



— BUREAU OF —  
RECLAMATION

# Bighorn Lake Sediment 2016 Sediment Survey

September 29, 2020

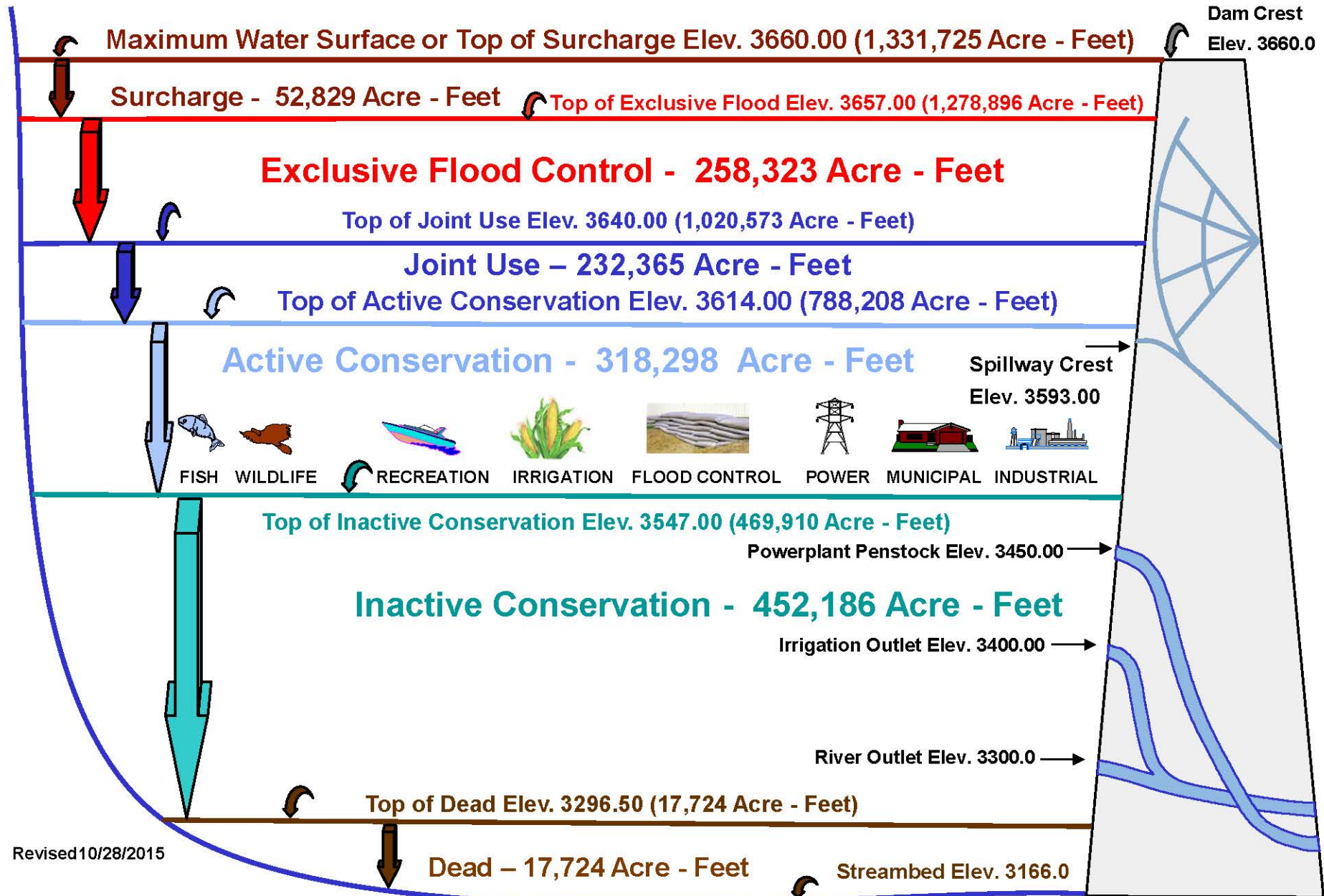
Clayton Jordan

# Background

- Bathymetric survey conducted during July and August 2017
  - Last survey was 2007
- Report finalized by Technical Service Center in May 2020
  - Available to the public
  - <https://www.usbr.gov/tsc/techreferences/reservoir.html>
- Start using new capacity tables on October 1, 2020



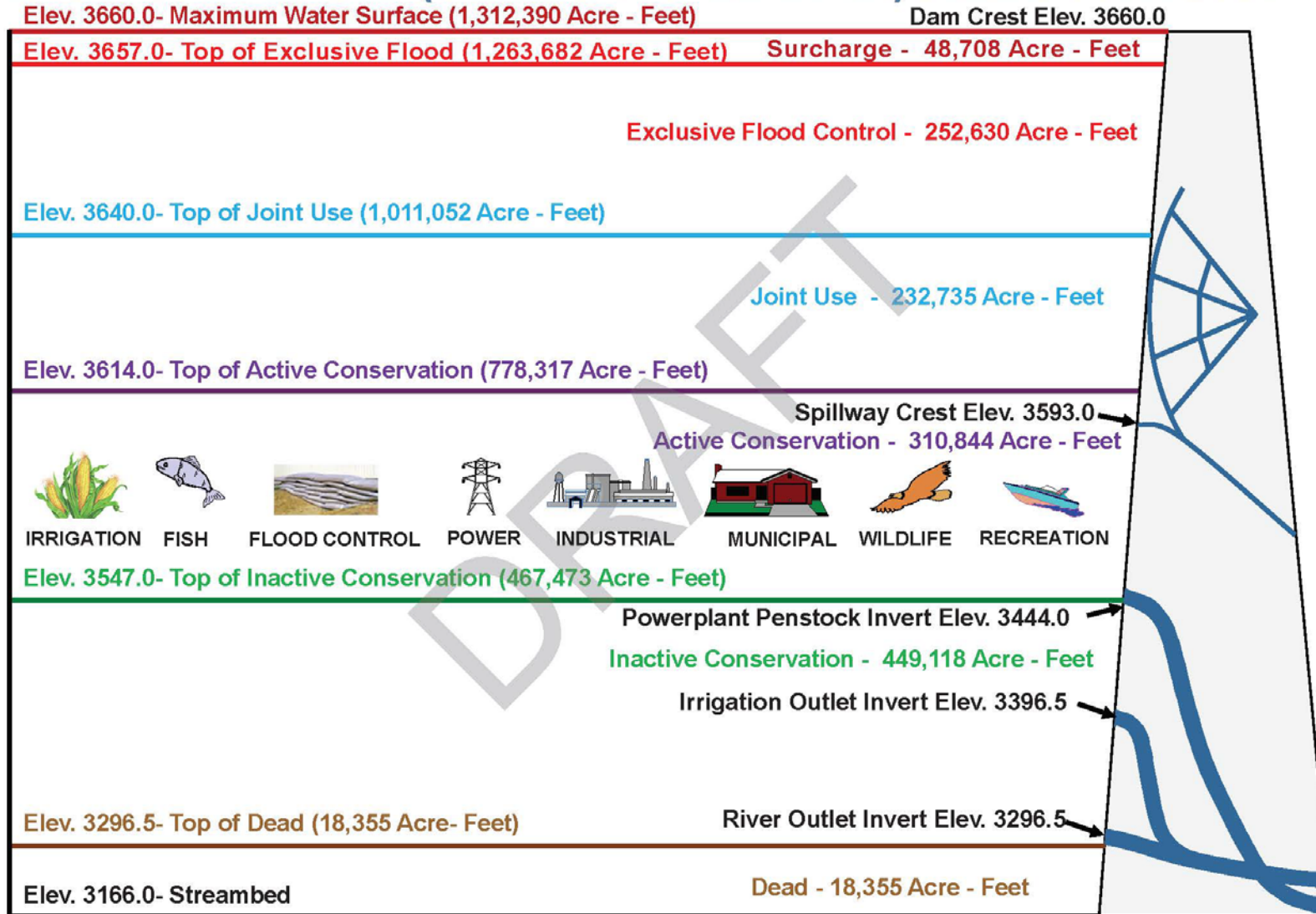
# BIGHORN LAKE (YELLOWTAIL DAM) ALLOCATIONS



Revised 10/28/2015



# BIGHORN LAKE (YELLOWTAIL DAM) ALLOCATIONS



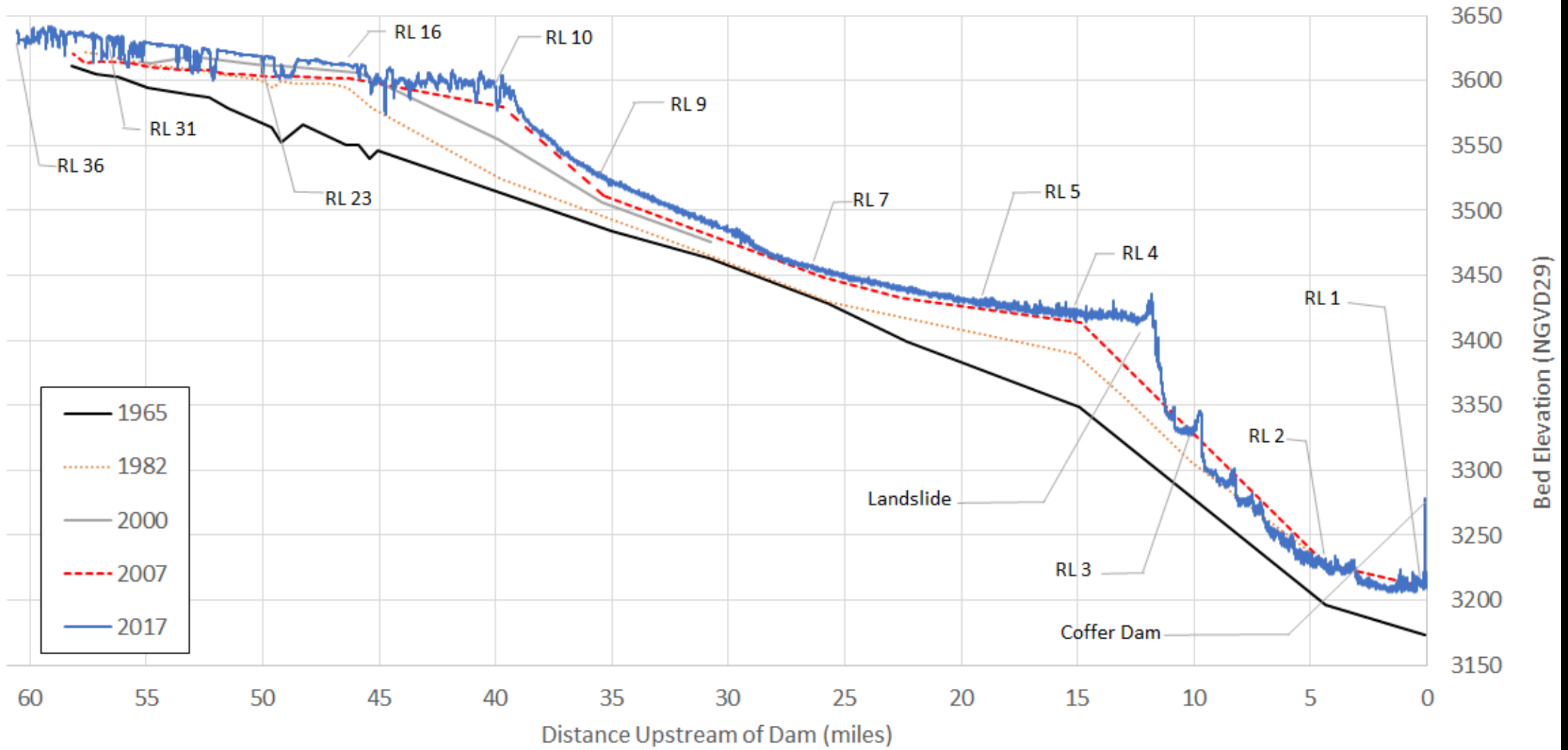
Revised 8/27/2020



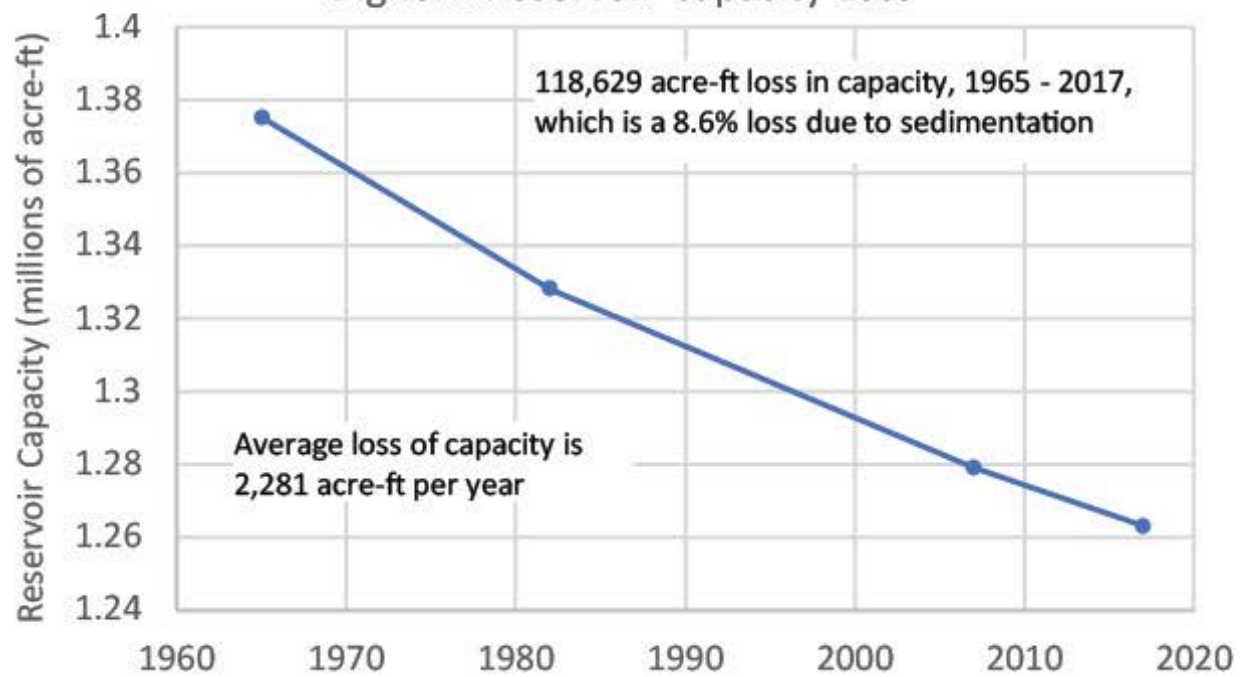
Name	2007 Survey (AF)	2017 Survey (AF)	Difference (AF)
Dead Storage	17,724	18,355	+631
Inactive Storage	452,186	449,118	-3,068
Active Conservation	318,298	310,844	-7,454
Joint-Use	232,365	232,735	+370
Exclusive Flood Control	258,323	252,630	-5,693
Surcharge	52,829	48,708	-4,121
Total	1,331,725	1,312,390	-19,335



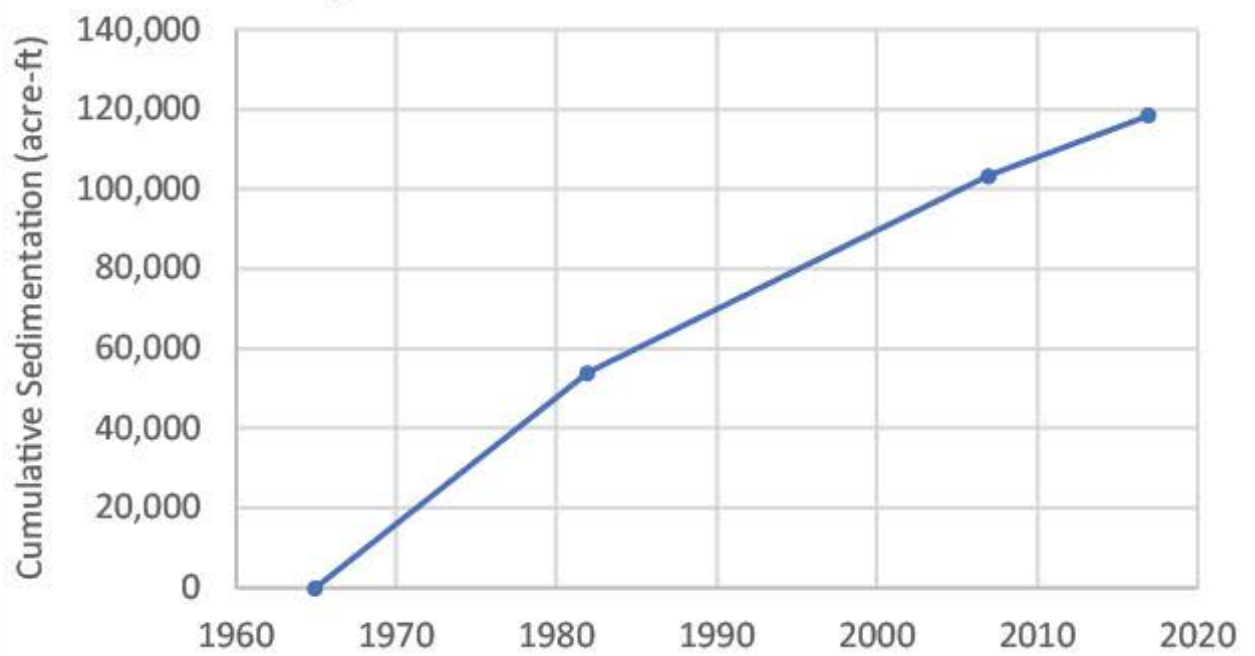
# Bighorn Reservoir Longitudinal Profile



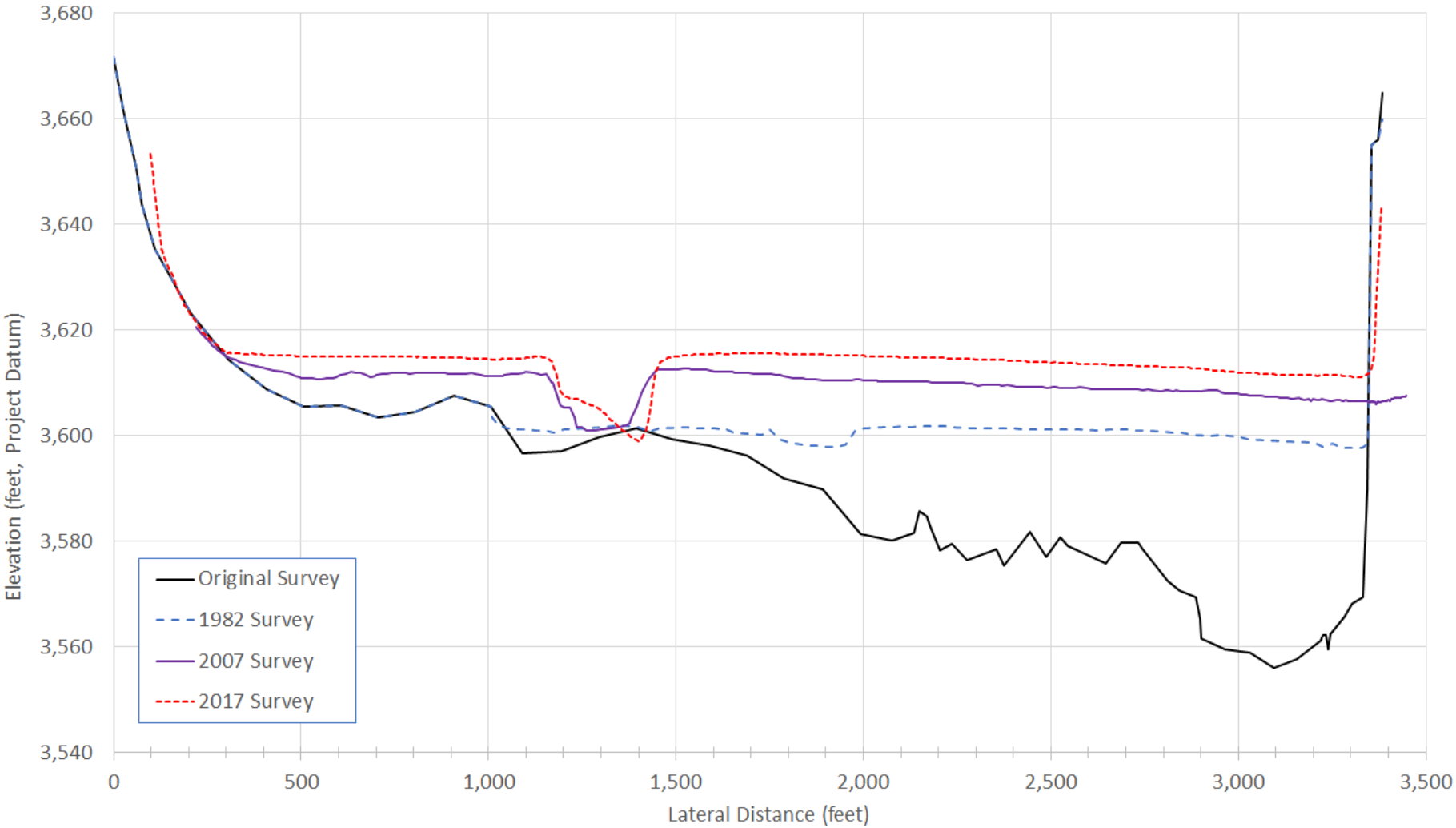
### Bighorn Reservoir Capacity Loss



### Bighorn Reservoir Cumulative Sedimentation



### Bighorn Range Line 16





# Next Steps

- Update Hydromet database and models with new capacity tables
- Update Chapter 4 of the SOP
- Update Yellowtail Operating Criteria
  - Review elevation targets
  - Update rule curves
- Update models with new elevation targets and rule curves
- Next survey recommended within the next 20 years
- Obtain above-water topography via photogrammetry or LiDAR





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