

agricultural disparities

**COMMUNITY
ENGAGEMENT**



HEALTH CONCERN

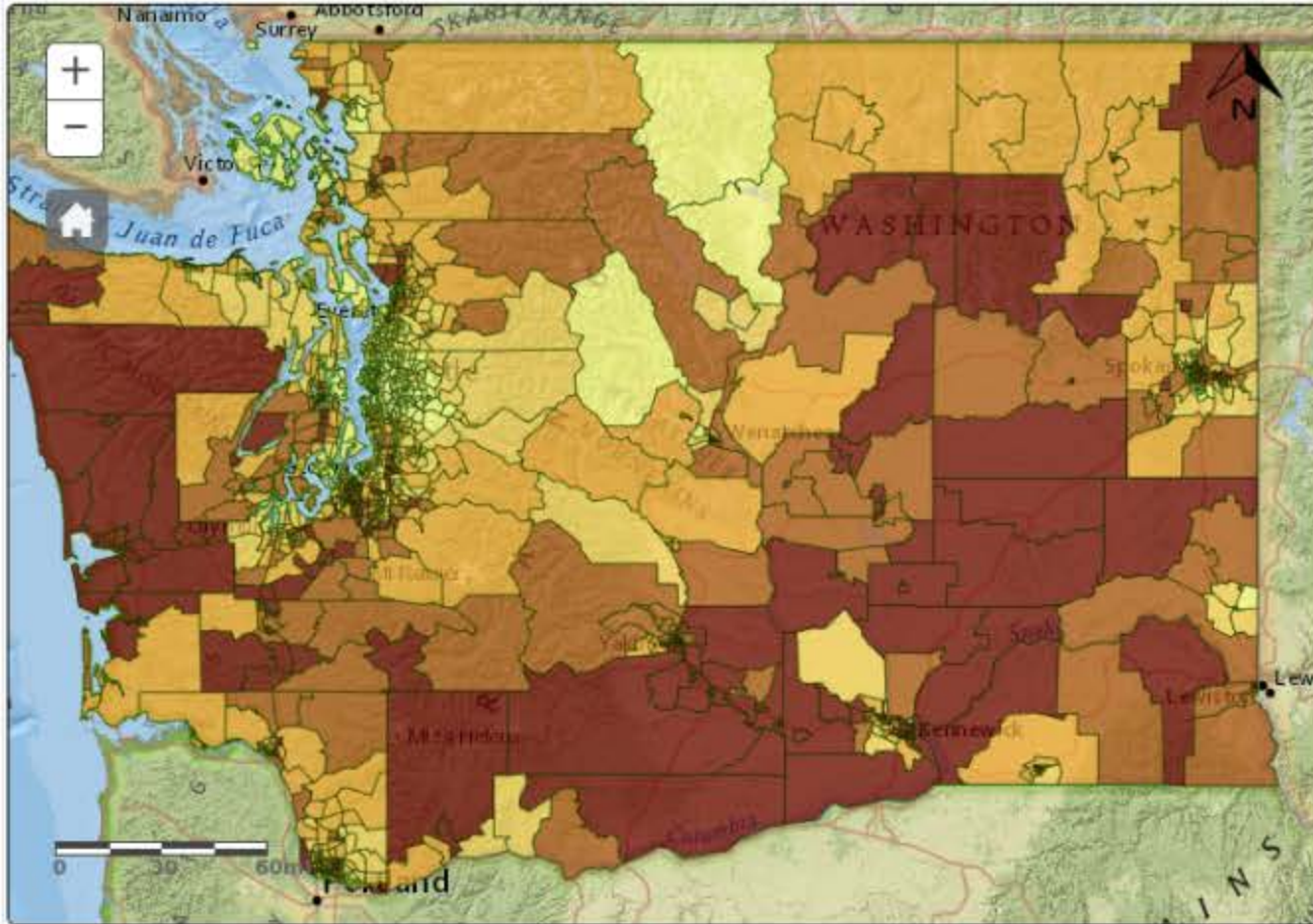
*nutrition, job health risks, and
the environment*

Based on data showing the demographics and increase of health outcomes such as obesity, as well as data showing the affects of factory farming, and finally data about climate change and other adverse environmental affects, my health concern is the affect of industrial agriculture on our nutrition, working conditions for factory farm workers, and the environment.

DATA *nutrition effects*

BMI - Census Tract

Geography: Census Tract, Age Group: 20+, Year: 2014



Legend (Measure 1)



Locate Address

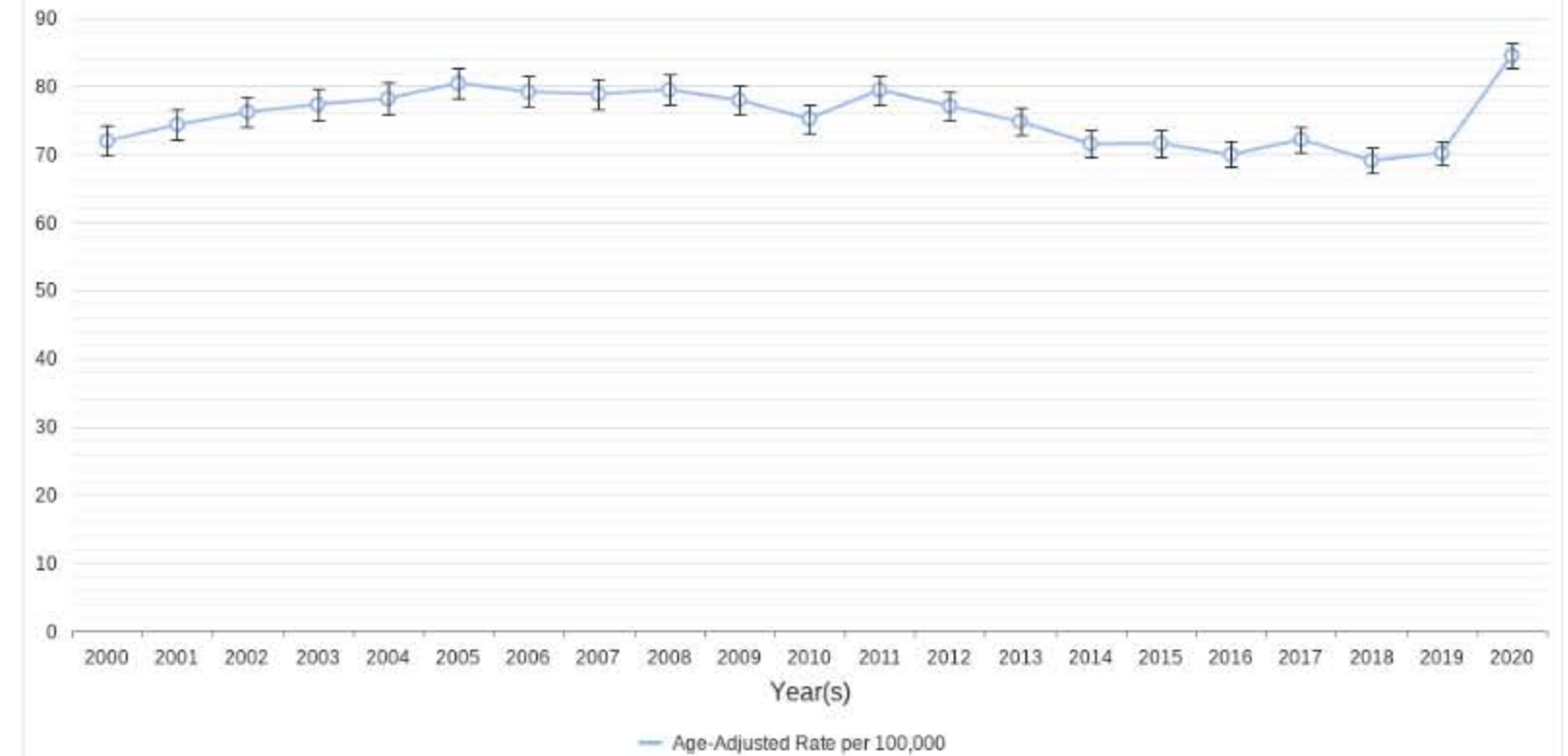
Enter a County, Zip Code, or Address

Locate

BMI ages 20+

Diabetes Related Mortality - Age-Adjusted Rates per 100,000

Geography: State, Sex: All (Combined), Age: All (Combined), Time Period: Single Year



Diabetes Mortality (all ages and genders)

Table 2: Adult Obesity by Household Income (Behavioral Risk Factor Surveillance System, 2014-2016)

Household Income	Percent	Margin of Error (+/-)
Less than \$25,000	33	2
\$25,000 to \$49,999	31	2
\$50,000 to \$74,999	28	2
\$75,000 or more	23	1

Adult Obesity by Household Income

DATA EXPLANATION

nutrition effects

BMI MAP

The map from WTN shows the distribution of BMI over the state. According to the CDC, a BMI of 25 + is overweight for adults. As seen on the map, about 80% of the state's counties are overweight. Overly processed and inorganic food are large culprits of this. This type of food is a result of industrial farming, where food is processed and packaged into convenient and cheap products.

ADULT OBESITY BY HOUSEHOLD INCOME TABLE

This table displays how lower income households have a higher percentage of obesity than higher income. \$75,000 + income has a percentage of 23% while less than \$25,000 has a percentage of 33%. With processed food being cheaper, and organic/local food more expensive and rare, it is hard for low income families to eat healthy.



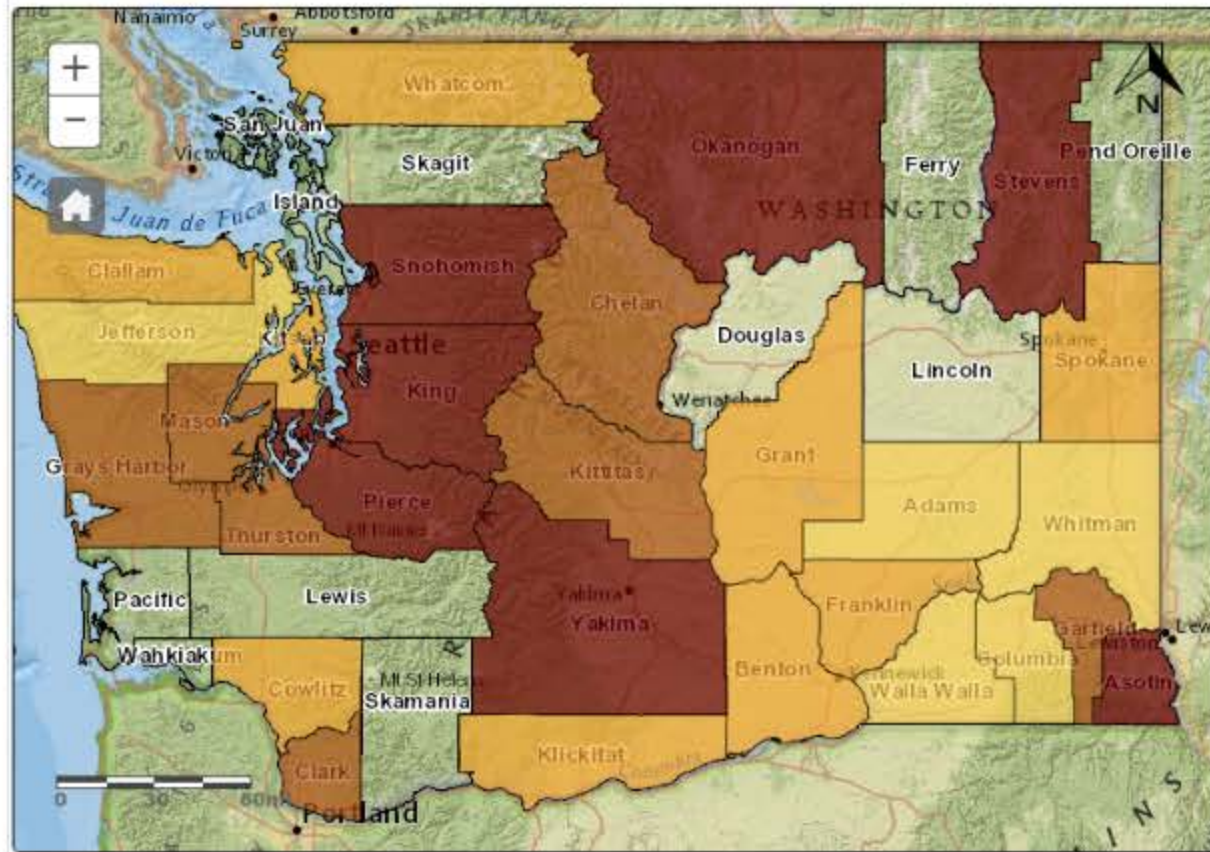
DIABETES MORTALITY CHART

As seen on the chart, diabetes mortality rate has stayed within the 70-80 deaths per 100,00 people each year rate. But in 2020, it started to increase to almost 90 deaths. Diabetes is another health effect of industrial food systems.

DATA *environmental effects*

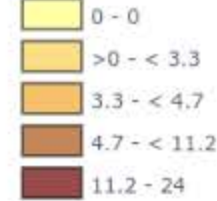
PM_{2.5} Air Quality

Geography: County, Monitor: FRM and Continuous Monitors, Year: 2020



Legend (Measure 1)

% Days Standard Not Met



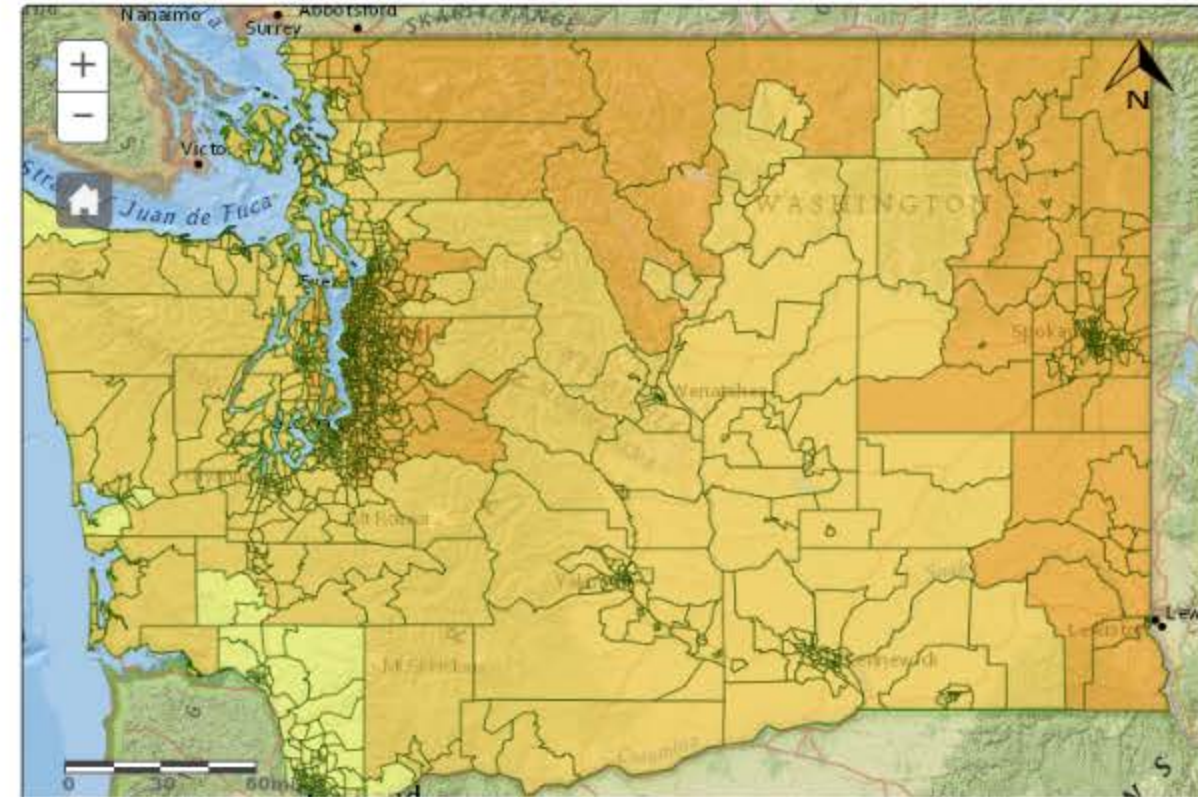
Locate Address

Enter a County, Zip Code, or Add

Locate

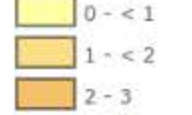
small particulate matter affecting air quality

Geography: Census Tract, Year: 2018



Legend (Measure 1)

Extremely Hot Days



Locate Address

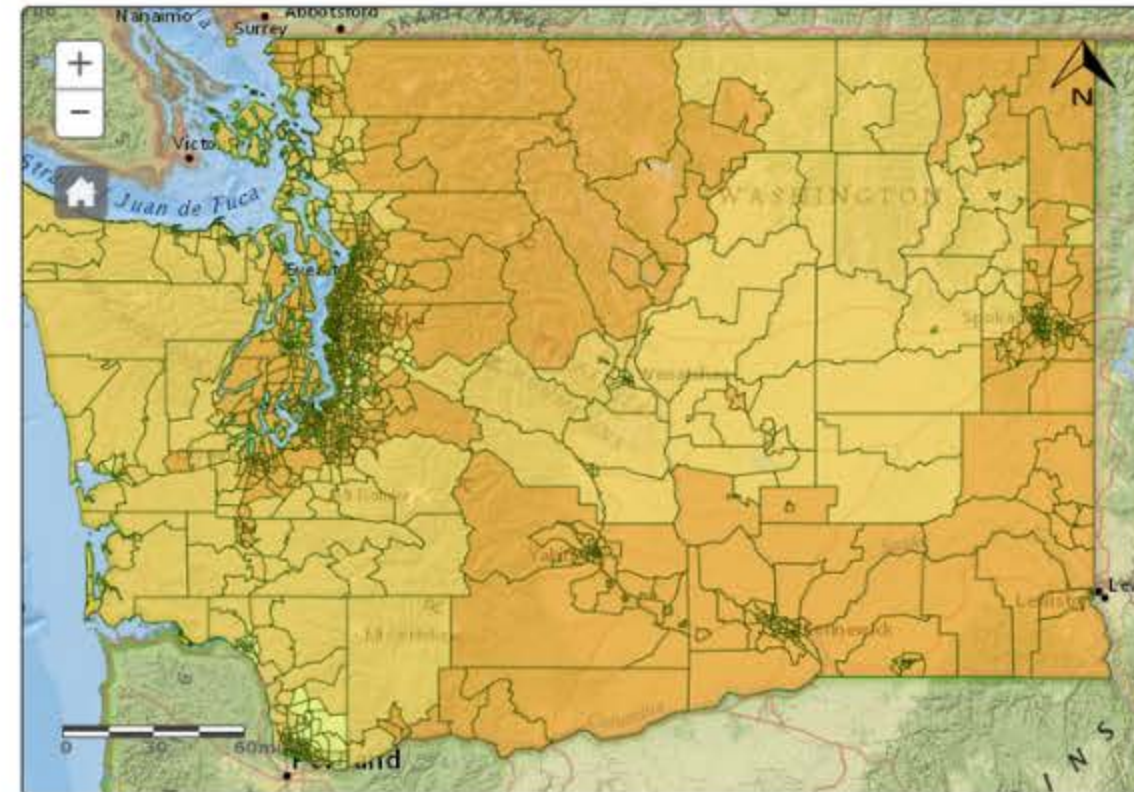
Enter a County, Zip Code, or Add

Locate

extreme heat 2018

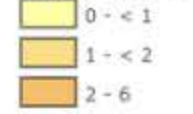
Extremely Hot Days

Geography: Census Tract, Year: 2020



Legend (Measure 1)

Extremely Hot Days



Locate Address

Enter a County, Zip Code, or Add

Locate

extreme heat 2020

DATA EXPLANATION

environmental effects

MAP OF EXTREME HEAT 2018 VS 2020

In just two years, the amount of extremely hot days increased in number, as well as in how many counties experienced them in Washington. This displays the effects of climate change, which industrial agriculture plays a large role in with animal feeding operations, deforestation, etc.

SMALL PARTICULATE MATTER IN AIR QUALITY MAP

This map displays how much pollution from small particles there is in Washington. As seen on the map, several counties have experienced great effects from this. Industrial agriculture is also a large culprit in small particle air pollution from pesticides, fertilizer, and waste particles from animals in concentrated areas.

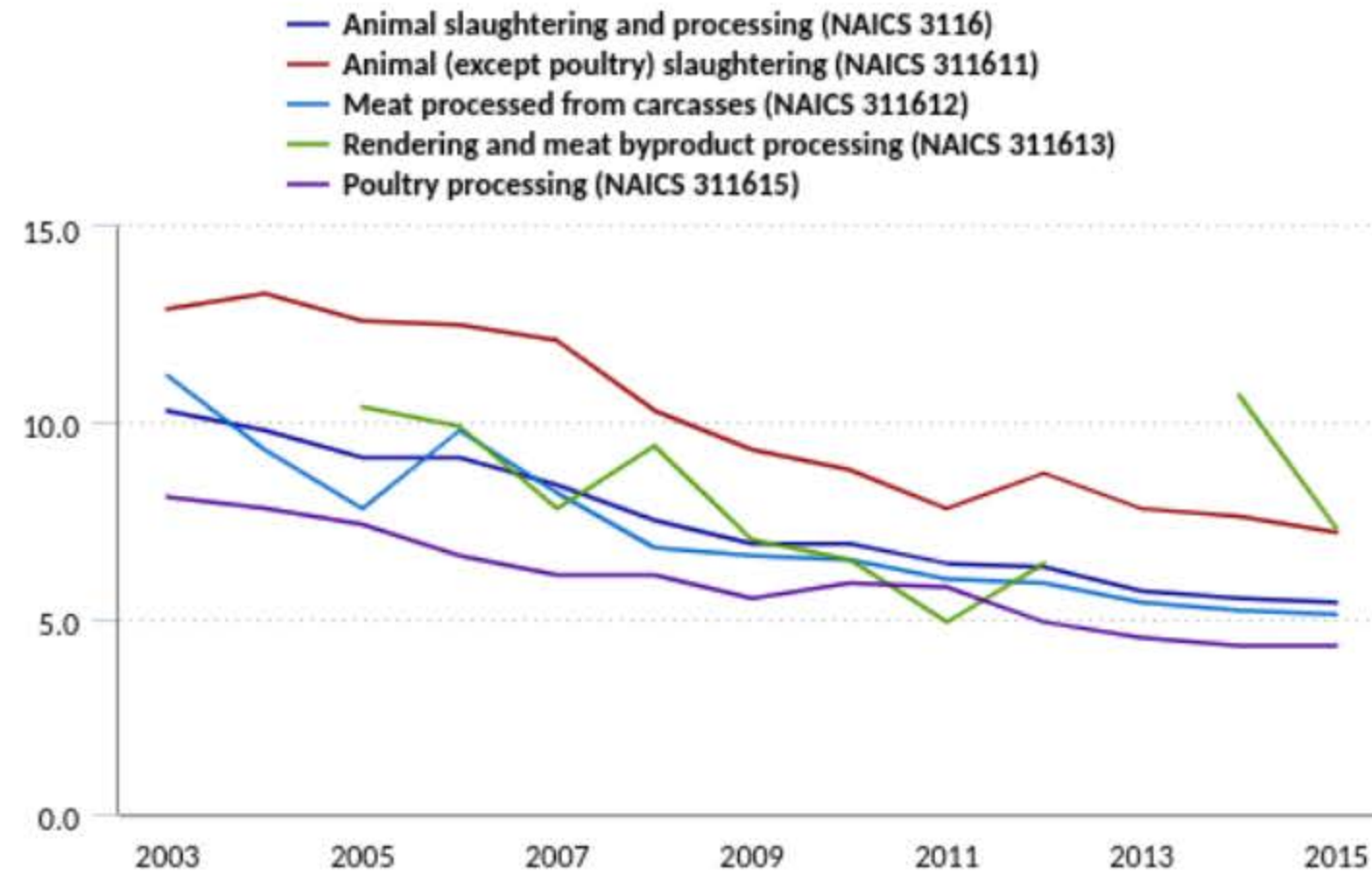


DATA

health risks of factory farms

(an additional health concern, identified through other sources)

Figure 1. Incidence rates for total recordable cases of occupational injuries and illnesses in the animal slaughtering and processing industry, 2003-15



Click legend items to change data display. Hover over chart to view data.
 Note: NAICS = North American Industry Classification System.
 Source: U.S. Bureau of Labor Statistics.

injury/illness rates in agricultural processing/slaughtering

Table 1. Incidence rates of injuries and illnesses by industry, North American Industry Classification System (NAICS) code and case type, 2015

Industry	NAICS	Total recordable cases	Cases with days away from work ⁽¹⁾	Cases involving job transfer or restriction	Other recordable cases	Illnesses (per 10,000 workers)
Animal slaughtering and processing	3116	5.4	1.0	2.7	1.7	160.3
Animal (except poultry) slaughtering	311611	7.2	1.0	3.9	2.3	307.3
Meat processed from carcasses	311612	5.1	1.3	2.4	1.4	107.3
Rendering and meat byproduct processing	311613	7.3	2.5	1.6	3.2	32.3
Poultry processing	311615	4.3	.8	2.1	1.4	106.4

Notes:

⁽¹⁾ Days-away-from-work cases include those which result in days away from work with or without job transfer or restriction.

Note: Incidence rates represent the number of injuries and illnesses per 100 full-time workers (10,000 full-time workers for illness rates).

Sources: U.S. Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating state agencies.

injury/illness cases in agricultural processing/slaughtering

DATA EXPLANATION

health risks of factory farms

INJURY AND ILLNESSES CHART

This chart displays the dangerous rate of injury and illness from agricultural processing jobs.

INJURY AND ILLNESS TABLE

This table also shows cases of injury and illness from processing jobs, with high numbers of illnesses.



Overall, industrial farming takes huge tolls on the health of workers, because of the amount of physical and emotional stress they are put under every day.

DISPARITIES

food deserts & factory farm workers

Food Deserts are areas where there is limited access to healthy food. This is seen in cities where nutritional food is scarce or more expensive. Industrial farms ship in their food to grocery stores, inflating the price due to shipping. The few local sources of healthy food are also expensive because of the limited amounts. This makes it hard for low income families to eat healthy, creating a disparity in the amounts of low income people who develop obesity, heart conditions, etc.

Factory farm workers are the people who work in factories or slaughter houses to process food and animals from industrial farms. According to data, these people are majority immigrants and non-white people. They are exposed every day to dangerous equipment, chemicals, and animals that can pass on viral infections and bacteria.

DISPARITIES DATA

Workers in Animal Slaughtering and Processing Industry



Source: CEPR's Analysis of American Community Survey, 2014-2018 5-Year Estimates
Notes: Top 10 occupations cover 66.7 percent of all workers in Animal Slaughtering and Processing



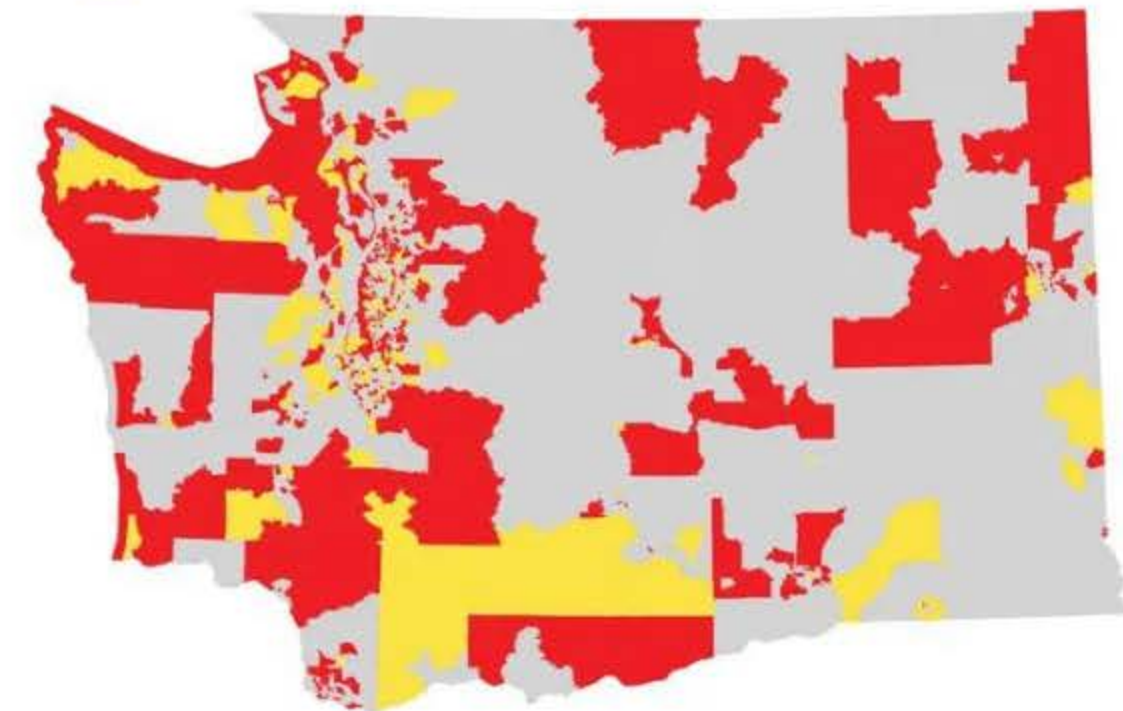
worker demographics in animal slaughtering/processing

Washington's retail food environment by census tract

About 40% of the census tracts analyzed in Washington state for food access were identified as either "food deserts" — areas with limited access — or "food swamps" — areas with limited access to healthy options.

Retail food environment index:

Food desert Food swamp Other



Source: Modhurima Dey Amin Syed Badruddoza, Jill J McCluskey in the 2021 study "Predicting access to healthful food retailers with machine learning" published in Food Policy

food swamps (unhealthy food)/deserts (limited food) in Washington



SOLUTION PROPOSAL

Small, local, urban farming

My proposal is to implement small, local urban farm plots into cities and suburbs, with every county having a number of plots proportionate to the population and spread of people. This system would be to largely replace industrial farming, and decrease livestock dependency.

significance:

Based on the earlier data, industrial farming clearly is detrimental to nutrition, the environment, and workers. Small urban farms would dispel industrial agriculture systems and livestock dependency, giving workers much better environments. It would also create a source of local healthy food, improving access to nutrition. Thirdly, it would decrease air pollution and habitat destruction greatly.

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