



NWRS Inventory and Monitoring Initiative: Building Partnerships

Jana M. Newman, PhD
National I&M Manager
USFWS, I&M Branch
Fort Collins, CO

Partnership Academy, Fort Collins, CO
June 2013



How does it all go together?



- Organizationally – where does I&M fit?
- What is the National Wildlife Refuge System?
- Who are my partners within the Service?
- Why is phenology important to I&M? To the Service?
- What are the partnerships we need to move this project forward?



National Wildlife Refuges



America's only network of Federal lands set aside primarily for the conservation of fish, wildlife, and plant resources and their habitats.



National Wildlife Refuge System Administrative Act of 1997

NWRS Mission

- “To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

Management guidance

- Administer a network of lands
- Manage to fulfill refuge mission as well as mission of the NWRS
- Complement efforts of States and other Federal agencies





**We can no longer afford to independently
toss conservation actions at the landscape
hoping something is going to stick.**

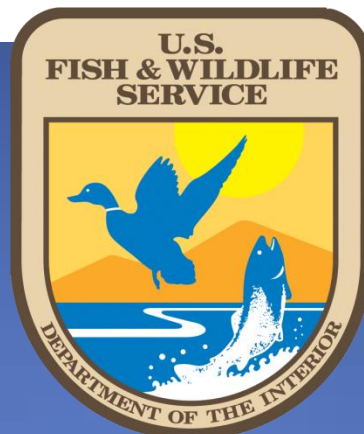


**We must be deliberate and
we must work together as a
conservation community.**



National Wildlife Refuge System I&M

The Refuge System I&M initiative works with others to assess the status of refuge lands, water, and biota, and supports achievement of conservation objectives at multiple spatial scales.

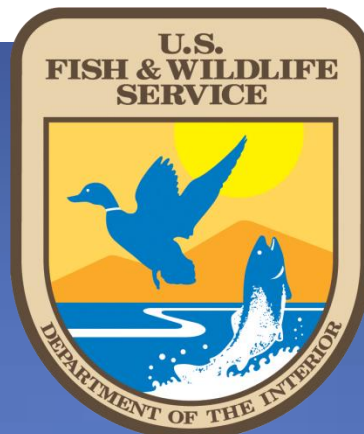


Internal Partnerships



My Conceptual Model





Regional Organization

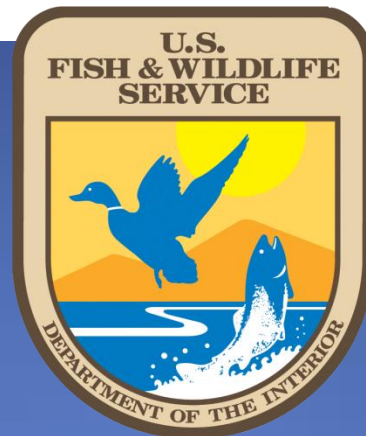
National
Wildlife
Refuge
System

Field
Stations

National
Programs





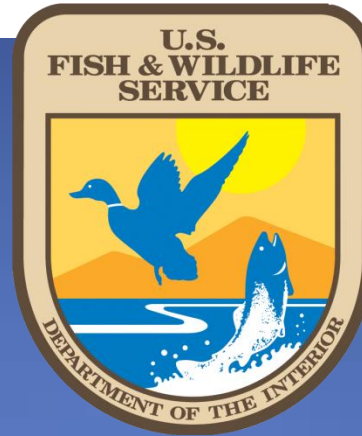


Internal Partnerships



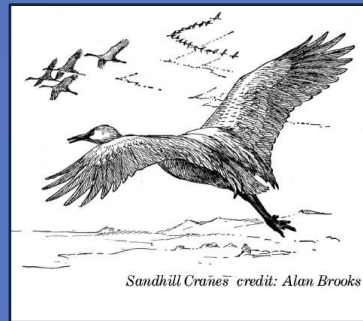
My Conceptual Model





Internal Partnerships

Migratory Birds



National Programs

Endangered Species



My Conceptual Model





Division of Natural Resources and Conservation Planning

I&M, Water Resources, HD, Air Quality...

Division of Realty

Division of Visitor Services and Communication

National
Wildlife
Refuge
System

Field
Stations





Phenology Monitoring



“Phenology...is perhaps the simplest process in which to track changes in the ecology of species in response to climate change.” (IPCC 2007)



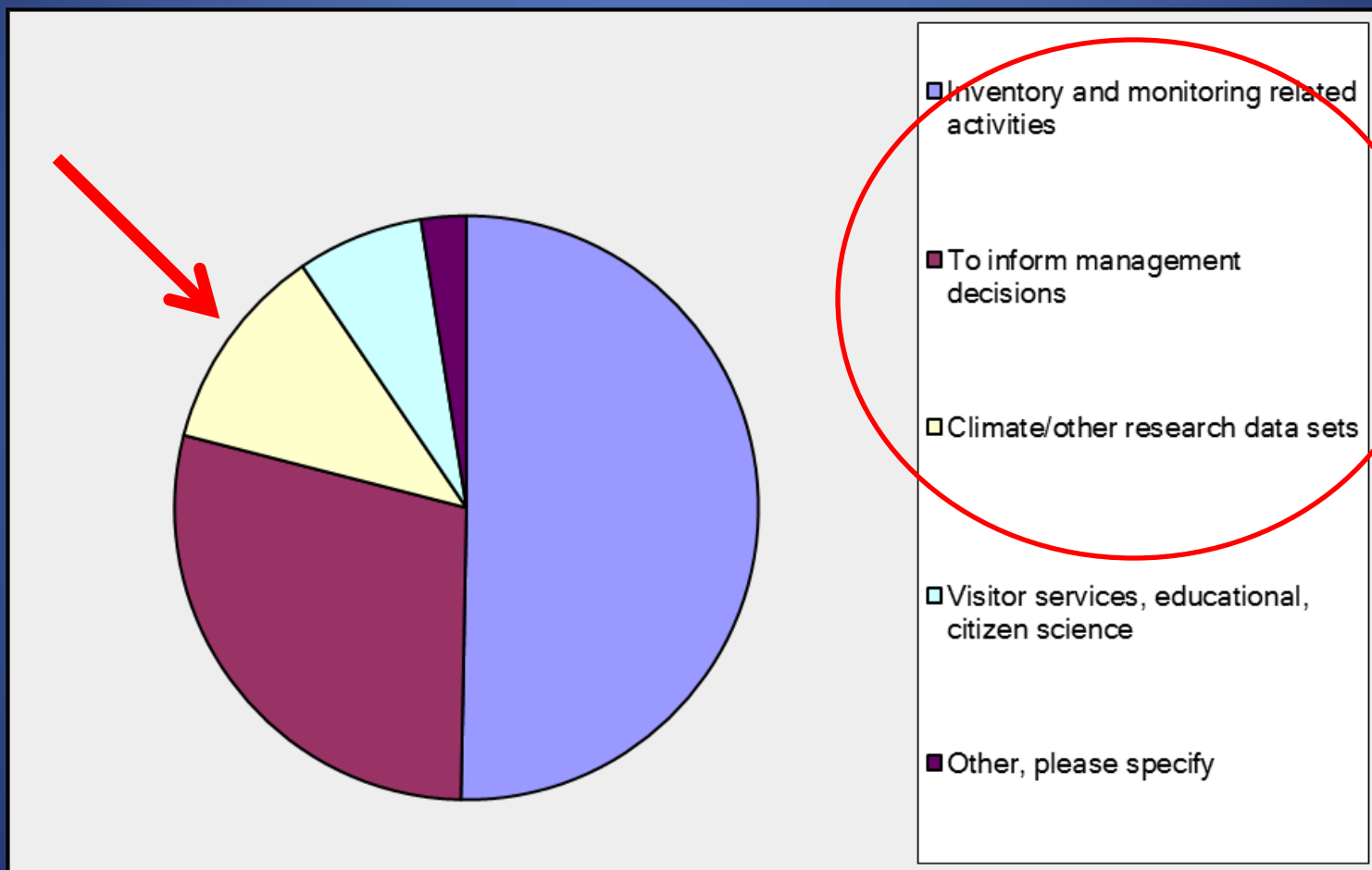
I&M and Phenology Goals

Collection and analysis of phenological data provides information on potential changes in key biological events and the resulting impact on ecosystem dynamics.

Ensure that phenological monitoring conducted on refuge land is scientifically credible and will be used to inform management questions at multiple spatial and temporal scales.

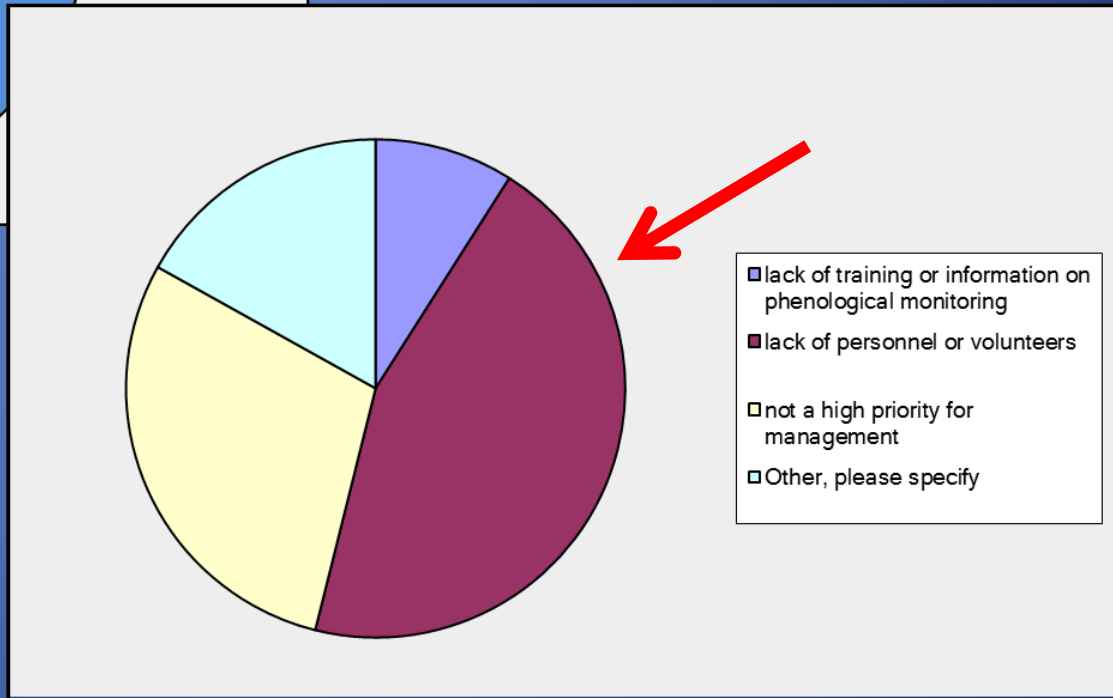
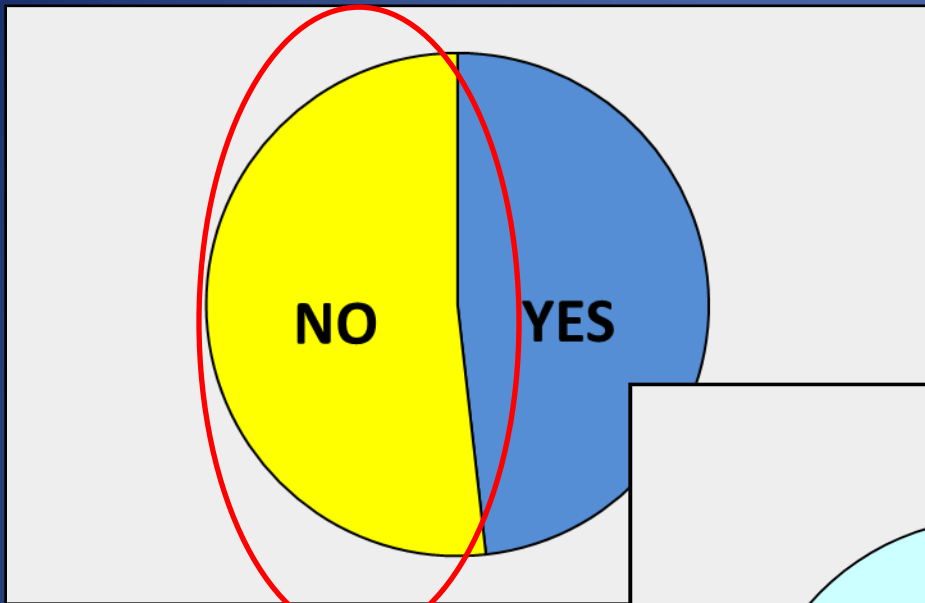


Why are refuges collecting phenology data?





Why not?

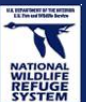
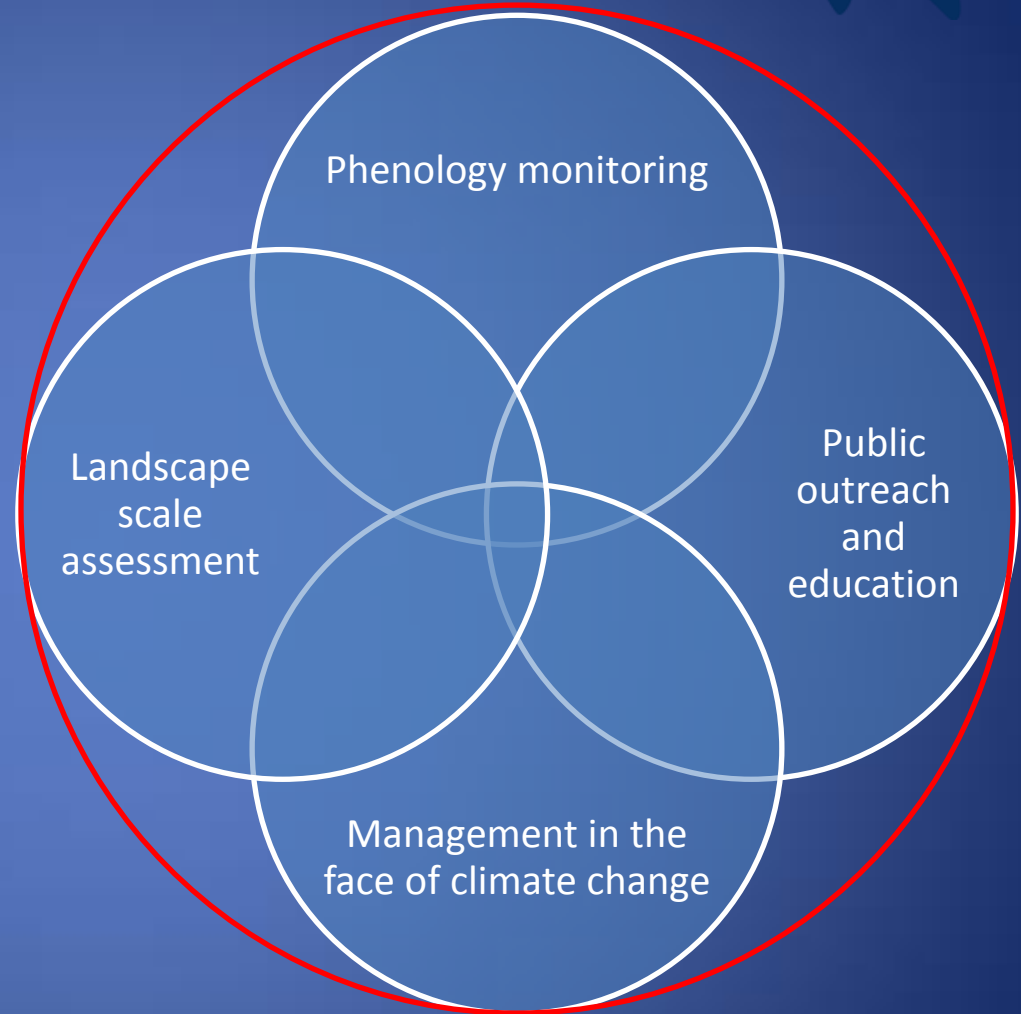






Project Goal

Increase scientifically credible phenological monitoring on refuge land through the involvement of citizen scientists to inform management questions at multiple spatial and temporal scales.





Phenology Initiative Partnerships



Natural Resource Program Center





U.S. FWS Phenology Network



A collaboration between the USFWS and the USA-NPN.

Refuge Management

How You Can Help

Phenology on the Refuges

Nature's Notebook

How You Can Help

Visitors to the Refuge system can help Refuge scientists build long-term data sets, using Nature's Notebook, as well as help motivate people of all ages to observe and learn about the seasonal changes of ecosystems around them.



The USFWS National Wildlife Refuge System and the USA National Phenology Network are using phenology as a teaching tool for the community, connecting the public with scientific research, and promoting the understanding of species' response to changes happening in our Refuges.

**How does a Refuge get started:
Already Monitoring Phenology?**







How does FWS Benefit?

Credible, interdisciplinary scientific information to inform biological planning at multiple scales

Public engagement and participation

- garner support
- enhance scientific literacy
- promote environmental stewardship

Increased efficiencies and cost savings



Best Practices in Managing Partnerships

Improve partner cultural awareness

Communication – more, more, and often

Ask for feedback – recheck partnership goals

Fulfill promises and meet deadlines



It all comes together



- I&M is refuge centric but not refuge exclusive.
- The Refuge System is America's only network of Federal lands set aside primarily for the conservation of fish, wildlife, and plant resources and their habitats.
- The Regional I&M Team is my most important link to the fields and regional organization.
- Phenological data provides information on potential changes in key biological events in the face of a changing climate.
- I&M team, refuge biological staff, regional support, visitor services, National Phenology Network, USGS, Refuge Friends, citizen scientists...