



NExUS Ongoing Projects and Activities Thu Feb 21 21:29:02 EST 2019

Name	Stormwater Runoff in Coastal Watersheds: Predicting Impacts of Development and Climate Change
Description	From project description: "NCCOS developed a stormwater runoff modeling system (SWARM) that quantifies runoff volumes and rates using climate change and development scenarios. We based SWARM on the runoff curve number method and unit hydrograph algorithms of the US Department of Agriculture, Natural Resources Conservation Services (NRCS). We validated SWARM using US Geological Survey discharge and rain data, and validation results support the appropriateness of our modeling system for southeastern coastal watersheds. We are building a user-friendly tool for use by research scientists, resource managers, decision makers, and others. SWARM also can be applied to other regions by recalibrating parameters and modifying calculation templates. Key applications of SWARM are: comparing runoff among watersheds representing different environmental settings (e.g., levels of development, soil types, a range of sizes, topography); evaluating and illustrating (singularly or in combination) effects of primary drivers of runoff amount and flashiness including development level, soil type, antecedent runoff conditions, rainfall amount; predict runoff under a range of development scenarios within a watershed; integrate effects of urbanization and projected climate change scenarios."
Category	- Climate-change Specific Projects
Sector	- Infrastructure - Natural Ecosystems
Focus Area	- Coasts and Climate Resilience (including sea-level rise) - Climate Impacts on Water Resources
Region	- Regional Or State -- South East
Status	- Ongoing
Timelines	2007-ongoing
Lead Agencies	NOAA/NCCOS, Center for Human Health Risk
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