



Institute for Natural Resources

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19 May 2025

Dear Members of the AMPC,

Thank you for the document, *Research Questions Package for Amphibians*, that we received on 19 April 2025. The purpose of this letter is to fulfill OAR 629-603-0200(4)(a) – responding to the AMPC within 45 days of the receipt of the research questions package.

Having read and discussed the amphibians research question package, we have determined that: (1) we need clarification regarding the questions package (see the IRST clarifying questions at the end of this letter); (2) in consultation with the AMPC, we will refine the research questions listed in the research questions package into finalized research questions; and, (3) we will develop scoping proposal(s) regarding how to address the finalized research questions as follows:

1. For Questions 1 and 2, we estimate that we will be able to submit a scoping proposal to the AMPC seven months following the IRST's receipt of the refined and approved finalized questions. We anticipate that if seven months falls within the holiday season, the scoping proposal will not be submitted until the end of January 2026.
2. For Question 3, we estimate that we will be able to submit a scoping proposal(s) to the AMPC six to nine months following the submission of the Questions 1 and 2 scoping proposal.

We will keep the AMPC Coordinator up to date on our progress. Should at any time we need to reevaluate the submission deadlines of the scoping proposal(s), we will give adequate notice to discuss this with the AMPC.

We look forward to working with you on this and in the long term. If you have any questions, please reach out to the IRST Housing Agency Technical Lead, Sean Gordon at Sean.Gordon@oregonstate.edu.

Sincerely,
Members of the IRST

Clarifying Questions from the IRST to the AMPC Regarding the Amphibians Questions Package

These clarifying questions were developed by the IRST at their May 8, 2025 meeting and represent questions compiled after discussion with all IRST members.

Question 1. For each of the covered amphibian species, what is the distribution (including genetics) within Oregon, and what factors (e.g., stream gradient, stream size, fish presence/absence, slope, aspect, temperature, seasonality, micro-habitat conditions) determine this distribution at a smaller spatial scale (e.g., watershed)?

Clarifying Questions:

- A. **At what scale and resolution does the AMPC request information regarding species distributions of the 5 covered amphibians?** For example, range maps found in a field guide or mapping databases describe species' distributions at a coarse scale in the state of Oregon (e.g., the USGS National Amphibian Atlas; <https://armi.usgs.gov/atlas/>). **Is AMPC interested in a summary of these existing coarse-scale distributions, particularly as they identify where the periphery of their geographic ranges are in Oregon? Or, is AMPC interested in collecting data to validate/verify these previously established distributions? Is there a particular species that needs emphasis?**
- B. **With regard to the phrase "including genetics," what specifically does the AMPC want to know about the genetic distribution of each covered amphibian species?** Conservation genetics can be considered a tool to develop ecological understanding. For example, the extent to which genetic material is transferred among individuals and populations may provide information on habitat connectivity. **At what spatial scale is this question being asked and what would be a desired deliverable? Is AMPC interested in learning how the populations of the 5 covered amphibian species are structured genetically across private forest lands - in other words, what is the relative amount of genetic variability within and among populations or sub-populations in Oregon?**
- C. Various models have been or can be developed to describe how local-scale factors influence the presence, occupancy, or abundance of species at smaller spatial scales. Other models focus on habitat characteristics and can be utilized to predict habitat suitability (e.g., Habitat Suitability Indices). Versions of these models exist for some of the covered species. The IRST can review options for potential future model development and the existing models in the scoping proposal. However, to guide development of research options, **could the AMPC clarify whether they are interested in a predictive model of "occupancy" (where the species are found currently) or of "potentially suitable habitat (where environmental conditions are available that may support the species)?"**

Question 2. What is the population trend of the Columbia and Southern torrent salamanders over time on lands subject to the Forest Practices Act (FPA) rules? This question is informed by the following overarching biological goal as stated in the draft PFA HCP: "Forest practices that support the survival and recovery of the covered species by providing clean, cool, connected, and complex habitats."

Clarifying Questions:

- A. Does the AMPC want to improve understanding of how or if baseline (current, or pre-PFA) population abundances are changing through time (trends) as additional stream and riparian protections are applied? Or is the AMPC interested in summarizing any existing long-term sampling data for amphibians on private

lands in Oregon that occurred prior to the PFA?

- B. Are there any specific, broad-scale disturbances or factors that should be integrated into this research question, such as impacts of wildfire or climate change?

Question 3. The following sub-questions are informed by direction from the PFA Report to “...better understand how riparian and unstable slope protections of at least the current and proposed rules for private forestland impact persistence of populations.”

Question 3.1. How do rules for no-harvest RMAs affect Columbia and Southern torrent salamanders’ habitat? BGO from Draft PFA HCP: Goal 2: Shade and watershed processes controlling stream temperature provide cool water compatible with the needs of the covered species. Objective 2.2 – No-harvest RMAs maintain stream shade sufficient to support desired cool water temperatures for covered amphibians. The most recent version of the BGOs is in the Dec. 2022 draft HCP. The BGOs will be finalized within the HCP due Dec. 31, 2027. Private Forest Accord Report, p. 121.

Clarifying Questions:

- A. **Is the AMPC interested in how the rules for no-harvest RMAs affect only stream shade and water temperatures related to the habitat requirements of the torrent salamanders? Or, is the AMPC interested in how the species respond (changes to populations, individuals, etc.) to changes in the habitat features of stream shade and water temperature as influenced by the rules for no-harvest RMAs?** Other habitat factors may be identified as important to the torrent salamanders through answering Research Question 1 and also could be included in a scoping proposal. **In addition, could the AMPC identify the specific rules related to no-harvest RMAs that are of interest to the AMPC in this context?**

Question 3.2. How do rules for Type N streams affect Columbia and Southern torrent salamanders’ habitat? BGO from Draft PFA HCP: Goal 3: Stream network connectivity satisfies freshwater habitat needs for covered species. Objective 3.3 – Timber harvest maintains stream-associated connectivity in riparian areas along non-fish streams sufficient to support covered amphibians.

Clarifying Questions:

- A. **Is the AMPC interested in how the rules for Type N streams affect only connectivity of the stream network for Columbia and Southern torrent salamanders or also including other specific habitat features?** The habitat factors important to describing occupancy, abundance, or habitat suitability for Columbia and Southern torrent salamanders may be identified through answering Research Question 1. **And, is the AMPC interested in understanding how connectivity affects species’ responses (changes to populations or individuals) in addition to habitat metrics? Finally, could the AMPC identify the specific rules related to Type N streams that are of interest to the AMPC in this context?**

Question 3.3. How do rules for steep/unstable slope protections affect Columbia and Southern torrent salamanders’ habitat? BGO from Draft PFA HCP: Goal 4: Riparian areas function to support complex habitats for the covered species. Objective 4.3 – Designated Debris Flow Traversal Areas function to deliver large wood to fish-bearing streams. Objective 4.4 – Forest practices maintain stream-associated wetlands and stream-adjacent seep and spring habitat for amphibians.

Clarifying Questions

- A. **Is the AMPC interested in improved understanding of these species’ responses (changes to populations, individuals, etc.) to steep/unstable slope protection changes associated with the PFA, or to changes to specific habitat characteristics that are important to Columbia and Southern Torrent Salamanders, such**

as large wood that may be provided through debris flows? Habitat factors important to describing occupancy, abundance, or habitat suitability for the torrent salamanders including large wood or presence of stream-associated wetlands, seeps, and springs, may be identified through answering Research Question 1. In addition, **could AMPC identify the specific rules related to steep/unstable slope protections that are of interest to the AMPC in this context?**