



Dam Safety Section

INTEROFFICE MEMORANDUM

TO: John Falk
FROM: Manuel Rauhut
CC: Corey Skinner, Shelley Keen
DATE: April 23, 2018
SUBJECT: Water rights at Dog Creek Reservoir

Reviewed: 

37-2782
ID00030

Findings:

Reservoir Surface Area	Dam Hydraulic Height	Reservoir Storage Capacity*	Water Right Storage
53 acres	22.8 feet	550 acre-feet	550 acre-feet

*550 acre-feet is based on the original design stage storage curve in the file and an elevation survey of the top of the flashboards (corresponds to elevation 50 on chart) that was completed by IDWR in 2000.

- Water Rights covering storage:
 - 37-2782 – 375 acre-feet (fish propagation storage)
 - 37-14295 – 175 acre-feet (fish propagation storage)
 - Sum Total 550 acre-feet

Conclusions and Recommendation:

The water rights for this reservoir match the storage capacity shown on the stage storage curve in the file. It is possible that the actual storage capacity is closer to the calculated 483 acre-feet than the 550 acre-feet that is listed on the stage storage curve. As calculated below, this lower value is due to a surface area equal to 53 acres that I measured in GIS (Arc-Map) at full pool vs. the 60 acres shown on the stage storage curve:

22.8 feet x 53 acres x 0.4 = 483 acre-feet	(from ArcMap)
22.8 feet x 60 acres x 0.4 = 547 acre-feet	(from stage storage curve)

However, given that in this case an approved stage storage curve exists, I recommend using it as a basis to determine the storage capacity and leaving the reservoir storage capacity at its current value; 550 acre-feet.