Avian Knowledge Network & Avian-Solar CWG/ ASWG

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Point Blue Conservation Science
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Point Blue Conservation Science

Conserving wildlife and ecosystems through science & partnerships

- Founded in 1965 as Point Reyes Bird Observatory

- 160+ staff and seasonal scientists

- 2017 budget: $14 million

- Provide technology solutions that support AKN nodes for data management, curation, visualization and analysis.

- Working in all 4 Flyways across Western Hemisphere
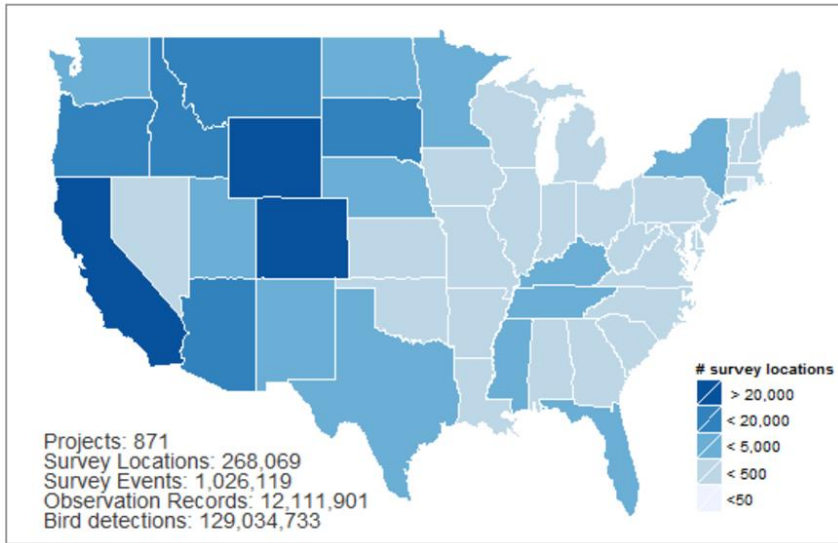

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Data needs for CWG & ASWG

- Survey data collection by partners:
  - Baseline information
  - Avian impacts (mortality)

- Data management & analysis needed to answer questions like:
  - How do avian impacts compare between sites?
  - What is the regional incident and magnitude of mortality?
  - Where are the migratory flyways to inform future site selection?
  - How can we better avoid, minimize and mitigate avian impacts in the future?

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Avian Knowledge Network

DATA FROM THE AKN

survey locations
- > 20,000
- < 20,000
- < 5,000
- < 500
- <50

Projects: 871
Survey Locations: 268,069
Survey Events: 1,026,119
Observation Records: 12,111,901
Bird detections: 129,034,733

A **partnership** supporting the **conservation of birds and their habitats** based on data, adaptive management, and best available science. AKN partners improve awareness, purpose, access to, and use of **data and tools at multiple scales**.

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Pacific Southwest Research Station

Klamath Bird Observatory

CONNECTING CONSERVATION

The Cornell Lab

BIRD STUDIES ÉTUDES D'OISEAUX CANADA

ROCKY MOUNTAIN AVIAN DATA CENTER

Midwest Coordinated Bird Monitoring Partnership

IWMM

Avian Knowledge Network – National Node

A Node for the Council for the Conservation of Migratory Birds

The goal of the Avian Knowledge Network (AKN) National Node is to su... further enabling and growing a network of people, data, and technology... management, and research across organizational boundaries and spatia... origins and background of the National Node, visit the About page.

- Project for The Council for the Conservation of Migratory Birds

- Funders: BLM, BOEM, FHWA, USFS, NPS, FWS, DoD

Discover Best Available Bird Monitoring Protocols

Read more

Upload, Enter and Manage Your Data

Upload and manage your data in bulk through the AKN.

Read more

Use AKN Tools with AKN Data to Explore Patterns and Trends

Use other AKN tools with AKN data to explore patterns and trends, generate simple visualizations, or apply advanced analyses to field
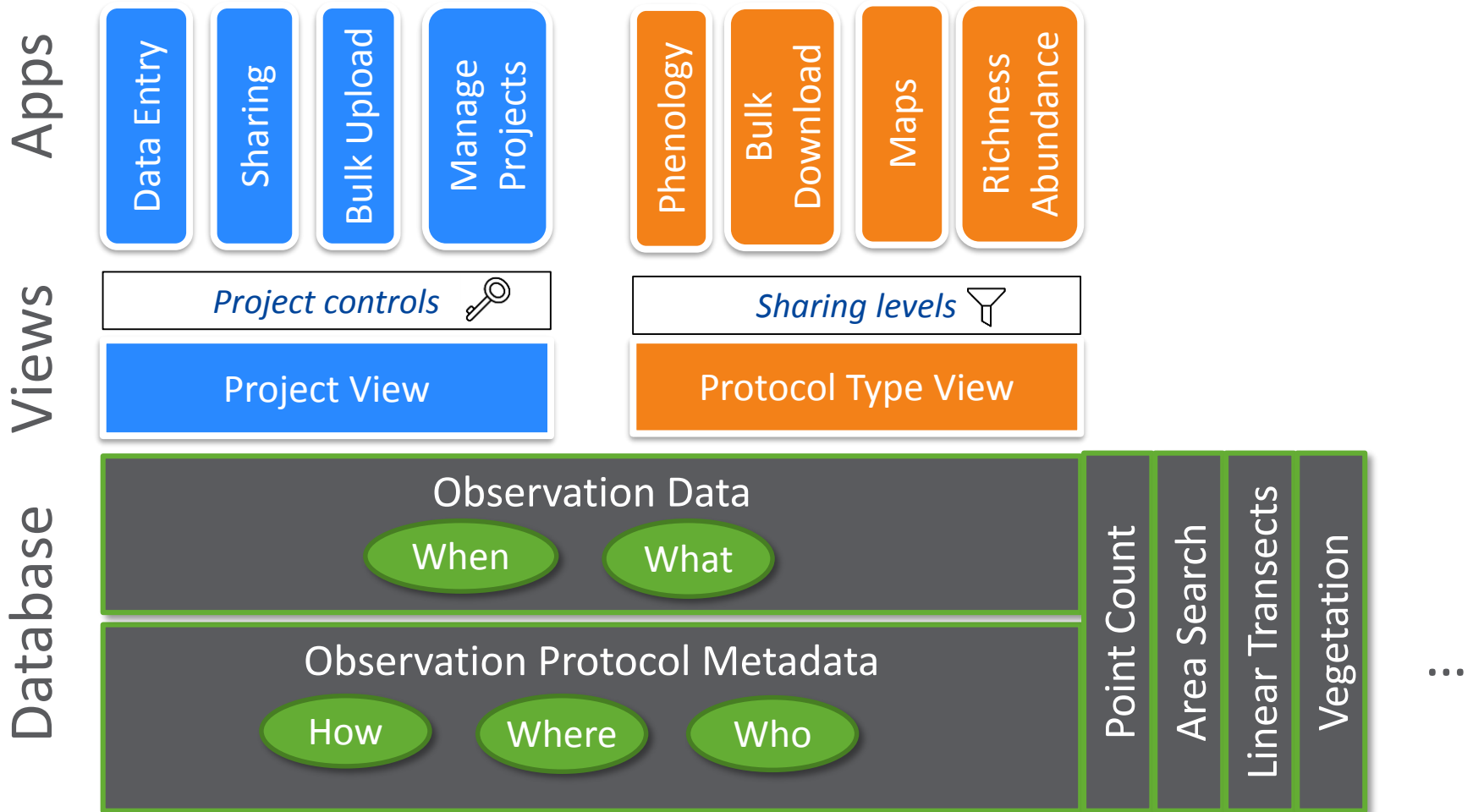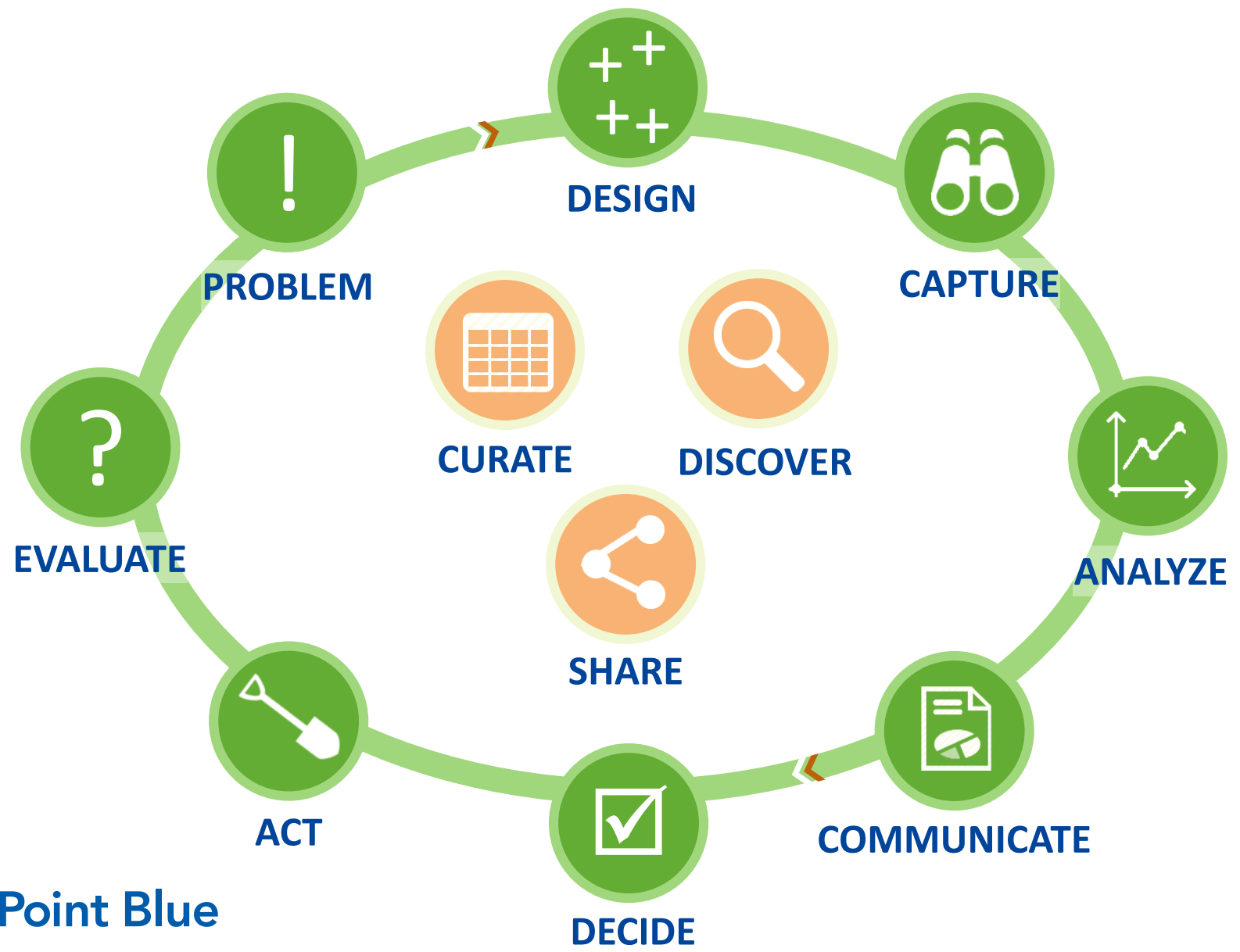
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Recent News

May 2016

AKN Data & Applications

Data Driven Climate-Smart Conservation
collaborative, iterative learning & understanding at scale

DESIGN

CAPTURE

PROBLEM

CURATE

DISCOVER

ANALYZE

EVALUATE

SHARE

ACT

COMMUNICATE

DECIDE

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Integrated Waterbird Management and Monitoring (IWMM)

Federal & State refuges

7 years

300K observations

Birds, vegetation & management actions

www.iwmmprogram.org

Adaptive Management through Bird Counts, Migration Curves, Bird Use Days, Habitat Reports by Mgmt Unit, Site, Refuge, FWS Region, JV Boundary, BCR, Flyway

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Site (Project): DUMM

Generate Reports

⦿ Report Type

| Bird Survey | Unit Conditions | Bird Use Days | Vegetation Survey | Report Output Description |

🌐 Location

Select a project to include all locations within those projects in the report. Optionally, select locations from the projects selected to include only those locations in the report.

Projects

| GREATSWAMPNWR ▼ |

Bridge Overlook
Little Pond
Middle Brook Pool
Pool 1
Pool 2
Pool 3A
Pool 3B

Select all   Deselect all

📋 Protocols

Filter results to show only those matching one or more protocols you select.

All Protocols

Specific Protocols

IWMM_AerialSurvey
IWMM_FlushCount
IWMM_GroundAerialSurvey
IWMM_GroundSurvey

🌱 Species

Select one or more species. You may also filter by one or more guilds, and optionally one or more species within those guilds. Species are listed in taxonomical order.

| All Species | Guilds | Species |

Larids
Marshbirds (Breeding)
Marshbirds (Non-breeding)
Non-waterfowl open-water species
Shorebirds
Wading Birds
Waterfowl

BBPL - Black-bellied Plover
AMGP - American Golden-Plover
PAGP - Pacific Golden-Plover
LGPL - Unid. Lesser or American Golden-P
SNPL - Snowy Plover
WIPL - Wilson's Plover
SEPL - Semipalmated Plover
PIPL - Piping Plover

Select all   Deselect all

📅 Dates

Filter results to show only those within the specified date range.

For Bird Use Days reports, a date range must be provided, and it must reflect the period for which the report is being requested. The time span between the start month/day and the end month/day defines the period used for the report. The period is applied to each year in the date range provided.

Date Range

Start Date

End Date

☑ Apply user defined period ❓

⇅ Results Grouping

The results will be grouped according to your selection here

| Units | Projects | Guilds |

Generate Report   Generate PDF Link

## Bird Use Days (unadjusted for area) for MI-7 and Year 2016

CSV

Species	Location	StartDate	EndDate	BUD	Corrected_BUD	Variance	LowerLim	UpperLim	Ndays
American Black Duck	MI-7	2016-01-06	2016-11-21	30	74	0	0	0	15
American Coot	MI-7	2016-01-06	2016-11-21	9812.5	10043.5	40669475.6292	NA	22542.9343	15
American Wigeon	MI-7	2016-01-06	2016-11-21	3892.5	4002.5	388297.992	2781.1542	5223.8458	15
Blue-winged Teal	MI-7	2016-01-06	2016-11-21	234.5	234.5	0	0	0	15
Bufflehead	MI-7	2016-01-06	2016-11-21	190.5	234.5	0	0	0	15
Canada Goose	MI-7	2016-01-06	2016-11-21	5213.5	7743.5	618055.94	6202.6159	9284.3841	15
Common Gallinule	MI-7	2016-01-06	2016-11-21	46.5	46.5	0	0	0	15
Double-crested Cormorant	MI-7	2016-01-06	2016-11-21	191.5	202.5	282955.7429	NA	1245.0943	15
Dunlin	MI-7	2016-01-06	2016-11-21	55.5	55.5	0	0	0	15
Eurasian Wigeon	MI-7	2016-01-06	2016-11-21	7.5	18.5	0	0	0	15

Showing 1 to 10 of 41 entries

Previous 1 2 3 4 5 Next

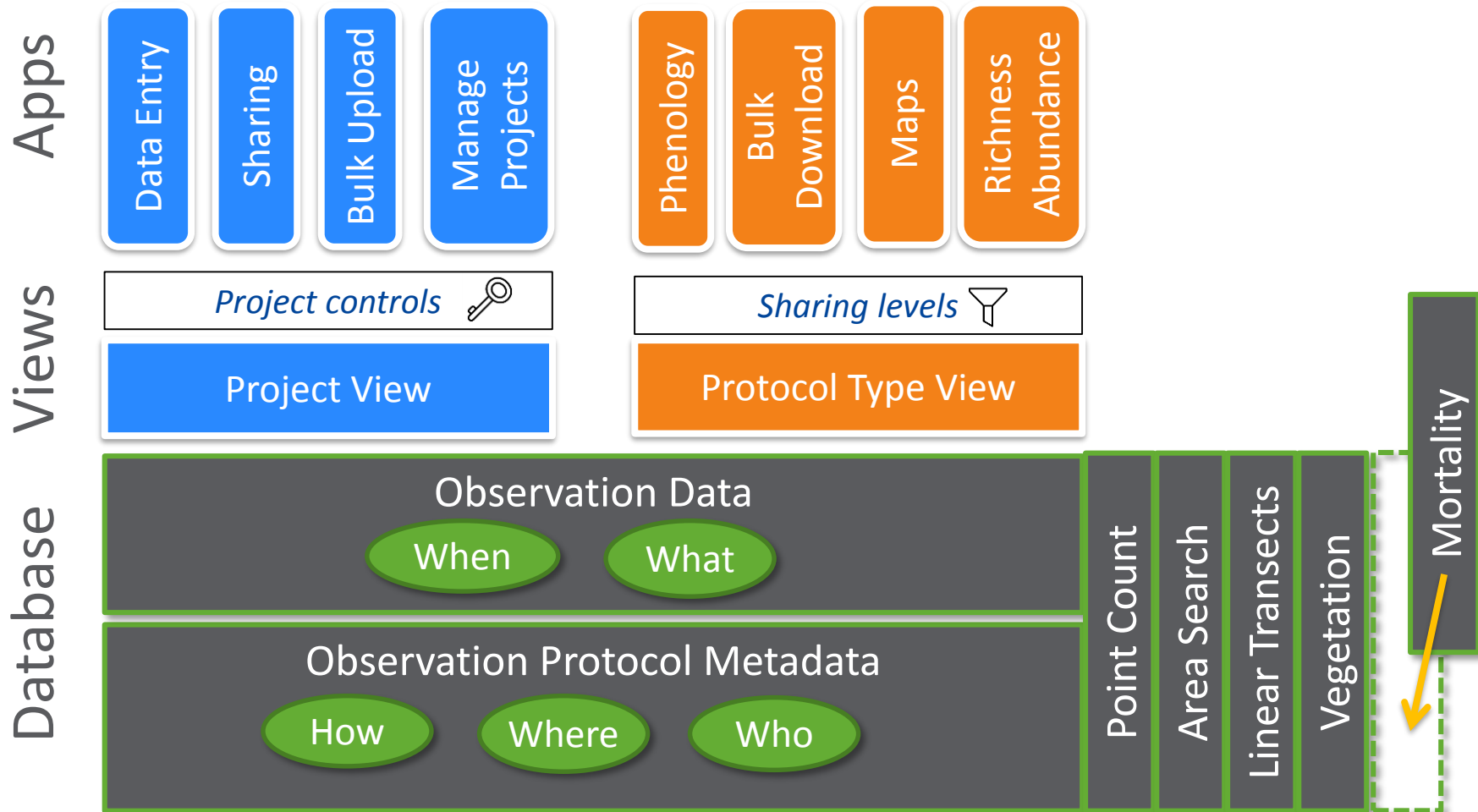Migration Curve for MI-7 and Starting Year 2016
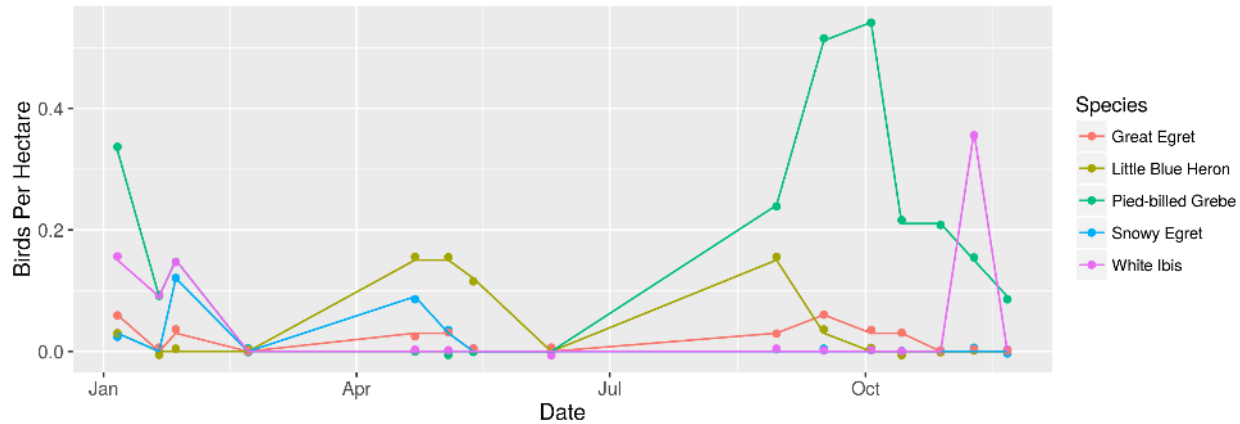
AKN / Avian-Solar CWG/ASWG Opportunities & Thoughts

- Use our infrastructure to manage & share data
  - Point Count Observations
  - Mortality Data
- Work with other AKN Partners on common conservation goals + learn from their experience
  - eg Sonoran Joint Venture & SW Avian Data Center (aka "Borderlands Node")
- Take advantage of other data collected in region by other partners
- Utilize our out-of-box analytics
- Provide IWMM-like end-to-end solution

Extending AKN Data & Applications

Apps

- Data Entry
- Sharing
- Bulk Upload
- Manage Projects
- Phenology
- Bulk Download
- Maps
- Richness Abundance

Views

- Project controls
- Sharing levels
- Project View
- Protocol Type View
- Mortality

Database

- Observation Data
  - When
  - What
- Observation Protocol Metadata
  - How
  - Where
  - Who
- Point Count
- Area Search
- Linear Transects
- Vegetation

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Some questions for you

- If all the observation data were available in one place, what types of analyses / visualizations do you want to do? What are the steps to do these manually? Do you have examples of these outputs?

- How do you want to share data between organizations? Who owns the data vs. who has the rights to use the data?

- How do you currently manage observation data? Would the AKN systems hold a copy or the official database of record?

- Do you have any standards for protocols?

- What are your data security requirements?

- How much of a turnkey system do you want?

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Thank you

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Chief Technology Officer
Aug 16, 2017

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