Frenchman Cambridge Irrigation District

- Water Users Meeting
- March 21, 2024
- Brad Edgerton, Manager

"Water is Life"

Frenchman Cambridge Irrigation District

Dale Cramer, President

Todd Lichty, Vice President

Duane Vorderstrasse, Secretary / Treasurer

FCID Employs 11 Fulltime Employees

"Water is Life"

Background:

FCID was Established in 1946.

First Irrigation District organized under the Missouri Basin Plan approved by congress in 1944

"Water is Life"

Background:

Four Reclamation Canal Systems serving 45,669 acres.

Meeker-Driftwood Canal serves 16,691 acres

Red Willow Canal serves 4,642 acres

Bartley Canal serves 6,130

Cambridge Canal serves 18,205

"Water is Life"

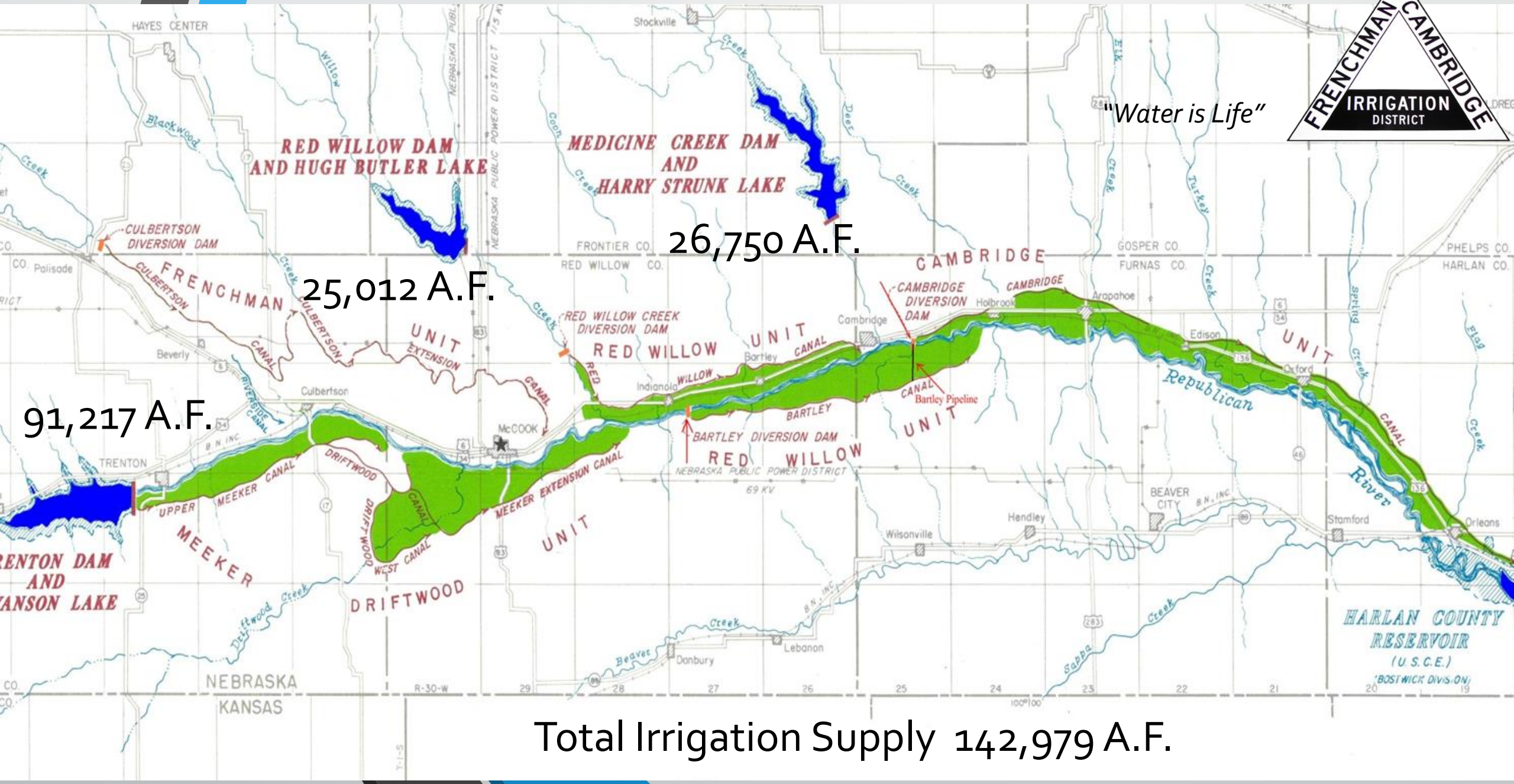
Background:

Four Reclamation Canal Systems with:

156 miles of main canal

100 miles of buried pipe laterals

157 miles of surface and sub-surface drains



Total Irrigation Supply 142,979 A.F.

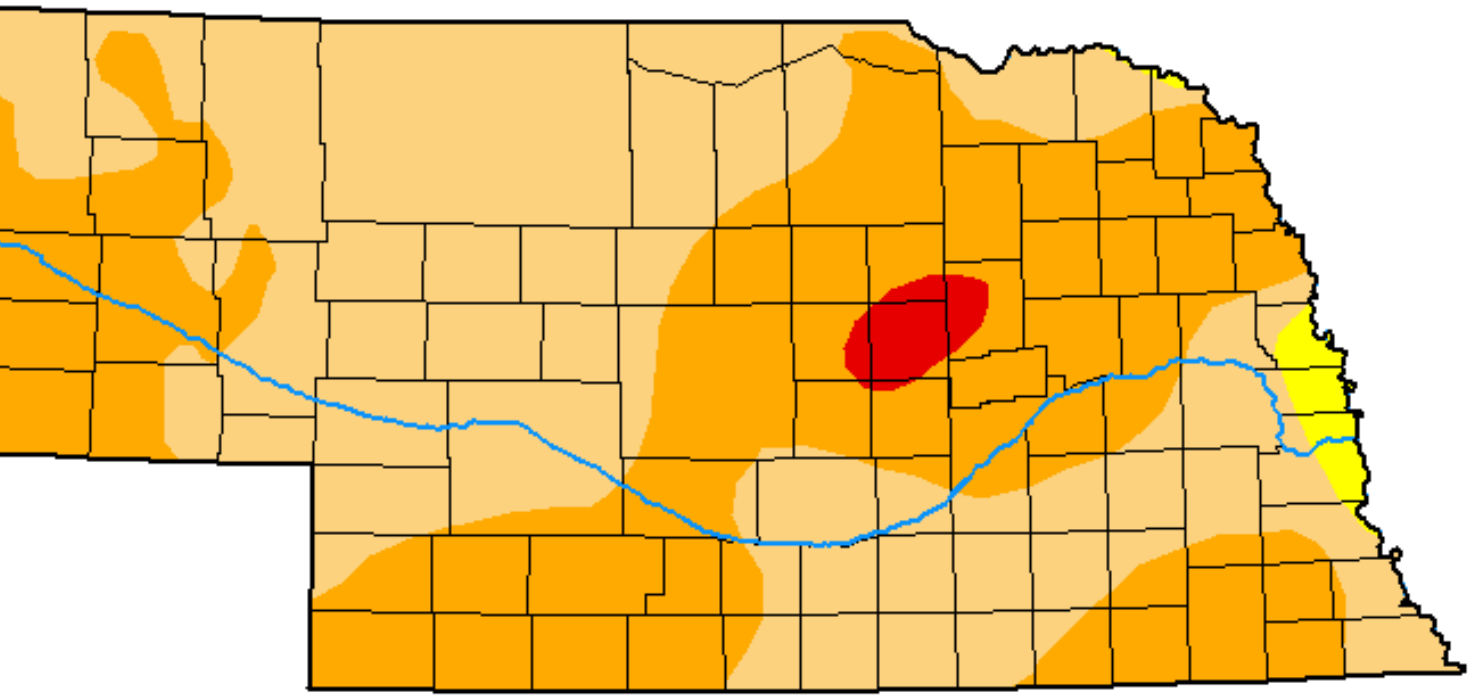
U.S. Drought Monitor

Nebraska

March 15, 2022

(Released Thursday, Mar. 17, 2022)

Valid 8 a.m. EDT



Intensity:

- None
- 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. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

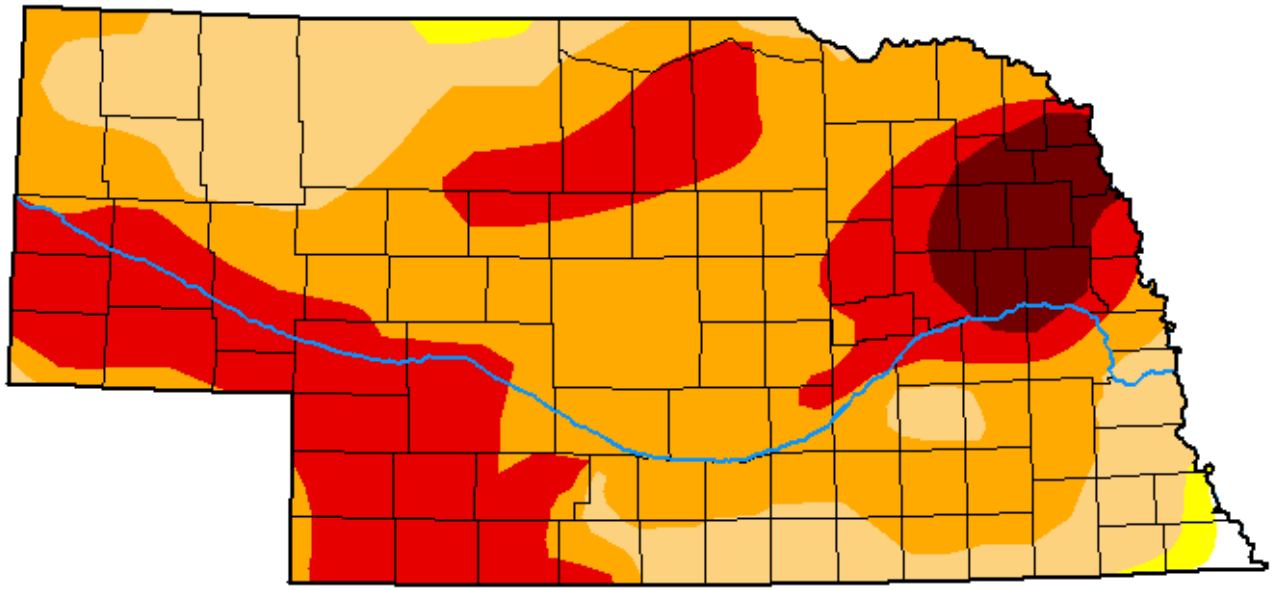
U.S. Drought Monitor

Nebraska

March 14, 2023

(Released Thursday, Mar. 16, 2023)

Valid 8 a.m. EDT



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Author:

Brad Rippey
U.S. Department of Agriculture

droughtmonitor.unl.edu

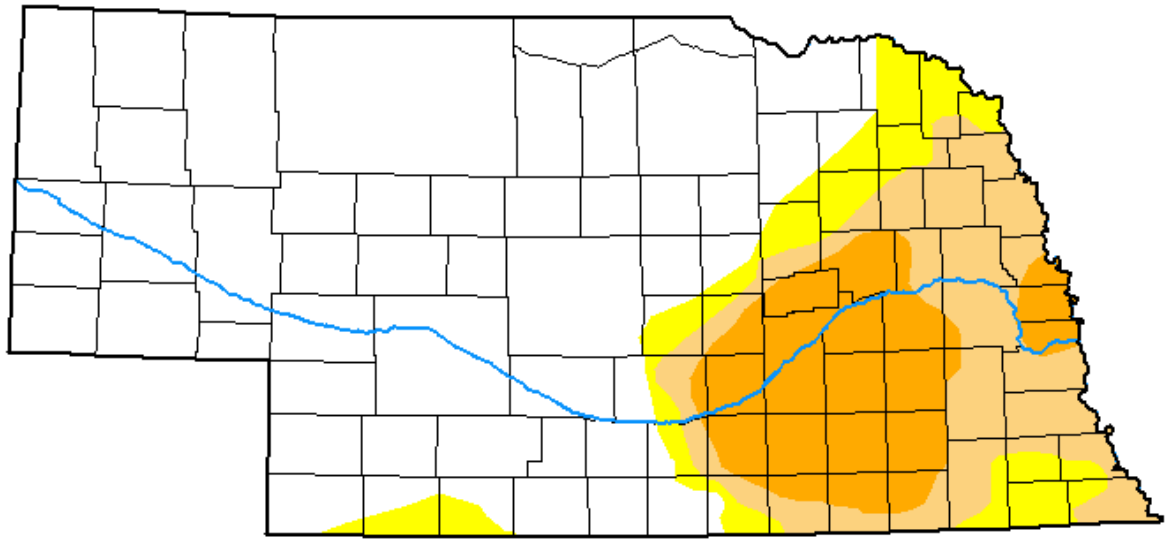
U.S. Drought Monitor

Nebraska

March 12, 2024

(Released Thursday, Mar. 14, 2024)

Valid 8 a.m. EDT



Intensity:

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- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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Author:

Curtis Riganti
National Drought Mitigation Center

droughtmonitor.unl.edu

NRD Annual Hardy Balance Forecast for Upcoming Year (2024)

	LRNRD	MRNRD	URNRD	Total
Allowable Depletion Distribution Percentage from IMPs	25.3%	30.8%	43.9%	100.0%
Allowable Groundwater Depletions	40,400	49,200	70,200	159,900
Projected Groundwater Depletions	48,000	50,900	74,500	173,400
2024 Forecast Balance (no action)	**-7,600**	**-1,700**	**-4,300**	**-13,500**
2020-2023, projected	-720	39,140	26,980	65,400
5-Year Forecast Balance	**-8,320**	**37,440**	**22,680**	**51,900**
5-Year Forecast Balance + 5K AF	**-13,320**	**32,440**	**17,680**	

NRD Annual Guide Rock Balance Forecast for Upcoming Year (2024)

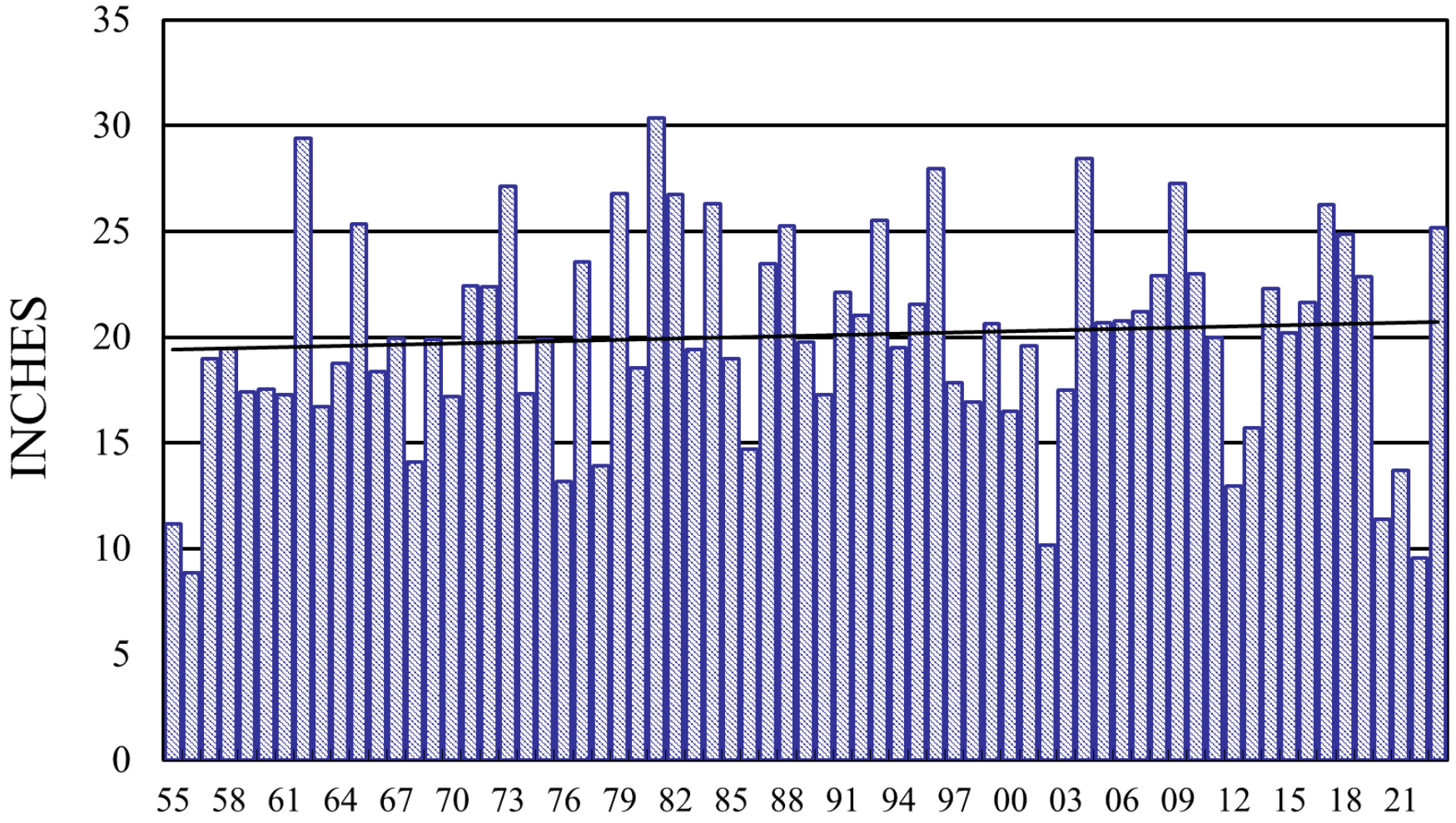
	LRNRD	MRNRD	URNRD	Total
Allowable Depletion Distribution Percentage from IMPs	24.5%	31.1%	44.4%	100.0%
Allowable Groundwater Depletions	36,700	46,600	66,600	149,900
Projected Groundwater Depletions	45,600	50,900	74,500	171,000
2024 Forecast Balance (no action)	**-8,900**	**-4,300**	**-7,900**	**-21,100**
2023, projected	-10,420	-4,060	-5,320	-19,800
2-Year Forecast Balance	**-19,320**	**-8,360**	**-13,220**	**-40,900**
2-Year Forecast Balance + 5K AF	**-24,320**	**-13,360**	**-18,220**	

A two year test will require the NRD's to pump up to 41,000 acre-feet from N-Corpe and Rock Creek. Kansas may request less water if not needed

- Two ways Nebraska can avoid the two year test!
- Harlan County must reach 119,000 Acre-feet of Irrigation Supply by June 30. Current irrigation supply is 104,700 Acre-feet.
- KBID's irrigation supply must reach 68,000 acre-feet. Current account balance for KBID is 62,700 acre-feet

FCID 2024 Water Supply and Reservoir Report

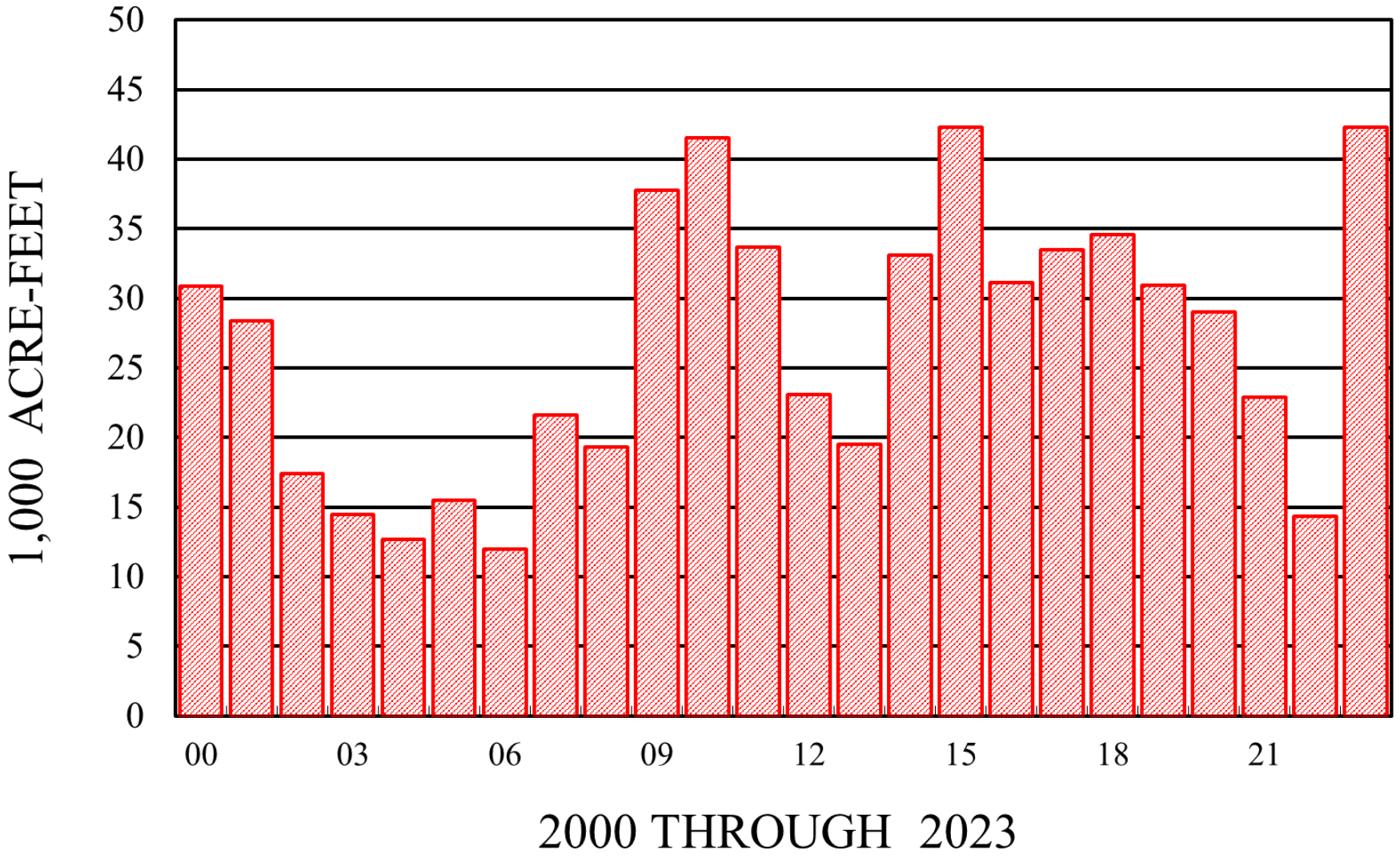
TRENTON DAM
YEARLY PRECIPITATION



1955 THROUGH 2023

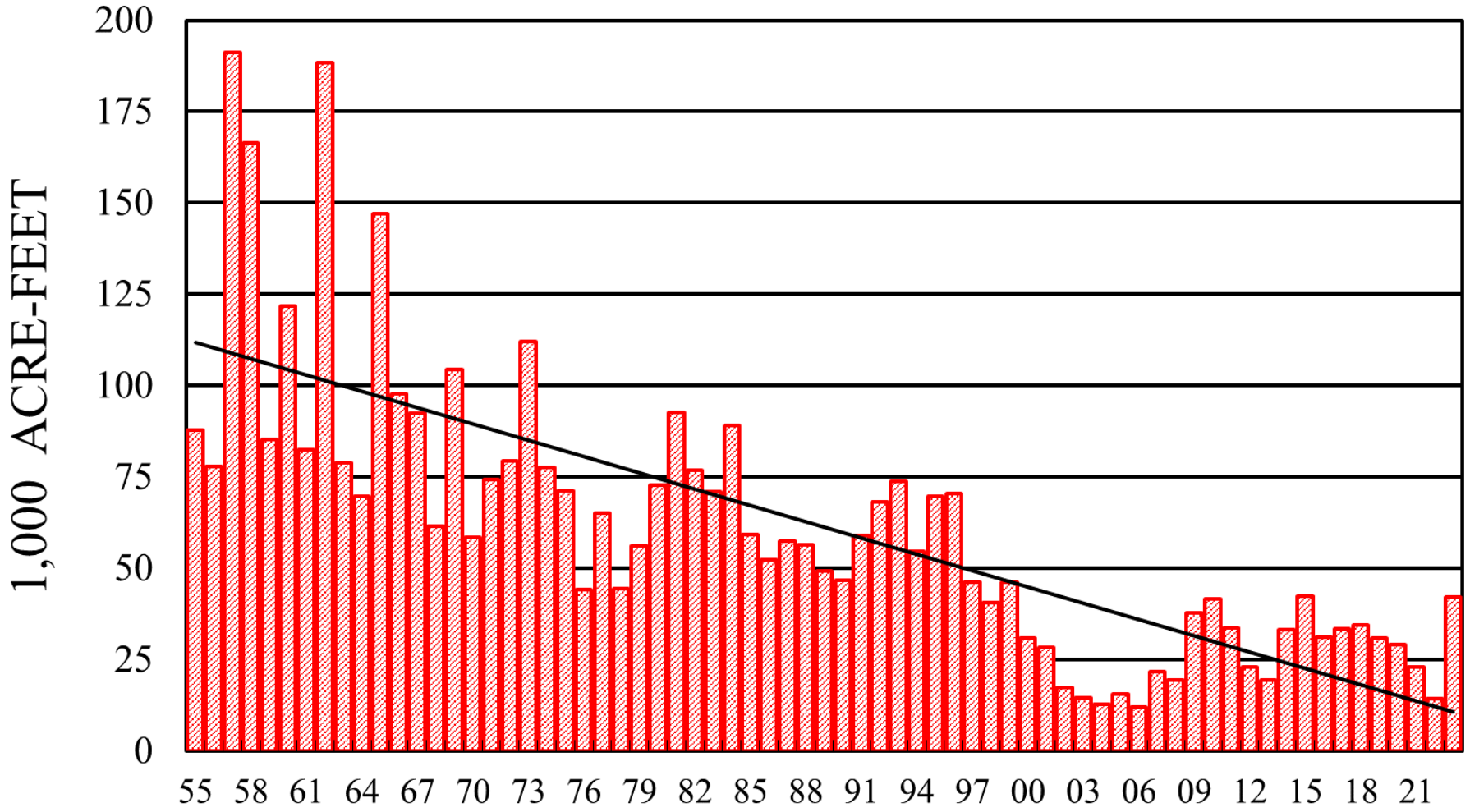
FRENCHMAN CAMBRIDGE IRRIGATION DISTRICT

TRENTON DAM
YEARLY HISTORICAL INFLOW



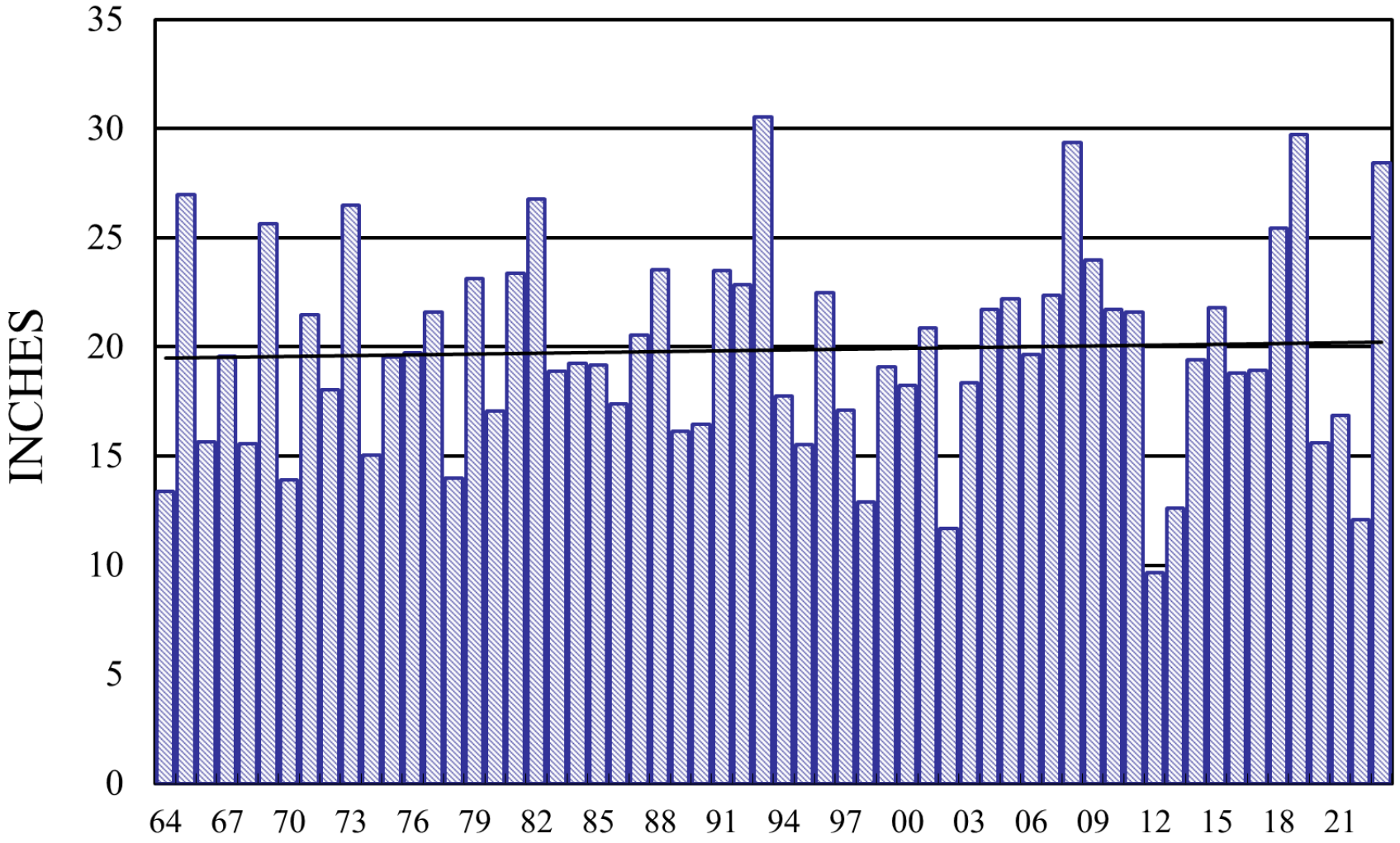
*2013-on Includes Augmentation Pumping from CPP & Rock Creek

TRENTON DAM
YEARLY HISTORICAL INFLOW



1955 THROUGH 2023

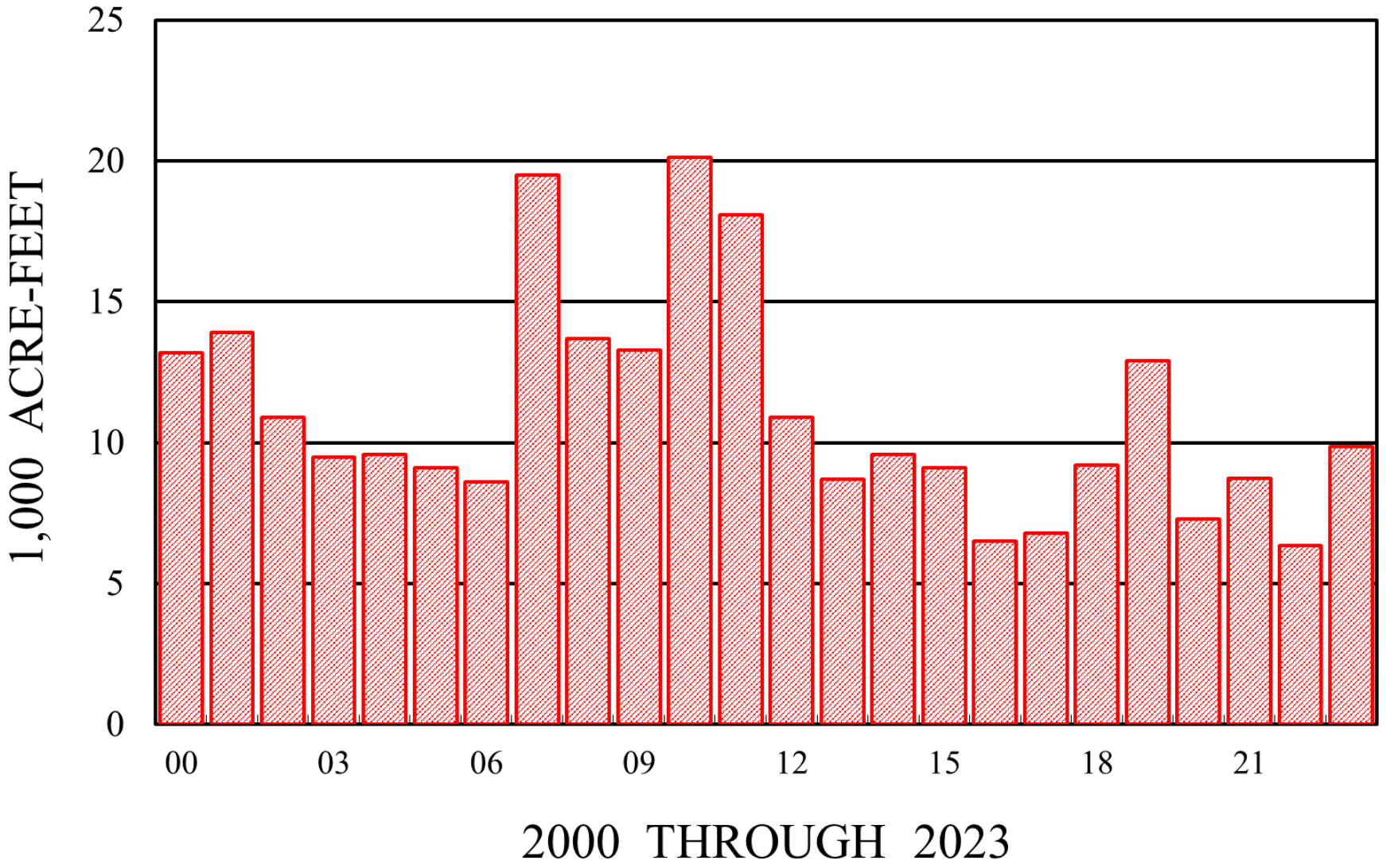
RED WILLOW DAM
YEARLY PRECIPITATION



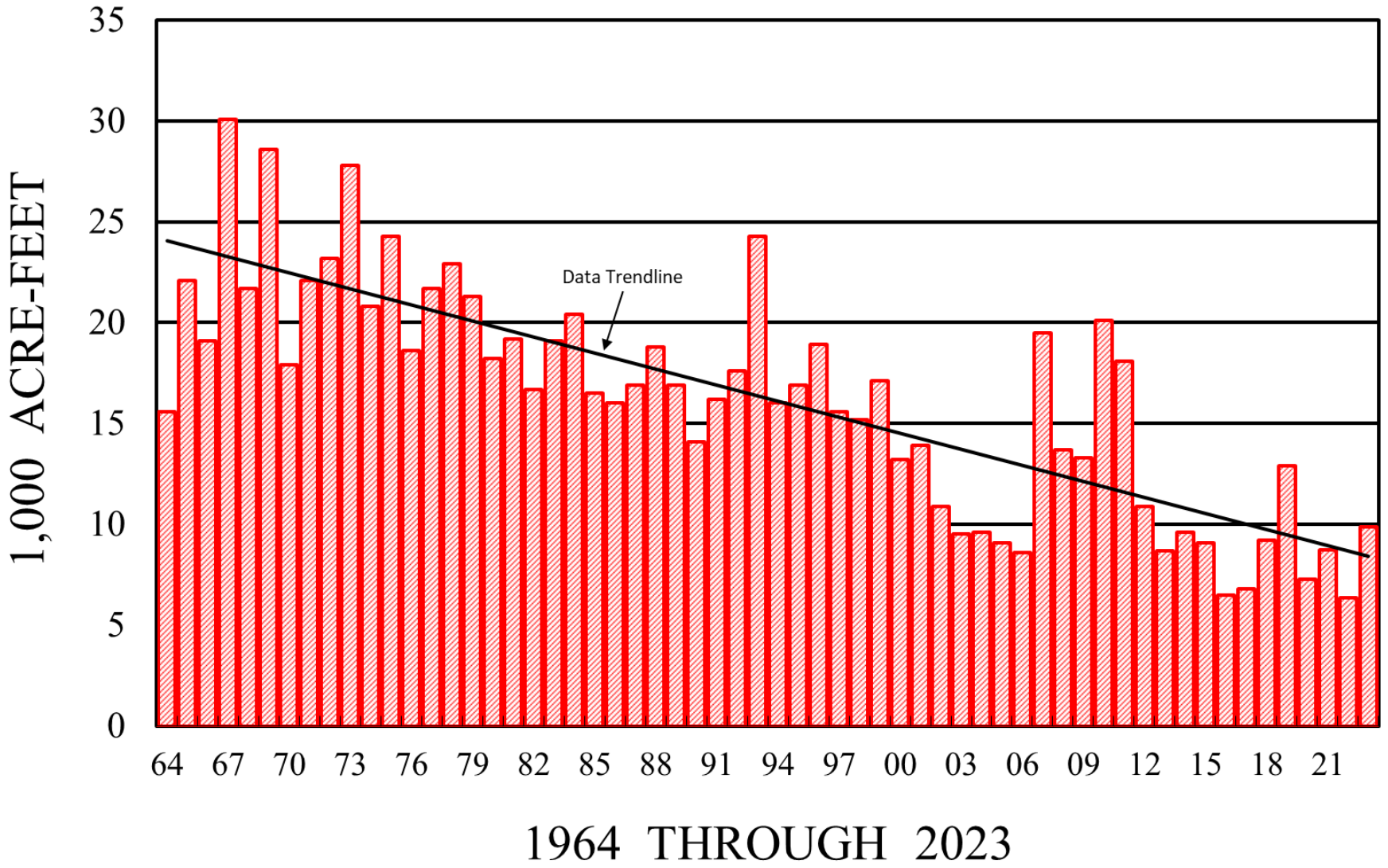
1964 THROUGH 2023

FRENCHMAN CAMBRIDGE IRRIGATION DISTRICT

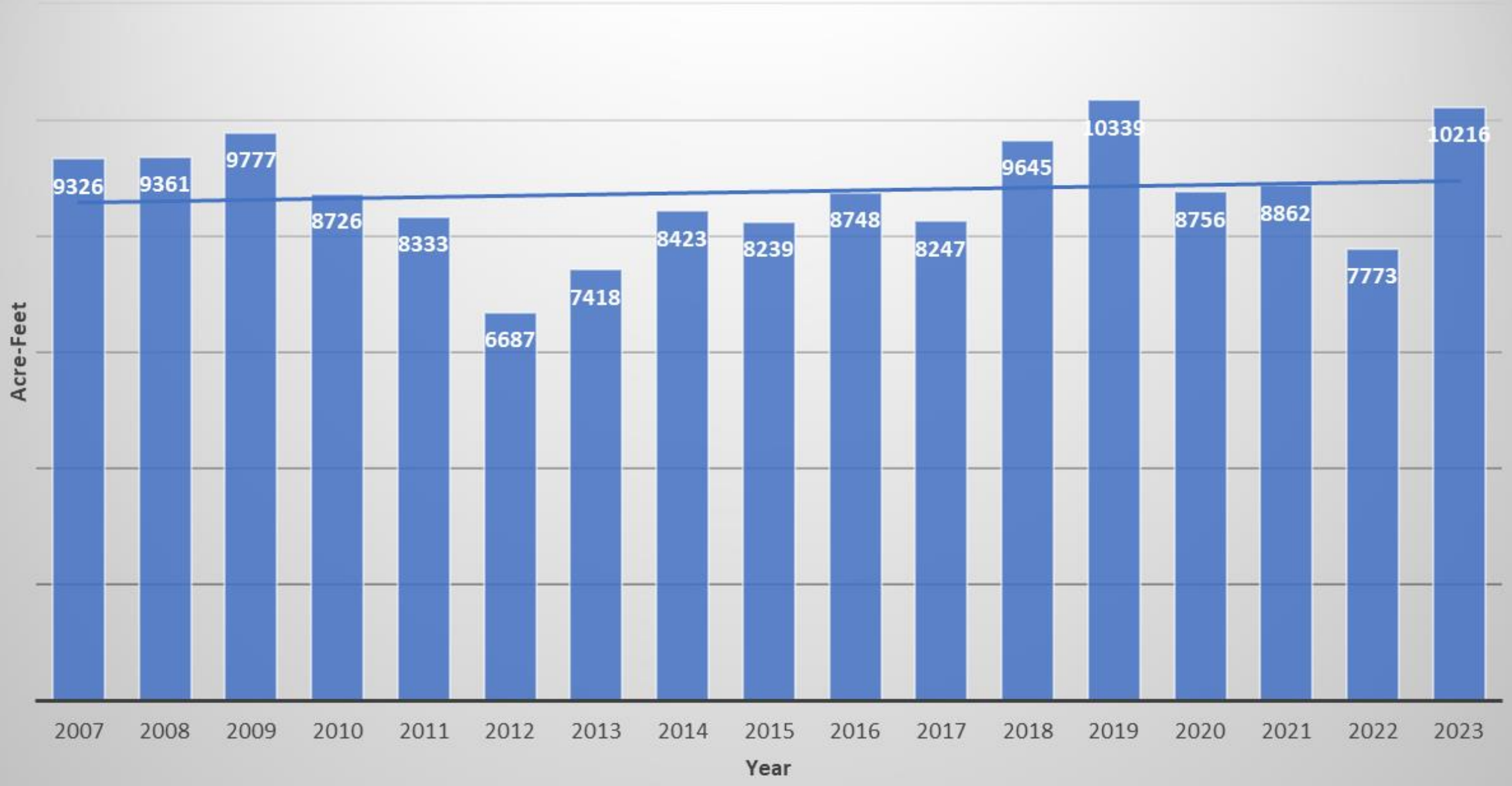
RED WILLOW DAM and HUGH BUTLER LAKE
YEARLY HISTORICAL INFLOW



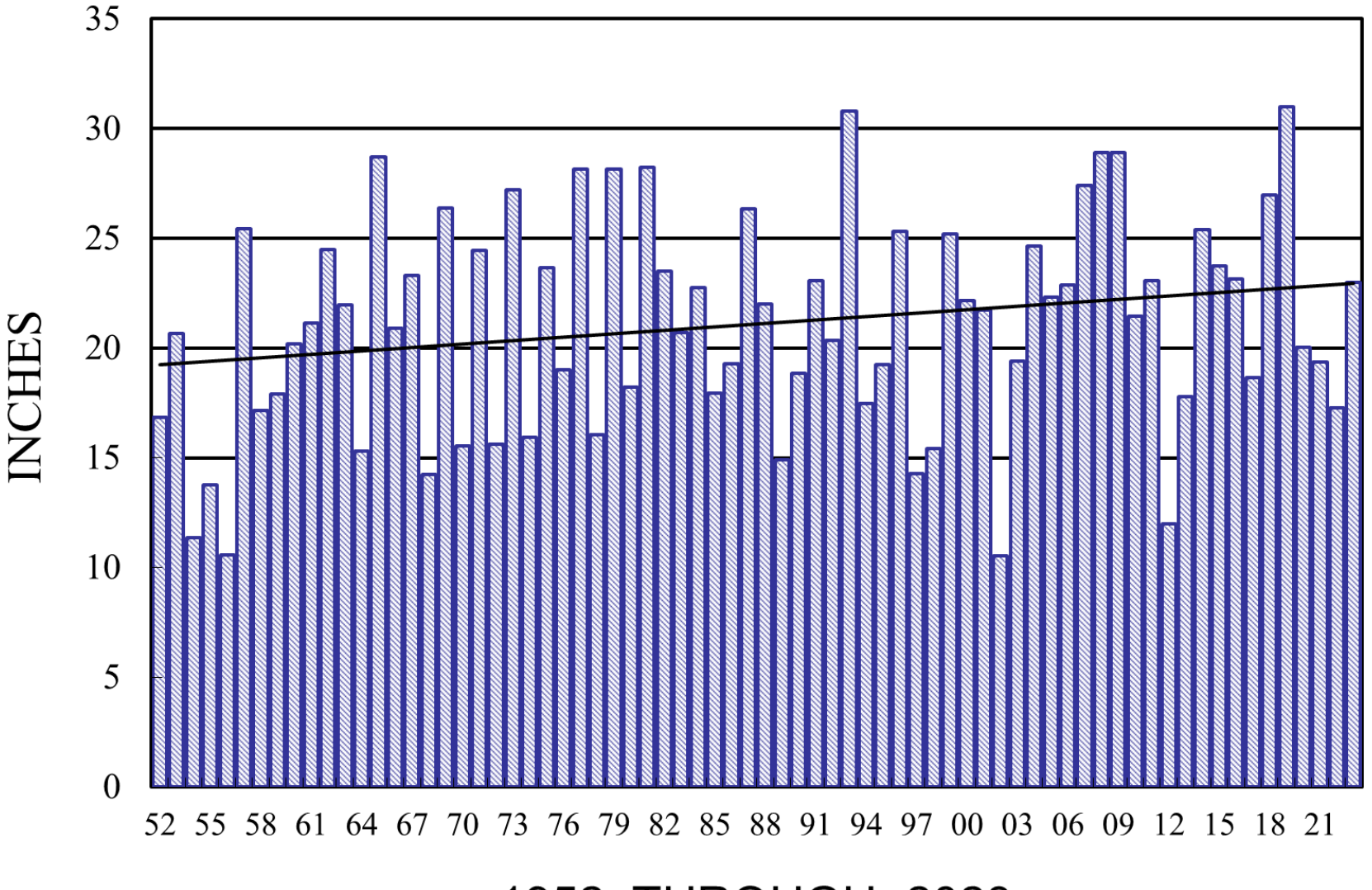
RED WILLOW DAM and HUGH BUTLER LAKE
YEARLY HISTORICAL INFLOW



Red Willow Sub-Basin GW Depletions to Red Willow Creek

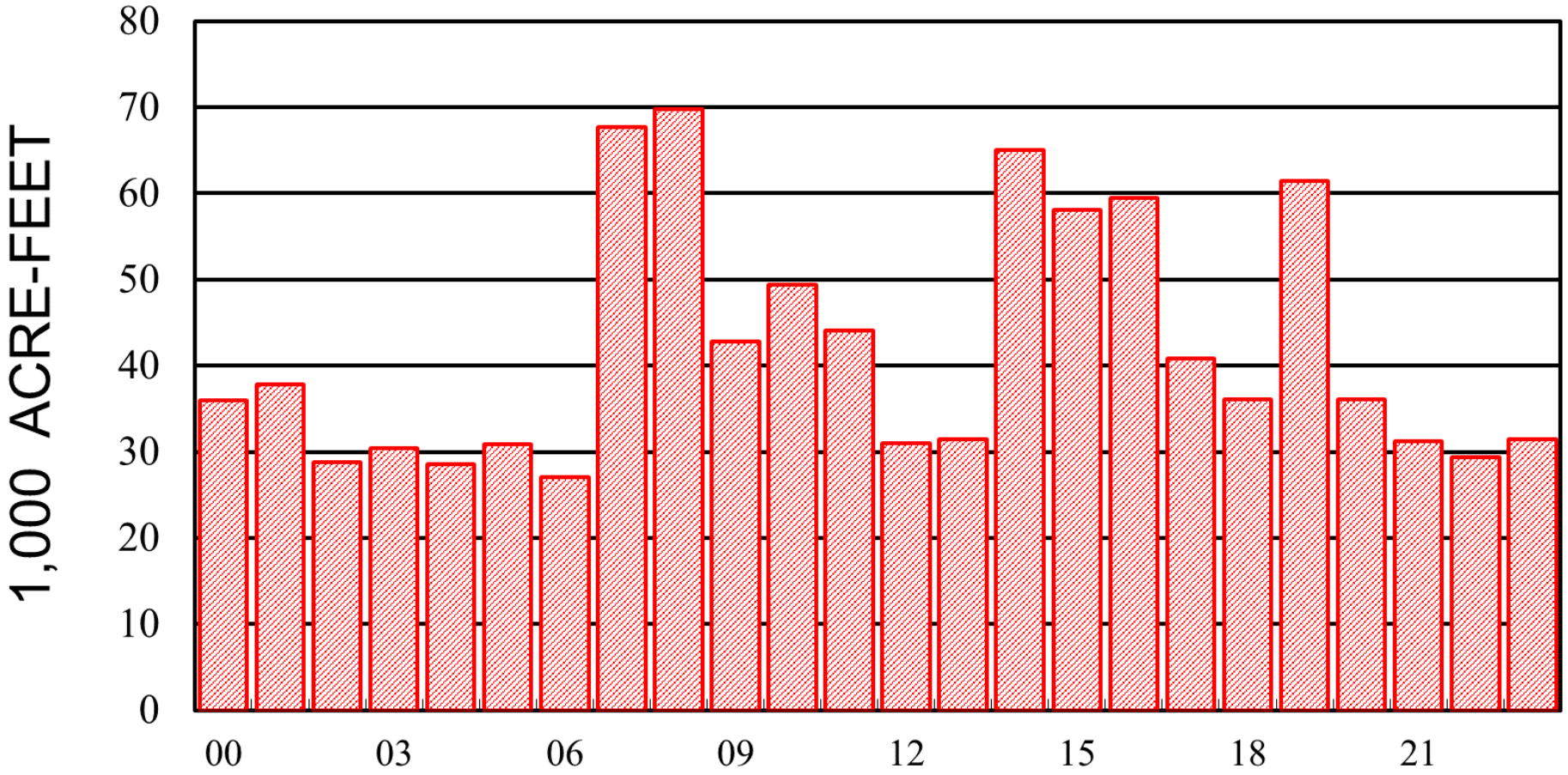


MEDICINE CREEK DAM
YEARLY PRECIPITATION



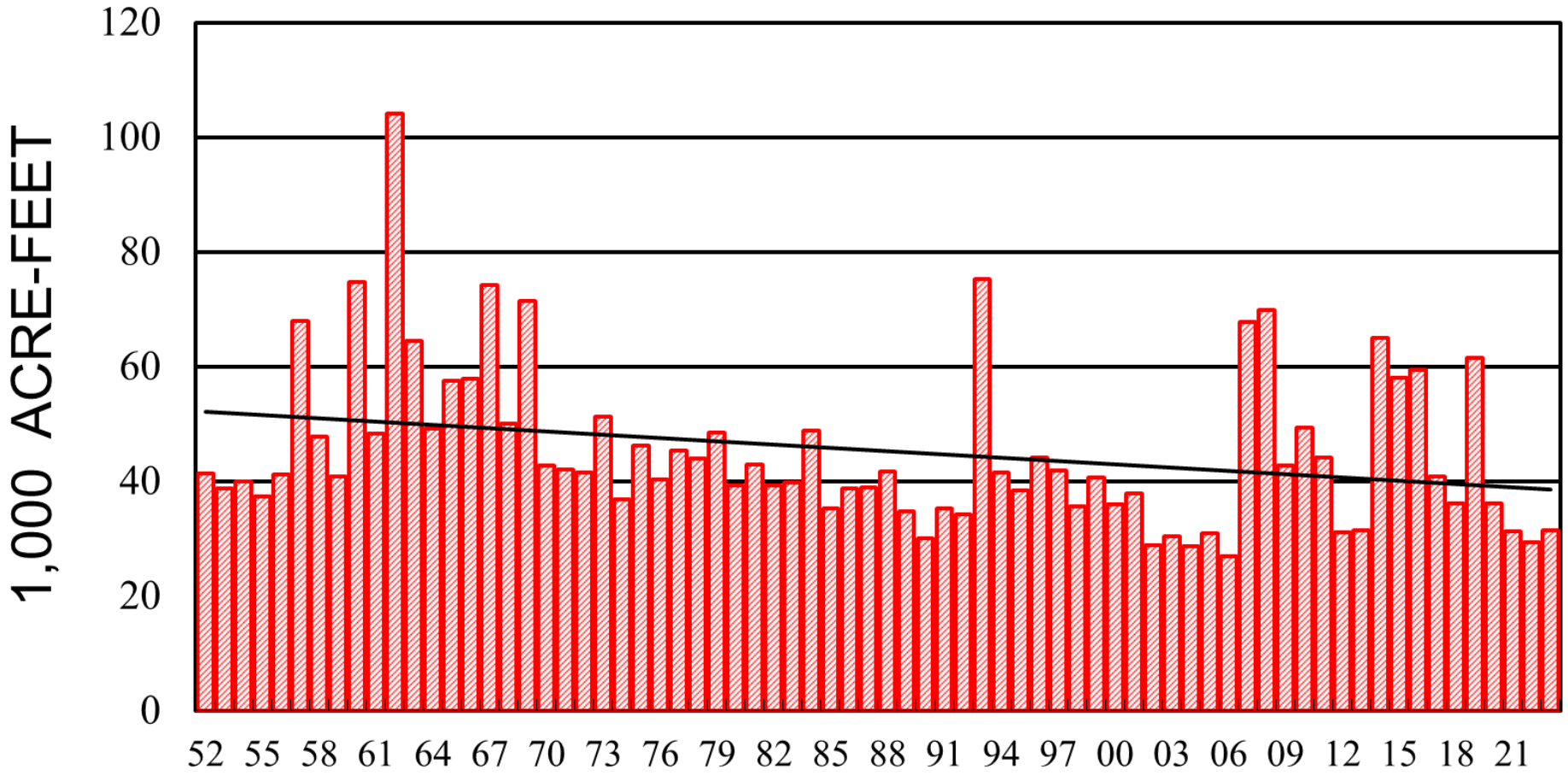
FRENCHMAN CAMBRIDGE IRRIGATION DISTRICT

MEDICINE CREEK DAM and HARRY STRUNK LAKE
YEARLY HISTORICAL INFLOW



2000 THROUGH 2023

MEDICINE CREEK DAM and HARRY STRUNK LAKE
YEARLY HISTORICAL INFLOW



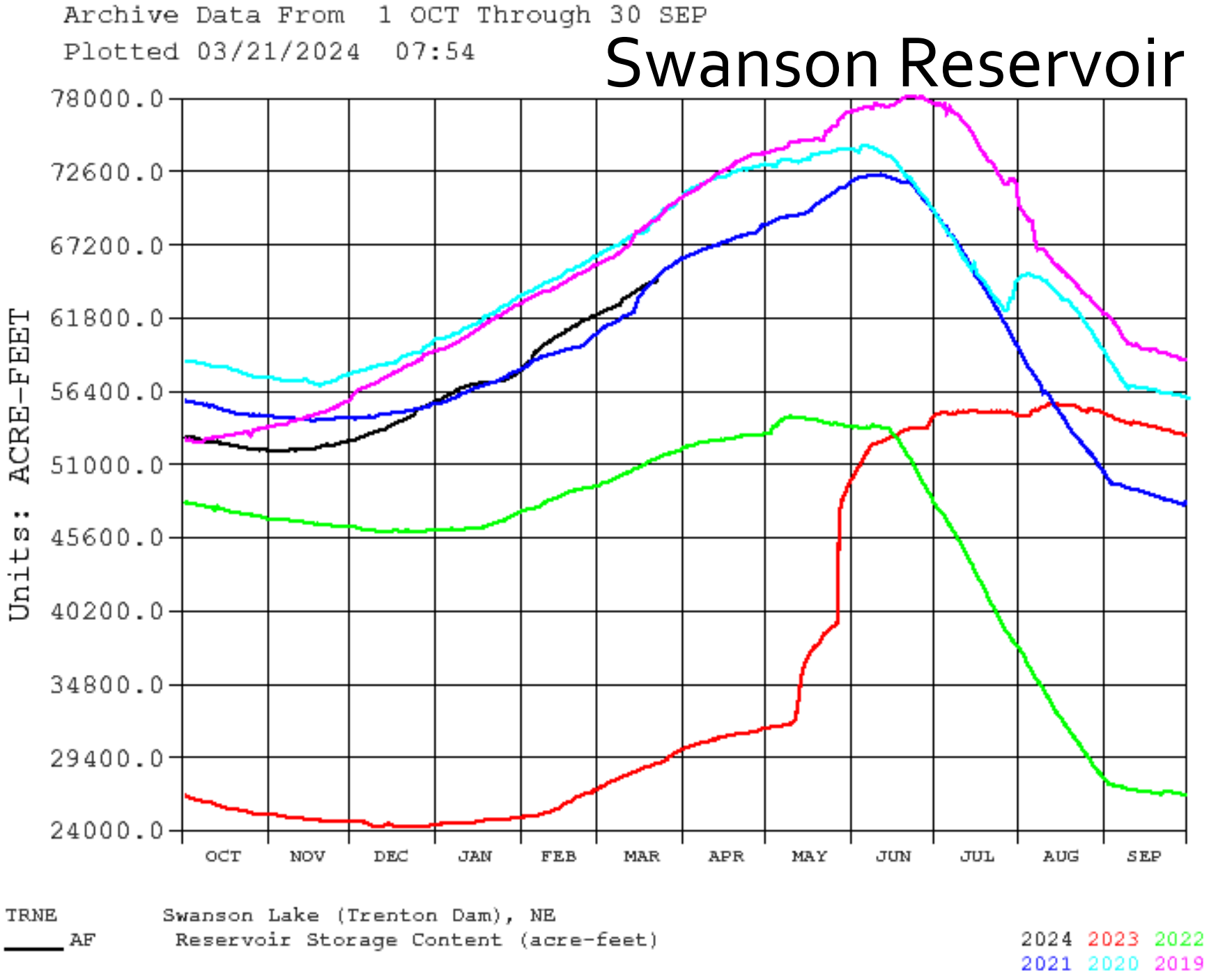
1952 THROUGH 2023

Frenchman Cambridge 2024 Storage Water Supply (To Date)

Reservoir Content / Irrigation Supply

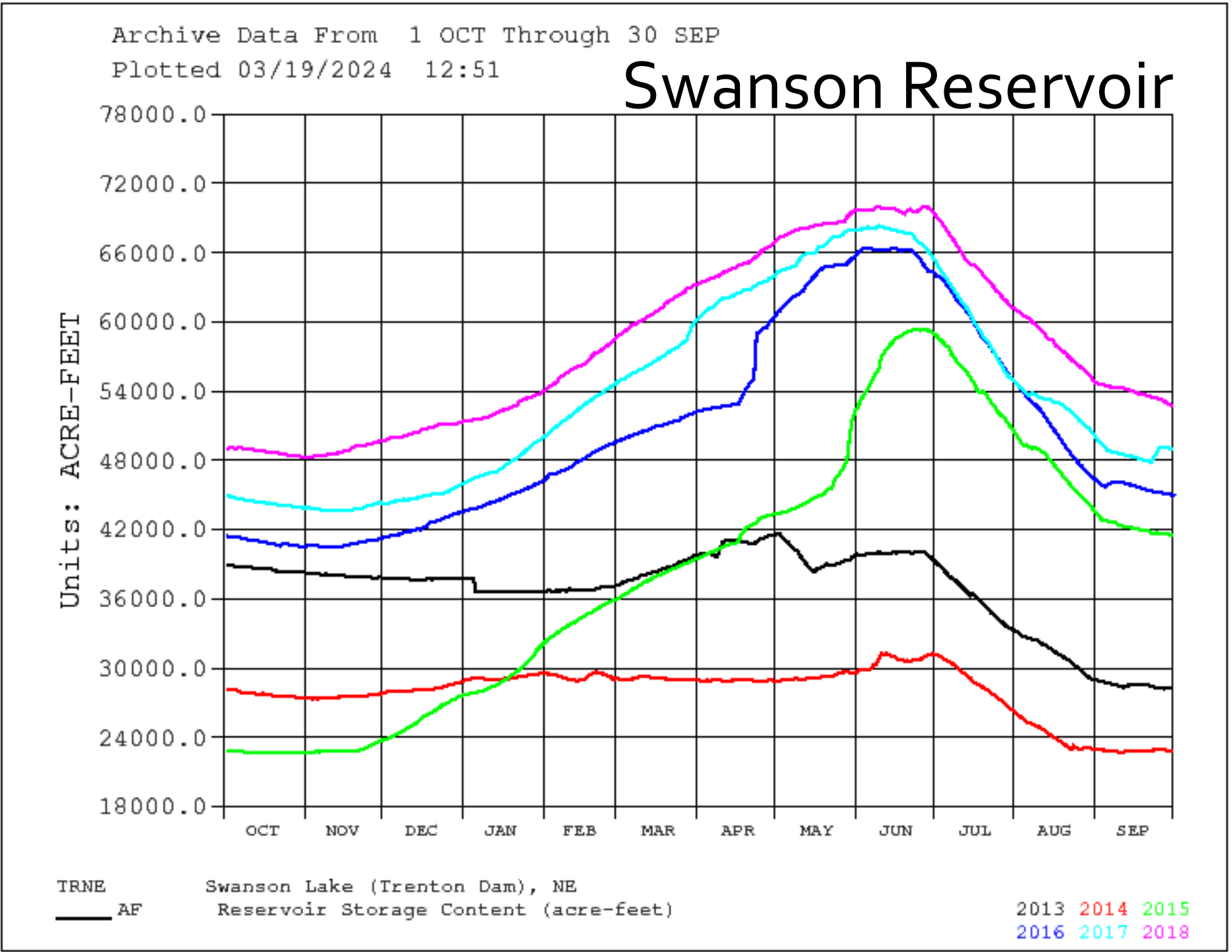
Reservoirs 2024	Swanson		Hugh Butler		Harry Strunk		Total AF
	Elevation	Acre-Feet	Elevation	Acre-Feet	Elevation	Acre-Feet	AF
Top of Irrigation Pool	2752.00	110,175	2581.80	36,224	2366.10	34,647	181,046
FCID Contracted Shut Off Elevation/Content AF	2725.00	18,958	2561.00	11,212	2343.00	7,897	38,067
FCID Contracted Irrigation Pool Capacity at 100% Full	27.00	91,217	20.80	25,012	23.10	26,750	142,979
Current Elevation / Content (Acre-Feet)	2741.23	64654.00	2567.70	17399	2366.09	34,629	116,682
% of Full Capacity	58.7%		48.0%		99.9%		64.4%
Current 2024 Irrigation Supply (To Date)	***Feet***	***A.F.***	***Feet***	***A.F.***	***Feet***	***A.F.***	***A.F.***
	16.23	***45,696***	*6.70*	***6,187***	*23.09*	***26,732***	***78,615***
Thursday, March 21, 2024	% Irr. Pool	50.1%	% Irr. Pool	24.7%	% Irr. Pool	99.9%	55.0%
One Year Change							
Tuesday, March 21, 2023	2,729.47	28,927	2,562.85	12,771	2,361.24	26,800	68,498
One Year Change in Storage (AF / Elevation)	**11.76**	**35,727**	**4.85**	**4,628**	**4.85**	**7,829**	**48,184**

Swanson Reservoir



Last filled in 1997!
110,175 Acre-Feet

Swanson Reservoir



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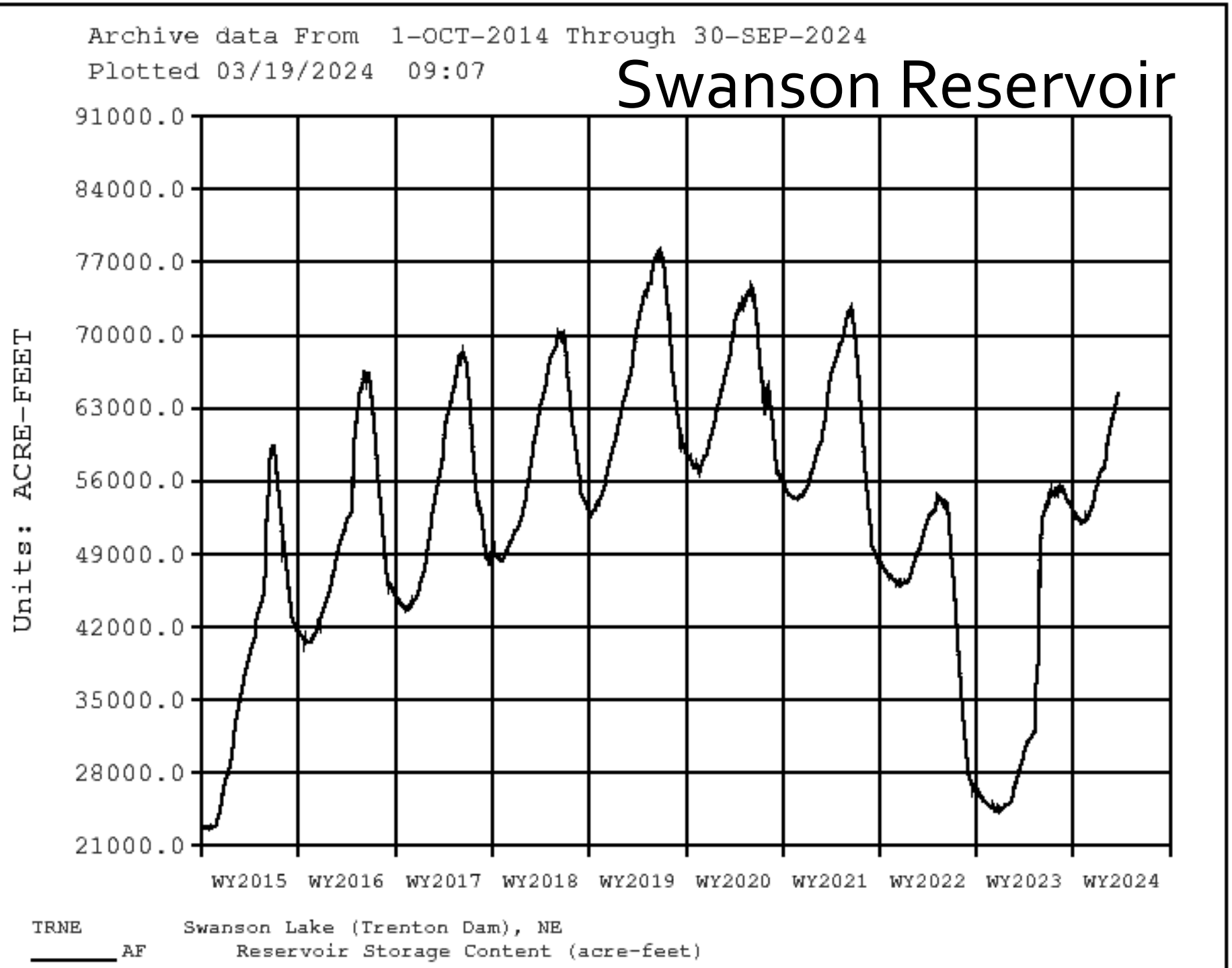
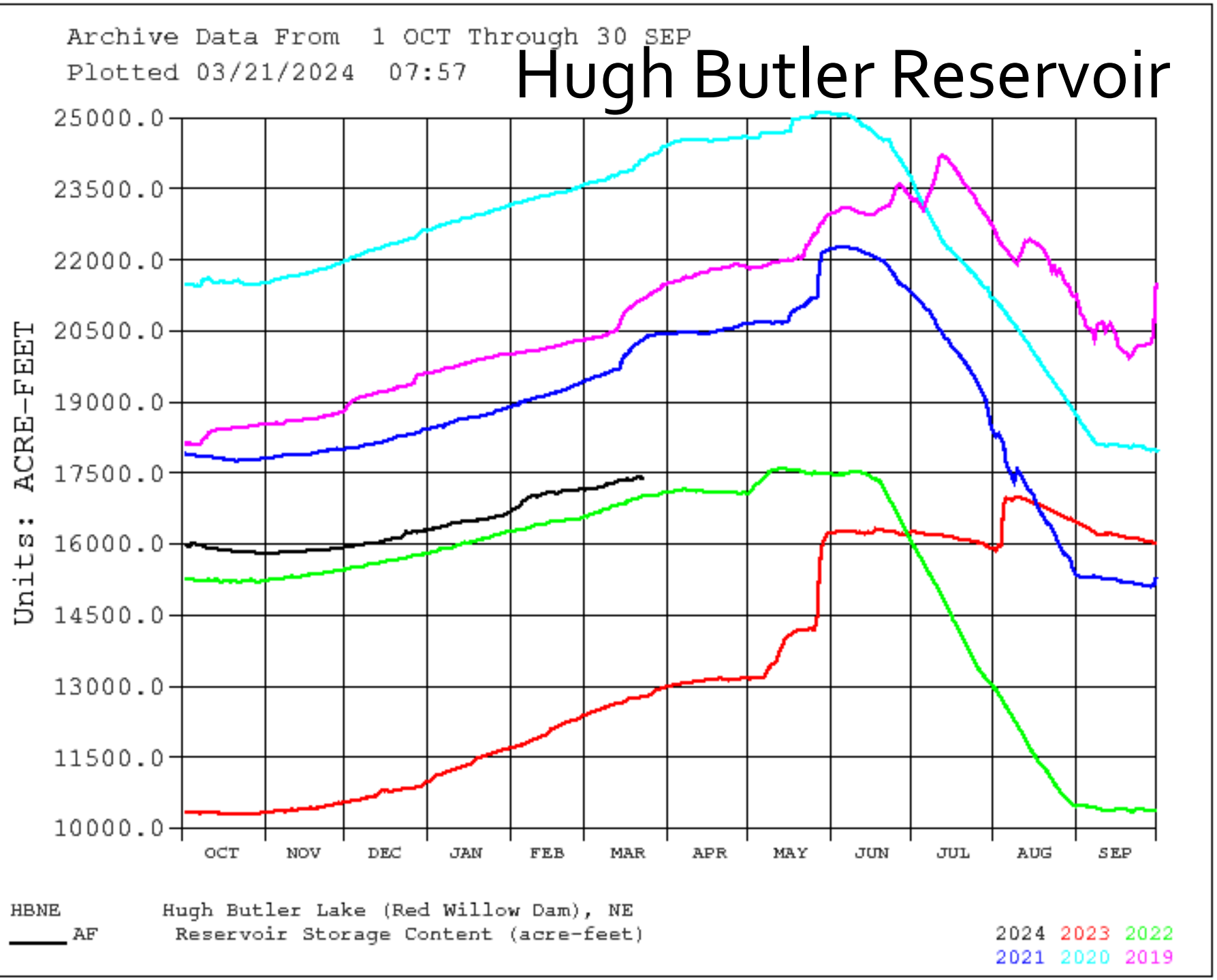
110,175 Acre-Feet

Swanson Reservoir

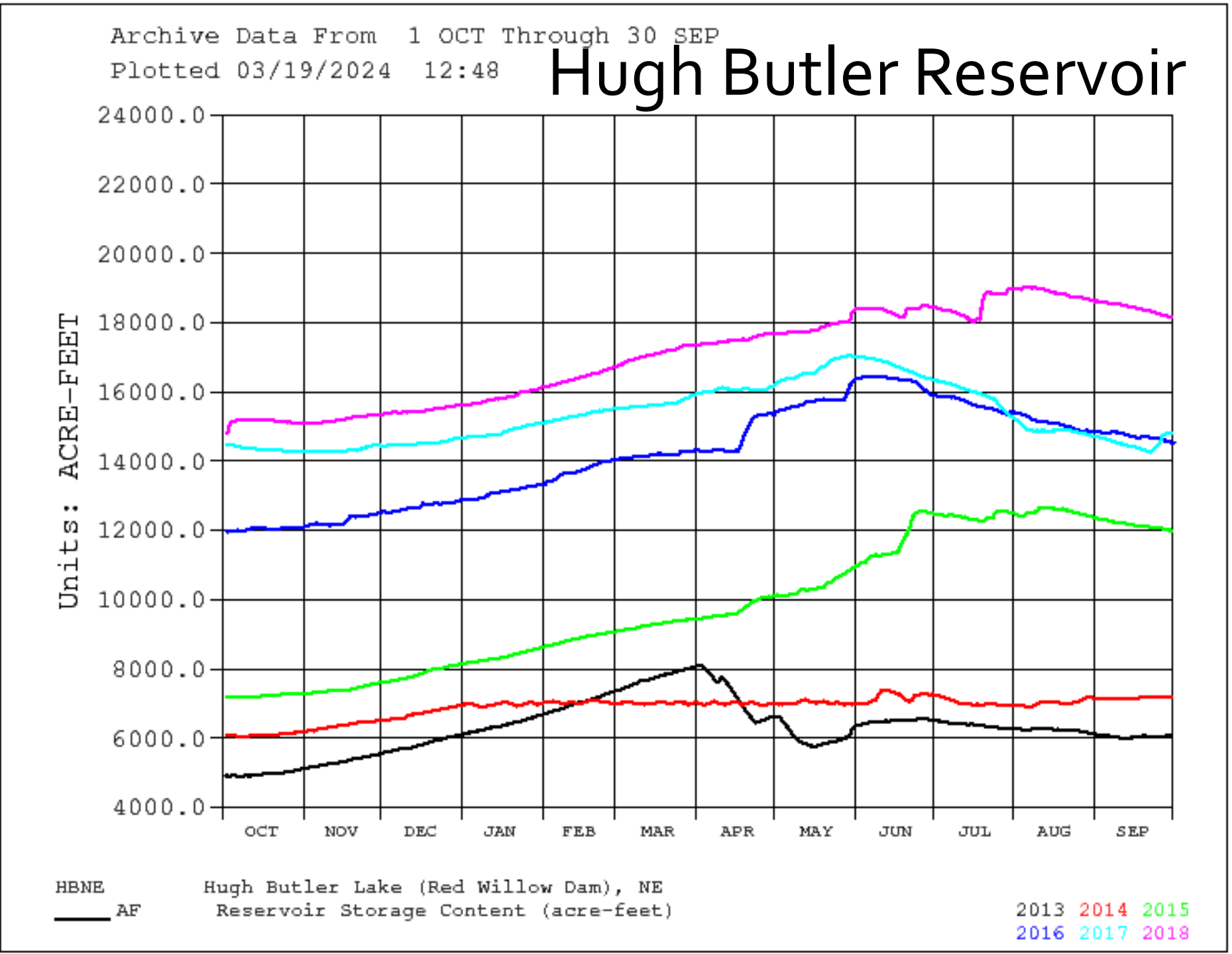


Hugh Butler Reservoir



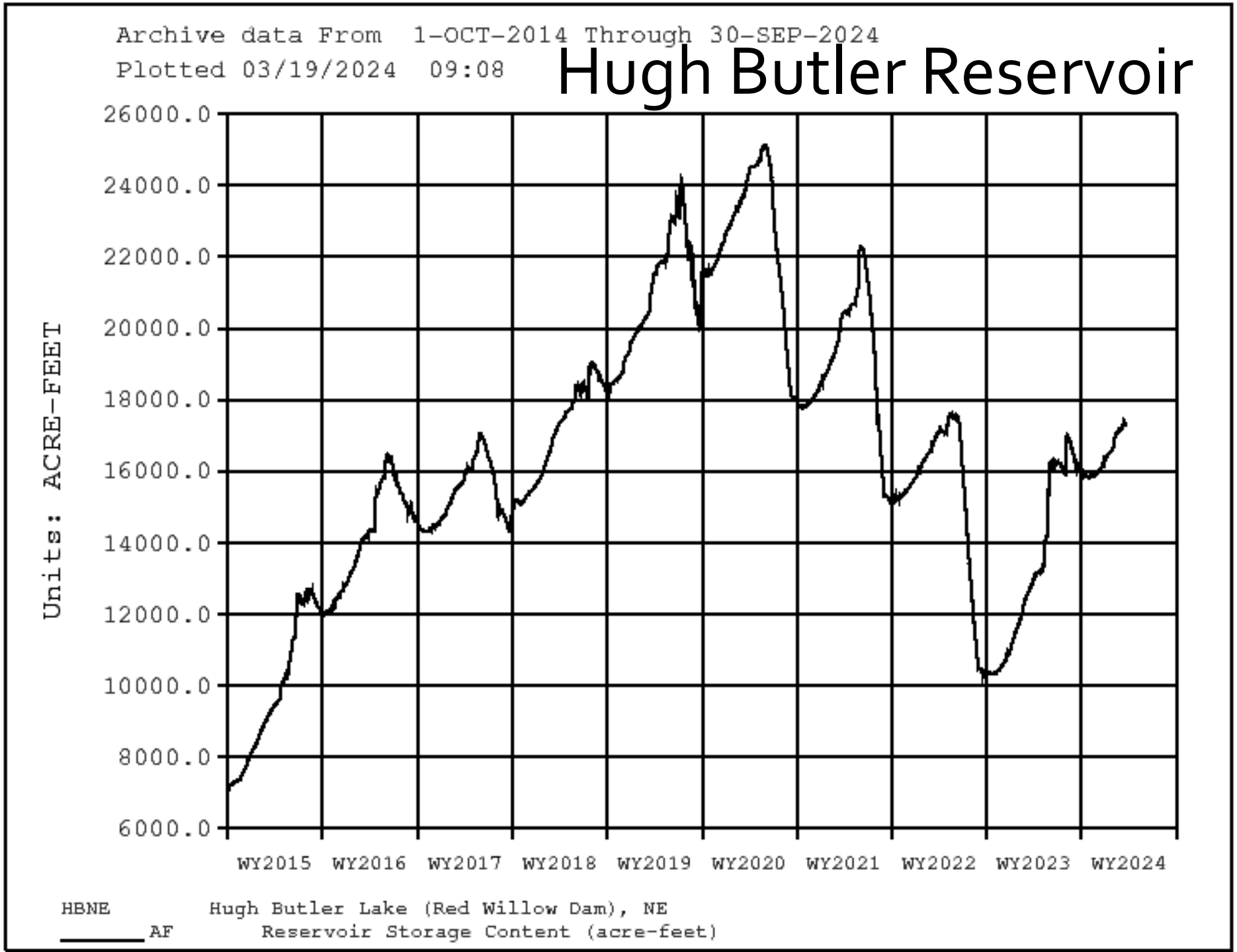
Last filled in 1997!
36,224 Acre-Feet

Hugh Butler Reservoir

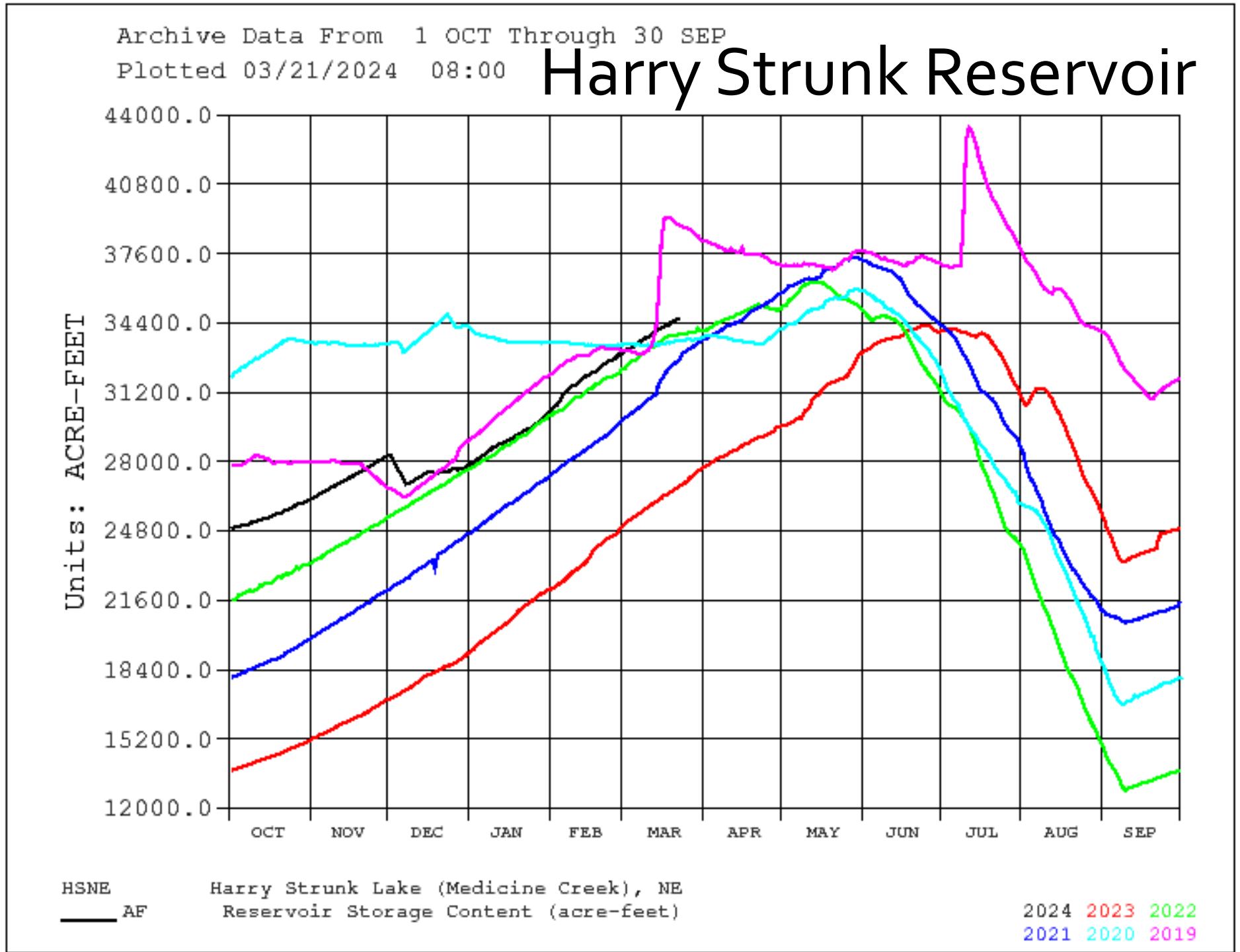


Last filled in 1997!
36,224 Acre-Feet

Hugh Butler Reservoir

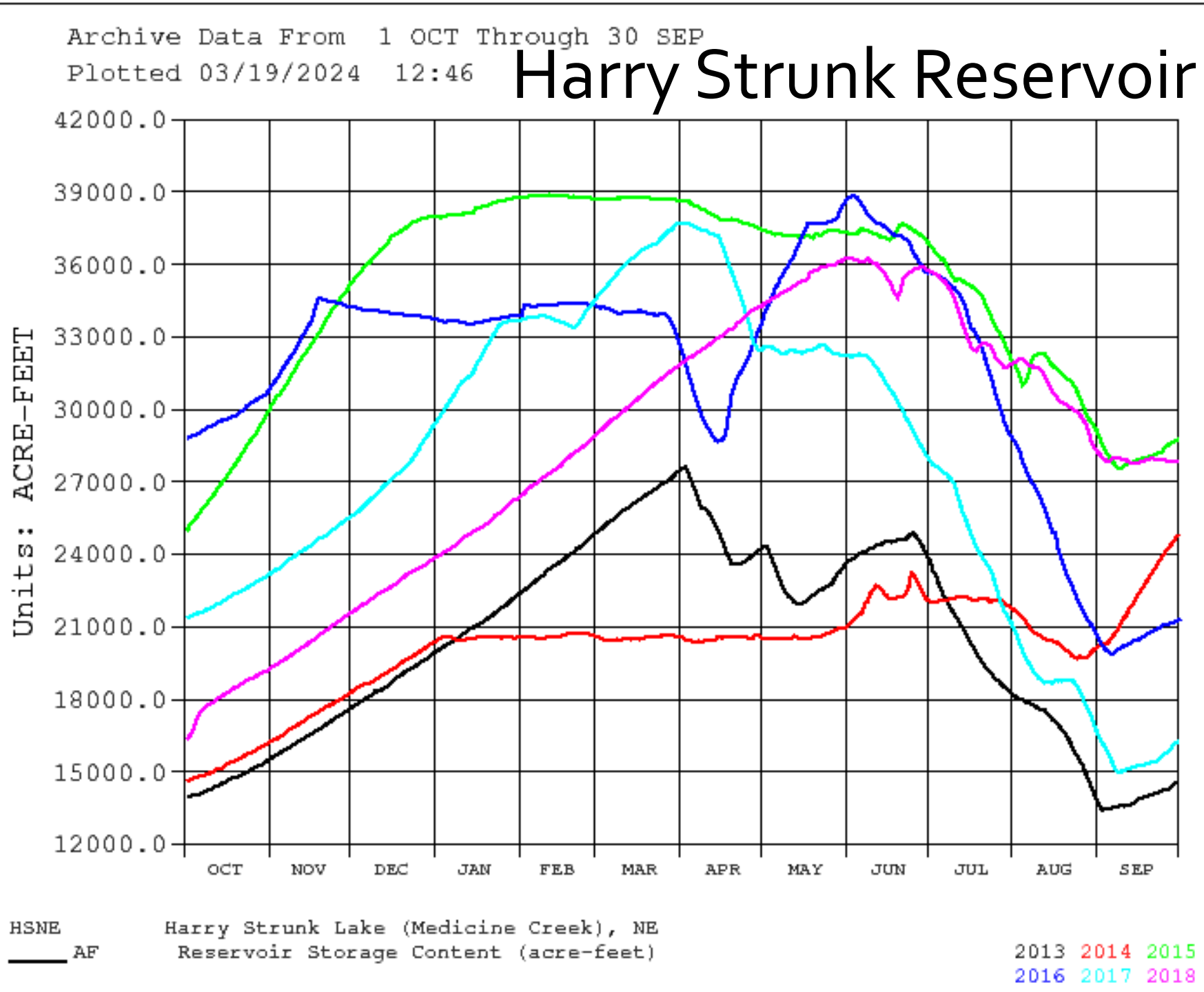


Harry Strunk Reservoir



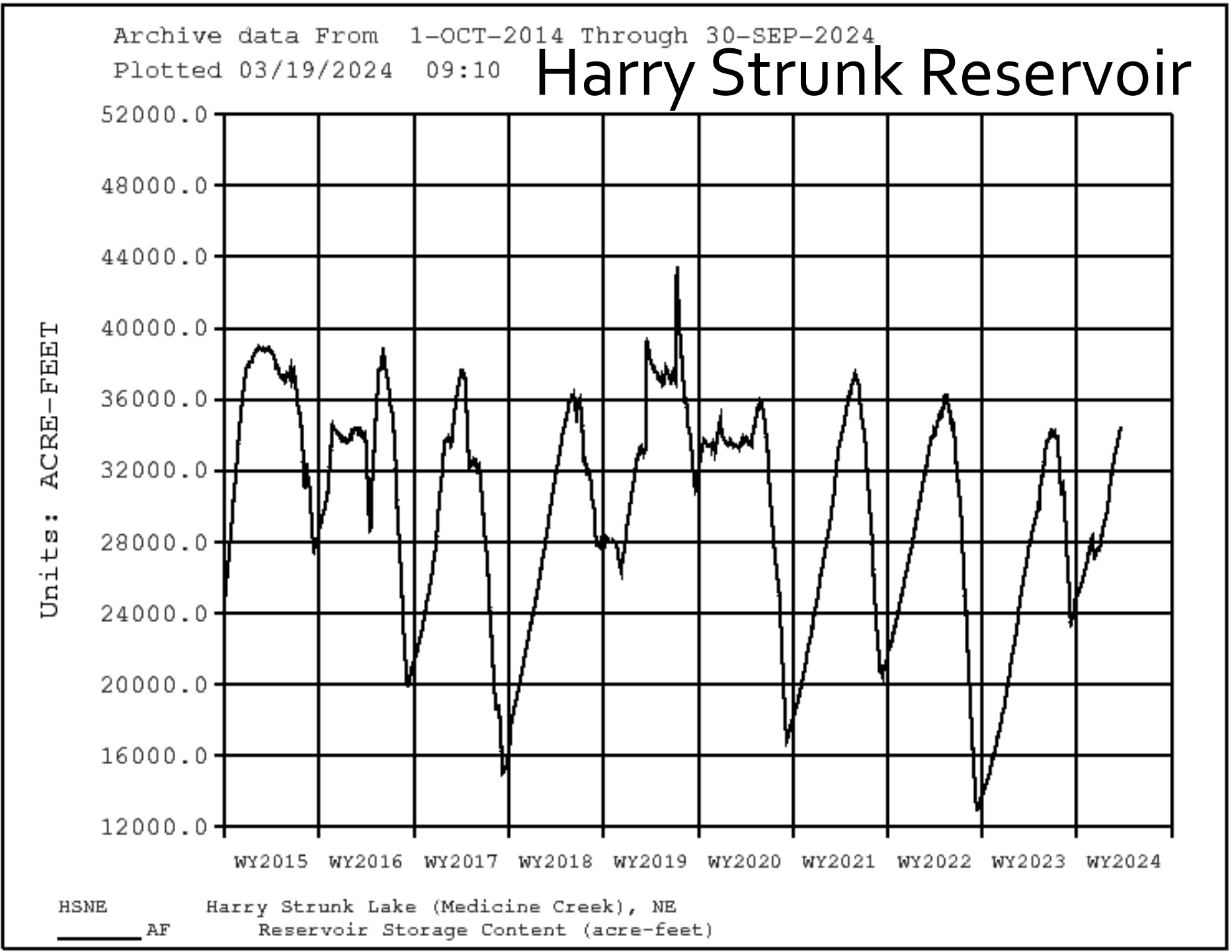
Last filled March 21, 2024
34,647 Acre-Feet

Harry Strunk Reservoir

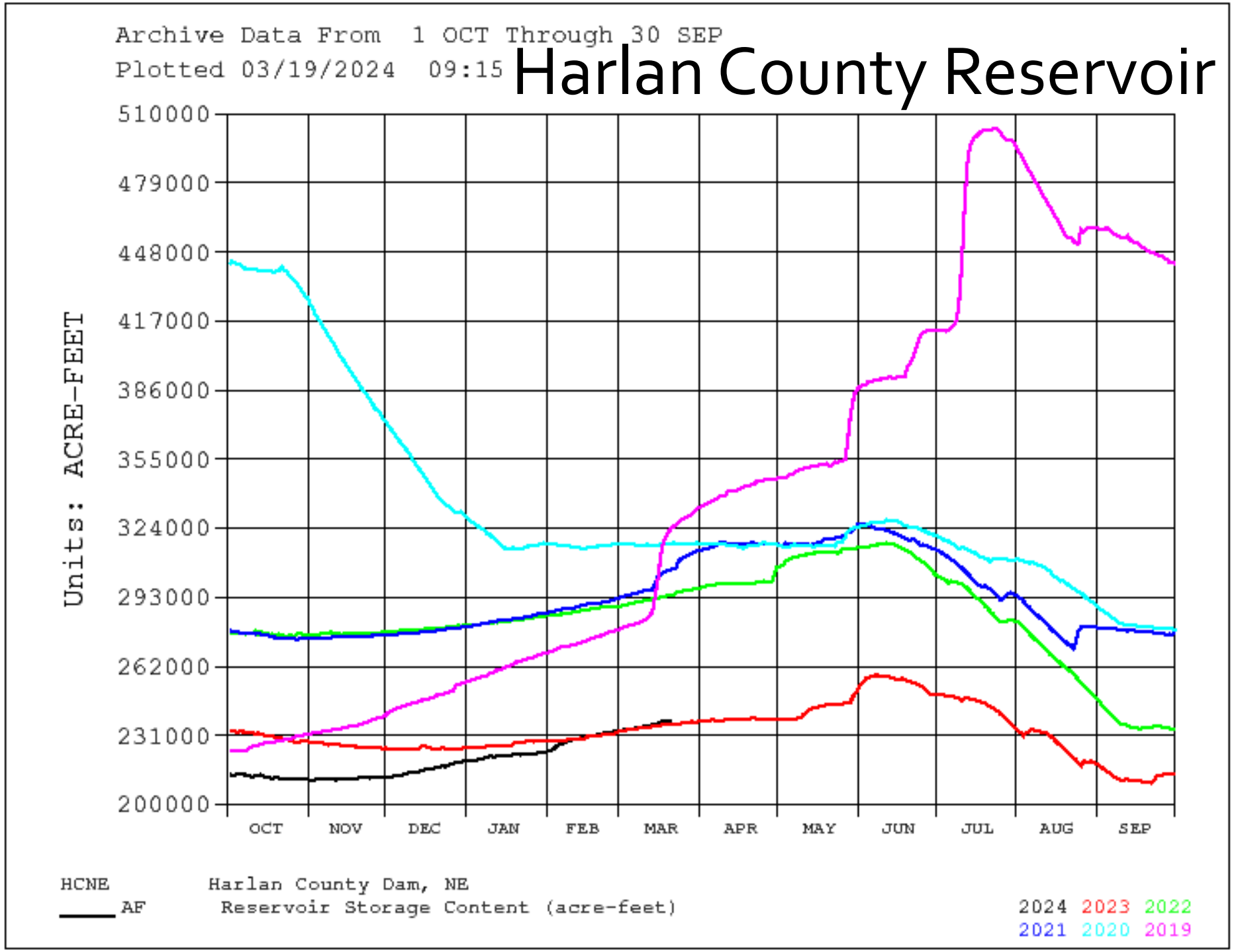


Last filled March 21, 2024
34,647 Acre-Feet

Harry Strunk Reservoir

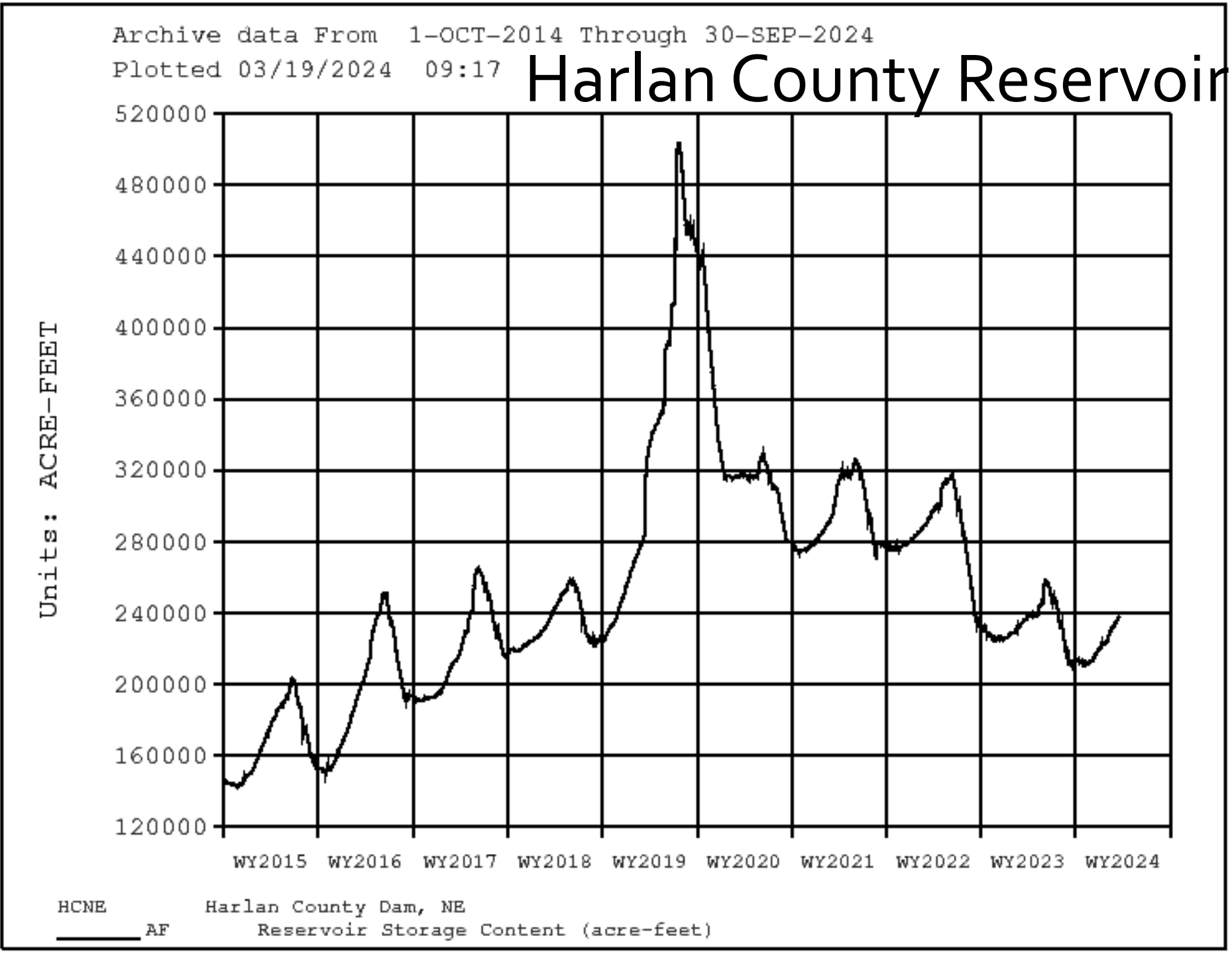


Harlan County Reservoir

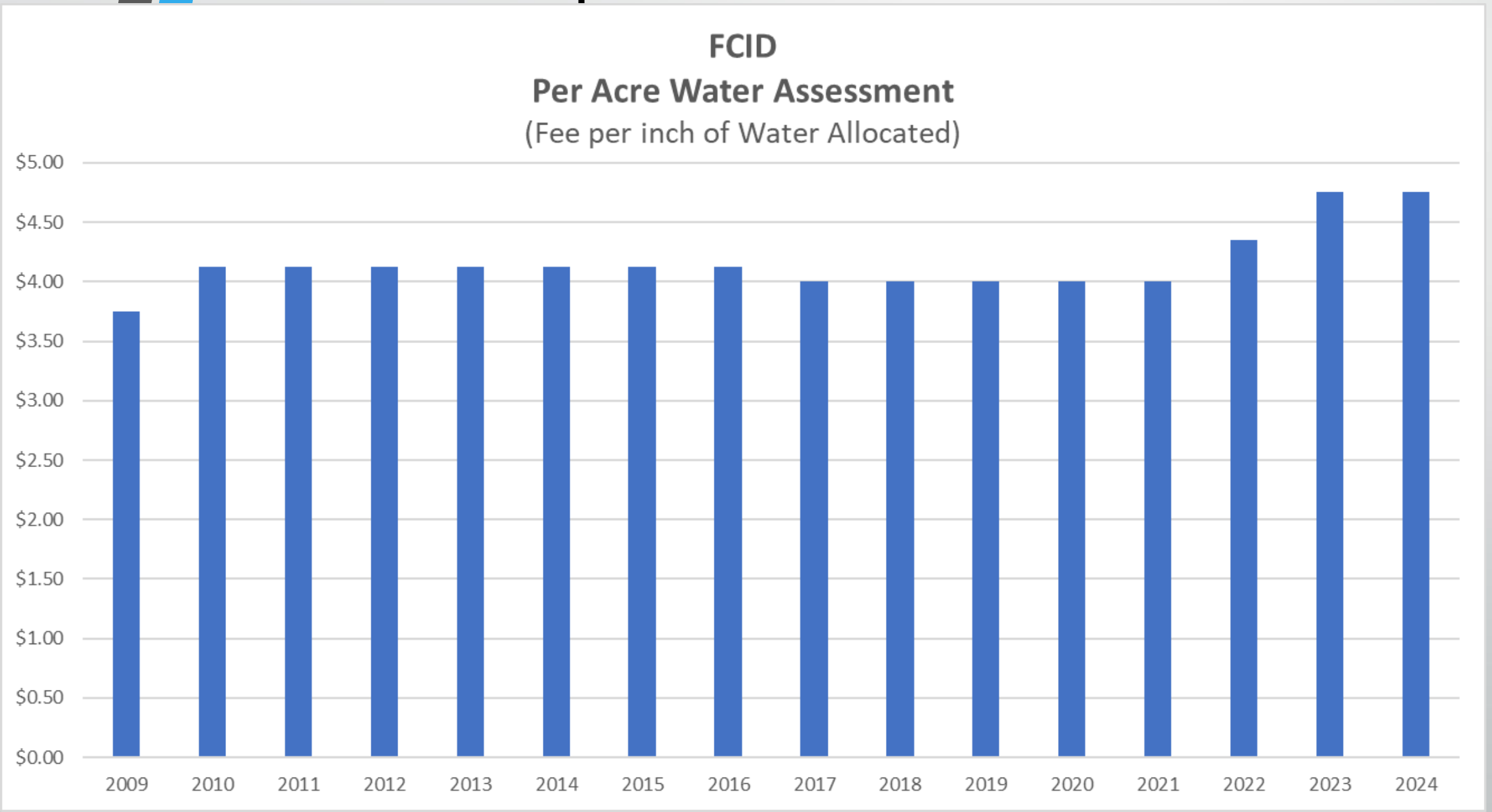


Last filled in 2022!
314,111 Acre-Feet

Harlan County Reservoir



2024 Water Rates



"Water is Life"

2024 Water Rates and Allocations

Meeker-Driftwood Canal is allocated 7 inches

$43.25 per acre for 7 inches

(7 inches x $4.75 = $33.25 plus $10.00 per acre = $43.25)

Reclamation's Forecast = 43,000 Acre-Feet

"Water is Life"

2024 Water Rates and Allocations

Red Willow Canal is allocated 6 inches

$38.50 per acre for 6 inches

(6 inches x $4.75 = $28.50 plus $10.00 per acre = $38.50)

Reclamation's Forecast = 8,400 Acre-Feet

"Water is Life"

2024 Water Rates and Allocations

Bartley Canal is allocated 6 inches

$38.50 per acre for 6 inches

(6 inches x $4.75 = $28.50 plus $10.00 per acre = $38.50)

Reclamation's Forecast = 8,400 Acre-Feet Hugh Butler Res.

Reclamation's Forecast = 43,000 Acre-Feet Swanson Res.

(Note: Frenchman Valley Irr. District will not operate in 2024)

River Water should be available early at $57.00 per Acre-Foot

"Water is Life"

2024 Water Rates and Allocations

Cambridge Canal is allocated 8 inches

$48.00 per acre for 8 inches

(8 inches x $4.75 = $38.00 plus $10.00 per acre = $48.00)

Reclamation's Forecast = 30,300 Acre-Feet

Cambridge Canal 8 inches per acre.

River Water Should be available at $57.00 per acre-foot

FCID's Finances

"Water is Life"

CD = $175,670.42

Federal Obligated Savings = $448,650.64

Money Market Account = $87,806.79

Checking = $54,512.11

2024 Budget

"Water is Life"

2024 Adopted Budget	$2,028,821
2023 Projected Expenses	$2,028,821
Budget Shortfall	$0.00

Water Conservation

"Water is Life"

FRENCHMAN CAMBRIDGE IRRIGATION DISTRICT

Grants:

Year	Project	Nebraska	Reclamation	FCID	Total	Grant Type
2011	**Bartley Pump Station**		$754,000	$824,173	**$1,578,173**	WaterSMART
2012	**Cambridge Canal Automation**		$299,700	$332,300	**$632,000**	WaterSMART
2012	**Pump Station Automation**		$94,900	$96,400	**$191,300**	Area Office
2017	**Cambridge Canal TCC (Phase I)**	$915,500		$610,400	**$1,525,900**	WSF
2019	**Cambridge Canal TCC (Phase II)**	$528,600		$352,470	**$881,070**	WSF
2020	**Meeker-Driftwood Canal TCC**	$2,000,000	$1,500,000	$486,446	**$3,986,446**	WaterSMART
	Totals	**$3,444,100**	**$2,648,600**	**$2,702,189**	**$8,794,889**	

Rubicon Water

"Water is Life"

Total Channel Control (TCC) was implemented on the entire length of the Cambridge Canal in 2019.

And the Meeker-Driftwood Canal in 2022

This solution has eliminated nearly all operational spills on the both Canals.

Rubicon Water

"Water is Life"

SCADA Connect software is used from the office.

A radio network enables inter-communication between the Flumegates.

All components work together, automatically controlling gates according to a canal-wide objective of matching supply with demand.

Rubicon Water

"Water is Life"

We have also been working with Rubicon Water on implementing "water ordering software"

This would allow water orders to be made using your smart phone or computer.

This Software will work for all the Canals. Let us know if your interested in this software option.

FLOOD CONTROL!
Emergency Spillway at Medicine Creek Dam.

"Water is Life"

Welcome to FCID

The Frenchman Cambridge Irrigation District is a political subdivision of the State of Nebraska organized under irrigation district laws of Nebraska on April 18, 1946. (Statutes 46-101 to 46-128) Frenchman Cambridge was created to enable the people of southwest Nebraska to develop the State's irrigation potential. Frenchman Cambridge delivers natural flow irrigation water to more than 45,600 acres in southwest Nebraska using four different canal systems; the District hold 41 direct flow permits with priority dates ranging from December 22, 1890 to November 13, 1987, and can legally divert 531.5 cubic feet per second of natural flow. Frenchman Cambridge is the 8th largest Irrigation District in Nebraska based on acres served.

FCID's 2024 Water Supply:

Updated November 29, 2023

Cambridge Canal will have an 8 inch per acre allocation in 2024.

Meeker-Driftwood Canal will have a 7 inch per acre allocation in 2024

FCID Newsletter 2021

FCID Newsletter 2020

FCID Newsletter 2019

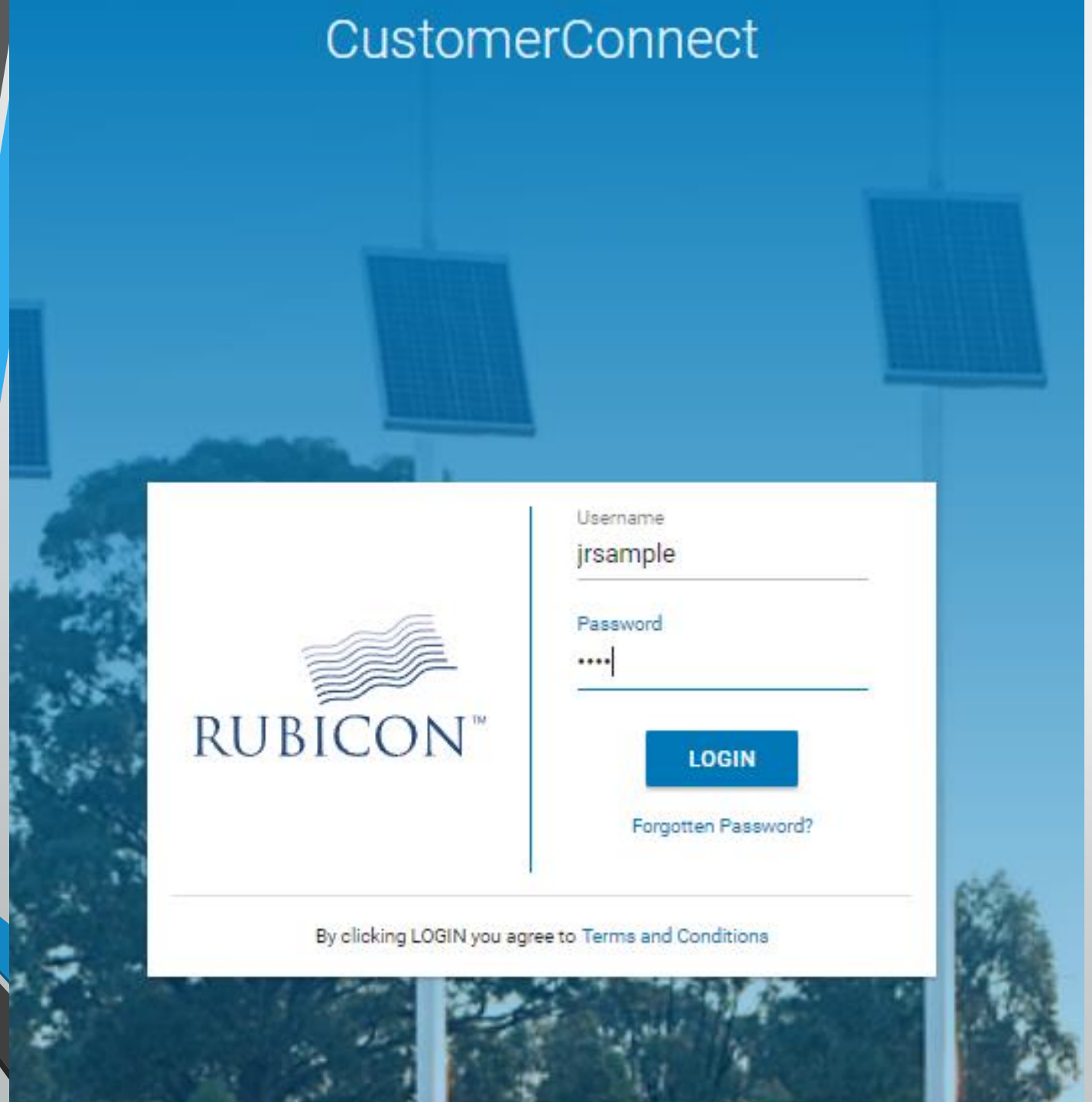
Canal Automation by Rubicon Water

Site Connect

Web Ordering: by Rubicon

Customer Connect

FCID Customers now have the option to order water and check your water account balance on-line. Contact the Cambridge office to get signed up.


CustomerConnect
RUBICON™
Username
jrsample
Password
LOGIN
Forgotten Password?
By clicking LOGIN you agree to Terms and Conditions

CustomerConnect

Home

Orders

Turnout

Farm

Meter Readings

Change Password

About

Help

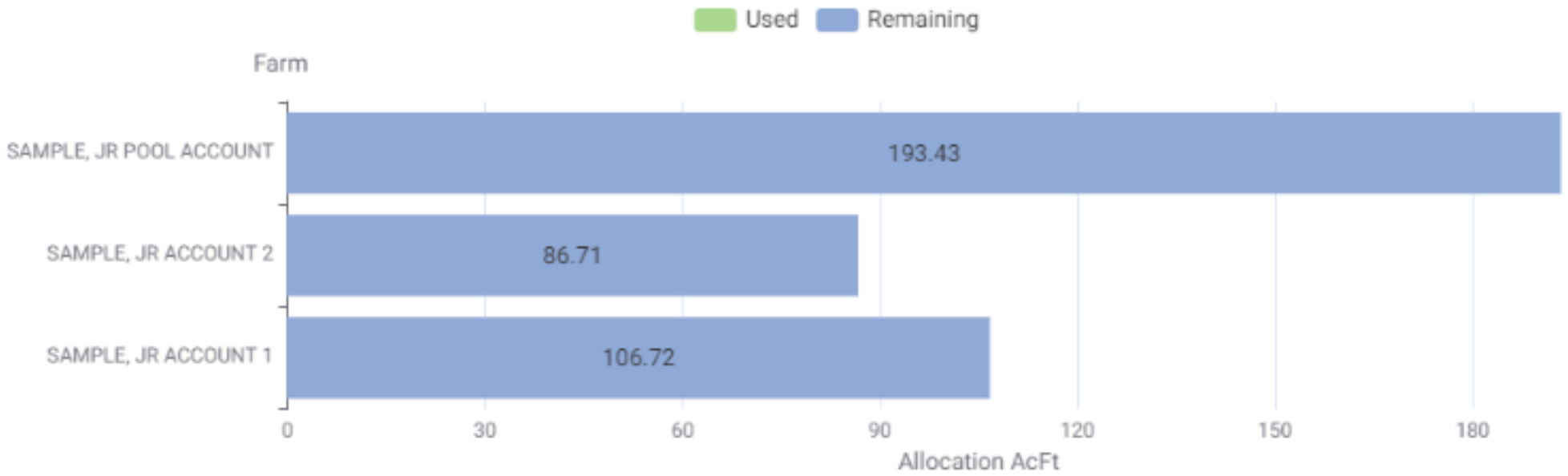
Sign Out

Home

CREATE ORDER

The

Usage



SAMPLE FLOOD F...
Large Service Point
CREATE ORDER

SAMPLE PIVOT N...
Large Service Point
CREATE ORDER

SAMPLE PIVOT N...
Large Service Point
CREATE ORDER

Create Order

CANCEL | CLEAR | LODGE ORDER

Turnout * SAMPLE FLOOD FIEL...

Farm * SAMPLE, JR ACCOU...

Flows

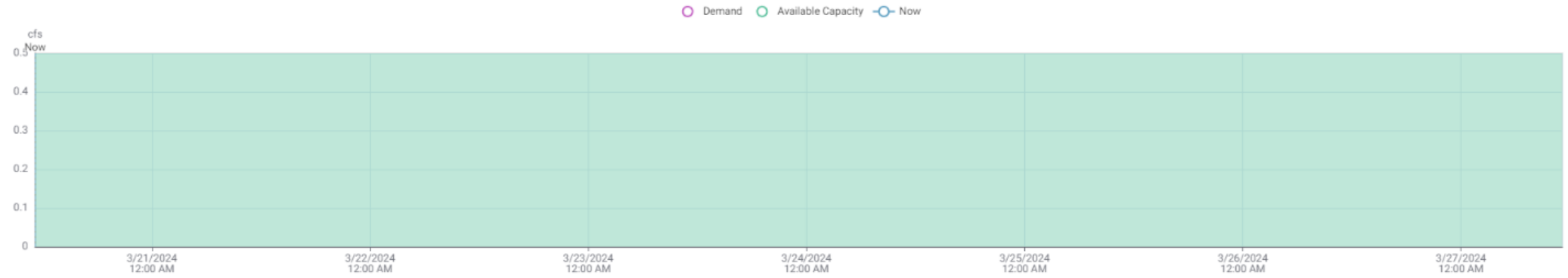
Start	Duration	cfs
3/22/24, 7:00 AM	5 days	0.5

Finish: 3/27/24, 7:00 AM

Totals: 4.96 AcFt over 5 days

Capacity and Demand

Select Period: Week



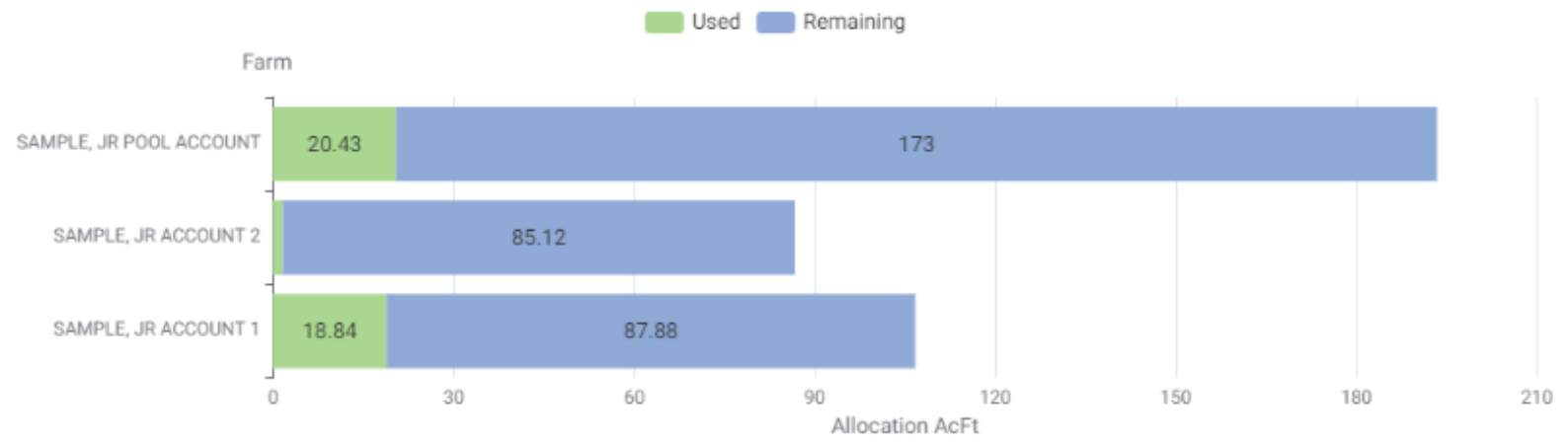
Home

CREATE ORDER

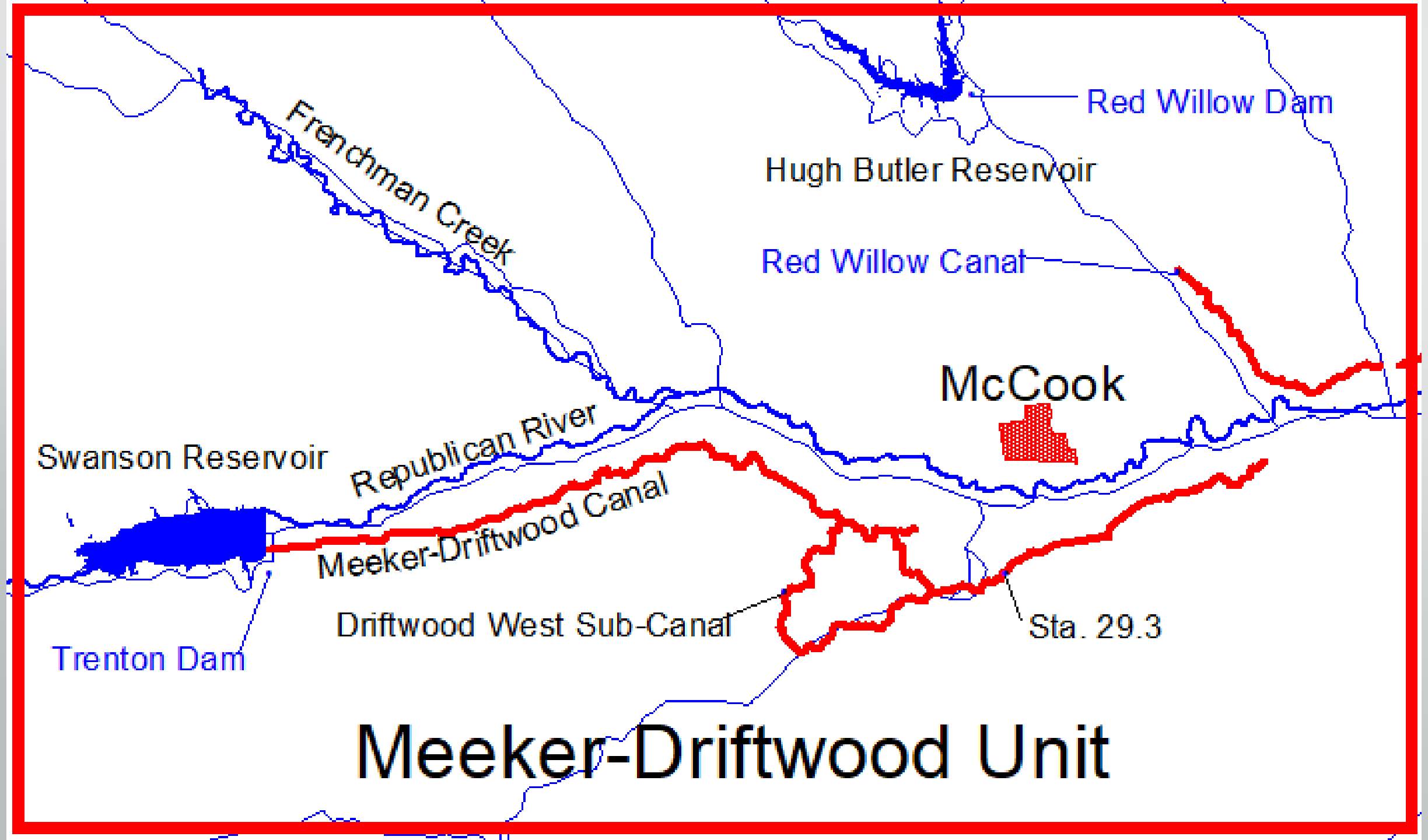
My Orders

Wed 20	Thu 21	Fri 22	Sat 23	Sun 24
		4.96 AcFt SAMPLE FLOOD FIELD NO. 1 7:00 AM 5 days		
		13.88 AcFt SAMPLE PIVOT NO. 1 11:00 AM 7 days		
			1.59 AcFt SAMPLE PIVOT NO. 2 7:00 AM 1 day	

Usage




Cambridge Diversion Dam


Red Willow Dam
Hugh Butler Reservoir
Frenchman Creek
Red Willow Canal
McCook
Republican River
Swanson Reservoir
Meeker-Driftwood Canal
Driftwood West Sub-Canal
Sta. 29.3
Trenton Dam
Meeker-Driftwood Unit

TCC Benefits

- Eliminates Unwanted Canal Spills
- Water orders 7 days a week
- Short notice water order changes
  - REA Peak Power Controls and Rain events
- On-line water orders and water balances

RRA Forms

"Water is Life"

Reclamation Reform Act of 1982

Everyone that farms or own 240 acres under a Federal Project must comply with the RRA laws.

Complete all required forms each year and file with the Irrigation District.

Must notify the District within 60 days after a change in ownership.

No one can irrigate over 960 acres


Thank You!!