

Integrating Bird Monitoring into Decision Support Tools



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Klamath Bird Observatory



Advancing bird and habitat conservation through science, education, and partnerships.



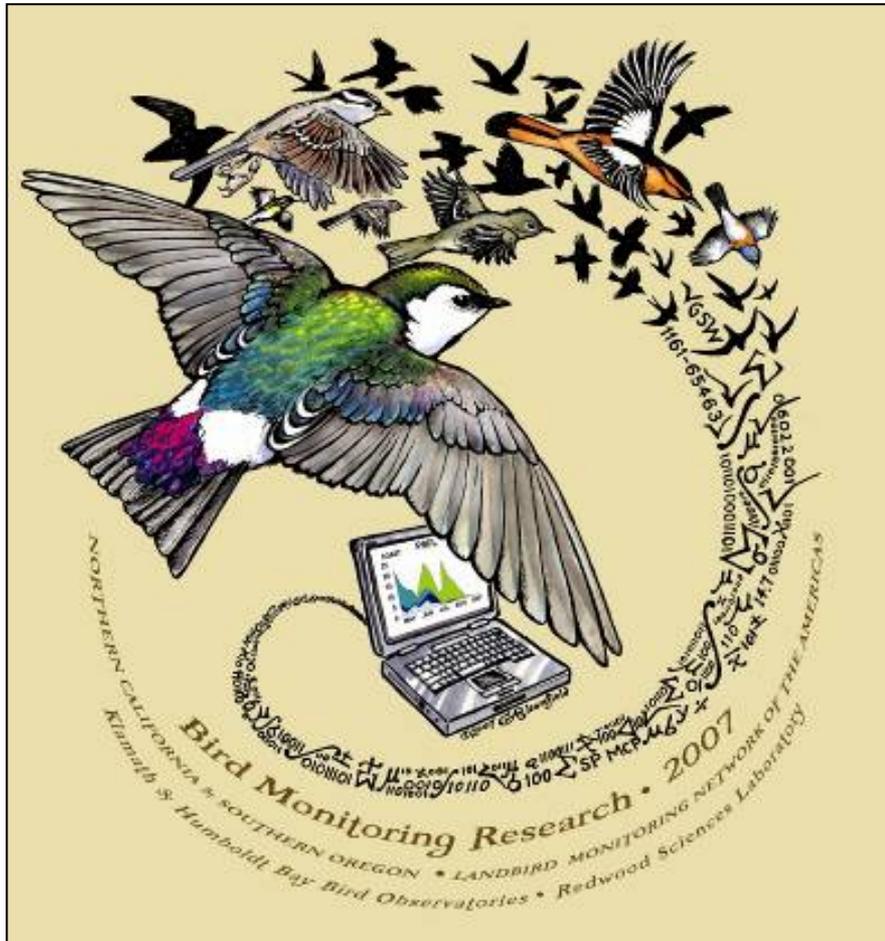


Avian Knowledge Northwest



a partner of Avian
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<http://www.avianknowledgenorthwest.net/>



Making current and historic data available to meet our most pressing conservation challenges.



Avian Knowledge Northwest



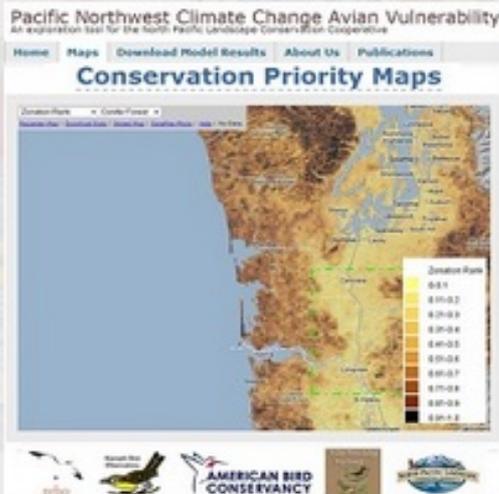
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Home Interactive Maps Citizen Science Decision Support Tools Conservation Planning Data

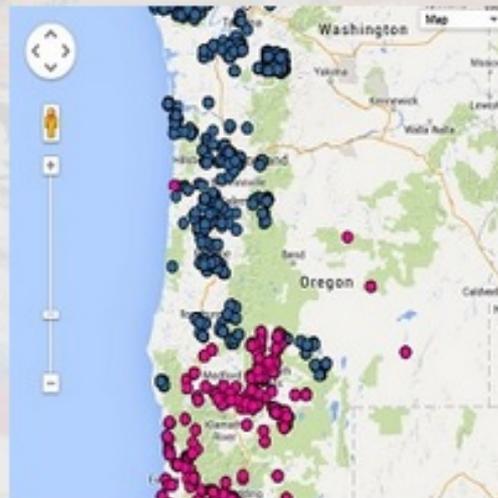
~20 Data Contributors

- Conservation NGOs
- State and federal agencies
- Universities

- Hosted by KBO, Point Blue, and RSL
- Over **1,000,000** data records!



Bird Distribution Models



Data Exploration Tool

Avian Knowledge Northwest

Data and Analysis Tool Sharing Policy

Updated: January 2014

Avian Knowledge Northwest is a regional node of the Avian Knowledge Network that provides information on birds and the environment for scientists, natural resource managers, and other individuals interested in conservation science in the northwestern United States. Avian Knowledge Northwest aims to advance ecosystem conservation by providing knowledge about birds and their habitats from monitoring and research datasets. Such information increases our understanding of bird population distributions and trends and will help inform ecological planning. Avian Knowledge Northwest represents collaboration among University of Washington, US Forest Service Pacific Southwest Research Station-Astoria, Point Blue Conservation Science, Central University of Technology, and a wide array of additional contributors. Avians or institutions conducting data or analysis tools for Avian Knowledge Northwest are committed to sharing those resources with the AKN under the policy and terms described below.

A guiding principle of this policy is that the development of tools, models, and methods that are essential to selection of a data set, the development of data processing or analysis tools, and the knowledge generated from related exercises across the "footprint" of these data, tools, and results is the fundamental benefit of the work. This policy recognizes the benefits to the investigator(s) and institution(s) responsible for data collection or compilation, development of tools, and generation of results. Therefore, publication of descriptive or interpretive materials, and results derived directly from the data or tools, by the Creator(s) or User(s), are a privilege and responsibility that primarily belongs to the Creator(s).

Avian Knowledge Northwest acknowledges that ecological data are highly valuable and must be properly processed for the purposes originally intended and for other purposes not necessarily anticipated by the data collector. Sharing data in a distributed database system, such as the AKN, increases data longevity by processing datasets in ways that are location- and time-independent, providing access to other investigators when the Creator(s) decide it is appropriate. Such open access to data can greatly enhance our ability to understand patterns and statistics of bird populations.

Data Owners must be assured that their data and tools are secure and access is restricted. Avian Knowledge Northwest has the following data access levels and sharing options, and Owners are encouraged to specify which level of access is to be granted:

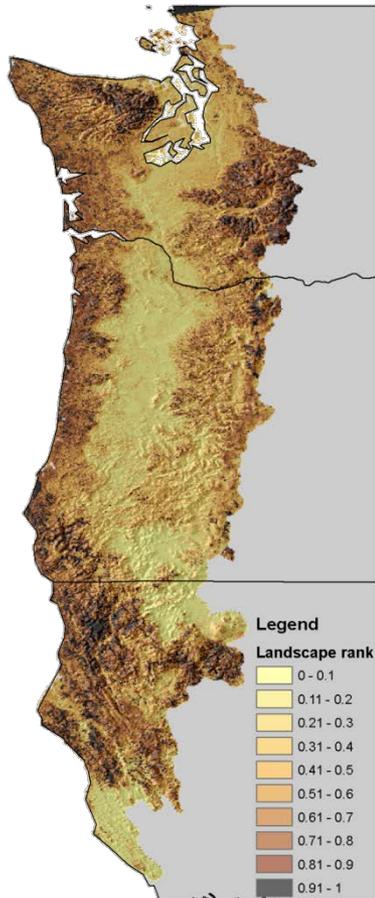
- Level 1: Data Owners require that their data are not exposed to the public in any form at all.
- Level 2: Data can be used in certain publicly available, unmodified visualizations (i.e. maps and graphs) – not for publications by the AKN membership. Suitable for a general AKN user, but direct access to the primary data is restricted only to the Data Owner.
- Level 3: Data can be used in certain publicly available, unmodified visualizations (i.e. maps and graphs), and the complete data set is available for download directly via the Internet user interface created from the data Owner. The Data Owner may directly use data for open access, such as an online database or an online data visualization.

Data Sharing Policy

Bird Conservation Hotspots



Conifer species



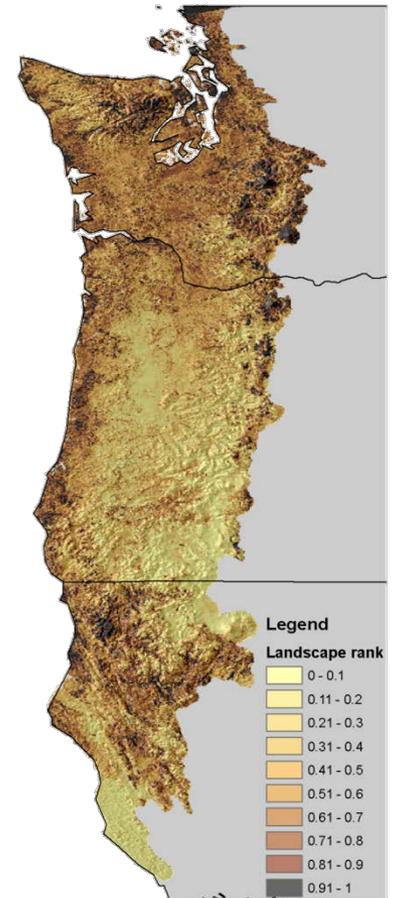
Grassland species



Oak woodland species



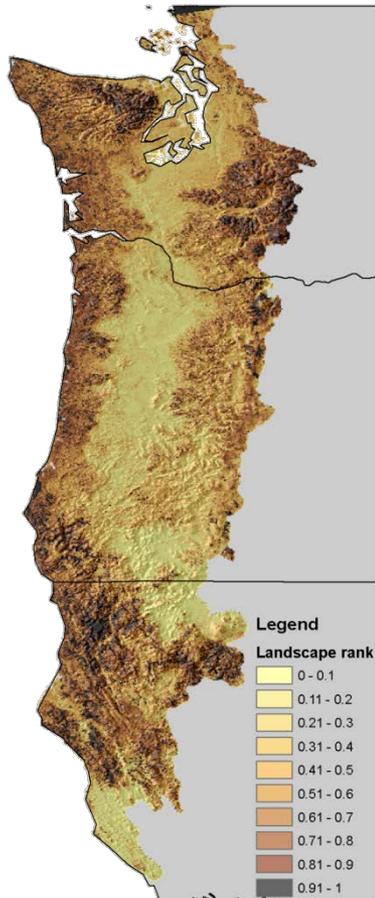
Riparian species



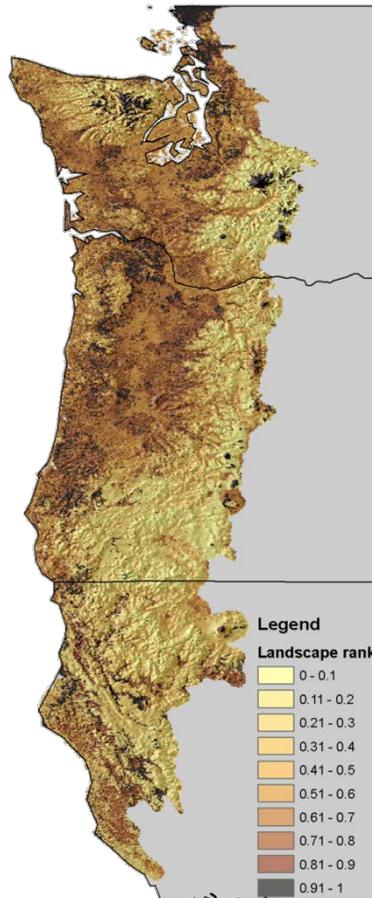
Bird Conservation Hotspots



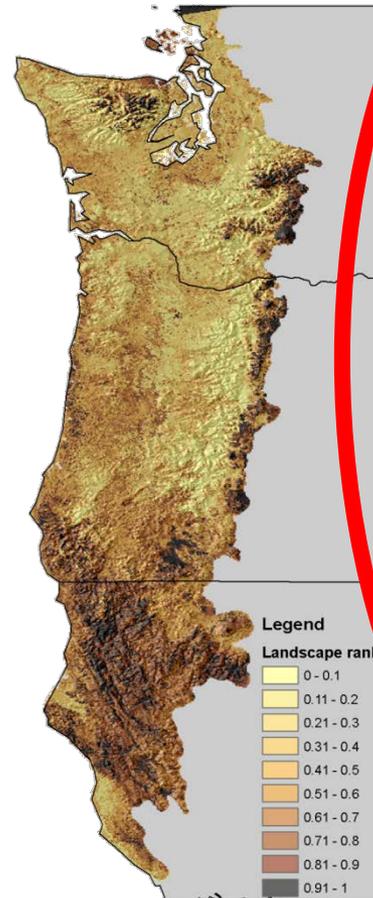
Conifer species



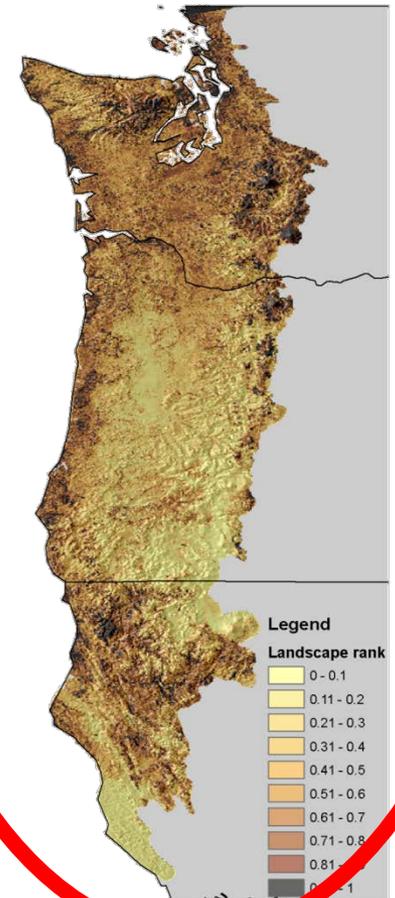
Grassland species



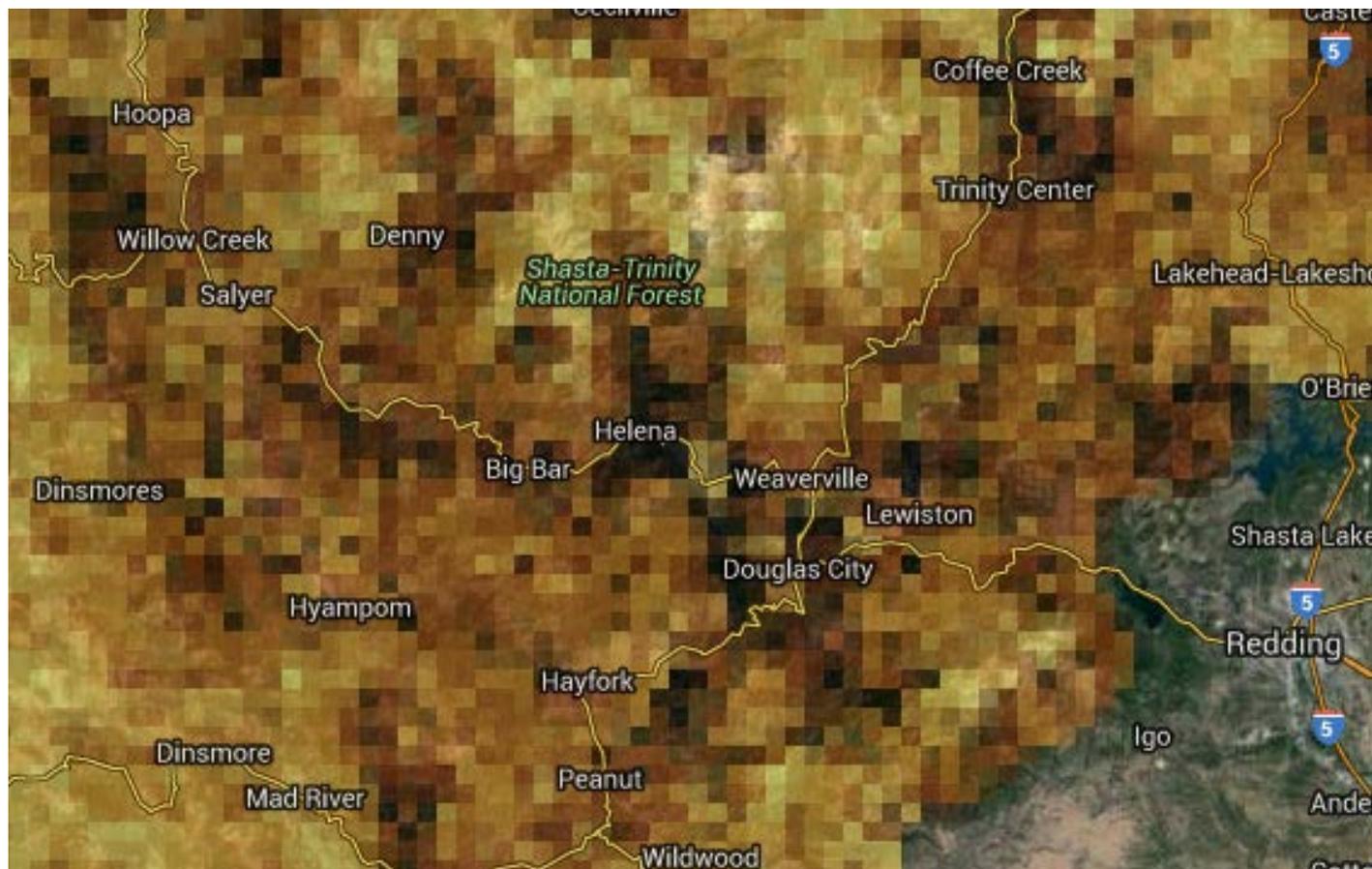
Oak woodland species



Riparian species



Bird Conservation Hotspots



Birds as Ecological Indicators



- Relatively high on food chain
- Sensitive to disturbance at multiple scales
- Easy and cost-effective to monitor

Bird Monitoring Objectives

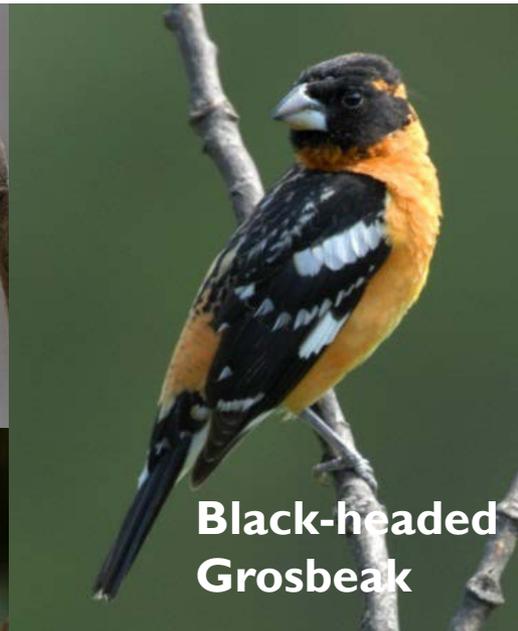


- Assess compliance
- Track avian response to restoration actions
- Inform adaptive management

Focal Riparian Species



Yellow Warbler



Black-headed Grosbeak



Yellow-breasted Chat



Song Sparrow



Tree Swallow

- Abundant
- Listed in CA conservation plan
- Variety of habitats

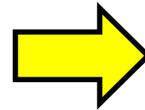
Bird Abundance Trends



Increasing



Stable



Decreasing



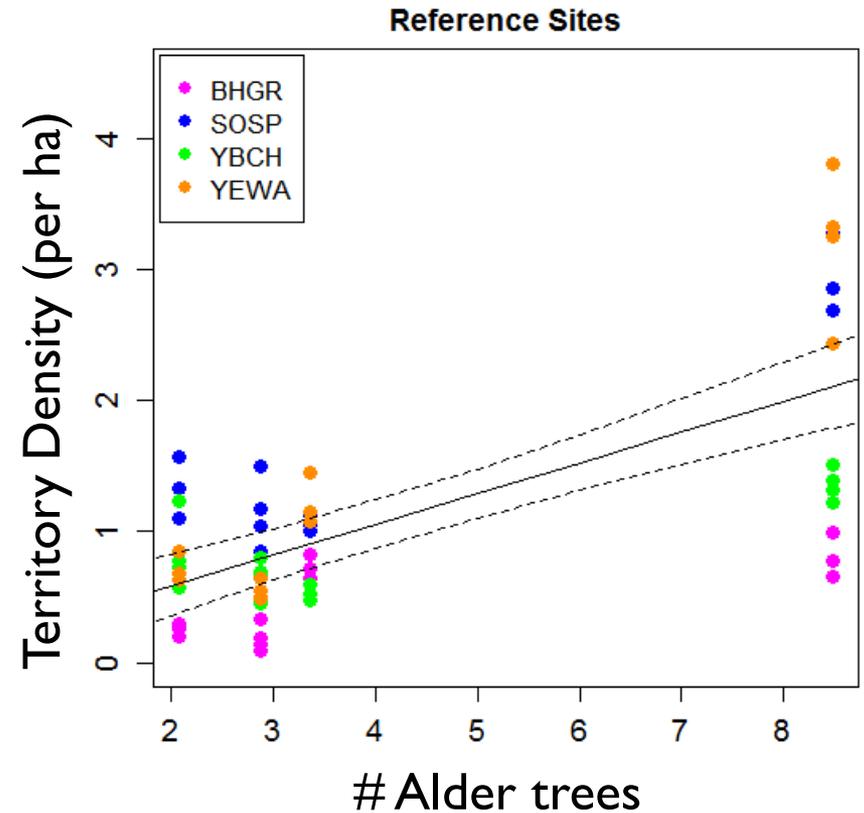
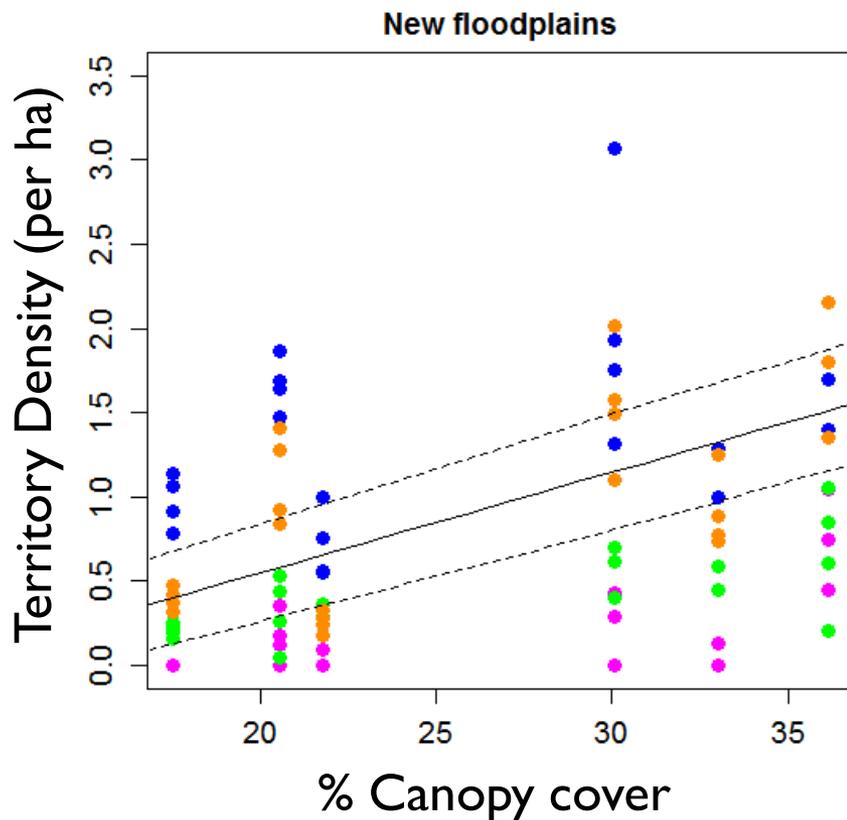
- Trend analysis from bird surveys within Program Area, 2002-2014

Bird Density & Vegetation



Density related to:

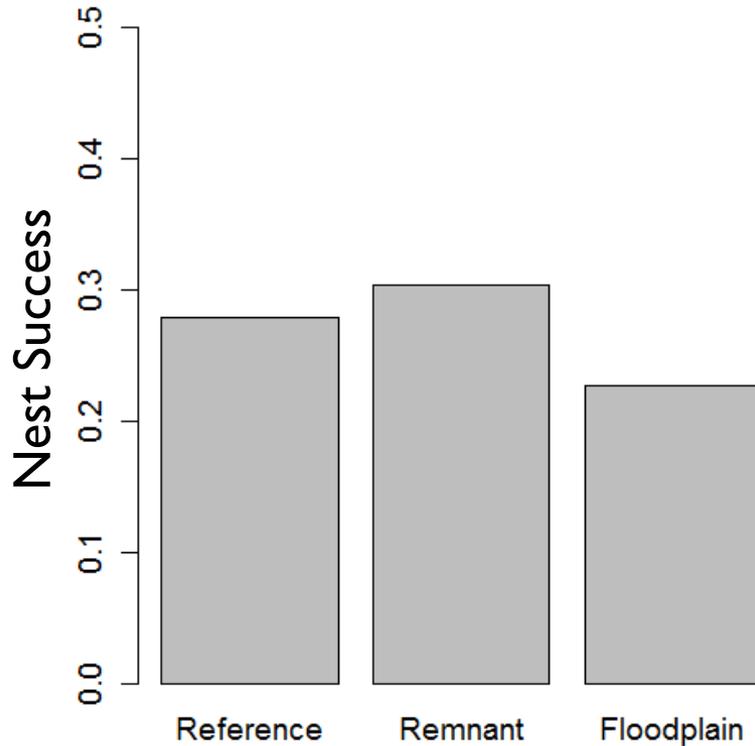
- # Alders
- % Canopy



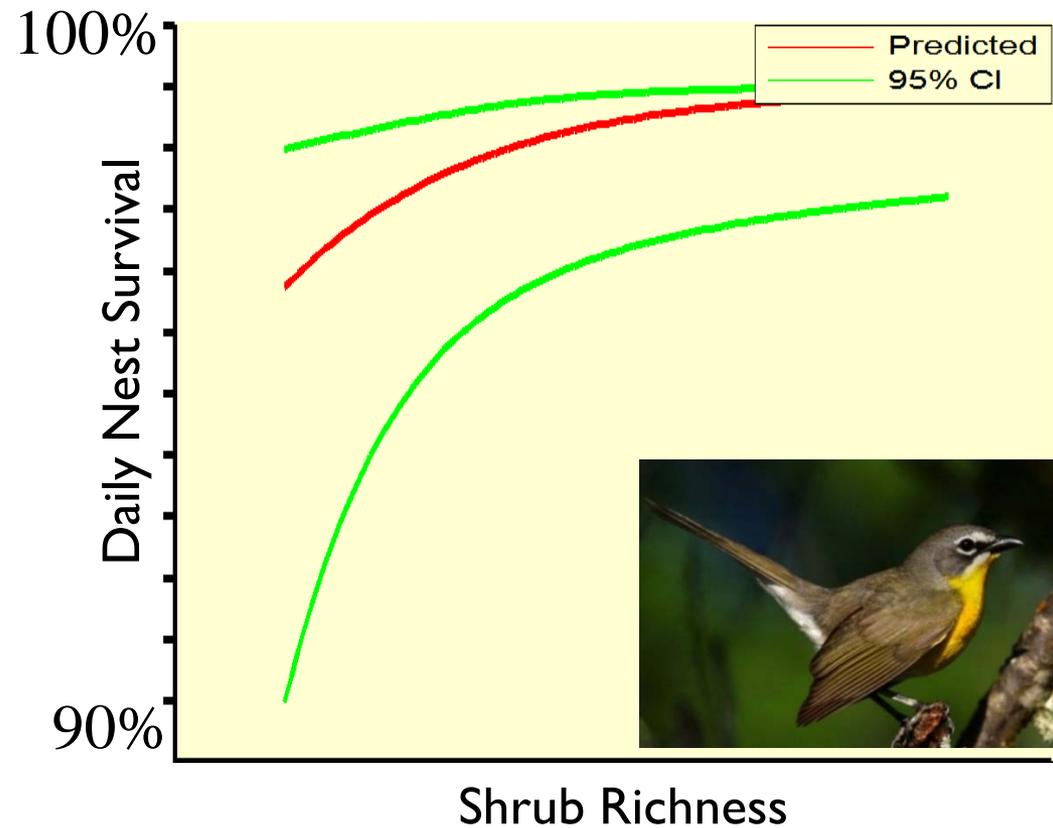
Nest Success



- Similar across habitat types (all species)



- Chats experience higher nest success with greater shrub richness



Conclusion



- AKN platform integrates bird data across Pacific NW
- Various decision support tools available online
- 12+ years of data from Trinity River
- Used bird abundance data to assess compliance
- Now, incorporate bird data into Trinity DSS



Acknowledgments



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©James Livaudais

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- California Department of Fish and Game
- Shasta-Trinity National Forest
- The Yurok Tribe
- Hoopa Valley Tribe
- Point Blue Conservation Science
- American Bird Conservancy
- private landowners

