

Christie, William -FS

From: Norman, Steve- FS
Sent: Tuesday, September 6, 2022 10:00 AM
To: Spruce, Joseph [US-US]; Hargrove, William -FS; Christie, William -FS
Cc: hnw@geobabble.org
Subject: RE: Recent news article regarding June 2022 storm damage in parts of Ohio

Joe,

This was a powerful storm! When I drove through a week later I saw downed scattered trees along 81 to the east. <https://www.whsv.com/2022/07/18/macroburst-two-tornadoes-hampshire-county-storms-7-12-2022/>

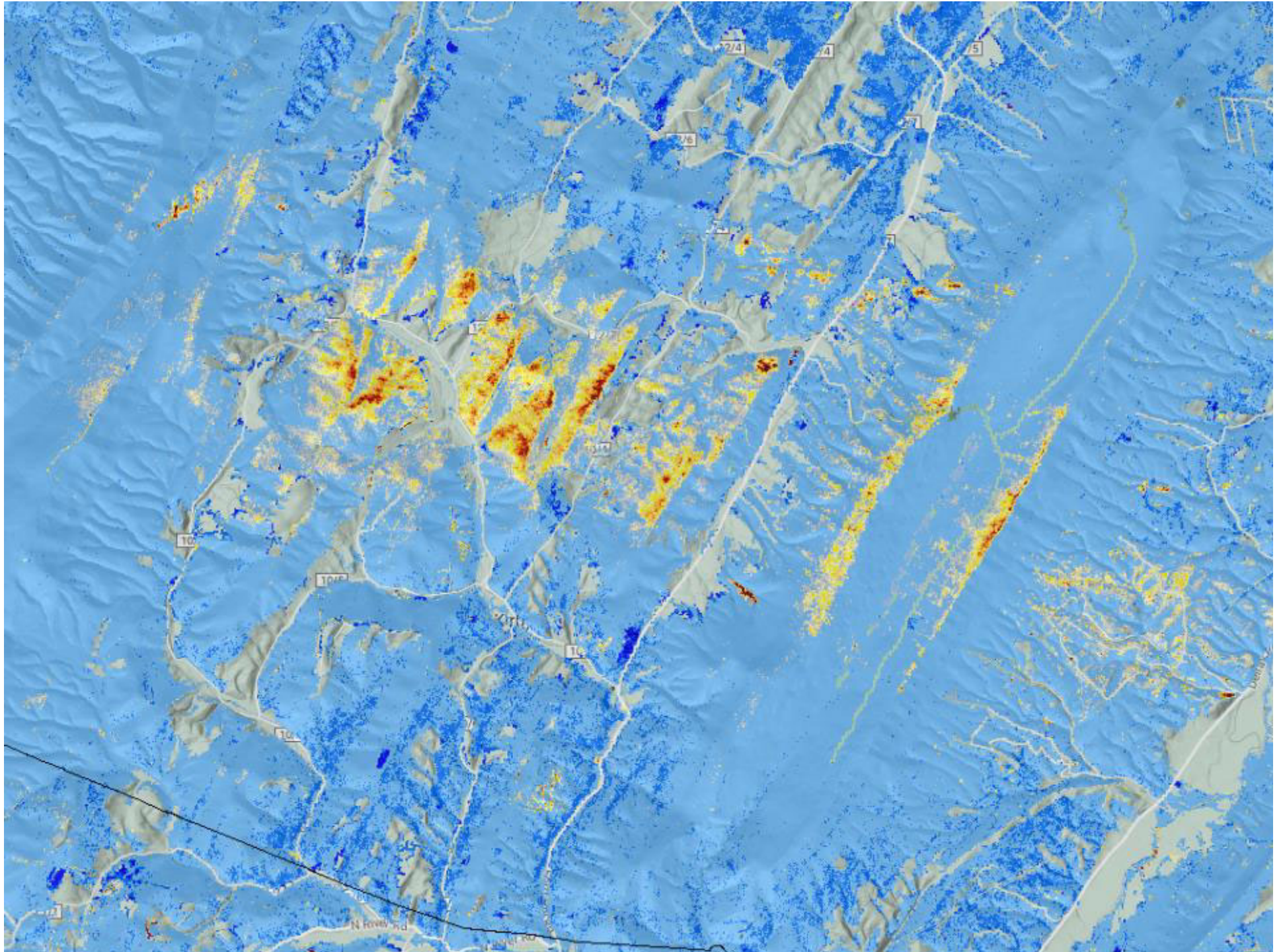
This example is exceptional because it shows so clearly how damage from severe wind is manifest in this montane landscape. While every storm is a bit different, these types of storms here clearly show patterns of exposure that can recur. Ridgelines are most vulnerable, but valleys (like in the east) aren't free from severe hail/downburst impacts either.

There are two clear/relevant Sentinel2 dates—July 22 and Aug 11, 2022, the former is clear (and a bit stronger in initial impact) but it has some clouds, so this below is a max NDVI composite of the two for this summer. Note that this is manifest as a series of defoliations mostly intense on the ridgetops.

The detail with *HiForm* (as a research link) uses the 1 year dNDVI map below:

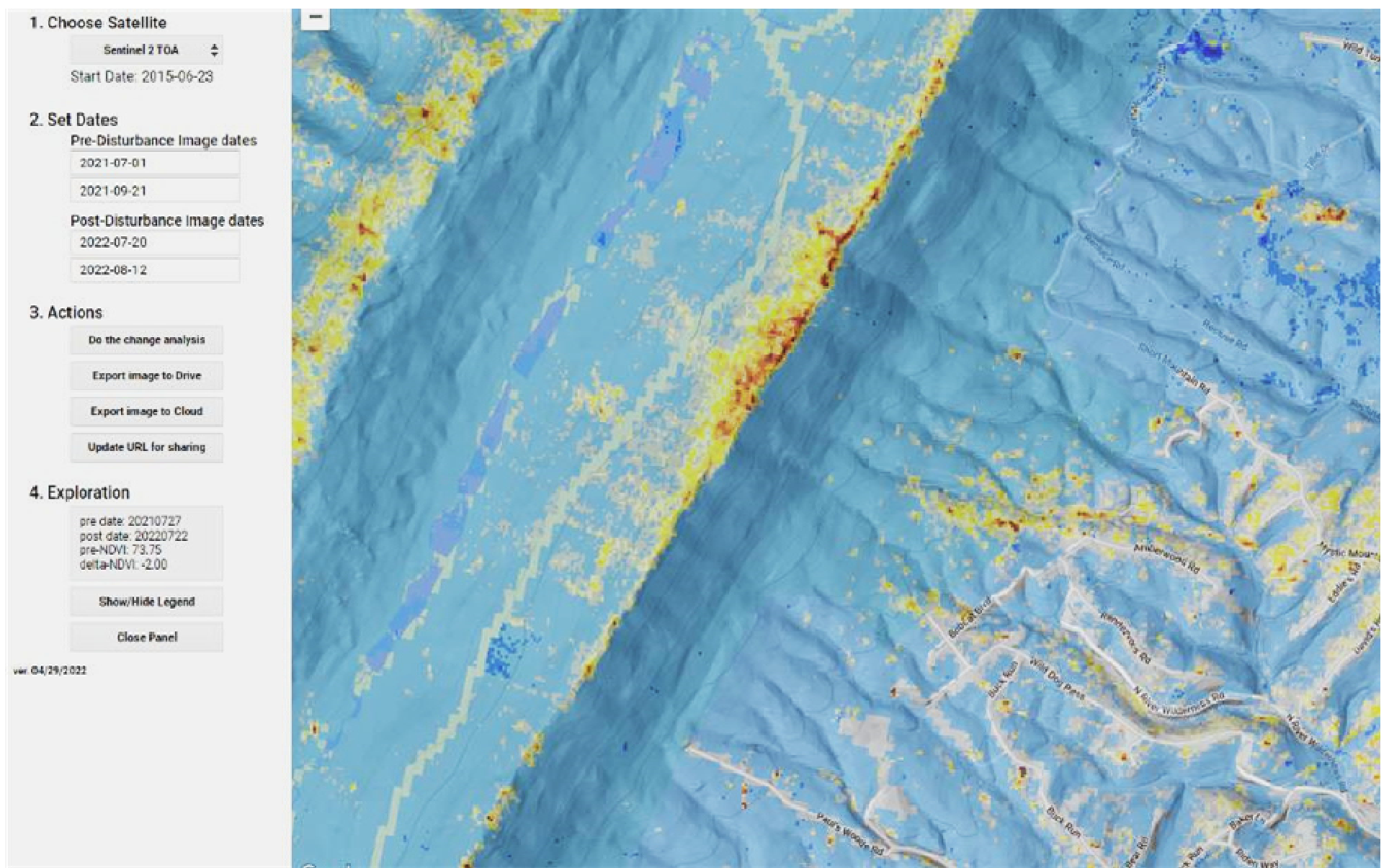
<https://code.earthengine.google.com/1c4733ad710e9ab69452cf1fb7938f85#satellite=Sentinel%20%20TOA;preDisturbanceStartDate=2021-07-01;preDisturbanceEndDate=2021-09-21;postDisturbanceStartDate=2022-07-20;postDisturbanceEndDate=2022-08-12;lng=-78.66678942105689;lat=39.19549879799088;mapZoom=13;autoRun=false;>

Nearly the entire diagonal mapped here (northwest to southeast) shows sign of wind damage.

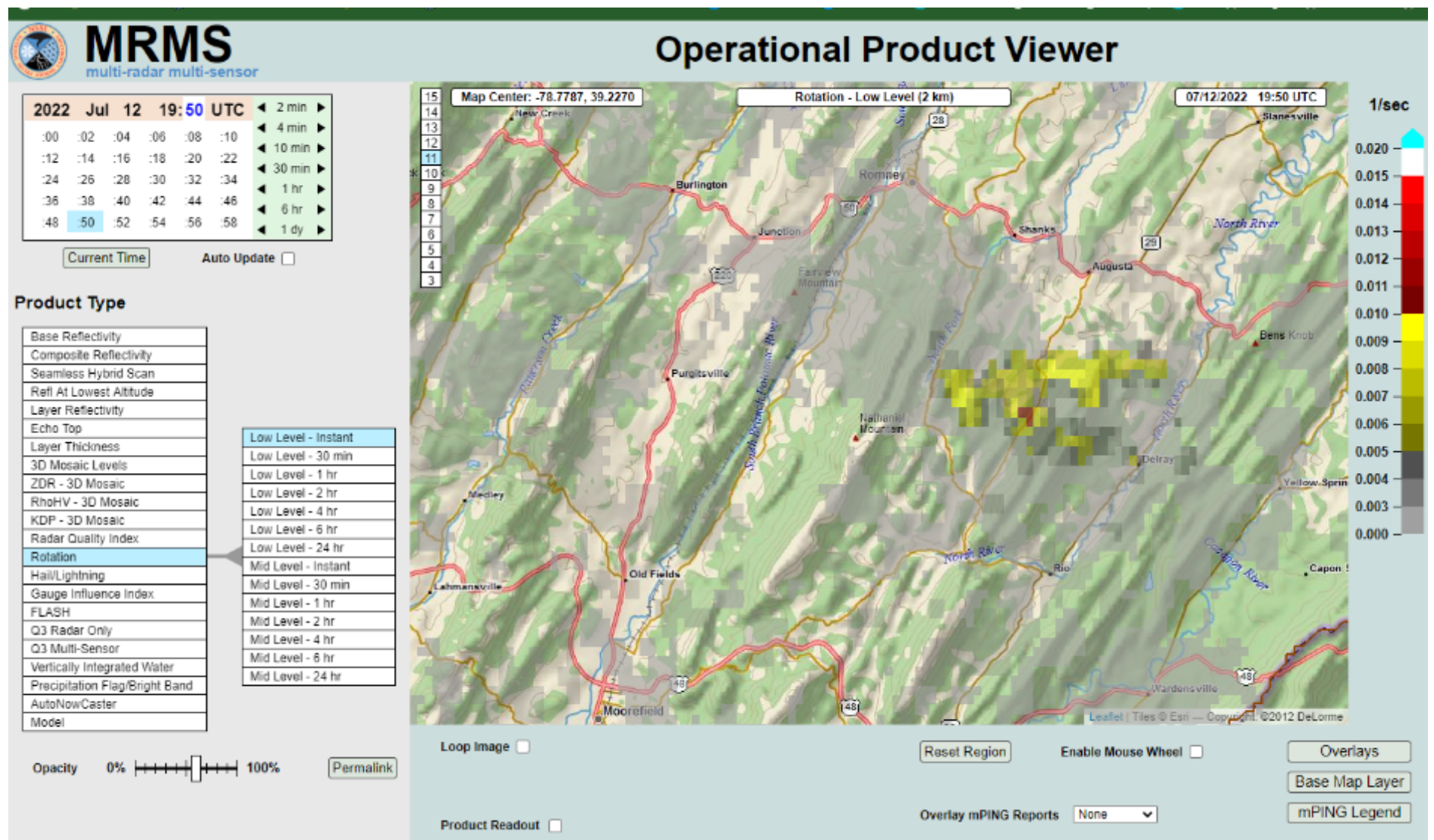


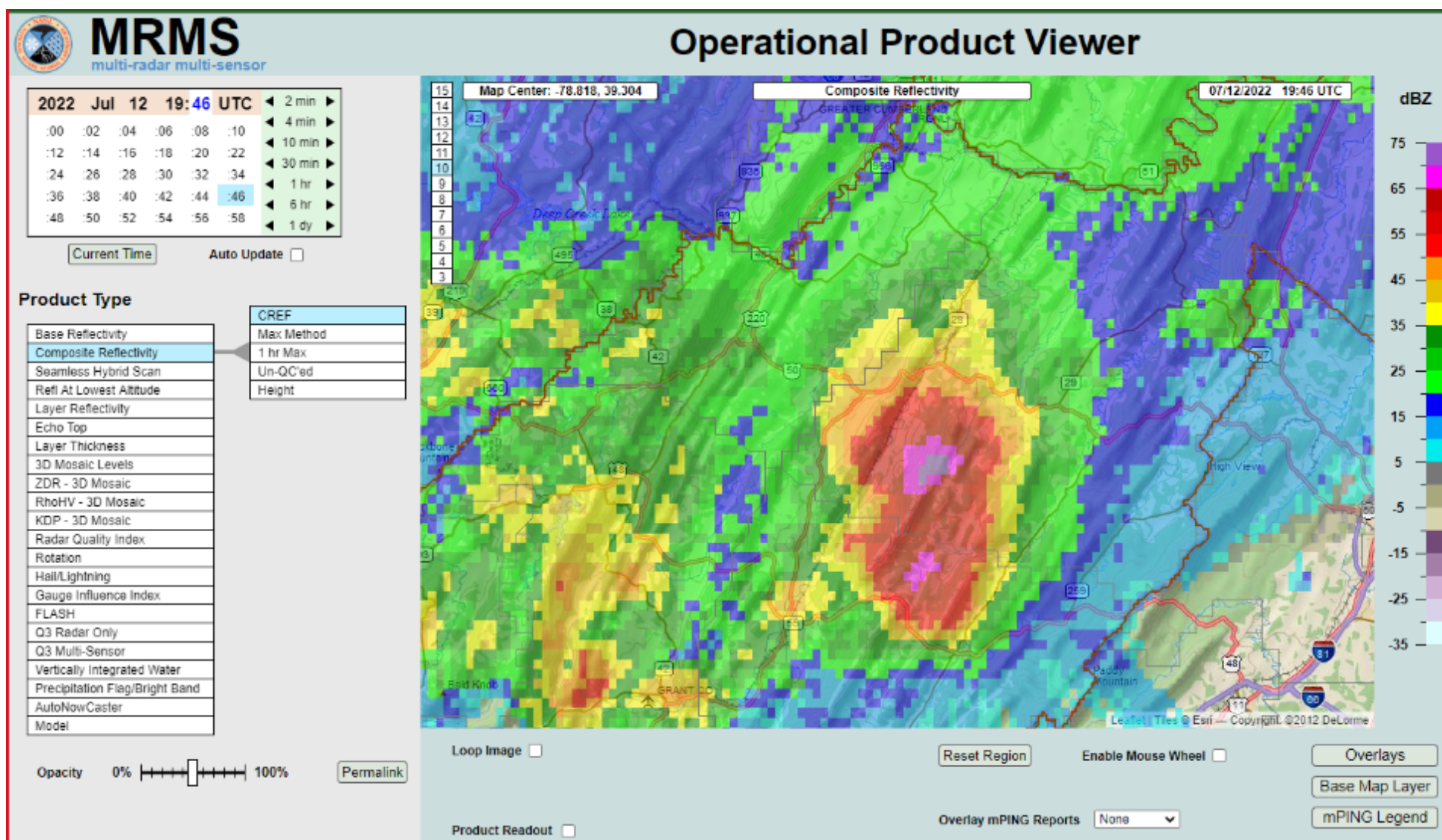
This zoom in shows the ridgeline damage (west) and an less typical damage zone in the lower slope (lee side) of the ridge amid a community. BC and I made a within year change product that clearly shows this damage too, so this is not recent development associated clearing. If it wasn't downburst blowdown around this community, it was hail. Importantly, on the S2 true color all these areas show up as brown, as they should with wind stripping or hail.


Most of this in the east (community) is probably isolated blowdown.



Based on radar, it occurred at about 4PM on 12 July 2022. Technically, it was an EF-0 tornado here. Some news talks about a “microburst” and reports from Rio and Kirby near what we map well reported golf ball sized hail (even though there’s no hail or tornado on the NOAA stormreports website, just wind..






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From: Spruce, Joseph [US-US] <Joseph.P.Spruce@leidos.com>
Sent: Thursday, September 1, 2022 2:34 PM
To: Hargrove, William -FS <william.w.hargrove@usda.gov>; Christie, William -FS <william.m.christie@usda.gov>; Norman, Steve- FS <Steven.Norman@usda.gov>
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Also FYI - Below are some notes on another recently reported forest storm damage that occurred in Ohio. I looked on current ForWarn change maps for the noted locations in the article below, but did not see enough extensive forest NDVI decline to send an alert on. There was some NDVI decline, though what I saw appeared to be very small patches.

Joe S.

 Clean-up progress slow in wildlife areas following June's storm
 Art Holden
 Outdoor Correspondent
 The Daily Record (posted on Yahoo)
 Posted 8-29-22
<https://www.yahoo.com/entertainment/clean-progress-slow-wildlife-areas-095746858.html>

For early June 2022 storm damaged forests in Ohio

First few paragraphs of article given below:

"When a storm with high winds and confirmed tornadoes ripped through Richland, Ashland, Holmes and Wayne counties back in early June, thousands of homeowners were left with tree damages to clean up. Also, three agencies that provide recreational opportunities for tens of thousands of Ohioans were impacted, with the Ohio Division of Wildlife's Killbuck Marsh Wildlife Area severely damaged, as was the Mohican State Forest and the Muskingum Watershed Conservancy District's Pleasant Hill area.

For the three agencies, it's a conundrum as to how to reopen the areas to the public, while managing how to best clean up the thousands of acres of timber both safely and economically.

Killbuck Marsh Wildlife Area manager Dennis Solon has been sickened by the devastation of the woodlands on the Area's 5,703 acres. While the storm happened June 13, there are trails and roads within the KMWA that are still not opened, and just finding a contractor who even qualifies to do the work is difficult enough, then finding one who has the time is even harder, all while being a good steward of the resources by trying to salvage the value of the downed hardwoods."

