MODIS Land Data Transition

Users who rely on MODIS for applications that require ongoing observations are encouraged to begin transitioning their workflows to alternative data sources to ensure continuity into the future. No single instrument replicates all of MODIS's capabilities. The Visible Infrared Imaging Radiometer Suite (VIIRS) is the primary successor for most MODIS land, fire, vegetation, and thermal applications. The table will be updated as additional replacement options are identified.

VIIRS currently operates on NOAA-20/JPSS-1 (launched 2017; **VJ1** prefix) and NOAA-21/JPSS-2 (launched 2022; **VJ2** prefix) satellites. VIIRS previously operated on Suomi NPP VIIRS (launched 2011; **VNP** product prefix) until data acquisitions ended on November 2, 2026. **VCD** is the designation for combined VIIRS data products.

Version 2 NOAA-21 VIIRS (primary) and NOAA-20 VIIRS (secondary) data products are listed in the table below. Version 2 Suomi NPP VIIRS data products are included to extend the historical record back to 2012.

MODIS Land Data Transition Options

Terra MODIS Long Name	Terra	NOAA-21	NOAA-20	Suomi NPP
MODIS/Terra Surface Reflectance 8-Day L3 Global 500m SIN Grid	MOD09A1	VJ209H1 (500m)	VJ109H1	VNP09H1
Supplemental Surface Reflectance product - VIIRS Surface Reflectance 8-Day L3 Global 1km SIN Grid		VJ209A1 (1km)	VJ109A1	VNP09A1
MODIS/Terra Surface Reflectance Daily L3 Global 0.05Deg CMG	MOD09CMG	VJ209CMG	VJ109CMG	VNP09CMG
MODIS/Terra Surface Reflectance Daily L2G Global 1km and 500m SIN Grid	MOD09GA	VJ209GA	VJ109GA	VNP09GA
MODIS/Terra Surface Reflectance Daily L2G Global 250m SIN Grid	MOD09GQ	VJ209GA (500m)	VJ109GA	VNP09GA
MODIS/Terra Surface Reflectance 8-Day L3 Global 250m SIN Grid	MOD09Q1	VJ209H1 (500m)	VJ109H1	VNP09H1
MODIS/Terra Land Surface Temperature/Emissivity 5-Min L2 Swath 1km	MOD11_L2	VJ221 (750m)	VJ121	VNP21
MODIS/Terra Land Surface Temperature/Emissivity Daily L3 Global 1km SIN Grid	MOD11A1	VJ221A1D (day)	VJ121A1D	VNP21A1D
		VJ221A1N (night)	VJ121A1N	VNP21A1N
MODIS/Terra Land Surface Temperature/Emissivity 8-Day L3 Global 1km SIN Grid	MOD11A2	VJ221A2	VJ121A2	VNP21A2
MODIS/Terra Land Surface Temperature/Emissivity Daily L3 Global 6km SIN Grid	MOD11B1	VJ221A1D (1km)	VJ121A1D	VNP21A1D
		VJ221A1N (1km)	VJ121A1N	VNP21A1N
MODIS/Terra Land Surface Temperature/Emissivity 8-Day L3 Global 6km SIN Grid	MOD11B2	VJ221A2 (1km)	VJ121A2	VNP21A2
MODIS/Terra Land Surface Temperature/Emissivity Monthly L3 Global 6km SIN Grid	MOD11B3	VJ221A2 (8 day)	VJ121A2	VNP21A2
MODIS/Terra Land Surface Temperature/Emissivity Daily L3 Global 0.05Deg CMG	MOD11C1	VJ221C1	VJ121C1	VNP21C1
MODIS/Terra Land Surface Temperature/Emissivity 8-Day L3 Global 0.05Deg CMG	MOD11C2	VJ221C2	VJ121C2	VNP21C2
MODIS/Terra Land Surface Temperature/Emissivity Monthly L3 Global 0.05Deg CMG	MOD11C3	VJ221C3	VJ121C3	VNP21C3
MODIS/Terra Vegetation Indices 16-Day L3 Global 500m SIN Grid	MOD13A1	VJ213A1	VJ113A1	VNP13A1
MODIS/Terra Vegetation Indices 16-Day L3 Global 1km SIN Grid	MOD13A2	VJ213A2	VJ113A2	VNP13A2
MODIS/Terra Vegetation Indices Monthly L3 Global 1km SIN Grid	MOD13A3	VJ213A3	VJ113A3	VNP13A3
MODIS/Terra Vegetation Indices 16-Day L3 Global 0.05Deg CMG	MOD13C1	VJ213C1	VJ113C1	VNP13C1
MODIS/Terra Vegetation Indices Monthly L3 Global 0.05Deg CMG	MOD13C2	VJ213C2	VJ113C2	VNP13C2
MODIS/Terra Vegetation Indices 16-Day L3 Global 250m SIN Grid	MOD13Q1	VJ213A1 (500m)	VJ113A1	VNP13A1
MODIS/Terra Thermal Anomalies/Fire 5-Min L2 Swath 1km	MOD14	VJ214 (750m)	VJ114	VNP14
Geolocation for VIIRS swath product - VIIRS Moderate Resolution Terrain Corrected Geolocation 6-Min L1 Swath 750m Light		VJ203MODLL	VJ103MODLL	VNP03MODLL
Supplemental fire product - VIIRS Active Fires 6-Min L2 Swath 375m V002		VJ214IMG	VJ114IMG	VNP14IMG
Supplemental fire product - VIIRS FILDA-2 Fire Modified Combustion Efficiency Product 6-min L2 Swath 375m		VJ247IMG*	VJ147IMG	VNP47IMG
Supplemental fire product - VIIRS FILDA-2 Fire Modified Combustion Efficiency Product 6-min L2 Swath 750m		VJ247MOD*	VJ147MOD	VNP47MOD
MODIS/Terra Thermal Anomalies/Fire Daily L3 Global 1km SIN Grid	MOD14A1	VJ214A1	VJ114A1	VNP14A1
MODIS/Terra Thermal Anomalies/Fire 8-Day L3 Global 1km SIN Grid	MOD14A2	VJ214A1 (1 day)	VJ114A1	VNP14A1

MODIS/Terra Leaf Area Index/FPAR 8-Day L4 Global 500m SIN Grid	MOD15A2H	VJ215A2H	VJ115A2H	VNP15A2H
MODIS/Terra Net Evapotranspiration 8-Day L4 Global 500m SIN Grid	MOD16A2	VJ216A2*	VJ116A2*	VNP16A2*
MODIS/Terra Net Evapotranspiration Gap-Filled 8-Day L4 Global 500m SIN Grid	MOD16A2GF	VJ216A2GF*	VJ116A2GF*	VNP16A2GF*
MODIS/Terra Net Evapotranspiration Gap-Filled Yearly L4 Global 500m SIN Grid	MOD16A3GF	VJ216A3GF*	VJ116A3GF*	VNP16A3GF*
MODIS/Terra Gross Primary Productivity 8-Day L4 Global 500m SIN Grid	MOD17AH2	VJ217A2	VJ117A2	VNP17A2
MODIS/Terra Gross Primary Productivity Gap-Filled 8-Day L4 Global 500m SIN Grid	MOD17A2HGF	VJ217A2GF	VJ117A2GF	VNP17A2GF
MODIS/Terra Net Primary Production Gap-Filled Yearly L4 Global 500m SIN Grid	MOD17A3HGF	VJ217A3GF	VJ117A3GF	VNP17A3GF
MODIS/Terra Land Surface Temperature/3-Band Emissivity 5-Min L2 1km	MOD21	VJ221 (750m)	VJ121	VNP21
MODIS/Terra Land Surface Temperature/3-Band Emissivity Daily L3 Global 1km SIN Grid Day	MOD21A1D	VJ221A1D	VJ121A1D	VNP21A1D
MODIS/Terra Land Surface Temperature/3-Band Emissivity Daily L3 Global 1km SIN Grid Night	MOD21A1N	VJ221A1N	VJ121A1N	VNP21A1N
MODIS/Terra Land Surface Temperature/3-Band Emissivity 8-Day L3 Global 1km SIN Grid	MOD21A2	VJ221A2	VJ121A2	VNP21A2
MODIS/Terra Land Surface Temperature/3-Band Emissivity Daily L3 Global 0.05Deg CMG	MOD21C1	VJ221C1	VJ121C1	VNP21C1
MODIS/Terra Land Surface Temperature/3-Band Emissivity 8-Day L3 Global 0.05Deg CMG	MOD21C2	VJ221C2	VJ121C2	VNP21C2
MODIS/Terra Land Surface Temperature/3-Band Emissivity Monthly L3 Global 0.05Deg CMG	MOD21C3	VJ221C3	VJ121C3	VNP21C3
MODIS/Terra Water Reservoir 8-Day L3 Global	MOD28C2	VJ228C2	VJ128C2	VNP28C2
MODIS/Terra Water Reservoir Monthly L3 Global	MOD28C3	VJ228C3	VJ128C3	VNP28C3
MODIS/Terra Vegetation Continuous Fields Yearly L3 Global 250m SIN Grid	MOD44B			
MODIS/Terra Land Water Mask Derived from MODIS and SRTM L3 Global 250m SIN Grid	MOD44W	**		
Aqua MODIS Long Name	**Aqua**	**NOAA-21**	**NOAA-20**	**Suomi NPP**
MODIS/Aqua Surface Reflectance 8-Day L3 Global 500m SIN Grid	MYD09A1	VJ209H1 (500m)	VJ109H1	VNP09H1
Supplemental Surface Reflectance product - VIIRS Surface Reflectance 8-Day L3 Global 1km SIN Grid		VJ209A1 (1km)	VJ109A1	VNP09A1
MODIS/Aqua Surface Reflectance Daily L3 Global 0.05Deg CMG	MYD09CMG	VJ209CMG	VJ109CMG	VNP09CMG
MODIS/Aqua Surface Reflectance Daily L2G Global 1km and 500m SIN Grid	MYD09GA	VJ209GA	VJ109GA	VNP09GA
MODIS/Aqua Surface Reflectance Daily L2G Global 250m SIN Grid	MYD09GQ	VJ209GA (500m)	VJ109GA	VNP09GA
MODIS/Aqua Surface Reflectance 8-Day L3 Global 250m SIN Grid	MYD09Q1	VJ209H1 (500m)	VJ109H1	VNP09H1
MODIS/Aqua Land Surface Temperature/Emissivity 5-Min L2 Swath 1km	MYD11_L2	VJ221 (750m)	VJ121	VNP21
MODIS/Aqua Land Surface Temperature/Emissivity Daily L3 Global 1km SIN Grid	MYD11A1	VJ221A1D (day)	VJ121A1D	VNP21A1D
		VJ221A1N (night)	VJ121A1N	VNP21A1N
MODIS/Aqua Land Surface Temperature/Emissivity 8-Day L3 Global 1km SIN Grid	MYD11A2	VJ221A2	VJ121A2	VNP21A2
MODIS/Aqua Land Surface Temperature/Emissivity Daily L3 Global 6km SIN Grid	MYD11B1	VJ221A1D (1km)	VJ121A1D	VNP21A1D
		VJ221A1N (1km)	VJ121A1N	VNP21A1N
MODIS/Aqua Land Surface Temperature/Emissivity 8-Day L3 Global 6km SIN Grid	MYD11B2	VJ221A2 (1km)	VJ121A2	VNP21A2
MODIS/Aqua Land Surface Temperature/Emissivity Monthly L3 Global 6km SIN Grid	MYD11B3	VJ221A2 (8 day)	VJ121A2	VNP21A2
MODIS/Aqua Land Surface Temperature/Emissivity Daily L3 Global 0.05Deg CMG	MYD11C1	VJ221C1	VJ121C1	VNP21C1
MODIS/Aqua Land Surface Temperature/Emissivity 8-Day L3 Global 0.05Deg CMG	MYD11C2	VJ221C2	VJ121C2	VNP21C2
MODIS/Aqua Land Surface Temperature/Emissivity Monthly L3 Global 0.05Deg CMG	MYD11C3	VJ221C3	VJ121C3	VNP21C3
MODIS/Aqua Vegetation Indices 16-Day L3 Global 500m SIN Grid	MYD13A1	VJ213A1	VJ113A1	VNP13A1
MODIS/Aqua Vegetation Indices 16-Day L3 Global 1km SIN Grid	MYD13A2	VJ213A2	VJ113A2	VNP13A2
MODIS/Aqua Vegetation Indices Monthly L3 Global 1km SIN Grid	MYD13A3	VJ213A3	VJ113A3	VNP13A3
MODIS/Aqua Vegetation Indices 16-Day L3 Global 0.05Deg CMG	MYD13C1	VJ213C1	VJ113C1	VNP13C1
MODIS/Aqua Vegetation Indices Monthly L3 Global 0.05Deg CMG	MYD13C2	VJ213C2	VJ113C2	VNP13C2
MODIS/Aqua Vegetation Indices 16-Day L3 Global 250m SIN Grid	MYD13Q1	VJ213A1 (500m)	VJ113A1	VNP13A1
MODIS/Aqua Thermal Anomalies/Fire 5-Min L2 Swath 1km	MYD14	VJ214 (750m)	VJ114	VNP14

Geolocation for VIIRS swath product - VIIRS Moderate Resolution Terrain Corrected Geolocation 6-Min L1 Swath 750m Light		VJ203MODLL	VJ103MODLL	VNP03MODLL
Supplemental fire product - VIIRS Active Fires 6-Min L2 Swath 375m V002		VJ214IMG	VJ114IMG	VNP14IMG
Supplemental fire product - VIIRS FILDA-2 Fire Modified Combustion Efficiency Product 6-min L2 Swath 375m		VJ247IMG*	VJ147IMG	VNP47IMG
Supplemental fire product - VIIRS FILDA-2 Fire Modified Combustion Efficiency Product 6-min L2 Swath 750m		VJ247MOD*	VJ147MOD	VNP47MOD
MODIS/Aqua Thermal Anomalies/Fire Daily L3 Global 1km SIN Grid	MYD14A1	VJ214A1	VJ114A1	VNP14A1
MODIS/Aqua Thermal Anomalies/Fire 8-Day L3 Global 1km SIN Grid	MYD14A2	VJ214A1	VJ114A1	VNP14A1
MODIS/Aqua Leaf Area Index/FPAR 8-Day L4 Global 500m SIN Grid	MYD15A2H	VJ215A2H	VJ115A2H	VNP15A2H
MODIS/Aqua Net Evapotranspiration 8-Day L4 Global 500m SIN Grid	MYD16A2	VJ216A2*	VJ116A2*	VNP16A2*
MODIS/Aqua Net Evapotranspiration Gap-Filled 8-Day L4 Global 500m SIN Grid	MYD16A2GF	VJ216A2GF*	VJ116A2GF*	VNP16A2GF*
MODIS/Aqua Net Evapotranspiration Gap-Filled Yearly L4 Global 500m SIN Grid	MYD16A3GF	VJ216A3GF*	VJ116A3GF*	VNP16A3GF*
MODIS/Aqua Gross Primary Productivity 8-Day L4 Global 500m SIN Grid	MYD17A2H	VJ217A2	VJ117A2	VNP17A2
MODIS/Aqua Gross Primary Productivity Gap-Filled 8-Day L4 Global 500m SIN Grid	MYD17A2HGF	VJ217A2GF	VJ117A2GF	VNP17A2GF
MODIS/Aqua Net Primary Production Gap-Filled Yearly L4 Global 500m SIN Grid	MYD17A3HGF	VJ217A3GF	VJ117A3GF	VNP17A3GF
MODIS/Aqua Land Surface Temperature/3-Band Emissivity 5-Min L2 1km	MYD21	VJ221 (750m)	VJ121	VNP21
MODIS/Aqua Land Surface Temperature/3-Band Emissivity Daily L3 Global 1km SIN Grid Day	MYD21A1D	VJ221A1D	VJ121A1D	VNP21A1D
MODIS/Aqua Land Surface Temperature/3-Band Emissivity Daily L3 Global 1km SIN Grid Night	MYD21A1N	VJ221A1N	VJ121A1N	VNP21A1N
MODIS/Aqua Land Surface Temperature/3-Band Emissivity 8-Day L3 Global 1km SIN Grid	MYD21A2	VJ221A2	VJ121A2	VNP21A2
MODIS/Aqua Land Surface Temperature/3-Band Emissivity Daily L3 Global 0.05Deg CMG	MYD21C1	VJ221C1	VJ121C1	VNP21C1
MODIS/Aqua Land Surface Temperature/3-Band Emissivity 8-Day L3 Global 0.05Deg CMG	MYD21C2	VJ221C2	VJ121C2	VNP21C2
MODIS/Aqua Land Surface Temperature/3-Band Emissivity Monthly L3 Global 0.05Deg CMG	MYD21C3	VJ221C3	VJ121C3	VNP21C3
MODIS/Aqua Water Reservoir 8-Day L3 Global	MYD28C2	VJ228C2	VJ128C2	VNP28C2
MODIS/Aqua Water Reservoir Monthly L3 Global	MYD28C3	VJ228C3	VJ128C3	VNP28C3
Combined Terra+Aqua MODIS Long Name	**Combined**	**NOAA-21**	**NOAA-20**	**Suomi NPP**
MODIS/Terra+Aqua Land Cover Type Yearly L3 Global 0.05Deg CMG	MCD12C1			
MODIS/Terra+Aqua Land Cover Type Yearly L3 Global 500m SIN Grid	MCD12Q1			
MODIS/Terra+Aqua Land Cover Dynamics Yearly L3 Global 500m SIN Grid	MCD12Q2	VCD22Q2*	VCD22Q2*	VNP22Q2
Supplemental product VIIRS Land Surface Phenology Yearly L3 Global 0.05Deg CMG		VCD22C2*	VCD22C2*	VNP22C2
MODIS/Terra+Aqua Leaf Area Index/FPAR 8-Day L4 Global 500m SIN Grid	MCD15A2H	VJ215A2H	VJ115A2H	VNP15A2H
MODIS/Terra+Aqua Leaf Area Index/FPAR 4-Day L4 Global 500m SIN Grid	MCD15A3H	VJ215A2H (8 day)	VJ115A2H	VNP15A2H
MODIS/Terra+Aqua Surface Radiation Daily/3-Hour L3 Global 1km SIN Grid	MCD18A1	VJ218A1*	VJ118A1	VNP18A1
MODIS/Terra+Aqua Photosynthetically Active Radiation Daily/3-Hour L3 Global 1km SIN Grid	MCD18A2	VJ218A2*	VJ118A2	VNP18A2
MODIS/Terra+Aqua Downward Shortwave Radiation Daily/3-Hour L3 Global 0.05Deg CMG	MCD18C1	VJ218C1*	VJ118C1	VNP18C1
MODIS/Terra+Aqua Photosynthetically Active Radiation Daily/3-Hour L3 Global 0.05Deg CMG	MCD18C2	VJ218C2*	VJ118C2	VNP18C2
MODIS/Terra+Aqua Land Surface BRF Daily L2G Global 500m and 1km SIN Grid	MCD19A1	VJ219A1	VJ119A1	VNP19A1
MODIS/Terra+Aqua Land Aerosol Optical Depth Daily L2G Global 1km SIN Grid	MCD19A2	VJ219A2	VJ119A2	VNP19A2
MODIS/Terra+Aqua BRDF Model Parameters Daily L3 Global 1km SIN Grid	MCD19A3D			
MODIS/Terra+Aqua Surface Reflectance (Bands 1-7) from MAIAC, Daily L3 Global 0.05Deg CMG	MCD19A1CMGL	VCD19A1CMG		
MODIS/Terra+Aqua Surface Reflectance (Bands 8-12) from MAIAC, Daily L3 Global 0.05Deg CMG	MCD19A1CMGO			
MODIS/Terra+Aqua AOD and Water Vapor from MAIAC, Daily L3 Global 0.05Deg CMG	MCD19A2CMG	VDC19A2CMG		
MODIS/Terra+Aqua Vegetation Index from MAIAC, Daily L3 Global 0.05Deg CMG	MCD19A3CMG	VCD19A3CMG		
MODIS/Terra+Aqua BRDF/Albedo Model Parameters Daily L3 Global - 500m	MCD43A1	VJ243MA1	VJ143MA1	VNP43MA1

Supplemental BRDF/Albedo product - VIIRS BRDF/Albedo Model Parameters Daily L3 Global 500m SIN Grid (Intermediate bands)		VJ243IA1	VJ143IA1	VNP43IA1
Supplemental BRDF/Albedo product - VIIRS DNB BRDF/Albedo Model Parameters Daily L3 Global 1km SIN Grid (Day/Night band)		VJ243DNBA1	VJ143DNBA1	VNP43DNBA1
MODIS/Terra+Aqua BRDF/Albedo Quality Daily L3 Global - 500m	MCD43A2	VJ243MA2	VJ143MA2	VNP43MA2
Supplemental BRDF/Albedo product - VIIRS BRDF/Albedo Quality Daily L3 Global 500m SIN Grid (Intermediate bands)		VJ243IA2	VJ143IA2	VNP43IA2
Supplemental BRDF/Albedo product - VIIRS DNB BRDF/Albedo Quality Daily L3 Global 1km SIN Grid (Day/Night band)		VJ243DNBA2	VJ143DNBA2	VNP43DNBA2
MODIS/Terra+Aqua BRDF/Albedo Daily L3 Global - 500m	MCD43A3	VJ243MA3	VJ143MA3	VNP43MA3
Supplemental BRDF/Albedo product - VIIRS BRDF/Albedo Albedo Daily L3 Global 500m SIN Grid (Intermediate bands)		VJ243IA3	VJ143IA3	VNP43IA3
Supplemental BRDF/Albedo product - VIIRS DNB BRDF/Albedo Albedo Daily L3 Global 1km SIN Grid (Day/Night band)		VJ243DNBA3	VJ143DNBA3	VNP43DNBA3
MODIS/Terra+Aqua BRDF/Albedo Nadir BRDF Adjusted Ref Daily L3 Global - 500	MCD43A4	VJ243MA4	VJ143MA4	VNP43MA4
Supplemental BRDF/Albedo product - VIIRS BRDF/Albedo Nadir BRDF-Adjusted Ref Daily L3 Global 500m SIN Grid (Intermediate bands)		VJ243IA4	VJ143IA4	VNP43IA4
Supplemental BRDF/Albedo product - VIIRSP DNB BRDF/Albedo Nadir BRDF-Adjusted Ref Daily L3 Global 1km SIN Grid (Day/Night band)		VJ243DNBA4	VJ143DNBA4	VNP43DNBA4
MODIS/Terra+Aqua BRDF/Albedo Model Parameters Daily L3 Global 0.05Deg CMG	MCD43C1	VJ243C1	VJ143C1	VNP43C1
MODIS/Terra+Aqua BRDF/Albedo Snow-free Model Parameters Daily L3 Global 0.05Deg CMG	MCD43C2	VJ243C2	VJ143C2	VNP43C2
MODIS/Terra+Aqua BRDF/Albedo Albedo Daily L3 Global 0.05Deg CMG	MCD43C3	VJ243C3	VJ143C3	VNP43C3
MODIS/Terra+Aqua BRDF/Albedo Nadir BRDF-Adjusted Ref Daily L3 Global 0.05Deg CMG	MCD43C4	VJ243C4	VJ143C4	VNP43C4
MODIS/Terra+Aqua BRDF/Albedo Daily L3 Global 30ArcSec CMG data products	MCD43D01-68	VJ243D01-89	VJ143D01-89	VNP43D01-89
MODIS/Terra+Aqua BRDF/Albedo Gap-Filled Snow-Free Daily L3 Global 30ArcSec CMG	MCD43GF			
MODIS/Terra+Aqua Burned Area Monthly L3 Global 500m SIN Grid	MCD64A1	VJ264A1*	VJ164A1*	VNP64A1

* Data coming soon!

** OPERA Dynamic Surface Water Extent from Sentinel-1 (Version 1) or OPERA Dynamic Surface Water Extent from Harmonized Landsat Sentinel-2 product (Version 1)