

**Fact Sheet Paper**  
 (Paper, 5-minute Twitter Brief, Online Tweet)

Twitter Brief Date: 4/12/22

Name: Dylan Holland

Topic: Fracking

CATEGORY	POINTS	SCORE
Handbook Compliant Grammar Clarity of Thought Punctuation Used Template Coherence in organization Spelling 6+ pages	6	
<ul style="list-style-type: none"> <li>• Introduction (1/2 page) [1 point]</li> <li>• Background/Problem Statement section – 3 sites (1.5 pages) (include Healthy People 2030) [7 points]</li> <li>• Research section – 2 sites (1 page) [4 points]</li> <li>• Statistics section – 2 sites (1 page) [4 points]</li> <li>• Consumer Information section - 2 sites (1 page) [4 points]</li> <li>• Solutions to the Problem – 2 sites (1 page) [4 points]</li> <li>• Conclusions (1/2 page) [1 point]</li> <li>• Summary of your paper that is posted on Blackboard [2]</li> </ul>	26	
<b>TOTAL POINTS FOR FACT SHEET</b>	<b>32</b>	
Post a summary of your paper on Black Board’s Class Blog by 5 PM the day before	2	
Post one factual tweet on PCH201wellness by 5 PM the day before and include a screenshot of it in your paper	1	
Submit hard copy with grid on date due for Twitter brief	1	
5-minute Twitter Brief	4	
<b>PROJECT COMPLETION POINTS</b>	<b>8</b>	
<b>SUBTOTAL PAPER + PROJECT COMPONENTS</b>		
LATE/INCOMPLETE	(-20%)	
Missing Grading Grid	(-3)	
<b>FINAL TOTAL POINTS</b>	<b>40</b>	

## **Fracking**

### **Introduction**

My Fact sheet topic will be about the study of fracking. Fracking is the short term for Hydraulic fracturing. Hydraulic fracturing or “fracking” is the process of extracting natural gas or oil from subterranean rocks, boreholes, etc. It is basically drilling into the ground to find oil, natural gas, geothermal energy and water and use them for energy or profit. It seems to have been used for a long time and still being used today.

I chose this topic because I wanted to see what I could learn by studying it and see how much of it I can find and share. I will be provided this fact sheet with its history, how much we can or have gained from it, and public health problems it can cause. Although, I admit when I chose fracturing I thought it meant something different than drilling but I’m still eager to see what I find on this topic and share what I find.

### **Section 1: Background and Problem Statement**

**HP2030 and HP2020 do not have any information on my topic.**

- **Web site #1 Name:** NRDC
- **Web address:** <https://www.nrdc.org/stories/fracking-101>
- **Background Information:**
  - According to the NRDC site, fracking has provided global energy and made big business for fossil fuels in the United States but it also poses serious threats to our health, environment and climate. It goes back to 1862 and has been credited to a Colonel named Edward A. L. Roberts where in the midst of the battle of Fredericksburg he discovered narrow water-filled channels in the artillery. A few years later discovered oil as he put in an “exploding torpedo” down in the shattered rock. So others using similar methods discovered this eventually the term fracking and its use was born. Although there has been much money to gain since it’s discovered there are still some concerns. For example, it consumes much water and risks contaminating the water as well. There are also risks of air pollution as natural gas and oil slips into the air causes problems such as methane pollution and greenhouse effects which eventually could lead to lung disease and cancer when inhaled.

- **Web site #2 Name: BALLOTPEDIA**

- **Web address:**

[https://ballotpedia.org/Fracking\\_in\\_the\\_United\\_States#:~:text=The%20process%20of%20fracking%20was,Halliburton%2C%20an%20oilfield%20service%20company.](https://ballotpedia.org/Fracking_in_the_United_States#:~:text=The%20process%20of%20fracking%20was,Halliburton%2C%20an%20oilfield%20service%20company.)

- **Background Information:**

- According to the BALLOTPEDIA site, the process of fracking has been studied and used by oil and gas companies since the 1940s. As the years went by production began to develop and technology began to advance and thus fracking was done more and more. By 2010, approximately 987,000 hydraulically fractured wells had been drilled in the United States. There are still some drawbacks though like earthquakes being caused by mining, damming rivers, and creation of injection wells. These drawbacks eventually came laws and regulations to try and reduce them and to hopefully try to get people to fix the damage that might have been done.

- **Web site #3 Name: American Rivers**

- **Web address:** [https://www.americanrivers.org/threats-solutions/energy-development/fracking/?gclid=CjwKCAjw9LSSBhBsEiwAKtf0n\\_wMCKWDEE0VOgFwdcVUW57v3JfHpi9f9Tz0CvL1ZzNXmg7\\_s8GWFB0CncEQAvD\\_BwE](https://www.americanrivers.org/threats-solutions/energy-development/fracking/?gclid=CjwKCAjw9LSSBhBsEiwAKtf0n_wMCKWDEE0VOgFwdcVUW57v3JfHpi9f9Tz0CvL1ZzNXmg7_s8GWFB0CncEQAvD_BwE)

- **Background Information:**

- According to the American Rivers, hydraulic fracturing is commonly used in geologic formations like coal beds, shale plays, and drilled wells and more than 90% of the U.S. use fracking. There are still problems like its fluid contains various toxic chemicals like diesel fuel, acids, and acetone. Each of those chemicals threaten much of the environment and can contaminate drinking water depending on local circumstances. Fracking may lead to vulnerable natural sources of oil and gas; it still can be devastating to the environment and the human and wildlife that live in the areas where the fracking wells are made.

## Section 2: Research

- **Web site #1 Name: EPA (United States Environmental Protection Agency)**

- **Web address:** <https://www.epa.gov/hfstudy>

- **Summary of the research:**

- According to the EPA site, numerous case studies have been completed in places where hydraulic fracturing has contaminated its drinking water. Some of the areas include Killdeer, Dunn County, North Dakota, Wise County, Texas, and Bradford and Susquehanna Counties, Pennsylvania.

- **Web site #2 Name:** planetrehab
- **Web address:** [https://www.planetrehab.org/clean-energy.html?gclid=CjwKCAjw9LSSBhBsEiwAKtf0nxGWbGCIksLKlqMkqug9aD0wLmMdWjbNQHuoX\\_bZG-Cq-N9MiQ0jthoCdW4QAvD\\_BwE](https://www.planetrehab.org/clean-energy.html?gclid=CjwKCAjw9LSSBhBsEiwAKtf0nxGWbGCIksLKlqMkqug9aD0wLmMdWjbNQHuoX_bZG-Cq-N9MiQ0jthoCdW4QAvD_BwE)

- **Summary of the research:**

○ According to the planet rehab website, once hydraulic fracturing drills are set up they turn communities into a term people call “sacrifice zones.” Clearing land for access roads, drilling and encasing wells, and fracking the well all contribute to pollution. The fracking process involves injecting water, sand and 596 chemicals into hard shale rock under high pressure to break it up and extract the gas trapped within. Of course, some of the gas escapes into the surface which causes them to get into the atmosphere. The gas is obviously toxic to the air but the real problem is that it could take years for the gas to clear.

### Section 3: Statistics

- **Web site #1 Name:** Sierra Club Oklahoma Chapter
- **Web address:** <https://www.sierraclub.org/oklahoma/blog/2021/04/fracking-good-for-fossil-fuel-companies-bad-for-public-health>

- **Summary of the statistics:**

○ According to the Sierra Club site, fracking seems to have an important part in business. In the state of Oklahoma alone there are tens of thousands of oil and gas wells that have made fossil fuel companies in that area thrive and increase. Although there are still some health concerns that go along with it. Data from 1998-2017, researchers found higher death rates, lower life expectancies, diseases, cancer and cardiac arrests. It seems that at least a 1% increase in the number of fracking wells leads to a 4.2% reduction in life expectancy, 6.8% increase in mortality rate, a 7.9% increase in cancer diseases, a 7.3% increase in cardiac diseases, and a 5.9% increase in respiratory diseases.

- **Web site #2 Name:** Environment America
- **Web address:** <https://environmentamerica.org/reports/ame/fracking-numbers-0>
- **Summary of the statistics:**

○ According to the Environment America site, at least 137,000 fracking wells have been drilled or permitted in more than 20 states by 2005 and since then many reports on some key environmental and public health-related impacts being triggered have come in. There are over a

billion pounds of chemicals in the wells that people working or living in those areas can be exposed to. Since 2014, fracking wells have produced at least 14 billion gallons of wastewater and consumed 239 billion gallons of water as well.

#### **Section 4: Consumer Information**

- **Web site #1 Name: State of the Planet**
- **Web address:**<https://news.climate.columbia.edu/2014/06/06/the-fracking-facts/>
- **Summary of the information:**
  - According to the state of the planet website, there can be some benefits that can come with fracking as it allows us to tap into energy resources like natural gas. In the website you'll find, "natural gas generates 25 percent of our electricity, and approximately two-thirds of the natural gas produced in the U.S. goes into making chemicals, pharmaceuticals and fertilizer, and is used for heating and cooling."

- **Web site #2 Name: Center for biological diversity**
- **Web address:**  
[https://www.biologicaldiversity.org/campaigns/fracking/10\\_questions.html](https://www.biologicaldiversity.org/campaigns/fracking/10_questions.html)
- **Summary of the information:**
  - According to biological diversity, fracking not only can negatively affect human life but also animal life as well. In the website you'll also find, "that's because, unlike a pool of oil that can be accessed by a single well, shale formations are typically fractured in many places to extract fossil fuels. This requires multiple routes for trucks, adding more pollution to the air and more disturbance of wildlife habitat."

#### **Section 5: Solutions to the Problem (or Issue)**

- **Web site #1 Name: Fracking technology improvements**
- **Web address:** <http://large.stanford.edu/courses/2015/ph240/allen1/>
- **Summary of the information:**
  - This website shows that technology can be improved in a way to make it safer for the environment. Researchers have developed a new fracturing liquid that addresses some of the issues of hydraulic fracturing. It is water based, becomes hydrogel to expand on to the cracks of rocks and fractures them, and is completely environmentally friendly. There are still some tests that need

to be done but eventually it will be more of an environmentally friendly fracking system with the reduction of water and chemical usage.

- **Web site #2 Name: OSU**
- **Web address: <https://u.osu.edu/engr2367/publicdocument3/alternatives-to-fracking/new-methods-to-fracking/>**
- **Summary of the information:**
  - According to the OSU site, there are at least 5 methods to make fracking cleaner. Those methods are: using waterless fracking systems that companies like Gasfrac are working on a new fluid that can gather the same results fracking has before using water. Also, replacing fresh water with recycled water or brine will help reduce the water pollution caused by traditional fracking systems. Next, replacing diesel powered equipment with engines that use natural gas or solar panels will reduce the large amount of harmful gasses emitted and hopefully lower the damage done to the environment. Additionally, introducing wastewater purification could help reduce the pollution caused by wastewater. Finally, reducing methane leaks by replacing traditional pressure-monitoring pneumatic controllers to lower-bleed designs which can reduce the leaks and save companies money.

## **Conclusions**

So in conclusion, I have to say fracking seems to have played an essential role in U.S. history. Hydraulic fracturing or “fracking” is the process of extracting natural gas or oil from subterranean rocks, boreholes, etc. Since the 1940x it has been used as a way to supply energy to many industries and companies in the U.S. and with it has gotten so many people jobs and careers. Although, there can be some risks that come to it like air pollution or water contamination. All in all it was a very interesting topic to study and research that I might be able to share with someday.

## **Twitter screenshot:**



**Fact Sheet Topic:** Fracking  
**By:** Dylan Holland  
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### **Section 2: Research**

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### **Section 4: Consumer Information**

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