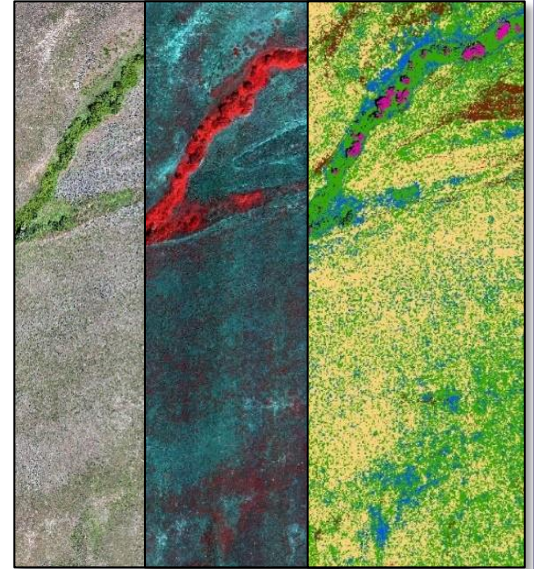


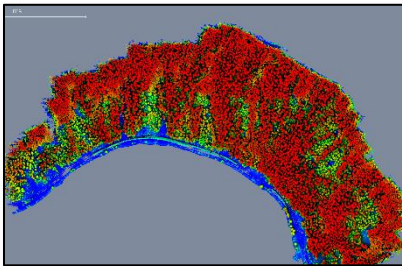
IDAHOVIEW HISTORY AND SUCCESSES

Idaho's economy strongly depends on its natural resources. Our IdahoView team uses remotely sensed information to study agroecosystems, forestry, geohazards, watersheds, and rangelands to aid in contributing to Idaho's land and resource management decision making. Further, to educate a qualified workforce in Science, Technology, Engineering, and Mathematics (STEM), IdahoView supports student participation in research and promotes outreach in the use of remote sensing and Unmanned Aircraft Systems (UAS) technology. Industries that require STEM are expected to increase in Idaho and across the nation with IdahoView prepared to support this activity through our partnerships in the state, region, and nationally.

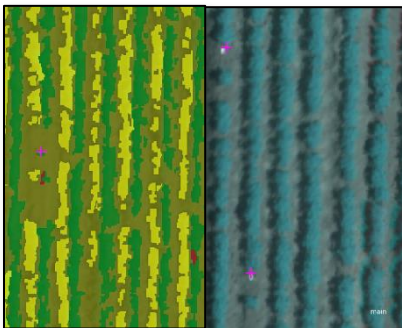
IdahoView activities are aligned with the U.S. Geological Survey's mission to investigate the challenges between our natural world and growing human demands. Products developed by IdahoView are distributed for public use through statewide data repositories including: the Idaho LiDAR Consortium, Inside Idaho, and the Northwest Knowledge Network. Educational materials are shared via the IdahoView and AmericaView websites.



Hyperspectral imagery captured from UAS. Left image represents natural color, middle image false color and right image is final vegetation classification.



UAS LiDAR of forested hillside for assessment of landslide geohazards.



Potato crop with plants infected by virus identified with purple crosshairs.

The IdahoView consortium consists of members from Idaho State University, Boise State University and the University of Idaho. Collectively our objectives are to:

- Promote the development of novel tools and techniques that allow translating remotely sensed data into information that is meaningful to decision makers
- Use remote sensing as a means to promote STEM interest and learning
- Seek to expand involvement to incorporate all higher education institutions in Idaho and any other interested parties
- Advance the availability and timely distribution of data by maintaining links to archives of publically available satellite imagery for Idaho
- Encourage the use, training, and scientific application of remotely sensed data from small Unmanned Aircraft Systems (sUAS)

IdahoView advances outreach in remote sensing and UAS education with K-12 students, programs, and teachers at Idaho schools. Through our activities over the years we have partnered with various state and federal agencies to solve societal issues relevant to Idaho's natural resources and environment.

Federal consortium members identified above do not receive funding from AmericaView.

IDAHOVIEW 2018 - 2019 ACTIVITIES

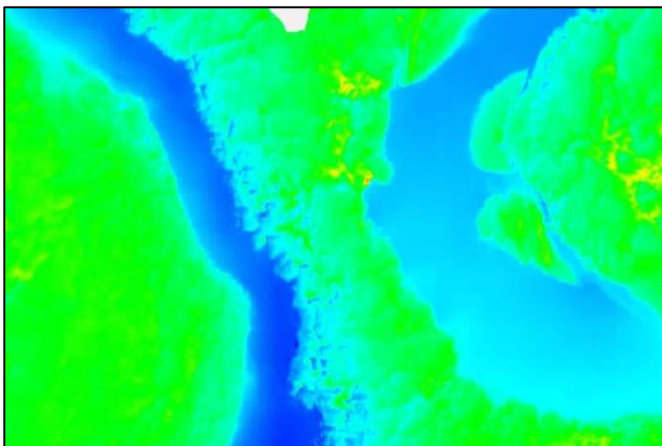
PI Delparte leads the AmericaView UAS Working Group. To highlight the breadth and depth of research and education in UAS throughout the AV network, our team is in the process of showcasing stateviews' UAS domain expertise, sensor/platform capabilities, and related activities. Images and specific examples of education, outreach, and research will be coalesced, in collaboration with and permission from each stateview, and published to the AV website. Further, these highlights will be coalesced into AV themed UAS printed materials. These materials will be created in handout form for distribution by the UAS working group members. The goal of this outreach activity is to promote remote sensing with UAS and leverage the nationwide expertise of our AV network. By broadening our reach across academia, government agencies and the private sector, our AV network will further its opportunities for funding and raise awareness of the educational resources available through the AV website.



Rangeland survey with an unmanned aircraft near Mt. Borah in Idaho.



River survey with an unmanned aircraft for Chinook salmon.



Thermal survey along river channel for Chinook salmon.

In partnership with an IDView team member from Boise State University, we will develop a course module with a focus on spatial mapping and modeling of sagebrush steppe and thermal refugia for fish in Idaho rivers. Our learning module will incorporate UAS and space-borne sensors, providing hands-on experience in analyzing and acquiring geospatial data that is synergistic with recovering sagebrush populations. Our intent is to utilize UAS hyperspectral and thermal sensing (local scale) along with Landsat data (regional scale) to evaluate sites recovering from large disturbances. By providing authentic research experiences to students we will engage students from a variety of backgrounds to solve applied problems.

The second course module will focus on an applied exercise related to agriculture. Idaho is known for its potato production and we will leverage 5 years of data collection over potato fields to introduce students to image analysis for crop health measures related to water stress, disease detection, and nutrient deficiency. Delparte and a graduate student will develop the course module and include Landsat imagery comparisons for landscape level analysis.

UAS Workshops: our team will support Idaho drone workshops in collaboration with an AV member from the University of Idaho and co-lead one employee development workshop for Idaho and region.

IdahoView Principal Investigator:

Dr. Donna M Delparte

Idaho State University

208-282-4419

delparte@isu.edu



<http://www.idahoview.org>