

A MULTI-AGENCY REPORT

Goodding's Willow
(*Salix gooddingii*)

TWG Meeting
April 9, 2014

PRESENTERS

AD HOC COMMITTEE (SMaCAHG)

Task Charge: Document the status of species of management concern and habitat restoration activities in the CRE, and report regularly upon those findings to the TWG. The SMCAH will advise the TWG regarding information gaps and potential ways to obtain needed information, and will provide TWG with a review of plans and documents related to CRE population and habitat restoration efforts and progress. Maintain and update the “CRE Taxa of Management Concern” site paper and data tables as information changes.

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Chair?: Larry Stevens

Members?: Shane Capron, Craig Ellsworth, others?

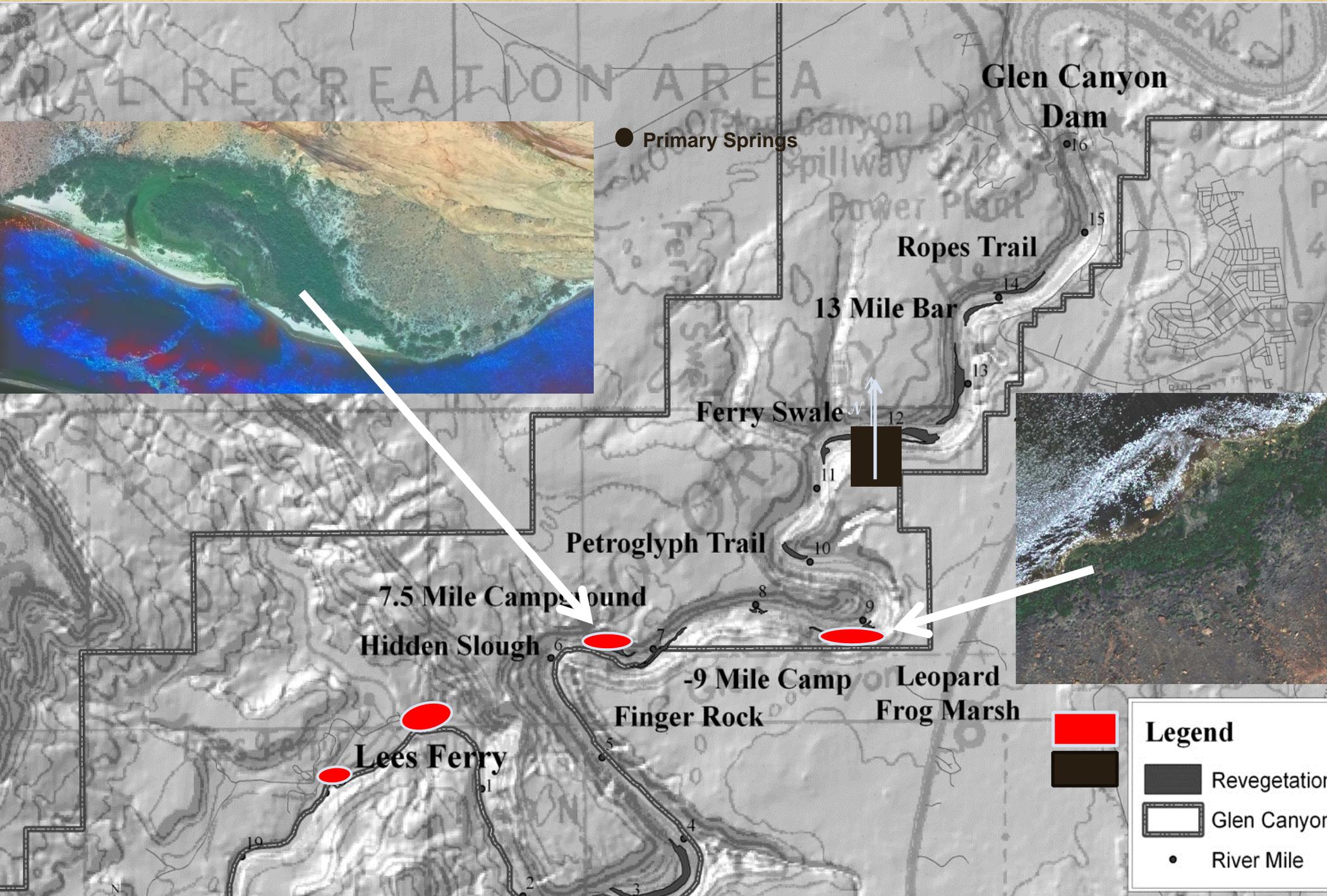
Enhancement and Restoration Project Glen Canyon National Recreation Area, Arizona



Christopher Hughes – GLCA Chief of Resource Management
Donnie Pilkington – GLCA Natural Resource Program Manager
Larry Stevens – GCWC Senior Ecologist



Riparian Rehabilitation Sites



Colorado River Mile - 6.5 R)

Project Objective (2008 – 2013)

Control invasive non-native plants

Restore native plant species, planting and seeding

Evaluate site for NLF establishment

Accomplishments

Treated 5 ac acres of tamarisk

Reveg'd LRZ native plant species (e. g. Goodding's willow, Fremont cottonwood, fourwing saltbush)

Lessons Learned

Phreatophytes require water table depths of $\leq 2\text{m}$

Beaver fencing is essential

At remote sites, planting poles into the water table is more efficient than use of artificial irrigation

Upper terrace planting requires irrigation for 2-3 yr



Western Slough - continued...

Project Objective (2014 – 2017)

Control 0.7 acres of tamarisk and restore native plants to the treated area.

Habitat creation and enhancement actions for Northern leopard frogs

- Excavate two to three open water ponds along the slough to enhance frog habitat.**
- If habitat creation efforts are successful, federal (USFWS and NPS) and state agency (AZGFD) partners may introduce northern leopard frogs at this site.**

Upcoming Work

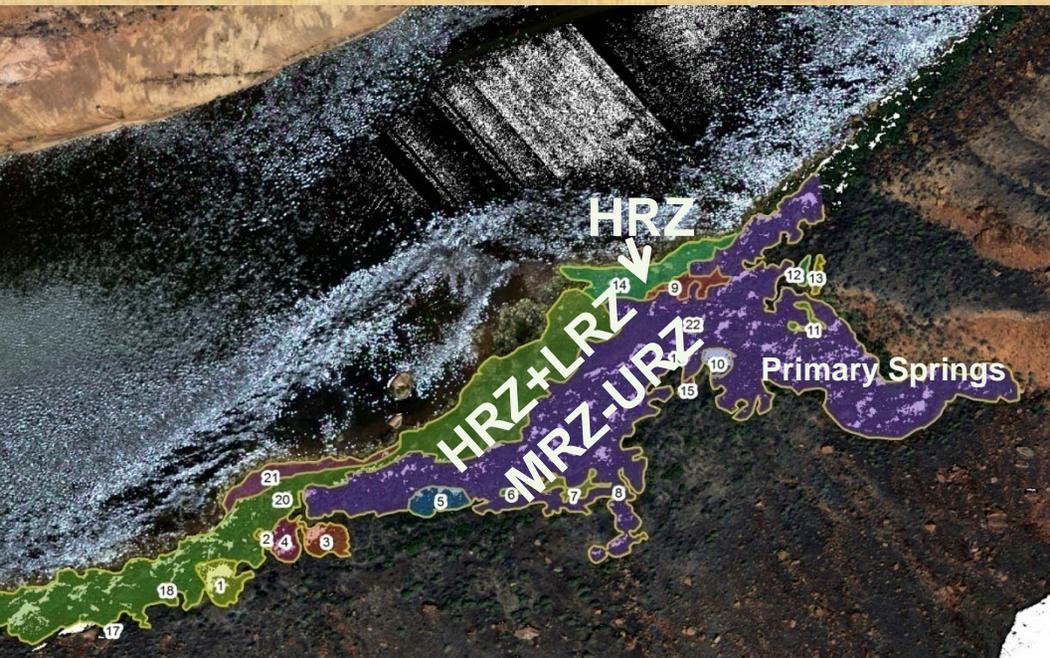
**Feb-March 2014 GCWC and NPS staff
and volunteers invasive plant control**

Remove irrigation lines



Project Objectives (2011 – 2017)

- Map vegetation and assess site rehabilitation options
- Control invasive NN tamarisk as needed, restore native plants adjj. 2.7 ac
- This site supported Northern leopard frogs until \approx 1995
- Create and maintain NLF habitat (AZ special status species)
 - Excavate 4-6 open water ponds where NLF formerly existed
- Maintain high quality habitat for Niobrara ambersnails (Arizona spec. statu
- Maintain populations of rare plants
- If habitat creation efforts are successful, federal (USFWS and NPS) and state agency (AZGFD) partners may reintroduce NLF at this site.



Species of Management Concern



Project Plan (2011 – 2017)

Control invasive non-native tamarisk as needed, restore native plants on 2.7 acres.

Create and maintain NLF habitat while maintaining high quality habitat for Rio Grande ambersnails (Arizona special status species). Excavate four to five open water ponds in areas previously known to harbor northern leopard frogs. This site supported Northern leopard frogs until \approx 1995

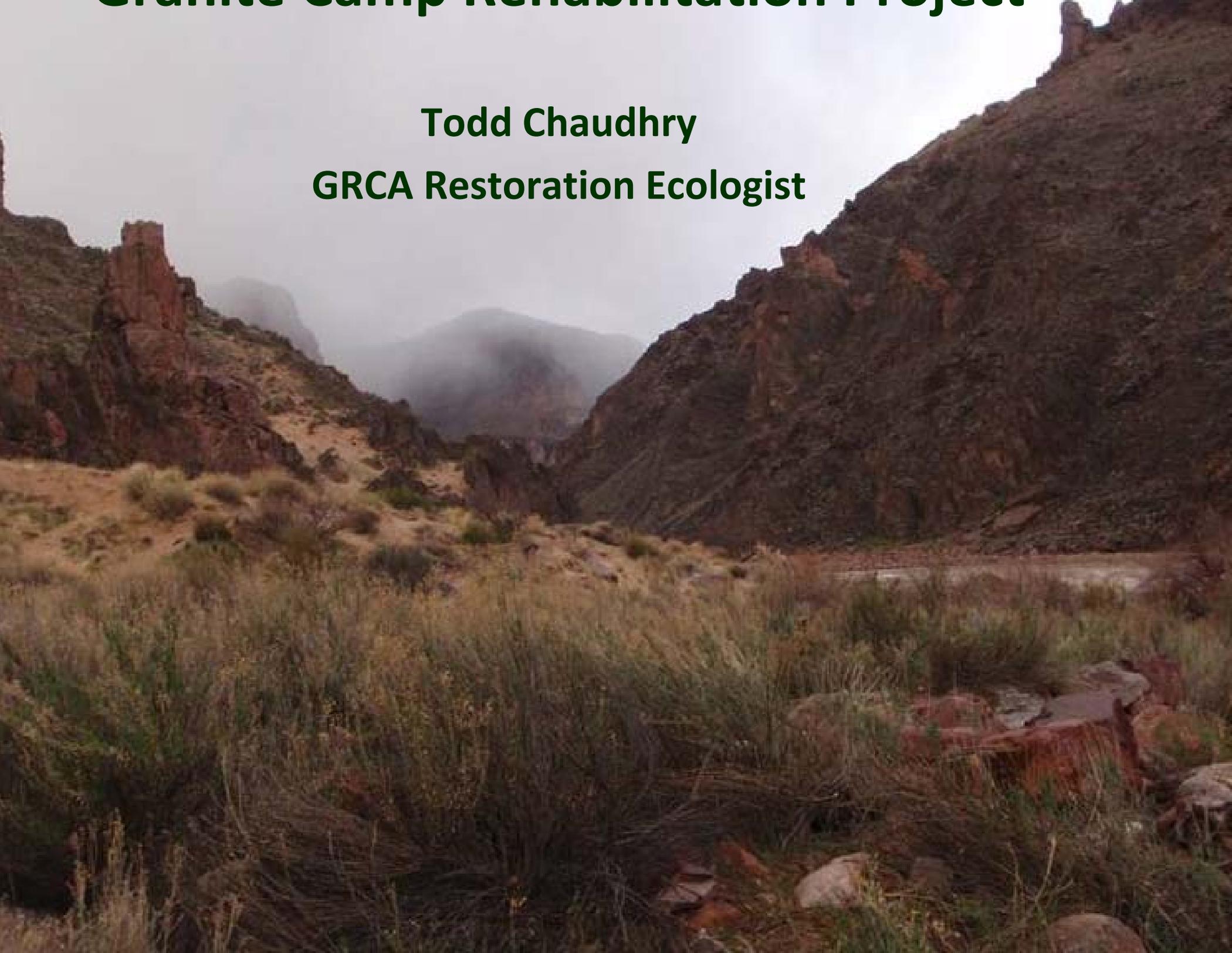
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Upcoming Work

Between 03/28/2014 and 03/31/2014, GCWC and NPS staff and volunteers will begin construction of open water ponds.

Granite Camp Rehabilitation Project

Todd Chaudhry
GRCA Restoration Ecologist



days on site

2 tamarisk removed

ective tamarisk removal

g. canopy cover of

arisk decrease from

% to 5%

er camp- canopy cover

reased from 72% to

%

er 60 people involved

all the trips- mostly

unteers



Blackwood

4 poles planted

6 survived

0 trees in Nov. 2013

Arroyo's willow

5 poles planted

6 survived

0 trees in Nov. 2013

White willow

18 poles planted

58 survived

Elder



April 2013

mesquite

planted

survived

100%

5 planted

2 survived

blackberry

planted

100%



shrubs planted
survived
ember 2013
dditional
bs planted



Encelia farinosa







ork









TRANSLOCATION AND MONITORING PROJECT – HUALAPAI RESERVATION



09/09/2013

Prepared by:

Kerry Christensen, Hualapai Tribe

Ms. Donata Dupree, Hualapai Tribe

Funded by the
Bureau of Reclamation through the
Canyon Dam Adaptive Management P

Special thanks to Glen Knowles, M

or to the 1983-4 flood event on the Colorado River in Grand Canyon
bra-tailed lizards were common at the Diamond Creek dunes on the
Hualapai Reservation.

The flood caused river raft operators to drive over the dunes for raft take
and launch

After the flood event (83-4) no more zebra-tailed lizards could be found
at the Diamond Creek dunes and they were deemed as extirpated in Grand
Canyon

Zebra-tailed lizards, however, were still present farther south in Peach
Springs Canyon

The Grand Canyon Dam Adaptive Management Program identified zebra-tai
lizard as a species that could likely be re-established in Grand Canyon
through a translocation effort

In 2012, Reclamation funded the Hualapai Tribe and Stevens Ecologic
Consulting to implement a translocation and monitoring effort at the
Diamond Creek dunes

AND MONITORING AREA





09/09/2013

Project Implementation

April 23, 2012, Dr. Larry Stevens, Dr. Geoffrey Carpenter and Dr. Kerr Cristensen captured 5 male (1 juvenile) and 5 female ztl in Peach Springs Canyon and transported them to the Diamond Creek dunes.

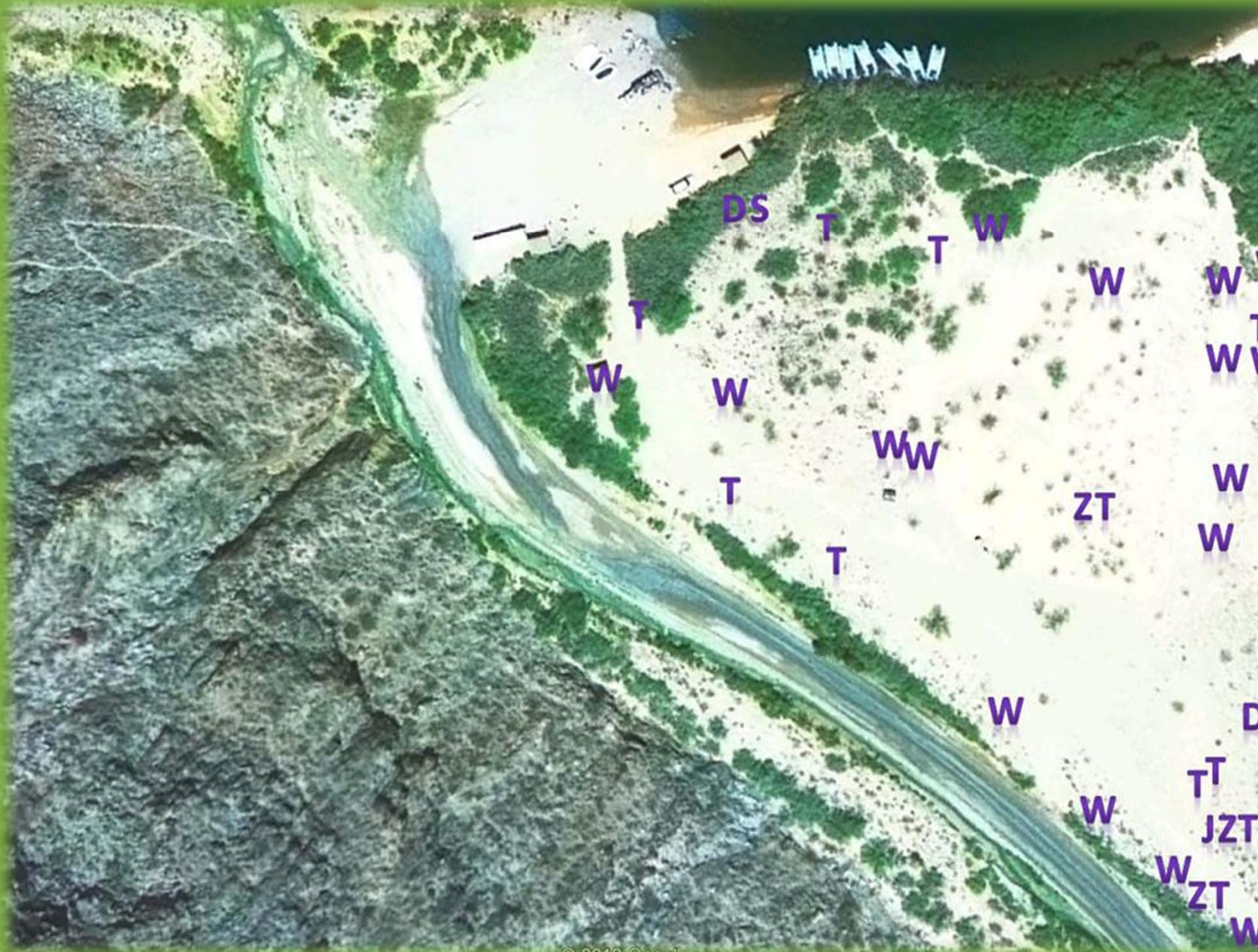
The lizards were released at three locations on and around the dunes.

Monitoring began on May 1, 2012 and continued monthly until October, 2012.

Monitoring consisted of one person (first two surveys) or two persons (remainder of the surveys) walking around the dunes, beach and now, campground area of Diamond Creek looking for lizards for about one hour per survey.

Locations of every species of lizard was identified on an aerial photograph.

When ztl were found, environmental conditions (temp, wind, barometric pressure) were recorded, the animals behavior was noted, the distance to vegetation was noted and the vegetation species was recorded (in addition



Black-tailed lizard

Adult ztl,

Immature ztl,

Black lizard (*Urosaurus ornatus*)

Spiny-tail lizard (*Cnemidophorus tigris*)

07/31/2013

Date	# of Observers	# ZTL Located	# Juveniles	Mean Dist. To Veg.	Veg. Type
5/01/12	1	2	1	0.5	Creosote bush
5/15/12	1	3	1	0.7	Arrowweed, rabbit brush
6/26/12	2	6	1	2.5 m	Creosote, mesquite, <i>Baccharis</i>
7/24/12	2	2	0	1.3 m	Creosote, mesquite
9/04/12	2	7	0	1.0 m	Mesquite, four o'clock, <i>Baccharis</i> , salt bush
4/02/13	2	4	2	1.7	Brittle bush
5/09/13	2	6	1	1.9	Creosote, brittle bush, catclaw
6/12/13	2	5	2	1.2	Creosote, mesquite, <i>Baccharis</i>
7/31/13	2	3	1	1.2	Creosote, brittle bush
9/09/13	2	3	1	1.3	



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SMaC-AHG Tasks

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