss of habitat heterogeneity

Med

Low

Ongoing habitat loss to timber harvest

High

Low

Ongoing habitat loss to wildfire

Med

Low

Competition with Barred Owls

High

Low

Direct mortality from Barred Owls

Med

High

Hybridization with Barred Owls

Low

Low

Totals (range-wide)

- 3 high mean ranks
 - past loss of habitat
 - ongoing loss of habitat
 - competition with BDOWs
- 3 high range of ranks
 - disease
 - direct mortality from BDOWs
 - stochastic weather events

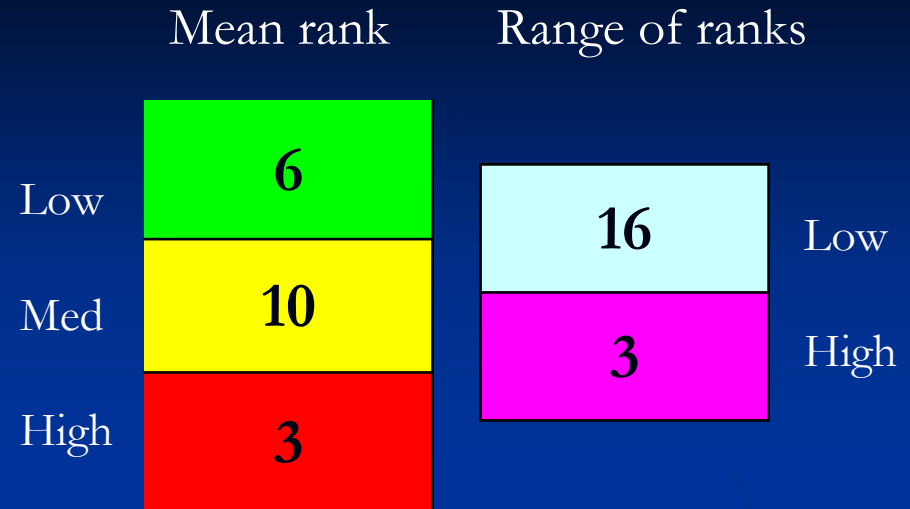


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2. Actions Workshop (June 20–23, 2006)

- 29 panelists
 - 16 biologists
 - 13 implementers

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Actions Workshop Biologists

Bob Anthony (OSU)

Joe Buchanan (WDFW)

Eric Forsman (USFS Pacific NW Research Station)

Rocky Gutiérrez (University of MN)

Tom Hamer (Hamer Environmental)

Dale Herter (Raedeke Associates)

Larry Irwin (National Council for Air and Stream Improvement)

John Lehmkuhl (USFS Pacific NW Research Station)

Bruce Marcot (USFS Pacific NW Research Station)

Bob Pearson (Private consultant)

John Pierce (WDFW)

Marty Raphael (USFS Pacific NW Research Station)

Peter Singleton (USFS Pacific NW Research Station)

Carl Skinner (USFS Pacific NW Research Station)

Jim Thrailkill (USFWS Oregon)

Brian Woodbridge (USFWS California)

Actions Workshop Implementers

Klaus Barber (USFS, Region 5)

Richard Bigley (WDNR)

Bill Gaines (USFS, Wenatchee-
Okanogan NF)

Eric Greenquist (BLM Eugene)

Jim Harper (BLM Medford)

Scott Horton (WDNR)

Margaret Kain (USFS Region 6)

Patti Krueger (USFS Region 5)

Katherine Mater (Mater Associates)

Steve Mealey (Private consultant)

Tony Melchiors (Weyerhaeuser)

Mark Nuetzmann (Yakama Nation)

Duane Shintaku (CDFG)

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2. Actions Workshop (cont.)

Tasks

- Make an exhaustive list of recovery actions
- For each action
 - Rank relative to cost
 - Determine
 - parameter to be measured
 - unit of measurement
 - measurement framework
 - Rank relative to biological effectiveness (biologists)
 - Rank relative to technical feasibility (implementers)

2. Actions Workshop (cont.)

Ranking categories

- Cost (1–3)
 - 1 = high (>\$1 million/yr)
 - 2 = med (\$250,000–1 million/yr)
 - 3 = low (<\$250,000/yr)
- Biological effectiveness (1–5)
 - 1 = greatest likelihood of reducing threat
 - 5 = would not contribute to reducing threat
- Technical feasibility (1–3)
 - 1 = feasible; 2 = unknown; 3 = infeasible

2. Actions Workshop (cont.)

- Panelists identified 83 recovery actions
- They ranked each action as described above
- We used these results in the recovery criteria and recovery actions in the Draft Recovery Plan
 - writing of the action
 - units of measurement
 - measuring of effectiveness
 - cost

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3. Prioritization of Actions Mtg (Sep 2006)

- Participants: NSO Recovery Team
- Task: Place each action into a priority category
- Priority categories
 - **1:** An action that must be taken to prevent extinction or prevent the species from declining irreversibly in the foreseeable future
 - **2:** An action that must be taken to prevent a significant decline in the species' population/habitat quality or some other significant negative impact short of extinction
 - **3:** All other actions deemed necessary to meet the recovery objectives

3. Prioritization of Actions (cont.)

We took the mode priority ranking for each of 37 actions

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Priorities	Frequency of modes
1	3
2	11
3	23

3. Prioritization of Actions (cont.)

- Still working under the assumption that existing regulatory mechanisms would continue, all three Priority 1 actions were Barred Owl actions
- Because Barred Owls are, apparently, negatively affecting NSOs in a large portion of the NSO's range now

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3. Prioritization of Actions (cont.)

Priority 1 Barred Owl actions

- Expedite permitting of experimental control of Barred Owls to determine effects to NSOs
- Conduct experimental control of Barred Owls to determine effects to NSOs
- If experimental control shows negative effects to NSOs, then manage Barred Owls

3. Prioritization of Actions (cont.)

Some other prioritizations

- Priority 2: Use silviculture to restore the habitat-capable acres in reserves that are currently not in the desired habitat condition
- Priority 2: Incorporate the presence of Barred Owls into ongoing NSO monitoring
- Priority 3: Monitor avian diseases (e.g., West Nile Virus, avian flu) and develop a contingency plan

Questions?

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