

DRAFT
Drought Emergency
Regulation for
Scott River and
Shasta River
Watersheds

State Water Resources Control Board and
California Department of Fish and Wildlife
July 20, 2021



Agenda Overview



Welcome and Logistics



Staff Presentations



Comments (Tribal leaders and elected officials only)



Break



Question and Answer Session

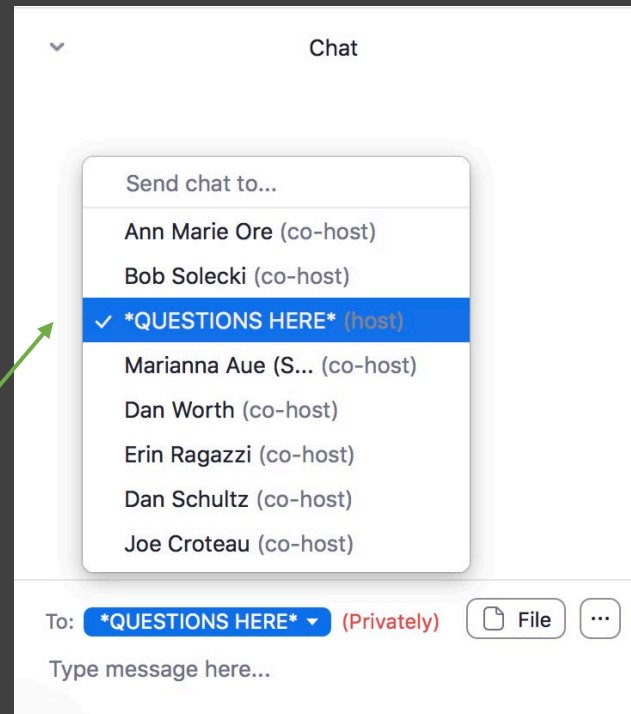


Public Comment (if time allows)

Meeting Logistics

- This meeting is being recorded
- Make sure your screen name reflects your actual name
- Participants will not be able to unmute themselves or chat publicly
- Chat feature will be used for submitting questions and requests to make oral comments
- We will read questions aloud
- If we do not get to your question during the workshop, we will try to respond by email.

How to Participate



1. Submit a question

Chat your question at any point to the ***QUESTIONS HERE*** participant, along with:

- First and Last Name
- Email Address
- Title (if any)
- Organization (if any)

Telephone callers:

- Press *9 to raise hand
- Press *6 to unmute when prompted

2. Verbal comment during discussion

Submit a virtual speaker card with above info to ***COMMENTS HERE*** via chat

3. Email a written question or comment:

ScottShastaDrought@Waterboards.ca.gov

Ground Rules

- 1. This is a public discussion.**
We're here to listen to and respect the questions, perspectives, and ideas shared by others.
- 2. Listen actively and with an open mind.**
We can better understand other perspectives when we try to see things from their lens. You can respect another person's point of view without agreeing with them.
- 3. Stay on point and on time.**
We have limited time today. Please respect the groups' time and help give everyone an opportunity to be heard. Keep questions and comments brief and to the point.



Introduction

- Overview and Purpose of Meeting
- Proposed Emergency Regulation
- Overview of Emergency Regulation Adoption Process
- California Department of Fish and Wildlife Flow Recommendation
- How to Submit Comments & Stay Informed



Topics Covered at July 1, 2021 Meeting

- Severe Drought Conditions
- Drought Proclamation – May 10, 2021
- Risk to Fisheries
- Recommended Minimum Drought Flows
- Potential Drought Response Actions
- Funding Opportunities

Recording of July 1, 2021, meeting:

https://www.waterboards.ca.gov/drought/scott_shasta_rivers/

Proposed Emergency Regulation

www.waterboards.ca.gov/drought/scott_shasta_rivers/docs/scott_shasta_e_regdraft_071621.pdf

- Emergency Curtailment to Protect Fish in Scott River and Shasta River Watersheds
 - Prohibits Inefficient Livestock Watering
- **Exceptions**
 - Non-Consumptive Uses
 - Minimum Health and Safety Needs
 - Minimum Diversions for Livestock Watering
 - Voluntary Flow Measures
- Reporting Requirements:
 - Curtailment Orders
 - Informational Orders
- Compliance and Penalties





Scott River - Drought
Emergency Minimum
Flows (875c.1.A.)

As measured in cubic feet per second at the Fort Jones Gage:

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
200	200	200	150	150	125	50	30	33	40	60	150



Shasta River - Drought
Emergency Minimum
Flows (875c.2.A)

As measured in cubic feet per second at the Yreka Gage:

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
135	135	135	70	50	50	50	50	50	125	150	150

Priority for Curtailment

§ 875.5(a)

§ 875.5(b)



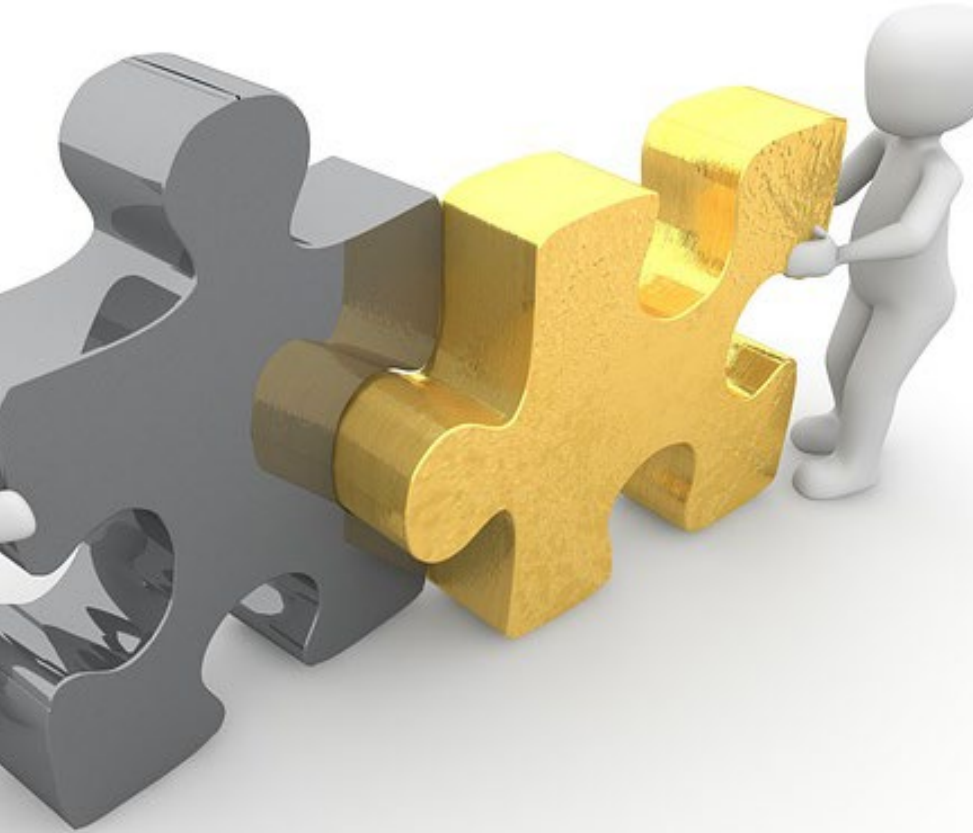
Curtailment orders shall be issued:

- In order of water right priority:
- Groupings from lowest to highest priority,
 - Surface and Groundwater
- Details in Section 875.5



Issuance of Curtailment Orders §875(d)(1), §875(d)(2), §875(e)

- Initial curtailment orders will be sent to each:
 - water right holder,
 - agent of record, or
 - landowner
- Suspension, reinstatement, or rescission shall be announced using the email subscription list and web page
 - **Website**
 - https://www.waterboards.ca.gov/drought/scott_shasta_rivers/
 - **Email subscription List**
 - ScottShastaDrought@waterboards.ca.gov



Local Cooperative Solutions §875(f)(1)

- Local Cooperative Solutions - Alternative Means to Meet Minimum Flows or Provide Other Fishery Benefits
- Solutions can be on three different scales:
 - Watershed-wide;
 - Tributary-wide; or
 - Individual
- Offers Flexibility
- State Water Board Approval Required



Minimum Health and Safety Needs §875.2(a)

- Amount of Water Necessary for Prevention of Adverse Impacts to Human Health and Safety, With No Feasible Alternate Supply.
 - Indoor Domestic Use
 - Energy Sources
 - Fire Prevention
 - Air Quality Protection
 - Prevention of Public Health or Safety Threats
 - Other Uses Necessary for Human Health and Safety



Non-Consumptive Uses §875.1

- Hydropower Diversion
- Water Rights Dedicated to Instream Uses
- Substitutions of Water
- Other Direct Diversions Solely for Non-Consumptive Uses
- Must File Certification with State Water Board
 - Describes non-consumptive use, and
 - Includes supporting evidence that use does not decrease downstream flows



Minimum Diversions for Livestock Watering § 875.3

Minimum Diversions for Livestock

- Self Certification to State Water Board That -
 - Necessary for livestock
 - Conveyed without seepage (pipes, wells, lined ditches)
 - Does not exceed provisions of 23 CCR § 697
- Excessive heat warning by National Weather Service allows for twice the minimum
- With petition approved by State Water Board

Inefficient Livestock Watering

§ 875.7



- Prohibits Inefficient Livestock Watering
 - September-January, losses of 50% or more are not reasonable



Emergency Curtailments Due to Lack of Water Availability in the Klamath River Watershed § 875.4

After the effective date of this regulation, when flows in the Klamath River watershed as a whole or in the individual tributaries to the Klamath River are insufficient to support all water rights, the State Water Board may issue curtailment orders to water right holders

Curtailment Order Reporting

§ 875.6

- Within 7 Days of Curtailment Order Receipt, Must Certify One or More of the Following :
 - Diversion Ceased
 - Continued Use Is:
 - Under Other Water Rights Not Subject To Curtailment
 - Only For Instream Purposes
 - Diversions Continue Only for:
 - Non-Consumptive Use (Certification Filed)
 - Minimum Human Health and Safety (Certification Filed)
 - Minimum Livestock Watering (Certification Filed)
- Diversions Continue Consistent With A Petition Filed Under section 878.1



Informational Orders § 875.8



Information orders to some or all water right holders: Scott River and Shasta River watersheds



Priority: Water users with the highest potential to impact streamflow



Examples of Potential Requests

Compliance and Penalties § 875.9

- Failure to Meet Regulation Requirements or Comply with Orders Constitutes Violation and Infraction of Water Code
- Total liability: Up to \$1,000/Day of Violation

Overview of Process





2021 Drought Emergency Regulations for the Shasta and Scott Rivers

A more focused presentation of CDFW
Recommendations

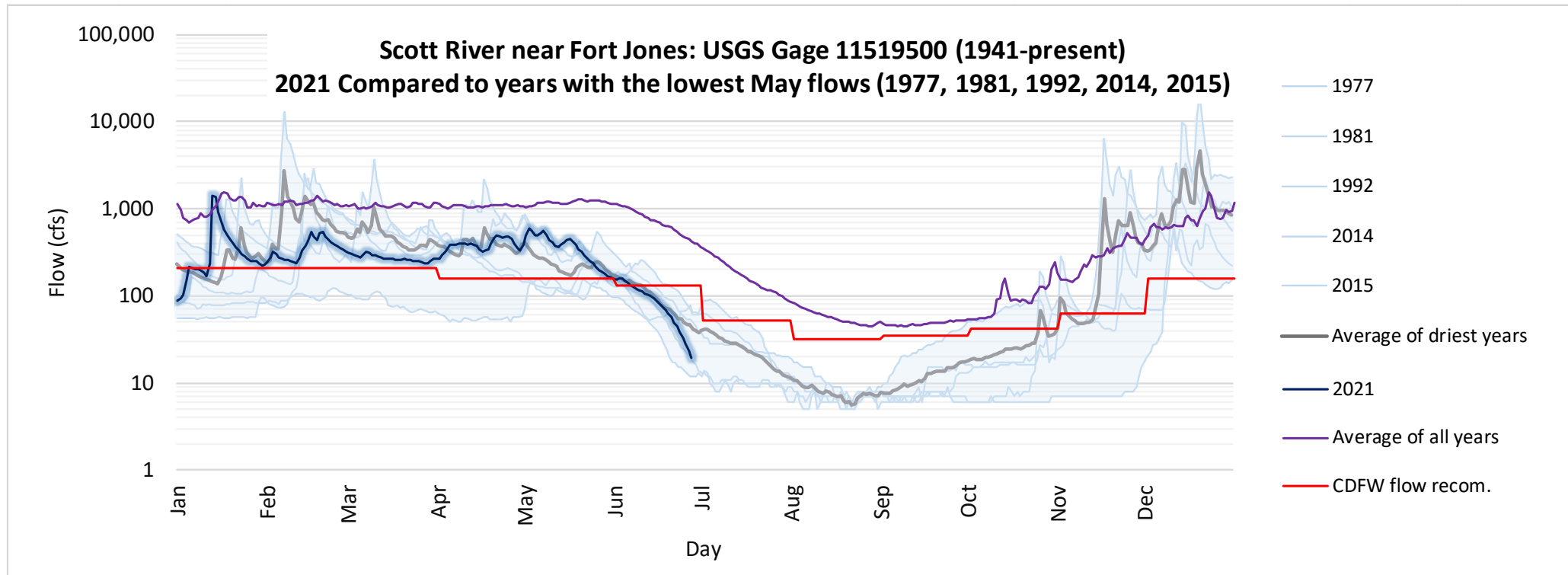
SWB Meeting
July 20, 2021

Comments from July 1

#1 - There's not enough water available this year to meet the recommendations.

2021 Drought Emergency Recommendations, Scott River, Fort Jones Gage

- Comparison of recommended flows vs:
 - Impaired average of driest years
 - Impaired average of all years
 - 2021 impaired flows

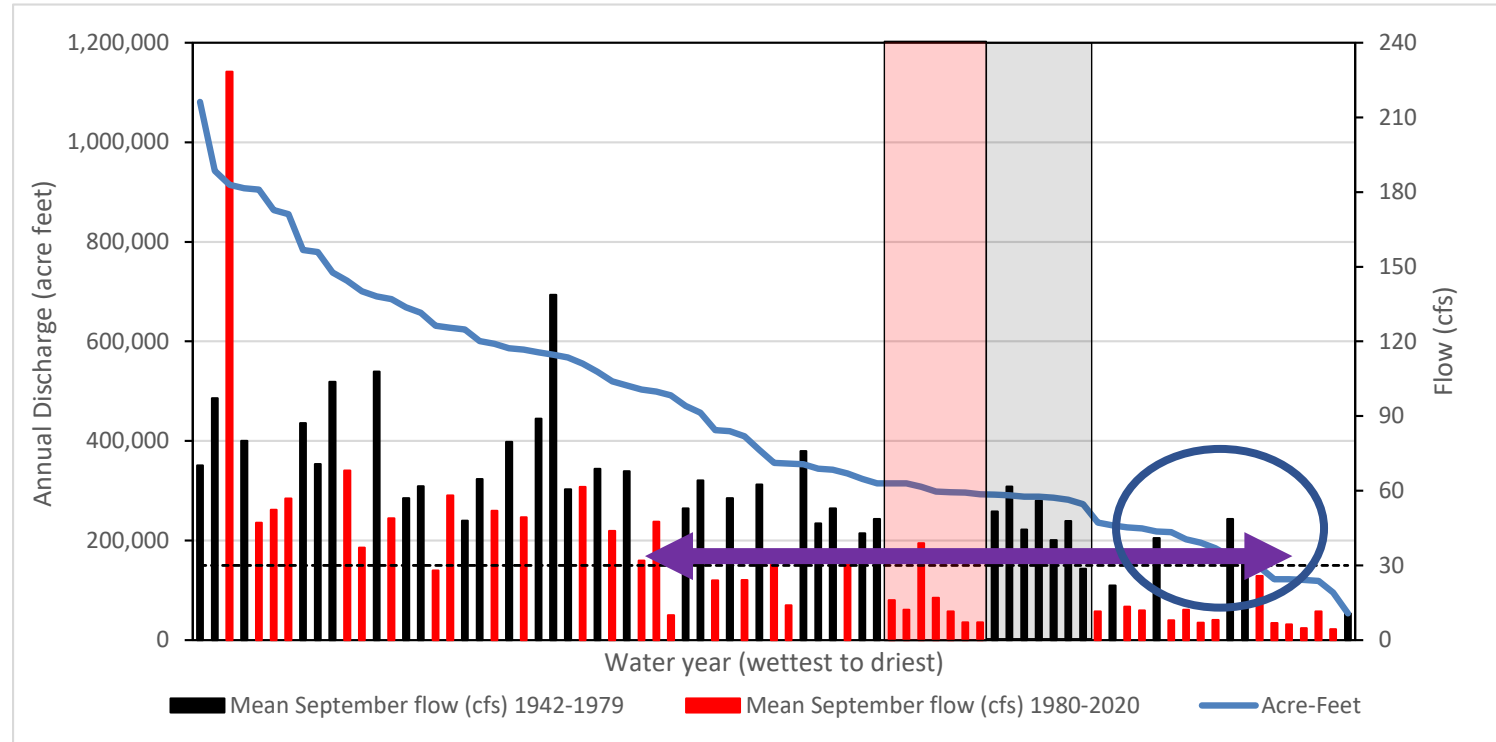


Mean September Flows

Pre and Post 1980

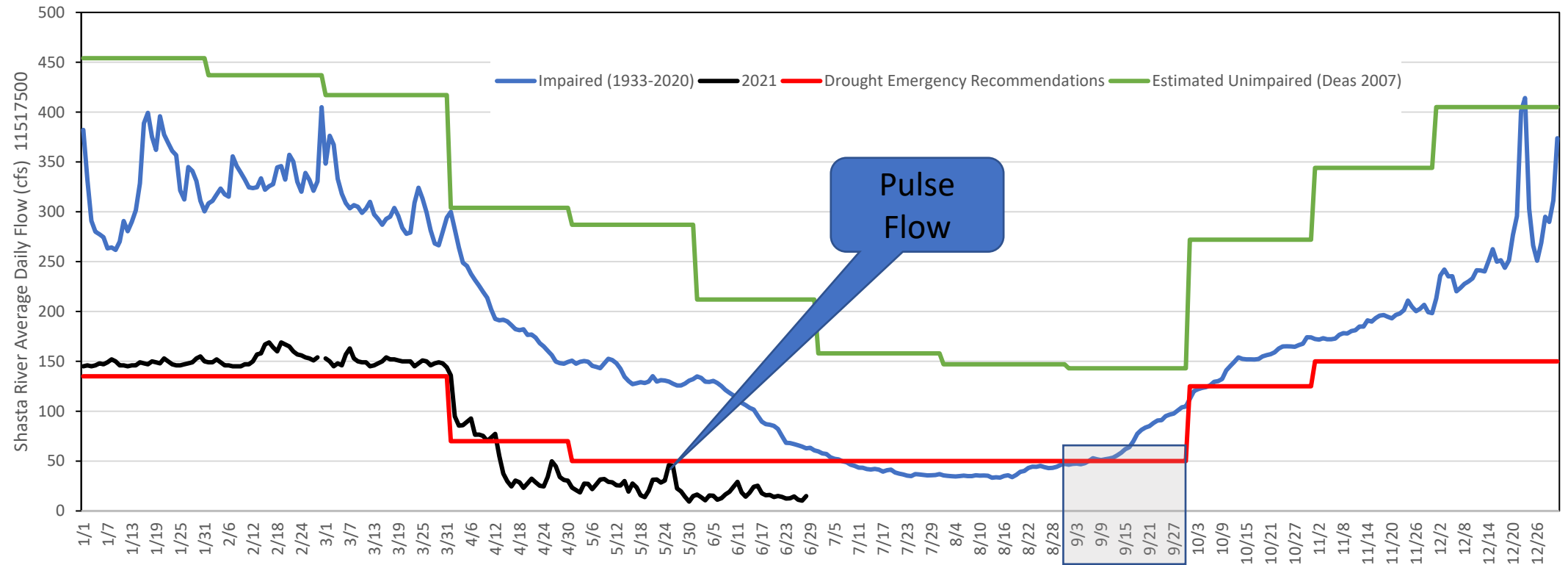
- Scott River annual discharge (acre-feet) measured at USGS Fort Jones gage (11519500) for each water year ranked from wettest to driest from 1942-2020 (blue line). Mean September flows (cfs) for corresponding water years are plotted as red (1980-2020) and black (1942-1979) bars. For reference, a dashed black line has been placed at 30 cfs. Red and black highlighted sections show 14 years with very similar amounts of annual discharge (seven years from each time period) and very different mean September flows.

Scott River Annual Flow and September Flow

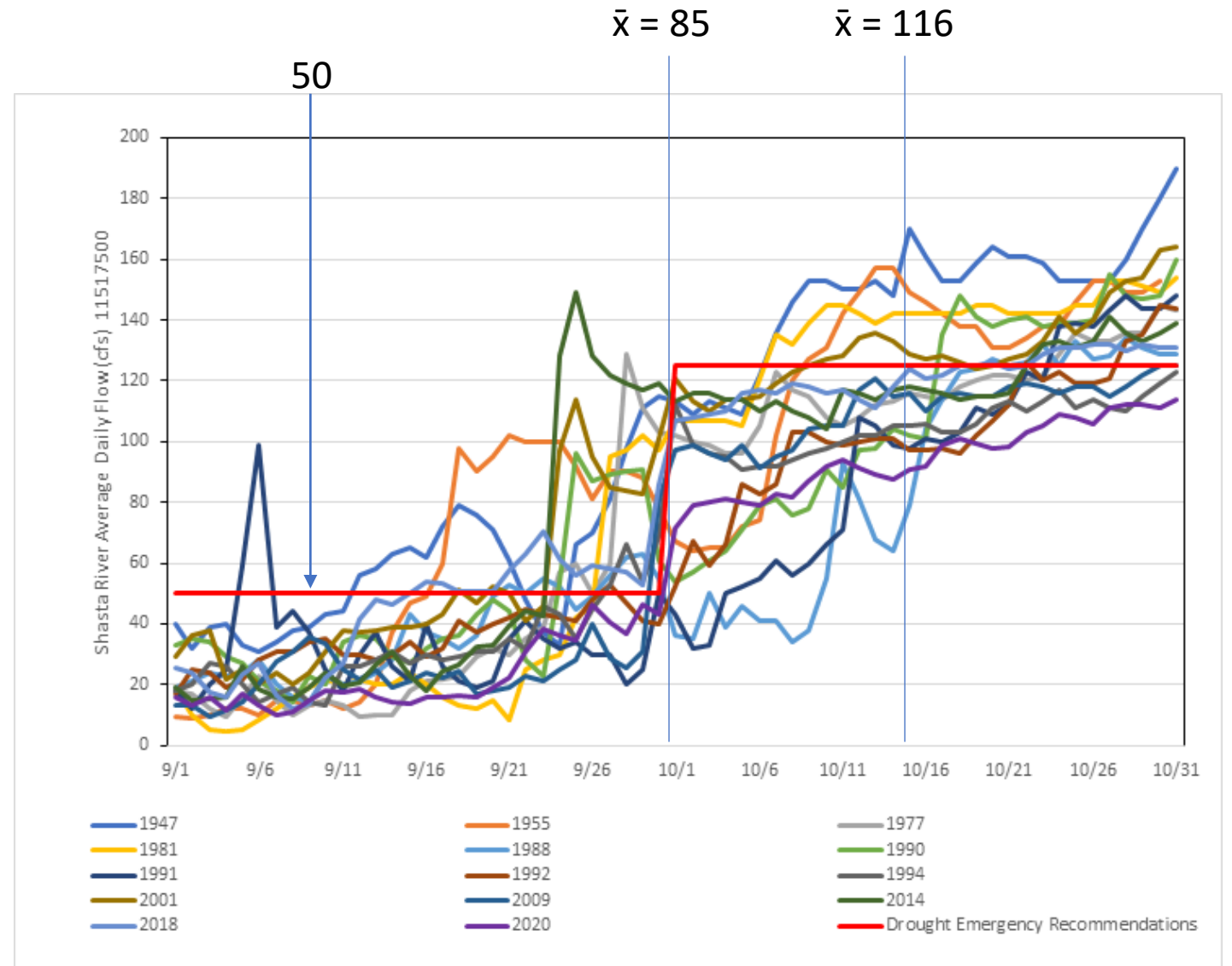
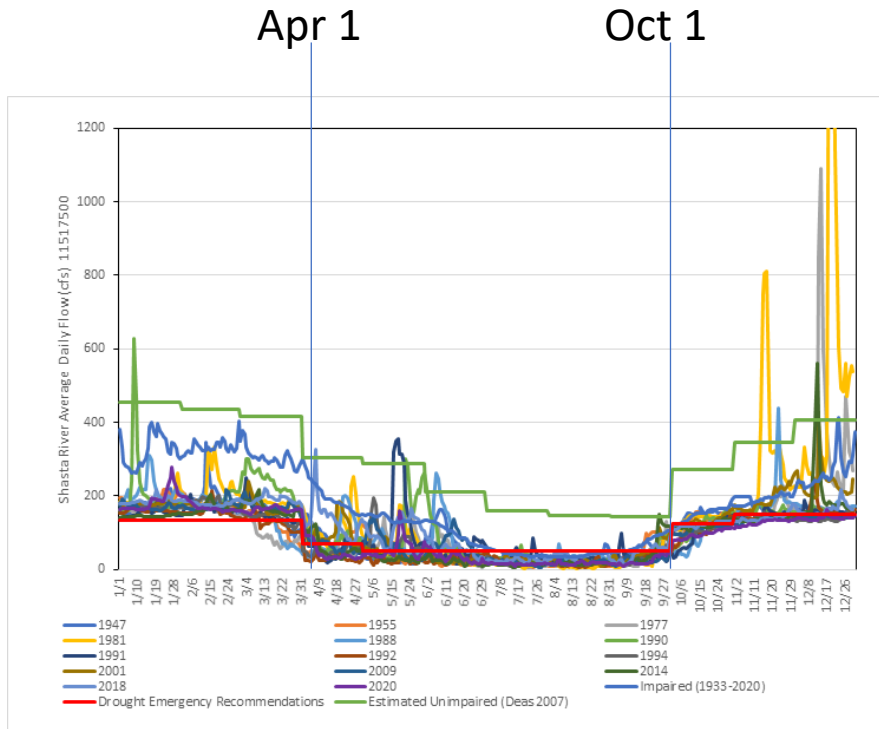


2021 Drought Emergency Recommendations, Shasta River, Yreka Gage (11517500)

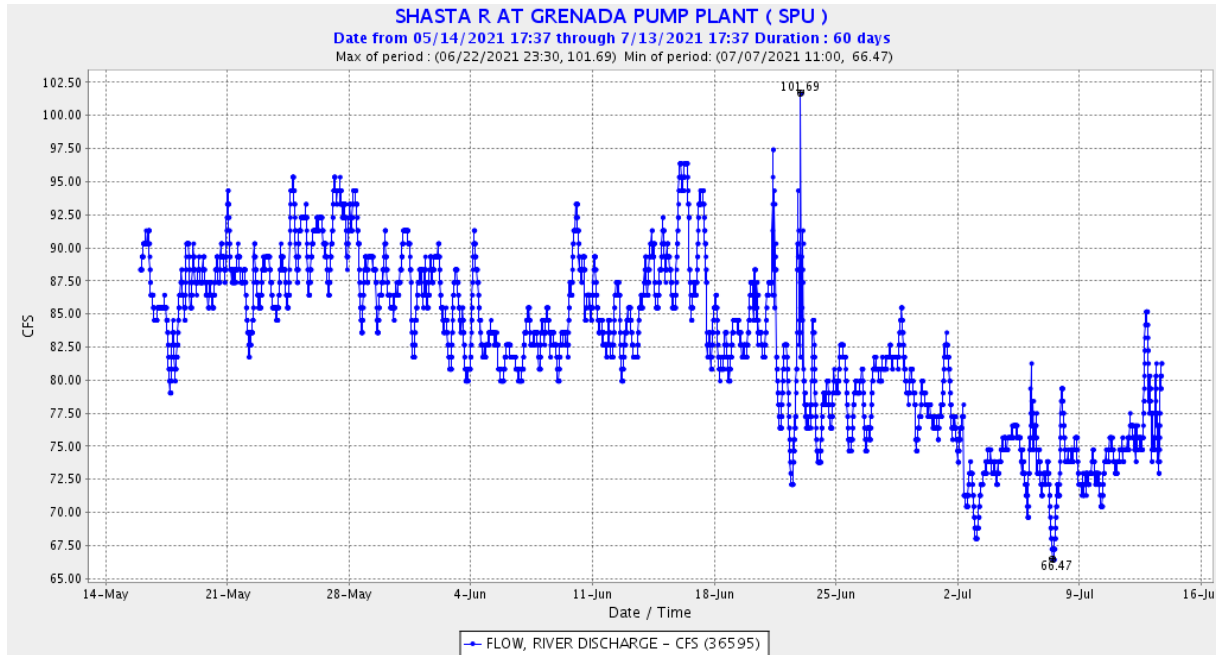
- Comparison of recommended flows vs:
 - Average impaired flows
 - Estimated unimpaired flows
 - 2021 flows



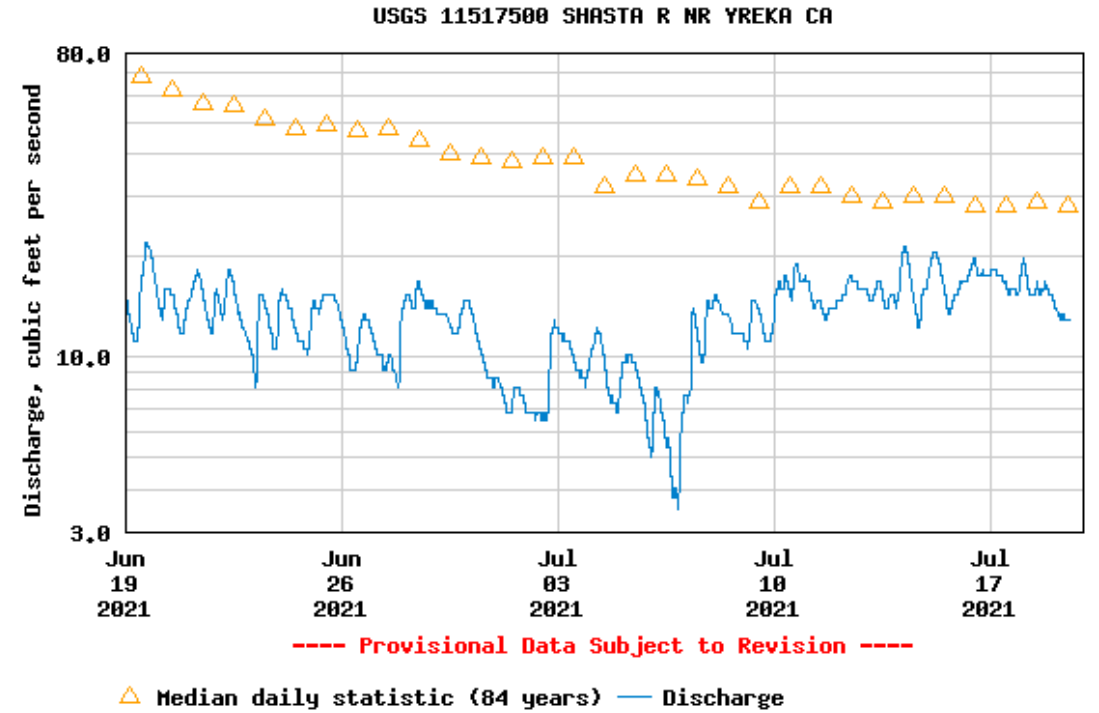
Shasta River, Critically Dry Years



Grenada Pump Plant Gage



Yreka Gage



Comments from July 1

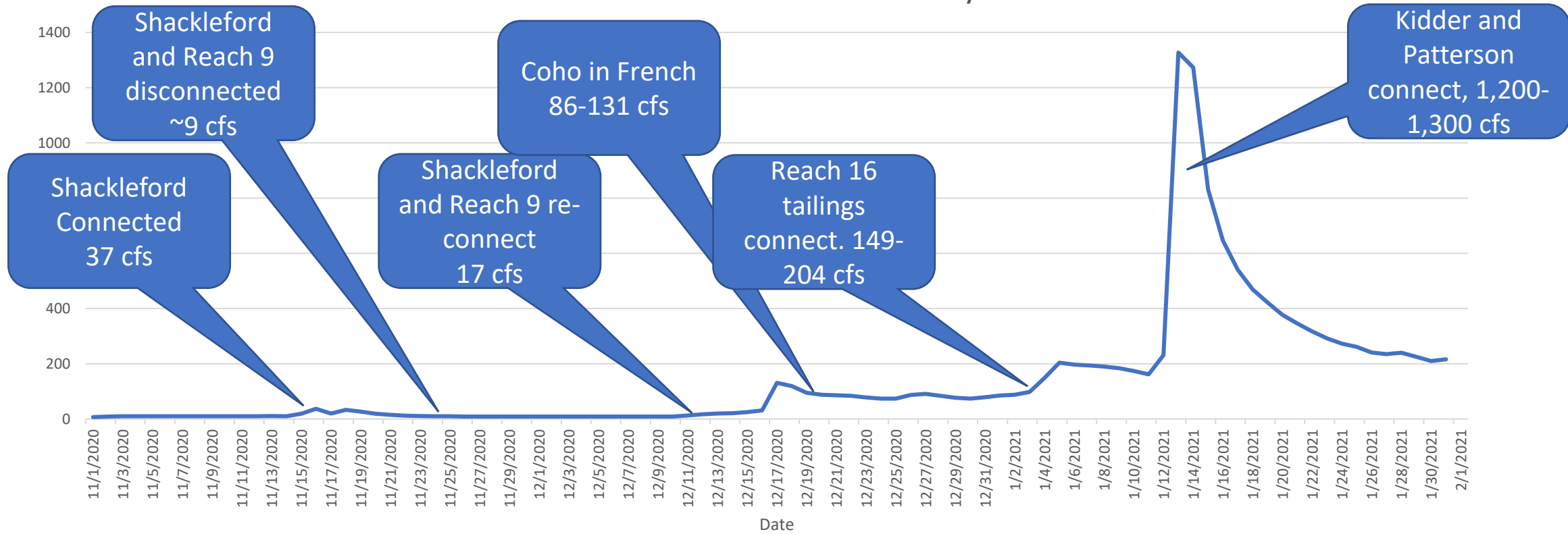
#2 - We should be more strategic than using a single measuring device at the bottom of each watershed as the test.

CDFW
contemplated a
reach/tributary
approach
for this drought
emergency

- For decades we've used the referenced gages in these rivers to help us predict habitat conditions, predict adult and juvenile migration, inform restoration, conduct surveys, and develop reports,
- These gages are partially or wholly referenced for scientific purposes and at least on the Scott is the test for certain priorities. The Fort Jones gage was assigned very specific water rights in 1980 after years of information sharing, debate, and court decisions,
- Our recommendations were built on the premise that we need to have enforceable recommendations and used those gages as benchmarks. We would ideally rely on these gages to support some voluntary efforts such as 1707 dedications,
- On both rivers, but particularly the Scott, there are not enough gages or watermaster tools on all of the important tributaries that can help us be more strategic,
- Funding, access, and political will to conduct updated evaluations has not been available to us,
- Lastly, one of our enclosures to the June 15 letter to the SWB was a 1974 CDFG summary of stream flow needs for salmonids in the Scott River. It was focused on key tributaries.

2020 Field Notes

Scott River Near Fort Jones Mean Daily Flow



1974 Minimum Flow Recommendations

Table 4. Scott River tributary rearing and spawning flow needs for anadromous salmonids

Stream	Location	Stream Mile	CFS		Approximate Drainage Area (Sq. Mi.)	
			Summer Rearing	Spawning		
				SH		SS
Moffett Cr.	Near Fort Jones	0.5	8.2	45	(a)	125.0
Moffett Cr.	Hwy. 3 bridge	7.3	7.4	(a)	(a)	70.0
Moffett Cr.	Sissel Gl.	18.6	2.4	7.7	(a)	17.3
McAdam Cr.	Near mouth	0.0	12.0	34.0	(a)	28.2
Soap Cr.	Near mouth	0.0	1.7	7.0	(a)	8.8
Duzel Cr.	Near mouth	0.0	2.2	5.5	(a)	18.0
Boulder Cr.	Near mouth	0.0	8.5	26.0	(a)	12.6
Etna Cr.	Etna City diversion	7.3	23.0	110.0	65	20.25
Etna Cr.	Hwy. 3 bridge	2.6	23.0	90.0	51	25.1
Grouse Cr.	Near mouth	0.0	7.2	23.0	(a)	11.0
Kangaroo Cr.	Near mouth	0.0	4.4	16.0	(a)	6.5
Kidder Cr.	Hwy. 3 bridge	5.0	25.0	80.0	55	31.2
Mill Big Cr.	Near mouth	0.0	5.5	17.0	(a)	9.2
Mule Cr.	Near mouth	0.0	2.5	12.0	(a)	3.9
Patterson Cr.	Hwy. 3 bridge	6.3	10.0	30.0	20.0	14.4
Sniktaw Cr.	One mile from mouth	1.0	4.5	9.2	(a)	-
Sugar Cr.	Hwy. 3 bridge	0.6	10.0	32.0	(a)	13.2
Wildcat Cr.	Hwy. 3 bridge	0.01	5.0	23.0	(a)	8.2

Table 6. Minimum Streamflow Recommendations by the Month for the Scott River Basin Streams

Stream	Location	River or Stream Mile	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Moffett Cr.	Near Ft. Jones	0.5	45.0	45.0	45.0	45.0	38.0	30.0	8.2	8.2	8.2	8.2	30.0	45.0
Moffett Cr. (a)	Stream gage	7.31	22.0	22.0	22.0	22.0	15.0	15.0	7.4	7.4	7.4	7.4	15.0	22.0
Moffett Cr.	Sissel Gl.	18.6	7.7	7.7	7.7	7.7	6.4	5.1	2.4	2.4	2.4	2.4	5.1	7.7
McAdam Cr.	Near mouth	0.0	34.0	34.0	34.0	34.0	28.0	23.0	12.0	12.0	12.0	12.0	23.0	34.0
Soap Cr.	Near mouth	0.0	7.0	7.0	7.0	7.0	5.9	4.7	1.7	1.7	1.7	1.7	4.7	7.0
Duzel Cr.	Near mouth	0.0	5.5	5.5	5.5	5.5	4.6	3.7	2.2	2.2	2.2	2.2	3.7	5.5
Boulder Cr.	Near mouth	0.0	26.0	26.0	26.0	26.0	22.0	17.0	8.5	8.5	8.5	8.5	17.0	26.0
Etna Cr.	City diversion	7.3	110.0	110.0	110.0	110.0	92.0	73.0	23.0	23.0	23.0	23.0	43.0	65.0
Etna Cr.	Hwy. 3 bridge	2.6	90.0	90.0	90.0	90.0	75.0	60.0	23.0	23.0	23.0	23.0	34.0	51.0
Grouse Cr.	Near mouth	0.0	23.0	23.0	23.0	23.0	19.0	15.0	7.2	7.2	7.2	7.2	15.0	23.0
Kidder Cr.	Hwy. 3 bridge	5.0	80.0	80.0	80.0	80.0	67.0	53.0	25.0	25.0	25.0	25.0	37.0	55.0
Mill, Big Cr.	Near mouth	0.0	17.0	17.0	17.0	17.0	14.0	11.0	5.5	5.5	5.5	5.5	11.0	17.0
Mule Cr.	Near mouth	0.0	12.0	12.0	12.0	12.0	10.0	8.0	2.5	2.5	2.5	2.5	8.0	12.0
Kangaroo Cr.	Near mouth	0.0	16.0	16.0	16.0	16.0	13.0	11.0	4.4	4.4	4.4	4.4	11.0	16.0
Patterson Cr.	Hwy. 3 bridge	6.3	30.0	30.0	30.0	30.0	25.0	20.0	10.0	10.0	10.0	10.0	13.0	20.0
Sniktaw Cr.	1 mile from mouth	1.0	9.0	9.0	9.0	9.0	7.7	6.1	4.5	4.5	4.5	4.5	6.1	9.2
Sugar Cr.	Hwy. 3 bridge	0.6	32.0	32.0	32.0	32.0	27.0	21.0	10.0	10.0	10.0	10.0	21.3	32.0
Wildcat Cr.	Hwy. 3 bridge	0.01	23.0	23.0	23.0	23.0	19.0	15.0	5.0	5.0	5.0	5.0	15.3	23.0
E.F. Scott R.	Callahan	0.0	95.0	95.0	95.0	95.0	95.0	63.0	32.0	32.0	32.0	32.0	63.0	95.0
S.F. Scott R.	Callahan	0.0	93.0	93.0	93.0	93.0	93.0	62.0	31.0	31.0	31.0	31.0	62.0	93.0
Scott R.	Farmer's diversion	53.4	155.0	155.0	155.0	155.0	155.0	103.0	62.0	62.0	62.0	103.0	155.0	155.0
Scott R.	Stream gage station	21.0	426.0	426.0	426.0	426.0	426.0	284.0	192.0	192.0	192.0	284.0	426.0	426.0

(a) No spawning recommendations used.

(a) No spawning determinations made.

SH: Steelhead

Comments from July 1

#3 - The recommendations are unnecessarily high at the gages during the summer months (i.e. June-August).

Does it really make sense to use a gage so low in the Watershed?

Why are summer flows important at the lower gages:

- We aren't just contemplating coho over-summering conditions. Our drought emergency recommendations were submitted to support outmigration and surface water recharge in the fall,
- We think over summering habitat for salmonids may be available in mid mainstem reaches, particularly in the Shasta River, if enough water meeting temperature standards is met,
- Without summer contributions it's been taking too long for precipitation to recharge these rivers in critically dry years,
- Aquifer recharge doesn't only come from flood irrigation and permeable ditches. The rivers, wetlands, and tributaries have also historically contributed to the aquifers.

Chinook Migration Response on the Scott River

- Percent of Chinook Salmon migration estimated upstream of SRFCF and average daily flows (cfs) at USGS Fort Jones gage (11519500) for half month periods from September 1 - November 30 annually from 2008-2020.

Run Year	Chinook Upstream of Counting Station	Average Daily Flow (cfs)					
		Sep 1- Sep 15	Sep 16-Sep 30	Oct 1- Oct 15	Oct 16 - Oct 31	Nov 1 - Nov 15	Nov 16 - Nov 30
2008	69%	15	19	33	41	159	122
2009	54%	7	7	10	25	37	59
2010	89%	28	45	49	199	409	287
2011	82%	58	66	88	94	95	111
2012	87%	10	15	23	37	56	223
2013	73%	7	17	44	46	47	54
2014	76%	7	7	7	51	72	222
2015	18%	7	7	6	6	7	8
2016	76%	11	9	22	554	534	495
2017	88%	45	59	62	69	94	541
2018	32%	8	8	10	15	22	53
2019	74%	15	34	45	52	56	56
2020	31%	6	7	7	7	9	16

Additional Comments

- You're not accounting for other factors like climate change,
- Water in the lower Shasta heats up no matter what we do. The pulse flow "experiment" this last spring proves it,
- The agencies are not looking far enough back in time,
- The agencies are looking too far back in time,
- The agencies need to acknowledge the voluntary efforts and efficiencies some are undertaking,
- The fish made it last year and will again this year. They are more resilient than you give them credit,
- Your minimum instream recommendations are too low,
- Permitting through the agencies is cost and time prohibitive and gets in the way of restoration,
- This is not a good year to put an extreme burden on legally irrigated agriculture.

Thoughts

- We think this is as low as we can go and are being reasonable,
- We want to avoid any potential future listings for other species,
- We're looking at all life histories of several species to maintain stream function,
- We are interested in implementing cooperative solutions that have equal or better conservation values
 - Specific
 - Measureable
 - Achievable
 - Relevant
 - Time bound
 - Enforceable

Wildlife Conservation Board (WCB) Stream Flow Enhancement Program (Proposition 1)



WCB Contact

Adam Ballard

wcbstreamflow@wildlife.ca.gov

(916) 324-7487

SWRCB Contact for water right components of WCB Projects

Rae Vander Werf

Rae.VanderWerf@Waterboards.ca.gov



Wildlife Conservation Board Proposition 1 Project Examples



- Water Transactions (refer to California Water Code section 79709)
 - Purchase or long-term transfer of water from a willing seller
 - Water rights instream dedication pursuant to CWC section 1707
 - Forbearance agreements
 - Conservation easements
- Water conservation projects
 - Off-channel water storage
 - Changes in the timing or rate of diversion or source water supply
 - Irrigation ditch lining or piping
 - Stock-water systems
 - Agricultural tailwater recovery/management systems
- Changing points of diversion
- Groundwater storage and conjunctive use
- Habitat restoration projects that enhance stream flow
 - Wet meadow restoration
 - Forest management practices (e.g., thinning)
 - Reconnecting flood flows with restored flood plains
- Acquisition of land
- Stream flow gauging
- Scientific studies that assess or inform projects



Fisheries Restoration Grant Program (FRGP) Project Types

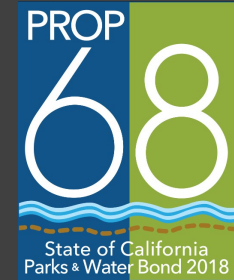
- Fish Passage
 - At stream crossings
 - Barrier modification
 - Instream Habitat Restoration
 - Riparian Restoration
 - Bank Stabilization
 - Project Design
- Upslope watershed restoration
 - Fish Screening of Diversions
 - Water Conservation Measure
 - Monitoring
 - Water Measuring Devices
 - Instream
 - Diversions

<https://wildlife.ca.gov/Grants/FRGP>

CDFW FRGP Region 1 Contact: Trevor Tollefson, (707) 834-0626



Proposition 68 Grant Program



- River and Streams Restoration
- Restoration of rivers and streams for fisheries and wildlife
- Fish and Wildlife Habitat Restoration
- Improvement of conditions for wildlife refuges, wetland habitat areas, and estuaries

CDFW Watershed Restoration Grants Branch
WatershedGrants@wildlife.ca.gov

Comment Period

(tribal leaders and
elected officials)

1. Send a chat to ***COMMENTS HERE***

- First and last name
- Email address
- Title (if any)
- Organization (if any)

2. Telephone callers:

- Press ***9** to raise hand
- Press ***6** to unmute when prompted

How to Submit Questions

1. Chat your question to ***QUESTIONS HERE*** along with:
 - Please enter :
 - First and Last Name
 - Email Address
 - Title (if any)
 - Organization (if any)
2. Telephone callers:
 - Press *9 to raise hand
 - Press *6 to unmute when prompted
3. If you have questions after this meeting, please Email to:
 - ScottShastaDrought@Waterboards.ca.gov

Submit Comments (By 5:00PM July 23, 2021)

1. Email written comment
to: ScottShastaDrought@Waterboards.ca.gov
2. You can type comments directly into the chat on this Zoom meeting
 - Please enter :
 - First and Last Name
 - Title (if any)
 - Organization (if any)
 - Email Address
 - Telephone callers:
 - Press *9 to raise hand
 - Press *6 to unmute when prompted

A scenic view of a rocky river valley. The foreground is dominated by a rocky, gravelly slope. A utility pole stands in the middle ground, with power lines stretching across the valley. The river flows through the center, surrounded by sparse, dry-looking vegetation and some evergreen trees. In the background, a white building is visible on a hillside, and a road runs along the top of the valley. The overall atmosphere is quiet and somewhat desolate.

Closing

Thank you for joining us.