

Northwest Climate Adaptation Science Center Cycle 2, Year 2 Annual Report

1 June 2025



SUBMITTED TO:

U.S. Geological Survey National Climate Adaptation Science Center

SUBMITTED BY:

University of Washington, on behalf of the Northwest Climate Adaptation Science Center Consortium (University of Washington (host), Affiliated Tribes of Northwest Indians, Boise State University, Northwest Indian College, Oregon State University, Portland State University, University of Montana Washington State University, Western Washington University)



ADMINISTRATIVE

Award Recipient

University of Washington
(Carol Rhodes)
4333 Brooklyn Ave NE
Seattle, WA 98195

Contact Information

Meade Krosby, PhD
University Director, Northwest Climate Adaptation Science Center
Email: mkrosby@uw.edu
Phone: 206-579-8023

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PURPOSE AND OBJECTIVES

This report provides a summary of activities completed by the Northwest Climate Adaptation Science Center's (NW CASC) Consortium during the second year of its second hosting cycle, which will be referred to as "Year 2" throughout the remainder of this report. The Consortium completed the agreed-upon deliverables for its second year, which are described throughout this report and include accomplishments in science; training and capacity-building; and communications. In Year 2, the NW CASC Consortium:

- Funded fifteen research projects in support of the NW CASC's *Science Agenda*, involving ten NW CASC Research Fellows, five Faculty Fellows, and a diverse suite of partners from federal, state and Tribal resource management agencies;
- Provided NW CASC Research Fellows with actionable science skills through a capacity-building curriculum developed and coordinated by the University Host, and provided a new and condensed, two-day actionable science workshop for Faculty Fellows;
- Held four, virtual information sessions for NW CASC programming: two welcome calls for the 2024-25 Research Fellows and the 2025 Faculty Fellows and two information sessions for those interested in applying for the 2025-26 Research Fellowship Program and 2026 Faculty Fellowship Program;
- Organized visits to Consortium partners UM and BSU, which included seminar presentations as well as one-on-one visits with Consortium faculty, staff and students;
- Planned a *Deep Dive* into the science and management of the ecological impacts of extreme heat events in the Northwest, bringing together over 80 natural resource managers and scientists to identify actionable science and co-production priorities;
- Strengthened relationships and participation of the Consortium Leadership Team and other partners in NW CASC activities through the *Deep Dive* process;
- Hired a Research Scientist to coordinate the NW CASC Actionable Science Deep Dives;

- Hired a Graduate Research Assistant to support the NW CASC communications program during the winter quarter; and
- Strengthened cross-CASC collaborations through participating in regular network-wide meetings of the CASC University Directors, Deputy/Assistant Directors and communications staff.

ORGANIZATION & APPROACH

The NW CASC Consortium is led by a Consortium Leadership Team (CLT) composed of the University Director, Deputy Director and co-PIs from each of the Consortium universities (Tables 1 and 2). The CLT collaboratively selects Research Fellowship projects in consultation with the NW CASC USGS Director and oversees award and sub-award administration. The CLT meets roughly every other month by video conferences convened by the University Director and is in frequent contact regarding Consortium operations, strategic opportunities and Consortium-member specific management issues. The University Director and Deputy Director oversee, manage and supervise NW CASC-funded (“core”) personnel at the University of Washington (Table 1).

Table 1. Individuals funded by the NW CASC USGS award at the host institution (UW) and sub-award institutions. Projected FTEs relative to 12 months unless noted.

INSTITUTION	PERSONNEL
<i>Core NW CASC Personnel</i> – Oversee and complete NW CASC consortium activities.	
University of Washington	Meade Krosby (University Director, 0.3 FTE), Scott Kalafatis (Deputy University Director, 1 FTE) Darcy Widmayer (Communications Manager, 1 FTE), Sarah Lindner (Awards Manager, 0.5 FTE for 1 month), Drew Hilen (Awards Manager, 0.5 for 5 months), Maria Anguiano (EarthLab Administrator, 0.5 FTE for 3 months), Cristina Urrutia, (Awards Manager, 0.5 FTE for 3 months), Jenny Dettmann (Program Coordinator, 0.41 FTE), Eva Colberg (Research Scientist, 0.5 FTE)
<i>NW CASC Research Fellows and Faculty Fellows (Consortium partner universities)</i> – Selected through a competitive process to conduct research that aligns with NW CASC science priorities (NW CASC fellows at UW are listed in Table 3). Note: Reported FTEs reflect total support provided by the NW CASC, including support projected for summer/fall 2025.	
Western Washington University	Keeley Chiasson (0.5 FTE for 12 months)
Washington State University	Seth Flanders (0.5 FTE for 12 months), Julianna Hoza (0.5 FTE for 4.5 months), Sujay Singh (0.5 FTE for 4 months), Amanda Stahl (1 FTE for 2.25 months)
Boise State University	Kloe Walter (0.5 FTE for 4.5 months),
Oregon State University	Katherine Carey (0.5 FTE for 6 months), Ella Gray (0.5 FTE for 6 months), Sean Matthews (1 FTE for 1 month), Christopher Still (0.8 FTE for 1 month)
University of Montana	Meredith Zettlemoyer (1 FTE for 5 months for research technician)
<i>NW CASC Consortium Leadership Team (Consortium Co-PIs)</i> – Provide strategic leadership, act as NW CASC liaisons to consortium institutions and administer sub-awards.	
Western Washington University	John Rybczyk (1 FTE for 1 week)

Washington State University	Jan Boll (1 FTE for 0.5 week), Julie Padowski (1 FTE for 0.5 week),
University of Montana	Solomon Dobrowski (1 FTE for 1 week)
Portland State University	Paul Loikith (1 FTE for 1 week)
Oregon State University	Selina Heppell (1 FTE for 1 week)
Northwest Indian College	Emma Norman (1 FTE for 1 week)
Boise State University	Kelly Hopping (1 FTE for 1 week)
Affiliated Tribes of Northwest Indians	Becky Jones (0.06 FTE for 12 months)

Table 2. Contributed service not funded by award: NW CASC Fellow Advisors.

<i>NW CASC Fellow Advisors</i> – Advise NW CASC fellows on research projects, support administration and compliance of award.	
University of Washington	Josh Lawler, Jonathan D. Bakker, L. Monika Moskal
Western Washington University	Eric Grossman
Washington State University	Alex Fremier, Jonah Piovia-Scott, Daniel Thornton
Oregon State University	Melanie Davis, David Bell
Boise State University	Kelly Hopping

Table 3. Leveraged support from other resources.

INSTITUTION	PERSONNEL
<i>NW CASC Research Fellows</i> – Selected through a competitive process to conduct research that aligns with NW CASC science priorities (fellows at consortium universities listed in Table 1). <i>Note:</i> Reported FTEs reflect total support provided by the NW CASC, including support projected for summer/fall 2025.	
University of Washington	Fern Crossway (.5 FTE for 6 months), Alexandra Howell (0.25 FTE for 9 months), Priscilla Sperandio (0.5 FTE for 9 months), Josh Lawler (0.3 FTE for 1 month)
<i>NW CASC Research Fellow alumni supported for contributing to the 2025 Deep Dive process.</i>	
University of Washington	Christine Nolan (100 hours)
University of Montana	Spencer Vieira (100 hours)
Boise State University	Will Loftin (100 hours)
University of Montana	Svetlana Yegorova (100 hours)

RESULTS

PARTNERSHIPS

The NW CASC's goal is to respond to high-priority natural and cultural resource management challenges and foster substantive, sustained engagement between scientists and managers. During Year 2, the Consortium focused on enhancing partnerships between the NW CASC and NW CASC external partners; between the NW CASC and host institution programs; and between the NW CASC and other federal programs.

NW CASC EXTERNAL PARTNERS. NW CASC Advisory Committee: During Year 2, NW CASC personnel continued to participate in the USGS-organized NW CASC Advisory Committee meetings, which provide an opportunity to build new and deepen existing relationships with both the agencies and individuals represented on the Committee. At the Committee's virtual meetings, NW CASC University Director Krosby and Deputy Director Kalafatis provided updates on the Consortium's programs.

HOST INSTITUTION PROGRAMS. Climate Impacts Group: During Year 2, the NW CASC continued its partnership with the Climate Impacts Group at the University of Washington. The NW CASC provides Climate Impacts Group staff with information about NW CASC activities, products and funding opportunities for distribution to their scientific partners and stakeholders. In turn, Climate Impacts Group personnel deliver insights about regional science needs to NW CASC leadership.

OTHER FEDERAL PROGRAMS. NOAA Climate Adaptation Partnership (CAP) Program: During Year 2, the NW CASC maintained its strong linkage with the Northwest Climate Resilience Collaborative (NCRC), through NW CASC University Director Krosby's participation as NCRC Co-PI. In addition, NW CASC University Deputy Director, Scott Kalafatis, continued his ongoing collaboration with the Great Lakes Integrated Sciences and Assessments.

SCIENCE

NW CASC FELLOWS' RESEARCH. In Year 2, the University Consortium finished supporting ten research projects that began in Year 1 and began funding 15 new research projects. These 25 projects supported science priorities identified in the *NW CASC Science Agenda (2018-2023)* and the *Deep Dive Actionable Science Agendas*. The new, in-progress projects funded in Year 2 focused on:

- Predicting Redband Trout Habitat in a Changing Climate
- How will Rising Sea Levels Affect Coastal Bluff Erosion in the Salish Sea and What Role Does Bluff Material Play?
- Evaluating the Influence of Climate Change on Priority Habitat for an At-Risk Butterfly
- Investigating Landholder Perspectives on Floodplain Connection Practices
- The Future of the Forests' Giants: Exploring Development and Survival of Large Trees at Mount Rainier National Park
- Can Beaver Ponds Create Amphibian Refuges From Climate Change and Predatory Fish?
- Restoring Trampled Subalpine Meadows to Build Climate Resilience at Mt. Rainier National Park
- Studying Populations of Cold-Adapted Species to Identify Climate Refugia in the Cascades
- How can Western Larch Stands Aid in Reducing Wildfire Severity on the Colville Indian Reservation?
- Advancing Climate Adaptation Through Innovative Grazing Practices in Sagebrush Landscapes
- Building Capacity to Track Ecosystem Health Across Washington State in a Changing Climate

- How Hot is Too Hot? Determining the Heat Tolerance of Pacific Northwest Tree Species and Understanding How Heatwaves Impact Forests
- Co-Developing a Tool for Identifying Potential Climatic Refugia for Species in the Pacific Northwest
- Monitoring Missoula's Native Cushion Plant Communities
- Collaborative Planning for the Reintroduction of Fishers to Southwest Oregon in a Changing Climate

2025 DEEP DIVE. *Too Hot to Handle? Managing the Ecological Impacts of Extreme Heat in the Northwest.* The University Consortium convened over 80 natural resource managers and scientists from across the Northwest in a five-month, virtual working group process to review what is known and unknown about managing the ecological impacts of extreme heat events in the Northwest. Expected products from this *Deep Dive*, to be released in July 2025, include three synthesis products (State of the Science, State of the Practice, State of the Policy), an actionable science agenda with considerations for its implementation, and a tools database for research and management. The actionable science agenda will include research and capacity-building needs for informing management of extreme heat events.

CAPACITY BUILDING

The NW CASC aims to build a community of practice of researchers and managers engaged in climate adaptation-oriented work and to foster their leadership in science-based resource management. Efforts in Year 2 were designed to advance novel research and promote the use of existing knowledge in support of climate adaptation decision making. To enhance researchers' proficiency in co-producing knowledge, the Consortium facilitated professional development opportunities through the education, training and capacity-building activities described below.

NW CASC FELLOWS PROGRAMS. Research Fellowship Program: In Year 2, the University Consortium supported ten Research Fellows, selected through a competitive process in Year 1. Research Fellows represented five Consortium universities. Their research, described in the Science section above, spans Idaho, Washington, Oregon and Northern California. All 2024-2025 Research Fellows participated in a University of Washington graduate seminar, *The Theory and Practice of Linking Knowledge with Action to Address Modern Environmental Challenges*. During the seminar, Research Fellows learned key theories and best practices for producing actionable science. They also met with practitioners from academic, government and non-government entities working on actionable science to ground their learning in real-world, applied contexts. Fellows participated in monthly video cohort training calls covering topics including career pathways, building networks for co-production, communicating science to policy makers and journalists, and developing compelling scientific presentations. **Faculty Fellowship Program:** NW CASC's first cohort of five Faculty Fellows initiated their projects in Year 2. Faculty Fellows represented four Consortium universities with research spanning Idaho, Montana, Oregon and Washington described in the Science section above. Faculty Fellowship activities are modeled on the Research Fellowship Program but are considerably tailored to the cohort's expressed interests. During a two-day, in-person workshop held at UW in February, the Faculty Fellows learned about and contributed to discussions about the need for and pursuit of actionable science in their projects, how to create useful products, cultivating transdisciplinary knowledge, the historical and legal context of working with Tribes and best practices for working with them, effective facilitation practices and supporting co-productive engagements in academia. Faculty Fellows also participated in a cohort call on pursuing funding support for engagement efforts.

SUPPORTING THE REGIONAL COMMUNITY OF PRACTICE IN ACTIONABLE SCIENCE. The University Consortium organized a Deep Dive virtual workshop with over 80 participants from federal and state agencies, Tribal governments, universities, NGOs and other entities over a five-month working group process to help create a community of practice for managing the ecological impacts of extreme heat events. Four Research Fellows from two cohorts (2022–2023 and 2023–2024) participated as research assistants in the Year 2 Deep Dive. These fellows supported working groups of managers and scientists, building skills in collaborative, transdisciplinary research and synthesizing different types of knowledge (literature, survey responses, meeting summaries) into key findings and actionable science recommendations.

COMMUNICATIONS

During Year 2, the NW CASC University Consortium communications program continued to maintain its established communications channels, while continuing to build processes and products to support its cycle 2 programs.

COMMUNICATIONS CHANNELS & PRODUCTS. **Website Updates:** Kept the NW CASC website up to date with the Center’s most-recent projects, publications, webinars and announcements. Hired a winter-quarter, Graduate Research Assistant studying library and information science to update project and publication filters on the NW CASC website. **Newsletter:** Distributed five issues of the *NW CASC Connections* electronic newsletter to connect audiences with NW CASC science, products, opportunities and resources. Sent an additional eight, special announcements with time-sensitive updates through the NW CASC newsletter platform. **Informational Webinars:** Hosted welcome calls for the 2024-25 Research Fellows and the 2025 Faculty Fellows. Hosted information sessions for those interested in the 2025-26 Research Fellowship Program and 2026 Faculty Fellowship Program. **Social Media:** Posted and reposted more than 20 times on LinkedIn. Began sharing announcements through a new Bluesky account, while transitioning off Twitter.

COMMUNICATIONS SUPPORT. **NW CASC Research Fellows:** Provided individual communications guidance; promoted Research Fellows’ science through NW CASC channels; shared relevant funding and training opportunities; and led a cohort call about effective meeting planning and facilitation.

NW CASC Faculty Fellowship Program: Led session on meeting facilitation during Faculty Fellows’ two-day, actionable science workshop. **USGS-funded Principal Investigators (PIs):** Attended project kick-off and check-in meetings with USGS-funded PIs to discuss project-specific communication opportunities and shared science spotlights on PIs’ research through the *NW CASC Connections* newsletter. **NW CASC Communications Capacity:** Assisted with scoping and hiring search for a NW CASC ORISE Communications Fellow, which was put on hold due to federal hiring freeze. **Northwest Regional Invasive Species and Climate Change (NW RISCC) Network:** Supported the NW RISCC Network, a program of the NW CASC, through hosting virtual events and providing graphic design and strategic communications support.

CASC NETWORK COMMUNICATIONS. **USGS Highlights:** Submitted routine highlights to inform USGS of upcoming, high-profile activities within the NW CASC network. **Climate Adaptation Insights Newsletter:** Provided regular submissions for consideration in the Climate Adaptation Insights newsletter. **CASC Network Communication Calls:** Attended calls every other month to stay informed of activities and connect with communications staff across the network.

COMMUNICATIONS EVALUATION. Conducted evaluation of communications channels and efforts, including the NW CASC website, LinkedIn, newsletter and webinars.

OUTREACH

PUBLICATIONS

Peer-reviewed publications featuring NW CASC-funded research by NW CASC Consortium Leadership Team members (*), Research Fellows (+), and CAP Fellows (#) include:

Askerooth, R.+, R.S. Mostow, P. Ruggiero, F. Barreto, and S.D. Hacker. 2024. A novel hybrid beachgrass is invading U.S. Pacific Northwest dunes with potential ecosystem consequences. *Ecosphere* 15(4): e4830.

Button, S.T.+, D.J. Brown, and J. Piovia-Scott. 2025. Amphibians reveal unexpectedly large differences in potential climate change responses among ecologically similar habitat specialists. *Ecological Indicators* 174:113488.

Genzoli, L.+, R.O. Hall, T.G. Otten, G.S. Johnson, J.R. Blaszczyk, and J. Kann. 2024. Benthic cyanobacterial proliferations drive anatoxin production throughout the Klamath River watershed, California, USA. *Freshwater Science* 43:307–324.

Molnar, N.B., B.L. Weigel, **R.J. Fales+**, and C.A. Pfister. 2025. Warming seawater temperature and nutrient depletion alters microbial community composition on a foundational canopy kelp species. *Environmental Microbiology* 27:e70077.

Puntenney, C.P.+, A. Hulet, and K.A. Hopping. 2024. Ranchers' and federal land managers' mental models of rangeland management across an environmental gradient. *Rangeland Ecology & Management*: S155074242400157X.

Rockweit, J.T.+, K.M. Dugger, D.B. Lesmeister, R.J. Davis, A.B. Franklin, and J.M. Higley. 2024. Changing fire regimes and nuanced impacts on a critically imperiled species. *Biological Conservation* 296:110701.

Russell, A., N. Fontana, **T. Hoecker#**, A. Kamanu, R. Majumder, J. Stephens, A.M. Young, A.E. Cravens, C. Giardina, K. Hiers, J. Littell, and A. Terando. 2024. A fire-use decision model to improve the United States' wildfire management and support climate change adaptation. *Cell Reports Sustainability* 1:100125.

Sorel, M.H.+, J.C. Jorgensen, R.W. Zabel, M.D. Scheuerell, A.R. Murdoch, C.M. Kamphaus, and S.J. Converse. 2024. Incorporating life history diversity in an integrated population model to inform viability analysis. *Canadian Journal of Fisheries and Aquatic Sciences* 81:535–548. (published in March 2024 but not reported in Cycle 1/Year 1 report)

Whiles, L.+, L.A. Shipley, J.R. Akins, R.G. Christophersen, J.I. Ransom, T. Levi, and D.H. Thornton. 2024. Predation risk for hoary marmots in Washington's North Cascades Mountains. *Journal of Mammalogy*: gya086.

Vieira, S.T.+, K.T. Davis, Z.A. Holden, A.J. Larson, and P.E. Higuera. 2024. Western larch regeneration more sensitive to wildfire-related factors than seasonal climate variability. *Forest Ecology and Management* 565:122011.

Yegorova, S.V.+, **S.Z. Dobrowski***, L. Yung, S.A. Parks, R.K. Bocinsky, K.T. Davis, C. Littlefield, M.P. Maneta, C. Wyborn, P. Wurster, R. Rank, D. Brinkerhoff, and T. Colligan. 2025. Spatial climate analogs in climate change research, impact assessment, and decision-making. *BioScience*: biaf031.

SPECIAL AWARDS. 2020-21 NW CASC Research Fellow Skye Greenler and NW CASC-supported researcher Frank Lake won a U.S. Forest Service Pacific Southwest Research Station Distinguished

Publication Award for their 2024 *Ecological Applications* paper, *Blending Indigenous and western science: Quantifying cultural burning impacts in Karuk Aboriginal Territory*.

PRESENTATIONS

In Year 2, NW CASC Consortium personnel and researchers delivered 12 presentations on NW CASC-funded research to diverse audiences during conferences hosted by international organizations, academic conferences, and federal agency events and workshops. These included The Wildlife Society Annual Conference, Society for Range Management Annual Meeting, University of Washington Graduate Climate Conference, National Park Service Science Days, and U.S. Forest Service Science and Technology Interregional Meeting.

STAKEHOLDER ENGAGEMENT

Table 1. Engagement Summary by Organization Type

Type	Fellows Projects		Deep Dive	
	Orgs	Projects	Orgs	People
Academia	0	0	10	22
Collaboration	1	1	0	0
Federal (DOI)	4	7	3	8
Federal (non-DOI)	2	2	3	8
Local	1	1	0	0
NGO	3	3	5	7
Private	2	2	1	2
State Agency	7	9	5	25
Tribal	4	5	6	8

Research supported by the NW CASC in Year 2 was conducted in close partnership with natural resource managers. NW CASC programs engaged with 49 different organizations in Year 2, including ten Tribes or Tribal organizations. Table 1 provides a summary of engagement by organization type. Projects funded by NW CASC's fellowship programs (ten newly funded Research Fellowship projects and five newly funded Faculty Fellowship projects) partnered with 24 organizations. Fellows communicated extensively with resource managers and other partners through regular meetings, organized

workshops, presentations and consultations through one-on-one meetings, phone conversations and email communications. This collaboration with resource agencies has shaped research questions, methodologies and analysis and given fellows first-hand experience collaborating with resource managers outside their university setting. The 2025 *Deep Dive* (described under 'Science', above) engaged over 80 individuals representing more than 30 organizations to assess the knowledge and capacity needs in the region related to responding to the ecological impacts of extreme heat events. Scientists participated from universities and agencies including Oregon State University, University of Washington, Portland State University, U.S. Geological Survey and the Squaxin Tribe. Natural resource managers participated from Tribal, federal, state and other agencies, including the National Oceanic & Atmospheric Administration, U.S. Fish and Wildlife Service, Idaho Department of Fish & Game, Washington Department of Fish and Wildlife, and the Skokomish Tribe, as well as non-governmental organizations such as The Nature Conservancy. Many participants joined one or more working groups examining the state of knowledge around biophysical, management and practice, and policy and human dimensions of the issue. Each working group was composed of 6–28 participants, led by NW CASC personnel and supported by four NW CASC fellows as research assistants. Each working group convened monthly between March–May to review progress towards knowledge syntheses and identify gaps in knowledge to inform a cumulative June *Deep Dive* workshop.

OTHER PRODUCTS FROM NW CASC-FUNDED RESEARCH PROJECTS

During Year 2, in addition to peer-reviewed publications, NW CASC Consortium-funded research projects also produced:

PRODUCTS. Dataset to support the development of mechanistic and spatially explicit models of habitat availability and trout growth potential. **RESEARCH PROJECT:** Predicting Redband Trout Habitat in a Changing Climate

PRODUCTS. Maps comparing pre- and post-fire vegetation values across western larch plantations and adjacent mixed forests for five major fires on the Colville Reservation. **RESEARCH PROJECT:** How can Western Larch Stands Aid in Reducing Wildfire Severity on the Colville Indian Reservation?

PRODUCTS. Maps of shifting winter and summer occupancy probabilities and areas of potential cool-air refugia for Canada lynx. **RESEARCH PROJECT:** Studying Populations of Cold-Adapted Species to Identify Climate Refugia in the Cascades

PRODUCTS. Audio recordings of interviews with 17 landholders in the Hangman Creek Watershed informing more collaborative water management between farmers and the Coeur d'Alene Tribe. **RESEARCH PROJECT:** Investigating Landholder Perspectives on Floodplain Connection Practices

PRODUCTS. Drone and pre-/post-storm survey data to validate geologic mapping and inform understanding of bluff geology along the Tulalip reservation. **RESEARCH PROJECT:** How Will Rising Sea Levels Affect Coastal Bluff Erosion in the Salish Sea and What Role Does Bluff Material Play?

PRODUCTS. Maps predicting vegetation change across the South Puget Sound to inform understanding of Taylor's checkerspot butterfly responses to climate change and target areas for restoration. **RESEARCH PROJECT:** Evaluating the Influence of Climate Change on Vegetation Patterns and Management in Priority Habitat for an At-Risk Butterfly in South Puget Sound Prairies

CONGRESSIONAL OUTREACH

During Year 2, the NW CASC continued to participate in the cross-CASC effort to provide outreach and education to Congressional offices about the role and activities of the CASCs and the expressed science and capacity needs of CASC stakeholders regarding climate adaptation for natural and cultural resources.

CROSS-CASC CONTRIBUTIONS

In Year 2, the NW CASC collaborated with working groups across the CASC network on a range of initiatives. The NW CASC communications manager continued to participate in monthly cross-CASC communications calls.

The NW CASC University Director continued participating in monthly meetings of regional CASC university directors, monthly meetings for university directors and NCASC leadership, and quarterly meetings for all regional CASC university directors and deputy/assistant directors.

The NW CASC Deputy University Director continued participating in regional Deputy University Director calls, quarterly meetings for all regional CASC university directors and deputy/assistant directors and monthly national network calls for the Evaluation group and the Training, Education, and Extension Group (TrEEEx) group. The Deputy Director also served on the CASC Futures Forum Planning Committee and developed and facilitated a training module on engagement for the CAP Fellows Program.

At the CASC Futures Forum, the NW CASC team gave three presentations (the development of the Faculty Fellows program, a summary of its early-career programs and a Pecha Kucha on its Actionable Science Deep Dives); helped facilitate two sessions, and presented a poster summarizing the NW CASC's programming.

NEXT STEPS

During Year 3 of the NW CASC award, the NW CASC Consortium anticipates engaging in the following activities:

CENTER & CONSORTIUM OPERATIONS. The Consortium will continue regular meetings and communication among NW CASC University and USGS staff and with the NW CASC Consortium Leadership Team. **TRIBAL ENGAGEMENT.** During Year 3, the Consortium will continue to work collaboratively to support Tribal adaptation work in the Northwest through its partnership with NWIC and ATNI and through engagement with Tribes across all Consortium programs. **SCIENCE FOR MANAGEMENT.** Year 2 Consortium-funded science projects will be completed during summer/fall 2025. Year 3 Research Fellowship science projects have been identified and will begin during summer/fall 2025, while Faculty Fellowship science projects will be selected in summer 2025 and begin in January 2026. A new NW CASC Climate Adaptation Postdoctoral Fellow was recruited in spring 2025 and will begin work in the cross-CASC *Future of Species Range Shifts* postdoctoral cohort this summer. The Consortium will also scope, plan and implement the 2025-2026 *Deep Dive*. **NW CASC FELLOWS.** The tenth cohort of NW CASC Research Fellows will begin cohort activities during fall 2026. This cohort includes one MS candidate, seven PhD candidates and two postdoctoral fellows spread across all seven consortium universities. The second cohort of NW CASC Faculty Fellows will start their fellowships in January 2026. **CAPACITY-BUILDING ACTIVITIES.** During Year 3, the NW CASC will convene the 2025-2026 *Deep Dive* workshop. The *Deep Dive* workshop will synthesize the state of knowledge and enable participant co-development of an actionable science agenda for addressing an emerging climate risk in the Northwest. During Year 3, the Consortium also anticipates hosting new actionable science webinar series. **COMMUNICATION.** During Year 3, the NW CASC will continue to maintain internal communications and connect its audiences to NW CASC-funded science, resources and opportunities through up-to-date, clear and accessible communication channels. The communications manager will develop new pages that compile research products under climate adaptation topics. They will also host an undergraduate communications intern through UW EarthLab. **NATIONAL NETWORK.** During Year 3, the NW CASC will continue to participate in CASC network university leadership collaborations. The NW CASC communications manager will participate in the monthly cross-CASC communications calls. **CONGRESSIONAL OUTREACH.** During Year 3, the NW CASC will continue to participate in the cross-CASC effort to provide outreach and education to Congressional offices about the role and activities of the CASCs and the expressed science and capacity needs of CASC stakeholders regarding climate adaptation for natural and cultural resources.

APPENDIX: PRESENTATIONS

Selected formal presentations delivered by the NW CASC Consortium Leadership Team (*), Research Fellows (+), and NW CASC Fellow Advisors (#) include:

Flanders, S.+ May 2025. Poster Presentation. Rivers, Watersheds, and Communities Symposium. Washington State University, Pullman, Washington.

Gray, E.R.+, B. Fallon, D.M. Bell#, M. Powers#. Feb 2025. *Tracking the Forest's Giants: Large Tree Abundance at Mount Rainier National Park.* National Park Service North Coast & Cascades Science Day. Virtual.

Howell, A.M.+ Apr 2025. *Developing Techniques to Restore Mt. Rainier Subalpine Meadows.* Ecological Restoration Symposium. University of Washington, Seattle, Washington.

Krosby, M.* *Mobilizing Actionable Science to Build Climate Resilience for People and Nature.* ClimateTALK Seminar. University of Victoria. Victoria, BC. 2025.

Krosby, M.*, N. DeCrappeo. *Introduction to the Northwest Climate Adaptation Science Center.* University of Montana, Missoula, MT. January 2025.

Krosby, M.*, N. DeCrappeo. *Introduction to the Northwest Climate Adaptation Science Center.* Boise State University. Boise, ID. January 2025.

Rockweit, J.+ Oct 2024. *Changing Fire Regimes and Nuanced Impacts to Northern Spotted Owls.* The Wildlife Society Annual Conference. Baltimore, Maryland.

Singh, S.+ Nov 2024. *A Tail of Two Cats: Estimating Current and Future Density of Canada Lynx and Bobcats in a Changing Climate.* Graduate Climate Conference. Seattle, Washington.

Singh, S.+, D. Thornton, L. Welfelt. Oct 2024. *A Tail of Two Cats: Estimating Density of Sympatric Canada Lynx and Bobcats in Washington.* Poster Presentation. The Wildlife Society Annual Conference. Baltimore, Maryland.

Walter, K.+, M. Sorrentino, A. Hulet, R. Kehler, S. Arispe, A. Simler-Williamson, M.A. de Graaff, K.A. Hopping#, A. Hulet. Feb 2025. *Integrating local knowledge to improve understanding of vegetation community change in a cheatgrass targeted grazing experiment.* Society for Range Management Annual Meeting. Spokane, Washington.

Sorrentino, M., M.A. de Graaff, A. Hulet, R. Kehler, **K. Walter+, S. Arispe, A. Simler-Williamson, K.A. Hopping*#.** March, 2025. *Ecological outcomes of a cheatgrass targeted grazing experiment with sheep on the Sawtooth National Forest.* U.S. Forest Service Range All Hands Interregional Meeting – Science and Technology. Virtual meeting.

Walter, K.+, K. A. Hopping. Apr 2025. *Climate adaptation through sheep targeted grazing in mountain sagebrush landscapes.* Northwest Climate Adaptation Science Center Fellowship Project Partner Meeting – Updates & Reflections. Virtual meeting.