



Academic Activity Chapter 13

Engineering and Spills

When an accidental leak occurs it affects many parties. Qualified engineers are often asked to make decisions about how to best clean up a spill and prevent the same type of spill in the future. For the scenario below, list the responsibilities of each of the following engineers or technicians:

City or State Water Engineer:

Manages the water rights owned by a municipality or state, the systems that deliver and retrieve water from communities, homes and businesses, water storage and treatment.

Oil Field Project Manager:

Often a petroleum Engineer or a senior technician manages the day-to-day operations in the oil fields and oversees any employees or equipment in operation.

Petroleum Engineer/Technician/Surveyor:

Oversees the placement of the wells and the layout of the distribution network that takes oil from the pump jack to the storage tanks.

Dam Project Manager:

This is a Civil Engineer PE (certified Professional Engineer) who oversaw the planning, development, and construction of the dam that created the lake and ultimately signed off on the project.

Scenario

A central Texas lake is used for recreation and as a water reservoir for a nearby community. The lake is man made and managed by the municipal water department of the community. As is common throughout Texas, New Mexico, and Oklahoma the mineral rights are owned by the municipality and are leased to petroleum companies. Some of the oil leases run right up to the edge of the lake. Heavy rainfalls in the recent weeks caused a few mudslides on the banks that adjoin the oil leases, and a pipe was damaged, resulting in an undetermined amount of oil spilled into the lake.

Assignment

In your own words, determine the role played in the scenario by of at least three of the four types of engineers listed. Go online and research the role of each in oil and chemical spills, and back up your determination with your findings. Please remember to cite your resources appropriately.
