



AboveNV Newsletter

Summer 2016

WE IMPROVE YOUR BOTTOM LINE

FROM ABOVE

News By Industry

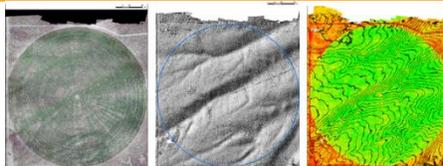


This summer we've made some great strides in opening up the Unmanned Aerial Vehicle market to businesses located in the Great Basin. We'd like to take a few minutes to share the latest with our friends and customers.

Agriculture

Working in a [Governor's Office of Economic Development](#) funded project aimed at demonstrating the value of drones in agriculture AboveNV with [Lynn Fenstermaker](#) and [Tim Minor](#) of the [Desert Research Institute \(DRI\)](#) have been flying over [Winnemucca Farms](#) to provide analysis on crop health.

Using multirotor and fixed wing aircraft equipped with both RGB and Near Infrared cameras we've been able to help DRI and Winnemucca Farms understand the soil and crop health to improve yield.



This is a sample image from UAV flights over agricultural fields near Winnemucca NV. The left figure is a natural color image of an alfalfa field; the center figure is a surface model image of the same field and depicts elevation; and the right figure is a [NDVI \(normalized difference vegetation index\)](#) image where brighter shades of green indicate higher vegetation health; elevation contours are superimposed on this image. Analysis like these help the farming staff pinpoint and identify issues which may be reducing their annual crop yield.

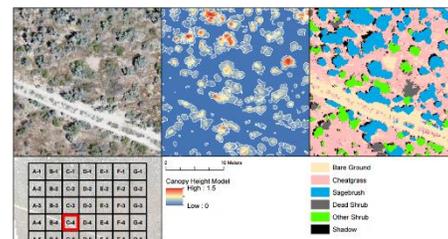
Construction



We've been working with [Q&D Construction](#) throughout 2016, including a mapping project at the [Wild West Motor Sports Park](#) where we created an unprecedented orthometric map set at better than 1cm per pixel. We have several other plans with Q&D and you can find out more and see virtual tours on a [recent blog post](#).

Range Management

Working with [Peter Weisberg](#), [Marjorie Matocq](#) and [Tom Dilts](#) of [UNR's College of Agriculture, Biotechnology, and Natural Resources](#) we've come up with a process to provide vegetative analysis in sagebrush ecosystems. Marjorie's team has been working on a project documenting the habitats of Pygmy rabbits. We've been able to identify plant communities mapping six cover classes at 95% accuracy. We'll soon be able to quantitatively determine how accurate the canopy height model and get the shrub classification down to species. Tom and Peter are planning to publish their findings later this year.



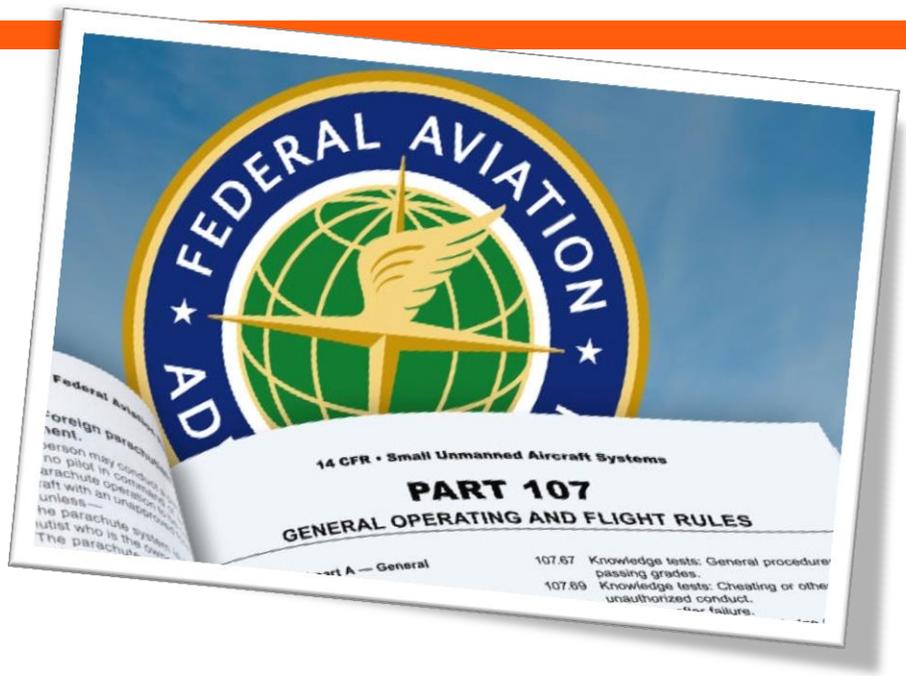
AboveNV has been in discussion with noted sage grouse expert Peter Coates of the [USGS Western Ecological Research Center](#) and we're doing some additional proof of concept projects to apply these techniques to sage grouse habitat.

This information on vegetative communities is vital for wildlife habitat management, land development, fire ecology and [invasive species control](#).

Educational Outreach

Former science teacher and AboveNV co-founder Kirk Ellern will be teaching another [Teaching Nevada Teachers](#) program about drones course. Working with [Brian Crosby](#) of the [North Western Regional Professional Development Program](#) the topic will be on [writing code for drones and underwater rovers](#).

We'll also be featured at the [Reno Air Races](#) as part of [Pathways to Aviation's](#) Aviation Learning Center. Last year we hosted over 3,000 students in our drone education tent. This year AboveNV will be teaming up with the [Nevada Business Aviation Association](#), a southern Nevada unmanned aviation STEM education group.



Our New Equipment



[Our fleet is growing!](#) Over the past few months we've added several new big hexacopters and more than a few fixed wing autonomous drones for use with our mapping projects. We've also added a large number of [MapIR Survey2](#) RGB and near infrared cameras to improve our results with vegetation identification and mapping. While we're at it we'll be testing the newly available [Micasense Sequoia multi spectral camera](#) to see if it's worth the costs. Look for reports soon!

Our next objective is to increase our flight time and obtain beyond line of site permission from the FAA. This will allow us to collect data over large expanses in rural areas.



Long Awaited FAA Rules

The FAA has announced [new rules for the professional use of unmanned aerial vehicles](#). These new rules, called Part 107, go into effect August 29 and will greatly improve our ability to provide customers with the Geo-data they need to improve their businesses. [This greatly improves our ability to serve customers and expand our business!](#)

Once these drone rules take effect they will ease the administrative burden of commercial and governmental drone operators across the United States. Small unmanned aircraft system operators will not be required to pass a medical exam. No Notice to Airmen will need to be filed prior to commencing a drone operation, and operators will only need to pass an aeronautical knowledge test rather than acquire any form of pilot's license.

While many aspects of our business will become easier we are still waiting for news on additional rules which will allow us to fly expanded missions.

- Beyond visual line of site
- At night
- From moving vehicles
- Over people

We're all in for these capabilities but the FAA can be slow to respond to applications. We're estimating 2017 for truly long range services.

Strategic Partners



Earlier this summer AboveNV joined [Cherokee Nation Technologies](#) in a joint venture to service federal agencies needing UAV services. Cherokee is a large company providing unmanned services to several agencies such as USGS, USDA-NRCS, NOAA, and the US Forest service. AboveNV will provide regional flight operations and emergency services missions to these entities through Cherokee.



CONTACT INFORMATION

Please give us a call to chat or find out more about our end to end flight operations and mapping services. We are happy to share our many proof of concept mission results. We can improve your bottom line... from above!

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