



Challenges of Responding to a Railcar Coal Spill in a Remote River

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Following the derailment of fifteen railcars containing coal in the Sierra Nevada Mountain range near Cromburg, California, USA, an estimated 350 tons (US) was spilled into the Middle Fork of the Feather River. This paper describes the response actions following the incident, including: the containment and recovery of bulk coal deposits by both mechanical and manual operations; the fate, behaviour, and visual assessment (derived from the Shoreline Cleanup Assessment Technique - SCAT) of coal in the river; the determination of cleanup endpoints; and the methods and constraints developed for the cleanup of the river. The major innovations for this response were the use of hi-rail for all equipment mobilized to the site (3 miles from the staging area), installation of a coffer dam around the railcar in the river, and the use of a clam shell dredge and divers with guzzlers vac trucks to remove coal from the bottom of the river. There were multiple challenges to the response team, primarily due to the remote environment, altitude, and winter seasonal conditions. These included poor accessibility to the river; shallow water levels with several riffles and rapids which required river rafts with trained operators for all in-river activities; occasional snow and ice conditions followed by increased river flow from snowmelt with subsequent flooding of sampling and monitoring sites. Additional, local challenges included the lack of agency and responder experience in responding to a coal spill, and the regulatory and permitting requirements for in-river work, especially considering the Feather River is one of the first nationally designated wild and scenic rivers as part of the 1968 Wild & Scenic Rivers Act due to its trout fisheries, recreational opportunities, and scenery^[1]. This paper details the challenges and how the response team managed those challenges and provides considerations for future similar responses.

[1] <https://www.rivers.gov/river/feather>

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Mr. Malizzi has over 30 years of experience in disaster response, insurance loss control, litigation support, spill planning, drills, and response, Natural Resource Damage Assessment (NRDA), endangered species, and habitat restoration. Recently, he was the EUL for a train derailment in CA and recent projects include managing work on the Hurricanes Ida, Ian and Nicole response and the Bayport Channel Collision and Ever Forward vessel matters. He was a SCAT Team Lead on the Dublin Express and B235 responses and he managed the staff on the ITC Fire response, St. Simon Sound Incident response, the TPC Explosion response, and the Hurricane's Florence, Michael, Irma, and Harvey responses, as well as, numerous small events. Previously, he managed the staff on the Bay Long response in Grand Isle, LA, the Avian Influenza response in Iowa, and was a SCAT Team Lead on the Bayonne 2015 spill response in Bayonne, NJ. Mr. Malizzi also managed staff on the Exxon Mayflower, Hurricane Isaac, Superstorm Sandy, Boston 30, and Texas City "Y" responses. He served as the Program Manager for the Natural Resource Advisor Program, among other tasks, in support of the MC252 Deepwater Horizon Response (BP Spill) in the Gulf of Mexico. Mr. Malizzi is on the Board for the Spill Control Association of America and was on the Planning Committee for the International Oil Spill Conference 2023. He has spoken extensively on spill planning, NRDA, and response and other environmental topics in both the U.S., Canada, Middle East, and the EU.