



NASA Earth Observations for Reservoir and Water Utility Management

August 4, 6, & 11, 2026

11:00-12:30 (Session A) or 14:00-15:30 (Session B) EDT (UTC-4)

NASA Earth observations and modeled data provide vital insights into these precursor conditions. Satellite-derived soil moisture and precipitation data allow managers to monitor basin saturation and heavy rainfall events. Additionally, remote sensing of snow cover and SWE fills critical data gaps in low-elevation and un-gauged mountainous areas, offering a comprehensive view of available water before it melts. Moreover, data on rain and snow melt runoff, water level heights of reservoirs and inflow rivers, and streamflow provide needed information for monitoring reservoir systems and watershed conditions to make informed management decisions.

This three-part training focuses on case studies and hands-on exercises using rain and snow, soil moisture, runoff and streamflow, and water level height, to help users monitor reservoir inflows, optimize water release decisions, and manage flood risks.

Part 1: Data Requirements for Reservoir Management

Trainers: Amita Mehta and Sean McCartney

- About ARSET
- Training Overview
- Part 1 Introduction
- Section 1: Overview of Hydropower Reservoir Management
- Section 2: NASA Earth Observations and Earth System Models to Monitor Reservoir Watershed Conditions
- Section 3: NASA Earth Observations and Earth System Models for Monitoring Reservoirs and Tributaries
- Part 1 Summary
- Q&A Session

Part 2: Accessing NASA Earth Observations for Reservoir Management

Trainers: Amita Mehta and Sean McCartney

- Part 1 Review
- Part 2 Introduction
- Section 1: Accessing Watershed Data for Selected Reservoirs
- Section 2: Accessing Reservoir and Inflow Data
- Part 2 Summary
- Q&A Session



ARSET empowers the global community through remote sensing training.



Part 3: Applying NASA Earth Observations to Hydropower Reservoir Management

Trainers: Amita Mehta and Sean McCartney

- Part 2 Review
- Part 3 Introduction
- Section 1: Lake Mead Case Study – Watershed Parameters and Reservoir Level Variability
- Section 2: Lake Itaipu Case Study – Watershed Parameters and Reservoir Level Variability
- Section 3: Thresholds for Decision Making
- Part 3 Summary
- Training Summary
- Q&A Session



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