



OPERA

Observational Products for End-Users from
Remote Sensing Analysis

Fifth OPERA Workshop

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Exploratory Analysis of OPERA DSWx in NASA Worldview

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Outline

OPERA DSWx and Worldview

- What's new with OPERA DSWx at NASA PO.DAAC
- What's new with OPERA DSWx in NASA Worldview
- Case Study DEMO in Worldview

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This workshop is open to US and non-US participants. The material presented has been cleared for unlimited release.

No ITAR information is to be presented.

OPERA DSWx Access and Visualization

National Aeronautics and
Space Administration



- **OPERA DSWx** data products are being **archived and distributed** through NASA's PO.DAAC:

- DSWx-HLS: data record began April 9, 2023
- DSWx-S1: data record began in Aug 1, 2024
 - Newest DSWx data product available
 - Also includes **inundated vegetation** layer



NASA
EARTHDATA
earthdata.nasa.gov

Distribution Stats (past 12 mo)

- 275 TB
- 602 distinct users

- **Search & Access:**

- Earthdata Search <https://search.earthdata.nasa.gov/search?q=OPERA%20DSWx>
 - Note: Discover & Access OPERA DSWx, DIST, DISP and all other NASA EO data in [Earthdata Search](#)
- PO.DAAC <https://podaac.jpl.nasa.gov/OPERA?sections=data>
- Downloader https://podaac.github.io/tutorials/quarto_text/OPERA.html#search-download
- NASA Worldview <https://worldview.earthdata.nasa.gov/>

- **Visualize/Exploratory Analysis:**

- NASA Worldview <https://go.nasa.gov/47c3CZ8>
- Earthdata GIS (EGIS) - DSWx-HLS Image Service (*under development*)

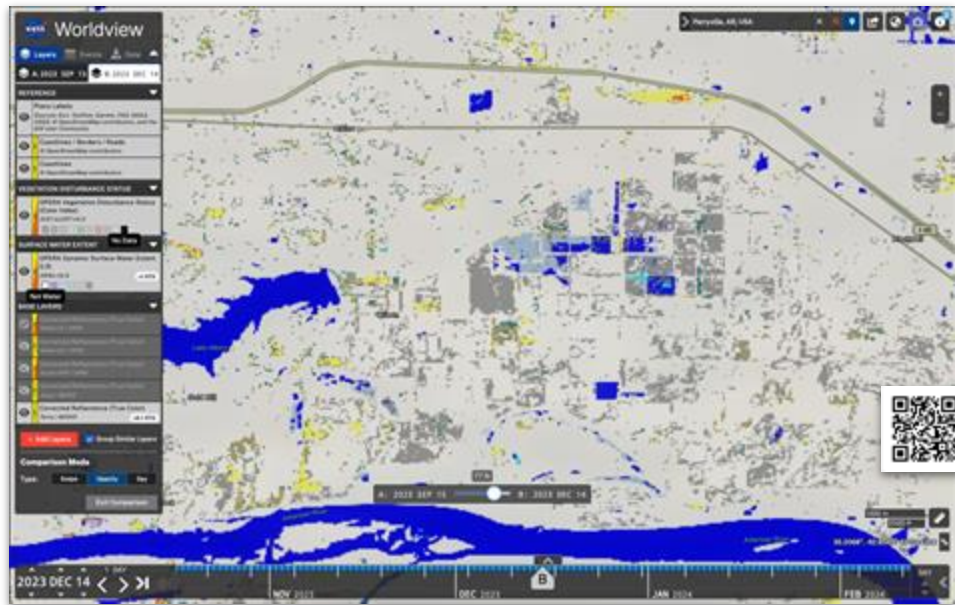
- **Tutorials and Other Resources** - PO.DAAC Cookbook https://podaac.github.io/tutorials/quarto_text/OPERA.html



OPERA DSWx in NASA Worldview

[DSWx-HLS](#) and [DSWx-S1](#) are available in NASA Worldview for visualization and exploratory analysis, as well as DIST-ALERT-HLS and DIST-ANN-HLS.

- Visualize dates/locations of interest
- *Comparison Mode* (e.g. different dates, same location; same date different data layers)
- Create *animations* over time/space
- *Available Imagery Dates* helps navigate in time
- Smart handoff to Earthdata Search for data access/download
- Leveraging Worldview capabilities to explore surface water - DSWx Case Studies:
 - **Lake Mead:** explore recent water extent changes
 - [Tour Story of Surface Water Extent](#)



[OPERA DSWx and DIST-ALERT over AR rice paddies in NASA Worldview](#)

Lake Mead Recent Conditions

DEMO

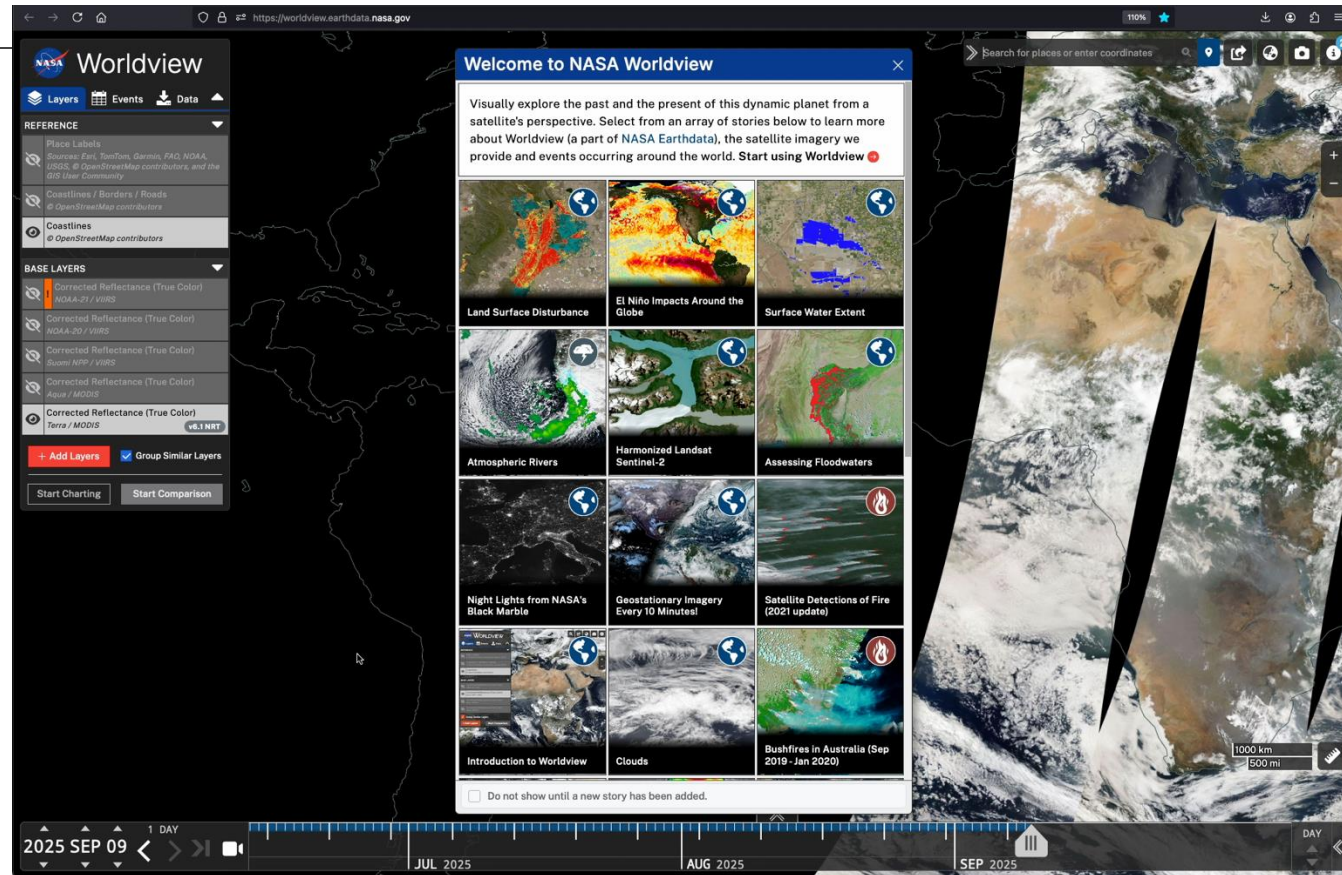
- DSWx-HLS and DSWx-S1 as complementary datasets
- 8/19 DSWx-HLS but partial cloud cover
- 8/20 DSWx-S1 fuller picture
- Using *Comparison Mode* and *Available Imagery Dates* features

<https://go.nasa.gov/4niYO98>



Lake Mead Example

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Thank you!

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