



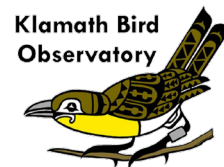
DoW AND THE AKN: WHO, WHAT, WHERE, WHEN, WHY, AND HOW

DoW Army Training
24 and 26 February 2026
Virtual

Sam Veloz
Dianne Miller

Elizabeth Neipert
Zoe Duran

John Alexander
Caitlyn Gillespie
Nora Honkomp





pointblue.github.io/dod_workshop

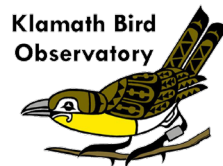
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Northern Bobwhite, Kanopolis Reservoir, Kansas; Credit: Ryan A. Williams



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?

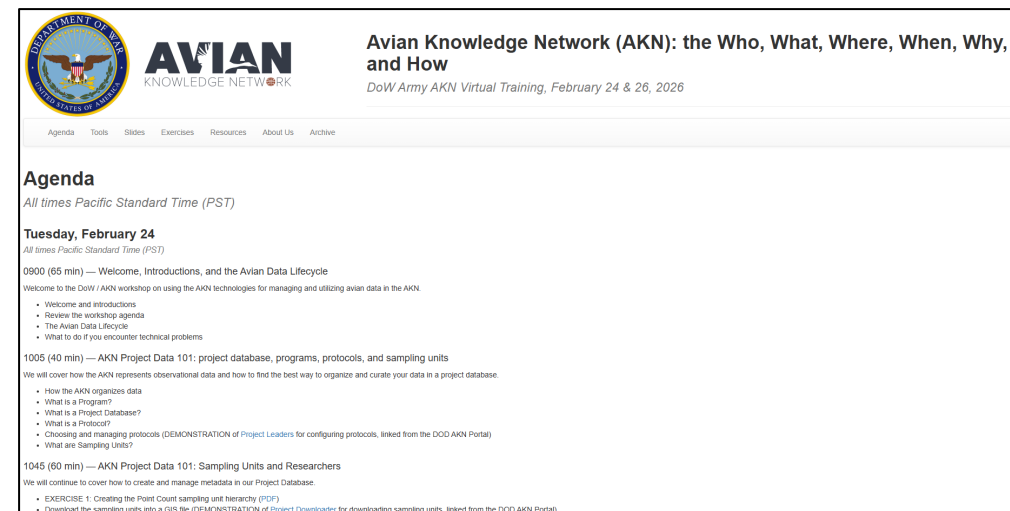
INTRODUCTIONS

A FEW LOGISTICS...

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



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



DEPARTMENT OF WAR
AVIAN
KNOWLEDGE NETWORK

Avian Knowledge Network (AKN): the Who, What, Where, When, Why, and How
DoW Army AKN Virtual Training, February 24 & 26, 2026

Agenda Tools Slides Exercises Resources About Us Archive

Agenda

All times Pacific Standard Time (PST)

Tuesday, February 24
All times Pacific Standard Time (PST)

0900 (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

1005 (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?

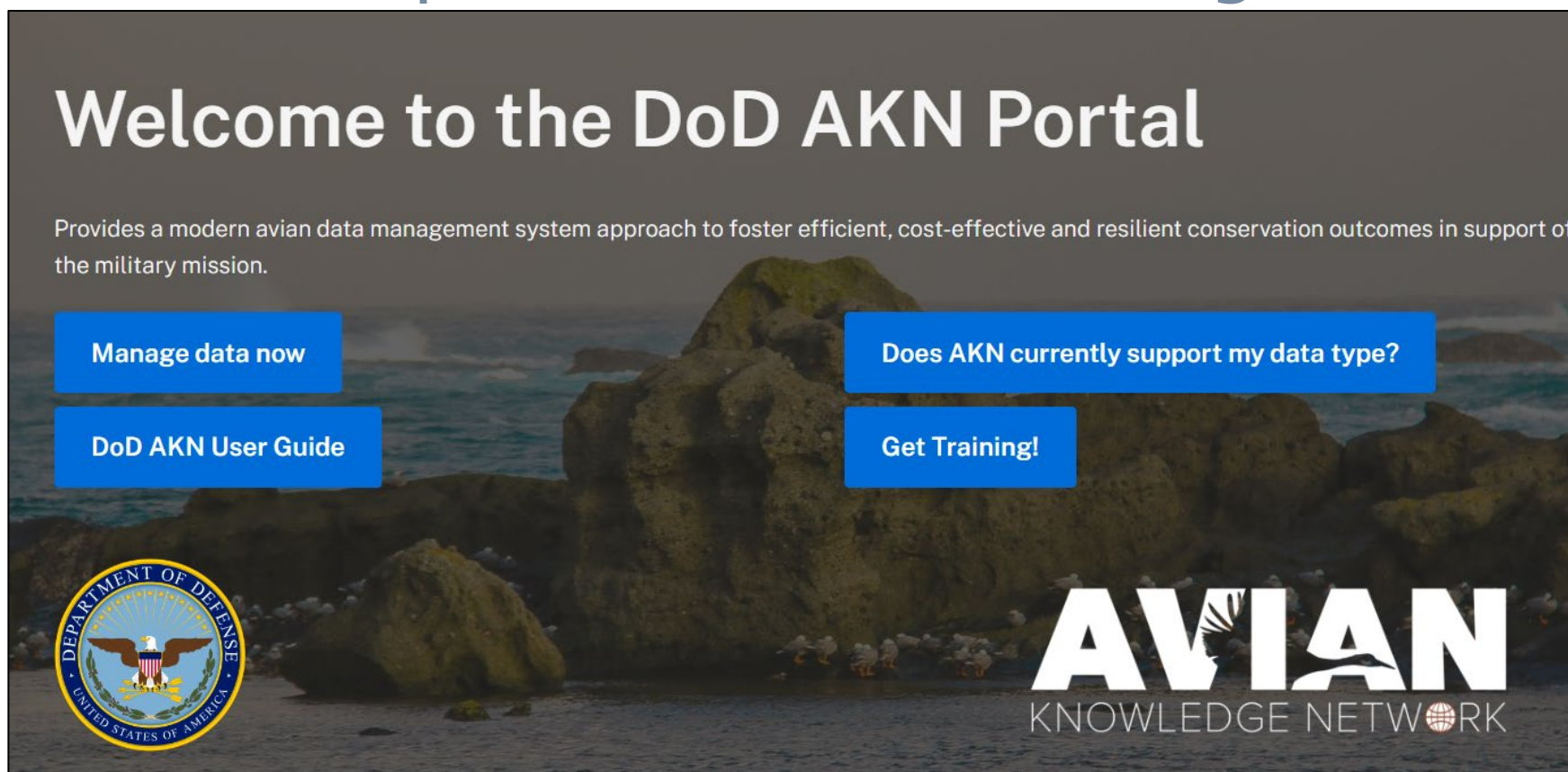
1045 (60 min) — AKN Project Data 101: Sampling Units and Researchers
We will continue to cover how to create and manage metadata in our Project Database.

- EXERCISE 1: Creating the Point Count sampling unit hierarchy (PDF)
- Download the sampling units into a GIS file (DEMONSTRATION of Project Downloader for downloading sampling units, linked from the DOD AKN Portal)

- Parking lot items

DoW AKN PORTAL

<https://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](#)

[DoD AKN User Guide](#)

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

[Get Training!](#)





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@erdc.dren.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 or 406-581-8148

KIDD, RICHARD GO Digitally signed by
ODWIN, IV.1163856
081

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

ALASKA

WAKE IS.

GUAM

HAWAII

PUERTO RICO

Army • Navy
• Air Force • DLA
• Marine Corps



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



Ongoing Base Support

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



Training

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



DoW-Specific Requirements

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 (Partner Initiatives)

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

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?

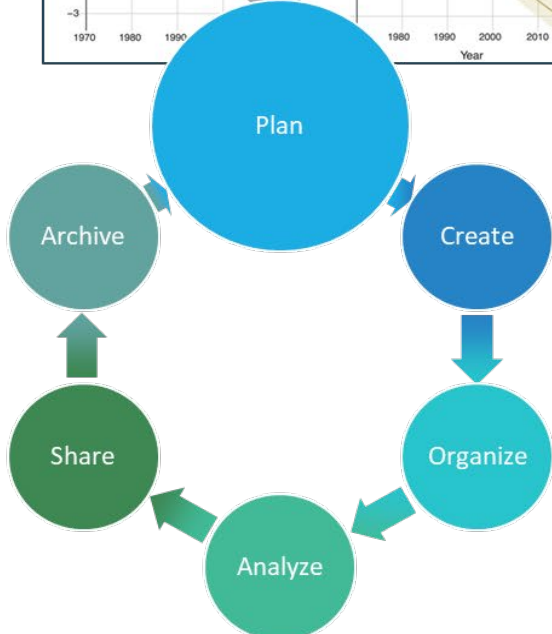
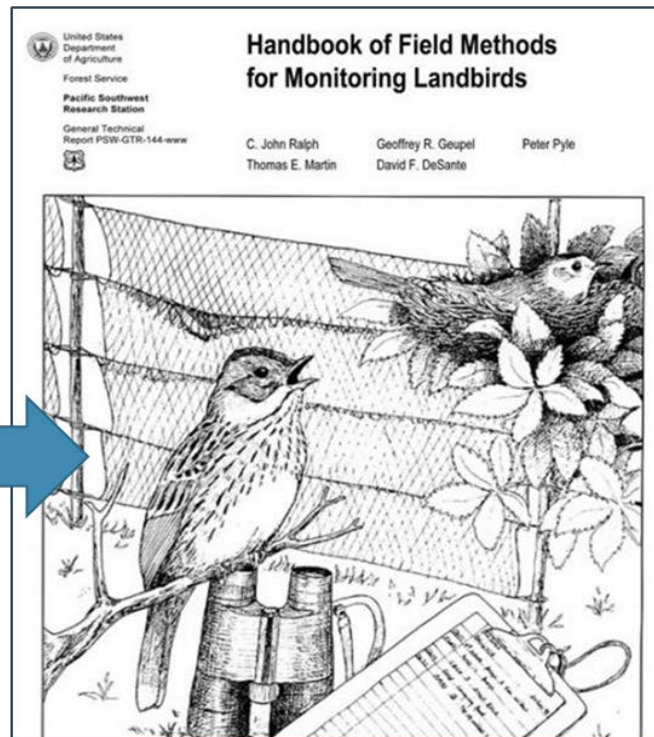
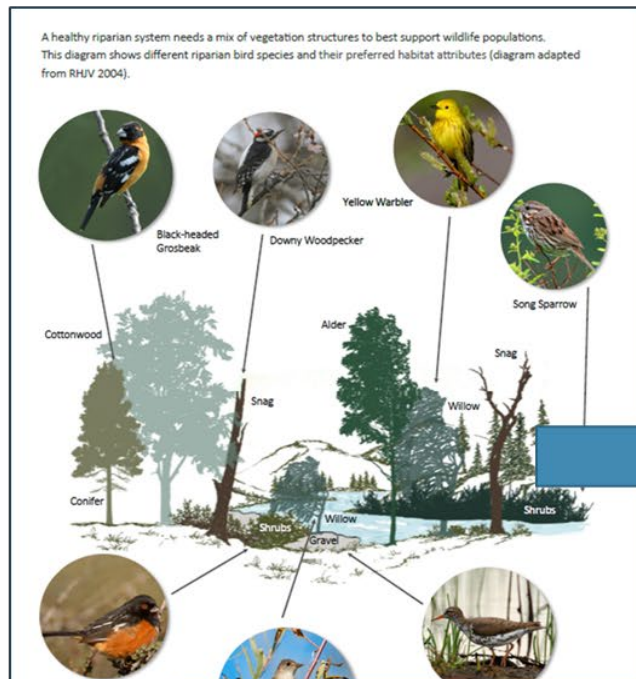
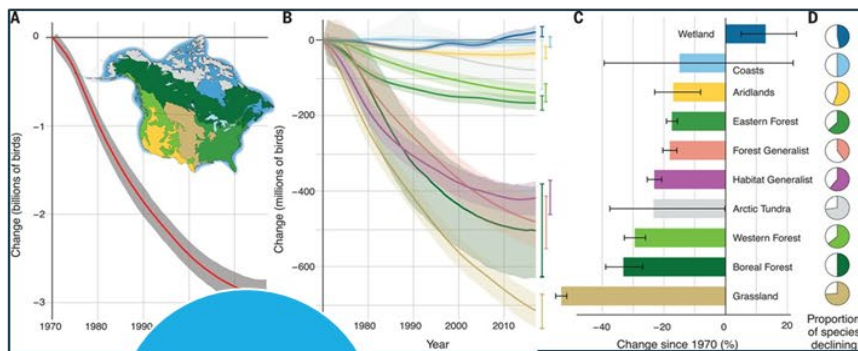
FULL AVIAN DATA LIFE CYCLE



FULL AVIAN DATA LIFE CYCLE



FULL AVIAN DATA LIFE CYCLE



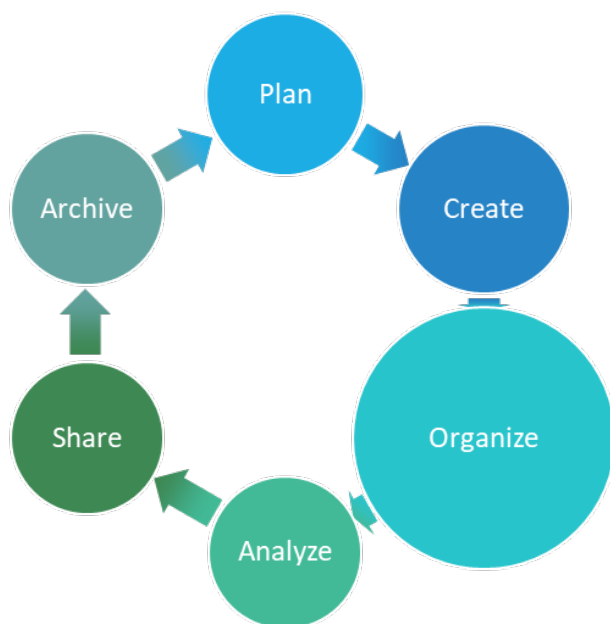
Objective: population trends

Objective: restoration & management

SURVEY OBJECTIVES

APPROPRIATE METHODOLOGIES

FULL AVIAN DATA LIFE CYCLE



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)

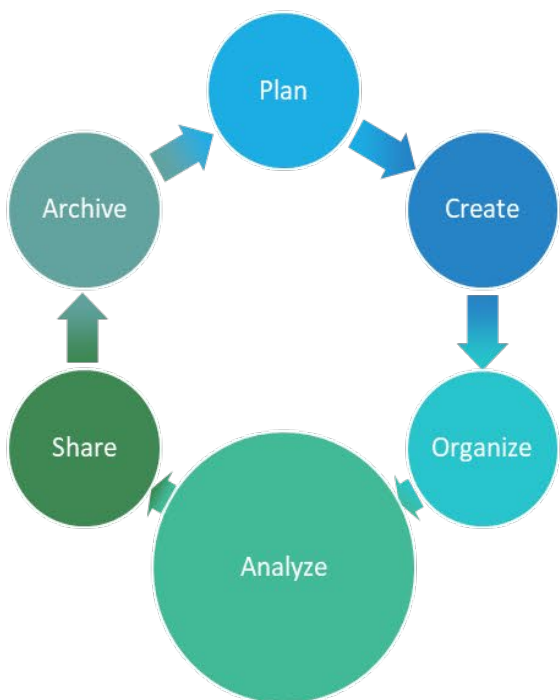
Observation Protocol: **VCP100Sx**
 Total Birds Counted: **7**

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



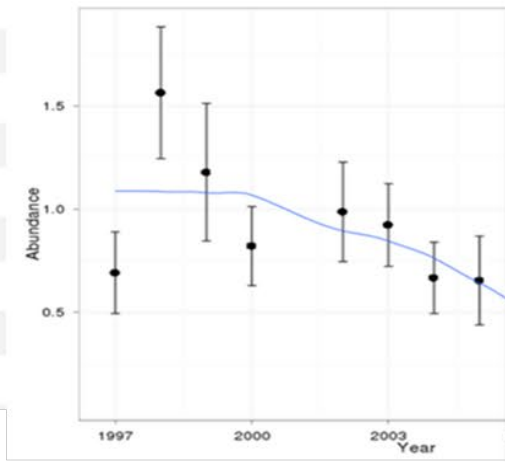
ANALYSIS

Total Number of Observations of each Species by Year

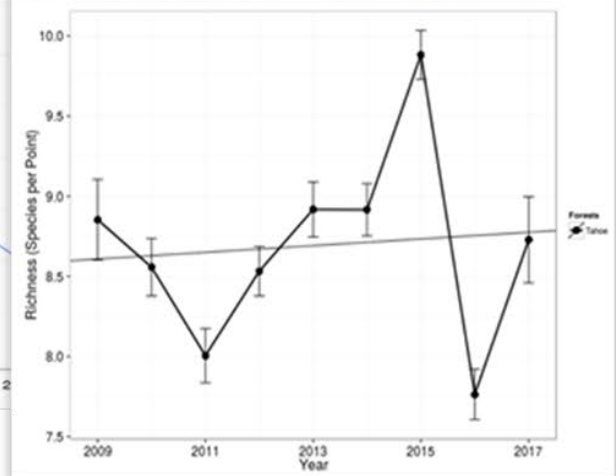
copy table to: [CSV](#) [HTML](#) [DOC](#) [PDF](#)

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										

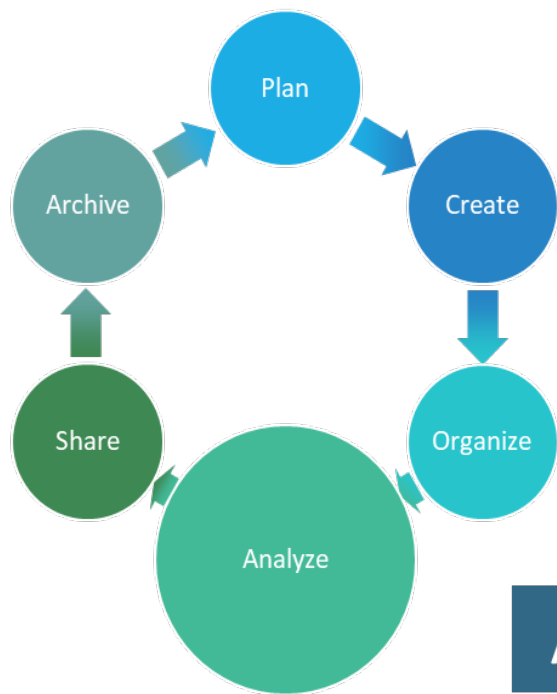
Trend in Abundance over Year Collected. Generalized additive trend estimate of Abundance by Year with locally weighed (loess) smoother. Estimate for Species = Song Sparrow Using Locally Weighed (loess) Smoother



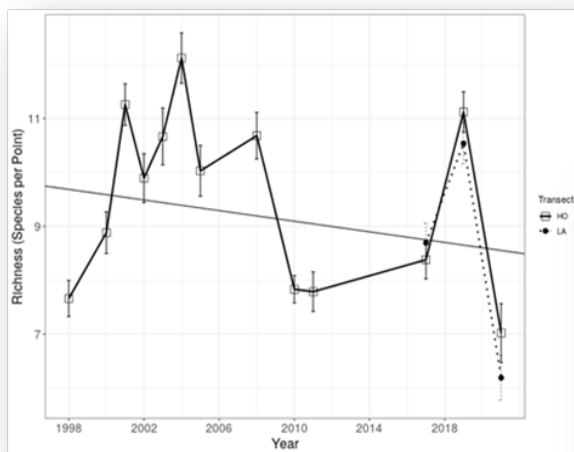
Simple linear trend estimate of Richness (Species per Point) by Year



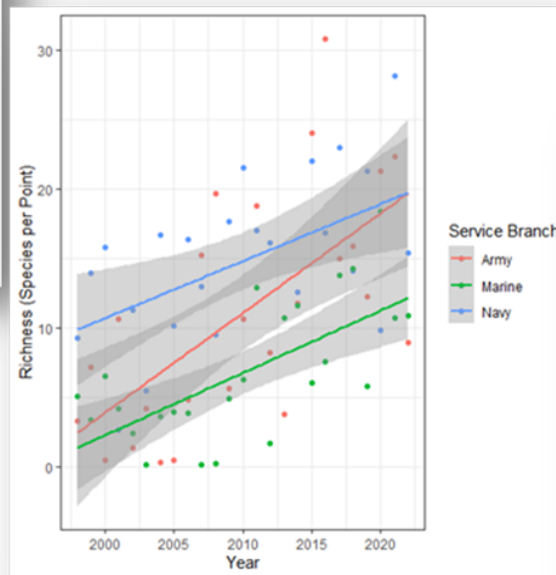
FULL AVIAN DATA LIFE CYCLE



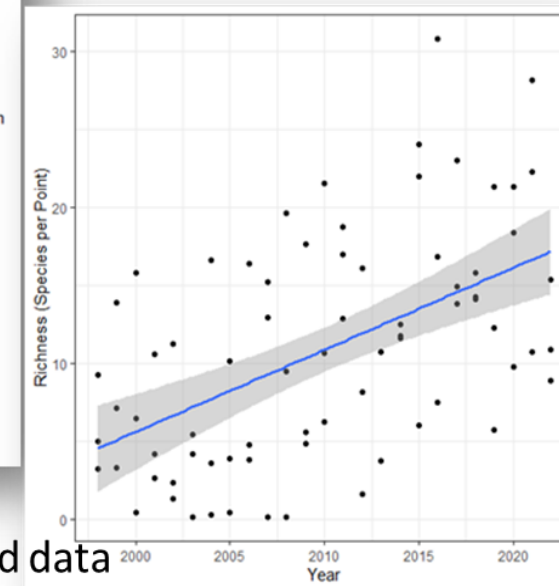
Vandenberg Space Force Base Project Riparian Richness



Service Branch Program Riparian Bird Richness



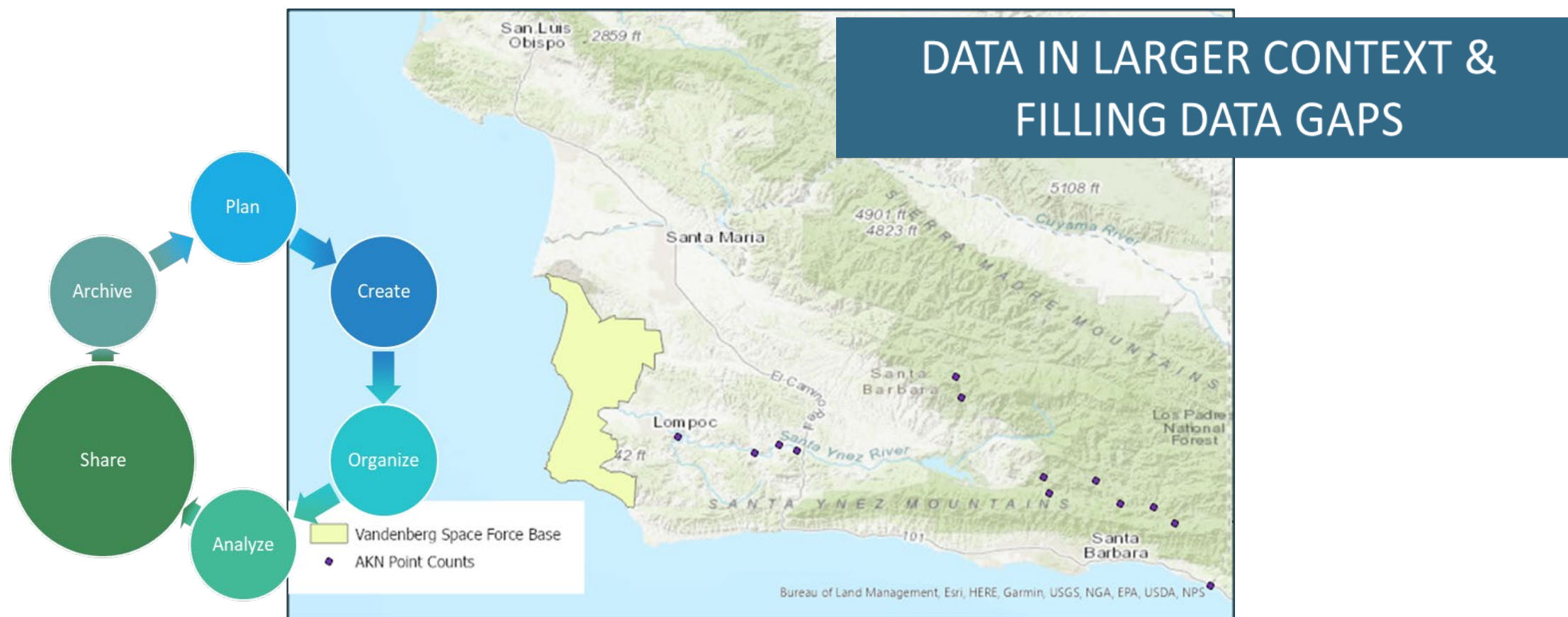
DoW Program Riparian Bird Richness



ANALYSIS AT MULTIPLE SCALES

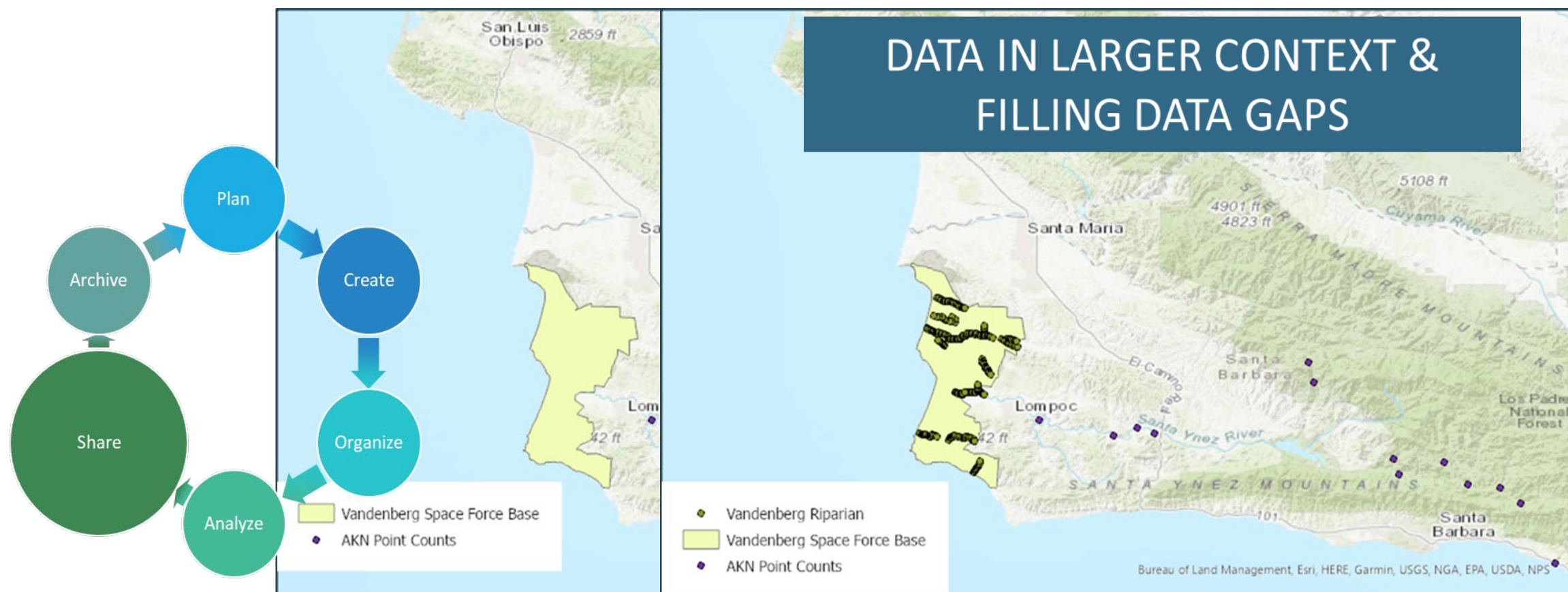
*Simulated data

FULL AVIAN DATA LIFE CYCLE

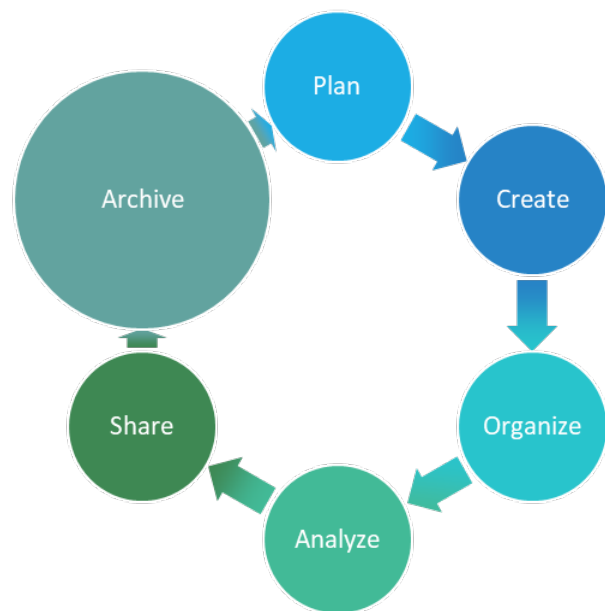




FULL AVIAN DATA LIFE CYCLE



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

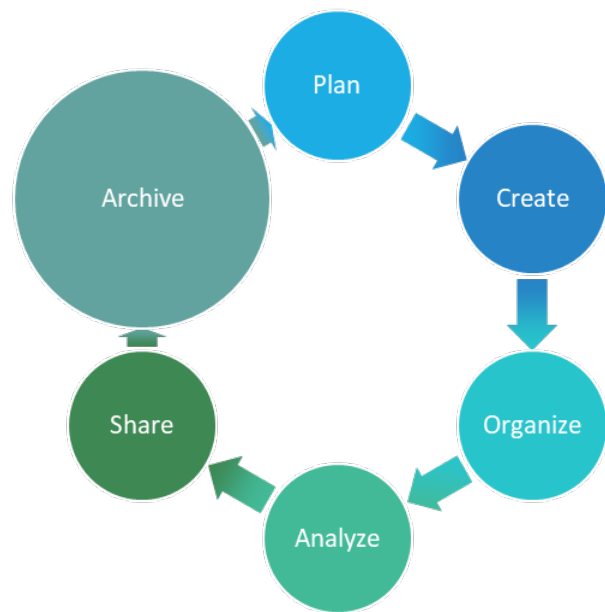
Search

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	Provider	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



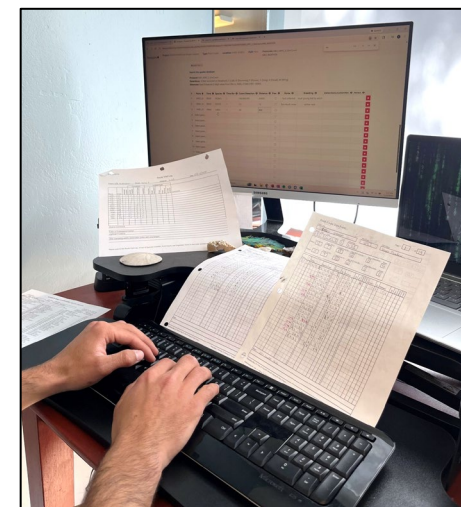
During Season:

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



Post-Season:

- Download data to share with partners and analyze



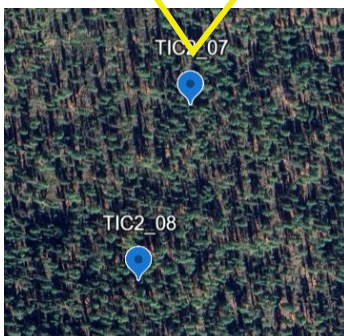


Klamath Bird
Observatory

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

Problems logging in?

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



LIMITATIONS AND CAVEATS

Focus for this training: Point Count data

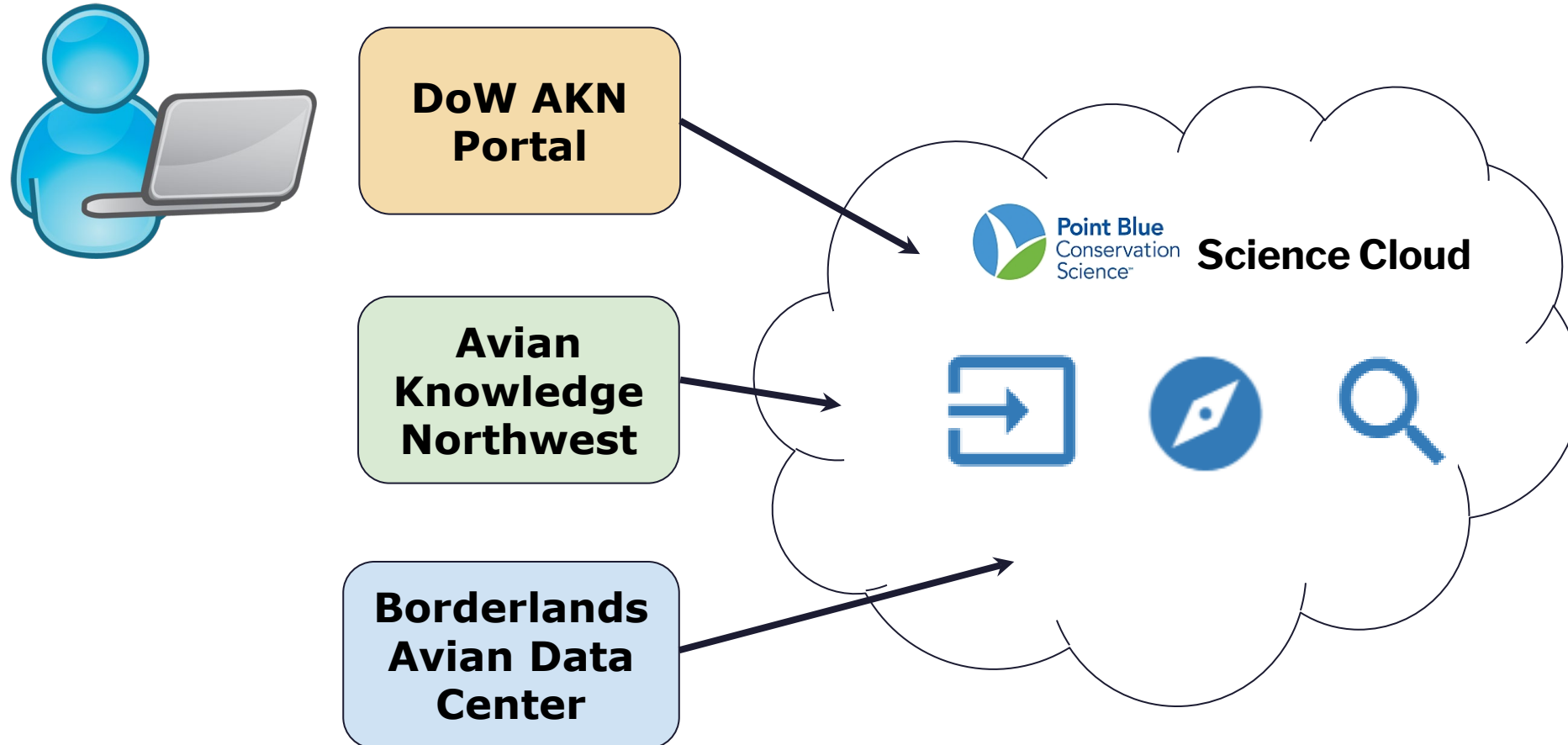
Office hours are where we can dig deep into your installation's specific Projects, surveys, data management/analysis needs, and any system issues.



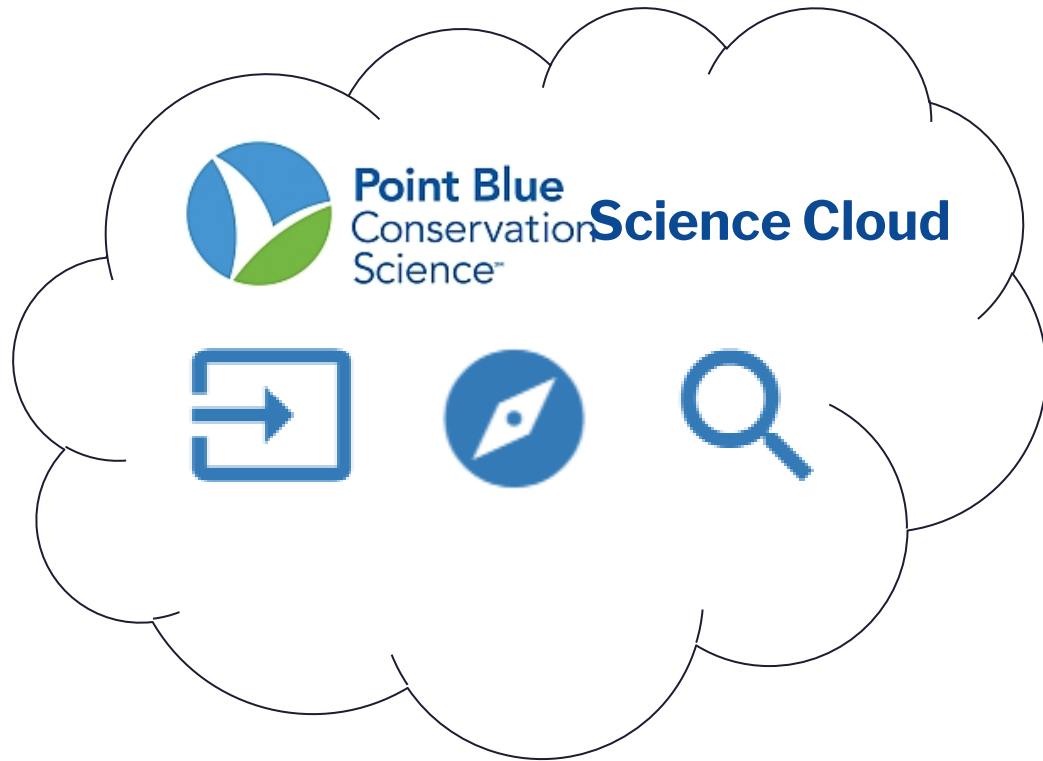
AKN PROJECT DATA 101



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 DoD
- Data ready and available to successor

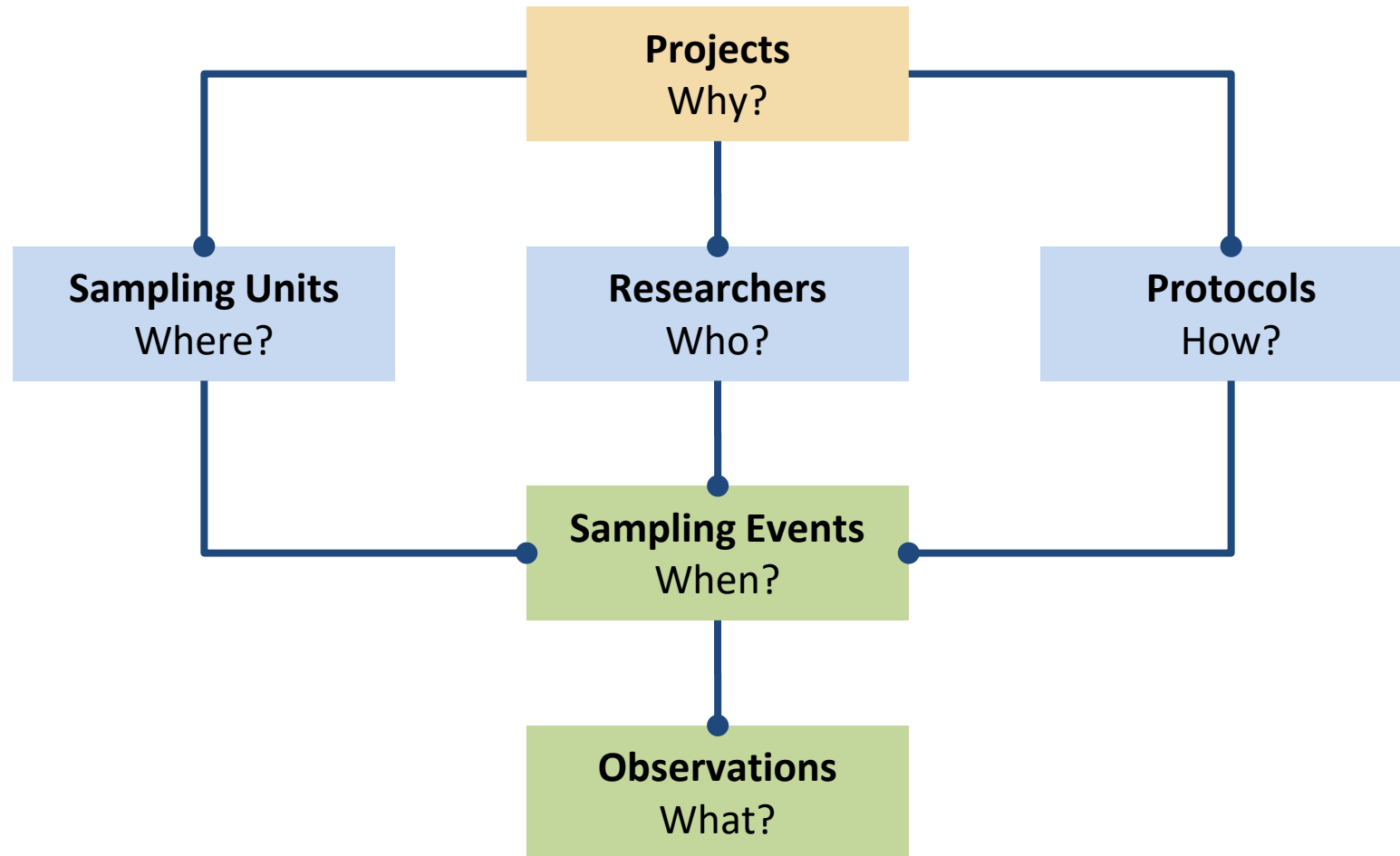


AKN PROJECT DATA 101

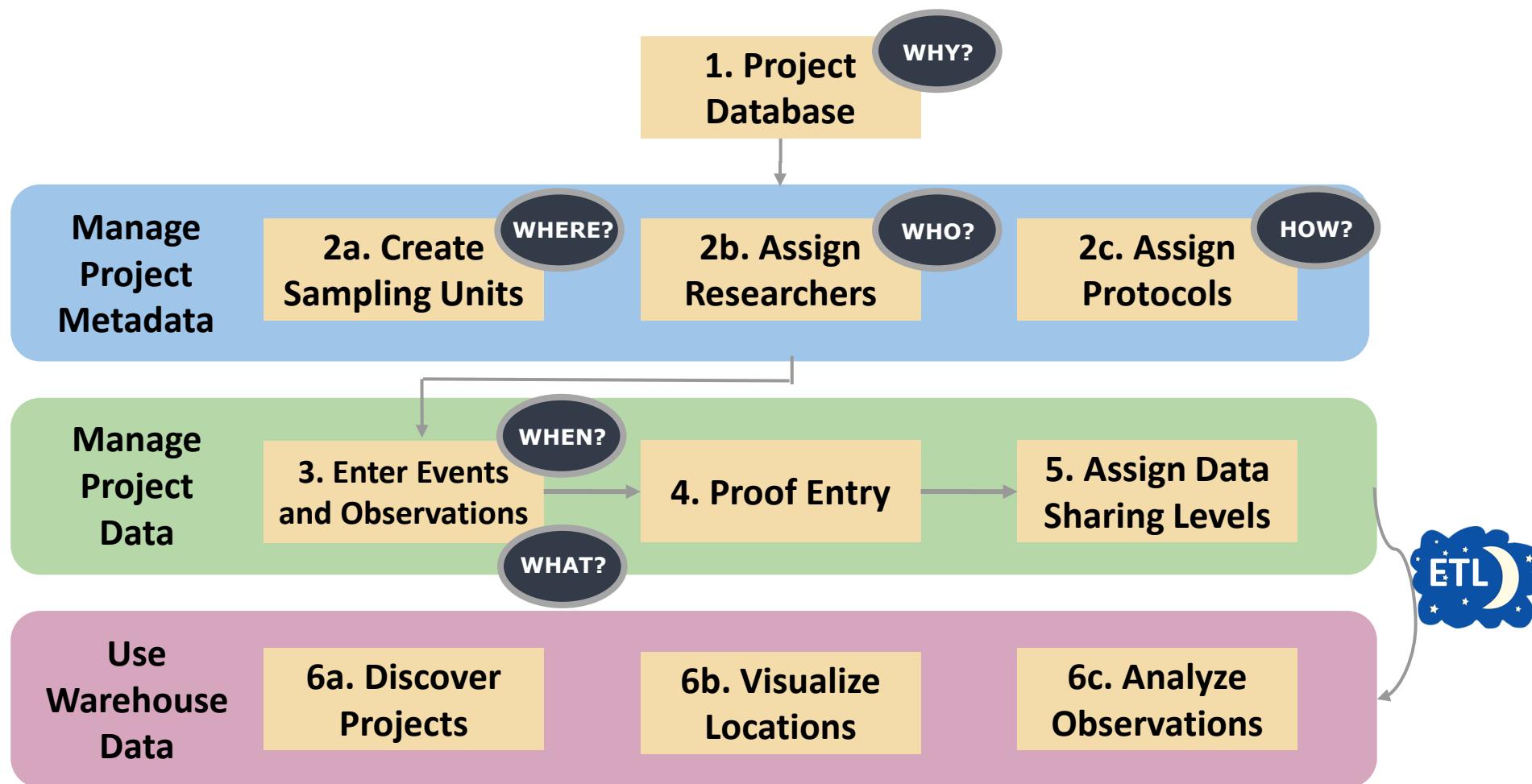
1. The parts of a Project Database

2. The workflow for creating and managing a Project

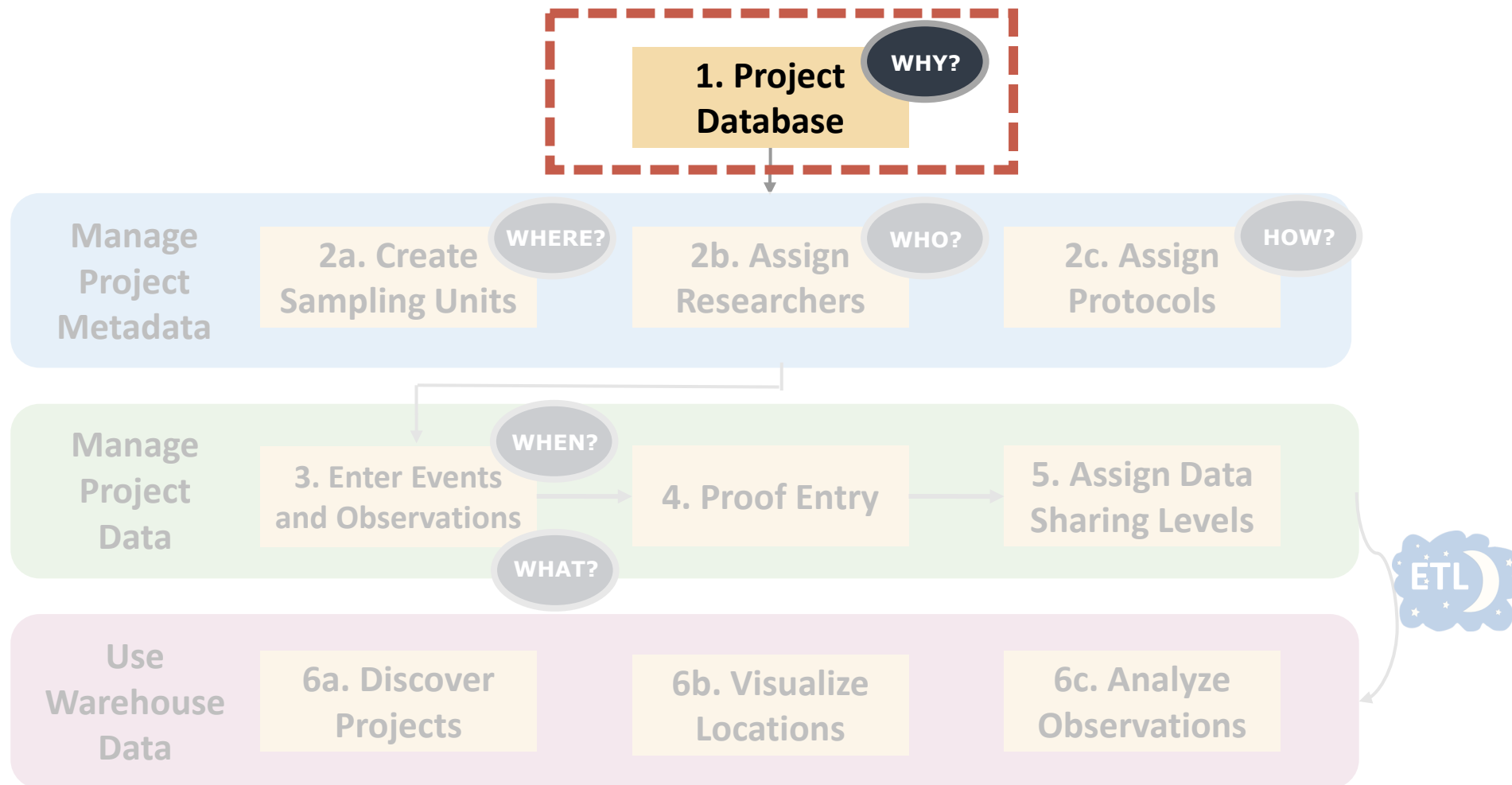
THE PROJECT DATABASE



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**



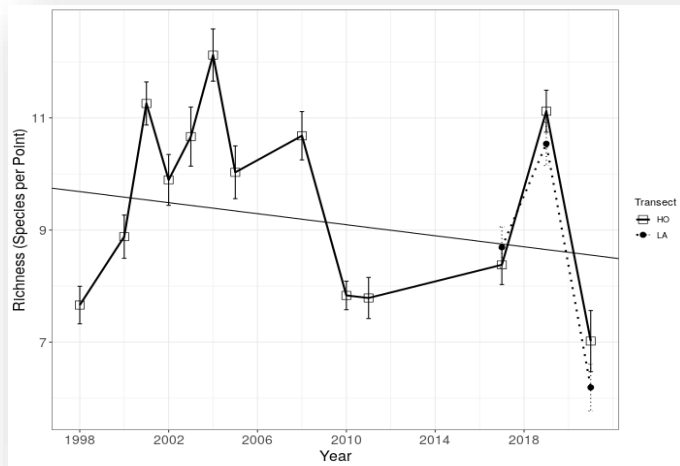
Installation Project
Databases

**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

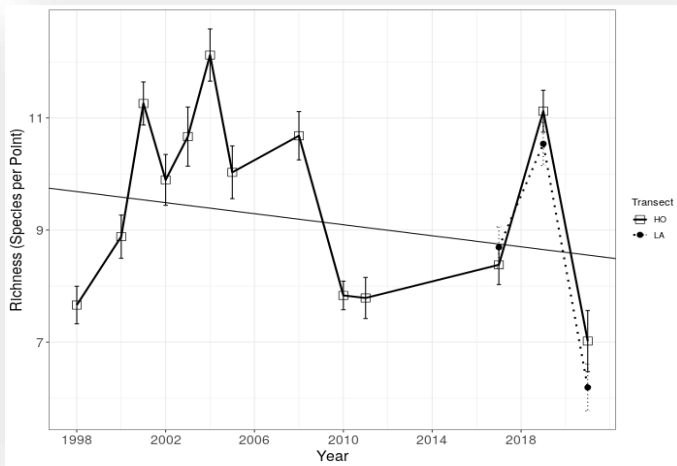
Marine Subprogram

Installation Project Databases

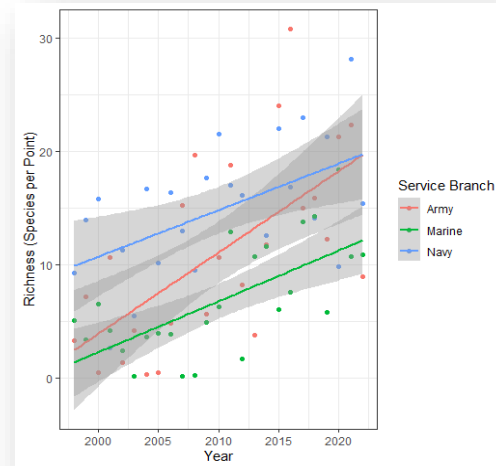
National Guard Subprogram

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



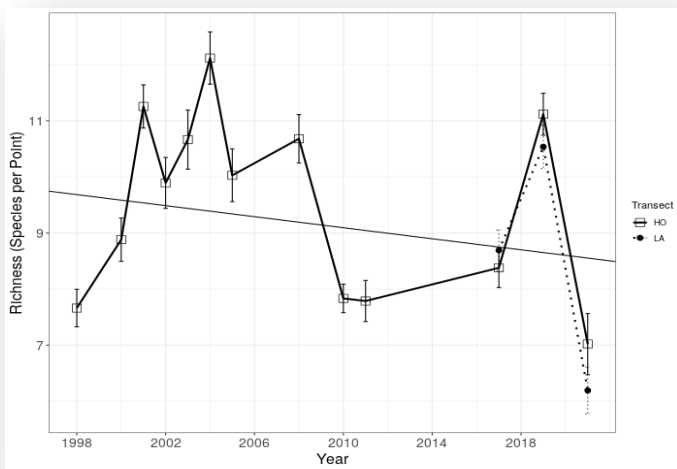
Installation Project Databases

National Guard Subprogram

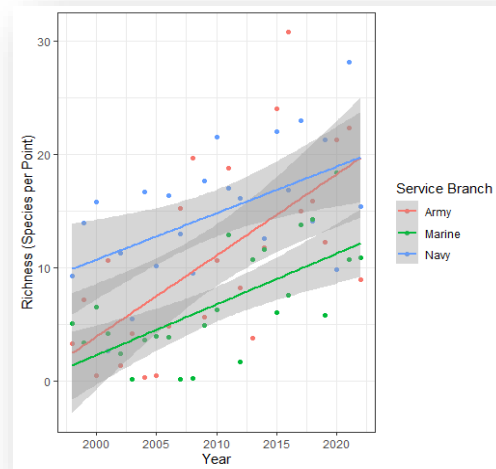


Installation Project Databases

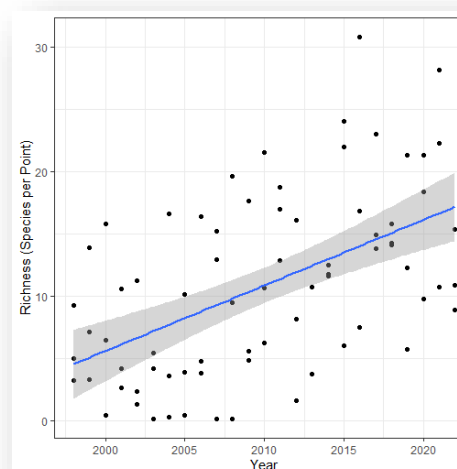
Vandenberg Space Force Base Project Riparian Richness



Service Branch Program Riparian Bird Richness



DoW Program Riparian Bird Richness



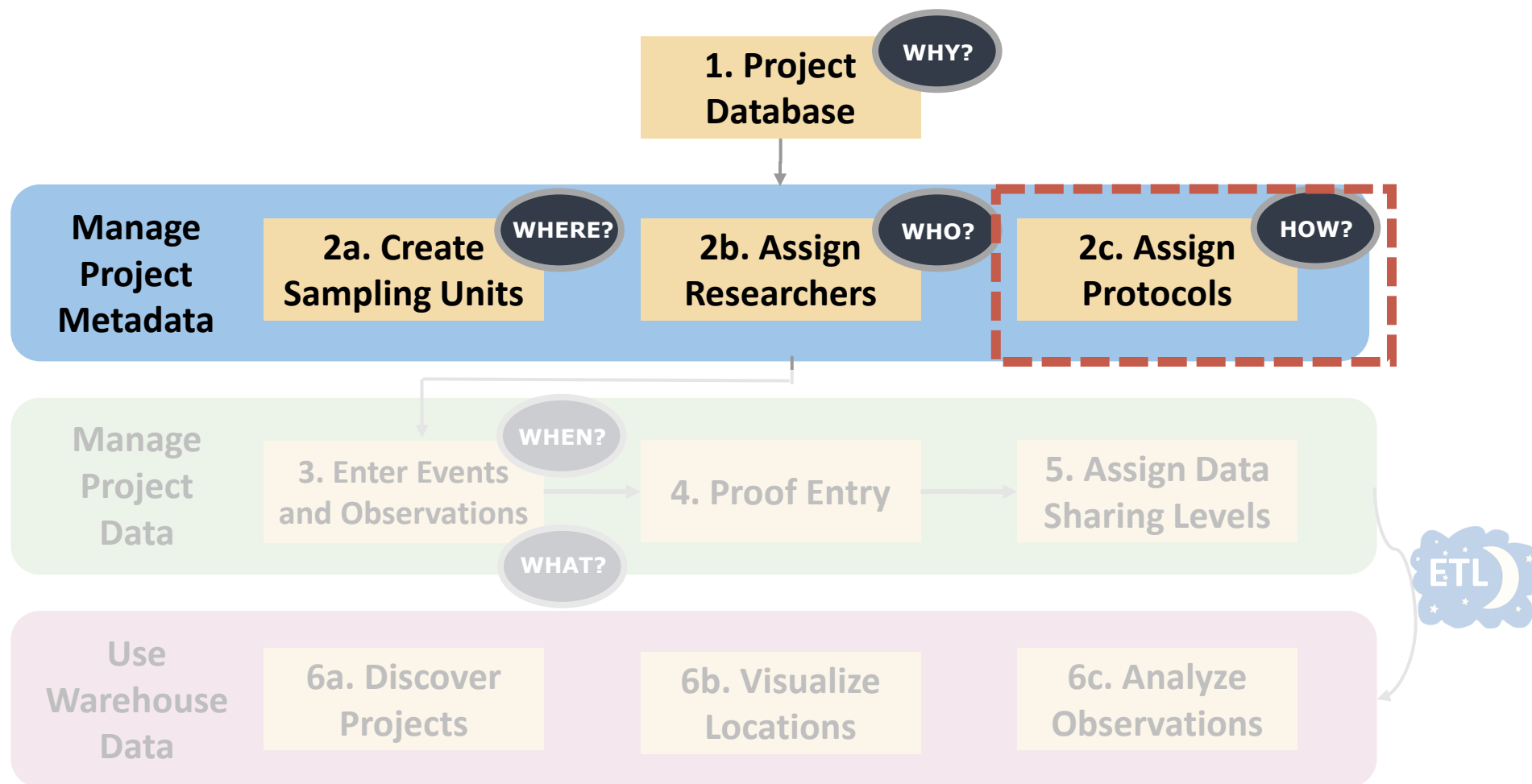


CASE STUDY:

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

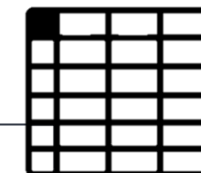
Should provide enough information for researcher 20 years from now to understand the methods you used



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 km²) 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 km² (including two colonies of 16.67 km² and 26.38 km²) (Johnson et al. 2014); 25.51 km² (Johnson et al. 2014); 26.99 km² (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

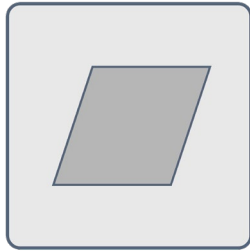
Detection Cues

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

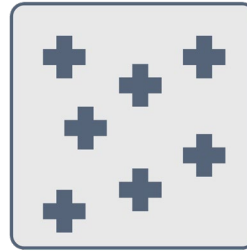
Cue	Description
A	Aural
NA	Not recorded on datasheet
V	Visual
VA	Both Visual and Aural

Distance Bins

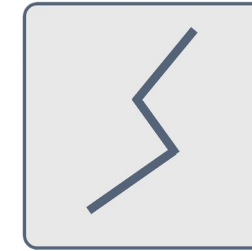
PRIMARY PROTOCOL TYPES



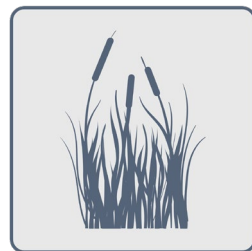
Area Search



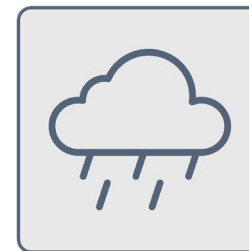
Point Count



Linear Transect



Secretive Marshbird



Site Conditions



PROTOCOL TYPES DISCUSSION



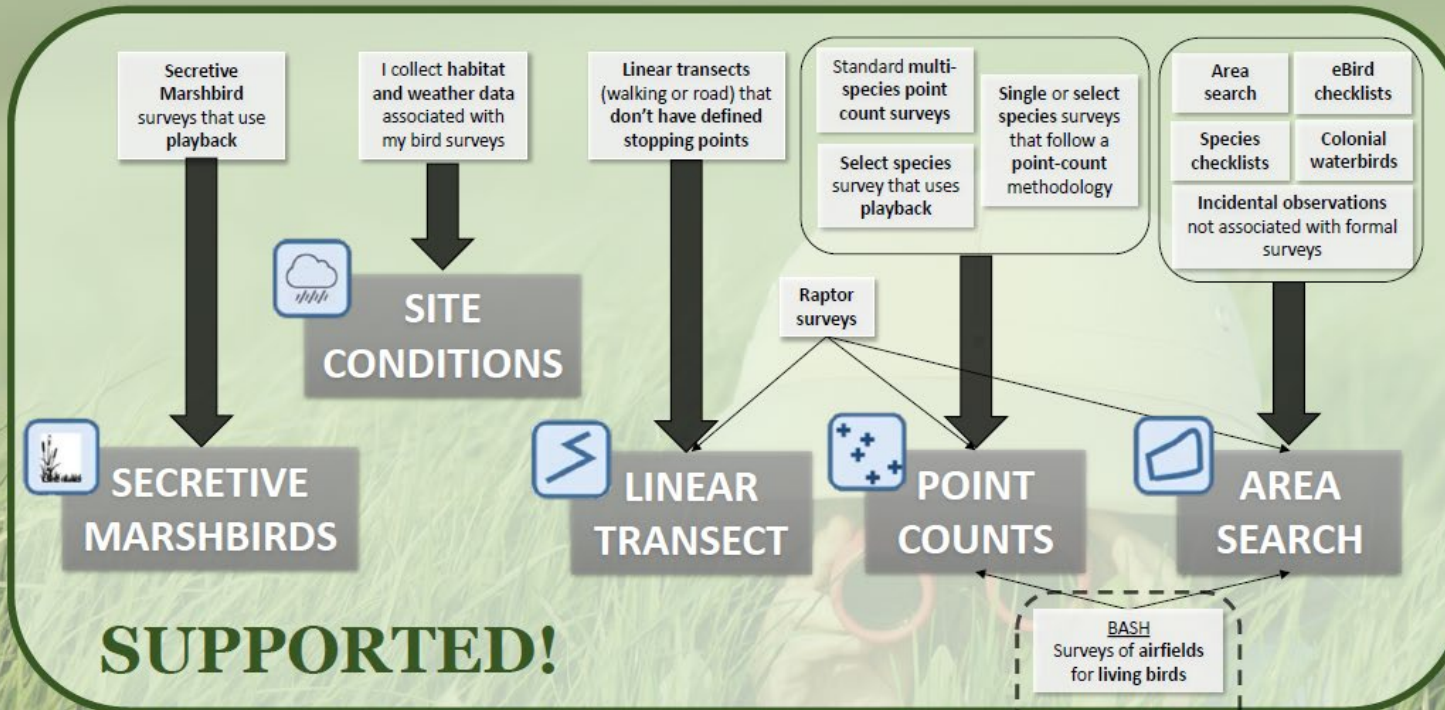
Point Counts



Area Search



Is your data-type currently supported in AKN??



Acoustic Recording Unit (ARU) data	Territory mapping or spot mapping
Color banding and resighting	Animal movements (e.g., telemetry data or Motus)
Nest monitoring	Bird capture and/or banding
MOTUS data	

Other demographic data (e.g., fledgling counts, nest counts, brood data)

I collect data that I'm not sure fits into one of these formats

I have a species-specific protocol that is a mix of two or more of these methods

IT'S COMPLICATED...

We may or may not have a protocol for you, but we need a little more information. Consult with an AKN team member for advice.

[CONTACT US](#)

NOT SUPPORTED ...YET!

But don't worry!
Our team is constantly updating available protocols, so let's touch base and see what we can do!

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](#)



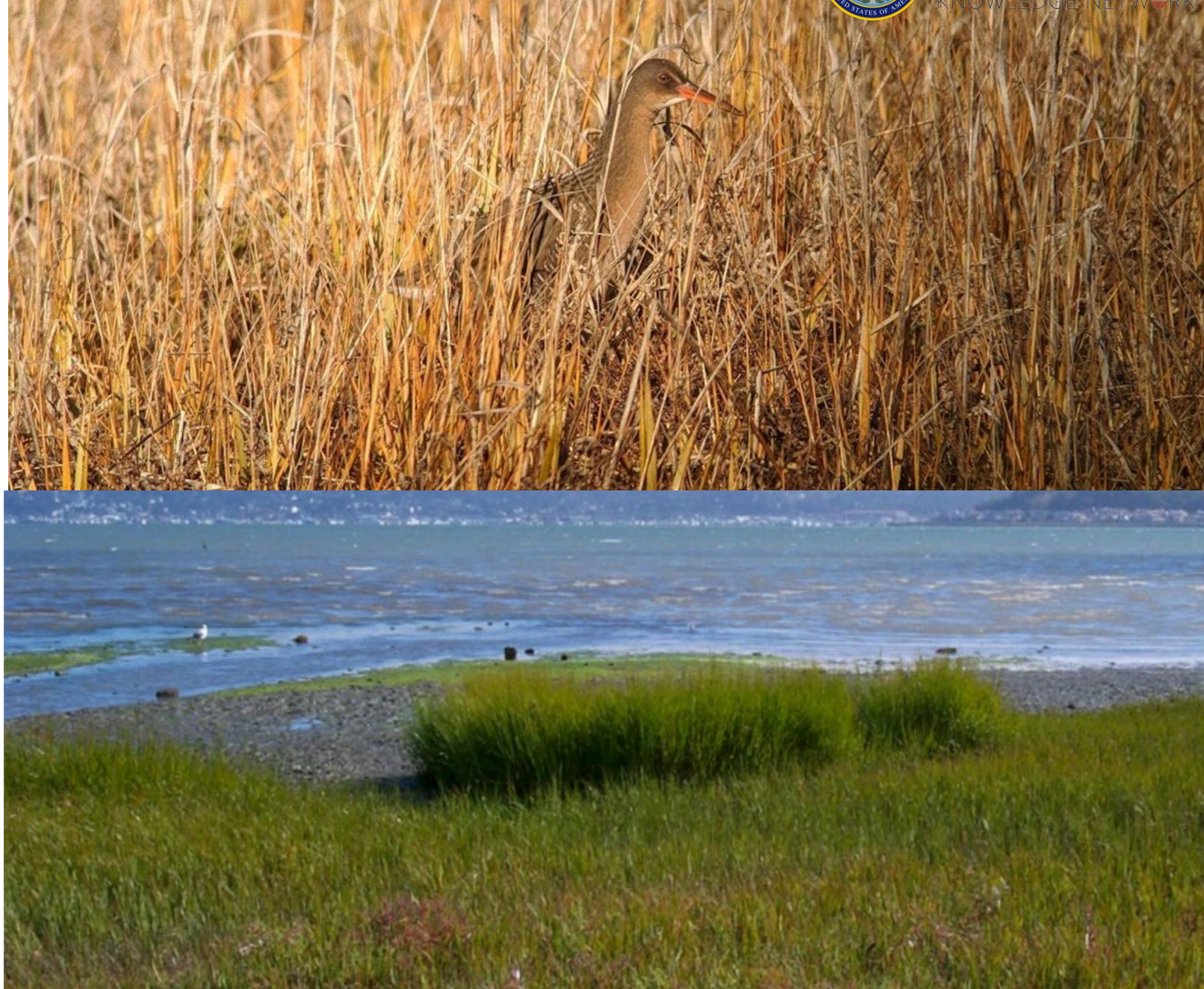
[Point Blue protocol](#)



[KBO protocol](#)



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





ASSESSING RAIL RESPONSE TO MANAGEMENT: THE CHALLENGE

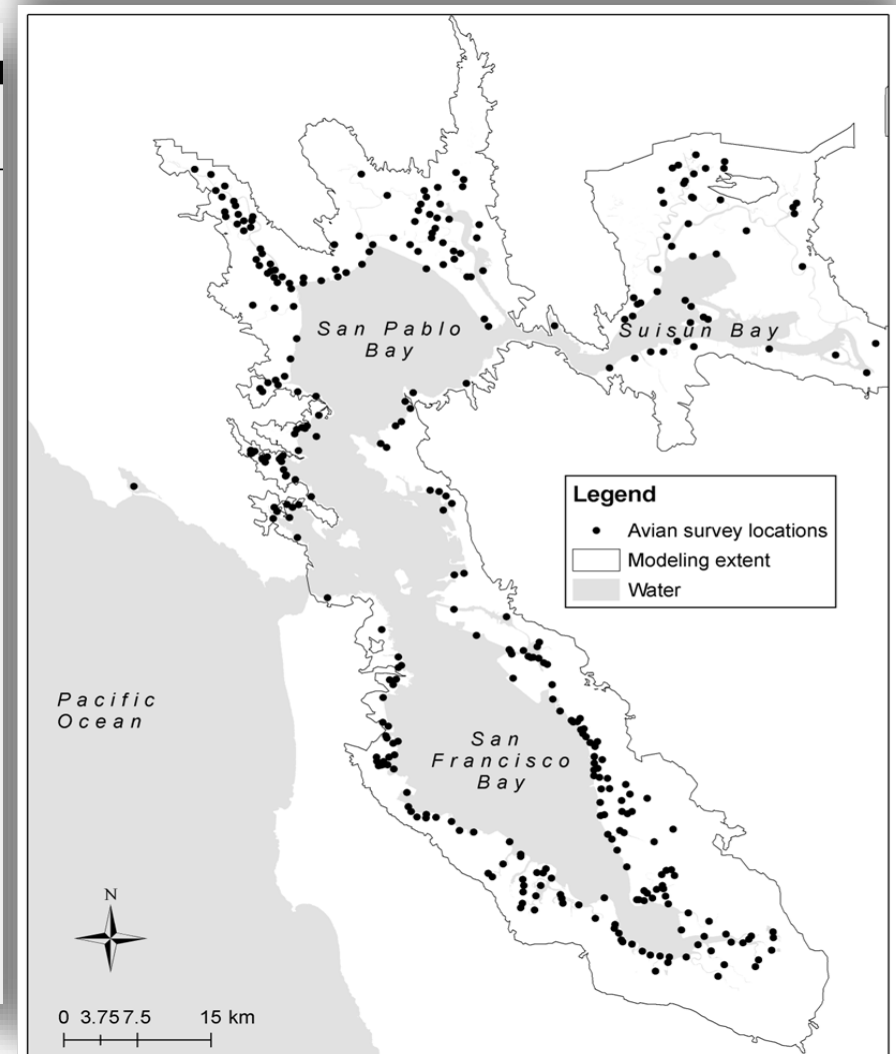


Multi-partner Effort



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**



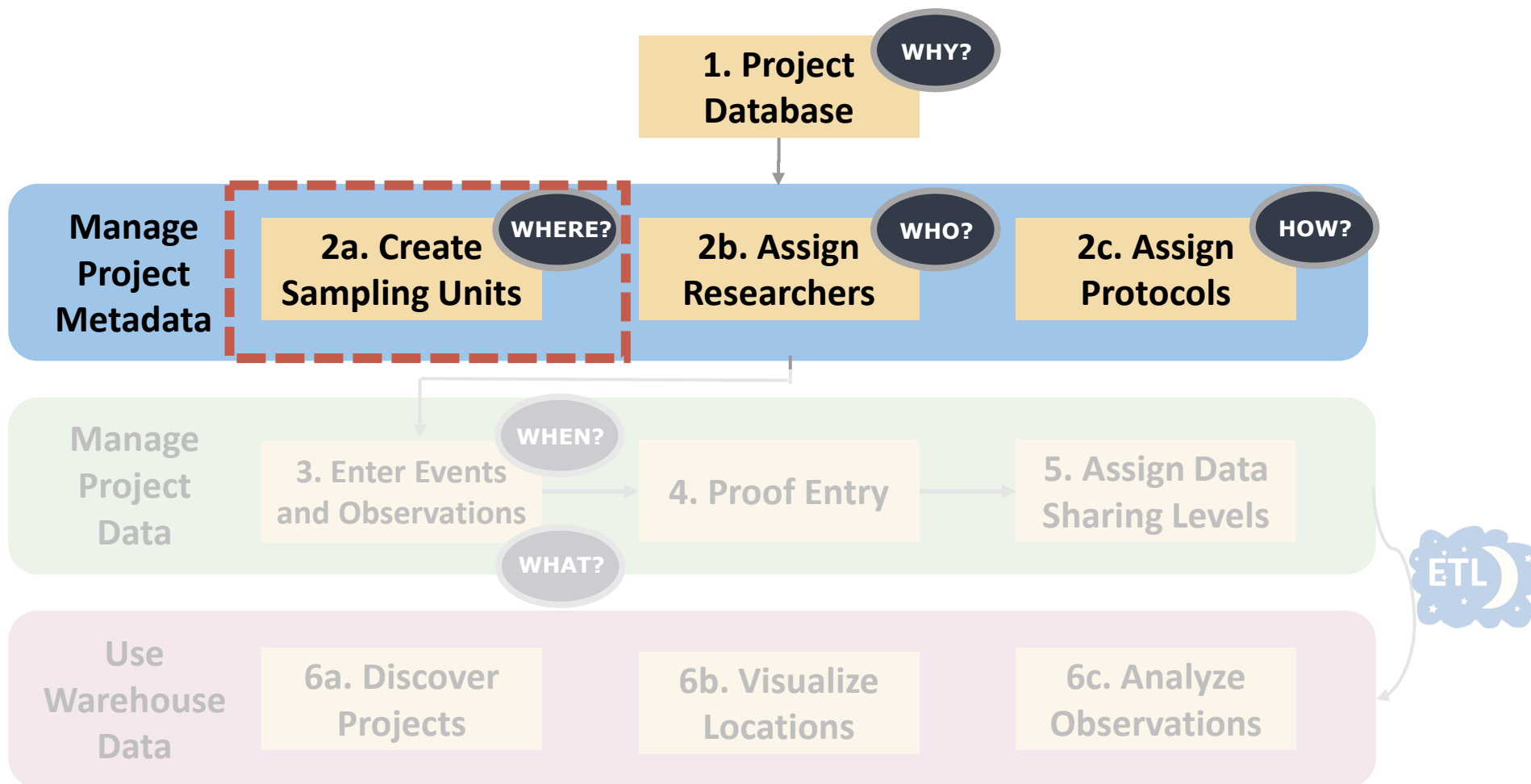
CHOOSING PROTOCOLS (DEMONSTRATION)

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

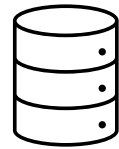
The locations where observations are collected

Organized into a tree (hierarchy)

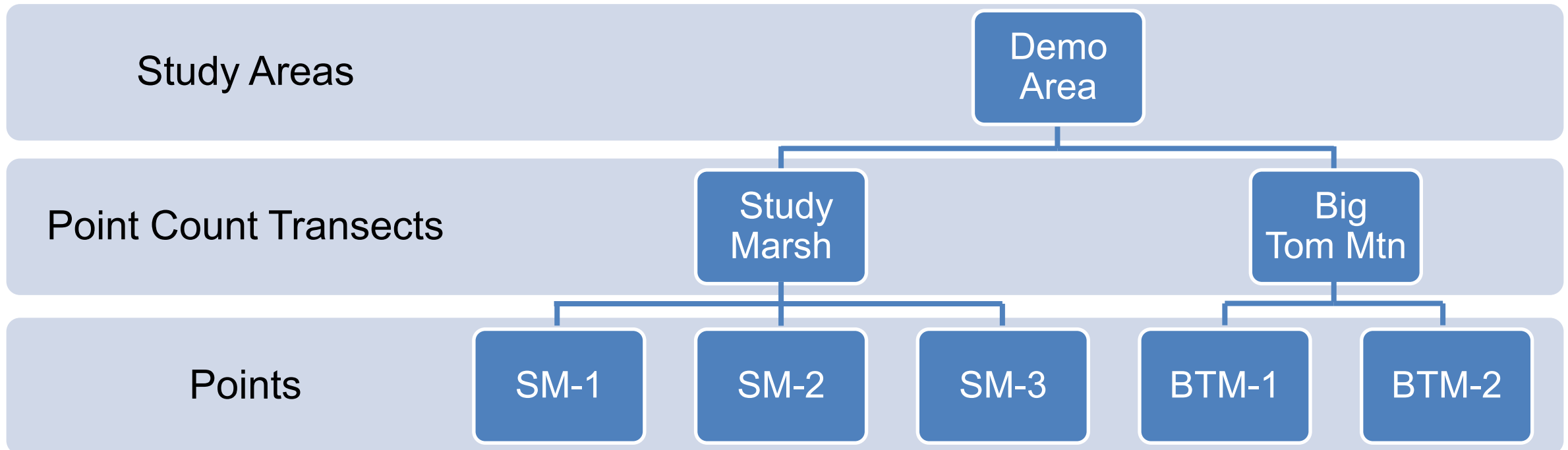
Uniquely named with Project

Can have Point/Line/Polygon

SAMPLING UNIT TYPES FOR POINT COUNTS

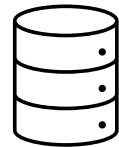


Project: DOD_DEMO



Replicates or independent points?
What questions are you asking?

SAMPLING UNIT TYPES FOR POINT COUNTS



Project: DOD_DEMO

Study Areas

Demo
Area

Point Count Transects

Demo
Transect

Points

SM-1

SM-2

SM-3

BTM-1

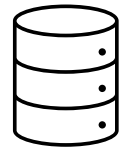
BTM-2

Replicates or independent points?
What questions are you asking?

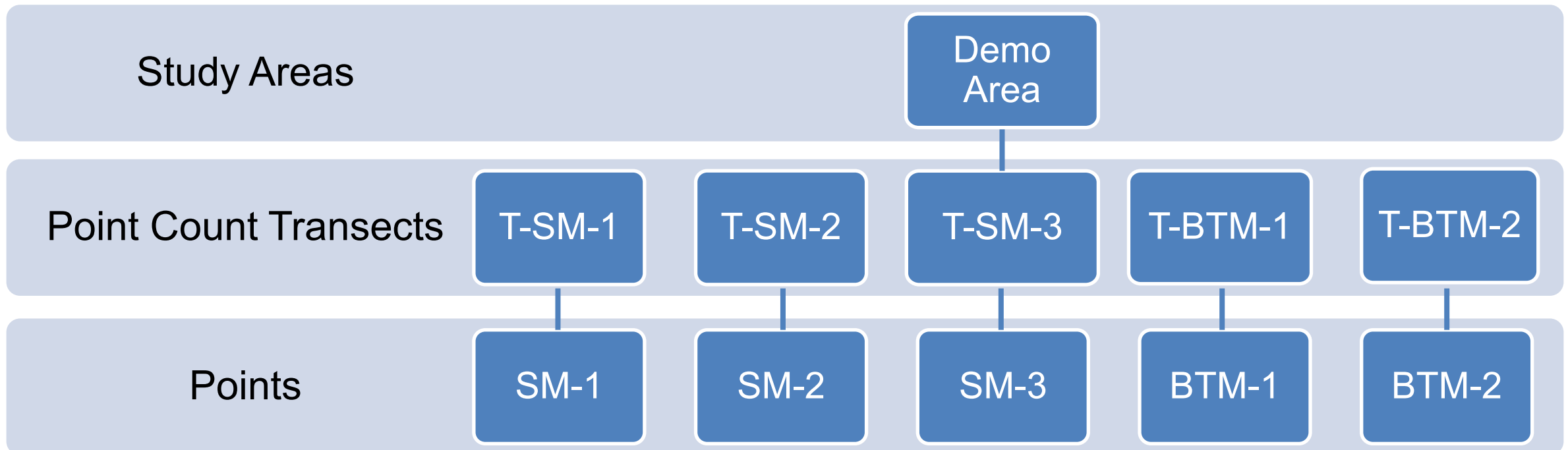
2a. Create
Sampling Units

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)

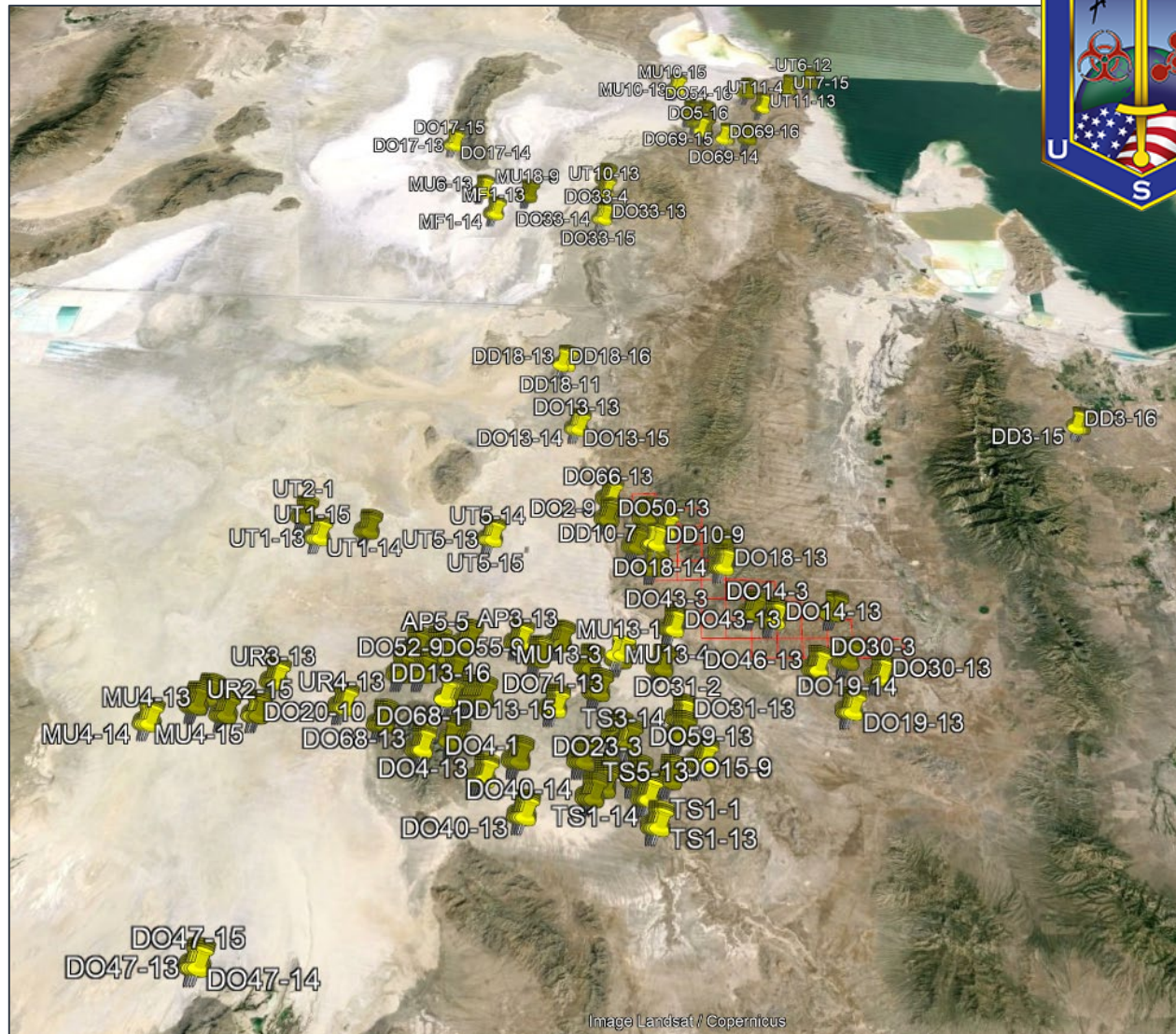
IMBCR Mudflats (UT-BCRg-MU)

IMBCR Target S (UT-BCRg-TS)

IMBCR UTG (UT-BCRg-UR)

IMBCR UTTR (UT-BCRg-UT)

PIJA Landscape Survey (PIJA)





EXAMPLE: FORT CAVAZOS (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

NEXT: PROJECT PROTOCOLS





MANAGING PROJECT METADATA

EXERCISE 1: CREATE SAMPLING UNITS

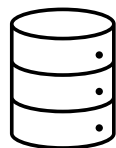


CREATE SAMPLING UNITS

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

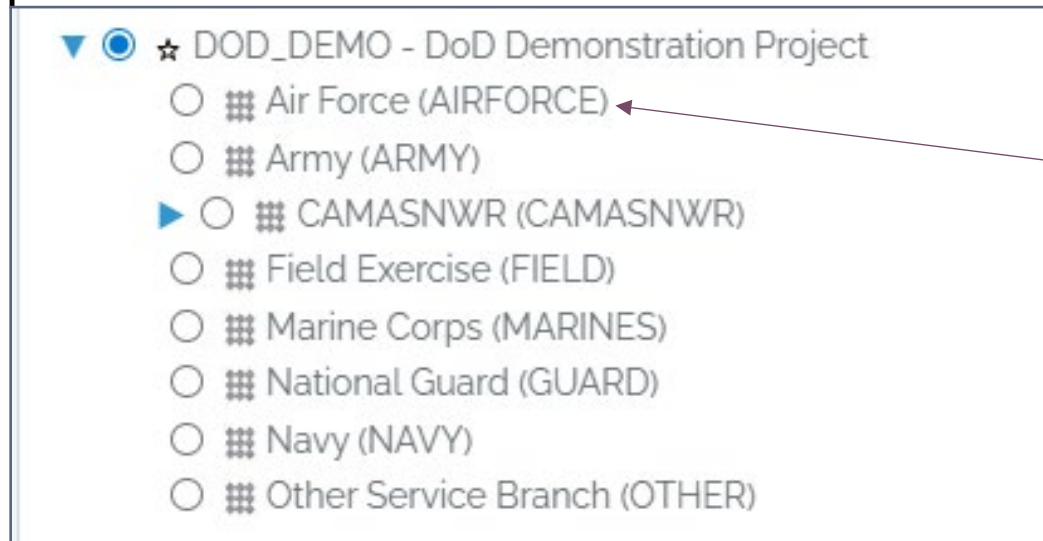


Project: DOD_DEMO

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):

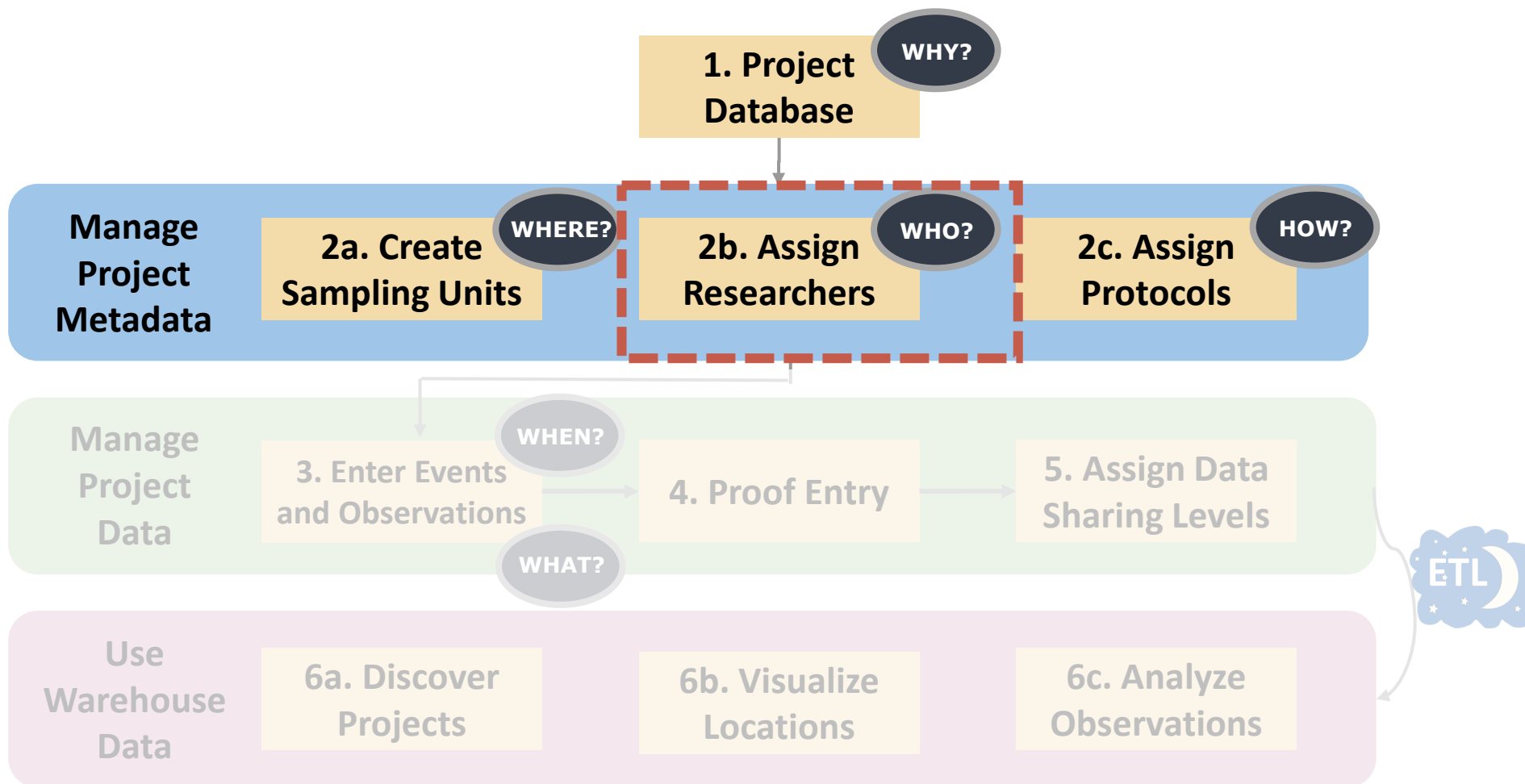
Point Count Transect Long Name	Point Count Transect Short Name
East Training Area	ETA
East Training Area 1	ETA-1
ETA	ETA
ETA-1	ETA-1

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)

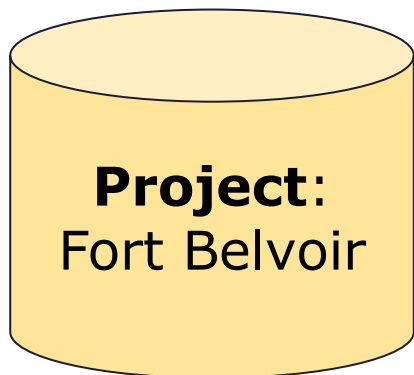
RESEARCHER TYPES

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

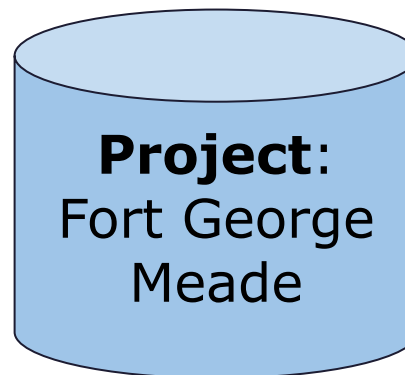
Biologist: can enter and review data in the Project

RESEARCHERS & PROJECT ACCESS

Project access assigned by Project Leader



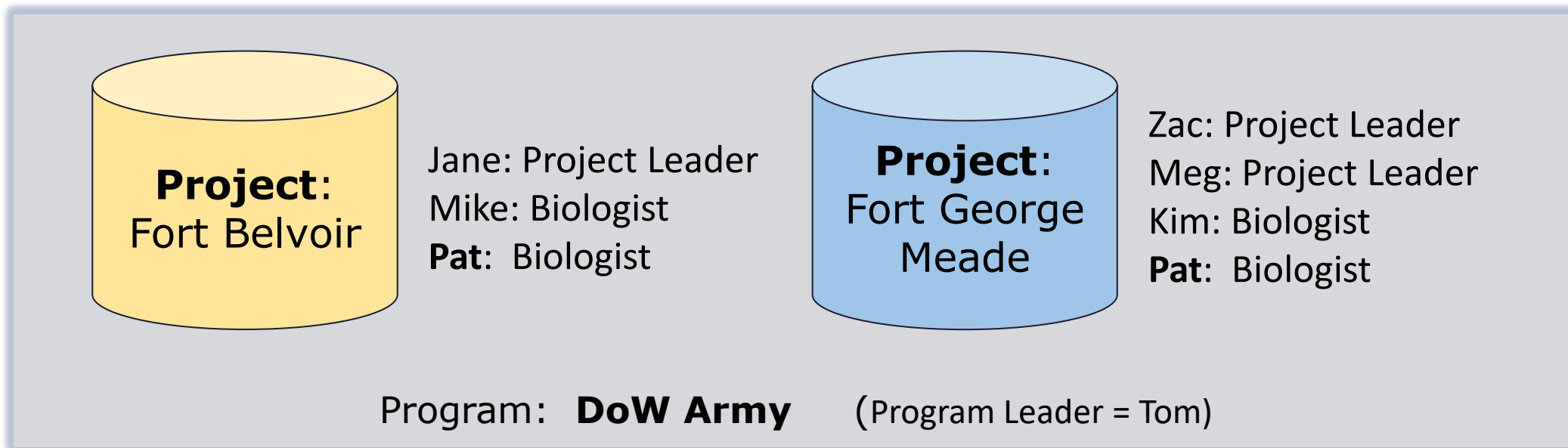
Jane: Project Leader
 Mike: Biologist
Pat: Biologist



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

RESEARCHERS & PROJECT ACCESS

Many Projects can be organized into a Program with a Program Leader



2b. Assign
Researchers

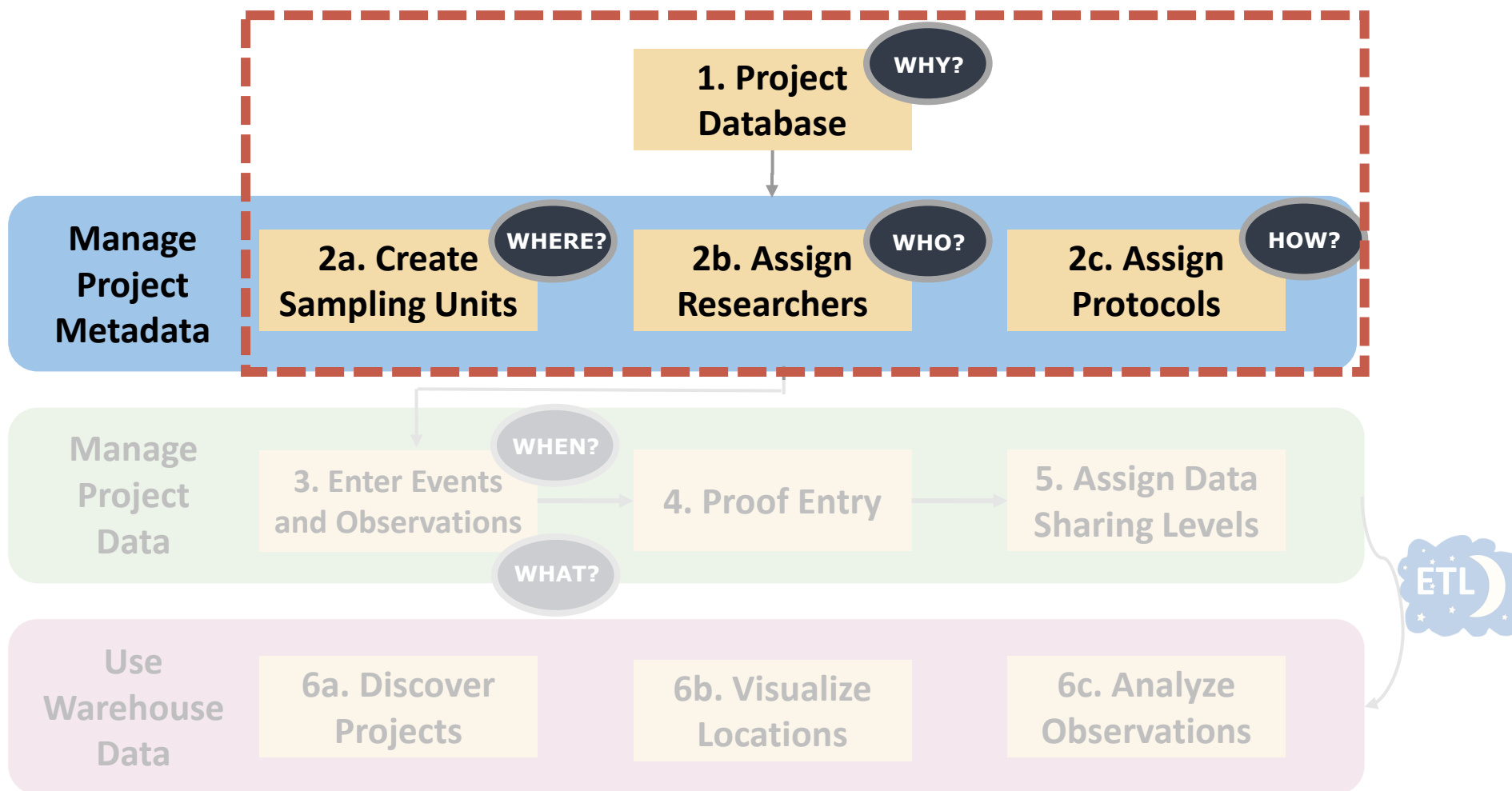
WHO?

ADDING RESEARCHERS DEMONSTRATION

Tools:

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

QUESTIONS ON MANAGING PROJECT METADATA?

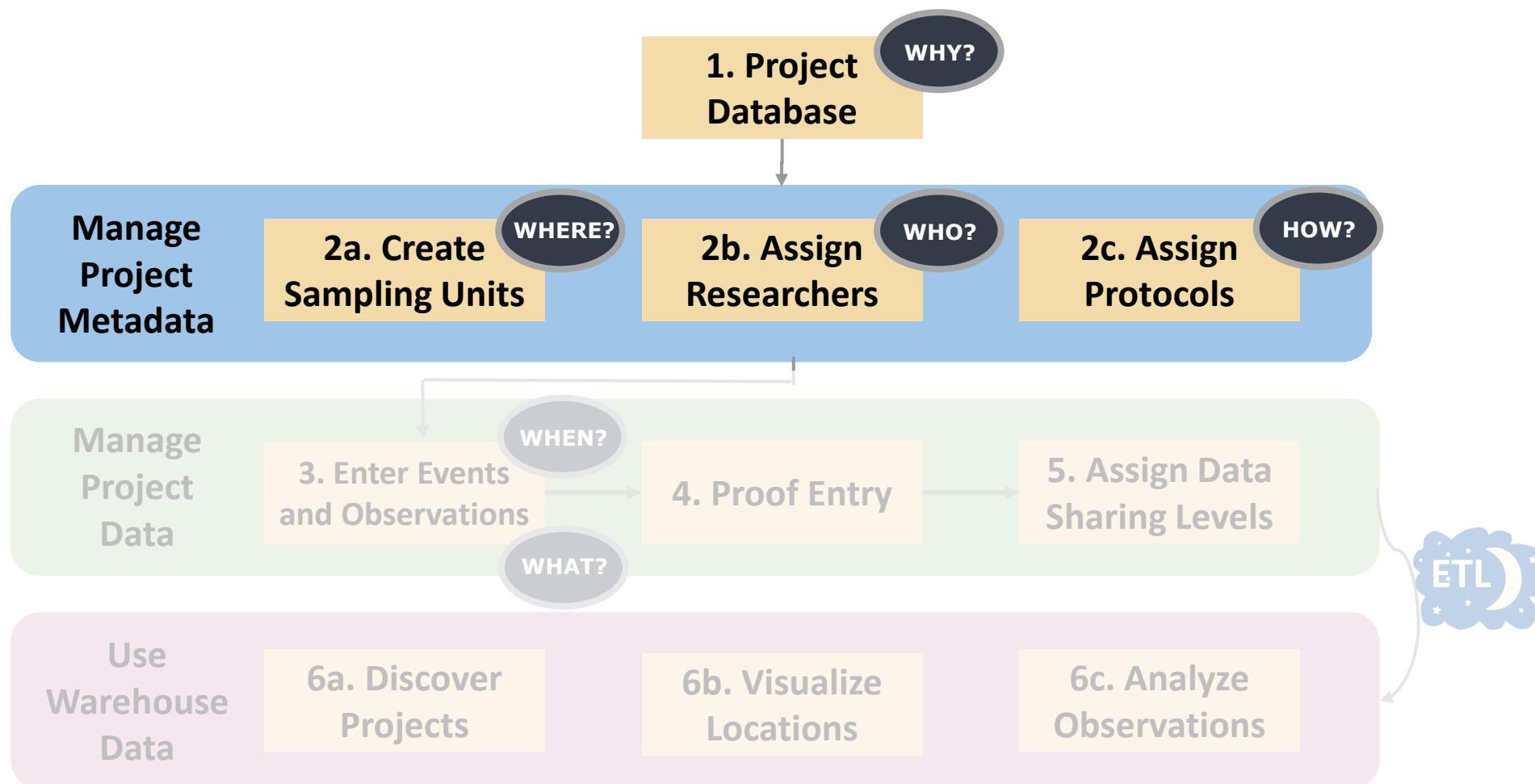




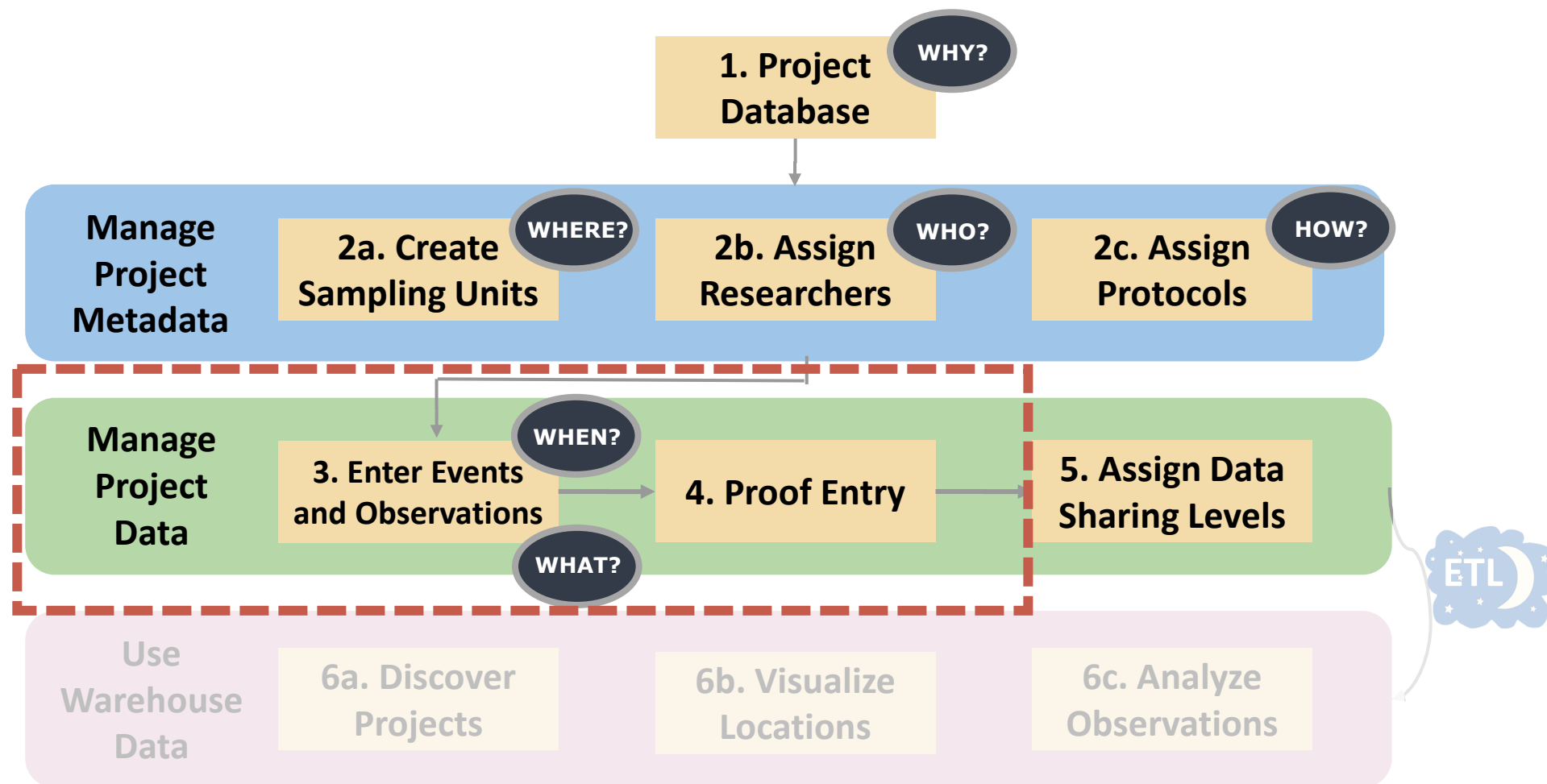
MANAGING OBSERVATION DATA



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

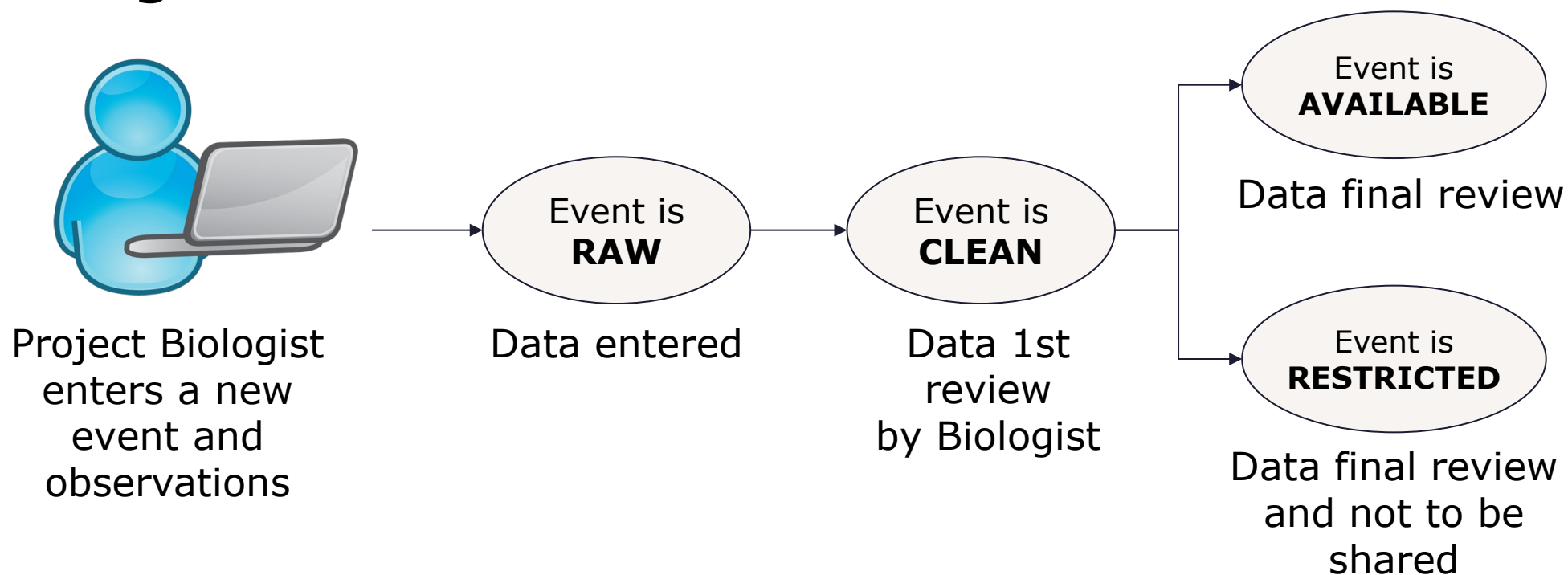
3. Enter Events
and Observations

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

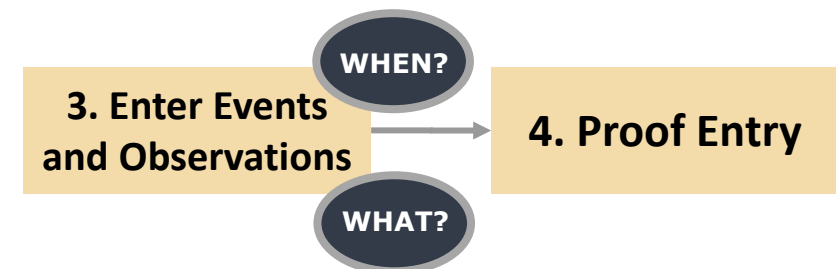


ENTER & PROOF POINT COUNT EVENT

EXERCISE 2

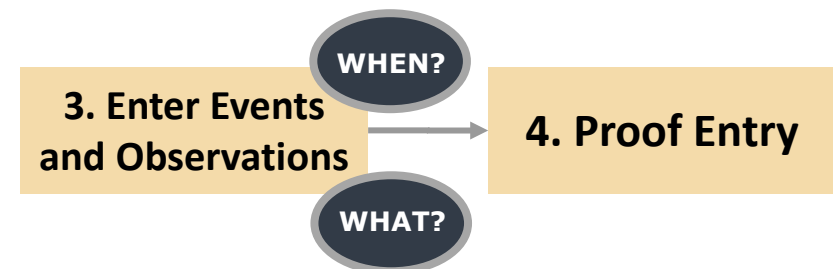
Purpose: Learn how to enter survey data and site conditions in Biologists and proof those data

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

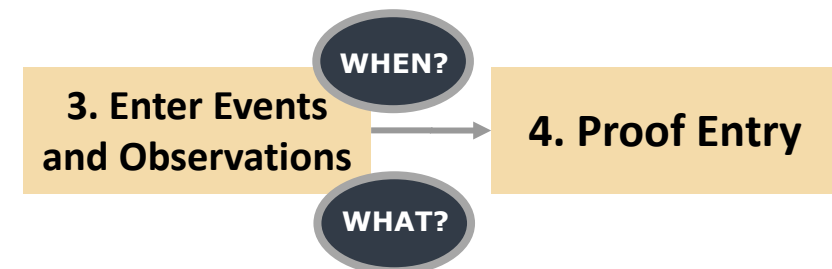
Exercise 2 instructions



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

OFFICE HOURS

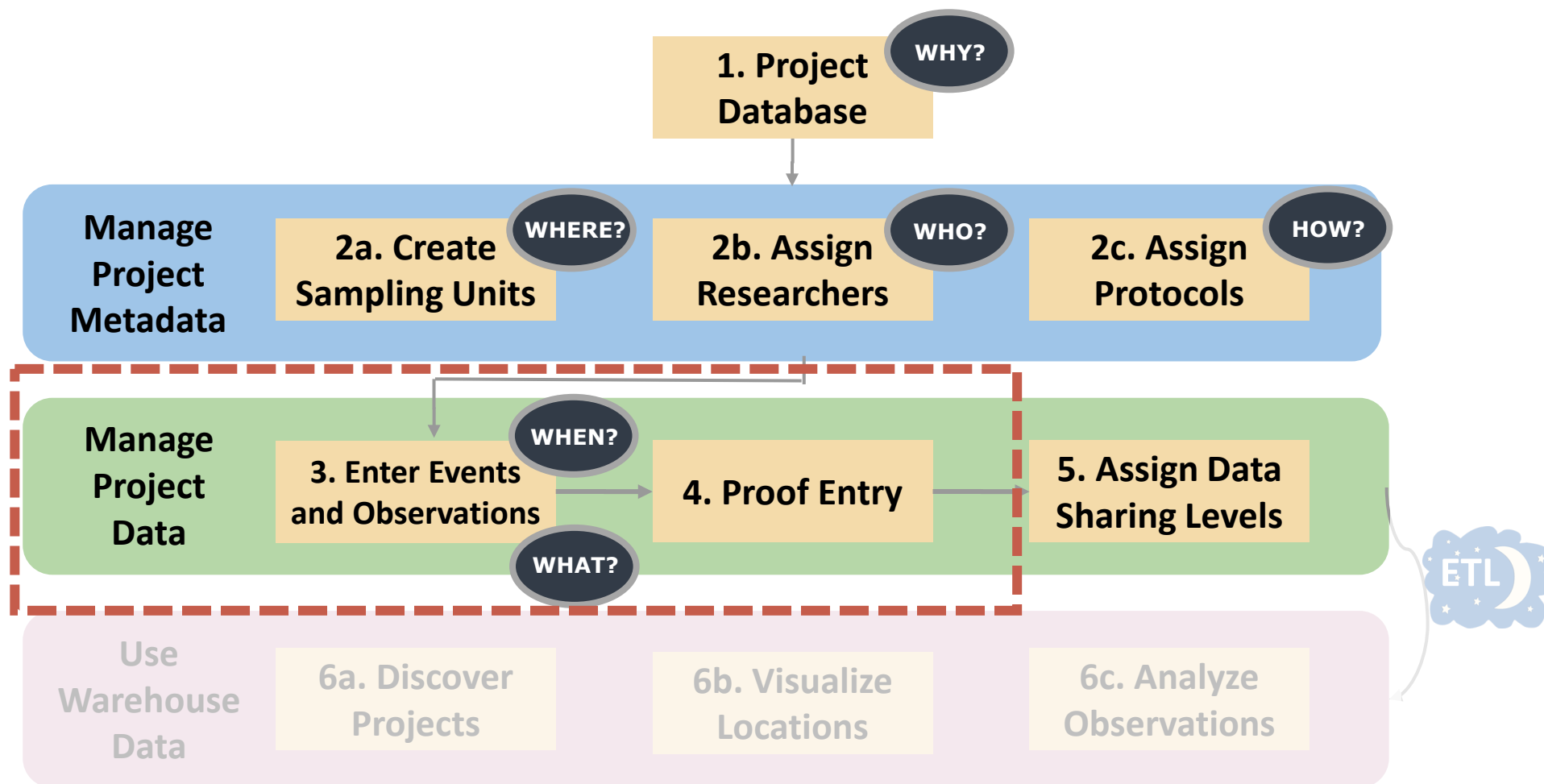
Discuss bulk loading and other issues regarding your observation data

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

- Next appointment dates: March 17 & 19



ANY QUESTIONS ON MANAGING PROJECT DATA?





DAY 1 WRAP-UP





pointblue.github.io/dod_workshop

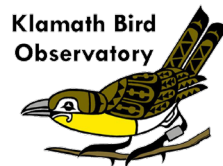
DoW AND THE AKN: WHO, WHAT, WHERE, WHEN, WHY, AND HOW

DoW Army Training
24 and 26 February 2026
Virtual

Sam Veloz
Dianne Miller

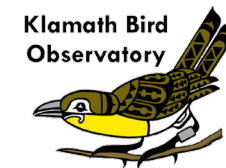
Elizabeth Neipert
Zoe Duran

John Alexander
Caitlyn Gillespie
Nora Honkomp



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

DEMO: EDITING DATA

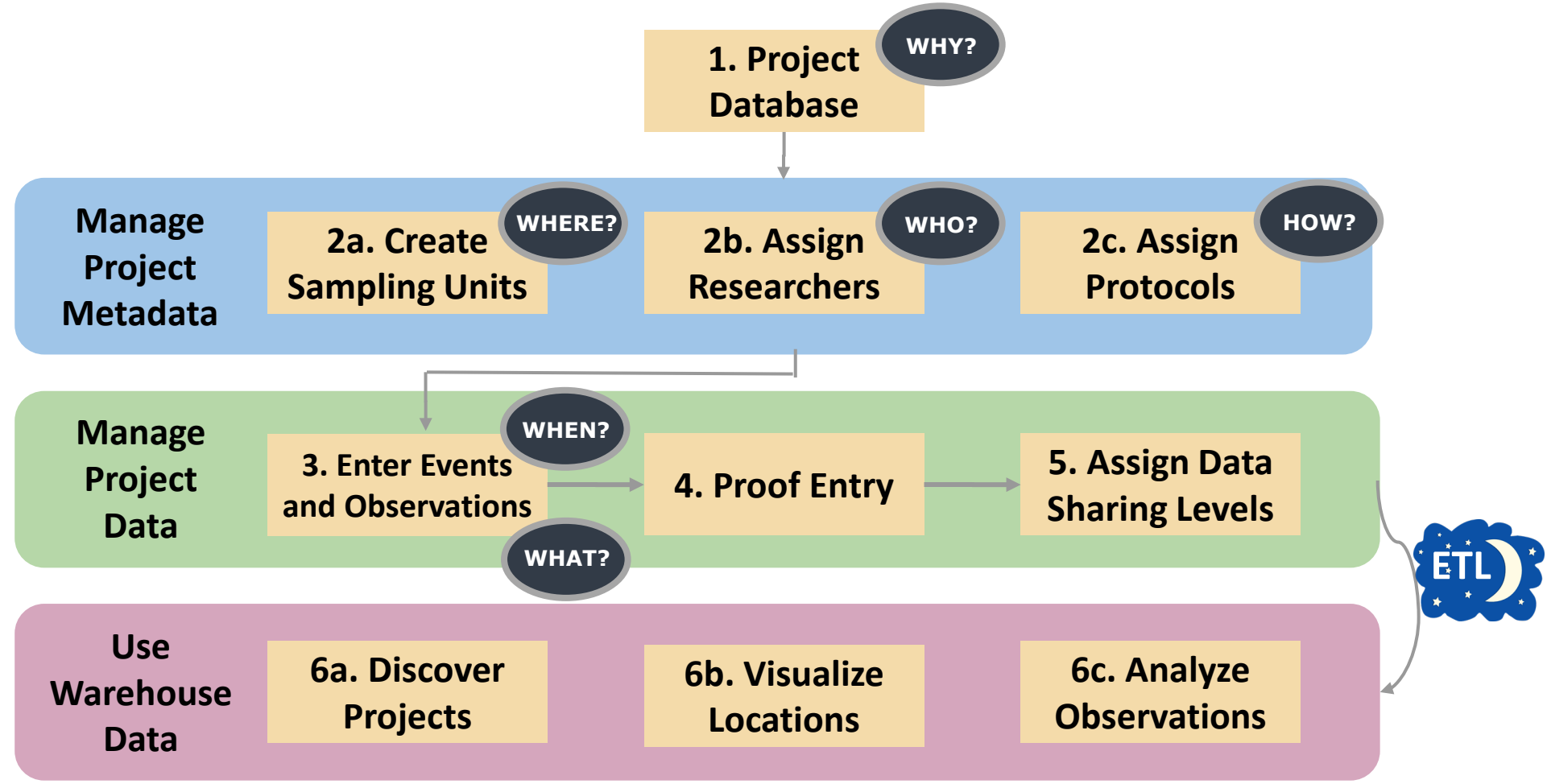




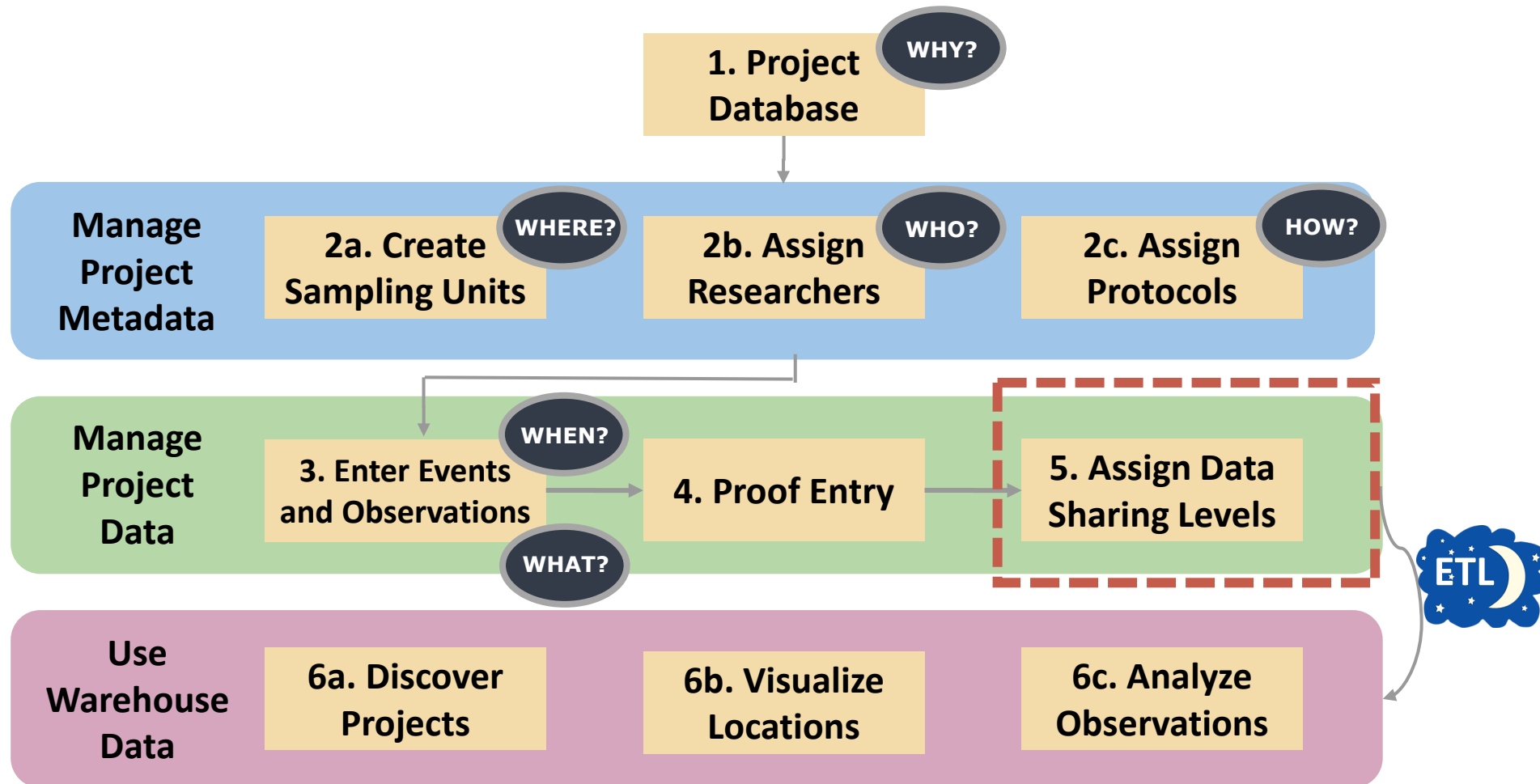
AKN DATA SHARING LEVELS



WORKFLOW FOR MANAGING A PROJECT



MANAGING A PROJECT: DATA SHARING LEVELS



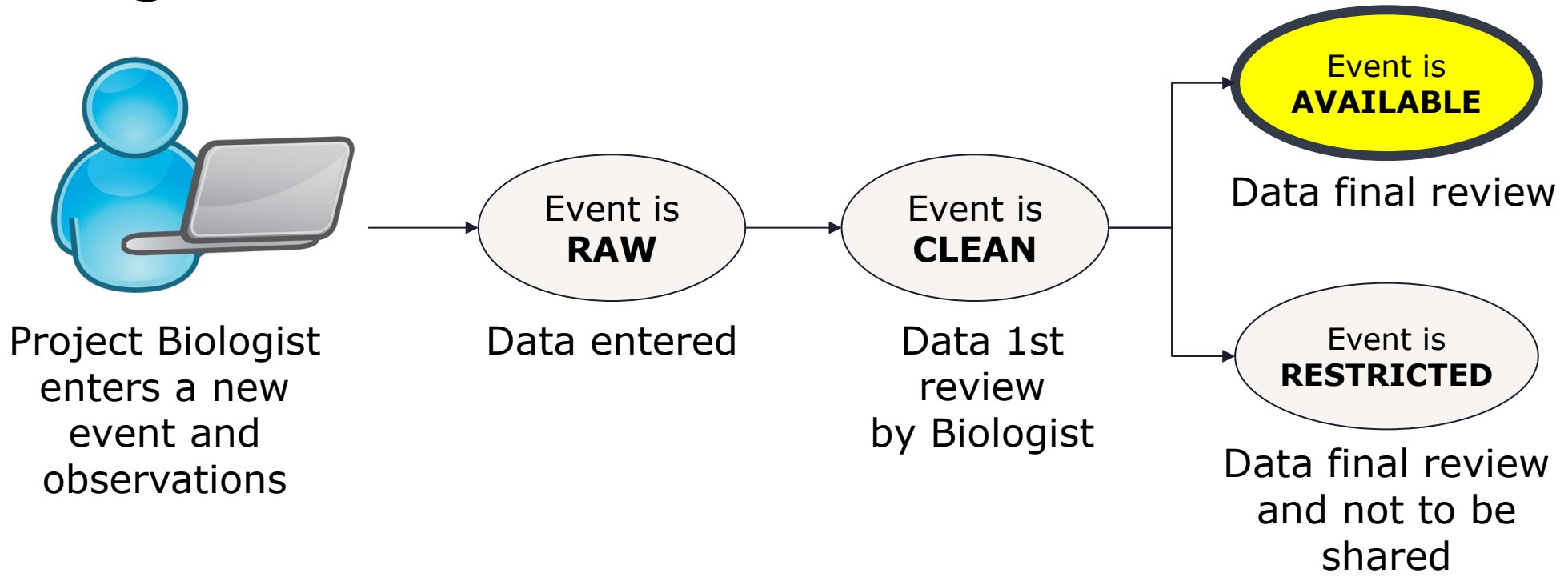
DATA SHARING LEVELS

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

Controlled by the Project Leader within each Project

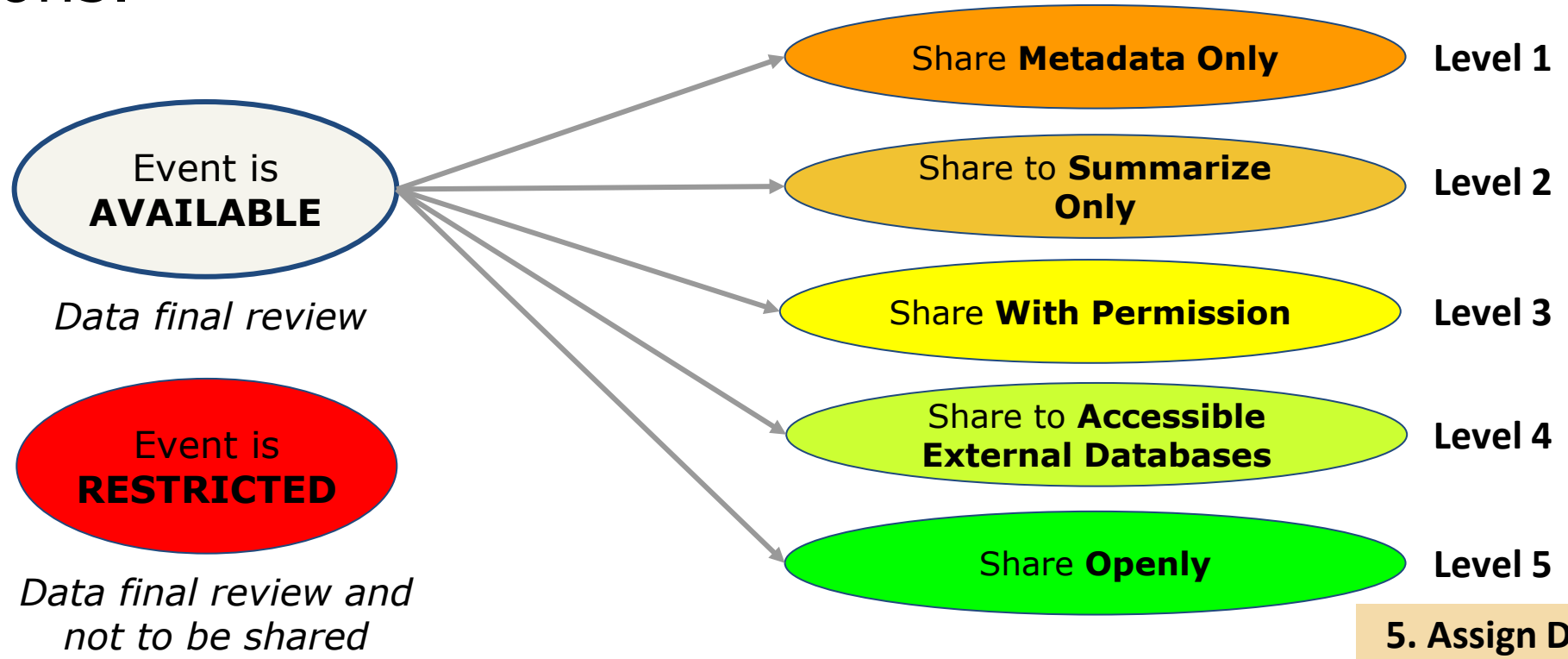
REVIEW LEVELS FOR EACH EVENT

Steps to enter and review data in preparation for sharing



DATA SHARING LEVELS FOR EACH EVENT

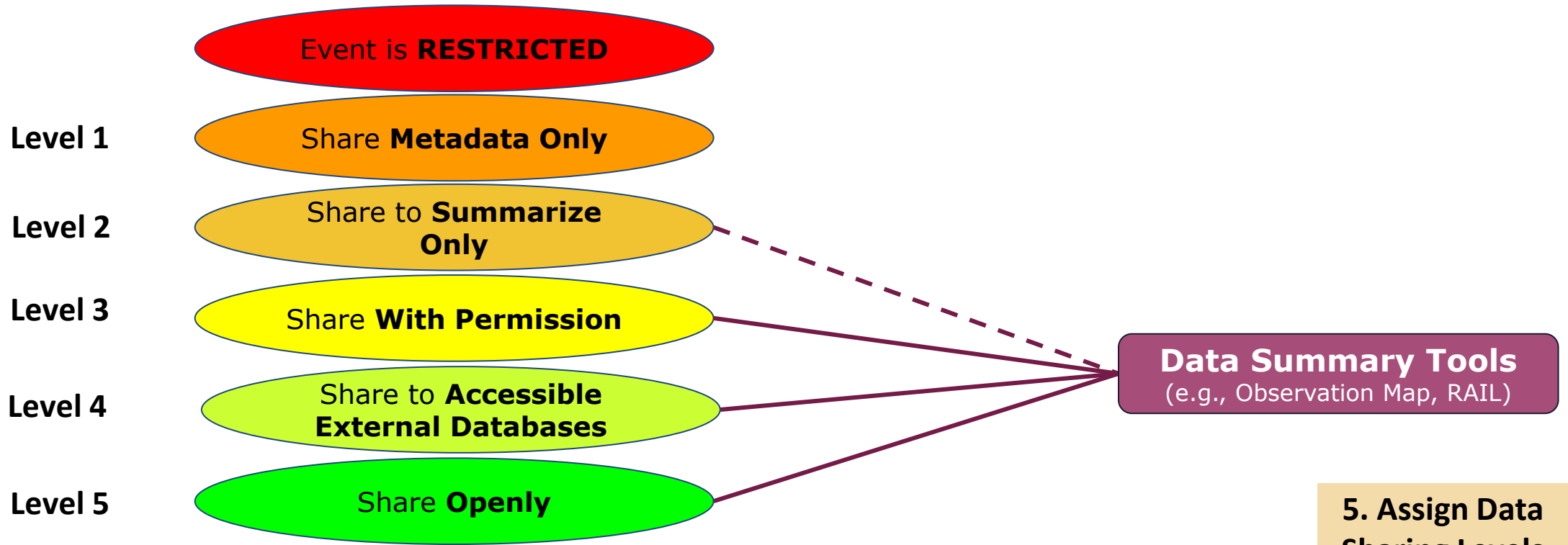
Choices informs the Point Blue Science Cloud tools of your intentions.



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

**5. Assign Data
Sharing Levels**



SETTING DATA SHARING LEVELS DEMONSTRATION

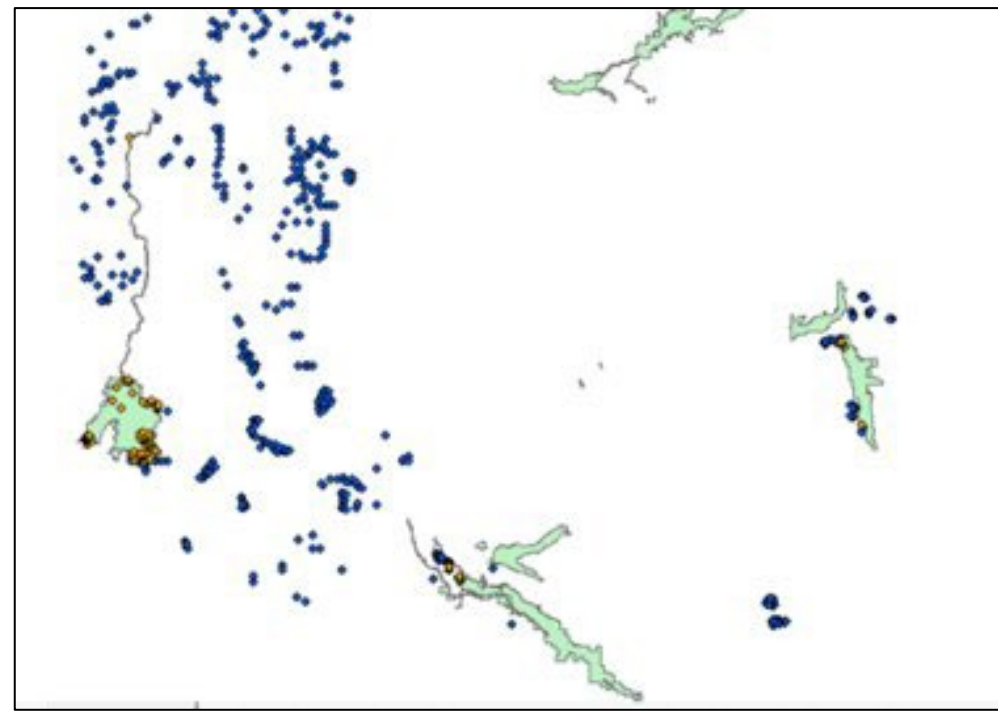
Tools:

- 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



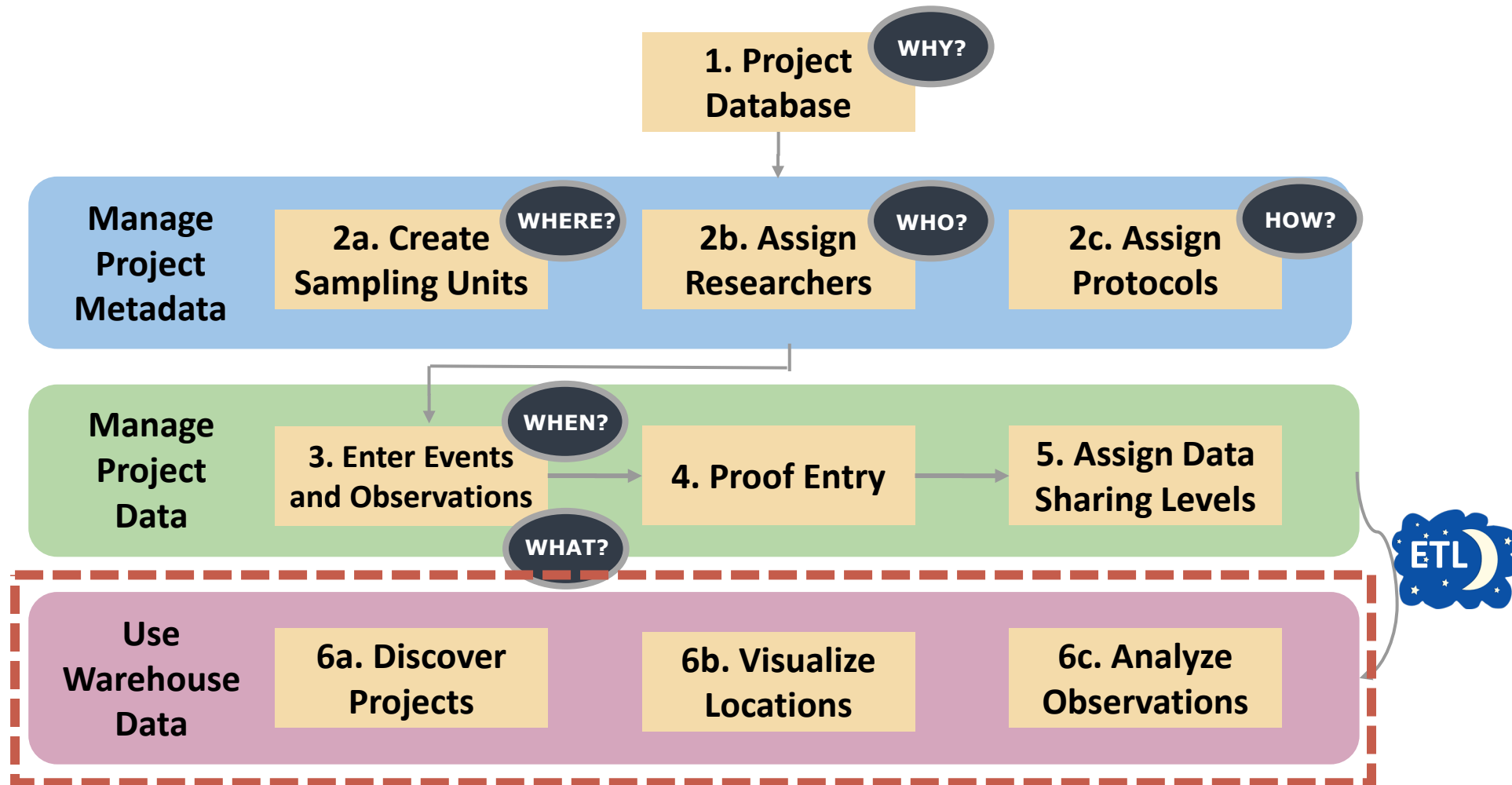


AKN WAREHOUSE DATA 101





MANAGING A PROJECT: DATA WAREHOUSES





DATA WAREHOUSES

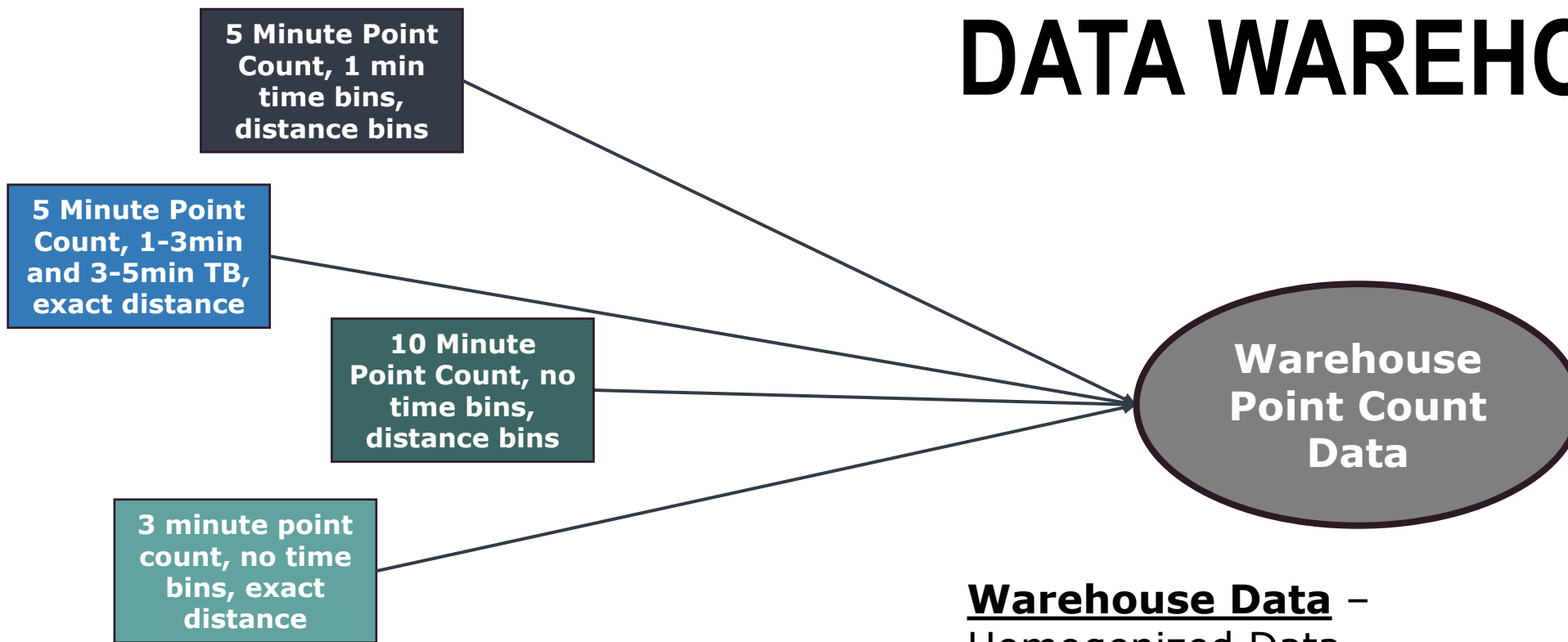
Database with homogenized copy of observation data, organized by sampling method for cross-project query and analysis

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



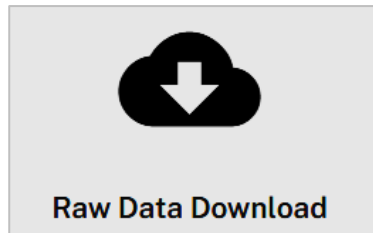


DATA WAREHOUSES



Raw Data – Differs by Protocol Fields

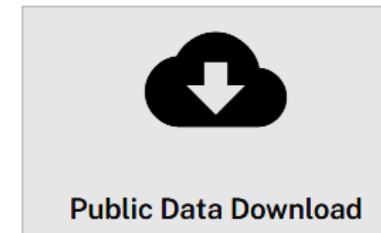
Stored in its full fidelity in your AKN Project Database



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*

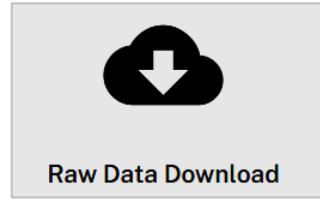




PROJECT DATA VS. WAREHOUSE DATA

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	

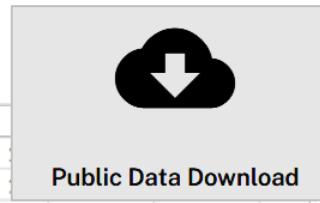
Project	Location	Protocol	Date	Time	HabitatPlot HabitatPlotId	HabitatPlot Composition Vine	HabitatPlot Composition Cane	HabitatPlot Composition Overstory	HabitatPlot Composition Midstory	HabitatPlot Composition Understory	Researcher
LITTLERIVERNWR	164	FWS_PC_HAB_LWRMISS	6/3/2019	8:01:00	164	3	1	3	3	4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

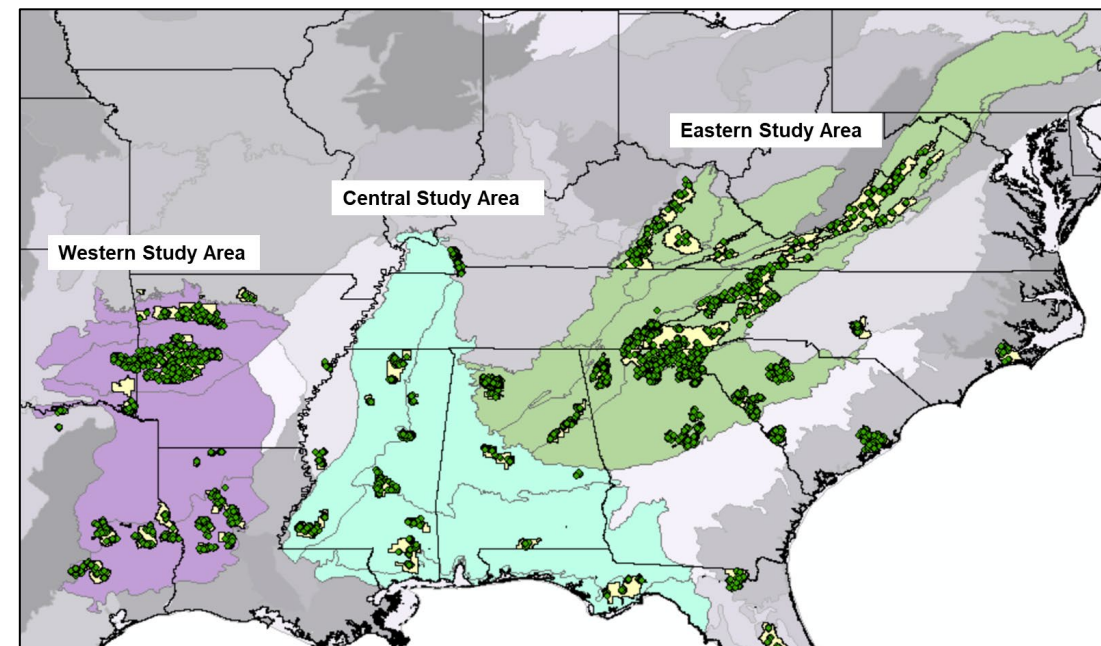
Point Count Data

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

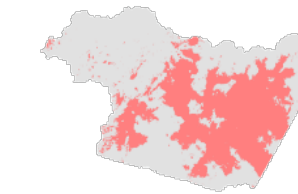
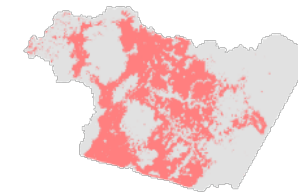
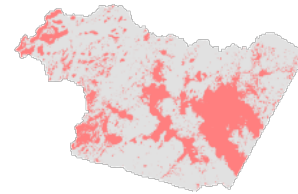
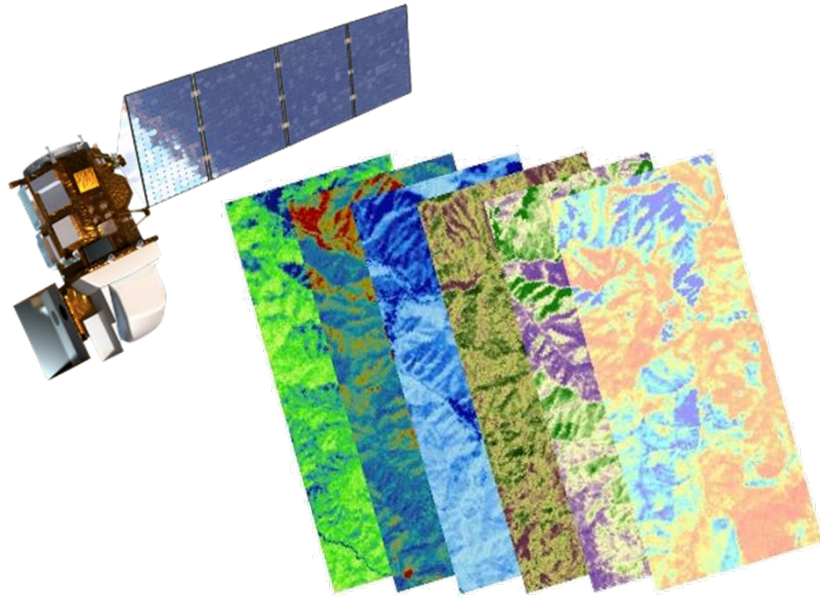
CASE STUDY: USFS REGION 8

- **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

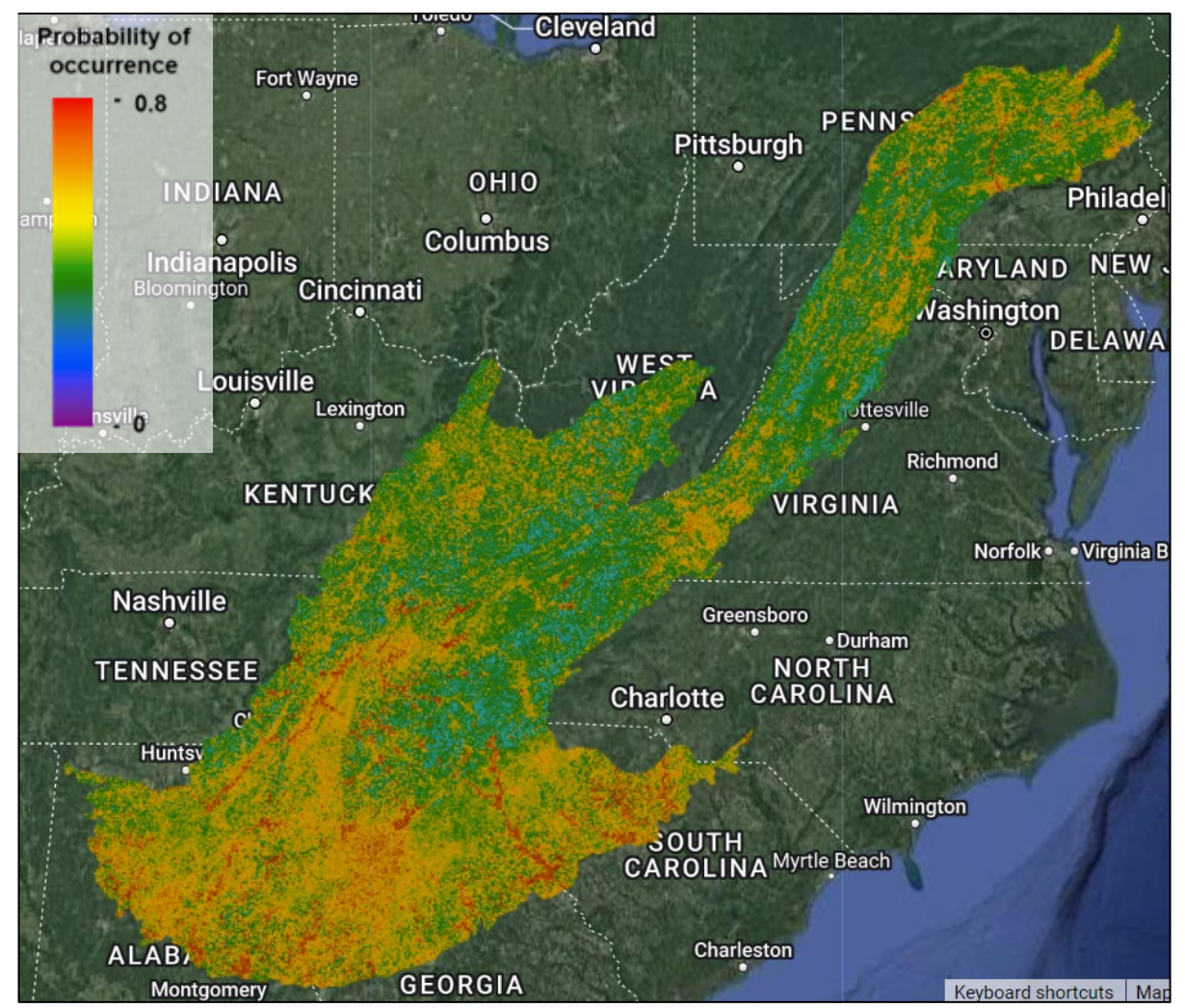
(Shirley et al 2013, Betts et al 2014,
Halstead et al 2019)



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

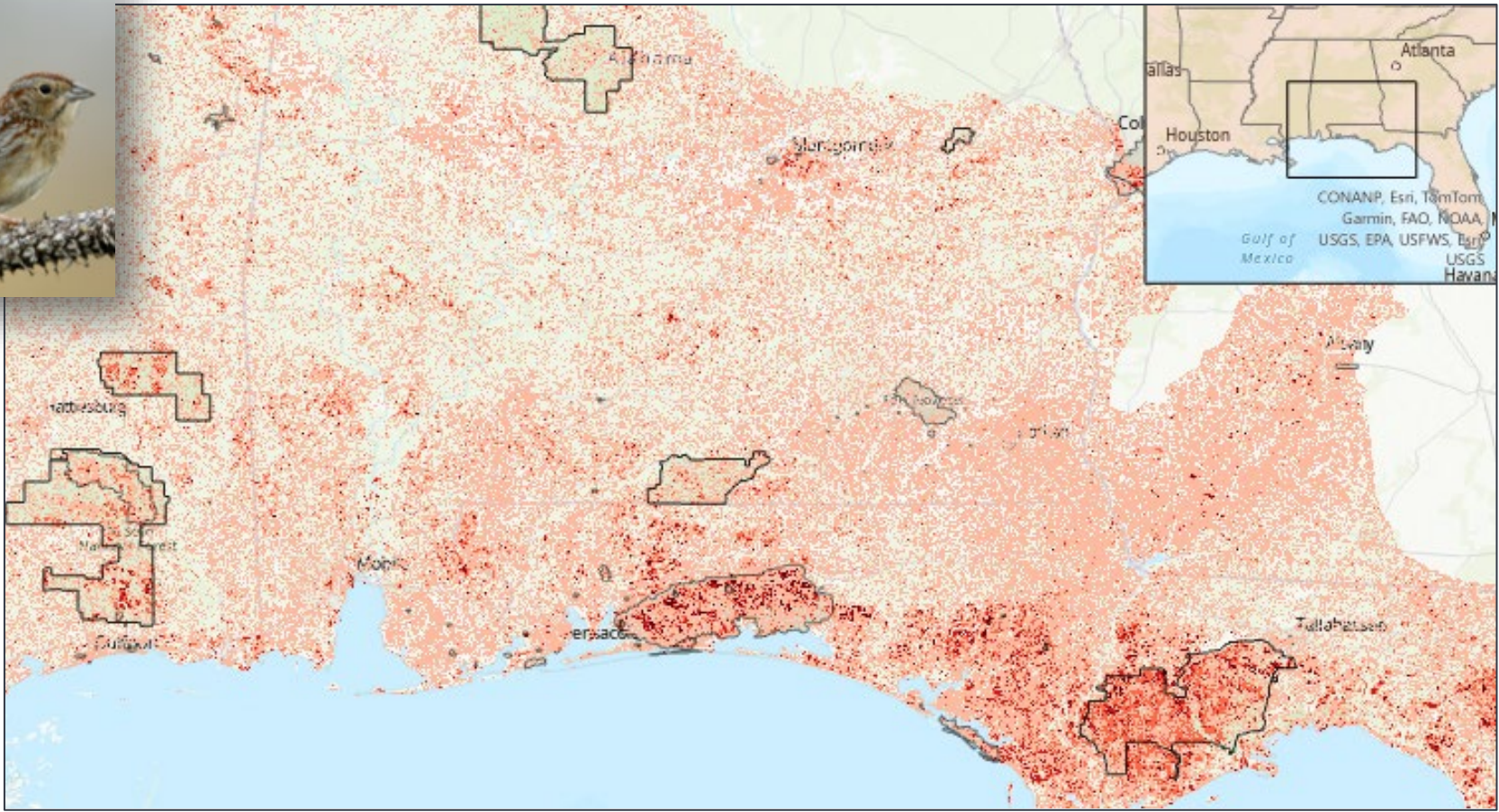
CASE STUDY: PINE WARBLER HABITAT DISTRIBUTION -- 2019



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

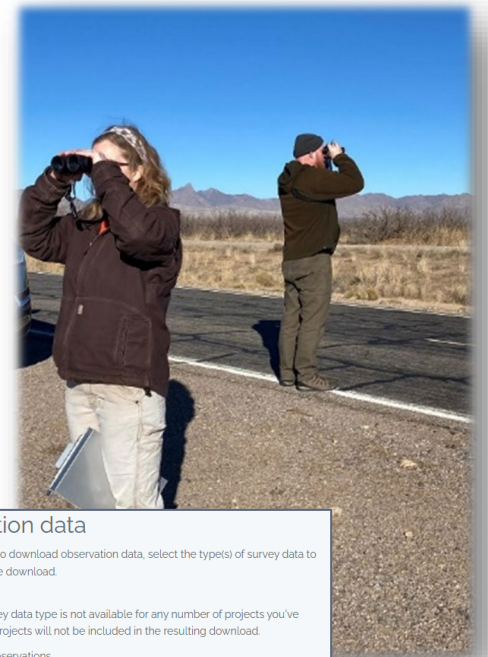
DoW

- 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 (CGJMT)
 - 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
- W/F/L 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



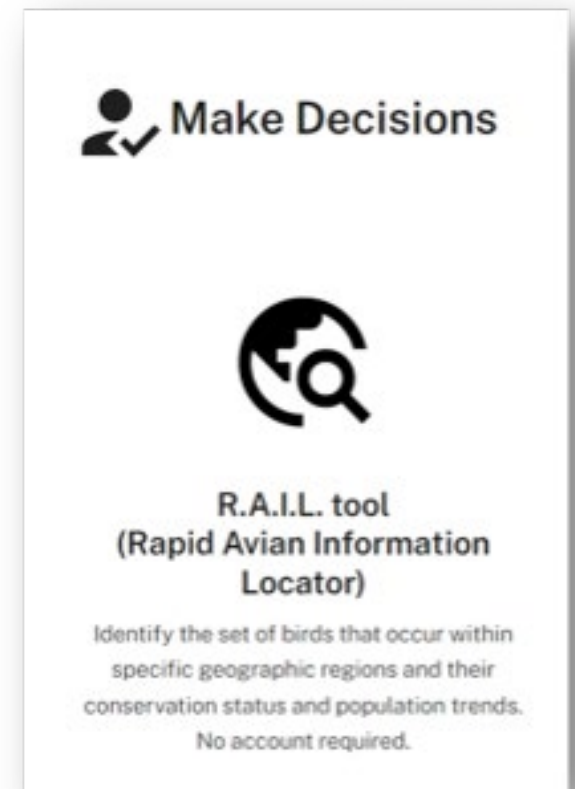
DISCOVERING OBSERVATION DATA



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

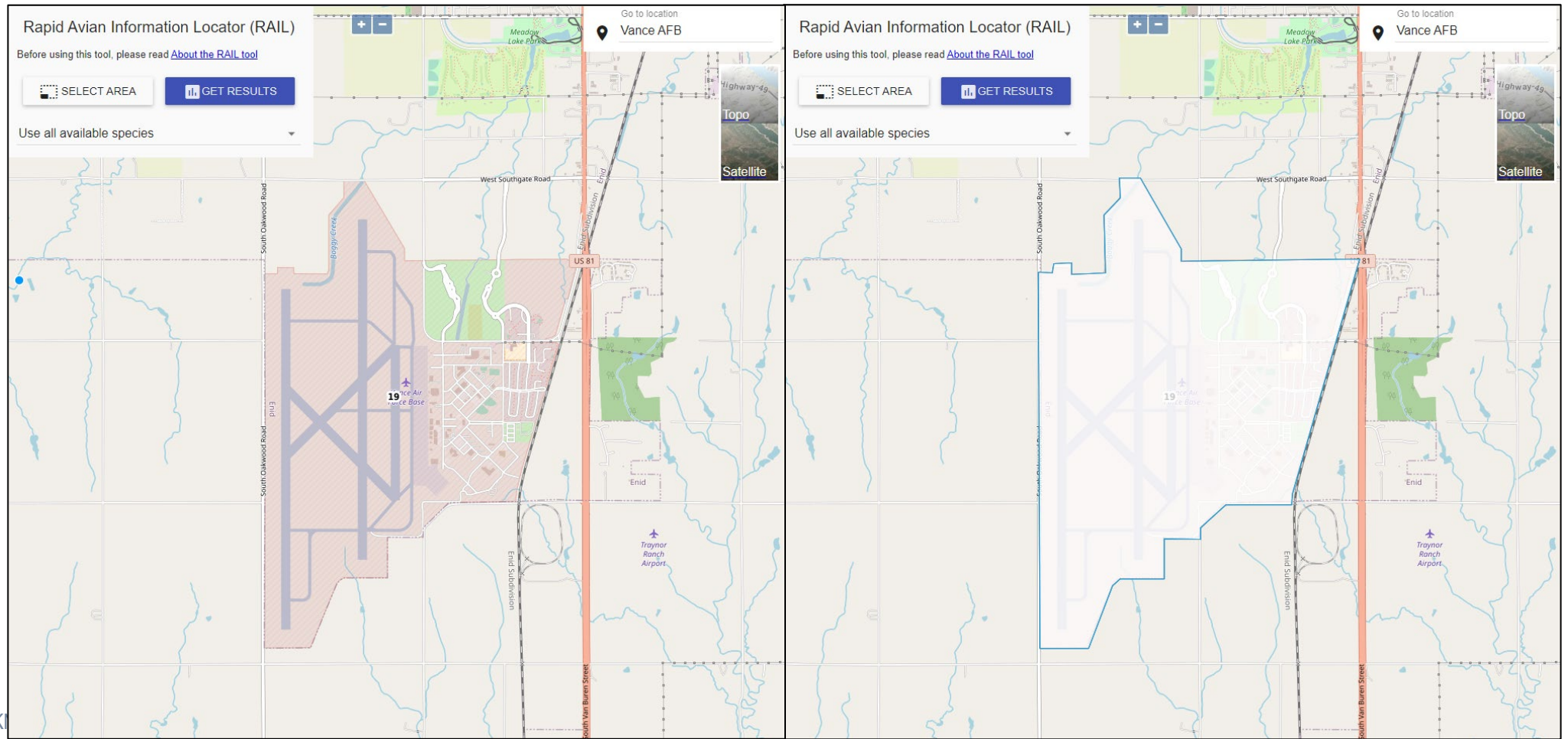
- Biologist was new to AF and did not have any bird data
- Wanted a list of birds on Vance for NEPA and INRMP updates
- RAIL tool available at no cost and without an account
Integrates data from AKN, Partners in Flight, US Fish and Wildlife, Breeding Bird Survey, eBird, All About Birds, and the Macaulay image library at Cornell

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



EXAMPLE: R.A.I.L. TOOL

VANCE AIR FORCE BASE, OK



EXAMPLE: R.A.I.L. TOOL

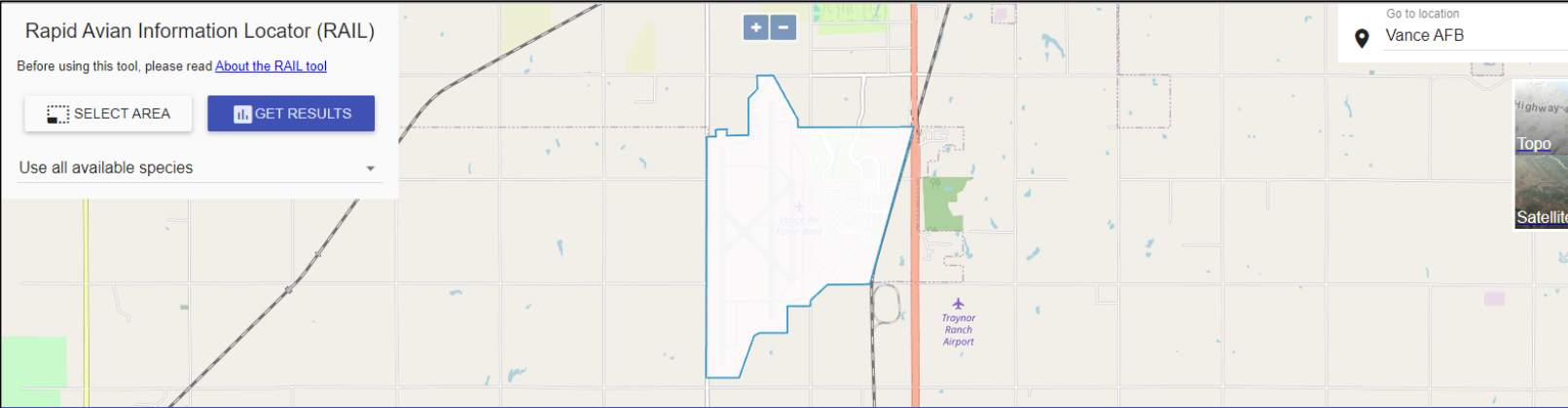
VANCE AIR FORCE BASE, OK

Rapid Avian Information Locator (RAIL)

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

SELECT AREA GET RESULTS

Use all available species

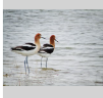

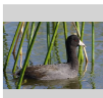








Go to location
Vance AFB

Highway - eg.
Topo
Satellite

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>Megasceryle 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	
Biology			
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

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

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

Alpha Code
Alpha Code¹: Not yet available

Physical Details
Weight²: 3000 - 6300 g
Length²: 71 - 96 cm

Habitat
Habitat Category²: Forests
Primary Breeding Habitat⁴: Wetlands, Generalist

Population Information
Global Population³: 200,000
% Population Estimate USA³: Not yet available
Lower 95% Bound USA³: Not yet available
Upper 95% Bound USA³: Not yet available
Continental Population Trend⁴: Significant large increase
Regional Population Trend⁴: BCR19 - Significant large increase
% BCR Population³: BCR 19 - 0.00%
Lower 95% Bound BCR³: BCR 19 - null
Upper 95% Bound BCR³: BCR 19 - null
% State Population³: OK - 0.00%
Lower 95% Bound State³: OK - null
Upper 95% Bound State³: OK - null

Biology
Food Category²: Fish
Behavior Category²: Soaring (raptor)
Nesting Category²: Tree
Incubation Period²: 34 - 36 days
Clutch Size²: 1 - 3 eggs
Number of Broods²: 1
Egg description²: Dull white, usually without markings.
Egg length²: 5.8 - 8.4 cm

Conservation Status
Continental Importance⁴: Not yet available
Half Life⁴: Not yet available
Federally Threatened⁶: No
Federally Endangered⁶: No
State Threatened⁷: MA, CT, NH, NY, TX
State Endangered⁷: NJ, VT, CA
Migratory Bird Treaty Act⁸: Listed
Bird of Conservation Concern⁹: 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

6c. Analyze
Observations

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

EXERCISE 4

Exercise:

- [Exercise 4 instructions](#)





BREAK

NEXT: LOOKING FOR TRENDS



CASE STUDY:

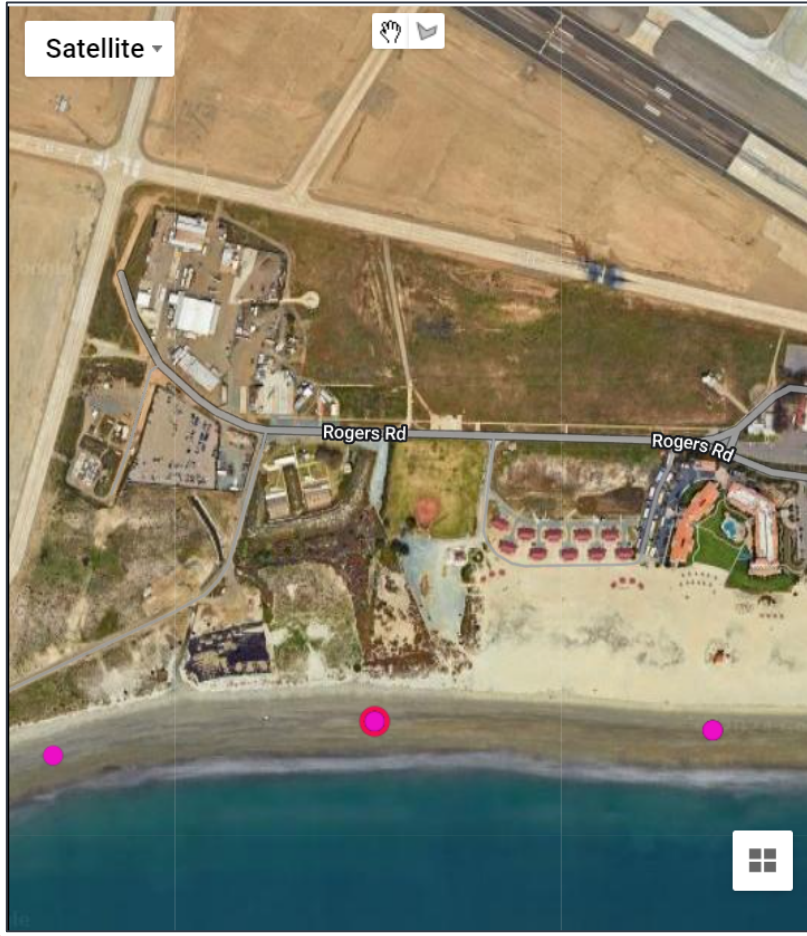
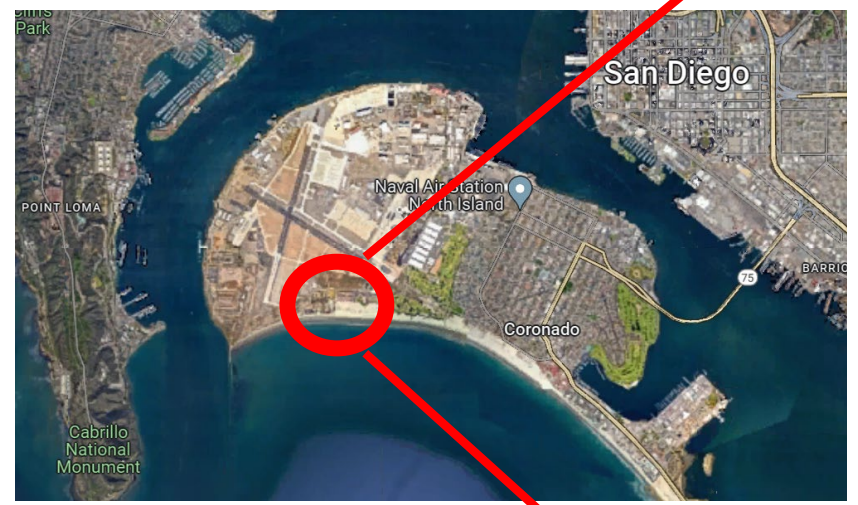
MIGRATORY SHOREBIRD PROJECT

- 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



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)

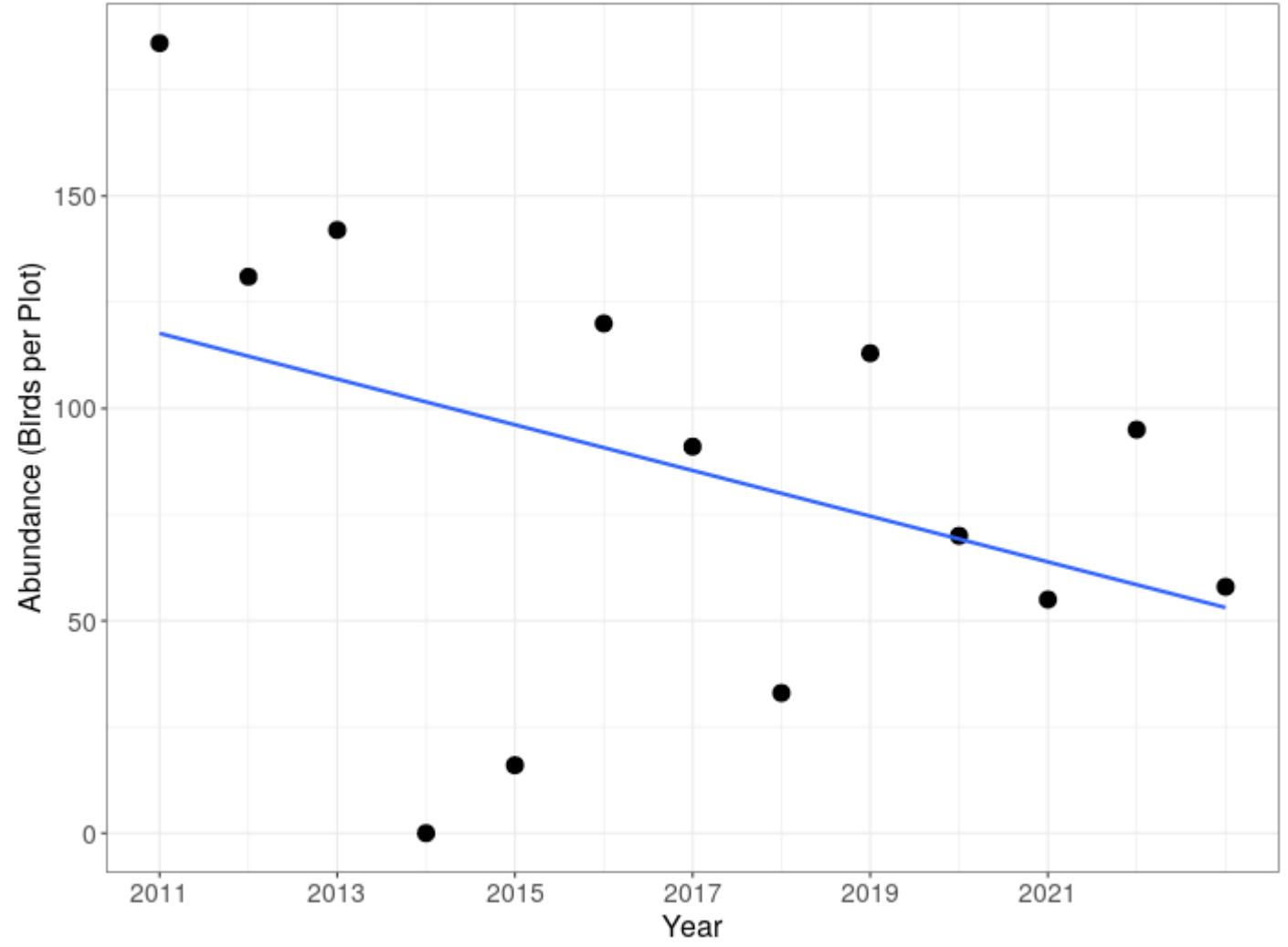
Months: -

[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)

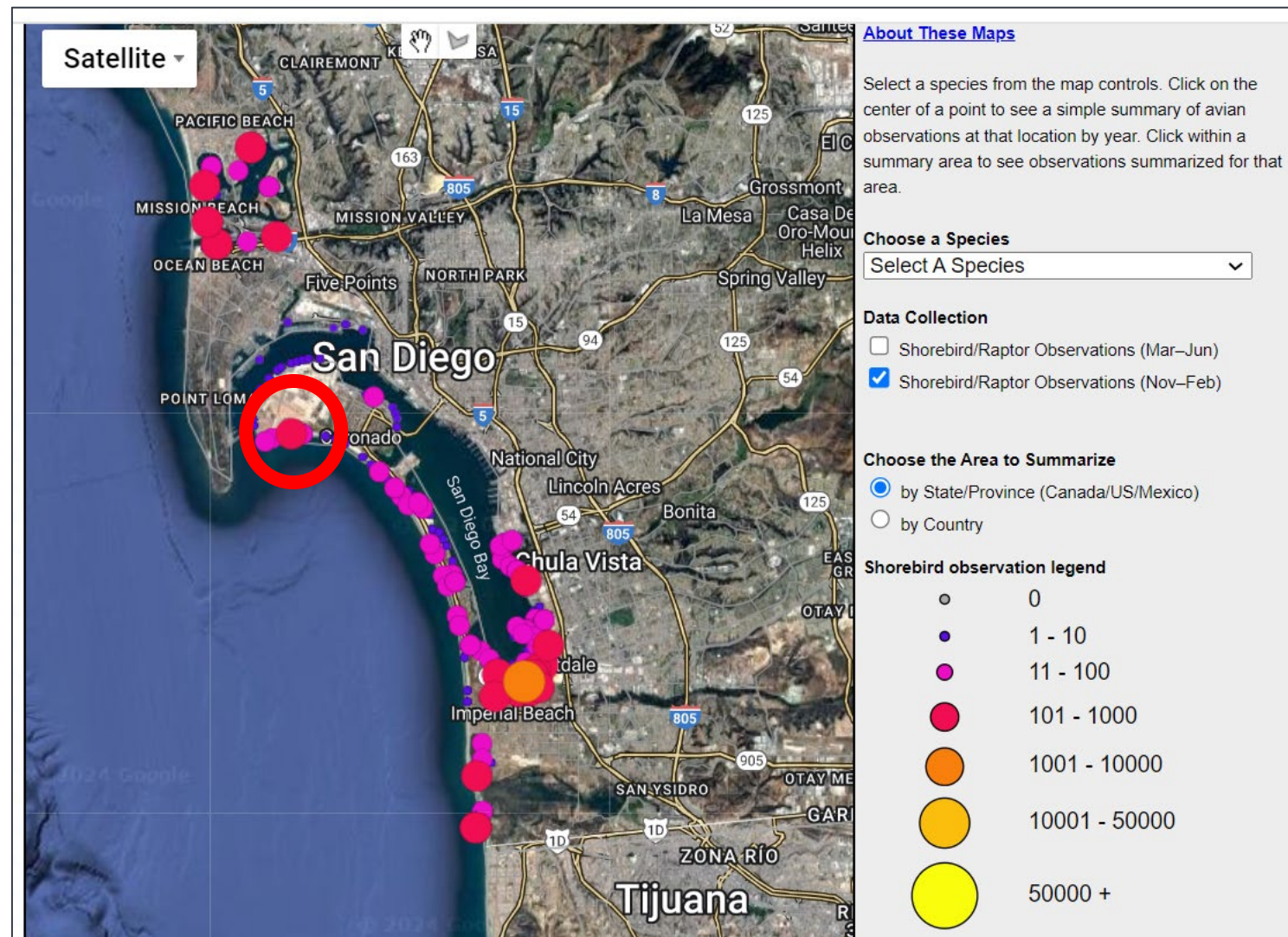
CASE STUDY: MIGRATORY SHOREBIRD PROJECT

North Island Coronado Beach Black-bellied plover abundance



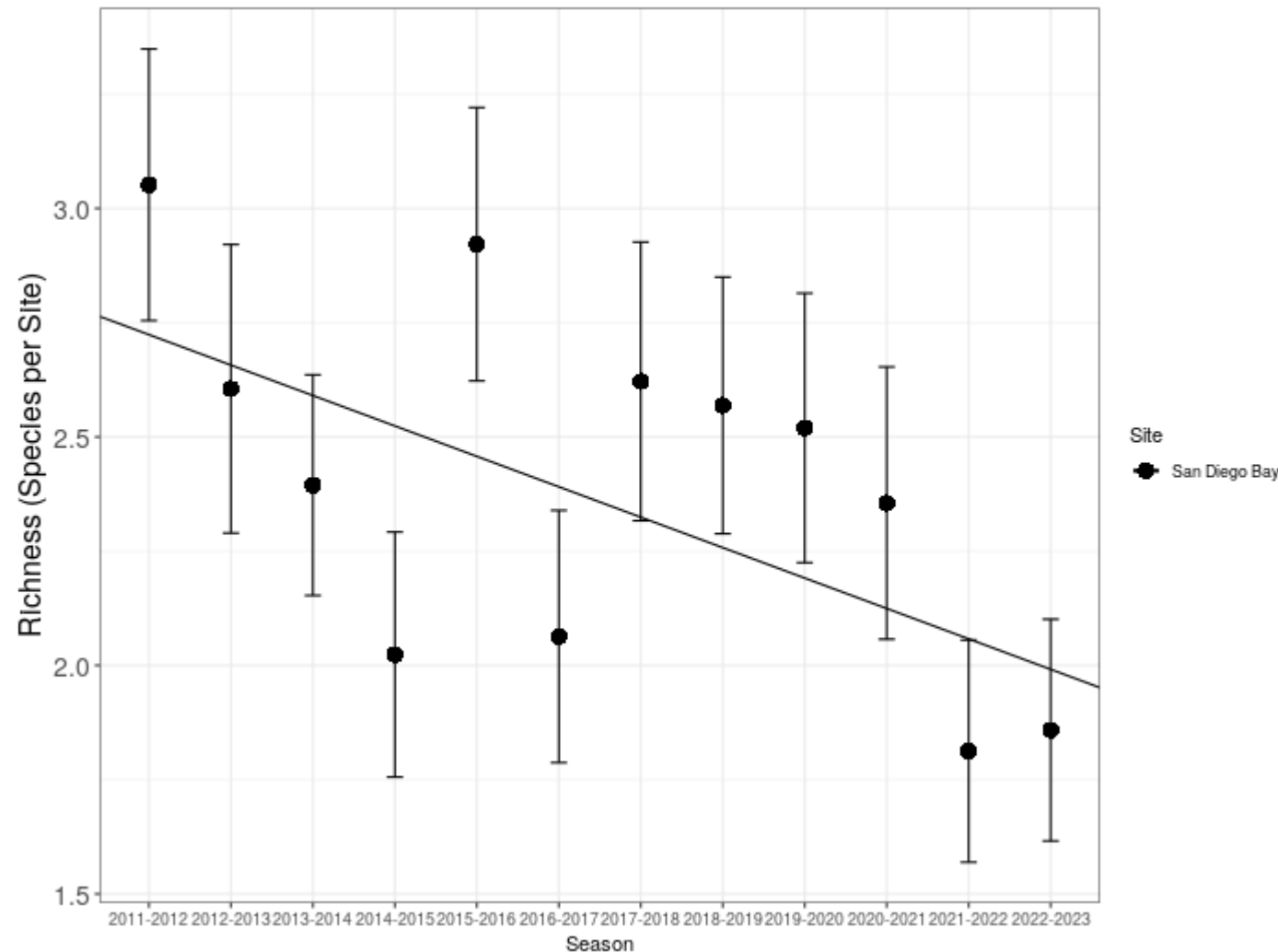
CASE STUDY: MIGRATORY SHOREBIRD PROJECT

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



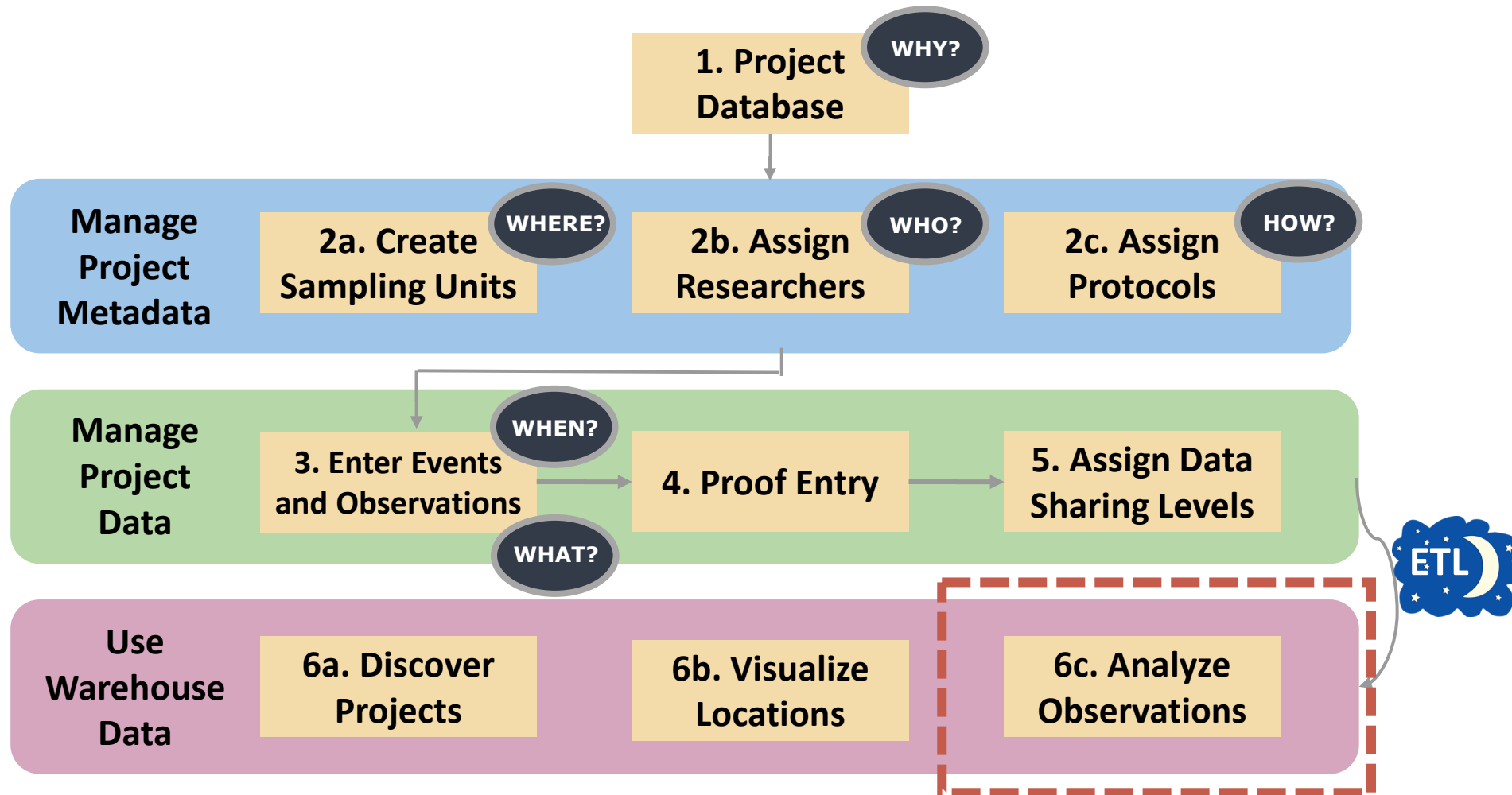
CASE STUDY: MIGRATORY SHOREBIRD PROJECT

San Diego Bay: Wintering shorebird species richness





MANAGING A PROJECT: LOOKING FOR TRENDS



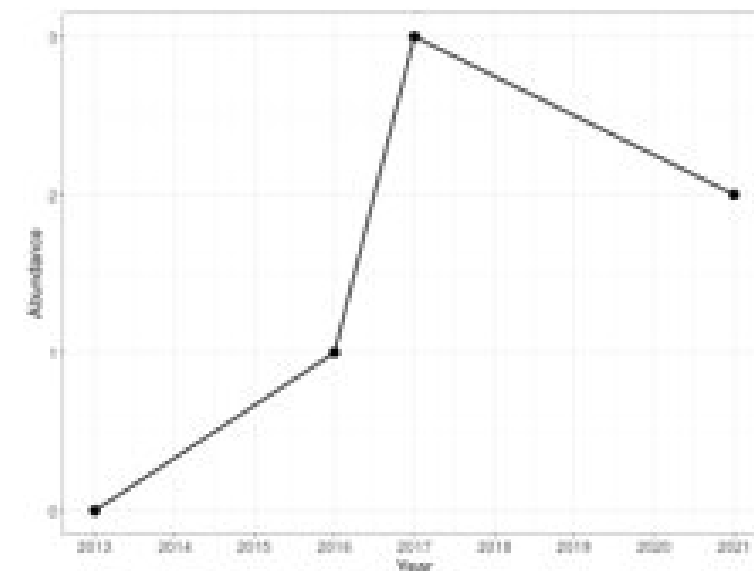


USING THE ANALYST TOOL DEMONSTRATION

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](#)

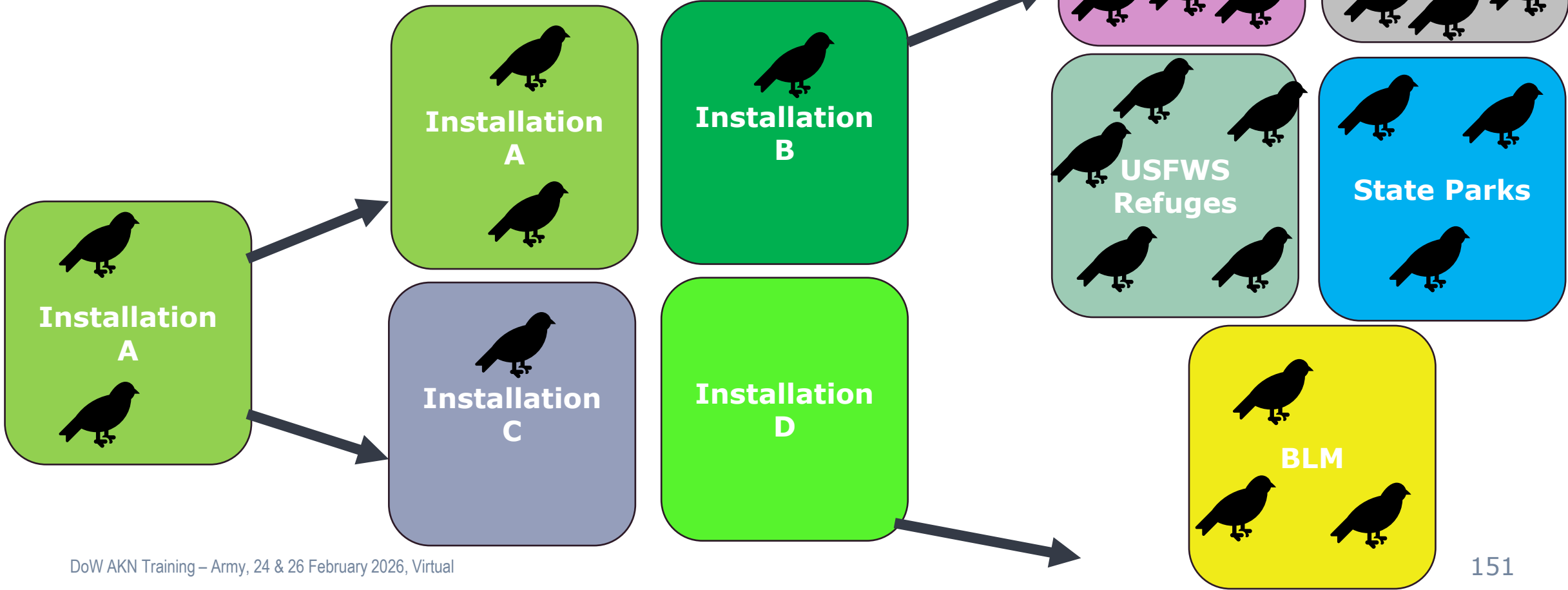
Use
Warehouse
Data

6a. Discover
Projects

6b. Visualize
Locations

6c. Analyze
Observations

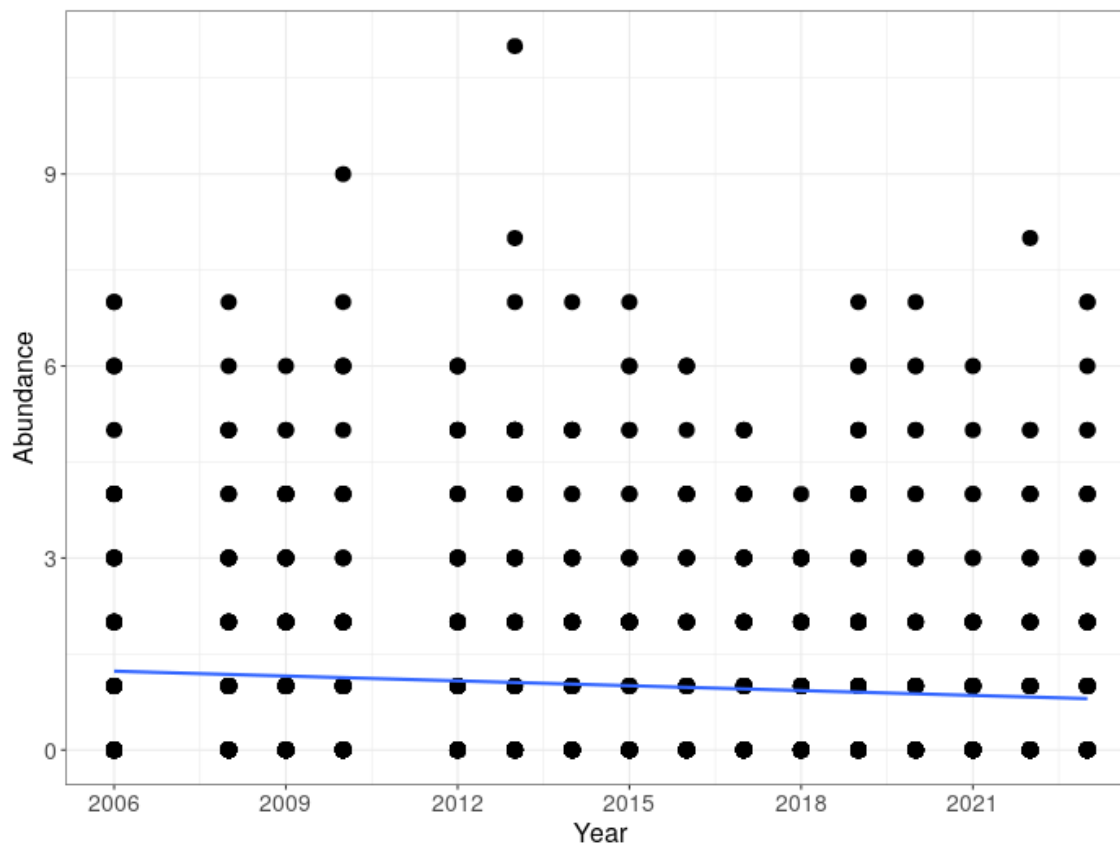
CASE STUDY: ASSESSING RELATIVE CONSERVATION RESPONSIBILITY



CASE STUDY: ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

AKN Analyst
output

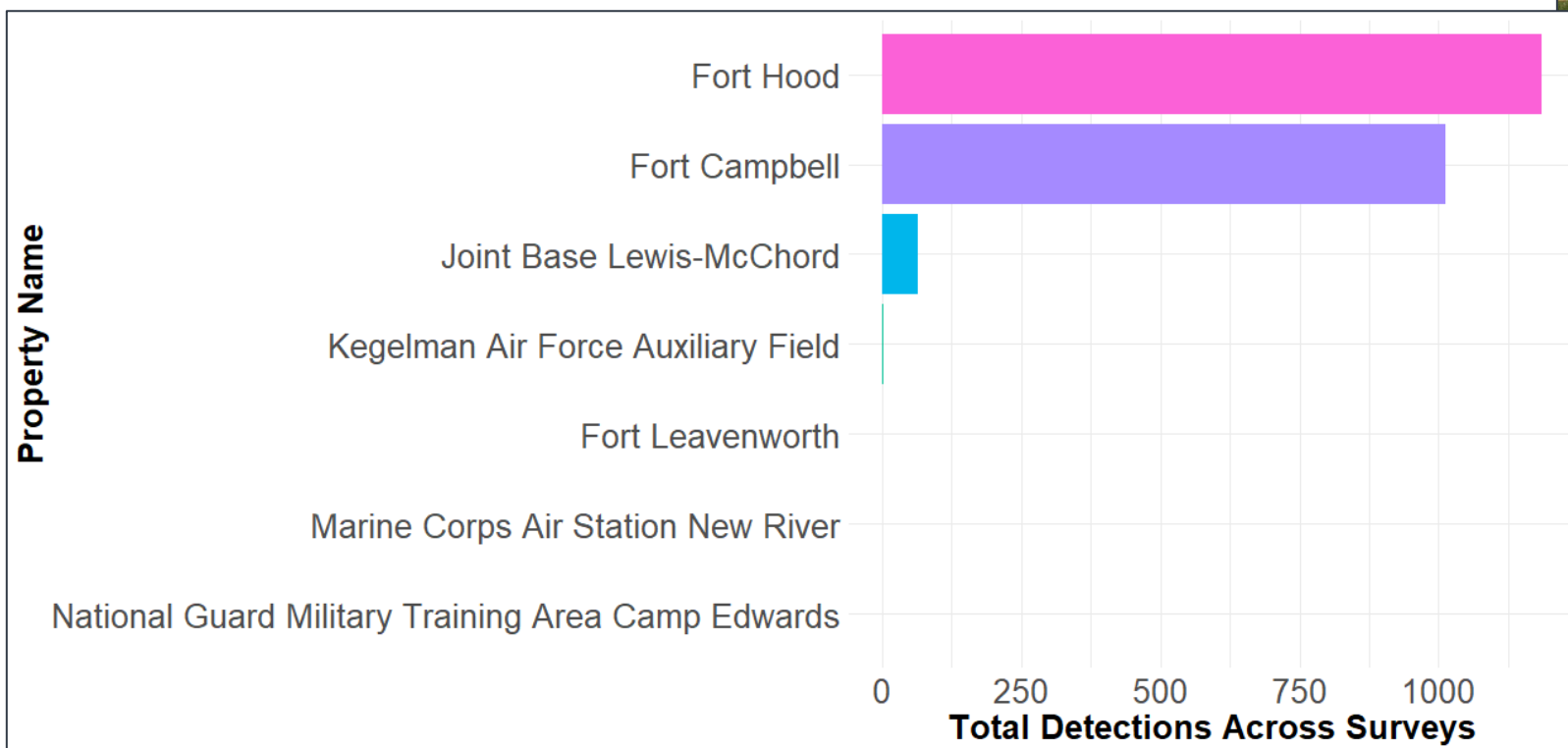
Fort Campbell



CASE STUDY:

ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

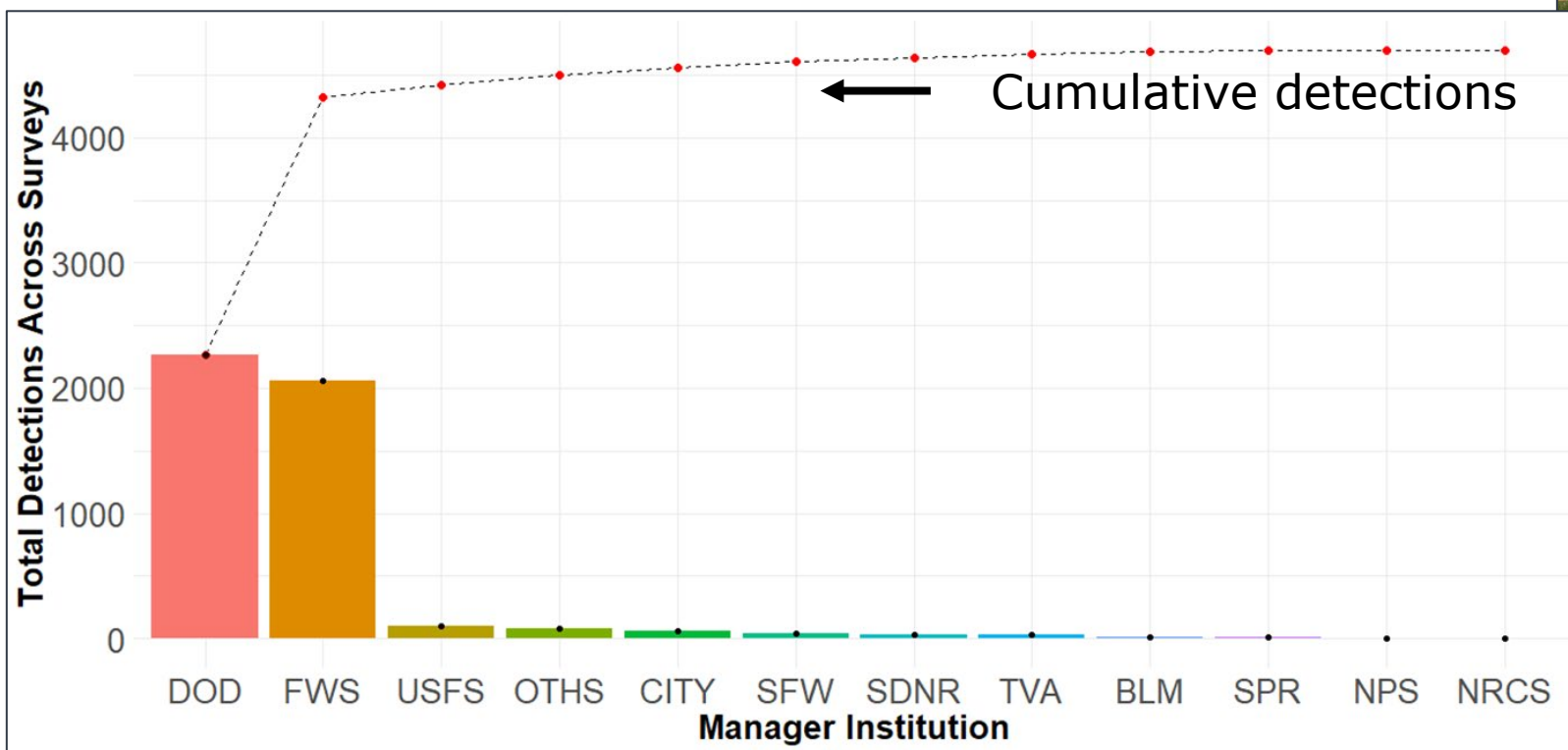
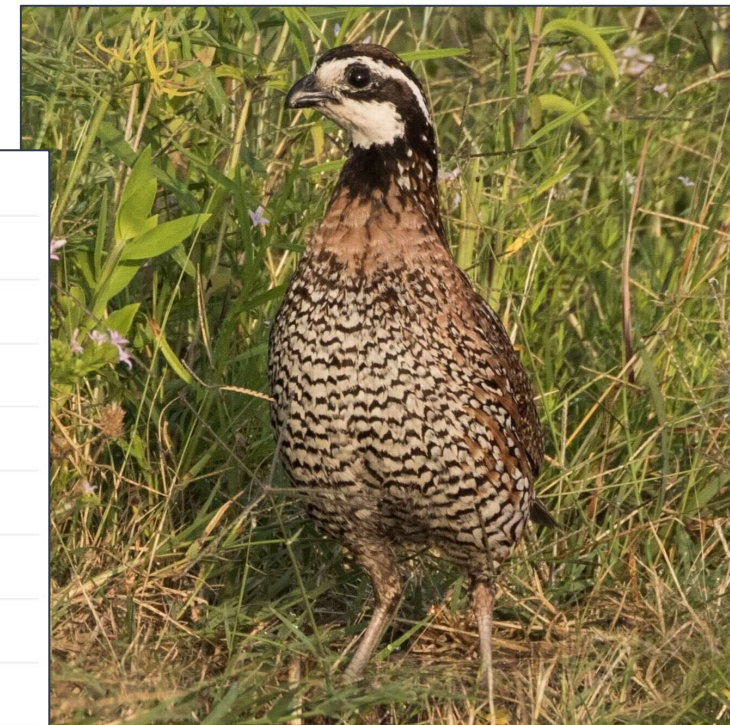
Which DoW installations have the most detections?



CASE STUDY:

ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

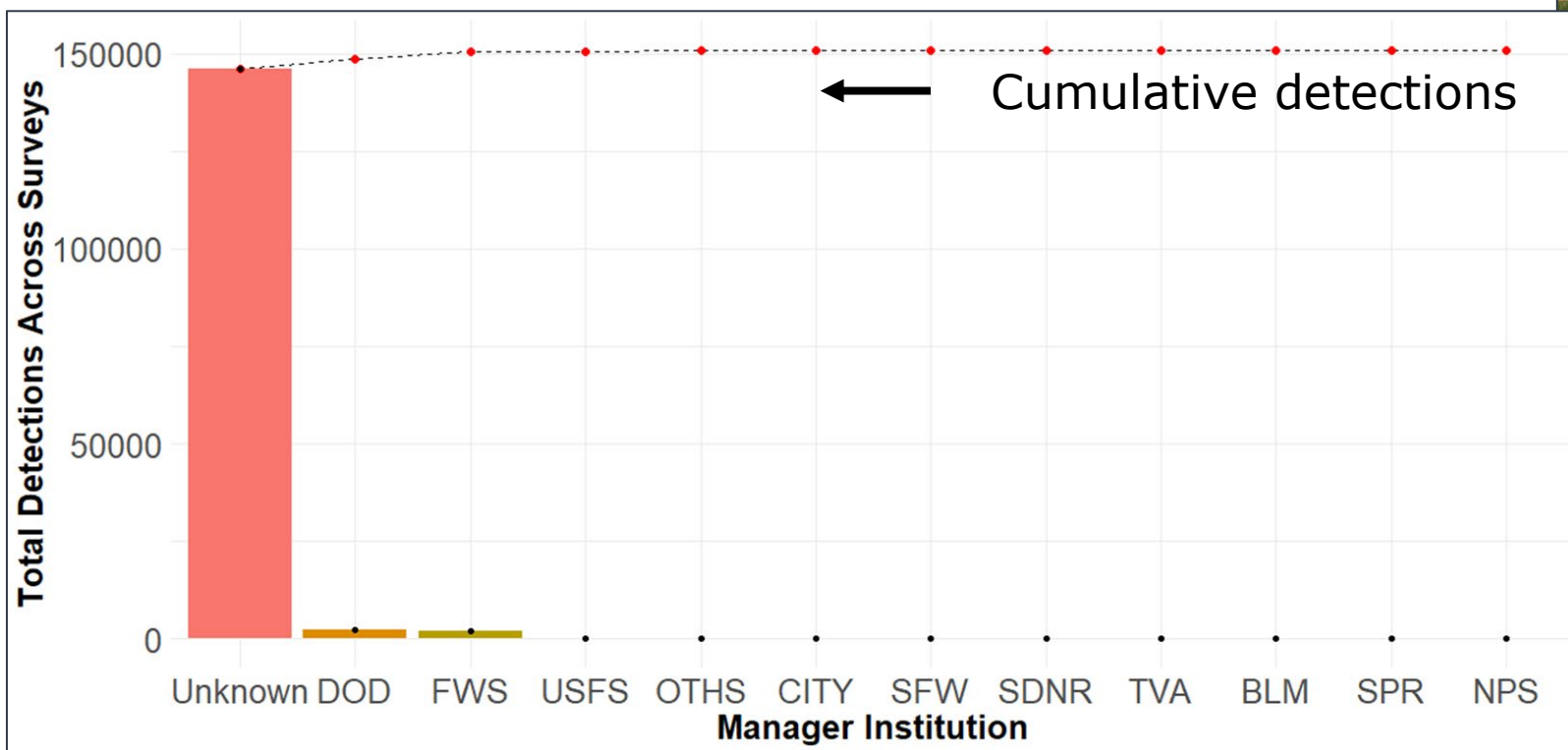
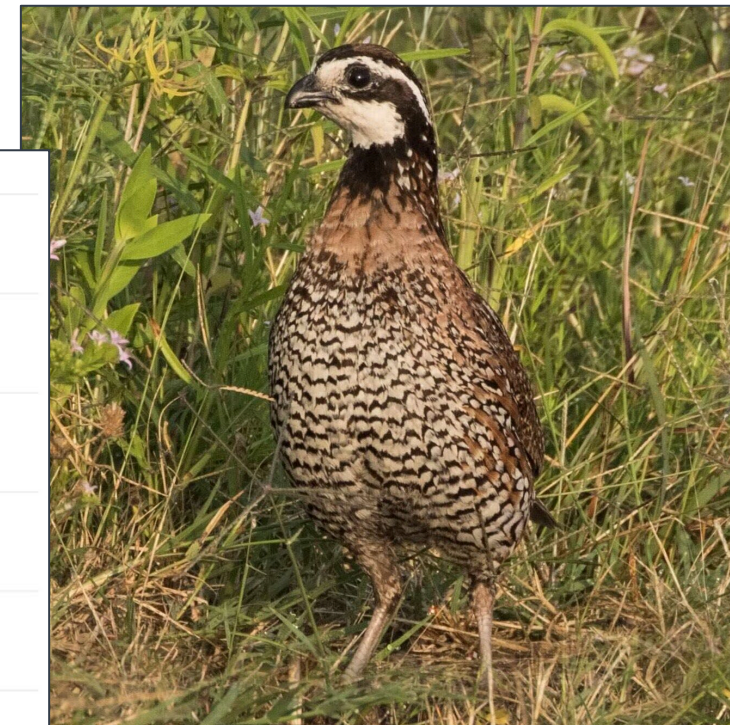
Across protected areas?



CASE STUDY:

ASSESSING RELATIVE CONSERVATION RESPONSIBILITY – NORTHERN BOBWHITE

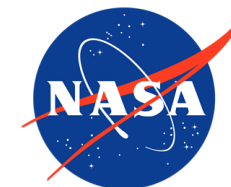
Across jurisdictions?



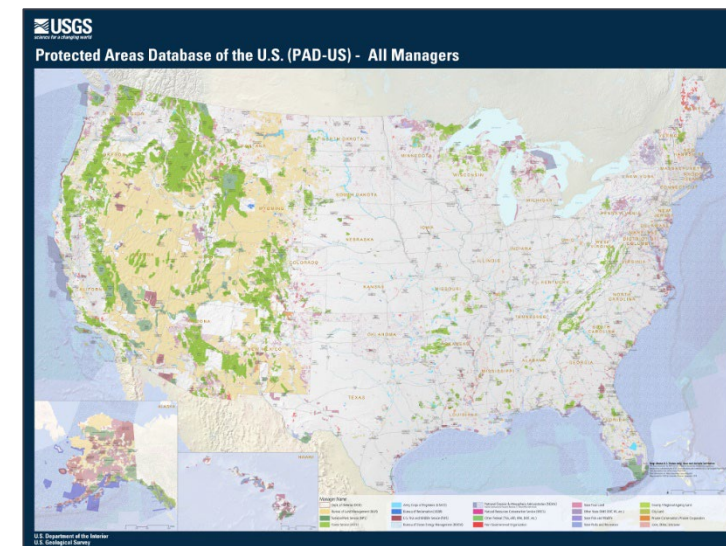
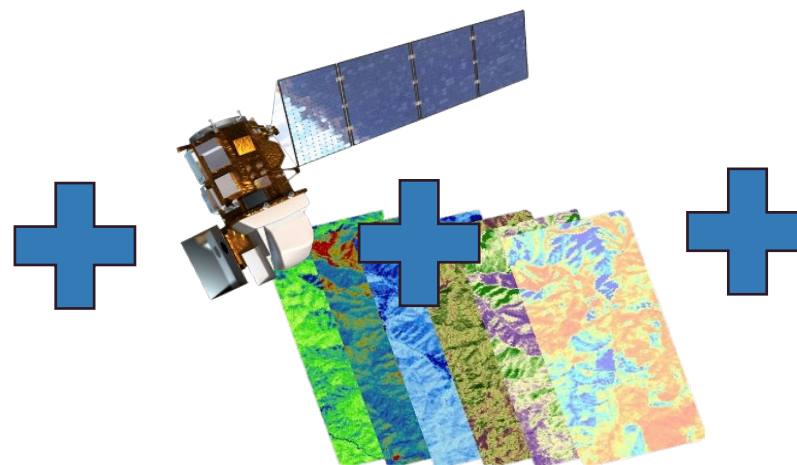
CASE STUDY:

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:

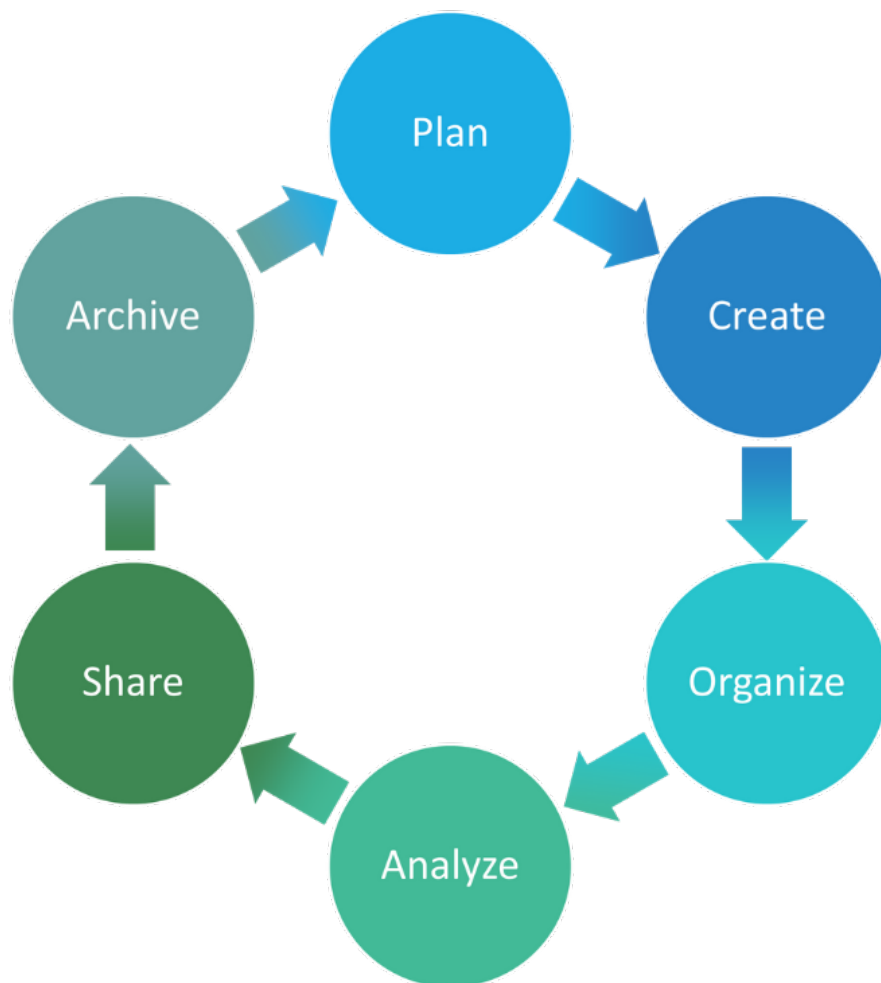
AVIAN DISTRIBUTIONS ACROSS LANDOWNERSHIPS (ADALO) PHASE 2

- 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





AKN & THE AVIAN DATA LIFE CYCLE



**FULL
AVIAN
DATA
LIFE
CYCLE**

AKN & THE AVIAN DATA LIFE CYCLE



Plan

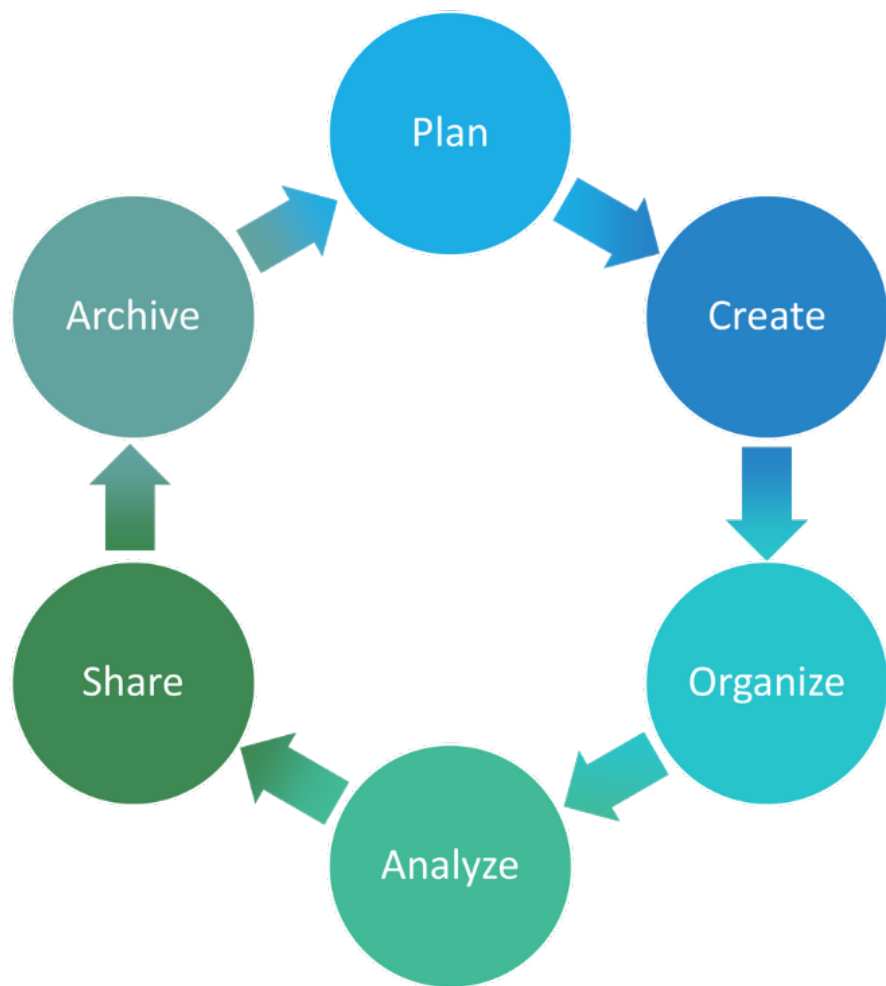
- Methodological alignment with partners
- What is your question?

- Office Hours



Protocol Search tool

AKN & THE AVIAN DATA LIFE CYCLE



Create & Organize

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

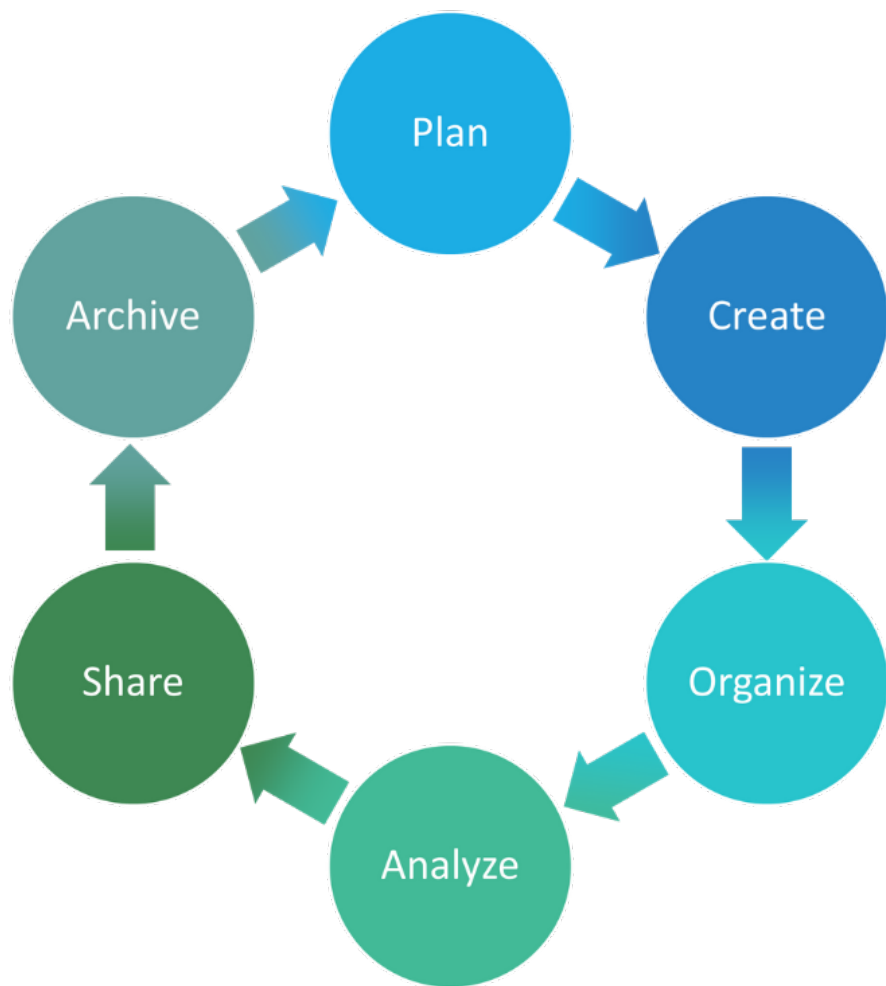


Biologists Application



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 data within or across Projects



Analyst Application

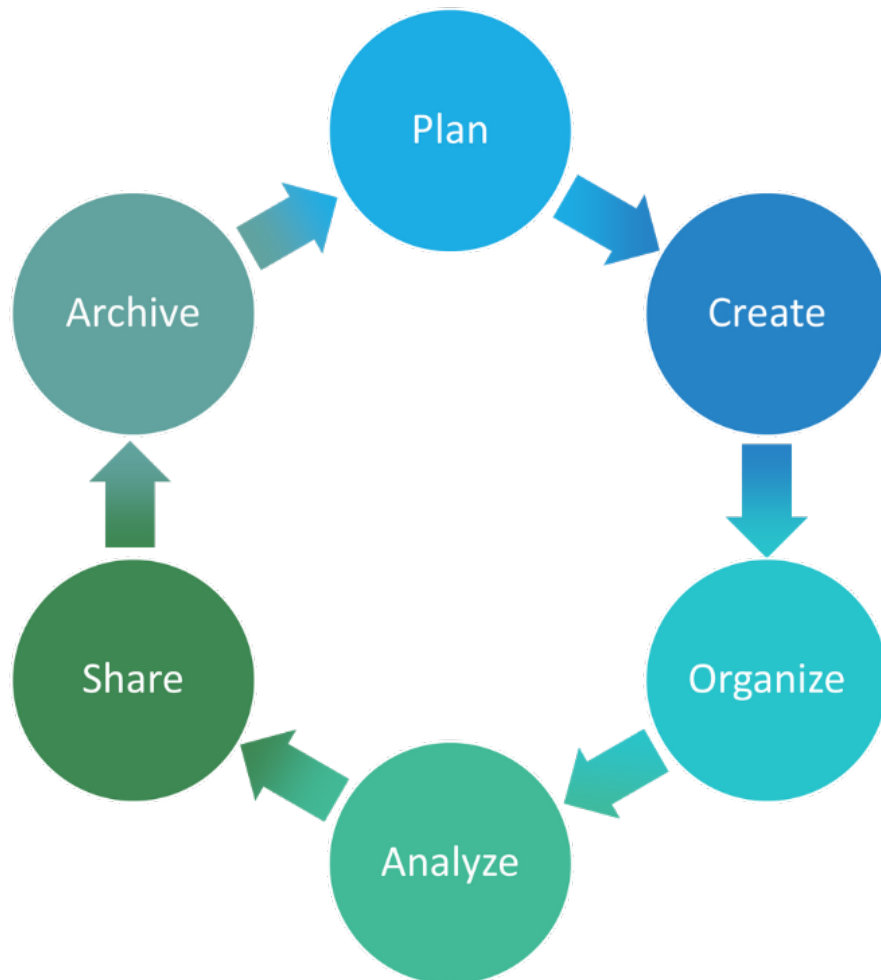


Raw Data Download



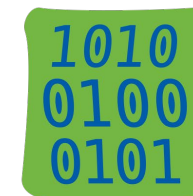
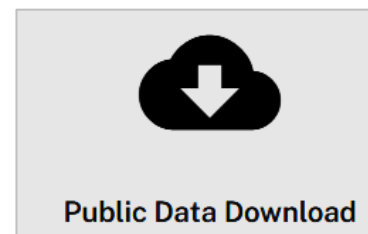
Public Data Download

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?





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 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 or 406-581-8148

KIDD, RICHARD GO Digitally signed by
ODWIN, IV.1163856
081

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

DoW MANDATE MEMO





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



Ongoing Base Support

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



Training

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



DoW-Specific Requirements

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 (Partner Initiatives)

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

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



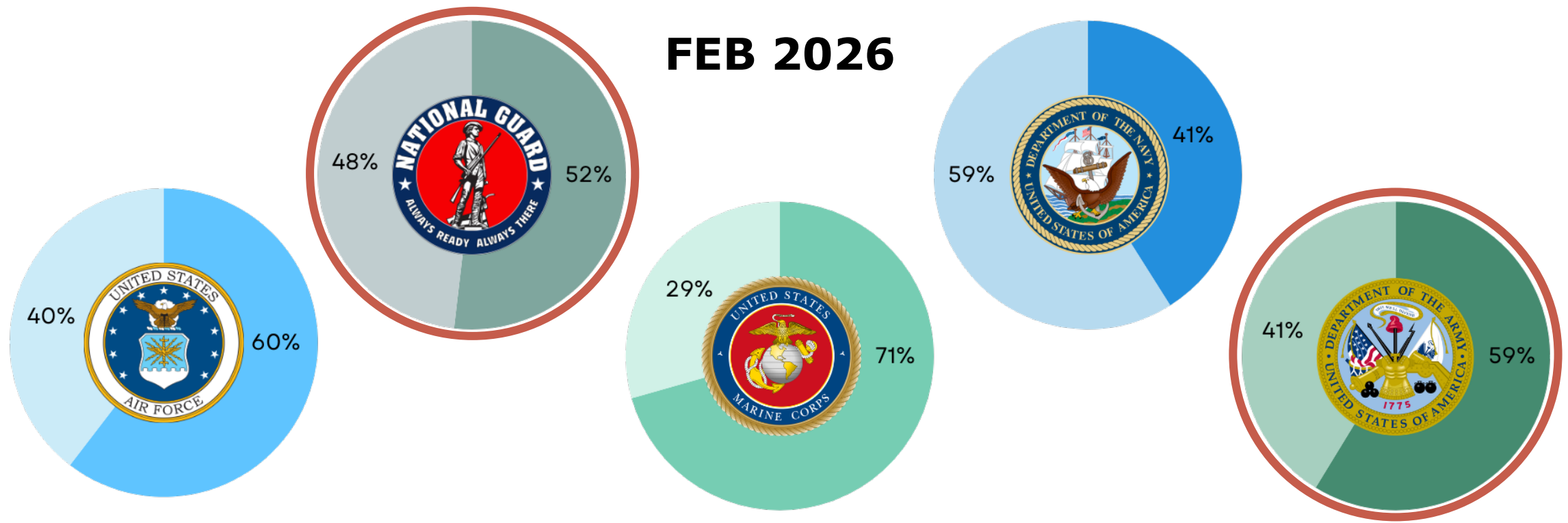
✓ **Five-year Implementation Plan:**

- 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

FEB 2026



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

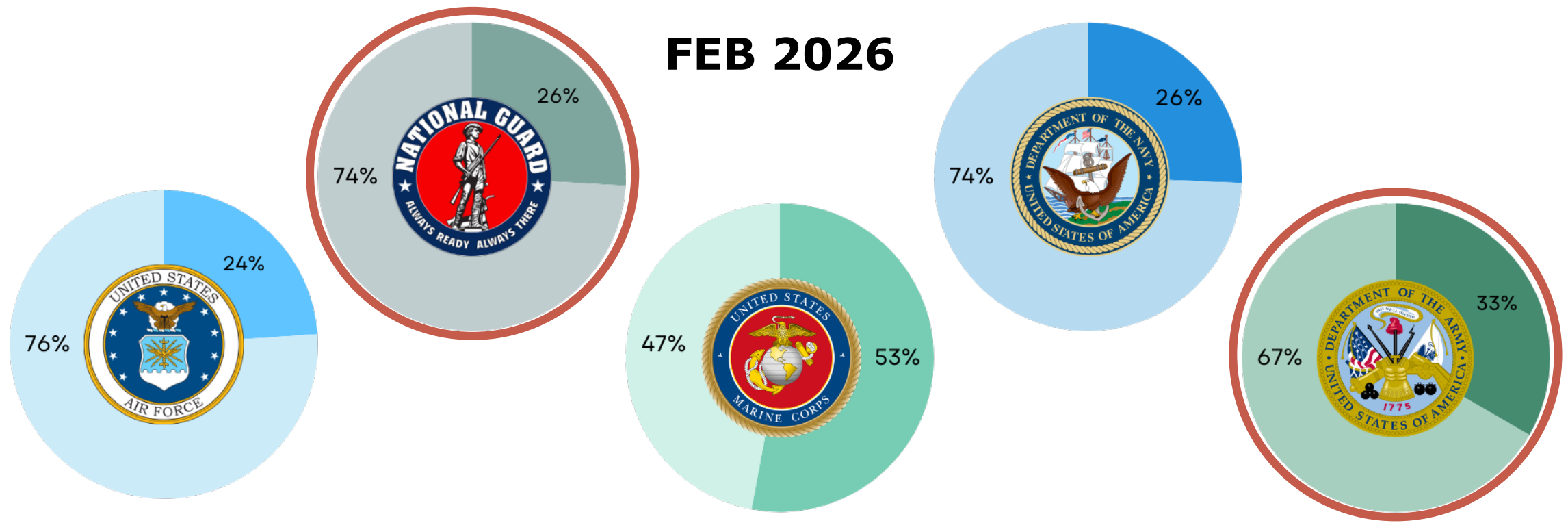
Dark colors - Installations with Active Projects

Light colors - Installations without Active Projects

MILITARY SERVICE PROGRESS

Installations with Contemporary Data by Service Branch

FEB 2026



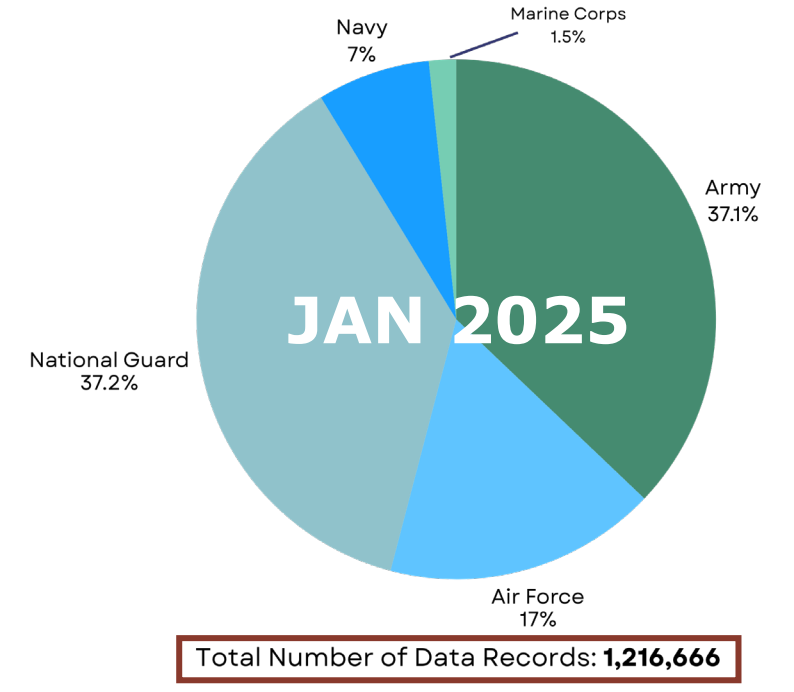
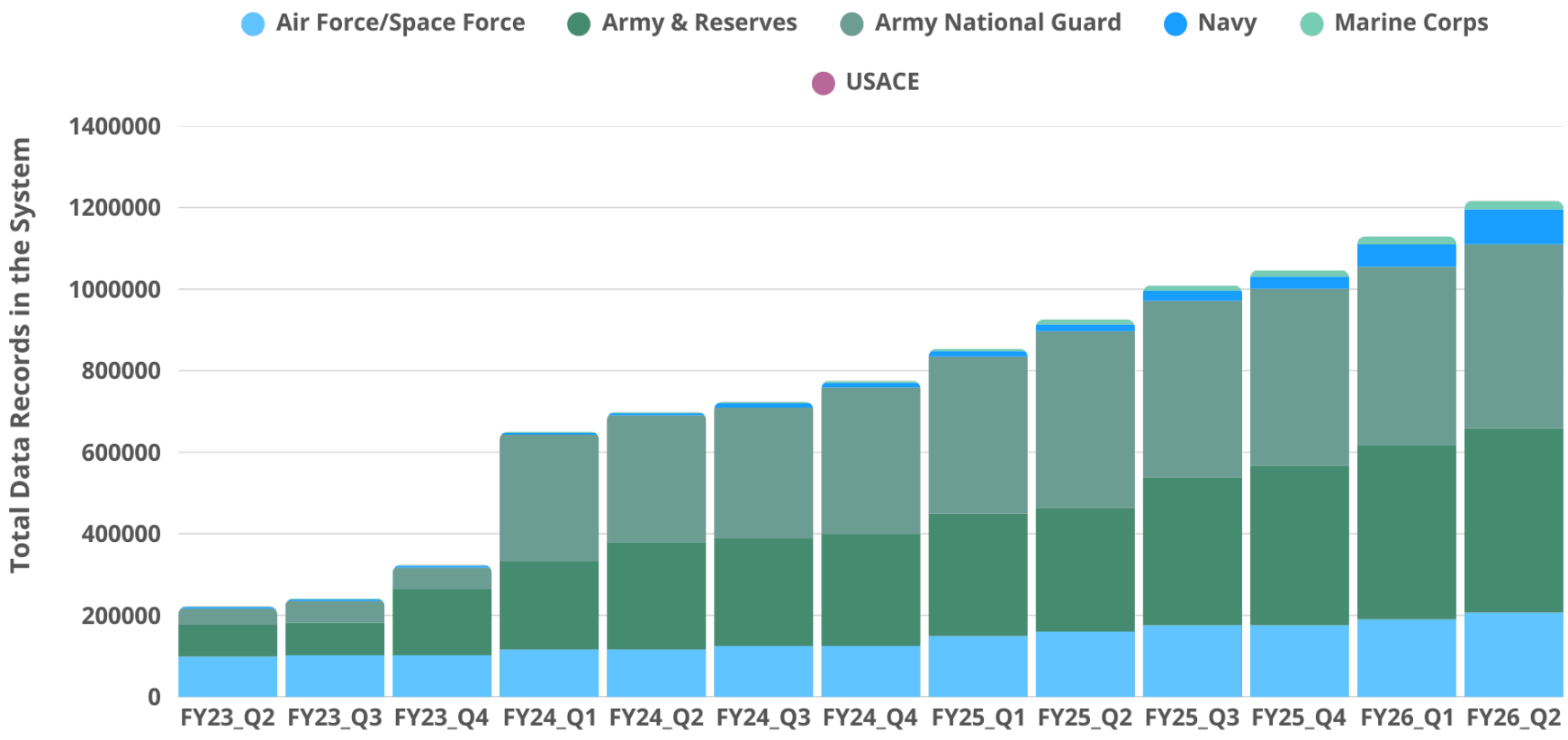
Total Number of Installations: **63** Army, **78** Navy, **96** Air Force, **17** Marine Corps, **54** National Guard states/territories

Dark colors - Installations with Active Projects

Light colors - Installations without Active Projects

MILITARY SERVICE PROGRESS

DoW Data Records in AKN by Military Service

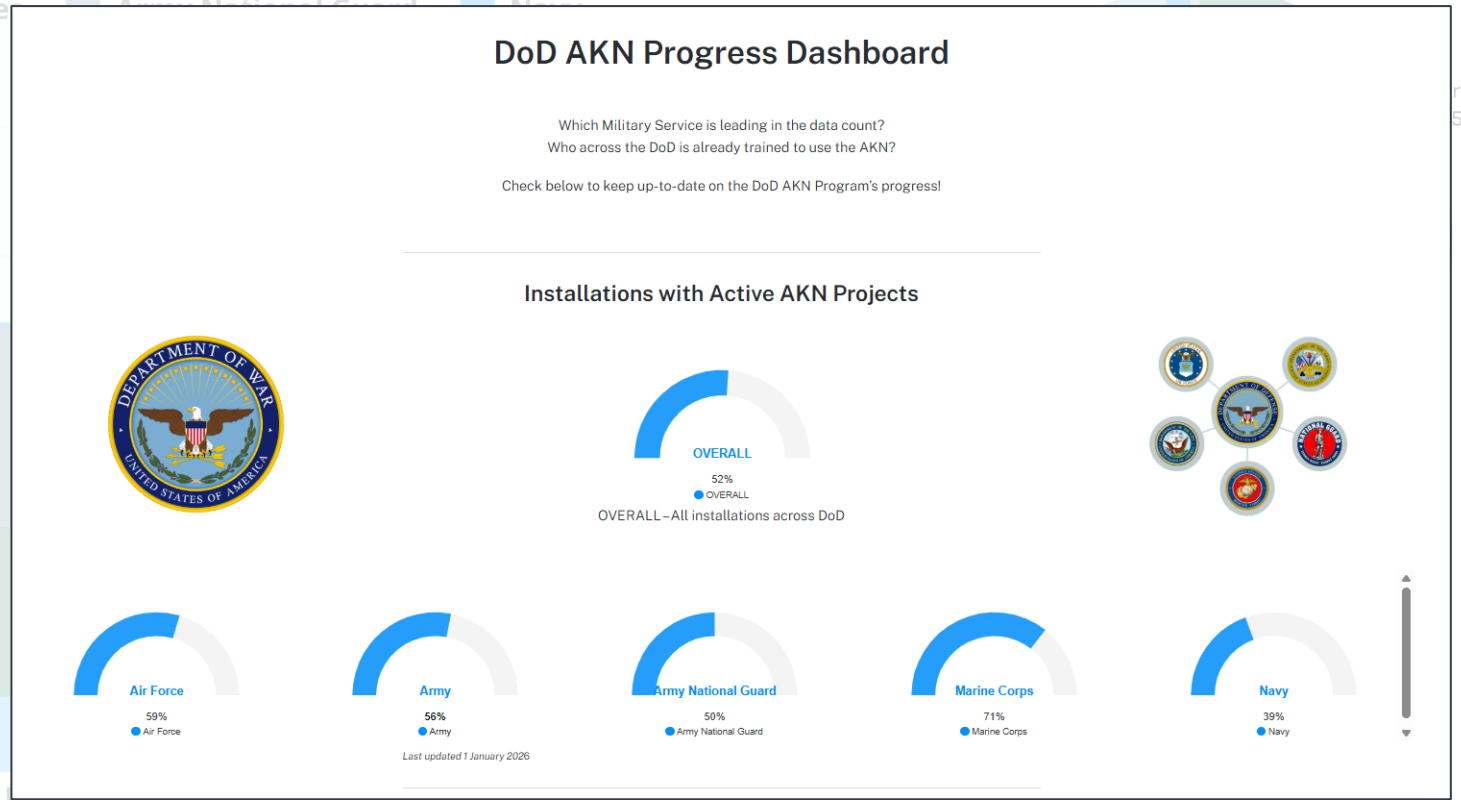


MILITARY SERVICE PROGRESS

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



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)



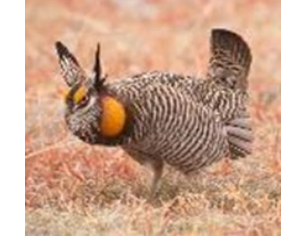
Northern Bobwhite



Greater Sage-grouse



Mountain Plover



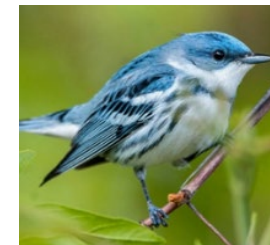
Greater Prairie Chicken



Burrowing Owl



Least Tern (Atlantic Coast)



Cerulean Warbler



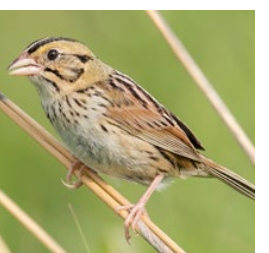
Golden-winged Warbler



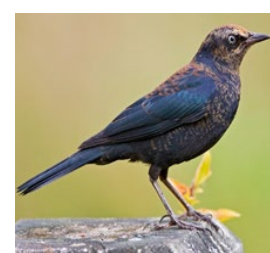
Pinyon Jay



Southeastern American Kestrel



Henslow's Sparrow



Rusty Blackbird



Bendire's Thrasher



Tricolored Blackbird



Bachman's Sparrow

DOW MISSION-SENSITIVE SPECIES (CONUS)

Species	# of Installations
Greater Sage-Grouse	6
Greater Prairie-Chicken	3
Northern Bobwhite	70
Southeastern American Kestrel	14
Black Rail**	5
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

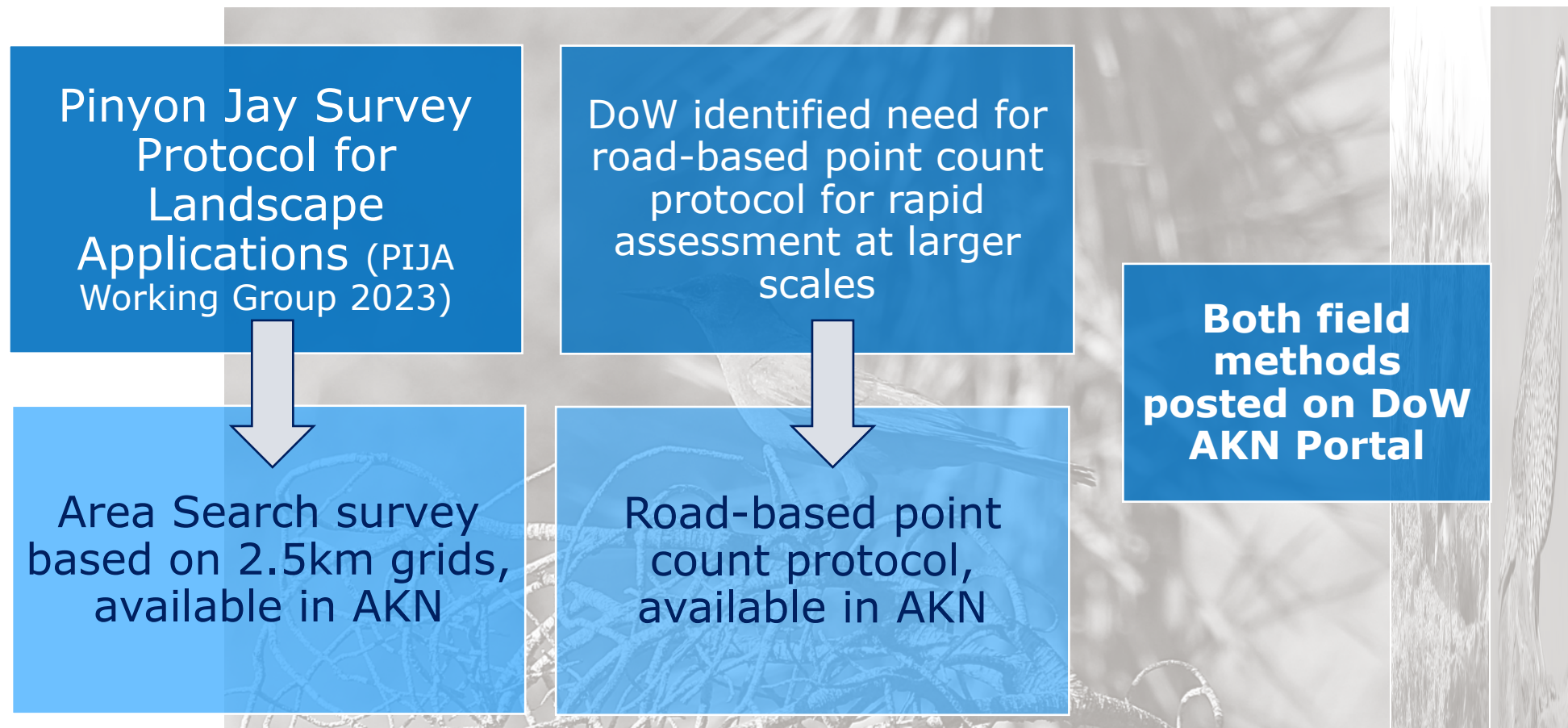
- ✓ FOCUS GROUP
- ✓ AKN PROTOCOLS
- ✓ DATA
- ~~✓ MSS QUERY TOOL IN AKN~~

DOW MISSION-SENSITIVE SPECIES





DOW MISSION-SENSITIVE SPECIES



https://www.dodakn.org/resources/mss/#MSS_PIJA



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



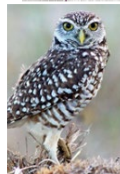
Determine monitoring objectives



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 management on DoD installations to help reverse species, identify potential mission impacts, and provide data for management based on the best available science.

To support using the best available science to aid management of MSS on DoD installations, one of the primary goals of the AKN Program is to provide standardized monitoring protocols, providing support for data entry and management. This document is a product of a working group of subject matter experts from within and outside the DoD, and provides monitoring protocols for Burdrowing Owl monitoring.

Scope and Limitations

This document is intended to provide guidance on monitoring objectives outlined in Table 1. Additional 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 protocols for designing a monitoring program for Burdrowing Owl monitoring, and 2) to allow for comparison of Burdrowing Owl monitoring data across sites. This document collects data beyond the standards outlined in this document to contribute to this effort and 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	BURW 1					A	Y	
02	0611	NONE					U	U	
03	0621	BURW 1		1			A	U	
03	0621	BURW 2							

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

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

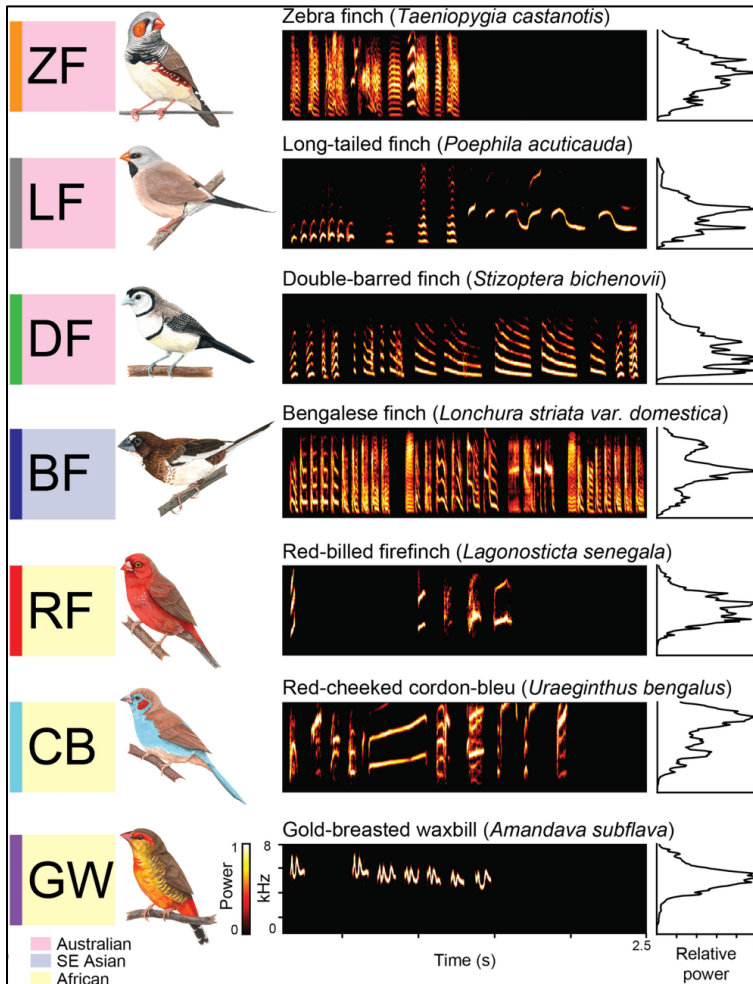
Metadata Considerations

- 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



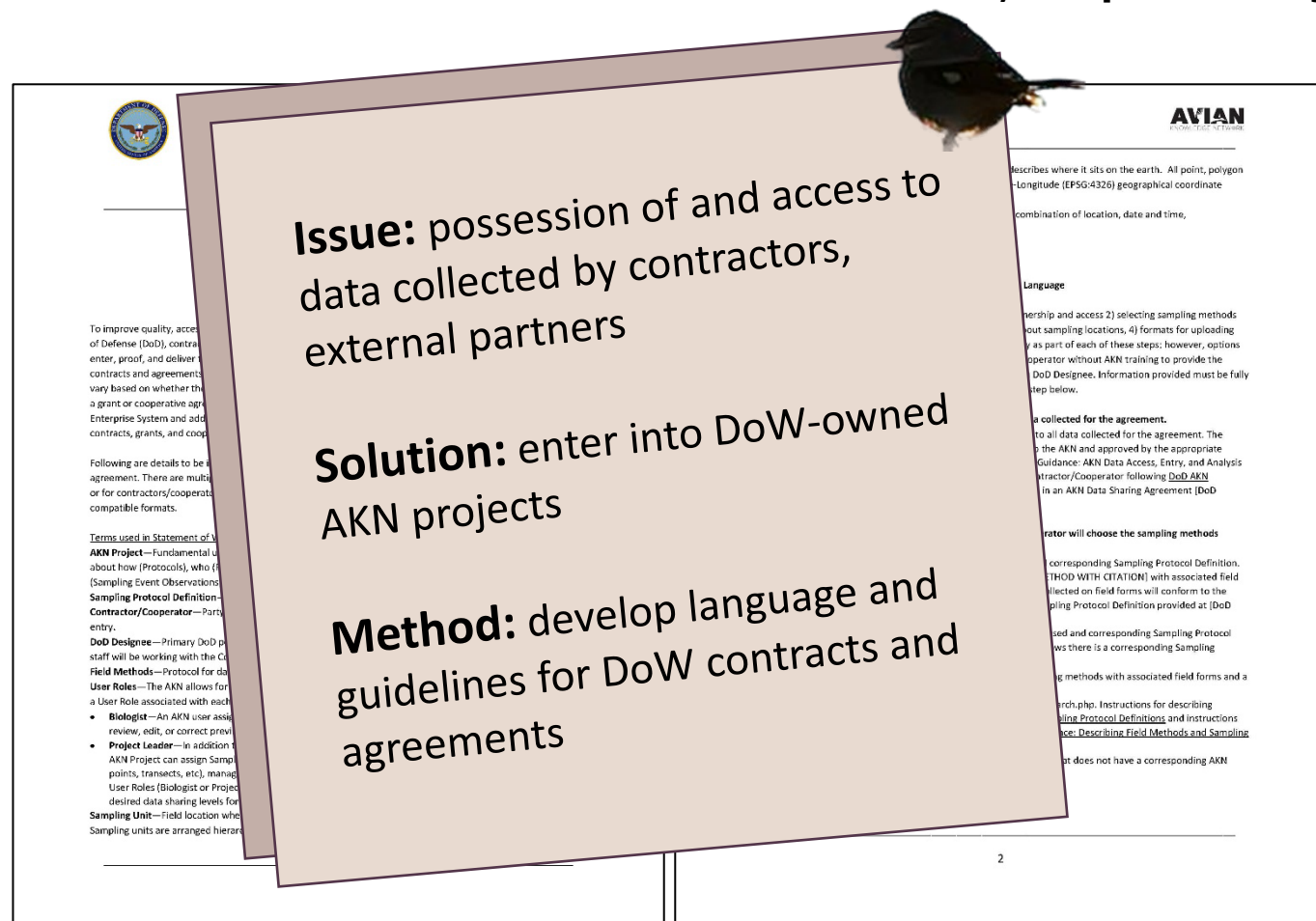
Metadata Considerations

- 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*

**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 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.pimblue.org/science/biologists/ohs/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](#).

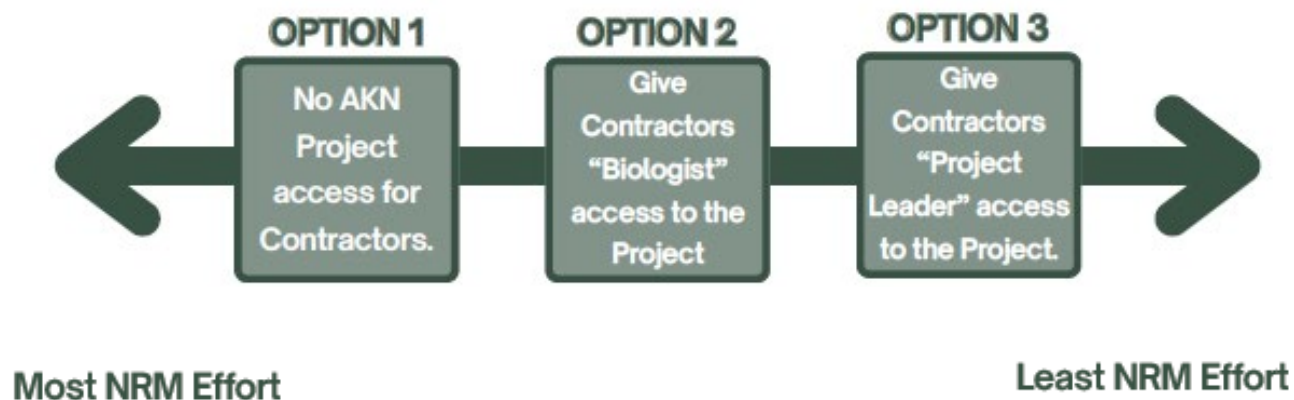
Contractor/Cooperator will specify sampling methods to be used that does not have a corresponding AKN Sampling Protocol Definition.

2

DoW AKN Guidance:

1. Avian Knowledge Network Data Sharing Guidelines
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8. Preparing Data to Submit for Bulk Uploading for AKN Compatible Projects

GUIDANCE TO HELP PROJECT MANAGERS DETERMINE ROLES FOR THEIR CONTRACTORS



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.

Will be posted to the DoW AKN Portal site SOON! (sign up for updates to be the first to know!)

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

Department of Defense ✕ 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.

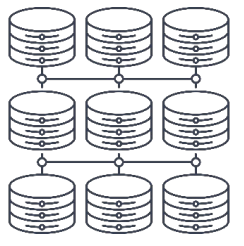
Start date Stop date

Sampling units

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

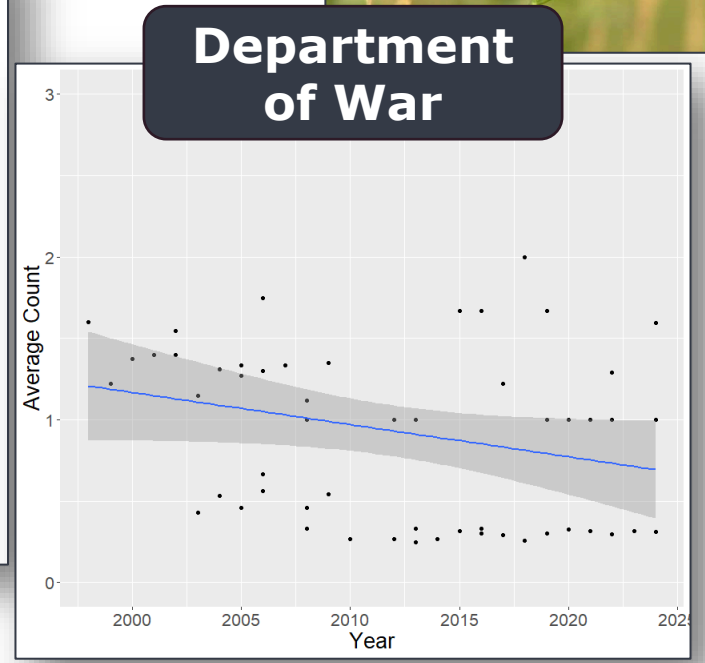
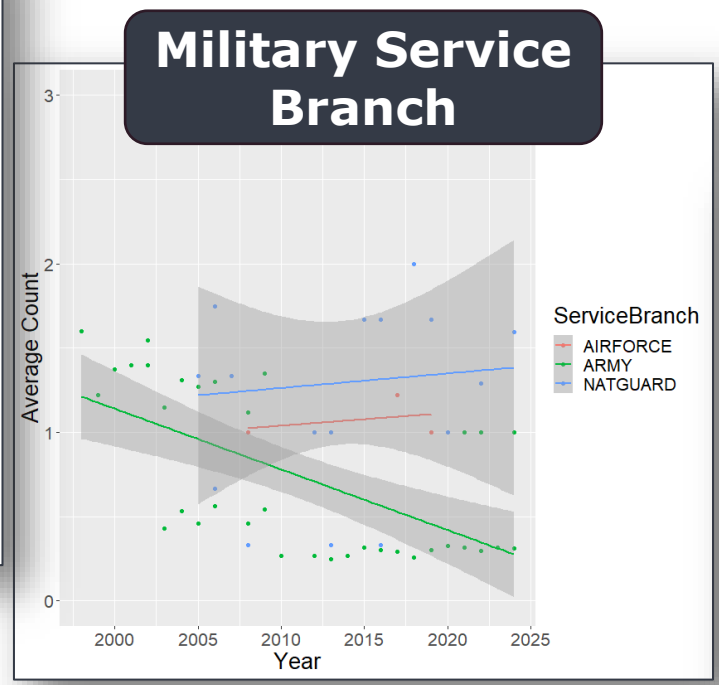
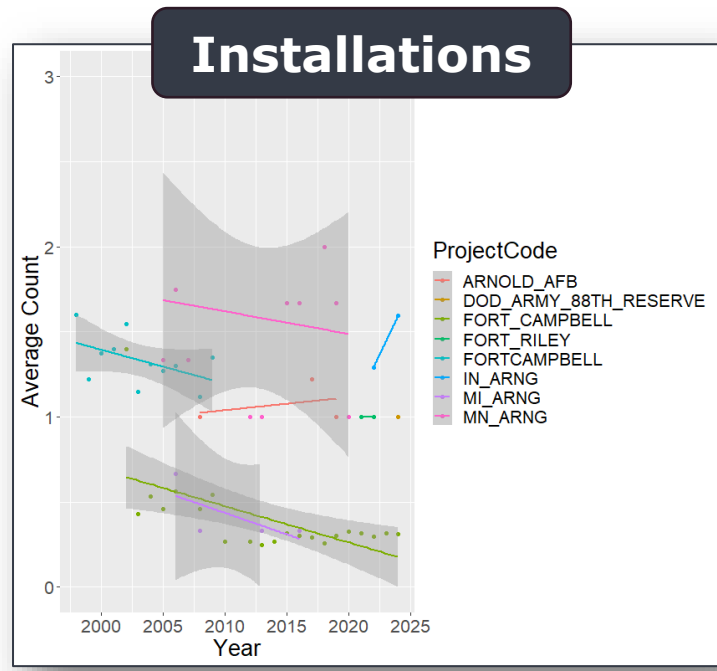
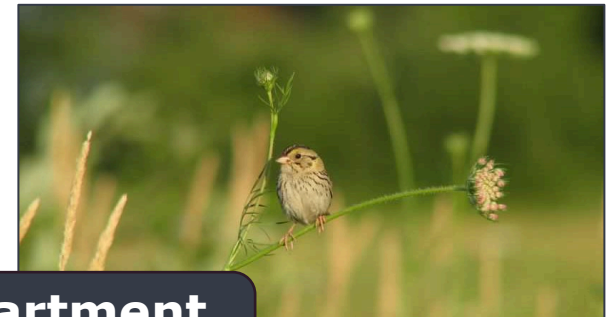
- CSV
- KML
- Shapefile
- GPSU
- Waypoint

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





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 = _____ P = _____

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: _____

Cooperator: _____

SURVEY/VANTAGE POINT (Check one): on-site 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 Nests	Total Number Nests	Number Active Nests	Number Young Seen	Estimated Breeds
DI- or Common Tern							
Great Blue Heron							
Great Egret							
Black Night-Heron							
Cattle Egret							
Little Blue Heron							
Arkingo							
Green Heron							
Shorebird							
Y-cr. Night-Heron							
Other:							

Survey Type Codes: Actual Count = 1; Visual Estimate = 2; Sampling = 3; Other = 0

Stage Codes: Pre-nesting (standing around in field) = 1; Incubation = 2; Unledged Young = 4; Age = 5

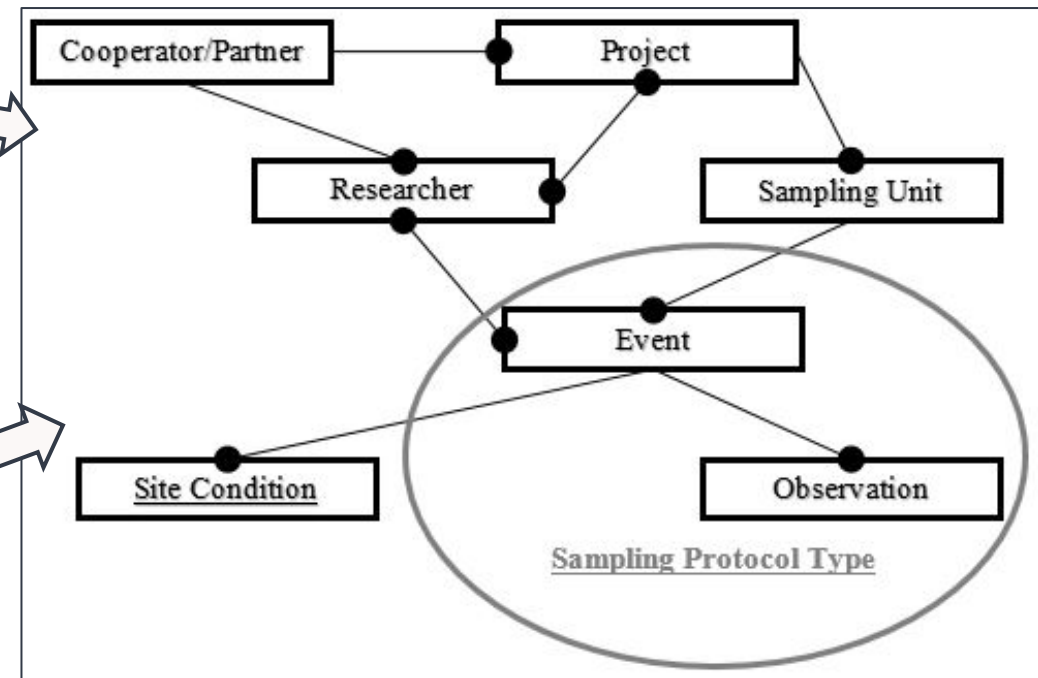
Comments (Other Notable Species): _____

COLONY SITE DESCRIPTION: County: _____ State: _____ Hexcode (Area Q25) _____

Latitude: _____ Longitude: _____

Explain how looking [down](#) and where standing in relation to herony (using GPS (NAD 83)) _____

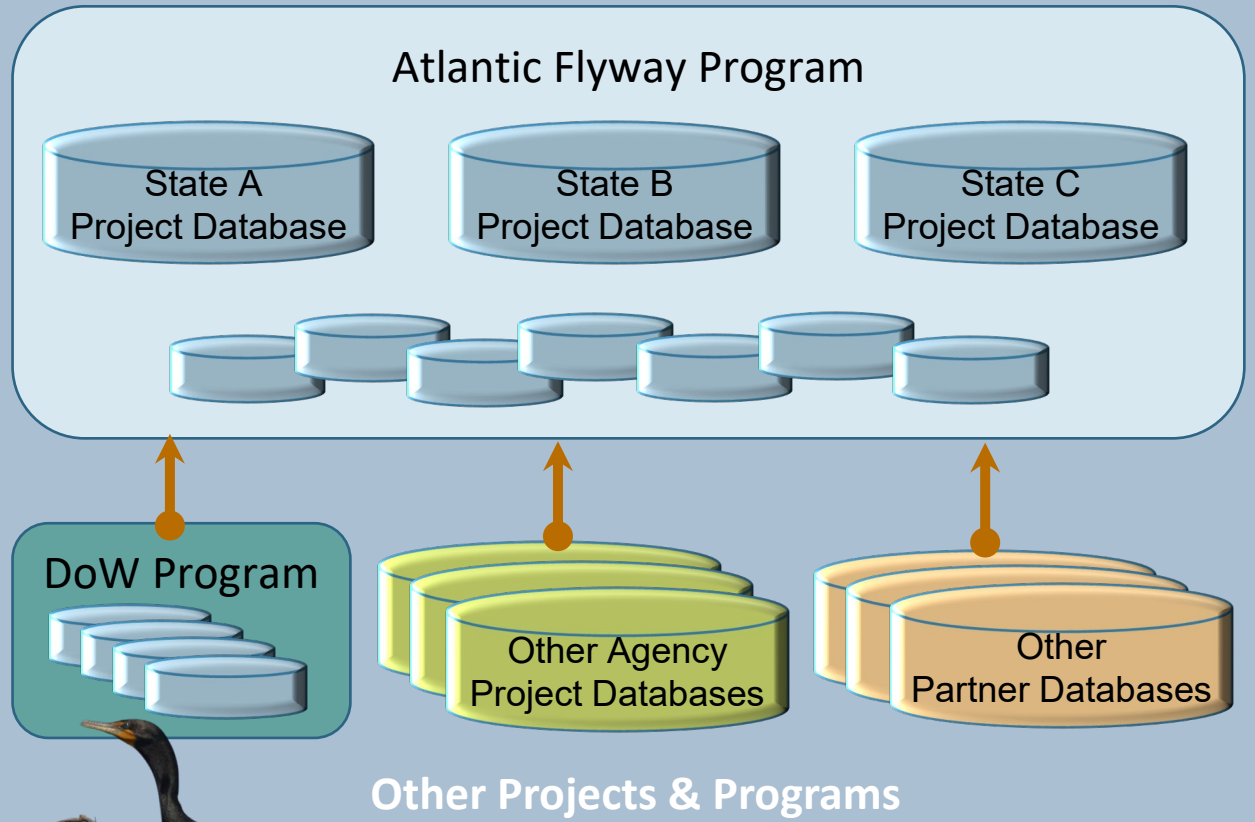
Nearest City/Town: _____ Distance: _____ mile Direction from town to colony: _____



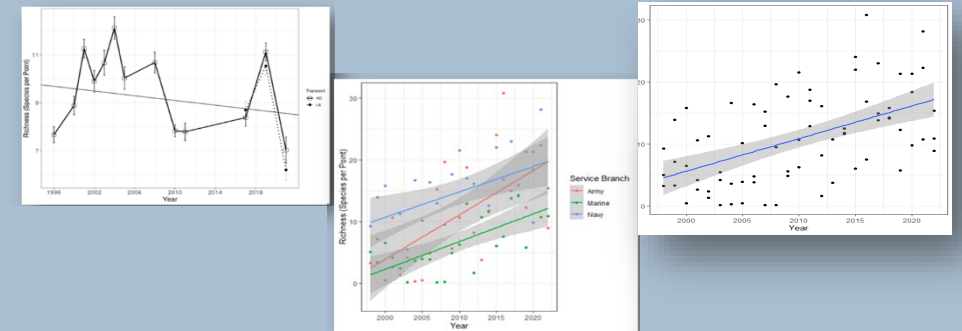
Sampling Protocol Definition(s)

- [CWB ATLANTIC FLYWAY](#)
- [CWB ATLANTIC FLYWAY CONDITION](#)

Colonial Waterbird Program Structure



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



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

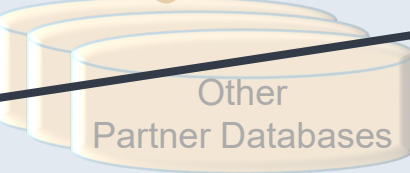
DoW Program



Other Agency Project Databases



Other Partner Databases



Other Projects & Programs

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

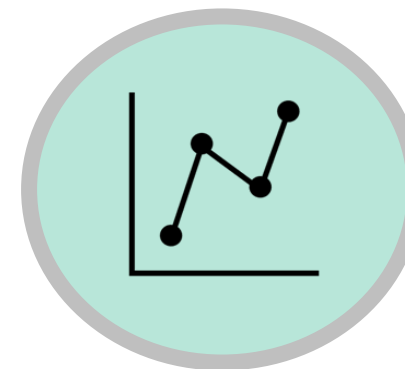
Need: Roles in the system that meet requirements for data entry and/or analysis for portions of AKN projects

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

DoD-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, NGO's and others are using to enter, manage, analyze and share their avian observation data.

MORE ABOUT AKN

MANAGE & EXPLORE DATA

AKN offers tools for collecting, entering, uploading, managing, accessing and summarizing bird monitoring data.

EXPLORE TOOLS

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/UCi9intC9uTZa9Bo3HgnY1Q/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/

Archive: 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?

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 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 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

If you have any problems or questions, please contact us at support@pointb

Point Blue Science Cloud

Email confirmation

Please use the button below to complete your email confirmation.

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

D 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: ⓘ Feedback

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 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

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](#)

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INACTIVE ACCOUNT

Biologists **Project:** DOD_DEMO Error: PRBODB.InvalidProjectAccessRights (403 error) ✕

Welcome to AKN Biologists


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Projects

What project do you want to work in?

[Quick Tips >>](#)

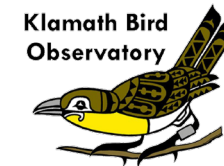
Loading available project operations...



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



OPEN FORUM





PLUSES AND DELTAS

WORKSHOP WRAP-UP





pointblue.github.io/dod_workshop

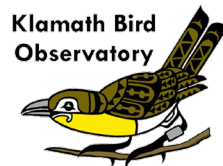
DoW AND THE AKN: WHO, WHAT, WHERE, WHEN, WHY, AND HOW

DoW Army Training
24 and 26 February 2026
Virtual

Sam Veloz
Dianne Miller

Elizabeth Neipert
Zoe Duran

John Alexander
Caitlyn Gillespie
Nora Honkomp



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