

**Opportunity Title:** Relationship between Coastal Water Quality and Wildland Fires in California

**Opportunity Reference Code:** 0199-NPP-NOV23-JPL-EarthSci

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0199-NPP-NOV23-JPL-EarthSci

**Application Deadline** 11/1/2023 6:00:59 PM Eastern Time Zone

**Description** The area burned in California due to wildland fires is on an increasing trend over the last 4 decades, with 15 of the 20 largest wildfires occurring since 2000. California's population continues to increase as well, with many choosing to reside in coastal regions. Climate change projections indicate that California is expected to experience larger periods of extended and severe droughts, which can exacerbate wildland fire behavior, and also contribute to water supply insecurity with detrimental implications for anthropogenic uses as well as fresh and coastal ecosystems. This proposed research will focus on and evaluate the relationship between wildland fires extent and coastal water quality, and will leverage a suite of measurements from satellite to in-situ collections.

**References:**

Observed Impacts of Anthropogenic Climate Change on Wildfire in California A. Park Williams John T. Abatzoglou Alexander Gershunov Janin Guzman"Morales Daniel A. Bishop Jennifer K. Balch Dennis P. Lettenmaier, AGU Earth's Future 2019 Characterizing the Influence of Fire on Hydrology in Southern California Lorraine E. Flint, Emma C. Underwood, Alan L. Flint, Allan D. Hollander, J. Natural Areas 2019 Modeling the impacts of wildfire on runoff and pollutant transport from coastal watersheds to the nearshore environment Katherine D. Morrison, Crystal A. Kolden, J. Environmental Mgmt 2015 Satellite ocean color observations of stormwater runoff plumes along the San Pedro Shelf (southern California) during 1997-2003 Nikolay P. Nezlin, Paul M. DiGiacomo, Continental Shelf Research, 2005

**Location:**

Jet Propulsion Laboratory  
Pasadena, California

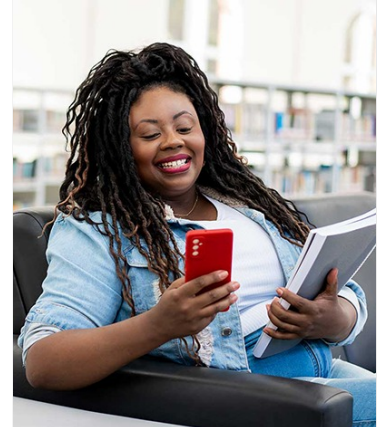
**Field of Science:** Earth Science

**Advisors:**

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**Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States.** A complete list of Designated Countries can be found at: <https://www.nasa.gov/oiir/export-control>.

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- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

**Eligibility Requirements**

- **Degree:** Doctoral Degree.