

WA Climate Assembly
Learning Session 3
Saturday, January 23, 10:00am-1:00pm
Presenter Materials

The presenters have provided their bios, summaries of their presentations, and additional educational materials in advance of their presentations. Review of these materials is optional, but recommended.

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Dr. Meade Krosby

Senior Scientist at the UW Climate Impacts Group

Deputy Director of the Northwest Climate Adaptation Science Center

Expert Presenter

Climate Impacts on Habitat and Wildlife

About Dr. Krosby:

Meade Krosby, PhD is a Senior Scientist with the University of Washington Climate Impacts Group, and is the University Deputy Director of the Northwest Climate Adaptation Science Center. Dr. Krosby has spent the past decade working collaboratively with federal, state and local governments; Tribes and First Nations; non-governmental organizations; and communities to address climate risks to species and ecosystems. She also supports regional and national efforts to build climate adaptation capacity and communities of practice. Dr. Krosby received a B.S. in Biology from Cornell University and a Ph.D. in Biology from the University of Washington.

Presentation summary:

Washington's climate is changing: from higher temperatures to shrinking snowpack to rising seas, these changes are affecting the region's wildlife and habitats. Increasing summer stream temperatures, decreasing summer stream flows, and increasing flood risk will impact the fish found in our rivers and streams, particularly cold-water species like bull trout, salmon, and steelhead. Dramatic declines in snowpack will affect snow dependent species such as wolverine. Sea level rise will affect coastal habitats, while ocean acidification will threaten shellfish species like crabs and oysters. And drier, warmer conditions will significantly increase wildfire risk, affecting the ability of our landscapes to store carbon. In this presentation, we will review these and other climate impacts on Washington's wildlife and habitats.

Paul Williams

Senior Biologist at the Suquamish Tribe

Expert Presenter

Marine Life

About Paul:

Paul is Senior Biologist at the Suquamish Tribe. He received a BA from the Jackson School of International Studies, and an MS degree from the School of Fisheries, both from the University of Washington. Paul has worked for the Suquamish Tribe since 1991 providing assistance in all things shellfish including: resource management; treaty rights litigation; harvest area certification; seafood enterprise development; shellfish aquaculture and hatchery method development, ocean acidification research; and k-12 education. He is currently developing the Suquamish Climate Change Resilience Plan, helping the Puget Sound Partnership develop the 2022-2026 Action Agenda, and is promoting development of a Career Technical Education pathway for alternative energy system design and installation. In addition, he serves on the boards of E3 Washington (educators for environment, equity, and economy) and the Puget Soundkeeper Alliance.

Presentation summary:

In this presentation, I will summarize some of the key impacts ocean warming and ocean acidification are projected to have on marine ecosystems and human communities. In addition, I will discuss the role the school system could be playing to change harmful human behaviors, and prepare youth for the challenges and opportunities that are emerging in our changing world.

Jessica Halofsky

Director of the USDA Northwest Climate Hub and the Forest Service
Western Wildland Environmental Threat Assessment Center
Expert Presenter

Forest Health and Wildfires

About Jessica:

Jessica Halofsky is the director of the USDA Northwest Climate Hub and the Forest Service Western Wildland Environmental Threat Assessment Center. Jessica received an M.S. in Forestry from Penn State, and a Ph.D. in Forest Science from Oregon State University. Her research interests include fire and disturbance ecology, vegetation dynamics, and climate change (ecosystem impacts and adaptation). Jessica pioneered one of the first climate change vulnerability assessment and adaptation projects with Olympic National Forest and Park. Since that initial project, Jessica has co-lead eight other sub-regional to regional-scale climate change vulnerability assessment and adaptation projects around the western U.S. (all described at www.adaptationpartners.org).

Presentation summary:

Wildfires in the Pacific Northwest have been immense in recent years, capturing the attention of resource managers, fire scientists, and the general public. Large and severe fires in the Northwest are associated with warm and dry conditions, and such conditions will likely occur with increasing frequency in a warming climate. According to projections based on historical records, current trends, and simulation modeling, protracted warmer and drier conditions will drive lower fuel moisture and longer fire seasons in the future, likely increasing the frequency and extent of fires compared to the 20th century. Interactions between fire and other disturbances, such as drought and insect outbreaks, are likely to be the primary drivers of ecosystem change in a warming climate. Reburns are also likely to occur more frequently with warming and drought, with potential effects on tree regeneration and species composition. Hotter, drier sites may be particularly at risk for regeneration failures.

Optional additional materials:

A recent synthesis on climate change and wildfire in the Northwest:
<https://fireecology.springeropen.com/articles/10.1186/s42408-019-0062-8>

A related fact sheet:

<https://www.sciencebase.gov/catalog/item/5e3d8a71e4b0edb47be26ded>

And a related Story Map:

<https://www.arcgis.com/apps/Cascade/index.html?appid=9c0f8668f47c4773b56c9b9ae6c301e3>

Jessica Randall

MS, LAC

Interested Party Presenter

Actions to Improve Forest Health and Resilience

Presentation summary:

The Pacific Northwest Forest has become one of the most valuable resources in our state for mitigating the effects of Climate Change. Washington has a long history of reaping and renewal, profit and prohibition. Our legislative actions on the forest have always been years or decades behind science. This critical time is now pushing our efforts at Forest Preservation to the front of our State's agenda, and we cannot afford that gap between knowledge and action. We have realized that without advocacy and logistical changes, our most precious resource will literally and figuratively go up in smoke. With this presentation, I wish to convey the importance of this valuable ecosystem and suggest ways we may protect it.

Brandon Letsinger

Department of Bioregion

Expert Presenter

Bioregionalism

About Brandon:

Brandon Letsinger is an open source advocate, organizer and founder of the Department of Bioregion, a Washington State non-profit. Their work seeks to shift from arbitrary boundaries and borders to bioregional frameworks that are truly equitable, representative and sustainable, and can enact the visionary change that our world demands. His work has been featured in Time Magazine, Vice, USA Today,

the Atlantic Monthly, NPR, the BBC, National Journal, Wall Street Journal, Business Insider, Canadian Broadcasting as well as a host of local newspapers and radio segments.

Presentation summary:

Bioregionalism reflects perhaps one of the most important, yet least known or understood philosophies that may exist today. In this presentation, Department of Bioregion organizer Brandon Letsinger talks about how bioregionalism provides a unifying set of principles and tools in the fight against Climate Change, and why these are important for breaking down large, intangible global issues into simple, and accessible pathways for action and change.

Julianne Gale & Zephyr Elise

Mason County Climate Justice

Interested Party Presenters

Healthy Soils Build Healthy Food, Climate, and Community

About Julianne:

Julianne 友蘭 Gale is a community organizer and youth worker who lives in Mason County, WA. A co-founder of Mason County Climate Justice, Julianne has worked on the climate crisis in a variety of roles: elementary school science teacher, union construction worker, water protector at Standing Rock, artist, member of East Yard Communities for Environmental Justice, educator with Sustainability in Prisons Project, tribal youth program supervisor, and more.

About Zephyr:

Zephyr Elise is a mixed-Indigenous [Hñähñu, P'urhépecha, Wixáritari, Be'ena' Za'a, Euskal] documentary filmmaker, liberation activist, soil regenerator, and lifelong plant tender. Zephyr has been a co-organizer for Idle No More—Two-Spirits on Ohlone Lands and oversaw Winyan Camp at Oceti Šakowiŋ. Now a guest residing on Squaxin Island traditional territory (Shelton, WA), Zephyr is currently lead production assistant for FIRE & FLOOD: Queer Resilience in the Era of Climate Change and a co-founder of Mason County Climate Justice.

Optional additional materials:

- Attached PDF-see email (“Here’s what I Think Everyone Needs to Know About Climate Change”)
- <https://kisstheground.com/thesoilstory/>
- <https://nerdsforearth.com/new-mexico-healthy-soils-policy/>

Request from the presenters:

Our presentation involves an optional interactive component. Please come to our presentation with a small cup of water, a plate or two, bread, and flour. This will allow you to participate in an easy/fun hands-on demonstration rather than just watching a video of it. The attached picture shows the demonstration supplies needed.



Heather Trim

Executive Director of Zero Waste Washington
Expert Presenter

Zero Waste and Climate Change

About Heather:

Heather has more than 25 years of experience in environmental work ranging from zero waste to toxic chemicals and habitat issues. At Zero Waste Washington, her focus has been on reducing upstream sources of waste and addressing downstream impacts, getting toxic chemicals out of products, eliminating plastic pollution, and building on the organization’s signature producer responsibility policy initiatives.

Previously, at Futurewise, she worked to prevent runoff from entering our waterways and improve shoreline management practices and policies. Heather was at People for Puget Sound for over ten years where she focused on protections for the marine environment. Earlier, she was staff scientist for the Los Angeles and San Gabriel Rivers Watershed Council and worked for the Los Angeles Regional Water Quality Control Board on water quality standards, regulatory permits, pollution assessments, greening the LA rivers and habitat renewal. In addition to policy work, Heather has conducted extensive education and outreach projects.

Presentation summary:

Zero waste issues intersect with climate change in many ways, ranging from the full life cycle of plastics (extraction to end-of-life), consumption of goods, repair, and design of products in the first place. This presentation will briefly summarize these connections and provide a brief overview of current legislative bills.

Jason Steinberg

University of Washington

Interested Party Presenter

Green Roofs

About Jason:

Jason's undergraduate background is in psychology, biology, and neuroscience from the University of Illinois at Urbana-Champaign; he has worked in scientific research, including at the University of Chicago's Environmental Neuroscience Lab, which examines the influences of natural and urban environments on psychology, behavior, and health. He also has city government experience, first in Chicago's Department of Planning and Development working on industrial economic development, and most recently in Seattle's Department of Transportation reviewing public space & right-of-way improvements for residential, commercial, industrial, and other developments throughout the city. Jason is currently finishing up a Master of Urban Planning degree at the University of Washington in Seattle, focusing on environmental planning and urban design, with a thesis on carbon sequestration of green roofs.

Presentation summary:

Roofs comprise a significant portion of Washington's cities, and vegetating these largely unutilized spaces is a strategy to increase greenspace in the built environment and mitigate climate change. Green roofs directly sequester atmospheric carbon dioxide into plants and soil, and can indirectly reduce carbon dioxide emissions through energy savings, reduced roof replacement frequency, and reduced transportation emissions if urban agriculture is implemented. In addition to carbon dioxide reductions, green roofs provide a plethora of benefits including stormwater runoff mitigation, reduced urban heat island effect, air pollutant removal, increased biodiversity, social opportunities, psychological benefits, and an increased natural aesthetic. For these climate mitigation and other benefits to be maximized, widespread green roof adoption must occur; thus, a statewide mandate is recommended to be adopted into municipal codes for all new construction and major renovations. Consideration should also be given to rooftop solar panels, which are shown to have a mutually beneficial relationship with green roofs; additionally, rooftop terraces for tenant access should be considered in some circumstances. Though evidence shows long-term benefits and savings, financial assistance should be incorporated in certain circumstances like affordable housing in order to prevent unintended inequities. Building bonuses can be implemented to incentivize more intensive green roofs. Lastly, while green roofs help mitigate climate change, they will be most successful when integrated with other policies such as ground-level vegetation efforts, increased housing supply, densified development, and protection of current forests and grasslands.

Optional additional materials:

<https://www.youtube.com/watch?v=FIJoBhLnqko>

<https://www.purple-roof.com/post/green-roof-co2-capture-explained>

<https://www.wbdg.org/resources/extensive-vegetative-roofs>

https://www.epa.gov/sites/production/files/2019-08/documents/greenroofssemiariidaridwest_508.pdf

https://static1.squarespace.com/static/58e3eecf2994ca997dd56381/t/5d84dfc371cf0822bdf7dc29/1568989140101/Green_Roof_and_Wall_Policy_in_North_America.pdf