

WHITE RIVER STORAGE DISCUSSION LAKE AVERY RELEASES (HISTORICAL)

PURPOSE AND NEED FOR ENLARGEMENT

LAKE AVERY RELEASES: 2021 AND BEYOND

White River Alliance Mtg: 5/19/2021



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PURPOSE AND NEED – WHITE RIVER HYDROLOGY

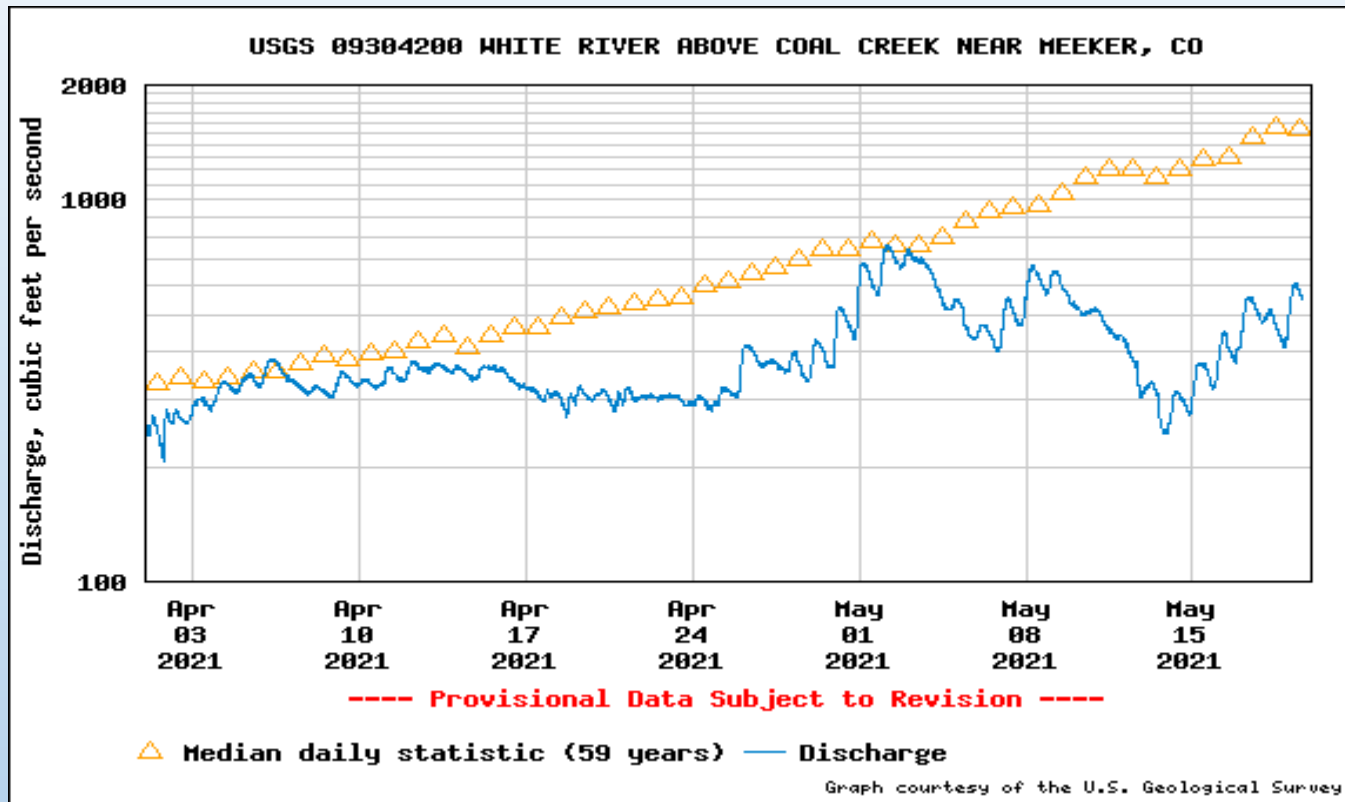
OUTLINE OF PERMITTING PROCESS FOR RESERVOIR ENLARGEMENT

1. Understand and incorporate regulatory planning and permitting requirements early
2. Combine water supply planning with community environmental expectations
3. Include statewide goals, conservation and reuse measures to reduce demand across all alternatives and minimize impacts on the environment



HANDBOOK
Colorado Water Supply
Planning and Permitting
October 2017

PURPOSE AND NEED – WHITE RIVER HYDROLOGY

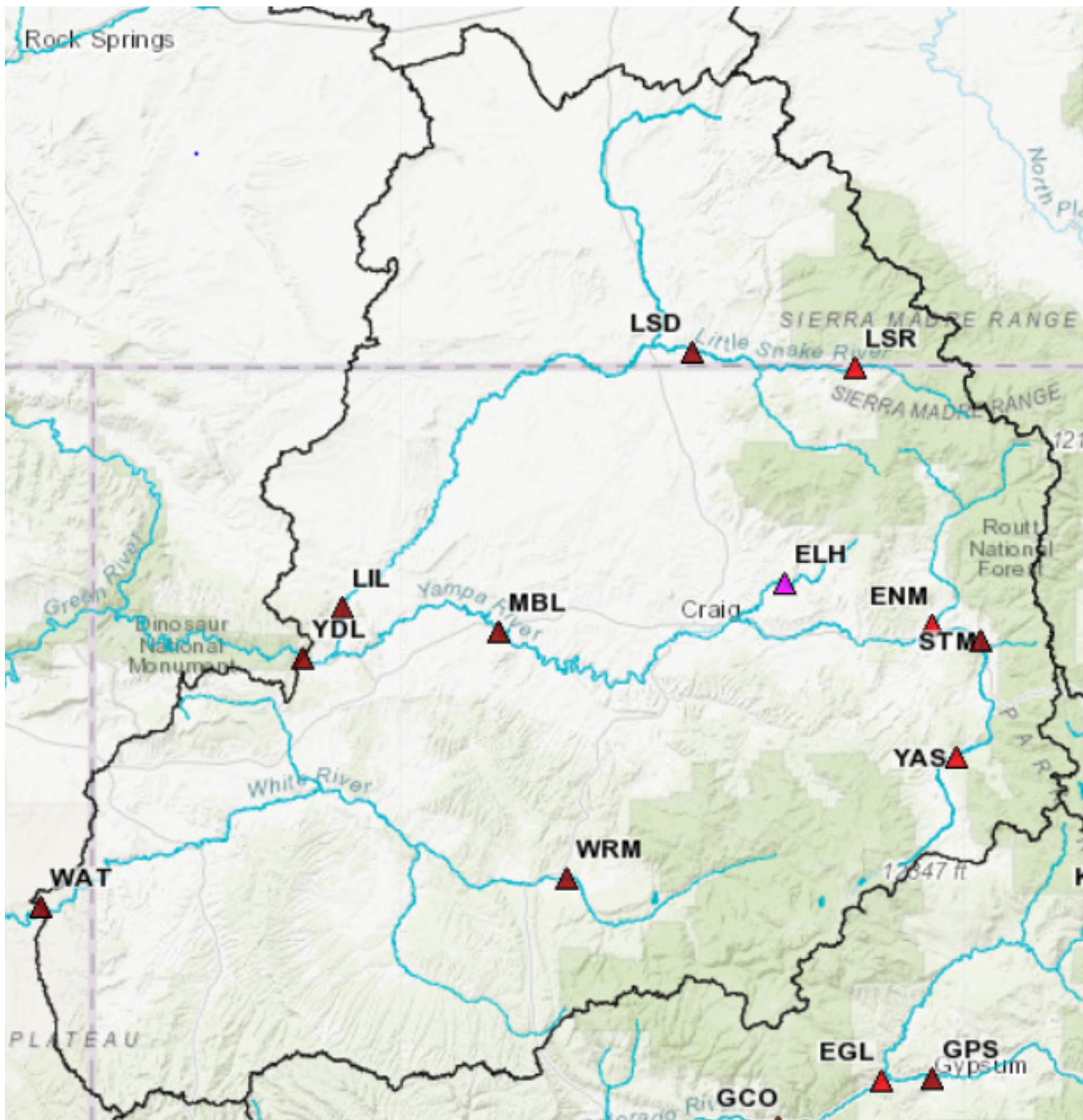


CURRENT CONDITIONS

Daily discharge, cubic feet per second -- statistics for May 19 based on 59 water years of record [more](#)

Min (1990)	Most Recent Instantaneous Value May 19	25th percentile	Median	Mean	75th percentile	Max (1973)
260	547	1190	1540	1660	2260	3230

- FISH NEED WATER; TROUT NEED COLD WATER (50-60F – GOOD; 70F – lethargy and poor feeding; upper 70s F can be LETHAL)
- FISH NEED AIR - DISSOLVED OXYGEN ‘Coldwater I Standard’ = 6.0 mg/l



Water Supply Forecast – 2021 Upper CO River Basin Forecast Center – Yampa-White Basins

- ▲ < 30%
- ▲ 30-50%
- ▲ 50-70%
- ▲ 70-90%
- ▲ 90-100%
- ▲ 100-110%
- ▲ 110-130%
- ▲ 130-150%
- ▲ 150-200%
- ▲ 200-300%
- ▲ 300-500%
- ▲ >500%
- ▲ Regulated
- △ No Forecast

2021 LOOKS LIKE ANOTHER
YEAR WHERE WATER FROM
LAKE AVERY WILL HELP THE
FISHERY

PURPOSE AND NEED – WHITE RIVER HYDROLOGY

TARGETS – AVOID LOW FLOWS, HIGH TEMPERATURES, AND LOW DISSOLVED OXYGEN

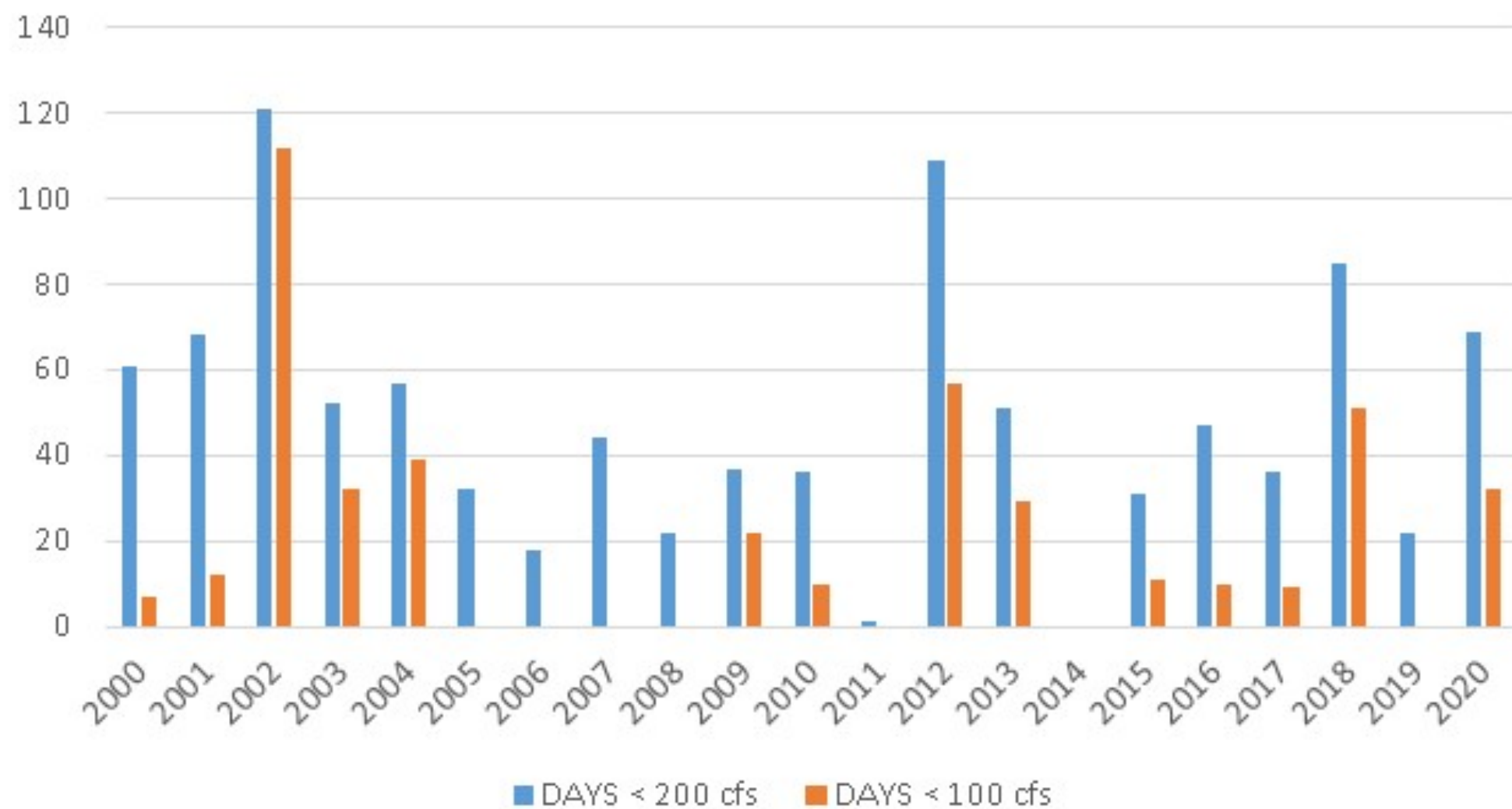
HABITAT PARAMETERS governing a water release:

- **1. Dissolved Oxygen**
 - a. Daily minimum dissolved oxygen levels fall below 5.0 ppm
- **2. Temperature**
 - a. Daily **MAXIMUM** water temperatures exceed 74°F (23.3°C)
 - b. Daily **AVERAGE** water temperatures exceed 72°F (22.2°C)

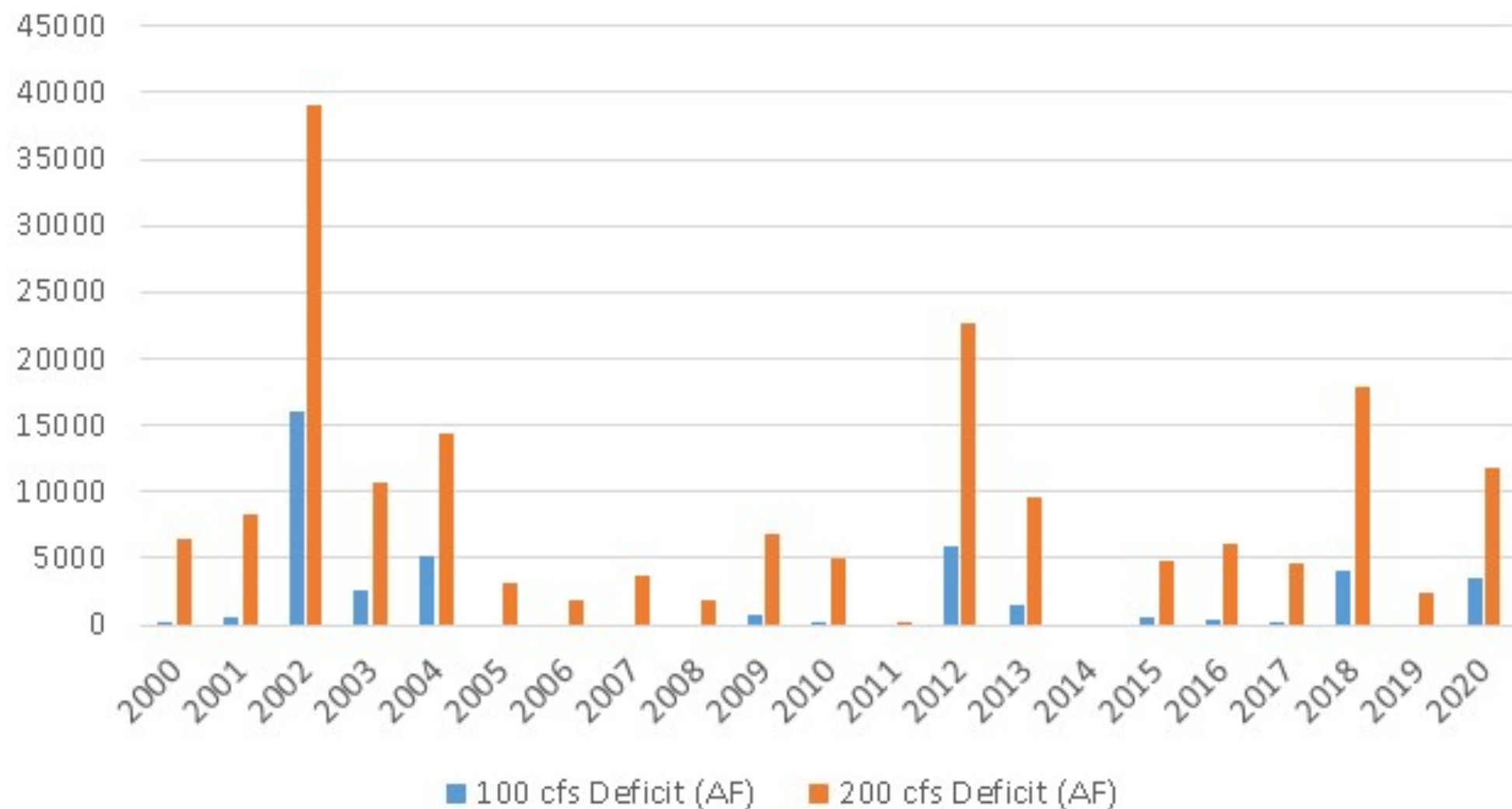
FLOW

- CWCB INSTREAM FLOW (1977): 200 CFS – confluence N. and S. Fk White River to Piceance Ck
- **100 cfs** – HABITAT PARAMETERS BECOME REGULARLY EXCEEDED

White River Nr Meeker (abv Coal Ck)



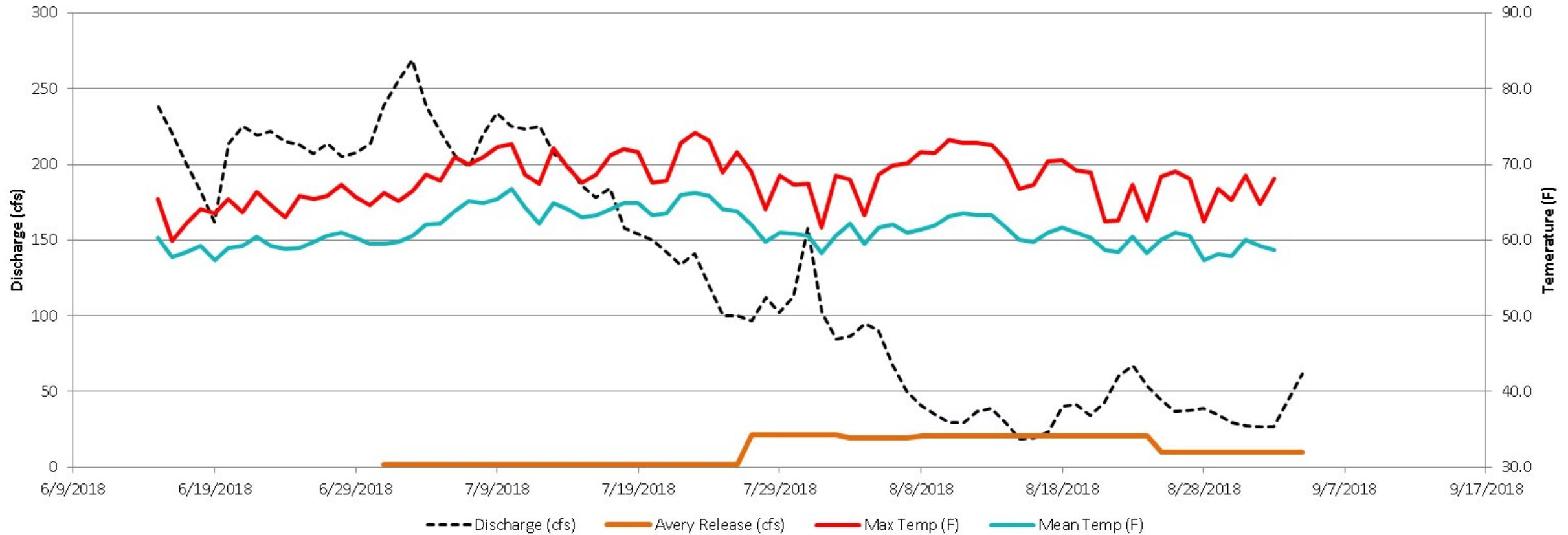
White River Nr Meeker (abv Coal Ck)



**DATA SUMMARY FOR CPW RELEASE YEARS AGAINST FLOW TARGETS: 100
CFS CRITICAL THRESHOLD AND 200 CFS DECREED CWCB WHITE RIVER
INSTREAM FLOW**

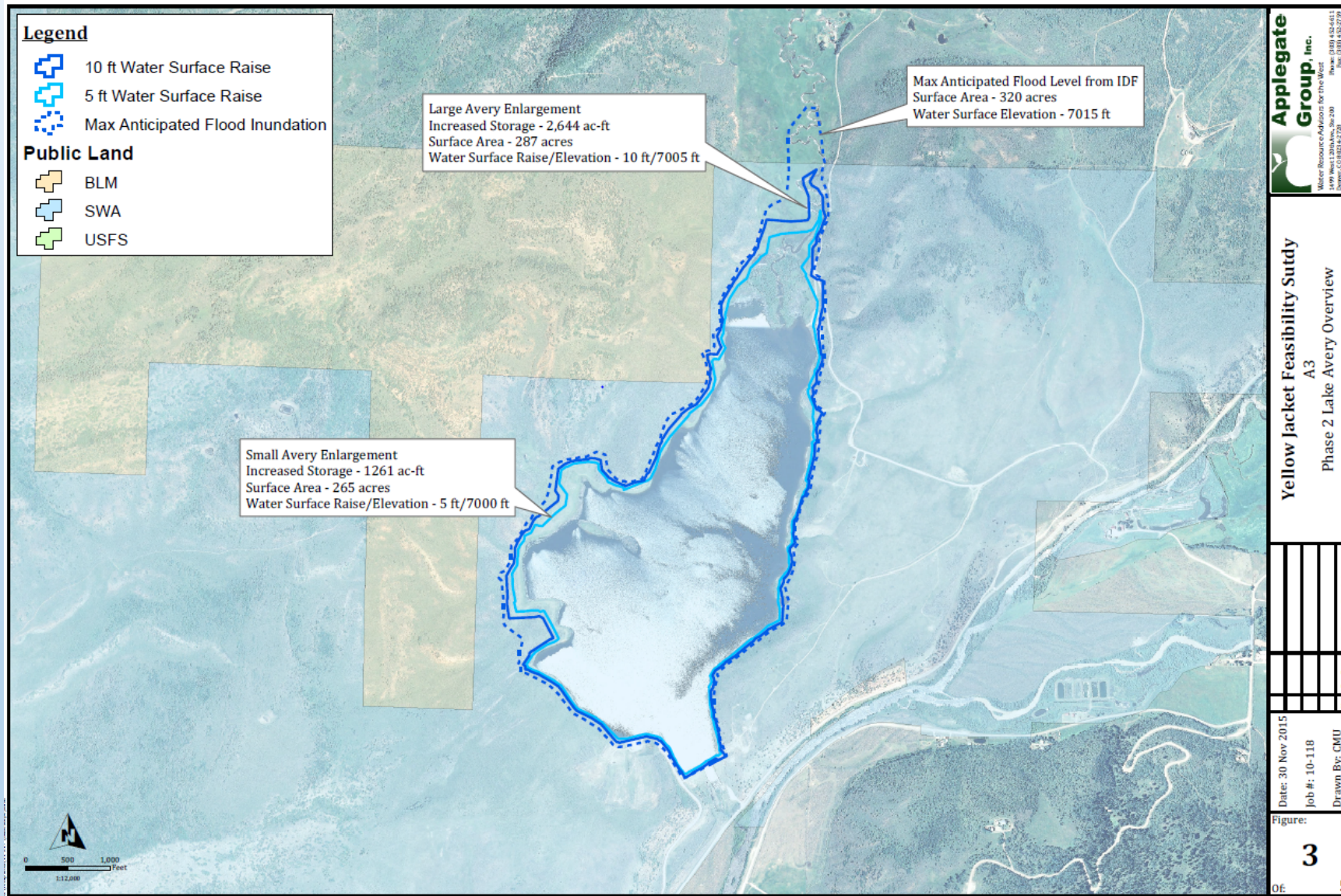
YEAR	DATES	No. of Days	Flow Rates	Total Release	NEED vs 100 cfs Target (AF)	NEED vs 200 cfs ISF Target (AF)
2002	~ mid- August - Oct 1	45	10 - 20 cfs	1500 AF	16095	39076
2012	8/30 - 10/3	35	18 cfs	1250 AF	5933	22658
2018	7/27 - 9/13	49	10-20 cfs	1600 AF	4155	17839
2020	8/10 - 8/31	21	23-28 cfs	1040 AF	3434	11847

White River Nr Coal Ck (@Wakara Bridge): 2018 (June - Sept)



- Lake Avery Release in 2018 was 20 cfs – 7/27 – 8/22; reduced to 10 cfs 8/23 – 9/13
- Daily MAX Temps into 70s beginning mid-July
- Release Reduced MAX and MEAN Daily Temps
- From ~ Aug 8 – Aug 20, MOST of the WATER IN THE RIVER WAS STORAGE RELEASE FROM LAKE AVERY

LAKE AVERY ENLARGEMENT - STATUS



11/30/2015

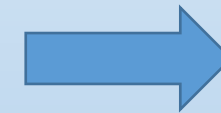
LAKE AVERY ENLARGEMENT - STATUS

October 12, 2018

Mr. Grosscup:

This letter is in response to the Yellow Jacket Water Conservancy District ("District") request (April 30, 2018) that Colorado Parks and Wildlife (CPW) consider entering into an agreement to allow the District to move a portion of its Sawmill Mountain Reservoir water rights to Lake Avery (aka Big Beaver Reservoir), creating the potential for expansion of Lake Avery. CPW appreciates the opportunity to work collaboratively with other entities and partners to address water supply and natural resource related issues, and has given serious consideration to this request.

... ..



CASE NO.: 19CW3017

CHANGE CASE – SAWMILL
MTN STORAGE RIGHT

RESOLUTION PENDING...



CPW – YJWCD AGREEMENT ... TBD...

LAKE AVERY ENLARGEMENT - STATUS

COLORADO WATER PLAN

Project_ID	Project_Name	Key_Word_1	Key_Word_2	Status	Lead_Proponent	Municipal	Agriculture	Envr_Rec_	Estimated_Yield
YW-2015-0003	Lake Avery Enlargement	Supply & Demand Gap	Conservation	Concept	Yellow Jacket WCD	15	25	60	5000

From Yampa-White-Green Identified Projects and Processes 2021 Basin Implementation Plan Update

LAKE AVERY RELEASES: 2021 AND BEYOND

- 2021 – EXPEDITED LOAN – QUEUE UP FOR MID-JULY
- 2022 – 2052: IMPLEMENT ‘NEW 5-IN-10’ CWCB LEASE FOR ISF PURPOSES
- GIVEN ENLARGMENT: POTENTIAL FOR DOWNSTREAM RELEASES AS PER DECREE

QUESTIONS?



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