# DEVELOPING A SPATIAL PRIORITIZATION TOOL FOR BARRED OWL MANAGEMENT

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#### Barred owl spread to western North America



#### Causes







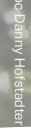




#### Consequences

- Novel interactions
- Trophic cascades
- Extinctions

## Barred owl impacts in western North America: Predation





Foothill Yellow-legged Frog Species of Special Concern



Coastal Tailed Frog Species of Special Concern



Clouded Salamander Sensitive Species



Cascade Frog
Species of Special Concern



Northern Leopard Frog Endangered (WA)



Western Toad
Candidate for listing (WA)



Southern Torrent Salamander Species of Special Concern



Red-Bellied Newt
Species of special concern

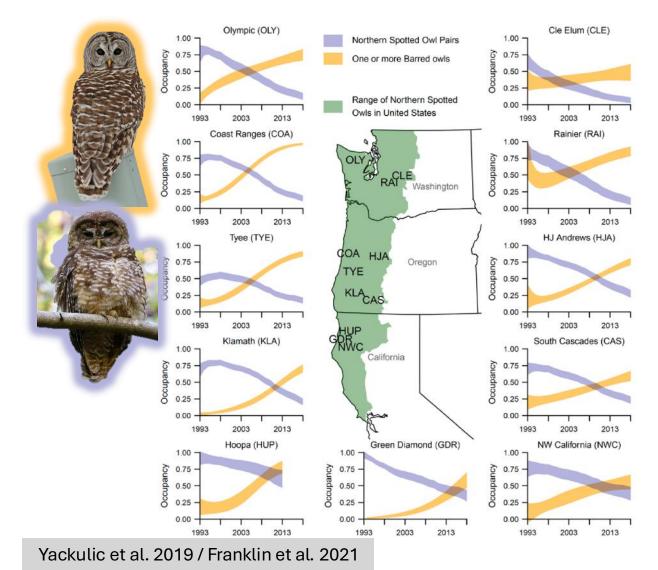
### Barred owl impacts in western North America: Competition



**Barred Owl** 



**Northern Spotted Owl** 



#### UW-led removal research

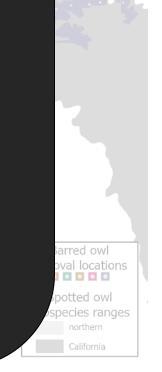
Removals hinder barred owl invasion & stabilize spotted owl populations

But...

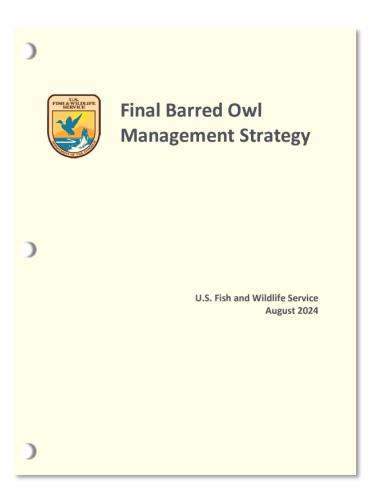
Large-scale removals are costly & funding cuts undermine efforts

Thus...

We need a to prioritize efforts



### Barred owl management strategy





Physiographic provinces California San Jose® Fresno



General

Focal Management Areas



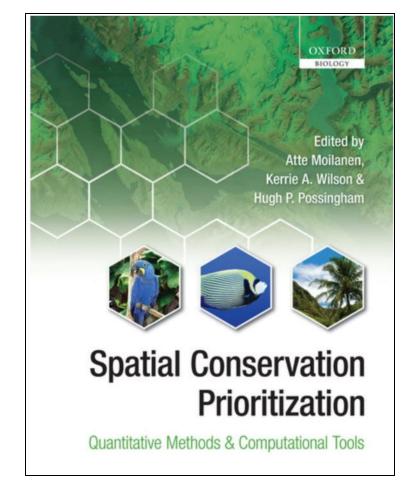


## Systematic conservation planning & spatial prioritization









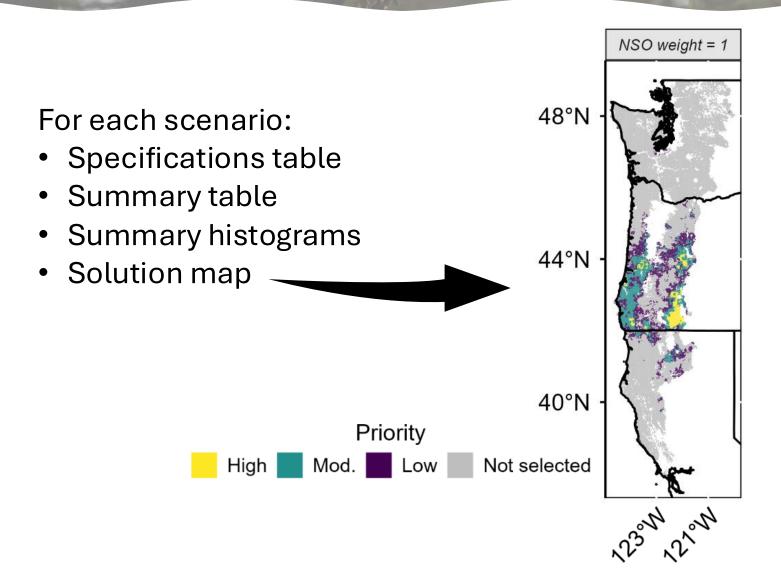
### Methods Implementing prioritizations Earth observations Conservation Penalties & prioritizr incentives features Systematic Conservation Prioritization in R Define parameters

Evaluate solutions

Push Github Page

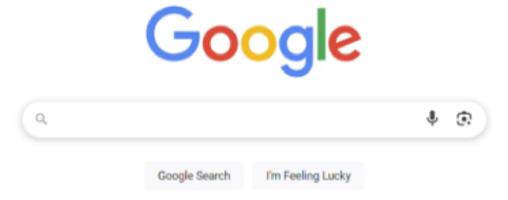
### Methods

### Prioritization maps



# Preliminary products

## Web-based platform containing prioritization results







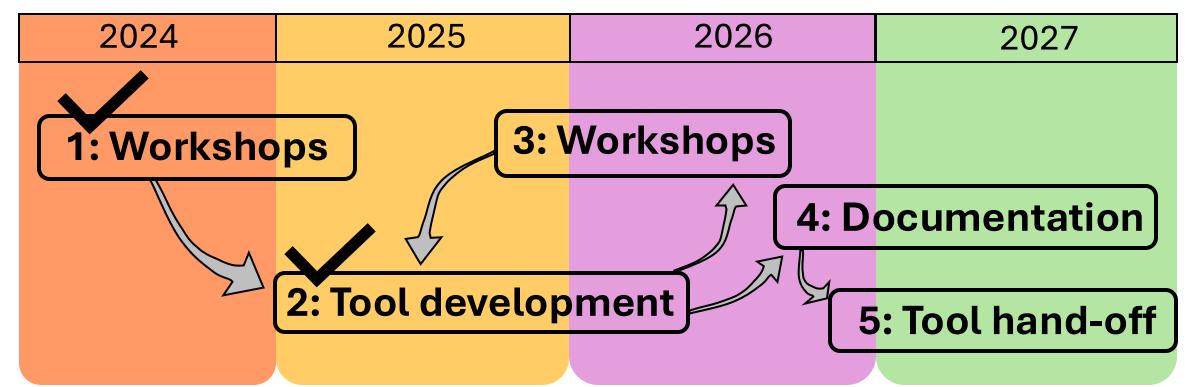


Google Search

I'm Feeling Lucky

### Methods

## Identifying inputs for spatially prioritizing barred owl removals















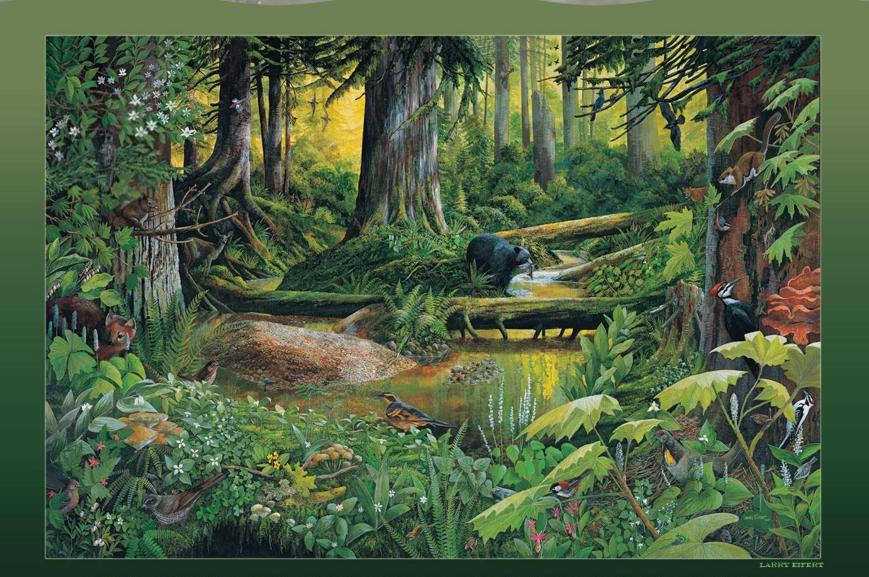






## Zooming out

## What's at stake? It's not just spotted owls



### Thanks!

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