MEMORANDUM

January 27, 2026

To: Cooperative Monitoring, Evaluation, and Research Committee (CMER)

From: Jenny Schofield, Project Manager - Water Temperature and Amphibian Use in Type Np Waters with Discontinuous Surface Flow in Western Washington Project

Subject: Water Temperature and Amphibian Use in Type Np Waters with Discontinuous Surface Flow in Western Washington Project- CMER Review Outstanding Concerns

This memo is to provide further information to CMER Members on outstanding issues raised by CMER Reviewers throughout the Discontinuous Np Study Design Review period. These issues have been deemed unresolved by CMER reviewers. This memo is meant to help highlight sections of the Study Design where reviewer concerns remain. On 1/15/2026 authors met with 3 of 4 reviewers (1 reviewer was provided a chance to meet but declined), this resulted in some clarifying language being added to the document. Specifically note comments labeled with 1/15/26 dates in the Study Design where new or clarifying language was added in response to conversations at reviewer/author meetings. Also, some comments have been left open/unresolved to highlight ongoing conversations around these concerns. *The Authors have attempted to address the concerns outlined below, please read the open comments in the Study Design Document for Authors responses.*

<u>Doug Martin Outstanding Concerns: From email Received on 1/15/2026, post Author and Reviewer meeting</u>

- *Please see Authors response to these concerns in the Project Critical Questions section on pg. 5, Project Objectives section on pg. 6, Steam-associated Amphibians section on pg.31 and Project Risk Analysis section on pg.34 (Study Design Track Changes Document).*

1. **CQ:** How are stream temperature and FP-covered amphibians (e.g., torrent salamanders) associated with spatial and temporal patterns of surface water expression in discontinuous Np reaches?
   CQ: Do stream-associated amphibians utilize discontinuous Np reaches and, if so, do occupancy and/or abundance differ from reaches with continuous surface flow?

   Issues:

   - Proposed sample timing and location disconnect with temporal and spatial patterns of flow type in Np streams across landscape.

- Seasonal and annual variability in flow status and potential influence on occupancy is not addressed by one same-date sample per year
- Proportion of discontinuous flow zone sampled will vary depending on length of Np reach and associated flow types

Concerns:

- Probability of determining occupancy and understanding of temporal patterns CQ limited
- Limited potential to answer how occupancy differs among flow types given small fixed sample segments (e.g., continuous flow under sampled)

Harry Bell outstanding Concerns: From email received on 1/13/2026

- *Some of these issues **may** have been addressed via edits included after the 1/15 Meetings with other Reviewers (Harry declined to meet with Authors to discuss these issues).*

1. In the study population introduction there is a reference to "timber managed lands in western Washington." Under the NWForest Plan for USFS and the state trust lands HCP, very high percentages of acres are excluded from any timber harvest and some that have never been harvested. Under Step 1 Identification HUCs, "state and federal lands adjacent to private lands will be included." Please clarify how the acres, many of which may never have been or never will again be harvested, will be used in this study. A solution would be to more clearly define "timber managed lands" to not include those areas under the fed and state plans.

2. Due to the rain shadow and geological history, and my field experience in all regions, it is clear to me that variability among HUCs in the Olympic Region is clearly larger than the variability among HUCs in the other 3 regions. This indicates that the number of HUCs sampled in the Olympic Region should be larger rather than smaller than the other regions. Please present and discuss the analysis (power?) used to determine the relative number of HUCs selected for regions and if the project analysis will characterize and test differences in surface water expression and permanence among regions. If not already done, a solution would be to do a power analysis specifically to determine a sufficient sample size for the number of HUCs in each region.

3. Regarding moving temperature sensor to keep them in water, I don't understand the difference between moving and "minor adjustments". I recall a discussion with Marc Hays that the very shallow water, in that case due to a rise in water level as a result of timber harvest, tended to be warmer. Please explain why just moving a "minor amount",

rather than a random location in the wetted reach, is not biasing the overall discontinuous Np reach temperature analysis because the meters are kept in the warmer edge of the wetted reach.

4. Regarding measuring canopy cover rather than effective shade, looking at aspect and elevation is very helpful but any characterization of the effects of "tree crowns" on temperature and maybe even amphibian use, will be open to doubt by using canopy cover.
5. Regarding the critical question about upland stand characteristics, this would take a full blown stream streamflow and stand hydrologic maturity study. The proposed sampling framework, regional stratification and sample sizes don't appear sufficient.

Chris Mendoza outstanding Concerns: From email received on 1/13/2026, post Author and Reviewer meeting

- *Please see Authors response to these concerns in the Project Purpose section on pg. 4-5 (Study Design Track Changes Document)*

19 December 2025
To: Authors of the Type Np Discontinuous Flow study design.
From: Chris Mendoza, Conservation Caucus CMER member.
Subject: CMER reviewer comments to Type Np Discontinuous flow study design.
Authors below are my general comments to the Type Np discontinuous flow study design. First and foremost, I want to thank all the authors for responding to all of the CMER reviewer comments. Several sections of the study design have been improved from their responses. However, I am not prepared to approve the current draft as written as some of my "red" comments were not adequately addressed by the author's responses. One of the main issues not adequately addressed is not new to the authors, as I raised it as a CMER reviewer during CMER's comment period on the Type Np discontinuous Scoping document.
Comment from the Scoping document (Page 5, June 2024):

Chris Mendoza
"Red - Again, I do not believe the results of this study can be inferred to buffer placement across the FP HCP landscape when intermittent reaches are high variable and highly unpredictable. Needs to be clearly stated in the introduction based on slide show given to CMER. Moreover, The FP Board is currently in the process of adopting new Type Np rules (CR 102) so the Type Np buffers are going to change substantially. Nowhere in the introduction is this mentioned, or the potential affect it will have on this current study approach, (emphasis added) i.e. your claim that the results of this study will help with Np buffer configuration and

placement, when the buffers will be changing in width and length. While I disagree with that claim as stated above, the new Type Np rules the Board adopts, based not the Dept. of Ecology proposal before them, will make this a moot point. This study approach will need to be postponed until the new Type Np rule is adopted by the Board. Need to acknowledge here in the introduction so the reader knows CMER is aware of the Board's current Type Np rule making process."
From the current Study Design draft in review (December 2025):

Chris Mendoza "Red: see prior comments on timing of this project as premature given the FP Board is poised to change Type Np rule with wider / longer riparian buffers. Evaluation of the 7DADM for stream buffers from what will be an "old" less protective rule will not inform the AMP in a meaningful way. Recommend waiting for the newly proposed Np rule to be formally adopted by the Board and implemented by DNR regulatory division. The new buffers can then be evaluated for meeting State / Ecology water quality standards."
Author's response:
Mcintyre, Aimee P (DFW)
"We've been directed by CMER and Policy to develop a study design based off of the scoping document, including BAS and alternatives. That is this document. Furthermore, the intent of this investigation is to evaluate the potential influence of these Disc Np reaches on the resources of interest to the program (i.e., water temp and amphibians). It is not an effectiveness study and does not evaluate riparian buffers regardless of the configuration."
The Board has since adopted a new Type Np riparian buffer rule for western Washington (Board meeting minutes, November 12, 2025). The newly adopted Type Np rule requires full length buffers on Np streams to the headwater PIP (Perennial initiation point, a.k.a. Upper most point of perennial flow).
Given that this draft study design is focused on 1st order streams, many of which are currently harvested to their streambanks adjacent to and directly downstream of the PIP (under rule required a 56ft. buffer), the new Type Np buffer rule will directly influence several of the variables this study design is planning to measure (e.g., Shade and stream temperature) which could impact the amphibians species of interest (Torrent salamanders and secondarily tailed frogs). Additionally, the Board's newly adopted rule will essentially fully buffer 1st. order Type Np streams that were previously harvested to their streambanks, and those additional buffers could influence the degree of "discontinuous flow" and intermittency Type Np streams experience (e.g., through evapotranspiration, near surface groundwater flow, sediment retainment via LW recruitment, etc.).

Several of the author's responses to my comments state that they are simply following what the Scoping document (2024) directed them to do. Understood. However, that does not negate the fact that the Scoping document was developed and approved over a year prior to the

Board's adoption of a new Type Np rule (November 12, 2025). And as noted in my comment above to said Scoping document (June 2024), at that time the Board was in their CR 102 process for rule adoption so I suggested it would be prudent to wait for the Board's outcome. It's fair to say at the time of scoping, that no one in the AMP had the ability to predict what the Board's decision would be. Now that Board has in fact formally adopted a new Type Np rule, a rule that will require a substantial increase in riparian buffer length and width, continuing to pursue a study design that was scoped under what are now "old rules" is no longer feasible.

Regarding the second part of author's responses to my comments, I'm fully aware that this is not an "effectiveness" study, and I greatly appreciate that author's removal from their initial Scoping document the insinuation that their results would help with "buffer configuration and placement". However, that does not change the fact that the new Type Np rule buffers would directly influence the variables this study design plans to implement (e.g., shade, stream temperature, degree of discontinuous flow, amphibian occupancy).

It is my understanding that CMER Board-approved members do not operate in a vacuum. We are tasked by the Board to study the impacts of WA forest practice rules on aquatic resources, not old rules but current rules. If the Board makes a substantial rule change, and I don't believe anyone would argue this is change in not substantial, I presume that the AMP adopts that rule and CMER adjusts their research strategy accordingly, particularly when it comes to designing research and monitoring studies funded by the Board. If this study design were to proceed as currently drafted, and include study sites with buffers that were harvested under what is now an obsolete rule, how would that inform the impacts of the newly adopted rule given the substantial changes to longer / wider buffers and their influence on the variables of interest? Conversely, if this study design is not meant to inform the newly adopted Type Np rule with substantially longer and wider buffers by measuring the variable of interest you propose (discontinuous flow, shade, stream temperature, amphibians), how will your results inform the FP HCP landscape in western WA that will now be managed under the Board's newly adopted rule?

Recommendations:

As a remedy, I offered recommendations earlier during both the scoping phase and now again during the study design phase that were not accepted. The most obvious remedy is to simply postpone implementation of this study design until the Board's newly adopted Type Np rule is fully implemented on the ground (August 2026 I believe, can confirm Board meeting minutes). Since that Board has expressed interested in studying the impacts of the new Type Np rule once implemented, this discontinuous Type Np study could piggyback onto that effort.

As an alternative, you could revise your site selection criteria and limit the 1st order basins under the "old rule" with streams that are short enough to require full length 50 ft. buffers from the PIP to a Type S or F water (see WAC 222-30-021 (2)(b). This would minimize the influence of the Board's newly adopted Type Np rule buffers on the main variables of interest

(shade, stream temperature, discontinuous flow, amphibian occupancy). The new rule has a 50 ft. buffer for headwaters streams < 2 ft. wide so there would be some applicability.

Sincerely,

Chris Mendoza

CMER Representative, Conservation Caucus.