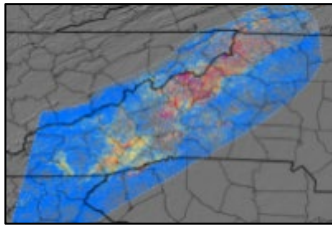


Hurricane Helene, *HiForm* Rapid Assessment Research Datasets by Extent

USFS Southern Research Station (05/09/25)

1. **Southern Appalachian Impacts: NC-GA-SC-TN-VA** (product end dates 10/24/2024 and 03/31/2025)



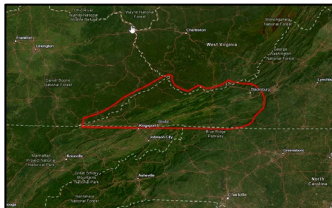
Description: These rapid assessment products show likely impacts of Hurricane Helene across the southern Appalachian forests using change in NDVI from 10m Sentinel-2 imagery for Oct. 2024 compared to Oct. 2023. Both the "Four Types" and "Major Damage" maps represent severity and uncertainty.

Data type and format: (*) analytical, 1-band raster, continuous NDVI change values, rescaled (x100) signed 8-bit integer; (**) single band categorical, for visual interpretation apply the layer-specific symbology file (.lyr) to colorize with the default color scheme, or apply your own; (***) ESRI polygon shapefile

Dataset	'Pre' Dates	'Post' Dates	Mask	AGOL	Download	Color file
Forest-only NDVI change*	10/03 – 10/24/2023	10/03 – 10/24/2024	2021 NLCD Forest	link	link	.clr
'All-lands' 1yr NDVI change*	10/03 – 10/24/2023	10/03 – 10/24/2024	n/a	link	link	.clr
Forest Impacts, Four Type classes**	10/03 – 10/24/2023	10/03 – 10/24/2024	2021 NLCD Forest	link	link	.lyr
Major Forest Damage classification**	10/03 – 10/24/2023	10/03 – 10/24/2024	3 (a)	link	link	.lyr
Forest Impact Type-1 polygons***	10/03 – 10/24/2023	10/03 – 10/24/2024	2021 NLCD Forest	link	link	n/a
Focal Forest Impacts**	10/03 – 10/24/2023	10/03 – 10/24/2024	3 (b)	link	link	.lyr
NEW 'All-Lands' 1yr Winter NDVI Change	03/01 – 03/31/2024	03/01 – 03/31/2025	n/a	link	link	.clr

AGOL (ArcGIS Online); (a) custom 3yr growing season-NDVI-max for deciduous, custom 2yr winter-NDVI-max for evergreen, and buffered 1yr recency NDVI threshold; (b) 2021 NLCD 4-classes of Forest, EPA Floodplains, and recency using 06/2024 - 09/2024 max-NDVI-value thresholding; all products are in geographic projection unless otherwise noted

2. **Southwest Virginia Impacts** (product end date 10/24/2024)



Description: 1yr NDVI change processed to the Major Forest Damage classification: (1) Evergreen Severe Damage, DN=4, (2) Deciduous Severe Damage, DN=1, (3) Severe Damage Likely, DN=2 and (4) Severe Damage Possible, DN=3.

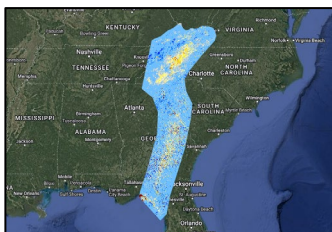
Data type and format: categorical 4-class, 1-band, unsigned 4-bit integer, greyscale, for visual analysis requires the layer-specific layer file to colorize to our color scheme or apply your own.

Dataset	'Pre' Dates	'Post' Dates	Mask	AGOL	Download	Color file
Major Forest Damage classification**	10/03 – 10/24/2023	10/03 – 10/24/2024	3 (a)	link	link	<i>in download</i>

(a) custom 3yr growing season-NDVI-max for deciduous, custom 2yr winter-NDVI-max for evergreen, and buffered 1yr recency NDVI threshold

Hurricane Helene, *HiForm* Rapid Assessment Research Datasets by Extent, continued
USFS Southern Research Station (02/25/25)

3. **Regional Impacts: FL-GA-SC-NC-TN-VA** (product end date 10/24/2024)

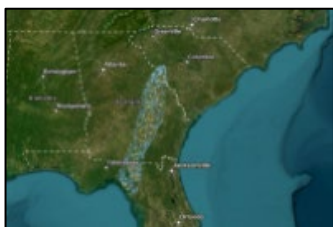


Description: This early rapid assessment product was created soon after the event using 10m Sentinel-2 imagery for a six-state area.

Data type and format: analytical, 1-band, continuous 1yr NDVI change values, rescaled (x100) signed 8-bit integer, all-lands (not masked), greyscale, for visual analysis requires the *HiForm* color map (.clr) to replicate the *HiForm* NDVI change legend color ramp.

Dataset	'Pre' Dates	'Post' Dates	Mask	AGOL	Download	Color file
'All-lands' NDVI change*	10/03 – 10/24/2023	10/03 – 10/24/2024	n/a	link	link	.clr

4. **Piedmont and Coastal Plain Evergreen-only Impacts: FL-GA-SC** (product end date 10/24/2024)



Description: This dataset focuses on Hurricane Helene impacts to the Coastal Plain and Piedmont provinces. By separating conifer and mixed forest, it provides more precise insight into how impacts may have affected the industrial softwood timber sector.

Data type and format: analytical, 1-band, continuous 1yr NDVI change values, rescaled (x100) signed 8-bit integer, masked to NLCD 2021 conifer-mixed forest, greyscale, for visual analysis requires the *HiForm* color map (.clr) to replicate the *HiForm* NDVI change legend color ramp.

Dataset	'Pre' Dates	'Post' Dates	Mask	AGOL	Download	Color file
Evergreen and Mixed Forest NDVI Change*	10/03 – 10/24/2023	10/03 – 10/24/2024	2021 NLCD	link	link	.clr

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