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# DoW AND THE AKN: WHO, WHAT, WHERE, WHEN, WHY, AND HOW

DoW Army Training  
9 and 11 June 2026  
Virtual

Sam Veloz  
Dianne Miller

Elizabeth Neipert  
Zoe Duran  
Jocelynn Marriott

John Alexander  
Caitlyn Gillespie  
Nora Honkomp



Blue Jay, Williamsburg, VA; Credit: Paul Block



**AVIAN**  
KNOWLEDGE NETWORK

[pointblue.github.io/dod\\_workshop](https://pointblue.github.io/dod_workshop)

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Blue Jay, Williamsburg, VA; Credit: Paul Block



# WELCOME, INTRODUCTIONS, AND LOGISTICS





Who are **we**?

Who are **you**? (we'll call on you)

- Name, Affiliation, Position
- Have you collected avian data yourself before?
- What type of avian data you collect?
- How would you like to use AKN?

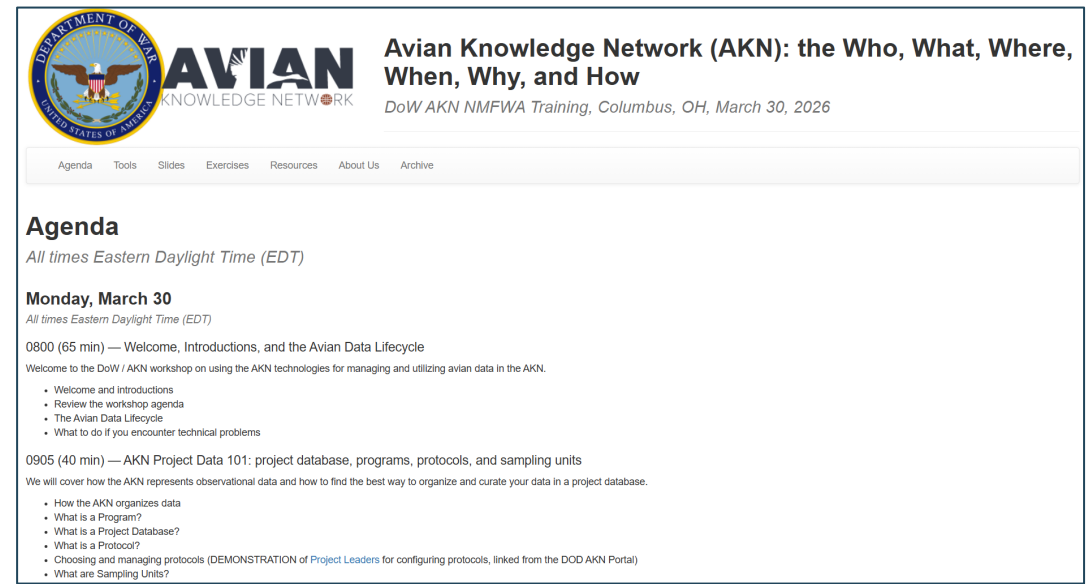
# INTRODUCTIONS

# A FEW LOGISTICS...

- The Agenda with links (bookmark this): [pointblue.github.io/dod\\_workshop](https://pointblue.github.io/dod_workshop)
- Session: interactive & casual
- Office hours: 16 hours monthly, sign up here



<https://www.dodakn.org/office-hours-booking-page/>



**AVIAN KNOWLEDGE NETWORK**  
 Avian Knowledge Network (AKN): the Who, What, Where, When, Why, and How  
 DoW AKN NMFVA Training, Columbus, OH, March 30, 2026

Agenda Tools Slides Exercises Resources About Us Archive

**Agenda**  
 All times Eastern Daylight Time (EDT)

**Monday, March 30**  
 All times Eastern Daylight Time (EDT)

0800 (65 min) — Welcome, Introductions, and the Avian Data Lifecycle  
 Welcome to the DoW / AKN workshop on using the AKN technologies for managing and utilizing avian data in the AKN.

- Welcome and introductions
- Review the workshop agenda
- The Avian Data Lifecycle
- What to do if you encounter technical problems

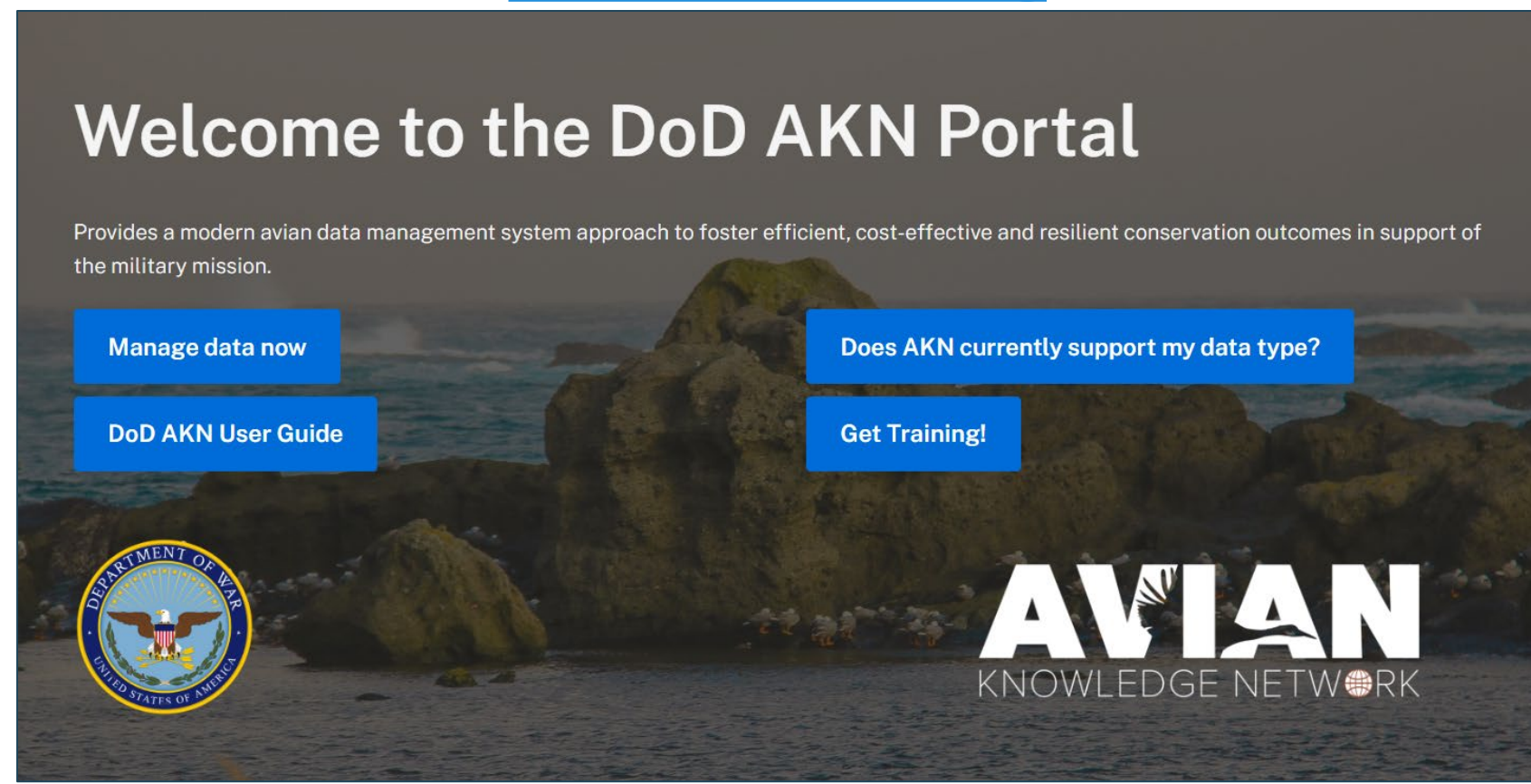
0905 (40 min) — AKN Project Data 101: project database, programs, protocols, and sampling units  
 We will cover how the AKN represents observational data and how to find the best way to organize and curate your data in a project database.

- How the AKN organizes data
- What is a Program?
- What is a Project Database?
- What is a Protocol?
- Choosing and managing protocols (DEMONSTRATION of Project Leaders for configuring protocols, linked from the DOD AKN Portal)
- What are Sampling Units?

- Parking lot items

# DoW AKN PORTAL

[www.dodakn.org](http://www.dodakn.org)



**Welcome to the DoD AKN Portal**



Provides a modern avian data management system approach to foster efficient, cost-effective and resilient conservation outcomes in support of the military mission.

[Manage data now](#)

[Does AKN currently support my data type?](#)

[DoD AKN User Guide](#)

[Get Training!](#)

# PLUS – DELTA METHOD

- Feedback from workshop to continue to improve

## + PLUS

What went well and should be continued or repeated

## Δ DELTA

What could be changed or improved for future iterations.



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
3400 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3400

ENERGY, INSTALLATIONS,  
AND ENVIRONMENT

MEMORANDUM FOR DEPUTY ASSISTANT SECRETARY OF THE ARMY  
(ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH)  
DEPUTY ASSISTANT SECRETARY OF THE NAVY  
(ENVIRONMENT AND MISSION READINESS)  
DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE  
(ENVIRONMENT, SAFETY AND INFRASTRUCTURE)

SUBJECT: Department of Defense Avian Knowledge Network Program

The Department of Defense (DoD), like other federal agencies, has significant regulatory, management, and stewardship responsibilities related to migratory birds. These requirements are driven primarily by the Migratory Bird Treaty Act (MBTA), the "Military Readiness Rule" (50 CFR § 21.15, Authorization of take incidental to military readiness activities) and Executive Order (EO) 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds." In accordance with EO 13186, DoD has also established a Memorandum of Understanding with the U.S. Fish and Wildlife Service outlining the management and stewardship activities DoD will implement for migratory bird conservation. All DoD natural resources conservation programs support DoD access to its land, air, and water resources for realistic military training and testing and to sustain the long-term ecological integrity of the resource base and the ecosystem services it provides, in accordance with the Sikes Act. Collecting data and information from ongoing surveys, inventories, and monitoring are essential to make informed management decisions, efficiently and effectively meet regulatory requirements (e.g., the MBTA, the Sikes Act), conduct environmental analyses, and support planning to adaptively manage migratory bird populations in the context of mission activities. As such, the DoD spends millions of dollars annually to collect these data.

However, even with the collection of large amounts of data, DoD faces significant challenges to fully utilize and optimize our avian data. These challenges include: (1) inefficient access to data for regulatory requirements, environmental analyses, and planning; (2) a lack of visibility on avian species population trends and management across the Military Services and broader landscapes; and (3) a lack of a centralized, secure data repository resulting in data loss during personnel turnover.

To address these challenges, DoD began partnering with other federal agencies (i.e., U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Forest Service) in the development of the Avian Knowledge Network (AKN) in 2016. The AKN is a national clearinghouse for avian data and decision support tool for assessing bird population health, status and trends, specific stressors, and conservation measures. The AKN connects partner datasets, includes metadata and data assumptions, contains powerful data analysis tools, and is a permanent archive of all data records.

This office fully endorses the use of AKN and requests that each DoD Component utilize AKN to the maximum extent practicable and provide staff the support needed to make AKN the best tool for DoD. A coordinated and comprehensive approach to implement DoD's participation in the AKN will directly support the military mission and improve the quality and effectiveness of bird conservation on DoD installations. For DoD to fully employ the power of AKN, user training and significant initial data management is required. This office, through the DoD Legacy Resource Management Program, is committed to providing baseline support and resources to help implement AKN. This support will provide training and education for personnel, and technical assistance related to system use and data management. The DoD AKN Director is Ms. Elizabeth Neipert, at [elizabeth.s.neipert@erdcdren.mil](mailto:elizabeth.s.neipert@erdcdren.mil) or 907-201-6244.

Additionally, a national Cooperative Agreement has been established to support AKN implementation. It provides a streamlined process for DoD Components and installations to contribute additional resources to meet their unique needs.

The point of contact for this office is Ms. Liz Galli-Noble, DoD Senior Natural Resources Program Manager and Legacy Resource Management Program Manager, [elizabeth.j.galli-noble.civ@mail.mil](mailto:elizabeth.j.galli-noble.civ@mail.mil) or 406-581-8148

KIDD, RICHARD GO Digitally signed by  
ODWIN, IV, 1163856  
081  
Reason: I am the author  
Date: 2022.06.24 11:39:54 -0400

Richard G. Kidd IV  
Deputy Assistant Secretary of Defense  
(Environment and Energy Resilience)

# DoW MANDATE MEMO





# DoW & AKN

**WHY?**

## DOW DATA ISSUES

- (1) Inconsistent formats and inefficient access to data for regulatory requirements, environmental analyses, planning and research
- (2) Lack of visibility on avian species population trends and management across the Military Services and broader landscapes, resulting in difficulty applying decision-making
- (3) Lack of a centralized, secure data repository resulting in dispersed datasets and data loss during personnel turnover

● Army  
● Air Force  
● Marine Corps  
● DLA

HAWAII

PUERTO RICO

WAKE IS.

GUAM



# DoW & AKN

*WHAT  
?*

## AKN DATA SOLUTIONS

- (1) Allowing efficient access to data for regulatory requirements, environmental analyses, planning and research
- (2) Creating visibility on avian species population trends and management across jurisdictions and broader landscapes and
- (3) Offering secure, centralized data repository and archive

- Army
- Air Force
- Marine Corps
- Navy
- DLA

HAWAII

WAKE IS.

GUAM

PUERTO RICO

# LEGAL DRIVERS

- Migratory Bird Treaty Act (PL 65-186; 16 USC 703 *et seq.*)
- National Environmental Policy Act, as amended. (PL. 91-190, 42 U.S.C. 4321-4347, as amended by Pub. L. 94-52)
- Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884), as amended – PL. 93-205
- Executive Order 13186 *Responsibilities of Federal Agencies to Protect Migratory Birds*
- Sikes Act (PL 105-85, as amended through 2004 including PL 108-136; 16 USC 670 *et seq.*)
- DoD Instruction 4715.03, *Natural Resources Conservation Program*
  - Prioritize species
  - Facilitate and encourage collaboration with partners
  - Focus research and planning efforts
  - Increase information sharing
  - Technology demonstration and transfer
  - Improved efficiencies



# DoW AKN Program

## Task Categories



### Training

Ex. quarterly regional, service-specific, NMFWA, training videos



### DoW-Specific Resources

Ex. user guides, DoW AKN Portal, data visualization and query tools



### Data Initiatives

Ex. new data type incorporation, integration with partner data, data standardization



### AKN Tools

Ex. new AKN roles, advanced analysis and query functionality, cohesive U.I., Program Enterprise



### Ongoing Base Support

Ex. project coordination, customer data support, back-end technical support

# Driving Avian Data Questions

1. What species have confirmed occurrence on my installation?
2. What species have the potential to occur on my installation?
3. What species may occur/persist on my installation in the future?
4. How are species “doing” (population metrics) on my installation? (AKA “is my INRMP effective?”)  
How are species doing across the military? (AKA “Is the DoW conservation program effective?”)
5. What factors are driving population trends on my installation? Are there conservation measures/actions within my INRMP that are working more than others to reach identified conservation objectives?
6. What is the relative conservation responsibility of avian species on military installations?



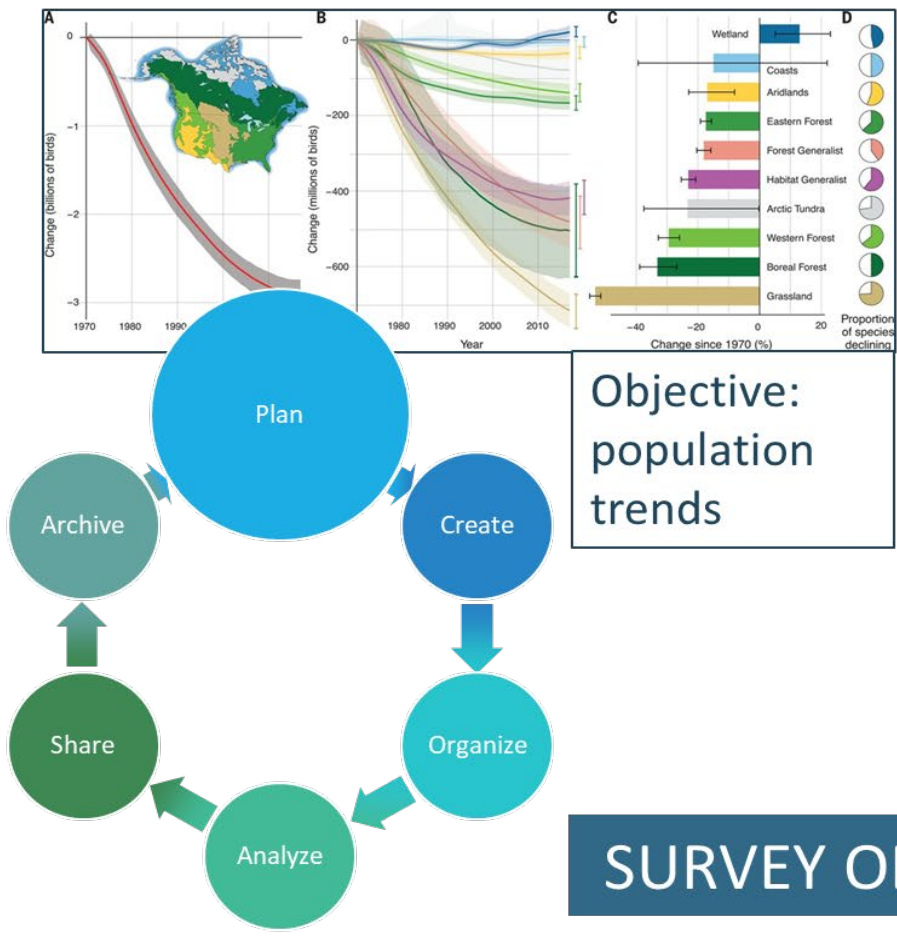
# FULL AVIAN DATA LIFE CYCLE



# FULL AVIAN DATA LIFE CYCLE



# FULL AVIAN DATA LIFE CYCLE



Objective: population trends



Objective: restoration & management

SURVEY OBJECTIVES

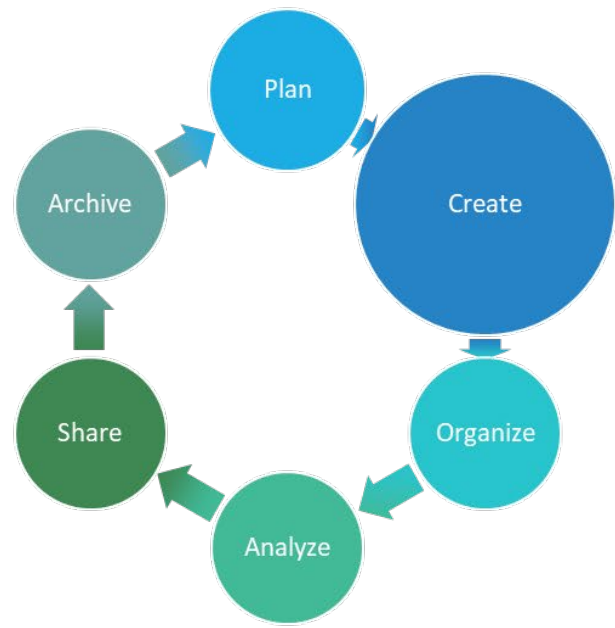
United States Department of Agriculture  
Forest Service  
Pacific Southwest Research Station  
General Technical Report PSW-GTR-144-www

C. John Ralph, Thomas E. Martin, Geoffrey R. Gougel, David F. DeSante, Peter Pyle

**Handbook of Field Methods for Monitoring Landbirds**

APPROPRIATE METHODOLOGIES

# FULL AVIAN DATA LIFE CYCLE



**FIELD SAMPLING-OBSERVATIONS**

Winter AM Point Count Datasheet

HMU HHD Point ID 13 Observer ESU  
 Date V31/23 Start Time 0603 UTM 0596424 5232965

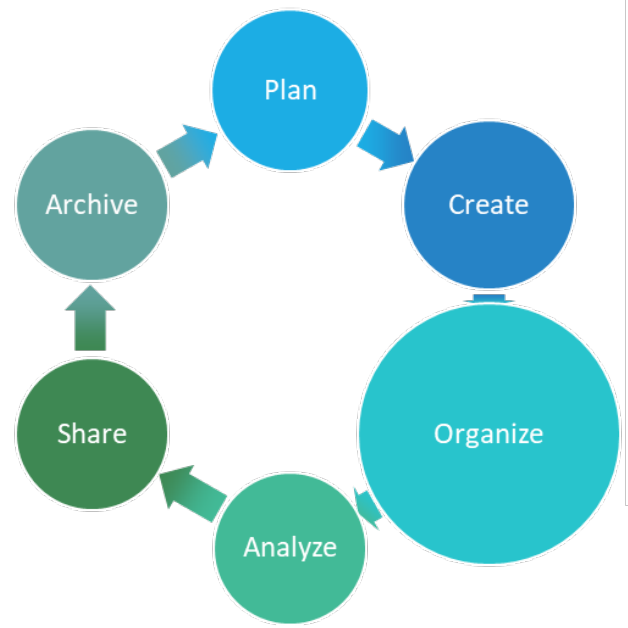
STSA

Species	Time	#	Distance	Comments
BLCH	1	1	50	
STSA	2	1	100	
SOSP	3	1	90	
PAUK	3	1	65	
DESU	3	1	45	
BRCR	4	1	20	
GLCI	5	1	75	

Flyovers \_\_\_\_\_  
 Datasheet # \_\_\_\_\_

**FIELD FORM-DATA**

# FULL AVIAN DATA LIFE CYCLE



**H Observations**  
 Species observations with details, layout and titles dependent on protocol.

- [Quick Tips >>](#)
- Separate observations on individual rows
- Scroll observations (not compatible with all browsers)

**Observation Protocol:** VCP100Sx  
**Total Birds Counted:** 7

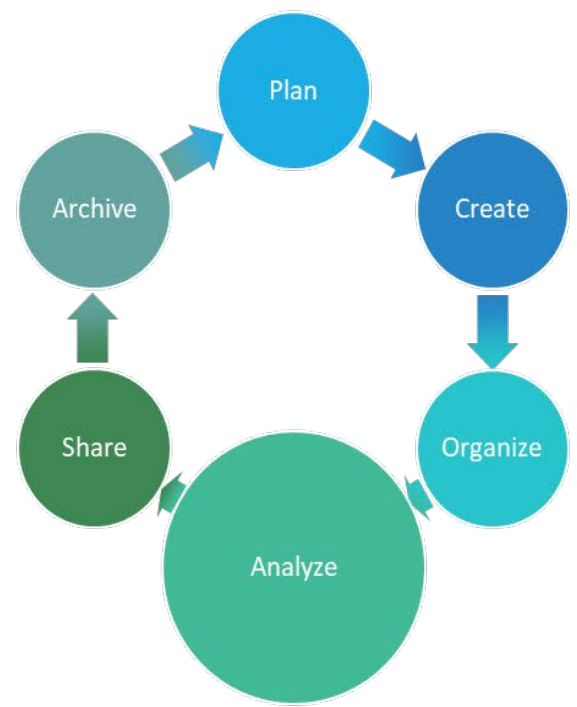
**DATA ENTRY  
QA/QC**

[Download CSV](#)

Point ⓘ	Time ⓘ	Species ⓘ	Time Bin ⓘ	Count ⓘ	Detection ⓘ	Distance ⓘ	AnimalSex ⓘ	Notes	
DI-10A	07:21	RWBL	1	1	S	52	Male		✕
DI-10A	07:21	RWBL	1	1	V	52	Male		✕
DI-10A	07:22	TUVU	2	1	V	FLO			✕
DI-10A	07:24	LASP	4	1	V	26			✕
DI-10A	07:24	LASP	4	1	V	94			✕
DI-10A	07:25	LASP	5	1	C	53			✕

# FULL AVIAN DATA LIFE CYCLE

## ANALYSIS

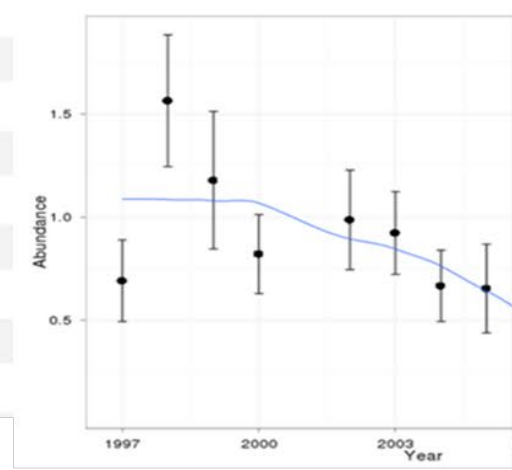


Total Number of Observations of each Species by Year

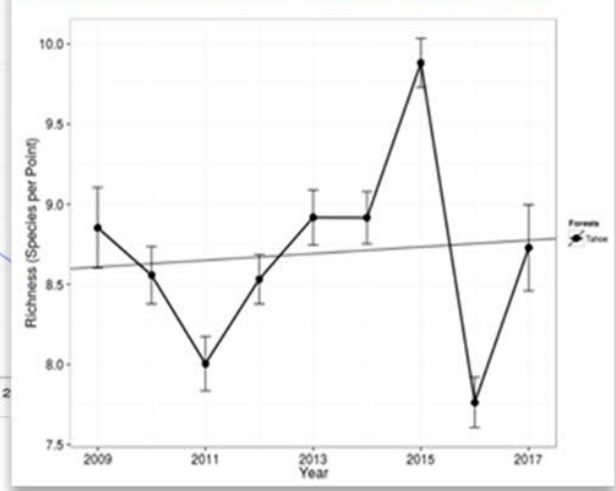
copy table to: [CSV](#) [HTML](#) [DOC](#) [PDF](#)

Common Name	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
American Crow	0	7	2	0	5	25	11	5	1	11	0
American Dipper	1	5	7	2	5	1	1	3	3	3	6
American Goldfinch	0	33	0	17	28	15	38	8	21	8	36
American Kestrel	0										
American Pipit	5										
American Redstart	0										
American Robin	44										
American Three-toed Woodpecker	2										
Audubon's Warbler	55										
Bald Eagle	0										
Band-tailed Pigeon	0										
Barn Swallow	0										
Barred Owl	1										

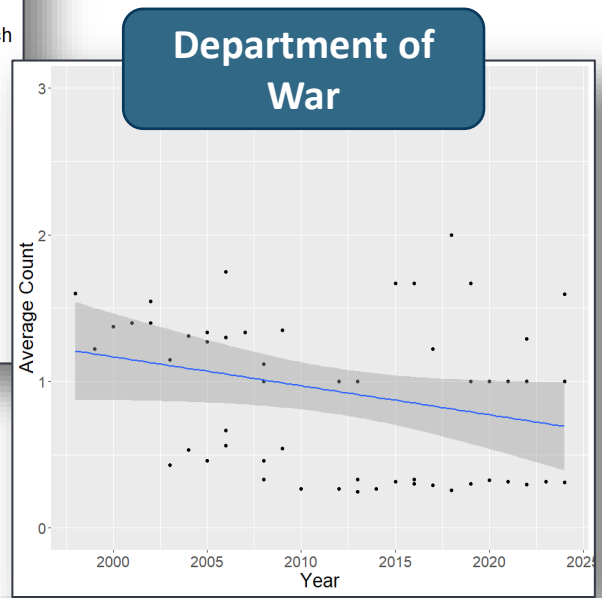
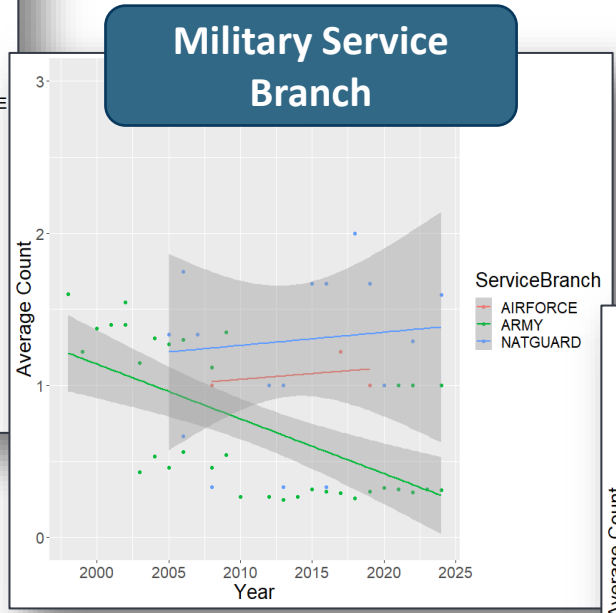
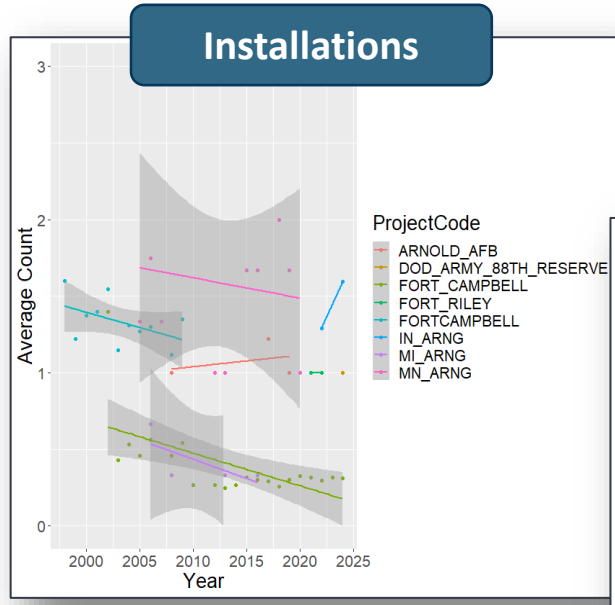
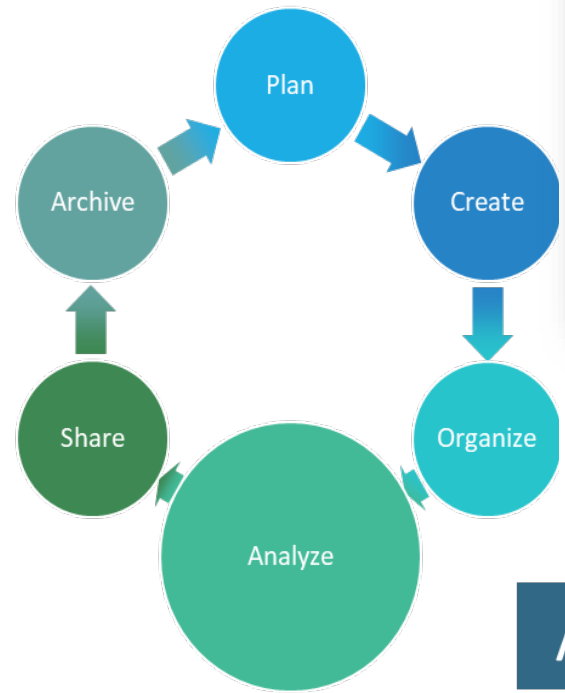
Trend in Abundance over Year Collected. Generalized additive trend estimate of Abundance by Year with locally weighed (loess) smoother. Estimate for Species = Song Sparrow Using Locally Weighed (loess) Smoother



Simple linear trend estimate of Richness (Species per Point) by Year

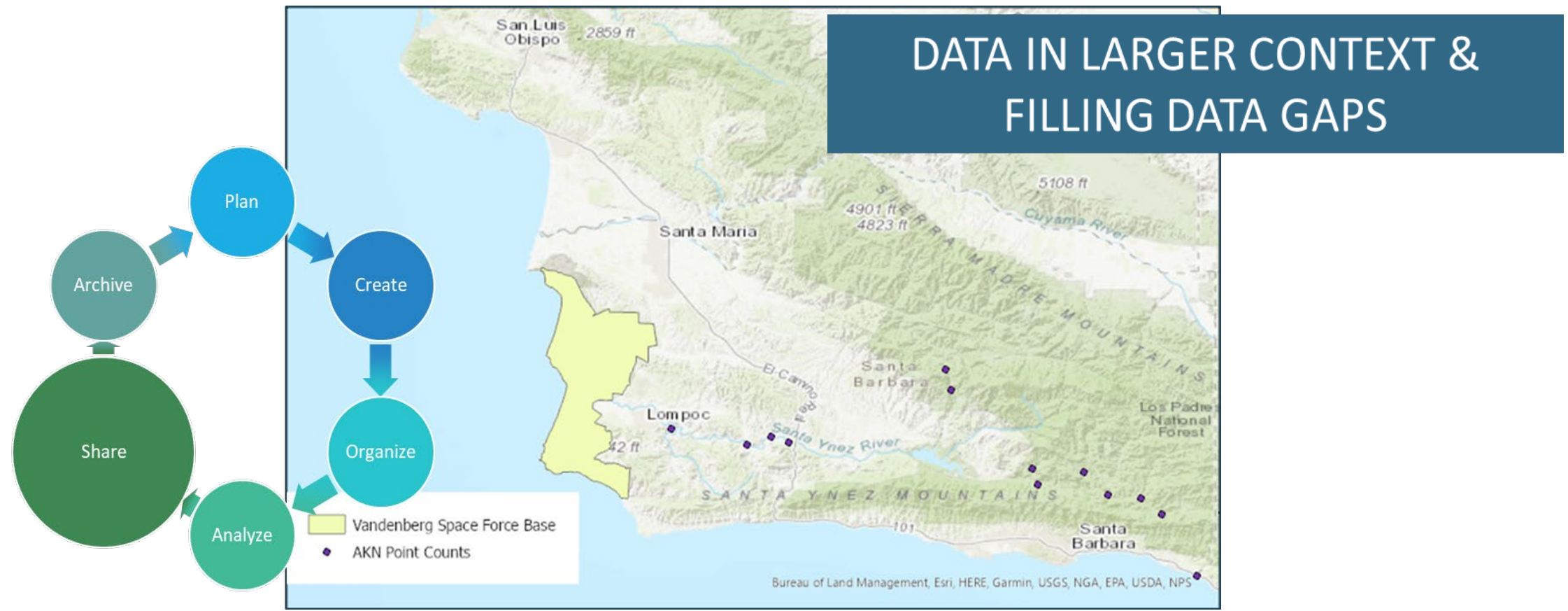


# FULL AVIAN DATA LIFE CYCLE

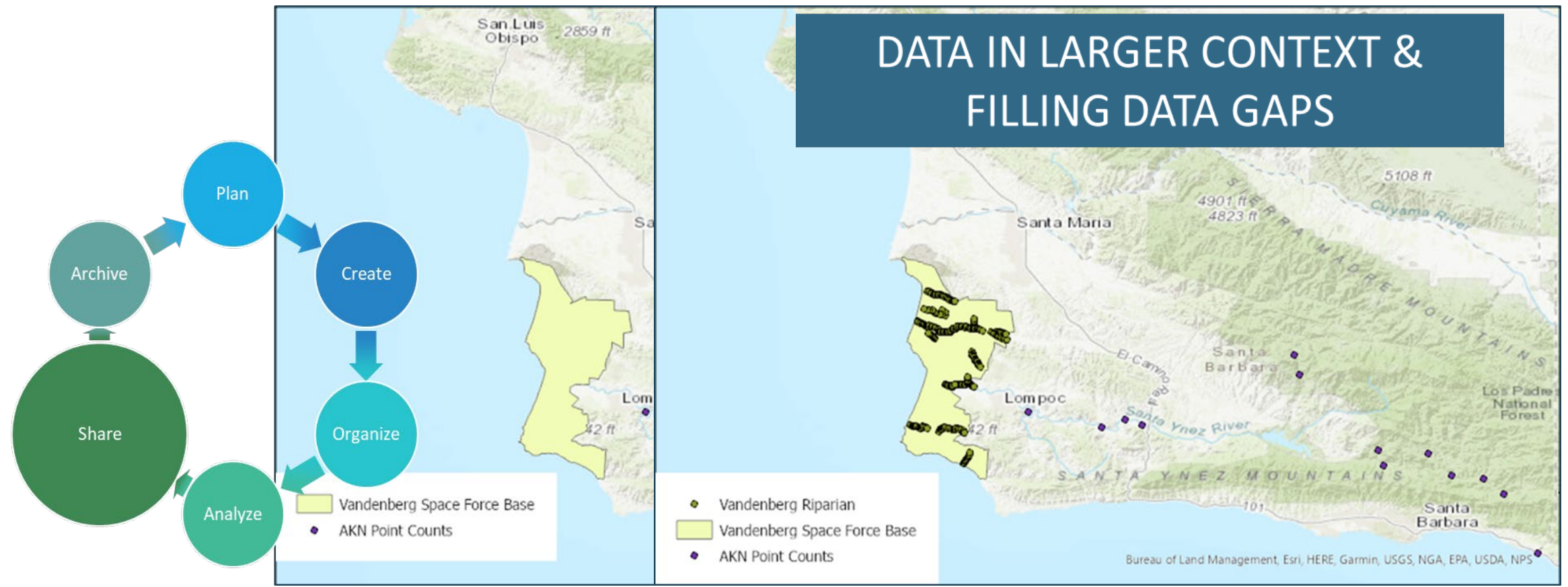


## ANALYSIS AT MULTIPLE SCALES

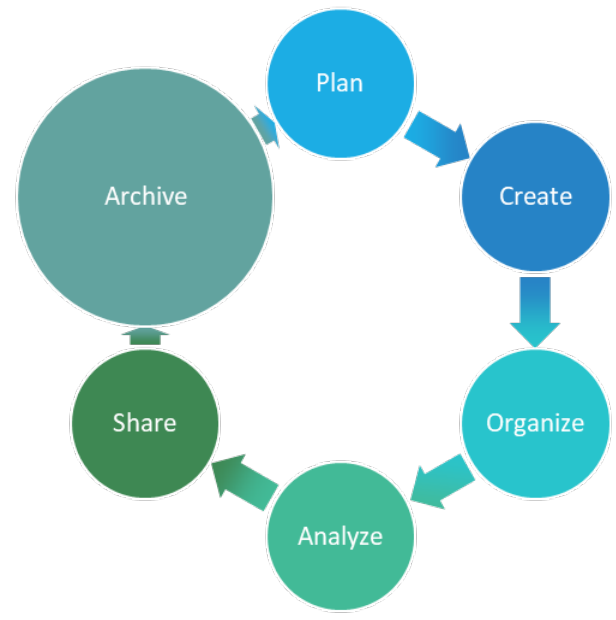
# FULL AVIAN DATA LIFE CYCLE



# FULL AVIAN DATA LIFE CYCLE



# FULL AVIAN DATA LIFE CYCLE



### Project Downloader

This tool allows you to download your observation data, sampling unit configurations, or both on a per-sampling unit, per-project basis. All projects that you have access to, including any in your program, will be available for selection. Once you click the download button, a zip file containing one CSV per selection will download from your browser.

#### Project

Select one or more projects or sampling units for data download.

Filter

All available projects and programs

Select all projects

- ▼  FORT\_CARSON - (DOD\_ARMY) Fort Carson
  - ▼  Fort Carson (FC)
    - ▼  FC IMBCR Surveys (FC\_IMBCR)
      - CO-BCR18-DO (CO-BCR18-DO)
      - CO-BCR18-FC (CO-BCR18-FC)
      - CO-BCR18-FF (CO-BCR18-FF)
      - CO-DOD16-FC (CO-DOD16-FC)
      - CO-DOD16-FF (CO-DOD16-FF)
    - Fort Carson Marshbird (FC\_MB)
    - Fort Carson Point Count (CARSON\_PC)
  - ▼  Pinon Canyon Maneuver Site (PCMS)
    - ▼  PCMS IMBCR Surveys (PCMS\_IMBCR)
      - CO-BCR18-PF (CO-BCR18-PF)
      - CO-BCR18-PM (CO-BCR18-PM)

#### Observation data

If you would like to download observation data, select the type(s) of survey data to be included in the download.

**Survey types**  
**NOTE:** If the survey data type is not available for any number of projects you've selected, those projects will not be included in the resulting download.

Point count observations

Area search observations

### View & Export Protocols

Viewing protocols within FORT\_CARSON

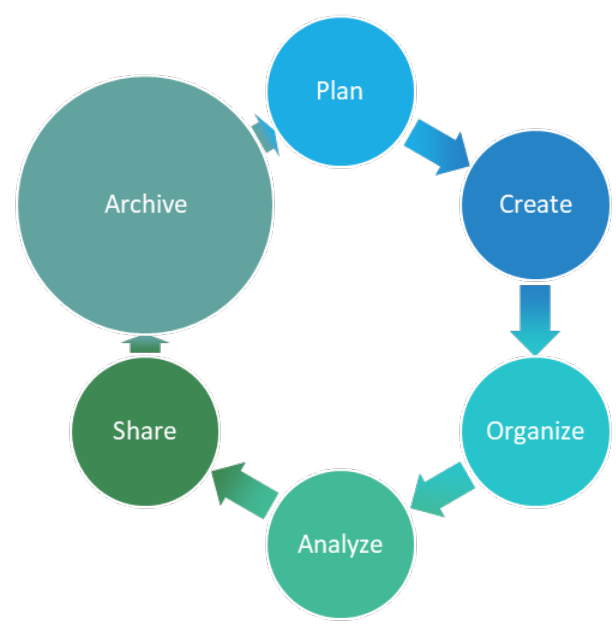
Search

Filter by type

Name	Description	Type
▶ ARSE_PUJA	Area search survey standard protocol from the PUJA Working Group	AreaSearch
▶ BLS_V_BI	BLRA,SORA,VIRA,BLTA	SecretiveMarshBirdCount
▶ IMBCR_VRPC	Bird Conservancy of the Rockies IMBCR 6 min count	PointCount
▶ SiteConditions_FORT_CARSON	Site conditions temperature, wind, sky, noise	SiteConditions

**PERMANENT STORAGE & ACCESS**

# FULL AVIAN DATA LIFE CYCLE



Service Name	Category	Authorization Level	Status	Count 1	Count 2
Perceptyx	Perceptyx Insights Platform	SaaS	Moderate	FedRAMP Authorized	1 0
]pexip[	Pexip Government Cloud (PGC)	SaaS	Moderate	FedRAMP Authorized	1 0
PingIdentity	PingOne for Government	SaaS	Moderate	FedRAMP Authorized	1 0
pitney bowes	SendPro 360	SaaS	Moderate	FedRAMP Authorized	4 3
Point Blue Conservation Science	Point Blue Science Cloud	SaaS	LI-SaaS	FedRAMP Authorized	1 0
TowerTrain	USALearning Federal Learning Enclave - SaaS	SaaS	Moderate	FedRAMP Authorized	20 19
PROJECT HORIZONS	GSS One - Azure	PaaS	Moderate	FedRAMP Authorized	9 26



# CASE STUDY: KLAMATH BIRD OBSERVATORY

## AKN for Streamlined Data Management

- Bird monitoring since mid 90's
- Data entered directly into AKN since 2016
- Streamlined data management process
- Save time and money every field season



# CASE STUDY:

# KLAMATH BIRD OBSERVATORY

## Pre-Season:

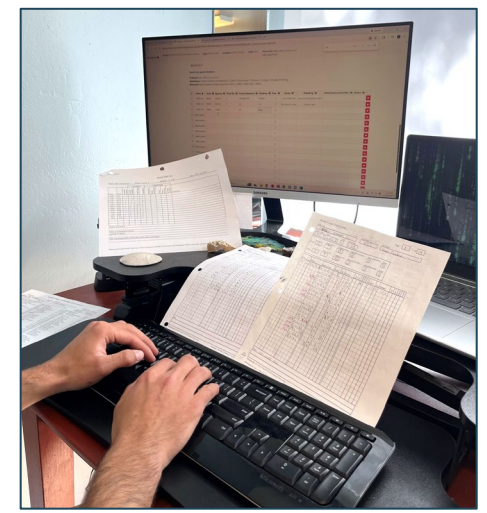
- Download survey locations from AKN to GPS units

## During Season:

- Collect data on paper forms in field
- Enter data directly into AKN

## Post-Season:

- Download data to share with partners and analyze



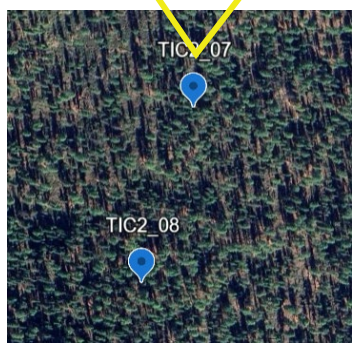


Klamath Bird Observatory

# CASE STUDY:

# KLAMATH BIRD OBSERVATORY

DecimalLatitude	DecimalLongitude	ObservationDate	Time	Collector	CommonName	SpeciesCode	Distance	DetectionCue
42.92888	-122.27877	6/17/2025	9:12:00	AH	Yellow-rumped Warbler	YRWA	20	S
42.92888	-122.27877	6/17/2025	9:15:00	AH	Pileated Woodpecker	PIWO	79	C
42.92888	-122.27877	6/17/2025	9:16:00	AH	Lazuli Bunting	LAZB	76	S
42.92888	-122.27877	6/17/2025	9:12:00	AH	Yellow-rumped Warbler	YRWA	58	S
42.92888	-122.27877	6/17/2025	9:12:00	AH	Nashville Warbler	NAWA	49	S
42.92888	-122.27877	6/17/2025	9:12:00	AH	Lazuli Bunting	LAZB	46	S
42.92888	-122.27877	6/17/2025	9:13:00	AH	Common Raven	CORA	63	V
42.92888	-122.27877	6/17/2025	9:13:00	AH	Golden-crowned Kinglet	GCKI	34	S



Cue	Description
C	Call
S	Song
V	Visual



# CASE STUDY: KLAMATH BIRD OBSERVATORY

## Advantages and Efficiencies

- No updating, managing old Access databases or spreadsheets
- Efficient QA/QC process
- Quick data access for new staff members
- No reformatting needed to compile datasets for analyses/data sharing

# CAN YOU LOG IN?

Biologists:

[data.pointblue.org/science/biologists](https://data.pointblue.org/science/biologists)

---

*Problems logging in?*

Best to find a buddy or have one of us help!



*Hermit Thrush, MCB Camp Pendleton; Credit: Tim Burr*

# LIMITATIONS AND CAVEATS

**Focus for this training:** Point Count data

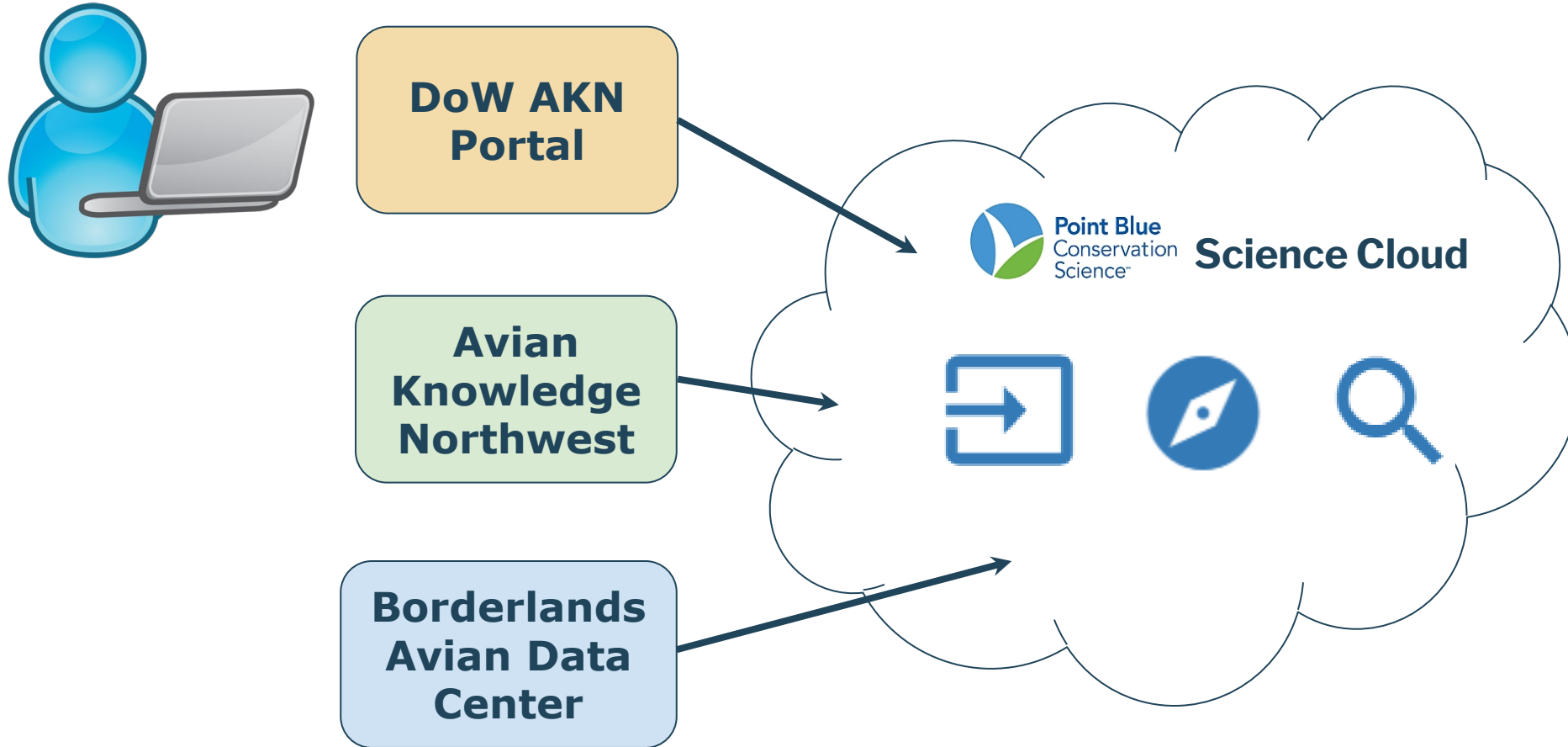
*Office Hours are where we can dig deep into your installation's specific Projects, surveys, data management/analysis needs, and any system issues.*



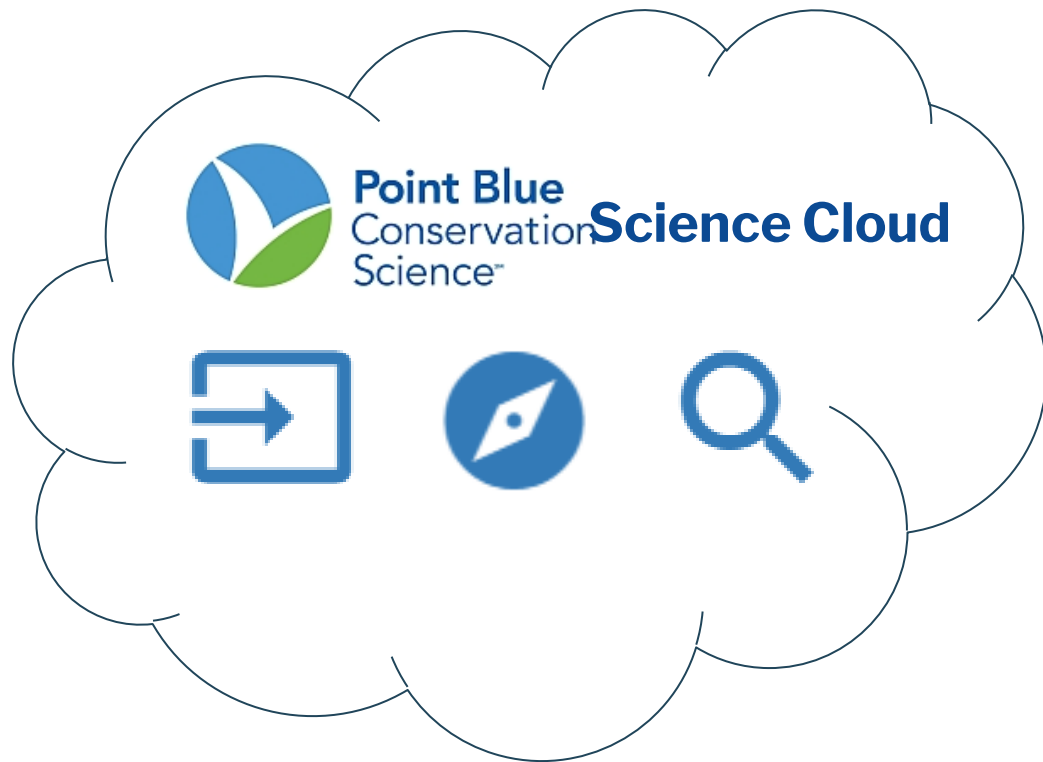
# AKN PROJECT DATA 101



# AKN: COMMON CLOUD TECHNOLOGY



# FOCUS FOR THIS TRAINING



How do we represent protocol-based science?

How do you get data in?

How do you get your data & information out?

What conservation questions can you answer?

# MA ARMY NATIONAL GUARD

- Biologist leaving position one week after training
- Had 20+ years of data
- Working through data, realized inconsistencies in data entry
- Standardized protocol in system, showing required fields to be utilized in all future surveys
- Successfully uploaded 35,000 records prior to leaving DoW
- Data ready and available to successor

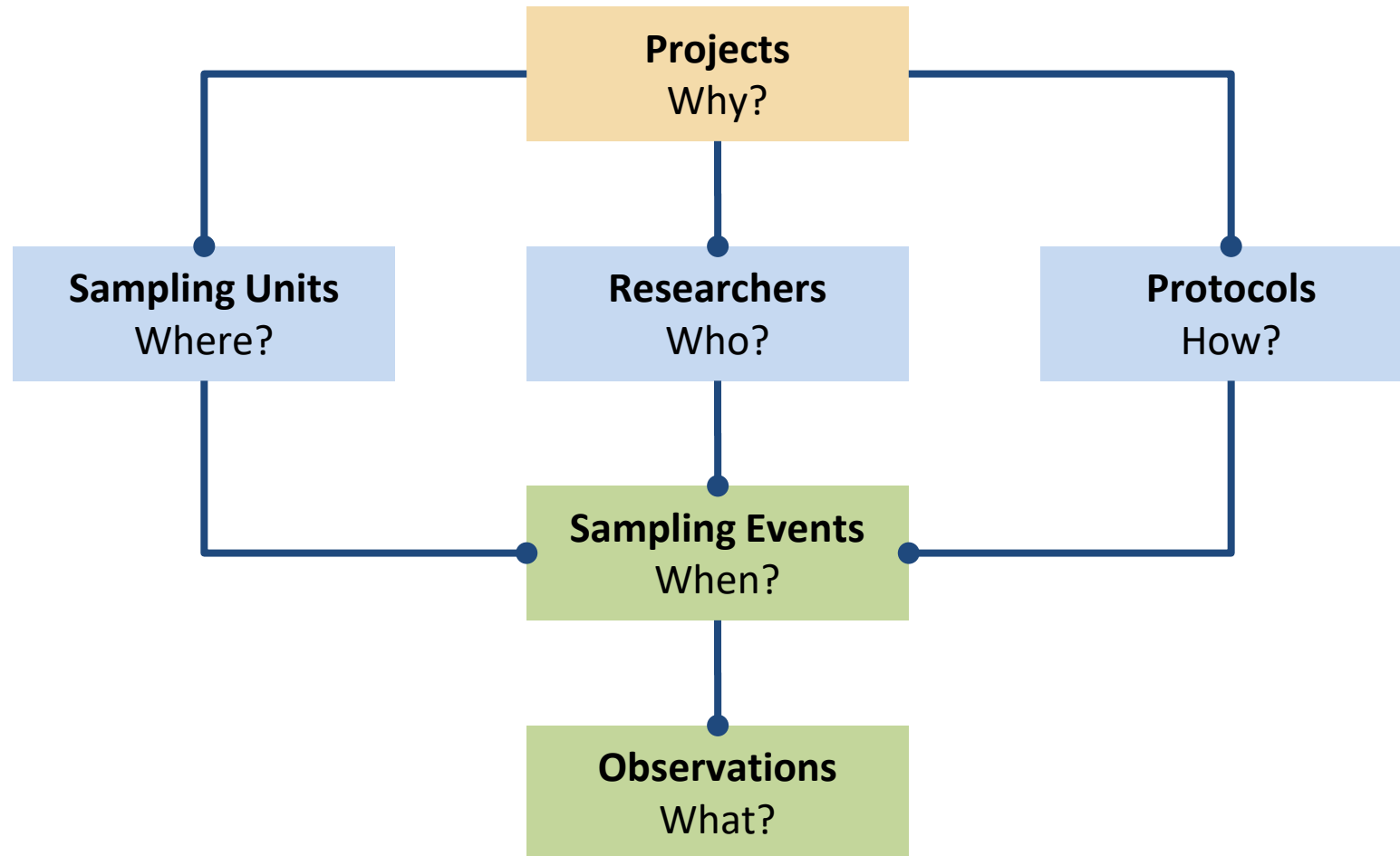


# AKN PROJECT DATA 101

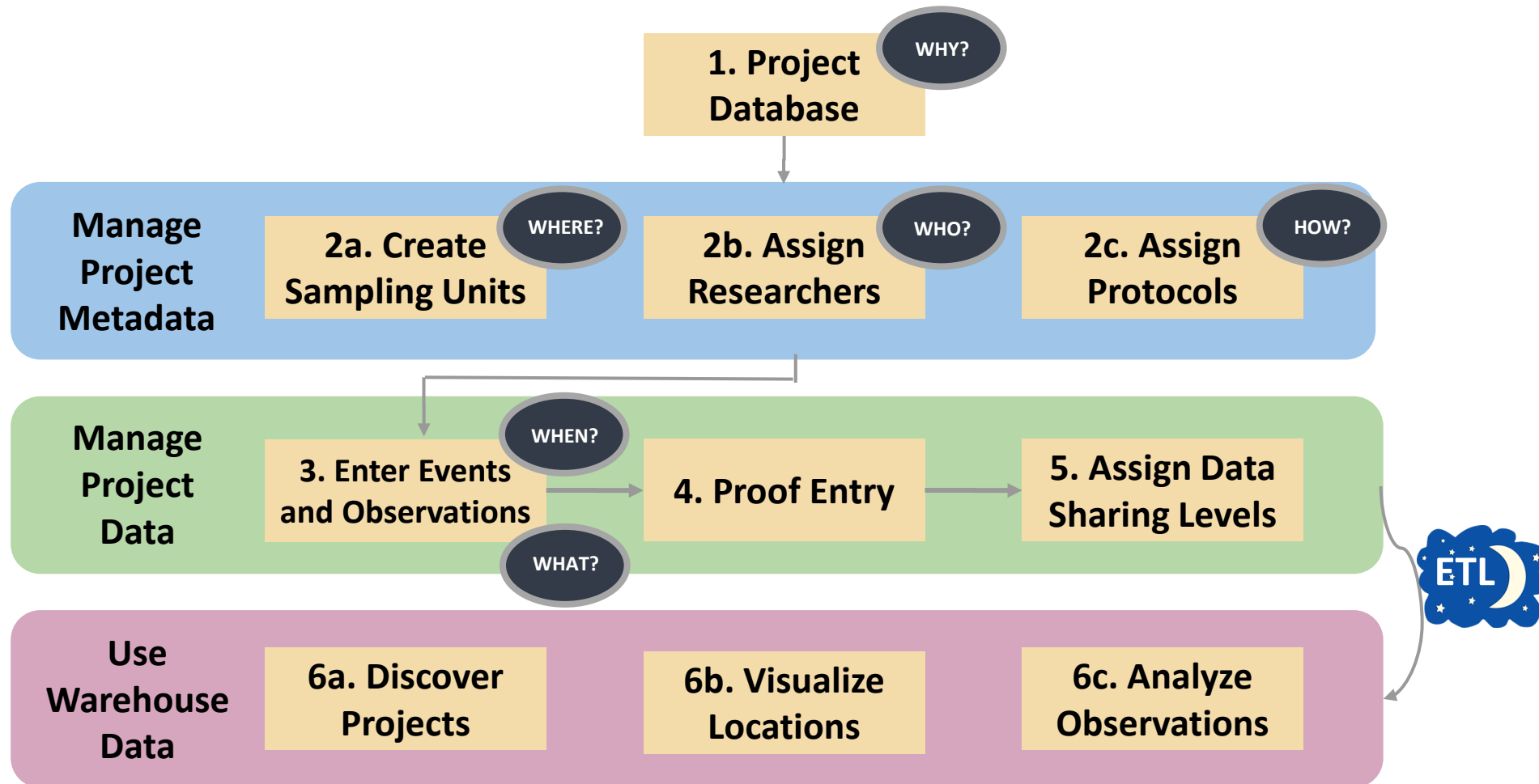
1. The parts of a Project Database

2. The workflow for creating and managing a Project

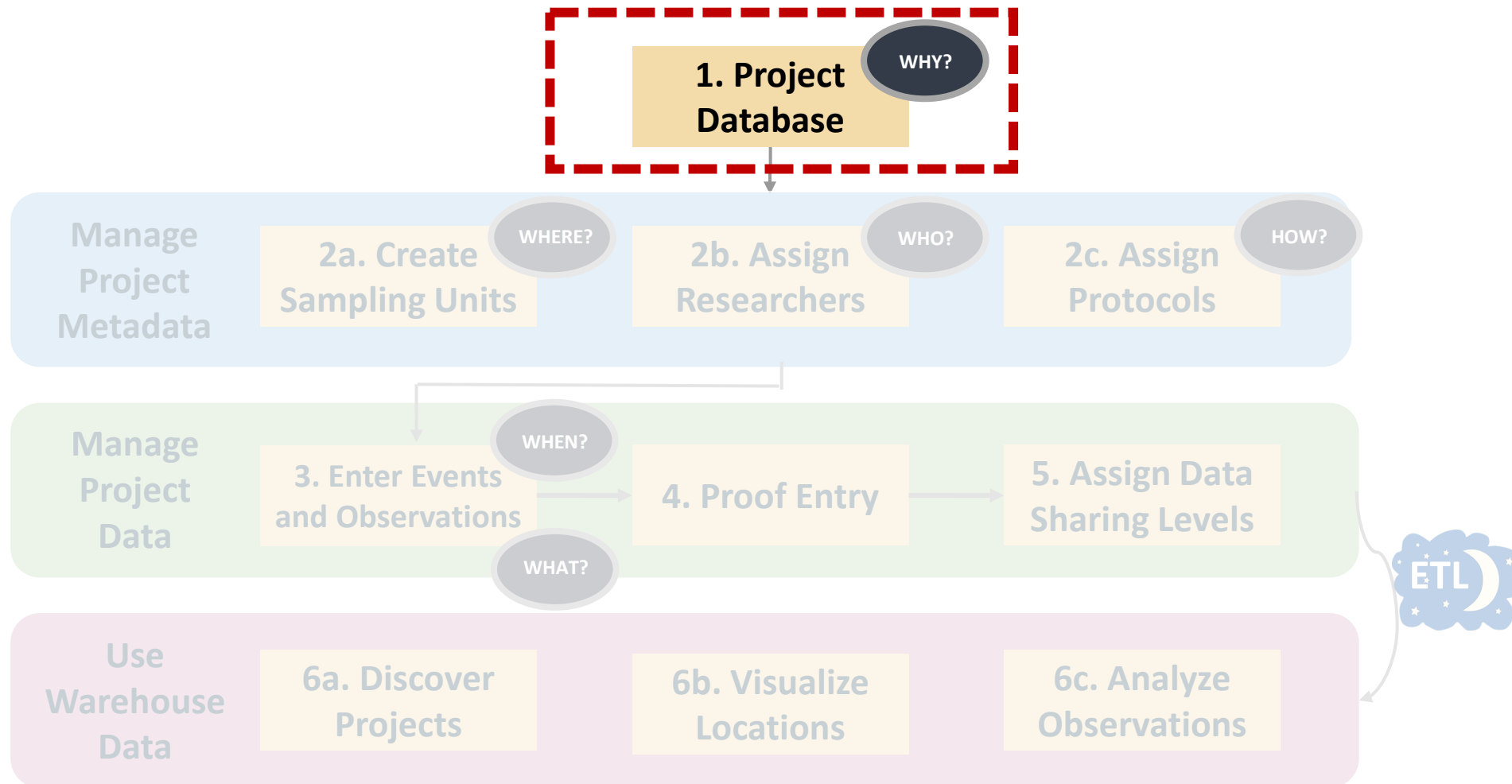
# THE PROJECT DATABASE



# WORKFLOW FOR MANAGING A PROJECT



# WORKFLOW FOR MANAGING A PROJECT



# PROJECT

Container for Event and Observation data

Many ways to organize

For DoW: Project = Installation



# DoW Program Structure



**Air Force Subprogram**



Installation Project Databases

**Army Subprogram**



Installation Project Databases

**Navy Subprogram**



Installation Project Databases

**Marine Subprogram**



Installation Project Databases

**National Guard Subprogram**



Installation Project Databases\*

\*National Guard  
Projects = State  
Installation = Study Area



# DoW Program Structure




**Air Force Subprogram**



Installation Project Databases

**Army Subprogram**



Installation Project Databases

**Navy Subprogram**



Installation Project Databases

**Marine Subprogram**



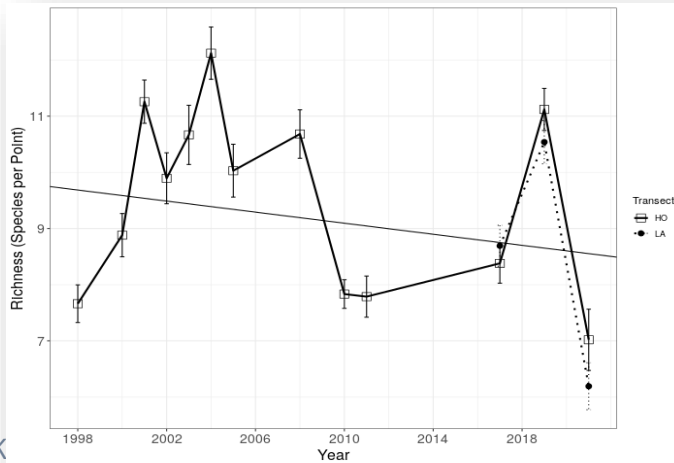
Installation Project Databases

**National Guard Subprogram**



Installation Project Databases

## Vandenberg Space Force Base Project Riparian Richness





# DoW Program Structure




**Air Force Subprogram**




Installation Project Databases

**Army Subprogram**



Installation Project Databases

**Navy Subprogram**



Installation Project Databases

**Marine Subprogram**



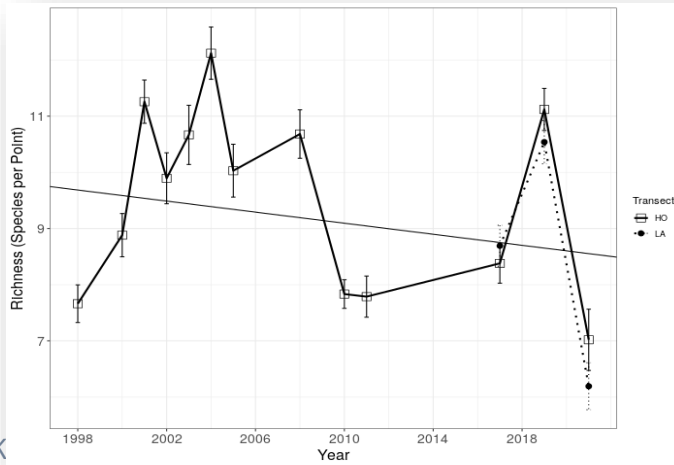
Installation Project Databases

**National Guard Subprogram**

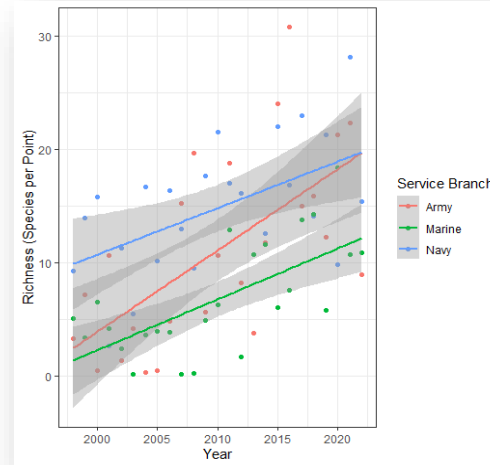


Installation Project Databases

### Vandenberg Space Force Base Project Riparian Richness



### Service Branch Program Riparian Bird Richness





# DoW Program Structure



**Air Force Subprogram**



Installation Project Databases

**Army Subprogram**




Installation Project Databases

**Navy Subprogram**



Installation Project Databases

**Marine Subprogram**



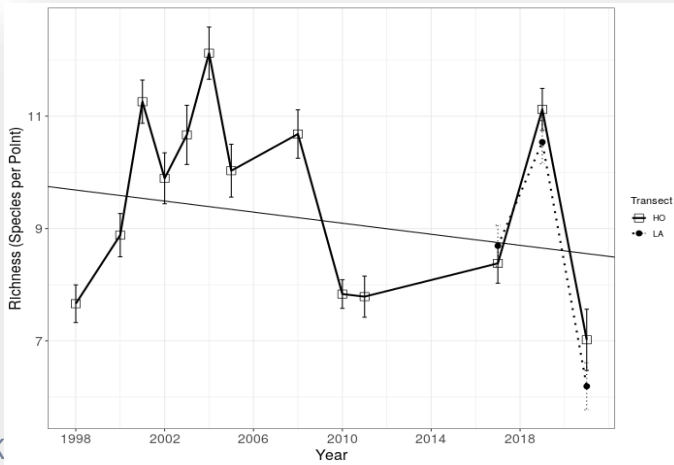
Installation Project Databases

**National Guard Subprogram**

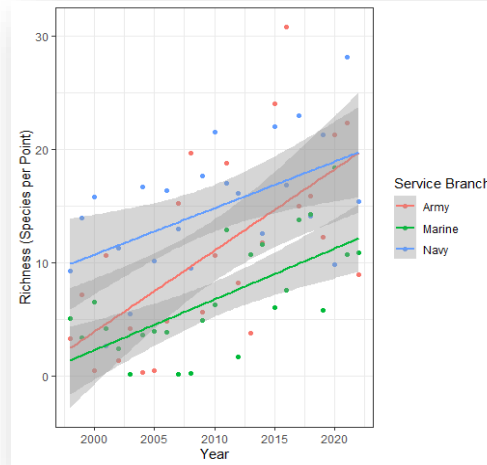


Installation Project Databases

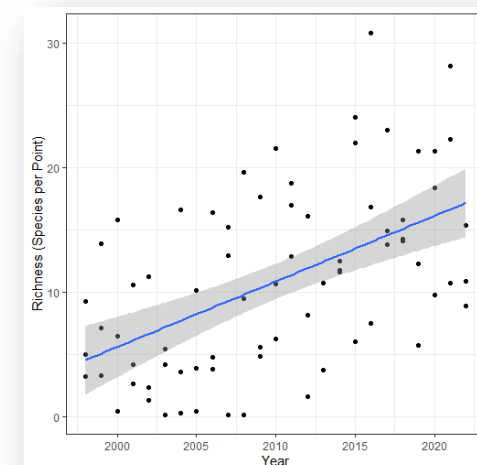
### Vandenberg Space Force Base Project Riparian Richness



### Service Branch Program Riparian Bird Richness



### DoW Program Riparian Bird Richness



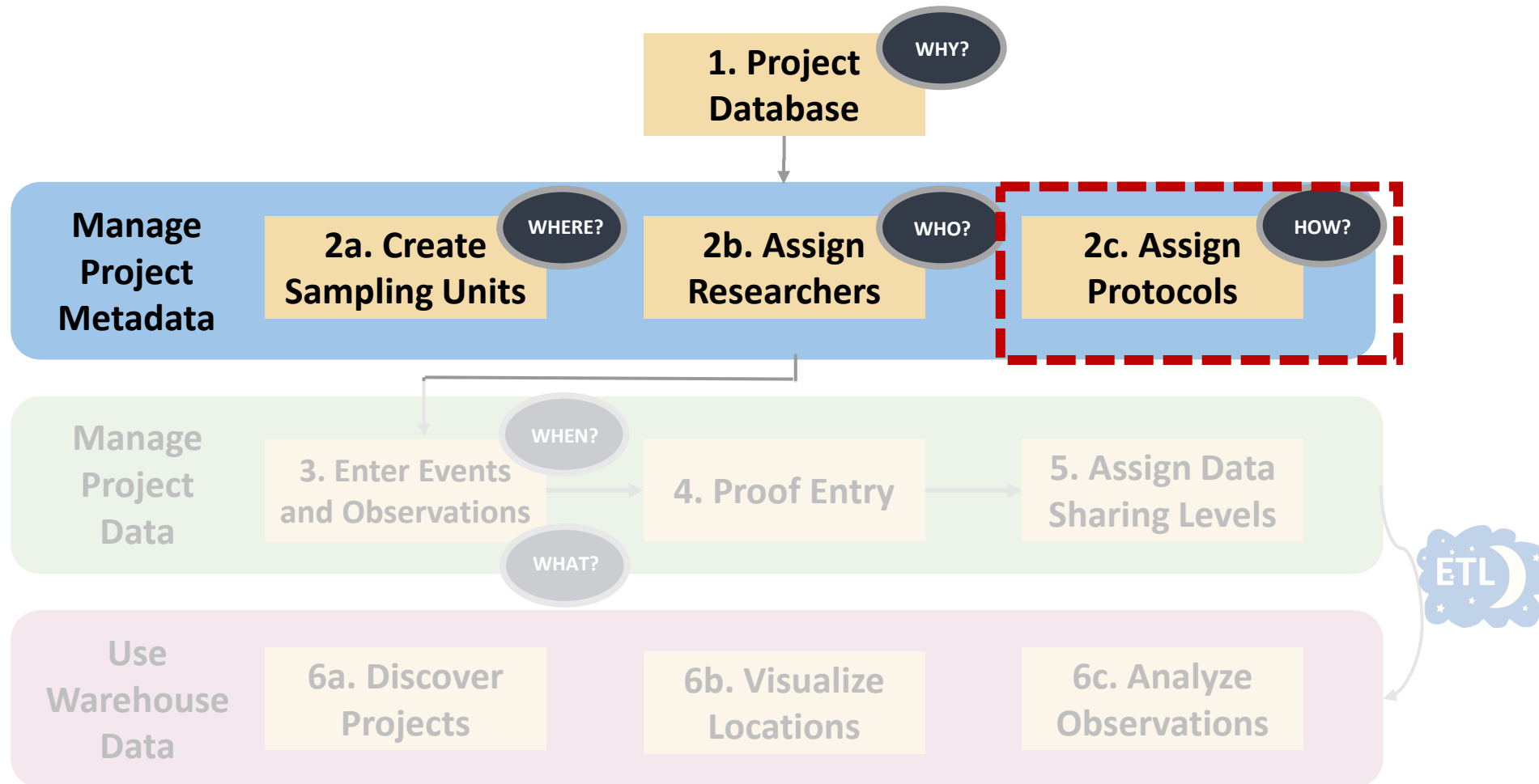


## CASE STUDY:

# BARRY M. GOLDWATER RANGE (BMGR), AZ

- Participating in Desert Thrasher Working Group
- Existing protocol in the AKN system
- Critical to add data to DoW-owned project
- Conducted surveys and entered data into BMGR project using desert thrasher data entry protocol available in AKN
- Shared data with thrasher initiative
- Data will show when querying DoW data for this species

# MANAGING A PROJECT: PROTOCOLS



# PROTOCOLS

The *metadata* describing the methods and mechanics of **how** observations were collected

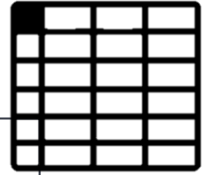
Should provide enough information for researcher 20 years from now to understand the methods you used



# FIELD METHODS

vs.

# AKN PROTOCOLS



## A Survey Protocol for Pinyon Jay Road-based Point Count Surveys

Version 1, March 2023

The road-based survey is a useful method of surveying for Pinyon Jays under certain circumstances and can be used in conjunction with or as an alternative to the Pinyon Jay Working Group (PJWG) pedestrian-based area search survey protocol (Boone et al. 2023; <https://partnersinflight.org/resources/pinyon-jay-working-group/>). Table 1 compares the two protocols.

The PJWG protocol consists of pedestrian surveys of 2.5 x 2.5 km blocks. That method is useful for discrete survey areas known or suspected to have Pinyon Jays, surveys with adequate personnel and funding to complete the time-intensive pedestrian surveys, and areas where foot traffic is allowed.

In some situations, however, road-based surveys may be more appropriate than pedestrian surveys. For example, pedestrian surveys or multiple visits may not be feasible in areas where no information on Pinyon Jay presence exists; in extremely large, previously un-surveyed areas; when financial and personnel resources are limited; or where foot traffic is prohibited, such as some areas on DoD installations.

The key elements of the road-based protocol are:

- 1) Use of 5 x 5 km blocks as the primary survey units. For analysis consistent with 2.5 km surveys, 5 km blocks can be sub-divided into 2.5 km blocks ("plots" in the PJWG protocol).

The 5 km blocks (25 km<sup>2</sup>) are recommended because of the greater geographical coverage possible with road-based surveys. This block size is based on radio telemetry studies of Pinyon Jay flocks and approximates known breeding season home ranges. [Examples include: 43.05 km<sup>2</sup> (including two colonies of 16.67 km<sup>2</sup> and 26.38 km<sup>2</sup>) (Johnson et al. 2014); 25.51 km<sup>2</sup> (Johnson et al. 2014); 26.99 km<sup>2</sup> (Novak 2019).] It is designed to reduce the possibility that a) a single flock moving over its home range will be counted two or more times, and b) more than one flock will be counted as a single flock (resulting in undercounts in a survey block that is too large). Either double-counting or under-counting is undesirable for a species of conservation concern, where accurate population estimates, trends, and occupancy are necessary for conservation and management. Road-based sampling can cover a block rapidly, before a flock can move into a neighboring block, potentially reducing both types of errors.

- 2) Delineation of survey routes along selected roads within the blocks (Figure 1). Blocks must include enough accessible road length to allow at least three point-count stops. If blocks will be subdivided into 2.5 km blocks for analysis, it is desirable to include at least three point-count stops in each 2.5 km block analyzed. However, this may not be possible

## Sampling Protocol Definition

Protocol: PIJA\_6min

Description	Road-side Point Count PIJA protocol
URL	No URL
Duration	6 minutes
Protocol type	PointCount
Other characteristics	Binned distance protocol

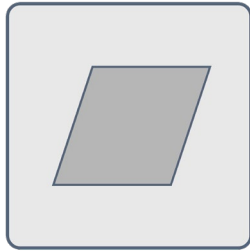
## Detection Cues

Summary: A (Aural), NA (Not recorded on datasheet), V (Visual), VA (Both Visual and Aural)

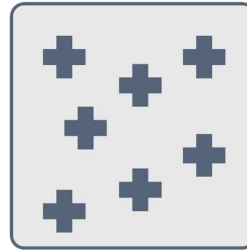
Cue	Description
A	Aural
NA	Not recorded on datasheet
V	Visual
VA	Both Visual and Aural

## Distance Bins

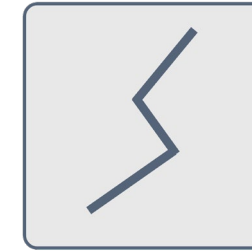
# PRIMARY PROTOCOL TYPES



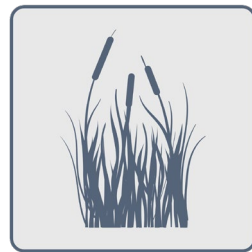
Area Search



Point Count



Linear Transect



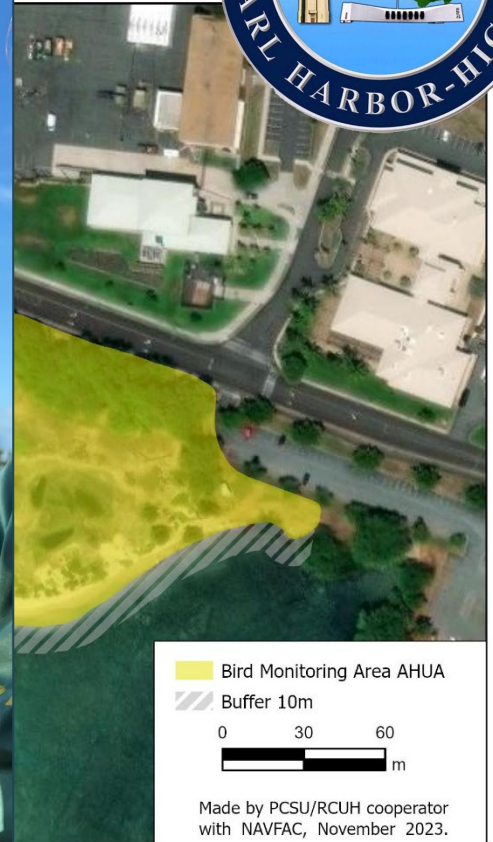
Secretive Marshbird



Site Conditions



# PROTOCOL TYPES DISCUSSION



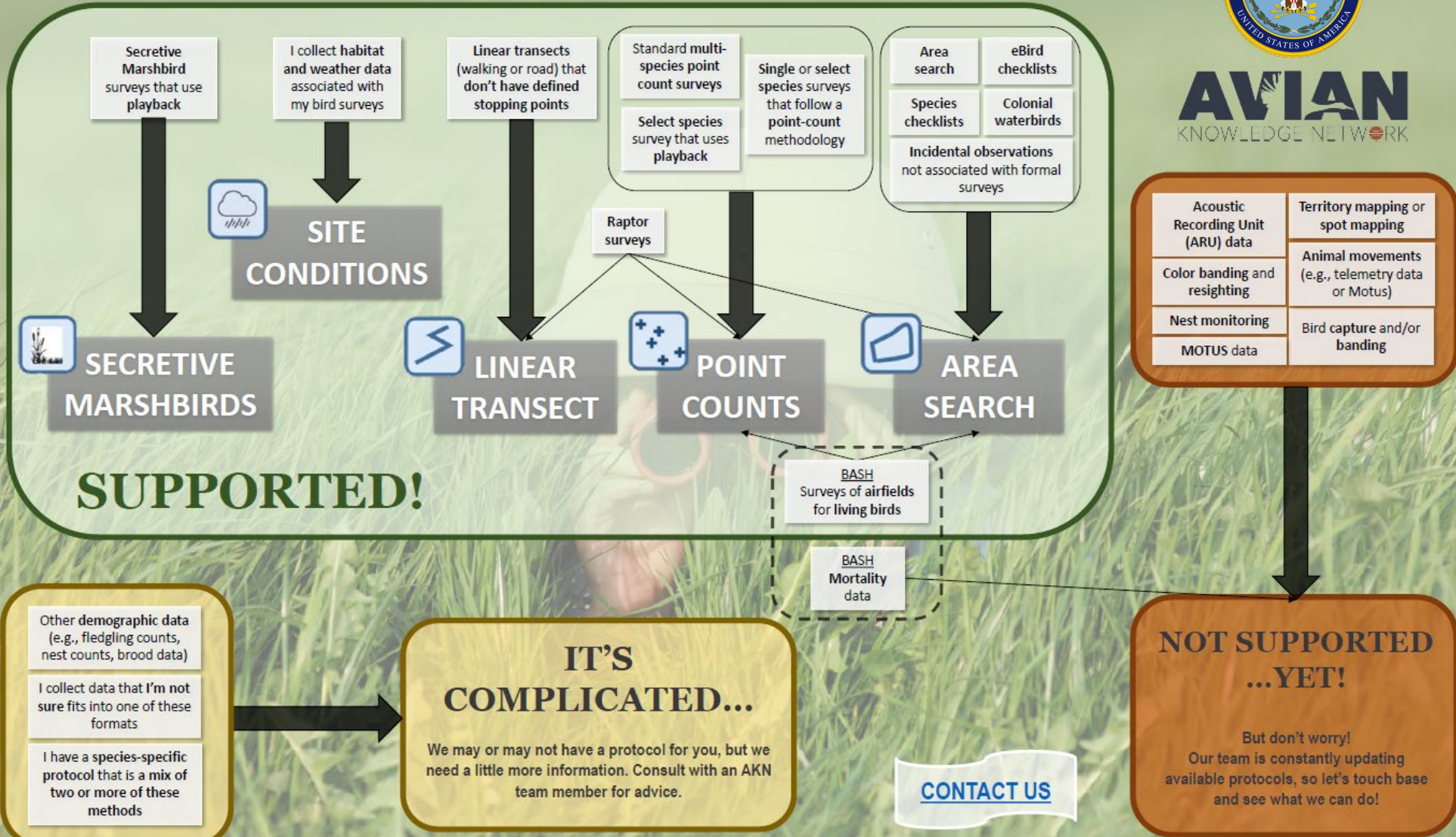
## Point Counts

DoW AKN Training – Army, 9 & 11 June 20

## 2c. Assign Protocols

HOW?

# Is your data-type currently supported in AKN??



# POINT COUNT PROTOCOLS

**Duration** of survey at each point

**Time** (binned)

**Distance** (binned or exact), maximum

**Detection** codes

Can include **breeding behavior**

Assumed **exhaustive** survey

Each animal **counted once**



# POINT COUNT PROTOCOL EXAMPLES

Compare how 3 field methodologies are represented:



Bird Conservancy of the Rockies IMBCR protocol



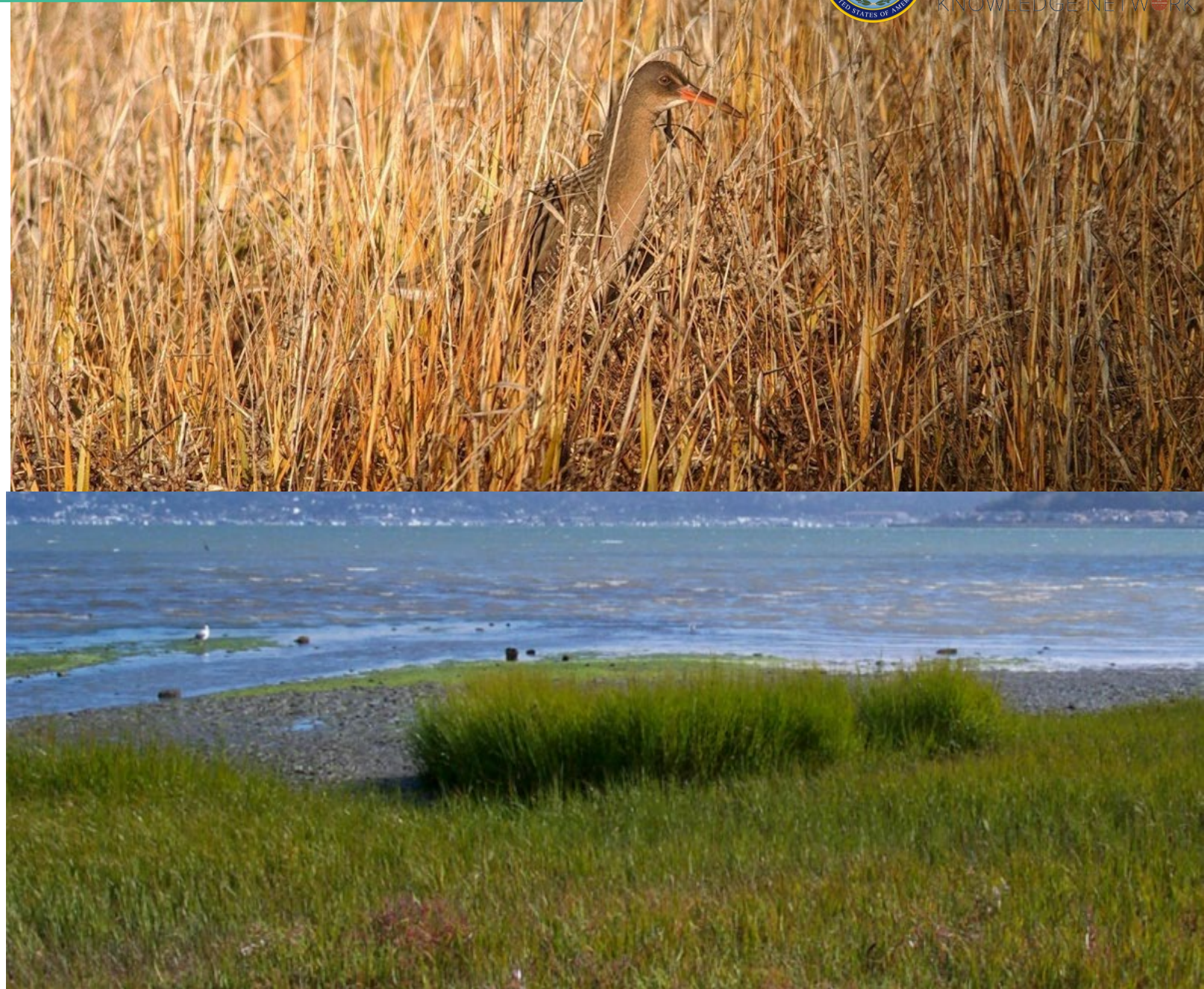
Point Blue protocol



KBO protocol



# HOW TO ACHIEVE CONFLICTING CONSERVATION OBJECTIVES: THE IMPORTANCE OF STANDARD PROTOCOLS



# ASSESSING RAIL RESPONSE TO MANAGEMENT: THE CHALLENGE



**Multi-partner Effort**



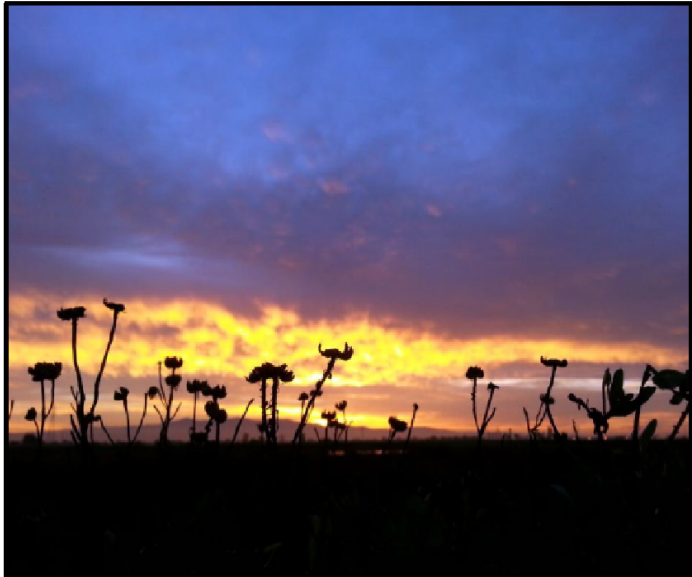
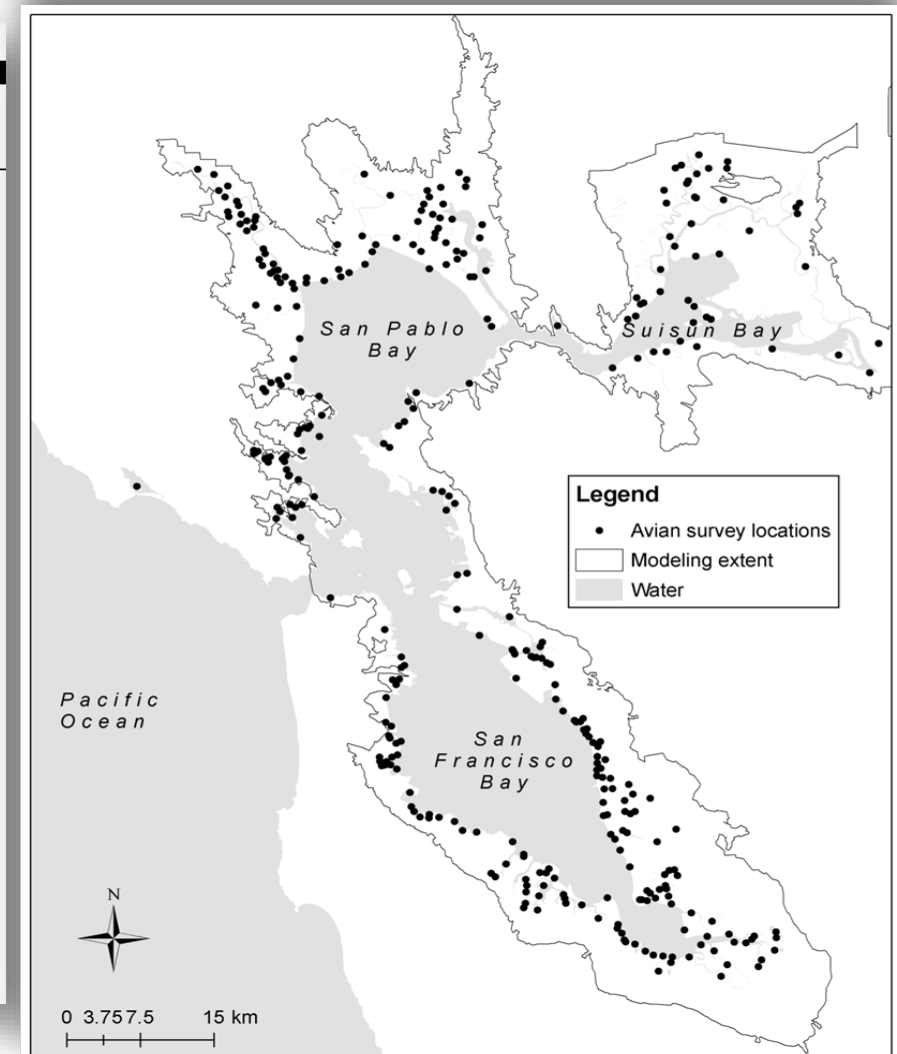
# DEVELOPING A STANDARD PROTOCOL

- North American Marsh Bird Protocol-SF Bay
  - 10 min broadcast point count
- Long-term dataset since 2005
- **All partner data in the AKN**

U.S. Fish and Wildlife Service  
U.S. Department of the Interior  
National Wildlife Refuge System  
Point Blue Conservation Science

**Site-specific Protocol for Monitoring Marsh Birds**  
*Don Edwards San Francisco Bay and San Pablo Bay National Wildlife Refuges*

Survey ID Numbers: FF08RSFB00-003 and FF08RSNP00-008

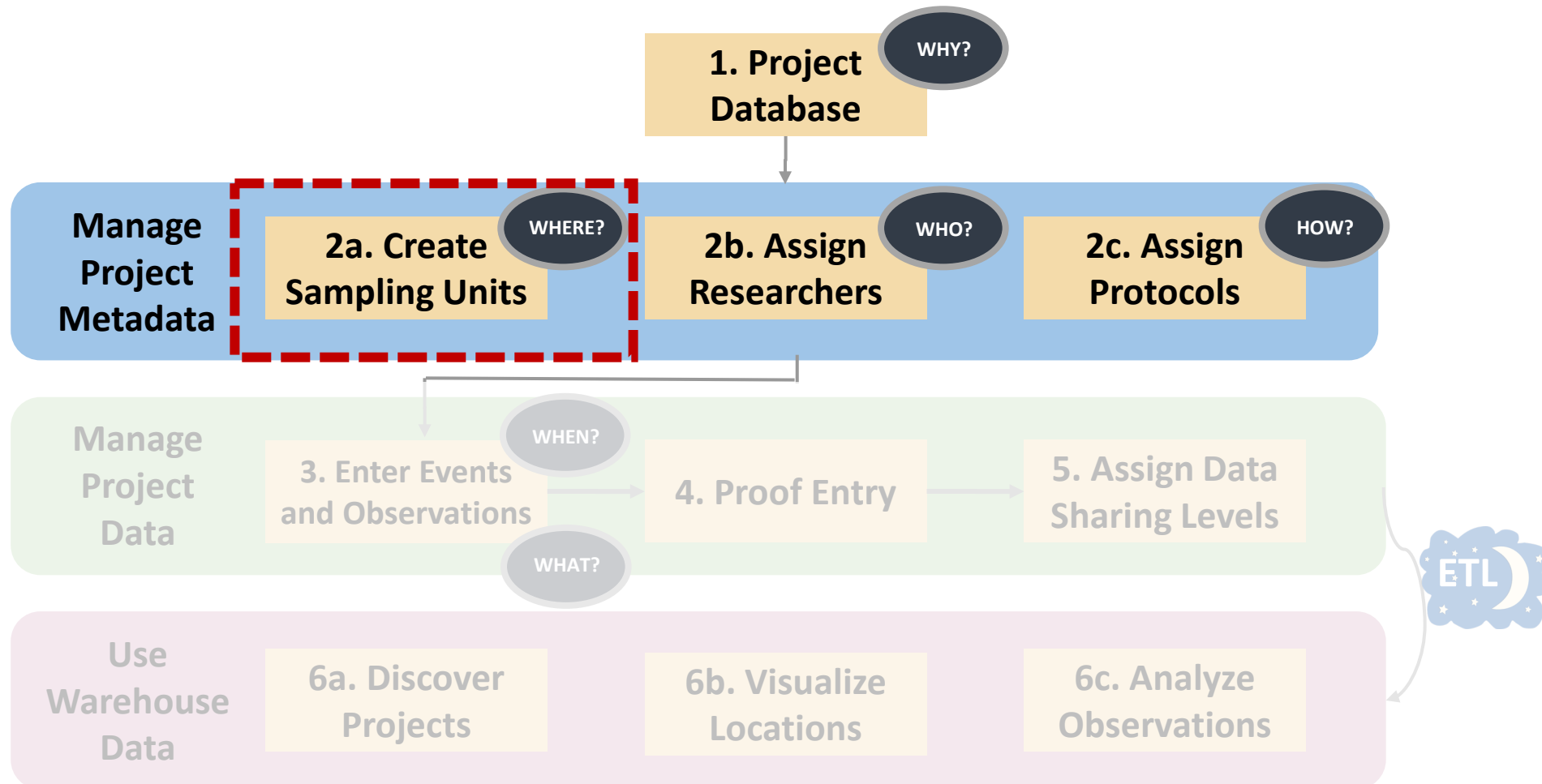
# CHOOSING PROTOCOLS (DEMONSTRATION)

Goal: select Point Count and Site Conditions protocols that match data sheet

## Tools:

- Our [data sheet](#)
- Protocol search [tool](#)
- [Project Leaders](#) for adding protocol to project

# MANAGING A PROJECT: SAMPLING UNITS



# SAMPLING UNITS

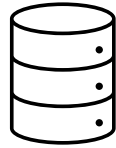
The locations where observations are collected

Organized into a tree (hierarchy)

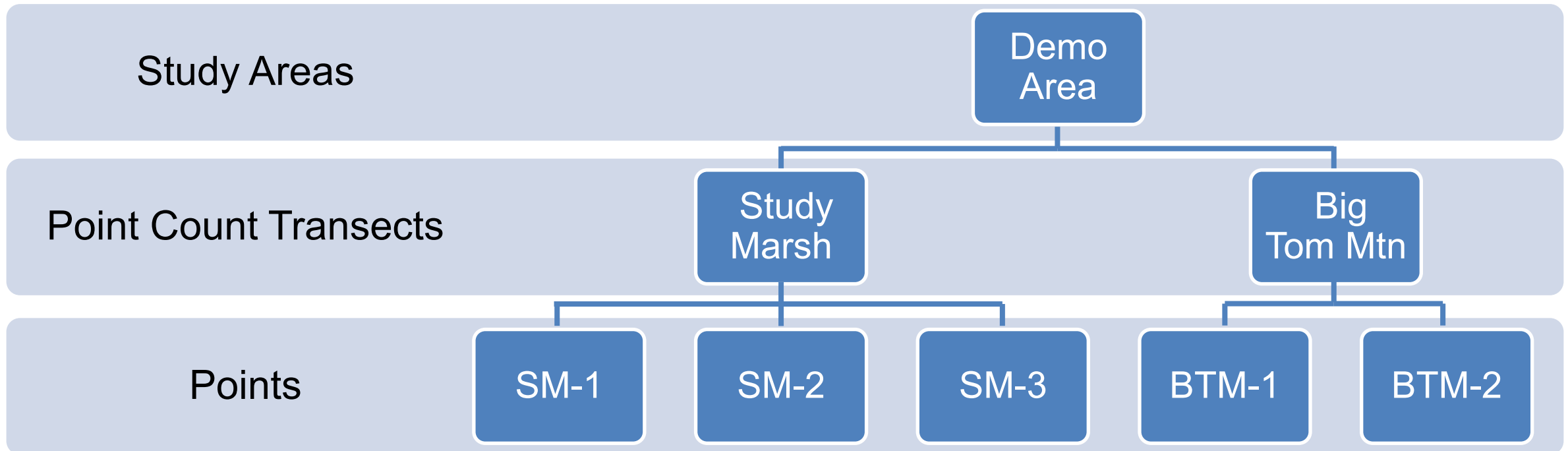
Uniquely named with Project

Can have Point/Line/Polygon

# SAMPLING UNIT TYPES FOR POINT COUNTS



Project: DOD\_DEMO

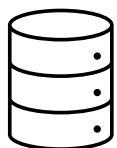


Replicates or independent points?  
What questions are you asking?

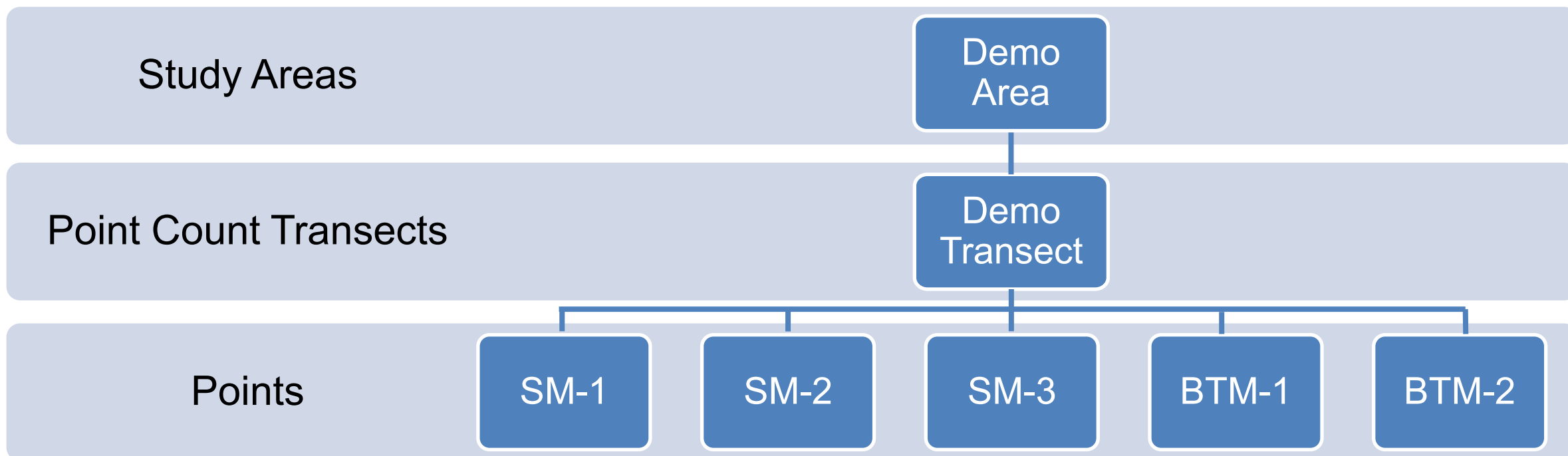
2a. Create  
Sampling Units

WHERE?

# SAMPLING UNIT TYPES FOR POINT COUNTS



Project: DOD\_DEMO

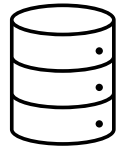


**Replicates** or independent points?  
 What questions are you asking?

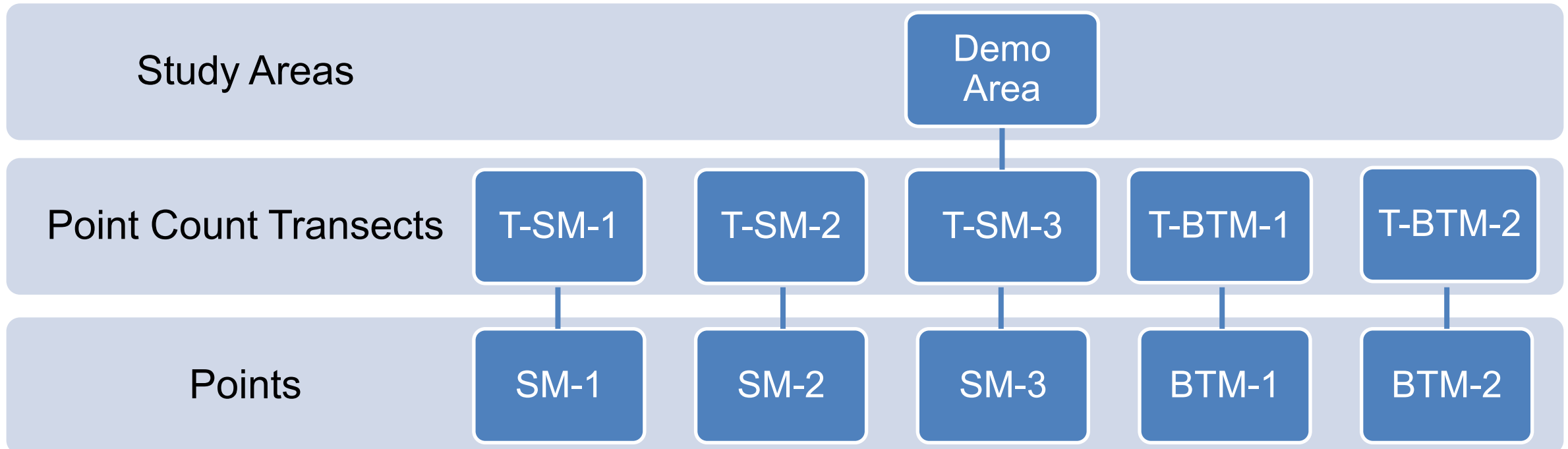
2a. Create  
 Sampling Units

WHERE?

# SAMPLING UNIT TYPES FOR POINT COUNTS



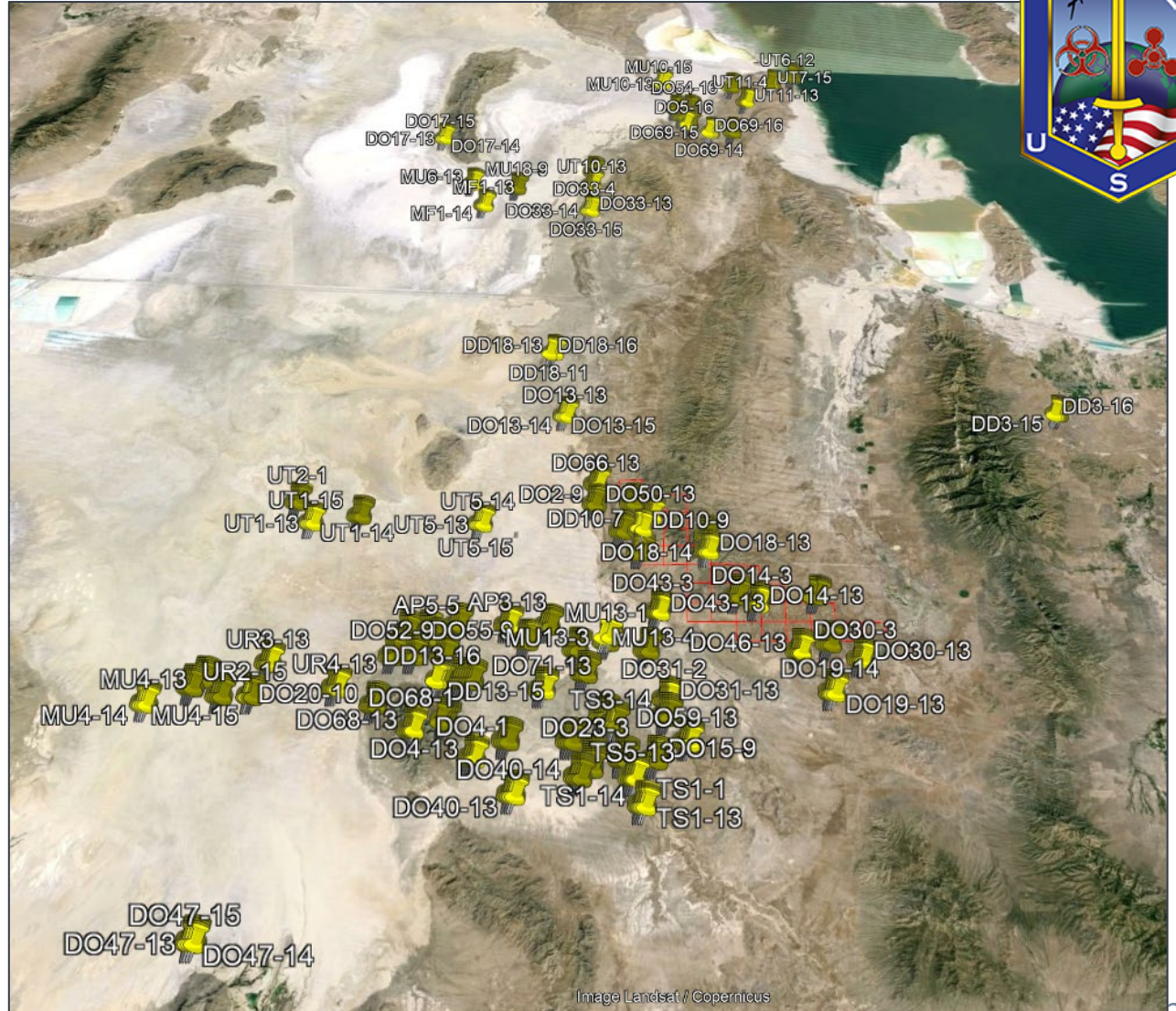
**Project:** DOD\_DEMO



**Example-** Single-point Transects (independent points)

★ DUGWAY PROVING GROUND - [DOD\_ARMY] Dugway Proving Ground

- # IMBCR (IMBCR)
  - ▶ ○ # IMBCR All Other DoD Lands (UT-BCRg-DD)
  - ▶ ○ # IMBCR APG (UT-BCRg-AP)
  - ▶ ○ # IMBCR DoD Lands Pre Reestratification (UT-BCRg-DO)
  - ▶ ○ # IMBCR Mud Flat Pre Reestratification (UT-BCRg-MF)
  - ▶ ○ # IMBCR Mudflats (UT-BCRg-MU)
  - ▶ ○ # IMBCR Target S (UT-BCRg-TS)
  - ▶ ○ # IMBCR UTG (UT-BCRg-UR)
  - ▶ ○ # IMBCR UTTR (UT-BCRg-UT)
- ▶ ○ # PIJA Landscape Survey (PIJA)





= Point Count Point

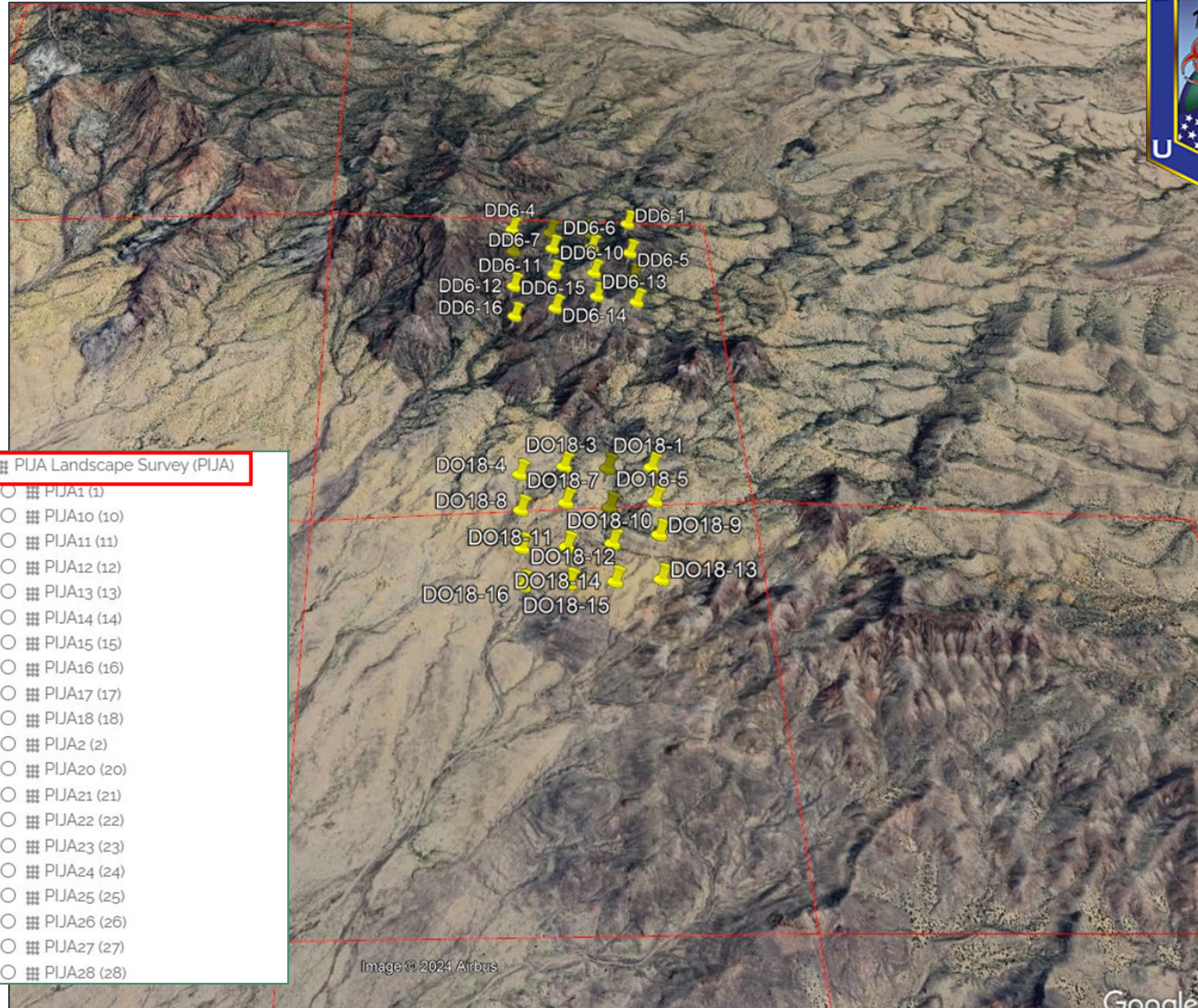


= Area Search



- ★ DUGWAY\_PROVING\_GROUND - [DOD\_ARMY] Dugway Proving Ground
  - ▼ ○ # IMBCR (IMBCR)
    - ▼ ○ # IMBCR All Other DoD Lands (UT-BCRg-DD)
      - ▶ ○ # UT-BCRg-DD1 (DD1)
      - ▶ ○ # UT-BCRg-DD10 (DD10)
      - ▶ ○ # UT-BCRg-DD13 (DD13)
      - ▶ ○ # UT-BCRg-DD18 (DD18)
      - ▶ ○ # UT-BCRg-DD22 (DD22)
      - ▶ ○ # UT-BCRg-DD3 (DD3)
      - ▶ ○ # UT-BCRg-DD30 (DD30)
      - ▶ ○ # UT-BCRg-DD4 (DD4)
      - ▶ ○ # UT-BCRg-DD5 (DD5)
      - ▼ ○ # UT-BCRg-DD6 (DD6)
        - # DD6-1 (DD6-1)
        - # DD6-10 (DD6-10)
        - # DD6-11 (DD6-11)
        - # DD6-12 (DD6-12)
        - # DD6-13 (DD6-13)
        - # DD6-14 (DD6-14)
        - # DD6-15 (DD6-15)
        - # DD6-16 (DD6-16)
        - # DD6-2 (DD6-2)
        - # DD6-3 (DD6-3)
        - # DD6-4 (DD6-4)
        - # DD6-5 (DD6-5)
        - # DD6-6 (DD6-6)
        - # DD6-7 (DD6-7)
        - # DD6-8 (DD6-8)
        - # DD6-9 (DD6-9)
      - ▶ ○ # UT-BCRg-DD9 (DD9)
    - ▶ ○ # IMBCR APG (UT-BCRg-AP)
    - ▶ ○ # IMBCR DoD Lands Pre Restratification (UT-BCRg-DO)
    - ▶ ○ # IMBCR Mud Flat Pre Restratification (UT-BCRg-MF)
    - ▶ ○ # IMBCR Mudflats (UT-BCRg-MU)
    - ▶ ○ # IMBCR Target S (UT-BCRg-TS)
    - ▶ ○ # IMBCR UTG (UT-BCRg-UR)
    - ▶ ○ # IMBCR UTTR (UT-BCRg-UT)
    - ▶ ○ # IMBCR UTTR (UT-BCRg-UT)
  - ▶ ○ # IMBCR APG (UT-BCRg-AP)
  - ▶ ○ # IMBCR DoD Lands Pre Restratification (UT-BCRg-DO)
  - ▶ ○ # IMBCR Mud Flat Pre Restratification (UT-BCRg-MF)
  - ▶ ○ # IMBCR Mudflats (UT-BCRg-MU)
  - ▶ ○ # IMBCR Target S (UT-BCRg-TS)
  - ▶ ○ # IMBCR UTG (UT-BCRg-UR)
  - ▶ ○ # IMBCR UTTR (UT-BCRg-UT)
  - ▶ ○ # IMBCR UTTR (UT-BCRg-UT)

- ▼ ○ # PIJA Landscape Survey (PIJA)
  - # PIJA1 (1)
  - # PIJA10 (10)
  - # PIJA11 (11)
  - # PIJA12 (12)
  - # PIJA13 (13)
  - # PIJA14 (14)
  - # PIJA15 (15)
  - # PIJA16 (16)
  - # PIJA17 (17)
  - # PIJA18 (18)
  - # PIJA2 (2)
  - # PIJA20 (20)
  - # PIJA21 (21)
  - # PIJA22 (22)
  - # PIJA23 (23)
  - # PIJA24 (24)
  - # PIJA25 (25)
  - # PIJA26 (26)
  - # PIJA27 (27)
  - # PIJA28 (28)





# EXAMPLE: FORT HOOD, TX

- Both the Adaptive and Integrative Management Team and Endangered Species Team utilizing system in one installation project
- Structured sampling units for differing survey types

View & Export Protocols

Viewing protocols within FORT\_CAVAZOS

Search

Filter by type All available types

Name	Description	Type
▶ 5_5TB_8DC_exact_ext	Exact distance point count lasting 5 minutes split into 1-minute time bins with detection cues, sex, and cluster codes	PointCount
▶ BCVI_Habitat_Weather	Habitat and Weather for BCVI Surveys	SiteConditions
▶ BCVI_VRPC	Variable-radius point count lasting 3 minutes adapted for BCVI surveys	PointCount
▶ FTHOOD_WEATHER_COWS	Weather with temp, wind, sky, and precipitation, and total number of cows	SiteConditions
▶ FTHOOD_WEATHER_FALL_COWS	Weather with temp, wind, sky, and precipitation, and total number of cows for fall point counts	SiteConditions

- ▼  ★ FORT\_CAVAZOS - [DOD\_ARMY] Fort Cavazos
  - ▶  # Black-capped Vireo Distance Sampling (BCVI\_DS)
  - ▶  # Fort Hood Cowbird Traps (FHCT)
  - ▶  # Grassland Breeding Bird Survey (GBBS)
  - ▶  # Grassland Point Counts 2016-2018 (GRASSLAND)
  - ▶  # Monitoring of Owls and Nightjars (MOON)
  - ▶  # Northern Bobwhite Point Counts (NOBO\_PC)



# BREAK

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## NEXT: CREATING SAMPLING UNITS & ADDING RESEARCHERS





# MANAGING PROJECT METADATA

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## EXERCISE 1: CREATE SAMPLING UNITS

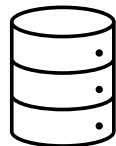


# CREATE SAMPLING UNITS

## EXERCISE 1

**Purpose:** Learn how to create a sampling unit hierarchy within a project to support a point count survey

**Goal:** Create a new point count transect with one point under your service branch's Study Area (e.g., Army) in the "DOD\_DEMO" Project

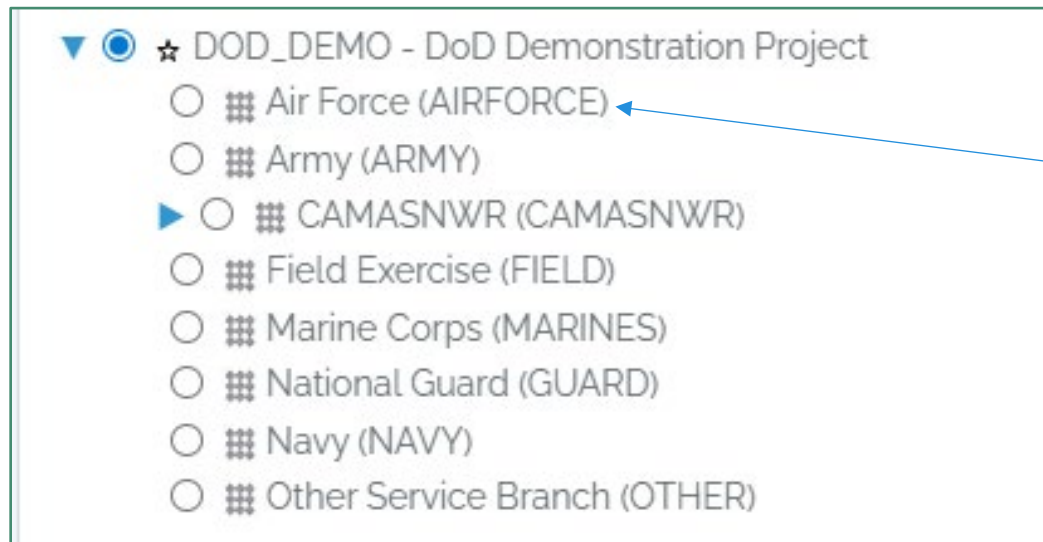


**Project:** DOD\_DEMO

# CREATE SAMPLING UNITS

## EXERCISE 1

**Reminder about Study Areas:** In the project DOD\_DEMO, your STUDY AREA is your service branch. The name is listed first, followed by the short name in parentheses.



For example, this Study Area Name is Air Force, and the Study Area Short Name is AIRFORCE

# CREATE SAMPLING UNITS

## EXERCISE 1

[Exercise 1 instructions](#)

# CREATE SAMPLING UNITS

## EXERCISE 1 *(THINKING AHEAD)*

- Consider how you might organize your data
  - Study Areas can be based on survey type rather than geography:
    - Ex- Study Area 1: multi-species point counts
    - Ex- Study Area 2: burrowing owl surveys
  - Only group points together in the same transect if they are part of the same survey (geographically grouped and collected on the same day)
  - Consider how you might name your study locations based on geographic features and numbers. (e.g., Emerald Hills 1, Alpha Maneuver Area 3)
  - Remember the hierarchy for point counts is  
**Study Area → Transect → Point(s)**
- We will be building on this exercise later! Think about how your naming strategy can scale as you add surveys and points.

# LONG NAME VS SHORT NAME: WHAT'S THE DIFFERENCE?

- Every sampling unit has a **Short Name** and a **Long Name**
  - Short Names and Long Names can be the same
- **Short Name + Long Name** combinations must be unique within an AKN Project
  - e.g., transect names and point count names **CAN NOT BE THE SAME**
- **Short Names** will be seen throughout the tools and in your data download
  - It is the shorthand name for each sampling unit
- **Short Names** are limited to 12 characters
- **Long Names** can be longer and more descriptive, if useful

# LONG NAME VS SHORT NAME: WHAT'S THE DIFFERENCE?

**EXAMPLES** (any of these would be correct):

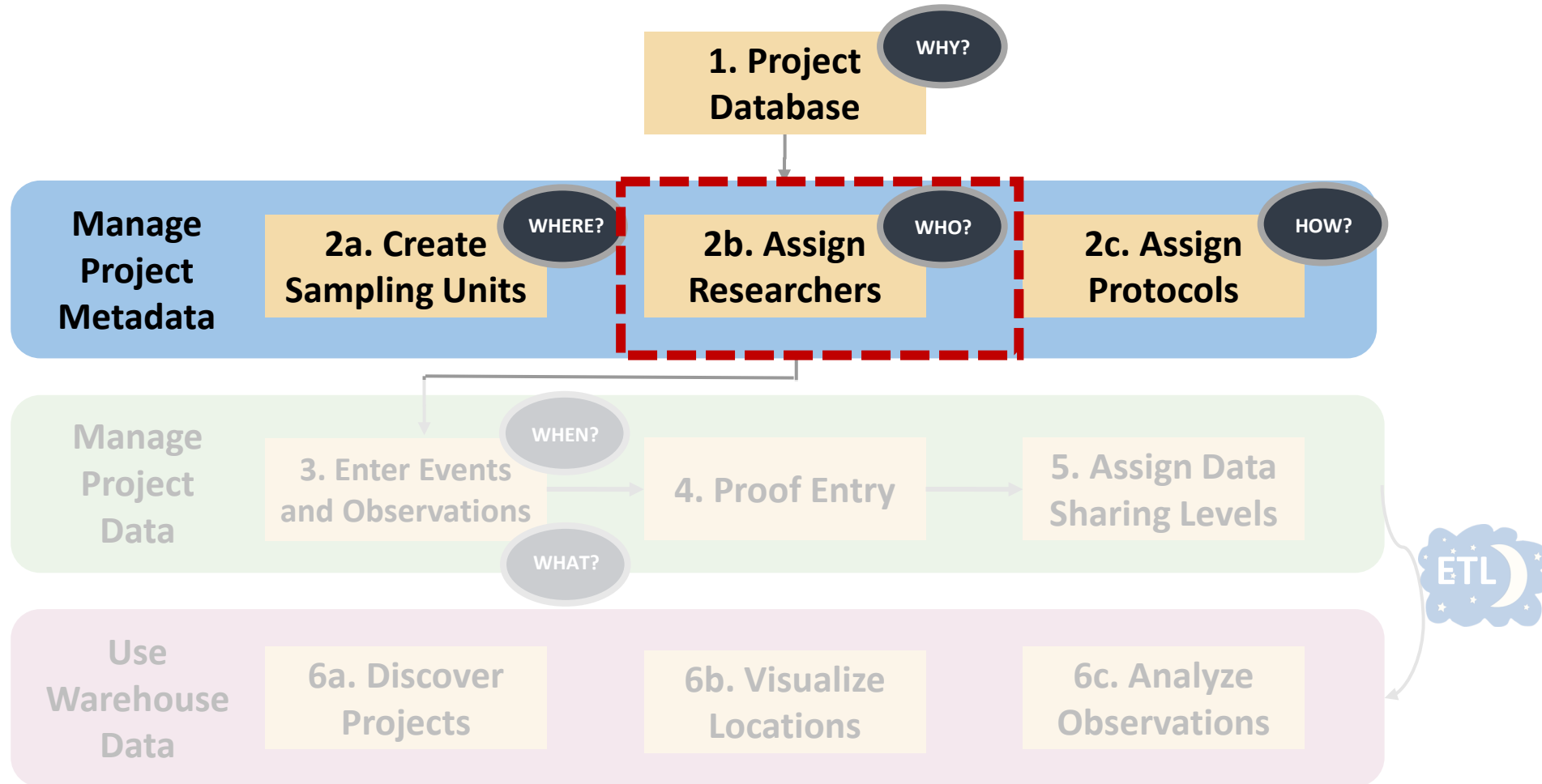
Point Count Transect Long Name	Point Count Transect Short Name
East Training Area	ETA
East Training Area 1	ETA-1
ETA	ETA
ETA-1	ETA-1

# DOWNLOAD SAMPLING UNITS DEMONSTRATION

Download sampling units:

- [Project Leaders](#) for download sampling unit locations to GPS, GIS and more

# MANAGING A PROJECT: RESEARCHERS



# RESEARCHERS

People identified in a Project for getting access and/or who made observations

Created by user registration (for active users) or manual entry (for historical data)

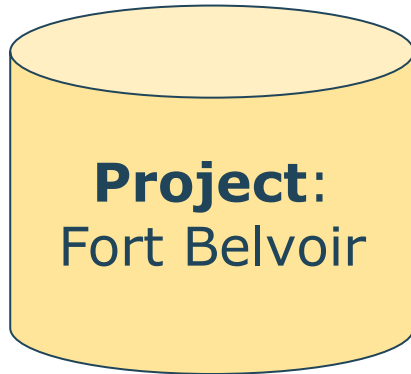
# RESEARCHER TYPES

Project Leader: the data owner, has full control over data, metadata, and who gets Project access

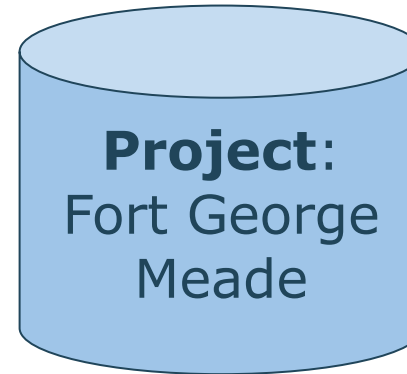
Biologist: can enter and review data in the Project

# RESEARCHERS & PROJECT ACCESS

Project access assigned by Project Leader



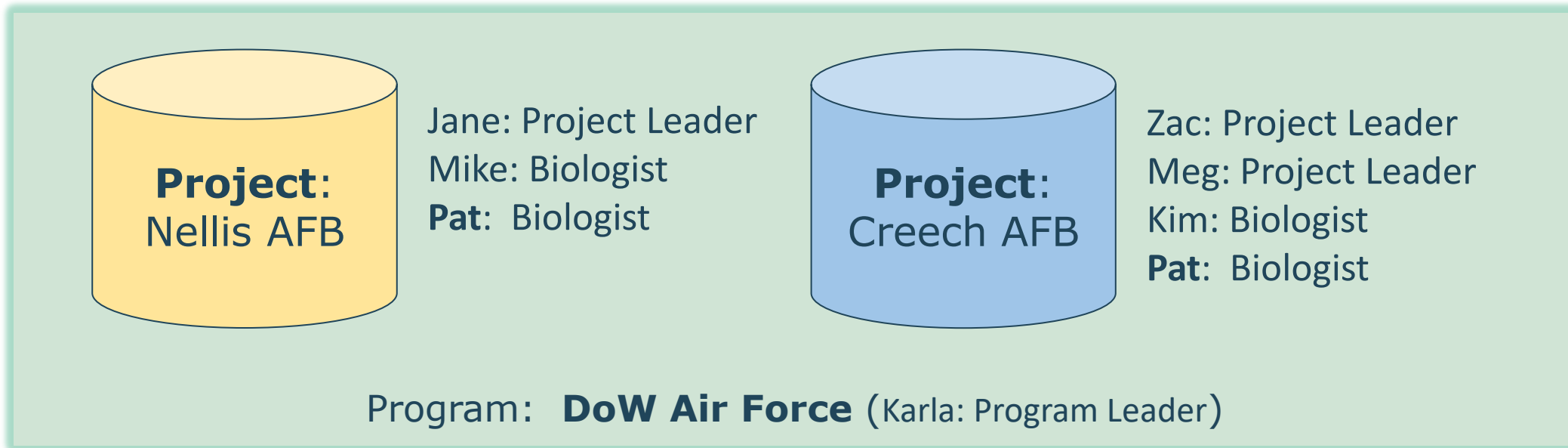
Jane: Project Leader  
Mike: Biologist  
**Pat:** Biologist



Zac: Project Leader  
Meg: Project Leader  
Kim: Biologist  
**Pat:** Biologist

# RESEARCHERS & PROJECT ACCESS

DoW also has a Program Leader (Program = group of many Projects)  
(managed by Point Blue staff w/ guidance from DoD leadership)

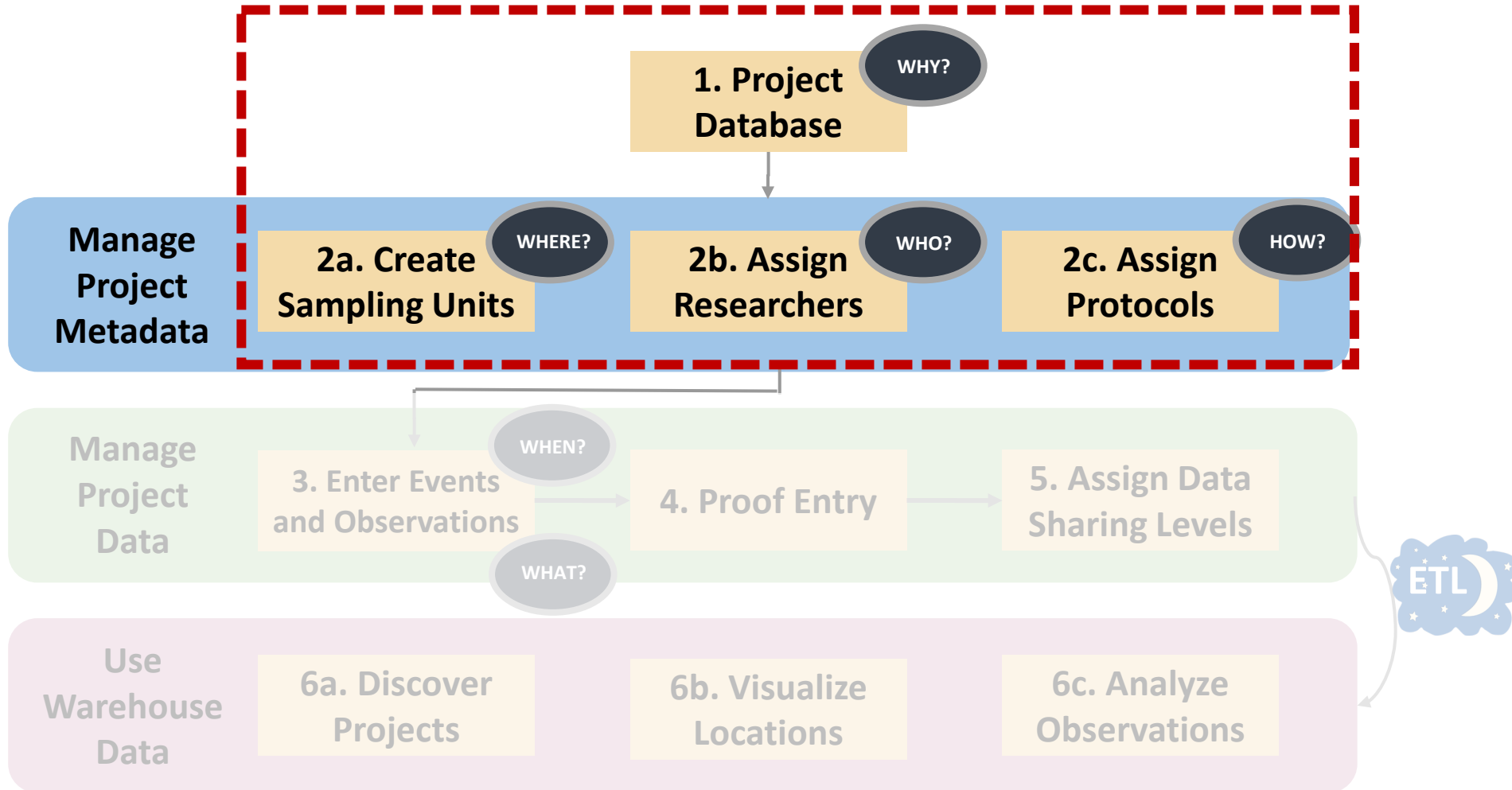


# ADDING RESEARCHERS DEMONSTRATION

## Tools:

- [Project Leader](#) for adding researchers to Project

# QUESTIONS ON MANAGING PROJECT METADATA?

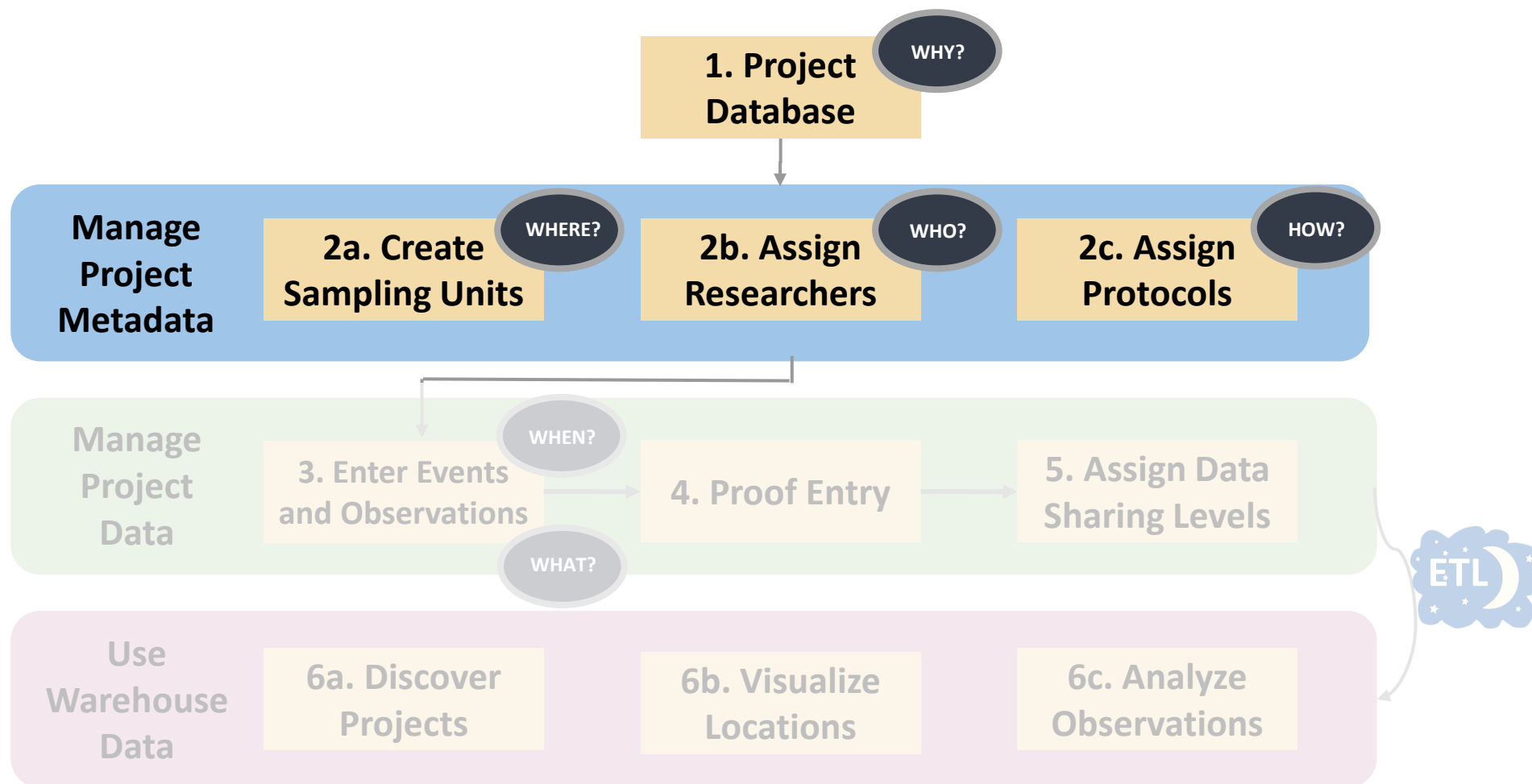




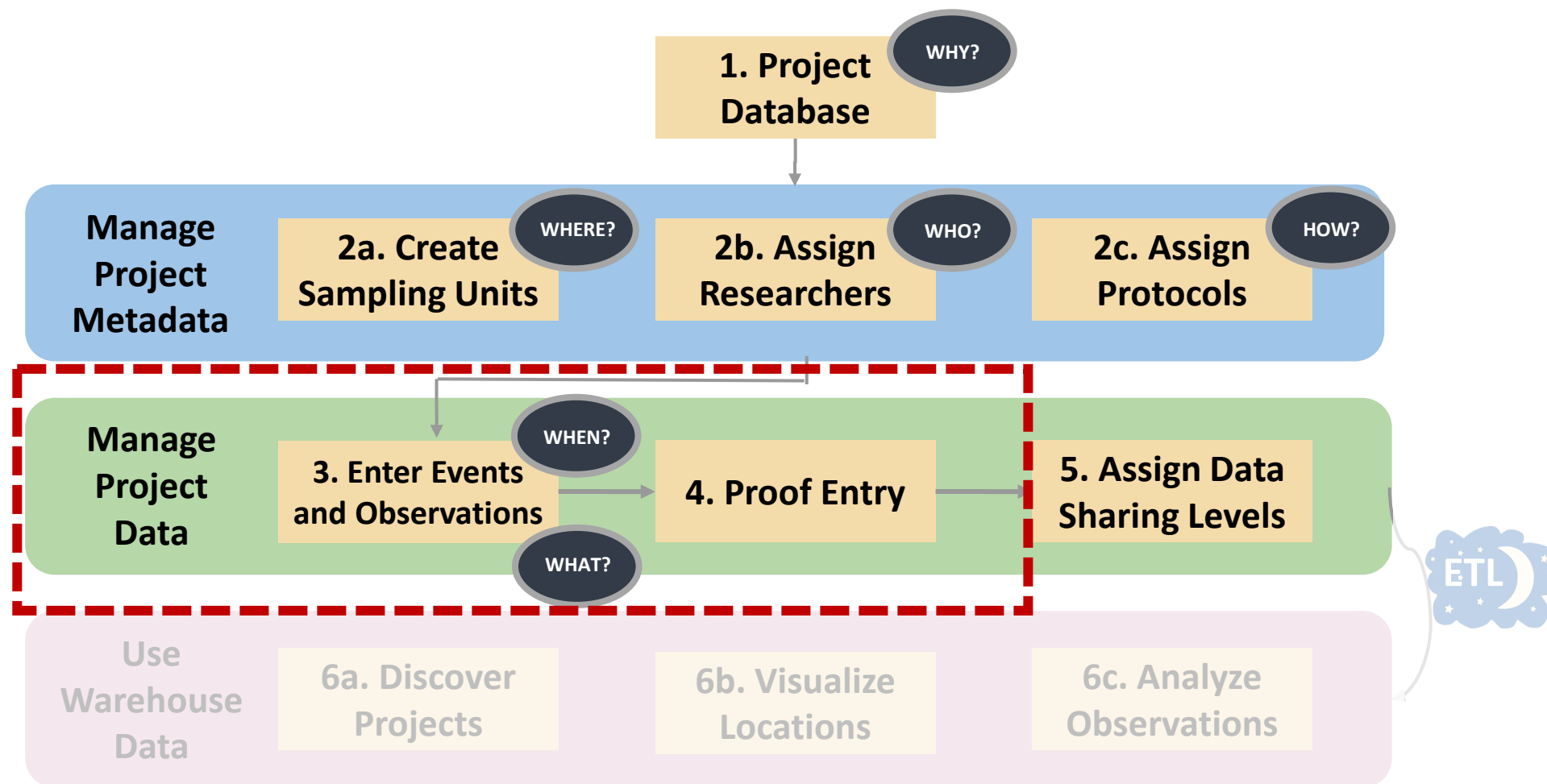
# MANAGING OBSERVATION DATA



# WORKFLOW FOR MANAGING A PROJECT



# MANAGING A PROJECT: OBSERVATION DATA



# SAMPLING EVENTS AND OBSERVATIONS

**Event:** survey at a Sampling Unit using a Protocol by Researcher at a specific date and time

**Observation:** one or more individuals of a single species detected during an Event

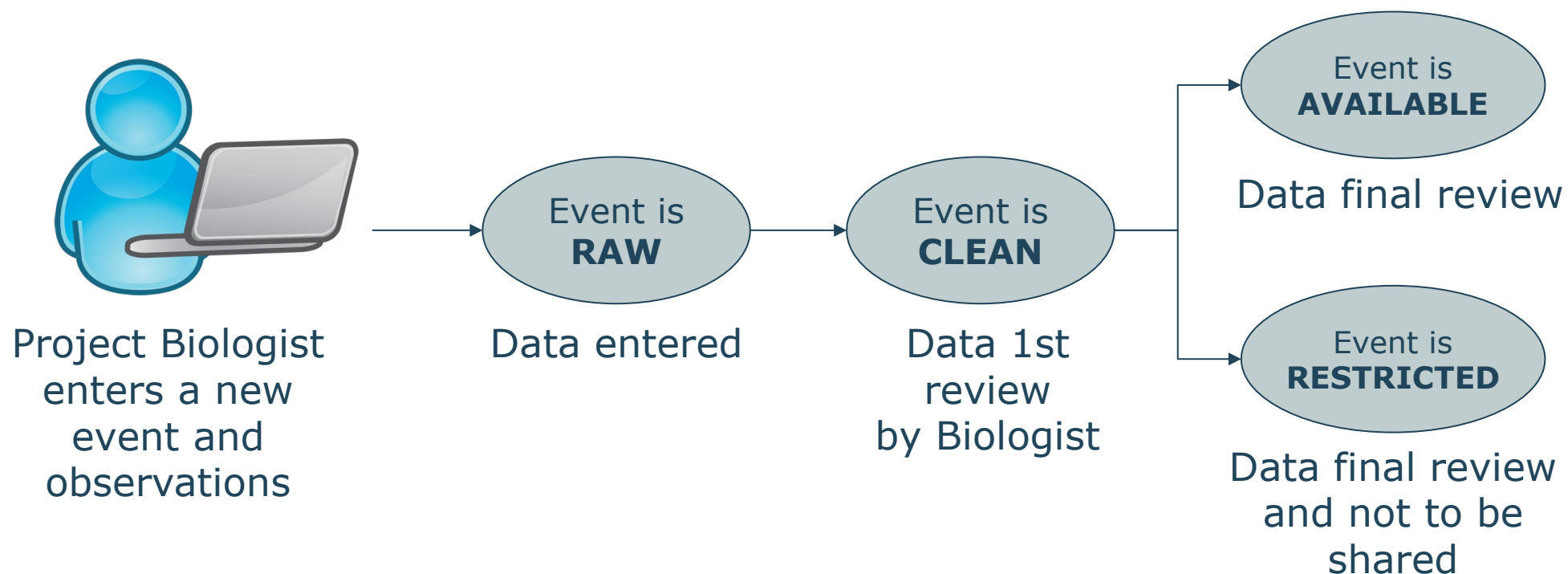
3. Enter Events  
and Observations

WHEN?

WHAT?

# REVIEW LEVELS FOR EACH EVENT

Steps to enter and review data in preparation for sharing




# MANAGING OBSERVATION DATA THROUGH BIOLOGIST

- Data entry using Biologist
  - Best for direct entry into the system

Point Count Data Form														Page		of			
Project/Region										Site Code				Site Name					
Month	Day	Year	Visit	Observer	Temp. (Cel.)	Cloud Cover %	Ppt. (N,F,M,D,R)		Wind (Beaufort)										
Station	Time	Species Code	Count	DT	Distance	Loc	Prev	Noise	Breed	Note#	Count	DT	Distance	Loc	Prev	Noise	Breed	Note	


**Datasheet**

Biologists 

**+ New Point Count Visit**

What did you see during your visit?


---


 General


Enter the following information about your visit.


[Quick Tips >>](#)


Enter date of event


**Visit** 

1 

**Data Sharing** 

RAW 

**Observer** 

Duran, Zoe 



**Web-based Form**



# MANAGING OBSERVATION DATA

---

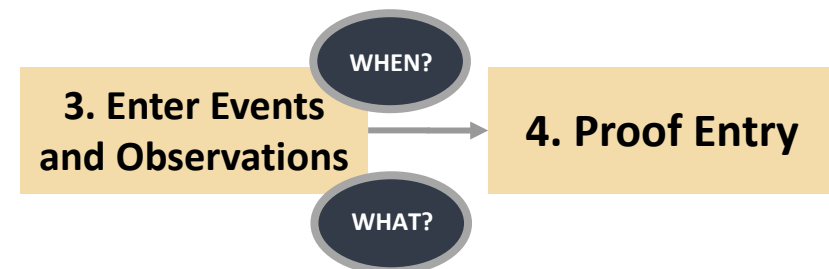
## EXERCISE 2: ENTER & PROOF POINT COUNT EVENT



# ENTER & PROOF POINT COUNT EVENT EXERCISE 2

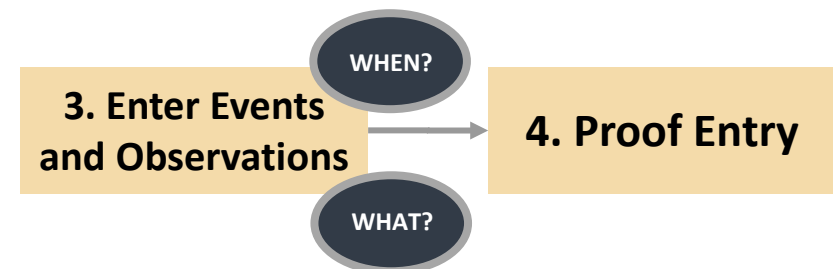
**Purpose:** Learn how to enter survey data and site conditions in Biologists and proof those data

**Goal:** Enter the sample data for the sampling unit you created in Exercise 1, save it, and proof those data



# ENTER & PROOF POINT COUNT EVENT EXERCISE 2

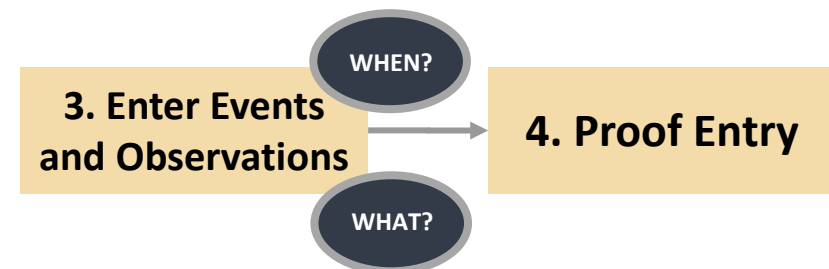
## Exercise 2 instructions



# ENTER & PROOF POINT COUNT EVENT

## EXERCISE 2 *(THINKING AHEAD)*

- Data marked Clean through proofing will load into the data warehouse, making it available to analysis tools
- As Project Leader, you will:
  - Grant users who collect data access to Biologists to enter and proof their own data
  - Add protocols to the project and manage sampling units



# DOWNLOAD POINT COUNT OBSERVATION DATA FROM PROJECT DEMONSTRATION

## Tools:

- [Project Leaders](#) for download observations from our Project



# BULK UPLOADING METADATA & OBSERVATION DATA INTO A PROJECT



# BULK LOADING DATA

Loading spreadsheet data into the Project Database for loading Researchers, Sampling Units, and Observations (e.g., historic datasets)

Observations: Uses definition file to describe how your spreadsheet maps into AKN

# BATCH PROCESSING

## Bulk Uploader v2 - Beta

Follow the steps below to load data in bulk into your project.

First, select the Project you want to bulk load into

FORT\_HOOD - (IDOD\_ARMY) Fort Hood

Next, select the Tool you want to use

Each tool independently does a task that helps you bulk load data into your project. Many of the tools process data in Batch, processing data in batches. Batch processing results can be found in the Batches tool.

[Add Researchers](#)
[Add Sampling Units](#)
[Add Observations](#)
[Add Protocol](#)
[Batch Processing](#)

Results:

### Batches for project FORT\_HOOD

The table is showing all batches for this project. Click on a row to get the batch result details when Status is success or error.

Save as CSV Refresh list

ID	Utility	Status	Status Detail	Submitted	Duration	Actions
455	AddSamplingUnits	success	batch completed successfully	2021-08-10 20:07:48	0:01	
454	AddSamplingUnits	error	batch completed with errors	2021-08-10 20:06:33	0:00	
453	AddObservations	success	batch completed successfully	2021-08-09 19:25:10	1:03	
452	AddObservations	error	batch completed with errors	2021-08-09 19:24:41	0:04	
451	AddObservations	error	batch completed with errors	2021-08-09 19:23:19	0:09	
450	AddObservations	error	batch completed with errors	2021-08-09 19:18:37	0:04	
449	AddObservations	error	batch completed with errors	2021-08-09 19:03:35	0:03	
448	AddObservations	error	batch completed with errors	2021-08-09 19:00:23	0:00	

Results:

Errors:

Error line 744: Value not allowed for weatherwinddirectioncardinal: East Northeast  
Error line 1055: The count field is required.

Add Observations Summary: CSV Rows Reviewed: 1054

Batch ID 451  
AddObservations  
plimptonc@gmail.com

Results:

Add Observations Summary: CSV Rows Reviewed: 1054, New PointCount Events created: 217, New PointCount Observations created: 1045, New PointCount SiteConditionEvents created: 217, New PointCount SiteConditionProperties created: 1207



# BULK UPLOADING PROJECT DATA

---

## EXERCISE 3: BULK UPLOADING SAMPLING UNITS



# BULK UPLOADING SAMPLING UNITS

## EXERCISE 3

**Purpose:** Build on Exercise 1 using the Bulk Upload tool to create multiple sampling units at once for a given survey type

**Goal:** Bulk upload a new point onto your existing transect and add a new transect with three points

# BULK UPLOADING SAMPLING UNITS

## EXERCISE 3

**Tip:** Go back to Project Leader (Sampling Units-> Create and Manage) and take a look at the sampling unit you already created in Exercise 1. In this exercise, we'll create a new point under the existing transect, plus add a new transect with new points.

### After Exercise 1:

- ▼ ○ ☆ DOD\_DEMO - DoD Demonstration Project
  - # Air Force (AIRFORCE)
  - # Army (ARMY)
  - ▶ ○ # CAMASNWR (CAMASNWR)
  - # Field Exercise (FIELD)
  - # Marine Corps (MARINES)
  - # National Guard (GUARD)
  - ▼ ○ # Navy (NAVY)
    - ▼ ● # CRG (CRG)
      - ● CRG1 (CRG1)
  - # Other Service Branch (OTHER)

Study Area: Navy  
 Point Count Transect: CRG  
 Point Count Point: CRG1

### After Exercise 3:

- # Air Force (AIRFORCE)
- # Army (ARMY)
- ▶ ○ # CAMASNWR (CAMASNWR)
- # Field Exercise (FIELD)
- # Marine Corps (MARINES)
- # National Guard (GUARD)
- ▼ ○ # Navy (NAVY)
  - ▼ ○ # CRG (CRG)
    - ● CRG1 (CRG1)
    - ● CRG2 (CRG2)
  - ▼ ○ # CRGB (CRGB)
    - ● CRGB1 (CRGB1)
    - ● CRGB2 (CRGB2)
    - ● CRGB3 (CRGB3)
  - # Other Service Branch (OTHER)

Make sure you are using the same Study Area (your service branch or affiliation) for Exercise 3!

In this example, the Study Area Name is Navy and the Study Area Short Name is NAVY

**2a. Create  
 Sampling Units**

WHERE?

# LONG NAME VS SHORT NAME: WHAT'S THE DIFFERENCE?

**EXAMPLES** (any of these would be correct):

Point Count Transect Long Name	Point Count Transect Short Name
East Training Area	ETA
East Training Area 1	ETA-1
ETA	ETA
ETA-1	ETA-1

# BULK UPLOADING SAMPLING UNITS

## EXERCISE 3

### Exercise 3 instructions

# BULK UPLOADING SAMPLING UNITS

## EXERCISE 3 *(THINKING AHEAD)*

- The Bulk Uploader tool is useful when you have many sampling units to add to your project.
- The Bulk Uploader tool can add sampling units to an existing hierarchy or create an entirely new hierarchy (*remember our discussion thinking about Study Areas!*)
- The Bulk Uploader tool can also add Researchers or Observation data to your project
  - Note: we will not be covering those use cases today but can assist in office hours



# EXAMPLE: FORT CARSON, CO

## Project

Select a project or sampling unit within which you would like to add or edit a sampling unit.

Filter

All available projects and programs

- ▼  ★ FORT\_CARSON - [DOD\_ARMY] Fort Carson
  - ▼  # Fort Carson (FC)
    - ▶  # FC IMBCR Surveys (FC\_IMBCR)
    - ▼  # Fort Carson Marshbird (FC\_MB)
      - ▶  # Cottonwood Spring (MB\_COTTON)
      - ▶  # Frog Pond (MB\_FROG)
      - ▶  # Haymes Reservoir (MB\_HAYMES)
      - ▶  # Infantry Creek East (MB\_INFEAST)
      - ▶  # Infantry Creek West (MB\_INFWEST)
      - ▶  # K Ditch (MB\_KDITCH)
      - ▶  # Lytle Spring (MB\_LYTLE)
      - ▶  # Middle School Area (MB\_MIDSCHOOL)
      - ▶  # MSR 1 / Range 113 (MB\_RG113)
      - ▶  # North B Ditch (MB\_BDITCH)
      - ▶  # Northside Reservoir (MB\_NORTHSIDE)
      - ▶  # Range 04 (MB\_RGo4)
      - ▶  # Range 08 (MB\_RGo8)
      - ▶  # Training Area 05 / Rock Creek (MB\_TA05)
      - ▶  # Training Area 08 / AHA (MB\_TA08)
      - ▶  # Womack Reservoir (MB\_WOMACK)
    - ▶  # Fort Carson Point Count (CARSON\_PC)
  - ▼  # Pinon Canyon Maneuver Site (PCMS)
    - ▼  # PCMS IMBCR Surveys (PCMS\_IMBCR)
      - ▶  # CO-BCR18-PF (CO-BCR18-PF)
      - ▶  # CO-BCR18-PM (CO-BCR18-PM)

View & Export
Add
Remove

## View & Export Protocols

Viewing protocols within FORT\_CARSON

Search

Filter by type All available types

Name	Description	Type
▶ ARSE_PIJA	Area search survey standard protocol from the PIJA Working Group	AreaSearch
▶ BLS_V_BI	BLRA,SORA,VIRA,BLTA	SecretiveMarshBirdCount
▶ IMBCR_VRPC	Bird Conservancy of the Rockies IMBCR 6 min count	PointCount
▶ SiteConditions_FORT_CARSON	Site conditions temperature, wind, sky, noise	SiteConditions
▶ SiteConditions_PIJA	Site Conditions PIJA protocol developed by the PIJA Working Group	SiteConditions
▶ SPCH_LOCATION	Species checklist with coordinates	AreaSearch
▶ VRPC	...	PointCount

# EDITING DATA DEMONSTRATION

## Tools:

- [Biologist](#) to edit observations from a Project

# OFFICE HOURS

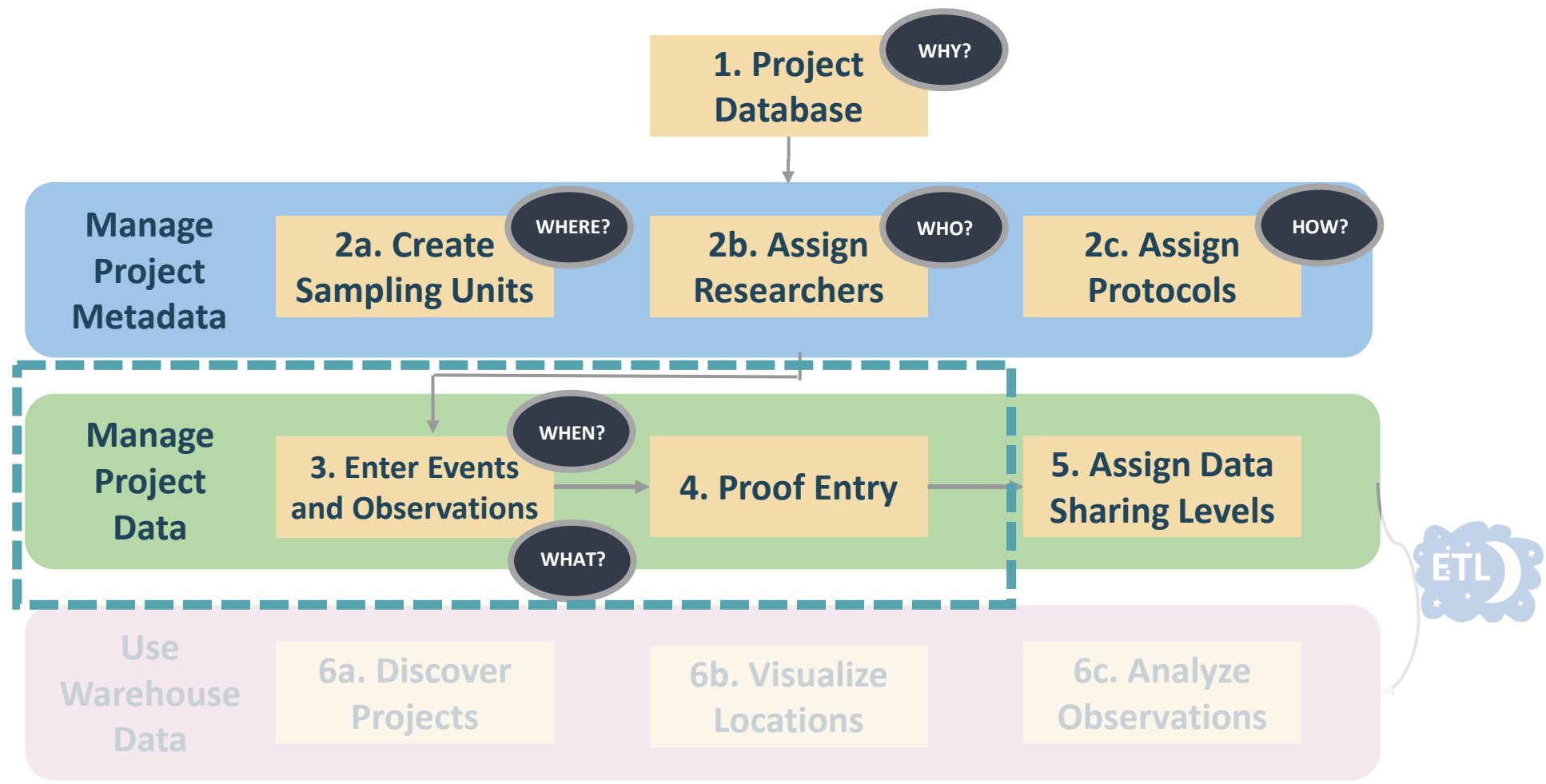
Discuss bulk loading and other issues regarding your observation data

Office Hours sign up is on the DoW AKN Portal page:  
<https://www.dodakn.org/office-hours-booking-page/>

- Next appointment dates: June 16 & 18



# ANY QUESTIONS ON MANAGING PROJECT DATA?





# DAY 1 WRAP-UP





**AVIAN**  
KNOWLEDGE NETWORK

[pointblue.github.io/dod\\_workshop](https://pointblue.github.io/dod_workshop)

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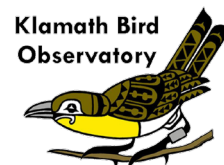
# DoW AND THE AKN: WHO, WHAT, WHERE, WHEN, WHY, AND HOW

DoW Army Training  
9 and 11 June 2026  
Virtual

Sam Veloz  
Dianne Miller

Elizabeth Neipert  
Zoe Duran  
Jocelynn Marriott

John Alexander  
Caitlyn Gillespie  
Nora Honkomp



Northern Bobwhite, Kanopolis Reservoir, Kansas; Credit: Ryan A Williams

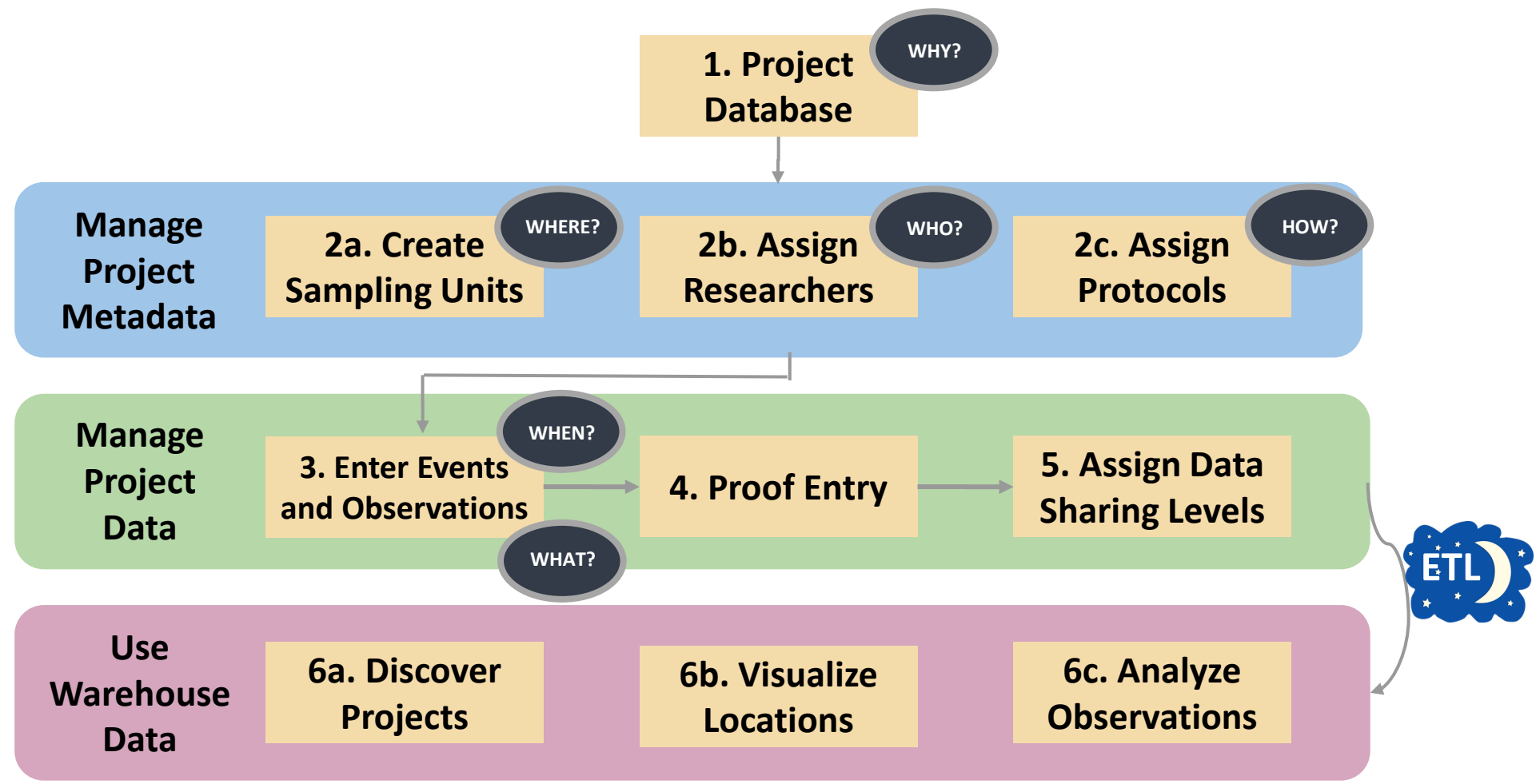




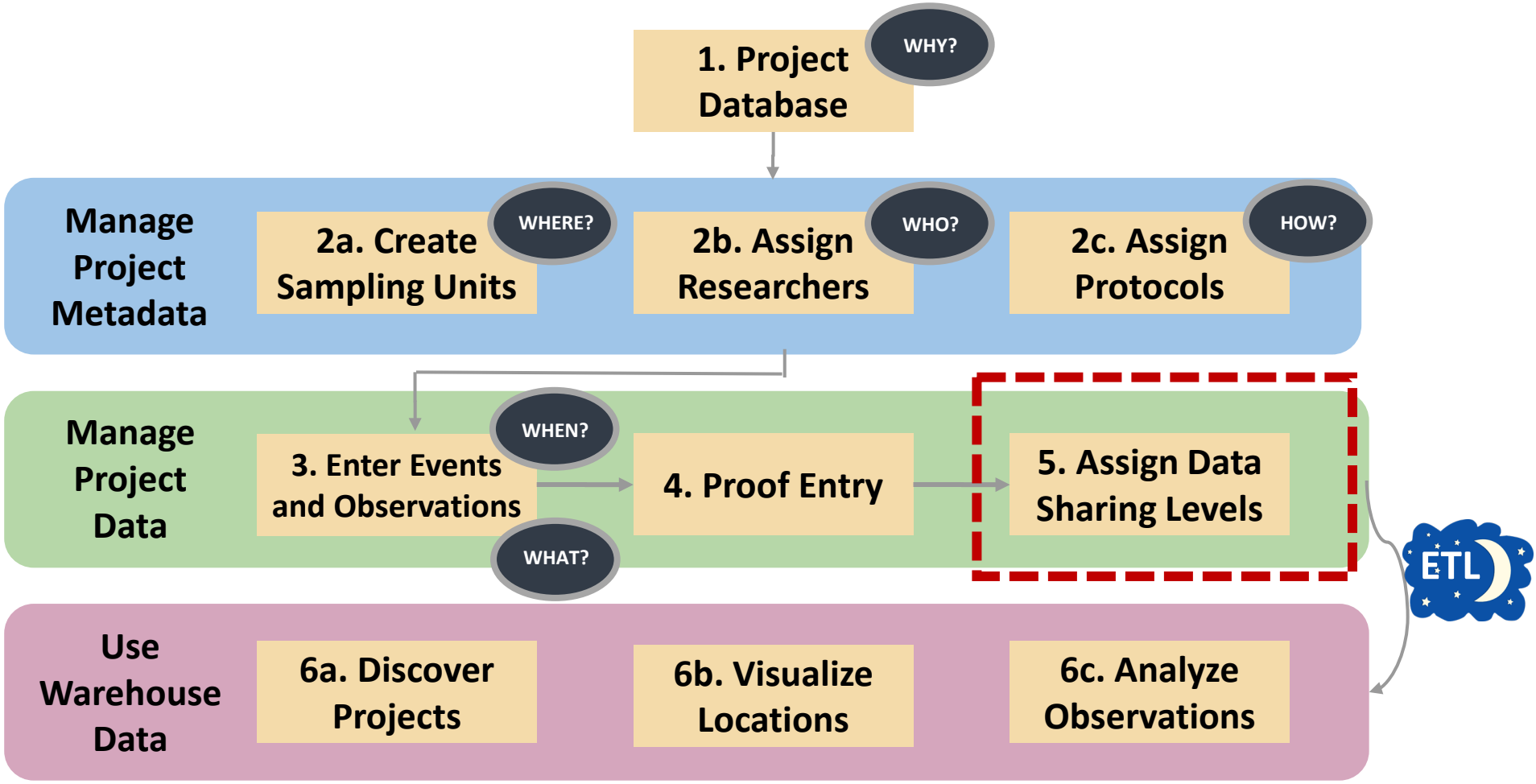
# AKN DATA SHARING LEVELS



# WORKFLOW FOR MANAGING A PROJECT



# MANAGING A PROJECT: DATA SHARING LEVELS



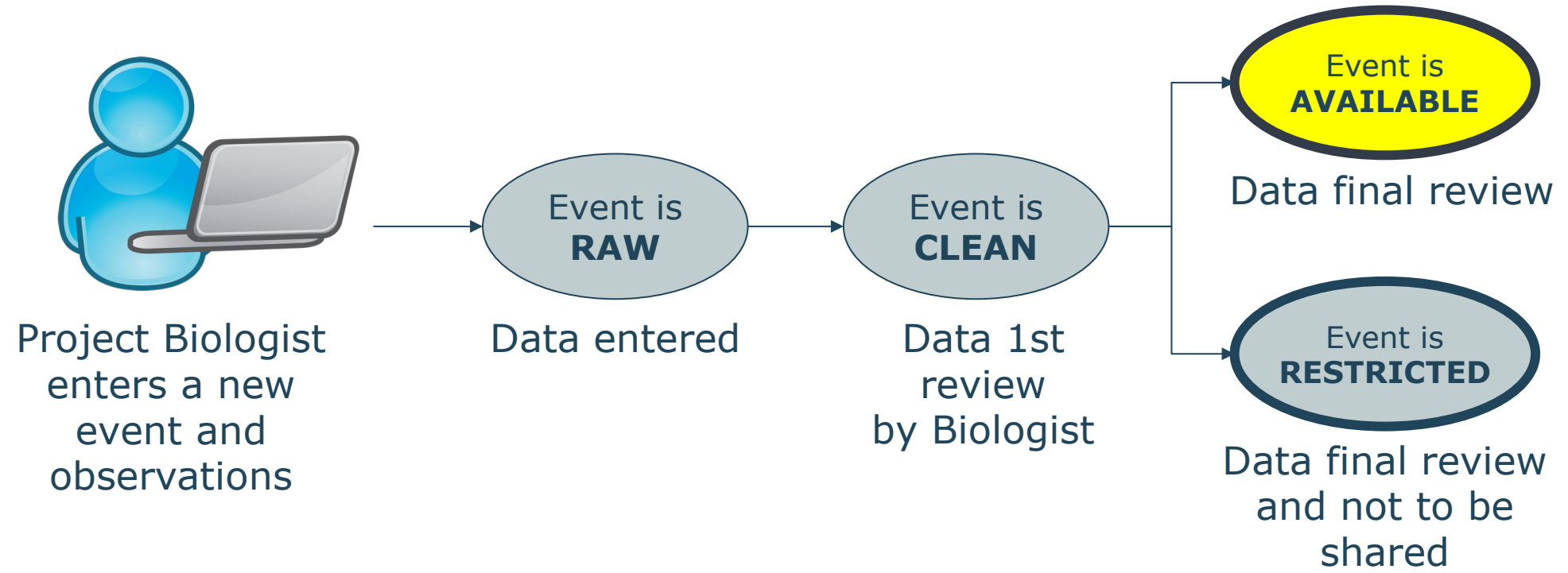
# DATA SHARING LEVELS

Defines how visible each observation is for querying, summarizing, visualizing, and analyzing.

Controlled by the Project Leader within each Project

# REVIEW LEVELS FOR EACH EVENT

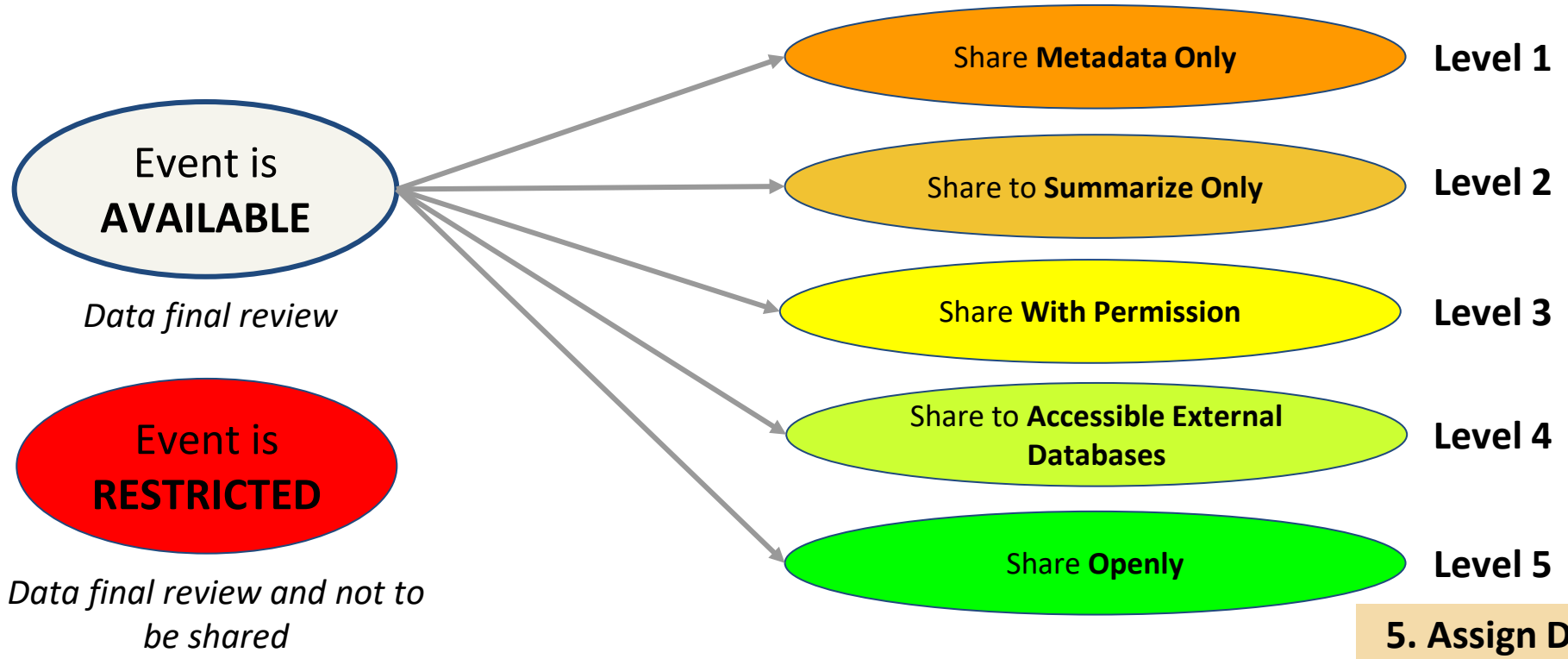
Steps to enter and review data in preparation for sharing



**5. Assign Data  
Sharing Levels**

# DATA SHARING LEVELS FOR EACH EVENT

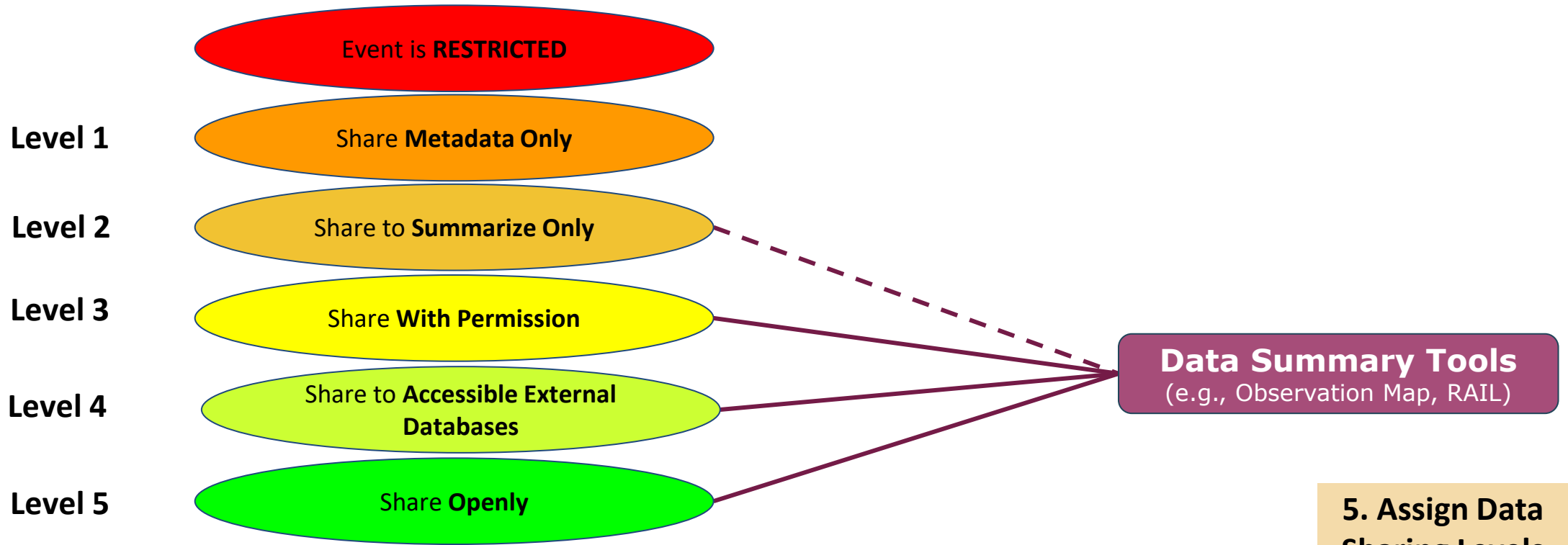
Choices informs the Point Blue Science Cloud tools of your intentions.



**5. Assign Data Sharing Levels**

# DATA SHARING AND TOOL ACCESS

Choices informs the Point Blue Science Cloud tools of your intentions.



**5. Assign Data Sharing Levels**

# DATA SHARING LEVEL MOTIVATION

- Organizational Policy
- Federal / State Law
- Research and Right of First Publication
- Threatened / Endangered Species
- Private Landowner Agreements
- Contribute to AKN Science
- Partnership / Collaboration Development

# SETTING DATA SHARING LEVELS DEMONSTRATION

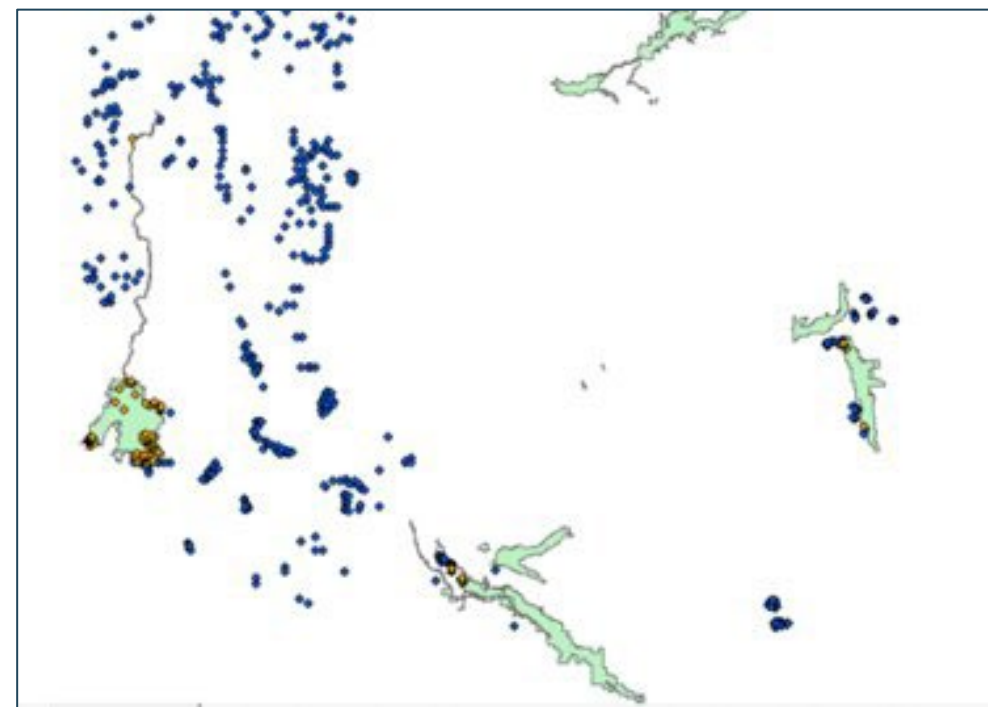
## Tools:

- [Project Leaders](#) to set/edit sharing levels



# EXAMPLE: USACE-WILLAMETTE VALLEY PROJECT, OR

- New biologist took DoW AKN training at NMFWA
- Worked with DoW AKN Team to ID data within boundary
- Data was both USACE and partner data
- Created USACE WVP within USACE enterprise
- Gained access to USACE-owned data
- Reaching out to partners about sharing data within boundary

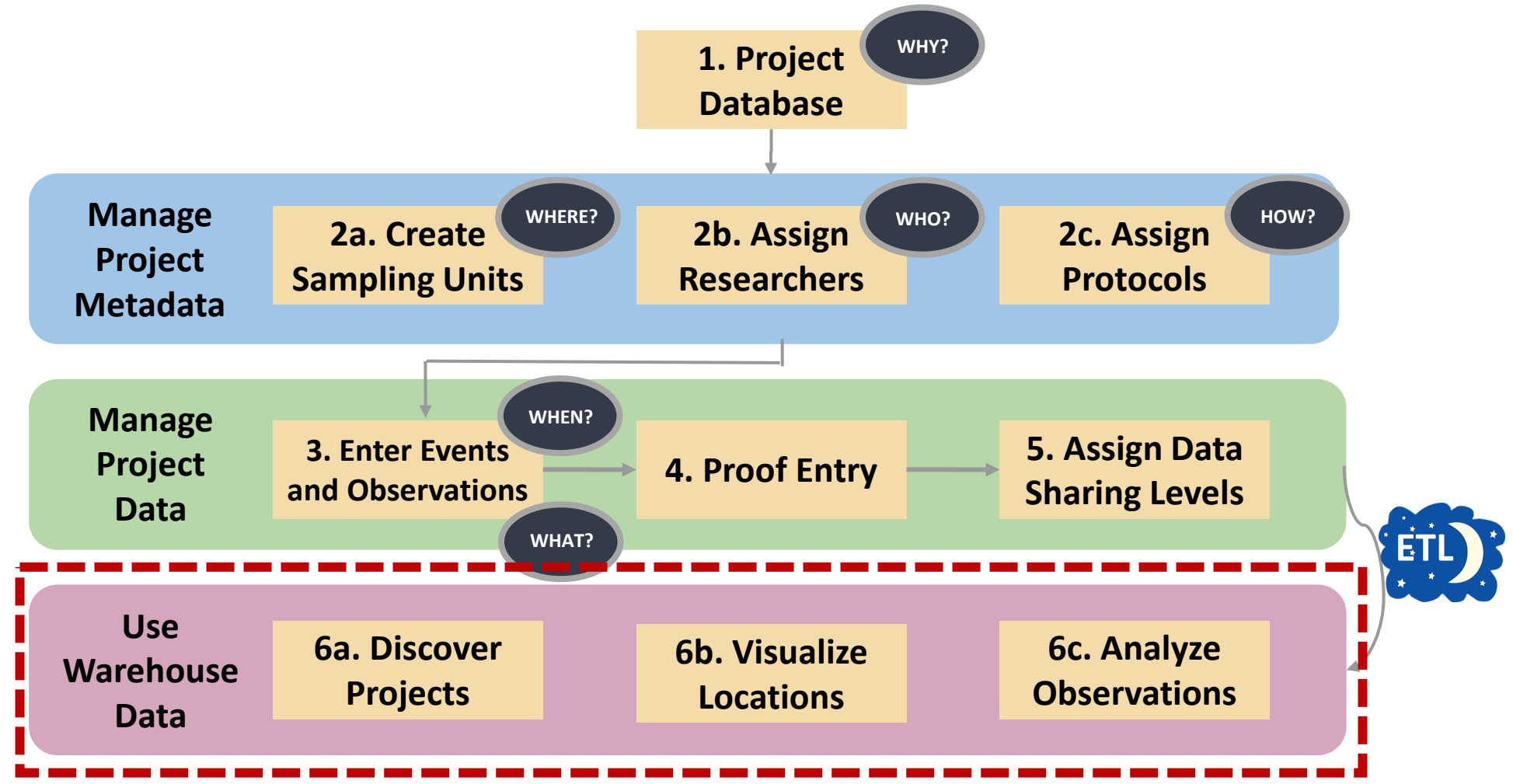




# AKN WAREHOUSE DATA 101



# MANAGING A PROJECT: DATA WAREHOUSES





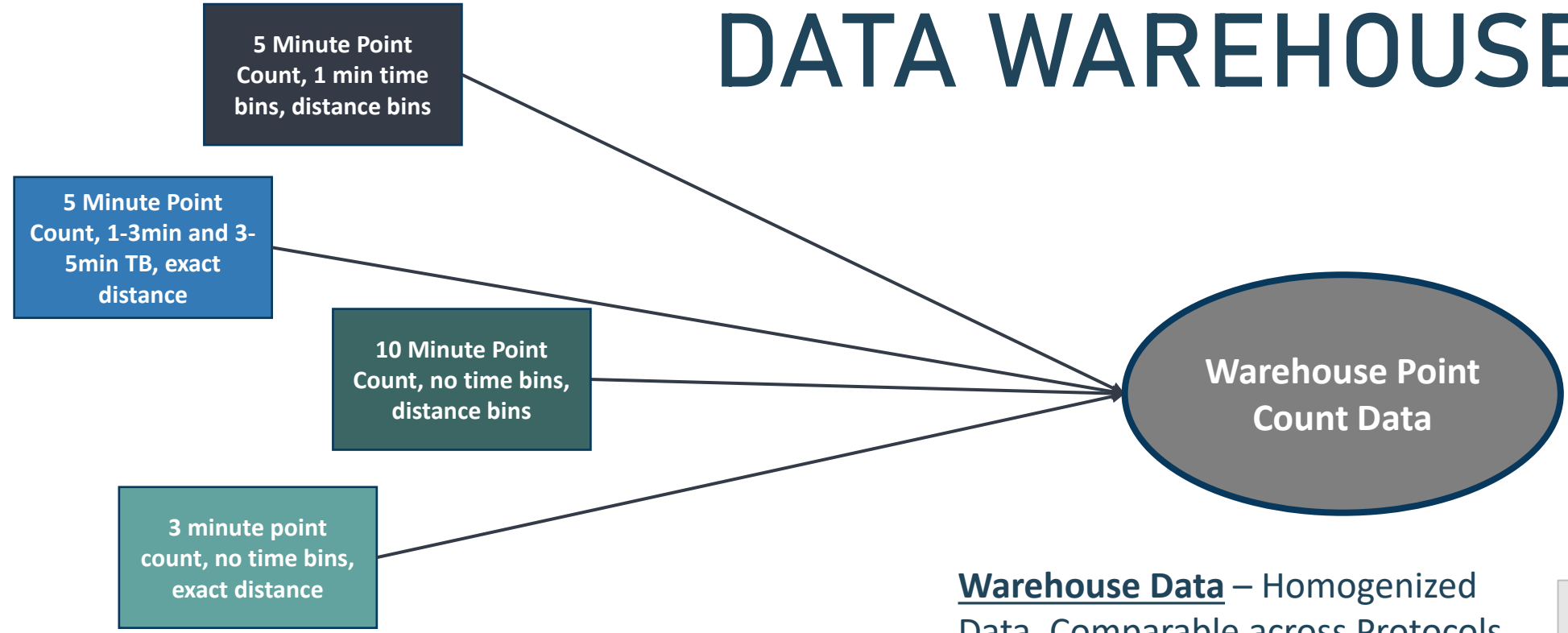
# DATA WAREHOUSES

Database with homogenized copy of observation data, organized by sampling method for cross-project query and analysis

Enables data from **different Protocols** under the same data type (e.g., Point Count) to be aggregated

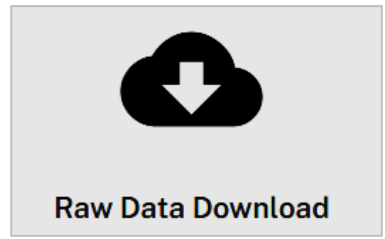


# DATA WAREHOUSES



## Raw Data – Differs by Protocol Fields

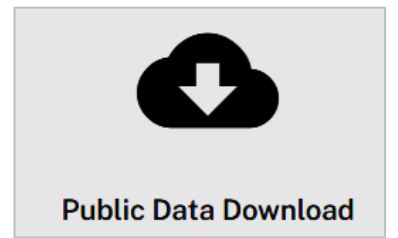
*Stored in its full fidelity in your AKN Project Database*



## Warehouse Data – Homogenized Data, Comparable across Protocols

*Stored in the Warehouse database*

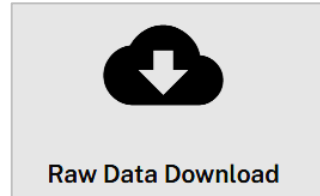
*Only **data you have access to** or that are shared at Level 5*



# PROJECT DATA VS. WAREHOUSE DATA

Study Area	Transect	Point	Protocol	Visit	Date	Start Time	End Time	Time Bin	Time Bin	Count	Spp	Common Name	Scientific Name	Detection	Distance B	Distance B	Point Note	Obs	Researcher	Data Status
LITTLERIVER	COMP_5	164	3_5_10m2	1	6/3/2019	8:01:00	8:11:00	3	0_3min	1	PIWA	Pine Warbler	Setophaga pinus	NR	G25	25 to 50	Light sprinkle, light rain	Arbour, David	AVAILABLE	Level 5
LITTLERIVER	COMP_5	164	3_5_10m2	1	6/3/2019	8:01:00	8:11:00	3	0_3min	1	GCFL	Great Crested Flycat	Myiarchus crinitus	NR	G50	50 to 100	Light sprinkle, light rain	Arbour, David	AVAILABLE	Level 5
LITTLERIVER	COMP_5	164	3_5_10m2	1	6/3/2019	8:01:00	8:11:00	3	0_3min	1	KEWA	Kentucky Warbler	Geothlypis formica	NR	G50	50 to 100	Light sprinkle, light rain	Arbour, David	AVAILABLE	Level 5
LITTLERIVER	COMP_5	164	3_5_10m2	1	6/3/2019	8:01:00	8:11:00	10	5_10min	1	BHCO	Brown-headed Cowbird	Molothrus ater	NR	G50	50 to 100	Light sprinkle, light rain	Arbour, David	AVAILABLE	Level 5

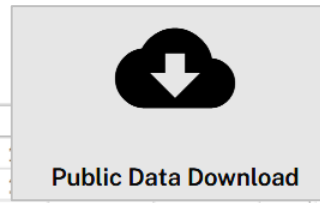
Project	Location	Protocol	Date	Time	HabitatPlot HabitatPlotId	HabitatPlot Composition Vine	HabitatPlot Composition Cane	HabitatPlot Composition Overstory	HabitatPlot Composition Midstory	HabitatPlot Composition Understory	Researcher
LITTLERIVERNWR	164	FWS_PC_HAB_LWRMISS	6/3/2019	8:01:00	164	3	1	3	3	4	Arbour, David



## Project Database Version

## Warehouse Version

GlobalUniqueIdentifier	ProjectCode	ProjectName	LocalityID	StudyArea	Transect	TransectName	Point
URN:catalog:PRBO:LITTLERIVERNWR.300600.PointCount.3_5_10m25_50_100MFLyByTm.329406.1	LITTLERIVERNWR	Little River NWR	LITTLERIVERNWR:COMP_5	Little River NWR	COMP_5	Compartment_5	
URN:catalog:PRBO:LITTLERIVERNWR.300600.PointCount.3_5_10m25_50_100MFLyByTm.329406.2	LITTLERIVERNWR	Little River NWR	LITTLERIVERNWR:COMP_5	Little River NWR	COMP_5	Compartment_5	
URN:catalog:PRBO:LITTLERIVERNWR.300600.PointCount.3_5_10m25_50_100MFLyByTm.329406.3	LITTLERIVERNWR	Little River NWR	LITTLERIVERNWR:COMP_5	Little River NWR	COMP_5	Compartment_5	164 300600 348115 Point
URN:catalog:PRBO:LITTLERIVERNWR.300600.PointCount.3_5_10m25_50_100MFLyByTm.329406.4	LITTLERIVERNWR	Little River NWR	LITTLERIVERNWR:COMP_5	Little River NWR	COMP_5	Compartment_5	164 300600 348115 Point



DecimalLat	DecimalLon	Visit	ProtocolCode	ObservationYear	CollectionMonth	DayC	JulianDay	JulianDayV	P Time	Collection	ScientificName	CommonName	SpeciesCode	Phylogenetic	DistanceFrom	Flycatcher	Detection	Observation	NoObserved	RecordPermissions
33.9699705	-94.70262	1	3_5_10m25_50_100MFLyByTm	6/3/2019	2019	6	3	154	75	8:01:00	DA	Setophaga Pine Warb	PIWA	1696	37.5		NR	1	0	AVAILABLE LEVEL 5
33.9699705	-94.70262	1	3_5_10m25_50_100MFLyByTm	6/3/2019	2019	6	3	154	75	8:01:00	DA	Myiarchus Great Cres	GCFL	1254	75		NR	1	0	AVAILABLE LEVEL 5
33.9699705	-94.70262	1	3_5_10m25_50_100MFLyByTm	6/3/2019	2019	6	3	154	75	8:01:00	DA	Geothlypis Kentucky	KEWA	1718	75		NR	1	0	AVAILABLE LEVEL 5
33.9699705	-94.70262	1	3_5_10m25_50_100MFLyByTm	6/3/2019	2019	6	3	154	75	8:06:00	DA	Molothrus Brown-hea	BHCO	2015	75		NR	1	0	AVAILABLE LEVEL 5



# PROJECT DATA VS. WAREHOUSE DATA

## Point Count Data

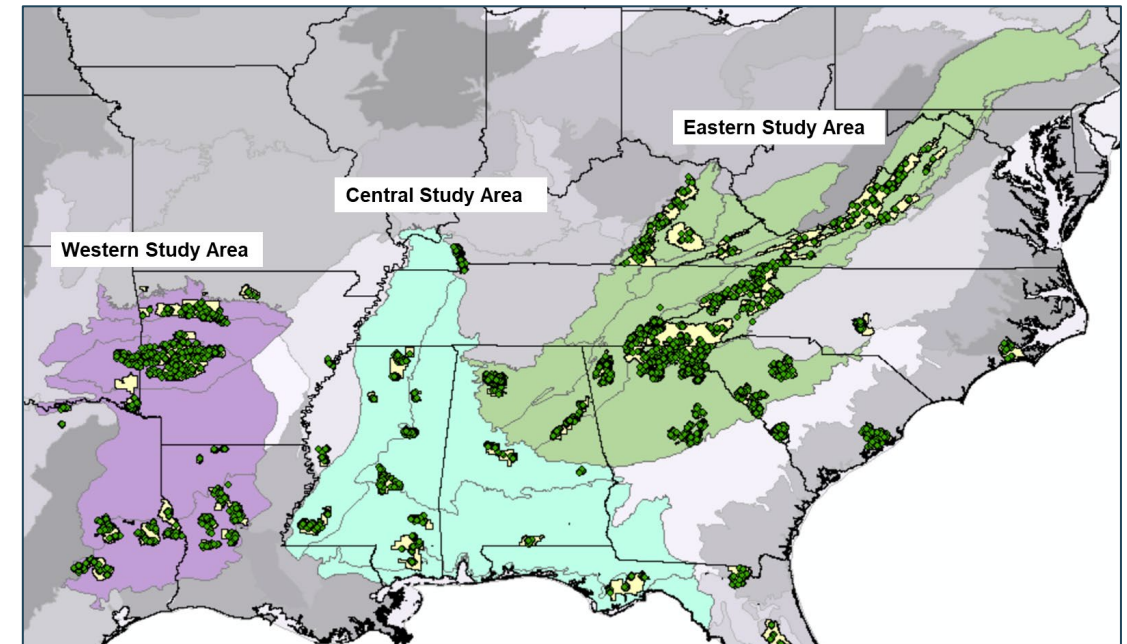
**Same:** Species, Count, Protocol, Locations, Detection Cues, Observation Time, Data Sharing Levels

**Differences:** Binned Distance averaged, Comments missing, no Site Conditions, Observer Names to Initials, no Time Bin

# CASE STUDY:

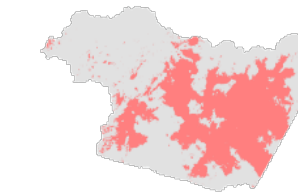
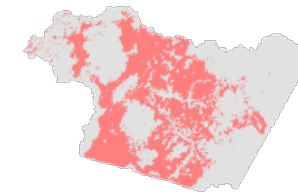
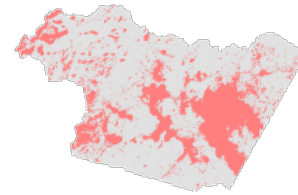
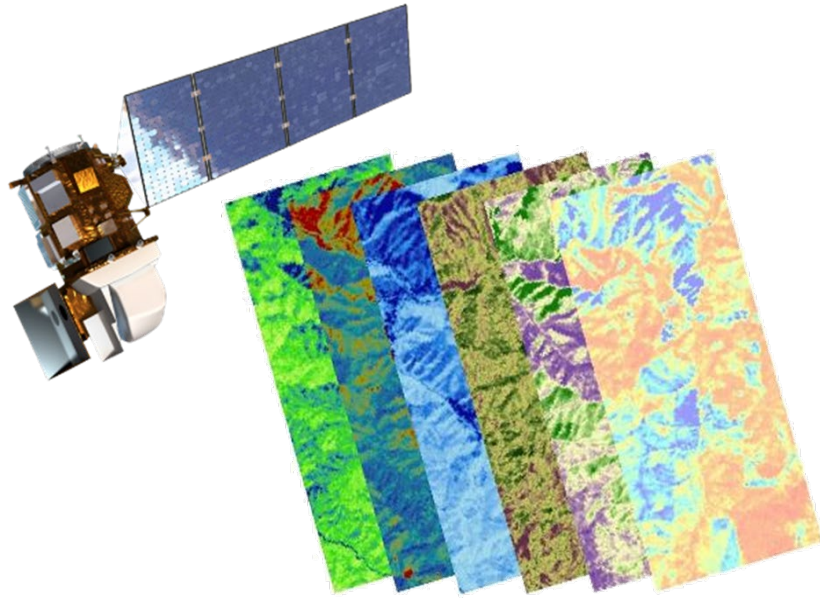
## USFS REGION 8

- **30-year** USFS database with bird monitoring data across 34 national forests and 13 states was being **decommissioned**
- FS regional biologist wanted to save data and make sure current FS biologists could access it
- **1,121,654** point count observation records (**13,664** sampling locations) uploaded to AKN!
- **100+** FS biologists in Region 8 now have access to their data and continue to contribute new data every year
- Data used to create species distribution models, now being applied in multiple AKN decision support tools



# CASE STUDY: SPECIES-CENTERED HABITAT MODELING

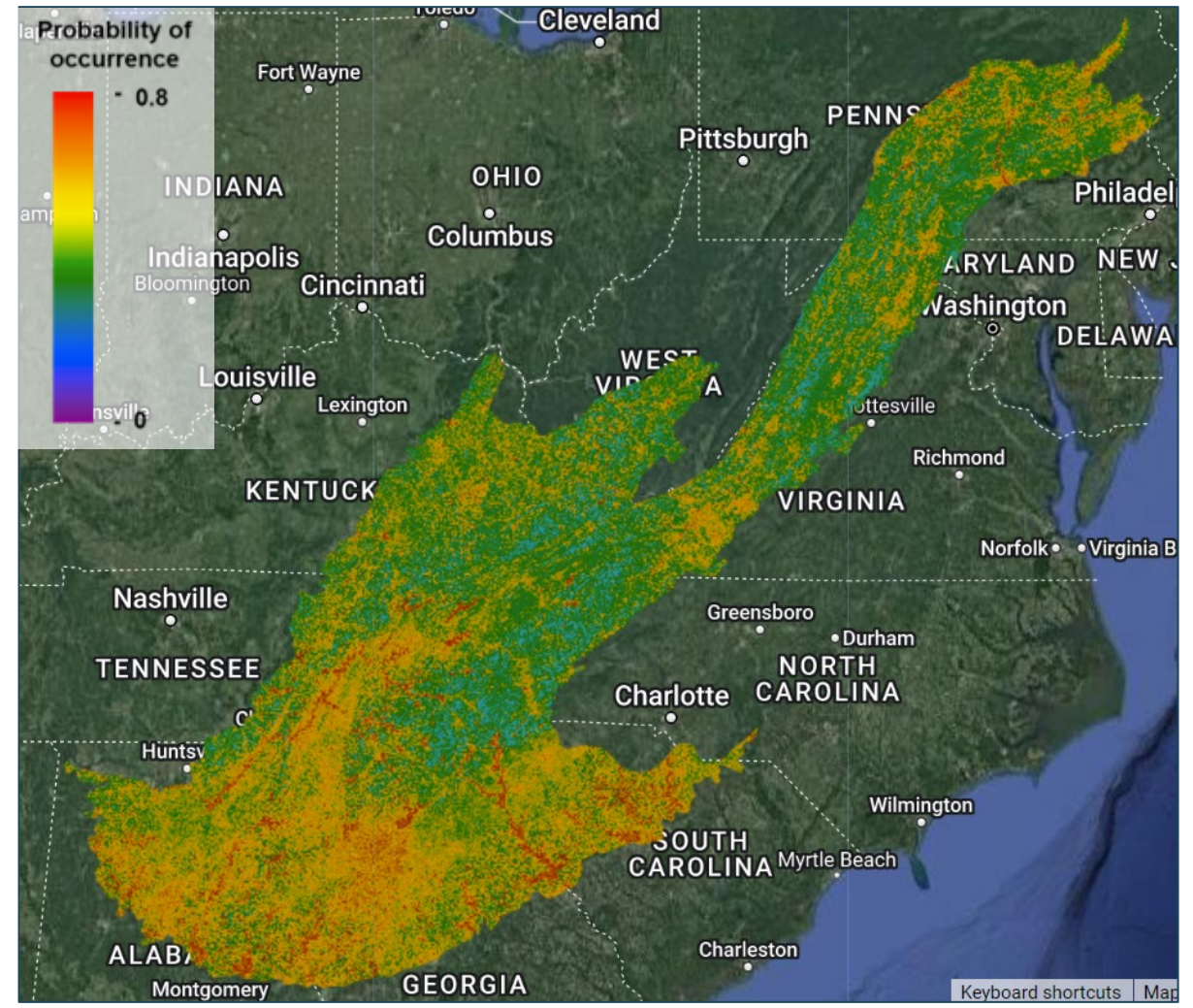
(Shirley et al 2013, Betts et al 2014,  
Halstead et al 2019)



## Compared to Land Cover Derived Models:

- High prediction ability
- Wider temporal range
- Avoid uncertainty:
  - misclassification of habitats
  - omission of fine-scale features
  - subtle changes in vegetation

# CASE STUDY: PINE WARBLER HABITAT DISTRIBUTION -- 2019

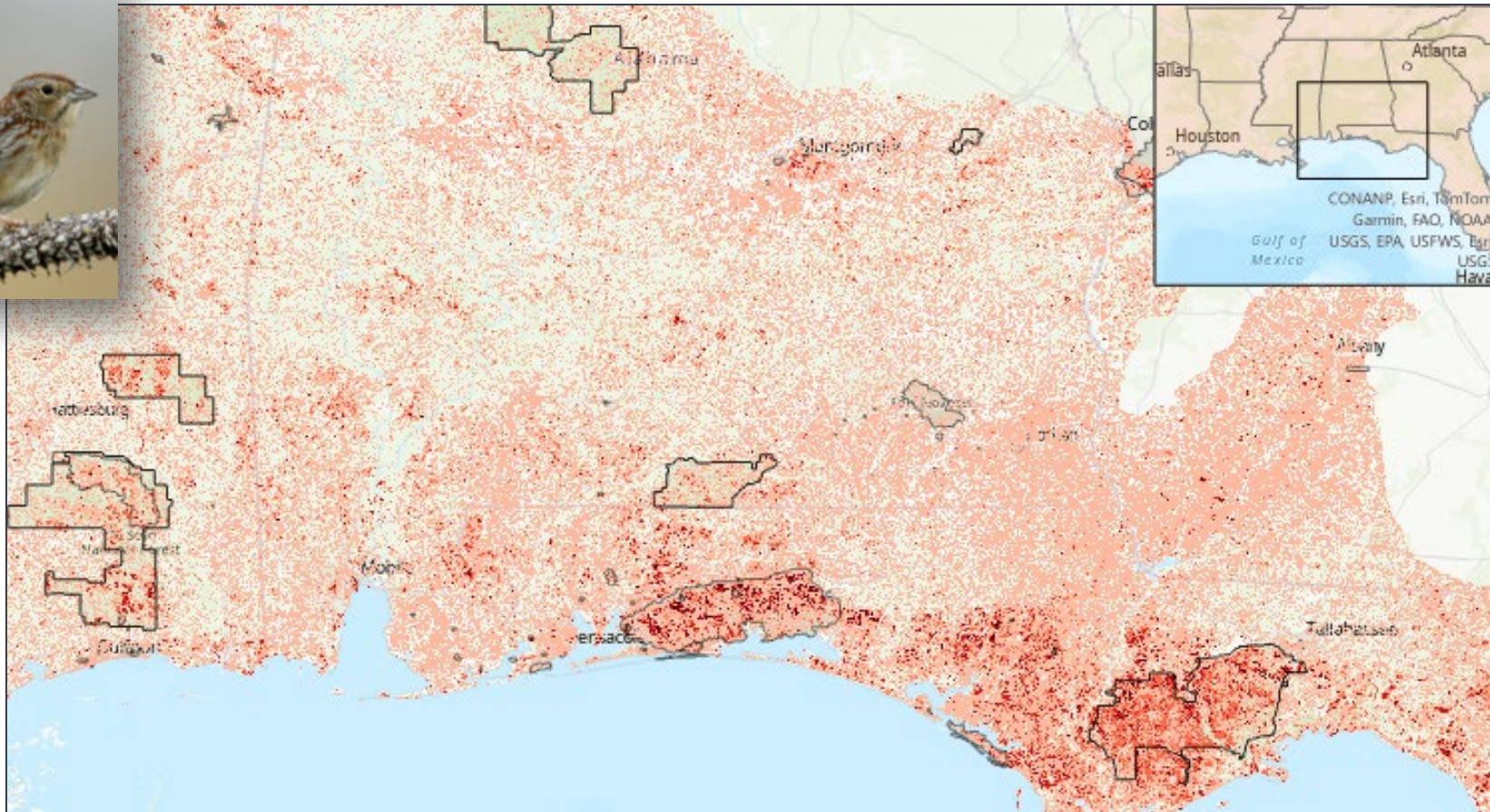




# CASE STUDY: MAPPING HABITAT FOR PRIORITY SPECIES



Bachman's  
sparrow



**USFS**  
+  
**DoW**

# DOWNLOAD POINT COUNT DATA FROM WAREHOUSE DEMONSTRATION



Tools:

- [Data Downloader](#)



# DATA OWNERSHIP, SHARING, AND CONTRACTORS





# DATA OWNERSHIP AND CONTROL

Project Leaders / Organizations are the owner of data from a Project, regardless of where it is stored

Project Leaders can change Data Sharing Levels at any time, including making more restrictive



# PARTNERSHIPS AND CONTRACTORS

## Partner / Contractors

- DoW collects data for a Partnership
- Hiring independent contractors for survey work

## DoW

- Wants to ask questions across DoW
- Needs to manage and control all data on installations

**We want data collected on/near DoW installations in DoW Projects**



# CONTRACTORS & TRAINING

## MICHIGAN ARMY NATIONAL GUARD (MIARNG)



- Contracts Kalamazoo Nature Center (KNC) to complete bird surveys
- Wanted to train long-term staff to use AKN
- Attended training and entering data
- Additional benefit, KNC to enter other data, supplementing MIARNG data

>>Same story with AZGFD!

### Project

Select one or more projects or sampling units for data download.

Filter

All available projects and programs

Select all projects

- MIARNG - [DOD\_NATGUARD] Michigan Army National Guard
  - Camp Grayling (CGJMTC)
    - Golden-winged warbler (GWWA)
    - Grassland birds (GB)
    - Pine barrens birds (PB)
    - Raptors (RA)
    - Red-headed woodpecker (RHWO)
    - Secretive Marsh Bird (SMB)
  - Fort Custer (FCTC)
    - 1-1-1 (1-1-1)
    - 1-10-10 (1-10-10)
    - 1-2-2a (1-2-2a)
    - 1-2-2b (1-2-2b)
    - 1-6-6 (1-6-6)

### Observation data

If you would like to download observation data, select the type(s) of survey data to be included in the download.

Survey types

NOTE: If the survey data type is not available for any number of projects you've selected, those projects will not be included in the resulting download.

- Point count observations
- Area search observations
- Secretive marshbird observations
- Vegetation observations
- Site condition observations
- Linear transect observations
- Soil survey observations
- WFL territory summaries
- Banding observations

Date filter

Select a date filter to limit observation data downloaded to those created within the specified range.

Start date  Stop date

### Sampling units

If you would like to download sampling units, select which file type(s) to include in the download.

- CSV
- KML
- Shapefile
- GPSU
- Waypoint
- Sampling unit hierarchy for entire project as text file



# DISCOVERING OBSERVATION DATA

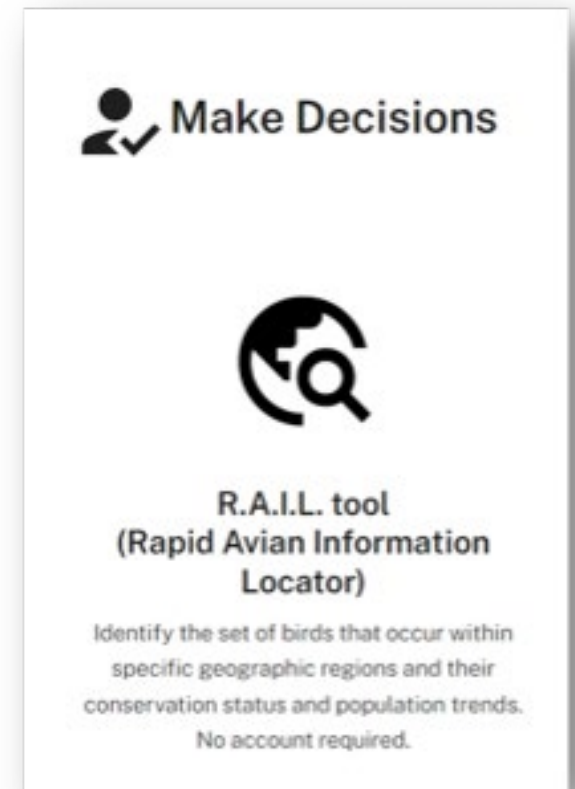


# EXAMPLE: R.A.I.L. TOOL VANCE AIR FORCE BASE, OK

- Biologist was new to AF and did not have any bird data
- Wanted a list of birds on Vance for NEPA and INRMP updates
- RAIL tool available at no cost and without an account

*Integrates data from AKN, Partners in Flight, US Fish and Wildlife, Breeding Bird Survey, eBird, All About Birds, and the Macaulay image library at Cornell*

<https://data.pointblue.org/apps/rail/>





# EXAMPLE: R.A.I.L. TOOL VANCE AIR FORCE BASE, OK

Rapid Avian Information Locator (RAIL)

Before using this tool, please read [About the RAIL tool](#)

Use all available species

Go to location  
Vance AFB

Go to location  
Vance AFB

Before using this tool, please read [About the RAIL tool](#)

Use all available species



# EXAMPLE: R.A.I.L. TOOL VANCE AIR FORCE BASE, OK

Rapid Avian Information Locator (RAIL)

Before using this tool, please read [About the RAIL tool](#)


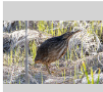
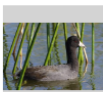
SELECT AREA GET RESULTS







Use all available species

Go to location  
Vance AFB

Species Results FILTER RESULTS (Currently showing 172 of 172 results)

BCR(s): 19-CENTRAL\_MIXED\_GRASS\_PRAIRIE  
State(s): OK

Bird Species	Population Estimates	Conservation Status	Detail
 American Avocet <i>Recurvirostra americana</i>	Global: Not yet available Continental U.S.: Not yet available	BCRBCC Breeding: 9, 33	▼
 American Bittern <i>Botaurus lentiginosus</i>	Global: Not yet available Continental U.S.: Not yet available	State Threatened: MD State Endangered: MA, CT, NJ, PA, OH, IN	▼
 American Coot <i>Fulica americana</i>	Global: Not yet available Continental U.S.: Not yet available	Common	▼

 Barn Swallow <i>Hirundo rustica</i>	Global: 190,000,000 Continental U.S.: 40,000,000	Common	▼
 Bell's Vireo <i>Vireo bellii</i>	Global: 5,700,000 Continental U.S.: 4,600,000	Common	▼
 Belted Kingfisher <i>Megaceryle alcyon</i>	Global: 1,800,000 Continental U.S.: 830,000	BCRBCC Breeding: 13	▼
 Black-bellied Whistling-Duck <i>Dendrocygna autumnalis</i>	Global: Not yet available Continental U.S.: Not yet available	Common	▼
 Black-crowned Night-Heron <i>Nycticorax nycticorax</i>	Global: Not yet available Continental U.S.: Not yet available	State Threatened: ME, NJ, OH State Endangered: DE, PA, IN	▼
 Black-throated Green Warbler <i>Setophaga virens</i>	Global: 9,200,000 Continental U.S.: 2,900,000	BCRBCC Breeding: 27	▼



# EXAMPLE: R.A.I.L. TOOL VANCE AIR FORCE BASE, OK

**Filter Species Results**

Length Min (cm)	Length Max (cm)	Primary Breeding Habitat	
<b>Biology</b>			
Egg Length Min (cm)	Egg Length Max (cm)	Incubation Period Min (days)	Incubation Period Max (days)
Egg Width Min (cm)	Egg Width Max (cm)	Clutch Size Min (integer)	Clutch Size Max (integer)
Number of Broods Min (integer)	Number of Broods Max (integer)	Food Category	
Behavior Category		Nesting Category	

**Conservation Status**

Continental Importance: Half Life  Federally Threatened or Endangered

Bird of Conservation Concern (BCC)  Migratory Bird Treaty Act (MBTA) - Listed

DoD Mission Sensitive Species

APPLY


**Rapid Avian Information Locator (RAIL)**

Before using this tool, please read [About the RAIL tool](#)

Type a species...

Selected species

- BAEA - Bald Eagle
- OSFL - Olive-sided Flycatcher
- HASP - Harris's Sparrow



**Bald Eagle**  
*Haliaeetus*  
*leucocephalus*

**Alpha Code**  
Alpha Code<sup>1</sup>: Not yet available

**Habitat**  
Habitat Category<sup>2</sup>: Forests  
Primary Breeding Habitat<sup>4</sup>: Wetlands, Generalist

**Biology**  
Food Category<sup>2</sup>: Fish  
Behavior Category<sup>2</sup>: Soaring (raptor)  
Nesting Category<sup>2</sup>: Tree  
Incubation Period<sup>2</sup>: 34 - 36 days  
Clutch Size<sup>2</sup>: 1 - 3 eggs  
Number of Broods<sup>2</sup>: 1  
Egg description<sup>2</sup>: Dull white, usually without markings.  
Egg length<sup>2</sup>: 5.8 - 8.4 cm

Global: 200,000  
Continental U.S.: Not yet available

**State Threatened:** MA, CT, NH, NY, TX  
**State Endangered:** NJ, VT, CA

**Physical Details**  
Weight<sup>2</sup>: 3000 - 6300 g  
Length<sup>2</sup>: 71 - 96 cm

**Population Information**  
Global Population<sup>3</sup>: 200,000  
% Population Estimate USA<sup>3</sup>: Not yet available  
Lower 95% Bound USA<sup>3</sup>: Not yet available  
Upper 95% Bound USA<sup>3</sup>: Not yet available  
Continental Population Trend<sup>4</sup>: Significant large increase  
Regional Population Trend<sup>4</sup>: BCR19 - Significant large increase  
% BCR Population<sup>3</sup>: BCR 19 - 0.00%  
Lower 95% Bound BCR<sup>3</sup>: BCR 19 - null  
Upper 95% Bound BCR<sup>3</sup>: BCR 19 - null  
% State Population<sup>3</sup>: OK - 0.00%  
Lower 95% Bound State<sup>3</sup>: OK - null  
Upper 95% Bound State<sup>3</sup>: OK - null

**Conservation Status**  
Continental Importance<sup>4</sup>: Not yet available  
Half Life<sup>4</sup>: Not yet available  
Federally Threatened<sup>6</sup>: No  
Federally Endangered<sup>6</sup>: No  
State Threatened<sup>7</sup>: MA, CT, NH, NY, TX  
State Endangered<sup>7</sup>: NJ, VT, CA  
Migratory Bird Treaty Act<sup>8</sup>: Listed  
Bird of Conservation Concern<sup>9</sup>: No

# NAVIGATING THE R.A.I.L. TOOL DEMONSTRATION

Tools:

- [RAIL Tool](#)



# EXERCISE 4: CREATE A SPECIES LIST WITH THE R.A.I.L. TOOL



# CREATE A SPECIES LIST WITH THE R.A.I.L. TOOL

## EXERCISE 4

**Purpose:** Get familiarized with the RAIL tool, which can help you find general information about the species in a particular area and their conservation status

**Goal:** Be comfortable navigating the RAIL tool to find information about species on your installation and understand the limitations of the tool

**Thinking Ahead:** Consider how RAIL might be helpful for your analyses and reporting

# CREATE A SPECIES LIST WITH THE R.A.I.L. TOOL

## EXERCISE 4

Exercise:

- [Exercise 4 instructions](#)





# BREAK

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## NEXT: LOOKING FOR TRENDS



# CASE STUDY: MIGRATORY SHOREBIRD PROJECT

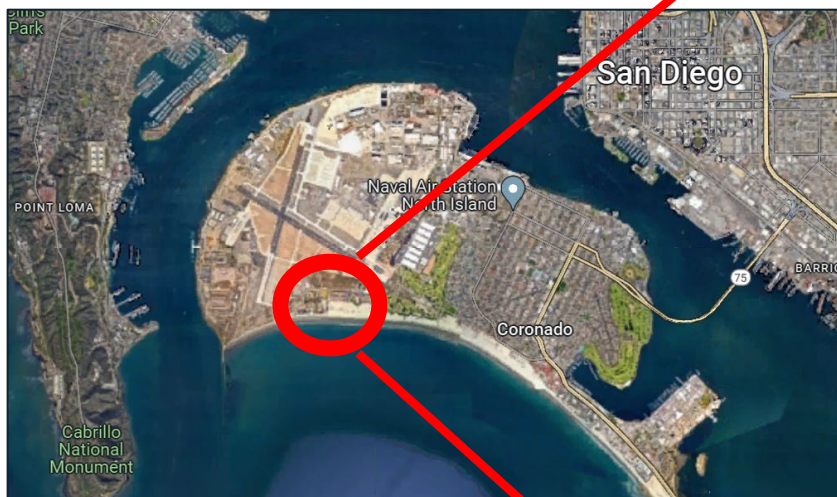
- Largest coordinated effort to monitor wintering shorebirds across all **13 countries** of the Pacific Coast of the Americas
- Project goals
  - Wintering Shorebird **abundance and distribution**
  - Factors **influencing** shorebird populations
  - Provide **science-based management** guidance from site to fly-way level



Western Sandpiper, Dam Neck Annex, VA; Credit: Paul Block



# CASE STUDY: MIGRATORY SHOREBIRD PROJECT



**Satellite** ▾

[About These Maps](#)

Select a species from the map controls. Click on the center of a point to see a simple summary of avian observations at that location by year. Click within a summary area to see observations summarized for that area.

**Choose a Species**  
Select A Species ▾

**Data Collection**

Shorebird/Raptor Observations (Mar–Jun)  
 Shorebird/Raptor Observations (Nov–Feb)

**Choose the Area to Summarize**

by State/Province (Canada/US/Mexico)  
 by Country

**Shorebird observation legend**

- 0
- 1 - 10
- 11 - 100
- 101 - 1000
- 1001 - 10000
- 10001 - 50000
- 50000 +

**13 visits from 2011—2023**

- American Kestrel (1)
- Black-bellied Plover (1110)
- Black Turnstone (11)
- Dunlin (14)
- Marbled Godwit (633)
- Red Knot (100)
- Ruddy Turnstone (26)
- Sanderling (2776)
- Semipalmated Plover (77)
- Sharp-shinned Hawk (1)
- Snowy Plover (179)
- Surfbird (3)
- Western Sandpiper (56)
- Willet (532)

---

**California (United States of America)**

**Months: -**

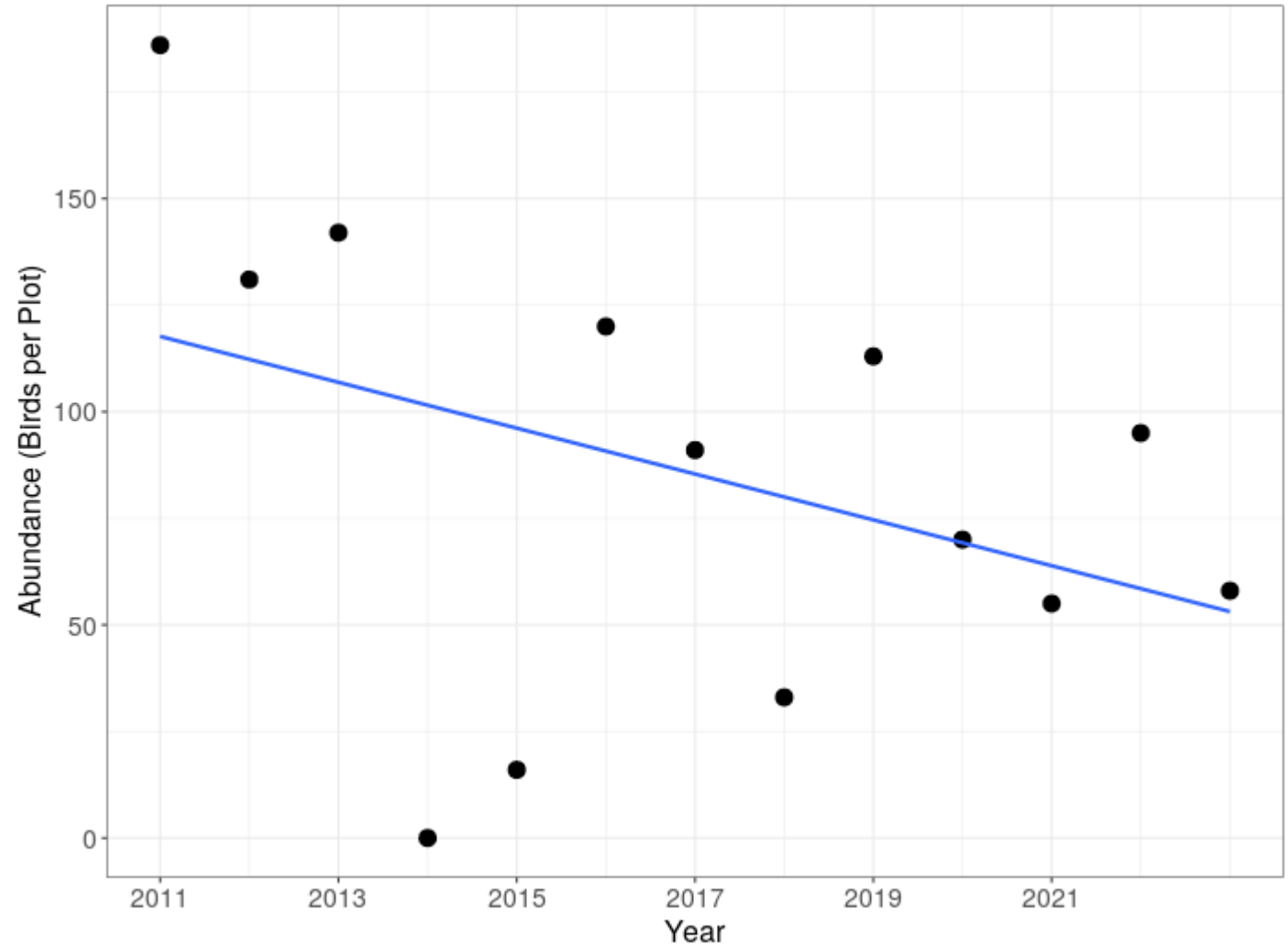
[1971](#) | [1972](#) | [1973](#) | [1974](#) | [1975](#) | [1976](#) | [1977](#) | [1978](#) | [1979](#) | [1980](#) | [1981](#) | [1982](#) | [1983](#) | [1984](#) | [1985](#) | [1986](#) | [1987](#) | [1988](#) | [1989](#) | [1990](#) | [1991](#) | [1992](#) | [1993](#) | [1994](#) | [1995](#) | [1996](#) | [1997](#) | [1998](#) | [1999](#) | [2000](#) | [2001](#) | [2002](#) | [2003](#) | [2004](#) | [2005](#) | [2006](#) | [2007](#) | [2008](#) | [2009](#) | [2010](#) | [2011](#) | [2012](#) | [2013](#) | [2014](#) | [2015](#) | [2016](#) | [2017](#) | [2018](#) | [2019](#) | [2020](#) | [2021](#) | [2022](#) | [2023](#) | [All Years](#) |

- Aleutian Cackling Goose (225)
- Allen's Hummingbird (78)
- American Avocet (437618)
- American Bittern (1140)
- American Black Duck X Mallard Hybrid (2)
- American Coot (5843730)
- American Crow (1590)
- American Golden-Plover (86)
- American Green-winged Teal (12110490)
- American Kestrel (2881)
- American Pipit (387)
- American Robin (10)
- American White Pelican (9861)
- American Wigeon (16921300)
- American x Eurasian Wigeon (6)
- Anna's Hummingbird (67)
- Ashy Storm-Petrel (2)
- Atlantic Brant (305)
- Baird's Sandpiper (648)

# CASE STUDY:

## MIGRATORY SHOREBIRD PROJECT

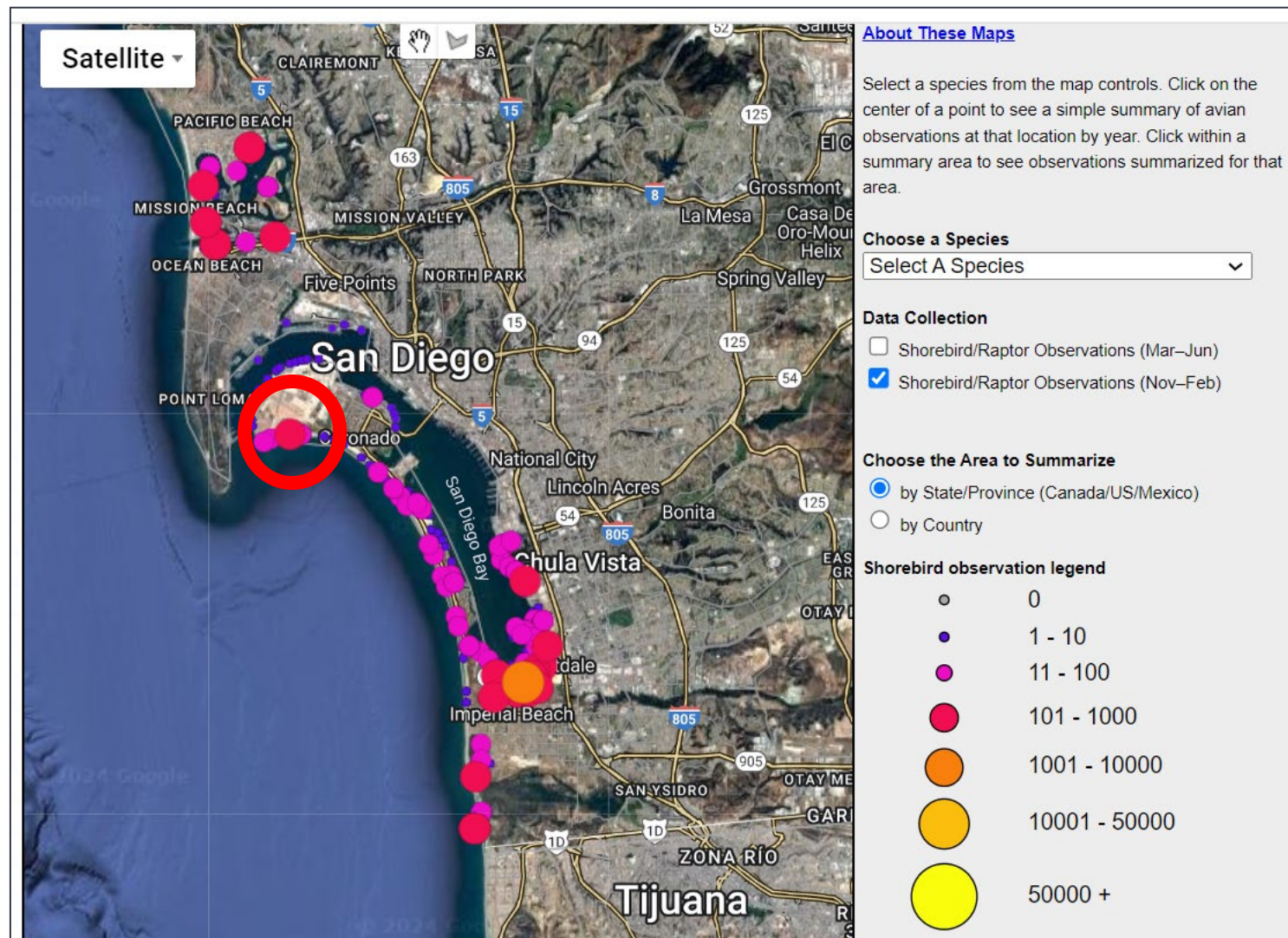
### North Island Coronado Beach Black-bellied plover abundance



# CASE STUDY:

## MIGRATORY SHOREBIRD PROJECT

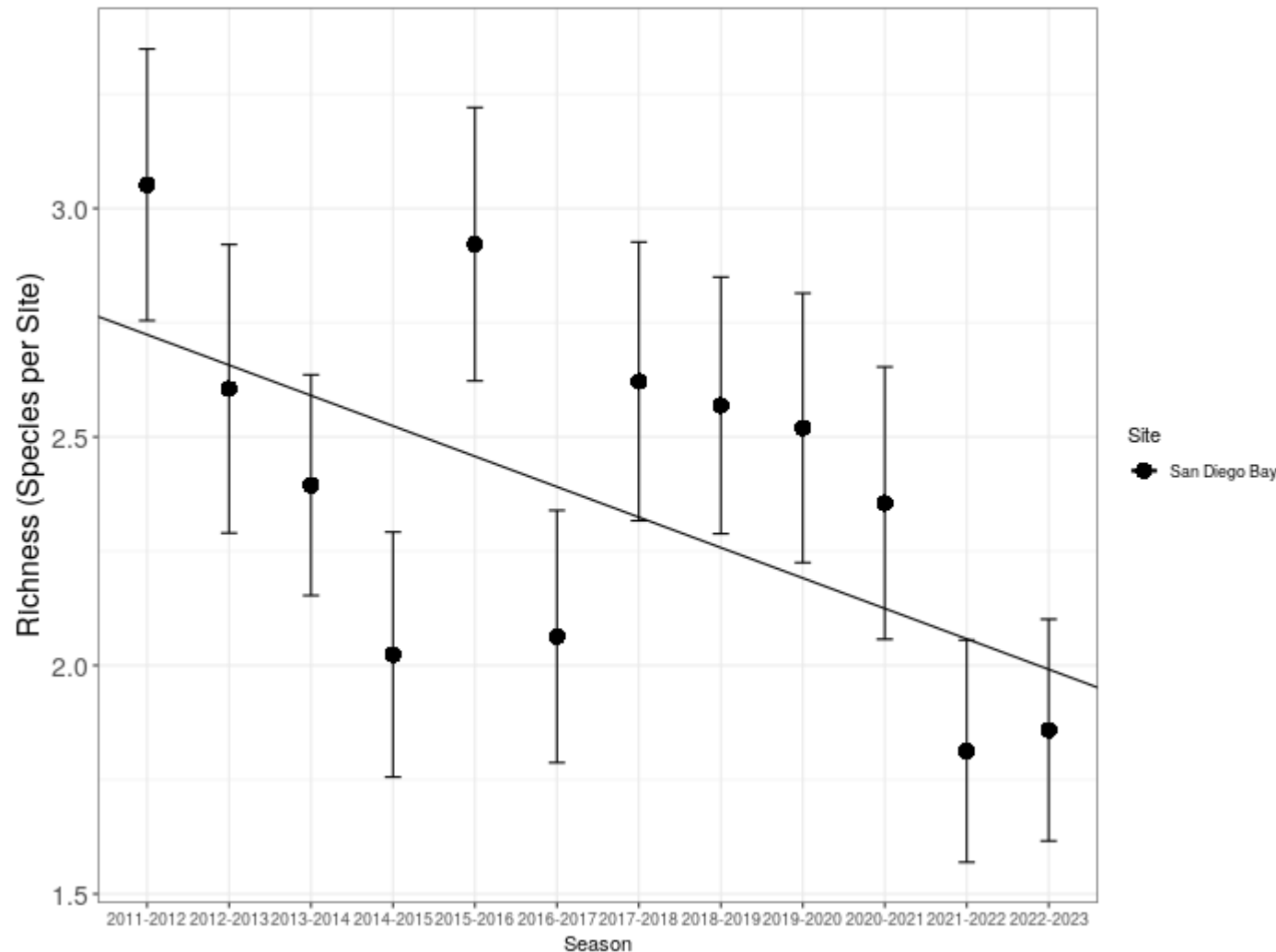
- Data collected between November and December every year since 2011
- <https://migratoryshorebirdproject.org>



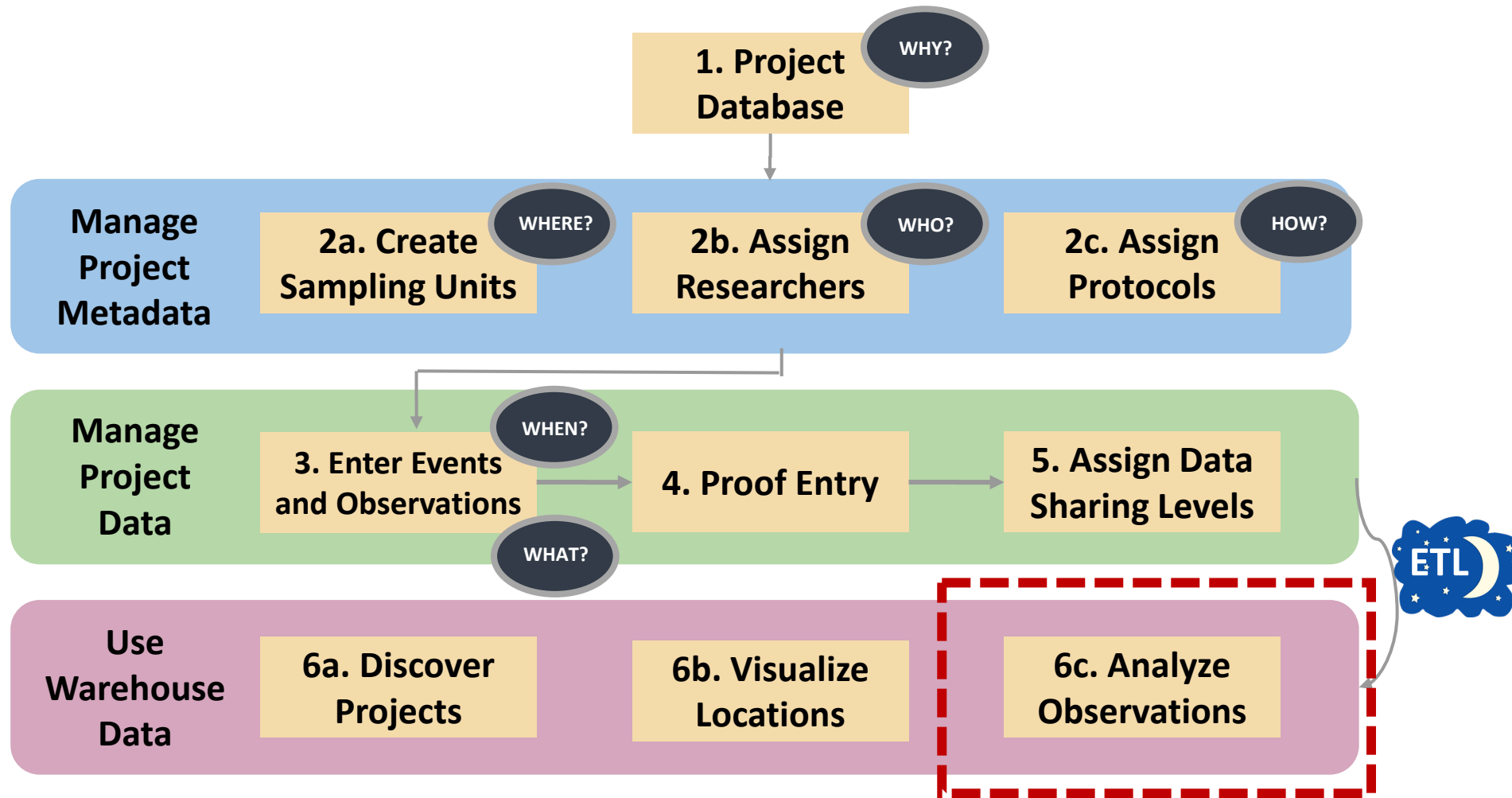
# CASE STUDY:

## MIGRATORY SHOREBIRD PROJECT

### San Diego Bay: Wintering shorebird species richness



# MANAGING A PROJECT: LOOKING FOR TRENDS



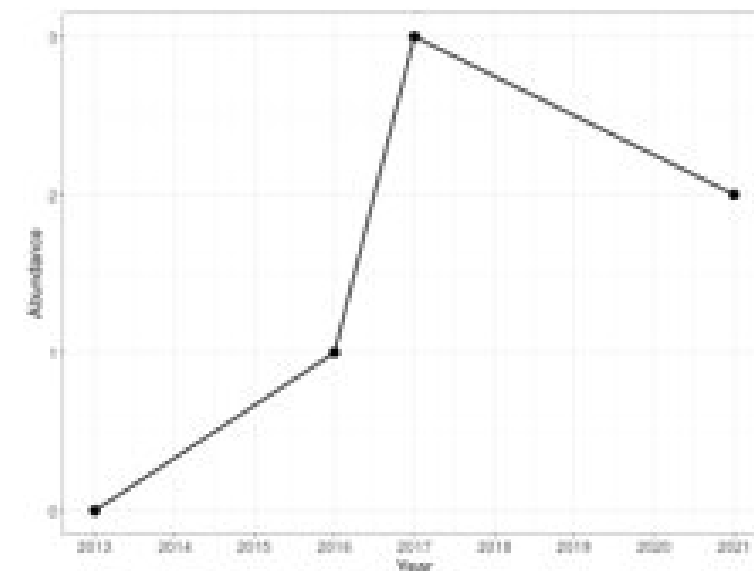


# USING THE ANALYST TOOL DEMONSTRATION

Tools:

- <https://data.pointblue.org/apps/analysts/>

Common Name	2013	2014	2015	2016	2017	2021
Acadian Flycatcher	6	11	25	12	14	15
Alder Flycatcher	0	0	0	0	1	0
American Crow	41	28	42	29	24	113
American Goldfinch	14	1	5	6	3	16
American Redstart	0	1	0	1	1	2
American Robin	0	0	0	0	1	0
Barred Owl	0	0	0	0	0	1





# LOOKING FOR TRENDS

---

## EXERCISE 5





# LOOKING FOR TRENDS

## EXERCISE 5

**Purpose:** Introduce you to more data exploration and discovery tools

**Goal 1:** Understand how to use the Observations Map to find survey locations from different datasets for a particular species and examine species trends

**Goal 2:** Use the Analyst Application to create a species list, check effort summaries, and examine trends.

**Thinking Ahead:** Consider how Observations Map may be helpful for your analyses and reporting; consider how the Analyst Application can assist in your data visualization and annual reporting needs.

# LOOKING FOR TRENDS

## EXERCISE 5

- Exercise:
  - Orientation of Observation Map
  - Exercise 5 instructions

Use  
Warehouse  
Data

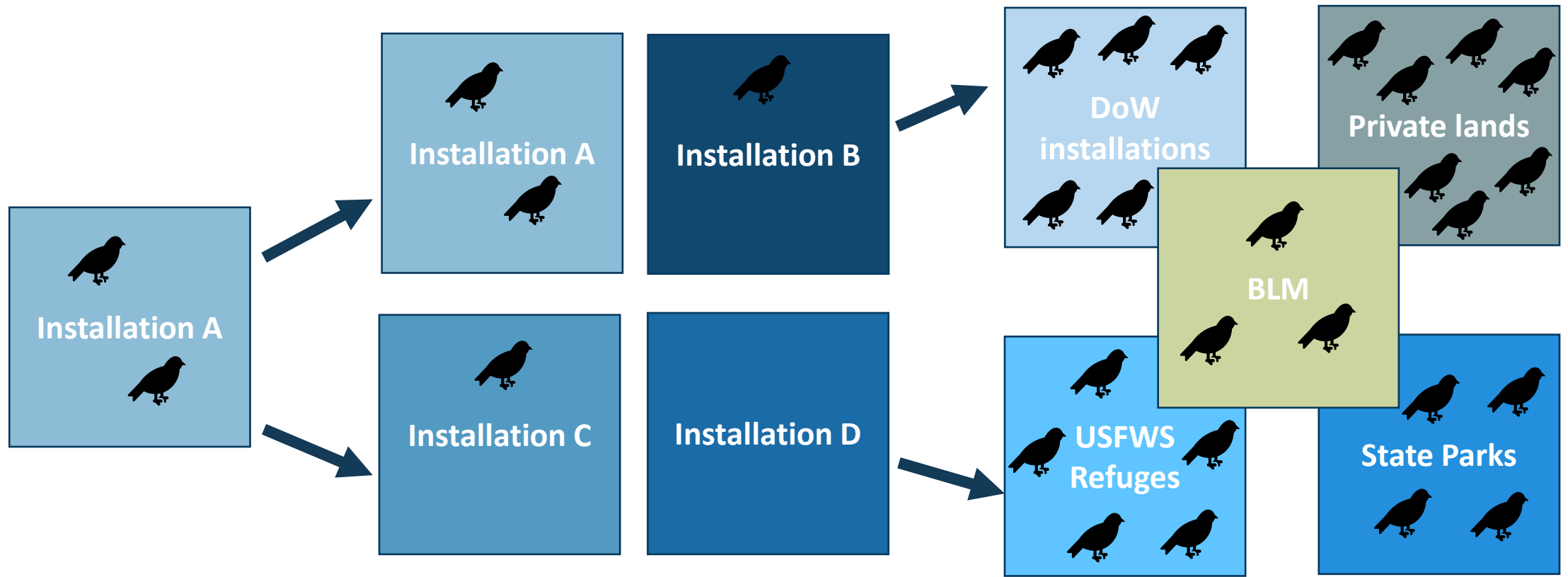
6a. Discover  
Projects

6b. Visualize  
Locations

6c. Analyze  
Observations

# CASE STUDY:

## ASSESSING RELATIVE CONSERVATION RESPONSIBILITY

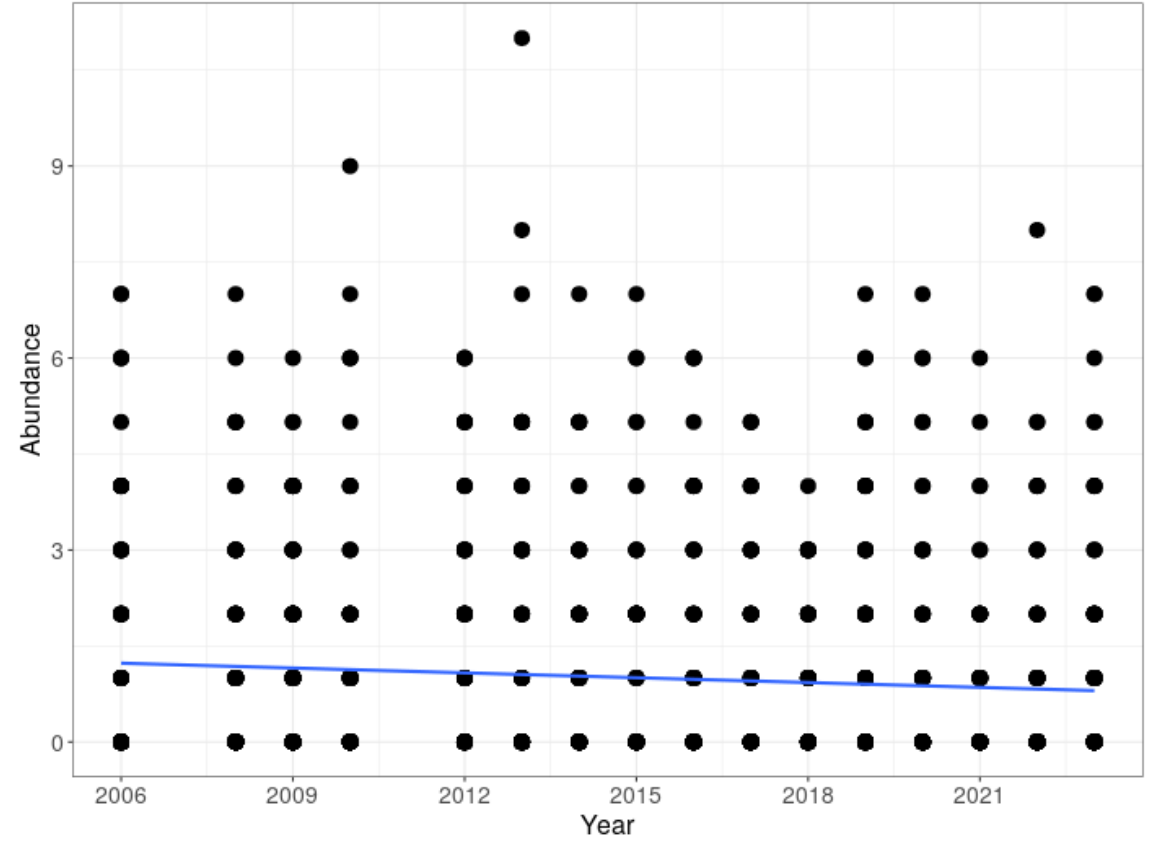


# CASE STUDY:

## ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

AKN Analyst  
output

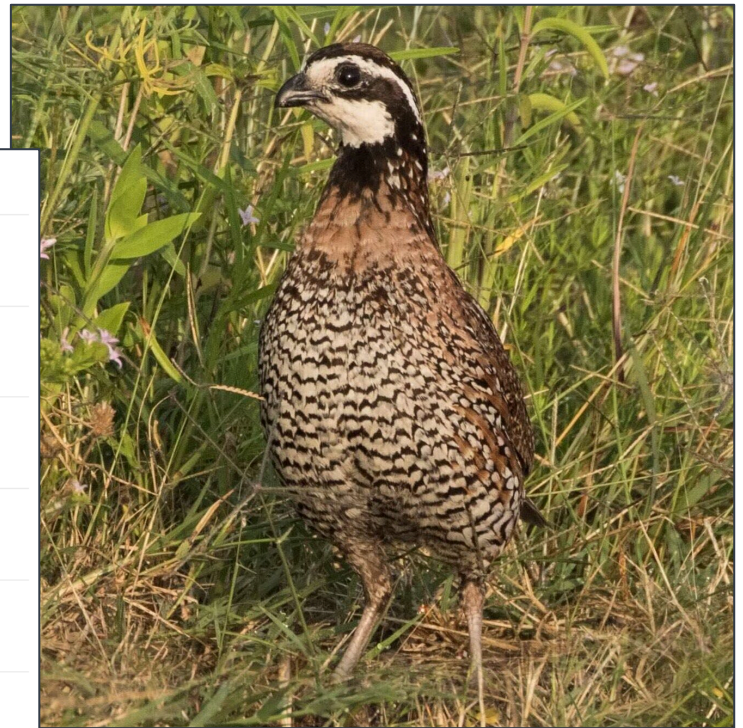
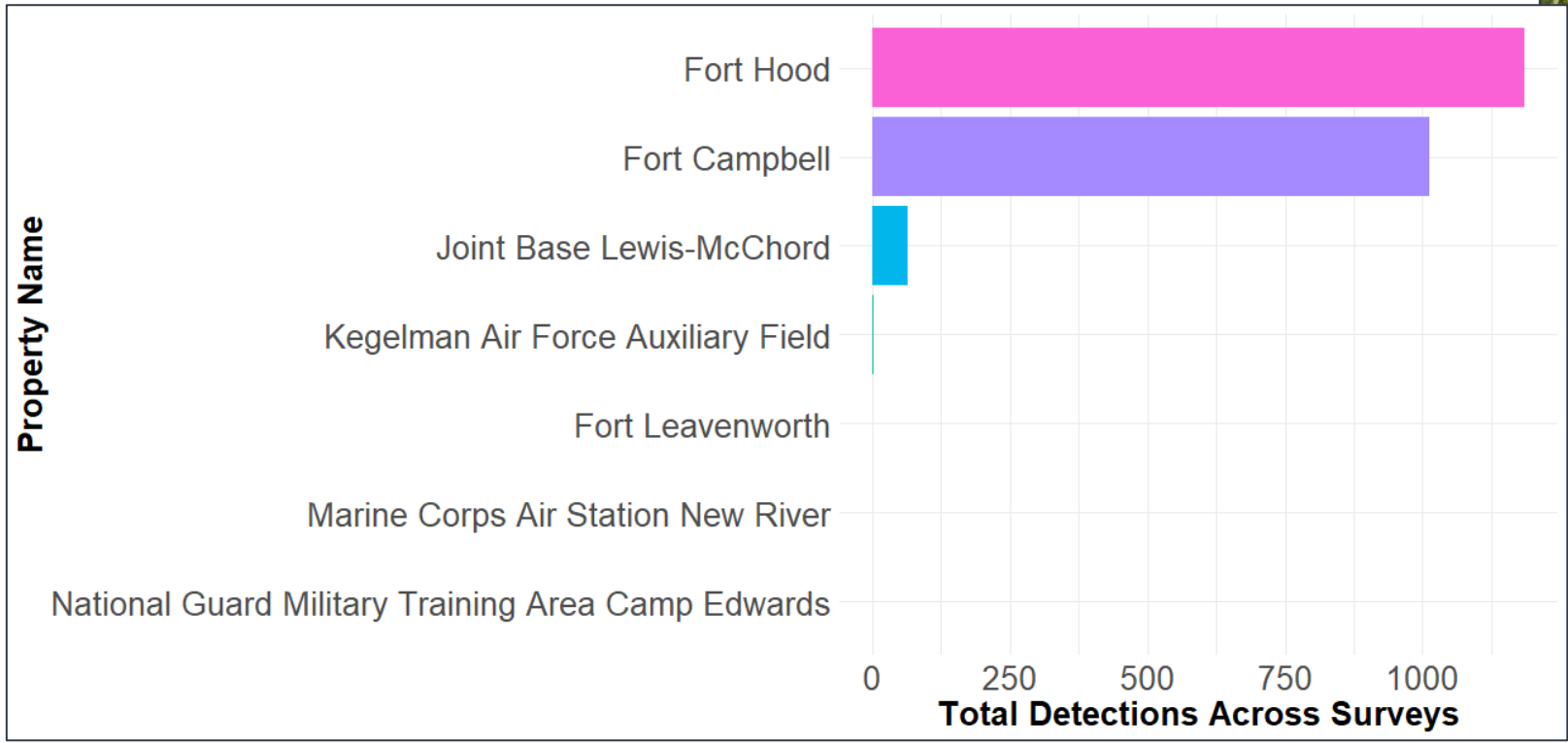
Fort Campbell



# CASE STUDY:

## ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

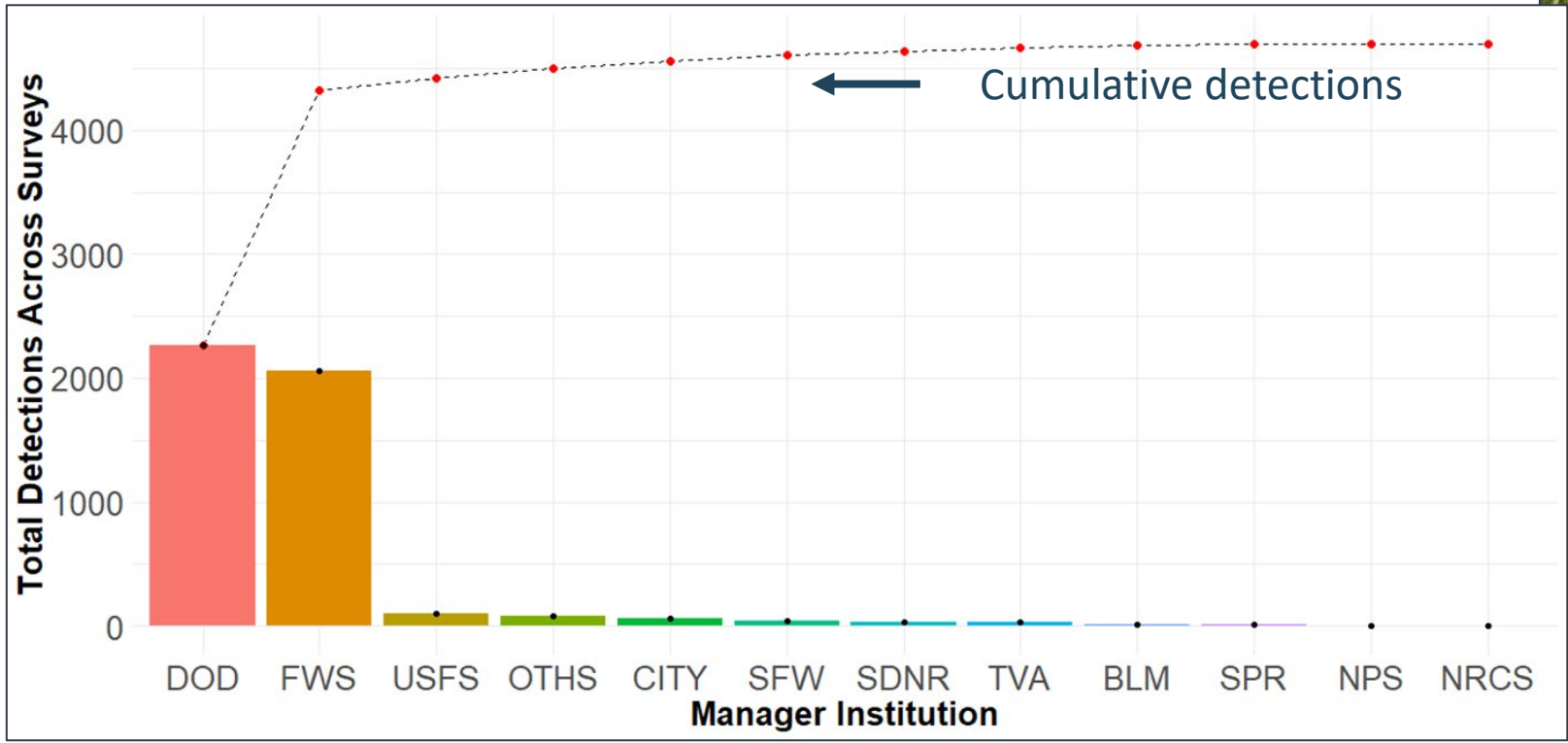
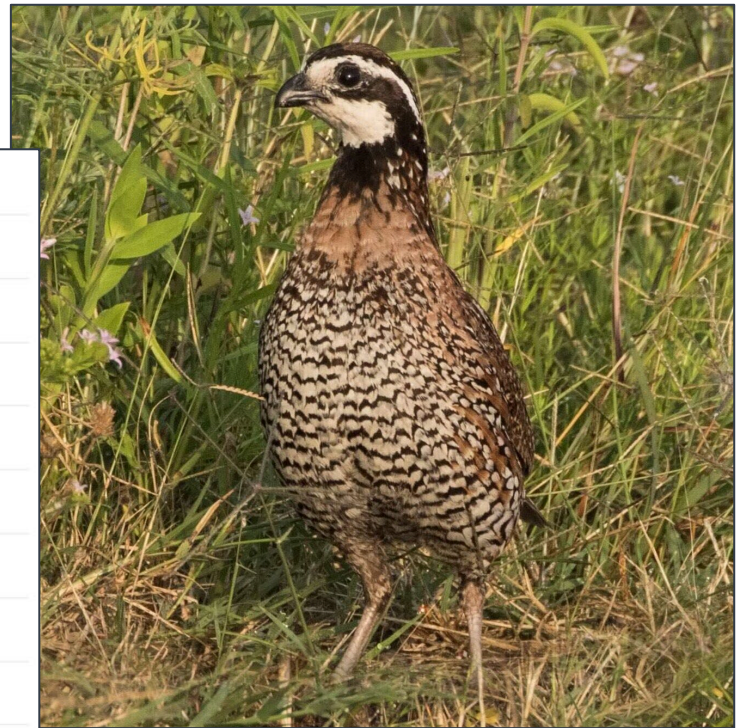
Which DoW installations have the most detections?



# CASE STUDY:

## ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

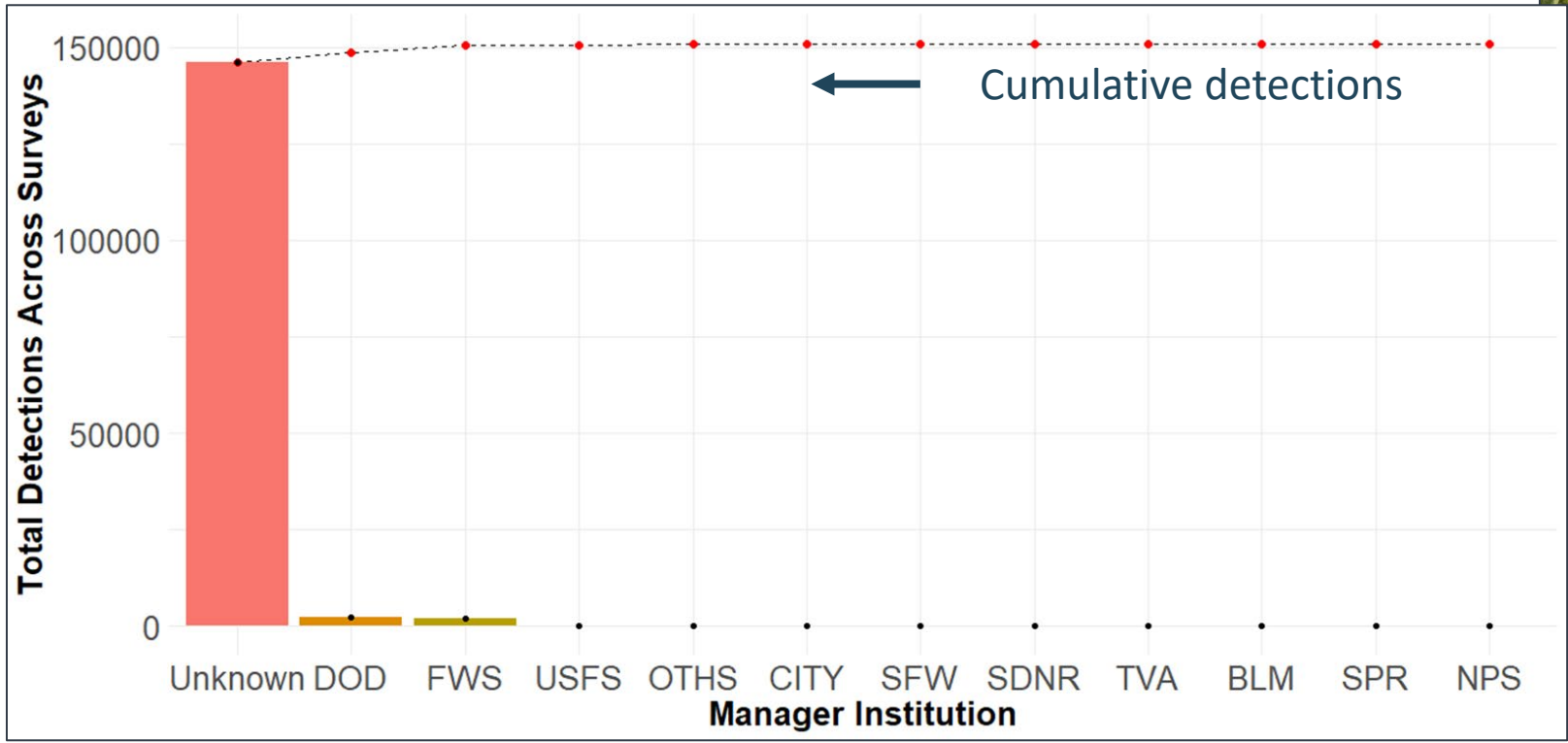
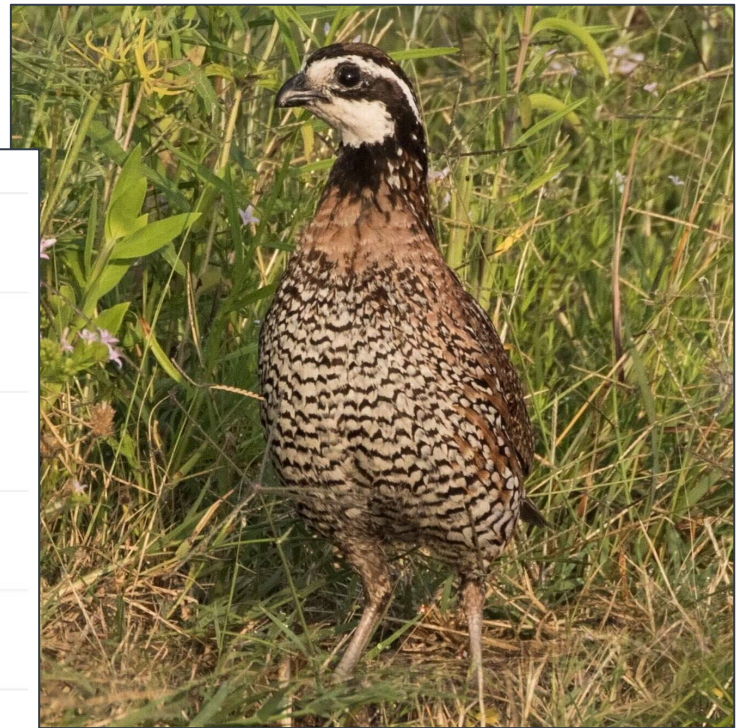
Across protected areas?



# CASE STUDY:

## ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

Across jurisdictions?

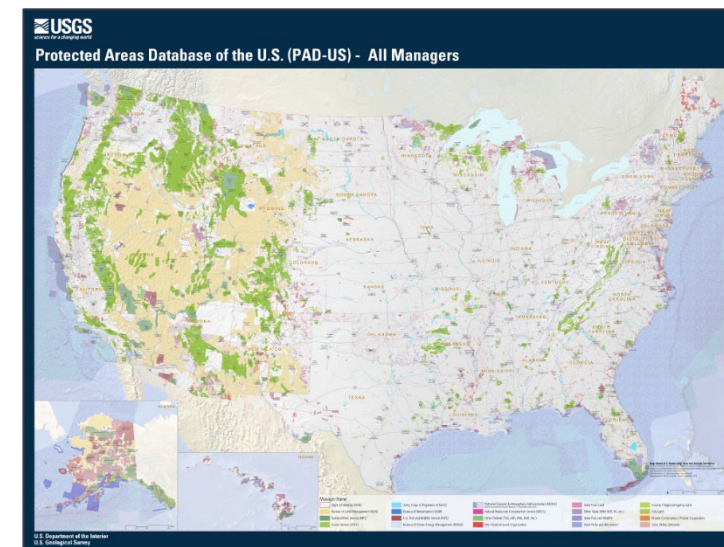
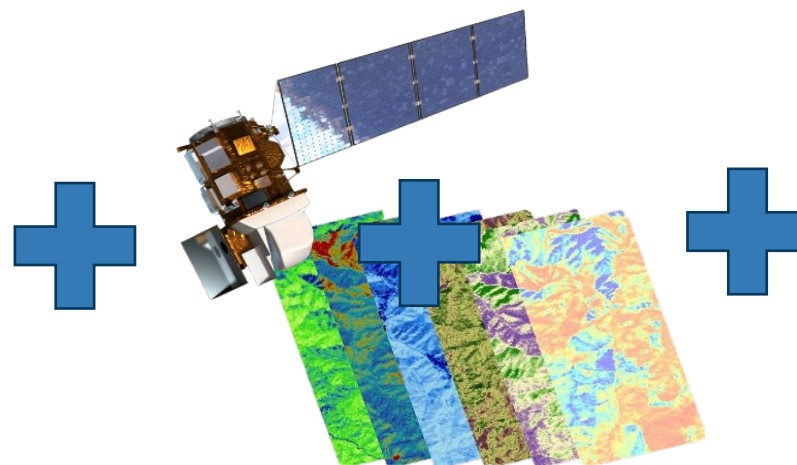
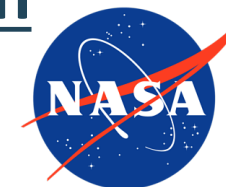


# CASE STUDY:

## ASSESSING RELATIVE CONSERVATION RESPONSIBILITY

### Avian Distributions Across Land Ownerships (ADALO) Tool Expansion

- Use **AKN data** in conjunction with **NASA remote sensing products** to model avian distribution and abundance across the U.S.
- Incorporate **DoW AKN data** for Mission-Sensitive Species



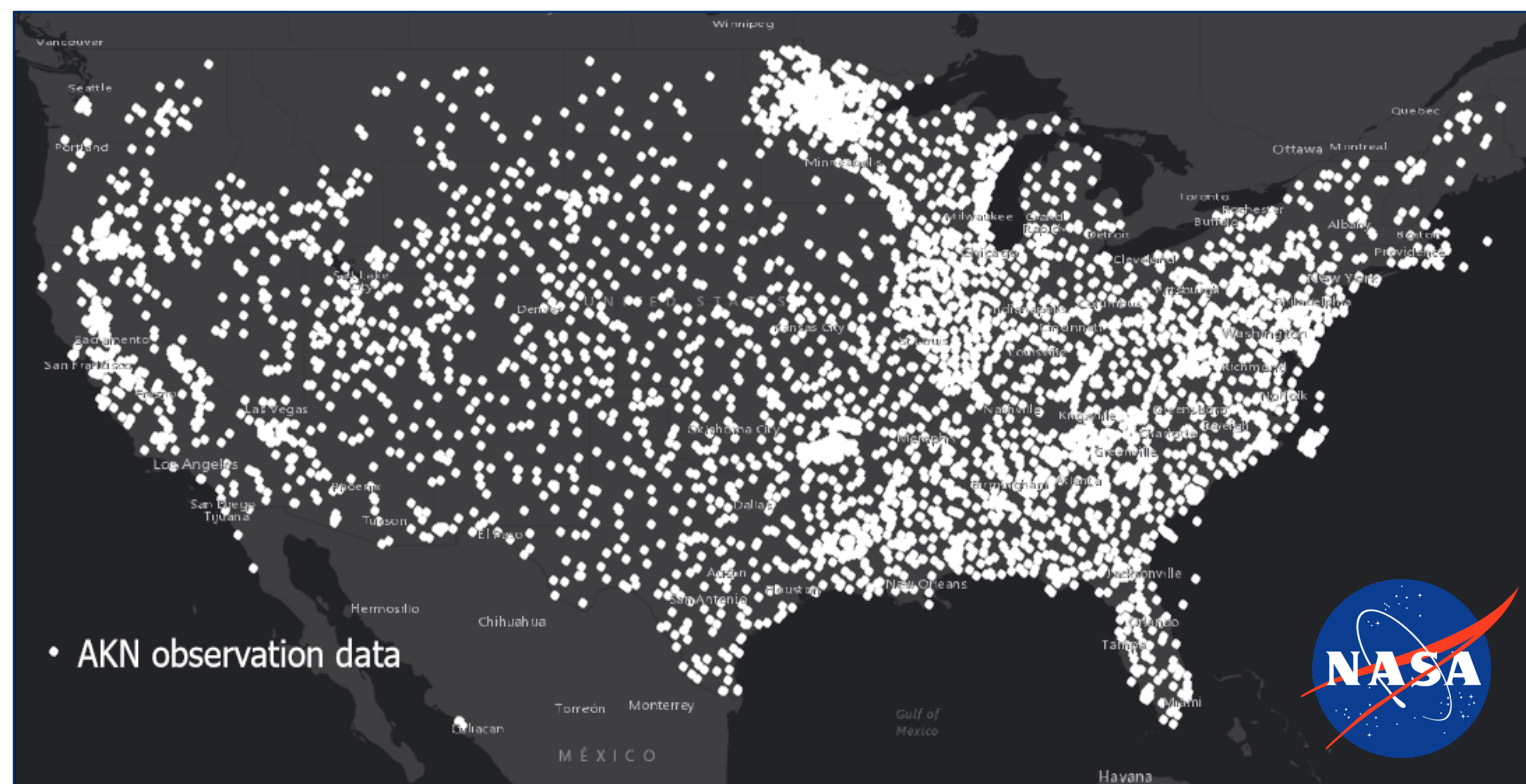
*Proposal through NASA Research Opportunities in Space and Earth Science (ROSES) –*

**ACCEPTED!**

# CASE STUDY:

## AVIAN DISTRIBUTIONS ACROSS LANDOWNERSHIPS (ADALO) PHASE 2

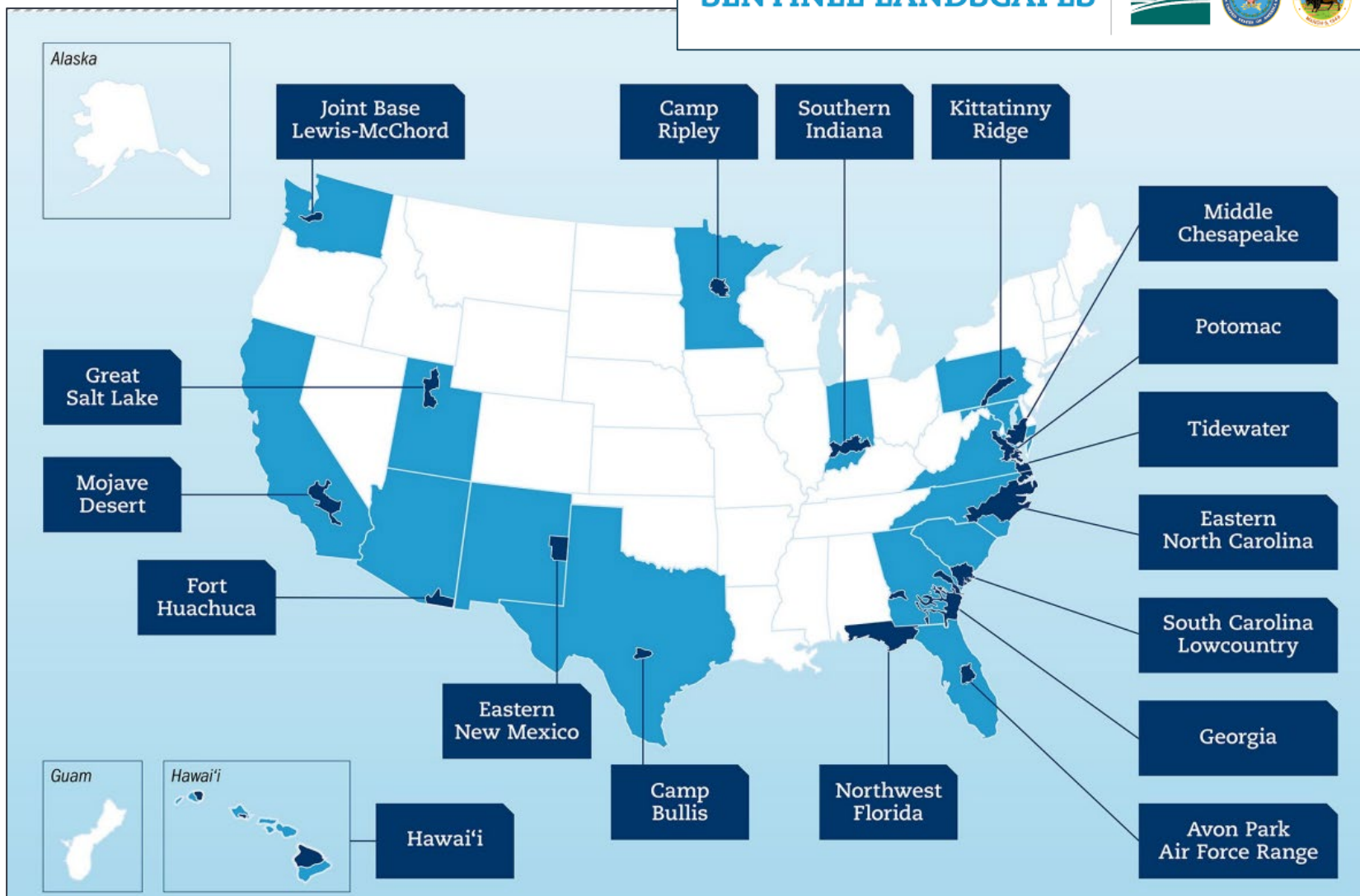
- Create species distribution models for Mission-Sensitive Species across the US
- Data from **192 AKN point count projects**
- **Over 50 different protocols**
- Warehouse delivers all of this data in **one spreadsheet** ready for our modeling process
- Models will be updated annually with new observation data and satellite remote sensing data



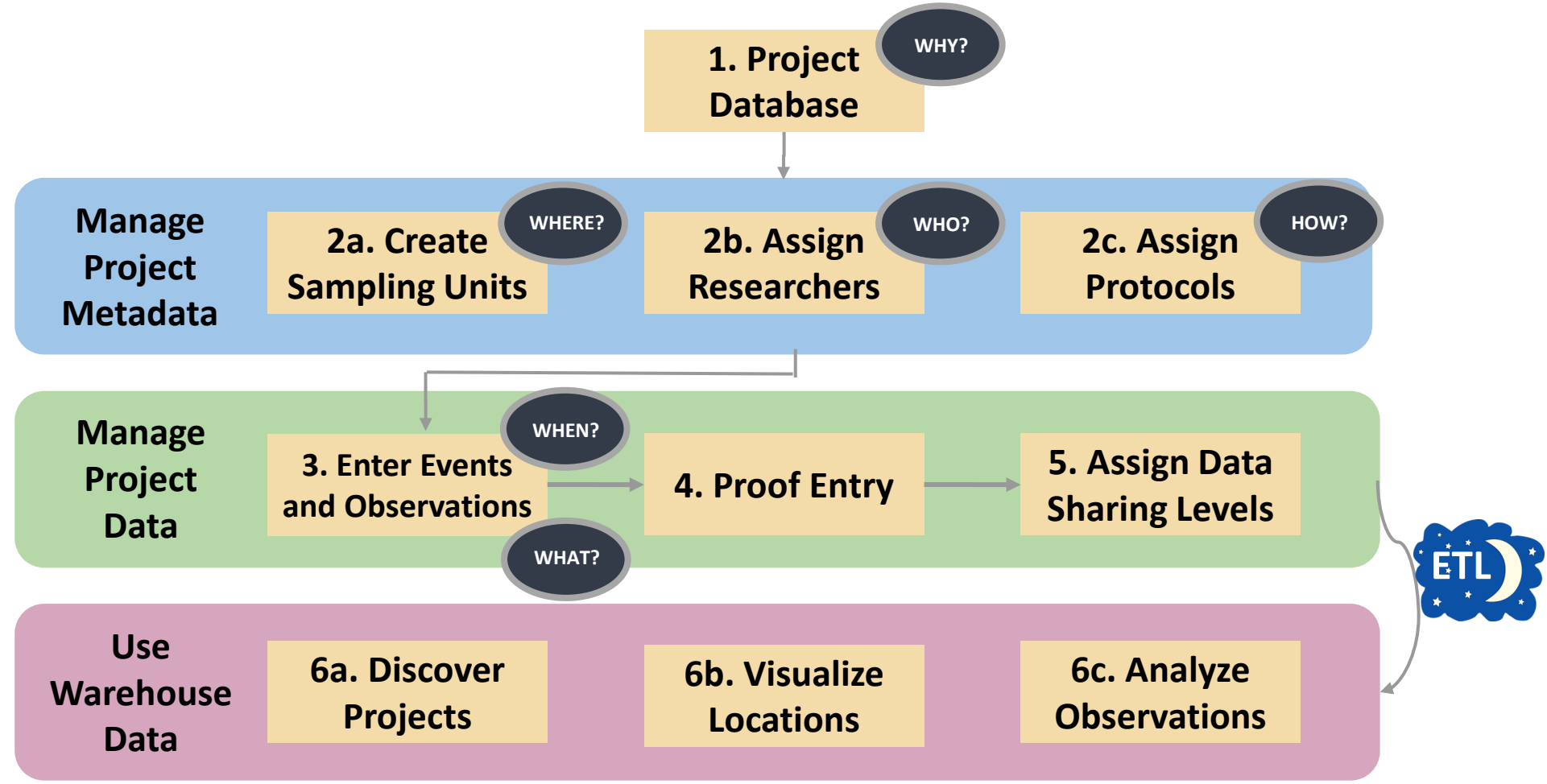
# CASE STUDY:

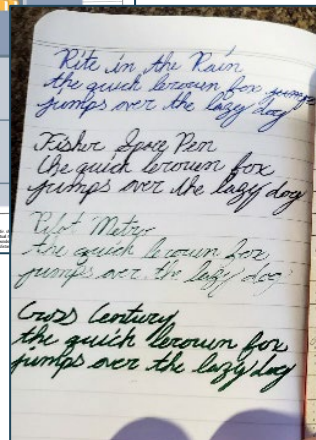
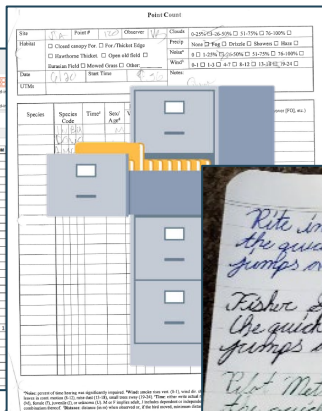
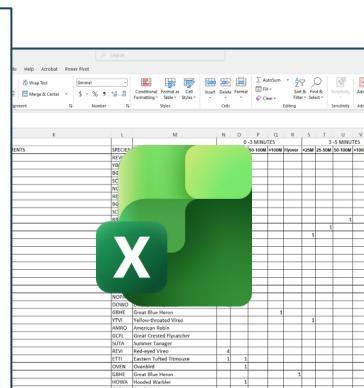
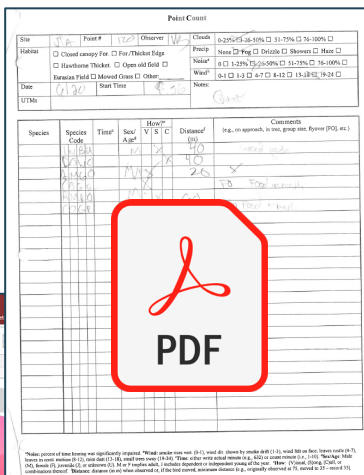
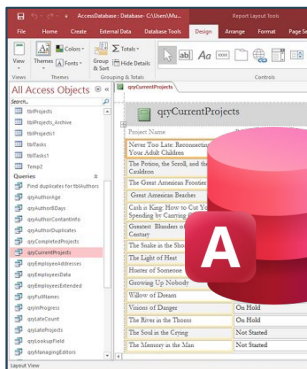
## APPLICATION- SENTINEL LANDSCAPES

SENTINEL LANDSCAPES

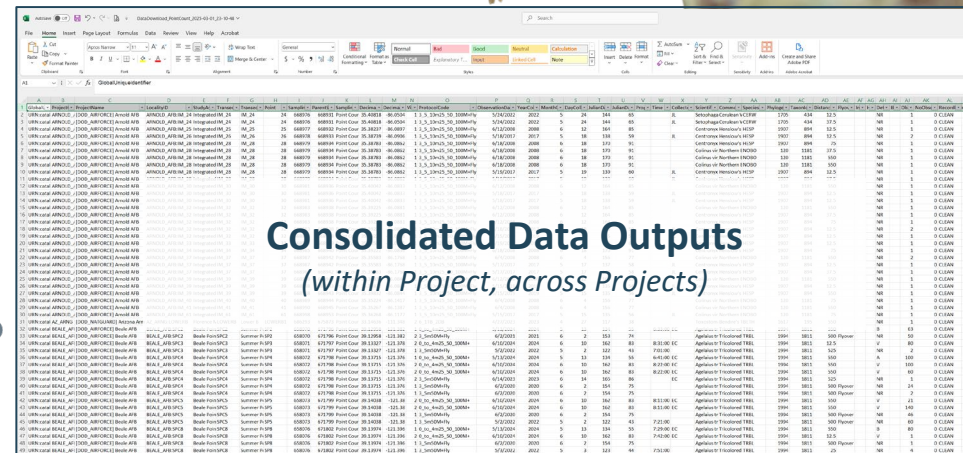


# WORKFLOW FOR MANAGING A PROJECT





Data from multiple sources, varying formats, historic and contemporary datasets



# AKN & THE AVIAN DATA LIFE CYCLE



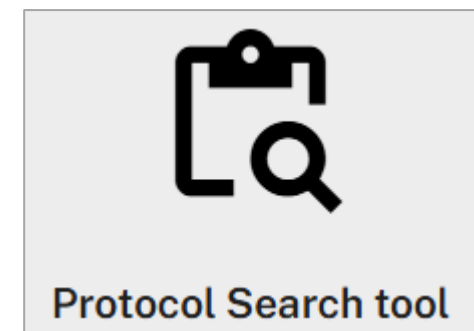
**FULL  
AVIAN  
DATA  
LIFE  
CYCLE**

# AKN & THE AVIAN DATA LIFE CYCLE



## Plan

- Methodological alignment with partners
- What is your question?
- Office Hours



# AKN & THE AVIAN DATA LIFE CYCLE



## Create & Organize

- Align AKN Protocols with field methodologies
- Standardized data input & QA/QC via Biologist, Bulk Uploader



Biologists Application



Bulk Uploader Application

# AKN & THE AVIAN DATA LIFE CYCLE



## Analyze

- Coarse analyses via Analyst tool
- Raw Data Downloader to download clean, raw data for external analyses
- Public Data Downloader to download homogenized



Analyst Application



Raw Data Download



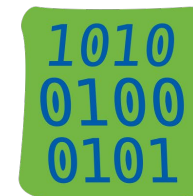
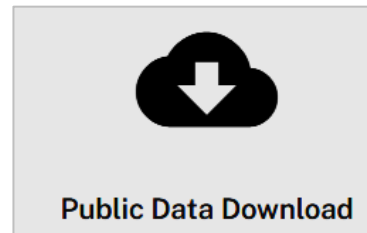
Public Data Download

# AKN & THE AVIAN DATA LIFE CYCLE



## Share

- Data sharing levels
- Sharing homogenized data via warehouse export
- Program Enterprise capacities



Sharing Levels

# AKN & THE AVIAN DATA LIFE CYCLE



## Archive

- Staff turnover
- Full description of essential metadata
- Historic and contemporary data
- You own and control in perpetuity



# WHAT SHOULD YOU EXPECT THIS YEAR WITH AKN AND DoW PARTICIPATION?





# DoW MANDATE MEMO



ENERGY, INSTALLATIONS,  
AND ENVIRONMENT

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
3400 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3400

MEMORANDUM FOR DEPUTY ASSISTANT SECRETARY OF THE ARMY  
(ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH)  
DEPUTY ASSISTANT SECRETARY OF THE NAVY  
(ENVIRONMENT AND MISSION READINESS)  
DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE  
(ENVIRONMENT, SAFETY AND INFRASTRUCTURE)

SUBJECT: Department of Defense Avian Knowledge Network Program

The Department of Defense (DoD), like other federal agencies, has significant regulatory, management, and stewardship responsibilities related to migratory birds. These requirements are driven primarily by the Migratory Bird Treaty Act (MBTA), the "Military Readiness Rule" (50 CFR § 21.15, Authorization of take incidental to military readiness activities) and Executive Order (EO) 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds." In accordance with EO 13186, DoD has also established a Memorandum of Understanding with the U.S. Fish and Wildlife Service outlining the management and stewardship activities DoD will implement for migratory bird conservation. All DoD natural resources conservation programs support DoD access to its land, air, and water resources for realistic military training and testing and to sustain the long-term ecological integrity of the resource base and the ecosystem services it provides, in accordance with the Sikes Act. Collecting data and information from ongoing surveys, inventories, and monitoring are essential to make informed management decisions, efficiently and effectively meet regulatory requirements (e.g., the MBTA, the Sikes Act), conduct environmental analyses, and support planning to adaptively manage migratory bird populations in the context of mission activities. As such, the DoD spends millions of dollars annually to collect these data.

However, even with the collection of large amounts of data, DoD faces significant challenges to fully utilize and optimize our avian data. These challenges include: (1) inefficient access to data for regulatory requirements, environmental analyses, and planning; (2) a lack of visibility on avian species population trends and management across the Military Services and broader landscapes; and (3) a lack of a centralized, secure data repository resulting in data loss during personnel turnover.

To address these challenges, DoD began partnering with other federal agencies (i.e., U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Forest Service) in the development of the Avian Knowledge Network (AKN) in 2016. The AKN is a national clearinghouse for avian data and decision support tool for assessing bird population health, status and trends, specific stressors, and conservation measures. The AKN connects partner datasets, includes metadata and data assumptions, contains powerful data analysis tools, and is a permanent archive of all data records.

This office fully endorses the use of AKN and requests that each DoD Component utilize AKN to the maximum extent practicable and provide staff the support needed to make AKN the best tool for DoD. A coordinated and comprehensive approach to implement DoD's participation in the AKN will directly support the military mission and improve the quality and effectiveness of bird conservation on DoD installations. For DoD to fully employ the power of AKN, user training and significant initial data management is required. This office, through the DoD Legacy Resource Management Program, is committed to providing baseline support and resources to help implement AKN. This support will provide training and education for personnel, and technical assistance related to system use and data management. The DoD AKN Director is Ms. Elizabeth Neipert, at [elizabeth.s.neipert@erdcdren.mil](mailto:elizabeth.s.neipert@erdcdren.mil) or 907-201-6244.

Additionally, a national Cooperative Agreement has been established to support AKN implementation. It provides a streamlined process for DoD Components and installations to contribute additional resources to meet their unique needs.

The point of contact for this office is Ms. Liz Galli-Noble, DoD Senior Natural Resources Program Manager and Legacy Resource Management Program Manager, [elizabeth.j.galli-noble.civ@mail.mil](mailto:elizabeth.j.galli-noble.civ@mail.mil) or 406-581-8148

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ODWIN, IV.1163856  
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Richard G. Kidd IV  
Deputy Assistant Secretary of Defense  
(Environment and Energy Resilience)

# DOW AKN STRATEGIC APPROACH

- DoW AKN Program Management Plan
- Status of DoW Data
- Data Initiatives
- DoW-Specific and AKN-wide Tools
- Priority Tasks for FY26

# DoW AKN Program

## Task Categories



### Training

Ex. quarterly regional, service-specific, NMFVA, training videos



### DoW-Specific Resources

Ex. user guides, DoW AKN Portal, data visualization and query tools



### Data Initiatives

Ex. new data type incorporation, integration with partner data, data standardization



### AKN Tools

Ex. new AKN roles, advanced analysis and query functionality, cohesive U.I., Program Enterprise



### Ongoing Base Support

Ex. project coordination, customer data support, back-end technical support

# DOW MISSION BENEFITS

- Secure database to input/upload, curate, and manage DoW field data
- Empowers historical data
- Assess status of birds on/near installations
- Monitor trends at multiple scales
- Data sharing and integration with partners
- Advanced data analysis and visualization tools
- Access to data that contributes to more technically and scientifically sound INRMPs, NEPA environmental reviews, and ESA Section 7 Consultation
- Contributes directly to proactive conservation, monitoring and management of priority bird species



**Enabling the Mission, Defending the Resources**



# MILITARY SERVICE ACTIONS



## Department of Army



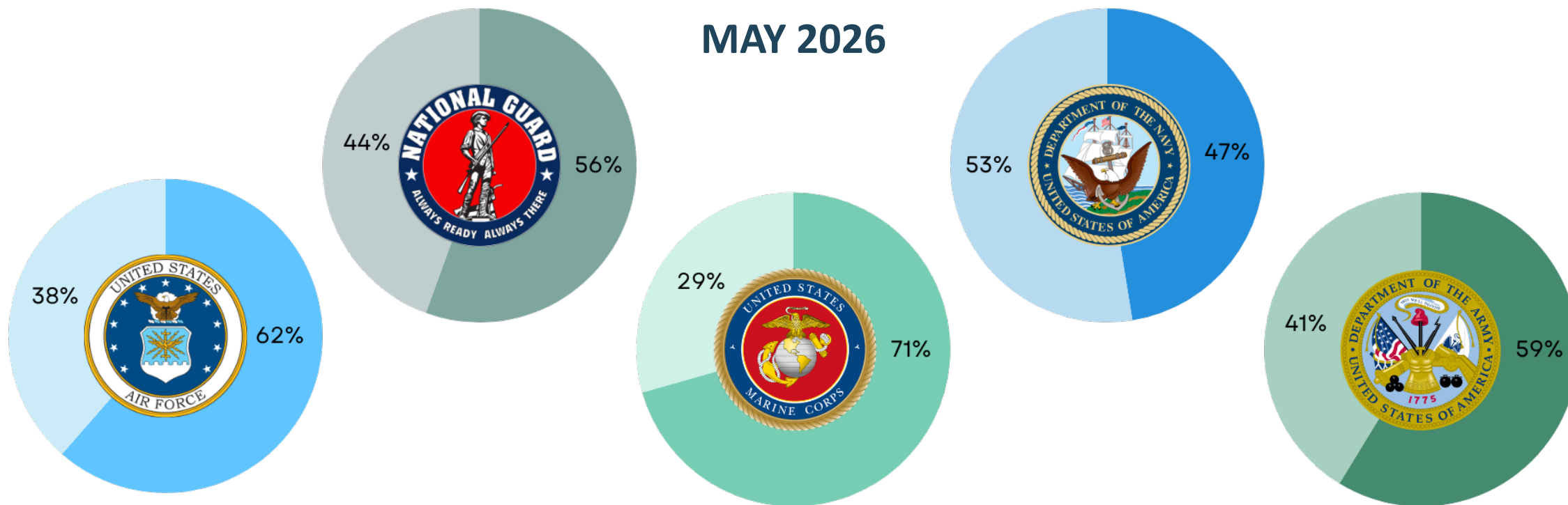
### ✓ Five-year Implementation Plan:

- Defines 100% compliance
- Establishes baseline
- Five-Year timeline
- Expands training
- Provides ongoing base support
- Development of Army leadership decision-support tools

# MILITARY SERVICE PROGRESS

## *Installations with Active Projects by Service Branch*

MAY 2026



Total Number of Installations: **63** Army, **78** Navy, **96** Air Force, **17** Marine Corps, **54** National Guard states/territories

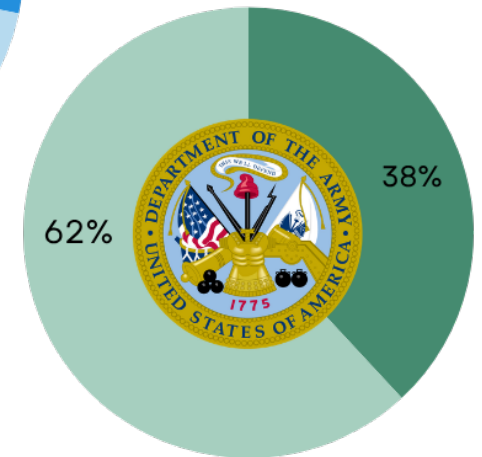
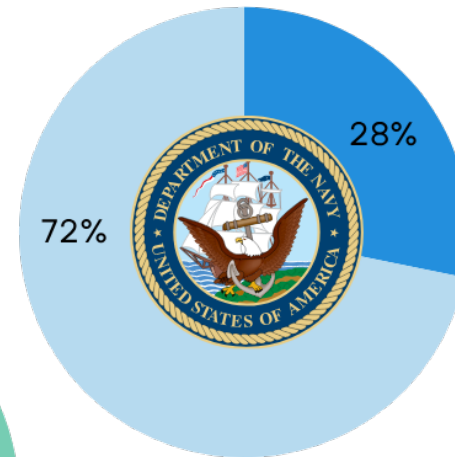
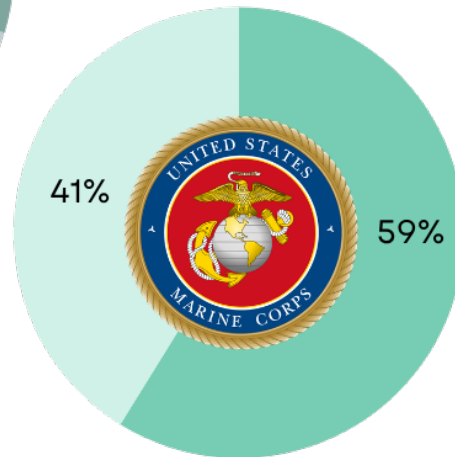
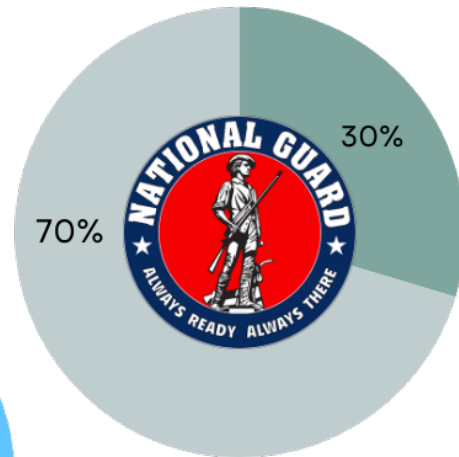
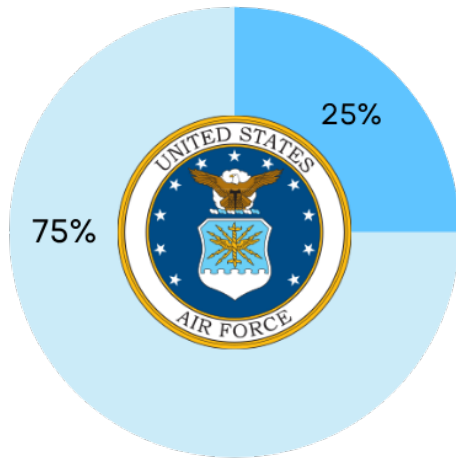
**Dark colors** - Installations with  
Active Projects

**Light colors** - Installations  
without Active Projects

# MILITARY SERVICE PROGRESS

## Installations with Contemporary Data by Service Branch

MARCH 2026



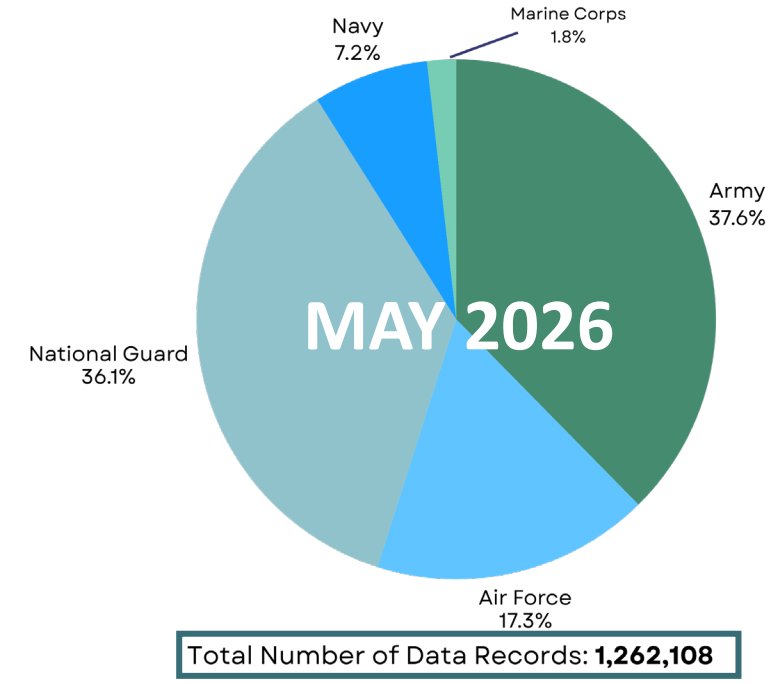
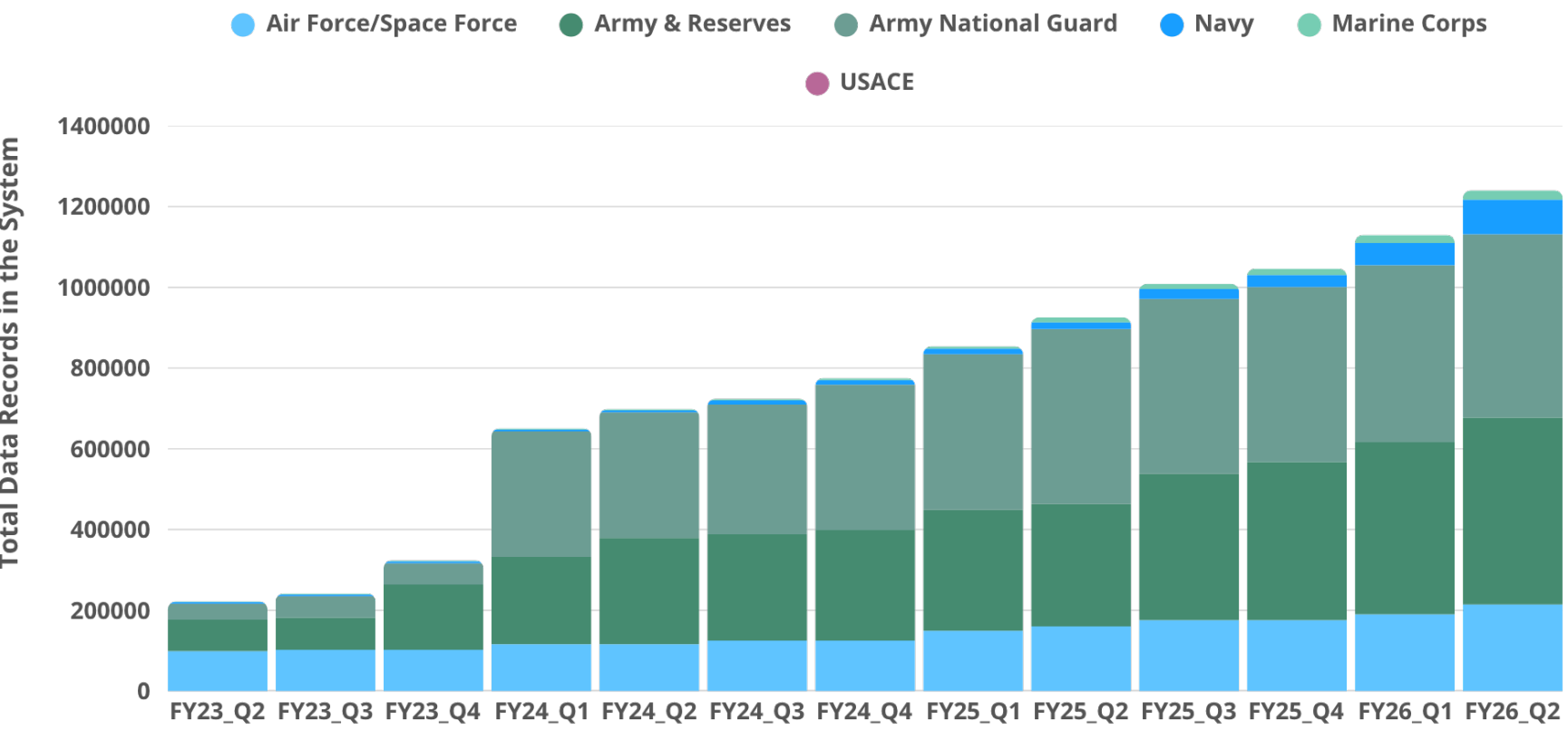
Total Number of Installations: **63** Army, **78** Navy, **96** Air Force, **17** Marine Corps, **54** National Guard states/territories

**Dark colors** - Installations with Active Projects

**Light colors** - Installations without Active Projects

# MILITARY SERVICE PROGRESS

## DoW Data Records in AKN by Military Service



# MILITARY SERVICE PROGRESS

*DoW Data Records in AKN by Military Service*

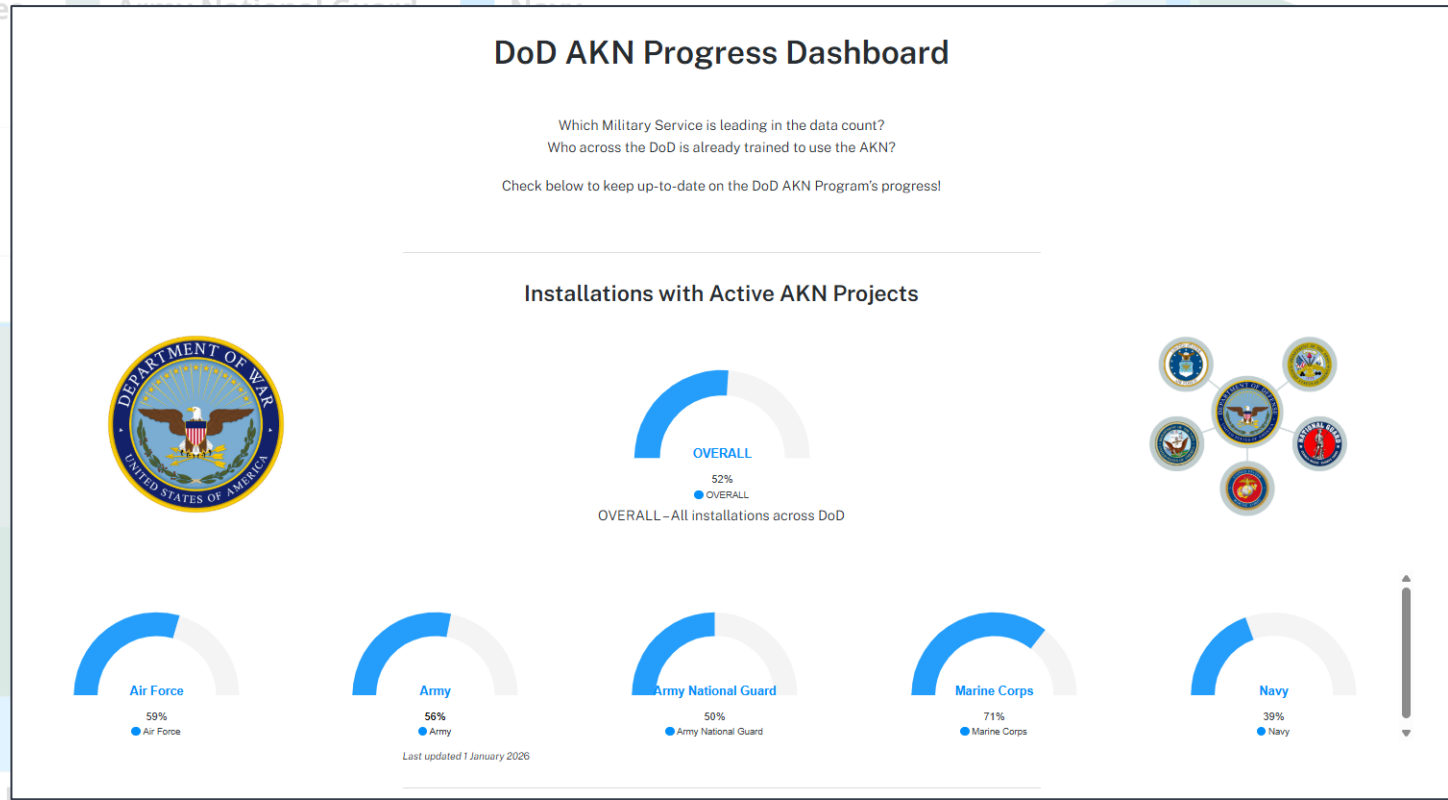
Check out the latest DoW AKN Program Progress on our new Progress Dashboard

Total Data Records in the System

600000  
400000  
200000  
0



FY24\_Q1



# DOW TOOLS

## *Standardized Sampling Methods*

- Survey DoW personnel to identify the most common bird monitoring questions
- Promote standardized data collection methods across DoW
- Provide appropriate protocol selection based on management or research needs





# AKN RESOURCES

## *Standardized Sampling Methods*

### SPECIES CHECKLIST



Species checklists are a simple way to record both incidental and comprehensive observations of bird species observed on your installation that don't fit a traditionally structured survey (e.g., point counts, line transects, etc.).

### CHRISTMAS BIRD COUNT



The Christmas Bird Count (CBC) is a citizen science project that involves counting birds in the Western Hemisphere. Click here to learn how to incorporate CBC data collected on your installation into your AKN Project here.

### EBIRD CHECKLISTS



eBird is a powerful community science tool run by Cornell Lab of Ornithology that collects observational data from birders. Click here to learn how to incorporate eBird checklist data collected on your installation in your AKN Project.

### POINT COUNT METHODS



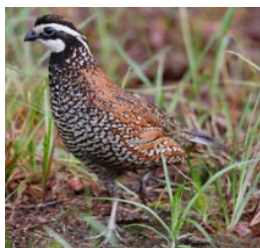
Click here to learn about Point Count methodologies including their assumptions, typical use cases, and examples of commonly used methodologies and their AKN Protocols.

### AREA SEARCH METHODS



Click here to learn about Area Search methodologies including their assumptions, typical use cases, and examples of commonly used methodologies and their AKN Protocols.

# DOW MISSION-SENSITIVE SPECIES (CONUS)



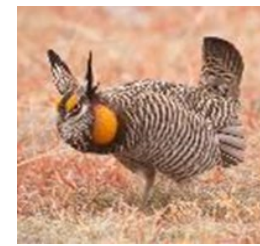
Northern Bobwhite



Greater Sage-grouse



Mountain Plover



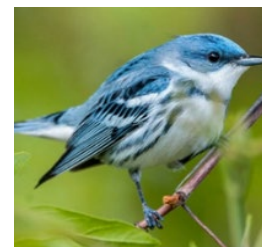
Greater Prairie Chicken



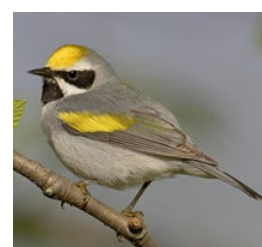
Burrowing Owl



Least Tern (Atlantic Coast)



Cerulean Warbler



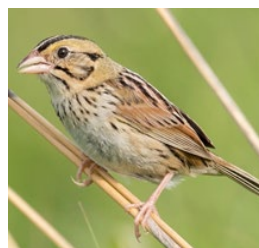
Golden-winged  
Warbler



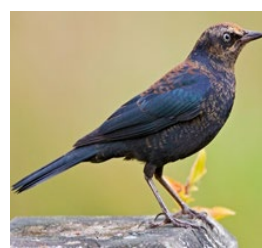
Pinyon Jay



Southeastern American  
Kestrel



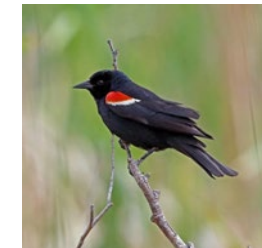
Henslow's Sparrow



Rusty Blackbird



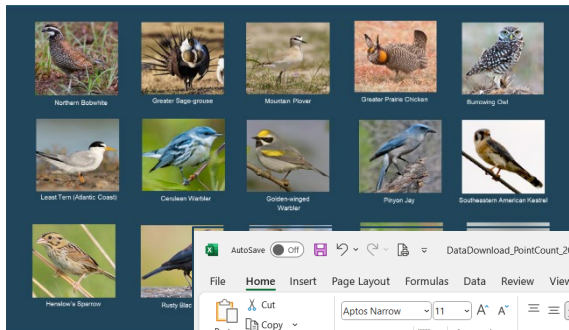
Bendire's Thrasher



Tricolored Blackbird



Bachman's Sparrow



# DOW MSS - FILTERS

Portal Announcement



Results matching your selections from Point Blue

Year: 1985 | Projects: 1 | Locations Surveyed: 25 | Number of Birds: 1 | Number of Species: 1

Search: [ ]

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL			
GlobalUniquelIdentifier	ProjectName	LocaltyID	StudyA	Transsect	Point	Sample	Parent	Sample	Declina	Declina	Vi	ProtocolCode	ObservationDate	YearCol	Month	Day	JulianDi	Proj	Time	Collect	Scientist	Comm	Species	Phylog	Taxonic	Distanc	Flyov	In	H	Del	B	Ob	NoObs	Record	mi					
1	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_24	Integrated IM_24	IM_24	24	668976	668931	Point Cour	35.40818	-86.0504	1 3_5_10m25_50_100m+Fly	5/24/2022	2022	5	24	144	65	JL	1705	424	12.5	NR	1	0	CLEAN															
2	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_24	Integrated IM_24	IM_24	24	668976	668931	Point Cour	35.40818	-86.0504	1 3_5_10m25_50_100m+Fly	5/24/2022	2022	5	24	144	65	JL	1705	434	37.5	NR	1	0	CLEAN															
3	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_25	Integrated IM_25	IM_25	25	668977	668932	Point Cour	35.38237	-86.0987	1 3_5_10m25_50_100m+Fly	6/12/2008	2008	6	12	164	85	JL	1907	894	12.5	NR	1	0	CLEAN															
4	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_26	Integrated IM_26	IM_26	26	668978	668933	Point Cour	35.38739	-86.0906	1 3_5_10m25_50_100m+Fly	6/18/2008	2008	6	18	138	59	JL	1907	894	12.5	NR	1	0	CLEAN															
5	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_28	Integrated IM_28	IM_28	28	668979	668934	Point Cour	35.38783	-86.0862	1 3_5_10m25_50_100m+Fly	6/18/2008	2008	6	18	170	91	JL	1907	894	75	NR	1	0	CLEAN															
6	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_28	Integrated IM_28	IM_28	28	668979	668934	Point Cour	35.38783	-86.0862	1 3_5_10m25_50_100m+Fly	6/18/2008	2008	6	18	170	91	JL	1907	894	12.5	NR	1	0	CLEAN															
7	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_28	Integrated IM_28	IM_28	28	668979	668934	Point Cour	35.38783	-86.0862	1 3_5_10m25_50_100m+Fly	6/18/2008	2008	6	18	170	91	JL	1907	894	12.5	NR	1	0	CLEAN															
8	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_28	Integrated IM_28	IM_28	28	668979	668934	Point Cour	35.38783	-86.0862	1 3_5_10m25_50_100m+Fly	6/18/2008	2008	6	18	170	91	JL	1907	894	12.5	NR	1	0	CLEAN															
9	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_28	Integrated IM_28	IM_28	28	668979	668934	Point Cour	35.38783	-86.0862	1 3_5_10m25_50_100m+Fly	5/19/2017	2017	5	19	139	60	JL	1907	894	12.5	NR	1	0	CLEAN															
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13	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_30	Integrated IM_30	IM_30	30	668981	668936	Point Cour	35.40042	-86.0833	1 3_5_10m25_50_100m+Fly	5/18/2017	2017	5	18	138	59	JL	1907	894	12.5	NR	1	0	CLEAN															
14	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_30	Integrated IM_30	IM_30	30	668981	668936	Point Cour	35.40042	-86.0833	1 3_5_10m25_50_100m+Fly	5/18/2017	2017	5	18	138	59	JL	1907	894	12.5	NR	1	0	CLEAN															
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17	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_32	Integrated IM_32	IM_32	32	668983	668938	Point Cour	35.39225	-86.0881	1 3_5_10m25_50_100m+Fly	5/18/2017	2017	5	18	138	59	JL	1907	894	12.5	NR	1	0	CLEAN															
18	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_32	Integrated IM_32	IM_32	32	668983	668938	Point Cour	35.39225	-86.0881	1 3_5_10m25_50_100m+Fly	5/15/2019	2019	5	15	135	56	JL	1907	894	12.5	NR	1	0	CLEAN															
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21	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_34	Integrated IM_34	IM_34	34	668985	668940	Point Cour	35.39222	-86.0836	1 3_5_10m25_50_100m+Fly	6/18/2008	2008	6	18	170	91	JL	1907	894	75	NR	1	0	CLEAN															
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27	URN:catal_ARNOLD_J [DOD_AIRFORCE] Arnold AFB	ARNOLD_AFB-IM_39	Integrated IM_39	IM_39	39	668988	668943	Point Cour	35.39832	-86.0844	1 3_5_10m25_50_100m+Fly	5/15/2019	2019	5	15	135	56	JL	1907	894	50	NR	1	0	CLEAN															
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32	URN:catal_BEALE_AFI [DOD_AIRFORCE] Beale AFB	BEALE_AFB-SPC2	Beale Point SPC2	Summer Pt SPC2	Summer Pt SPC2	658070	671796	Point Cour	39.12958	-121.382	1 0_10_4m25_50_100m+	5/13/2024	2024	5	13	134	55	JL	6:33:00	EC	Agelaius tr	Tricolored TRBL	1994	1811	500	Flyover	B	63	0	CLEAN										
33	URN:catal_BEALE_AFI [DOD_AIRFORCE] Beale AFB	BEALE_AFB-SPC2	Beale Point SPC2	Summer Pt SPC2	Summer Pt SPC2	658070	671796	Point Cour	39.12958	-121.382	2 3_5m50M+Fly	6/2/2021	2021	6	2	153	74	JL	1994	1811	500	Flyover	NR	50	0	CLEAN														
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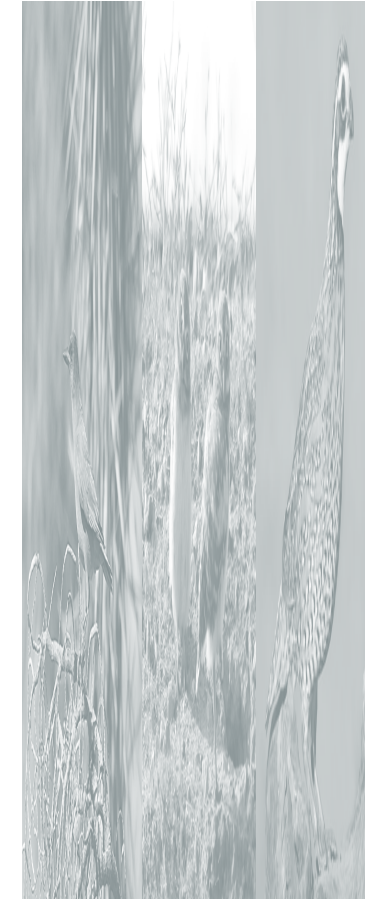
# DOW MISSION-SENSITIVE SPECIES (CONUS)

Species	# of Installations
Greater Sage-Grouse	6
Greater Prairie-Chicken	3
Northern Bobwhite	70
Southeastern American Kestrel	14
<del>Black Rail**</del>	<del>5</del>
Mountain Plover	16
Burrowing Owl	50
Least Tern (Atlantic Coast Pop)	18
Pinyon Jay	7
Bendire's Thrasher	4
Golden-winged Warbler	24
Cerulean Warbler	30
Bachman's Sparrow	24
Henslow's Sparrow	25
Tricolored Blackbird	15
Rusty Blackbird	30

## DOW AKN MSS 4-PRONGED APPROACH

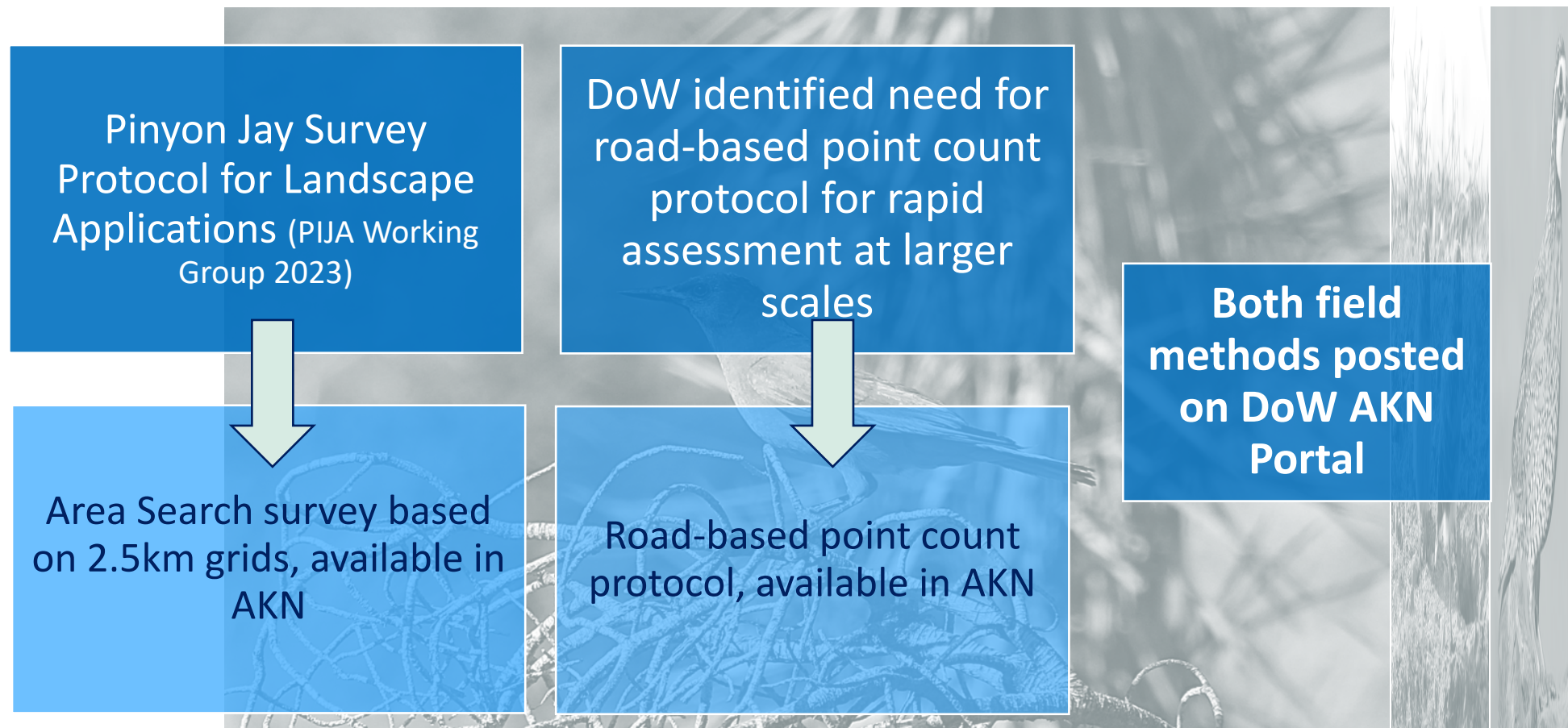
- ✓ FOCUS GROUP
- ✓ AKN PROTOCOLS
- ✓ DATA
- ~~✓ MSS QUERY TOOL IN AKN~~

# DOW MISSION-SENSITIVE SPECIES





# DOW MISSION-SENSITIVE SPECIES



[https://www.dodakn.org/resources/mss/#MSS\\_PIJA](https://www.dodakn.org/resources/mss/#MSS_PIJA)

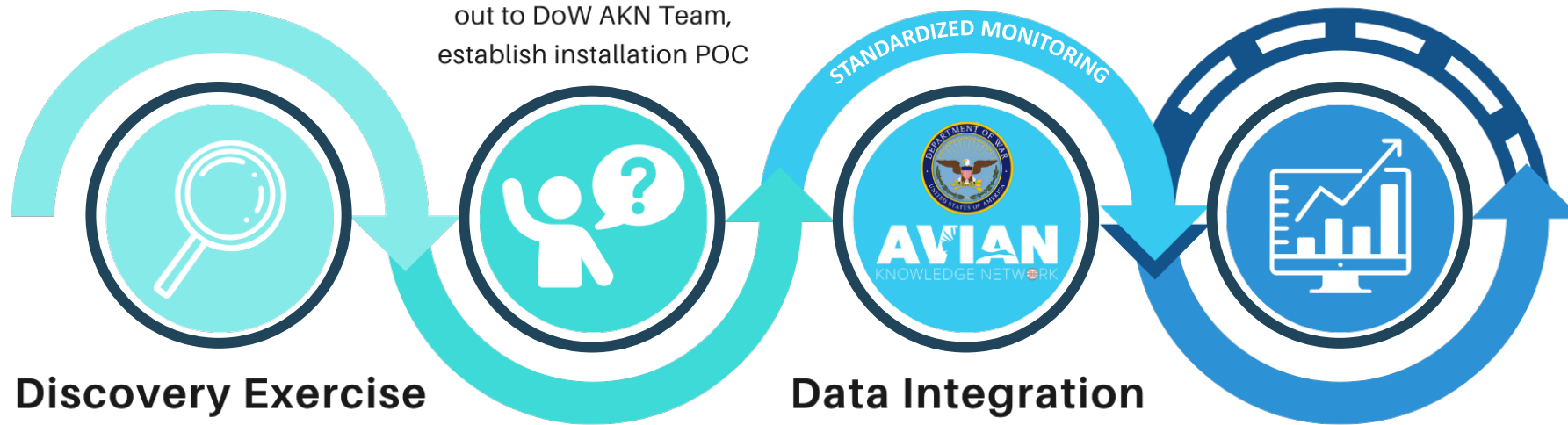
# PINYON JAY SSA – DOW APPROACH

## Tasker

Feb/Mar 2026 - OSW and the Military Services released tasker asking NRMs to reach out to DoW AKN Team, establish installation POC

## Aggregation and Delivery

DoW AKN Team will summarize PIJA-range survey data and deliver\* to USFWS for SSA analyses



## Discovery Exercise

Combination of existing DoW AKN data, DoW PIF self-report surveys, GIS overlap with Tack et. al. 2023

## Data Integration

Installations actively work with DoD AKN Team to format and upload data into their AKN Project.

\*Share at level of detail identified by installations

# PINYON JAY SSA – ARMY/ARNG

## COMPLETE – Data in the AKN


- Chemical Materials Activity West  
Dugway Proving Ground
- Fort Sill
- Fort Bliss
- Fort Carson
- AZARNG
- MTARNG
- UTARNG
- WYARNG
- NMARNG

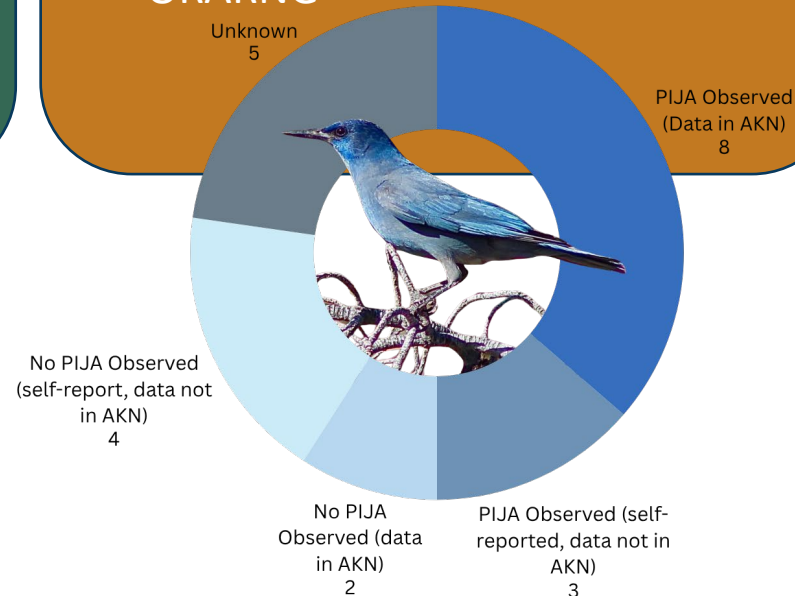
## IN PROCESS – Working with DoW AKN Program Team

- Fort Irwin
- Sierra Army Depot
- White Sands Missile Range
- Joint Base Lewis-McChord
- ORARNG

## AWAITING CONTACT – Have not begun work with Team yet

- Hawthorne Army Depot
- Tooele Army Depot
- NVARNG
- SDARNG
- Fort Wingate Depot Activity
- Green River Test Complex UT
- West Desert Test Center

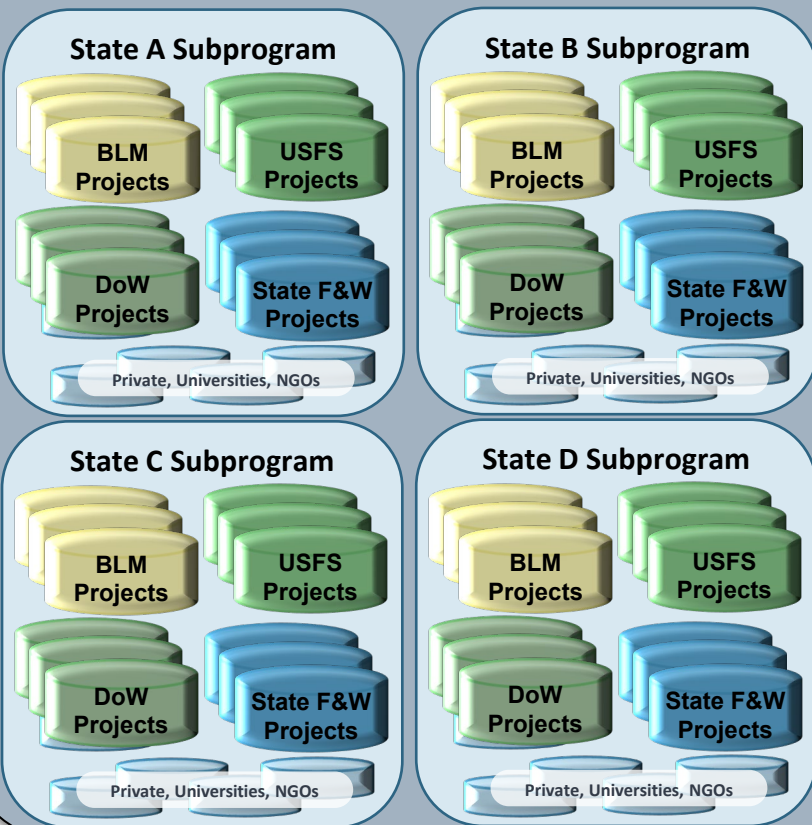
 = PIJA observed (either self-reported or reflected in AKN data)



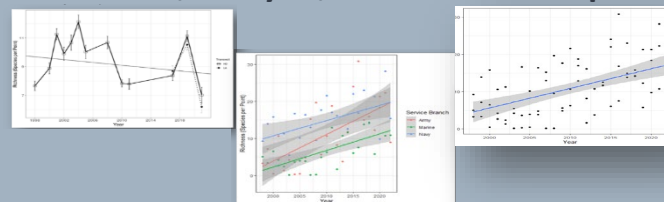


# LEVERAGING PARTNER DATA

## Pinyon Jay Program Structure



Program-based multi-scaled data access, analysis, download & outputs



Standardized sampling methodologies, standardized data format, outputs

Flexibility with data analysis

Sharing controlled at the Project database (or observation) level, can choose to share or not

Scaled conservation actions targeted where most needed





# DOW MISSION-SENSITIVE SPECIES

Standardized Monitoring Strategies for Burrowing Owls on DoD Installations  
(Garcia et al 2008)

Guidelines and Recommendations for Burrowing Owl Surveys and Mitigation  
(California Burrowing Owl Consortium 1993)

Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012)

Comparison of Detection Probability Associated with Burrowing Owl Survey Methods  
(Conway and Simon, 2003)

## Focus Group SMEs:

Courtney Conway, *USGS ID Cooperative Fish and Wildlife  
Research Unit*

Sandra Menzel, *Talon Ecological Research Group*

David H. Johnson, *Global Owl Project*

Kevin Warner, *Idaho Army National Guard*

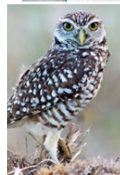
Colin Leingang, *JBLM Yakima Training Center*

Russ Lawrence, *Hill AFB and Utah Test and Training Range*

# DOW MISSION-SENSITIVE SPECIES



Determine monitoring objectives



Identify data needs based on questions




Methods and study design considerations



Sampling effort based on monitoring objectives



Field methods and AKN data structure



### Burdrowing Owl Monitoring Objectives Protocol and Data Structures for DoD AKN Program

Version 1.0  
February 19, 2025

**Overview and Purpose**

This document was developed for the Department of Defense (DoD) Avian Knowledge Network (AKN) Program in an effort to compile survey methodology and data structure into one document to provide recommendations for standard protocols for surveying Burdrowing Owls on DoD installations. Burdrowing Owl is one of 15 bird species that occur on DoD installations that has been identified as a Mission-Sensitive Species (MSS) by DoD. MSS have the highest priority for DoD management on DoD installations to help reverse species, identify potential mission impacts, and provide the best available science.

To support using the best available science to aid management of MSS on DoD installations, one of the initiatives includes recommending standardized monitoring protocols, providing support for data entry and management, and providing support for data entry and management group of subject matter experts from within and outside DoD to develop monitoring protocols for Burdrowing Owl monitoring.


**Scope and Limitations**

This document is intended to provide guidance on monitoring objectives outlined in Table 1. Additional monitoring objectives, such as banding, or demography studies, are outside the scope of this document.

While we recommend following the data structure outlined in the "Network Data Structure", we understand that not all sites may be able to follow the protocol definitions. It is important to recognize that the standards outlined in this document represent the minimum standards. These standards are 1) to provide recommended protocol definitions for designing a monitoring program for Burdrowing Owl monitoring, 2) to provide a comparison of Burdrowing Owl monitoring data across sites, and 3) to collect data beyond the standards outlined in this document at a minimum to contribute to the effort needed to meet their monitoring or analytical objectives.

**Acknowledgments**

This document summarizes focus group meetings from August 2023 – May 2024 that included members of the DoD AKN Program team (Caitlyn Gillespie (Klamath Bird Observatory), John Alexander (Klamath



Point Count Data Form

Study Area: East Training Area    Site Code: ETA1    Month: 05    Day: 24    Year: 2024    Visit: 1    Observer: CRG

Point #	Start Time	Species Code	<100m	101-200m	201-300m	>300m	Age	At Burrow?	Notes
01	0556	BURW1					A	Y	
02	0611	NON					U	U	
03	0621	BURW1		1			A	U	
03	0621	BURW2							

Code Lists  
Age: A (Adult), J (Juvenile), U (Unknown)  
At Burrow: Y (Yes), N (No), U (Unknown)


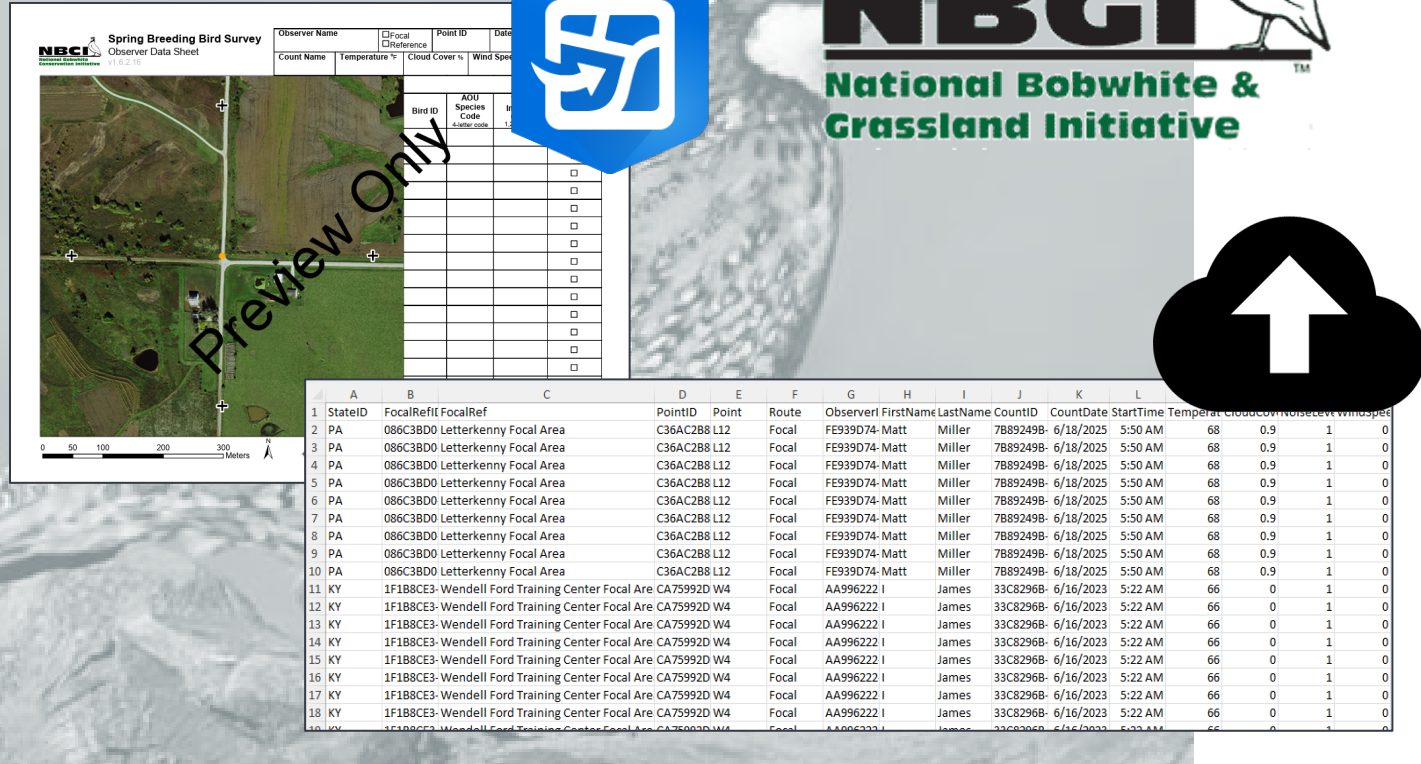
# DOW MISSION-SENSITIVE SPECIES

Standard protocol and study design developed by the National Bobwhite and Grassland Initiative

NBGI mobile data collection app and database

Fall covey counts and spring breeding bird surveys

(NEW!!) Crosswalk data flow from NBGI database housed at Clemson to AKN; Portal Page

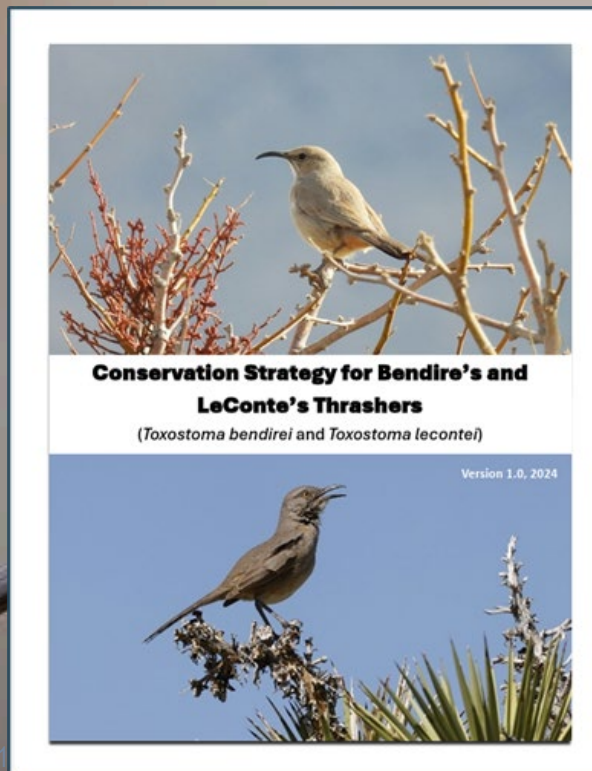



StateID	FocalRefID	FocalRef	PointID	Point	Route	Observer	FirstName	LastName	CountID	CountDate	StartTime	Temperature	CloudCover	WindSpeed
PA	086C3BD0	Letterkenny Focal Area	C36AC288 L12	Focal	FE939D74	Matt	Miller	78892498	6/18/2025	5:50 AM	68	0.9	1	0
PA	086C3BD0	Letterkenny Focal Area	C36AC288 L12	Focal	FE939D74	Matt	Miller	78892498	6/18/2025	5:50 AM	68	0.9	1	0
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PA	086C3BD0	Letterkenny Focal Area	C36AC288 L12	Focal	FE939D74	Matt	Miller	78892498	6/18/2025	5:50 AM	68	0.9	1	0
KY	1F1B8CE3	Wendell Ford Training Center Focal Area	CA75992D W4	Focal	AA996222 I	James	33C82968	6/16/2023	5:22 AM	66	0	1	0	
KY	1F1B8CE3	Wendell Ford Training Center Focal Area	CA75992D W4	Focal	AA996222 I	James	33C82968	6/16/2023	5:22 AM	66	0	1	0	
KY	1F1B8CE3	Wendell Ford Training Center Focal Area	CA75992D W4	Focal	AA996222 I	James	33C82968	6/16/2023	5:22 AM	66	0	1	0	
KY	1F1B8CE3	Wendell Ford Training Center Focal Area	CA75992D W4	Focal	AA996222 I	James	33C82968	6/16/2023	5:22 AM	66	0	1	0	
KY	1F1B8CE3	Wendell Ford Training Center Focal Area	CA75992D W4	Focal	AA996222 I	James	33C82968	6/16/2023	5:22 AM	66	0	1	0	
KY	1F1B8CE3	Wendell Ford Training Center Focal Area	CA75992D W4	Focal	AA996222 I	James	33C82968	6/16/2023	5:22 AM	66	0	1	0	
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# DoW MISSION-SENSITIVE SPECIES - UPCOMING

PIF Desert Thrasher Working  
Group monitoring methods  
on DoW AKN Portal



- LeConte's Thrasher, Bendire's Thrasher (MSS), Loggerhead Shrike
- Upload data now to make any upcoming data calls easier!

# DoW DATA NEEDS

- Sensor and machine-collected data (ARUs)
- ~~BASH Data, specifically data collected by USDA-WS~~
- Nest data
- Banding data, including MAPS
- Spot-mapping
- Survey 123 cross-walk directly into AKN
- Foreign OCONUS data



# NEW DATA TYPES: ARU DATA

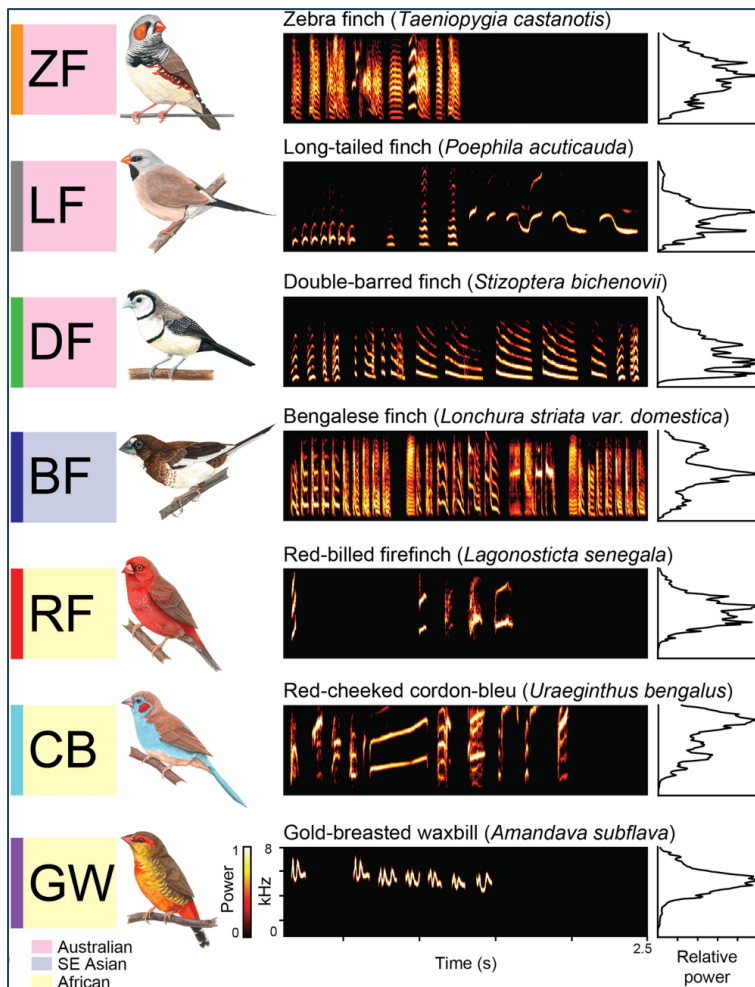
## Metadata Considerations

- Hardware - sensor make, model
- Microphone type
- Sensor settings
  - Gain (Microphone Sensitivity)
  - Sample Rate (kHz)
  - Pre-filtering
- Study design
  - Recording schedule
  - Sampling Units



**Machine-  
collected raw  
audio data**

# NEW DATA TYPES: ARU DATA



## Metadata Considerations

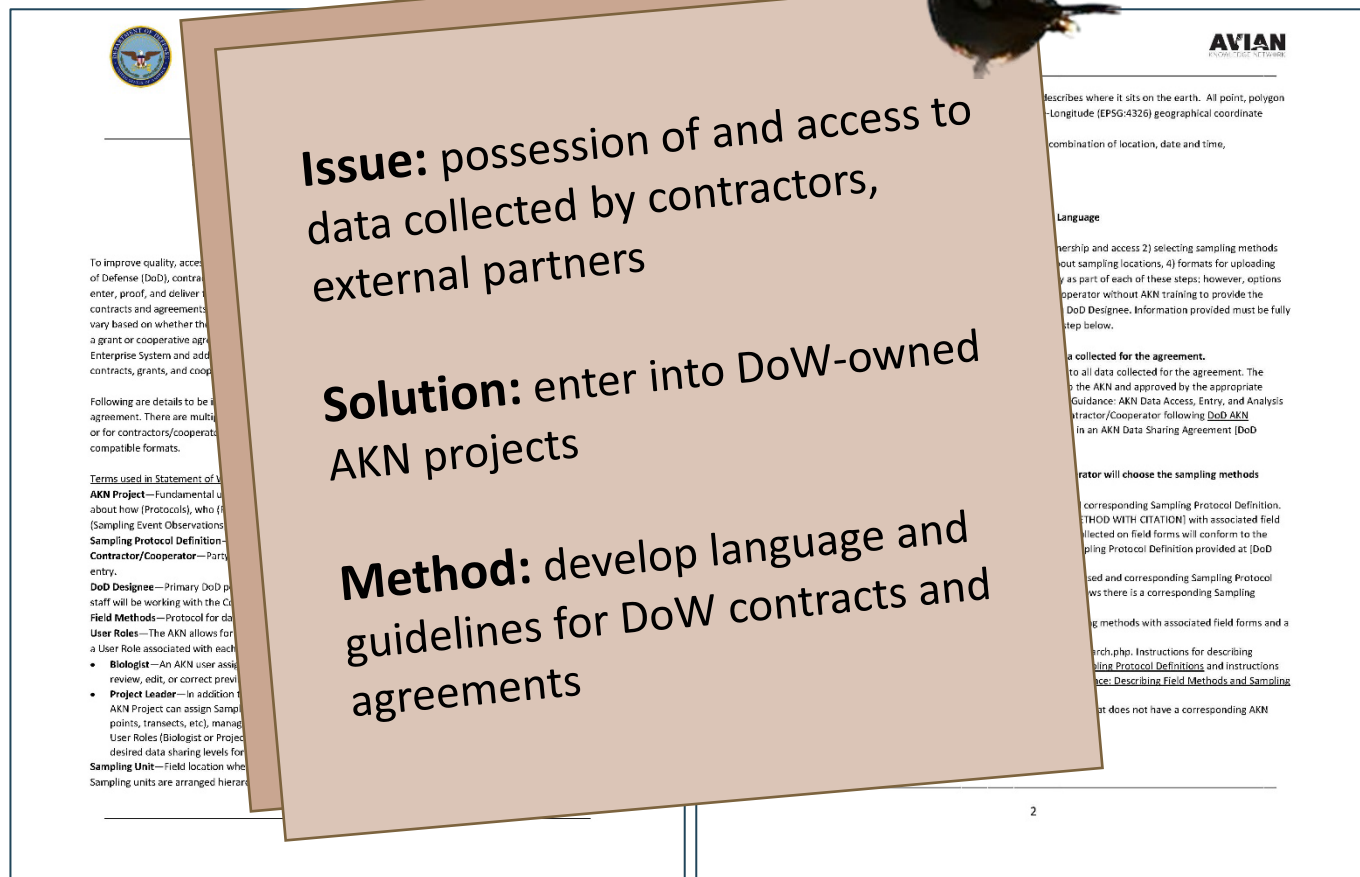
- Post-processing method – manual vs. machine-learning software
- Software name
- Confidence score threshold
- Degree of overlap
- Sensitivity

## Species ID via machine-learning



# SCOPE OF WORK LANGUAGE

for Contracts, Cooperative Agreements and Interagency Agreements



**Issue:** possession of and access to data collected by contractors, external partners

**Solution:** enter into DoW-owned AKN projects


**Method:** develop language and guidelines for DoW contracts and agreements

## DoW AKN Guidance:

1. Avian Knowledge Network Data Sharing Guidelines
2. Describing Sampling Protocol Definition for AKN Compatible Projects
3. Sampling Protocol Definition Template
4. Describing Field Methods and Sampling Design
5. Creating AKN Compatible Sampling Units
6. Sampling Unit Bulk Upload Templates
7. AKN Data Access, Entry, and Analysis
8. Preparing Data to Submit for Bulk Uploading for AKN Compatible Projects

# SCOPE OF WORK LANGUAGE

## for Contracts, Cooperative Agreements and Interagency Agreements



**AVIAN**  
KNOWLEDGE NETWORK

*Leveraging Partnerships, Data and Technology Information  
Revolutionize Avian Conservation and Management*

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**Statement of Work Language for Department of Defense  
Service Contracts, Grants, and Cooperative Agreements**  
DRAFT – February 2023

**Introduction**

To improve quality, access, and usability of avian survey, monitoring, and research data collected for Department of Defense (DoD), contractors and cooperators collecting such data use the Avian Knowledge Network (AKN) to enter, proof, and deliver their data. Here we provide guidance for developing statement of work language for contracts and agreements to specify such use of the AKN by contractors and/or cooperators. Specifications may vary based on whether the DoD is acquiring data from a contractor via a service contract or from a cooperator via a grant or cooperative agreement. The DoD and AKN are also developing new capacities, including a Program Enterprise System and additional user access specifications that will influence how the DoD specifies AKN use in contracts, grants, and cooperative agreements.

Following are details to be included in the "Statement of Work" section of a service contract, grant, or cooperative agreement. There are multiple options for data access, project set-up, and data entry for users with AKN training or for contractors/cooperators who do not have AKN training but will need to submit their project data in AKN compatible formats.

Terms used in Statement of Work (SOW) language

**AKN Project**—Fundamental unit of organization for observation data within the AKN. Projects contain information about how (Protocols), who (Researchers and Users), where (Sampling Units), when (Sampling Events), and what (Sampling Event Observations) data are collected. For DoD, each installation has its own project.

**Sampling Protocol Definition**—Defines how the data were collected and how they are stored.

**Contractor/Cooperator**—Party within the agreement that is primarily responsible for data collection and data entry.


**DoD Designee**—Primary DoD point of contact for contract terms. Can also specify an DoD AKN staff member if AKN staff will be working with the Contractor/Cooperator.

**Field Methods**—Protocol for data collection in the field used by the Contractor/Cooperator.

**User Roles**—The AKN allows for multiple levels of access to enter, manage, and share data. AKN users are assigned a User Role associated with each AKN Project they have permission to access. Current User Roles include:

- Biologist**—An AKN user assigned as a Biologist in an AKN Project can enter and proof data. Biologists can also review, edit, or correct previously entered data in any dataset housed within the AKN Project.
- Project Leader**—In addition to all Biologist User Role capacities, AKN users assigned as a Project Leader in an AKN Project can assign Sampling Protocol Definitions to an AKN Project, manage the Sampling Units (areas, points, transects, etc), manage data, get full exports of the AKN Project data from the system, and manage the User Roles (Biologist or Project Leader) of other AKN users on the AKN Project. Project Leaders can also set the desired data sharing levels for data, which determines how the data will appear in the various tools in AKN.

**Sampling Unit**—Field location where research or a survey is conducted and samples (observations) are collected. Sampling units are arranged hierarchically within AKN Projects (e.g., point count points nested within a transect).



**AVIAN**  
KNOWLEDGE NETWORK

Sampling Units contain a location name and geometry that describes where it sits on the earth. All point, polygon and other geographic data are described in WGS-84 Latitude-Longitude (EPSG:4326) geographical coordinate system.

**Sampling Event**— Represents the survey itself with a unique combination of location, date and time, person/people, and the protocol employed.

**Statement of Work Language**

The statement of work should specify standards for 1) data ownership and access 2) selecting sampling methods and AKN Sampling Protocol Definition(s), 3) providing details about sampling locations, 4) formats for uploading data. A user with AKN training may engage with the AKN directly as part of each of these steps; however, options are provided below for each step that allow for a Contractor/Cooperator without AKN training to provide the information in a format that is easily uploaded into the AKN by a DoD Designee. Information provided must be fully described per the AKN Guidance documents referenced in each step below.

**DATA OWNERSHIP: DoD must have permanent access to all data collected for the agreement.**

- SOW LANGUAGE: DoD owns and will have permanent access to all data collected for the agreement. The observation data (not summarized data) must be entered into the AKN and approved by the appropriate Project Leader at the appropriate sharing level (see DoD AKN Guidance: AKN Data Access, Entry, and Analysis for sharing level definitions). Data may be shared with the Contractor/Cooperator following [DoD AKN Guidance: AKN Data Sharing Guidelines](#) with specifics outlined in an AKN Data Sharing Agreement [DoD Designee PROVIDES ATTACHMENT].

**DATA COLLECTION: Specify whether DoD or the Contractor/Cooperator will choose the sampling methods (CHECK ONE):**

DoD Designee will specify the sampling methods to be used and corresponding Sampling Protocol Definition.

- SOW LANGUAGE: Contractor/Cooperator will use [FIELD METHOD WITH CITATION] with associated field forms [DoD Designee PROVIDES ATTACHMENT]. The data collected on field forms will conform to the metadata specified by the methodology and associated Sampling Protocol Definition provided at [DoD Designee provides AKN link].

Contractor/Cooperator will specify the sampling methods to be used and corresponding Sampling Protocol Definition. (Only use this option if the Contractor/Cooperator knows there is a corresponding Sampling Protocol Definition in the AKN).

- SOW LANGUAGE: Contractor/Cooperator will provide sampling methods with associated field forms and a link to the associated Sampling Protocol Definition here <https://data.ponblue.org/science/biologists/poh/protocolsearch.php>. Instructions for describing metadata are provided in [DoD AKN Guidance: Describing Sampling Protocol Definitions](#) and instructions for providing sampling methods is provided in [DoD AKN Guidance: Describing Field Methods and Sampling Design](#).

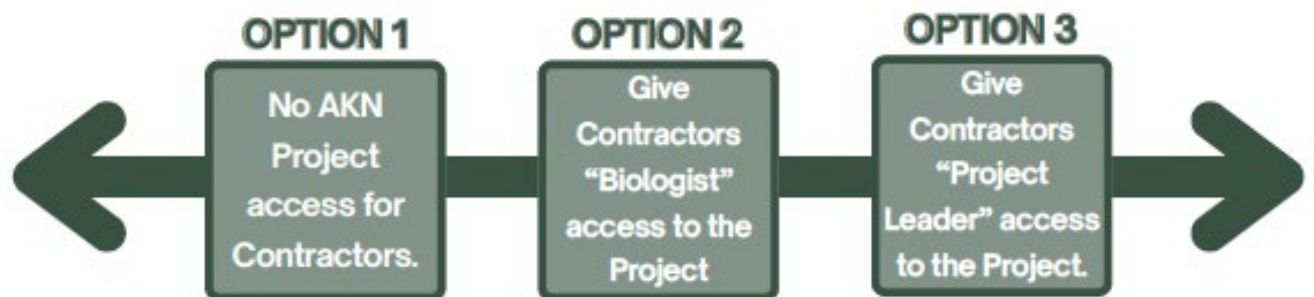
Contractor/Cooperator will specify sampling methods to be used that does not have a corresponding AKN Sampling Protocol Definition.

2

## DoW AKN Guidance:

1. Avian Knowledge Network Data Sharing Guidelines
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3. Sampling Protocol Definition Template
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6. Sampling Unit Bulk Upload Templates
7. AKN Data Access, Entry, and Analysis
8. Preparing Data to Submit for Bulk Uploading for AKN Compatible Projects

# GUIDANCE TO HELP PROJECT MANAGERS DETERMINE ROLES FOR THEIR CONTRACTORS



Most NRM Effort

Least NRM Effort



## AKN Guidance:

- Guidance for NRMs working with **contractors**
- Describes all available **User Role choices**
- Assist NRMs in deciding **what level of AKN Project access** to grant contractors
  - Takes into account NRM effort/involvement, contractor access, etc.

# DOW AKN USER GUIDE

**Detailed Step-by-step Instructions for AKN Use;  
Supplements Training**



Getting  
Started

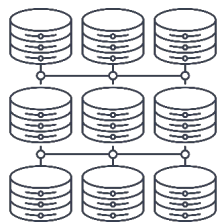
Managing  
Project

Getting  
Data In

Getting  
Data Out

Exploring  
Data

DoW  
Glossary



# AKN TOOLS

## Enterprise Support for Programs

**Need:** Data curation, management, and analysis at multiple scales (e.g., field office, regional office, entire agency)

**Solution:** AKN-wide structure allowing multiple Project grouping via Programs.

**Plan:** Build new technology, to create/manage Programs, especially for query and download of project data

**Status:** In prototype phase

- I. Beta test of Program download tool
- II. Prototype of Program warehouse

Project Management Portal [↑](#)

### Project Downloader

This tool allows you to download your observation data, sampling unit configurations, or both on a per-sampling unit, per-project basis. All projects that you have access to, including any in your program, will be available for selection. Once you click the download button, a zip file containing one CSV per selection will download from your browser.

#### Project

Select one or more projects or sampling units for data download.

Filter  ✖ Clear Program

Select all projects

- ★ ABERDEEN\_PROVING\_GROUND - (DOD\_ARMY) Aberdeen Proving Ground
- ★ ALTUS\_AFB - (DOD\_AIRFORCE) Altus AFB
- ★ ARNOLD\_AFB - (DOD\_AIRFORCE) Arnold AFB
- ★ AZ\_ARNG - (DOD\_NATGUARD) Arizona Army National Guard
- ★ BARKSDALE\_AFB - Barksdale Air Force Base
- ★ BARRY\_GOLDWATER\_RANGE\_EAST - (DOD\_AIRFORCE) Barry M. Goldwater Range East
- ★ BARRY\_GOLDWATER\_RANGE\_WEST - (DOD\_MARINE) Barry M. Goldwater Range West

You must select at least one sampling unit or project

#### Observation data

If you would like to download observation data, select the type(s) of survey data to be included in the download.

**Survey types**  
NOTE: If the survey data type is not available for any number of projects you've selected, those projects will not be included in the resulting download.

- Point count observations
- Area search observations
- Secretive marshbird observations
- Vegetation observations
- Site condition observations
- Linear transect observations
- Soil survey observations
- WIFL territory summaries
- Banding observations

**Date filter**  
Select a date filter to limit observation data downloaded to those created within the specified range.

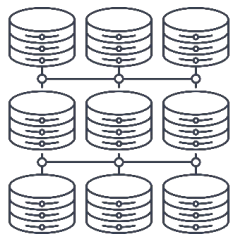
Start date  Stop date

#### Sampling units

If you would like to download sampling units, select which file type(s) to include in the download.

- CSV
- KML
- Shapefile
- GPSU
- Waypoint

You must select at least one of either the observation data or sampling unit file types

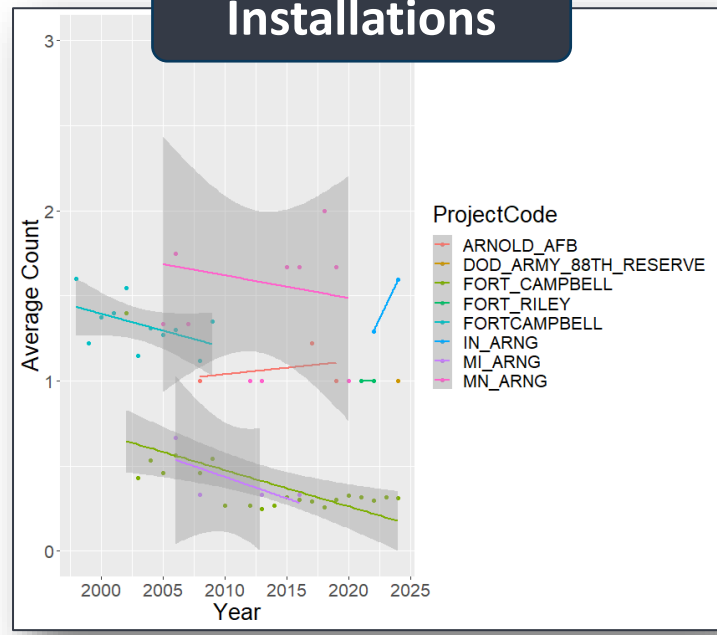


# AKN TOOLS

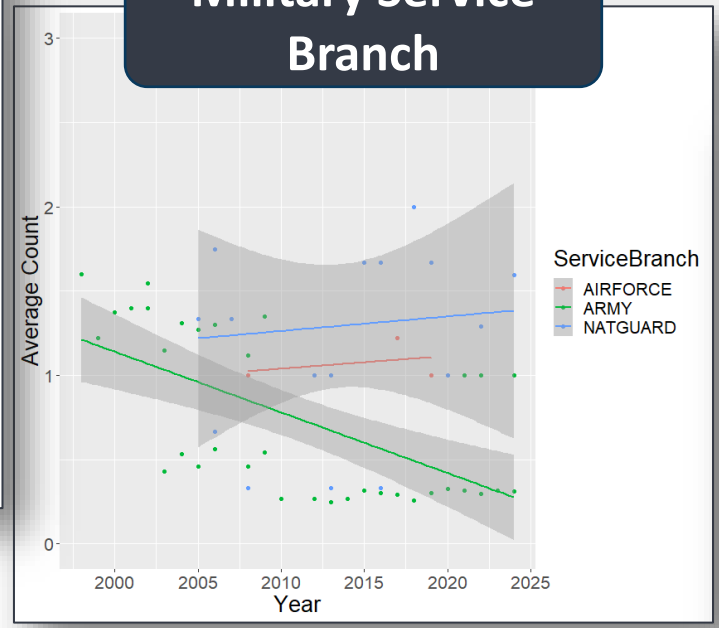
## Henslow's Sparrow Trends Across Enterprise Scales



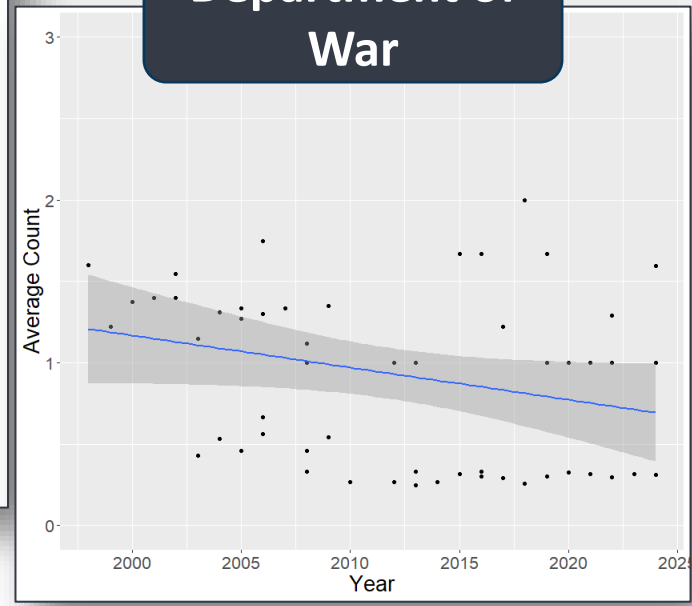
### Installations



### Military Service Branch



### Department of War





## CASE STUDY:

# PROGRAM ENTERPRISE – COLONIAL WATERBIRDS

- CWB data collected across **several states and provinces**
- Survey **methods vary** (e.g., some count pairs, some nests), stored in many **different formats**
- **Lack of visibility** on species data and numbers state-wide, range-wide



*Great Egret (rookery); Fort Stewart; Photo credit: Paul Block*



# CASE STUDY:

## PROGRAM ENTERPRISE - COLONIAL WATERBIRDS

**PACIFIC FLYWAY COLONIAL WATERBIRD SURVEY**

**General Information**

Colony Name: \_\_\_\_\_ Colony Code (if known): \_\_\_\_\_ Coordinates (WGS84) Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Survey Date: \_\_\_\_\_ Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Status\* (check 1): Active  Inactive

Primary Observer Name: \_\_\_\_\_ Email: \_\_\_\_\_ Telephone #: \_\_\_\_\_ Agency/Affiliation: \_\_\_\_\_

**Survey Information**

Survey Method/Vantage Point (check 1):  Perimeter  Boat  Aerial Photo  Direct Aerial  Within-colony  Other

Survey Type (check 1):  Full (complete) survey  Partial survey  % of Colony: \_\_\_\_\_

Vantage: \_\_\_\_\_ Distance: \_\_\_\_\_

**Count Information**

Species	Survey Target**	Count #	Number Observed			Estimated Breeding Pairs	Estim Yod Prod
			Nests	Adults	Young		

\*Status - Active = Breeding (nest building, courtship, incubation, eggs, or chicks observed)  
Inactive = Non-breeding (no active nests, eggs, or chicks)

\*\*Survey Target - N = Nesting target  
P = Production target

Comments (other nesting species, predators, presence of banded birds): \_\_\_\_\_

**Colony Site Information**

State: \_\_\_\_\_ County: \_\_\_\_\_ General I: \_\_\_\_\_

Nesting habitat ground, trees, manmade structure: \_\_\_\_\_ Land Own: \_\_\_\_\_

**Mississippi Flyway Colonial Waterbird Survey 2018**

COLONY NAME: \_\_\_\_\_ COLONY CODE: \_\_\_\_\_ COLONY (check one): Active  Inactive

SURVEY DATE: \_\_\_\_\_ DIGITAL PHOTOGRAPHY: No  Yes

OBSERVER(S): \_\_\_\_\_

Primary: \_\_\_\_\_ Last Name: \_\_\_\_\_ First: \_\_\_\_\_ MI: \_\_\_\_\_

Email: \_\_\_\_\_ Telephone: \_\_\_\_\_

Cooperators: \_\_\_\_\_

SURVEY VANTAGE POINT (Check one): on-air visit  from boat  perimeter  area survey  TMC start: \_\_\_\_\_ end: \_\_\_\_\_

Species	Predominant/Reproductive Stage (Enter a code from box below)	Survey Type (Enter a code from box below)	Number	Total Number	Number Active	Number Young Seen	Estimated Breeds
014-cr. Cormorant							
Greot Blue Heron							
Great Egret							
Bl-cr. Nigre-Heron							
Cade Egret							
Littn Blue Heron							
Arkingo							
Green Heron							
Shaw Egret							
Y-cr. Nigre-Heron							
Other:							

Survey Type Code: Actual Count = 1; Visual Estimate = 2; Stage Code: Pre-nesting (banding around in field) = 2; Incubation = 3; Unledged Young = 4; Age = 5

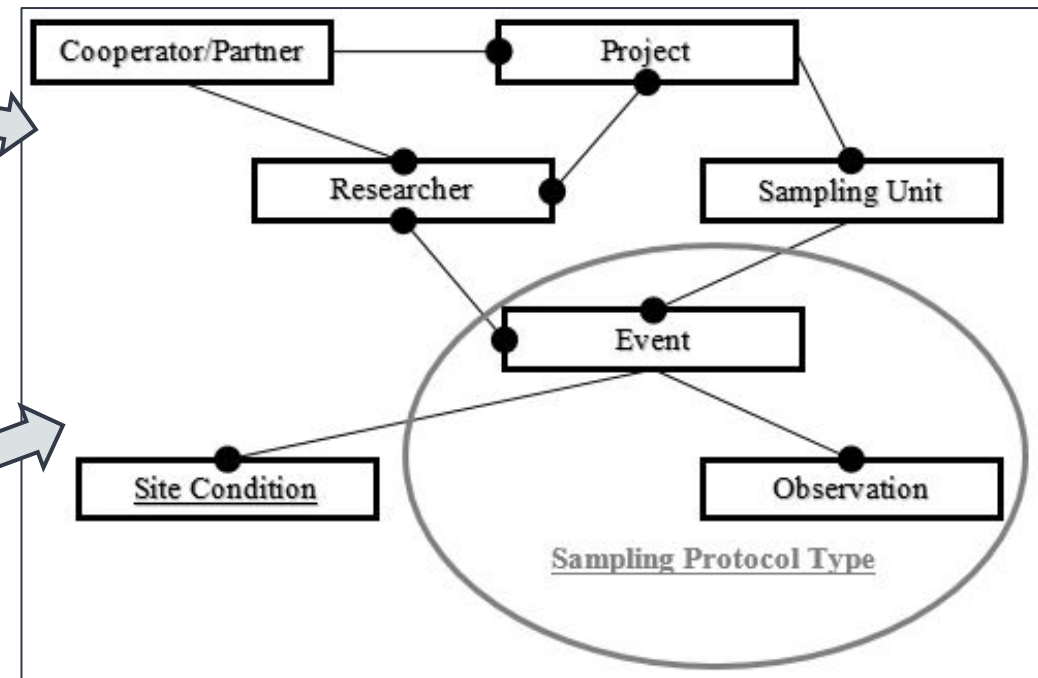
Comments/Other Notable Species: \_\_\_\_\_

COLONY SITE DESCRIPTION: County: \_\_\_\_\_ State: \_\_\_\_\_ Hecarise (Acres) (25)

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Explain how looking down and where standing in relation to herony (using GPS (NAD 83): \_\_\_\_\_

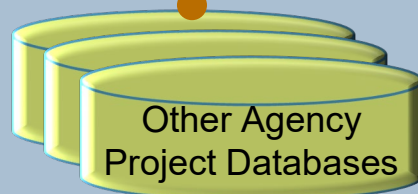
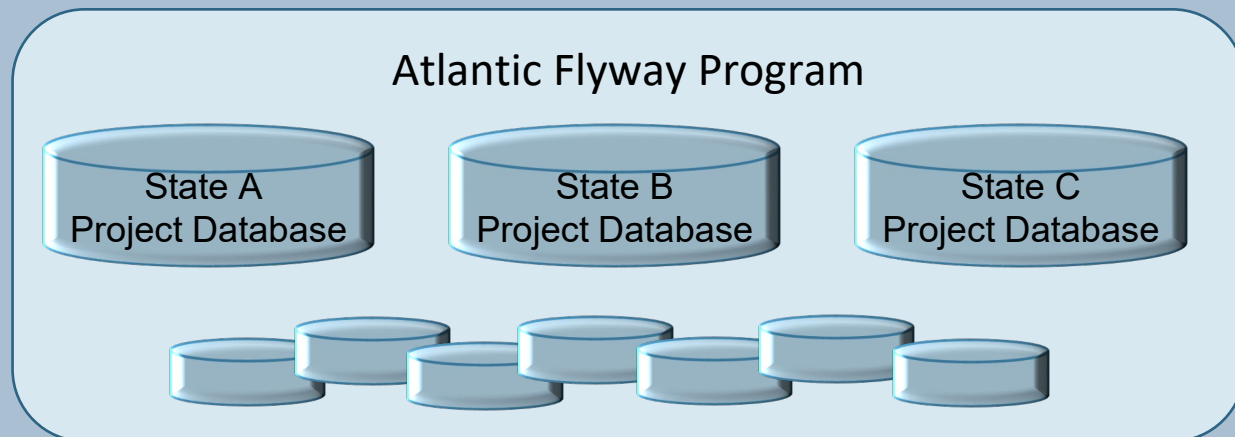
Nearest City/Town: \_\_\_\_\_ Distance: \_\_\_\_\_ mile Direction from town to colony: \_\_\_\_\_



- Sampling Protocol Definition(s)**
- [CWb ATLANTIC FLYWAY](#)
  - [CWb ATLANTIC FLYWAY CONDITION](#)

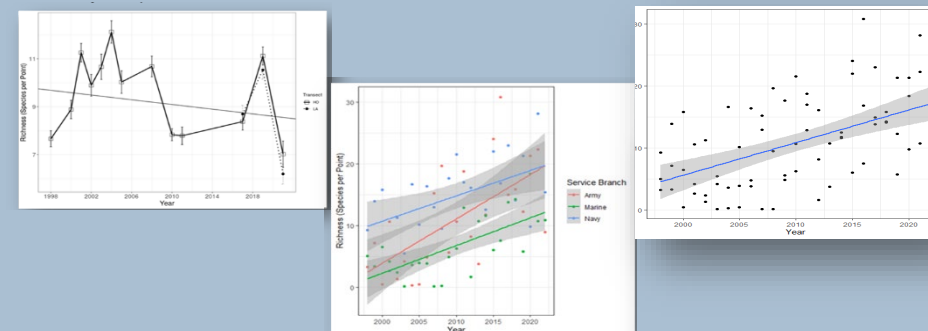


# Colonial Waterbird Program Structure



Other Projects & Programs

**Program-based multi-scaled data access, analysis, download & outputs**



**Flexibility with data analysis**

**Sharing controlled at the Project database (or observation) level, can choose to share or not**

**Scaled conservation actions targeted where most needed**



# AKN TOOLS

## *More Flexible User Roles*

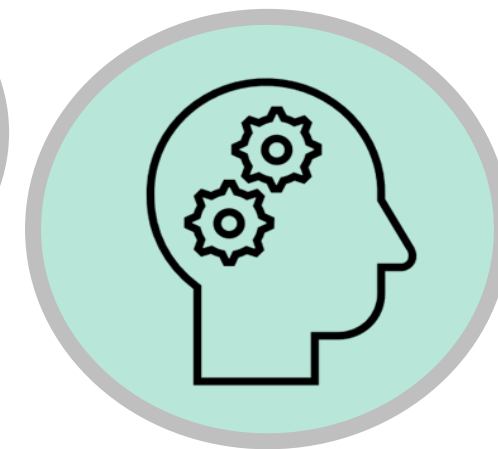
**Need:** Roles in the system that meet requirements for data entry and/or analysis for portions of AKN projects

**Solution:** Creation of two new user roles that meet identified needs

**Plan:** Create two new roles

- I. **Contractor Role** - support a contractor requiring access (data entry, data download, data analysis) to a portion of Project
- II. **Analyst Role** - allow full access to a Project or Program for data download and analysis, w/o ability to manage metadata or user access.

**Status:** Needs and roles identified, Will begin upon completion of the Enterprise Support for Programs



# Driving Avian Data Questions

1. What species have confirmed occurrence on my installation?
2. What species have the potential to occur on my installation?
3. What species may occur/persist on my installation in the future?
4. How are species “doing” (population metrics) on my installation? (AKA “is my INRMP effective?”)  
How are species doing across the military? (AKA “Is the DoW conservation program effective?”)
5. What factors are driving population trends on my installation? Are there conservation measures/actions within my INRMP that are working more than others to reach identified conservation objectives?
6. What is the relative conservation responsibility of avian species on military installations?

# FY26 PRIORITY TASKS

## Base Support

- Program Coordination
- Installation Consulting (Office Hours)
- Back-end Technical Support
- Customer Data Support
- Reporting: Annual, Qtrly & Factsheets
- Annual Support Costs (Science Cloud)

## Training

- Regional Training (4x/year)
- Service-specific Trainings (Army)
- Manager Training Modules
- Expanded Methodology Training
- Training Videos

## AKN Tools (Partner Initiatives)

- Database-to-database API
- Creation of Contractor Role
- Creation of Analyst Role
- New Analyst Tool

## Data Initiatives

- MSS Protocols & Data
- ARU-collected Data Model
- BASH Data in Science Cloud
- Banding Data in Science Cloud
- Decision-support Tools & Publications

## DoW-Specific Tools

- Conservation Responsibility
- Management Program Update
- Standardizing DoW Bird Monitoring
- Mission-sensitive Species Tools
- Operations Sustainment Tool

## Military Services & Installation Support

- Historical/Contemporary Data Support
- Custom Data Outputs
- Direct Data Initiatives
- Case Study Development



# WHAT UPDATES, INITIATIVES, TOOLS DO YOU WANT TO SEE?





# NEXT STEPS FOR YOU





# SIGN UP FOR DOW AKN UPDATES

## Welcome to the DoD AKN Portal

Provides a modern avian data management system approach to foster efficient, cost-effective and resilient conservation outcomes in support of the military mission.

Manage data now

Does AKN currently support my data type?

DoD AKN User Guide

Get Training!



Sign Up to Receive DoD AKN Program Updates

### Join the DoD AKN Program Contact List

Name \*

First

Last

Affiliation (Military Service or Company Name) \*

Installation (if applicable)

Email \*

Comment or Message

Submit



Bluethroat, Nome, AK, C. VanTassel

<https://www.dodakn.org/resources/join-the-dod-akn-program-contact-list/>

# SIGN UP FOR AKN UPDATES



SIGN UP FOR UPDATES | CONTACT

**AVIAN**  
KNOWLEDGE NETWORK

ABOUT ▾ TOOLS ▾ PORTALS ▾ HELP ▾ Q

## Avian Knowledge Network

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

**A NATIONAL PARTNERSHIP**

### Who We Are

The Avian Knowledge Network (AKN) is a partnership currently composed of federal and state agencies and non-governmental organizations who have shared priorities regarding informatics 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 their avian observation data.

**MANAGE & EXPLORE DATA**  
AKN offers tools for collecting, entering, uploading, managing, accessing and summarizing bird monitoring data.

EXPLORE TOOLS

MORE ABOUT AKN

SIGN UP FOR UPDATES | CONTACT

**AVIAN**  
KNOWLEDGE NETWORK

ABOUT ▾ TOOLS ▾ PORTALS ▾ HELP ▾ Q

**KEEP CONNECTED**

### AKN Newsletter / Updates

Subscribe to keep informed about updates and new features in the Avian Knowledge Network.

Archive  
Coming soon!

### Subscribe

\* INDICATES REQUIRED FIELD

**Email Address \***

**First Name \***

**Last Name \***

**Associated Organization \***

SUBSCRIBE

# ONGOING SUPPORT

## ■ *Monthly Virtual Office Hours*

- Monthly “Office Hours”
- Calendar and signups [here](#)

## ■ *Other Opportunities*

- Training videos on AKN YouTube Channel  
([https://www.youtube.com/channel/UCi9in\\_tC9uTZa9Bo3HgnY1Q/featured](https://www.youtube.com/channel/UCi9in_tC9uTZa9Bo3HgnY1Q/featured))



<https://www.dodakn.org/get-training/>

### Training Course Site

Select the link below to access the Training Course Site which gives you access to the current and archived course agendas and materials including training slides and course exercises.

Current: [https://pointblue.github.io/dod\\_workshop/](https://pointblue.github.io/dod_workshop/)

Archive: [https://pointblue.github.io/dod\\_workshop/archive.html](https://pointblue.github.io/dod_workshop/archive.html)

**Questions, thoughts, suggestions in the future?  
Contact our team!**

**DoDAKN@erdc.dren.mil**



## Office Hours: Project Set Up in the AKN

### New Project Questionnaire

Name:

Installation:

Email Address:

- 1) Please provide a short summary of the scope of your project. What are the objectives/questions for your project?
- 2) What survey type do you conduct? (e.g., Point Count, Area Search, Line Transect, etc.)
- 3) **Sampling Units:** How are your surveys organized? How do you select your sampling locations? Briefly describe your study design.
  - a. If point counts, are they grouped into transects, or are all points independent?  
Y or N
- 4) **Observation Protocol:** Describe your field methods. Do you have a written protocol or data dictionary? Y or N
  - a. Species
  - b. Length of survey
  - c. Time Bins
  - d. Distance—exact or binned?
  - e. Detection cues—do you record this? Y or N
    - If so, what detection cues do you use (e.g., call, song, visual, wing, etc.)?
    - If so, all types or just first detected?

## • Start with you

- Presence/abundance

- Occupancy

- Abundance

- Trend

- How do these

Space/habitat

management

# SURVEYS

ations:

icipated budget,

tc.)

ility

pecies phenology

s and population

# END-TO-END PROCESS TO REGISTER A NEW USER DEMONSTRATION



*Red-cockaded Woodpecker, Camp Lejeune; Photo Credit: Kevin Rose*



# STEP 1: NEW USER REQUESTS AN ACCOUNT

Point Blue New User Registration

## New User Registration

First Name \*  Last Name \*

Email Address \*   
to sign-in and register.

Password \*

Re-enter Password \*

Your Organization \*

Street Address

City  State

Country

Point Blue New User Registration


## Thank you for registering!

We will be sending you an email momentarily asking you to confirm this registration

- Make sure that you can receive email from [datasolutions@pointblue.org](mailto:datasolutions@pointblue.org) so that the message isn't blocked as spam.
- You should receive a confirmation email within a few minutes. If not, you should re-register, as your email address may have been typed incorrectly.
- If you do not receive your confirmation email after the second registration attempt, please send an email to [support@pointbluehelp.zendesk.com](mailto:support@pointbluehelp.zendesk.com) with details of your registration.
- Use the link in that email to confirm your registration. Upon confirmation, an email will be sent to a project leader or system administrator approving your access to the system and any projects you've requested.



# STEP 2: VERIFY ACCOUNT

 datasolutions@pointblue.org 13-03-202

Subject: Please confirm your registration with DOD\_DEMO

Confirm Your Registration with DOD\_DEMO

DOD\_DEMO User Name: DoDTest@akn.org

Thank you for registering your account with DOD\_DEMO

Before you are able to use your new account, you must click the link below to validate your e-mail address and complete your registration:

[https://data.pointblue.org/apps/public/deju.php?p=NewuserConfirm&tt=\\_\\_tmpr65f1ee1b28d6d&hs=YjQ0WnowTmNMVGZ3adc&deju\\_nextPage=nu-confirm](https://data.pointblue.org/apps/public/deju.php?p=NewuserConfirm&tt=__tmpr65f1ee1b28d6d&hs=YjQ0WnowTmNMVGZ3adc&deju_nextPage=nu-confirm)

If you have any problems or questions, please contact us at support@pointblue.org

## Point Blue Science Cloud

### Email confirmation

Please use the button below to complete your email confirmation.

Confirm my email

## Point Blue Science Cloud

### Email successfully confirmed

Thank you for successfully confirming your email address.

An email was sent to the project leader(s) of your requested project for approval.

Once your project access has been approved you will receive an email with information about how to log into the system.



# STEP 3: PROJECT LEADER APPROVAL

OAKN new user request to join DOD\_DEMO - Message (HT...)

File Message Help Acrobat

Share to Teams All Apps Mark Unread Find Zoom Save Attachments

OAKN new user request to join DOD\_DEMO

datasolutions@pointblue.org  
To: crg; Dianne Miller

Wed 3/13/2024 11:35 AM

Reply Reply All Forward

If there are problems with how this message is displayed, click here to view it in a web browser. Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Start your reply all with:

**WARNING, this message has originated from an external source.**

AKN new user request to join DOD\_DEMO

The following person is requesting access:

Name: TestUser, DoD Email: [DoDTest@akn.org](mailto:DoDTest@akn.org) Project: DOD\_DEMO

To approve or deny this request, click on this link: [https://data.pointblue.org/apps/projectleaders/index.php?page=appr-new-p&deju\\_rid=27045&deju\\_hs=YjQ0WnowTmNMVGZ3dw%3D%3D&deju\\_registration\\_host=cadc&deju\\_pr=DOD\\_DEMO](https://data.pointblue.org/apps/projectleaders/index.php?page=appr-new-p&deju_rid=27045&deju_hs=YjQ0WnowTmNMVGZ3dw%3D%3D&deju_registration_host=cadc&deju_pr=DOD_DEMO)

All the best, Your Avian Data Center

# STEP 3: PROJECT LEADER APPROVAL

***THIS IS WHERE YOU COME IN***



**Project Leader**

- Home
- Sampling Units
- Field Observations
- Project Definition

## Approve New User Request

**Project:** DOD\_DEMO  
**Requestor:** TestUser, DoD  
Email: DoDTest@akn.org

Which Approval should you choose? ?

Approve as Biologist

Approve as Project  
Leader

Deny Access

# BIOLOGISTS VIEW

## Welcome to AKN Biologists

AKN Biologists is an application for entering and reviewing field observations in support of the Avian Knowledge Network, hosted by [Point Blue Data Solutions](#)

### Projects

What project do you want to work in?

[Quick Tips >>](#)

DOD\_DEMO - DoD Demonstration Project

### Project Observation Types

For project: DOD\_DEMO

What type of observations would you like to work on?

[Quick Tips >>](#)

- [Area Search Surveys](#)
- [Point Count Surveys](#)
- [Site Conditions](#)

[Feedback](#) | [User: dodtest@akn.org](#) | [Logout](#)

Powered by [Point Blue Data Solutions](#)



# INACTIVE ACCOUNT

Biologists **Project:** DOD\_DEMO Error: PRBODB.InvalidProjectAccessRights (403 error) ✕

## Welcome to AKN Biologists

AKN Biologists is an application for entering and reviewing field observations in support of the Avian Knowledge Network, hosted by [Point Blue Data Solutions](#)

### Projects

What project do you want to work in?

[Quick Tips >>](#)

Loading available project operations...

---

[Feedback](#) | **User:** dodtest@akn.org | [Logout](#) Powered by [Point Blue Data Solutions](#)



# OPEN FORUM





# PLUSES AND DELTAS

---

# WORKSHOP WRAP-UP



# PLUS – DELTA METHOD

- Feedback from workshop to continue to improve

## + PLUS

What went well and should be continued or repeated

## Δ DELTA

What could be changed or improved for future iterations.