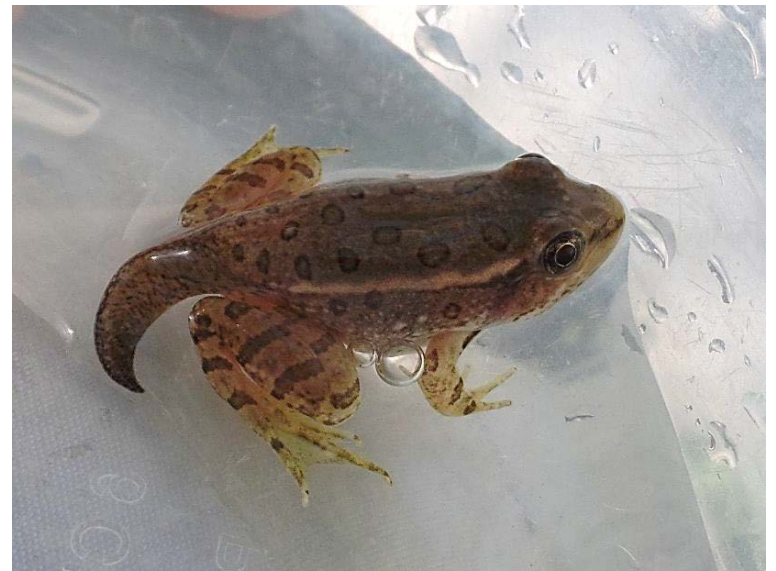


Relict Leopard Frog Conservation Planning & Implementation



Rebeca Rivera and Jef Jaeger
School of Life Sciences, University of Nevada, Las Vegas

Clark County MSHCP Annual Project Progress Report Symposium
15 August 2018, Project: 2015-UNLV-1550A

Conservation & Management

Multiagency voluntary
conservation team

- Conservation Agreement
and Strategy 2005
- Revised and signed 2016



CONSERVATION AGREEMENT
AND
CONSERVATION ASSESSMENT AND STRATEGY
FOR THE RELICT LEOPARD FROG
(*RANA ONCA* [= *LITHOBATES ONCA*])



Prepared by the Relict Leopard Frog Conservation Team
November 18, 2016

Final decision in Federal Register,
October 6, 2016



“[L]isting the relict leopard frog....under Act is not warranted at this time, and...we are removing it from candidate status.”

Genetic diversity?

Population Sustainability?

Northshore sites

Bighorn Sheep Spring

Objectives:

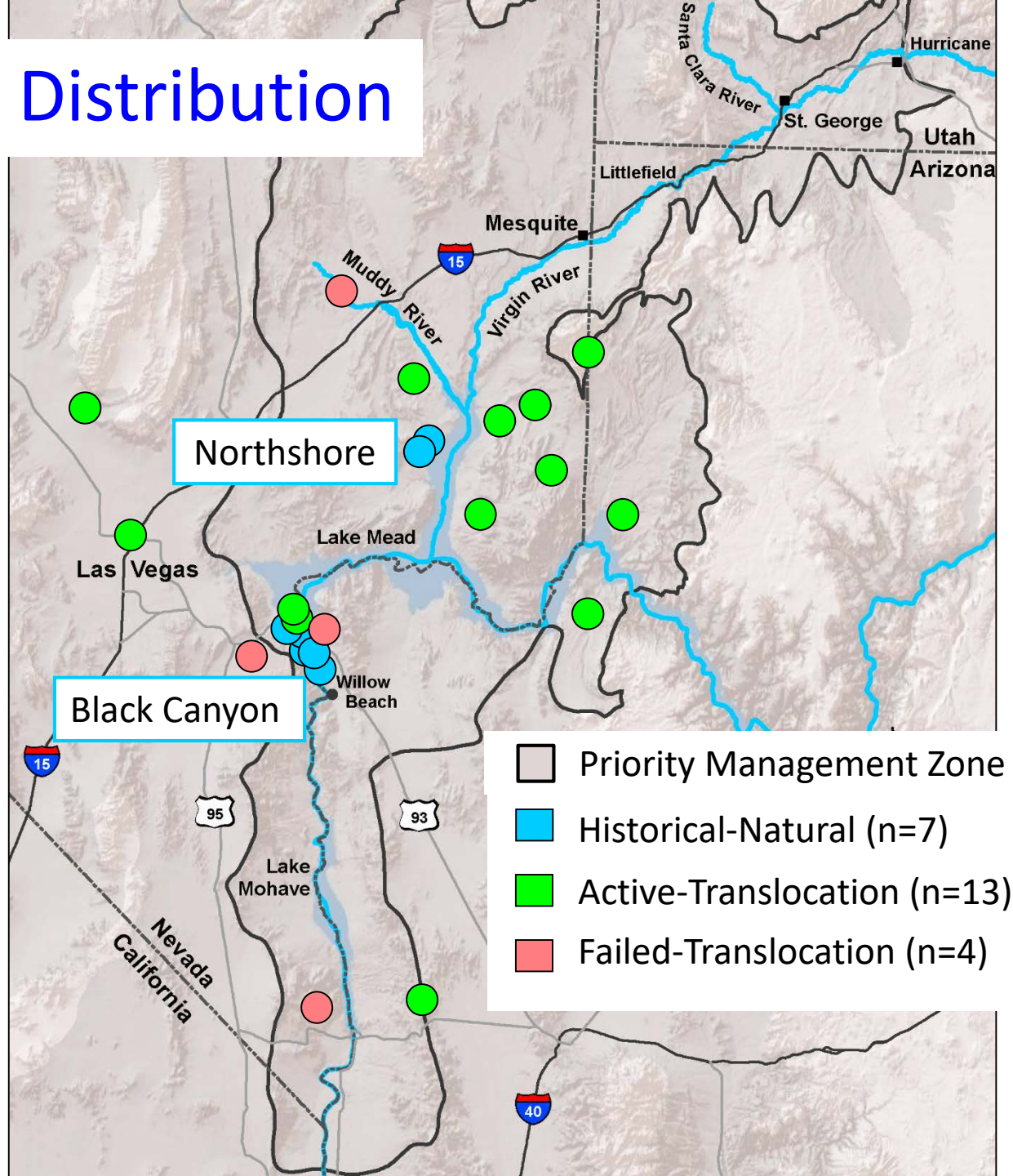
- Monitor populations
- Establish additional populations
- Enhance or create habitat
- Promote population sustainability
- Investigate species biology and apply findings to management

CONSERVATION AGREEMENT
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Current Distribution



Headstarting & Translocation



Headstarting & Translocation

2018 season

- 89 tadpoles and 1,041 juvenile frogs (1,130 total) released
- 3 translocation sites and 3 augmented 'natural' sites
- 4 juvenile frogs for public display
- 24 juveniles for research



Status of Translocation Sites

Site Name	Release Years	Animals Released	Over-Winter	Breeding	Recruit.	Frog Count Spring 2018
Bearpaw	2012-16	595	Yes	Yes	–	23
Horse	2012-16	414	Yes	Yes	Yes	123
Lime	2012-16	436	Yes	Yes	–	7
Union Pass	2011-15	868	Yes	Yes	Yes	327
Perkins	2010-14	1819	Yes	–	–	–
Quail	2008-12	597	Yes	Yes	Yes	92
Tassi	2006-10	1198	Yes	Yes	Yes	174
Grapevine, NV	2006-07	1145	Yes	–	–	–
Red Rock	2005-10, 13-14	813	Yes	Yes	Yes	5
Goldstrike	2004-09, 13	2296	Yes	Yes	Yes	20
Grapevine, AZ	2004-09	3820	Yes	Yes	Yes	130
Pupfish	2003-08	541	Yes	Yes	Yes	16
Sugarloaf	2002-05	539	Yes	Yes	–	–
Wetland Park	2000-01	297	–	–	–	–

Status of Translocation Sites

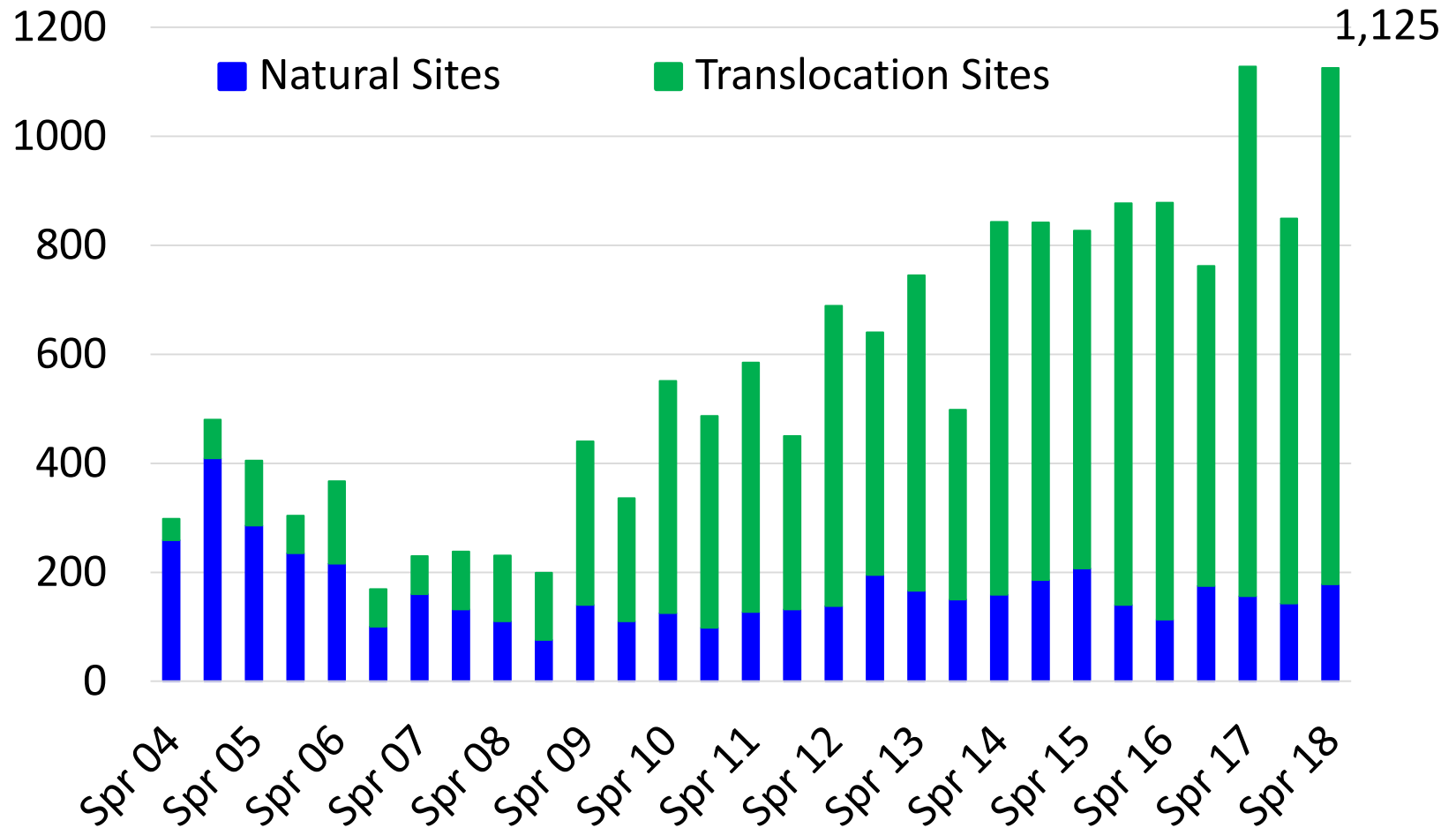
Site Name	Release Years	Animals Released	Over-Winter	Breeding	Recruit.	Frog Count Spring 2018
Springs Preserve	2018	100	–	–	–	–
Kaolin Spring	2016-18	480	Yes	Yes	–	29
Corn Creek	2015-18	1266	Yes	–	–	1



Artificial pond at Springs Preserve, May 2018

Monitoring

High-counts of adults and juveniles



Habitat Management

Minor component of project

- Maintain important breeding habitat

Efforts at:

- Bighorn Sheep
- Boy Scout Canyon
- Upper Blue Point

Pool reestablished at
Bighorn Sheep Spring,
January 2018



Habitat Management

Boy Scout Canyon Spring



NDOW and UNLV
maintaining breeding
pools, Nov 2017

Habitat Management

Consultation on BLM habitat enhancement plans

- Horse
- Bearpaw Poppy
- Quail



Main pool at Horse Spring,
July 2018

Habitat Management

Plans to improve habitat conditions at sites in Gold Butte area.



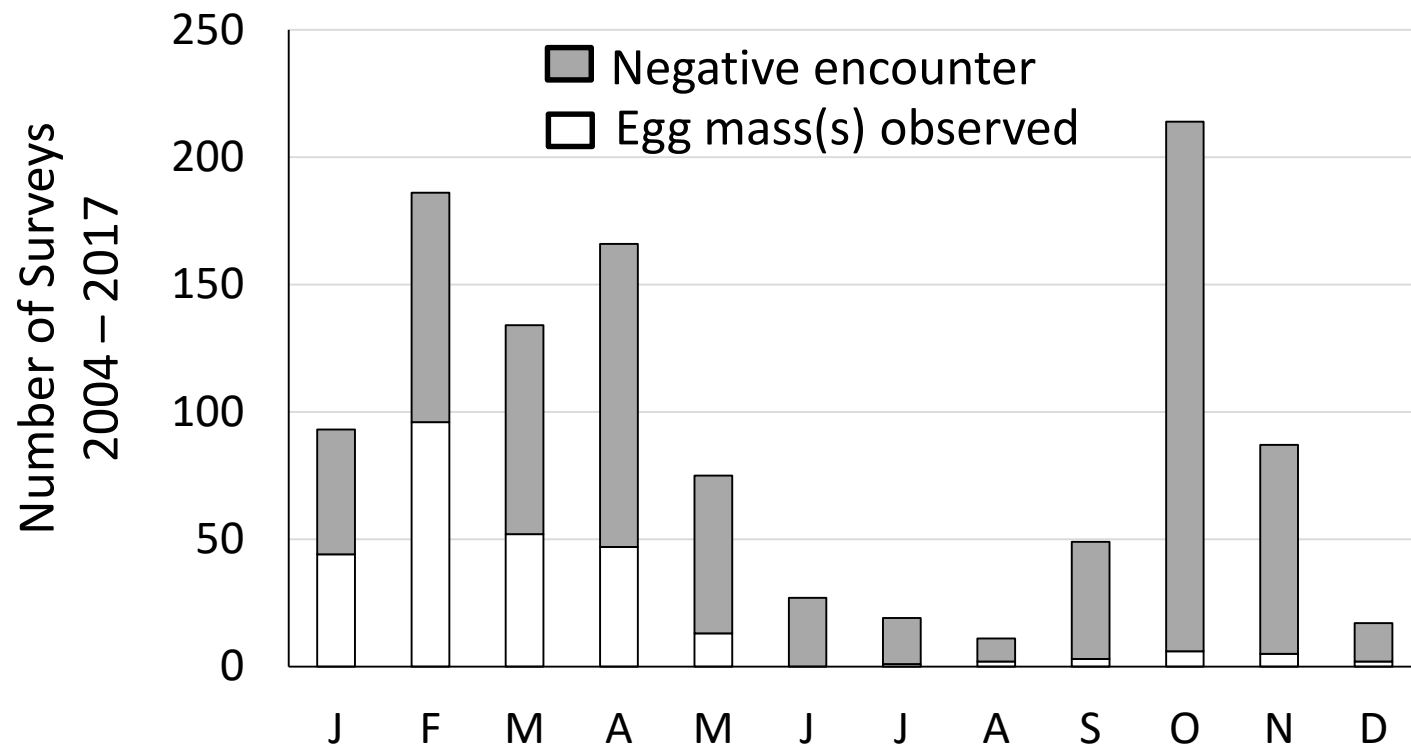
Bearpaw Poppy Spring, March 2018.



Quail Spring, February 2018.

Investigate Species Biology

Manuscript:
Aspects of Relict Leopard Frog Breeding
Biology (Rivera and Jaeger, *In Prep*)



Investigate Species Biology

Pathogenic amphibian fungus (*Bd*)

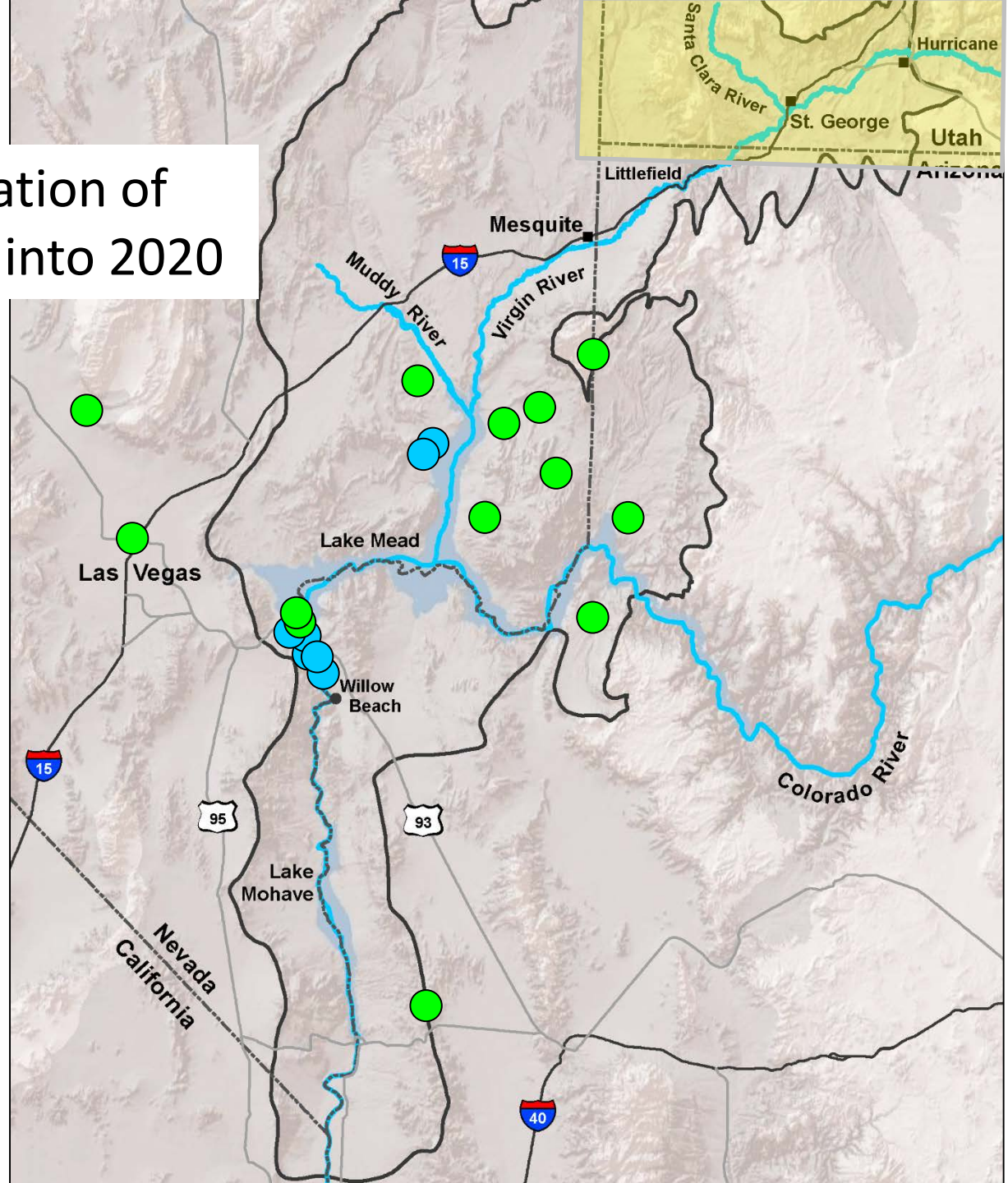


- Field – Detected *Bd* at 2 sites occupied by *R. onca*
- Laboratory – Local strains of *Bd* lower *R. onca* survivorship
(laboratory research funded by BLM)

Future

Continue implementation of conservation actions into 2020

- Maintain local management
- Assist UT
- Address USFWS concerns



Acknowledgements

- Clark County Desert Conservation Program
- Nevada Department of Wildlife
- US Fish and Wildlife Service
- Bureau of Reclamation
- Bureau of Land Management
- Arizona Game & Fish Department
- Utah Division of Wildlife Resources
- National Park Service
- Lake Mead State Fish Hatchery

We thank all members of the RLFCT, agency personnel, and volunteers that participated in the conservation of this species



desert conservation
PROGRAM
respect, protect and enjoy our desert!



UNLV

Special mention of **UNLV** student volunteers and assistants, 2017-2018

Mikee Gonzalez – UNLV undergrad
DeJeigh Herrera – UNLV undergrad
Emma Keenan – UNLV undergrad
Alexa Krauss – UNLV undergrad
Josh Levy – UNLV undergrad
Megan Locher – UNLV undergrad
Kristen McCarty – UNLV undergrad
Matthew Radar – UNLV undergrad
Chase Robbins – UNLV undergrad
Hannah Rice – UNLV undergrad
Marlai Sai – UNLV undergrad
Yesenia Vasquez – UNLV undergrad
Daniel Villanueva – UNLV employee
Anthony Waddle – UNLV graduate student
Alexandra Zmuda – UNLV undergrad
And many others over the years!

(Position at time of effort)



Photos credits: mostly Rebeca Rivera

UNLV