Landsat 8 Data Product Information

Landsat 8 data products are produced to be consistent with the existing standard Level-1 (orthorectified) data products created using Landsat 1 to Landsat 7 data.

The standard Level 1 Product, along with the LandsatLook (full-resolution jpg) images, are available to download at no charge from EarthExplorer, GloVis, or via the LandsatLook Viewer.

Processing details of Landsat 8 Level 1 Products

Processing:	Level 1 T- Terrain Corrected
Pixel Size:	OLI multispectral bands 1-7,9: 30-meters OLI panchromatic band 8: 15-meters TIRS bands 10-11: collected at 100 meters but resampled to 30 meters to match OLI multispectral bands
Data Characteristics:	• GeoTIFF data format • Cubic Convolution (CC) resampling • North Up (MAP) orientation • Universal Transverse Mercator (UTM) map projection (Polar Stereographic for Antarctica) • World Geodetic System (WGS) 84 datum • 12 meter circular error, 90% confidence global accuracy for OLI • 41 meter circular error, 90% confidence global accuracy for TIRS • 16-bit pixel values
Data Delivery:	.tar.gz compressed file via HTTP Download
File size:	Approximately 1 GB (compressed), approximately 2 GB (uncompressed)

Details about processing levels of all Landsat data products can be found on http://landsat.usgs.gov/Landsat_Processing_Details.php.
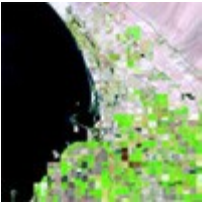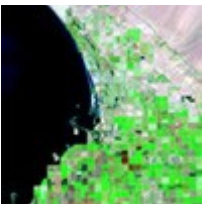
Question:
How do Landsat 8 band combinations differ from Landsat 7 or Landsat 5 satellite data?

Answer:
Because Landsat 8 data includes additional bands, the combinations used to create RGB composites differ from Landsat 7 and Landsat 5. For instance, bands 4, 3, 2 are used to create a color infrared (CIR) image using Landsat 7 or Landsat 5. To create a CIR composite using Landsat 8 data, bands 5, 4, 3 are used.

The graph at the bottom of the page shows the wavelengths from both Landsat 7 (bottom row) and Landsat 8 (top row). Seeing where the bands fall will help to create Landsat 8 RGB composites that will be comparable to Landsat 7 and 5.

Displayed below are some common band combinations in RGB comparisons for Landsat 7 or Landsat 5, and Landsat 8.

	Landsat 7 Landsat 5	Landsat 8
Color Infrared:	4, 3, 2	5,4,3
Natural Color:	3, 2, 1	4,3,2
False Color:	5,4,3	6,5,4
False Color:	7,5,3	7,6,4
False Color:	7,4,2	7,5,3

Landsat 8's OLI sensor includes a new coastal/aerosol band (band1), which can be used with two other bands for closer investigations of coastal waters and estimating the concentration of aerosols in the atmosphere, however, in most cases, models will use the radiance values of this band.

Also new, OLI's cirrus band (band 9) provides better detection of cirrus cloud contamination in each scene.