
My NASA Data - Maps, Graphs, and Data

Hurricane Harvey's Effect on Soil Moisture

Hurricane Harvey dropped record-breaking amounts of rainfall, particularly around Houston, Texas on August 25, 2017. Have your students analyze the legend below and this proportional symbol map of Hurricane Harvey to answer the questions below. Note: Soil moisture is expressed in volumetric terms, water by volume/volume of soil.

**Soil Moisture on
August 27 (cm³/cm³)**



**Difference
from August 19**



Mini Lesson



Name _____ Period _____ Date _____

Phenomenon: Soil Moisture

1. What does the size of the dot represent?
 2. What does the color represent?
 3. What area was the most impacted by Hurricane Harvey? How do you know?
 4. Why do you think there was not a change in soil moisture in the city of Houston?
 5. What is one question you have when looking at this map?
1. What does the size of the dot represent? *The rate of change in the amount of moisture in the soil*
 2. What does the color represent? *The quantity of moisture per cm cubed per cm cubed*
 3. What area was the most impacted by Hurricane Harvey? How do you know? *North West of Houston because it has the largest and darkest hexagons.*
 4. Why do you think there was not a change in soil moisture in the city of Houston? *The surface of a city is mainly impermeable so the water isn't able to soak into the soil but rather runs off into its watershed*
 5. What is one question you have when looking at this map? *Answers can vary but examples are; why did the East side of Houston not have as drastic soil moisture change compared to the west side of the city; what was the path the storm took; how much water dumped onto the city?*

Sphere(s)

- [Geosphere](#)

Phenomenon

- [Soil Moisture](#)

Crosscutting Concepts

- [Cause and Effect](#)
- [Stability and Change](#)

Tags

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- [Soil Moisture](#)
- [Water Cycle](#)
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- [Phenomenon: Soil Moisture](#)
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- [NASA Shows How Harvey Saturated Areas in Texas](#)
- [NASA soil moisture data advances global crop forecasts](#)
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Document Resources

Document Resources

- [Map Scale](#)
- [Map of Houston's Soil Moisture after Hurricane Harvey](#)
- [Data Literacy Cubes](#)