

Runoff and Operations Update

Inyo/LA Standing Committee Meeting

March 2, 2023

Los Angeles Department of Water and Power

Water Operations Division

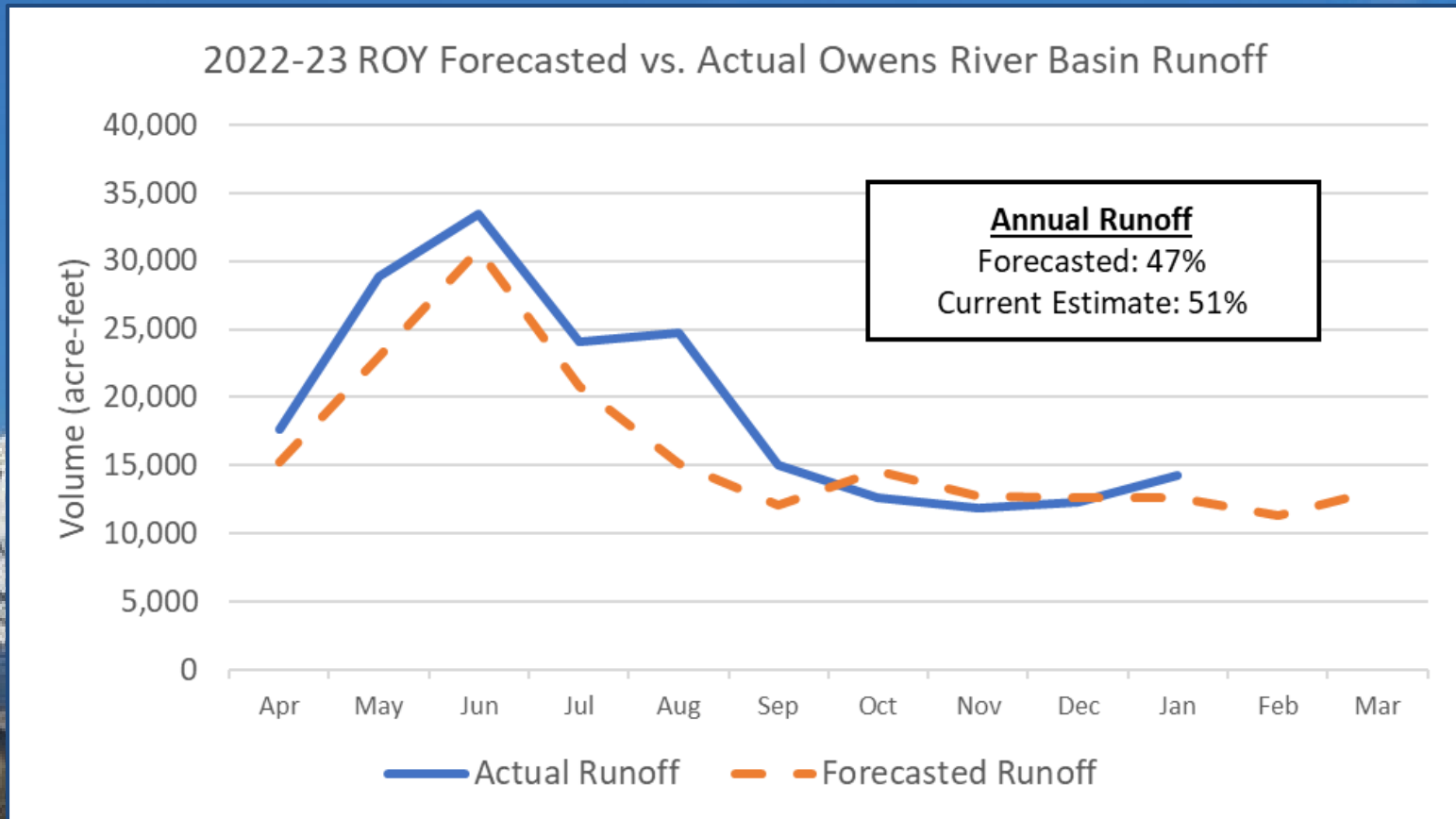
2022-23 Runoff Forecast

ANNUAL RUNOFF FORECAST (April 1, 2022)			
Most Probable	Reasonable Max	Reasonable Min	Long-Term Average (1971-2020)
47% (194,000 AF)	52%	26%	409,355 AF

Current Estimate
51%
(210,000 AF)

Percentages are based on Long-Term Average

2022-23 Owens River Basin Runoff Forecast

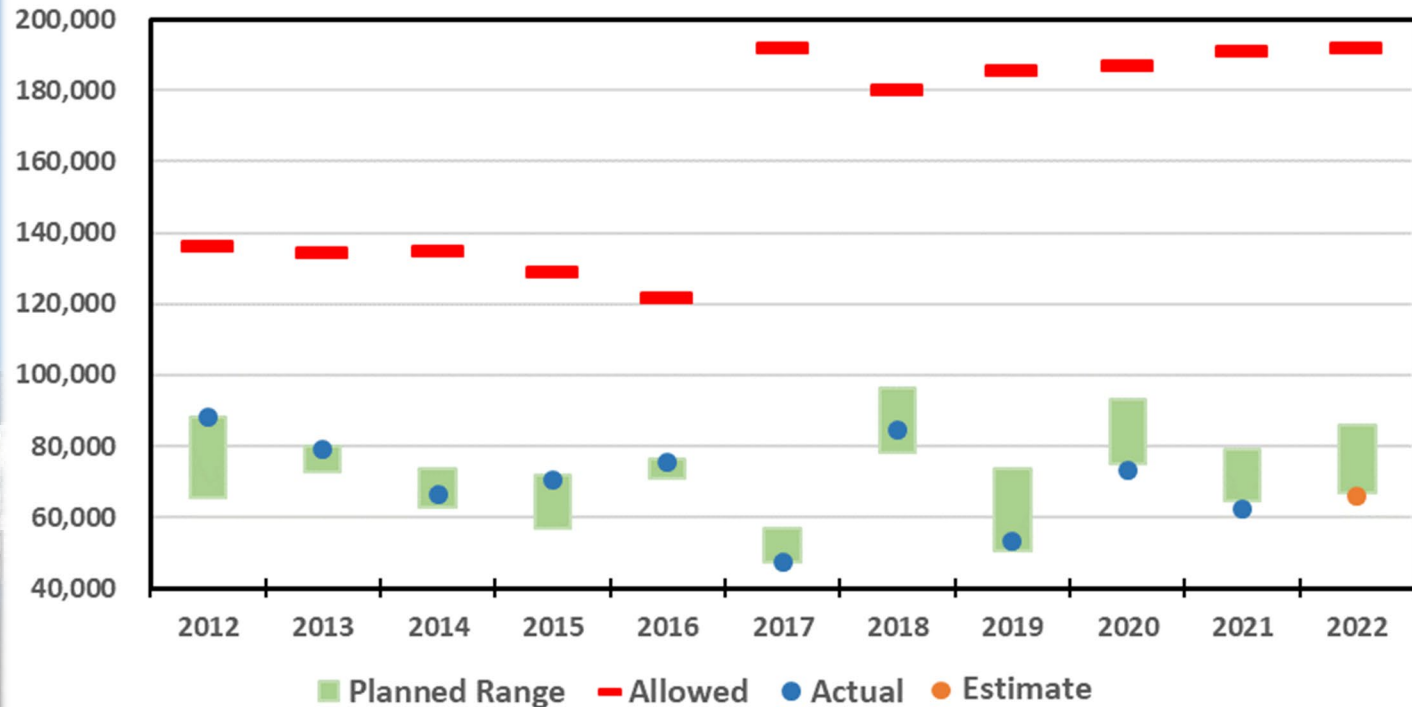


Owens Valley Pumping Planned vs. Actual

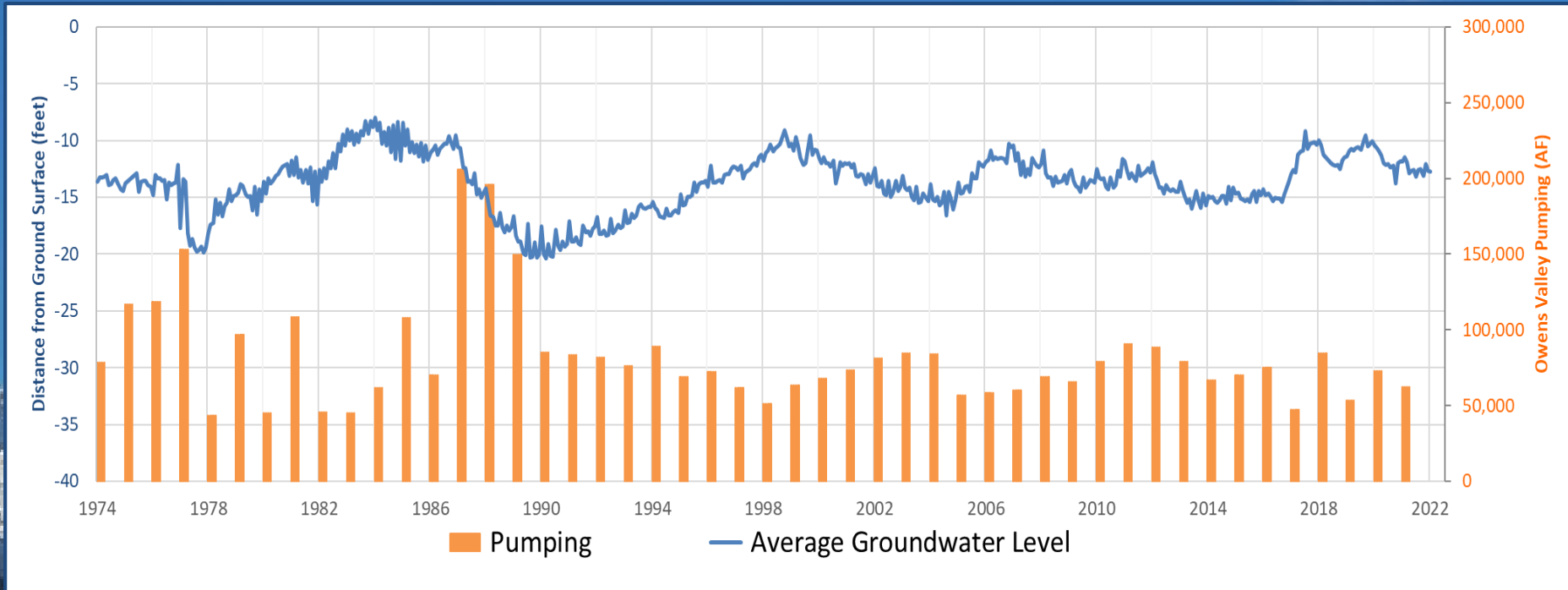
Wellfield	Planned Annual Pumping (af)	Actual Annual Pumping (af)*
Laws	9,410-11,240	8,102
Bishop	12,000	9,754
Big Pine	20,250-23,400	16,058
Taboose-Aberdeen	6,000-14,850	12,813
Thibaut-Sawmill	10,080-10,920	9,638
Independence-Oak	7,000-8,800	5,761
Symmes-Shepherd	1,200-2,910	1,954
Bairs-George	960-2,270	779
Lone Pine	900-960	979
Total Owens Valley	67,800-87,340	65,838

* February and March 2023 pumping are forecasted

Pumping Planned Range vs. Actual



Historic Pumping and Average Groundwater Levels in Owens Valley



Snowpack Measurement

- Based on three main factors:
 - Snowpack: April 1 Survey
 - Stream flow: Oct-Mar total volume
 - Precipitation: Oct-Mar total volume, then average used for April-Sept

Snowpack Measurement

- **How is snowpack measured?**
 - Snow pillows
 - Remote monitoring of snowpack at a single point
 - Stations owned & operated by the State
 - LADWP assists in maintenance activities
- Snow courses
 - Each 'area' has 1-3 snow courses
 - Each snow course is about 1000' long
 - Each snow course has 8-10 measurement points

Snowpack Measurement



Current Snowpack

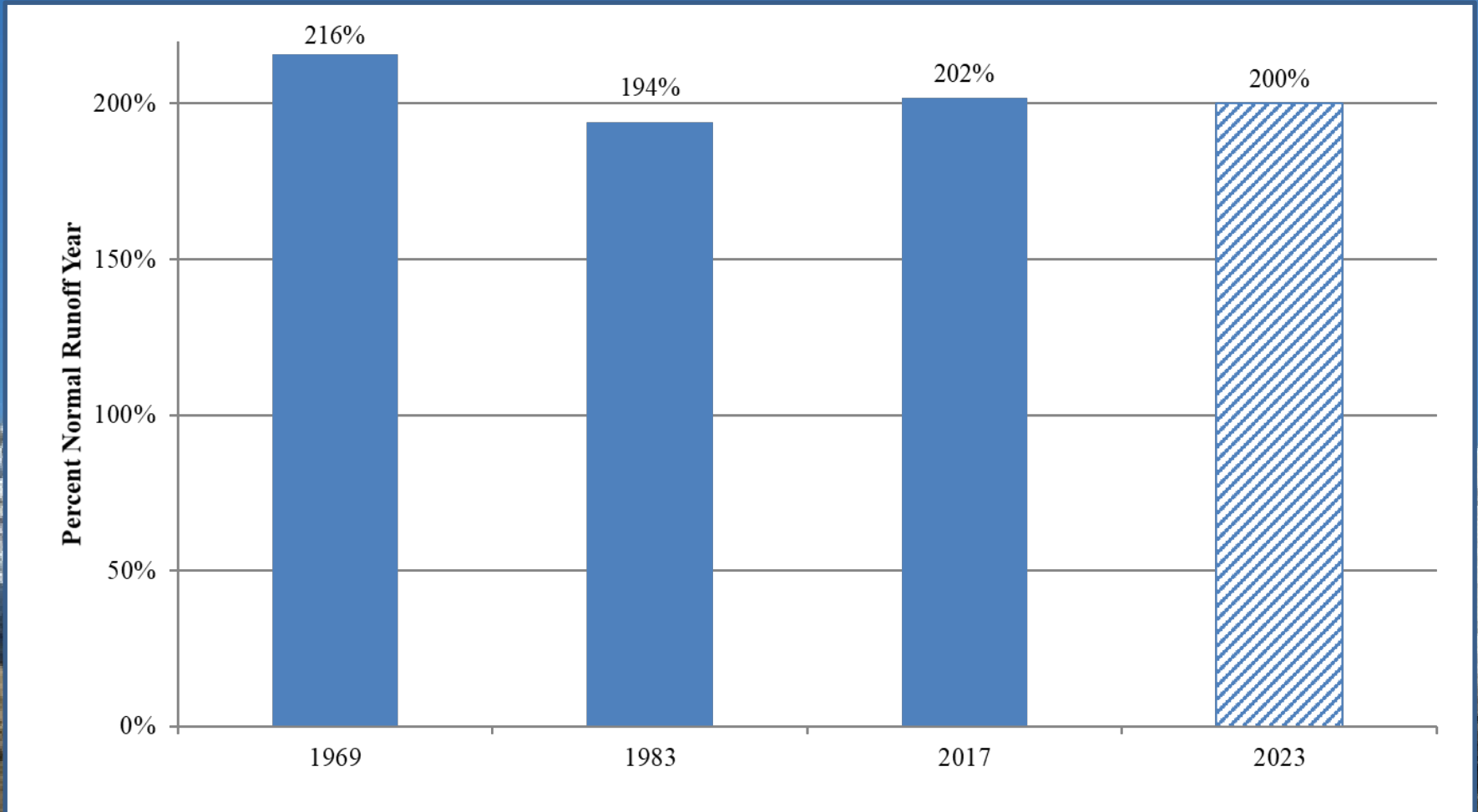
- 2023 Current Snowpack (as of Feb 27, 2023):

<u>Area</u>	<u>Contribution</u>	<u>Snowpack</u>
Mammoth	27%	194%
Rock Creek	16%	207%
Sawmill	19%	276%
Big Pine	13%	276%
Cottonwood	25%	252%
Eastern Sierra Overall Snow Pack		236%

2023-24 Runoff Estimate

- **2023-24 April to March Runoff Estimate: 200%**
- This is a very “wet” year.
- Only 2 out of the last 100 years have experienced higher runoff than this estimate.
- Assuming one more good storm in March, so this estimate can change somewhat depending on what actually occurs in March.

2023-24 compared to wettest years on record



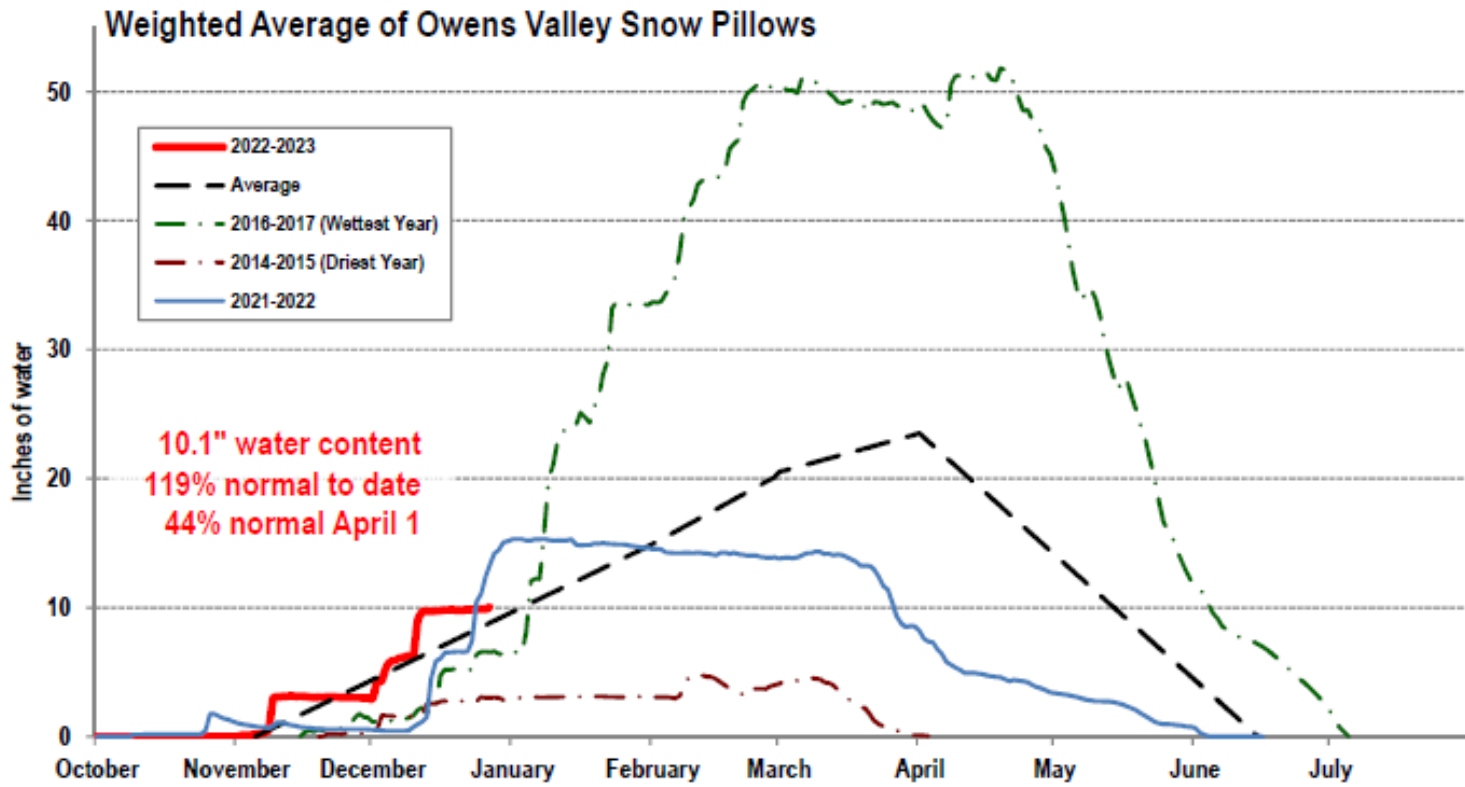
Runoff/Spreading Preparation

- Lessons learned:
 - Snow can accumulate in a very short time
 - Prepare spreading grounds as soon as possible

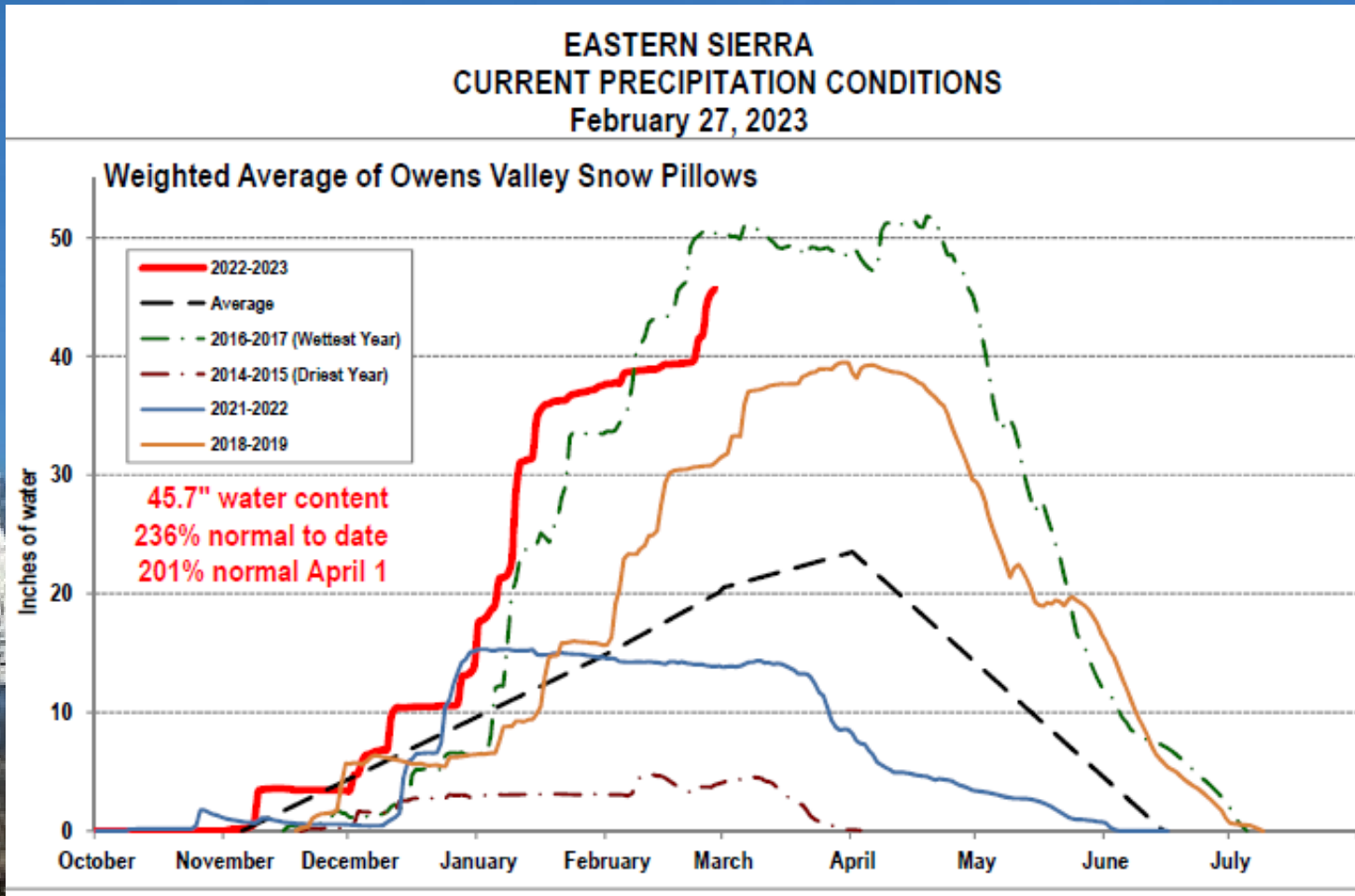


Runoff/Spreading Preparation

EASTERN SIERRA CURRENT PRECIPITATION CONDITIONS December 27, 2022



Runoff/Spreading Preparation



Spreading Preparation

- LADWP coordinates with permitting agencies:
 - California Dep. Fish & Wildlife
 - BLM
 - Forest Service



Spreading in Laws Wellfield



Spreading in Big Pine Wellfield



Spreading along Alluvial Fans (Sawmill Ck.)



Spreading along alluvial fans (Sawmill Ck.)



Spreading Preparation

- Spreading grounds preparations are mostly complete:
 - McNally Canals (2017: about 38,000 AF)
 - Big Pine Spreading Grounds (2017: about 19,000 AF)
 - Alluvial Fans (2017: about 66,000 AF)
- Other areas are prepared as well for spreading and operational releases.
- In 2017 there was 215,000 acre-feet in spreading and operational releases.

End of Presentation

