

Resource Conservation and Resiliency



UPDATES

Welcome to our quarterly Resource Conservation and Resiliency newsletter that provides updates about new information and products available from the Resource Conservation and Resiliency Program Area.

REMARKABLE RESEARCH CONDUCTED AT ROI-NAMUR ISLAND ON KWAJALEIN ATOLL

In addition to the Army's Ronald Reagan Ballistic Missile Defense Test Site where 1,300 people work, over 50,000 people call the Marshall Islands home.

A recently completed [SERDP project](#) provides a new understanding as well as specific information on the impact of climate change and sea-level rise on Roi-Namur Island on Kwajalein Atoll in the Republic of the Marshall Islands. Results include an improved and updated timeline of the threats that low-lying atoll islands face due to future climate change. Researchers on this effort included the U.S. Geological Survey, National Oceanographic and Atmospheric Administration, Deltares, and University of Hawaii. To produce the study, they relied on physics-based numerical oceanographic and hydrogeologic models to project the effects of wave-driven flooding of the island and evaluate its resulting impacts to infrastructure and freshwater resources.



The impact of sea-level rise inundation combined with annual wave-driven flooding will begin to significantly negatively impact Roi-Namur when mean sea level is 0.4 meters higher than at present. Without active management measures the annual amount of seawater flooded onto the island during storms will be of sufficient volume to make the groundwater nonpotable year-round. [MORE](#)

Recently Released Documents Available for Download

- RC-2202 - “Methods for Assessment of Species Richness and Occupancy Across Space, Time, Taxonomic Groups, and Ecoregions: Field Guide and Natural History of Butterflies on the Western Edge of the Great Basin” - [Field Guide](#)
- RC-2243 - “Patterns and Processes: Monitoring and Understanding Plant Diversity in Frequently Burned Longleaf Pine Landscapes” - [Final Report](#)
- RC-2245 - “Defense Coastal/Estuarine Research Program (DCERP)” - [Final Report](#)
- RC-2245 - “Biodiversity Variation and Change on a Complex Coastal Plain Landscape: Causes, Connections, Consequences, and Recommendations for Ecosystem Restoration and Conservation” - [Technical Report](#)

Strategic Environmental Research and Development Program (SERDP) Environmental Security Technology Certification Program (ESTCP)
(517) 372-6565 | www.SERDP-ESTCP.org | 4800 Mark Center Drive, Suite 17D03, Alexandria, VA 22350



- RC-2245 - “Quantification of Nutrient and Suspended Solids Loading from Watersheds at Marine Corps Base Camp Lejeune, NC” - [Technical Report](#)
- RC-2245 - “Carbon Burial in Natural and Created Fringing Marshes of Northwest Florida (Choctawhatchee to Pensacola Bay)” - [Technical Report](#)
- RC-2330 - “Soil Microbial Communities: Critical Roles in Control of NonNative Invasive Species and Restoration of Ecosystem Functions” - [Final Report](#)
- RC-2433 - “Recovery of Native Plant Communities and Ecological Processes Following Removal of Non-native, Invasive Ungulates from Pacific Island Forests: Pohakuloa Training Area Plant Guide” - [Guidance Document](#)
- RC-201201 - “Operational-Scale Demonstration of Propagation Protocols and Comparative Demographic Monitoring for Reintroducing Five Southeastern Endangered and At-Risk Plants” - [Final Report](#)
- RC-201304 - “Integrated Measurement of Naval Sonar Operations and Precise Cetacean Locations” - [Final Report](#)
- RC-201304 - “Integrated Measurement of Naval Sonar Operations and Precise Cetacean Locations: Integration of Fastloc GPS into a LIMPET tag” - [Technical Report](#)

Key Events and Meetings

November 27-29, 2018 - SERDP & ESTCP 2018 Symposium

The SERDP and ESTCP Symposium is a nationally recognized conference focusing on the DoD’s priority environmental and installation energy issues. The 2018 Symposium will be held from November 27-29, 2018, at the Washington Hilton Hotel in Washington, D.C.



The Resource Conservation and Resiliency Program Area is offering four technical sessions at the Symposium on various topics including installation resilience, wildland fire management, threatened, endangered, and invasive species, and terrestrial Arctic research. The two short courses will be similarly focused on infrastructure resilience planning and wildland fire management tools. Additional details can be found on the [Symposium website](#) regarding the posters sessions, plenary session, and more.

Upcoming Conferences

December 10-14, 2018 - AGU Fall Meeting 2018

The AGU Fall Meeting 2018 will mark another dynamic year of discovery in Earth and space science, serve as the advent of AGU’s Centennial year, and provide a special opportunity to share science with leading thinkers in Washington, D.C. [MORE](#)