



Walker Basin Restoration Program



Program Overview - June 7, 2016
Legislative Commission's
Subcommittee to Study Water
Dyer, Nevada



NFWF

National Fish and Wildlife Foundation

The National Fish and Wildlife Foundation (NFWF) is a federally chartered non-profit organization established by Congress in 1984 to further the conservation and management of the nation's fish, wildlife, plant and habitat resources for present and future generations.



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 a majority 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

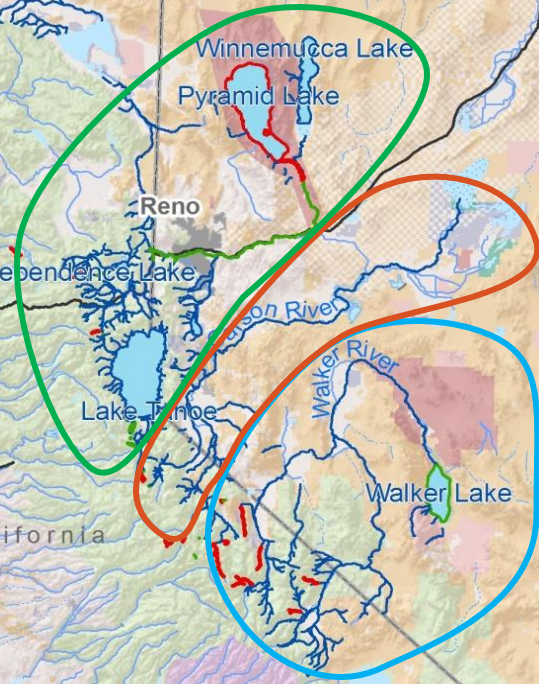
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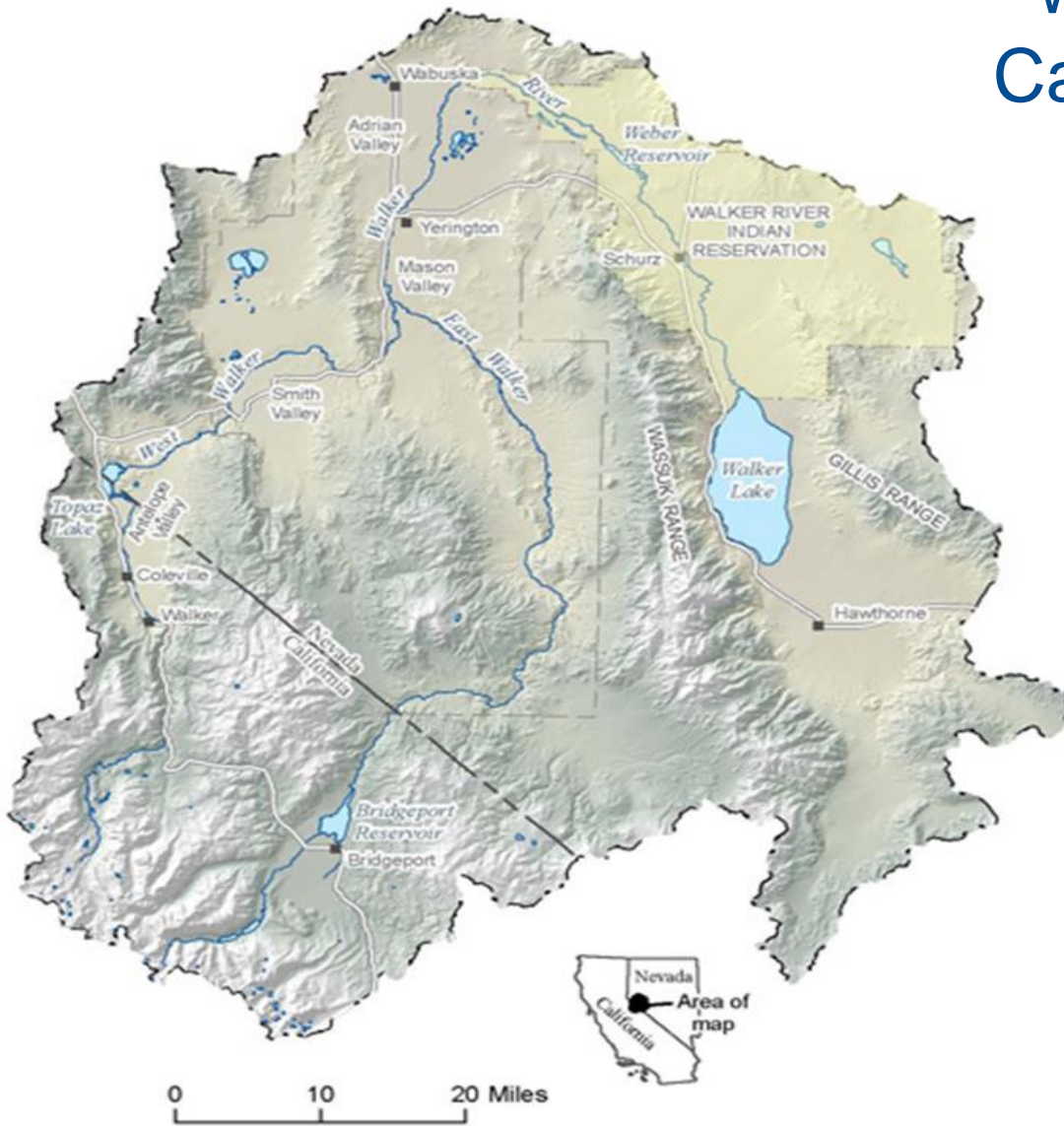
20 Pounds? Not Too Bad, for an Extinct Fish

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

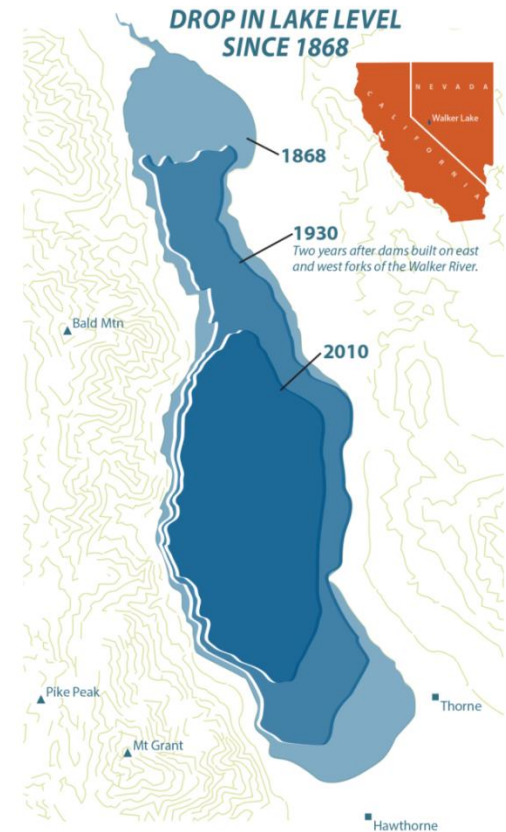
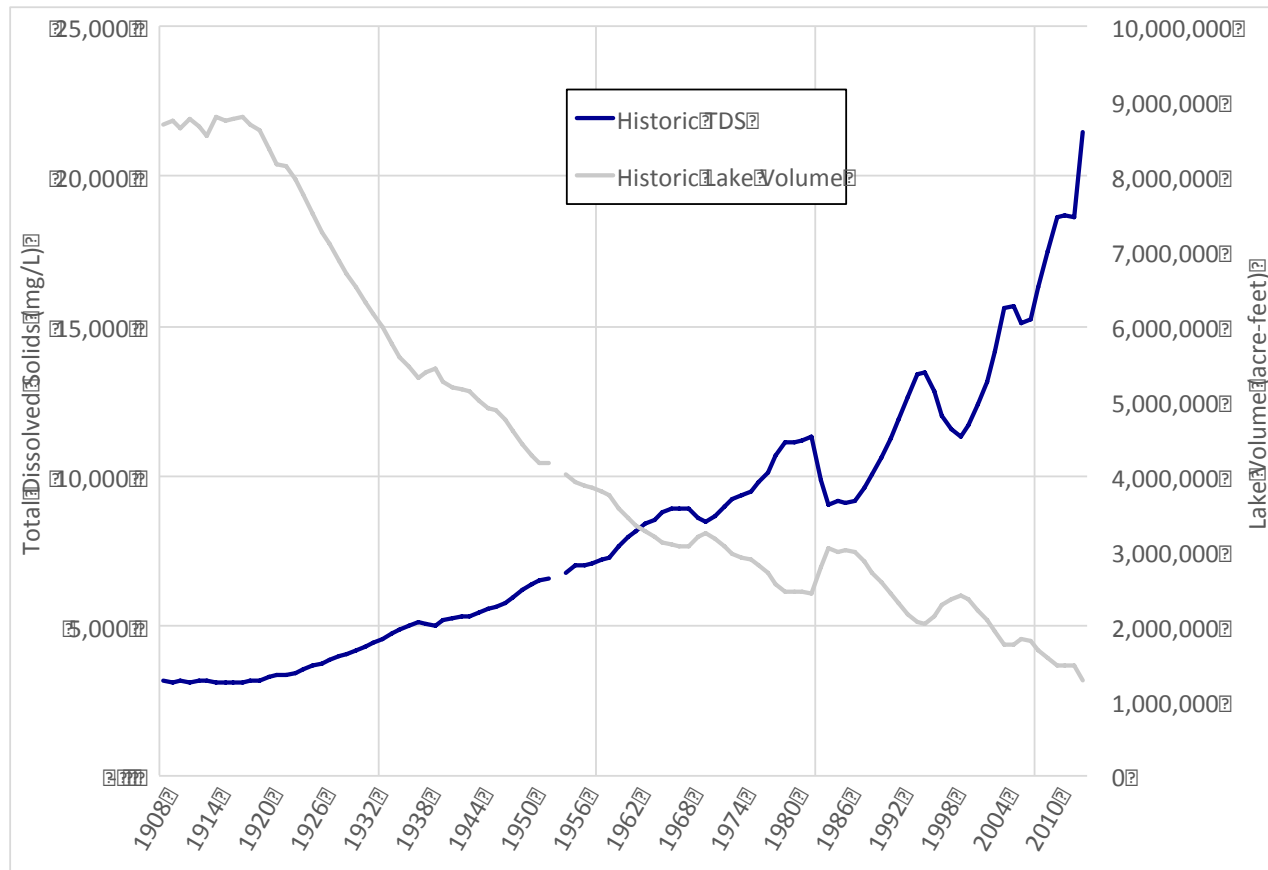
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Walker Lake, Nevada

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 down stream to Walker Lake
 - Water leasing demonstration program developed and administered by the Walker River Irrigation District (WRID)
 - Conservation and stewardship grants focused on affected lands, alternative agriculture, watershed improvement, system modernization and establishment of a local nonprofit 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

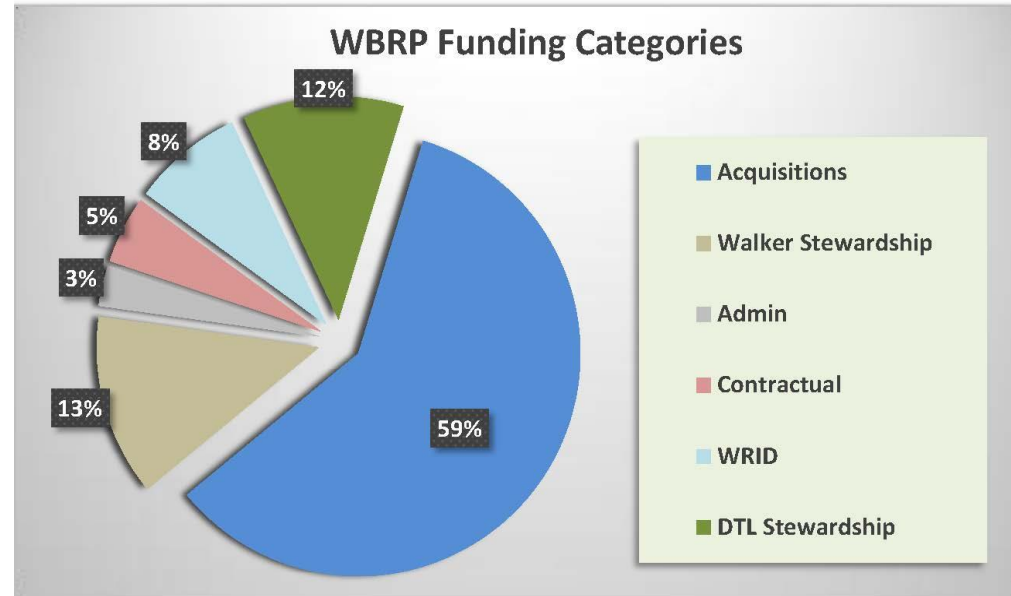
Secondary Purpose

- 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 30% of long-term goal (20,000 AF of water rights from willing sellers)
- Acquired 6 ranch properties with conservation values (7th in escrow); restructured 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 appeal to the 9th Circuit Court in progress
- Established Walker Basin Conservancy 2014



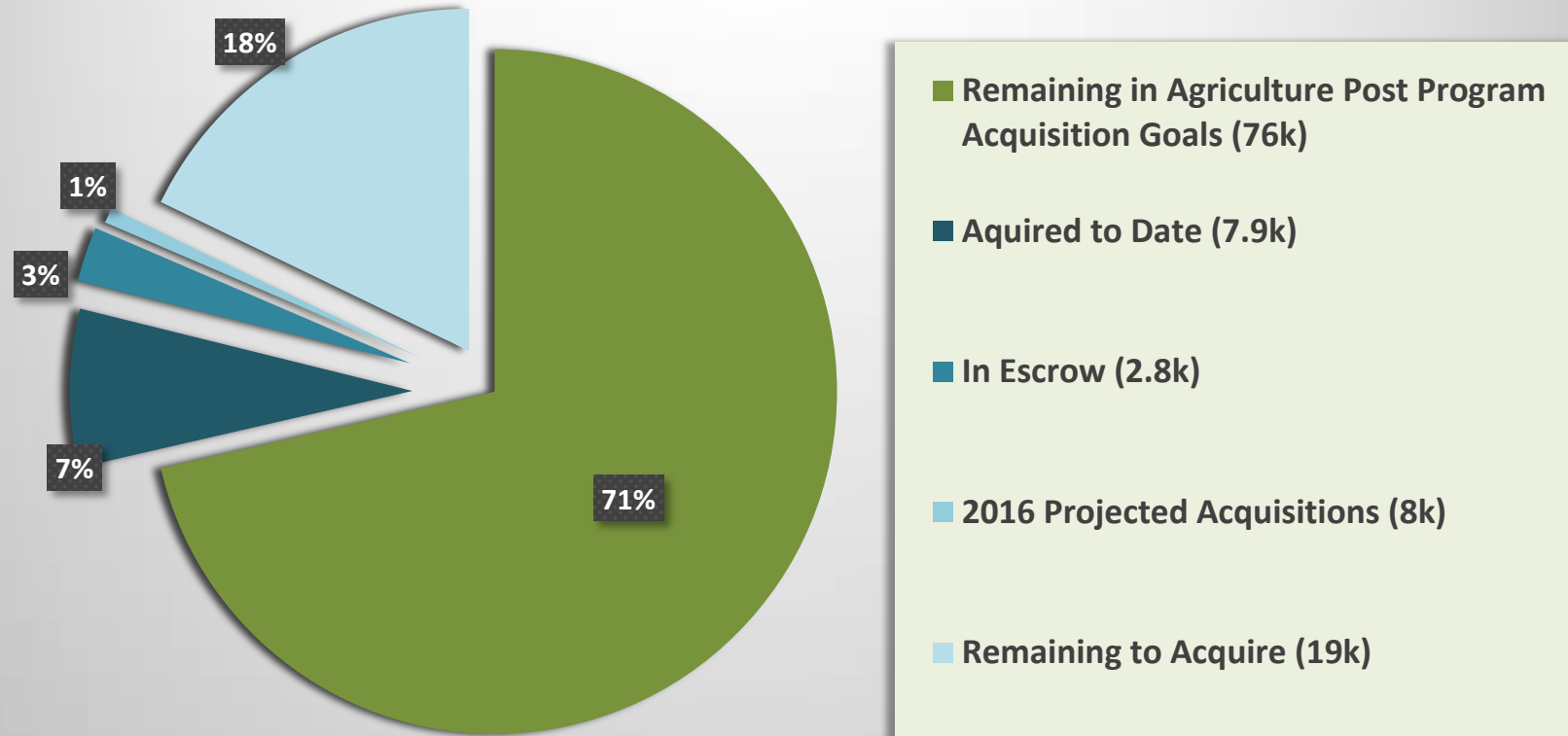
Willing Seller Water and Land Acquisitions

<i>Seller</i>	<i>Deal Closed</i>	<i>Surface Decree (Cubic Feet Per Second)</i>	<i>Reservoir Storage Water (AF)</i>		<i>Groundwater (AF)</i>		<i>Land (Acres)</i>	<i>General Location</i>
			<i>Supplemental</i>	<i>New Land</i>	<i>Supplemental</i>	<i>Primary</i>		
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
Ward	FY16	-	-	323	-	-	-	Smith Valley
TOTALS		70.73	2,091	6,207	9,402	986	8,580	

Since 2010 NFWF has expended nearly \$57 million to acquire from willing sellers approximately a third 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

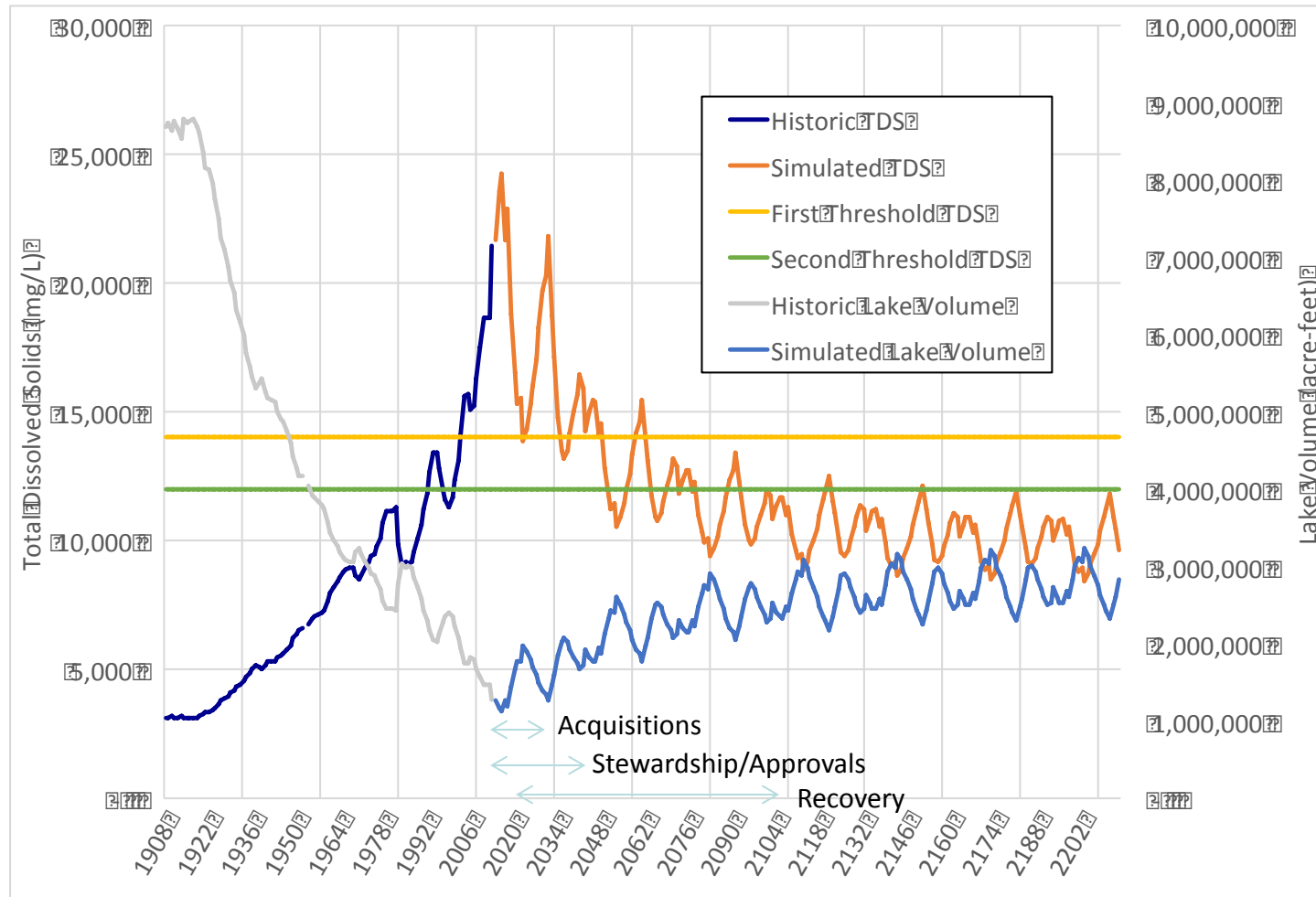
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Walker Lake Restoration Model

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



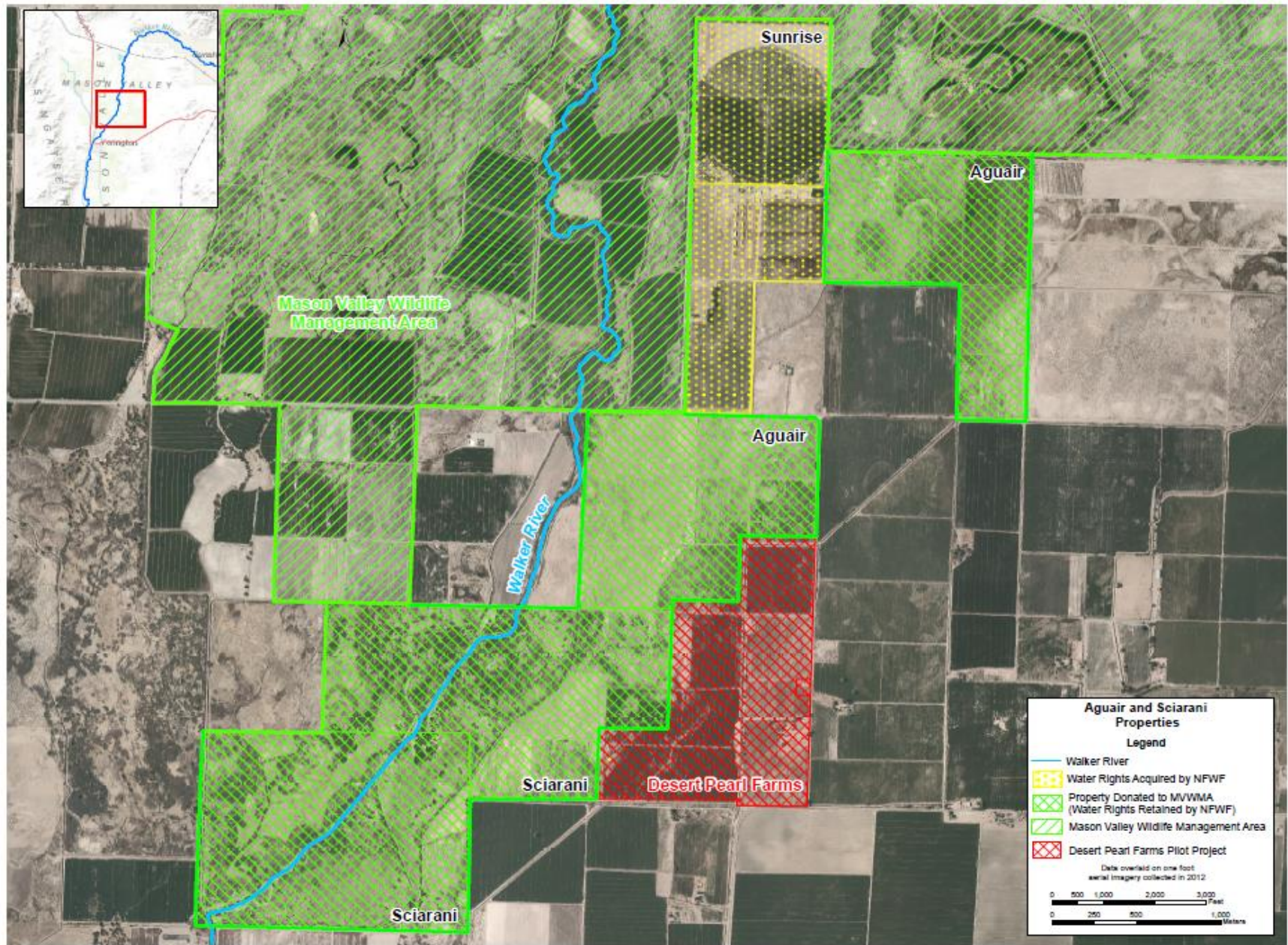
Source: Ecosystem Economics 2014, Run 4 (NV+CA acquisitions, 10k TDS target)

Restructuring of Water Usage:

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

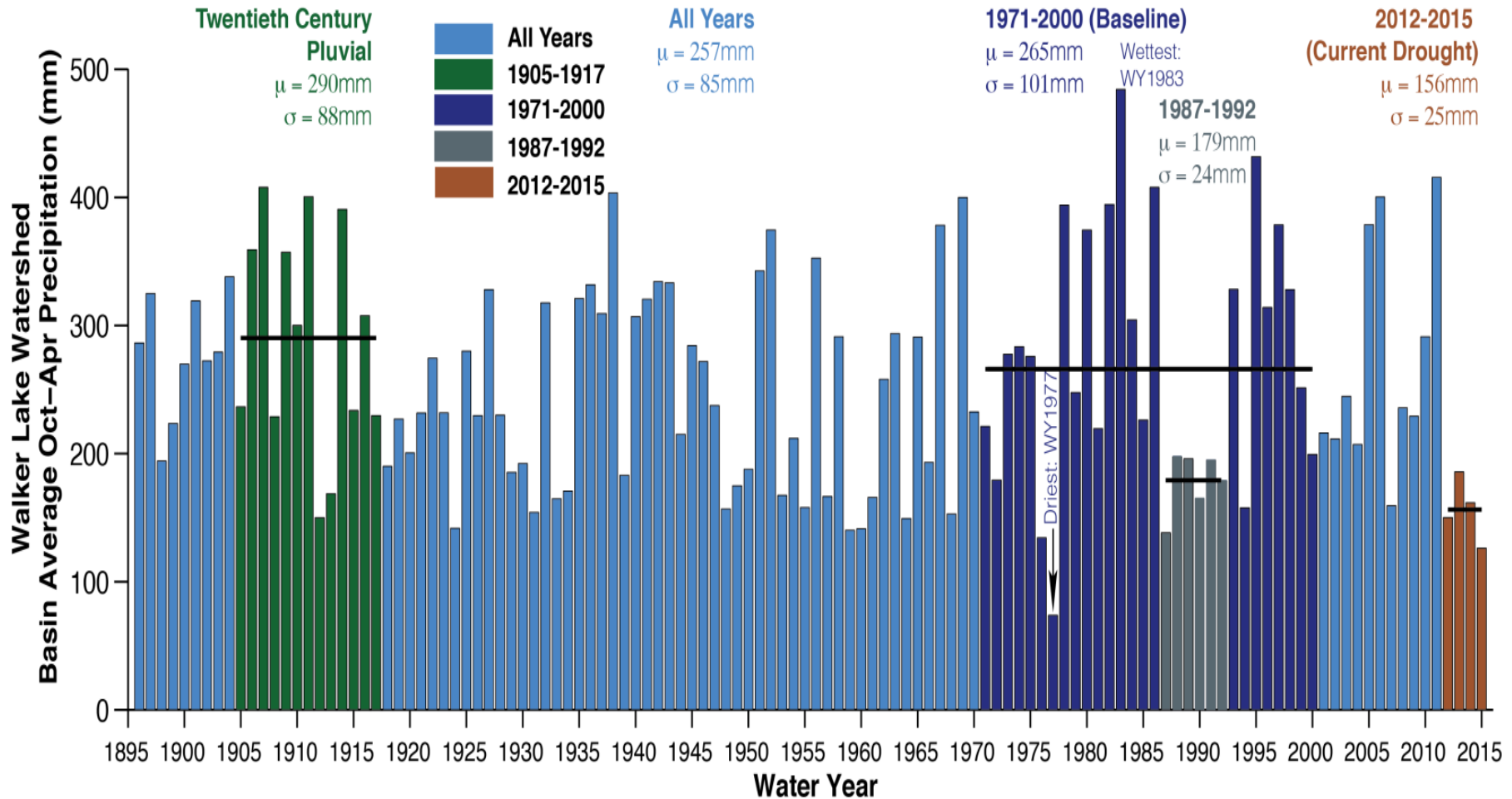


Acquisition Example

Aguair/Sciarani Property

- In total it was a 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)

Walker River Basin 120 Years of Precipitation vs. 2012-2015 Drought



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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