Understanding the Private Forest Accord

Stream Typing

Importance: In Oregon, forest practice rules and prescriptions are tied to the type of stream adjacent to, or impacted by, the timber harvest. For example, fish bearing streams receive greater riparian buffers than streams without fish, and perennial streams receive different protections than seasonal streams. Because of these differences, correctly and fully identifying the extent and type of streams on the landscape is critical to implementing the full protections necessary to sustain aquatic ecosystems. Further, fully identifying the extent of the stream network (hydrography) is critical because a stream that is not identified on the map is unlikely to receive any protection.

Current Law/System: Oregon currently allows three methods for classifying streams, desktop modelling, physical habitat surveys, and direct surveys for fish presence (normally conducted by electro-fishing). Oregon's current stream typing system is administered through Oregon Department of Forestry (ODF), with stream typing assessed at the District level. As a result, there are substantial differences in the extent of the stream network identified, the methods used to classify streams, and who conducts the stream assessment (landowner, ODF staff, etc.) between ODF Districts. Surveys for fish presence may be conducted by the owner of the property, with limited training and oversight. The maps used as the base for these evaluations are generally low resolution NHD or based on 30-m digital elevation models, which are insufficient and inaccurate for identifying the network, often failing to include small and headwater streams.

Proposed Change: Responsibility for the identification and maintenance of the stream typing maps will move to the Oregon Department of Fish and Wildlife (ODFW) and additional staff positions will be created to administer the program. All three methods for identification of the fish bearing network will be improved; model-based approaches will now rely on high resolution LIDAR to more fully identify the extent of the stream network and its geomorphic properties; physical habitat survey protocols will be upgraded to align with the best available science on the ability for stream types to support fish; and direct surveys for fish presence will increasingly rely on new technologies like environmental DNA to identify fish presence – which do not directly harm fish the way that e-fishing does. In addition, all stream type maps will be unified into a single, state-wide layer that is publicly available. While old surveys of fish distribution may be brought in to inform this new map, the old surveys will be subjected to QA/QC. Finally, determination of the perennial network will rely on the PROSPER model which will also use high resolution LIDAR with the probability threshold set at 75%.

Discussion: The agreement improves the protections of the stream network by relying on rigorous and modern scientific approaches to delineating the fish bearing and perennial stream networks to assure that streams are fully protected under the correct management system for the type of the stream. Further, it moves authority for this program to ODFW, an agency that is directly vested in the sustainability of Oregon's fish and wildlife.