

Mapping Orphan Wells in Kentucky

Orphan Wells Are Threatening Kentucky Communities

New map shows the location of all 14,367 currently documented orphan wells in the state. Pending federal legislation will invest nearly \$5 billion to plug and clean up these and the more than 81,000 other documented orphan wells across the country.



The Trouble with Orphan Wells

Kentucky had some of the country's earliest oil and gas development, and now has one of the highest counts of documented orphan wells in the country, from one end of the state to the other. Kentucky's extractive history has left a serious environmental legacy of unplugged wells, the scale of which is just beginning to come into focus. After oil and gas wells are done producing, they must be properly closed to prevent air and water pollution, protect the health of the surrounding communities, restore the property values of the landowner, and in addition, prevent high-priority, climateforcing methane emissions. Kentucky's Oil and Gas agency has begun an effort to address this legacy of unplugged wells, but there is a long way to go.

Hundreds of thousands of wells across the country were not plugged by their operators and remain open to groundwater and nature, some for a century or more. These "orphan" wells have no solvent owner of record, so the cleanup liability falls on the states, federal agencies or Tribe. Unfortunately, only pennies on the dollar have been available to properly clean up these wells.

How Do Orphan Wells Impact Communities

When a well is left unplugged, it can leak oil and other toxic chemicals, endanger water wells and other sources, contribute to air pollution and emit methane - a powerful greenhouse gas. Orphan wells also dramatically impact local communities and economies by threatening the health and well-being of residents and decreasing property values which lowers funding for local schools, police departments, and other public services.



Top Ten Orphan Well Count, by County



Where Are The Wells

To better understand where the documented orphan wells are eligible for closure funding under the REGROW Act, EDF partnered with researchers at McGill University to develop a first-of-its-kind geolocated dataset. Our research turned up approximately 81,000 such wells across 28 states. Kentucky could receive over \$755M to plug the 14,367 currently documented orphan wells in the state. The promise of the REGROW Act is essentially to make all these dots disappear, with significant environmental, public health and quality of life benefits for surrounding communities and for the climate, while creating or retaining tens of thousands of oilfield services jobs.

A Down Payment On A Big Problem

The EPA estimates that emissions from inactive, unplugged wells, of which documented orphan wells are a subset, range from 7-20 million tons of CO2 equivalent per year in the form of methane, and any reduction in methane emissions has an outsized short-term positive impact on the climate. This is equivalent to taking anywhere between 1.5 and 4.3 million cars in the United States off the road for a year. Despite all of this, a full accounting of wells with no solvent owner of record might be close to a million. There is also a large population of wells that are low- or nonproducing which are likely to be orphaned in the future. The REGROW Act is a critical down payment in plugging these wells but we must also pass meaningful policy reform related to financial assurance and fees, idle well management and well transfer.

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