

# COMMUNITY WATERS SCIENCE UNIT

4<sup>TH</sup> GRADE

The background of the slide is a light gray gradient. It is decorated with numerous realistic water droplets and bubbles of various sizes. Some are large and prominent, while others are small and scattered. The droplets have highlights and shadows, giving them a three-dimensional appearance.

# **LOCAL STORMWATER SYSTEMS**

[Community Waters Science Unit: Lesson 3](#)

# LOCAL STORMWATER SYSTEMS

- Focus Question: Where does our stormwater runoff go and what problems does it cause?

Learning Target: I can use maps to help me figure out what happens to the stormwater runoff from my neighborhood.



In this lesson:

Students analyze maps to identify where water goes after it lands on the ground in their neighborhood.

Students use videos and/or graphics to identify the effects the stormwater from their neighborhood has elsewhere.

**What kinds of things are on the streets and sidewalks that stormwater runoff might pick up as it flows over the ground?**



**Where do you think the stormwater will end up?  
Would it cause problems there?**



# WHEN IT RAINS, IT POURS



**Instructions after video:**

*On a blank page of your Student Packet create this chart:*

| Where might stormwater go? | What problems might stormwater cause? |
|----------------------------|---------------------------------------|
|                            |                                       |

# OUR NEIGHBORHOOD

Local Stormwater Systems:  
Tacoma (NEXT SLIDES)

Look at these maps:  
Where does water in  
our schoolyard end up?

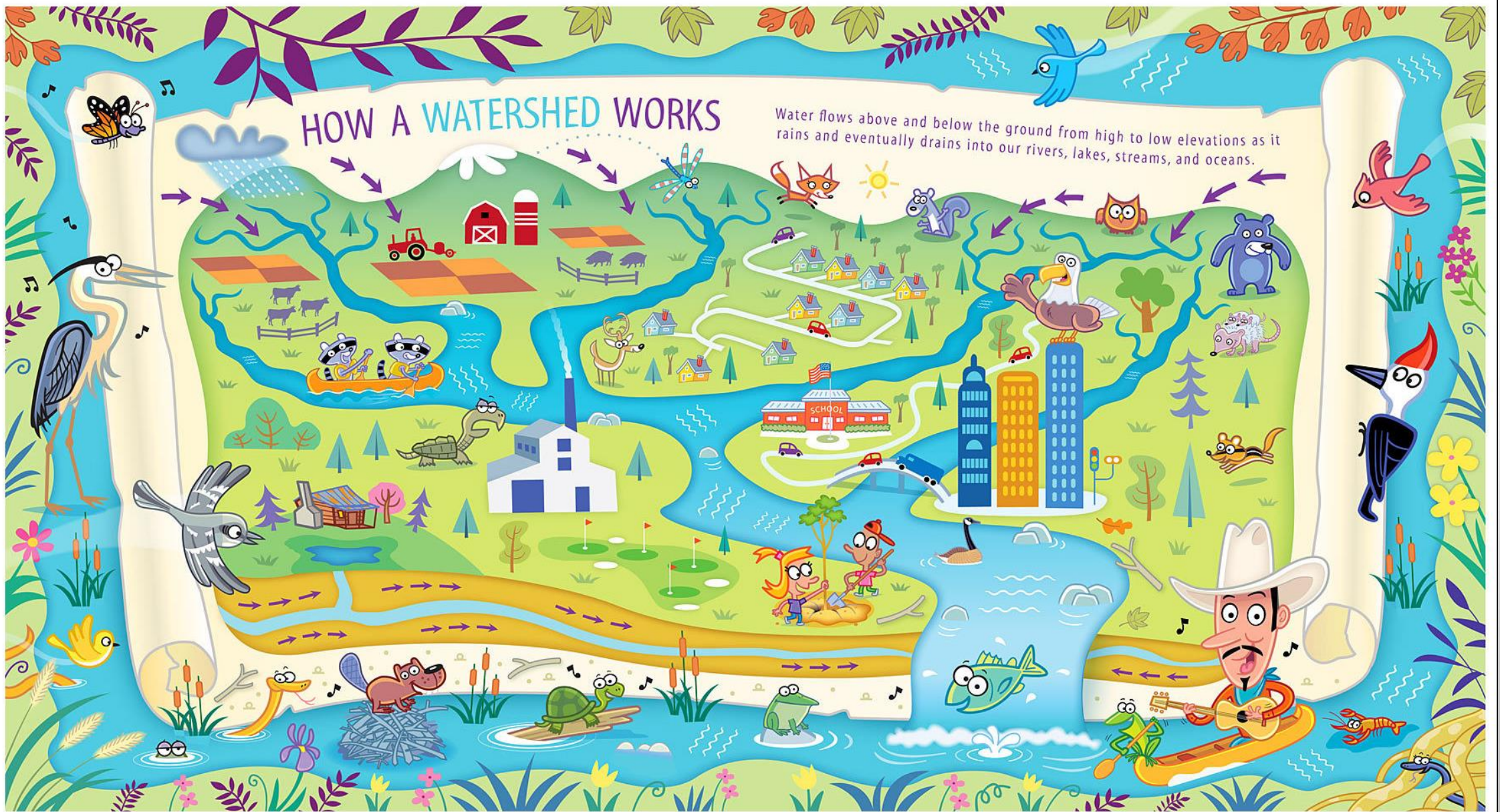
Our School's Guide





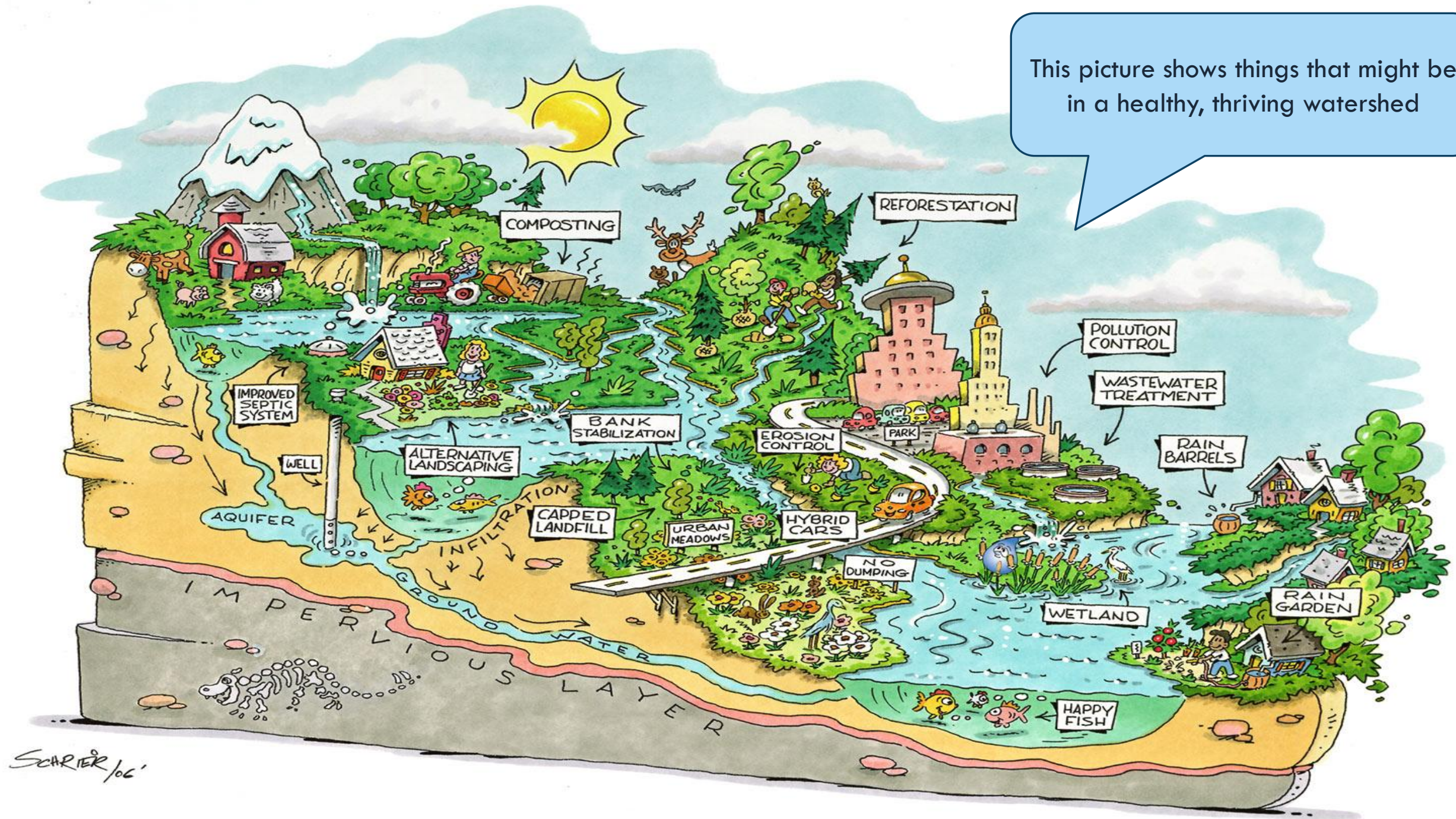
# HOW A WATERSHED WORKS

Water flows above and below the ground from high to low elevations as it rains and eventually drains into our rivers, lakes, streams, and oceans.



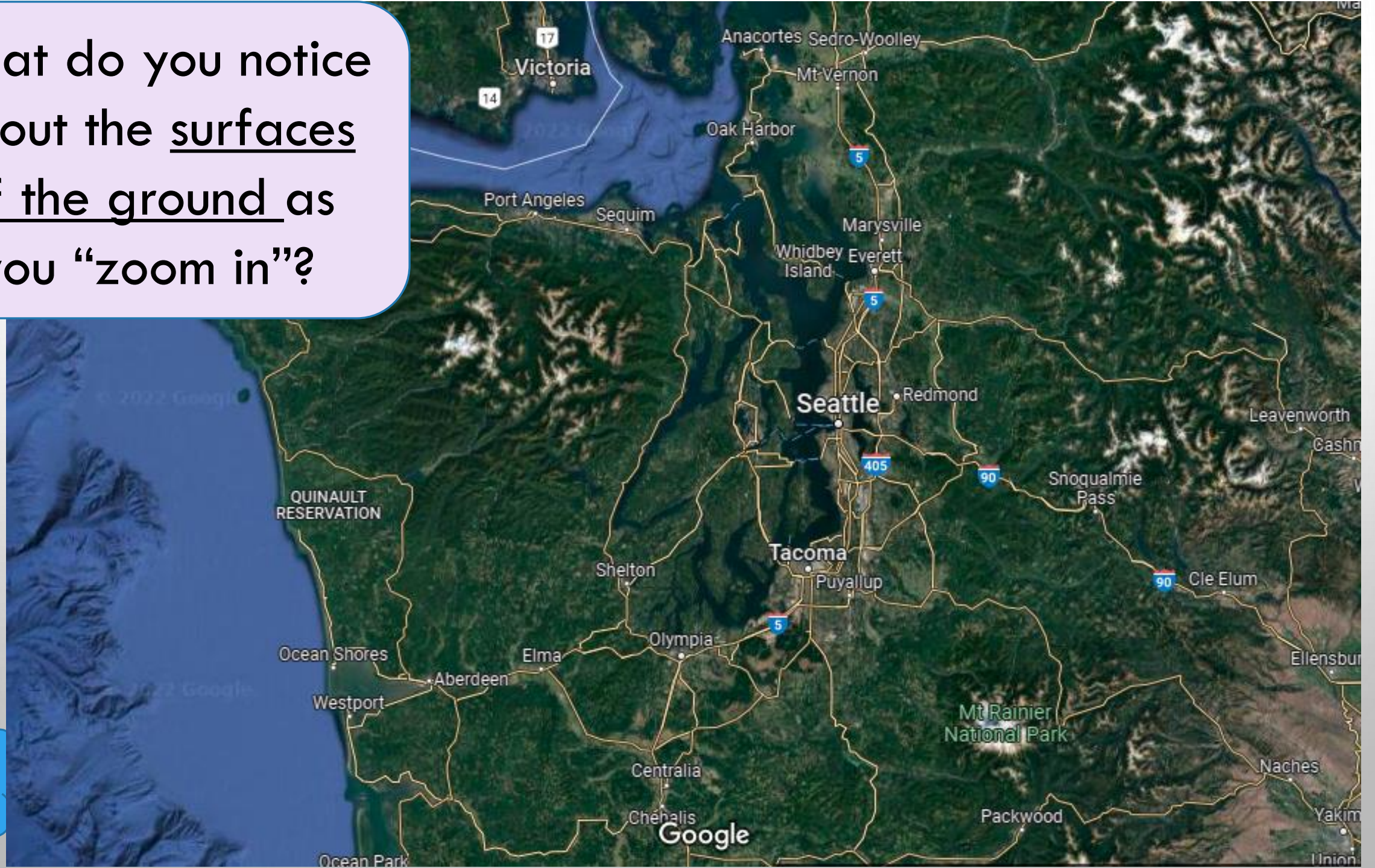


This picture shows things that might be in a healthy, thriving watershed



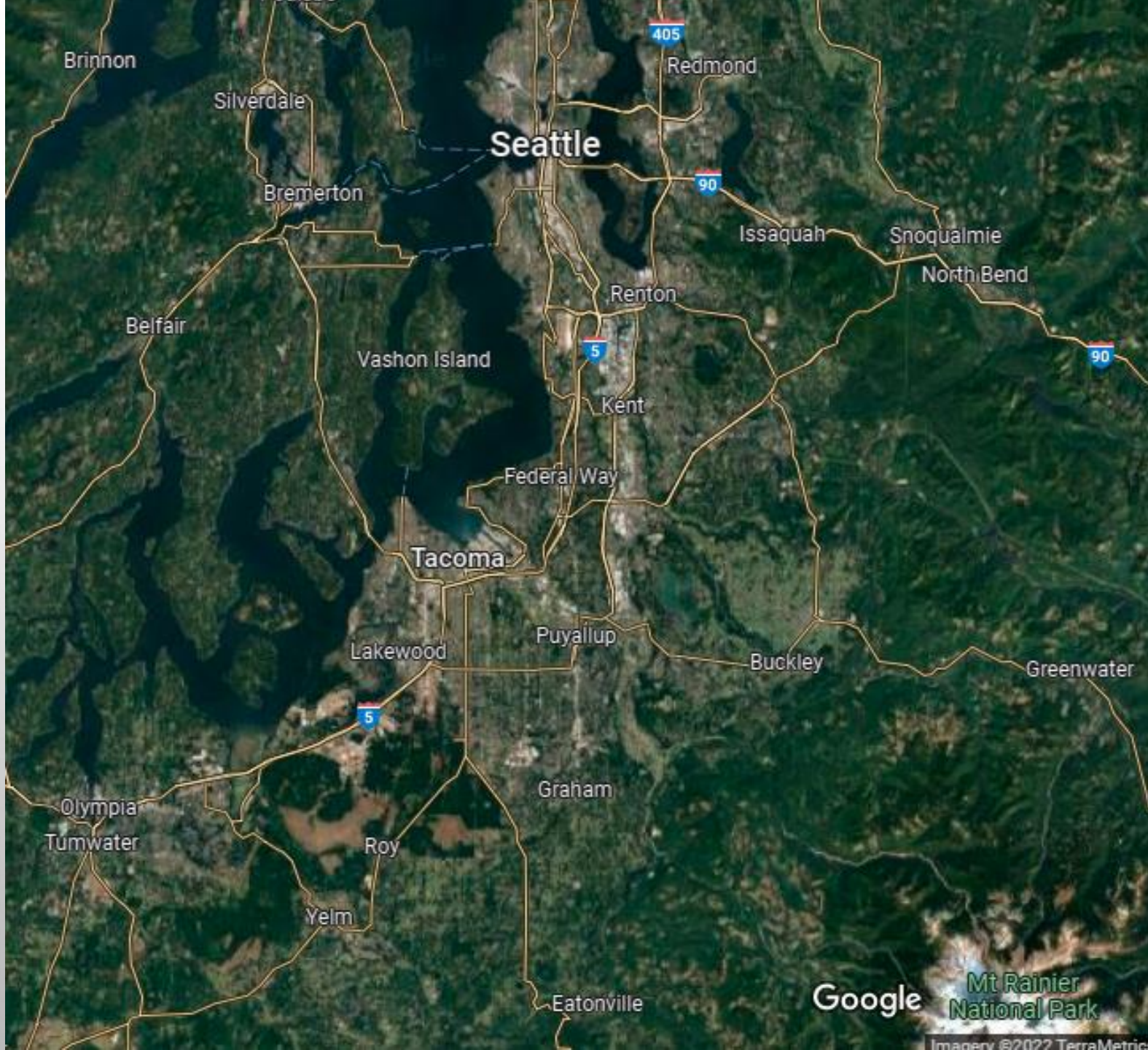


What do you notice  
about the surfaces  
of the ground as  
you “zoom in”?



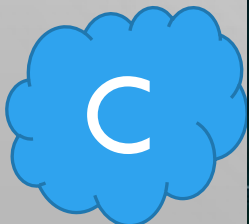
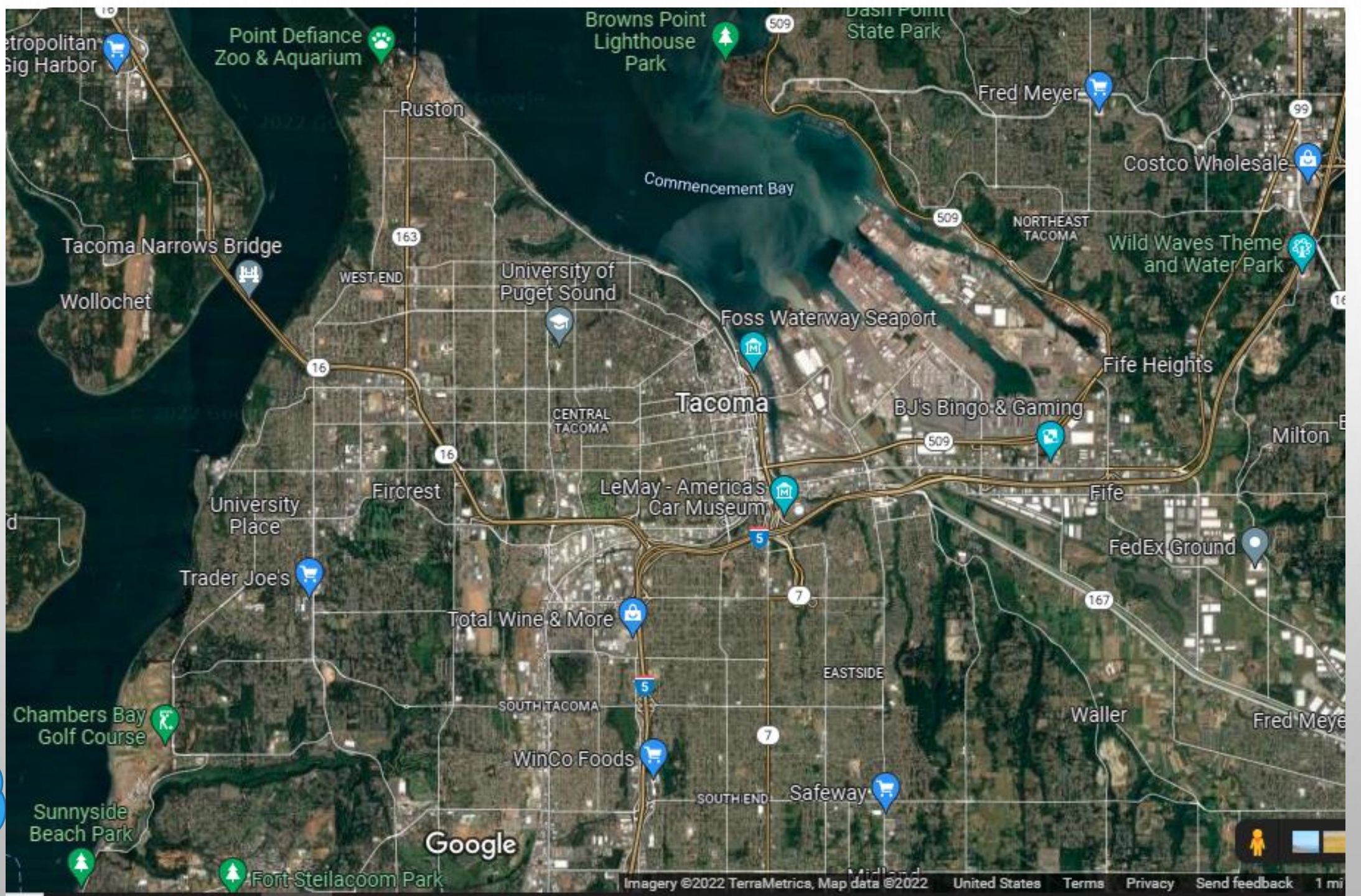
A



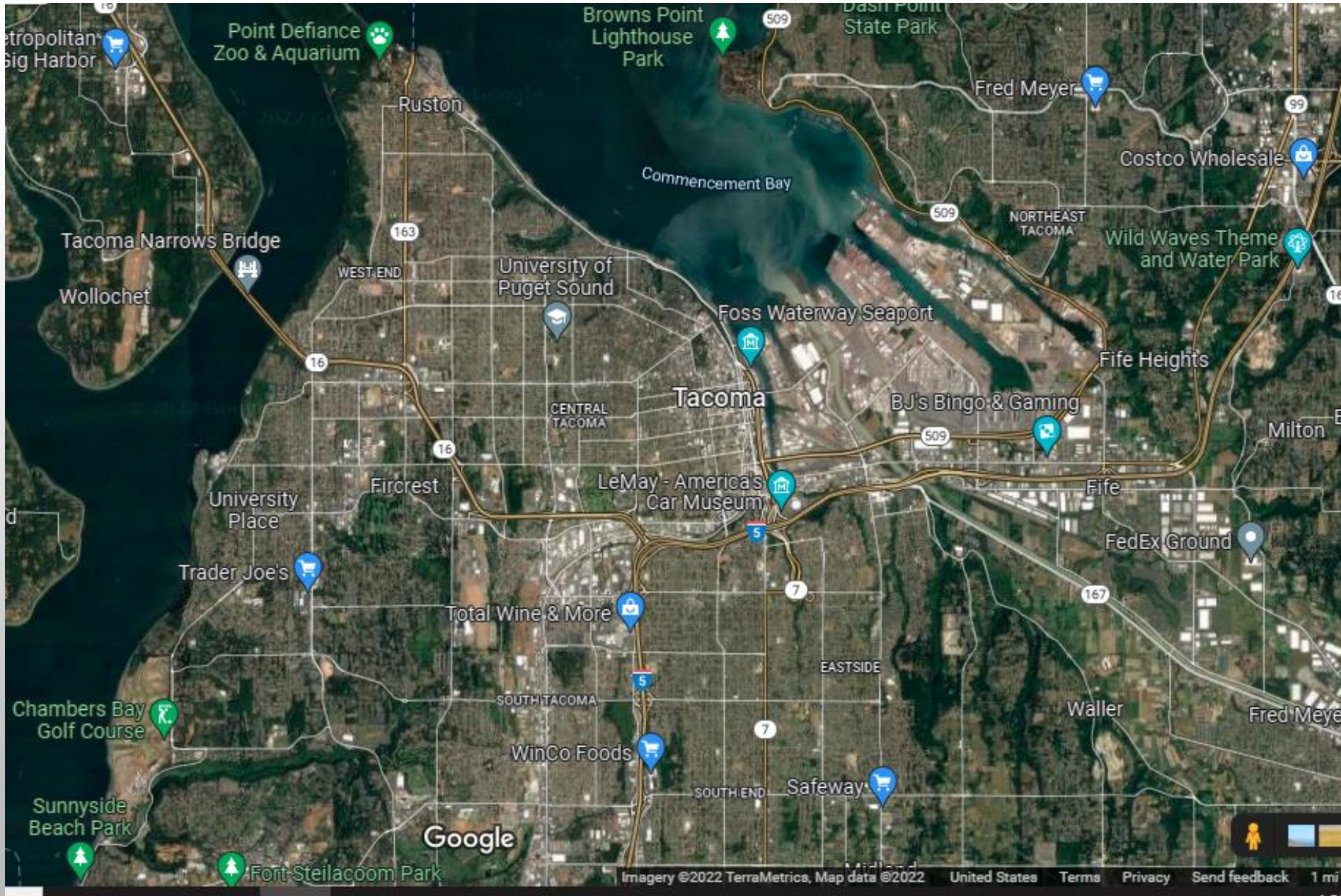


B







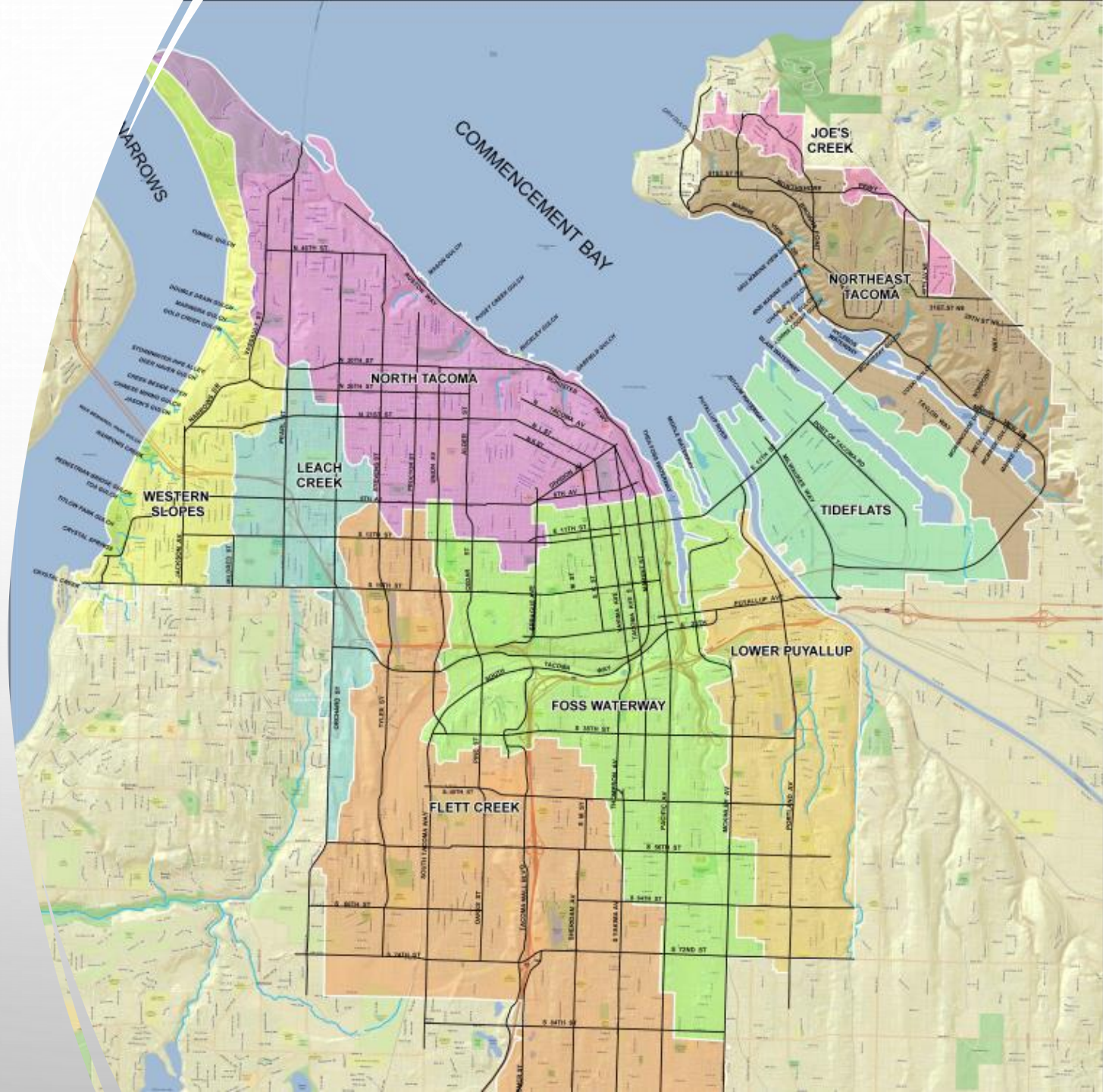


- WHERE DOES THE WATER GO WHEN IT RAINS?
- WHAT DID YOU NOTICE ABOUT THE SURFACES OF THE GROUND AS YOU “ZOOM IN”?
- DO YOU KNOW WHERE YOUR SCHOOL IS LOCATED?



# TACOMA WATERSHEDS

CAN YOU FIND WHICH WATERSHED  
YOUR SCHOOL IS IN?





# OUR CITIES HAVE A LOT OF HARD, IMPERVIOUS SURFACES THAT DO NOT LET WATER SOAK INTO THE GROUND



1



2

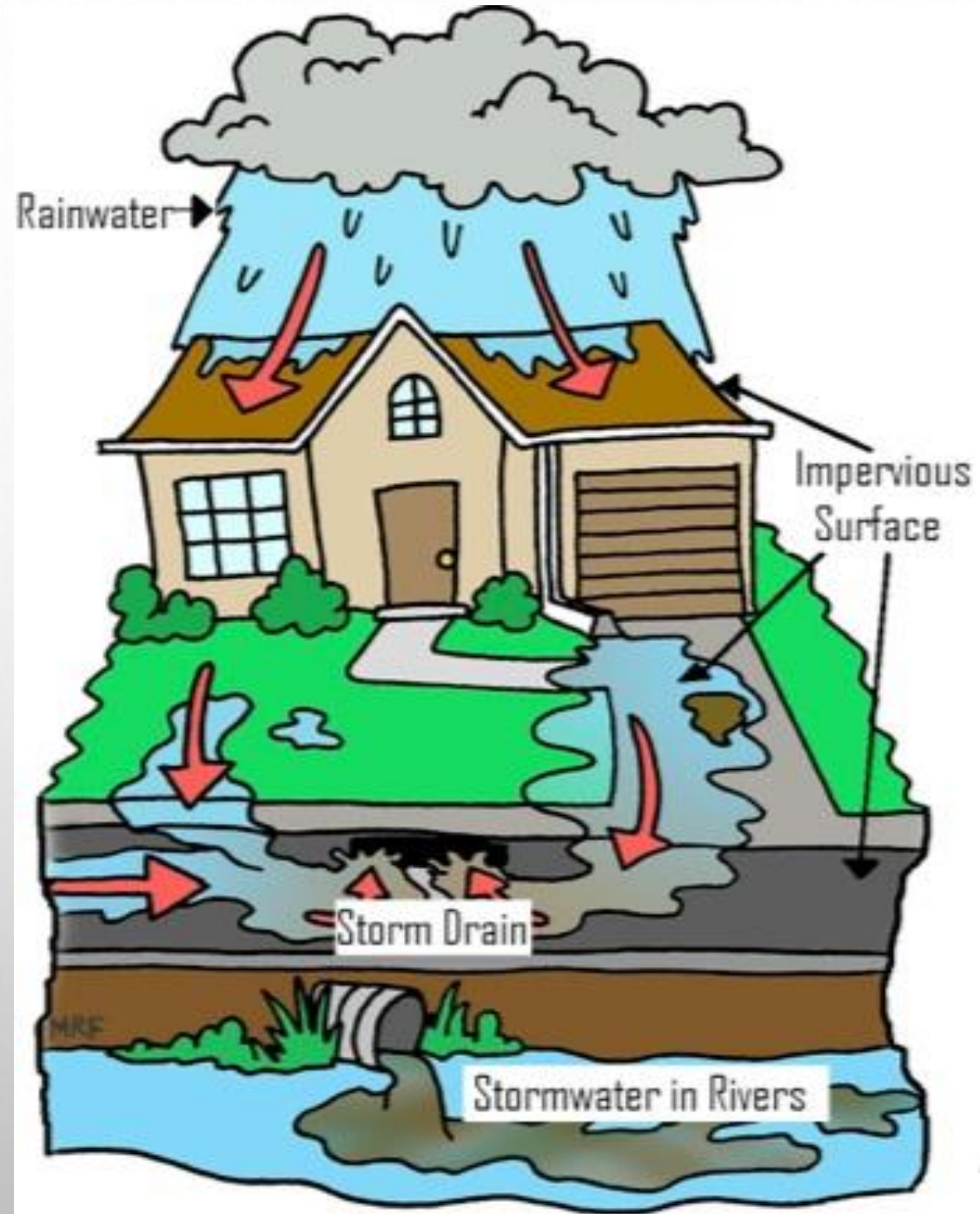
Pollution into a stormdrain!

As water runs off these impervious surfaces (instead of soaking into the ground), two main problems are created:

**TOO MUCH water:** In a city, all the impervious surfaces create a lot more stormwater runoff. The stormwater runoff flows down roads and picks up speed. The large amounts of water increase the risk of erosion and flooding. The increased speed of the water in city streams also washes away salmon eggs and other wildlife habitat.

**POLLUTED water:** Runoff flowing across roads and parking lots picks up pollutants that are on the ground and takes them into streams, lakes and Puget Sound. This polluted runoff kills and confuses salmon and harms other wildlife, people and ecosystems.







Storm Drain



Stormwater Pipe



Stormwater Outfall

Most of the time in cities, this is the path of stormwater!



DOES YOUR WATER GO  
• INTO A STREAM, CREEK  
OR RIVER?



OR DOES YOUR WATER  
GO DIRECTLY INTO  
PUGET SOUND?





Which of the possible things that you wrote on your chart actually happen to water from where YOU are?

Add anything you might have missed to your chart, and underline on your list the items that relate to our water.

Where might stormwater go?

What problems might stormwater cause?

