PENNSYLVANIAVIEW REMOTE SENSING ACTIVITIES 2015 - 2016

PENNSYLVANIAVIEW WORKS WITH LOCAL COUNTY USING HAZUS

Dr. Thomas Mueller and a student completed a HAZUS analysis of Washington, Pennsylvania. HAZUS is a multi-hazard identification and risk assessment tool developed by Federal Emergency Management Agency (FEMA). The software program uses Geographic Information Systems (GIS), remote sensing technology, and several datasets, such as digital elevation models (DEMS), to estimate physical, economic, and social impacts of disasters (https://www.fema.gov/hazus).

A Level 1 flood analysis was completed using federal data sets and then compared to the results from a Level 2 flood analysis, using local data. These results were presented to the Washington County Department of Public Safety and FEMA. Both agencies were impressed and the Washington County Department of Public Safety will be using the results in their next hazard report.


HAZUS multi-hard identification and risk assessment tool.

PENNSYLVANIAVIEW PREPARES LANDFIRE EDUCATIONAL MATERIAL

PennsylvaniaView (PAView) developed a tutorial in order to define some applications for LANDFIRE data. LANDFIRE is a shared program between the wildland fire management programs of the U.S. Department of Agriculture Forest Service and U.S. Department of the Interior, providing landscape scale geo-spatial products to support cross-boundary planning, management, and operations. It provides over 20 national geo-spatial layers (e.g. vegetation, fuel, and disturbance), databases, and ecological models that are available to the public. Additional information and data are provided at http://www.landfire.gov/about.php.

Using the guidance to encourage "careful evaluation of database records prior to use in modelling" provided within the article "*Predicting the distribution of Sasquatch in western North America: anything goes with ecological niche modelling"* in the *Journal of Biogeography* (September 2009), the current vegetation along the west coast of the United States was examined to determine the most suitable habitat locations for Sasquatch, known as Bigfoot. The author-acknowledged, partially tongue-in-cheek article encourages non-professionals to understand the objective analysis of data, needed to answer questions about the habitat modeling. The methods and model in this PAView work might be used to locate and protect endangered species and other species of concern.
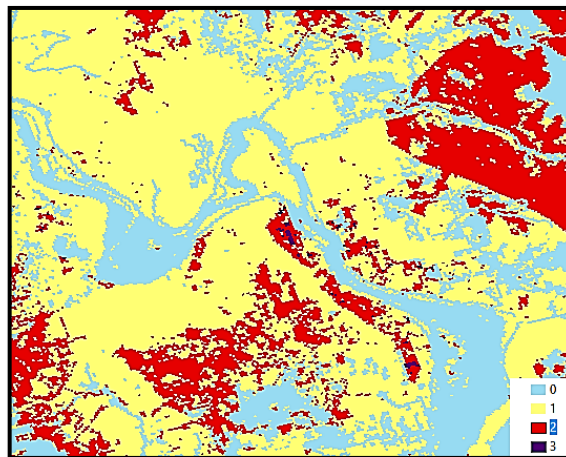
Map of possible Bigfoot habitat. 3 = Best Habitat to 0 = Worst

The following process was utilized:

- Process and load three raster datasets (foliage type, coverage, and height).
- Mask the raster layers to the desired area of interest.
- Reclassify the attributes based on levels of relevance.
- Implement the raster calculator to determine area of congruence.

BENEFITS TO PENNSYLVANIAVIEW

The **goals** of PAView are:

- To build partnerships within the Commonwealth of Pennsylvania to support interests in public domain remotely sensed data.
- To create resources for K-12 teachers to utilize in their classrooms to educate students about remotely sensed imagery.
- To promote the sharing of data through connections with existing resources and acquisition of new data.
- To work with undergraduate educators and institutions through the Commonwealth of Pennsylvania to enhance access to satellite data and to encourage the use of it in courses.

The value of the PAView consortium to Pennsylvania rests with its ability to further one of the primary goals of the AmericaView program – to educate the public about remotely sensed imagery
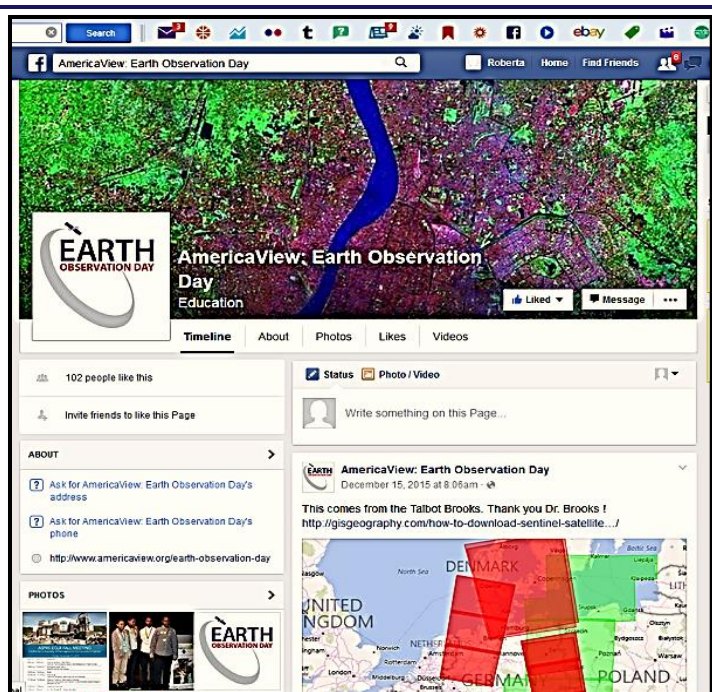
Earth Observation Day Facebook Page.

PENNSYLVANIAVIEW CONSORTIUM MEMBERSHIP

The PAView consortium members work on a wide variety of efforts related to remotely sensed data at their universities.

California University of Pennsylvania
  Co – PI: Thomas Mueller, Ph.D., GISP
Pennsylvania State University
  Co – PI: Maurie Kelly, Ph.D.

Clarion University of Pennsylvania
Bucknell University
Villanova University