

NASA DEVELOP – 2019 Summer Potential Project List

NOTE: These project ideas are tentative and subject to change. The number of projects listed does not necessarily reflect the number of projects conducted at a given node. Expect that each node will conduct 1-2 projects for the 2019 summer term.

AL: Alabama – Mobile (Mobile, AL)

- ▶ *New Orleans Health & Air Quality II: Evaluating Urban Green Space Impact on Land Surface Temperatures in New Orleans, LA and Mobile, AL*

ARC: California – Ames (Moffett Field, CA)

- ▶ *Hawai'i Water Resources: Using NASA Earth Observations to Study Changes in Coastal Water Quality Affecting the Coral Reefs of West Maui, Hawaii*
- ▶ *Wyoming Energy: Monitoring the Land Disturbances Caused by the Continuous Development of Coal Mine Facilities in Wyoming Overtime by Using Landsat and Sentinel Imagery*
- ▶ *American Samoa Water Resources: Evaluating the Land Use Changes in American Samoa by Utilizing NASA Earth Observations to Improve Watershed Management*
- ▶ *Chile Water Resources II: Assessing the Impacts of Harmful Algal Blooms (HAB's) in Chile's Coastline and Their Association with ENSO Events by Using Landsat, MODIS, and Sentinel Imagery*

AZ: Arizona – Tempe (Tempe, AZ)

- ▶ *Ohio Energy: Restructuring the Energy Balance in Ohio by Quantifying Energy Loss and Solar Potential using NASA Earth Observations and LiDAR*

CO: Colorado – Fort Collins (Fort Collins, CO)

- ▶ *Hawai'i Disasters: Employing NASA Earth Observations to Analyze Forest Cover Change, in Support of the Puu O Hoku Ranch and USFS Pacific Southwest Region Resource Conservation Efforts*
- ▶ *Rocky Mountain National Park Water Resources: Employing NASA Earth Observations to Monitor Alpine Lake Algal Productivity in Rocky Mountain National Park*

GA: Georgia – Athens (Athens, GA)

- ▶ *Northern New England Ecological Forecasting: Changes in winter recreation activities, fall foliage, and maple syrup production in Northern New England related to anomalous weather patterns*
- ▶ *Talamanca Ecological Forecasting II: Minimizing Potential Human-Jaguar Conflict Areas by Forecasting Land Use Change to Identify Optimal Potential Jaguar Corridors Connecting La Amistad and Corcovado National Protected Areas in Costa Rica*

GSFC: Maryland – Goddard (Greenbelt, MD)

- ▶ *New York Ecological Forecasting II: Comparing Efficiency of Space-based Imagery to AVIRIS Airborne Data in Identifying Hemlock Forests to Mitigate Invasive Species Expansion*
- ▶ *Ellicott City Disasters: Enhancing A Flood Monitoring Dashboard with NASA Earth Science to Improve Early Warning and Public Safety*

ID: Idaho – Pocatello (Pocatello, ID)

- ▶ *West Virginia Agriculture: Monitoring Forest Restoration Using NASA Earth Observations to Support the USFS Monongahela National Forest*

JPL: California – JPL (Pasadena, CA)

- ▶ *Santa Monica Mountains Ecological Forecasting III: Analyzing Recent Wildfire Impacts to Assist the Resource Conservation District of the Santa Monica Mountains in Identifying Tree Species to Replant*
- ▶ *Lawrence Energy: Identifying Areas with High Solar Power Potential with NASA Earth Observations and LiDAR with Socioeconomic Considerations in the City of Lawrence, Kansas*

LaRC: Virginia – Langley (Hampton, VA)

- ▶ *US Night Skies Urban Development II: Estimating Artificial Light Along America's National Riverways Using Suomi-NPP VIIRS Data*
- ▶ *Hampton Roads Urban Development II: Urban Tree Canopy and Land Cover Analysis to Assist Adaptation Strategies for Reduced Flood Vulnerability in the City of Hampton*
- ▶ *Peru Ecological Forecasting: Estimating loss of Peruvian coastal forest ecosystems using NASA Earth observations*

MA: Massachusetts – Boston (Boston, MA)

- ▶ *Maine Health & Air Quality: Examining Tick-Borne Illness Risk and Emergence by Evaluating Land Cover Change and Tick Habitat Suitability in Northern Maine*

MSFC: Alabama – Marshall (Huntsville, AL)

- ▶ *Delaware Urban Development: Assessing Beach Replenishment Initiatives and Shoreline Risk along Delaware's coasts*
- ▶ *Tennessee Valley Energy: Assessing the Hydrothermal Outputs of Nuclear Power Plants*
- ▶ *Kenya Agriculture: Evaluating Drought Indices for Early Warning in Kenya*

NC: North Carolina – NCEI (Asheville, NC)

- ▶ *Northeast Agriculture: Quantifying Flash Drought Potential in the Northeast and the impact on Agriculture*
- ▶ *Hawai'i & USAPI Water Resources: Developing Satellite Data Derived Drought Indicators for Hawai'i and the USAPI*
- ▶ *Hawai'i Agriculture: Impact of Drought on Coffee Cultivation along the Kona Coastline*