

Truckee Meadows Water Authority

Update On Programs And Activities

Legislative Committee on Public Lands – May 18, 2018

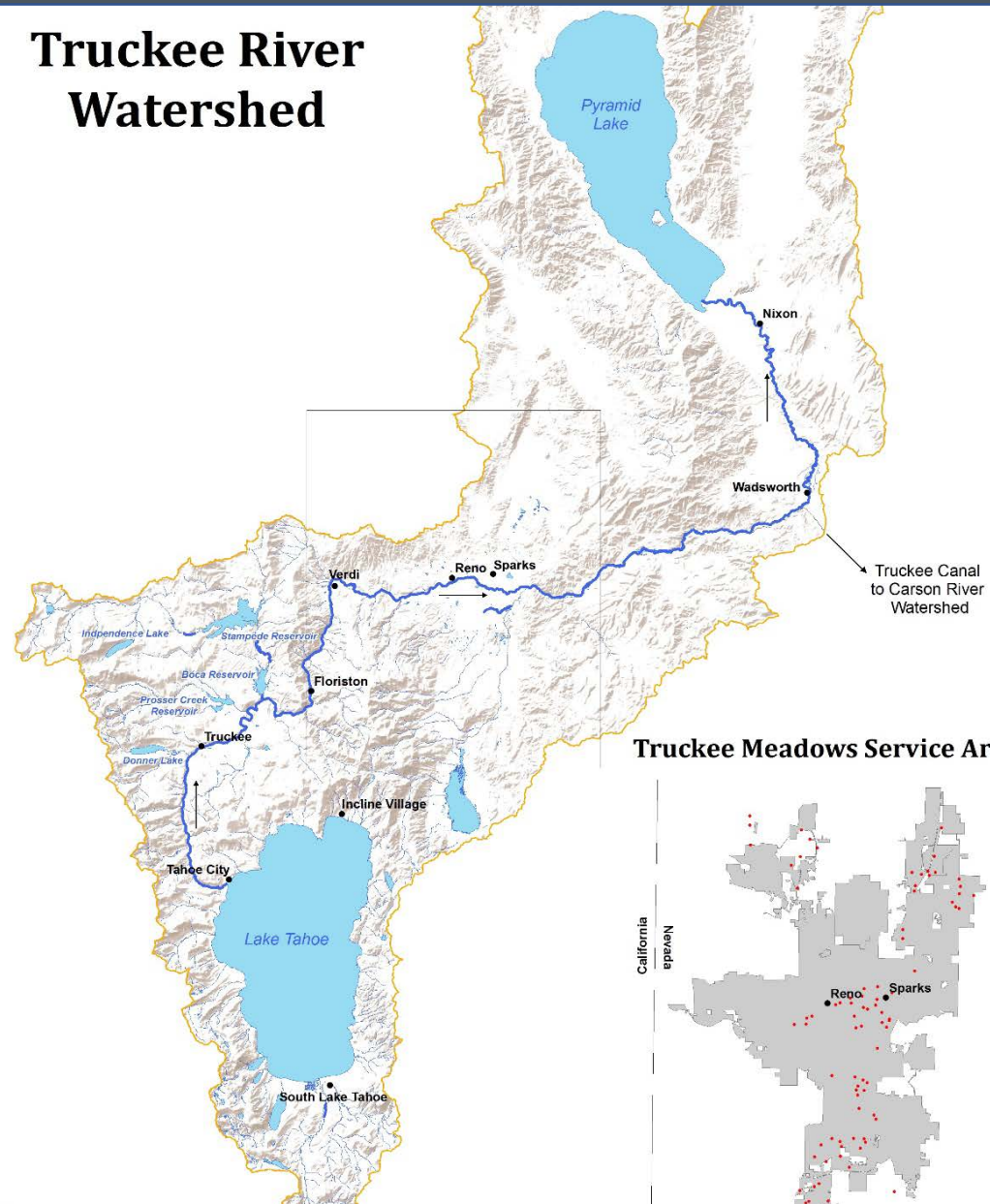


AGENDA ITEM IX E-LANDS
Meeting Date: 5-18-18

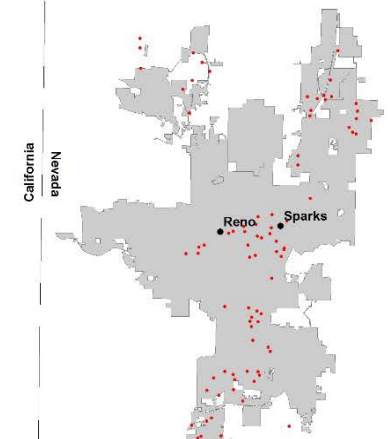
Brief History of TMWA

- Joint powers authority created by Reno, Sparks, and Washoe County in 2000
- Purchased Sierra Pacific Power Company's (now NV Energy) water utility assets
- Governed by a seven-member Board of Directors
 - City of Reno – 3 Directors (Neoma Jardon, Jenny Brekhus, and Naomi Duerr)
 - City of Sparks – 2 Directors (Geno Martini and Ron Smith)
 - Washoe County – 2 Directors (Vaughn Hartung and Bob Lucey)
- TMWA owns and operates a water system that provides retail water supplies to residential, governmental, and commercial users and one wholesale customer
- Successful merger of Washoe County and South Truckee Meadows GID water systems added 24,800 new connections and resulted in better water-management and lower costs (Effective January 1, 2015)
- TMWA operates 8 drinking water treatment facilities, 94 groundwater wells, 1,970 miles of pressurized transmission and distribution mains, over 110 pump stations, and 4 hydroelectric generation facilities
- Source of Revenue: Water user fees and charges only – Enterprise Fund

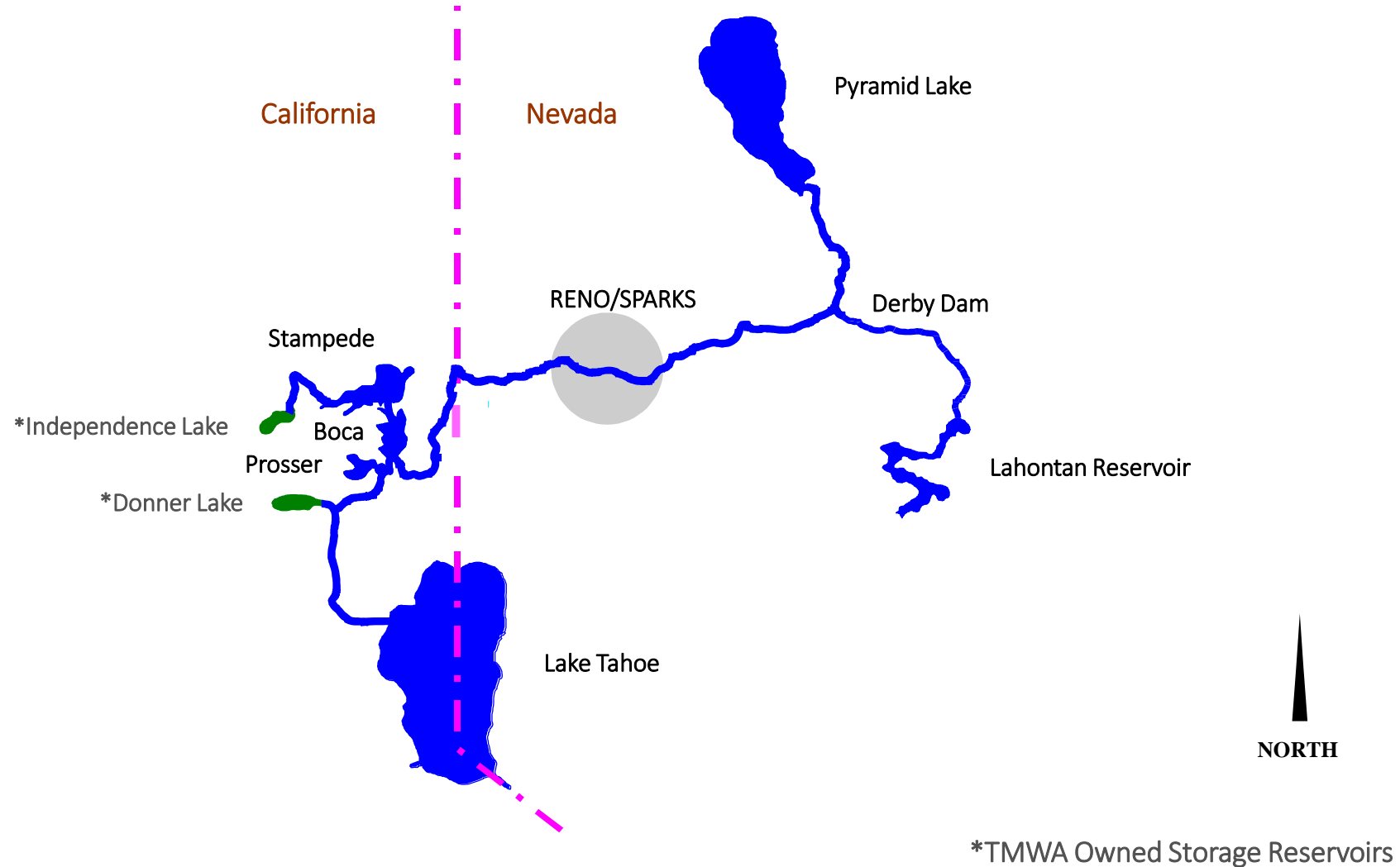
Truckee River Watershed



Truckee Meadows Service Area



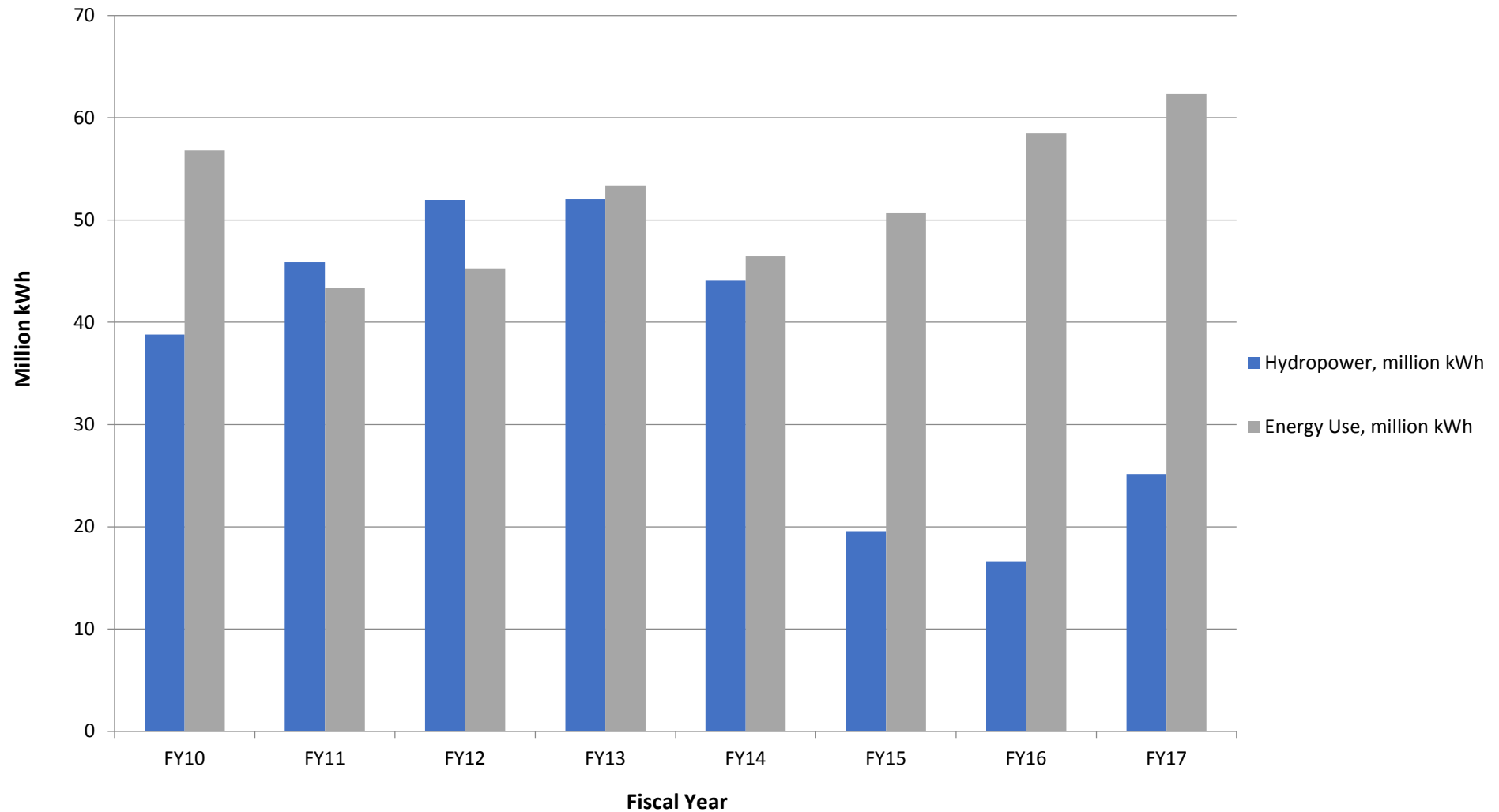
The Truckee River System





Hydroelectric Plants

TMWA Electricity Generation vs. Usage





Chalk Bluff Water Treatment Plant

TMWA Water Rights And Storage Capabilities

- Total of 181,820 acre-feet of Water Rights
 - 38,800 acre-feet of decreed water rights
 - 74,220 acre-feet of acquired irrigation water rights
 - 36,800 acre-feet of groundwater rights (added 19,000 from merger)
 - 27,000 acre-feet of privately owned reservoir storage rights
 - 5,000 South Truckee Meadows creek water rights (from merger)

- Storage Capacities:

<u>Facility</u>	<u>Capacity</u>	<u>Available to TMWA</u>
<i>Federally Owned or Operated:</i>		
Lake Tahoe	744,600 af	Varies
Boca Reservoir (TROA)	40,800 af	Varies
Stampede Reservoir (TROA)	226,500 af	Varies
Prosser Reservoir (TROA)	29,800 af	Varies
<i>TMWA Owned & Controlled:</i>		
Donner Lake	9,500 af	9,500 af
Independence Lake	17,500 af	17,500 af
Groundwater*		36,800 af

* 42,850 af available in drought years

Truckee River Operating Agreement (TROA): A Transformation of Water Supply Management

Truckee River Water Negotiations: A History of Milestones

1902

Bureau of Reclamation starts Newlands Project

Created a water supply for Nevada farmers.

1909

Federal Control of Lake Tahoe Dam begins

Operated by the Federal Dam Master to present day.

1913

US vs. Orr Ditch Water Company

Court case begins.

1915

Truckee River General Electric Decree

Established seasonal Floriston Rates.

1935

Truckee River Agreement Signed

Established Lake Tahoe levels and the construction of Boca Reservoir.

1944

US vs. Orr Ditch settled

Established water rights on the Truckee River system.

1971

Interstate Compact (CA, NV) Approved

Yet fails to be ratified by Congress.

1990

Truckee-Carson-Pyramid Lake Settlement

Operating agreement between SPPCo and Pyramid Lake Tribe.

2008

Truckee River Operating Agreement

Signed by CA, NV, Pyramid Lake, US Dept. of Interior & TMWA.

2015

Truckee River Operating Agreement Implemented

After 26 years of negotiation, a comprehensive river operating framework begins.

TROA is a dynamic management framework to meet modern-day needs. Specifically for the Truckee Meadows, this means:

1. TROA allows for more efficient use of available reservoir storage when it's needed most.
2. TMWA can retain stored water during drought cycles that is saved by conservation efforts, helping to bolster water supplies if dry conditions continue.
3. While minimum flow rates for the Truckee River must be maintained, portions of TMWA-owned water can be held back for later use.

Use of the Truckee River

Truckee Meadows Water Authority

3%
9%

Truckee Carson Irrigation District

9%
45%

Pyramid Lake

81%
33%

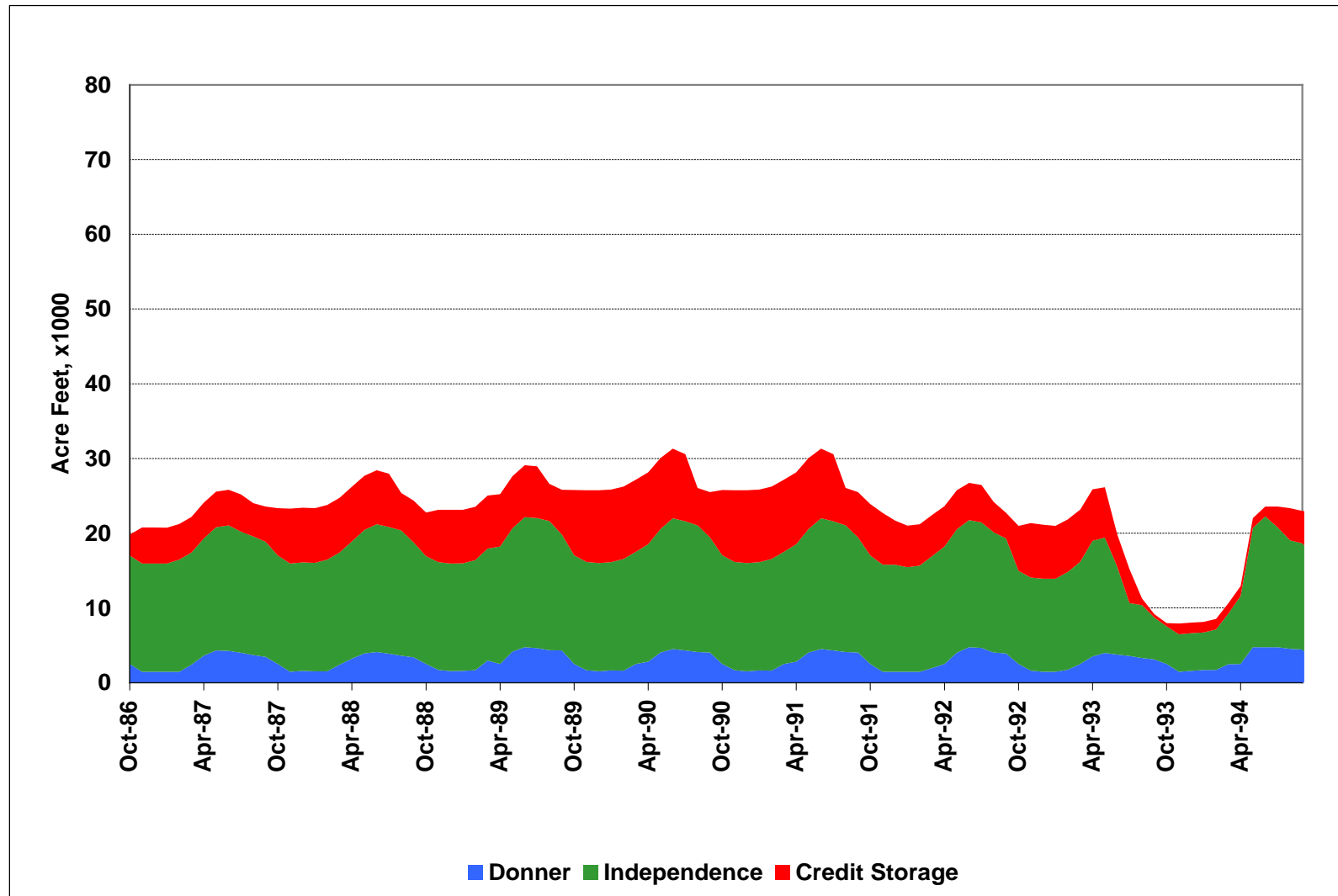
Others

7%
13%

■ Normal Water Years

■ Dry Water Years

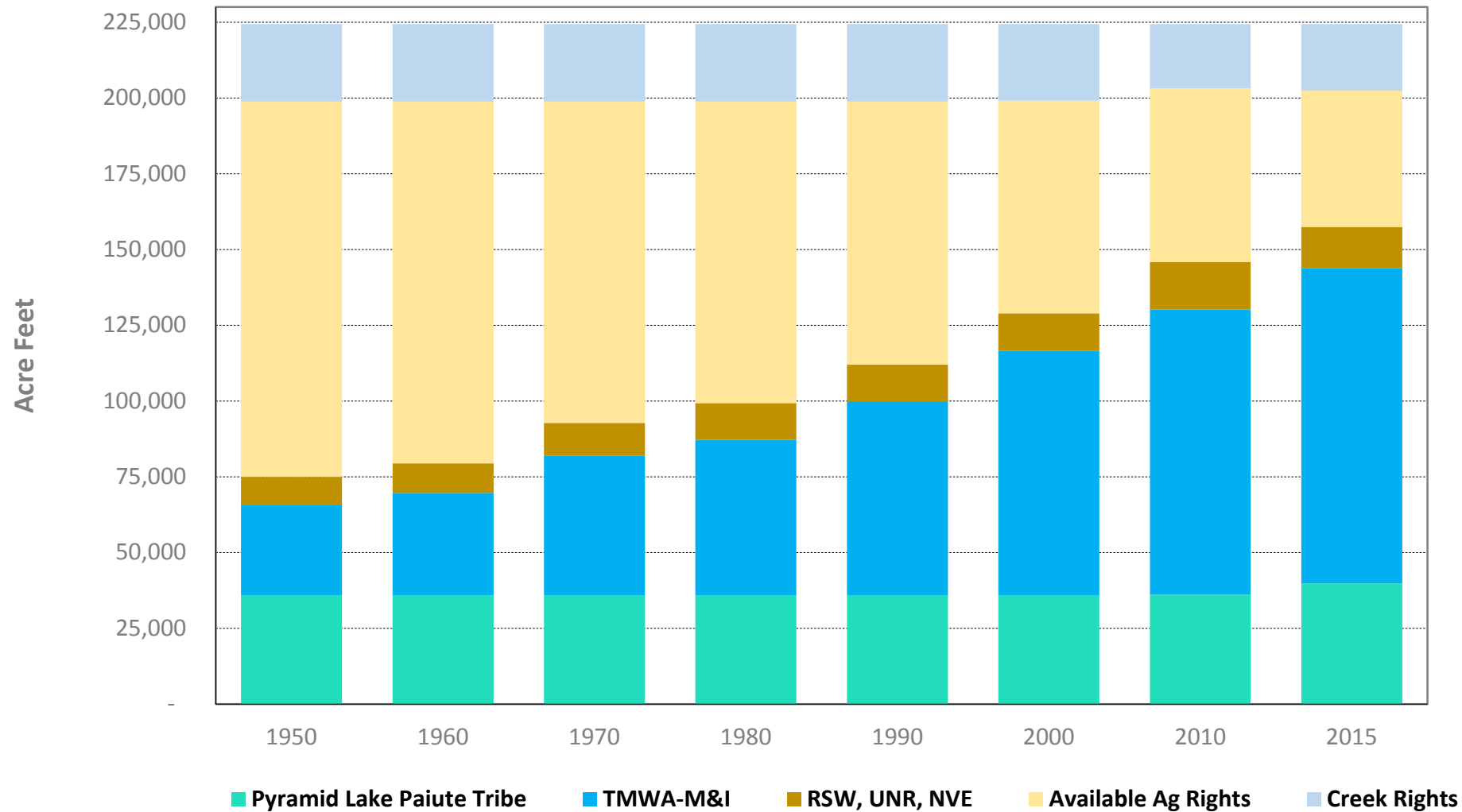
Pre-TROA Upstream Reserves



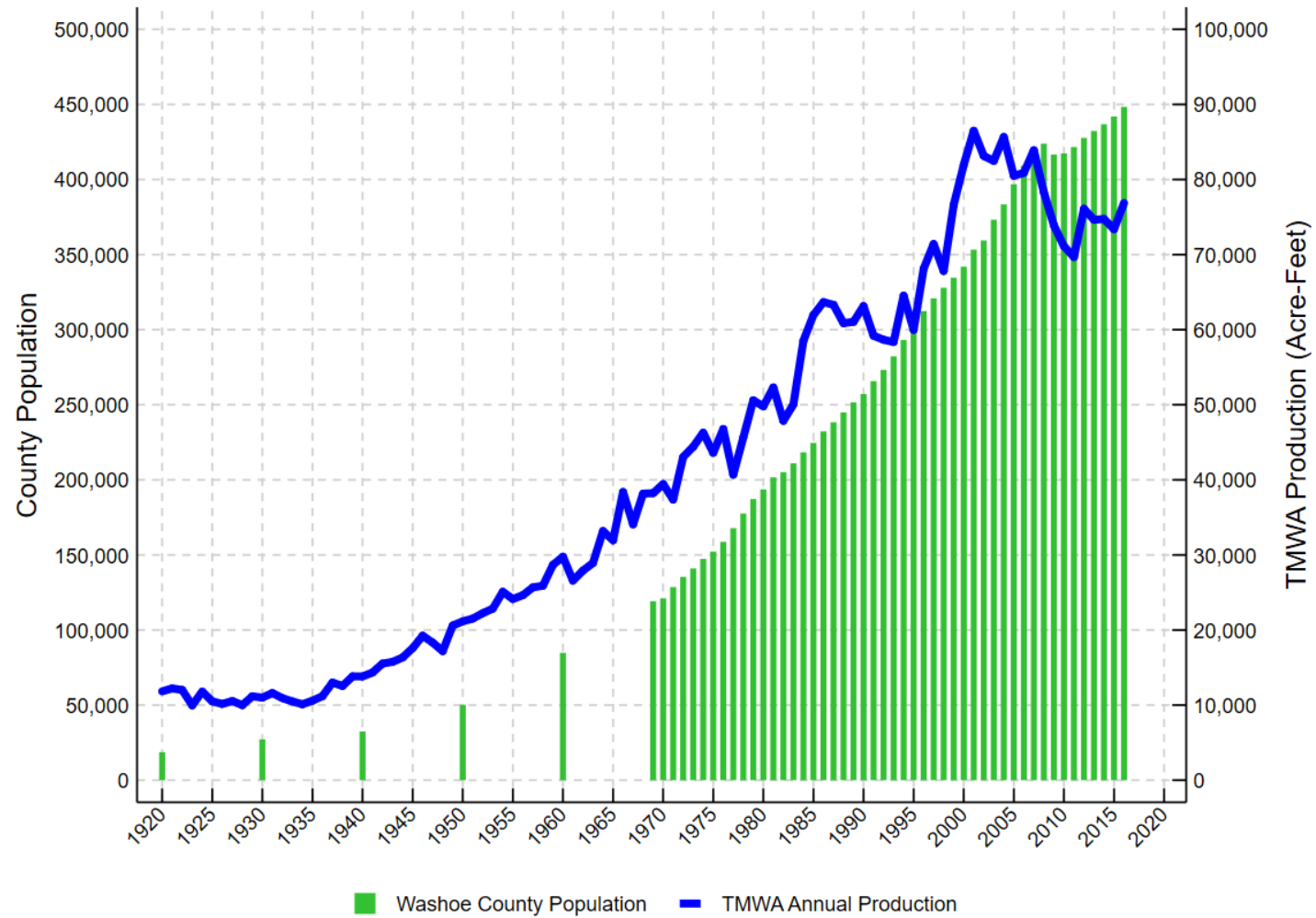
How do developers get water for new projects?

- Developers purchase existing water rights on the open market or from TMWA's inventory of uncommitted resources.
- There have been no new Truckee River water rights since 1944. (Orr Ditch Decree established all water rights on the Truckee River.)
- Most water rights dedicated to TMWA for new development are agricultural rights that are converted to municipal use.
- Infrastructure and the amount of water rights needed for new development are determined by TMWA through an engineering review process.
- Water system improvements to serve new development are paid by development fees.

Water Rights In The Truckee Meadows



Washoe County Population & TMWA Water Production



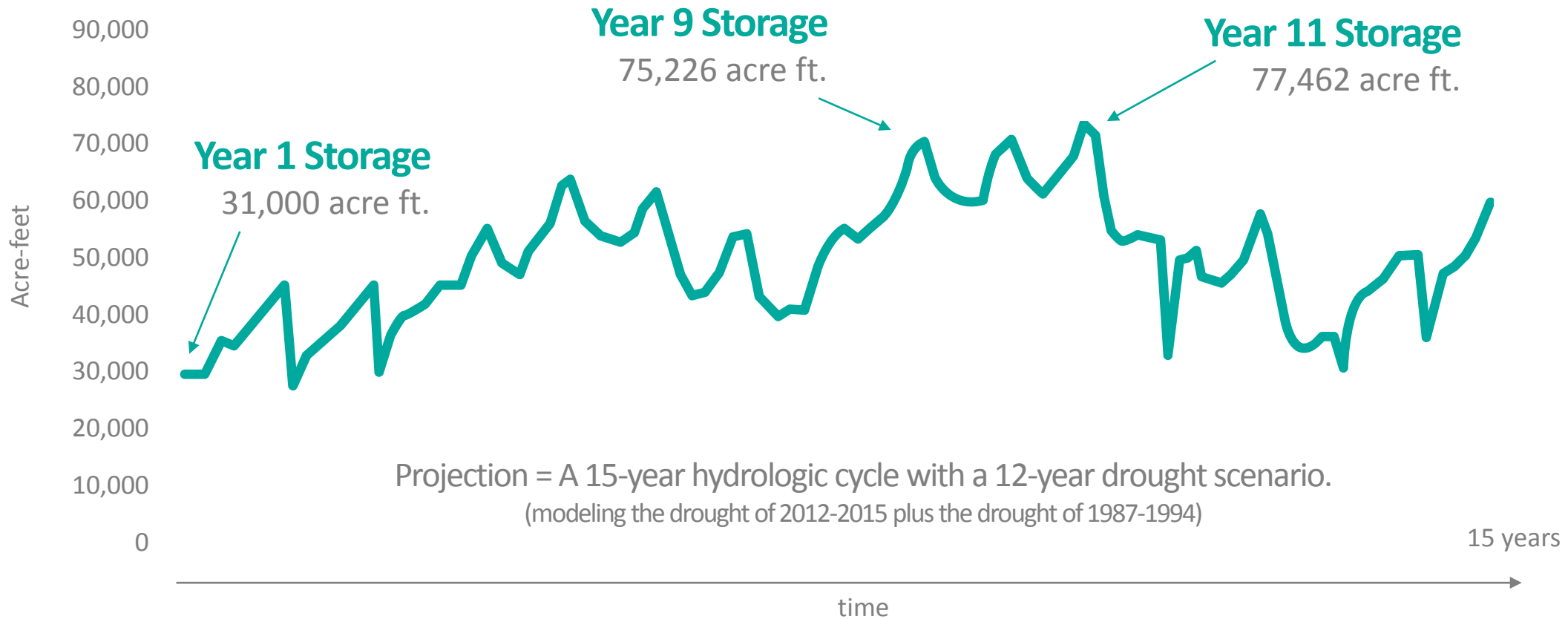
TMWA Water Resource Planning

- Based on a 20-year planning horizon (updated every 5 years)
- Identifies available water supplies and projected demands of the Reno-Sparks community
- Planning is based on the worst drought on record (1987-1994)
- Existing water supplies are able to meet projected customer demands through 2035

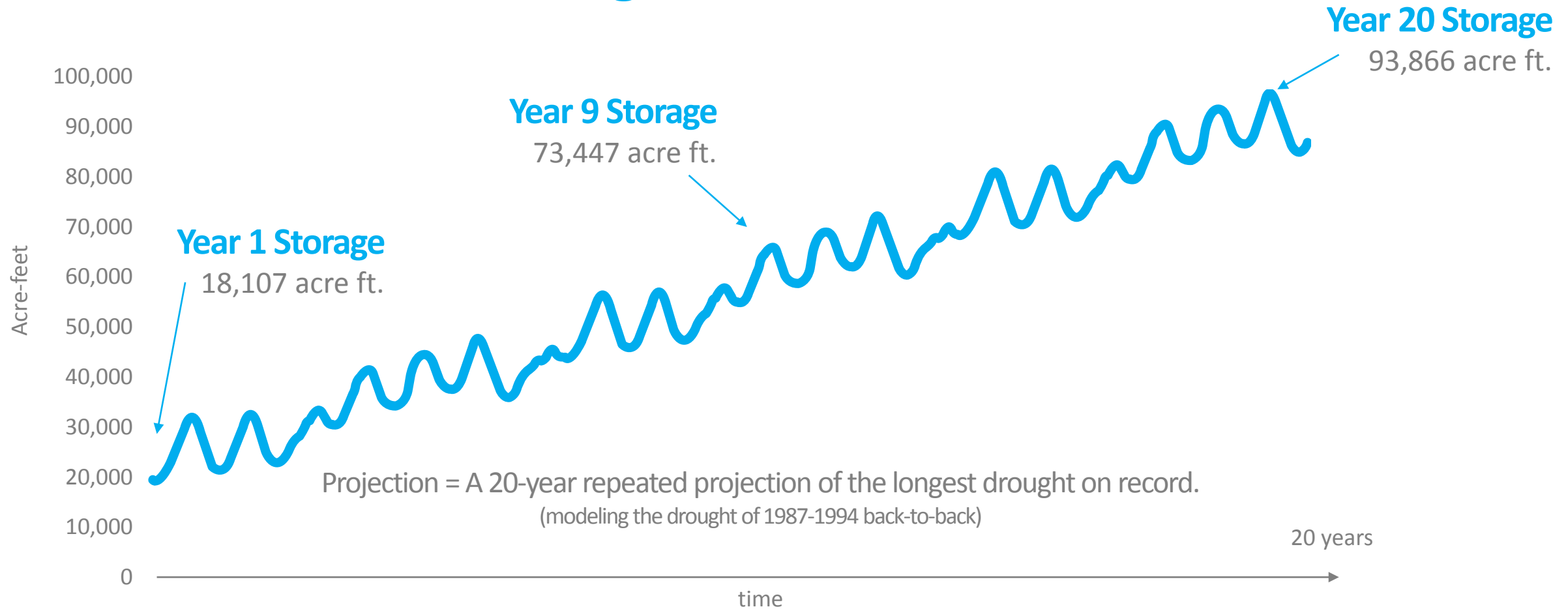
Drought Contingency Response Plan

- TMWA has completed a two-year, Drought Contingency Planning project sponsored through a Bureau of Reclamation grant.
- The project is a stress test of TMWA's resiliency to simulated extreme droughts that could potentially result from a changing climate.
- TMWA used a 15-year hydrologic scenario developed by the Water for the Seasons research team, including UNR, DRI and USGS, and input from stakeholder groups.
- The model results show that water shortages would not occur under the simulated drought, with or without additional reductions to customer demands.
- TMWA will evaluate additional climate change scenarios for our next Water Resource Plan update.

TMWA Storage Available with 12-Year Drought Scenario under TROA



TMWA Storage Available with 20-Year Drought Scenario under TROA

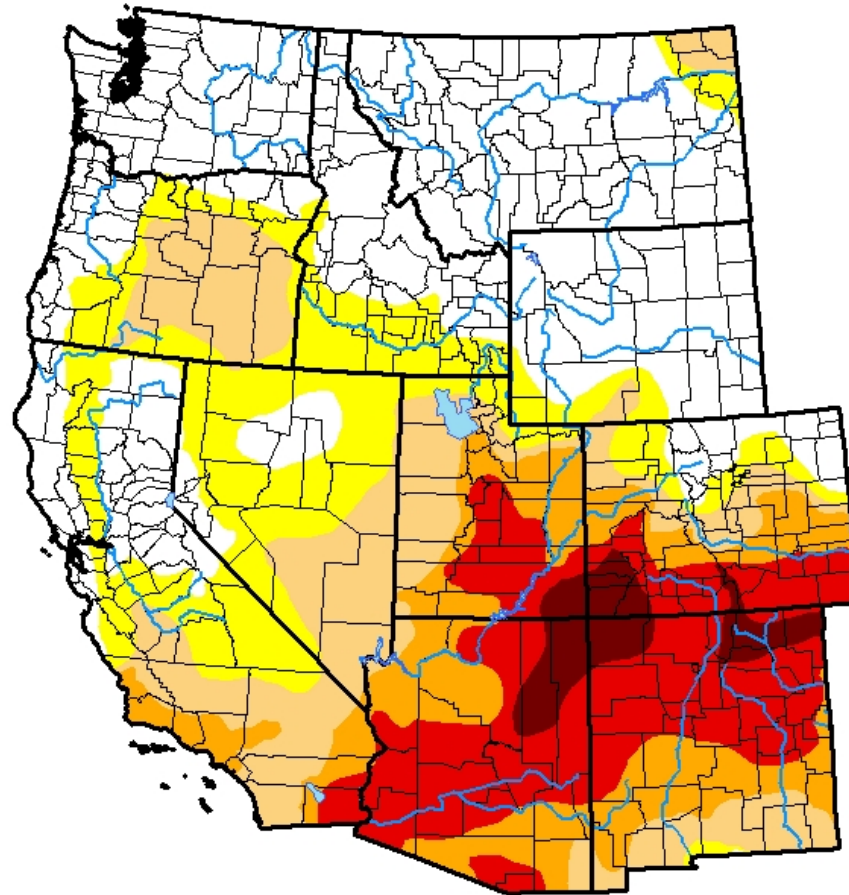


Water Supply Update, as of May 1: Excellent!

- 2017 was a record year
- 2018 snowpack is 75% in Lake Tahoe and the Truckee River Basin
- March precipitation was more than 200% of average with 200+ inches of snow
- All upstream reservoirs and Lake Tahoe will fill again this year
- Normal Truckee River flows are expected for at least three years
- Normal TMWA operations this year
- No additional conservation measures are needed from customers

U.S. Drought Monitor West

May 8, 2018
(Released Thursday, May. 10, 2018)
Valid 8 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

David Simeral
Western Regional Climate Center



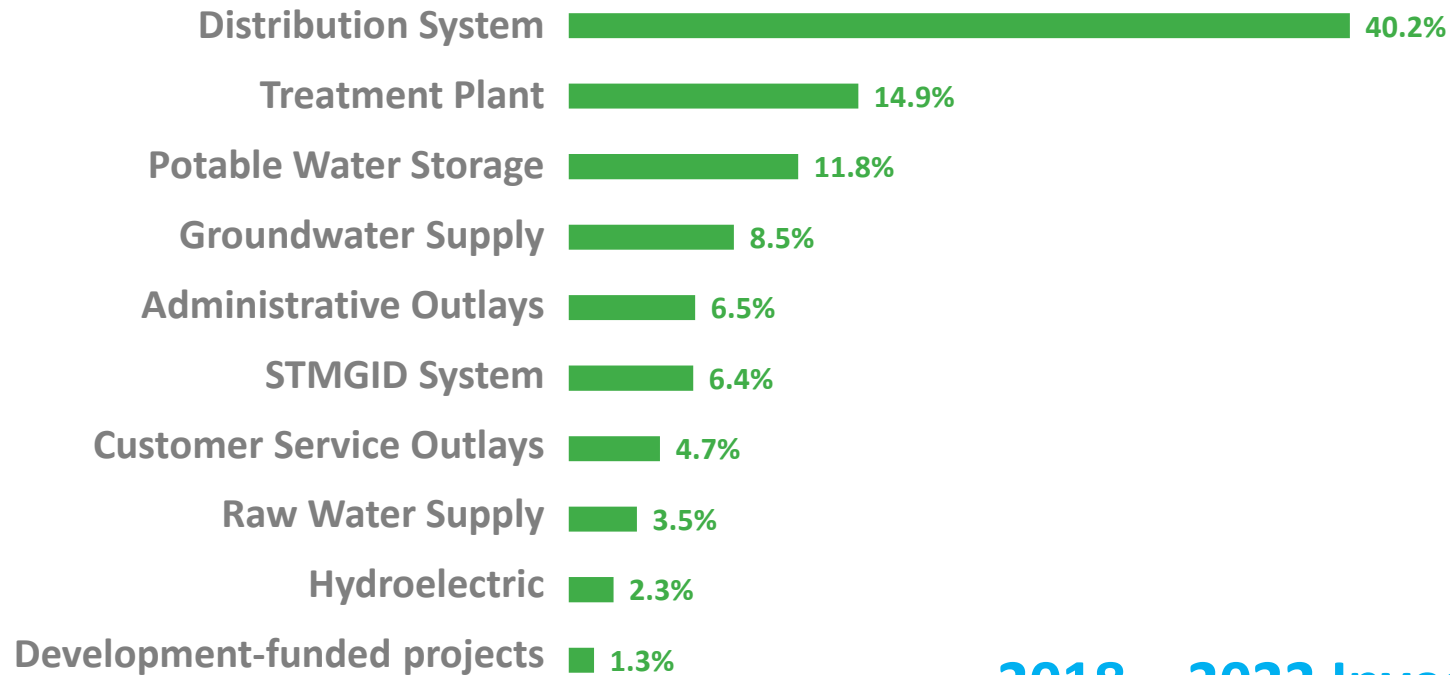
<http://droughtmonitor.unl.edu/>

Scheduled and Recently Completed Infrastructure Projects



Applied Diligence: Our Infrastructure

Capital Improvement Project Projections: Next 5 Years



2018 – 2022 Investment Estimate
\$172.8M

Notable Past Projects

2001 - 2005

Wells Avenue Water Project

Replacement of aging water mains, auxiliary pipelines and fire hydrants.

Chalk Bluff Treatment Plant Expansion

Expanded treatment capacity by 14 million gallons per day (MGD). Increased production capacity to 90 MGD.

2006 - 2010

Highland Canal System and Mogul Bypass

Expanded water delivery from 55 MGD to 95 MGD. With installation of inverted siphon, saves \$400K per year in pumping costs.

2011 - 2017

Zolezzi Pump Station Installation*

Delivers surface water from the Truckee River to South Reno.

Fish Springs Integration*

Delivers groundwater from Honey Lake Valley into TMWA's Stead/Lemmon Valley system.

** Both projects help stabilize levels in respective aquifers.*

2018 TMWA Projects Scheduled

Peavine Tank Replacement *

Arrowcreek Drought Response, Phase 2

Mainline Replacements:

4th Street

Prater Way

South Virginia *

Mt. Rose Treatment Plant *

Verdi Main Extension

Satellite Hills Booster Pump Station Replacement

*Active Now

Questions?

John R. Zimmerman

Water Resources Manager

775-834-8223 • jzimmerman@tmwa.com

