



Washington Department of Fish and Wildlife

Wildlife Program Citizen Science

Fish and Wildlife
Commission
November 2015

Wendy Connally
Bill Tweit
WDFW

Data
Conservation
Engagement

Resources

- Fees & Plates
- Grants
- National Efforts (Blue Ribbon Panel)
- + Value in Other Contributions
 - Stewardship
 - Management
 - Data Collection

Order Your License Plate Today!

Endangered Wildlife Plate



WASHINGTON MONTHLY TAX YEAR TAX
E W 0000 1
Endangered Wildlife

Wildlife Viewing Plate



WASHINGTON MONTHLY TAX YEAR TAX
W W 0000 1
Wild in Washington

Game Management Plates




WASHINGTON MONTHLY TAX YEAR TAX
W E 0000 1
WASHINGTON'S WILDLIFE



WASHINGTON MONTHLY TAX YEAR TAX
W B 0000 1
WASHINGTON'S WILDLIFE



WASHINGTON MONTHLY TAX YEAR TAX
W D 0000 1
WASHINGTON'S WILDLIFE



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WASHINGTON DEPARTMENT OF FISH & WILDLIFE



ABOUT WDFW

Home About WDFW Conservation Fishing Hunting Er

Volunteer Opportunities
Citizen Science Volunteer Opportunities

Volunteer Opportunities

STRESSOR	DESCRIPTION	ACTION NEEDED	LEVEL OF INVESTMENT
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Images: Oregon Spotted Frog Surveys
ccFlickr - Taylor Goforth USFWS-2012; BLM2015

Priorities

Species & Habitats
of Greatest
Conservation Need
(SGCN & HGCN)

State Wildlife Action
Plan 2015

Service Drivers

Data Cycle:
Understand, Act,
Adapt

Needs

Data + Capacity

Field Work - Collection

Entry

Quality Control +
Management

Analysis + Collaboration

Communication



Image: WDFW Gallery, Bo Roberts 2012

Credible, relevant, defensible
information to inform conservation
action

Partnering with Purpose includes the
Public

Wildlife recreation and under-served
non-traditional constituencies -
engagement

Fiscally sound

Communication: conservation does
not happen without people

WDFW
Citizen
Science
Benefits

Wildlife Program Citizen Science Initiative

Criteria

8 new PROJECTS

Survey, monitor **SGCN** and **Game** species, surrogates, habitats, conditions, responses



Images: Surf Scoter – ccFlickr Linda Tanner 2008;
Streaked Horned Lark - David Maloney

Project Types

WDFW “marketed”
+ crowd-sourced

WDFW-managed

Partner + WDFW
technical guidance



“Marketed” + Crowd-sourced WDFW Publicly-available Priorities

Target Audience
Community Curation

Guided App Use



Visualize & Share



Data QUALITY &
UTILITY

<http://wdfw.wa.gov/viewing/moose/>

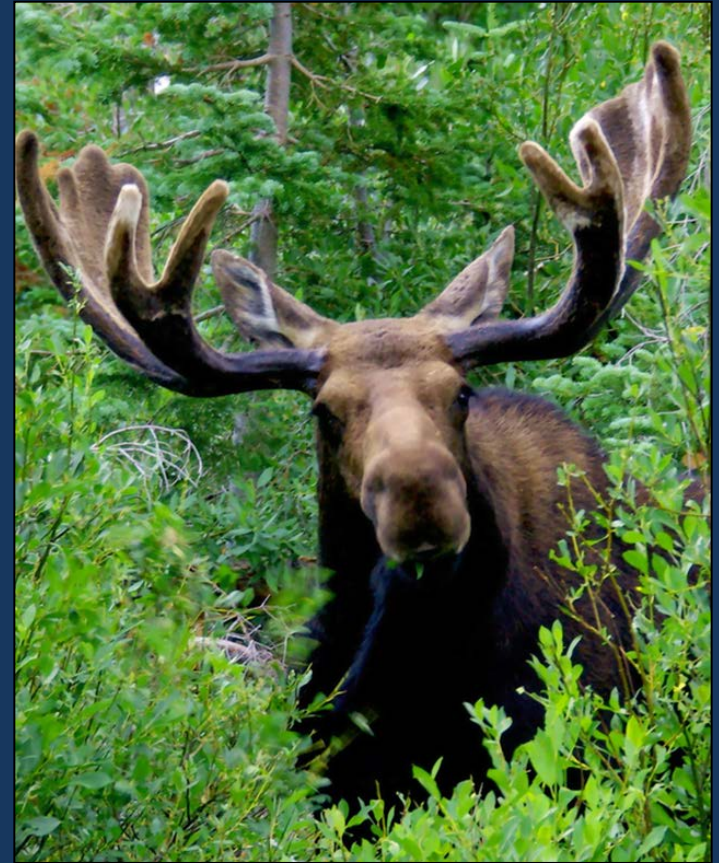
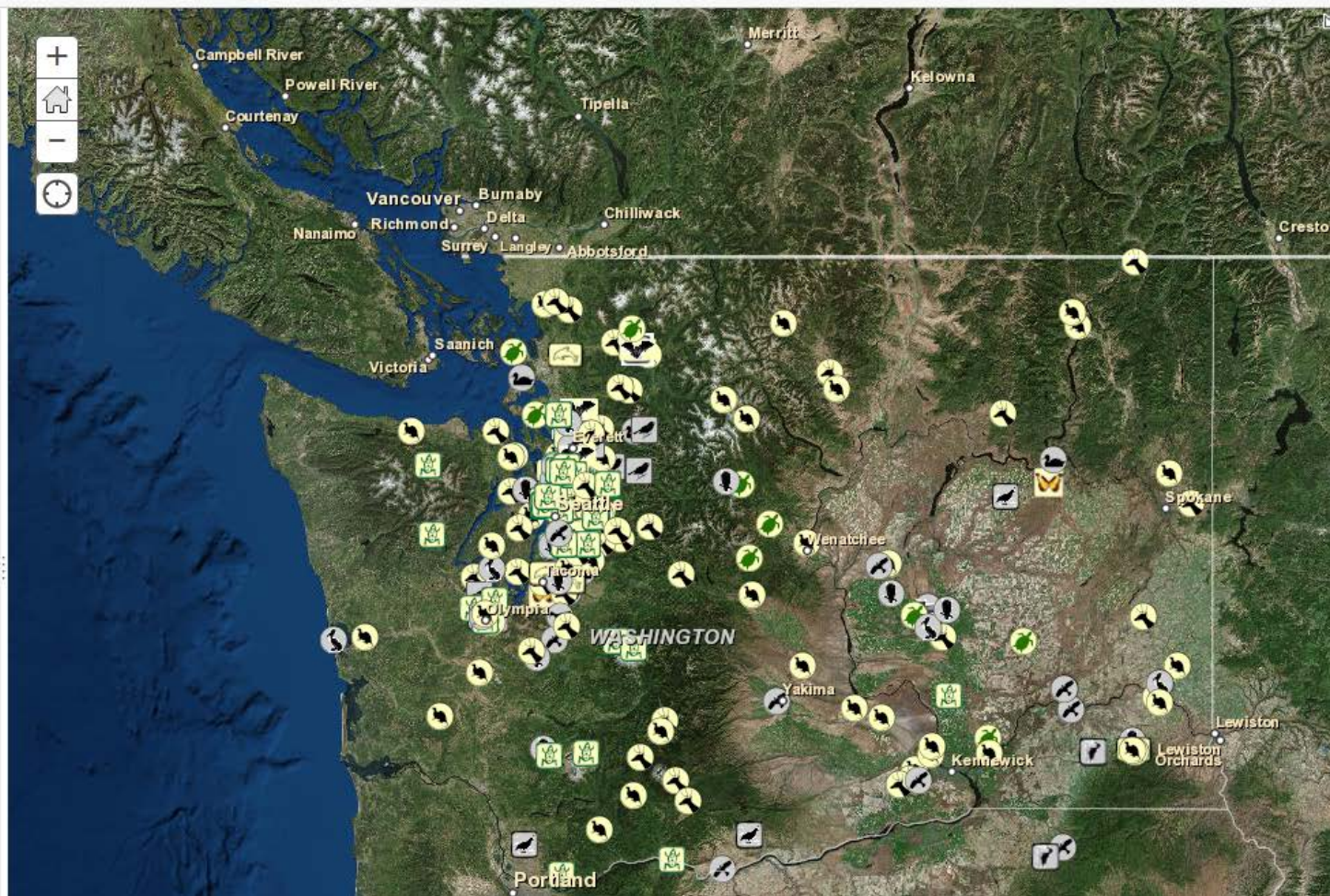


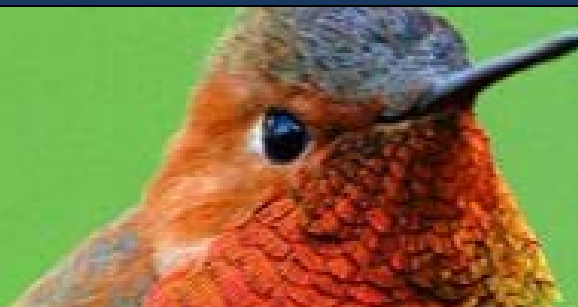
Image: Shiras Moose – ccFlickr ALHikesAZ 2008

Public Wildlife Point Observations

- Amphibians
- Reptiles
- Beetles
- Butterflies and Moths
- Dragonflies
- Bats
- Marine Mammals
- Small and Medium Mammals
- Large Mammals
- Loons
- Owls
- Pelicans
- Quail and Grouse
- Raptors
- Seabirds
- Songbirds
- Waders and Shorebirds
- Waterfowl
- Woodpeckers



<http://wdfw.wa.gov/viewing/observations/sgcn/>



Welcome to eBird Northwest

Birding in the 21st Century.

eBird

Northwest

<http://ebird.org/content/nw>

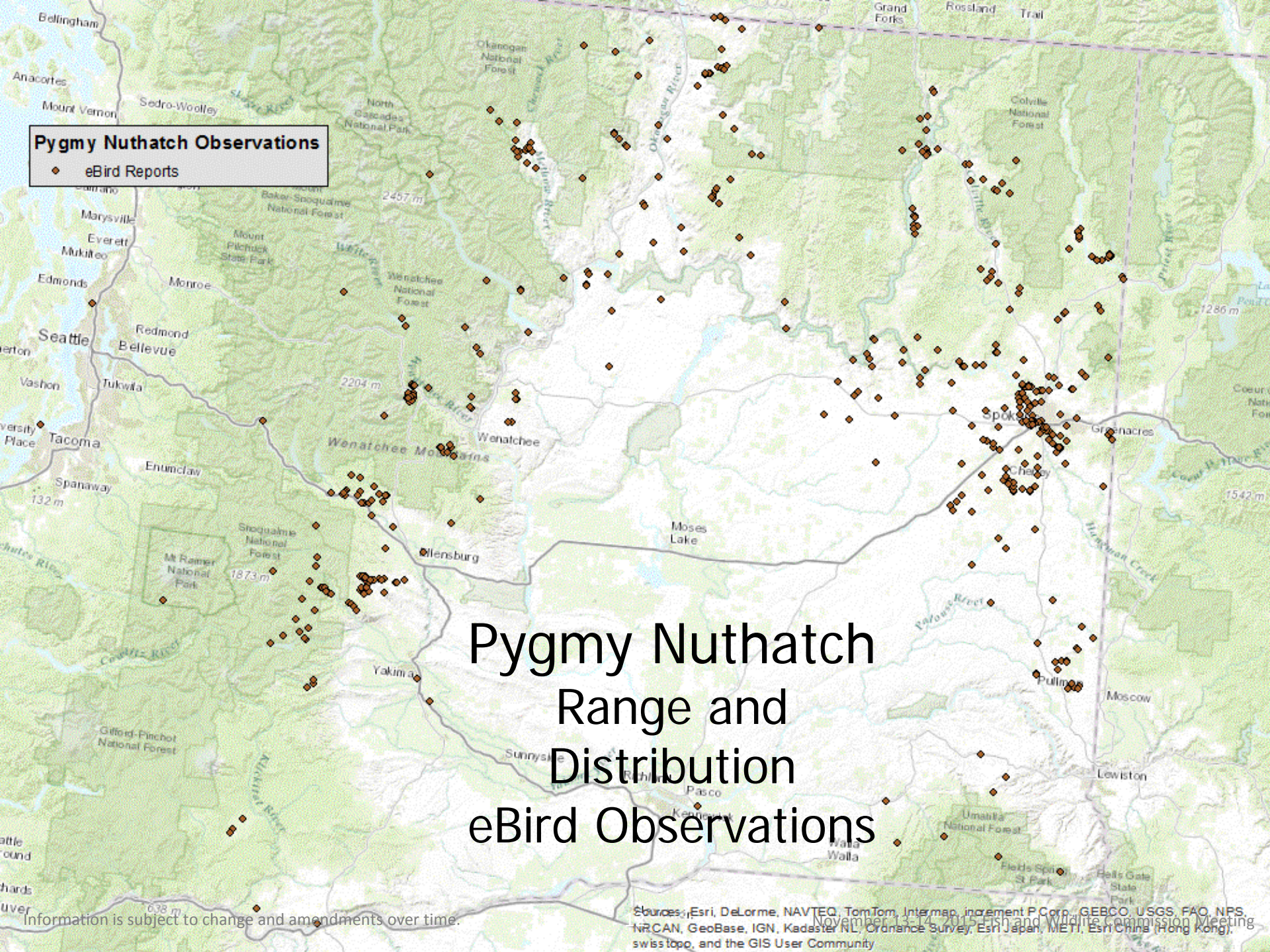
About - Portal Partnership

News and Features updated
weekly

Citizen Science Projects page

Pygmy Nuthatch Observations

◆ eBird Reports



Pygmy Nuthatch Range and Distribution eBird Observations

Information is subject to change and amendments over time.

Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, and the GIS User Community

Pygmy Nuthatch Observations

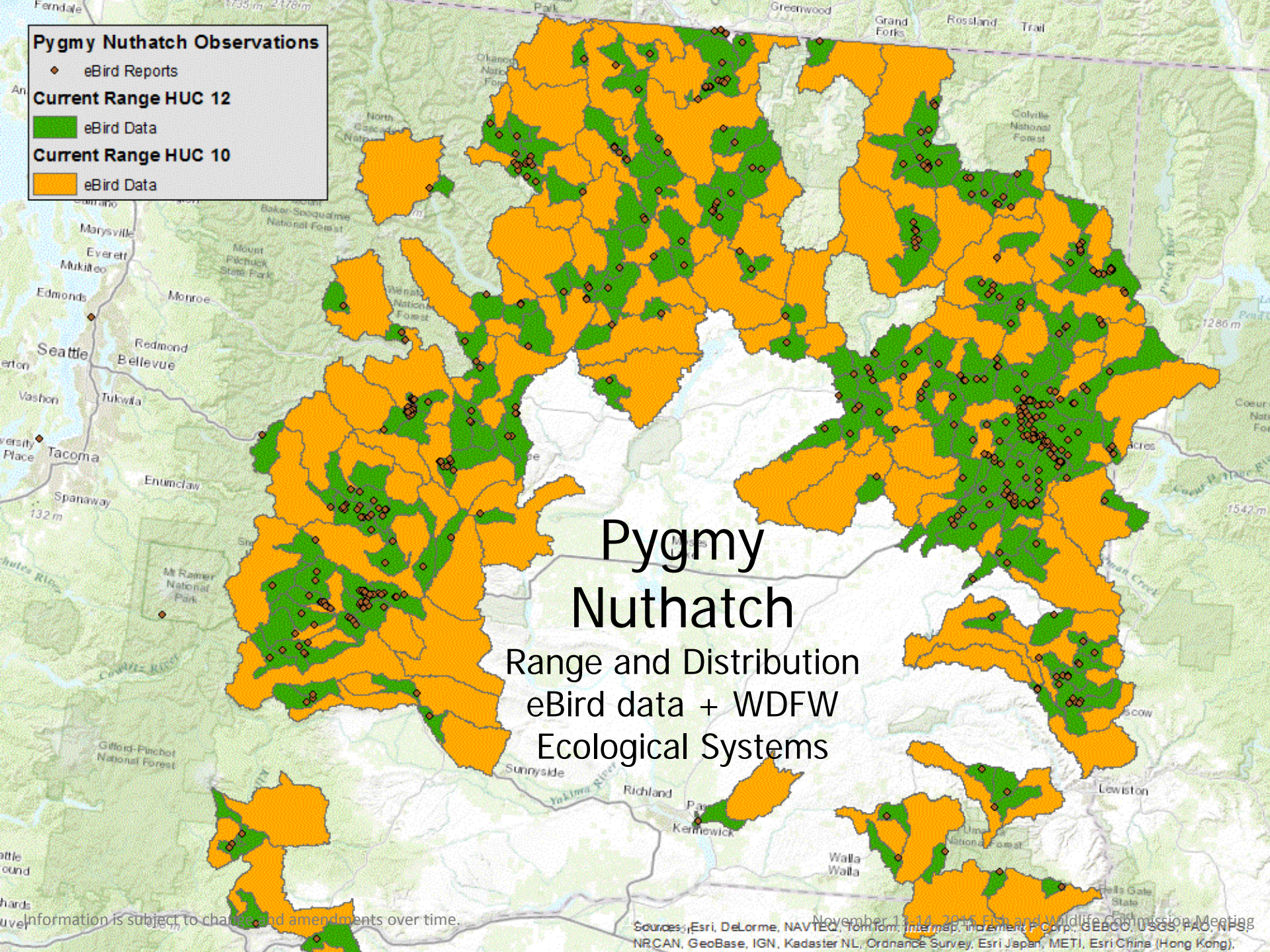
◆ eBird Reports

Current Range HUC 12

■ eBird Data

Current Range HUC 10

■ eBird Data



Pygmy Nuthatch

Range and Distribution
eBird data + WDFW
Ecological Systems

Information is subject to change and amendments over time.

Sources: Esri, DeLorme, NAVTEC, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), November 11, 2014, 2014 Fish and Wildlife Commission Meeting

Marketed + Crowd-sourced “guided and curated” by Agency Leads+

« Projects Terms & Rules | Join this project



Herps of Texas

species observed

Add Observations

Presented by

Texas Natural History Collections
TEXAS NATURAL SCIENCE CENTER
THE UNIVERSITY OF TEXAS AT AUSTIN

TEXAS PARKS & WILDLIFE

Browse the *Amphibians of Texas* & the *Reptiles of Texas* Field Guides

<https://www.inaturalist.org/projects/herps-of-texas>



Wyo Bio

Wyoming Biodiversity Citizen
Science Initiative

<http://wyobio.org/>

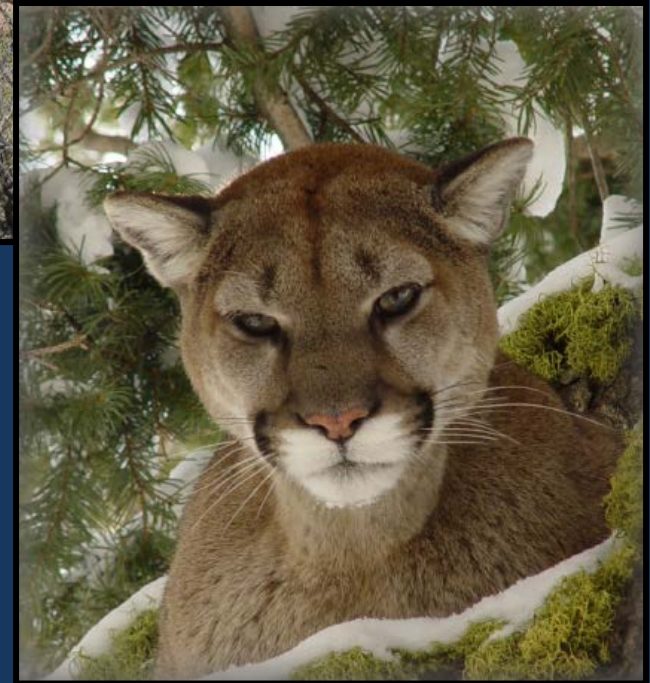
WDFW- Managed

Ecological Integrity Monitoring - Wildlife Areas

<http://wdfw.wa.gov/about/volunteer/eim/intro/>

Using DNA to Estimate Cougar Populations in Washington

<http://wdfw.wa.gov/publications/01546/>



Images: EIM Monitoring Volunteer, - DFW;
Cougar – DFW Biologist Beausoleil

WDFW- Managed "Hybrid" Project

Hunter Survey + Online
Public Reporting Tool +
Protocol-driven Citizen
Science Volunteers

283 group observations

2,600 elk

7,000 miles/141 surveys

96% compliance rate
on returned data

Hoof Lesions



Help Monitor Hoof Disease

Wildlife managers are seeking reports on elk with hoof deformities observed in specific areas of southwest Washington. [View a map and detailed instructions on how to report observations in these areas.](#)

[Report Limping Elk](#)

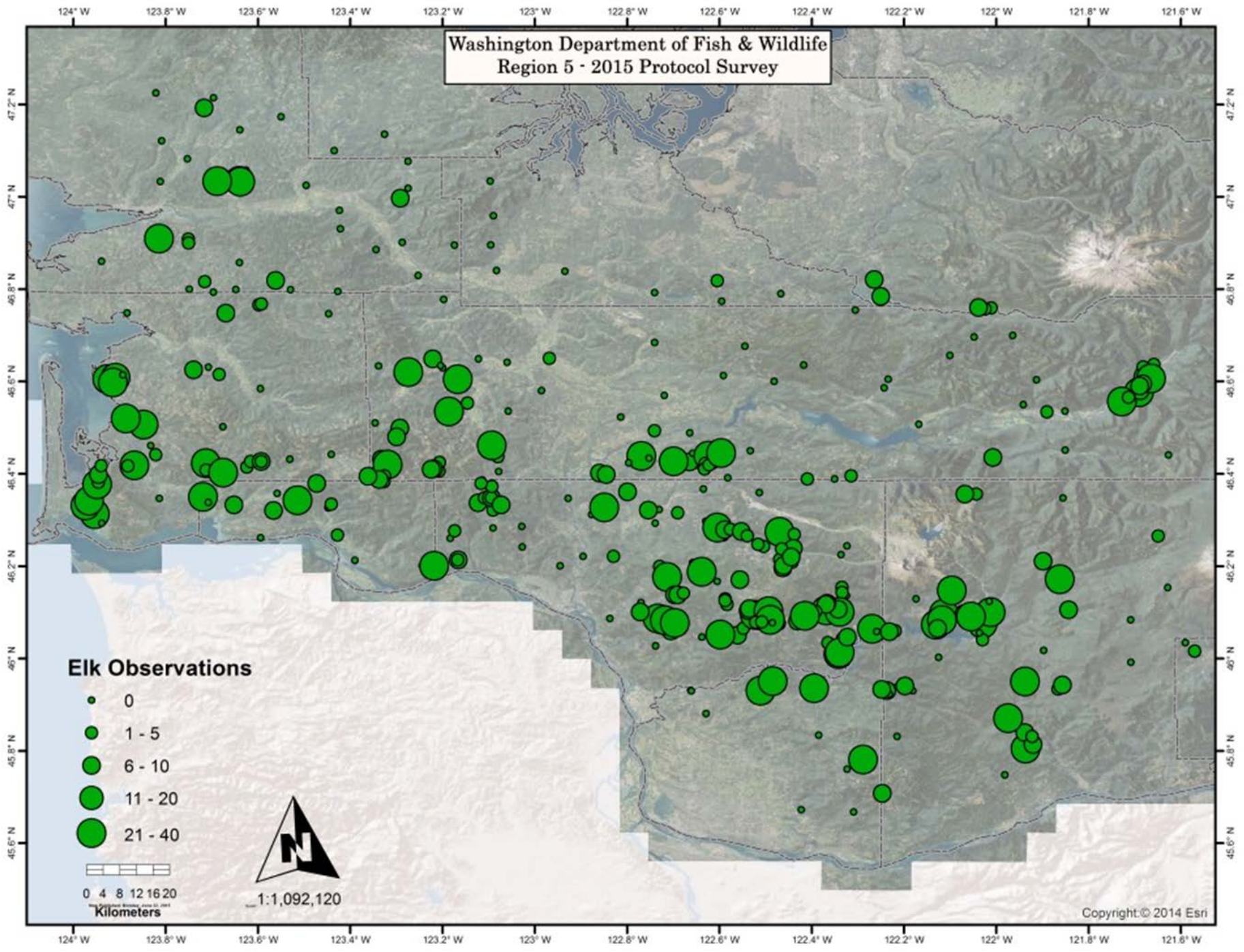
[Report Dead Elk with Hoof Deformities](#)

http://wdfw.wa.gov/conservation/health/hoof_disease/

Hundreds of Hours
Average/Volunteer = 6 hrs
Portland to Seattle +

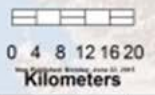
Elk Hoof Disease Survey Level of Effort

Washington Department of Fish & Wildlife
Region 5 - 2015 Protocol Survey



Elk Observations

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 40



1:1,092,120

WDFW Biologists in
4 Districts

WDFW-developed
survey design and
protocols

WDFW-recruited
volunteers

Partnership with
Pacific Biodiversity
Institute

<http://www.pacificbio.org/>

WDFW- Managed “Hybrid” Project

Western Gray Squirrel Status Assessment



Image: Western Gray Squirrel - WDFW publication, Rod Gilbert



Image: Sage Thrasher
cc Flickr Tom Benson 2014

Partner-Managed + WDFW Technical Guidance

Audubon – WDFW Sagebrush Songbirds

<http://wa.audubon.org/songbird-survey-eastern-washington-underway>

114 Citizen Scientists

186 surveys, 66 sites

158 focal sp. obs

2,060 obs. of 174 sp.



Cascade Carnivores



Image: A. Carado 2015

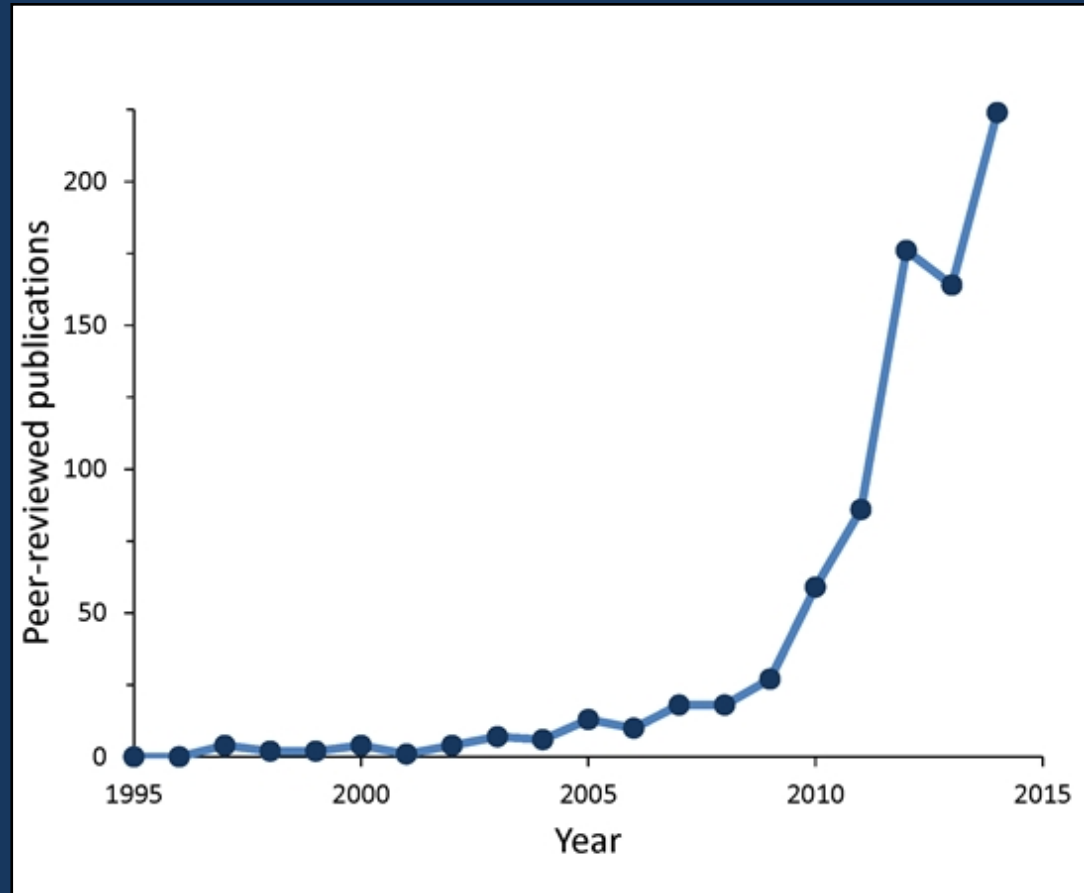
31 Citizen Scientists/year
2,350 hours and 8,500 miles in 2014
42 wildlife camera surveys
Trail transects in 50 survey units

<http://cascadescarnivoreproject.blogspot.com/>

Future of Citizen Science

1.3 to 2.3
million
volunteers
contribute
\$667 million
to \$2.5
billion in-kind
annually

January 2015



September 2015 Fig 1 McKinley et al *Issues in Ecology* 19.

Future Vision Citizen Science WA Network

Meet information needs
for WA biodiversity
conservation and
management
through a
large and networked
Citizen Science partnership



Questions?

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Image: Pacific Clubtail – ccFlickr DAHoffmann 2011