



TRWD Rainscapes Virtual Field Trip

Name:

Teacher:

Date:

To complete this activity, you first need to [click this link to access the TRWD Rainscapes Story Map](https://arcg.is/09ffq00) or type this into your address bar: <https://arcg.is/09ffq00>

1. Read the introduction blurb (“TRWD: Leading by Example”) and watch the first and last videos (“TRWD Rainscapes” at the beginning and “Protecting The Trinity” at the end). **Describe three ways that Tarrant Regional Water District is involved with water.**

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2. In your own words, describe:

- a. Low Impact Development:

- b. Green Stormwater Infrastructure:

3. The TRWD Rainscapes utilize several different types of Green Stormwater Infrastructure. Scroll through the story map to read more about each of these components. *Be sure to use the side arrows to see all the information!* **Pick the three components that are most interesting to you and explain the benefits of each.**

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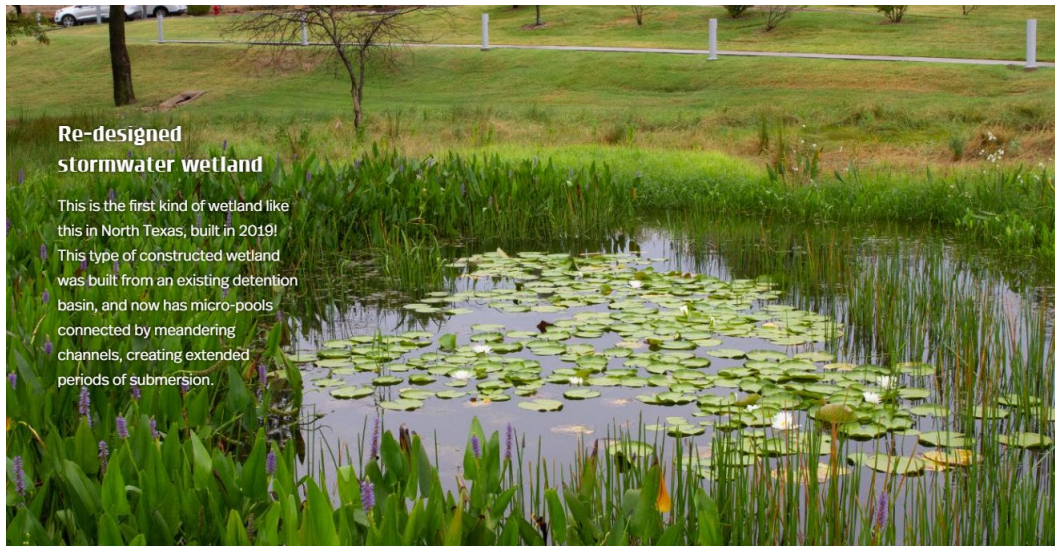
4. Ecosystem Services are physical goods and other benefits that people derive from natural systems. For example, a forest provides us with wood, recreational opportunities, beauty and inspiration, climate regulation through carbon storage, oxygen for us to breathe, soil stabilization, and many more. **Using the components you chose for question 3, identify two ecosystem services (other than improving water quality) that those components provide to you.**

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Go out to your yard or think about a nearby park (or any other outdoor space you love). What's one ecosystem service you see at play in this space?

5. Scavenger hunt time! Find this photo:



Once you have located the photo, use the written information and the photos to **identify three ways that elements of the TRWD Rainscapes (such as water, plants, animals, sunlight, rocks, soil, etc) are interdependent (ways they rely on or interact with each other)**. If you're not sure where to start, think about the way things in this photo might interact.

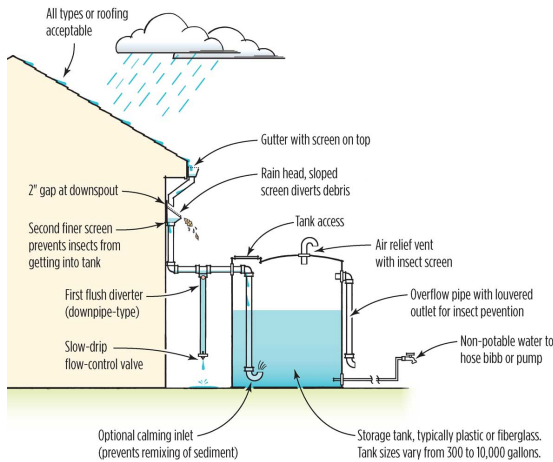
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6. A point source of pollution comes from a single, identifiable location, such as a pipe that discharges into a water body. Nonpoint sources of pollution result from broad things that happen across the landscape and are carried into the water body by runoff, such as lawn fertilizer or motor oil on roadways. [Click to watch this video about point versus nonpoint sources of pollution.](#) The TRWD Rainscapes treat and mitigate both sources of pollution. **Identify at least one source of pollution on TRWD's campus and explain why it is either a point source or a nonpoint source.**

Describe the source:

Is it point or nonpoint? Why?

7. Scroll to the Rainwater Harvesting section and complete the problem below.



One rainstorm in north Texas was 1.5" (inches). At the TRWD Rainscapes the dimensions of part of the roof, or collection area, are 150' (feet) x 50' (feet). **How much water could be collected from that roof?**
Use $V = L \times W \times D$

ft³



What volume in gallons would the rainwater harvesting cistern need to be to collect all the rainfall on the roof from that storm? Use 1 cubic foot = 7.48052 US liquid gallons

The rainwater harvesting cisterns at the TRWD Rainscapes are 5000 gallons each. What is the maximum amount of rainfall one can collect for the roof measurements above in inches?