



PENNSYLVANIAVIEW 2022 - 2023

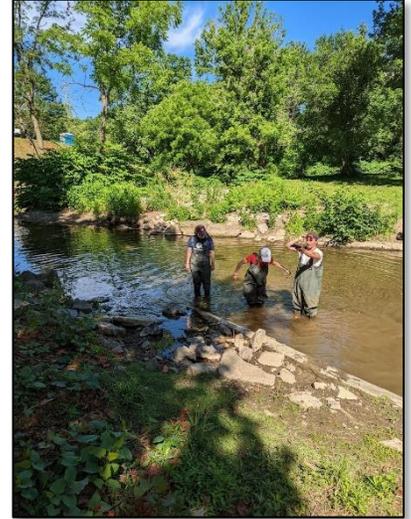
AmericaViewSM
Empowering Earth Observation Education
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PENNSYLVANIAVIEW 2022 - 2023 ACTIVITIES

PennWest University – California completed a number of projects with funding support from AmericaView and PennsylvaniaView. During academic year Fall 2022 to Spring 2023 several initiatives were continued or undertaken through the Pike Run Watershed, a student-led research and service group of the Geology Club of the university. These projects serve the local community of California, but also the broader communities within Washington, Fayette, and Allegheny Counties of southwestern PA, and extended reach to eastern Ohio, northern West Virginia, and northwestern PA. Projects include course-related education involving students of PennWest – California (PWUC) in classes of Hydrology, Geomorphology, and Watershed Evaluation and Management.

Over the Fall and Spring semesters, over 100 students took part in field and lab experiences involving stream flow and water quality measurements using equipment and materials secured through AmericaView funding. This year, students in Introduction to Geology used hydrography maps and remotely-sensed imagery to evaluate land use and its potential influence on stream water quality. Students learned about legacy mining activities and modern agriculture, as well as the common environmental impacts of those activities. They used this information to predict sites of particular interest based on surface water impacts. Additionally, they used aerial imagery to estimate sediment loading to streams throughout Allegheny County, PA from denuded surfaces under construction, using precipitation data and estimates of bare earth areas.

In Spring 2023, a repeat of the Pittsburgh Geological Society (PGS) student drilling workshop was conducted two regional environmental consulting firms. Twenty-eight students participated from seven universities (PennWest – California, Allegheny College, PennWest – Edinboro, Indiana University of PA, Slippery Rock University, University of Pittsburgh and University of Pittsburgh – Johnstown) in the two-day event. Hosted at the PennWest - California “SAI Farm,” the drilling workshop allows faculty to stay on the sidelines as environmental and geotechnical professionals’ share their experiences and lead real-world example activities. These activities give students a taste of what careers in these fields entail. Participants used historical and modern maps and air photos to determine potential environmental hazards, predict behavior of contaminants, and establish potential remedial strategies.



Water testing



Drilling Workshop.



Students working on reports and maps. .

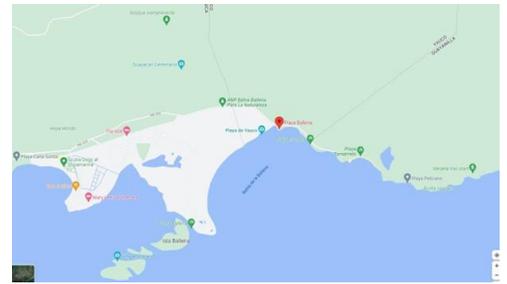
PennsylvaniaView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state. AmericaView is funded by USGS grant agreement G18AP00077.

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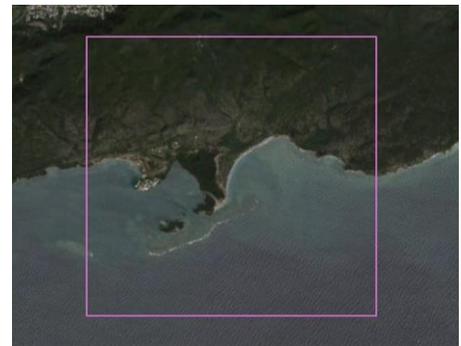
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BENEFITS TO <PENNSYLVANIAVIEW> : VILLANOVA UNIVERSITY

Marine debris (MD) is a major threat to ecosystems, biodiversity, and human health because it is prevalent in the environment, resistant to degradation, and easily transported for long distance dispersal. MD includes any human-made items that are intentionally or unintentionally discarded in the ocean, including plastics, metals, glass, fishing gear, lumber, etc. In the tropics, hurricanes and other tropical storms are anecdotally considered sources of MD, but their impact is difficult to assess. Combining remote sensing imagery before and after a hurricane with on-the-ground collections of marine debris in the impacted coastal area will greatly improve our understanding of tropical storms as accumulators and depositors of MD along the coast. We will acquire satellite imagery for this area at the highest resolution possible, on or near the dates the Hurricane was in the region and for the dates of our MD collection. The results of this analysis and the images will be used to support graduate and undergraduate research projects and incorporated into relevant environmental science lectures at Villanova University.

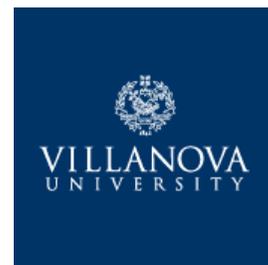


Map of Playa Ballena Study Area



Pleiades Imagery 30cm 2022-11-18

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