



Springflow Habitat Protection Work Group

*August 21, 2020
9:00-11:00am*

Agenda Overview

- Confirm attendance
- Meeting logistics
- Public comment
- Approve meeting minutes
- Issue 1 final draft Motion
- Mentimeter Issue 2 prioritization poll results presentation
- Overarching Issue 2 discussion regarding prioritization
- Overarching Issue 3 discussion regarding potential areas of focus
- Approach for categorizing AMP study topics under Issue 4
- Public comment
- Future meetings

Confirm
attendance



Meeting logistics

- Virtual meeting logistics
 - Meeting recording
 - Mute
 - Raise Hand
 - Chat / Asking questions



- Meeting points of contact
 - Meeting access
 - Kristina Tolman (ktolman@...)
 - Technical questions
 - Victor Hutchison (vhutchison@..)
 - Martin Hernandez (mhernandez@)
 - Participant monitor
 - Kristy Kollaus (kkollaus@...)
 - Chat and Q&A monitor
 - Damon Childs (dchilds@...)

Public comment





Consider
Meeting 6 Minutes

Issue 1 final draft Motion

Issue 1: The Implementing Committee should ensure a technical evaluation is undertaken of water quality impacts of predicted extended periods of flow below 80 cfs in both spring systems, either using the Hardy water quality model but calibrated and validated using data from recent low-flow periods or using an alternate approach.

Motion by Tom Arsuffi, second by Patrick Shriver (made orally during August 6, 2020 meeting and later formalized in writing for consideration for formal action):

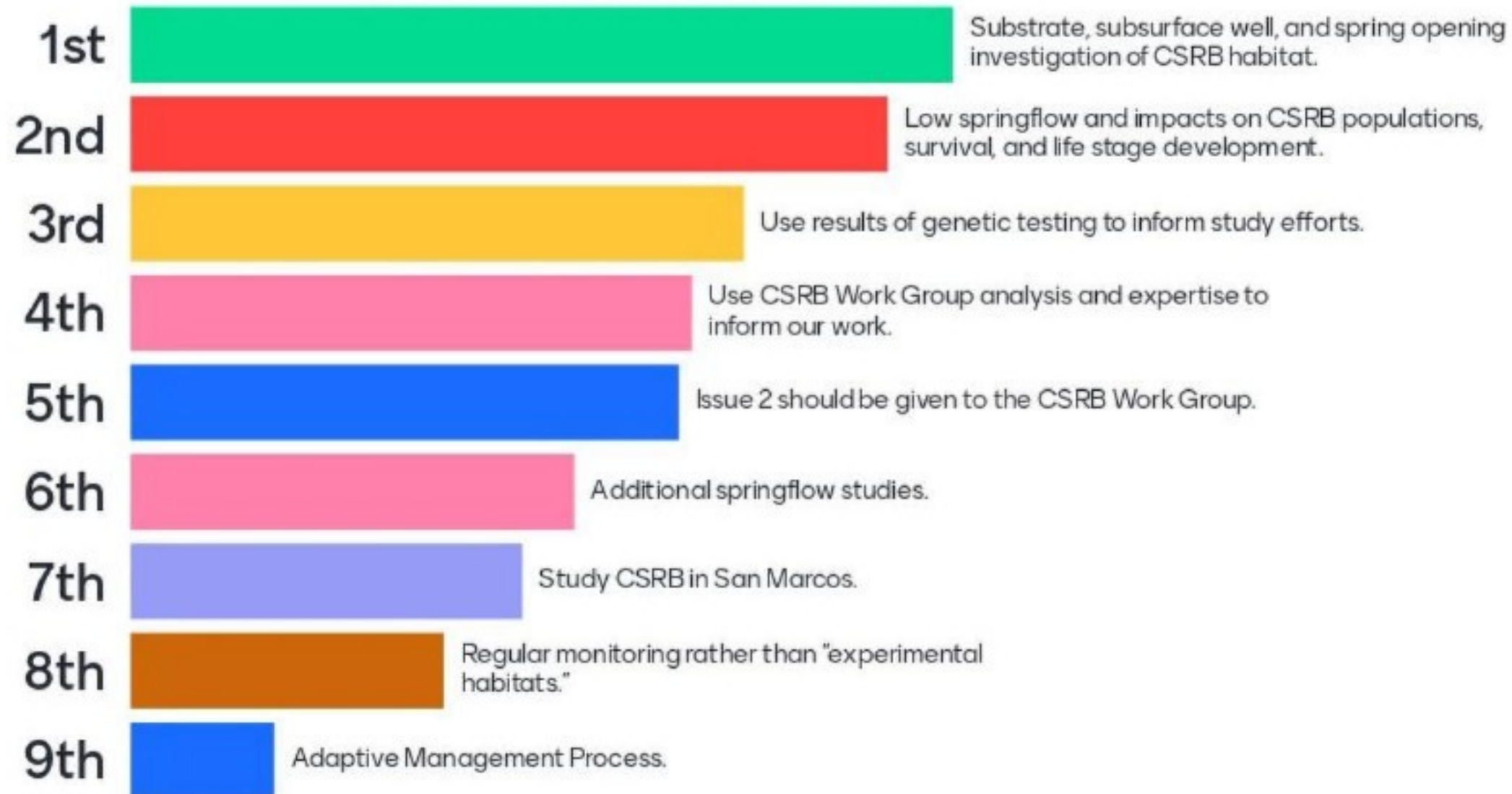
Move that the Work Group carry forward the following topics under Issue 1 for consideration in Part 2 of the Work Group's charge related to water quality below 80 cfs: 1) Calibrate, evaluate, and validate the Hardy Model using 2014 data; 2) Address dynamics of habitat, dissolved oxygen, and vegetation loss during low springflow and 3) Review the outcomes of the 2016 Expanded Water Quality Work Group. These and other topics were summarized in the discussion documents for the Work Group meeting on August 6, 2020. The topic, "Evaluate temperatures and decreasing springflow (<80cfs)" are understood as being included under the three topics listed above.

Although this Motion prioritizes specific topics under Issue 1, it is not intended to suggest that other topics discussed pursuant to Issue 1 do not merit consideration in other processes or at other times, including through recommendations, potentially by this Work Group, for future monitoring during periods of extended low flow.



Mentimeter Issue 2
prioritization poll results and discussion

How would you prioritize the topic areas (or themes) for technical evaluations related to the following (Issue 2):



Items	1st place	2nd place	3rd place	4th place	5th place	6th place	7th place	8th place	9th place	Total
Substrate, subsurface well, and spring opening investigation of CSRB habitat.	4	2	1	0	0	1	0	0	0	8
Issue 2 should be given to the CSRB Work Group.	3	0	1	0	0	0	2	0	2	8
Low springflow and impacts on CSRB populations, survival, and life stage development.	1	4	0	2	1	0	0	0	0	8
Use CSRB Work Group analysis and expertise to inform our work.	1	1	1	2	0	1	1	0	0	7
Use results of genetic testing to inform study efforts.	0	1	2	1	3	1	0	0	0	8
Additional springflow studies.	0	1	1	0	2	0	3	0	0	7
Study CSRB in San Marcos.	0	0	1	2	1	1	0	0	2	7
Regular monitoring rather than "experimental habitats."	0	0	1	1	0	2	0	1	1	6
Adaptive Management Process.	0	0	0	0	0	0	0	5	1	6
Total responses	9	9	8	8	7	6	6	6	6	

Items	1st place #x9pts	2nd place #x8pts	3rd place #x7pts	4th place #x6pts	5th place #x5pts	6th place #x4pts	7th place #x3pts	8th place #x2pts	9th place #x1pt	Total
Substrate, subsurface well, and spring opening investigation of CSRB habitat.	36	16	7	0	0	4	0	0	0	63
Low springflow and impacts on CSRB populations, survival, and life stage development.	9	32	0	12	5	0	0	0	0	58
Use results of genetic testing to inform study efforts.	0	8	14	6	15	4	0	0	0	47
Use CSRB Work Group analysis and expertise to inform our work.	9	8	7	12	0	4	3	0	0	43
Issue 2 should be given to the CSRB Work Group.	27	0	7	0	0	0	6	0	2	42
Additional springflow studies.	0	8	7	0	10	0	9	0	0	34
Study CSRB in San Marcos.	0	0	7	12	5	4	0	0	2	30
Regular monitoring rather than "experimental habitats."	0	0	7	6	0	8	0	2	1	24
Adaptive Management Process.	0	0	0	0	0	0	0	10	1	11
Total responses	81	72	56	48	35	24	18	12	6	



**Overarching Issue 3 discussion
regarding potential areas of focus**

Issue 3: The Implementing Committee should ensure that a technical evaluation is undertaken of potential impacts of predicted extended periods of flow below 80 cfs on San Marcos salamander populations, particularly for populations in the area below Spring Lake dam, and on Texas wild-rice and other vegetation serving as habitat for fountain darters downstream of Spring Lake dam, including consideration of impacts from recreation;

All: What questions related to Issue 3 should the Work Group consider:

consider the change in spring lake springs also. what happens to available salamander spring habitat in the lake as flows drop

What specific recreational impacts exist and what are their data-supported impacts to wild-rice and fountain darters?

specifically look at sedimentation as a result of decreased flows. how important is clearing vegetation from around all potential salamander habitat as flows decrease - will that enhance salamander success during low flows

Recreation and TWR: re-evaluating SSAs to ensure they are in the most effective placement for TWR, and recommendation to include more SSAs triggered by low flow conditions as wadeable areas shift/change with decreasing flow levels.

Evaluate approaches for delineation of recreational exclosures that provide readily available information to adjust boundaries in response to changes in flow and vegetation coverage.

We received early presentations on this item that I recall did not indicate concerns with current in place gardening and controls.

Impacts to: population size, reproduction and survival, prey base, water quality, sediment impacting habitat, changes in vegetation. Also if there's ways for management to mitigate impacts of low flows on habitat

What is the effect of low flow on sediment accumulation?

establish a mapped baseline of habitat necessary to maintain minimal fountain darter populations - this provides a tool for decision making on behalf of local, state and federal agencies



All: What questions related to Issue 3 should the Work Group consider:

impacts recreation will have on species when flow is low. Work with biologists from state and federal. How prepared refugia is for salvage events and for how long it is reliable

Can we have further connection of how the dam impacts flow in the below Spring Lake specificity???

Not a study need, but a recommendation for an official SSAs with 'exclusion' and signage to protect the salamander habitat below Spring Lake Dam from recreation impacts (people wading and sitting on the rocks below the dam).

Monitor changes in spring flow emergence within Spring Lake during periods of flow below 80 cfs to better understand sedimentation and potential impacts on SM salamander.

When it comes to San Marcos salamander why are we specifically separating out the populations below the dam?

What are the impacts of dams on sediment movement? would the system

The genetic relationship between SM salamander populations and those collected from western Edwards plateau springs, within the contributing and recharge zones.

What are the temperature thresholds for the SM salamander and how will low flows promote higher temps in the area that drains above Spring Lake Dam? And, will these potentially higher temps be a problem for the salamander?

Habitat availability is a reflection of flow conditions - how are those conditions being influenced by management of human activity as they near 30 cfs? And earlier? Should there be additional controls based on evidence?



All: What questions related to Issue 3 should the Work Group consider:

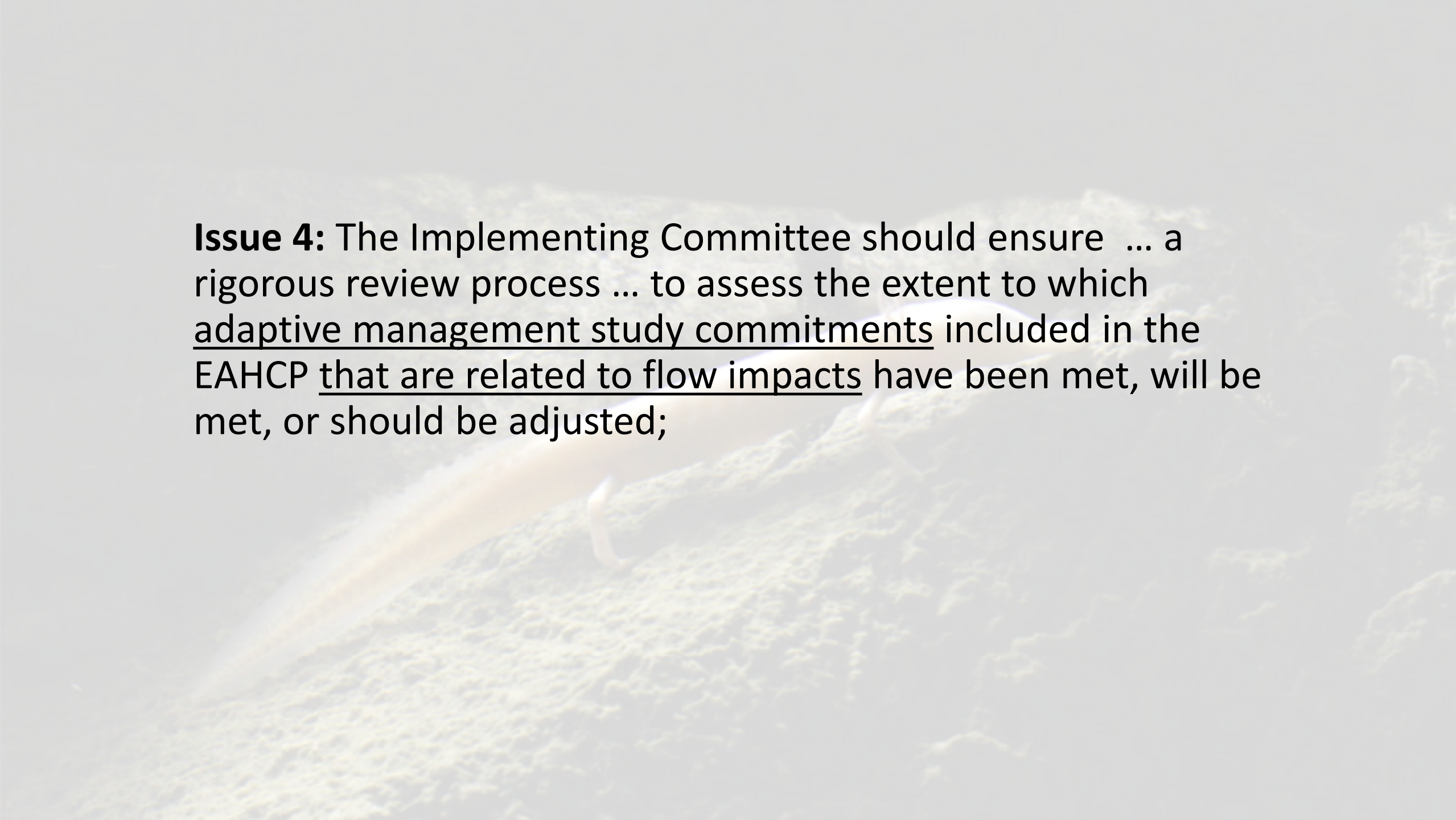
Evaluate approaches for adjusting recreational exclosures in area just downstream of Spring Lake Dam to protect SM salamander as occupied habitat changes

Develop updated bathymetry data/map for the San Marcos River to evaluate SAV and wadeable areas to inform areas threatened by recreation impacts during low flow.





Approach for categorizing AMP study topics under Issue 4



Issue 4: The Implementing Committee should ensure ... a rigorous review process ... to assess the extent to which adaptive management study commitments included in the EAHCP that are related to flow impacts have been met, will be met, or should be adjusted;

Possible Work Group Recommendation Column Entries:

No obvious inconsistency with EAHCP study commitments: One or more studies have been done that address the referenced AMP commitment in a substantive way. The Work Group has not attempted to undertake a substantive review of study results, but, consistent with its understanding of the Work Group charge, has not identified an obvious shortcoming in addressing the AMP commitment and is not making a recommendation for further action. [Shown with green highlighting]

Possible Work Group Recommendation Column Entries:

Permit extension issue: Based on the Work Group review, this appears to be a study commitment that has not been addressed. Without making a judgment about the importance of the proposed study, the Work Group has identified an apparent shortcoming in addressing the AMP commitment and is recommending the Implementing Committee and EAHCP staff implement a process for ~~addressing~~ assessing the apparent shortcoming in preparation for the anticipated renewal of the incidental take permit. In some instances, only a specific subset of the commitment is identified as an apparent shortcoming. [Shown with turquoise highlighting]

Possible Work Group Recommendation Column Entries:

Work Group Priority Subset: Based on the Work Group review, this appears to be a study commitment that has not been addressed. The Work Group has identified an apparent shortcoming in addressing the AMP commitment that merits further consideration by the Work Group in Part 2 of its charge. [Shown with red highlighting]



Public comment

Future meetings

- Meeting 9
 - Wednesday, September 9
 - 2-4pm
- Meeting 10
 - TBD



Thank you!

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