

Weld County Profile

Weld County²² is the third largest county in the state of Colorado, covering approximately 4,000 square miles, or twice the size of Delaware. Weld County is also the most agriculturally productive county in Colorado, according to the U.S. Department of Agriculture.²³

The county population grew 39.7 percent between 2000 and 2010, and was the fastest growing county in the United States between 2000 and 2004. Weld County has the ninth largest population of the state's 64 counties, and outpaced the state's overall growth, climbing 40 percent between 2000 and 2015, while the state population overall increased by 26 percent. The county has outpaced the state's average growth every year since 2000, and local officials expect the county to experience a 3.75 percent compounded growth rate each year from 2015 to 2035, more than double the expected annual compounded growth rate for Colorado overall.

The number of county residents employed in oil and gas jumped 160 percent between 2009 and 2016, from 1,870 to 4,870 workers, according to the Colorado Department of Local Affairs.

Death Statistics

In order to better understand what impacts, if any, oil and gas development may be having in the D-J Basin, Energy In Depth analyzed death statistics from 2002 through 2015 in counties located within the basin. This led to a focus on the county where the greatest intensity of production has occurred: Weld County.

Here is a chart compiling the publicly available data from CDPHE²⁴ and COGCC.²⁵

Weld County, Colo. Health Indicators	2002	2015	Percent Change
Total population	198,975	284,876	+43.2 %
Population 65+	17,492	32,557	+86.1 %
Percentage of population	8.8%	11.4%	+29.5%
Rates of death for all causes	616.7	614	-0.4 %
Rates of death for:			
All cancers	131.7	129.2	-1.9 %
All heart diseases	143.7	113	-21.4 %
All chronic lower respiratory diseases	45.2	41.1	-9.1 %
Oil and gas wells	12,481 (COGCC)	27,063 (COGCC)	+116.8%

The total population of Weld County grew by more than 43 percent, or nearly 86,000 residents, from 2002 to 2015. The number of residents 65 years of age or older nearly doubled in the same time period, a 29.5 percent increase in the percentage this age group represents in the total population, as it grew from 8.8 percent to 11.4 percent of the total county population. This is especially notable given the fact the Centers for Disease Control and Prevention (CDC) lists heart disease, cancer, and lower respiratory disease as the leading causes of death for persons age 65 and over.²⁶

22 "The Weld County Population & Development Report," Weld County, September 26, 2016.

23 Ibid.

24 "Colorado Health and Environmental Data," CDPHE.

25 "GIS Online," COGCC.

26 "Older Persons' Health," National Center for Health Statistics, U.S. Centers for Disease Control and Prevention.

"We've had at least 10,000 wells or more in Weld County for about 30 years or more and with that number of wells, we clearly have been the canary in the mine. It's obvious that there would be health effects if indeed oil and gas was causing health issues that would take us out of the normal range. If it was going to be a problem, it should have shown up long ago, but it hasn't."

Wolk told the Tribune there is not a causal relationship between development and chronic diseases.

"We want to make sure that we stay very much objective and neutral and just report the facts," he said.

"It says that there's no reason to believe that there is a causal relationship between oil and gas operations and chronic diseases or cancers. That plays out in the end numbers."

As the Greeley Tribune reported⁶² in 2016:

"The numbers, which were reported in two-year increments between 2008 and 2012, show that **Weld does not have significantly more, and in many cases, it has fewer, instances of asthma, cancer, birth defects, infant mortality and low birth weights than other Front Range counties.**" (Emphasis added)

CDPHE Executive Director and Chief Medical Officer Larry Wolk noted that despite alleged claims of oil and natural gas development causing health risk, Colorado's health department found that development has not adversely affected the health of Weld County's 285,000 residents. "There's no reason to believe that there is a causal relationship between oil and gas operations and chronic diseases or cancers," he told the Greeley Tribune in 2016.

Broader Analysis of Colorado Communities: CDPHE's Oil and Gas Health Information Reports

The CDPHE issued a FY 2016-17 status report⁶³ for the Colorado State Legislature Joint Budget Committee on Nov. 1, 2017. Led by Tami McMullin, Oil and Gas Health Information and Response (OGHIR) Program Manager and Toxicologist, and Greg Harshfield, Air Quality Monitoring Unit Supervisor, the report tracked health concerns reported by Colorado residents, with 50 percent of the self-reported concerns in the state originating in Weld County.

Responding to stakeholders, air sampling was conducted and reports provided for 6 Tier III responses.

"Six Tier III community investigations, which included community air sampling, accounted for 65% of reported concerns," according to OGHIR. Five of the six reports included Weld County sampling data.

"OGHIR deployed the Colorado Air Monitoring Mobile Laboratory (CAMML) to three of the investigations, resulting in approximately 500 sampling hours. Each hourly sample includes about 1000 individual data points," the authors explained.

"In general, the data collected from air sampling investigations have shown low risk for short- and long-term health effects to people in communities reporting concerns," the authors found.

62 "Weld County health incidents level with rest of state, despite more oil and gas development," *The Greeley Tribune*.

63 "Colorado Department of Public Health and Environment Request for Information 03 Oil and Gas Health Information and Response Program," CDPHE, November 1, 2017.

Statewide attempts to ban fracking and oil and gas development, meanwhile, have not fared well. In 2014, two measures to increase setbacks for drilling rigs and add an environmental bill of rights were pulled⁵² at the last minute, just as signatures for the ballot measures were due to the Colorado Secretary of State's office. Governor John Hickenlooper (D) orchestrated a compromise that led to a one-year statewide oil and gas task force⁵³ review to tackle concerns about oil and gas development, including health and environmental impacts.

Attempts in 2016 to resurrect the oil and gas restrictions through setbacks, fracking bans, or environmental bill of rights failed, with nine out of 11⁵⁴ ballot measures eventually being dropped by their sponsors, and the final two failing⁵⁵ to gain enough valid voter signatures to reach the ballot box that November. Those measures⁵⁶ would have allowed local governments to ban oil and gas development, and would have instituted a statewide 2,500 foot setback requirement.

The same groups who brought forth related ballot measures in the past have come back with yet another ballot measure attempt in 2018. Ballot measure #97,⁵⁷ which includes similar provisions, has been filed with the Colorado Secretary of State and is currently moving through the ballot measure approval process.

CDPHE Finds Anti-Oil and Gas Reports Mischaracterize Data

Claims of negative health-related impacts cited by opponents of oil and gas development prompted the Colorado Department of Public Health and Environment (CDPHE) to examine its available health data, particularly in Weld County. Dr. Wolk said⁵⁸ of the department's research: "People should do their own research before making assumptions. I want to make sure people aren't presuming there's a health hazard. We wanted to make sure the public wasn't unnecessarily misled."

There is no apparent health risk, Wolk said, and despite alleged claims of oil and gas development causing health risk, Colorado's health department found that oil and gas development has not adversely affected the health of Weld County's 285,000 residents.

Indeed, based on the state's data, it appears certain groups have mischaracterized or poorly presented the findings of health reports to the public. Examples include Dr. Van Dyke's analysis of the McKenzie cancer study⁵⁹ that he said had "significant limitations." The 2017 CDPHE report's findings restate that based on currently available agency data "there were no chemicals or substances that exceeded those [Environmental Protection Agency] safe levels." The CDPHE report argues against presenting the data out of context or erroneously presenting the conclusions of reports to the public.

CDPHE's analysis found that⁶⁰ despite Weld County producing 90 percent of Colorado's oil and having 70 percent more active wells than other counties in the northern part of the state, it does not have more health issues. Bill Jerke, executive director of Fostering Unity and Energizing Leadership (FUEL) Colorado told⁶¹ the Greeley Tribune in 2016,

52 "Hickenlooper compromise keeps oil and gas measures off Colorado ballot," *The Denver Post*, August 4, 2014.

53 "The Campaign Goes On: 'Ban Fracking' Groups Target New Colorado Task Force," *Energy In Depth*, August 28, 2014.

54 "Despite Dropping More Initiatives, Activists Haven't Given Up on 'Full-Fledged Ban' on Fracking," *Energy In Depth*, February 25, 2016.

55 "Anti-Fracking Measures Fail to Make Colorado Ballot—... 'Potentially Forged' Signatures," *Energy In Depth*, August 29, 2016.

56 "Energy measures fail to make... ballot... No. 75 and 78 fall short," Office of Colorado Sec. of State Wayne W. Williams, August 29, 2016.

57 "2017-2018 #97 FINAL," January 5, 2018

58 "Weld County health incidents level with rest of state, despite more oil and gas development," *The Greeley Tribune*

59 "Q&A: Why the Colorado health department says fracking's risk to health is 'low,'" *The Colorado Independent*.

60 "Weld County health incidents level with rest of state, despite more oil and gas development," *The Greeley Tribune*.

61 *Ibid*.