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the Journey to Restore Zuni Heaven

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Tribal Water Law CLE 2024



Presentation Overview

Zuni's Wetlands Restoration

Settlement Implementation

Zuni Heaven
Water Rights Settlement

Introduction/Background

How to deal with changing and/
or unanticipated conditions?

(AKA what happens when the
planning estimates are off?)

Insight Gained

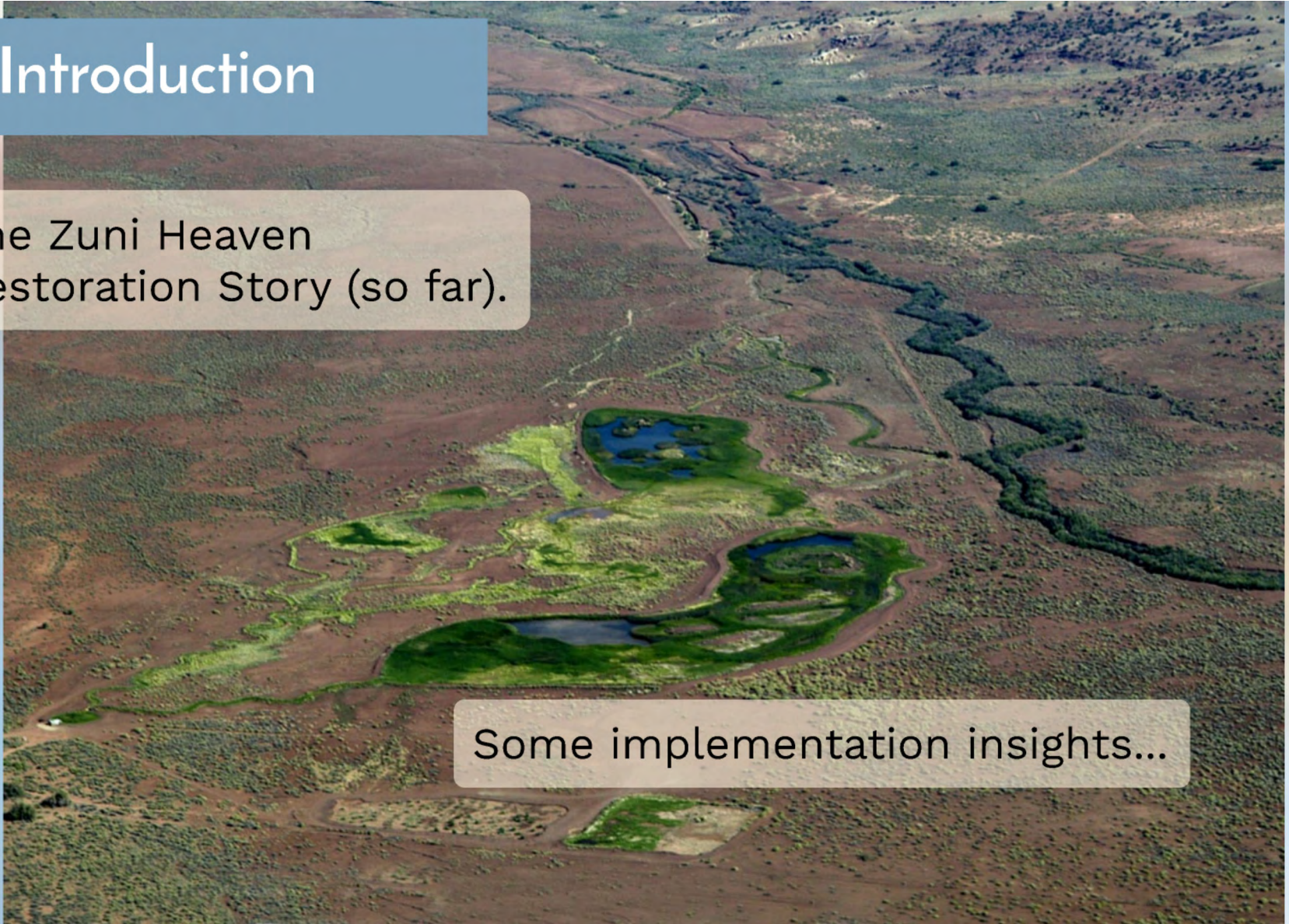
20+ Years
on the Journey to
Restore Zuni Heaven



Introduction

The Zuni Heaven
Restoration Story (so far).

Some implementation insights...



Introduction

Every four years the Zuni people make a pilgrimage from the Zuni Village to Zuni Heaven.

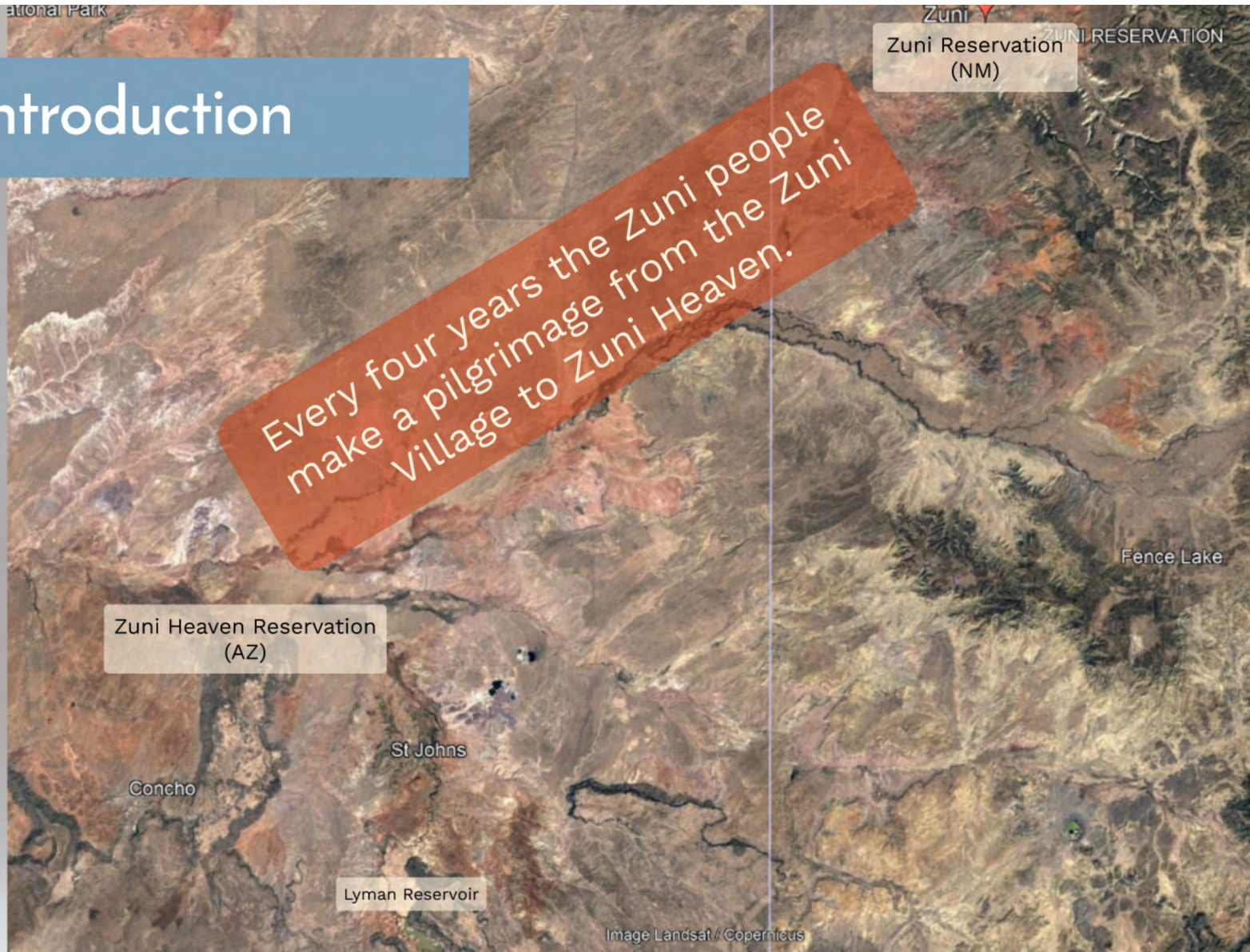


Image Landsat / Copernicus

Background

**Zuni Heaven -
Post Degradation**

Dewatering the sacred springs and sacred lake and degrading the LCR channel caused the disappearance of the wetlands, riparian habitat and aquatic animals.

2024

Coronado Generating Station

Lyman Dam

**Zuni Heaven -
Pre Degradation**

Lush riparian and wetland environment with sacred springs, a sacred lake and a variety of plants and wildlife along the LCR.

1904



The Path to Settlement Implementation

Congress adds Zuni Heaven to the Zuni Reservation.

1984

Zuni begins water right settlement negotiations.

1997

Zuni implements interim Cultural Wetlands Program.

2000-2009

The Zuni Heaven Settlement becomes enforceable.

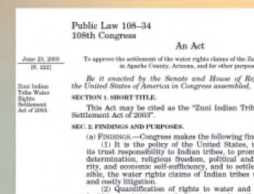
2006

1992

Zuni files LCR water right claims for sufficient water to maintain Zuni Heaven for religious and sustenance activities in the AZ stream adjudication.

2003

Congress approves the Zuni Heaven Water Rights Settlement.



Zuni Heaven Settlement

~\$22 M (Fed/State/SRP)

To purchase land and water rights &
To restore Zuni Heaven wetlands, the Sacred Lake and riparian areas.

1,900 AFY

Existing
surface water

3,600+ AFY

Surface water rights to be
purchased and
transferred

5,500 AFY

(Acre-Feet per Year) of
water needed for wetlands
restoration

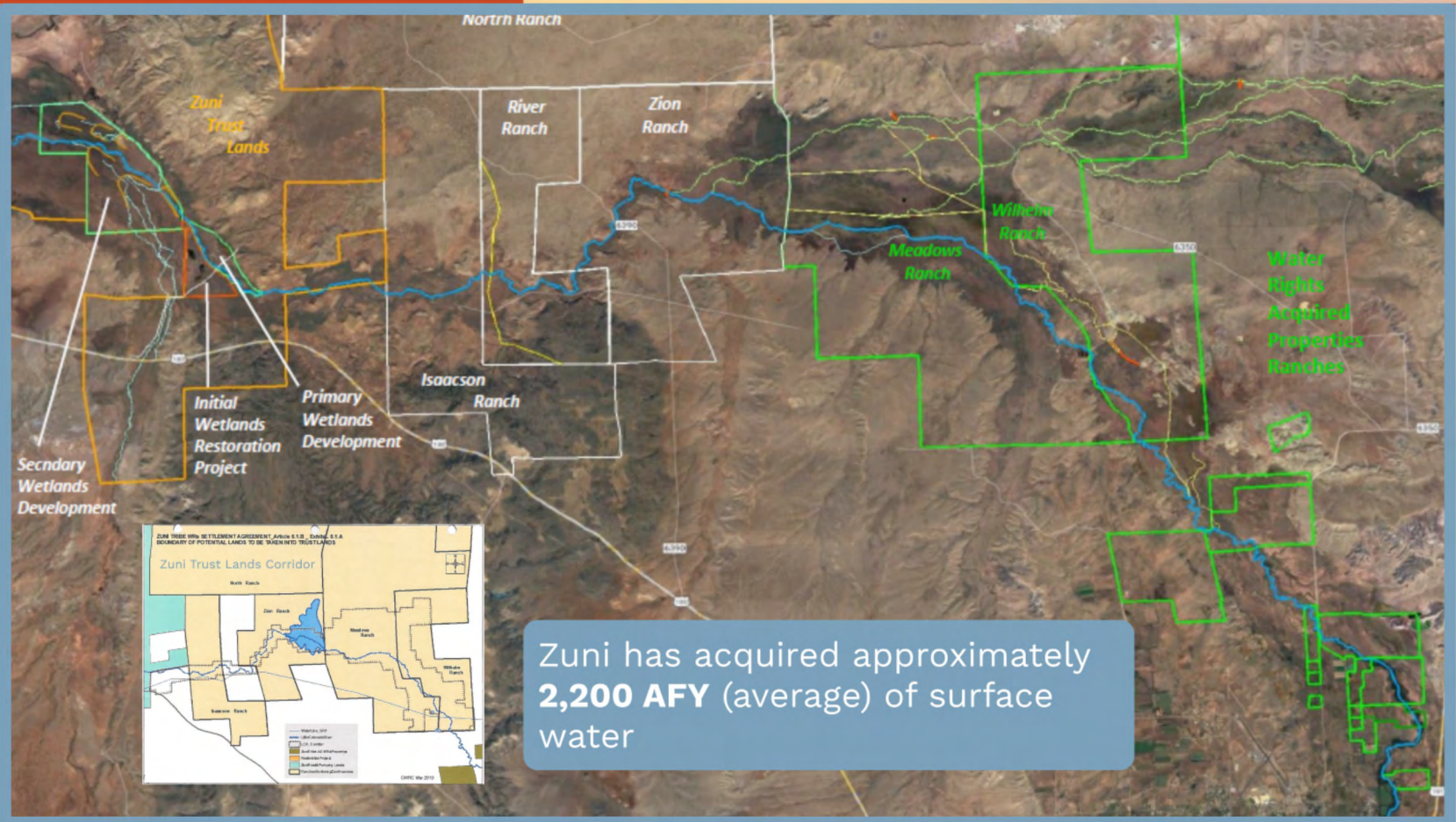
Up to 1,500 AFY

Ground water
to supplement
surface water

1,000 AFY

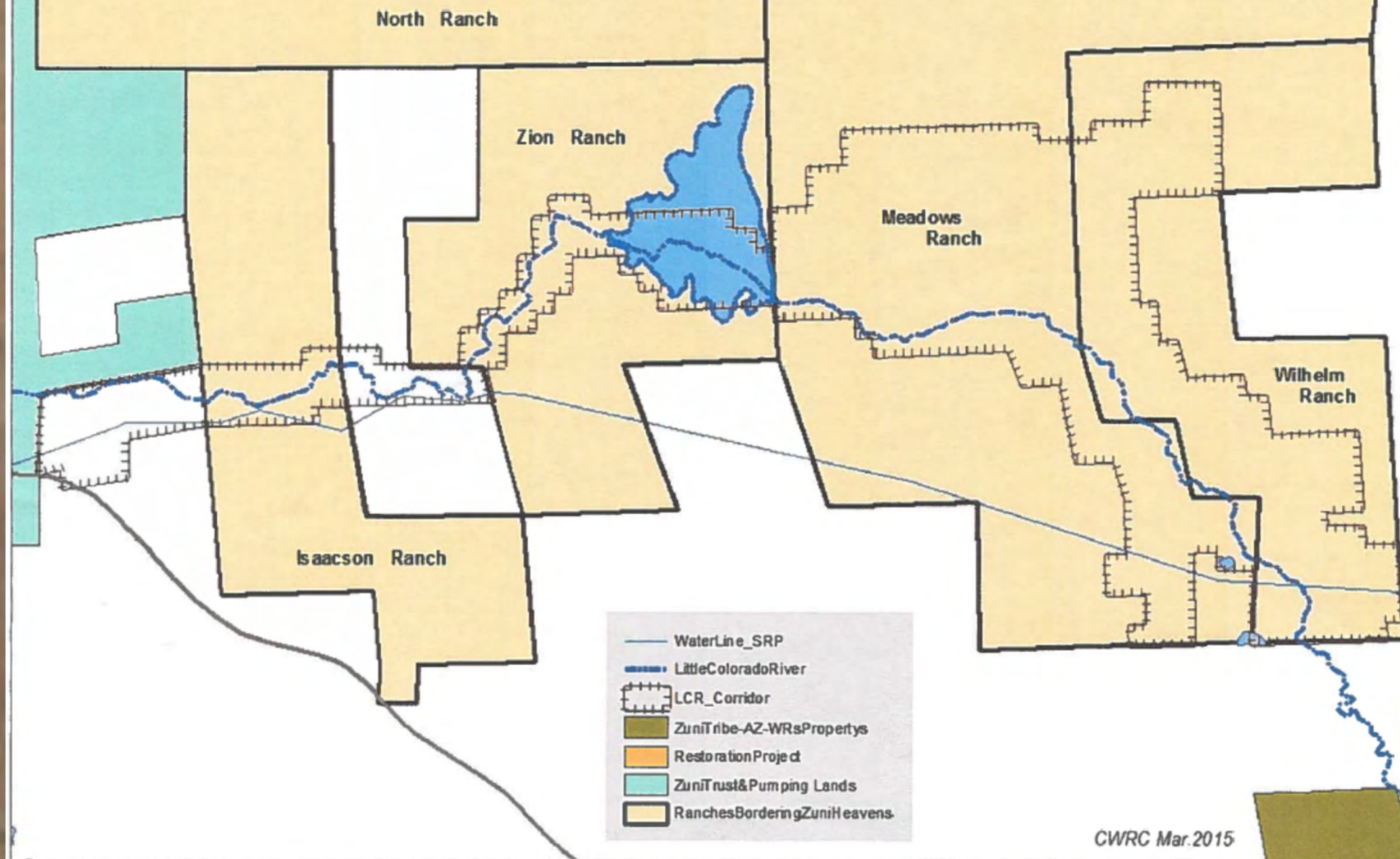
AGFD to
contribute water
upstream of
Lyman to Zuni

Settlement Implementation



ZUNI TRIBE WRs SETTLEMENT AGREEMENT Article 6.1.B Exhibit 6.1.A
BOUNDARY OF POTENTIAL LANDS TO BE TAKEN INTO TRUST LANDS

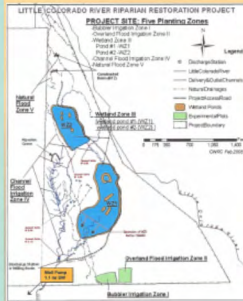
Zuni Trust Lands Corridor



The Initial Wetlands Restoration Project

Initial Effort

~14 acres of wetlands using groundwater



Long Term Plan

~700 acres of wetlands using surface water supplemented by groundwater.



LITTLE COLORADO RIVER RIPARIAN RESTORATION PROJECT

PROJECT SITE: Five Planting Zones

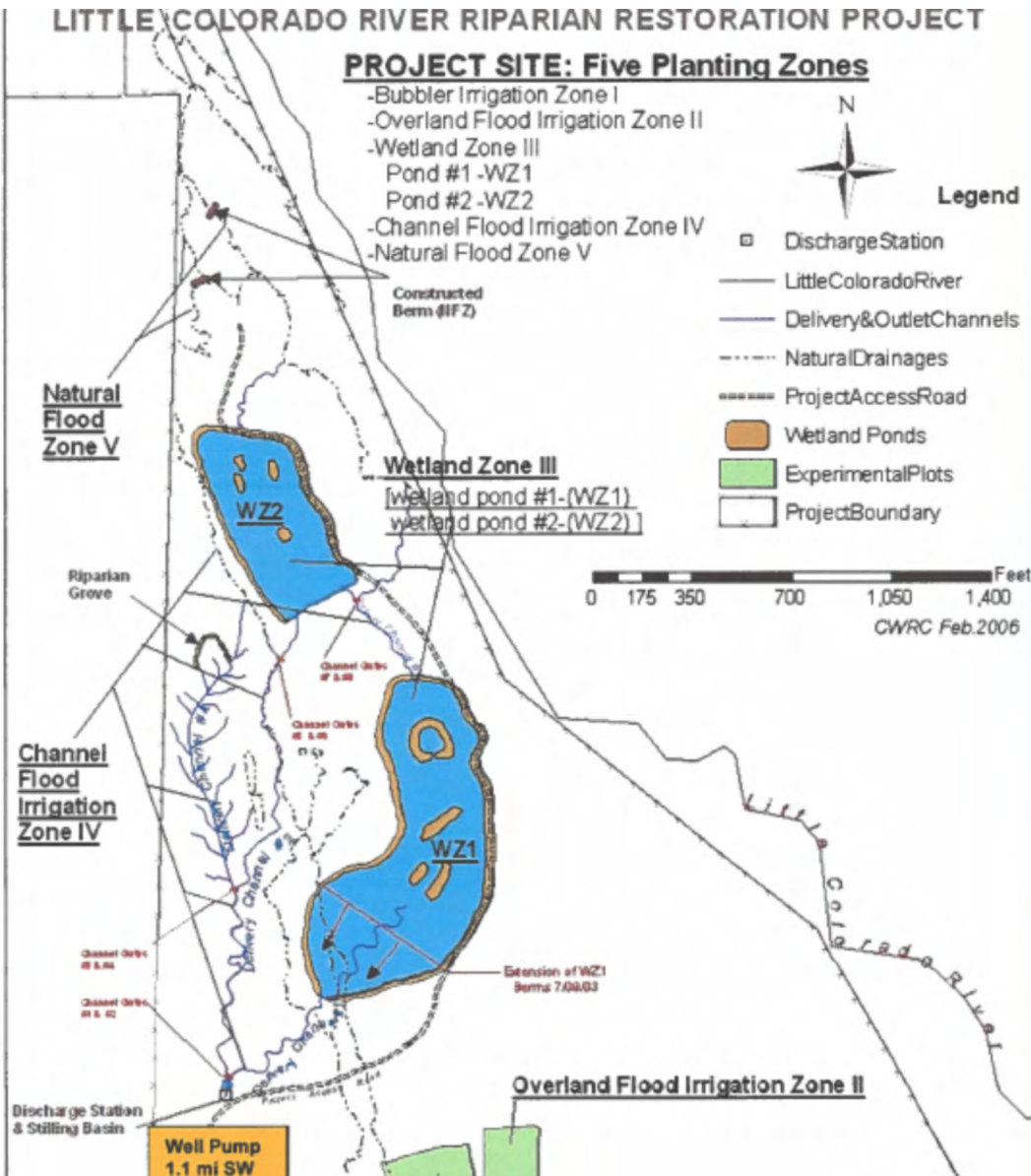
- Bubbler Irrigation Zone I
- Overland Flood Irrigation Zone II
- Wetland Zone III
 - Pond #1 -WZ1
 - Pond #2 -WZ2
- Channel Flood Irrigation Zone IV
- Natural Flood Zone V



Legend

- Discharge Station
- Little Colorado River
- Delivery & Outlet Channels
- - - - - Natural Drainages
- ==== Project Access Road
- Wetland Ponds
- Experimental Plots
- Project Boundary

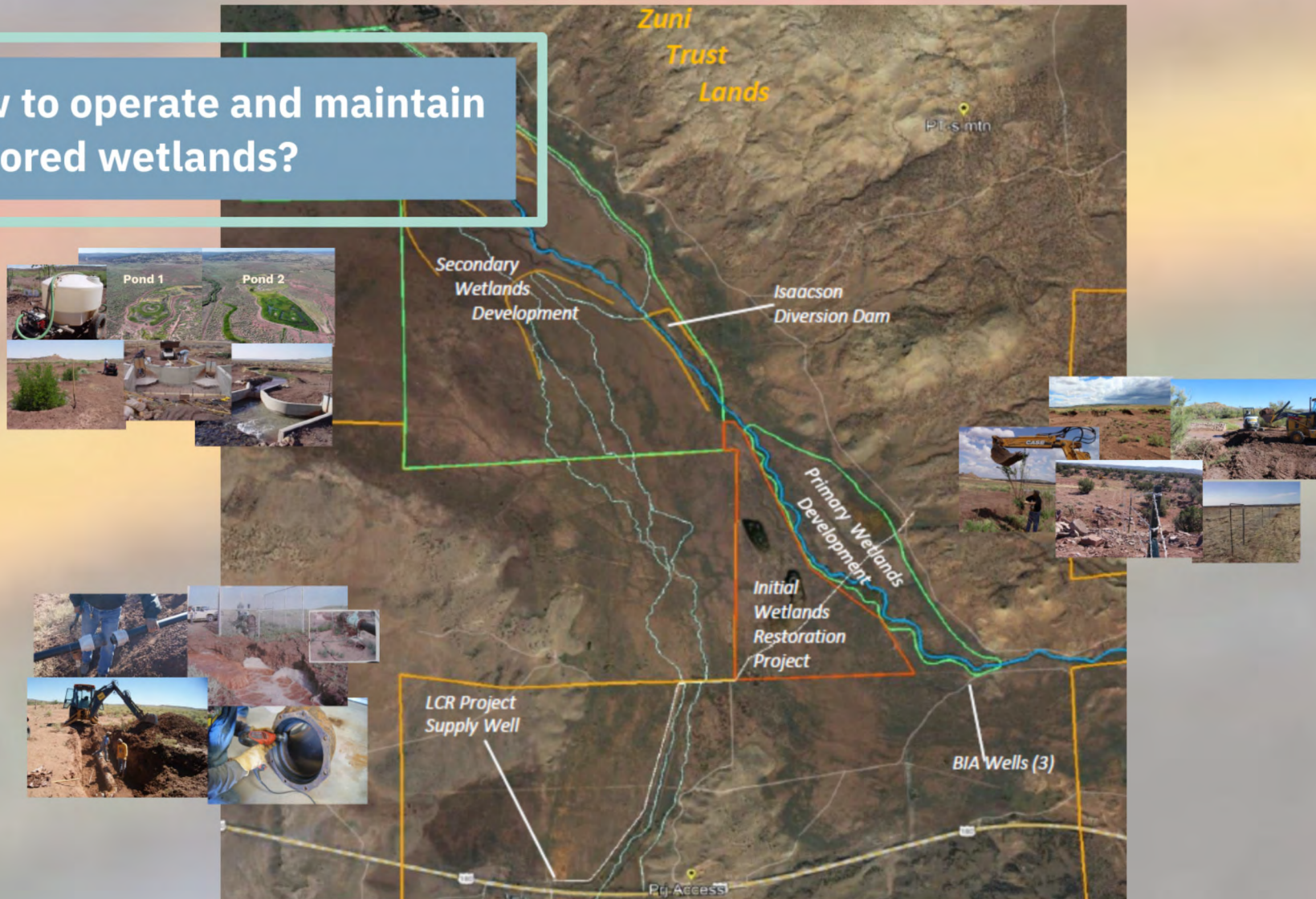
0 175 350 700 1,050 1,400 Feet
CWRC Feb. 2006



~700 acres of wetlands using surface water supplemented by groundwater.



How to operate and maintain restored wetlands?





Pond 1



Pond 2







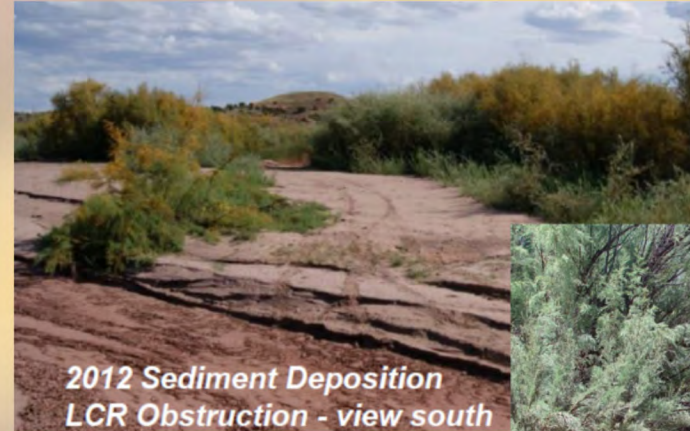
How to Deal with Conveyance Issues?

Conveyance issues were anticipated and identified before the Settlement.

Detailed assessment of 40 miles of river channel conditions began in 2010 and continues today.

After first release of Lyman water in 2011, Zuni identified additional conveyance issues between Lyman and Zuni Heaven.

- Channel obstructions
- Beaver dams
- No river channel
- Needed infrastructure replacements
- Sedimentation



How to deal with Changing Commitments?

2015: AGFD 1,000 AF contribution not feasible.

2018: LCR Conveyance Improvements Report:

- Replace the SJIDC Upper Diversion
- Replace the SJIDC Lower Diversion
- Construct a new low flow channel from Lower Diversion to Zion Reservoir

2022: Alternative Contribution Agreement with AGFD.

Zuni gets \$2M from AGFD for LCR improvements in lieu of 1,000 AFY.



Little Colorado River Basin Zuni Settlement Studies

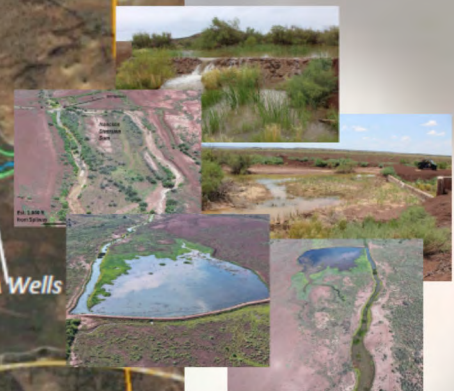
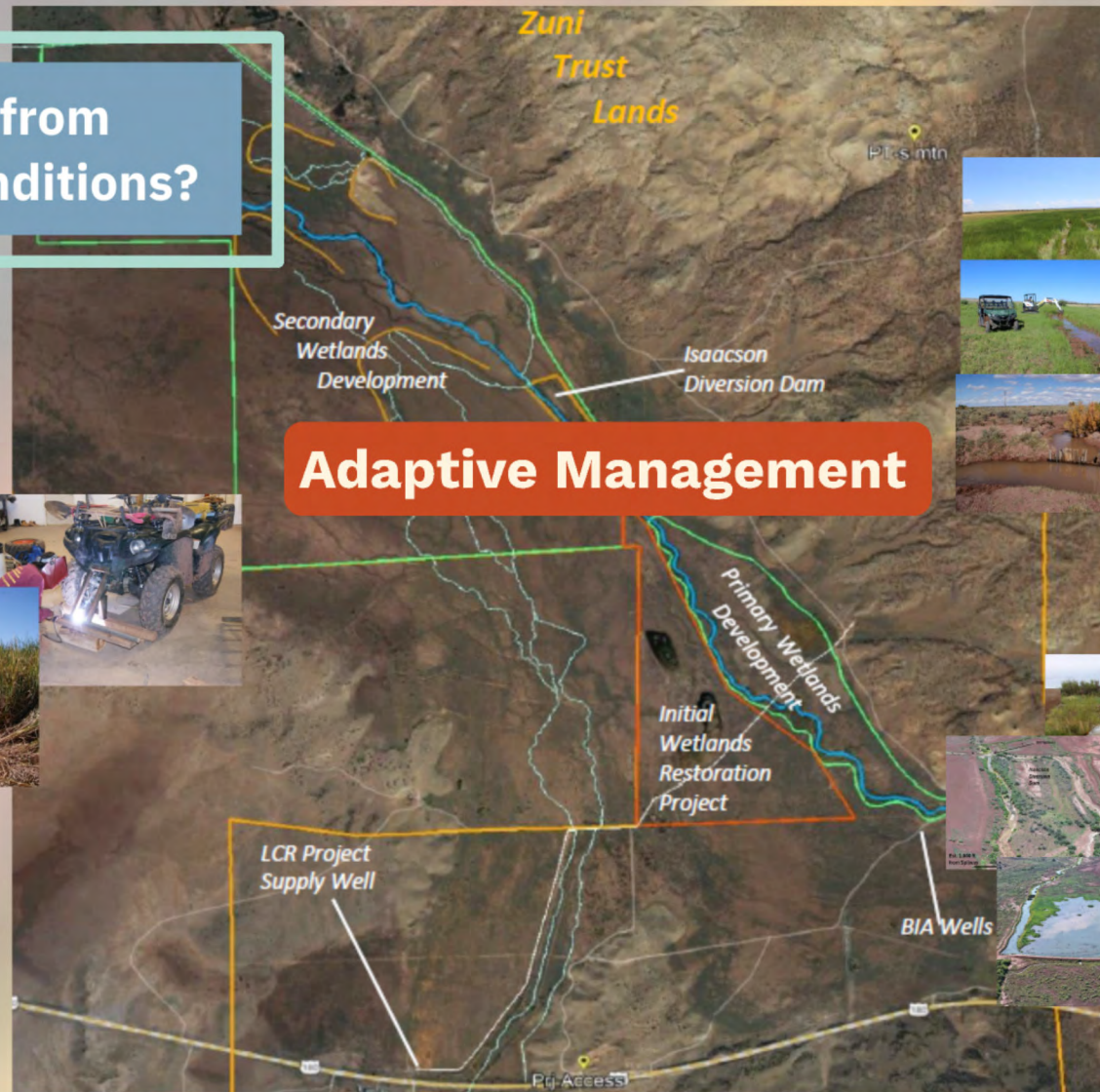
Conveyance Improvements

Submitted:
November, 2018



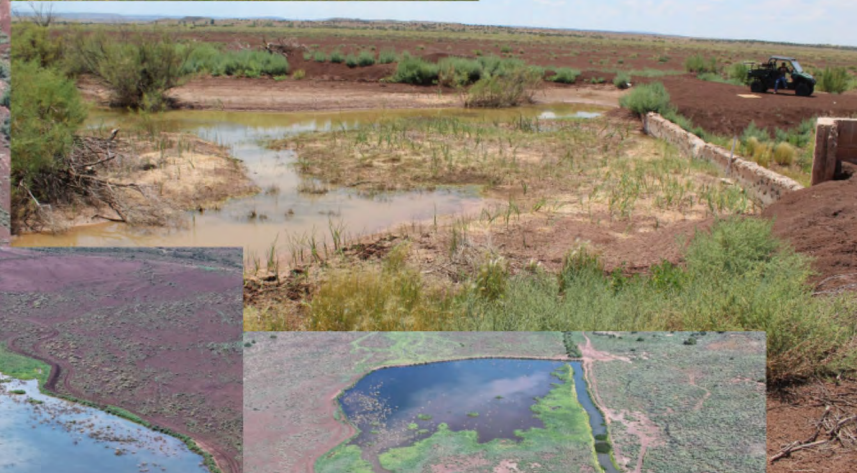
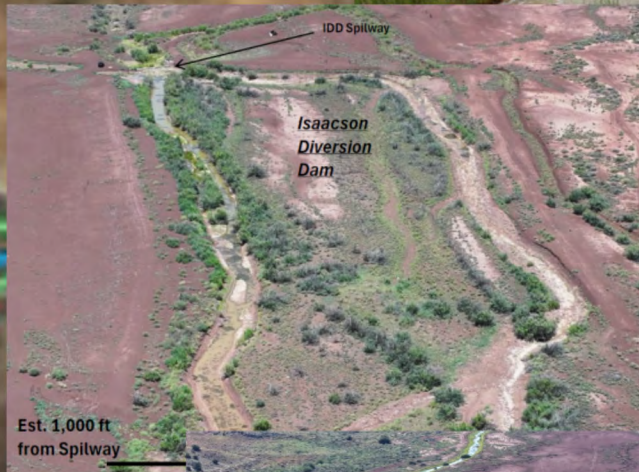
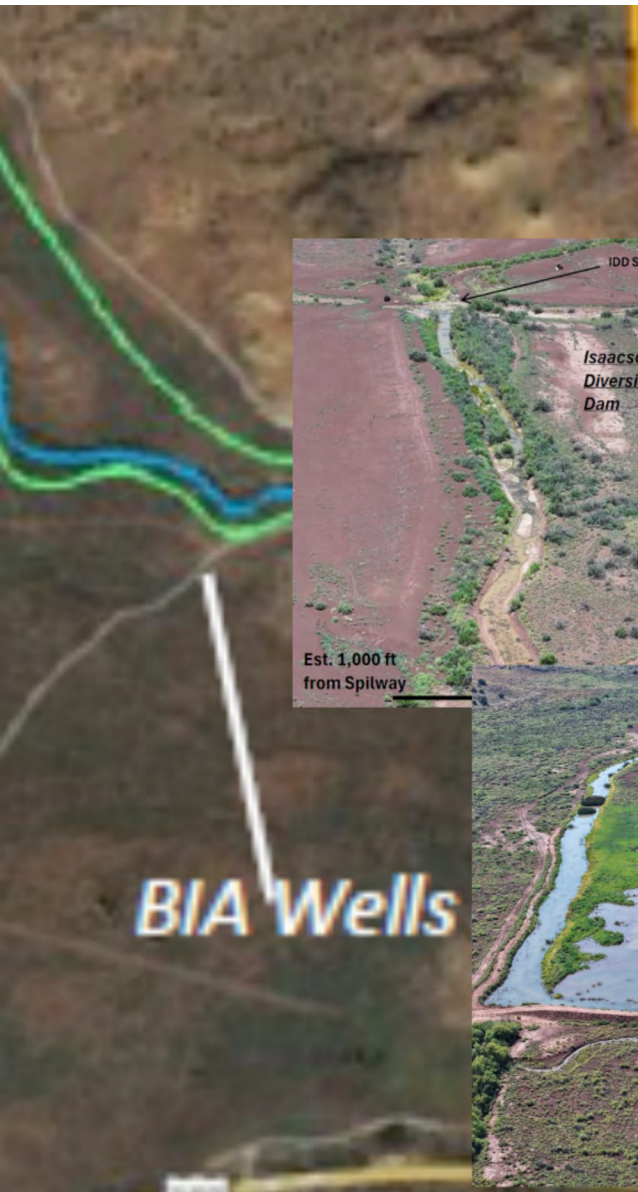
How to learn from Changing Conditions?

Adaptive Management









How to augment your funding?

Federal and State grant funds:

- BIA Tribal Climate Resiliency (10/17/24)
- BOR WaterSMART Grants
 - Env'tl Water Resources (3/11/25)
 - Aquatic Ecosystem Restoration
 - Planning and Project Design
- AZ WIFA Water Supply Development.



Insight Gained

The future is uncertain and will present both new challenges and opportunities.

Adaptation and resilience is part of Zuni culture.

Zuni Heaven has existed since time immemorial and will continue through time everlasting.

Something magical
is taking root!



the Journey to Restore Zuni Heaven

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