	Product Long Name	Subproducts	Spatial Extent	Spatial Resolution	Temporal Extent	Temporal Resolution	Latency	Data Access (Full Data Access instructions can be found in Module 4)	Product Specification Document / Product User Manual	Coordinate Reference System / Grid	References
DSWx-S1	**D**ynamic **S**urface **W**ater **E**xtent -- Sentinel-1	- Layer 1: Binary Water - Layer 2: Water Classification - Layer 3: Confiedence	Near-Global (all landmasses excluding Antarctica)	30 meters	08/21/24 - Present (For late August and early septembe not all scenes are available	Every 6 to 12 days		https://search.earthdata.nasa.gov/search/granules?p=C2949811996-POCLOUD&pg[0][v]=f&tl=1738273715.7693!!	https://d2pn8kiwq2w21t.cloudfront.net/documents/OPERA_DSWx-S1_Product_Spec_v1.0.0_D-108761_RevA_2024-08-16_.pdf	- Universal Transverse Mercator (Jung et al 2024, p. 3) - Military Grid Reference System. Each tile is 3660 by 3660 pixels (109.8 km by 109.8 km). This means each pixel is 30 meters by 30 meters. [Jung et al 2024, p. 3]	Jung, Junqkyo; Jeong, Seongsu "Product Specification Document for Dynamic Surface Water Extent from Sentinel-1 ", Observational Products for End-Users from Remote Sensing Project. Version 1.0.0, JPL D-108761, Rev A, August 16, 2024, https://d2pn8kiwq2w21t.cloudfront.net/documents/OPERA_DSWx-S1_Product_Spec_v1.0.0_D-108761_RevA_2024-08-16_.pdf
DSWx-HLS	Dynamic Surface Water Extent -- Harmonized Landsat Sentinel	- Layer 1: Water Classification - Layer 2: Binary Water Classification - Layer 3: Confidence (CONF) - Layer 4: Diagnostic Layer (DIAG) - Layer 5: Interpretation of Diagnostic Layer into Water Classes (WTR-1) - Layer 6: Interpreted Layer refined using land cover and terrain shadow testing (WTR-2) - Layer 7: Land Cover Classification (LAND) - Layer 8: Terrain Shadow Layer (SHAD) - Layer 9: Input GLS Fmask cloud/cloud-shadow classification (CLOUD) - Layer 10: Digital Elevation Model (DEM)	Near-Global (all landmasses excluding Antarctica)	30 m	April 2023 - Present	Depends on HLS viewing geometry. Median resolution is 2.9 days	2-4 days, depends on NASA HLS product latency	https://search.earthdata.nasa.gov/search/granules?p=C2617126679-POCLOUD&tl=1725647299!3!!	https://d2pn8kiwq2w21t.cloudfront.net/documents/OPERA_DSWx-HLS_ProductSpec_v1.0.0_D-107395_RevB.pdf	- "DSWx-HLS tiles are provided over projected map coordinates aligned with the Military Grid Reference System" (Jones p. 7) - "Each tile has a ground footprint of 109.8 km x 109.8 km divided into 3,660 rows and 3,660 columns with 30 meter pixel spacing in both directions. Both the HLS and DSWx-HLS products include an overlap of 4,900 meteres" (Jones et al p. 7) - The Military Grid Reference System is a geographic grid reference system defined using the Universal Transvers Mercator (UTM) for most latitudes and the Universal Polar Stereographic (UPS) coordinate systems for polar regions (North of 84 N and South of 80 S)." (Jones et al, 2024)	Jones, John W.; Shiroma, Gustavo H. X., "Product Specification Document for Dynamic Surface Water Extent from Harmonized Landsat and Sentinel-2", Observational Products for End-Users from Remote Sensing Project. Version 1.0.1, JPL D-107395, Rev B, July 10, 2024. https://d2pn8kiwq2w21t.cloudfront.net/documents/OPERA_DSWx-HLS_ProductSpec_v1.0.0_D-107395_RevB.pdf
MCDWD	**M**ODIS **C**ombine**D** **W**ater **D**etection	-1 day (MCDWD_F1_L3_NRT) -1 day Cloud Shadow mask (MCDWD_F1CS_L3_NRT) -2 day (MCDWD_F2_L3_NRT) -3 day (MCDWD_F3_L3_NRT) For each of the 4 subproducts above, there are 3 subdatasets (12 total subproducts) - Water Counts - Valid counts - Flood Map	Near-Global (Non-polar global land areas below 70 degrees latitude	0.0020833 degrees (~232 m at the equator) [Slayback et al 2022]	Beta 2 Release: Jan 12 2023 - Present	1 day	<3 hours (no later than 4:30 p,m. local time) (additional 2 hours for product to appear in WorldView)[Slayback]	https://nrt3.modaps.eosdis.nasa.gov/archive/allData/61/	MCDWD_UserGuide_RevD.pdf (nasa.gov)		Slayback, Dan. "MODIS NRT Global Flood Product User Guide", Revision D., NASA LANCE, 16 April 2024, https://www.earthdata.nasa.gov/s3fs-public/2024-04/MCDWD_UserGuide_RevD.pdf
VFM (aka VNG Flood)	**V**IIRS **F**lood **M**onitor	- Near Real Time: Gives latest VIIRS acquisition from either Suomi-NPP, NOAA-20 and NOAA-21. - Daily Composite: Composites the 2-3 observations made by VIIRS overpasses - 5-day composite: Composites all VIIRS acquisitions over a rolling 5 day window. There is also a quality flag detection for NRT, daily composite, and 5-day composite	Near-real time product	375 meters	01/20/23 - Present	1 day	NRT Gloabl: 3 hours after an overpass arrives NRT US: 40 minutes after an overpass Daily and 5-day Composite: 6 hours	https://noaa-ipss.s3.amazonaws.com/index.html#JPSS_Blended_Products/VFM_1day_GLB/	https://www.star.nesdis.noaa.gov/jpss/documents/ATBD/ATBD_VIIRS_Flood_Mapping_v1.0.pdf		Li, Sanmei, Sun Donglian, "JPSS VIIRS Flood Mapping (VFM) Algoritm Theoretical Basis Document", Version 1.0, June 2021. https://www.star.nesdis.noaa.gov/jpss/documents/ATBD/ATBD_VIIRS_Flood_Mapping_v1.0.pdf
GFM	**G**lobal **F**lood **M**onitoring	- Observed Flood Extent - Observed Water Extent - Exclusion Mask - Likelihood values - Advisory Flags - Sentinel-1 Metadata - Sentinel-1 Footprint - Affected Population - Affected Landcover	Global	20 meters; "The dataset was re-projected to the same grid system as the flood map itself, which is the Equi7Grid with a 20m pixel-sapacing and a 300km gridding" (Matgen 2022)	January 1 2015 - Present	- Jan 1 2015 - December 23, 2021: 6 days - Dec 23, 2021 - present: 12 days		https://portal.gfm.eodc.eu/	https://extwiki.eodc.eu/GFM/PDD	- "The last step resamples the data to the Equi7Grid System at 20 m pixel sampling, using bilinear resampling from the Geospatial Data Abstraction Library (GDAL)" (Matgen 2022). - The Equi7 Coordinate reference system uses an ESPG Code of 27701 through 27707 depending on the continent you are on (source: https://github.com/TUW-GEO/Equi7Grid)	Matgen, Patrick, ""Provision of an Automated, Global, Satellite0based Flood Monitoring Product for the Copernicus Emergency Management Service", GFM D6 Product Definition Document. Issue 1, Version 1.4. April 20, 2022. https://extwiki.eodc.eu/GFM/PDD