CyAN Update (2021-04-01 - 2021-08-01) for Eastern Region

Report Date: 2021-08-02

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Hello all,

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

Please note that:

* The 7-Day Average Daily Maximum is used for summarizing the cyanobacterial cell counts.
* The table includes all waterbodies with 7-Day Average Daily Maximum of cell counts above WHO thresholds (100,000 cells/mL) in the last 7 days.
* The time series plots include all resolvable waterbodies identified from EPA’s CyAN project. The plots report both the daily average and daily maximum cell counts from April 1st through the present.
* All data presented in this report are provisional and subject to change. Estimates of cyanobacteria 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: Don Butcher, John Dadoly, Mike Hiatt, and Smita Mehta

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 2021-07-25 to 2021-08-01. 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) |
| --- | --- | --- | --- |
| Upper Klamath Lake\_01151685 | Perennial | Klamath | 4,986,462 |
| Davis Lake\_01140666 | Perennial | Deschutes | 2,735,040 |
| Cold Springs Reservoir\_01119125 | Perennial | Middle Columbia | 1,932,817 |
| Summer Lake\_01150595 | Intermittent | Oregon Closed Basins | 1,524,177 |
| Gerber Reservoir\_01121105 | Perennial | Klamath | 1,395,336 |
| Crane Prairie Reservoir\_01140386 | Perennial | Deschutes | 1,074,193 |
| Malheur Lake\_01123710 | Swamp/Marsh: Perennial | Oregon Closed Basins | 1,058,096 |
| Lake Billy Chinook\_01138120 | Perennial | Deschutes | 644,084 |
| Hart Lake\_01121637 | Perennial | Oregon Closed Basins | 574,773 |
| Goose Lake\_00224325 | Perennial | Upper Sacramento | 376,704 |
| Lake Abert\_01116755 | Perennial | Oregon Closed Basins | 233,286 |
| Crump Lake\_01119601 | Perennial | Oregon Closed Basins | 224,047 |
| Beulah Reservoir\_01117569 | Perennial | Middle Snake-Boise | 212,453 |

Figures: Time series plots of daily maximums and daily means of cyanobacteria abundance (cells/mL) of the waterbodies during 2021-04-01 and 2021-08-01 in the Eastern Region.















































