

## NASA DEVELOP – 2024 Summer Proposed Project List (v2. January 18, 2024)

NOTE: These project ideas are **tentative** and **subject to change**. Projects will be conducted either in-person\* at a DEVELOP location or virtually, and each node will conduct 2-3 projects in the 2024 summer term. This list may be updated throughout the application period.

The DEVELOP summer 2024 term will offer opportunities for in-person or virtual participation, by project. The work environment of the opportunity will be dependent on the project and DEVELOP location.

When selecting your preferred location(s), please pay attention to the type of opportunity selected based on the location and project offers on this document and how that aligns with your eligibility.

### In-Person Project Opportunities

<b>Federal Locations</b> (Requires U.S. Citizenship)	# of Project(s)
AL – Marshall (Huntsville, AL)	1
CA – Ames (Mountain View, CA)	1
CA – JPL (Pasadena, CA)	2
MD – Goddard (Greenbelt, MD)	2
NC – NCEI (Asheville, NC)	1
VA – Langley (Hampton, VA)	2
VA – Langley Space Weather (Hampton, VA)	2
<b>Regional Locations</b> (Open to U.S. Citizens & Non-U.S. Citizens)	
CO – Fort Collins (Fort Collins, CO)	1
GA – Athens (Athens, GA)	2
ID – Pocatello (Pocatello, ID)	1
MA – Boston (Boston, MA)	1
PUP – Pop-up Project at ASU Center for Global Discovery and Conservation Science (Hilo, HI)	1
PUP – Pop-up Project at Florida Gulf Coast University (Fort Myers, FL)	1
PUP – Pop-up Project at Hunter College (New York, NY)	1
PUP – Pop-up Project at James Madison University (Harrisonburg, VA)	1
PUP – Pop-up Project at Texas Tech University (Lubbock, TX)	1

### Virtual Project Opportunities

<b>Locations Hosting Virtual Projects</b> (Open to U.S. Citizens & Non-U.S. Citizens)	# of Project(s)
CA – Ames	1
CO – Fort Collins	1
MA – Boston	1
NC – NCEI	1
VA – Langley	1

Notes: virtual projects are open to all candidates (US citizens and Foreign Nationals). Virtual projects continue to be **extremely** competitive.

## Proposed Project List by DEVELOP Location

### AL – Marshall

- ▶ **Peruvian Amazon Ecological Conservation:** Monitoring Deforestation in the Peruvian Amazon Forest Using PeruSAT and NASA Earth Observations for Informed Mitigation ([in-person project](#))

### CA – Ames

- ▶ **Clear Lake Volcanic Field Disasters:** Identifying Deformation Using InSAR to Assess Hazards of Clear Lake Volcanic Field ([in-person project](#))
- ▶ **Cali Urban Development II:** Investigating the Impacts of Wetland Declinations and Deforestation on Urban Heat in Cali, Colombia ([virtual project](#))

### CA – JPL

- ▶ **Karuk Wildland Fires:** Evaluating the Efficacy of Prescribed Burns to Reduce Fire Risk in the Karuk Tribe Territories ([in-person project](#))
- ▶ **South Africa Ecological Conservation:** Identifying and Mapping Riparian Areas in South Africa with NASA Earth Observations ([in-person project](#))

### CO – Fort Collins

- ▶ **Colorado Water Resources:** Using Satellite Observations to Assess Relationships between Snowpack and Wildfires for Land and Water Utility Management ([in-person project](#))
- ▶ **Jemez Pueblo Agriculture:** Monitoring Rangeland Production to Inform Drought and Land Management in New Mexico ([virtual project](#))

### GA – Athens

- ▶ **Dakotas Ecological Conservation:** Using NASA Earth Observations to Track the Encroachment of Woody Invasives into Dakotas Rangelands ([in-person project](#))
- ▶ **Georgia Water Resources:** Using Ocean Color Data from the SeaHawk CubeSat to Identify Optimal Locations for New Oyster Farming Permits along Georgia's Coast ([in-person project](#))

### ID – Pocatello

- ▶ **Western US Ecological Conservation:** Monitoring Contemporary and Future Trends in Distributions of the Federally Threatened Whitebark Pine (*Pinus albicaulis*) in the Intermountain West ([in-person project](#))

### MA – Boston

- ▶ **Narragansett Bay Water Resources:** Using NASA Earth Observations to Identify Trends in Phytoplankton Blooms ([in-person project](#))
- ▶ **Alaska Ecological Conservation II:** Using NASA Earth Observations to Identify Recent Changes in Vegetation Phenology and Its Impacts on Caribou Migration ([virtual project](#))

### MD – Goddard

- ▶ **Hoosier National Forest Ecological Conservation:** Identifying Change in Tree Species Composition in Southern Indiana to Inform Harvesting Activities ([in-person project](#))
- ▶ **Nevada Wildland Fires:** Identifying Drivers of Fuel Load Growth as Early Warning Indicators for Protection of the Desert Tortoise Habitat in Southern Nevada ([in-person project](#))

### NC – NCEI

- ▶ **Asheville Urban Development II:** Mapping Urban Heat to Support Green Infrastructure and Climate Resilience Planning in the Greater Asheville Area ([in-person project](#))
- ▶ **Vermont Wildland Fires:** Quantifying The Role of Drought Conditions in Exacerbating Fire Potential and Risk across Forested Lands in Vermont ([virtual project](#))

### VA – Langley

- ▶ **Cape Hatteras Ecological Conservation II:** Mapping Wetland Change in the Cape Hatteras National Seashore for Coastline Management and Transportation Corridor Adaptation Strategies ([in-person project](#))

- ▶ **Hampton Roads Health & Air Quality:** *Monitoring Air Quality using TEMPO and TROPOMI in Conjunction with Socioeconomic Data to Map Vulnerability in Hampton Roads Virginia* ([in-person project](#))
- ▶ **Coastal Chile Water Resources:** *Improving Response to Indicators of Possible Harmful Algal Blooms (Red Tides) in Coastal Chile through Automatic Satellite Image Processing* ([virtual project](#))

#### **VA – Langley Space Weather**

- ▶ **Space Weather Feasibility Study – North America Ecological Conservation:** *Exploring the Impact of Space Weather and Bird Migration Patterns to Inform Management of Migratory Bird Species Habitat* ([in-person project](#))
- ▶ **Space Weather Feasibility Study – Cape Cod Ecological Conservation:** *Examining the Connection Between Solar Storms and Mass Strandings to Support Marine Wildlife Management in Cape Cod* ([in-person project](#))

#### **PUP – PUP at ASU Center for Global Discovery and Conservation Science**

- ▶ **Hilo Bay Water Resources:** *Monitoring Water Quality in Hilo Bay, Hawaii to Support Future Land Use Planning* ([in-person project](#))

#### **PUP – PUP at Florida Gulf Coast University**

- ▶ **Peace River Water Resources:** *Evaluating Drivers of Change in the Peace River through Satellite-Derived Water Monitoring for Environmental Protection Efforts* ([in-person project](#))

#### **PUP – PUP at Hunter College**

- ▶ **Central Park Ecological Conservation:** *Satellite-derived Measurement of Growing Degree Days and Tree Phenology in New York City's Central Park for Enhanced Management and Preservation* ([in-person project](#))

#### **PUP – PUP at James Madison University**

- ▶ **Shenandoah Ecological Conservation:** *Monitoring Forest Disturbance and Land Cover Change in Shenandoah National Park for Informed Land Management* ([in-person project](#))

#### **PUP – PUP at Texas Tech University**

- ▶ **Arizona Ecological Conservation:** *Assessing Wolf Habitat for Potential Reintroduction Sites in the Grand Canyon Area* ([in-person project](#))