CyAN Update (2021-04-01 - 2021-08-22) for Western Region

Report Date: 2021-08-23

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**TO:**

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Hello all,

Below is the update for satellite imagery estimates of cyanobacteria in Western Region waterbodies.

Please note that:

* The 7-Day Average Daily Maximum is used for summarizing the cyanobacterial abundance.
* The table includes all waterbodies with 7-Day Average Daily Maximum of cyanobacterial abundance above the World Health Organization (WHO) guideline value (100,000 cells/mL) for moderate probability of adverse health effects in the last 7 days. Potential health risks for the possible exposure through recreational activities, such as contact, ingestion and inhalation, during cyanobacterial abundance above this guideline level include skin irritations and gastrointestinal illness ([WHO 2003](https://apps.who.int/iris/bitstream/handle/10665/42591/9241545801.pdf?sequence=1&isAllowed=y)).
* The time series plots include all resolvable waterbodies identified from EPA’s CyAN project. The plots report both the daily average and daily maximum abundance from April 1st through the present.
* All data presented in this report are provisional and subject to change. Estimates of cyanobacterial abundance may be skewed by cloud cover, ice cover, sun glint, water surface roughness, dry lake beds, algal mats and shoreline effects. We suggest examining additional imagery from Sentinel 2 (<https://www.sentinel-hub.com/explore/sentinelplayground/>) or following up with site visits to confirm on the ground conditions.

Cheers!

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Attn: Bill Meyers, Bryan Duggan, David Waltz, Heather Tugaw, Nancy Gramlich, and Priscilla Woolverton

Waterbodies ranked by the 7-Day Average Daily Maximum of cyanobacteria abundance (cells/mL) that are above the WHO guideline (100,000 cells/mL) for cyanobacteria in recreational freshwater during the 7 days from 2021-08-15 to 2021-08-22. The waterbody hydrographic types and basin names are shown in the table. The waterbodies, which 7-Day Average Daily Maximum of cyanobacteria abundance are less than 6310 cells/mL (the satellite detection threshold value), are not included in the table.

| Waterbody\_GNISID | Hydrographic Type | Basin | Average 7 Daily Maximum (cells/mL) |
| --- | --- | --- | --- |
| Diamond Lake\_01140999 | Perennial | Southern Oregon Coastal | 553,323 |
| Fern Ridge Lake\_01120678 | Perennial | Upper Willamette | 501,019 |

Figures: Time series plots of daily maximums and daily means of cyanobacterial abundance (cells/mL) of the waterbodies during 2021-04-01 and 2021-08-22 in the Western Region. Red dashed line: WHO RUV Guideline - World Health Organization Recreational Use Value Guideline for moderate probability of adverse health effects, which is 100,000 cyanobacterial cells/mL.





















