



# Walker Basin Restoration Program

Program Overview  
April 15th, 2016  
Legislative Committee of Public  
Lands Meeting  
Winnemucca, Nevada

EXHIBIT L - LANDS  
Document consists of 25 pages.  
Entire exhibit provided.  
Meeting Date: 4-15-16



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# PRESENTATION OVERVIEW

- Western Water In Context
- Desert Terminal Lakes
- Geography
- History and Task
- Program Funding
- Accomplishments
- Challenges
- Opportunities
- Discussion



# WESTERN WATER IN CONTEXT

Photo Credit: Mineral County Museum

WALKER LAKE NEV.



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# Water Transactions 101

- Diversionary water rights established during the early years of western settlement (1850-1880) are the most reliable water rights available in “prior appropriation” states.
- Irrigated agriculture continues to account for 80-90% of consumptive water demands and use in most western states.
- The purchase and/or lease of senior irrigation rights from willing sellers is the most cost-effective voluntary means for improving instream flows via reduced diversions and consumptive use.
- In most cases, local, state and federal administrative and legal approvals are needed to protect water acquired for instream use from diversion by other (junior or downstream) rights holders.

# Western Water Program

NFWF is a recognized leader in efforts to develop and implement voluntary water transactions to improve stream flows and habitats across the arid West.

- Columbia Basin Water Transactions Program
- Walker Basin Restoration Program
- Rio Grande Environmental Water Transactions Program
- Texas Gulf Coast Environmental Flows Partnership
- Lower Klamath Basin Restoration Program
- Colorado River Delta



# DESERT TERMINAL LAKES

Photo Credit: Mineral County Museum

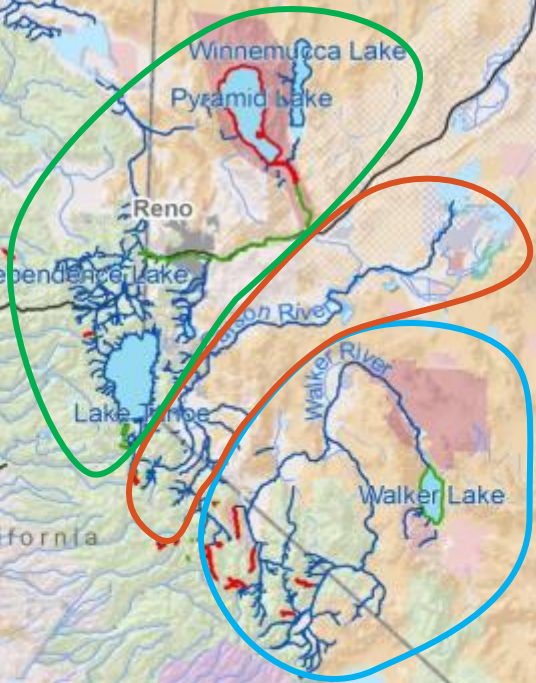
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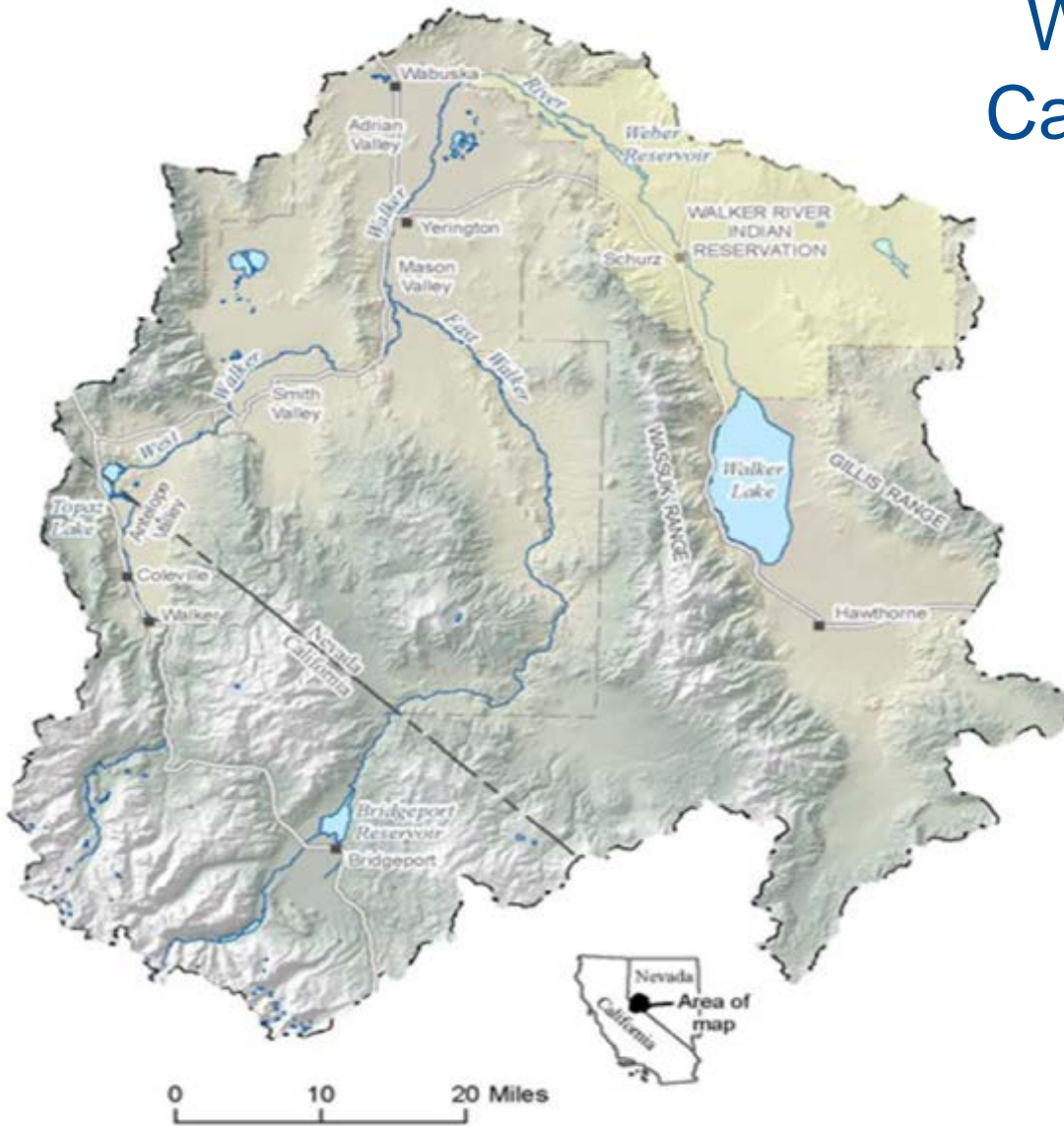
# 20 Pounds? Not Too Bad, for an Extinct Fish

By NATE SCHWEBER – NEW YORK TIMES - APRIL 23, 2013



Lahontan Cutthroat - Pyramid Lake, NV

# Walker River Basin - California and Nevada



- Natural flow rights adjudicated by the Walker River Decree (Nevada-California)
- 2 upstream storage reservoirs (WRID)
- 1 downstream storage reservoir (WRPT)
- Extensive primary and supplemental groundwater rights (NV) and (CA)
- 6 agricultural valleys, more than 100,000 irrigated acres
- Walker River, Tributaries, Riparian Corridors, Wet Meadows and Sagebrush Ecosystems, Walker Lake

# HISTORY AND TASK

Photo Credit: Mineral County Museum

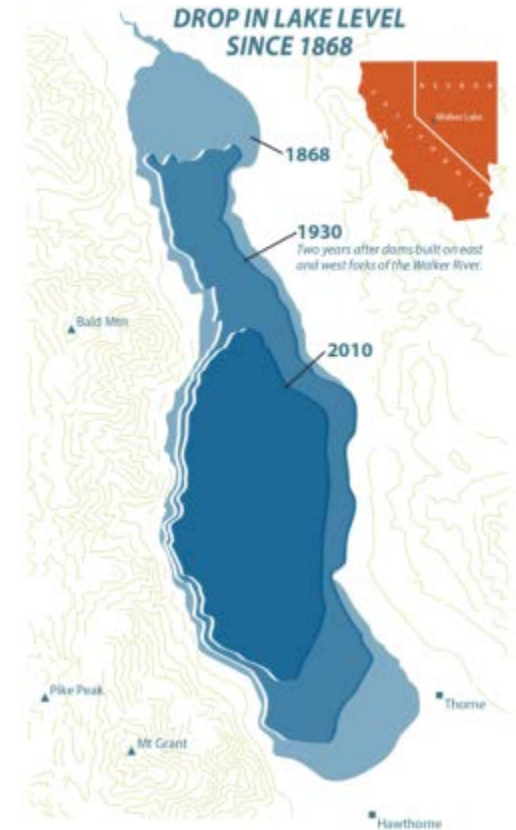
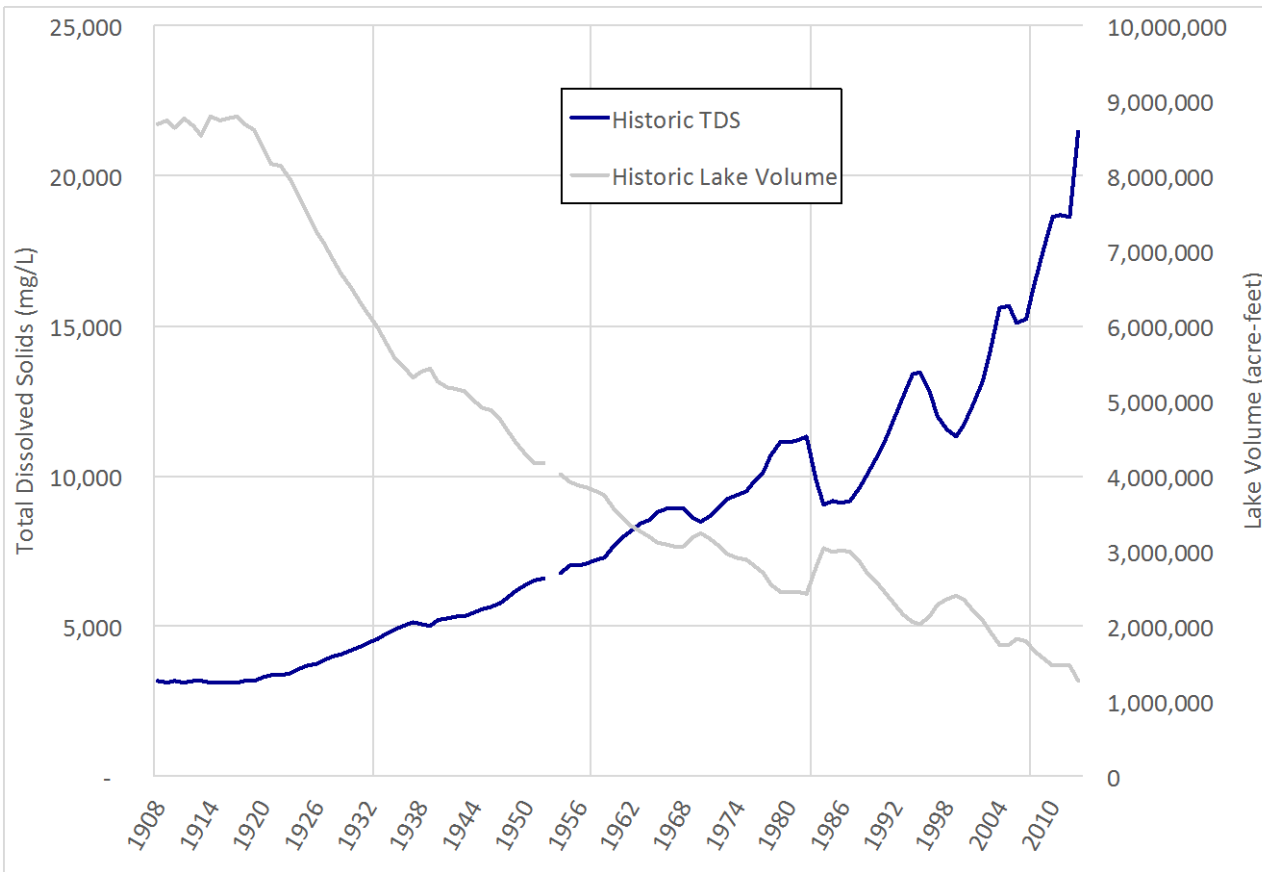
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# Walker Lake, Nevada

## Total Dissolved Solids (TDS) and Water Volume, 1908-2013



# Walker Basin Restoration Program



- Established by Congress under Public Law 111-85 (2009) “for the primary purpose of restoring and maintaining Walker Lake...while protecting agricultural, environmental and habitat interests in the Walker River Basin”
  - Water acquisitions from willing sellers together with all necessary approvals to increase freshwater inflows in the Walker River to Walker Lake
  - Water leasing demonstration program developed and administered by the Walker River Irrigation District
  - Conservation and stewardship grants focused on affected lands, alternative agriculture, watershed improvement, system modernization and establishment of a local non-profit entity to hold and manage Program assets
  - Associated research, evaluation, modeling and decision support
- Transfer of assets and obligations from the University of Nevada’s Walker Basin Project (2006-2009)
- Funding through the Bureau of Reclamation’s Desert Terminal Lakes Program via Farm Bill appropriations 2002-2012

# PROGRAM FUNDING

Photo Credit: Mineral County Museum

WALKER LAKE NEV.



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## Walker Basin Restoration Program

### Primary Purpose

- Restore and maintain Walker Lake, a desert terminal lake in Nevada

### Core Strategies

- Acquire water rights and protect instream to increase freshwater flows to Walker Lake

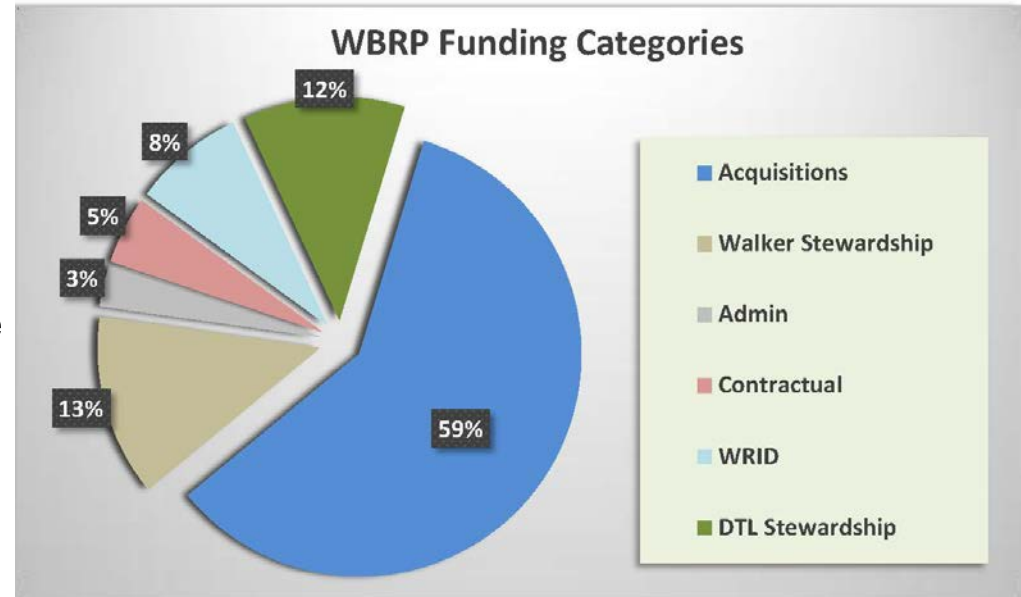
### Secondary Purpose

- Protect agricultural, environmental and habitat interests in the Walker River Basin

### Core Strategies

- Conservation and stewardship program focused on land stewardship, water conservation, alternative agriculture, watershed improvement and establishment of a local nonprofit.

(per PL 111-85 and related federal legislation)



# ACCOMPLISHMENTS

Photo Credit: Mineral County Museum

WALKER LAKE NEV.



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# Walker Basin Restoration Program



## Selected Accomplishments 2010-2015

- Over \$300m for conservation investments in Walker and DTL watersheds (2002, 2008, and 2012 Farm Bill authorities)
- Turned contentious pre-NFWF history into platform for long-term success
- Acquired nearly 30% of long-term goal (20,000 AF of water rights from willing sellers)
- Acquired 6 ranch properties with conservation values (7<sup>th</sup> in escrow); re-structured and sold/donated two, all other dispositions in progress to support agricultural and watershed interests
  - *Agricultural Sustainability Project with resale to Desert Pearl Farms*
  - *NDOW – Mason Valley Wildlife Management Area*
- Negotiated \$25m water lease program grant with WRID
  - *2011 flood forbearance program with 68% enrollment*
- Secured Nevada State Engineer (NSE) approval on first water rights change application
  - *WRID and WRPT negotiated stipulation; Federal Decree Court remand to NSE; and 9<sup>th</sup> circuit appeal in progress*
- Established Walker Basin Conservancy 2014



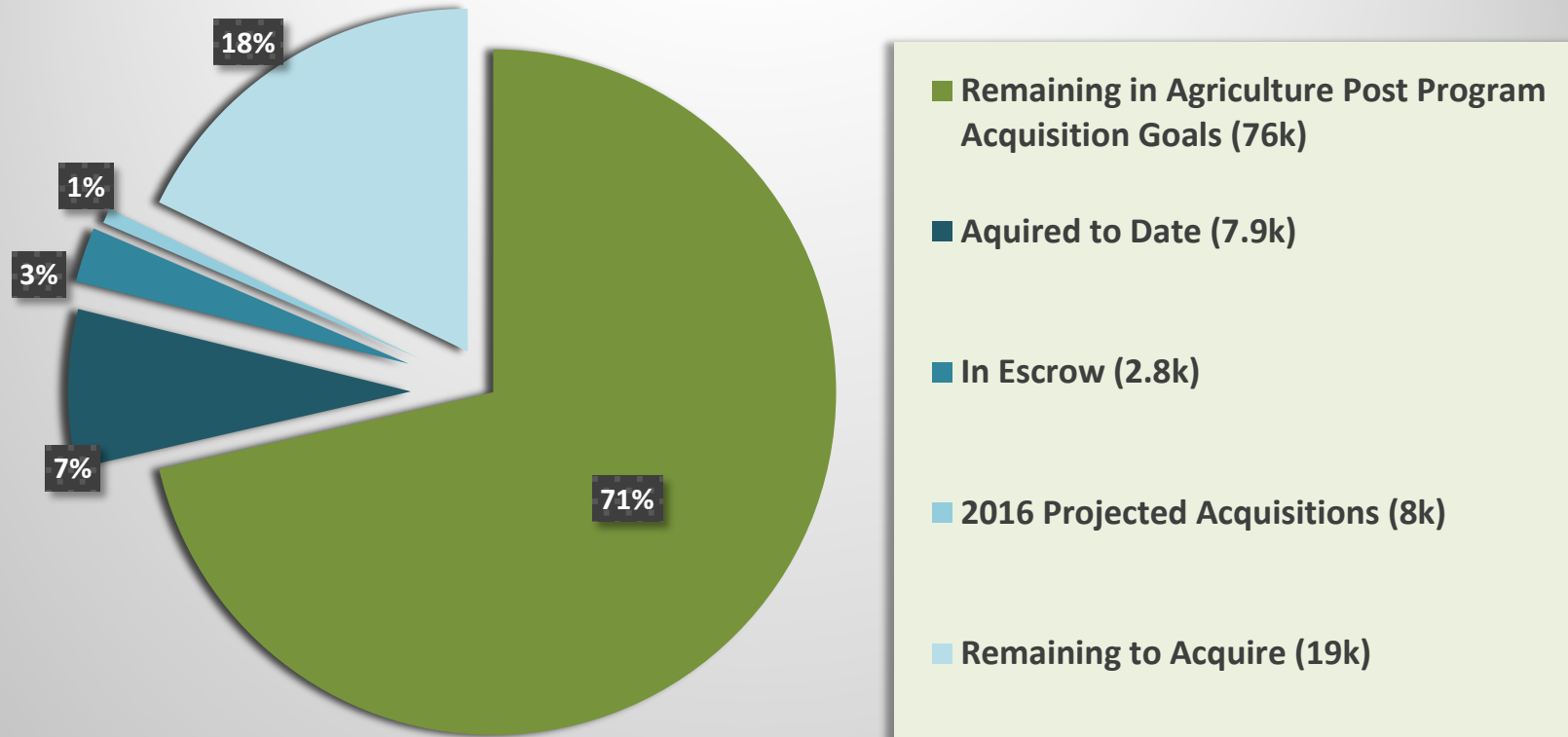
## Willing Seller Water and Land Acquisitions

Seller	Deal Closed	Surface Decree (Cubic Feet Per Second)	Reservoir Storage Water (AF)		Groundwater (AF)		Land (Acres)	General Location
			Supplemental	New Land	Supplemental	Primary		
L&M	FY10	7.75	402	-	2,585	-	-	North Mason Valley
Sovereign	FY11	-	-	330	-	-	-	Smith Valley
Sciarani	FY11	9.25	376	517	-	-	1,130	North Mason Valley
Sunrise	FY11	3.31	149	192	-	586	-	North Mason Valley
Aguiar	FY11	8.84	359	171	1,131	-	855	North Mason Valley
Farias	FY12	1.92	-	-	-	-	-	Smith Valley
Desert Creek Inv.	FY13	0.93	-	246	468	-	-	Southeast Mason Valley
Turf Company	FY13	2.25	147	231	930	160	-	Southeast Mason Valley
Rafter 7 Ranch	FY13	11.98	212	1,668	3,688	-	3,223	East Walker River
Stanley Ranch	FY13	0.82	-	206	600	-	198	North Mason Valley
Sutter Ranch	FY14	13.92	190	173	-	-	854	Smith Valley
Pitchfork Ranch	FY15	8.08	247	1,802	-	240	2,320	East Walker River
Walker River Ranch	FY16	1.68	9	348				South Mason Valley
<b>TOTALS</b>		<b>70.73</b>	<b>2,091</b>	<b>5,884</b>	<b>9,402</b>	<b>986</b>	<b>8,580</b>	

Since 2010 NFWF has expended nearly \$57 million to acquire from willing sellers ~1/3 of the water rights needed to increase Walker Lake inflows and reduce Total Dissolved Solids (TDS) to a long-term average of 10,000 mg/l in accordance with USFWS restoration goals.

# Acquisition Strategy in California and Nevada

Water Righted Acres Acquired and Remaining in Agriculture  
CA and NV Combined



# Protecting Agricultural and Watershed Interests

\$24+ million Awarded and Committed FY10-15

- Ditch analysis and diversion system improvements
- WRID control system improvements
- New drain and stream gages
- Revegetation and alternative crops
- Agricultural sustainability demonstration projects
- Local employment and equipment purchases
- WRPT siphon replacement and irrigation improvement projects
- Conservation of riparian corridor and habitat
- Donation and resale of acquired lands
- Regulating reservoir studies



# CHALLENGES AND OPPORTUNITIES

Photo Credit: Mineral County Museum

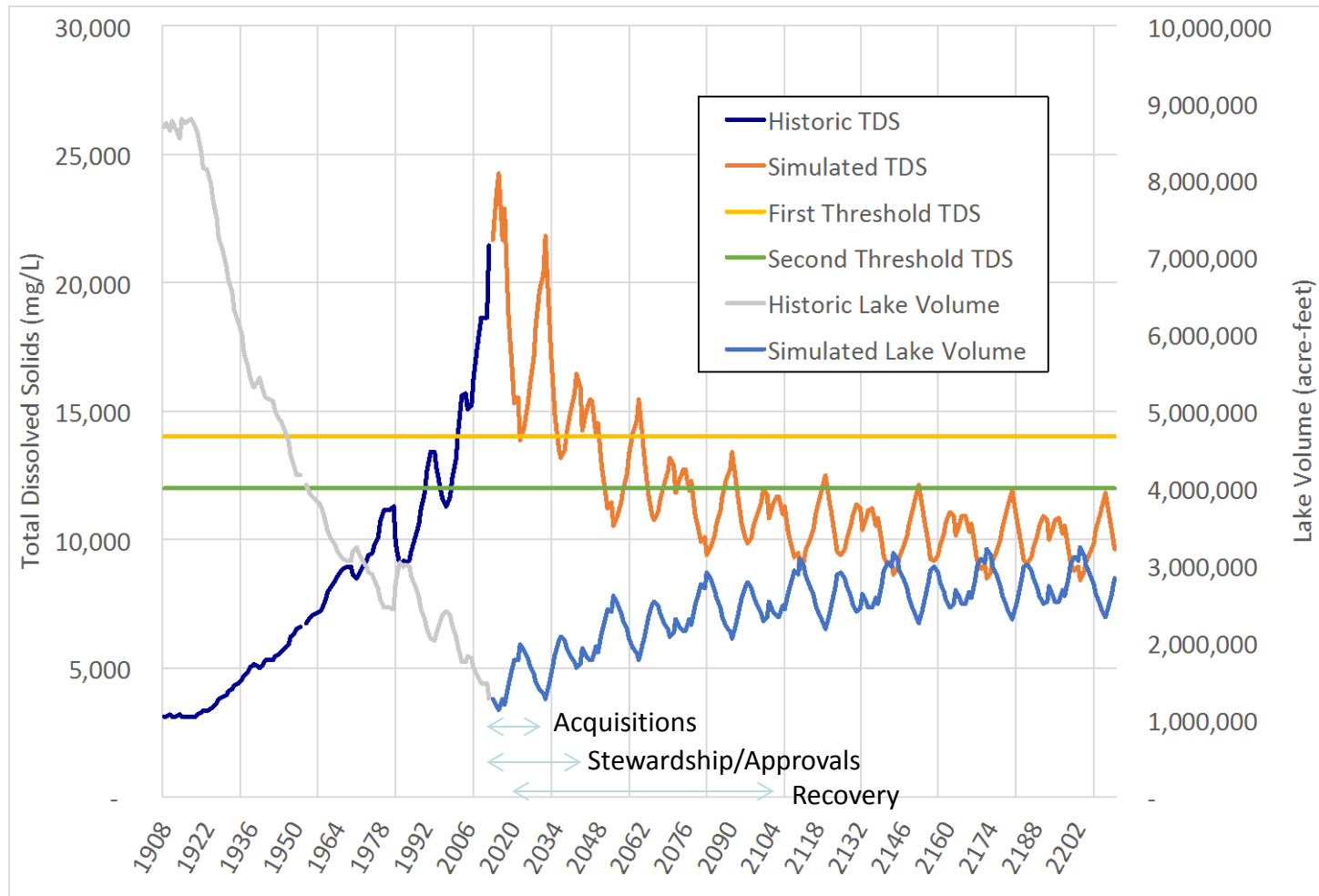
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# Walker Lake Restoration Model

## Long-Term Total Dissolved Solids (TDS) @ 8,000-12,000 mg/l



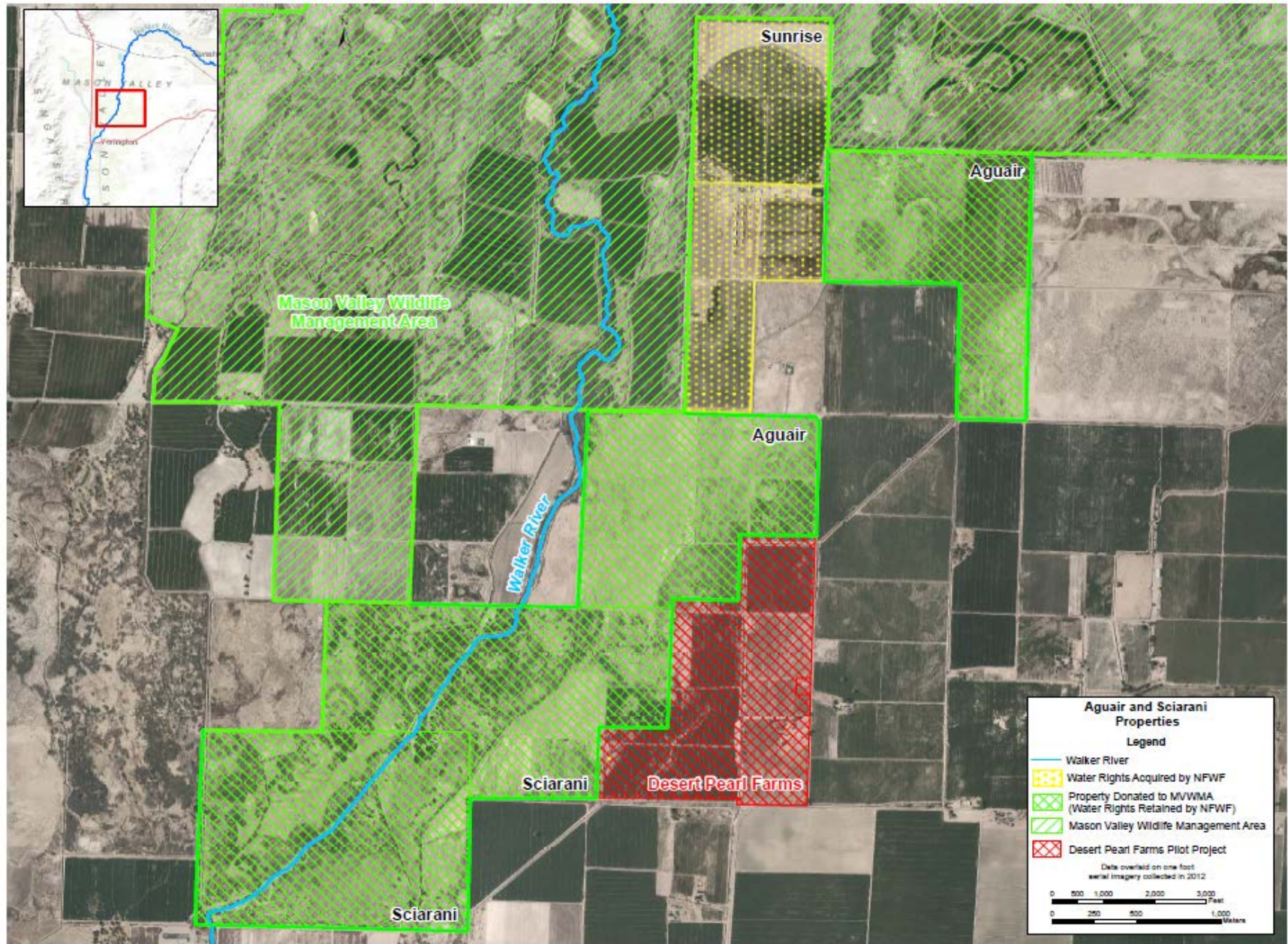
Source: Ecosystem Economics 2014, Run 4 (NV+CA acquisitions, 10k TDS target)

# Acquisition Example

## Aguair/Sciarani Property

- **Two deals inherited from the Nevada System of Higher Education**
  - Originally water-only deals optioned at twice market value
- **NFWF restructured deals to include land and other assets**
  - Combined deal total: \$13.3 million (closed 2011)
  - Purchased: 18 cfs decree, ~1,400 AF storage water, 1,100 AF groundwater rights and 1,985 acres of land (including 3 miles of riparian corridor)
- **1,600 acres of land donated to the State of Nevada's Mason Valley Wildlife Management Area (transferred 2012/2013)**
  - Subdivision approvals
  - Major conveyance agreement negotiations
  - Undergoing active revegetation
- **Sold remaining ~360 acres to Desert Pearl Farms (DPF) for pilot project on agricultural economics**

# Example: Aguair/Sciarani Property



# Acquisition Example

## Aguair/Sciarani Property

- In total it was four year process to negotiate, purchase, and eventually donate/sell the land
- Revegetation completed by ~2017
- Total timeline from negotiations to completion of land transfer and all stewardship activities ~6 years
- Currently filing applications to protect acquired water instream
- **DPF Pilot: Economic Impact Analysis 2013 (WestWater)**
  - 620 acres of pasture retired, 301 of 604 alfalfa/hay acres kept in production
  - 166 acres of alfalfa retained
  - 135 acres converted to onion
- **Estimated (Net) Change in Agricultural Production, Employment, and Expenses (\$100k)**

# Looking Forward

- **Nevada Program focus**
- **Walker Basin Conservancy**
  - Expanded Role
  - Increased Capacity
  - Broadened Board
- **Revegetation activities, riparian corridor protection, and public access**
- **Exploring opportunities to assist with voluntary groundwater management**
- **Continue to work with key partners on water management improvements**





Questions?



Thank you!



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