

Stakeholders, Collaborators, and Sponsors

PSL staff are engaged with a variety of stakeholders, collaborators and sponsors to advance science research and application initiatives. This document provides a sampling of those relationships.

Organization	Relationship (Short Description)
Alfred Wegener Institute (AWI)	Collaborative research partnership to co-lead, develop and execute the MOSAiC Expedition.
Atmospheric and Environmental Research, Inc.	Collaborator on a JTTI-funded project on "coalescence" to improve deterministic precipitation forecasts.
Atmospheric Circulation Reconstructions over the Earth	International initiative that coordinates data rescue from citizen science (e.g., Old Weather, Weather Rescue), universities, national met services, and others for assimilation by reanalyses.
CA Department of Water Resources	Stakeholder for hydrometeorological monitoring and forecast information for extreme events. Provides funding to several PSL projects, including improvement of S2S precipitation forecasts, operation and maintenance of the HMT-West Legacy Observing Network, and implementation of the Advanced Quantitative Precipitation Information project for the San Francisco Bay Area.
California-Nevada River Forecast Center	Frequent collaborator on testing impact of improved post-processed forecast guidance on hydrologic predictions. Also collaborating on AQPI in the SF Bay area.
Canadian Meteorological Centre	Co-participants in regular conference calls to share knowledge on new developments in statistical postprocessing.
Colorado Division of Water Resources	Colorado-New Mexico Regional Extreme Precipitation Study (REPS) to update probable maximum precipitation estimates for spillway design at dams and other sensitive hydraulic infrastructure. 21st Century Dam Safety Rules for Extreme Precipitation in a Changing Climate.
Colorado State University	Collaboration partnership to design and then implement the scanning radar deployment for the Advanced Quantitative Precipitation Information (AQPI) project in the San Francisco Bay Area. Resource economic study for AQPI.
Department of Defense Strategic Environmental Research and Development Program	NOAA representative on the Scientific Advisory Board to DOD SERDP providing subject matter expert advice on research directions and fostering collaborative research partnership activities between the two agencies.
Environment Canada	Data Collection in Alert, Canada.
European Centre for Medium-Range Weather Forecasts	Provider of reforecast data used in many PSL studies and frequent collaborator. Post-processed methods shared in return. Collaborated in getting data from ENRR dropsondes and radiosondes onto GTS in real time and assisted in interpreting data of descending radiosondes.

Famine Early Warning Systems Network (FEWS NET)	Formal agreement between USAID and PSL plus other NOAA partners (USGS, NOAA/CPC, NASA, USDA) to provide critical products and services to support FEWS NETs early warning of acute food insecurity worldwide, including leading research on predictability, prediction, and climate change, monitoring datasets, training, and expert outlooks.
Great Lakes Environmental Research Laboratory	Evaluation of quantitative precipitation estimation (QPE) from MRMS and other operational products and the performance of the National Water Model .
Gulf of Maine Research Institute (non profit)	Collaborate on a number of projects examining how climate change will influence fisheries and coastal communities along the northeast US shelf.
International Arctic Systems for Observing the Atmosphere (IASOA)	PSL has led development of this international consortium of Arctic Observatories based on a layered approach of coordinating observations, developing data access, science working groups and supporting services. The consortium was initiated during the International Polar Year and is now likely to be sunsetted as both a change in direction from the supporting Arctic Research Program as well as "mission accomplished".
Joint Center for Satellite Data Assimilation	Collaboration on data assimilation system development.
Kiribati Meteorological Service	Collaboration in ENRR field work and data sharing.
Local and regional water management and flood agencies in the SF Bay area	Stakeholder to hydrometeorological monitoring and forecast information for extreme events.
National Center for Atmospheric Research, Earth Observation Lab	Provided critical assistance in getting data from ENT dropsondes and radiosondes onto GTS in real time and assisted in post-processing DOE/ARM radiosonde data from the North Slope of Alaska. Projects on assessing uncertainty in climate projections and on climate extremes including marine heatwaves. Evaluation of the CESM, NCAR's climate model. Develop modules for the Model Evaluation Tools (MET)plus diagnostic package.
NASA	Ocean Salinity Science team and the Precipitation Measurement Mission. Connected with NOAA's grand challenge on precipitation. Also through their Precip Measurement Mission ground validation efforts - we are intending to deploy a profiling radar at their Wallops facility and we have talked about leveraging our CA instrumentation for additional ground validation of the Global Precipitation Measurement satellite.
National Science Foundation	Partner on earth system science research projects spanning from observations and field campaigns to analysis, modeling, applications and socioeconomic studies.
New Mexico Office of the State Engineers	Colorado-New Mexico Regional Extreme Precipitation Study (REPS) to update probable maximum precipitation estimates for spillway design at dams and other sensitive hydraulic infrastructure
NIDIS	NIDIS Program Office is hosted by PSL. Engaged in a collaborative research partnership on the monitoring, understanding and prediction of drought and drought impacts.

NOAA Center for Earth System Sciences and Remote Sensing Technologies (CESSRST)	Partnership primarily through graduate student internships (NOAA Experiential Research and Training Opportunities, NERTO). PSL has hosted three students from CCNY and one from Univ of Puerto Rico Mayaguez over the last 2 years through the CESSRST umbrella. Also an undergraduate intern from CCNY. These are minority serving institutions and the NERTO's provide opportunities for students to gain research skills for possible employment at NOAA and other science agencies. We also participate with CESSRST through a brown bag seminar series.
NOAA Fisheries	Contributed to the development of the Climate-Fishery Initiative, the NOAA Fisheries Climate Science Strategy and fishery vulnerability assessments. Participate in the integrated ecosystem Assessment Program. Collaborate on studies to explain the origins and predictability of extreme ocean conditions impacting living marine resources. Also partner on the NOAA Habitat Blueprint effort in the Russian River and the Forecast Informed Reservoir Operations (FIRO) in the same watershed.
NOAA National Ocean Service	Exploring seasonal prediction of sea level along the US coast. Also, coastal coupling along the west coast of the U.S. for AQPI.
NOAA NESDIS Center for Satellite Applications and Research (STAR)	Collaboration on improvement of satellite ocean products and product evaluation.
NOAA NWS Alaska Region	NPN wind profiler data ingest into AWIPS2 to support volcanic ash and aviation forecasting.
NOAA NWS Alaska Region	Use of CAFS Sea Ice Forecast guidance products.
NOAA NWS Climate Prediction Center	Uses the knowledge and techniques developed at PSL to support medium-range to seasonal forecast products. Tech transfers in progress include seasonal precipitation forecasts, fire-weather forecasts, S2S hurricane forecasts for Atlantic Basin.
NOAA NWS Environmental Modeling Center	Collaborations on data assimilation system development, model development, especially in ensemble prediction systems and ensemble-based data assimilation.
NOAA NWS Meteorological Development Lab	Operational partner using statistical post processing techniques developed for the National Blend of Models program.
NOAA NWS Monterey Weather Forecast Office	Collaborate on AQPI: quantitative precipitation estimation (QPE), delivery of information to local bay area water managers and flood agencies, and fire smoke tracking.
NOAA NWS Pacific Region Headquarters	Provided files containing specialized tropical surface analysis.
NOAA NWS Weather Prediction Center	Partner agency with PSL in NOAA's Hydrometeorology Testbed. Runs annual Flash Flood and Intense Rainfall and Winter Weather Experiments.
NOAA NWS Western Region Headquarters	Partner agency in the SF Bay AQPI project. We also partner with them on the evaluation of radar quantitative precipitation estimation (MRMS), the National Water Model, and fire/debris flow hazard modeling, and in the western US.
NOAA Office of Marine & Aviation Operations	Collaboration and involvement in ship and aircraft operations during CalWater, ENRR, and ATOMIC field campaigns.
NOAA Office of Water Prediction	Collaborative partnership in the evaluation and development of the National Water Model, hydrologic forecasts, and experimental precipitation prediction products.

NOAA UAS Program	Support for miniFlux development and UAS ATOMIC deployment. Support for analysis of UAS data impact on hurricane forecasts and promotion of collaboration with other laboratories. Significant collaboration on observations during the ENRR experiment.
NOAA NWS Lower Mississippi River Forecast Center	Collaboration that explores effects of extreme central United States precipitation on marine ecosystems in the Gulf of Mexico.
NOAA NWS Missouri Basin River Forecast Center	Stakeholder for whom PSL conducted and delivered three assessments - one on seasonal predictability of MO River basin precipitation, a second on the cause for extreme 2011 floods, and another on the reasons for the increased frequency of extreme floods in the Upper Basin.
NOAA NWS Colorado Basin River Forecast Center	Evaluation of the National Water Model and precipitation products.
NOAA NWS North Central River Forecast Center	Evaluation of the National Water Model.
NOAA NWS Northwest River Forecast Center	Evaluation of the National Water Model.
Office of Science and Technology Policy	PSL scientists serve on the Fast Track Committee for Earth System Predictability.
Office of Naval Research	Office of Marine Meteorology and Physical Oceanography. Cooperation of field programs such as PISTON.
Scripps Institution of Oceanography	Collaborative research projects to investigate the influence of climate variability and change on living marine resources.
Scripps Institution of Oceanography, Center for Western Weather and Water Extremes	Collaborator on atmospheric river science, including Forecast Informed Reservoir Operations (FIRO) and publishing a book in 2020 about atmospheric rivers. Collaborator on the AQPI project.
Sonoma Water	Administering agency for a major State of California grant supporting the Advanced Quantitative Precipitation Information (AQPI) project. Collaborator on Hydrometeorology Testbed (HMT) and Forecast Informed Reservoir Operations (FIRO) activities in the Russian River watershed.
University of Colorado, Western Water Assessment	Collaborative research partnership to understand and predict the impacts of climate variability and change on water availability in the Colorado River Basin and Front Range of Colorado. 21st Century Dam Safety Rules for Extreme Precipitation in a Changing Climate.
University of Colorado	Collaborative research projects on coastal ocean variability including biogeochemistry and predictability of ocean conditions.
U.S. Army Corps of Engineers	Collaborative partnership with USACE to produce attribution and prediction knowledge assessments to inform flood and drought risk policy and planning in the Missouri River Basin and develop experimental applications in support of Forecast Informed Reservoir Operations (FIRO)
U.S. Bureau of Reclamation	Stakeholder for PSL hydroclimate information in the western U.S. ranging from the present to future climate scenarios. Partnered on the S2S forecast competition

U.S. Department of Energy	Provided grant funding, supercomputer time and massive storage for NOAA-CIRES-DOE 20th Century Reanalysis version 3 production
U.S. Geological Survey	Partner on AQPI - addressing compound flooding through their coastal flood forecast model and the National Water model the SF bay area. Also partner on soil moisture data for NWM validation.
U.S. National Ice Center	Provide Sea-Ice forecast products.
U.S. Navy	Collaborated in getting data from ENRR dropsondes and radiosondes onto GTS in real time as well as metadata and radiosonde data from Arctic stations.
UK Met Office	Collaborators on data rescue, boundary conditions, and data assimilation for NOAA-CIRES-DOE 20th Century Reanalysis version 3. Co-participants in regular conference calls to share knowledge on new developments in statistical postprocessing.
Woods Hole Oceanographic Institute	Cooperation on NOAA-funded Ocean Flux Reference stations and the global flux data product (WHOI OAflux). Also a partner on development of a covariance flux system for NOAA buoys. Research on regional modeling of coastal regions.