

**From:** SCHINNELL, LAURA  
**Sent:** Tuesday, August 10, 2004 5:23 PM  
**To:** Blane Bellerud (E-mail); Carl Corey (E-mail); Dean Grover (E-mail); Deborah Cornett (E-mail); George Lee (E-mail); Hal Beecher (E-mail); John Blum (E-mail); John Roland (E-mail); Ken Wieman (E-mail); Kent Doughty (E-mail); Lauri Vigue (E-mail); Lou Ellyn Jones (E-mail); Margaret Beilharz (E-mail); Mike Iyall (E-mail); Ruth Tracy (E-mail); KASKO, BERNICE F.; KIEL, WILLIAM A.  
**Cc:** Andrea Spencer (E-mail); Ann-Ariel Vecchio (E-mail); Carroll Palmer (E-mail); Clifford Casseseka (E-mail); Frank Winchell (E-mail); Kelly Susewind (E-mail); Ken Hogan (E-mail); Taylor Aalvik (E-mail); ROSS, DAN L.; CRAWFORD, RANDY G.  
**Subject:** Packwood Lake Hydroelectric Project - Update on Study Protocols and Agreements

PKWD-04-0026

At our last meeting on June 24 at Packwood, discussions were held between Energy Northwest and the natural resource agencies and tribes regarding refinements and clarifications to the draft 401 Water Quality Certification, Instream Flow, and Habitat Assessment protocols. Comments on the drafts have also been received and reviewed. Following is a brief summary of items that were discussed and what Energy Northwest plans to include in the studies based on those discussions and comments received:

1. Instream Flow Study: Two additional transects were added to Study Site 4 (immediately below the drop structure). Calibration flows will be taken at approximately 32 cfs, 15 - 17 cfs, and 3 - 5 cfs as measured at the drop structure.
2. Anadromous Spawner Surveys: Spawner surveys will be conducted, beginning in August and continuing throughout the Chinook, coho, and steelhead spawning season. Surveys would extend from the mouth of Lake Creek to the chute at RM 1.03 on every survey; other surveys would periodically extend to the barrier at RM 2.0.
3. Preference curve verification: Spawning curve data will be collected opportunistically during surveys if spawners are observed during surveys. Preference curve data will be collected on those fish observed during snorkeling surveys at a variety of flows and areas of Lake Creek. Information at the IFIM study sites at the different calibration flows will be collected as practicable.
4. Target species: Lower Lake Creek target species are Chinook, coho, cutthroat trout and potentially other native species that may be present. Target species above the barriers is rainbow trout.
5. Amphibians: Currently selected transects will be evaluated to determine if some would be appropriate for modeling. EES Consulting will provide examples of preference curves for tailed frogs and Pacific giant salamanders as developed in Oregon.
6. Potential entrainment study: Provided permission is secured from WDFW via Scientific Collectors Permit, the potential for the project to entrain fish at the intake will be examined.
7. Potential electrofishing study. Provided permission is secured from WDFW via Scientific Collectors Permit, electroshocking will be conducted above the barriers to establish relative distribution and abundance of rainbow trout and other species that might be present.
8. Snorkeling surveys: Absent Scientific Collectors Permit, Lake Creek will be snorkeled at various study sites to determine species presence, distribution and relative abundance.
9. Hydrology Data: The hydrology data will be further refined to reflect analysis requests from Dr. Hal Beecher and the U.S. Forest Service.

If you have any questions, please contact me.

Laura Schinnell

Energy Northwest Licensing Project Manager  
Richland Office: 509-372-5123  
Satsop Office: 360-482-1586  
Cell: 360-482-8649  
E-mail: [lschinnell@energy-northwest.com](mailto:lschinnell@energy-northwest.com)