



PENNSYLVANIAVIEW 2023 - 2024

AmericaViewSM
Empowering Earth Observation Education
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PENNSYLVANIAVIEW 2023 - 2024 ACTIVITIES

During the 2023-'24 program year, PAView focused on projects and activities that provided opportunities for research for graduate and undergraduate students across the Commonwealth. Topics of concern included land use change, water and air quality, and ecological habitat assessment. Several universities contributed the time and talent of students and faculty mentors to these research endeavors.

Faculty mentors trained university students to work with K-12 partners in related projects. Faculty-led projects included water quality sampling associated with abandoned mine drainage and subsidence, along with analysis of landscape response to natural and manmade processes including coastal erosion and sediment loading to streams. University student mentors worked with undergraduate and K-12 students on water quality sampling and assessment, surface and groundwater interaction, and development of field skills for environmental careers.



Hillslope on the banks of Muncy Creek, Sullivan County, PA. Local geology contributes to the dynamic behavior and high sediment loading in the creek.



University students surveying subsidence features over mined areas.



10th grade students learn water sampling from a university mentor.

Specific projects included...

- Sediment accumulation and migration in Muncy Creek
- Habitat potential for reintroduction of the American Chestnut
- Abandoned Mine Drainage sampling for air and water quality impacts, including CO₂, Metals, Nutrients, and bulk parameters of pH, alkalinity, and conductivity
- Acquisition of "loaner" field equipment for K-12 teachers to deploy in classes for real-world data collection, including Infrared Cameras, Laser thermometers, and water test kits
- Aerial imagery analysis of impacts of conflict in the Darfur area of Sudan, in northeast Africa
- Passive treatment wetland assessment for continued effectiveness of Iron removal
 - This joint project included students of the Pennsylvania State System of Higher Education (PASSHE) teaching K12 students water testing procedures

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 G23AP00683.

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BENEFITS TO PENNSYLVANIA

- Pennsylvania collaborators from across multiple institutions worked together to solve problems related to environmental issues, both historical and emerging. Students from nearly a dozen universities and several K12 schools participated in multiple projects related to water quality and the work of environmental sampling.
- As we consider the changing demographics of the state, including workforce needs, we emphasize the potential careers in Environmental Science, Biology, and Geology that will be in high demand in the coming years.
- Diverse projects aimed at a diverse audience increase the visibility of science careers as well as their importance to Pennsylvania families and the economy.



Emergent American Chestnut (Creative Commons).



PASSHE students visit an abandoned mine drainage site to measure water chemistry.



A PennWest – California student observes shoreline erosion along the Lake Erie coast.

PENNSYLVANIAVIEW CONSORTIUM MEMBERSHIP

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