

EPA's Office of Research and Development in Caño Martín Peña

**Evelyn Huertas, USEPA Region 2
Caribbean Environmental Protection Division
Urban Waters CMP Partnership Meeting
November 29, 2016**

Community-Based Ecosystem Goods and Services

San Juan, Puerto Rico Ecosystem Services Case Study: Task SHC 2.61



San Juan,
Puerto Rico



Coastal Gulf of
Mexico



Southern
Plains



Pacific
Northwest



Great
Lakes AOC

- Timeline: 2015-2020 Budget: more the 10 FTEs
- Project Goals
 - Identify approaches for integrating ecosystem services concepts into community-level decision-making
 - Examine transferability, scalability, & relevance of tools & approaches
 - Quantify linkages among ecosystem services, human health, & well-being, focus in CMP

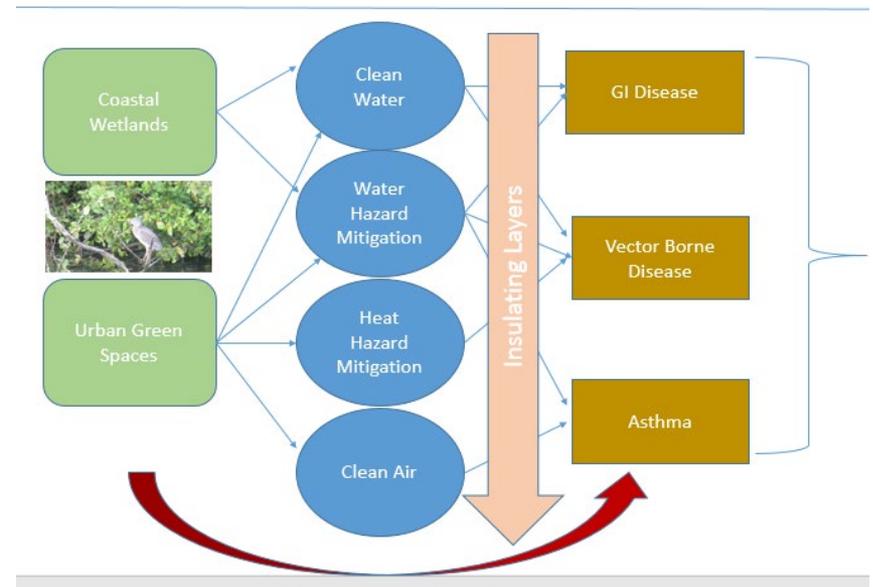
Task SHC 2.61 (cont.)



- A new postdoc started in January at ORD's Gulf Ecology Division (GED) who will specifically be looking at relationships between ecological condition and human health outcomes. In early June, the GED postdoc collaborated with the University of Southern Mississippi to collect mosquito samples in San Juan, to learn more about the potential interaction between watershed nutrient loading, flooding events, and the magnitude of vector-borne illnesses, such as the Zika virus.
- AED has also two postdocs conducting research in the San Juan bay Estuary and the CMP. One AED postdoc is investigating greenhouse gas inventories and carbon storage associated with mangroves and coastal waters as well as water quality issues in the MPC. The second post doc is creating a systems model of nutrient loading, water quality, and blue carbon as well as a model of ecosystem services and human well-being in the CMP.

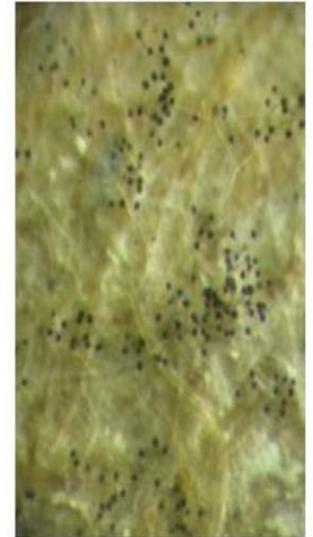
Task SHC 2.61 (cont.)

- Nitrogen characterization using isotopes to learn about its distribution and influence in the food web project-** To establish an anthropogenic baseline of N inputs to the SJBE, additional sediment core samples were taken in June 2016. Analysis is underway for measurements of nitrogen content and other ecological parameters. These data will be considered in conjunction with recently collected information on surface sediments, shellfish, and fish from throughout the estuary and will allow us to assess how nitrogen moves through the estuary and **how the closure of the Martin Peña is impacting the health of the ecosystem.**

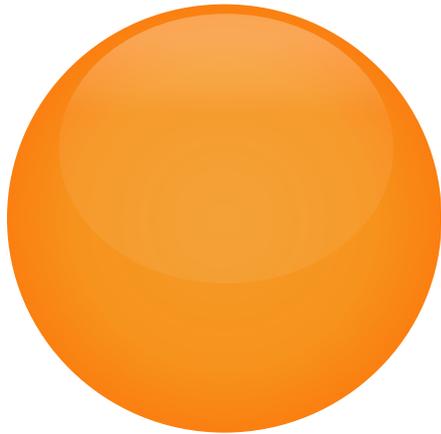


Task SHC 2.61 (cont.)

- **EPA mold characterization study in Caño Martin Peña** to advance in the research on asthma incidence in this community. - In the summer 2016, started the pilot study with the Quality Assurance Plan that was approved in October 2016. In December 2016, we will start recruiting CMP households that voluntarily wish to participate. Sampling at participating households will consist on collection of dust and air samples - indoor and outdoor. This study is in collaboration with UPR-Medical Sciences Campus and Interamerican University of Puerto Rico.



THANK YOU!



**Evelyn Huertas
USEPA Region 2
Huertas.evelyn@epa.gov**

