



Oil and Gas

Abandoned Oilfield Equipment

“If you travel much in the wilder sections of our country, sooner or later you are likely to meet the sign of the flying goose—the emblem of the National Wildlife Refuges. Wherever you meet this sign, respect it. It means that the land behind the sign has been dedicated by the American people to preserving, for themselves and their children, as much of our native wildlife as can be retained along with our modern civilization.”

— Rachel Carson

Beyond the sign of the blue goose, the legacy of oil and gas exploration and production is evident in many national wildlife refuges. Although the presence of active pump jacks and storage tanks in these wildlife areas are a reminder of our need for energy to fuel our economy and way of life, abandoned oilfield equipment no longer in use is at odds with the purposes of these refuges and the desire of refuge visitors to view wild places. Derelict pump jacks, tanks, and other oilfield equipment are not only an eye-sore; they present a hazard to the refuge environment and to public safety.

Stairs, catwalks, and ladders on tanks or other oilfield storage vessels and pump jacks pose a human safety risk. Storage tanks and catwalks in the floodplains of large rivers are typically located on elevated platforms over 20 feet



Abandoned compressor station, Delta NWR, LA /P Ramirez USFWS

above the ground in some refuges in Louisiana and Mississippi. Abandoned elevated platforms supporting tanks can collapse and pose a serious safety risk. Pump jacks can be 30 feet or higher. Abandoned aboveground flowlines or small diameter pipelines and well casings protruding above the ground pose a hazard to refuge personnel engaged in management activities such as mowing. Tall, dense vegetation can hide these pipes which can damage refuge equipment and vehicles.

Abandoned oilfield equipment can also harm wildlife. Abandoned tanks and separators can leak and contaminate soil, water, and vegetation. Open-topped tanks, buckets, and other containers with oil and water can attract and entrap wildlife, especially insects, small mammals, and songbirds. Abandoned oilfield equipment left

on a refuge can limit a refuge manager’s restoration and management options. The extent of abandoned equipment throughout the National Wildlife Refuge System is unknown.

Currently, there are an estimated 90,000 abandoned or orphan wells in the United States. An orphan well is defined as a well that is not producing or injecting fluids, is not permitted to remain inactive by the appropriate state regulatory agency, and the operator is unknown or insolvent. Oil operators that abandon inactive wells and the surface production equipment place the burden of plugging and abandonment and site reclamation on the taxpayer since the costs are borne by the state oil and gas agency or the federal government.

The Texas Railroad Commission spent \$1.2 million to remove abandoned oilfield equipment and

plug orphan wells in the East Lake unit of the Lower Rio Grande Valley in South Texas. At St. Catherine Creek NWR in Mississippi, plugging one orphan well and site restoration cost the U.S. Environmental Protection Agency \$260,000.

Removing abandoned oilfield equipment is not as easy as hauling the rusted pump jacks, empty tanks, and pipes off the refuge. The U.S. Fish and Wildlife Service must weigh the potential liability resulting from equipment removal. For example, Oklahoma allows the removal and salvage of abandoned oilfield equipment so long as the integrity of the well is not compromised.

The National Wildlife Refuge System's Energy Team has developed a plan to identify and maintain a database of abandoned oilfield equipment on national wildlife refuges, identifying legal constraints and liabilities for removing that equipment, and developing protocols for removal of the equipment and site restoration. The Team is working with the U.S. Environmental Protection Agency and State agencies in identifying

abandoned or orphan well sites, plugging orphan wells, and removing abandoned oilfield equipment.



Abandoned dump truck, Tensas River NWR, LA/ P Ramirez USFWS



Abandoned pump jack and well, Deep Fork NWR, OK /P Ramirez USFWS



Abandoned separator, Lower Rio Grande Valley NWR, TX/S Covington



Abandoned tanks, Matagorda Island NWR, TX /S Covington USFWS

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July 2014