National Land Imaging Program Update

National Geospatial Advisory Committee Meeting
Landsat Advisory Group Session
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Landsat Operations Status

Landsat 9 (2021 -)

Collecting more than 700 new scenes per day; full mission transitioned to USGS in August

Landsat 8 (2013 -)

Collecting more than 700 new scenes per day; night and off-nadir imaging of volcano and fire imaging.

Landsat 7 (1999 - 2022)

Recently lowered into storage orbit; awaiting NASA satellite rendezvous and refueling

Earth Resources Observation and Science Center (EROS)

Landsat Archive Operations

10 million unique Landsat scenes available in the 50-year archive, with well over 100 million downloads since Landsat data become freely available in 2008.

Reprocessed CEOS-ARD-compliant “Collection 2” available on the Amazon Cloud.

Landsat Next Program Activities

- **NASA and USGS have determined the Landsat Next mission concept**
- **NASA and USGS held Key Decision-Point A meeting on 29 November to proceed with the mission**
  - Constellation of three observatories in a repeating ground track Sun-synchronous orbit to achieve an aggregate six-day revisit over the Earth's land surfaces
  - Instrument suite will provide for the instruments(s) to support the mission concept and provide the complete spectral coverage of the required Landsat Next Visible to Short-Wave Infrared (VSWIR) and Thermal Infrared (TIR) spectral bands
- **Community Forum for the Landsat Next Instrument Suite: 8 December 2022**
- **Target Launch Readiness Date: 2030**

Landsat Next Requirements Meet Emerging Needs

User need surveys provided a clear set of priorities for Landsat Next requirements to meet emerging needs at breakthrough effectiveness:

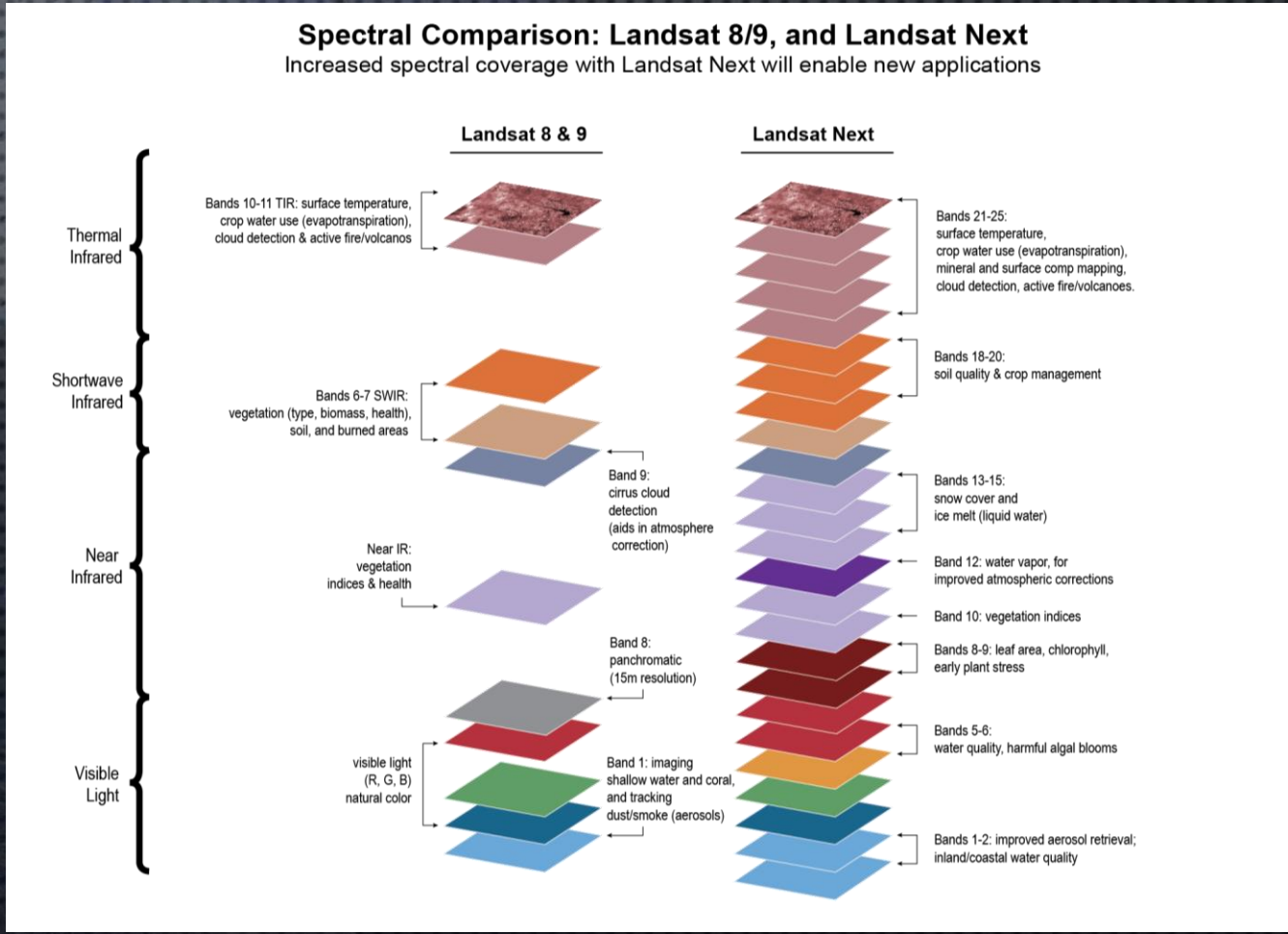
Improved Revisit Frequency. Dynamic phenomena (crop health & productivity, water quality, snow/ice state, wildfire) which require ~weekly clear views.

Higher Spatial Resolution. Experience with Sentinel-2 has underscored importance of 10-meter data for monitoring small agricultural fields, forest disturbance, urbanization, and other applications.

Additional spectral bands to support emerging applications in water quality, snow hydrology, soil mapping, and other areas.

Maintaining radiometric quality established by Landsat 8/9

Multi-spectral → Super-spectral



Landsat Next will provide more than twice as many spectral bands than Landsat 8/9, with resolution improved by a factor of 2, and with improved repeat coverage