Water Management Plan Annual Review

Nov. 12, 2020

LCRA
ENERGY • WATER • COMMUNITY SERVICES

Agenda

- Basin conditions update
- 2020 Water Management Plan
- Water supply evaluations
- Firm water projected demands and interruptible allocations
- Actual and projected water use
- Water releases at Mansfield Dam
- Projected conditions

Questions: LCRAWMP@lcra.org

Key Points

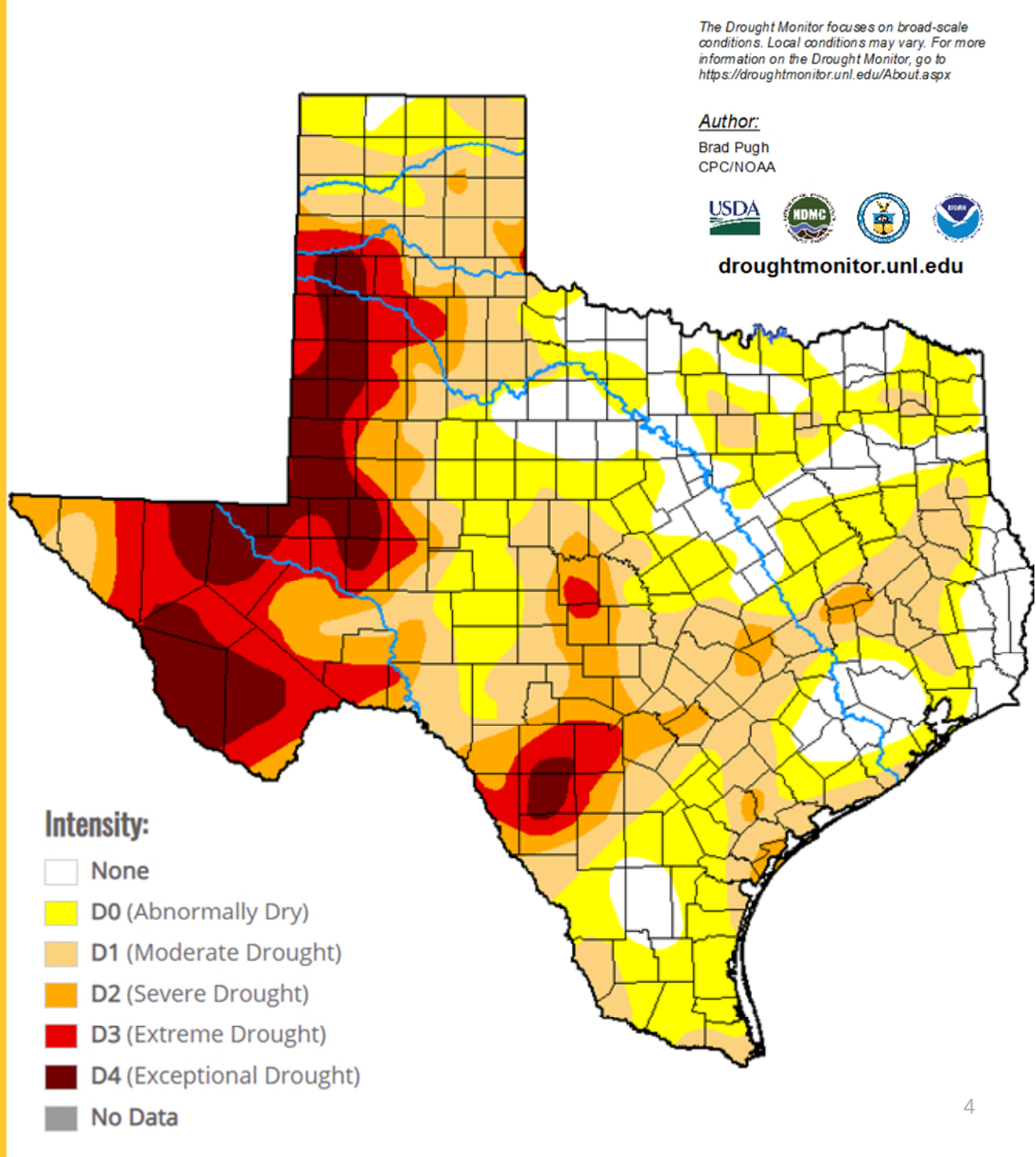
- **2020 WMP was approved in February**
- **Water use is well below demand levels the WMP is designed to meet**
- **WMP is designed to adapt to changing conditions**
- **Looking ahead:**
  - Firm water use to continue trending fairly flat
  - Ag water use to continue trending fairly flat
  - Water supply condition could be Normal or Less Severe Drought in the spring

Basin Conditions Update

U.S. Drought Monitor

Texas

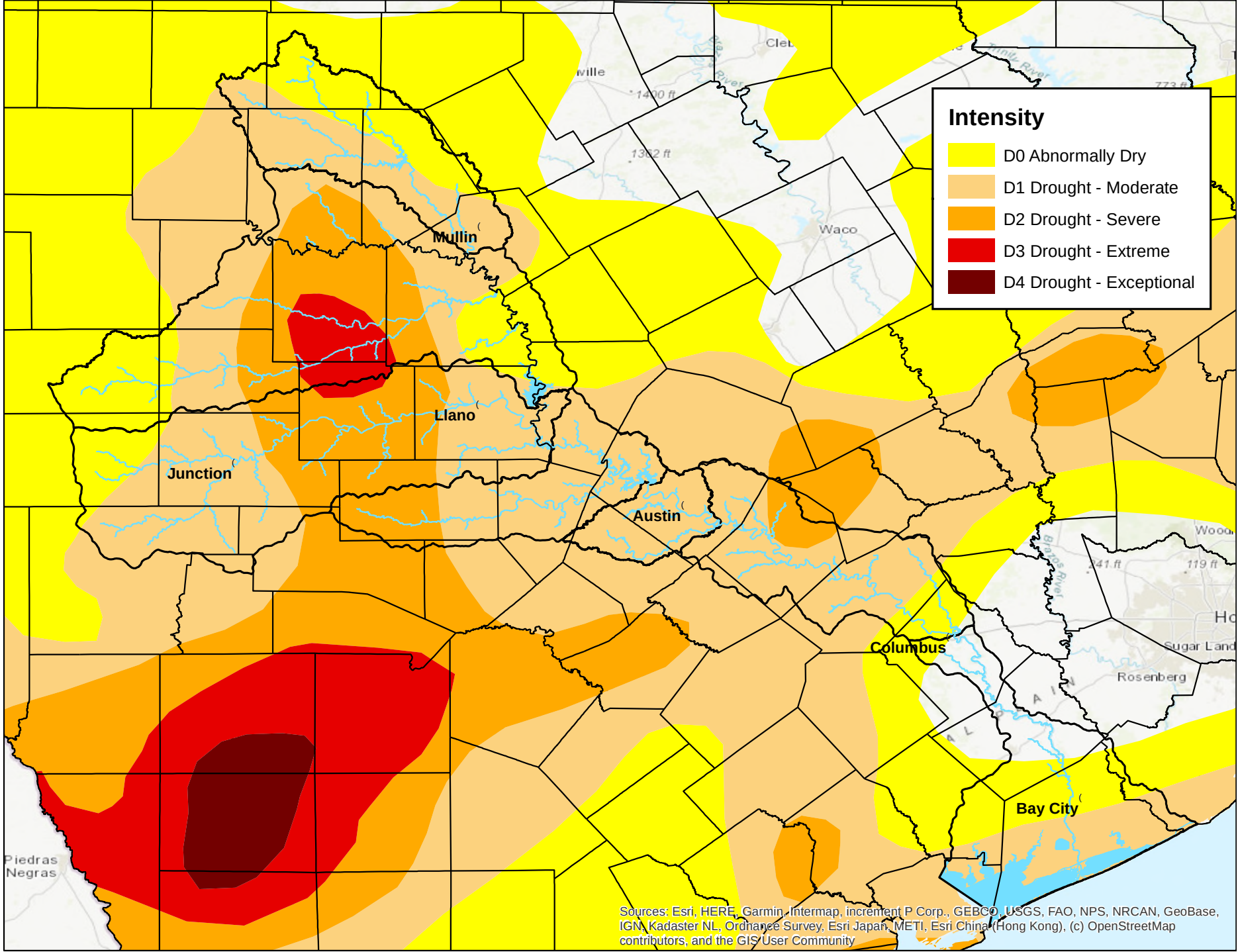
As of Nov.10, 2020



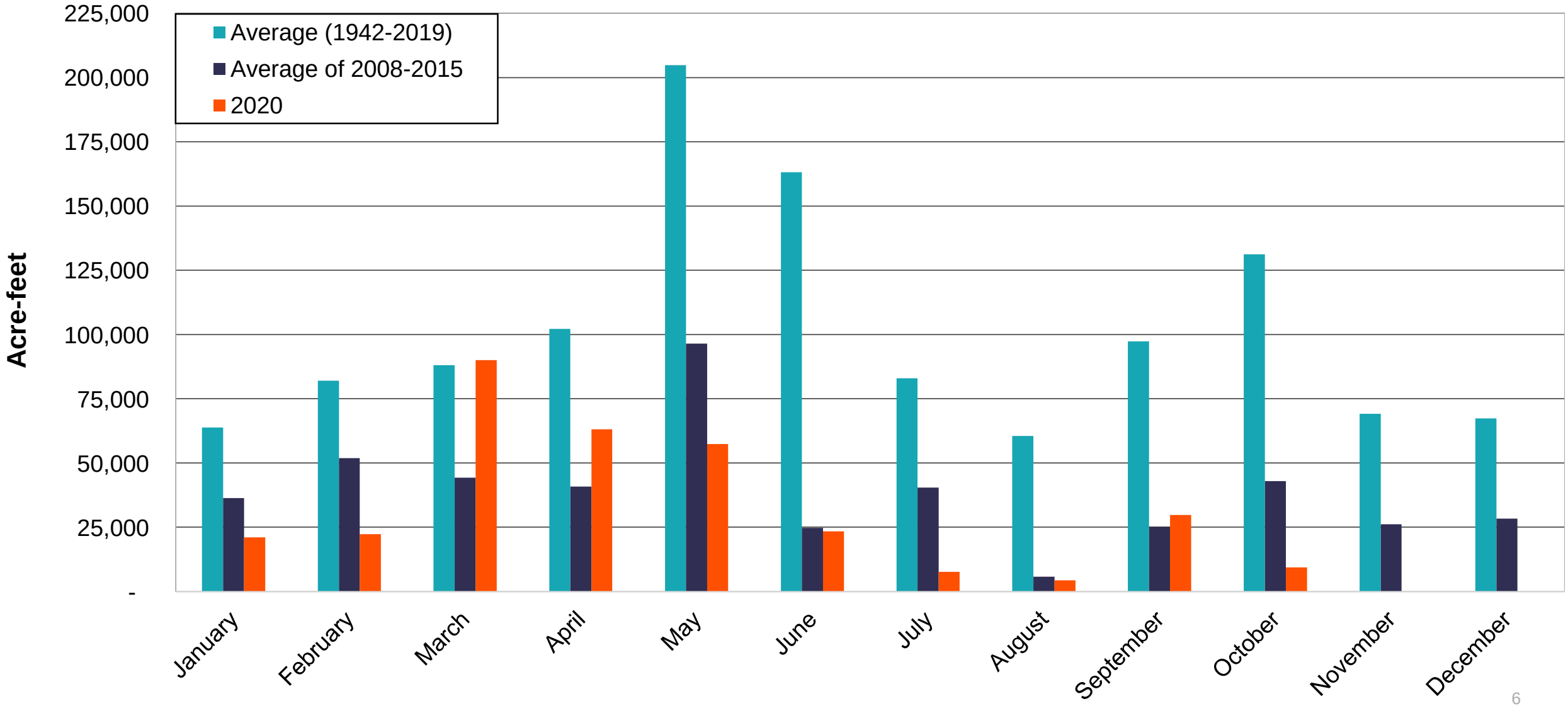
U.S. Drought Monitor

Lower Colorado River Basin

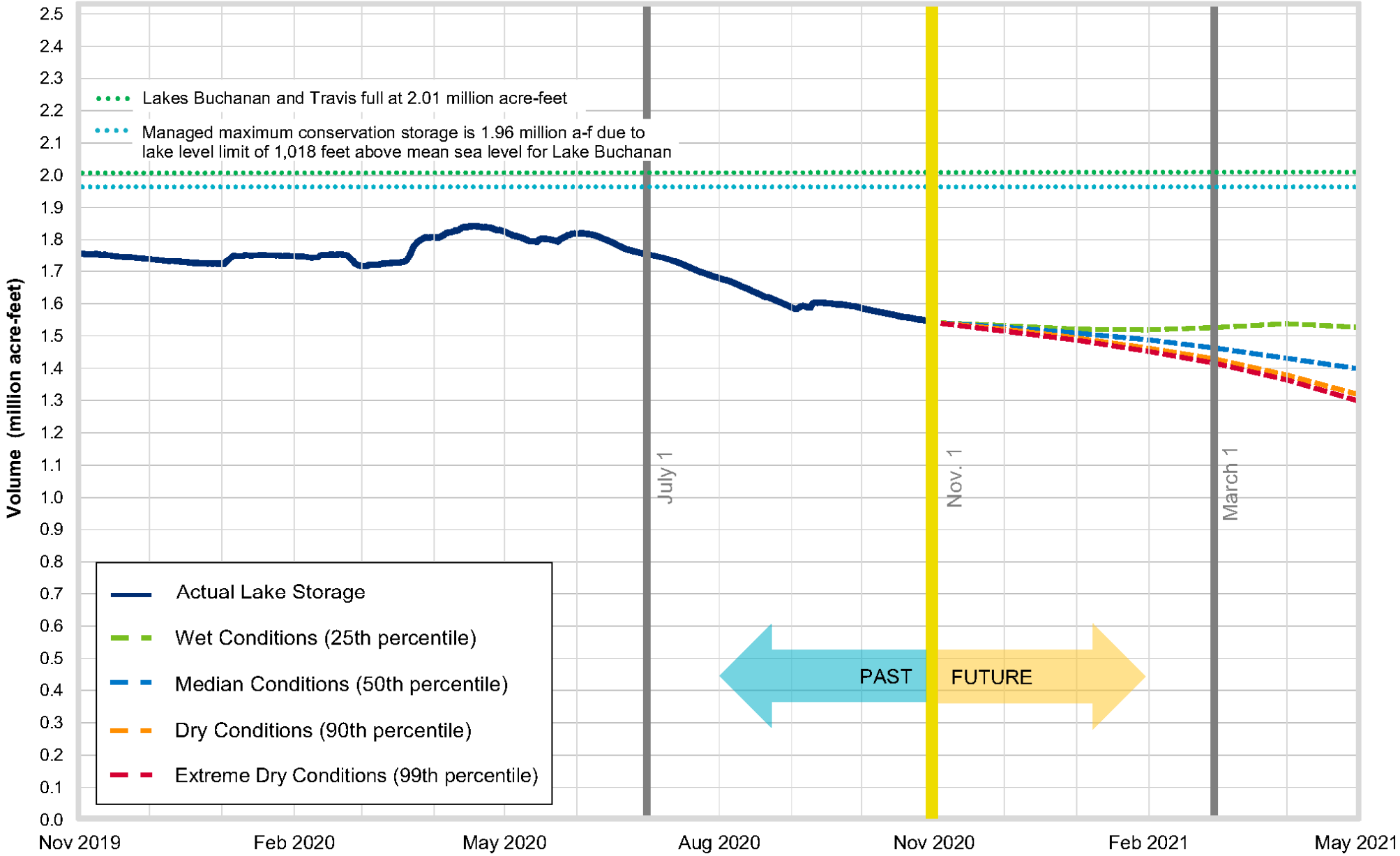
As of Nov. 10, 2020



Water Flowing Into the Highland Lakes

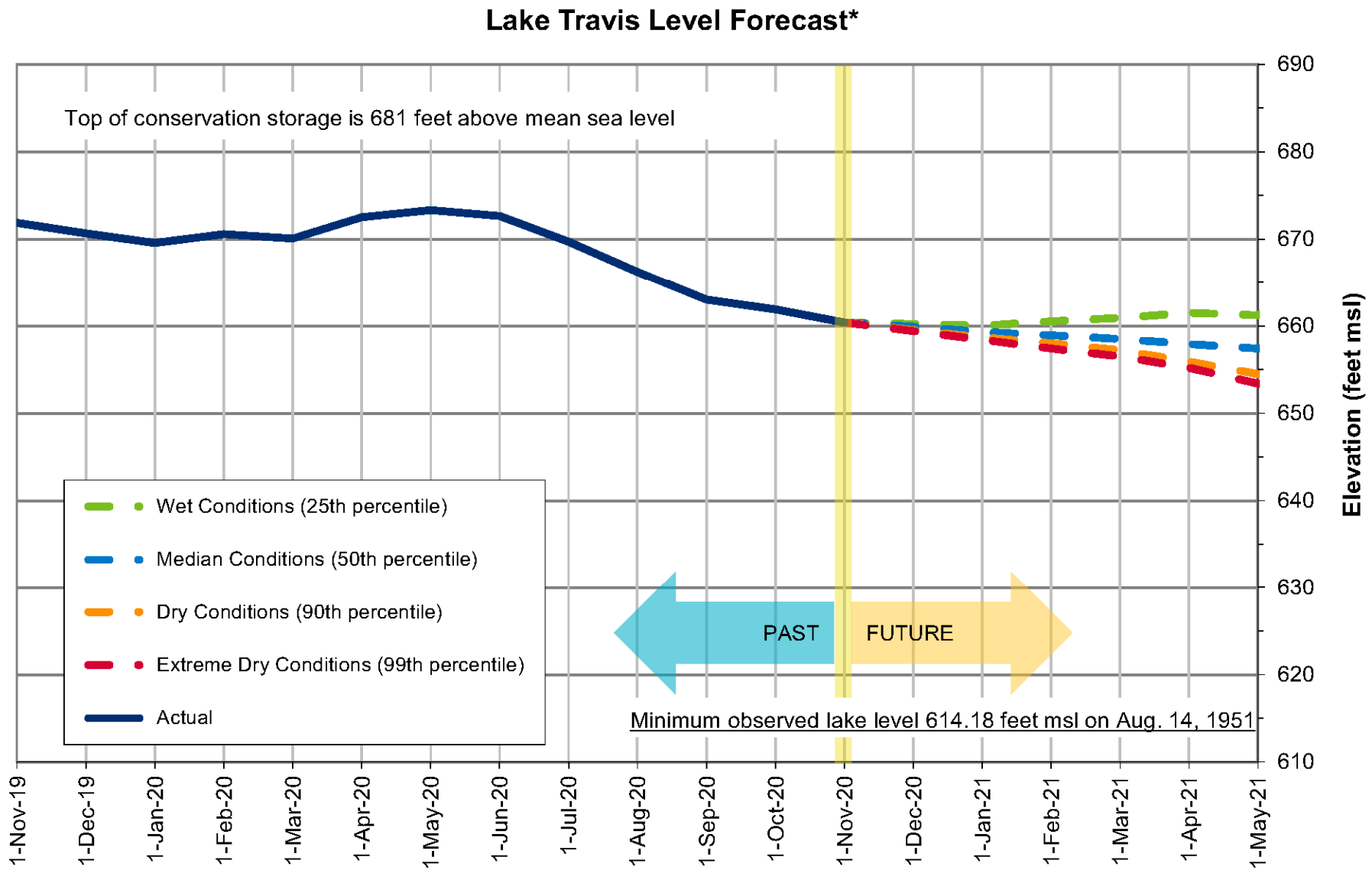


Lakes Buchanan and Travis Total Combined Storage Projections



Date: Nov. 1, 2020

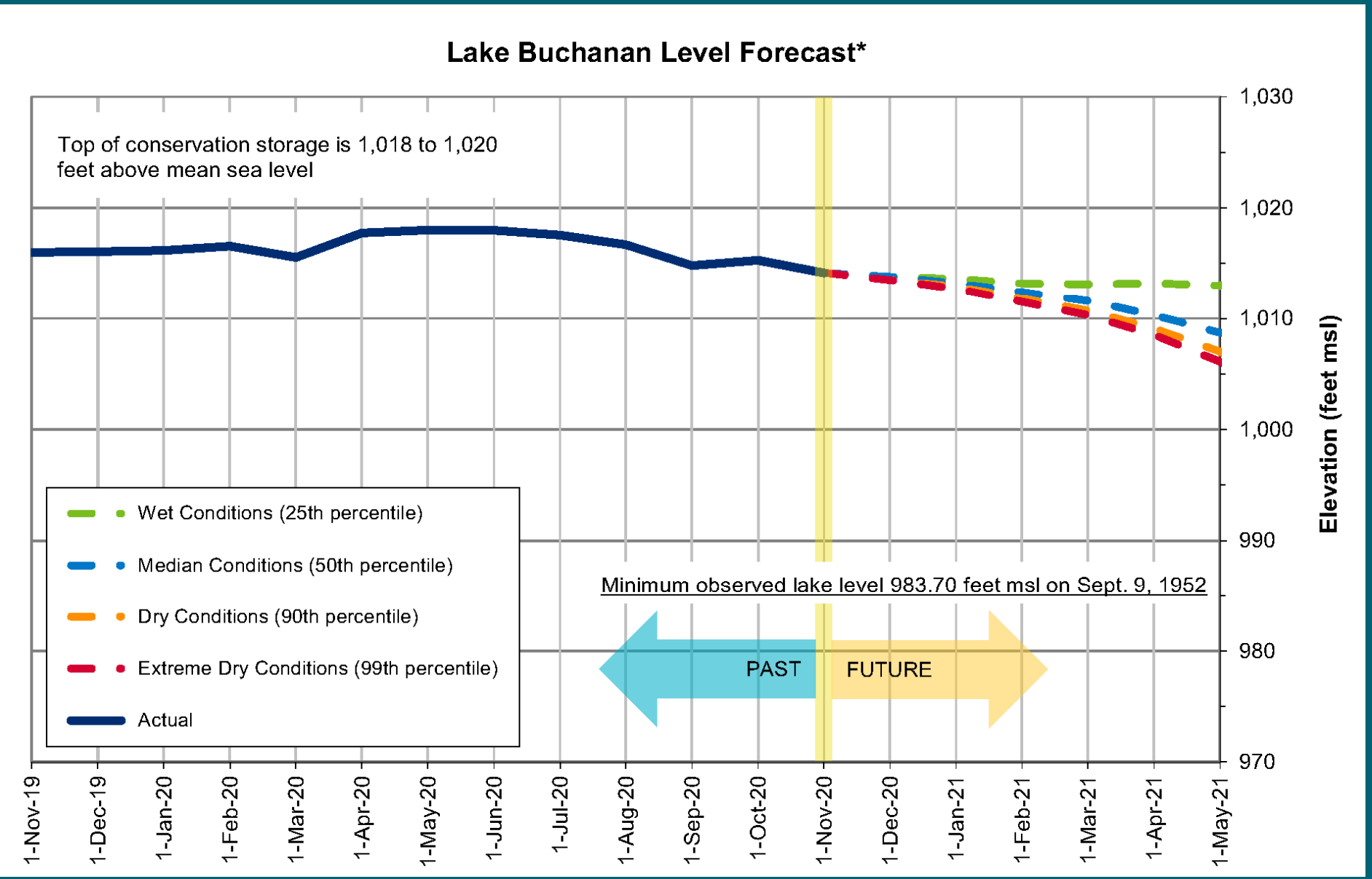
Note: One acre-foot equals 325,851 gallons



Average for November:
666.53 feet msl

Historic low (1951):
614.18 feet msl

*Based on results from the draft stochastic model under development to reflect provisions of the 2020 Water Management Plan



Average for November: 1,010.77 feet msl

Historic low (1952): 983.70 feet msl

*Based on results from the draft stochastic model under development to reflect provisions of the 2020 Water Management Plan

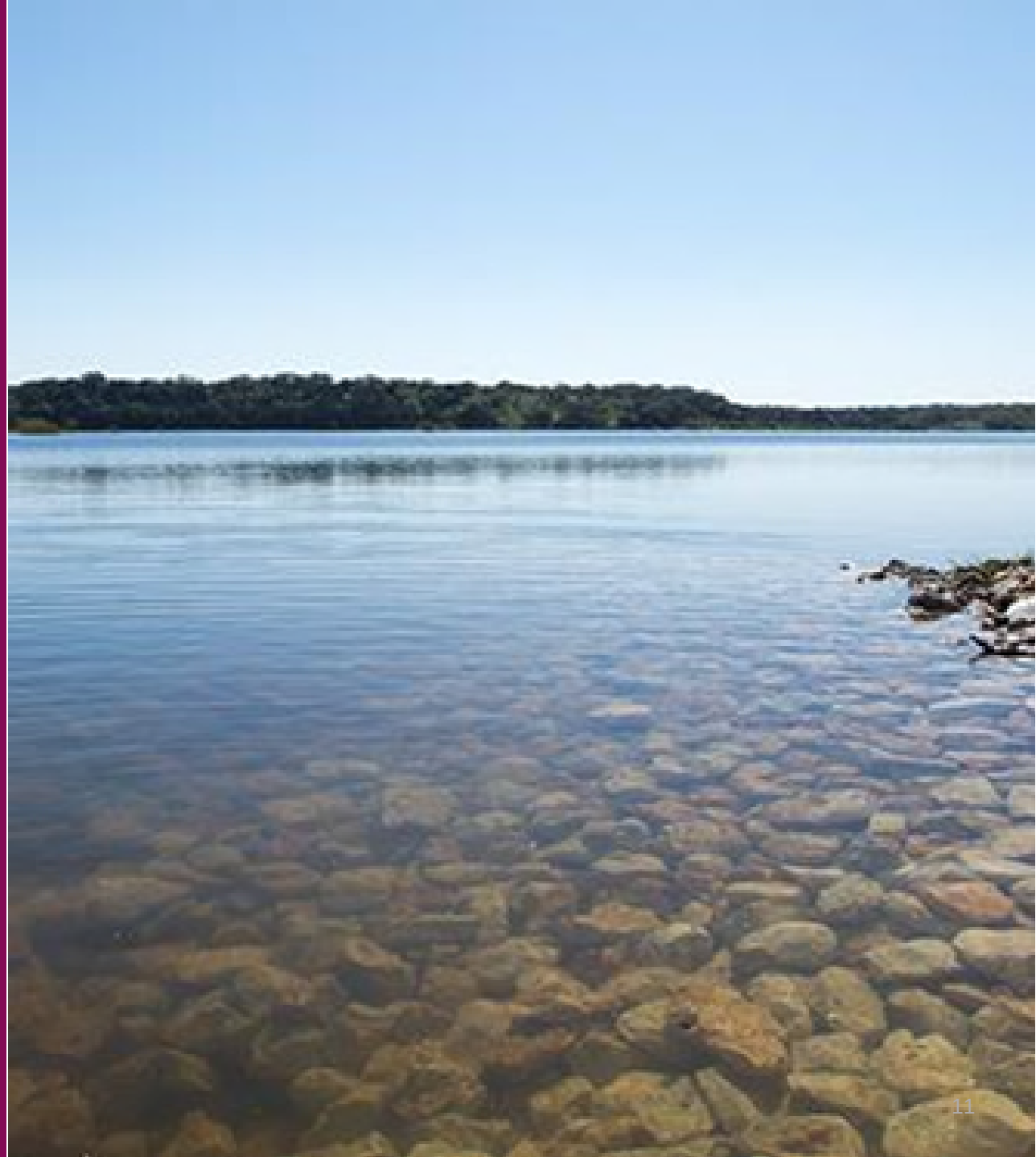
Lake Level Comparisons

	Nov. 1, 2019	Nov. 1, 2020
Lake Travis (feet msl)	671.85	660.41
Lake Buchanan (feet msl)	1,015.99	1,014.18
Combined storage* (a-f)	1,757,413	1,540,773

*For purposes of the 2020 Water Management Plan, the combined storage is defined as the total of the daily average volume of water in lakes Buchanan and Travis. This determination excludes any water in Lake Buchanan above elevation 1,018 feet msl in the months of May through October or above 1,020 feet msl in the months of November through April and any water in Lake Travis above elevation 681 feet msl.

Questions?

Email LCRAWMP@lcra.org



WMP Activities Since November 2018

- November 2018 – Last participant meeting
- February 2019 – LCRA filed application to amend 2015 WMP
- TCEQ reviewed application
- October 2019 – TCEQ public meeting and comments
- February 2020 – TCEQ approved WMP amendment

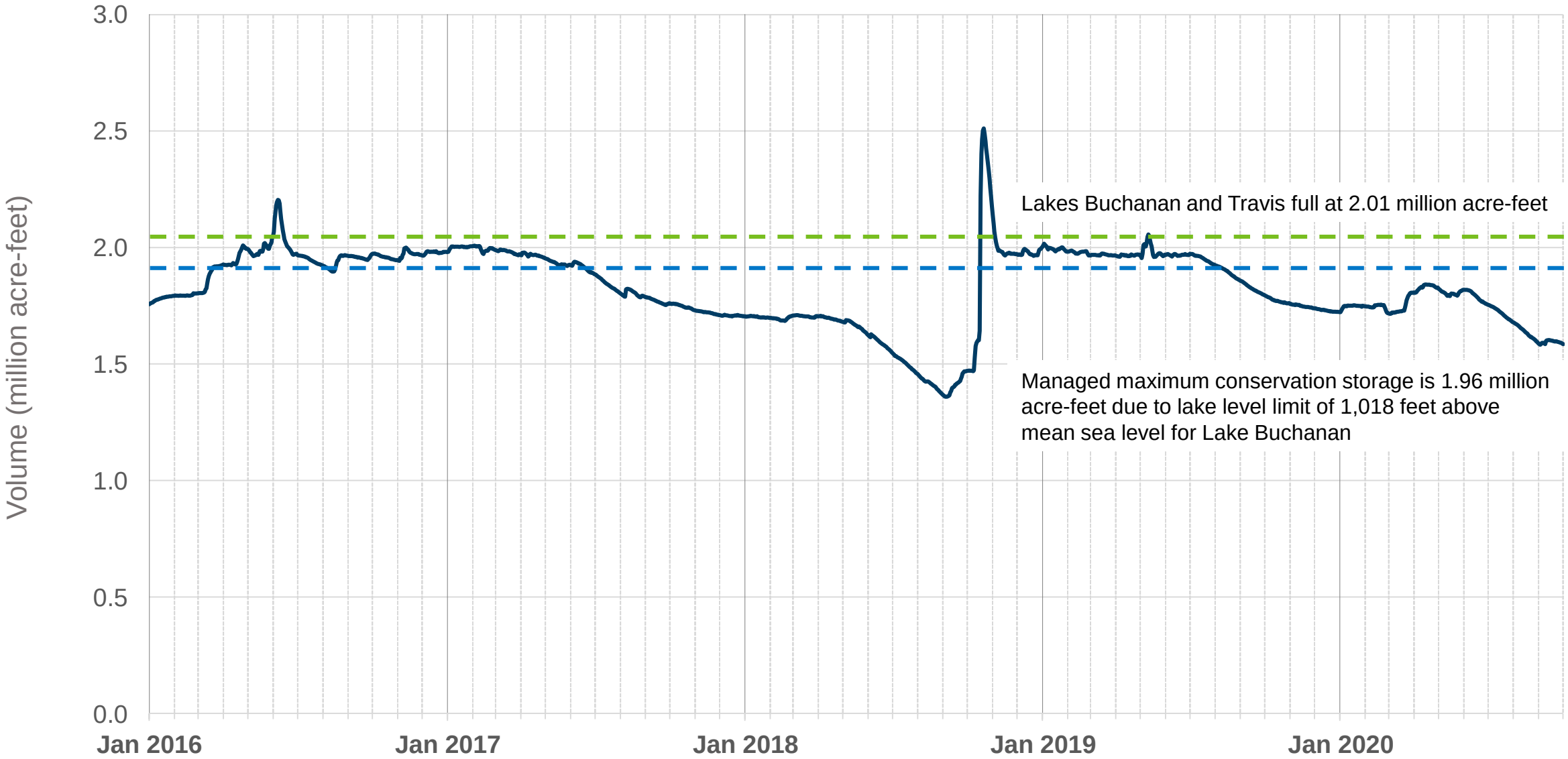
2020 WMP Updates

- Includes data through new Drought of Record
- Increased projected firm demands and implemented weather variability
- Reduces allocation of stored water for interruptible agricultural use
- Places a cap on water releases at Mansfield Dam for interruptible agricultural use
- Adds Nov. 1 evaluation date for environmental flow conditions

2020 WMP – Evaluation Dates

- **Three evaluation dates**
  - March 1
    - Sets first crop interruptible stored water allocation and environmental flow criteria for following four months
  - July 1
    - Sets second crop interruptible stored water allocation and environmental flow criteria for following four months
  - Nov. 1
    - Sets environmental flow criteria for following four months

Lakes Buchanan and Travis Total Combined Storage (Jan. 1, 2016, to Oct. 1, 2020)



Conditions at Beginning of 2020

- **Entered year under the 2015 WMP**
- **Water supply category was Normal Condition**
- **Environmental Flow conditions**
  - Instream flow criteria was Base-Average
  - Bay inflow criteria was Category OP-4
- **2020 WMP effective date was Feb. 3, 2020**

March 1, 2020, Evaluation Date

- **Combined storage on March 1, 2020: 1.716 million acre-feet**
  - For combined storage >1.5 million acre-feet, water supply category is Normal Condition
- **Cumulative inflows test did not apply**
- **Look-ahead test passed**
- **First crop interruptible stored water availability for non-Garwood irrigation: 178,000 acre-feet**
- **Environmental flow criteria changed from Base-Average to Subsistence**
- **Bay inflow criteria changed from OP-4 to OP-3**

July 1, 2020, Evaluation Date

- **Combined Storage on July 1, 2020: 1.753 million acre-feet**
  - For combined storage >1.5 million acre-feet, water supply category is Normal Condition
- **Cumulative inflows test did not apply**
- **Look-ahead test passed**
- **Second crop interruptible stored water availability for non-Garwood irrigation: 66,000 acre-feet**
- **Environmental flow criteria remained unchanged**

Nov. 1, 2020, Evaluation Date

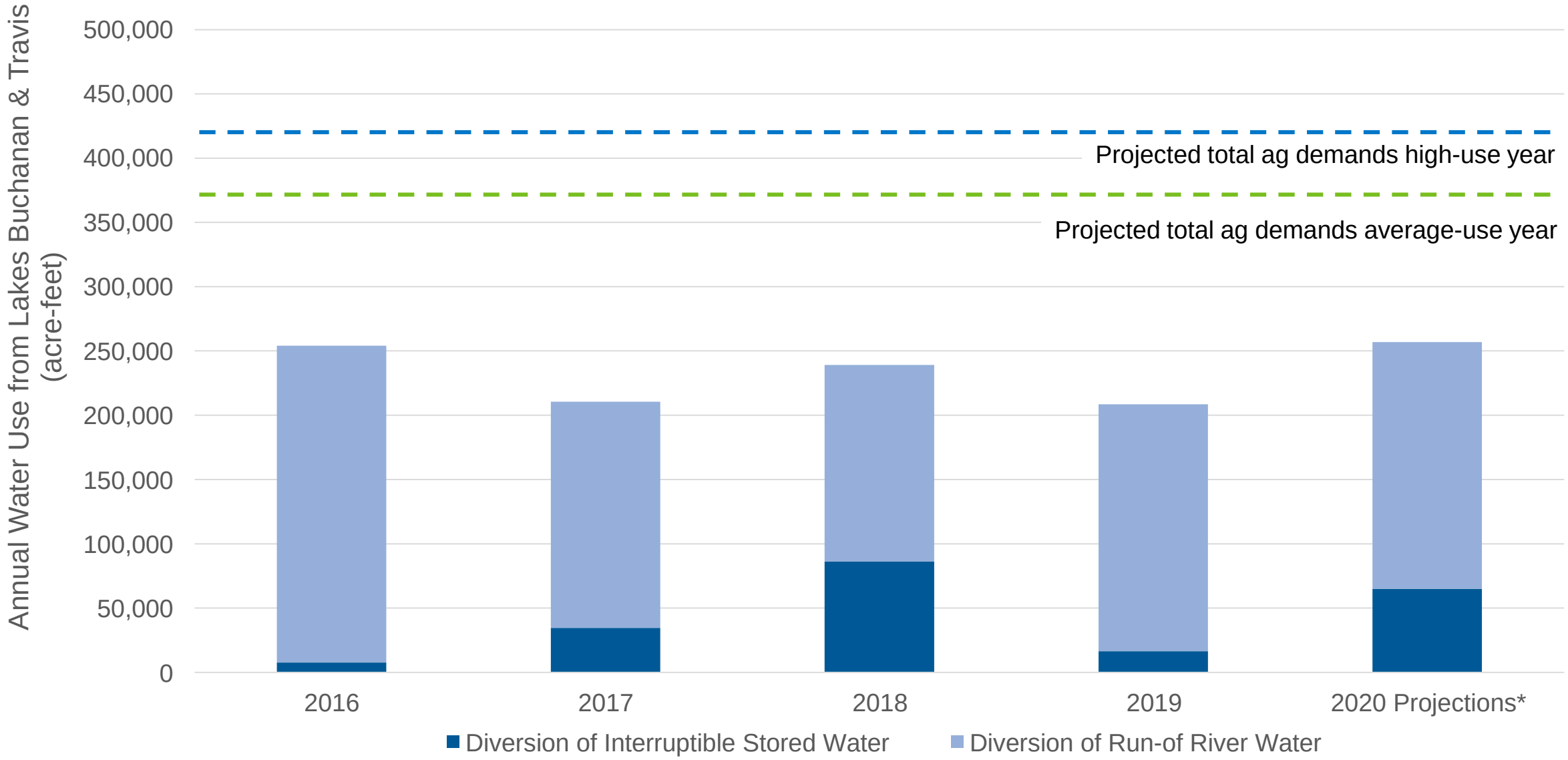
- Nov. 1 evaluation only affects environmental flow criteria
- Combined storage on Nov. 1, 2020: 1.541 million acre-feet
- Environmental flow criteria will remain at OP-3

2020 WMP Firm Water Projected Demands and Interruptible Allocations

	Normal / Average Use Year (acre-feet)	Max / High Use Year (acre-feet)
Projected Firm Water Use in 2025	342,000	426,000
Projected Total Ag Demands*	368,000	422,000
	1st Crop Season	2nd Crop Season
Interruptible Stored Water for Agriculture		
Normal Supply Condition	107,100 to 178,000	39,700 to 66,000
Less Severe Drought Condition	88,200 to 155,000	39,700 to 55,000
Extraordinary Drought Condition	0	0
Max Annual Release at Mansfield Dam	210,000	82,000

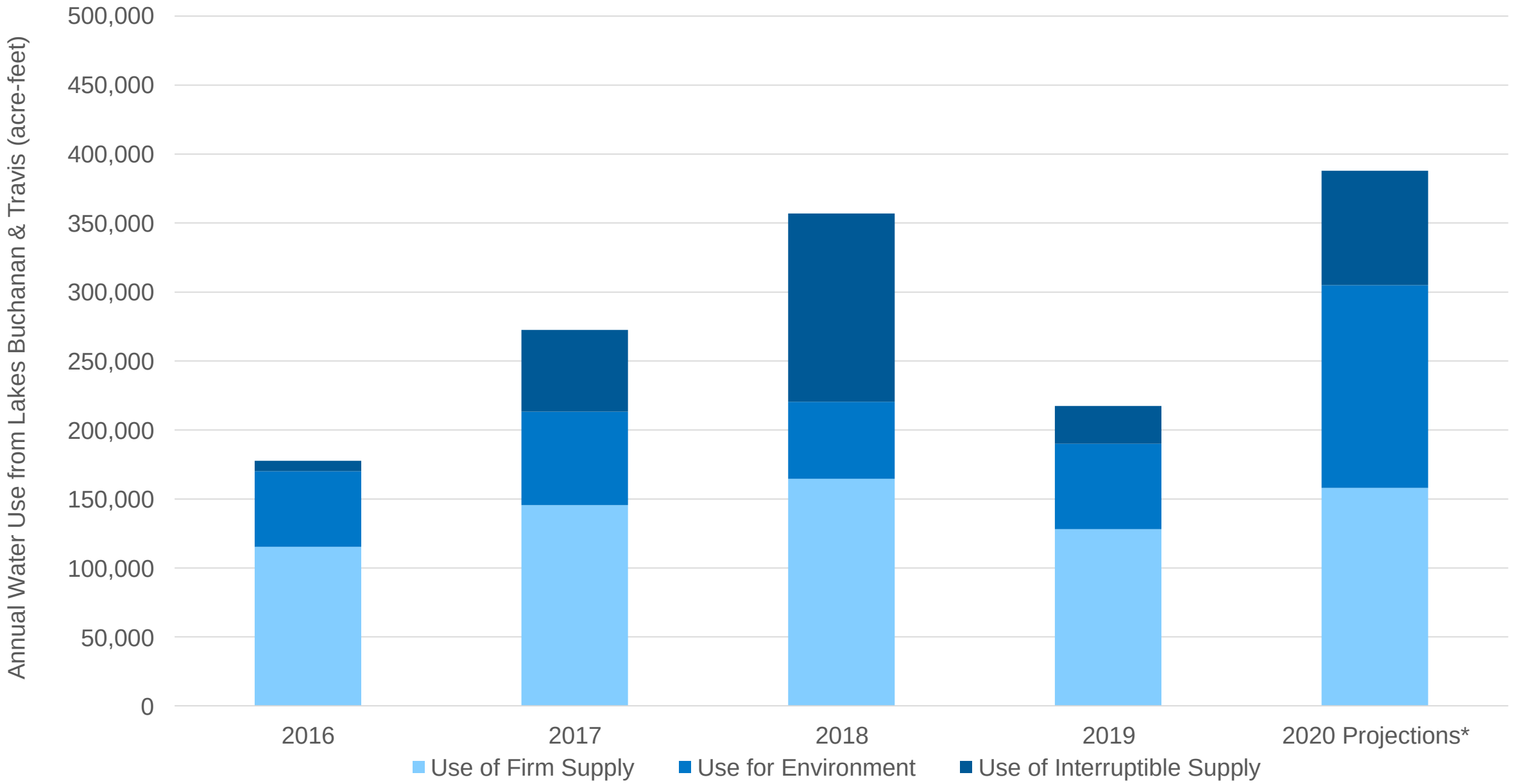
*Can be met by using stored or run-of-river water

Use of Interruptible Stored Water and Run-of-River at the Four Downstream Agricultural Operations



*Based on measured use for January through September and projected use for October, November and December.

Total Use from Lakes Buchanan and Travis



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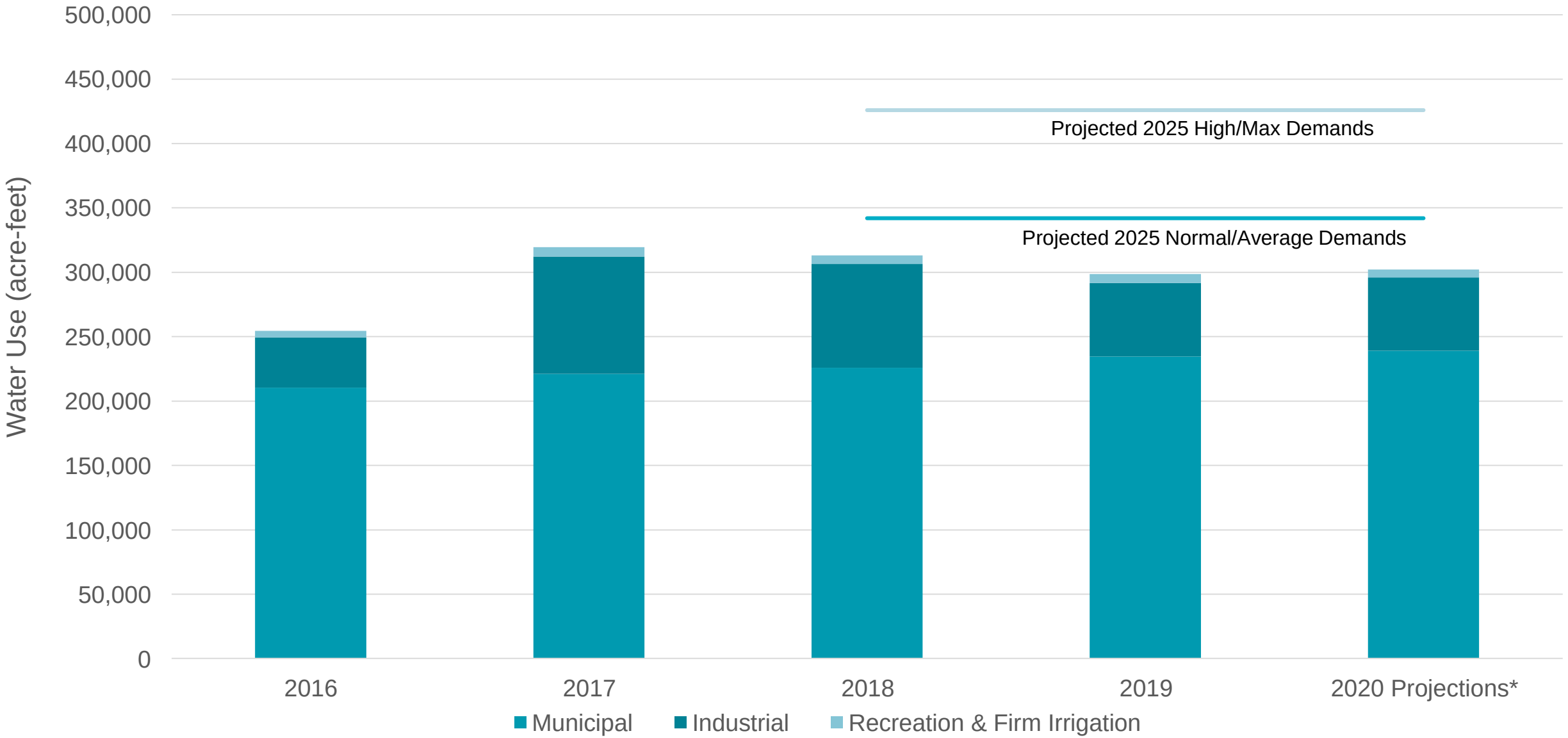
Municipal, Industrial, Recreation and Firm Irrigation Use from Lakes Buchanan and Travis and Colorado River



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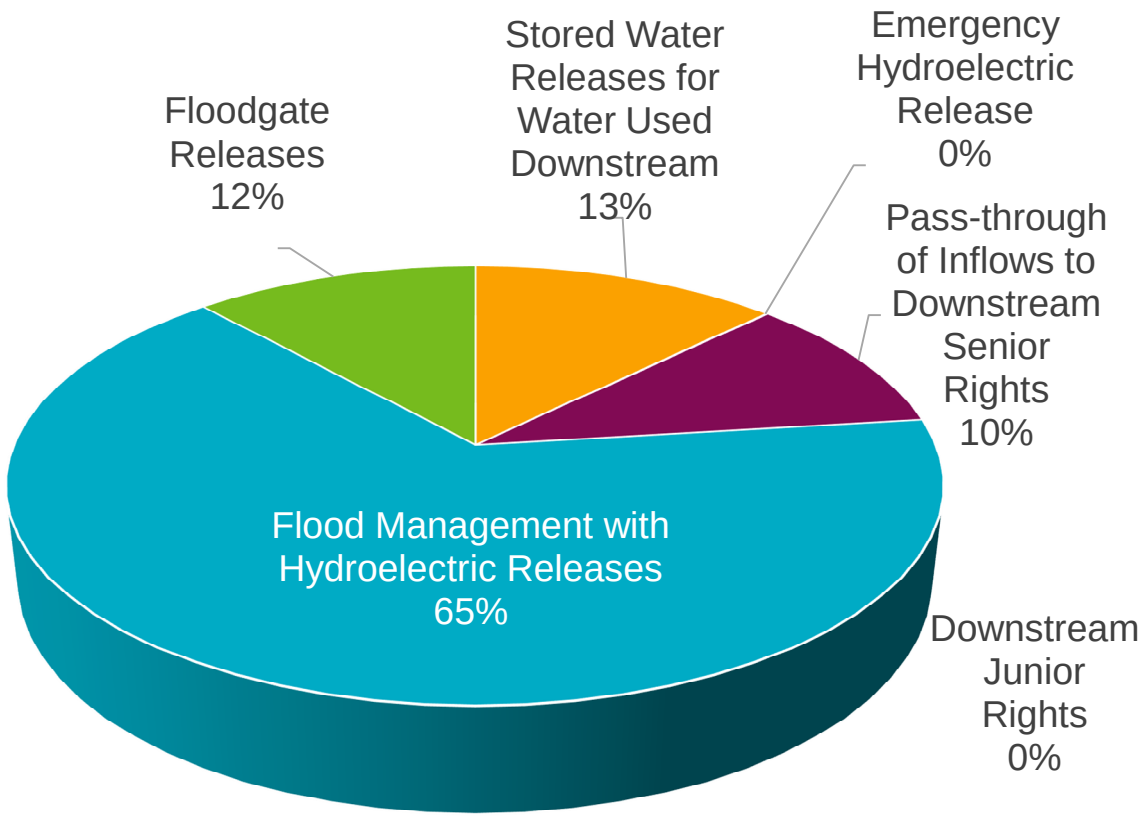
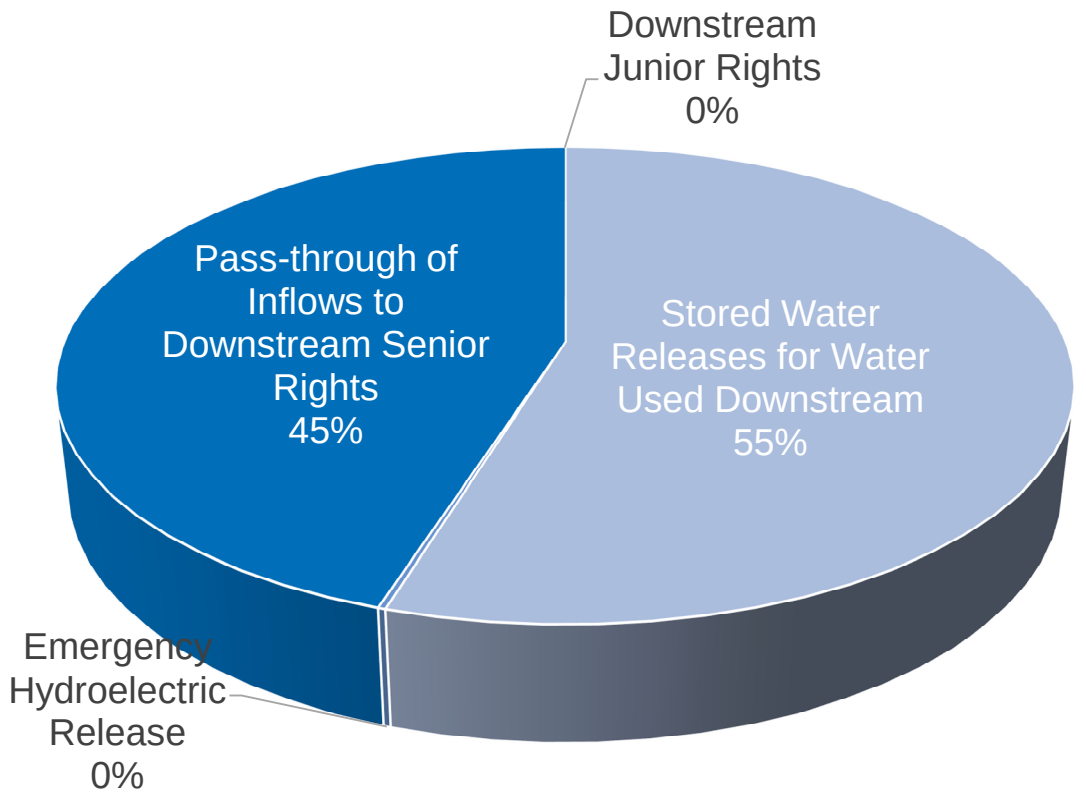
2019 Water Releases from Mansfield Dam



1,054,004 acre-feet released, including flood releases



243,251 acre-feet released for downstream use

Projected Conditions

- **March 1, 2021**
  - Combined storage ‘equal chances’ projection is 1.46 million acre-feet
    - Dec-Jan-Feb inflows < 50,000 acre-feet, then Less Severe Drought Condition
    - Dec-Jan-Feb inflows ≥ 50,000 acre-feet, then Normal Condition
  - Minimum projection is 1.40 million acre-feet

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