

# **Civil Engineer (Hydraulics) Job Announcement at the U.S. Department of the Interior Bureau of Reclamation, Lakewood, Colorado**

The Bureau of Reclamation's Sedimentation and River Hydraulics Group in Lakewood, Colorado is recruiting for a GS-9/11 Civil Engineer (Hydraulics) to work on investigations of rivers and reservoirs within the western United States. Candidates with other physical science degrees may qualify (see vacancy announcement qualifications section). The focus of our work is on hydraulics, sediment transport, and geomorphology for river restoration and the protection of infrastructure. We are interested in engineers to work on projects and we are also interested in engineers with skills in complex numerical model development.

A Master of Science degree (or year of specialized experience) is required for the GS-9 grade level. A Ph.D. (or one year of specialized experience) is required for the GS-11 grade level. The position is located within Reclamation's Technical Service Center, which provides technical support to our Region and Area Offices that cover the 17 western United States.

**This position is open from November 29<sup>th</sup> through Wednesday December 12, 2018 (midnight EST).** If interested, please look for the announcements in USA Jobs (<https://www.usajobs.gov>)

- BR-DO-2018-329 Merit Promotion
  - <https://www.usajobs.gov/GetJob/ViewDetails/518116400>
  - for candidates who have previously held a permanent position within the Federal government
- BR-DO-2018-330 DEU
  - <https://www.usajobs.gov/GetJob/ViewDetails/518117600>
  - for candidates who do not have a career position with the Federal government

Please prepare a custom resume for this advertisement that documents your education and experience related to the position.

## **Sedimentation and River Hydraulics Group**

<http://www.usbr.gov/tsc/tscorganization/8200.html>

For the past 70 years, engineers and scientists of Sedimentation and River Hydraulics Group have conducted studies of how rivers and reservoirs have or will respond to changes in river flow, sediment supply, or channel modification. Studies are prepared for a variety of purposes including stream habitat restoration, protection of streamside infrastructure, and reservoir sediment management and long-term sustainability. See the news story about our 70<sup>th</sup> anniversary at <https://www.usbr.gov/newsroom/stories/detail.cfm?RecordID=56635>.

Work activities includes field data collection, geomorphic analysis, numerical modeling, and river engineering problem solving. Specific areas of technical expertise include:

- Reservoir sedimentation and river channel surveys
- Sediment management studies for habitat restoration, protection of streamside infrastructure, and long-term sustainability of reservoirs
- Research and development:
  - numerical model development
  - river channel process investigations
  - river structure design criteria
  - sediment measurement
- Numerical Modeling of rivers and reservoirs (1D, 2D, and 3D):
  - river and floodplain hydraulics informing channel restoration design
  - sediment transport
  - lateral channel migration
  - vegetation growth and mortality and linkages to habitat
- Development of technical guidelines



Figure 1. Sediment sampling on the Elwha River, WA.



Figure 2. River channel surveys from a raft using GPS and depth sounder.

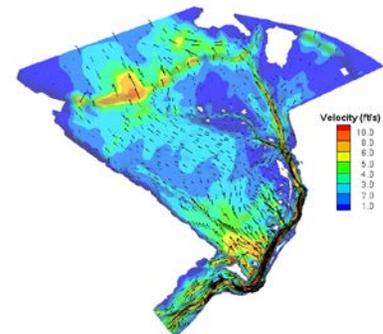


Figure 3. 2D hydraulic modeling of the Dungeness River, WA.

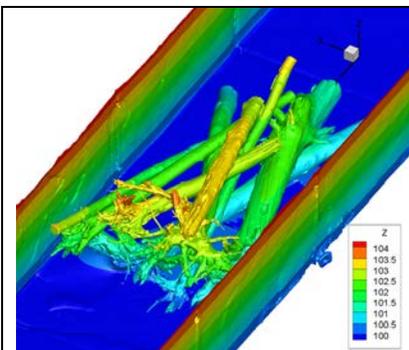


Figure 4. 3D numerical model simulation of log jam hydraulics.



Figure 5. Removal of Glines Canyon Dam, Elwha River, WA.



Figure 6. Sedimentation in Paonia Reservoir, CO.