DRAFT v2 – 11 December 2025

INSTITUTE FOR NATURAL RESOURCES

Oregon State University

Independent Research and Science Team

Road-Stream Hydrologic Connectivity Baseline Assessment and Sediment Delivery Trends Project

2026

Request for Proposals

Announcement Date: DAY, DATE, 2026

DRAFT NOTES:

Blue font is new text; bold is to call attention to it; underlined is hyperlinked

Black font is text already seen by the IRST

Red font is to call attention to

Pink font is information needed

Full Proposals Due: DAY, DATE, 2026, before 11:59 p.m. PT

Late and/or incomplete applications will not be considered.

Individual Requests: Not to exceed $AMOUNT per year

Anticipated Funding: 1 project, Total approx. $AMOUNT over NUMBER years

Project Duration: DATE through June 30, 2030

Available funding is set by the Adaptive Management Policy Committee (AMPC) based on Oregon Board of Forestry approval and subject to change and rescission.

The Institute for Natural Resources at Oregon State University is the housing agency of the Independent Research and Science Team.

Table of Contents

Summary

THIS SECTION WILL BE COMPLETED WHEN THE RFP IS NEAR ITS FINAL DRAFT

It will be more like an executive summary.

I. Introduction

Based on stakeholder negotiations documented in the Private Forest Accord Report, the Oregon legislature, in Senate Bill 1501 in the 2022 session, directed the Board of Forestry to update the state's forest practice rules and set up the Adaptive Management Program (AMP).

The AMP will help design effectiveness monitoring of forest practices rules and the inform future rulemaking to support the state's 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 the best available science to assess the effectiveness of rules for achieving the biological goals and objectives described in the HCP. The AMP includes two advisory bodies: (1) the Adaptive Management Program Committee (AMPC), which develops the policy direction for the program, including the research questions; and (2) the IRST, which supports the work of the AMPC by developing research and monitoring options in response to AMPC-developed research question packages, and oversees research and monitoring to address the policy direction.

In Oregon Administrative Rules (OAR) 629-603-0100(8), "requirements of baseline and trend monitoring of road rules" was one of three topics called to be prioritized in the initial phase of the Adaptive Management Program. The AMPC, with input from the IRST, developed the following set of questions to address this legislative direction (for full contextual information see Appendix A):

What is the baseline status of hydrologic connectivity of roads prior to the implementation of the OFPA road rules effective Jan 1, 2024?

a. How does the status of hydrologic connectivity differ based on landowner type and East/West region?

b. How do particular elements of the regulatory framework (e.g., road location) or site characteristics (e.g. geology) contribute to hydrologic connectivity?

Public Benefit, Target Audience, and Product Use NEEDS DISCUSSION

This project will contribute to the knowledge associated with road-stream connectivity by:

- Assessing hydrologic connectivity between roads and streams, and models associated with amounts of sediment delivery.
- Including all connectivity-only metrics listed in Option 1 of the scoping proposal, in addition to the modeled delivery of road sediment to streams.
- Informing ~~the development of performance targets and~~ the effectiveness of road rules in achieving biological goals and objectives (BGOs) related to hydrologic disconnection and sediment delivery.

The primary audience for the Final Report is the IRST. Other audiences include the Oregon Board of Forestry, AMPC, and a diversity of interested stakeholders whose continued interest will contribute to the ODF Adaptive Management Program.

The products and deliverables from this project will be used to evaluate and inform regulation, policy, technical guidance, training, and identify information gaps.

II. General Proposal Submission Information

A. Schedule of Dates for Proposal Submission and Review

Item	Timeline
Request for proposal (RFP) announced	DATE
RFP information meeting	2 weeks after announcement
Written questions submission deadline	1 week after info meeting
Responses posted on website	1 week after written question deadline
Full proposals due	10 weeks after announcement (before 11:59 pm Pacific Time)
Review period	4 weeks after full proposals due
Reviews to investigators	6-7 weeks after full proposal due
Tentative notice of funding decisions	7-8 weeks after full proposal due
Overview of pros and cons to entities that were not selected	1 week after tentative notice of award
Award agreement set up	2- to 3-month time period
Successful projects begin	Approximate DATE

Note: This timeline is subject to change. Any updates will be posted on Oregon State University's (OSU) Institute for Natural Resources (INR) IRST Grant Opportunities webpage (LINK) and disseminated through email.

B. Eligibility Information

Full proposals may be submitted by individuals and organizations with the capacity, expertise, demonstrated experience, and qualifications to successfully fulfill the requirements and the deliverables. IRST members are also eligible proposers. As per OAR 629-603-0200(6)e, "If an IRST member applies for an RFP, the IRST shall ensure RFP selections follow conflict of interest standards as established by the Oregon Government Ethics Commission." Oregon Government Ethics law defines two types of conflicts of interest: actual conflicts of interest (ORS 244.020(1)) and potential conflicts of interest (ORS 244.020(13)).

The project's lead Principal Investigator (PI) must be deemed eligible by their institution to receive extramural funding. Note: Only one full proposal for each Principal Investigator may be submitted.

C. Statement of Work

The IRST seeks a proposal that encompasses the following components:

- The IRST seeks a proposal that encompasses the following components:
- Pre-survey Options 1 & 2 that save time and money by using geospatial data to identify optimal field work for the study;
- A sample stratification based on differences in ownership (large vs. small landowner) and geography (eastern vs. western Oregon);

- A baseline assessment of road-stream hydrologic connectivity soon after the start of the new Forest Practices Act (FPA) rules; and,
- Modeling to assess ~~tren~~ds in sediment delivery from roads to streams.

Preference for a Watershed Approach

DOCUMENT 4c for 3 December IRST meeting (SEAN, JEFF, ELLEN, AND MICHAEL)

Proposals should also address each of the following objectives: DOCUMENT 4c for 3 December IRST meeting (SEAN works on this)

- Component 1: Geospatial analysis to identify optimal field work practices for the study

  Objective(s) or Questions: _____

- Component 2: Sample stratification based on differences in ownership (large vs. small landowner) and geography (eastern vs. western Oregon)

  Objective(s) or Questions: _____

- Component 3: Baseline assessment of road-stream hydrologic connectivity soon after the start of the new Forest Practices Act (FPA) rules

  Objective(s) or Questions: _____

- Component 4: Sediment modeling to assess trends in sediment delivery from roads to streams.

  Objective(s) or Questions: _____

D. Duration of Grant, Anticipated Deliverables, and Anticipated Milestones

The duration of proposed work is estimated to be about 4 years (48 months), after the 2- to 3-month award set-up period. The proposed work should begin DATE at the earliest, and deliverables, including the final report, are due no later than June 30, 2030. Requests for support exceeding 4 years will not be considered. Proposals to continue work beyond the initial 4 years should be entered into a future competition.

Anticipated Project Timeline

Project	Milestone	Completed *(months since project start)*
Road-Stream Hydrologic Connectivity Baseline Assessment and Sediment Delivery Trends Project	Preparation for field data collection	15–18
	Complete data collection	27–30
	Complete data analysis & draft reports	42–46
	Complete final report	48

Anticipated Deliverables and Interactions with the IRST

Deliverables	General Date
Kick-off meeting	Within 3 weeks of project start
Progress reports due to IRST	Quarterly
Interactions with IRST liaison and for key decisions/milestones	Monthly, as needed
Interactions with IRST	Quarterly
Ad hoc convenings with IRST during substantive decision points	Ad hoc
Present to the AMPC and/or Board of Forestry	As requested
Draft technical scientific final report	12 weeks before project end
Data*	8 weeks before project end
IRST returns draft to PI with comments	6 weeks before project end
Detailed final report*	2 weeks before project end
An after-action review meeting between the IRST and the contractor and other cooperators*	Last day of project

* Indicates deliverables as defined in rule, OAR 629-603-0200(6)b.

Anticipated Milestones and Interactions with the IRST

Milestones	General Date
Unless specified in the proposal, the choice of and justification for selecting either a land-grid–based approach, such as that used by Dubé et al. (2010), or a watershed-based approach.	TBD
Refine the sampling design (e.g., paired, unpaired, or rotating panel).and analytical methods to support both baseline and subsequent trend analysis and to account for any improvements conducted under the FRIA process.	TBD
Finalize any remaining details and justification for sampling methods to ensure all strata (i.e., large and small land ownerships in western and eastern Oregon) are sufficiently represented, including the targeted statistical power, needed sample size, scale of sample grids or watersheds, criteria to identify locations for field work within sample units (e.g., census of all road segments or just road segments most likely to have a high degree of road-stream hydrologic connectivity), metrics to assess the degree of connectivity and sediment delivery of roads to streams.	TBD
Report on the adequacy of available GIS data, including roads, LiDAR-derived DEMs, landowner class, and hydrography.	TBD
Finalize the approach for interacting with landowners and obtaining permission to access sampling locations.	TBD
Refine the methods for any characterization of the road/stream environment from DEMs using GIS, including for crosswalking with field data and data storage.	TBD

Milestones	General Date
Report on results from any characterization of the road/stream environment from DEMs using GIS	TBD
Finalize the approach for collecting and storing data, including: 1) training procedures for field staff, 2) field methods, and 3) QA/QC plan	TBD
Early progress on field-data collection with justifications for any needed adjustments.	TBD
Mid-field season progress on field-data collection	TBD
End of season report on field-data collection	TBD
Refine analytical methods for characterizing the baseline level of road-stream hydrologic connectivity and modeling of sediment delivery	TBD
Progress report on analysis of baseline hydrologic connectivity and modeling of sediment delivery	TBD
Present draft final report	TBD

E. Funding

NEEDS DISCUSSION DUE TO POSSIBLE RECISSION OF 2025-2027 FUNDS FOR RESEARCH

The maximum funding request for this competition is $AMOUNT or less per year. Grant funding comes from the Oregon Department of Forestry and totals an estimated $AMOUNT over 4 years for research related to road-stream hydrologic connectivity. Available funding is subject to change and rescission.

F. Cost-share Requirement

There is no cost share required for this grant opportunity.

G. ODF Data Sharing Requirement

NEED THIS INFORMATION FROM TERRY

III. Proposal Development and Evaluation Process

A. Transparent Review Process and Guidance for Proposers

The IRST is committed to a fair and transparent review process that addresses both study designs and study reports (OAR 629-603-0400(4)(d)). INR is also providing guidance to PIs on preparing proposals that can be easily blinded by INR after submission (i.e., to facilitate removal of identifying information). This guidance will also be available on INR's IRST Grant Opportunities webpage:

- ~~INR will redact names for all project personnel from all proposal materials before materials are publicly shared. Biosketches, information on current and pending support, and budgets and budget justifications will not be publicly shared. Full application materials will be shared with the reviewers.~~
- Consistent use of names and spelling is encouraged (e.g., use either nickname or full name throughout the proposal package, including budget materials).
- Be mindful when citing resources by the Lead PI and/or CoPIs. Although this may be helpful for traditional review, it may make anonymity difficult to maintain.

B. Proposal Development Process

The development and review of proposals is a multi-step process:

1. The IRST will conduct a question-and-answer period to help potential proposers better understand the research requirements and policy context, and to ask any clarifying questions. This will occur via an online meeting, as well as through the submission of written questions. Responses to written questions will be posted on the IRST RFP webpage.
2. Full proposals will be submitted via DETERMINE MECHANISM TO SUBMIT PROPOSALS before 11:59 p.m. Pacific Time, DATE. No incomplete or late proposals will be accepted. All provided narrative guidance must be followed.
3. Full proposals are rigorously reviewed following the process outlined in Section III.C of this RFP. Proposers are required to provide the names, affiliation, and primary expertise of at least three potential reviewers from outside of Oregon. INR asks that proposers avoid reviewers who have any conflicts of interest (LINK TO CONFLICT OF INTEREST DEFINITION) with your proposal team. This information can be provided using MECHANISM TO PROVIDE THIS INFO.
4. A review panel comprised of external reviewers and an IRST Lead will evaluate the proposals using the review criteria provided below.
5. The full IRST will consider these evaluations and select a proposal to recommend for funding.

6. Final decisions for IRST-funded proposals are approved by the _____. Recommended proposals are expected to complete _____.

7. Proposers will be informed of final decisions by mid- or late-MONTH & YEAR. INR and the IRST reserve the right to negotiate and/or adjust the final grant amount and work plan prior to award, as appropriate and consistent with university policy and funds available.

C. Evaluation Process and Decision Criteria

The IRST aims to fund a scientifically robust proposal that encompasses the following components:

- Pre-survey Options 1 & 2 that save time and money by using geospatial data to identify optimal field work practices for the study;
- A sample stratification based on differences in ownership (large vs. small landowner) and geography (eastern vs. western Oregon);
- A baseline assessment of road-stream hydrologic connectivity soon after the start of the new Forest Practices Act (FPA) rules; and,
- Sediment modeling to assess trends in sediment delivery from roads to streams.

Proposals that do not follow the guidelines outlined in this RFP will not be reviewed. Each compliant full proposal will be reviewed by external peer reviewers and an IRST Lead. External peer reviewers will provide both written comments and a proposal rating using the following criteria. All written peer reviews will then be provided to the IRST, who will review the proposals and external reviewer scores, and make the final funding recommendation to the AMPC, which will provide the recommendation to the Oregon Board of Forestry.

As per rule, all selected reviewers will be identified. INR will make their names available on its IRST Grant Opportunities webpage (LINK); however, the reviewers will not be directly associated with individual reviews.

Review Criteria and Weight

Proposers should directly and explicitly address the following criteria within their proposal. Each submittal will be rated using a point system, with a total of 100 points possible. Proposers will be evaluated based on the quality and extent to which criteria are addressed; failure to provide applicable information in the proposal will affect the score:

Specific Project Criteria (maximum total points for this section is 50)

- Responsiveness–~~R~~elevance¿How responsive is the proposal to the RFP criteria?
- Timeline¿To what degree can the stated deliverables be completed within the proposed timeline?
- Deliverables¿To what degree are the deliverables clearly defined?
- Methodology¿To what degree does the project advance the state of the science through clear, understandable, and robust methods?

- Soundness–Technical.Merit¿To what degree is the proposed project feasibly and technically sound?
- Quality.Assurance–Quality.Control.(QA–QC)¿How well does the field work proposed incorporate quality assurance/quality controls into its approach (e.g., approach taken to recruit field workers, approach taken to ensure data is collected per stringent standards)?

Project Team Qualifications (maximum total points for this section is 25)

- Knowledge¿Project team has specialized knowledge in the RFP topic areas.
- Experience¿Project team has research or appropriate experience relevant to proposed work.
- Project.Understanding: Project team has demonstrated understanding of needed research.

Project Budget (maximum total points for this section is 25)

- Alignment¿Project budget is justified and aligned with project goals, deliverables, and milestones.
- Reasonableness¿Project supplies, materials, equipment, personnel and other costs are clearly described and reasonable to produce described deliverables.

IV. Full Proposal Submission Guidelines

Below are details on developing and submitting the full proposal. This guidance is also available on INR's IRST Grant Opportunities webpage (LINK). Full proposals must be submitted using DETERMINE MECHANISM FOR PROPOSAL SUBMISSION. Full proposal submittal instructions and requirements will be available on IRST Grant Opportunities webpage (LINK).

A. Requested and Required Information for Full Proposal

A full proposal has three categories of requested and required information:

- Basic Information
- Proposal Narrative
- Supplemental Information

NOTE: Principal Investigators at OSU do not need to submit proposals through the Cayuse system.

B. Full Proposal Guidelines

Below are details on developing and submitting the full proposal. This guidance is also available on INR's IRST Grant Opportunities webpage (LINK). Full proposals must be submitted using _____. Full proposal submittal instructions and requirements will be available on IRST Grant Opportunities webpage (LINK).

B.1 Title Page

The title page (1-page limit) must include the following basic information:

1. Project Title
2. Project Duration, including start and end dates
3. Principal Investigator (primary contact for the project)
   a. Title/Position
   b. Institution
   c. Telephone number
   d. Mailing address
   e. Email address
   f. Conflict of interest declaration
4. Additional Team Members – name, institution, telephone, email, and conflict of interest declaration
5. Date of Submittal
6. Total Budget Amount
7. Abstract or Executive Summary (300-word limit)

B.2 Proposal Narrative

There is a 14-page limit for the narrative. The page limit includes graphs and tables but excludes references and the additional requested/required elements listed above. All pages must be single-

or double-spaced, 12-point font (Times New Roman, Arial, or Calibri preferred), and printable on 8.5-inch x 11-inch paper, with 1-inch margins.

Your narrative should include the following sections:

a. Technical Proposal/Project Approach (10-page limit)

Describe each objective/component of the proposed work plan and how it links to the deliverables in the Scope of Work. Give reviewers ample information regarding the following: 1) how you will access or generate the needed data and information needed for the analyses; 2) what methods and tools (e.g., models, special analytical approaches, etc.) you will use; 3) why the methods are appropriate and/or needed, and (4) the role of all project personnel.

b. Field Crew Recruitment and Retention Plan (1-page limit).

Describe how the proposer will recruit and retain field crew. This should include information about training field crew, an overview of field safety measures, continuous quality assurance/quality control, and milestones.

c. Outreach, Engagement, and Recruitment of Private Landowner Plan (1-page limit).

Describe how the team will integrate and solicit – in partnership and with the support of the Oregon Department of Forestry, forestry associations, and large private landowners – voluntary participation from small private landowners. This should include information about how the proposer will introduce the needed work with landowners, how the landowner will be engaged during the work (roles and responsibilities) as well as how the landowner will be notified once work is completed.

d. Data Management Plan (2-page limit)

A Data Management Plan is required, and the contents of this plan (or absence thereof), and past performance regarding such plans, will be considered as part of proposal review. The Data Management Plan must include the following considerations:

- Data security
- The types of data, software, and other materials to be produced.
- How the data will be acquired.
- Time and location of data acquisition, if scientifically pertinent.
- How the data will be processed.
- The file formats and the naming conventions that will be used.
- A description of the quality assurance and quality control measures during collection, analysis, and processing.
- A description of dataset origin when existing data resources are used.
- A description of the standards to be used for data and metadata format and content.
- Appropriate timeframe for preservation.

- The plan may consider the balance between the relative value of data preservation and other factors such as the associated cost administrative burden. The plan will provide justification for such decisions.
- A statement that the data cannot be made available to the public when there are privacy concerns (e.g., "This data cannot be cleared for public release in accordance with the requirements in _____)

The Data Management Plan must also include a brief description of how the PI will address the Oregon Department of Forestry's data sharing requirements and explain how the data and metadata will be stored and provided. Funds may be budgeted in the project proposal for this task.

e. References

Provide those cited in the narrative. Note: This is not part of the 15-page limit.

B.3 Supplemental Information

Supplemental information has its own page number limitations and does not count toward the 14-page proposal narrative limit.

a. Project Timeline (1-page limit)

Using the Milestones and Deliverables Timeline in the Scope of Work as a guide, provide a detailed outline of the team's proposed strategy and discuss how the success of the project (i.e., objectives, timelines, milestones) and outcomes of the project will be measured and reported.

b. Project Management (1-page limit)

Describe how the project will be managed to achieve the project's outcomes and deliverables.

c. Qualifications

- Supply curriculum vitae or biosketch for the PI, co-PIs, and key persons (2-page limit, each). Biosketches should include information regarding recent projects pertinent to this RFP call.
- Disclosure of Current and Pending Support:

  I. A list of all current projects the individual is working on, in addition to any future support the individual has applied to receive, regardless of the source.
  II. Title and objectives of the other research projects.
  III. The percentage per year to be devoted to the other projects.
  IV. The total amount of support the individual is receiving in connection to each of the other research projects or will receive if other applications are awarded.
  V. Name and address of the agencies and/or other parties supporting the other research projects.
  VI. Period of performance for the other research projects.

d. Budget and Budget Justification

Clear, concise, and accurate budget and budget justification reflect the proposer's financial plan for accomplishing the effort contained in the technical proposal. The PI shall submit a full budget in sufficient detail so that a determination of reasonableness can be made. The budget is to be completed using the budget template (LINK).

Using a budget justification template (LINK), the lead PI is also required to provide complete justification for each dollar value entered for each project year in the budget for various categories, which may include the following:

- *Direct Labor*: Direct labor should be detailed by level of effort (i.e., numbers of hours, etc.) of each labor category and the applicable labor rate. The source of labor rates shall be identified and verified. If rates are estimated, please provide the historical based used and clearly identify all escalation applied to derive the proposed rates.
- *Fringe Benefit Rates*: The source of fringe benefit rates shall be identified and verified.
- *Travel*: Travel costs must include a purpose and breakdown per trip to include destination, number of travelers, and duration.
- *Materials/Equipment*: List all material/equipment items by type and kind with associated costs and advise if the costs are based on vendor quotes and/or engineering estimates; provide copies of vendor quotes and/or catalog pricing data.
- *Subaward costs*: Submit all subaward proposals and analyses. Provide the method of selection used to determine the subaward. Note: A letter of commitment is required from each subaward source. Please use the form (LINK).
- *Tuition*: Provide details and verification for any tuition amounts proposed.
- *Indirect Cost*: Currently the negotiated indirect rate for awards is 26%. Note: For OSU PIs, indirect cost is charged to all direct costs. For non-OSU PIs, indirect cost is only applied to the first $25,000.
- *Any other proposed direct costs*: The source should be identified and verified.

e. Letters of Commitment and Support

As part of the full proposal application, the following letters of commitment are required or optional:

- Letters of commitment from each PI and co-PI's authorized representative (required) (please use the template provided here).
- Letter of commitment from each subaward source (required, if applicable)
- Up to 3 letters of support from project partners or interested parties (optional; encouraged but not required)

All letters should be submitted as PDFs.

V. Award Administration Information

A. Notice of Award

The IRST, via INR, will send an email to the Principal Investigator(s) (PI) notifying them that they have been selected to receive a grant. After the PI(s) acknowledge(s) that they have received the email and accept(s) the grant award, an official "Notice of Award" will be sent. The Notice will include the following:

- Period of performance
- Name of the principal investigator
- Dollars committed and/or obligated
- Future year commitments
- Cost sharing (if required)
- Accounting and reporting obligations
- Deliverables
- Payment to awardee
- Special terms and conditions
- General terms and conditions

B. Award Conditions

In addition to the Notice of Award, OSU and INR prepare an agreement/contract that fully describes the conditions of the award for signature by all institutional partners. Principal investigators cannot sign on behalf of their home organization/institution/unit. The project cannot begin until the agreement or contract is fully executed.

C. Reporting Requirements

NEED TO DETERMINE THESE

VI. Contact

Researchers preparing full proposals for possible IRST funding should contact the program with questions.

For questions about the application, review, and approval process, and the overall funding policy, contact INR Director Lisa Gaines (mailto:lisa.gaines@oregonstate.edu, (541) 737-1976).

For questions on technical aspects or questions about private landowner engagement, contact INR Forest Landscapes Program Manager Sean Gordon (mailto:sean.gordon@oregonstate.edu, (541) 725-6617).

Appendix A: AMPC Roads Research Questions Package

Finalized Research Questions

These finalized research questions were approved by the AMPC at the June 24th, 2024 AMPC meeting.

1. Baseline report
    a. What is the baseline status of hydrologic connectivity of roads prior to the implementation of the OFPA road rules effective Jan 1, 2024?
    b. How does the status of hydrologic connectivity differ based on landowner type and East/West region?
    c. How do particular elements of the regulatory framework (e.g. road location) or site characteristics (e.g. geology) contribute to hydrologic connectivity?
2. Trend monitoring
    a. What are the trends in the status of hydrologic connectivity of roads over 5-year intervals? These trends should be assessed for the same variables in question 1.
3. Determination of rule effectiveness
    a. Within 25 years, to what extent are road rules associated with hydrologic disconnection effective at achieving biological goals and objectives?

Preliminary Research Questions Package: Contextual Information

The remainder of this document provides contextual information that details the context for the preliminary research questions, as required by rule[1]. The following are organized per the elements in this rule.

B.1 The type of research[2]
This research is of type OAR 629-603-0100(1)(a): *"Conduct effectiveness monitoring by assessing the degree to which the rules facilitating particular forest conditions and ecological processes achieve the biological goals and objectives. This assessment may include evaluation of cumulative effects."*

B.2 The rule, biological goals and objectives (BGOs), or other issue being studied[3]
Note that 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.The BGOs are listed below with those applicable to these questions in bold italic:

"Overarching.Goal¿*Forest practices that support the survival and recovery of the covered species by providing clean, cool, connected, and complex habitats.*
Goal.7¿*Provide clean water and substrate for the covered species.*

[1] OAR 629-603-0200 (3)(a)
[2] OAR 629-603-0200(3)(a)(A)
[3] OAR 629-603-0200(3)(a)(B)

- Objective.7¡7 - Forest.practices.near.streams.minimize.sediment.delivery¡
- *Objective 1.2 – Slope Retention Areas reduce episodic sediment delivery to fish-bearing streams.*
- Objective.7¡9 – Road.runoff.directly.to.streams.is.minimized¡
- Objective.7¡0.- .Roads.are.not.a.significant.source.of.episodic.sediment.delivery.to. streams¡

Goal.8¿*Shade and watershed processes controlling stream temperature provide cool water compatible with the needs of the covered species.*

- *Objective 2.1 – Forest practices maintain stream shade sufficient to support desired cool water temperatures on fish-bearing streams.*
- *Objective 2.2 – No-harvest RMAs maintain stream shade sufficient to support desired cool water temperatures for covered amphibians.*
- *Objective 2.3 – Forest practices near non-fish-bearing perennial streams do not notably increase water temperatures in fish-bearing streams.*

Goal.9¿*Stream network connectivity satisfies freshwater habitat needs for covered species.*

- *Objective 3.1 – Road crossings on fish-bearing streams are passable by the covered fish species.*
- *Objective 3.2 – Forest practices maintain the hydrologic continuity of stream-associated wetlands and stream-adjacent seeps and springs to stream habitats.*
- *Objective 3.3 – Timber harvest maintains stream-associated connectivity in riparian areas along non-fish streams sufficient to support covered amphibians.*

Goal.0¿*Riparian areas function to support complex habitats for the covered species.*

- *Objective 4.1 – Mature, complex riparian forests are fostered in no-harvest zones of RMAs.*
- *Objective 4.2 – Forest practices within tree retention areas of RMAs promote delivery of large wood.*
- *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."*

B.3 The objective of the research[4]

1. To assess the current (baseline) status and trend of roads that are hydrologically connected to streams, and how those vary with practice, region, landowner type, and other relevant strata.
2. Determine the effectiveness of road rules associated with hydrologic disconnection at achieving biological goals and objectives.

[4] OAR 629-603-0200(3)(a)(C)

B.4 A brief description of the context of the research question[5]

The following direction was provided in the PFA Report and provides the foundation for these research questions:

> "4.3.5 Hydrologic Connectivity in Forest Practice Rules (FPR) Revisions and Proposed Inventory Processes
>
> *Hydrologic connectivity occurs where road and ditch runoff is delivered to the natural stream channel system. Roads can generate overland flow due to the relatively impermeable surface of the road prism and can also intercept interflow at cutslopes, effectively converting subsurface flows to surface flows. When these surface flows have a continuous flow path between the road prism and a natural stream channel, hydrologic connectivity occurs (Furniss et al., 2000, pp. 5-6). As Furniss et al. describe, "a hydrologically connected road becomes part of the stream network" (pp. 5-6).*
>
> *Hydrologically connected roads can deliver increased runoff, sediment, and chemicals associated with roads, such as spills or oils generated on the road surface or cutslope. At the watershed scale, connections between roads and streams can also alter the drainage density of the watershed and change runoff frequency and magnitude (See Furniss et al., 2000; Weaver et al., 2015).*
>
> *The Authors agree that the goal of disconnecting roads and streams is to minimize sediment delivery, hydrologic change, and risk of road pollutants entering waters of the state."*
>
> 4.3.10 Development of Monitoring Requirements
>
> *The Independent Research Science Team (IRST) created under the PFA shall design and oversee baseline and trend monitoring for hydrologic disconnection. Compliance monitoring will be conducted through the Department's process.*
>
> 7¡ Baseline.and.Trend.Monitoring.for.Hydrologic.Disconnection¿*The methodology for the monitoring shall be based off of Dube et al. (2010) and Martin (2009). The purpose of the monitoring for hydrologic disconnection is to establish a baseline and to monitor and report the change in hydrologic connectivity over time as the FRIA is implemented. The overarching goal is to ensure that all forest roads and landings shall be hydrologically disconnected to the maximum extent feasible from waters of the state. The Adaptive Management Program Committee shall use the results of the baseline and trend monitoring to develop regional goals consistent with that monitoring. All hydrologic connectivity data should be public and shared as it becomes available to help focus goals, identify accomplishments, and inform statewide learning."*

[5] OAR 629-603-0200(3)(a)(D)

B.5 Other information the AMPC deems necessary for the IRST's work[6]

1. It is essential to maintain the role of the regulatory framework (the OFPA) throughout the design and implementation of studies, including the following considerations:

   a. There are two stratum classifications:

      A. FPA regions, of which there are two - East and West of the Cascade Mountains.

      B. Landowner classifications in the FPA (of which there are two, each with a different regulatory framework for roads) – 1) small forestland owners (RCA); 2) large forestland owners (FRIA).

   Assessments should differentiate Type F, SSBT, and N streams, but the design need not be stratified by stream type. Additional attributes listed in Dube et al. (2010) should also be considered.

2. The AMPC wants to know how metrics of interest (e.g., sediment delivery from roads) compares with background levels.

3. Ideally, the baseline would be for the effective date for the road rules (Jan. 1, 2024); however, the AMPC recognizes that it will take time to refine and scope the research questions, decide on the research agenda, develop and then award the RFP.

4. Research should include field data.

5. When assessing effectiveness of rules, it would be helpful to understand results both individually and cumulatively.

6. This entire research question package would be very complex, long, and expensive to implement as a single research project. Thus, the AMPC would appreciate the IRST dividing up this research question package into discrete projects and developing scoping proposals (per OAR 629-603-0200(4)) for each one.

[6] OAR 629-603-0200(3)(a)(E)

Appendix B: Definitions

Hydrologic Disconnection, OAR 629-600-0100 (71). "Hydrologic disconnection" means the removal of direct routes of drainage or overland flow of road runoff to waters of the state.

Hydrologic Function, OAR 629-600-0100 (72) "Hydrologic function" means soil, stream, wetland and riparian area properties related to the storage, timing, distribution, and circulation of water.

Road. (In rule there are definitions for abandoned roads, active roads, inactive roads, and vacated) NEED DEFINITION/CLARIFICATIONS INCLUDING SURFACE TYPE?

> (2) "Abandoned roads" are defined as roads that were constructed prior to 1972 and do not meet the criteria of active, inactive, or vacated roads. This does not include skid trails.
>
> (5) "Active roads" are roads currently being used or maintained for the purpose of removing commercial forest products.
>
> (74) "Inactive roads" are roads used for forest management purposes exclusive of removing commercial forest products.
>
> (154) "Vacated roads" are roads that have been made impassable and are no longer to be used for forest management purposes or commercial forest harvesting activities.

Road-Stream Hydrologic Connectivity. A road segment is considered hydrologically connected where surface runoff from road cuts, ditches, running surfaces, and fills exhibits a continuous surface flow path to a natural stream channel. (This working definition was adopted by the IRST on 6 March 2025.)

Small Forestland, OAR 629-600-0100(124). "Small forestland" means forestland that has an owner that owns or holds common ownership interest in less than 5,000 acres of forestland in this state, regulated under section 5(1)(b), chapter 33, Oregon Laws 2022.

Small Forestland Owner, OAR 629-600-0100(125). "Small forestland owner" pursuant to section (16), chapter 33, Oregon Laws 2022 and section 2, chapter 34, Oregon Laws 2022, means a landowner who:

(a) Owns or holds in common ownership interest in less than 5,000 acres of forestland in this state;

(b) Has harvested no more than an average yearly volume of two million board feet of merchantable forest products from the landowner's forestlands in this state, when averaged over the three years prior to:

(A) The date the department receives a harvest notification from the landowner; or

(B) If applying for a Small Forestland Investment in Stream Habitat Program grant, the date the landowner submits a grant application; and

(c) Affirms that they do not expect to exceed an average yearly volume of two million board feet of merchantable forest products to be harvested from the landowner's forestlands in this state for 10 years after the department receives the harvest notification or grant application; or

(d) Emergency exception: Any landowner who exceeds the two million board feet average harvest threshold from their land in the three years prior to submitting a harvest notification or grant application to the department, or who expects to exceed the threshold during any of the following 10 years, shall still be deemed a "small forestland owner" if the landowner establishes to the department's reasonable satisfaction that the harvest limits were, or will be, exceeded to raise funds to pay estate taxes or for a compelling and unexpected obligation, such as for a court-ordered judgment or for extraordinary medical expenses.

Sediment Reduction Trends/Sediment Delivery Trends. NEED DEFINITION

Western and Eastern Oregon (OAR 629-635-0220). For the purposes of assigning protection measures to waters of the state, the State Forester has defined two geographic regions west and east of the Cascade Crest in Oregon, depicted as Western Oregon and Eastern Oregon, respectively. The boundaries and names of the geographic regions are displayed in Figure 1. Geographic regions are not "forest regions" established pursuant to ORS 527.640.

Figure 1: Western Oregon and Eastern Oregon Geographic Regions

ATTACHMENT A: Example Agreement

THIS WILL BE A SEPARATE DOCUMENT.