

BAER HYDROLOGIST (BAHY) - [Qualification Checklist](#)

Responsibilities

The BAER Hydrologist contributes to addressing post wildfire emergency watershed conditions by assessing fire effects on hillslope runoff and water resources, determining the natural range of variability upper limits for watershed capabilities, identifying values at risk (life, property, and critical natural and cultural resources), and developing in-channel and watershed treatments to avoid if possible an excessive watershed response.

Responsibilities

- Assesses the burned area for fire effects to hydrologic processes soils and makes findings available to other users.
 - Documents and map observations and findings.
 - Assesses post-wildfire watershed response.
 - Identifies wildfire-caused changes in watershed characteristics (upland and stream channel conditions).
 - Compiles and interpret available hydrologic and climate data.
 - Estimates post-wildfire runoff and peak flows.
 - Identifies values at risk from post-wildfire watershed conditions within and downstream of the burned area.
 - Determines if an where threats to human life, property and critical cultural and natural resources due to post-wildfire watershed conditions
 - Contributes hydraulic information to the watershed damage assessment.
- Develops recommendations (if needed) for emergency stabilization of impacted watersheds.
 - Prepares channel and watershed treatment and monitoring specifications.
 - Map proposed treatment locations.
- Coordinates with other BAER technical specialists and other agencies.
- Compiles field notes and maps, data, digital photos, and daily unit logs for the record.
- Prepares the hydrologic presentations for public, agency administrator's and close-out meetings and briefing.
- Prepares and delivers the close-out briefing burned areas assessment summary.
- Prepares copies of the resource field assessment notes, maps and other draft materials and delivers them to the Documentation Specialist as part of the documentation package with sensitive data/notes identified and returned to the local specialists-not to be included in the official documentation package.

Skills/Knowledge

- Technical skill as a GS-09 Soil Scientist
- Knowledge of fire effects on watersheds and drainages.
- Knowledge of methods for estimating post-fire erosion, peak flows and mass wasting.
- Experience in mapping field information and using GPS and GIS.
- Knowledge of and familiarity with hydrologic and in-channel stabilization techniques.
- Ability to quickly and efficiently locate and synthesize relevant technical information from local land use plans and local and community sources.
- Basic understanding of the potential effects of wildfire on natural and cultural resources and public health and safety.

Training

- Required
 - Annual Fire Safety Refresher Training
 - Introduction to Fire Behavior (S-190)
 - Fire fighter Training (S-130)
- Additional training which supports development of knowledge and skills
 - Introduction to Incident Command System (I-100)
 - Wildland Fire Suppression Orientation for Non-operations Personnel (S-110)
 - Basic Incident Command (I-200)
 - Introduction to Fire Effects (RX-310)
 - Interagency BAER Techniques course
 - GPS for ICS
 - GIS (Arcview or ArcGIS)
 - Interagency Helicopter Training Guide (S-271)
 - Burn Area Reflectance Classification
 - Hydrologic and erosion modeling (HEC, WEPP, etc.)
 - Incident communications and radio training

Prerequisite Experience

- Hydrologist (HYDR)
- One satisfactory performance as a BAER Hydrologist

Physical Fitness

- Light

Position currency can also be maintained by successful performance a Hydrologist (HYDR), BAER Soil Scientist (BASS), or BAER Geologist (BAGE).

