

From: Leland Frayseth

Sent: Tuesday, August 25, 2020 6:20 AM

To: Kellye J Kennedy, Rachel Murphy, Jennifer Allen, John Burgh, E. Avila, S. Palmer, John Cunningham, Sarah Sugar, Paige Uttley, Erik Erreca, Michael Mierzwa, Greg Gearheart, Karen Mogus, Bill Wells, Scott Anderson, Daniel Bacher

Cc: Armando Quintero, Joseph Yun, Amy Young, Brianna Shoemaker

Subject: Re: European Space Agency Copernicus Sentinel 2 satellite image 17 Aug 2020 (18:49:19 Zulu) Los Vaqueros Reservoir California USA Watershed fire from lightning strike

Update 4

Colleagues,

ESA Copernicus Sentinel 2A satellite image Marin, Napa, Sonoma, Solano counties captured 22 Aug 2020 18:49:21 Zulu processed in infrared bands for atmospheric penetration through smoke. I hear on KPIX 5 news Inverness is being evacuated and I know one of our colleagues on this thread lives in Marin so I downloaded this satellite track showing the Pt. Reyes and I processed it this morning.

Check out Lake Berryessa it was completely encircled by fire. It will be interesting when the smoke clears and I can put the natural colors visible bands to work looking for red fire retardant dye loaded with phosphorus. I already have a plan to identify those pixels and with visible bands I get 10 meter resolution, infrared bands are 20 meter resolution. LandSat is poor resolution and I don't trust the calibration Trump has gutted science and scientists. If CalFire dropped fire retardant around Lake Berryessa and it washes down into the Lake, Berryessa could very well bump Clear Lake out of 1st place for studying Cyanobacterial Algal Blooms. Exciting times to be a Citizen Scientist and advocate on water policy issues. Sentinel 2B will be flying over us in 2 days snapping a fresh set of pictures for me to process. I wish I had a faster computer with a bigger screen, my laptop is 7 years old because Presiden Borba and her Board keep jacking up my water rates to pay for Los Vaqueros reservoir 275,000 AF (acre-feet) expansion studies. My water rates are up 150% in the last 4 years and get this Marathon Petroleum has announced it is closing the Martinez refinery this fall so CCWD will be losing \$7M in annual net revenues of treated and untreated water for that 1 customer. I am not making that up; it is in CCWD's Covid-19 Financial Plan Impact Report prepared for their Finance Committee meeting this Friday.

I have to get this image posted up on the Coastside Fishing forum, fishermen and fisherwomen know a lot about water and water policy, they will have a lot to say about this Marin, Napa, Sonoma, Solano image a lot of them fish out of Bodega Bay off 10 Mile Beach and down to Duxberry.

Leland

On Sun, Aug 23, 2020 at 8:46 PM Leland Frayseth wrote:

Update 3

My friend Jwr on the Coastside Fishing forum asked for an infrared processed picture of the Santa Cruz fire near him. First picture is infrared, second is the visible light spectrum but the smoke makes it pretty worthless. Santa Cruz bay is in the lower right corner. These images were taken 22 Aug 2020 18:49;21 Zulu by ESA Copernicus Sentinel 2. I think the trees near the coast are a lot more flammable than the Valley Oaks out here in the valleys when you zoom in on this Santa Cruz image you see a web of little fires emitting infrared everywhere.

My mentor Dr. Braun at the University of Tübingen Germany wrote "very good" on my STEP forum post of these lightning strike fires, he helped me when I was learning to process Copernicus images 18 months ago with bandmath using chlorophyll as a proxy for cyanobacterial algal blooms in Los Vaqueros reservoir. Leland

On Sun, Aug 23, 2020 at 7:22 AM Leland Frayseth wrote:

Dear Colleagues,

Update 2

Headline in this morning SF Chronicle "Freaking War Zone" and ESA Copernicus Sentinel 2A and 2B satellite images certainly reveal that. Attached 22 Aug SNAP processed satellite images reveal fire lapping at Los Vaqueros reservoir marina dock and another fire from the north that was very small in the 17 Aug image getting near "racist" John Muir Interpretive Center building at the dam end.

Another fire is getting closer to San Luis reservoir that will be of interest to farmers and folks living in LA and San Diego. I think we need to start today a conversation of more than 3 minutes for the public to speak about leaving our water in the Delta, storing it safely underground not in surface reservoirs, stop the fracking nonsense that destroys aquifers and build desalination plants in the south land.

For those writers and reporters on this thread if you publish please give credit to the European Space Agency Copernicus Sentinel program for the satellite images. ESA's sensors are well calibrated and their technology is rock solid unlike Landsat under Trump that is like an old man with dirty pop bottle bottom cataract glasses.

Leland Frayseth
Very Concerned Citizen and Taxpayer

On Fri, Aug 21, 2020 at 5:55 AM Leland Frayseth wrote:

Update: The Copernicus Sentinel 2 SNAP 7.0.4 processed satellite image of Los

Vaqueros Reservoir Watershed lightning strike has been elevated by the Sentinel Toolbox Exploitation Platform (STEP) forum moderator to the "Showroom" and is receiving international "likes".

I do not always agree with the Governor but I think he nailed it in this last minute video to the DNC convention <https://youtu.be/jqGJlDwqNcw> raking leaves is not the solution to our climate change problems.







