STAFF REPORT

Agenda Item No.:	C
Work Plan:	Forest Resources Division
Topic:	Implementing Legislative Direction
Presentation Title:	Appointments to the Independent Research and Science Team
Date of Presentation:	January 8, 2025
Contact Information:	Josh Barnard, Division Chief, Forest Resources Division, ODF, Josh.W.Barnard@odf.oregon.gov;Terry Frueh, Adaptive Management Program Coordinator, Forest Resources Division, ODF, Terry.Frueh@odf.oregon.gov Kelly Burnett, Chair, Independent Research and Science Team

SUMMARY

The Independent Research and Science Team (IRST) has nominated two candidates to join the IRST and is seeking a Board decision to accept these nominations. This is a decision item.

CONTEXT

The legislature directed the board to set up an adaptive management program. The program's purpose is to help inform future rulemaking and support an application for a programmatic habitat conservation plan (HCP), and subsequent incidental take permits from NOAA Fisheries and the US Fish and Wildlife Service. The goal of the program is to use best available science to assess the rule effectiveness for protecting several fish and other aquatic species. The program requires the Adaptive Management Program Committee (AMPC) to direct the program's work. The IRST oversees research requested by the AMPC and reports the associated results to the Board and the AMPC.

BACKGROUND

In February 2020, a coalition of conservation groups, the Oregon Small Woodlands Association, and forest industry representatives agreed to revise the Forest Practices Act and administrative rules through a memorandum of understanding, which included mediated discussions, known as the Private Forest Accord (PFA). The bill set the timeline and topics for making changes to the Forest Practices Act and rules from which the Board could apply for a programmatic HCP. The PFA concluded in late 2021. In March 2022, the legislature adopted the PFA recommendations through Senate Bills 1501 and 1502, and House Bill 4055. Senate Bill 1501 incorporated by reference the Private Forest Accord Report dated February 2, 2022. The PFA Report further detailed the recommended changes to the Act and rules and a pathway for an HCP. The HCP has a statutorily-mandated approval deadline of Dec. 31, 2027. A key part of the rules is the adaptive management program. In addition to the Board, this program has two primary participants:

1. The AMPC develops the policy direction for the program.
2. The IRST oversees the research and monitoring to address the policy direction.

ANALYSIS

The AMPC recommended in June 2023 that the Board appoint the initial slate of IRST nominees. According to law, the AMPC nominated IRST members to ensure at least one representative from each of three groups (public institution, timber, and conservation) per section 38(2)(b), chapter 33, Oregon Laws 2022. Although the AMPC did not specifically identify which nominee represents the public institution, timber, and conservation seats, they worked to ensure balanced representation of perspectives and consistency with statutory requirements.

The IRST is requesting the Board appoint two new members to the IRST. The IRST decided to add two members to the group because:

1. IRST is currently at the minimum number (5) of members specified in law, and they sometimes have insufficient attendance to make substantial decisions. Adding two members will keep them moving forward in a timely manner and complies with the statutory provision that the total voting membership must be an odd number.
2. The IRST needs disciplinary expertise in hydrology and geomorphology to help with the current slate of research questions on which they are working.

The IRST developed a process (described here) to nominate new members, which they used for the first time in nominating the two potential members. The IRST values inclusion of diverse ideas and perspectives in support of the Adaptive Management Program, as noted in its founding charter. When discussing the scientific disciplines needed to fill key gaps in IRST expertise, the IRST considered the overall composition of its members through a DEI lens and contacted a diverse group of individuals to apply for potential IRST membership. The IRST will continue to incorporate diverse perspectives into its work.

RECOMMENDATION

The IRST recommends that the Board appoint the following nominees to the IRST:

IRST Nominee	Organization
Josh Roering, Ph.D.	University of Oregon
Michael J. Furniss, M.S.	Smith River Alliance; Sacred Groves; Cal Poly U.-Humboldt (adjunct)

The nominees' CVs are available by following the link below, or by scanning the QR code.
https://www.oregon.gov/odf/board/bof/bof-irst-cv-furniss-and-roering.pdf

NEXT STEPS
The department will coordinate with the IRST Housing Agency named in rule (the Institute for Natural Resources at Oregon State University) to onboard the new IRST members.

ATTACHMENT

1. IRST nomination packet

Oregon State University

Institute for Natural Resources

Oregon State University, 234 Strand Agricultural Hall | Corvallis, Oregon 97331

Phone 541-737-9918 | Fax 541-737-1887 | http://inr.oregonstate.edu

September 18, 2024

Dear Chair Kelly and Board of Forestry Members,

At the meeting of the Independent Research and Science Team (IRST) on September 4, 2024, a process to nominate new members was voted on as a substantial decision and unanimously approved consistent with Oregon Laws 2022, section 38(6), chapter 33 and OAR 629-603-0400(2)(f). The IRST followed this process, based on Robert's Rules of Order, in nominating the two additional members, who we are now submitting to the Board of Forestry for approval.

In compliance with ORS section 38(6), chapter 33, the current composition of the IRST contains one voting member representing "a public institution, the timber industry, and a nongovernmental organization that promotes conservation of freshwater aquatic habitat." Given that the IRST meets this requirement, the two factors prompting our interest in adding members are described below.

The first factor is improving the continuity and decision-making ability of the team. The current five-member team is the minimum number specified in law. If one member leaves, replacing them will likely take several months to complete the recruitment, nomination, and approval processes. Thus, the IRST will fall below the minimum membership, which will prevent all substantial decisions and open non-substantial decisions to challenge until a new member is added. The IRST determined that adding two members best addresses the need and complies with the statutory provision that the total voting membership must be an odd number. This accommodates temporary absences, enabling flexibility in meeting the legal requirement that "the team shall make substantial decisions by a vote of at least two-thirds of team members" and maintains overall efficiency in decision making.

The second factor is the mix of disciplines deemed necessary for providing the highest quality, unbiased science to meet the immediate and near-future policy demands of the Adaptive Management Program Committee (AMPC) and the Board of Forestry. The two research questions that have been posed by the AMPC to the IRST concern monitoring the hydrologic connectivity of roads and a literature review of steep slopes in eastern Oregon. Based on discussions with the Chairs of the AMPC, the IRST anticipates beginning work on three additional topics over the next year. These involve developing: 1) studies of the

amphibians considered in the Private Forest Accord Report, 2) a strategy to monitor the efficacy of the steep slopes model that is used to identify Slope Retention Areas and Designated Debris Flow Traversal Areas under OAR 629 Division 630, and 3) a program to monitor the status and trends of stream and riparian characteristics, such as large wood, shade, and fine sediment, for effectiveness monitoring under OAR 629-603-0100(1)(a). Given these five topics and taking into account the expertise of current members, the IRST prioritized adding a forest hydrologist, geomorphologist, forest/roads engineer, or forest ecologist/riparian ecologist. Another consideration was to add someone with applied experience.

Within this overarching context, the IRST is fortunate to be nominating for Board of Forestry approval two highly respected experts, Dr. Josh Roering, who is a geomorphologist, and Mr. Michael Furniss, who is a forest hydrologist with applied expertise related to roads.

Respectfully submitted on behalf of the IRST,

Kelly Burnett

Kelly M. Burnett, PhD
Chair, Independent Research and Science Team

CC: Lisa Gaines, PhD
Director, Institute for Natural Resources

Oregon State University

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September 19, 2024

Dear Chair Kelly and Board of Forestry members,

It is my honor to recommend Dr. Josh Roering as a member of the Independent Research and Science Team (IRST). Dr. Roering is a highly respected geomorphologist and a Professor in the Department of Earth Sciences at the University of Oregon. His studies underpin much of what we know about landslides and debris flows in the Pacific Northwest. Dr. Roering's research emphasizes understanding about how tectonics, climate, fire, and anthropogenic activities impact floods, soils, erosion, and landslides. Results of this research have been disseminated in over 100 peer-reviewed publications. His career during the past 25 years includes advancing theoretical perspectives in geomorphology and applying that theory to address real-world challenges related to public safety and land management.

Dr. Roering will bring outstanding skills in geomorphology to the IRST that include topographic and statistical analyses, laboratory analyses, field experimentation, and modeling. He will also contribute to the collaborative nature of the IRST in that he has routinely worked across cultures and disciplines. He has experience collaborating with tribal communities and with professionals from disparate technical fields such as engineering, biology, atmospheric science, insurance policy, anthropology, risk management, and soil science.

Dr. Roering has led and participated on numerous teams with various objectives related to planning, conducting, overseeing, and evaluating science. Among these, he served as the Head of the Department of Earth Sciences at the University of Oregon and on the Board of Directors for the University Navstar Consortium (UNAVCO), which is a 110+ employee, non-profit, NSF-funded consortium for measuring the Earth's surface. Dr. Roering has been a member of several scientific committees, including those of the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF). He also was on the editorial team of the top peer-reviewed journals in his field. Through such service along with his own history of successfully funded research, Dr. Roering has extensive expertise in drafting and reviewing scientific proposals and manuscripts.

Dr. Roering has demonstrated experience in interpreting science for policy makers, the public, and other scientists. He currently serves on the advisory committee for the Center for Scientific Communication Research at the University of Oregon. In 2018, Dr. Roering was recognized as a Fellow of the American Geophysical Union (AGU), which is the largest international organization dedicated to Earth and space sciences. Fellows "demonstrate scientific eminence in science through achievements in research" and "exemplary leadership in following and promulgating AGU values such as mentoring, public engagement, and communication."

I have collaborated with Dr. Roering on research projects that resulted in peer-reviewed publications and can personally attest to his scientific excellence, integrity, objectivity, and collegial spirit. The State of Oregon will be exceedingly fortunate to have a scientist of Dr. Roering's caliber join the ranks of the IRST in supporting the missions of the Adaptive Management Program Committee and the Board of Forestry.

Respectfully submitted,

Kelly Burnett

Kelly M. Burnett, PhD
Chair, Independent Research and Science Team

CC: Lisa Gaines, PhD
Director, Institute for Natural Resources

Oregon State University

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Phone 541-737-9918 | Fax 541-737-1887 | http://inr.oregonstate.edu

September 19, 2024

Dear Chair Kelly and Board of Forestry members,

I am honored to recommend Mr. Michael Furniss as a member of the Independent Research and Science Team (IRST). He is a forest hydrologist and one of the nation's experts on forest roads. Mr. Furniss has developed training materials and software as well as authored numerous peer-reviewed publications, technical reports, and science syntheses regarding roads. These products address topics such as transportation analysis and planning, fish passage through road-stream crossings, responses of roads to floods and landslides, methods of monitoring roads and assessing risk, and evaluating potential hydrologic connectivity of roads and implications for water quality and aquatic habitat.

Throughout his career, Mr. Furniss has designed and implemented monitoring systems that promoted accountability and enabled adaptive management. He developed a system for monitoring the implementation and effectiveness of Best Management Practices in the National Forests of California, which was adapted for use in all National Forests and Grasslands across the United States. Mr. Furniss also served for two years as Team Leader during development of the Aquatic and Riparian Effectiveness Monitoring Program (AREMP) for the 27 million acres of federal lands in Oregon, Washington, and California managed under the Northwest Forest Plan.

In addition to his applied work with the U.S. Forest Service, Mr. Furniss has conducted research and consulted internationally on matters related to land management and adapting to a changing climate. He is an Adjunct Professor at the California Polytechnic University-Humboldt in the Department of Environmental Resource Engineering and in the Department of Forestry, Fire, and Rangeland Management. Mr. Furniss has advised governments and taught foresters in the United States, Vietnam, India, Ecuador, Columbia, and Peru. For example, he served as a team leader, curriculum developer, and lecturer for a short course in "Environmental Monitoring" presented at the Forest Research Institute of India to senior foresters and policy makers.

Mr. Furniss has extensive experience collaborating on and leading interdisciplinary teams. His practical and scientific knowledge along with excellent communications skills resulted in his appointment at the

Pacific Northwest Research Station as a "Boundary Spanner." That position was created to facilitate dialogue among policy makers, practitioners, and researchers for the purpose of advancing and applying the most relevant watershed science to forest management.

I have had the good fortune to interact professionally with Mr. Furniss on many occasions over the last 30 years. He is the rare individual who can draw on a deep well of technical knowledge to solve practical problems. Mr. Furniss is one of the most effective and compelling communicators I have encountered. He seems to have the capacity to engage any audience when translating complex technical issues into common-sense understanding. Given his knowledge of forest hydrology, applied experience, collegial approach, and outstanding ability to communicate, Mr. Furniss will be a valuable asset to the IRST. Further, his experience working in California and the Rocky Mountains will benefit the IRST when tackling issues for Oregon's drier private forestlands. The State of Oregon will be exceedingly fortunate to add Mr. Furniss' broad portfolio to help fulfill the role of the IRST in supporting the Adaptive Management Program Committee and the Board of Forestry.

Respectfully submitted,

Kelly Burnett

Kelly M. Burnett, PhD
Chair, Independent Research and Science Team

CC: Lisa Gaines, PhD
Director, Institute for Natural Resources

Statement of Interest, Independent Research and Science Team, Oregon Board of Forestry
Josh Roering, Eugene, Oregon, 3-September-2024

My interest in serving on the IRST stems from my decades-long focused study of geomorphic processes in forested steeplands. While the early stages of my academic career were devoted to advancing theoretical perspectives in geomorphology, more recently my priorities have shifted to improve our use of theory and emerging datasets to address pressing challenges. More specifically, my research group uses an array of tools, such as topographic and statistical analyses, analog experiments, computational models, and laboratory analyses, to document and quantify landscape form and geomorphic process rates and tackle questions relevant to public safety and land management. These questions often require us to bridge highly disparate timescales and decipher how tectonics, climate, and anthropogenic activities impact erosion, landslides, floods, and soils. Because the Earth's surface is the product of a complex and fascinating suite of processes, our ability to be predictive demands a well-articulated geomorphic perspective that is informed by the long term trajectory of landscapes. Serving on the IRST will enable me to contribute my experience and skills to assess how forest management influences mass wasting processes in eastern Oregon, which is an understudied question, as well as assess the accuracy of models for steepland processes, particularly landslides, in western Oregon.

My ability to serve on IRST is compatible with my academic appointment at the University of Oregon. My teaching, research, and administrative commitments afford substantial flexibility to commit to IRST meetings and project work. In addition, I have the ability to draw upon the expertise and availability of my graduate students, who are highly skilled in numerous analyses and characterization of the literature.

Over the course of my career, I have evaluated and interpreted science in a wide range of venues. For example, I served as an associate editor for two prominent scientific journals, reviewed >600 scientific manuscripts and proposals, and delivered over 100 talks to scientific communities as well as the general public. I have been interviewed by a wide array of national news outlets, such as the New York Times and Fox Weather Channel, on multiple occasions, and I currently serve on the advisory committee for the Center for Scientific Communication Research at the University of Oregon. My research program enables me to collaborate broadly and my recent scientific papers include colleagues from disparate fields, such as engineering, biology, atmospheric science, insurance policy, anthropology, risk management, and soil science.

In recent years, I gained substantial experience working and collaborating in teams. During my 7 years as department head and associate department head, I oversaw the instructional, research, and outreach activities for over 180 people, including faculty, researchers, students, and staff. More recently, my work on two multi-disciplinary National Science Foundation projects focused on landslide hazards in SE Alaska has allowed me to work directly with tribal communities to inform their efforts to become more resilient and mitigate risk related to landslides and floods. Thus far, this work has resulted in the creation of landslide warning systems, hazard maps, and meaningful partnerships between tribes, governmental agencies, non-profit organizations, and academic institutions. Finally, as an Oregonian (at least since 2000), I am deeply committed to advancing our understanding of Oregon landscapes.

September 1, 2024

Michael J. Furniss

I am writing to express my strong interest in joining the IRST group. I understand the position requires significant part-time work, which aligns with my availability and professional goals.

With over four decades of experience in forest watershed management, I can bring valuable expertise to your team. My background includes:

- 40+ years of experience in watershed- and fish-friendly roads, including teaching, technology development, transportation analysis and planning, inventory, research, and monitoring of wildland road impacts to water quality and aquatic habitats.
- 20 years of specialized work in fish passage through road-stream crossing culverts, including as the primary developer of the FishXing software and learning system, which remains in use worldwide.
- 35 years of developing and implementing land management monitoring systems that promote accountability and adaptive results. With two others, I developed a system for monitoring the implementation and effectiveness of Best Management Practices for the National Forests of California. After ~10 years of implementation, this system was seen as highly effective and efficient and was adapted for use in all National Forests and Grasslands in the USA. The national system has been in use for ~14 years and provides robust accountability and findings that directly support adaptive corrections. I was primarily responsible for the roads portion of the National BMPs and the associated BMP monitoring.

Throughout my career, I have collaborated across disciplines with professional teams. My interdisciplinary approach and broad knowledge of both science and management led to my appointment at the Pacific Northwest Station in 2000 as a "Boundary Spanner," where my primary role was to bridge scientific research and land management.

I retired from the Forest Service in 2013. I have stayed active, teaching about climate change and vulnerability assessment internationally in SE Asia, South Asia, and NW South America, as well as conducting many large-scale climate vulnerability assessments of infrastructure on public lands in the western US. I function as the primary Subject Matter Expert for the Forest Service's annual International Seminar in Climate Change. I am also a developer of a green, tree-based cemetery near here and contribute expertise to others doing conservation burial work.

My background in watershed management, wildland road impacts, aquatic ecology, and monitoring systems, combined with my collaborative, team-oriented approach, would be an asset to your team.

I am excited about possibly contributing to the IRST's important work.

Thank you for your consideration.

Sincerely,

Michael J. Furniss
Adjunct Professor
Department of Forestry, Fire, and Rangeland Management
California Polytechnic University, Humboldt