WyomingView conducted educational outreach activities and trained four interns (University of Wyoming students).

Sixth graders are learning the connections between Earth’s 4 spheres (atmosphere, hydrosphere, geosphere, and biosphere), and how changes in one can influence the rest of the spheres. WyomingView PI presented how diverting the water flowing into Aral Sea (hydrosphere) influenced the fishes, birds, and animals (biosphere), and created the earth’s newest desert (geosphere). Historical satellite images of Aral Sea generated by the USGS and NASA were used as the primary visual aids in this educational outreach activity. (Number of students reached: 254 – 12 sections).

Eighth graders learned the relationship between leaf conditions (live versus dead) and spectral reflectance. Students used ALTA II Spectrometer and measured reflection in 11 regions of the electromagnetic spectrum. Plot of spectral reflectance highlighted the value of infrared measurements. Following this activity, WyomingView PI described how infrared measurements obtained by sensors onboard Landsat and other satellites can be used for monitoring vegetation and water conditions around the world. This multiday activity was conducted over 6 days. (Number of students reached: 245 – 12 sections).

Sarah Weidler analyzed fall 2015-2018 phenology data of aspen trees recorded by students enrolled in a UW applied remote sensing course. She presented following findings in the 2020 ASPRS conference:

- Aspen trees exposed to less sunlight in spring & summer, changed color and lost their leaves quickly than those that received more sunlight,
- This pattern was consistent for all 4 years under different weather conditions (varying temperature and precipitation), &
- Citizen Science data forms must collect data on the differences in sunlight received by individual Aspen trees.

The proceedings paper was published in ISPRS archives (https://doi.org/10.5194/isprs-archives-XLIV-M-2-2020-105-2020).
Past WyomingView interns are currently working federal, state, and local government agencies.

Some interns have confirmed the value of the training they received as part of the internship. Analyzing satellite images, extracting information, and presenting them in conferences were identified as important skills.

New testimonials from past interns will be uploaded to: https://wyomingview.blogspot.com/p/then-now.html.

WyomingView will continue to recruit and train more interns (future workforce development).

WyomingView continues to work with farmers and ranchers to promote remote sensing applications:

- 2019-20, WyomingView intern Logan Heward worked with 2 farmers in SE Wyoming and obtained crop production or yield data for their fields.
- Heward obtained Landsat NDVI images for the corresponding years from USGS EarthExplorer. These dates corresponded to the peak crop growth on the ground.
- Heward compared the average NDVI values with the crop yield data and found statistically significant relationship for few but not all years.

Working with farmers and ranchers allows WyomingView to reach out to non-technical users and showcase the benefits of Landsat and other remotely sensed data. Testimonials provided by farmers and ranchers are valued highly by AmericaView and USGS. WyomingView will continue to work with farmers and ranchers.