



# THE AVIAN KNOWLEDGE NETWORK

Leveraging Partnerships, Data, and Technology to Revolutionize Avian Conservation and Management



## WHAT IS THE AVIAN KNOWLEDGE NETWORK?

The Avian Knowledge Network (AKN) is a partnership composed of over 100 federal and state agencies and non-governmental organizations who have shared informatics priorities and needs for biodiversity conservation and management. The AKN is a powerful and secure cloud computing system that government agencies, NGOs and others are using to enter, manage, analyze, and share avian monitoring data.

**THE AKN MISSION IS TO SUPPORT A NETWORK OF PARTNERSHIPS, DATA, AND TECHNOLOGY TO IMPROVE BIRD CONSERVATION, MANAGEMENT, AND RESEARCH ACROSS ORGANIZATIONAL BOUNDARIES AND SPATIAL SCALES**

## TOOLS TO MANAGE AND EXPLORE DATA

### Get Data In

- **Biologists application** Enter data
- **Project Leader** Manage Project data and sharing levels
- **Bulk Uploader** Upload large datasets

### Make Decisions

- **R.A.I.L. (Rapid Avian Information Locator)** Request information on species, relevant lifecycle information, conservation status, and population trends in a user-selected geographic area

### Discover Data

- **Data Downloader** Filter and download data from your AKN Project(s) and any public AKN data available at Sharing Level 5.

### Explore Data

- **Observation Map** Displays observation data
- **Analyst** Summarize and analyze Project data



The AKN is fully **FedRAMP authorized** - a required government security program for cloud services that ensures federal data is protected.



RAIL TOOL



OBSERVATION MAP

**AKN Tools** you can access without an account!

## CHALLENGES

Agencies hold large amounts of avian data but face significant challenges to fully utilize and optimize these data, including:

- inconsistent formats, inefficient access to summary data for analyses;
- a lack of visibility on avian species population trends and management across agencies and broader landscapes;
- a lack of a centralized, secure data repository resulting in dispersed datasets, difficulty retrieving, low utility, and data loss.

## SOLUTIONS

Through a series of **data management** and **decision-support tools** AKN offers partner agencies real-time data solutions by:

- allowing efficient access to data for use in analyses and planning;
- creating visibility on avian species population trends and management across the agency/organization and broader landscapes;
- offering a secure, centralized data repository and archive;
- maximizing the long-term value of data by enabling its use for future internal needs and partner collaborations.

## AKN Vision:

A world where bird populations thrive through conservation and management informed by a network of avian knowledge.





# AKN STEERING COMMITTEE

The AKN steering committee (SC) is composed of 10 to 12 members and sets the priorities for the partnership. The SC is designed to reflect the data and science needs for agencies and other institutions. The SC works together to identify and achieve shared goals while fostering the collaboration of diverse institutions, agencies, states, and others interested in improving the conservation of birds and their habitats through the use of data and partnerships. Representation includes, but is not limited to: federal and state agencies, NGOs, Joint Ventures, Flyways, Portal leaders, and informatics, industry and academic scientists.

## COLLECTIVE GOALS

The AKN facilitates data sharing across jurisdictions and locations, enhancing the power and reliability of bird monitoring data. This collaborative approach empowers avian data collected across agencies and improves guidance for habitat and species management, contributing to effective conservation actions.



# PARTNER PRODUCTS

## BORDERLANDS AVIAN DATA CENTER (BADC)

Borderlands Avian Data Center (BADC) supports bird and habitat conservation in the southwest United States and northern Mexico. BADC is supporting the Binational Marsh Bird Network, a U.S.-Mexico partnership, by providing data management and standardized protocols to support collaborative monitoring, research, and conservation efforts for secretive marsh birds on both sides of the border.

## AVIAN KNOWLEDGE NORTHWEST (AKNW)

Avian Knowledge Northwest (AKNW) provides a suite of decision support tools for scientists and natural resource managers focused on bird and habitat conservation in the northwestern United States, including tools and resources focused on oak and prairie, coniferous forests, and riparian habitats.



### WHAT IS AN AKN PORTAL?

Portal websites link to AKN tools and also provide additional data products and resources of interest to a specific region, agency, or partnership.

# NEW FEATURES

## AVIAN KNOWLEDGE NETWORK WEBSITE

A brand new, updated AKN website has been created as a resource for all AKN users that includes links to tools, instructional videos, detailed user guides, and case studies.

## ENTERPRISE SUPPORT FOR PROGRAMS

Increases the power of data in the AKN by improving the way data are shared across AKN Projects. Adds the functionality for tools to query and analyze data across multiple scales for improved management and conservation decision support.



AKN WEBSITE

# RECENT ACCOMPLISHMENTS

## DoW Training Workshops

- Department of War has sponsored 25 trainings across the country with 440 biologists representing 165 installations.
- Trainings resulted in 171 new Projects and over 1.2 million DoW data records in the AKN.
- Facilitated the first **AKN User Guide** available for all users.



AKN USER GUIDE



## Pinyon Jay (PIJA) Protocols

- Two PIF PIJA Working Group **standardized protocols** are available in the AKN in support of regional monitoring:
  - PIJA Working Group Protocol for Landscape Applications
  - Road-based Point Count Protocol
- PIJA is a **DoW Mission-Sensitive Species** that is now undergoing a formal Species Status Assessment by the USFWS.

## San Francisco Bay State of the Birds

- The **2025 SF Bay State of the Birds** is a new, dynamic report that presents bird population monitoring results, recommended conservation actions, and restoration success stories from around the SF Bay and is updated **annually with AKN data**.
- The **new dashboard** enables more regular science and monitoring updates, providing important, timely information about what types of conservation actions are working and where additional investments in restoration are needed.



## USFS Region 8 - Southern Region

- 30 years and over **one million records** of USFS bird monitoring data from the southeastern US were **preserved in the AKN**.
- Data are now being used to develop dozens of high-resolution **predictive maps** of bird habitat to inform conservation planning.

# NEXT PRIORITIES

**1** Add new **User Roles** within the system that support partner needs and requirements for data entry and analysis.

**2** Integrate **new data types** into the AKN including **banding data, nest monitoring data**, and outputs from **Automatic Recording Units (ARUs)**.

**3** Update the **Avian Distributions Across Land Ownerships (ADALO)** tool combining NASA imagery with AKN data to develop distribution models of species of concern, allowing managers determine conservation responsibility and improve landscape-level planning.

# HOW TO GET INVOLVED

**Use the AKN for your data management needs** - Subscribe to the AKN newsletter to keep informed about updates and new features in the AKN.  
<https://avianknowledge.net/newsletter-signup/>

**Use Decision Support Tools** to apply avian data products in your NEPA analysis or other reporting. Explore the RAIL tool to look for a list of birds and conservation status in your area.

- Call to Action!**
- Explore and use data in the AKN with the tools listed on the front page.
  - Explore the **Portals** to see examples of existing AKN data products and resources of interest specific to a region, agency, or partnership.

AKN PORTALS



### Tell us about it!

Learn how to make the Avian Knowledge Network work for you, ask a question, or share a comment, contact the AKN Steering Committee Chair, Elizabeth Neipert ([elizabeth.s.neipert@erdc.dren.mil](mailto:elizabeth.s.neipert@erdc.dren.mil)).

Photo Credits: California Gnatcatcher - Bob Schallmann; Carolina Wren, Eastern Bluebird, White-breasted Nuthatch, Piping Plover - Paul Block

