

# River Basin Delineation Based on NASA Digital Elevation Data

Date: November 26, 2019

Time: 10-11 ET and 4-5 ET

River basin (known as watershed in North America) are areas of land that drain precipitation, surface water, and underlying groundwater into a river and its tributaries, eventually reaching a common outlet such as a lake, reservoir, river, or estuary. The drainage pattern is from smaller sub-basin to larger sub-basin, and from higher elevation to lower elevation. Land surface processes, precipitation, storm water, and wastewater runoff within basins have substantial impact on quantity and quality of the water draining into tributaries. Surface topography and elevation generally determine boundaries or drainage divides between sub-basins. Delineation is crucial for assessing the contribution to water quantity and quality in the river system, and for planning better land and water management practices.

This webinar will focus on describing NASA digital elevation data and its application in deriving river basin information by using **Hydro**logical data and maps based on **SHuttle Elevation Derivatives** at multiple **Scales** (HydroSHEDS) database (<https://www.hydrosheds.org/>). Exercises with instructions for river basin delineation using HydroSHEDS will be provided.

## Learning Objectives:

By the end of this training, attendees will be able to delineate a river sub-basin and determine flow direction in the area of their interest using HydroSHEDS.

## Course Format:

- The webinar will be conducted in English, with Spanish translation of the material available
- One-hour presentation, demonstration, and question and answer session
- There will be identical sessions at two different times of the day
- No certificate of completion will be offered for this webinar

## Software:

- QGIS

## Prerequisites:

- Fundamentals of Remote Sensing

## Audience:

The audience for this training is local, regional, state, federal, and international entities, including public and private sector organizations, engaged in water resources, floods, and river basin management, and water quality management.

## Agenda:

- Overview of NASA Digital Elevation Data
- Demonstration of HydroSHEDS for river basin delineation