

THE

# CLIMATE IMPACTS RESEARCH CONSORTIUM

## ABOUT CIRC

The Climate Impacts Research Consortium (CIRC) is a team of climate and social science researchers based in the Northwest United States. We help communities in Oregon, Washington, Idaho, and western Montana become more resilient to extreme climate and weather impacts. Our team members can be found at Oregon State University, the University of Idaho, the University of Washington, and the University of Oregon.

## CIRC FUNDING

CIRC is publically funded through the National Oceanic and Atmospheric Administration's Regional Integrated Sciences and Assessments (RISA) program. Part of NOAA's Climate Program Office, the RISA program supports research teams that help expand and build our nation's capacity to prepare for and adapt to climate variability and change.

## WHAT WE'VE DONE

**The Northwest Climate Toolbox**—CIRC's Northwest Climate Toolbox is a virtual toolbox of free online applications that provide climate and weather information to Northwest farmers, businesses, and resource managers. Toolbox tools monitor current weather conditions as well as calculate seasonal forecasts and future climate projections.

**Grays Harbor Coastal Futures**—CIRC helped the coastal community of Grays Harbor, Washington analyze the hazards the community faces and the costs associated with addressing those hazards. This project is expected to help the community save lives and dollars as it becomes more resilient to coastal hazards.

**Piloting Utility Modeling Applications (PUMA)**—CIRC provided an in-depth analysis of how climate changes are likely to impact the Pacific Northwest's two largest water utilities, the Portland Water Bureau and Seattle Public Utilities. The two utilities are using this analysis to provide clean and abundant drinking water to their over 2 million customers now and into the future.

**Big Wood Basin**— From 2012–2016, CIRC and community members in Idaho's Big Wood River Basin investigated how the basin's water resources are projected to change in the coming decades. Together with CIRC, community members developed water-saving strategies designed to help farmers, ranchers, and other business owners remain resilient and prosperous.

**LEFT:** CIRC team members and Spokane community members. May 21st, 2018 meeting of the Spokane Community Adaptation Project.







## WHAT WE'RE DOING

**Citizen Science in Spokane**—CIRC is advising community members in Spokane, Washington as they use CIRC's Northwest Climate Toolbox to create a climate vulnerability assessment for the Spokane region. CIRC hopes to replicate this citizen science approach on future projects.

**Teaching Citizen Science**—CIRC is developing a series of educational tools that teach communities to create their own climate vulnerability assessments using CIRC's Northwest Climate Toolbox.

**Crops and Machine Learning**—In response to the 2015 drought in the Pacific Northwest, CIRC developed machine-learning techniques that predict potential drought-related losses to crops. CIRC is investigating ways to integrate these techniques into climate resilience strategies for farmers and water managers.

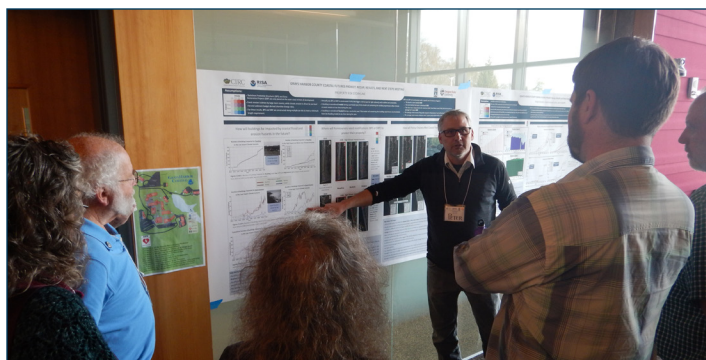
**Drought Recovery Tool**—CIRC created a diagnostic method that estimates whether individual counties are likely to recover from drought. This work was created at the request of state drought coordinators in Oregon, Washington, and Idaho and is expected to aid their efforts to make their states more resilient to drought and related extremes.

**Needed Forecasting**—Weather forecasts extend over the next 7 days, while seasonal forecasts extend 1 to 9 months into the future. However, farmers, firefighters, and water managers tend to make decisions based on forecasts for the next 30 days. CIRC is currently developing forecasts for this important time period. These *subseasonal-to-seasonal* forecasts will include several key drought-relevant variables.

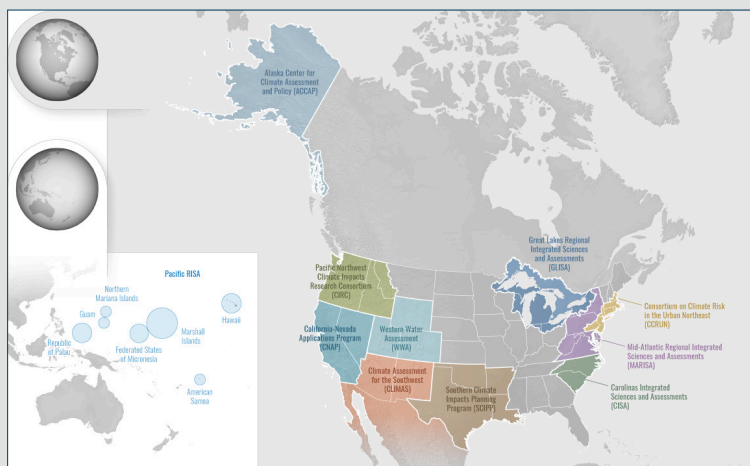
## MORE ABOUT CIRC

CIRC's efforts fall into three broad categories:

- **Community Adaptation**—CIRC projects that engage directly with communities to create tailor-made resiliency strategies.
- **Climate Tools**—CIRC's free online applications that help users visualize past, current, and projected future climate and weather conditions and impacts.
- **Advancing Science**—CIRC research is advancing both the social science around citizen science and community resilience and the science of climate and weather impacts. CIRC regularly publishes the results of our research in peer-reviewed scientific journals, national and regional climate assessments, and on CIRC's blog, *The Climate CIRCulator*.



CIRC researcher Peter Ruggiero talks with Grays Harbor community members at the April 9th, 2018 meeting of the Grays Harbor Coastal Futures project.



Currently funded RISAs.



## RESOURCES

Email us: [pnw.circ@oregonstate.edu](mailto:pnw.circ@oregonstate.edu)

CIRC website: [pnwcirc.org](http://pnwcirc.org)

Northwest Climate Toolbox: [climatetoolbox.org](http://climatetoolbox.org)

The Climate CIRCulator: [climatecirculator.org.wordpress.com](http://climatecirculator.org.wordpress.com)

Twitter: [twitter.com/PNWclimate](https://twitter.com/PNWclimate)

Facebook: [facebook.com/PNWclimate](https://facebook.com/PNWclimate)

About RISA: [cpo.noaa.gov/RISA](http://cpo.noaa.gov/RISA)

