

NASA DEVELOP – 2023 Summer Proposed Project List

updated 2/7/2023

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 1-2 projects for the 2023 summer term. This list may be updated throughout the application period.

The DEVELOP summer 2023 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.

*If prior to the start of the summer term it is determined that onsite participation is no longer feasible due to evolving pandemic issues, we will revert locations back to virtual participation as needed. This is a fluid situation, and we are using current information to make decisions. We appreciate your flexibility and understanding if changes are required.

In-person/virtual project opportunities –

| Location | In-person Project(s) | Virtual Project(s) |
|--|----------------------|--------------------|
| AL – Marshall | X | |
| CA – Ames | X | |
| CA – JPL | X | |
| CO – Fort Collins | X | X |
| GA – Athens | X | |
| ID – Pocatello | X | |
| MA – Boston | X | |
| MD – Goddard | X | |
| NC – NCEI | X | |
| VA – Langley | X | |
| EJ – Environmental Justice | | X |
| PUP – Pop-up Project at University of Wyoming | X | |
| PUP – Pop-up Project at University of Virginia | X | |
| PUP – Pop-up Project at Skidmore College | X | |
| BT – Bhutan Special Project | | X |

Proposed project list by DEVELOP Location –

AL – Marshall

- ▶ Huntsville Urban: *Evaluating the Impact of Heat Mitigation Efforts on Urban Vulnerability in Huntsville, AL (In-person project)*

CA – Ames

- ▶ South Slough Water Resources: *Monitoring Changes in Water Quality to Identify Stressors in Eelgrass Extent Throughout the South Slough National Estuarine Research Reserve (In-person project)*
- ▶ Marin County Wildland Fires II: *Improving Fire Suppression Modeling to Inform Fire Prevention and Suppression Decisions in Areas Surrounding Marin County, CA (In-person project)*

CA – JPL

- ▶ Carolina & Georgia Water Resources: *Investigating the Development of Ghost Forest Due to Saltwater Intrusion on the Southeast Coast (In-person project)*

CO – Fort Collins

- ▶ Medicine Bow Routt Wildland Fires: *Improving Invasive Species Detection Mapping With Novel Phenology Approaches (In-person project)*
- ▶ Grand Staircase-Escalante Ecological Conservation: *Mapping Russian Olive and Tamarisk to Inform Invasive Species Management along the Paria River in Grand Staircase-Escalante National Monument, UT (Virtual project)*

GA – Athens

- ▶ Alaska Climate: *Analyzing Permafrost Degradation and Drainage Networks in Unalakleet, AK (In-person project)*
- ▶ Las Vegas Urban Development: *Using Earth Observations to Assess Urban Heat Impacts to Build an Equitable Response to Extreme Heat (In-person project)*

ID – Pocatello

- ▶ Capitol Reef Ecological Conservation: *Mapping Vegetation Functional Groups to Plan for Invasive Vegetation Management and Habitat Rehabilitation in Capitol Reef National Park (In-person project)*

MA – Boston

- ▶ Coast Range Water Resources: *Mapping Historic Logging within Drinking Watersheds of Oregon's Coastal Range to Support Future Resource Management Policies (In-person project)*

MD – Goddard

- ▶ Washington DC Water Resources: *Investigating the Use of Earth Observations for Comparing Landcover, Climate, and Hydrology Information to Support Management Metrics in the National Capital Region (In-person project)*
- ▶ PACE Water Resources: *Exploration of PACE Proxy Data for Early Adopter Applications in Coastal Resilience (In-person project)*

NC – NCEI

- ▶ Pacific Northwest Health & Air Quality: *Monitoring Trends in Air Quality during a Drought Case Study to Improve Public Health Response to Drought Threats (In-person project)*

VA – Langley

- ▶ Lake Anna Water Resources: *Using NASA Earth Observations to Study Algal Events within Lake Anna (In-person project)*
- ▶ Richmond Disasters: *Tracking and Assessing Stormwater Flooding in Richmond, VA (In-person project)*

EJ – Environmental Justice Projects

- ▶ San Joaquin Valley Health & Air Quality: Assessing the Distribution and Implications of Smoke from Illegal Agricultural Burning in the San Joaquin Valley (*Virtual project*)
- ▶ Portland Urban Development: Quantifying and Visualizing Urban Heat Island and Compounding Sociodemographic and economic Vulnerabilities in Portland, Oregon to Support Community Depaving Initiatives (*Virtual project*)

PUP – Pop-up Project at University of Wyoming

- ▶ Kankakee Water Resources: Monitoring Temperature and Vegetation to Detect River Flow Impediments at Energy Intake Structures (*In-person project*)

PUP – Pop-up Project at University of Virginia

- ▶ Chile Agriculture: Assessing Climate Change Impacts On Agriculture By Studying Soil Moisture Using Hydrological Distributed Models Under Several Scenarios (*In-person project*)

PUP – Pop-up Project at Skidmore College

- ▶ New York & Vermont Ecological Conservation: Evaluating Agricultural Conservation Easement Impact using Earth observations to Examine Avoided Soil Carbon Loss to Development (*in-person*)

BT – Bhutan Special Project

- ▶ Bhutan Agriculture III: Mapping Cropland Changes in Bhutan using Remote Sensing (*Virtual project*)
 - **Note:** This special project is for Bhutanese scholars studying in the United States *only*.