



# Digital Representation of Oil and Natural Gas Well Pad Scars in Southwest Wyoming—2012 Update

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## Abstract

The recent proliferation of oil and natural gas energy development in the Greater Green River Basin of southwest Wyoming has accentuated the need to understand wildlife responses to this development. The location and extent of surface disturbance that is created by oil and natural gas well pad scars are key pieces of information used to assess the effects of energy infrastructure on wildlife populations and habitat. A digital database of oil and natural gas pad scars had previously been generated from 1-meter (m) National Agriculture Imagery Program imagery (NAIP) acquired in 2009 for a 7.7-million hectare (ha) (19,026,700 acres) region of southwest Wyoming<sup>1</sup>. Scars included the pad area where wellheads, pumps, and storage facilities reside and the surrounding area that was scraped and denuded of vegetation during the establishment of the pad. Scars containing tanks, compressors, the storage of oil and gas related equipment, and produced-water ponds were also collected on occasion. This report updates the digital database for the five counties of southwest Wyoming (Carbon, Lincoln, Sublette, Sweetwater, Uinta) within the Wyoming Landscape Conservation Initiative (WLCI) study area and for a limited portion of Fremont, Natrona, and Albany Counties using 2012 1-m NAIP imagery and 2012 oil and natural gas well permit information<sup>2</sup>. This report adds pad scars created since 2009, and updates attributes of all pad scars using the 2012 well permit information. These attributes include the origination year of the pad scar, the number of active and inactive wells on or near each pad scar in 2012, and the overall status of the pad scar (active or inactive). The new 2012 database contains 17,404 pad scars of which 15,532 are attributed as oil and natural gas well pads. Digital data are stored as shapefiles projected to the Universal Transverse Mercator (zones 12 and 13) coordinate system. These data are available from the U.S. Geological Survey (USGS) at <http://dx.doi.org/10.3133/ds934>.

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<sup>1</sup> Garman, S.L., and McBeth, J.L., 2014, Digital representation of oil and natural gas well pad scars in southwest Wyoming: U.S. Geological Survey Data Series 800, 7 p., <http://dx.doi.org/10.3133/ds800>.

<sup>2</sup> Biewick, L.R.H., and Wilson, A.B., 2014, Energy map of southwestern Wyoming, Part B—Oil and gas, oil shale, uranium, and solar: U.S. Geological Survey Data Series 843, 20 p., 4 pls., <http://dx.doi.org/10.3133/ds843>.

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