watershed quiz

February 4, 2016 Groundswell Teacher PD Day
1. What is a watershed? Name two watersheds you live in.
2. What is the translations of Plaster Creek’s Native American name?

a. Water of the Sparkling Rock
b. Water of the Walleye  **Kee-No-Shay**
c. Water of the Clouds
How big in square miles is the Plaster Creek Watershed?

Basic statistics:
Stream Length: ~ 14 miles
Watershed area: 58 mi²

Historic land cover: forest

Present land cover: urban, commercial & residential, rural residential & agricultural
If you took a sample of water from Plaster Creek, what would you find in it (besides water)? (3 things and their source.)
Main Issues:
Flow Dynamics
Sediment
Bacterial Contamination
Thermal Pollutions
Trash and Toxins
Choose the correct “Impaired Designated Uses” and their causes:

<table>
<thead>
<tr>
<th>Designated Uses</th>
<th>Pollutants:</th>
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<tbody>
<tr>
<td>a) Agriculture</td>
<td>a) Heavy metals</td>
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<tr>
<td>b) Body Contact</td>
<td>b) <em>E. coli</em> bacteria</td>
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<td>c) Aquatic Biodiversity</td>
<td>c) Parasitic aquatic worms</td>
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<td>d) Swimming</td>
<td>d) Hydrocarbons</td>
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<td>e) Fishing</td>
<td>e) Sediment</td>
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<td>f) Water sports</td>
<td>f) Prescriptions medication</td>
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<td>contamination</td>
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How many gallons of water a day does a mature tree “drink”?

30-100 gallons/day
If I pull out a plant in a prairie and a plant in a wetland, which one will have longer roots and why?
The bulk of the wood’s dry-weight can be linked to one source: which one?

Soil
Water
Sunlight
Air
If I’m designing a rain garden that will “drain” a parking lot, how big should the rain garden be relative to the parking lot? (give a % where 100% = the size the area of the parking lot)

20-25%
What other factors might go into the sizing, design, and layout of the rain garden?
What % of Grand Rapids is covered by tree canopy?

35-36%
There are all different types of wetlands that interact with their watersheds in a variety of ways. Contaminants and sediment are filtered. Provides critical wildlife habitat. Cleaner water outflow. Slow release of stored water. Saturated peat stores water. Bacteria break down contaminants. Groundwater flow. Dissipates stream energy.
What’s an ephemeral wetland? (hint: spring wildflowers are also called spring ephemerals...)
What is the difference between source and non-point source pollution?
How many lbs/year of sediment flows through Plaster Creek each year? (closest 3 teams to the actual number get credit!)

360,000 lbs/yr
Bonus Points:

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