

Update on Terrestrial Wildlife Habitat and Population Initiatives in the Henry's Fork Watershed

**November 10, 2015
Henry's Fork Watershed Council**



**Upper Snake Regional Wildlife Staff Curtis Hendricks, Rob Cavallaro,
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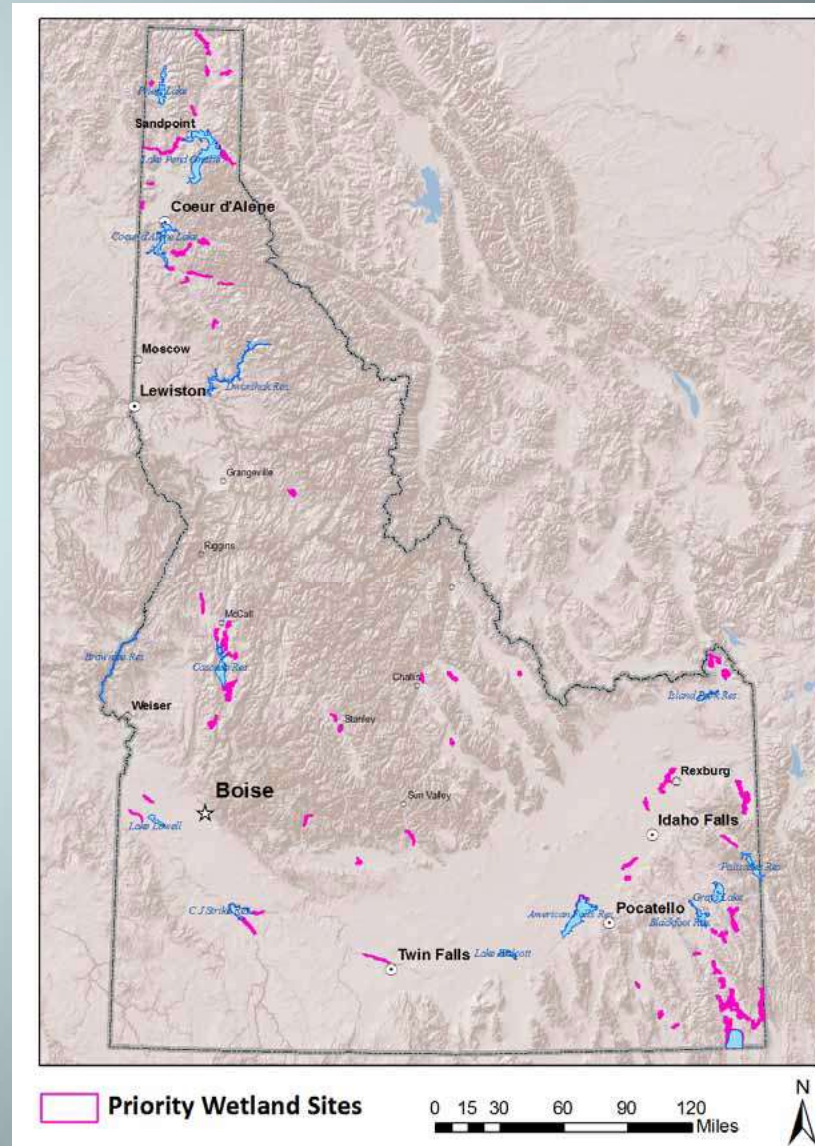
2012 Wetland Prioritization Plan

Sites are ranked by 4 factors: richness, rarity, condition, and viability.

Class I sites are the most outstanding, irreplaceable wetlands of highest conservation priority.

Class II sites provide valuable habitat and other functions, but impacts may be more noticeable.

Henry's Lake
Henry's Lake Flats/ Flat Ranch
Lower Henry's Fork
Teton Basin



Yellow-Billed Cuckoo - Status and Population

Assigned as Candidate Species by the USFWS
in July 2001

Designated an Idaho Species of Greatest
Conservation Need in 2005

USFWS publishes Determination of Threatened
Status for the Western Distinct Population
Segment of the Yellow-billed Cuckoo
(*Coccyzus americanus*) on October 3, 2013

USFWS Proposes Designation of Critical
Habitat for Western Yellow-Billed Cuckoo on
August 15, 2014 – Including Idaho

Population Estimate for Western DPS is
???????



YBCU ESA Listing Rationale

USFWS determined that the western YBCU is likely to become endangered throughout its range within the foreseeable future, based on the immediacy, severity, and scope of the threats to its continued existence.

Habitat loss associated with manmade features that alter watercourse hydrology so that the natural processes that sustained riparian habitat in western North America are greatly diminished.

Loss and degradation of habitat has also occurred as a result of livestock overgrazing and encroachment from agriculture.

Habitat loss results in the additional effects associated with small and widely separated habitat patches such as increased predation and reduced dispersal potential. This threat is particularly persistent where small habitat patches are in proximity to human-altered landscapes.

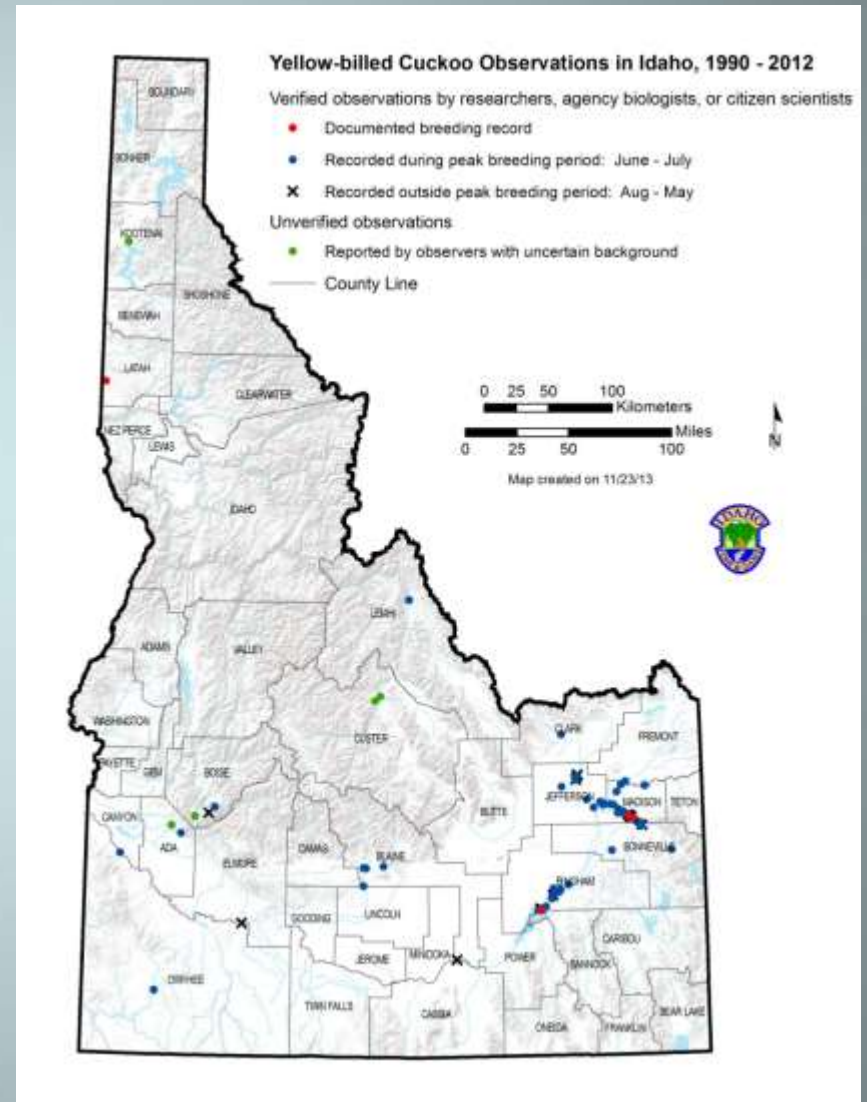
USFWS 2014



YBCU have occurred most frequently and consistently in cottonwood forests with thick understory along the Snake River in southeastern Idaho (Groves et al. 1997).

YBCU appears to be hanging on precariously in Idaho, primarily along the Snake River in the southeastern part of the state. There are probably not more than a few dozen pairs breeding annually in the state, and quite possibly fewer than ten pairs (Taylor 2000)

According to Reynolds and Hinckley (2005) The most important documented breeding habitat for YBCU in Idaho primarily exists on lands administered by the BLM Idaho Falls District Office and adjacent private lands.



Habitat Mapping and Description

River Reach	Area (acres)		
	Suitable	Unsuitable	Grand Total
Henrys Fork	640	391	1,031
South Fork Snake River	2,391		2,391
Snake River	1,968		1,968
Big Lost River		362	362
Salmon River		551	551
Grand Total	4,999	1,304	6,302

River Reach	Suitable Habitat (acres)								
		Management Area (Acres, %)*							
		Bureau of Land Management		US Forest Service		Private		Other	
Henrys Fork	640	103	16%			477	75%	60	9%
South Fork Snake River	2,391	1,651	69%	204	9%	386	16%	150	6%
Snake River	1,968	1,289	66%			455	23%	218	11%
Grand Total	4,999	3,043	61%	204	4%	1,318	26%	427	9%

Rocky Mountain Bird Observatory Field Protocol for Spatially Balanced Sampling of Landbird Populations 2011

Hanni, D. J., C. M. White, R.A. Sparks, J. A. Blakesley, J. J. Birek, N.J. Van Lanen, and J.A. Rehm-Lorber. 2011. Field protocol for spatially-balanced sampling of landbird populations. Unpublished report. Rocky Mountain Bird Observatory, Brighton, CO. 41 pp.



Riparian Obligate

Cottonwood Forest – In Idaho, YBCU occurs most frequently and consistently in low elevation cottonwood forests with thick understory (Groves et al. 1997a, Taylor 2000, Idaho CDC 2005).

Large Patches - One study in Ca found cuckoos occupied 9.5% of 21 sites 20 to 40 ha in extent, 58.8% of 17 sites 41 to 80 ha in extent, and 100% of 7 sites greater than 80 ha in extent (Laymon, 1998)

Intact Understory - Dense understory foliage appears to be an important factor in nest site selection (Laymon et al. 1993).

Live Water – Important for sustaining prey base and cooler moister temps provide better nesting conditions (Johnson 2104).

Adjacent Natural Habitat – Unnatural habitat negatively affects occupancy (Saab 1999; Johnson 2013).



South Fork Snake



Snake River

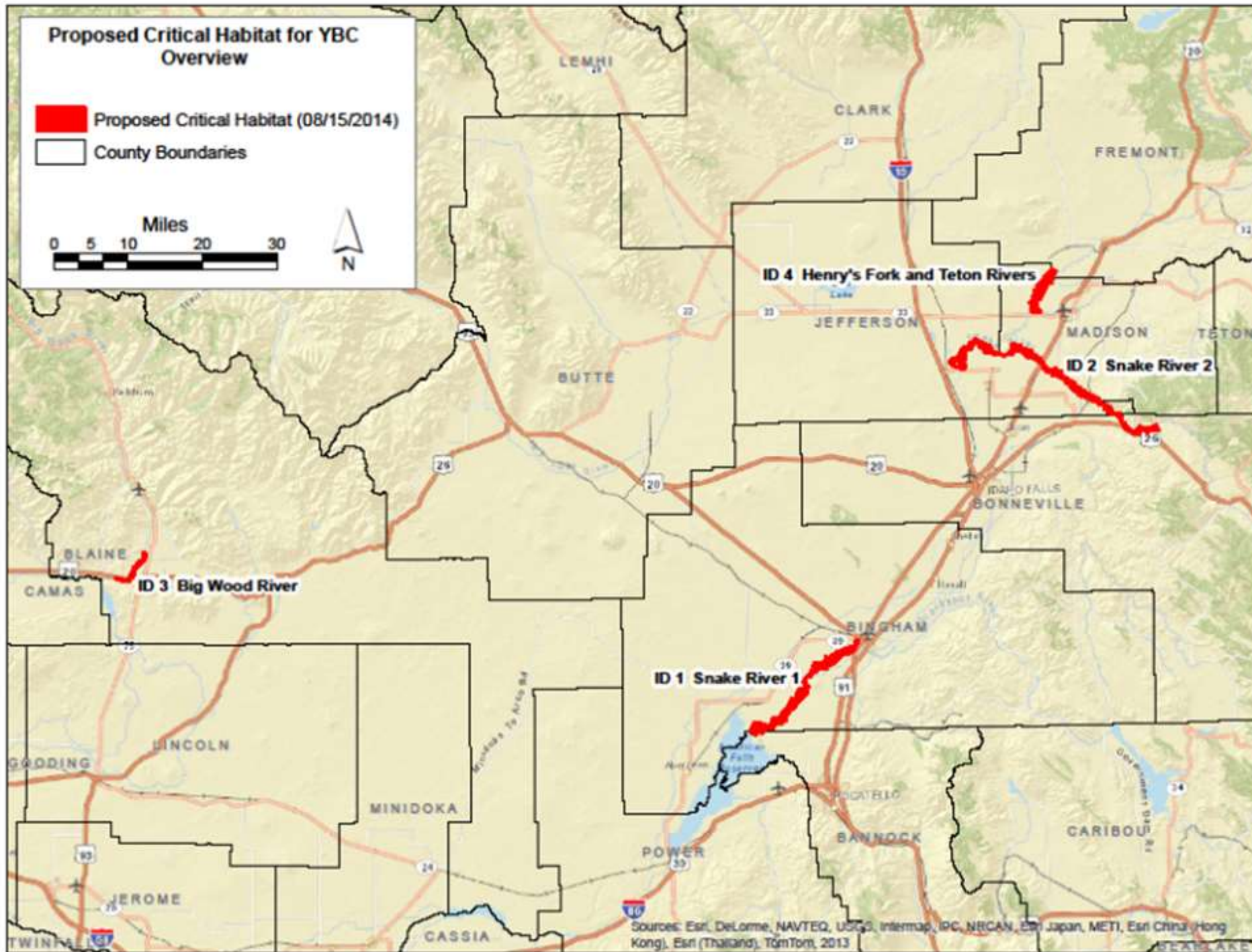


Lower Henrys Fork River

Proposed Critical Habitat for YBC Overview

- Proposed Critical Habitat (08/15/2014)
- County Boundaries

Miles
0 5 10 20 30



East Idaho Conservation Strategy – Land Management and Private Lands Conservation

Expand Snake River Area of Critical Environmental Concern (ACEC)

An ACEC is an area on BLM lands where special management is required for protection or to prevent irreplaceable damage to important scenic values, fish and wildlife resources or natural systems or processes (SRAOP 2008).

ACEC management objectives:

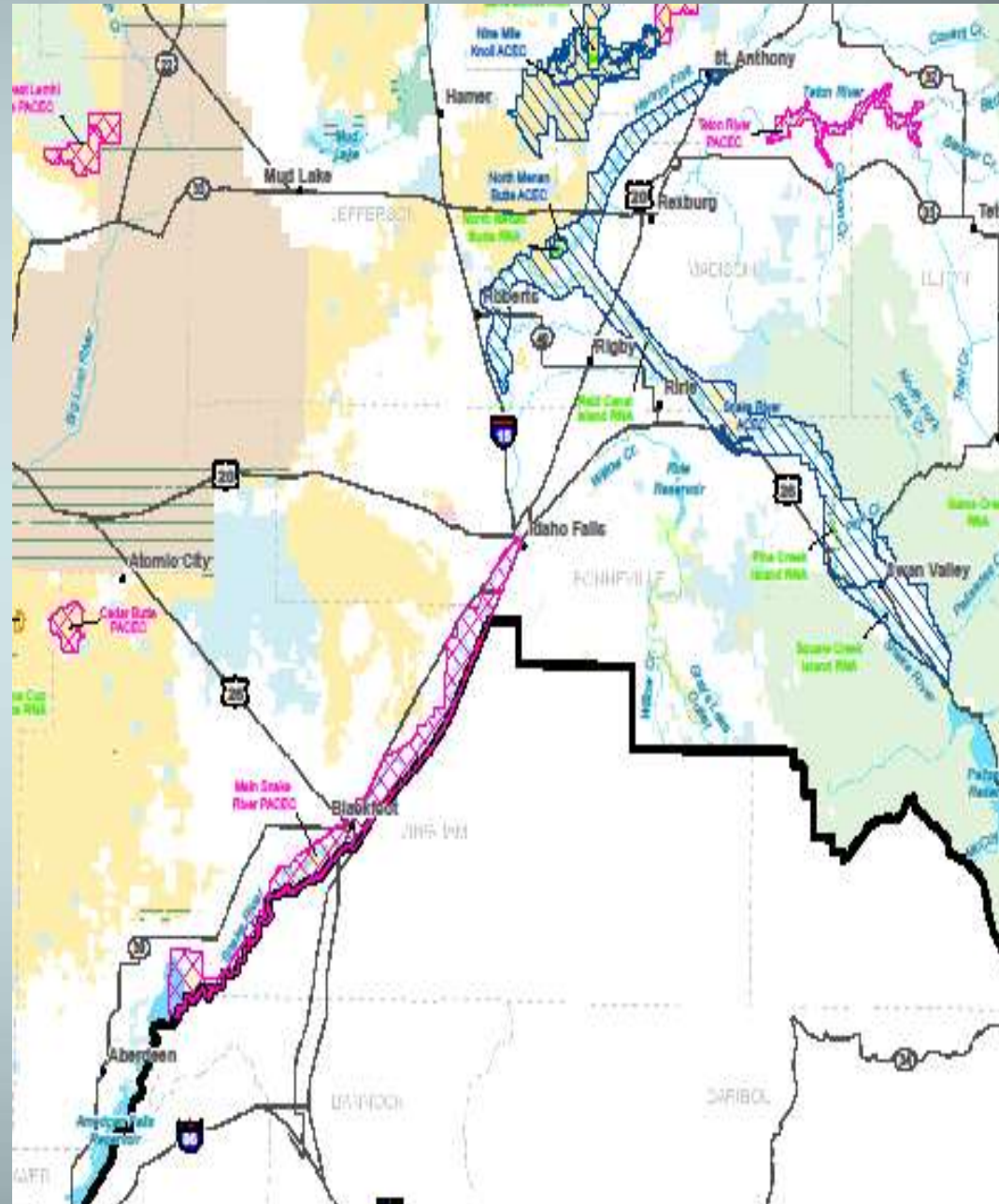
- Maintain and perpetuate the cottonwood-riparian ecosystem.
- Initiate a lands program to block up public land ownership and identify boundaries.
- Maintain recreation opportunities and uses at a level that is compatible with preserving other resource values.

ACEC is crucial frame work for private lands conservation

- \$50 million for private land conservation over the last 15 years – protected about 20,000 acres
- Enables more coordinated Section 7 consultation
- Allows for Watershed approach to river and riparian management and conservation

Proposed ACEC Expansion

Alt B of ongoing Resource Management Plan revision



Eastern Idaho Conservation Strategy – Water Management

Continue Efforts to include Wildlife Conservation in Water Management

South Fork – Palisades Dam flow management

Henry's Fork Watershed Council

Collaborative efforts to pursue an ecological systems approach to water management



Habitat Use by Foraging White-faced Ibis in Eastern Idaho



Idaho Fish and Game, Intermountain Bird Observatory



White-Faced Ibis Ecology



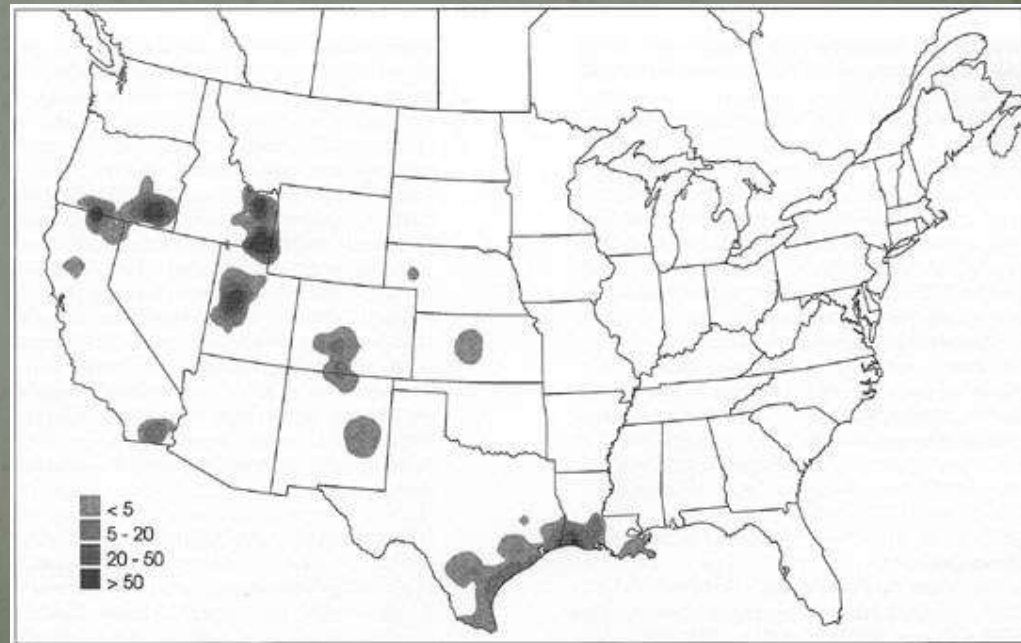
Nest in large protected deep marshes
in tall emergent vegetation

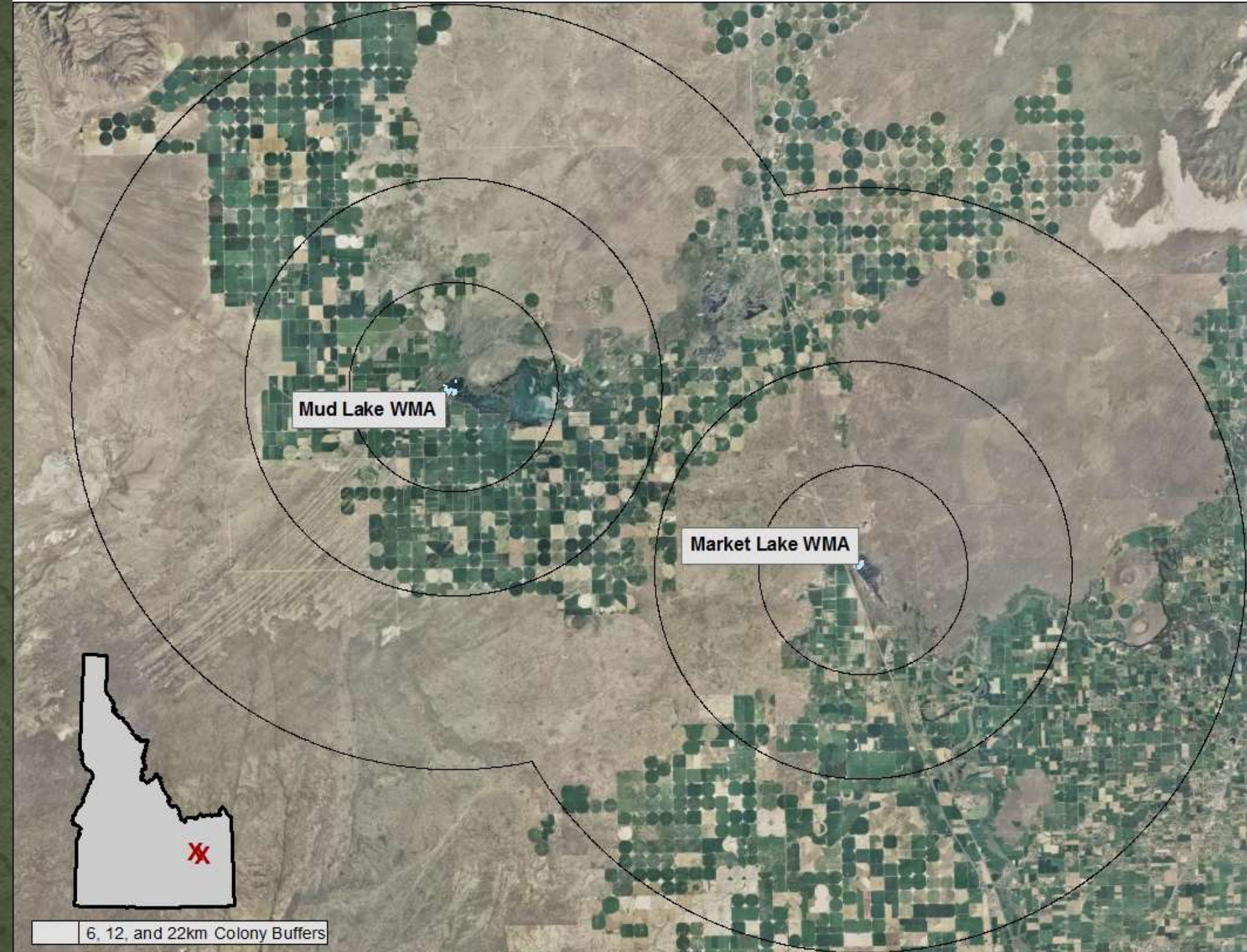


Forages in nearby shallow wetlands
and irrigated ag. fields for invertebrates

White-faced Ibis in the West

- Approximately 160,000 breeding birds
- 6 colonies in Idaho - Market Lake WMA is largest
- 32,000 breeding ibis in 2012
- Market Lake and Mud Lake WMAs are core areas for breeding ibis in the west; 20-25% of western population





Foraging Habitat

- **Habitat Type**

- Flood-irrigated: 75%
- Natural wetlands: 12%
- Flooded corners of center-pivot fields: 8%
- Sprinkler-irrigated, Center Pivot < 5%



Conclusions

- WFIB in the Market Lake/Mud Lake complex are strongly tied to flood-irrigated fields
- Show preference for foraging in alfalfa fields, but use other flooded crop fields
- WFIB from Market Lake are foraging further from colony than is found in literature.

Recommendations

- Maintain at least current levels of flood irrigation around WMAs
 - Within 12km of Mud and 22km of Market
- Conserve shallow wetlands
- Restore or create additional shallow wetlands where feasible



Regional Conservation Partnership Program (RCPP)

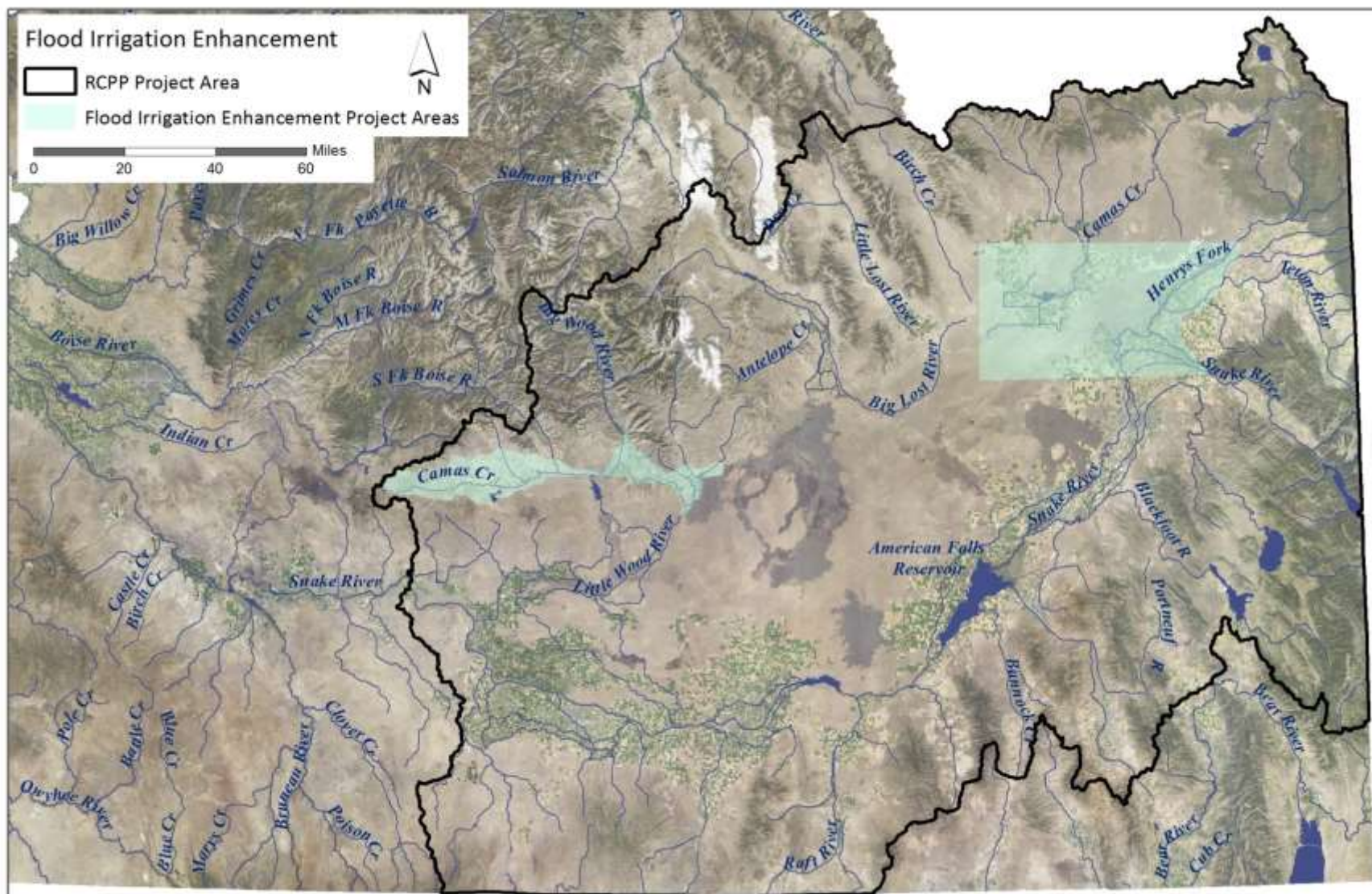


- New in 2014 Farm bill-nearly \$400 M available
- Idaho partners successful with a 2015 grant (\$1.2 M)
 - Funded through EQIP

- Project 3: Flood Irrigation Enhancements:

Partner with producers to retain and improve surface water flood irrigation systems in geographic areas that are ideal for aquifer recharge and will provide quality wildlife habitat.

RCPP Project Area



East Idaho Amphibian Breeding Survey



Rob Cavallaro, Regional Wildlife Biologist
Idaho Department of Fish and Game
2014

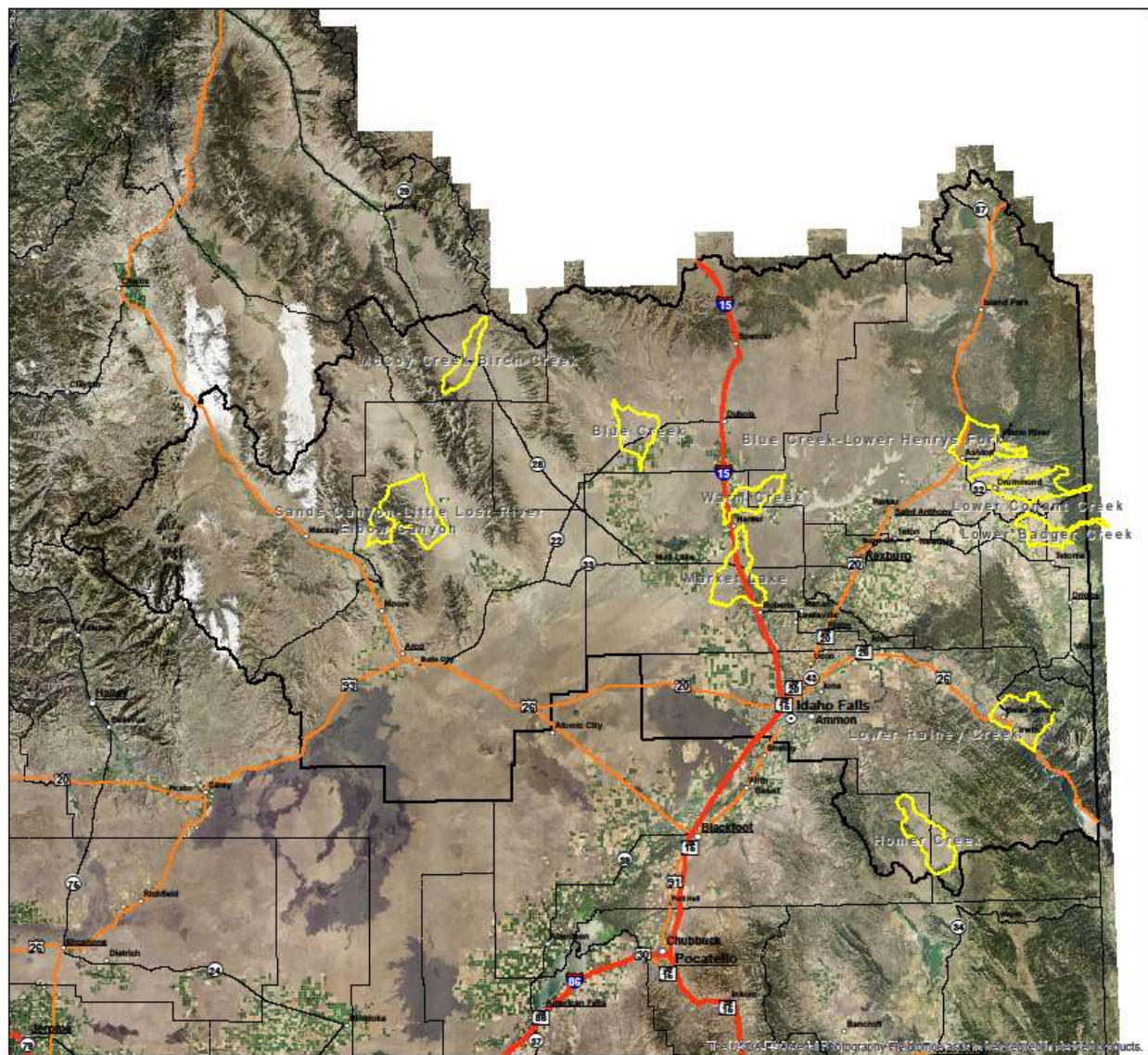


Project Objectives

- Conduct surveys in Eastern Idaho (Salmon, Upper Snake and Southeast IDFG Regions) of sites where northern leopard frog or western toad have been documented to occur since 2000
- Collect information on all breeding amphibians
- Assess breeding status, and sample individuals for *Batrachochytrium dendrobatidis* (Bd).
- Characterize amphibian distributional patterns, habitat conditions, and chytrid fungus prevalence across eastern Idaho to contribute to regional management prioritization and assess current species status.
- Estimate the proportion of these that remain occupied (i.e. what is the distribution of breeding northern leopard frog and western toad in east idaho)
- Funded by IDFG, USFWS, BLM-Idaho Falls District

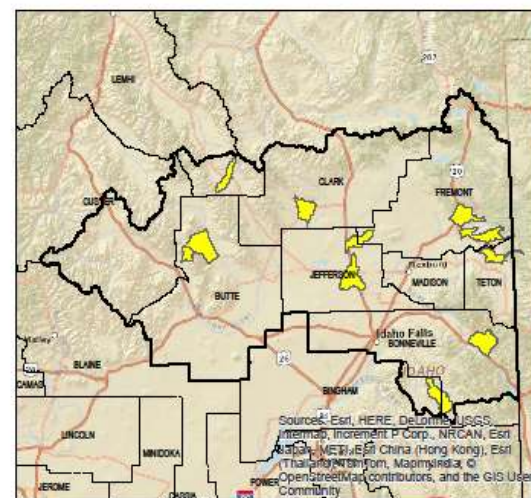
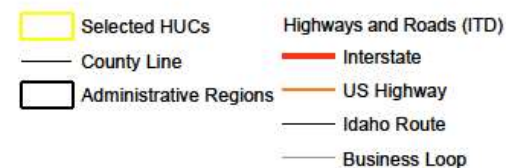
Sampling Design

- Sampling design included assessment of: 1) subwatersheds (USGS Level-6 HUCs) where extant populations of northern leopard frog and western toad had been found since 2000;
- 2) Level-6 HUCs historically occupied by northern leopard frog and western toad (≤ 1999);
- 3) One randomly selected Level-6 HUC within each Level-4 HUC in Study Areas 1 and 2;
- 4) Sites selected a priori (“ad hoc” surveys) based on priority management need (i.e., conservation sites, state Wildlife Management Areas).

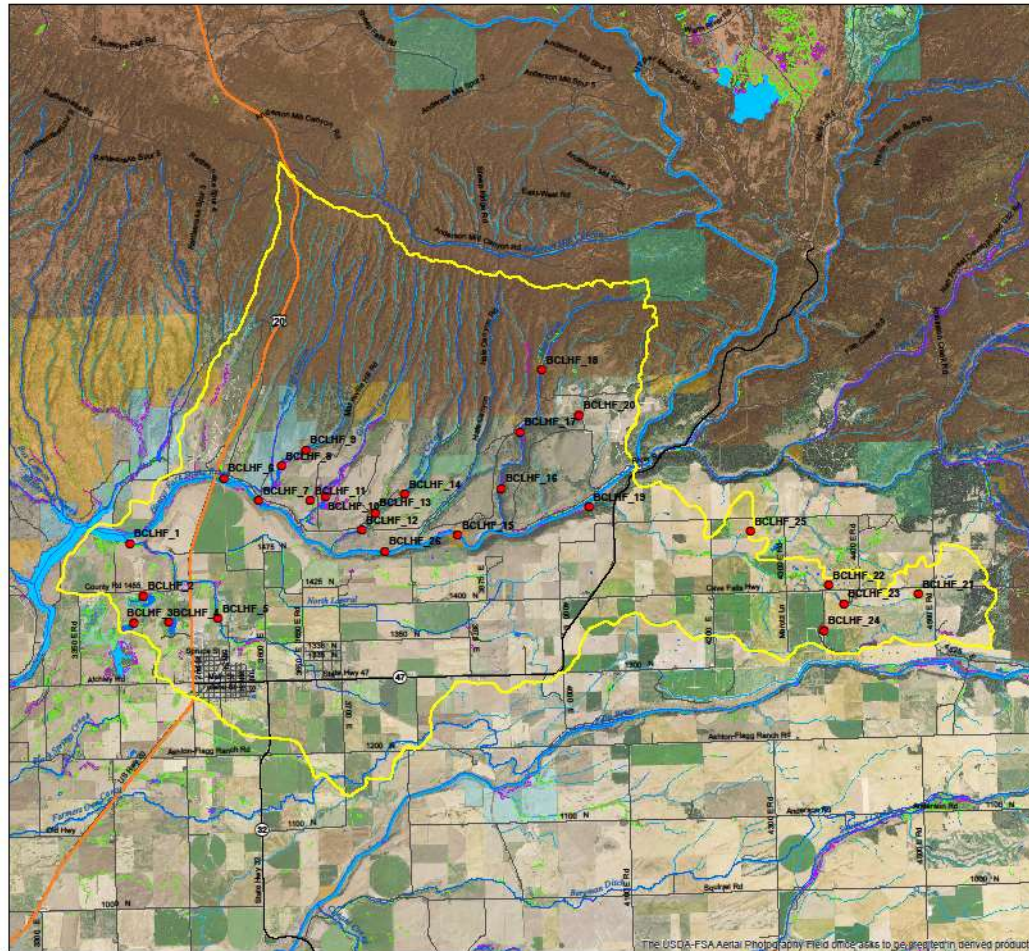


R6 Amphibian Surveys

Site Name	HUC12
Blue Creek	170402150304
BlueCreek Lower Henrys Fork	170402020701
Elbow Canyon	170402180705
Homer Creek	170402050204
Lower Badger Creek	170402040306
Lower Conant Creek	170402030303
Lower Rainy Creek	170401040604
Market Lake	170402010301
McCoy Creek - Birch Creek	170402160105
Sands Canyon - Little Lost	170402170604
Warm Creek	170402140608



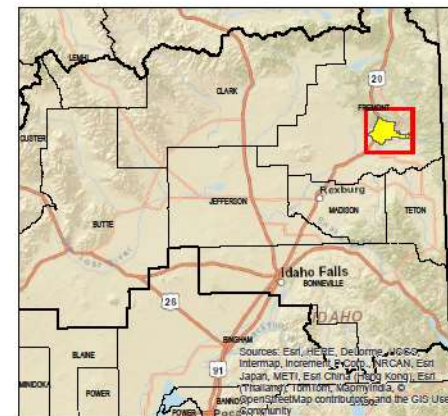
HUCs Mapped and Sample Points Delineated



Blue Creek Lower Henrys Fork

Point_ID	DWGS84_X	DWGS84_Y	Point_ID	DWGS84_X	DWGS84_Y
BCLHF_1	-111.473069	44.099098	BCLHF_14	-111.397010	44.107060
BCLHF_2	-111.468763	44.088816	BCLHF_15	-111.382994	44.098710
BCLHF_3	-111.471604	44.083576	BCLHF_16	-111.370806	44.107585
BCLHF_4	-111.462069	44.083537	BCLHF_17	-111.365254	44.118452
BCLHF_5	-111.448718	44.083885	BCLHF_18	-111.358694	44.120477
BCLHF_6	-111.445977	44.111262	BCLHF_19	-111.347133	44.103380
BCLHF_7	-111.436687	44.106730	BCLHF_20	-111.349070	44.121403
BCLHF_8	-111.430214	44.113361	BCLHF_21	-111.258625	44.084262
BCLHF_9	-111.423443	44.116302	BCLHF_22	-111.282782	44.086651
BCLHF_10	-111.418556	44.107083	BCLHF_23	-111.278895	44.082837
BCLHF_11	-111.422683	44.106367	BCLHF_24	-111.284515	44.077768
BCLHF_12	-111.408953	44.100335	BCLHF_25	-111.303606	44.097579
BCLHF_13	-111.405234	44.103655	BCLHF_26	-111.402960	44.096083

- SamplingPoints
- HUC 170402020701
- Roads
- Rivers
- Streams
- National Wetland Inventory
- Wetland Type
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Lake
 - Freshwater Pond
 - Riverine/Other
- Land Ownership (PAD-US v1.3)
 - Owner Name
 - Bureau of Land Management (BLM)
 - Forest Service (USFS)
 - State Department of Land (IDL)
 - State Fish and Wildlife (IDFG)
 - Private Landowner (easement)

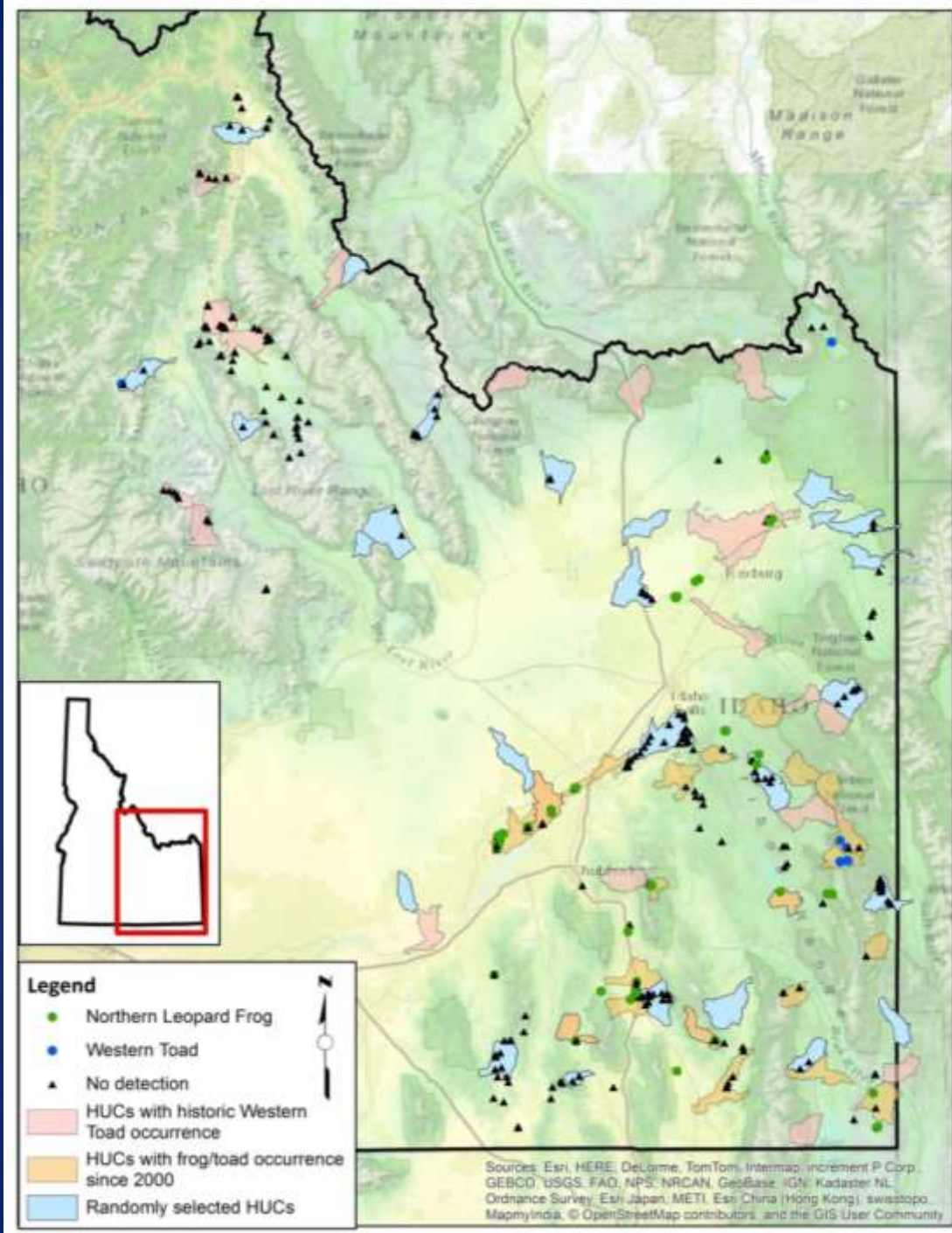


Disease Sampling

- We collected skin swabs to be used for detection of Bd using molecular techniques. Adult amphibians were handled with sterile nitrile gloves and contact with amphibian feet and ventrum were minimized. Using the same swab, we swabbed each foot bottom 5 times and swabbed the pelvic patch/underside 20 times to ensure consistency across Bd samples. Swabs were placed in vials of 95% ethanol, labeled, and stored at room temperature out of direct sunlight.



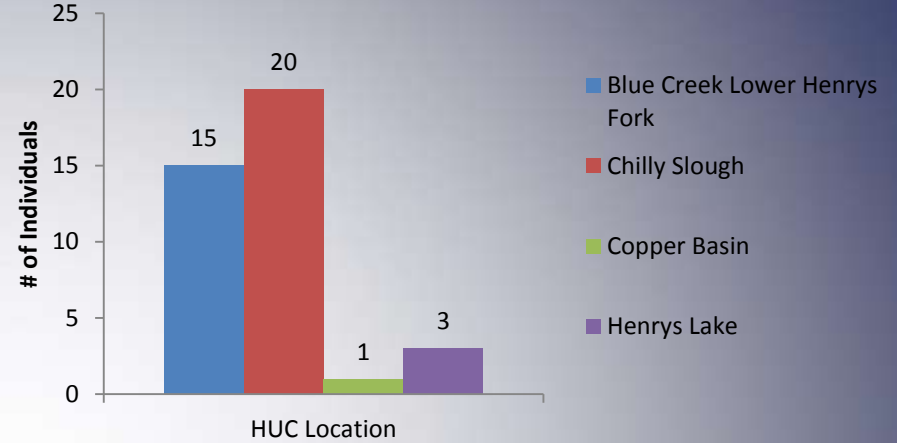
Northern Leopard Frog and Western Toad Locations



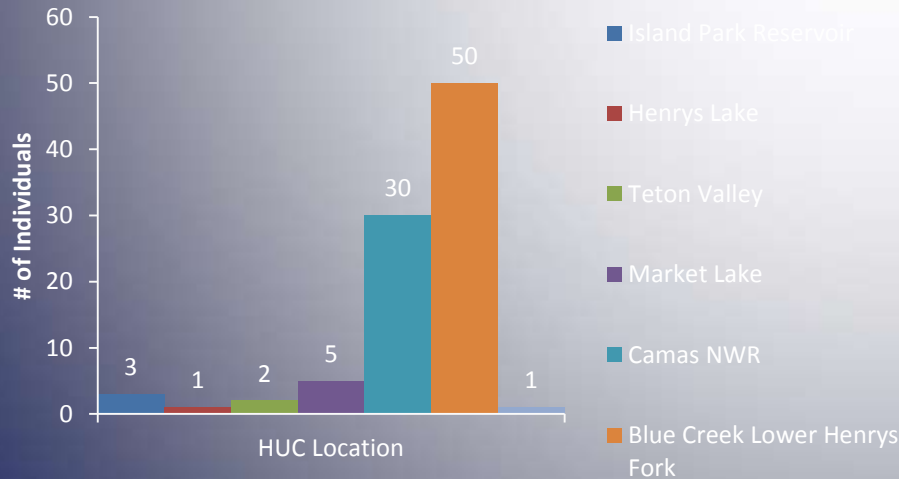
Adult Northern Leopard Frog



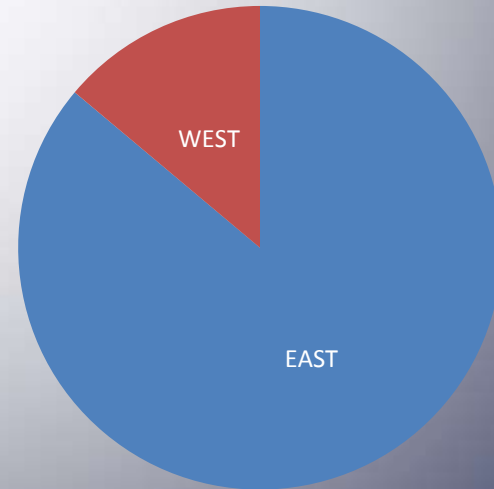
Adult Columbia Spotted Frog



Adult Boreal Chorus Frog



Amphibian Presence in Relation to I-15

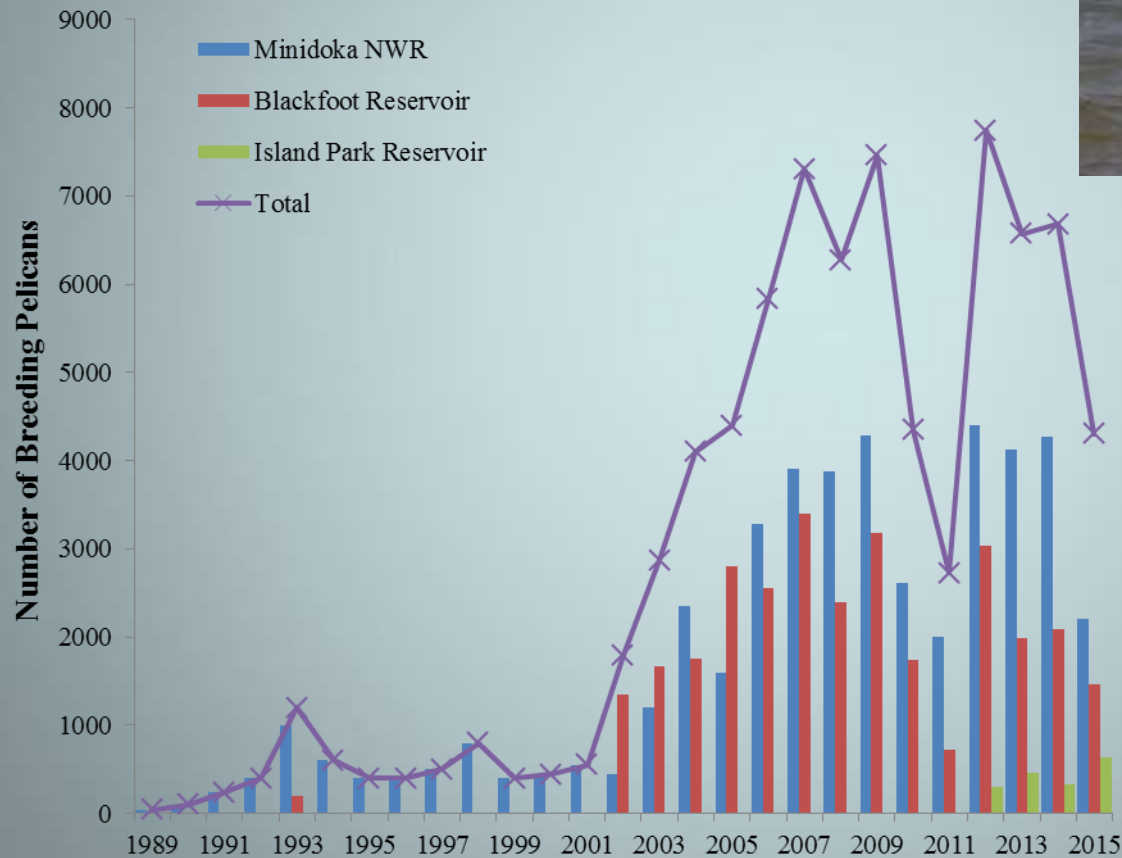


Disease Sampling

- R5/R6/R7 in years 2012 + 2014, we tested 169 samples from western toad, northern leopard frog, Columbia spotted frog, and boreal frog.
- Waiting on additional disease sample from R5 from 2014.
- R6 Upper Snake – Tested 45 Amphibians (2 western toads; 13 Northern Leopard Frogs; 15 Spotted Frogs; 15 Boreal Chorus Frogs).
- Ranavirus – 0
- Chytrid BD – 3 positives
- (2 Boreal Chorus Frog from Sandhole Lake Camas NWR and 1 Spotted Frog (dead from Blue Creek HUC)

- Final Report in 2016

IDFG Pelican Management



Pelicans in Idaho?



Records in East Idaho from
Earliest European Visitors

Records of Multiple colonies
from early 1900s

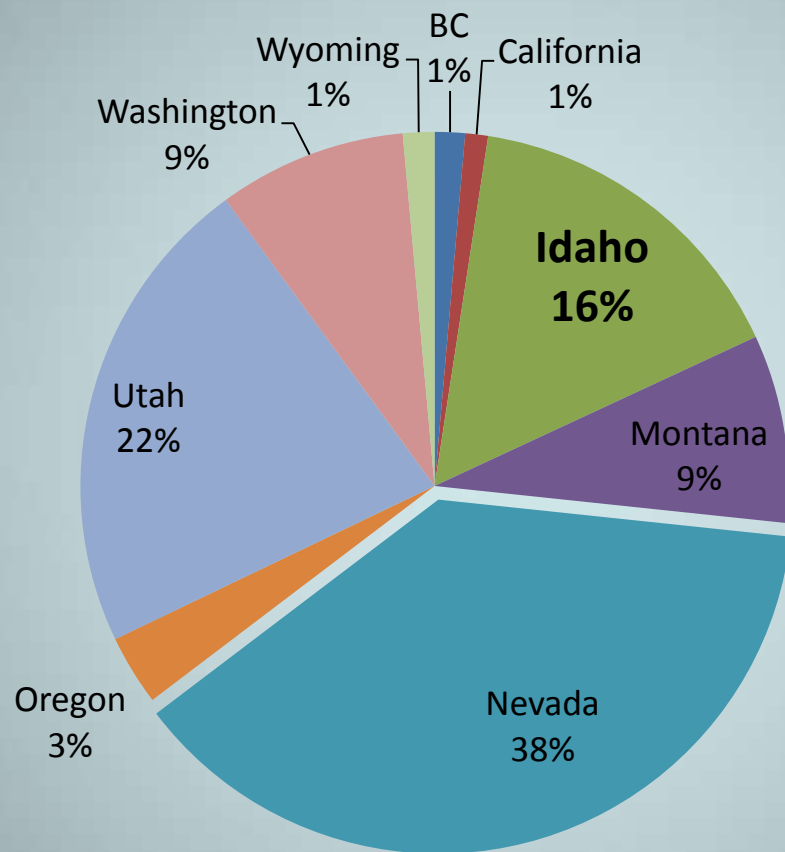
Massive Declines due to DDT

Western Meta Population

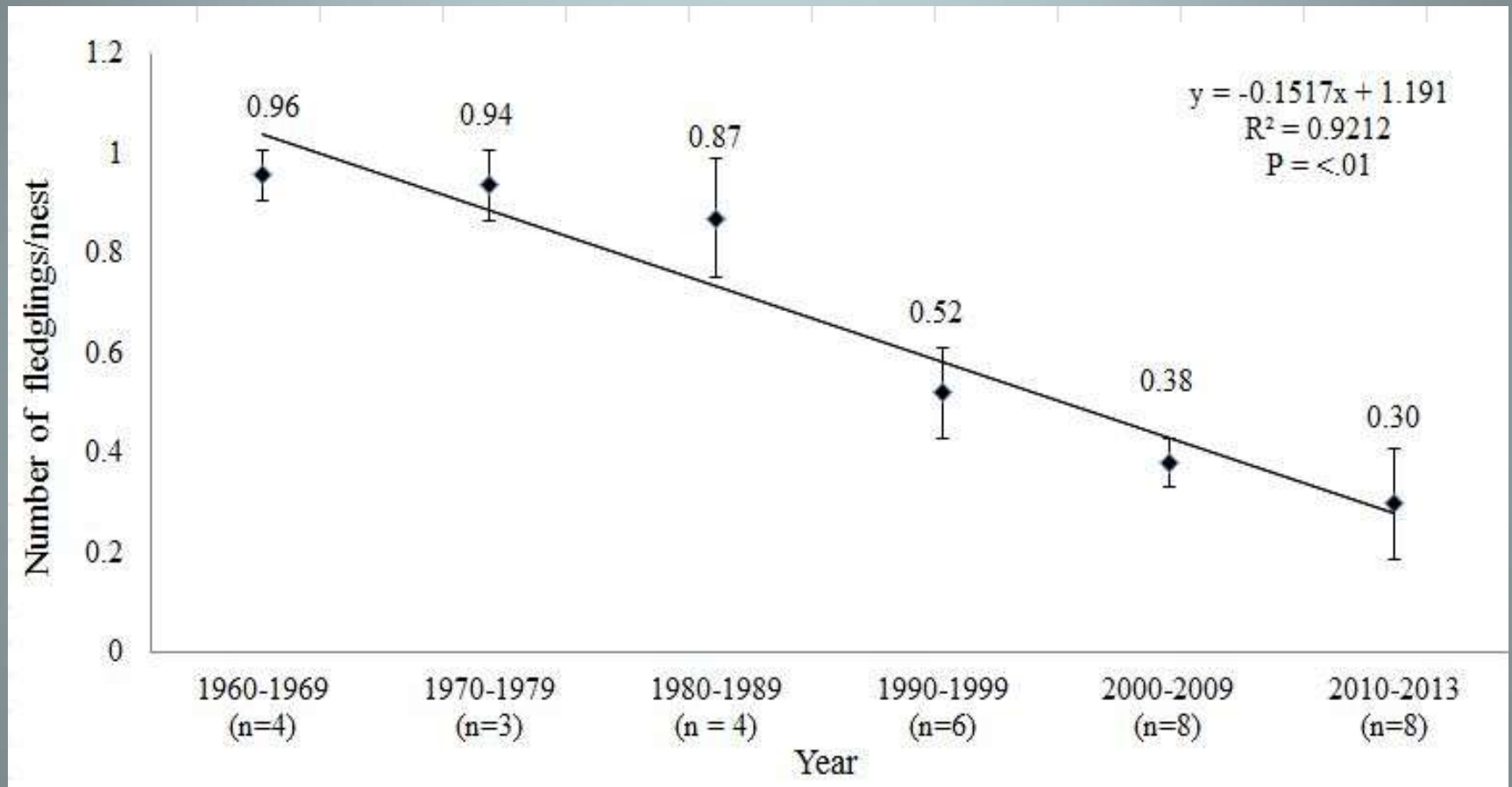
USFWS Primary
Management Authority

Western Colony Location





Pelican Productivity



IDFG Management Plan

- Completed in Winter 2015-2016
- Will Establish Population Objectives Statewide
- Pelicans above Objective IDFG may implement control/containment strategies, particularly where there are conflicts with fish populations
- Will recommend management to contain Island Park Breeding colony



Beaver Translocation Project

