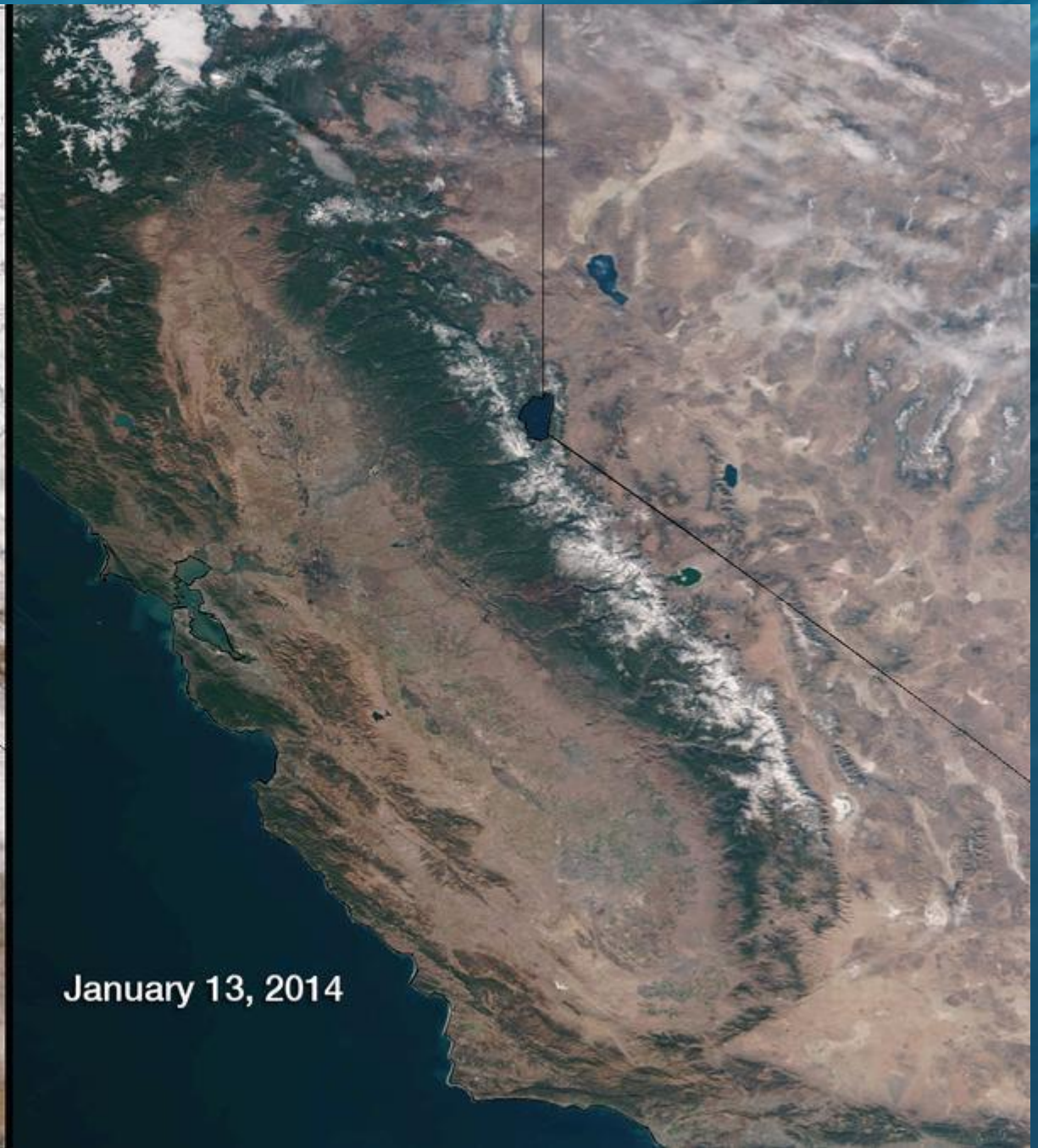
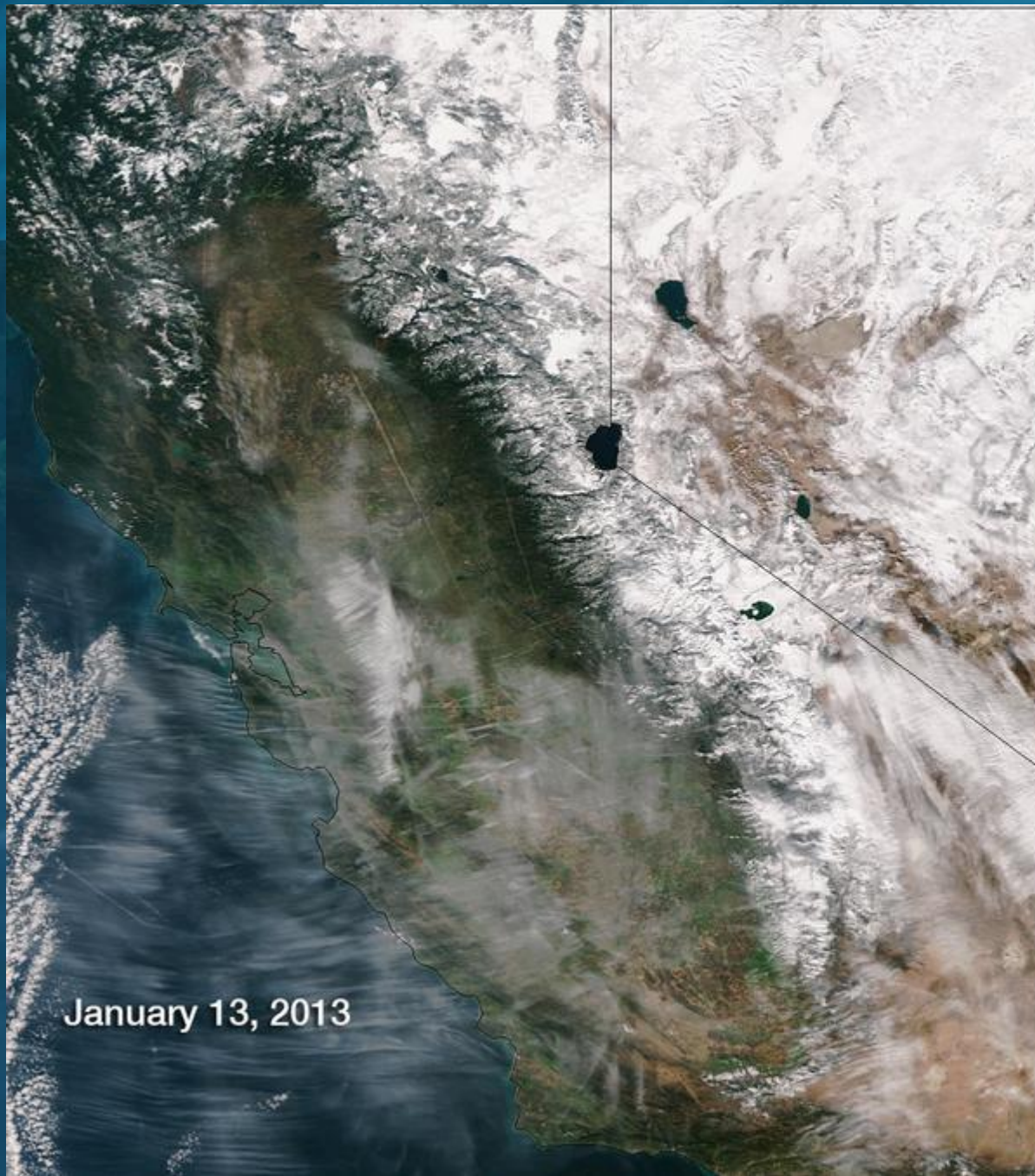


How We Use Water

Clinton River Watershed Council
1115 W. Avon Rd
Rochester Hills, MI 48309







Lake Oroville is shown in July 2011
in all of its lush glory at 97 per cent
capacity



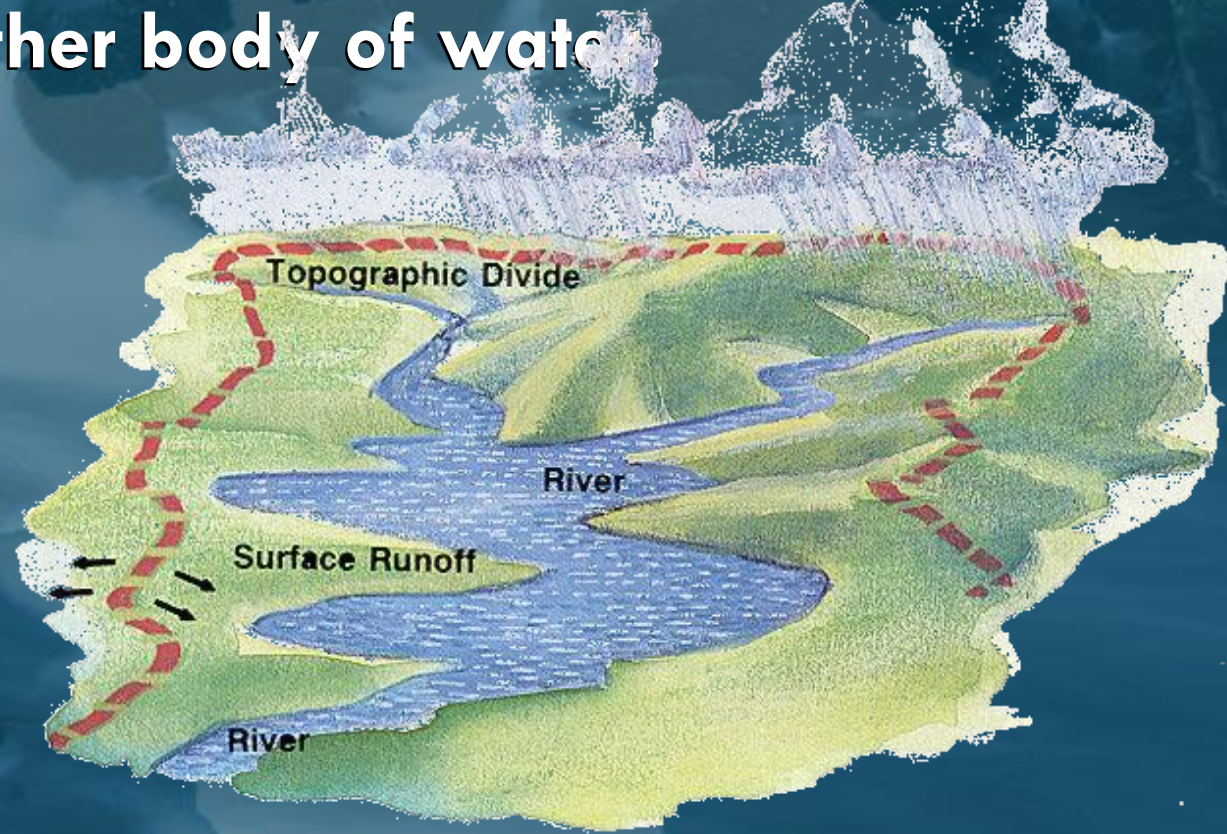
January 2014





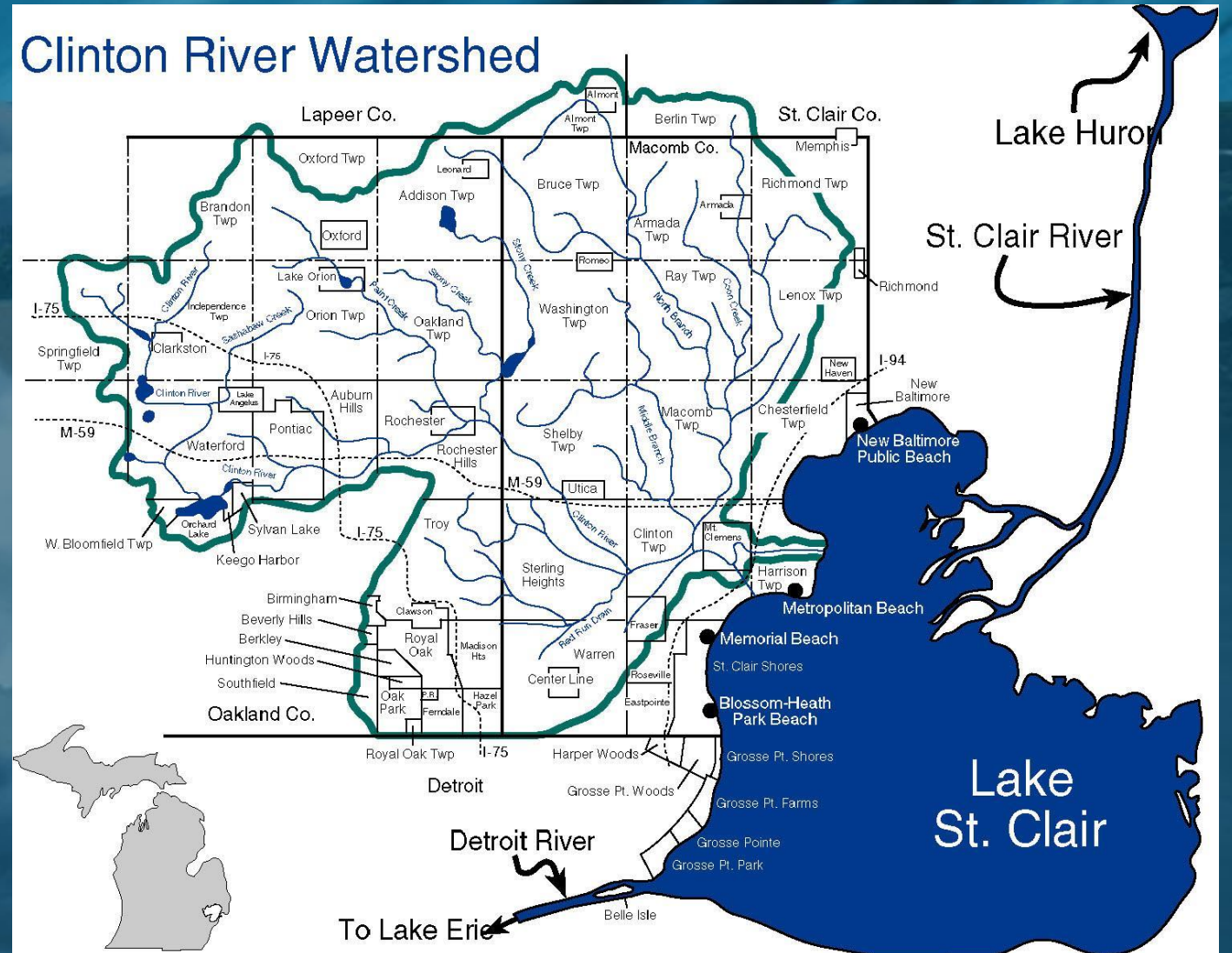


**The region draining into a river, river system,
or other body of water**

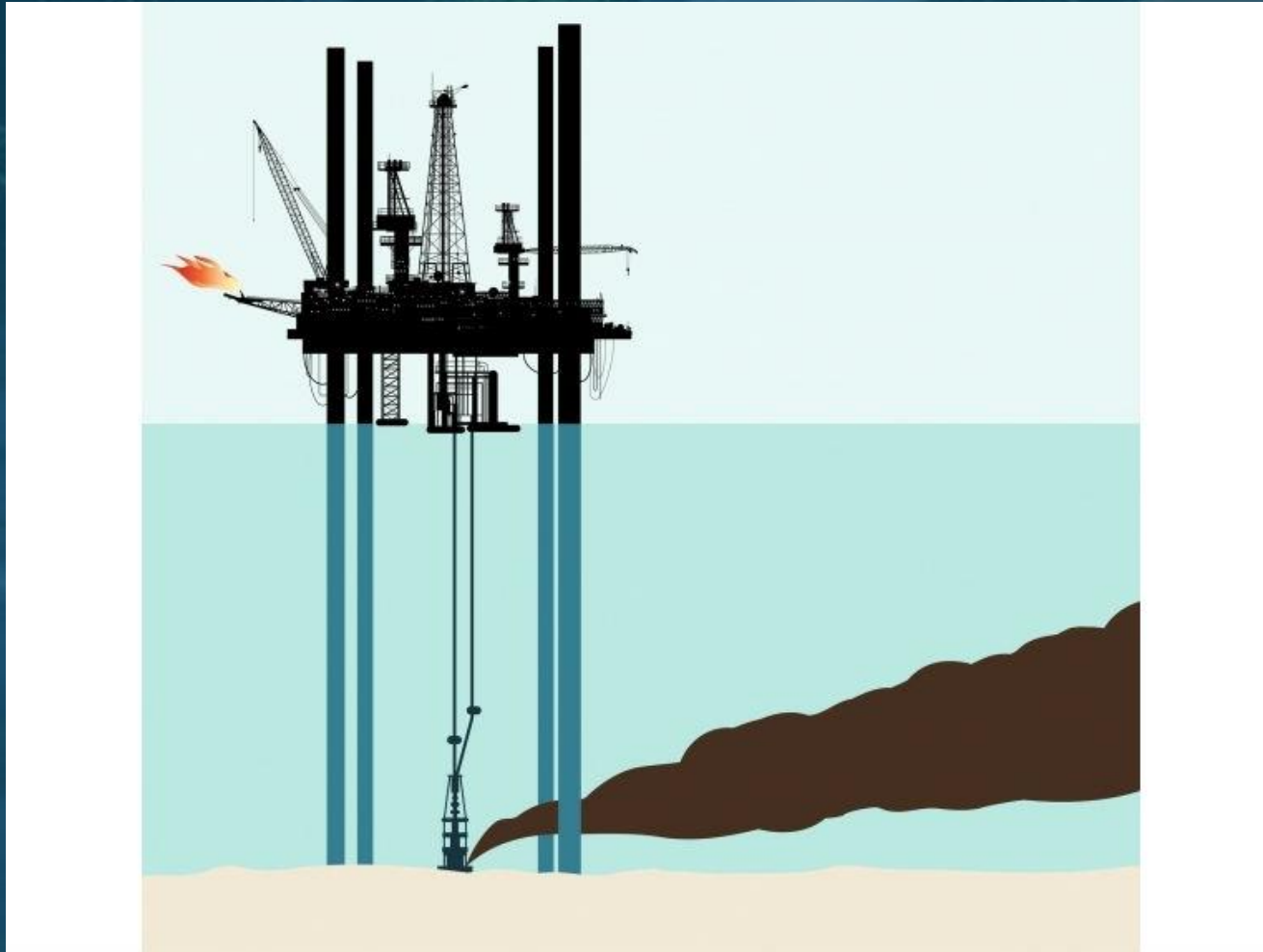


Clinton River Watershed

- 63 communities within watershed
- 9 communities in St. Clair Drainage
- 760 Square Miles
- 1.5 million people



Point Source Pollution can be traced to a specific location such as a pipe or disposal site.



Clean Water Act



Clinton River Water Quality

- **Historical Water Quality Problems:**

- Contaminated sediments
- Industrial & municipal effluents

STORMWATER

- **Current Water Quality Problems:**

- Bacterial contamination from sewer overflows and failing septic systems

- Contaminated sediments persist

- But what is the single greatest source of impairments in the Clinton River?

POLLUTION

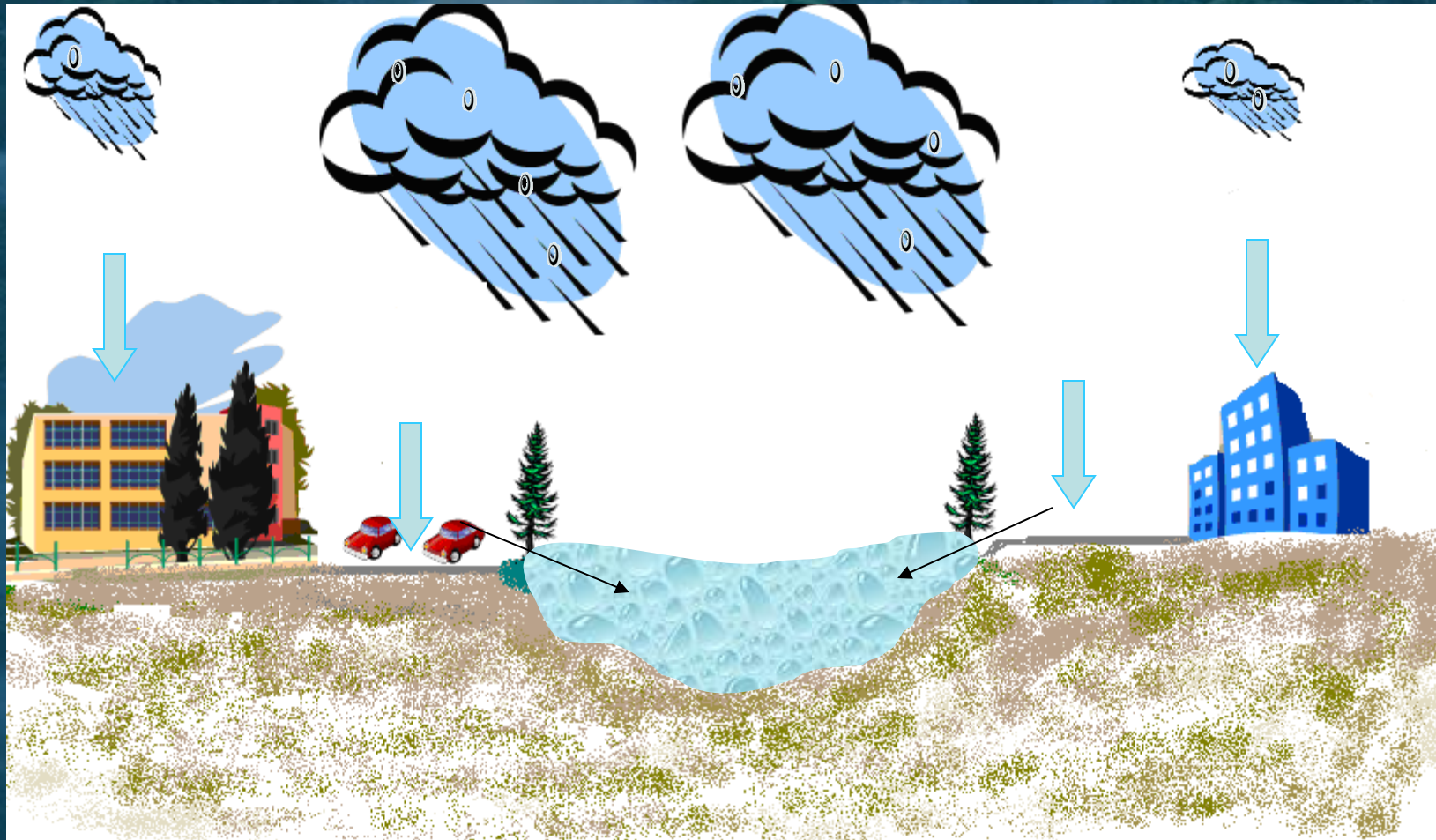


STORMWATER:

**The water that runs off
of our
rooftops, roads,
parking lots,
driveways, sidewalks
and lawns**



Impervious Surfaces and runoff

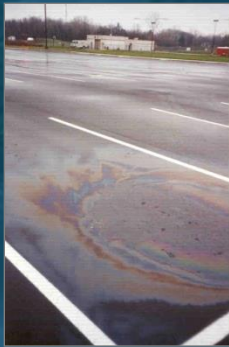




- **63 communities**
- **1000's of storm drains**
- **1.5 million people**
- **Millions of gallons of water**

Why is stormwater a problem?

Pollutants fall on paved surfaces & lawns...



Dirt, oils, metals, salts



Animal waste, fertilizers, pesticides



Runoff enters storm drain...



Storm drain discharges to waterway...



...resulting in water quality problems...



...and impairment of aesthetic & recreational values

Common Stormwater Pollutants

- **Lawn fertilizers**
- **Pesticides**
- **Runoff from driveways, rooftops, sidewalks**
- **Lawn clippings and leaves**
- **Soil**
- **Septic effluent**
- **Geese and other types of wildlife droppings**
- **Boat by-products (oil, gas, cleaning products)**



So what can we do to limit this impact?

Keep Pollution Out of Storm Drains

ALSO

- Sweep Fertilizer and Clippings
- Dispose of Hazardous Chemicals Properly
- Label Storm Drains





Fertilize Sparingly and Caringly

ALSO

- Mow High
- Use Slow Release Fertilizer
- Use Low Phosphorous Fertilizer
- Sweep Debris onto Lawn
- Soil Test
- Healthy Lawn Programs
- Mow LeavES

Use Earth Friendly Landscaping

ALSO

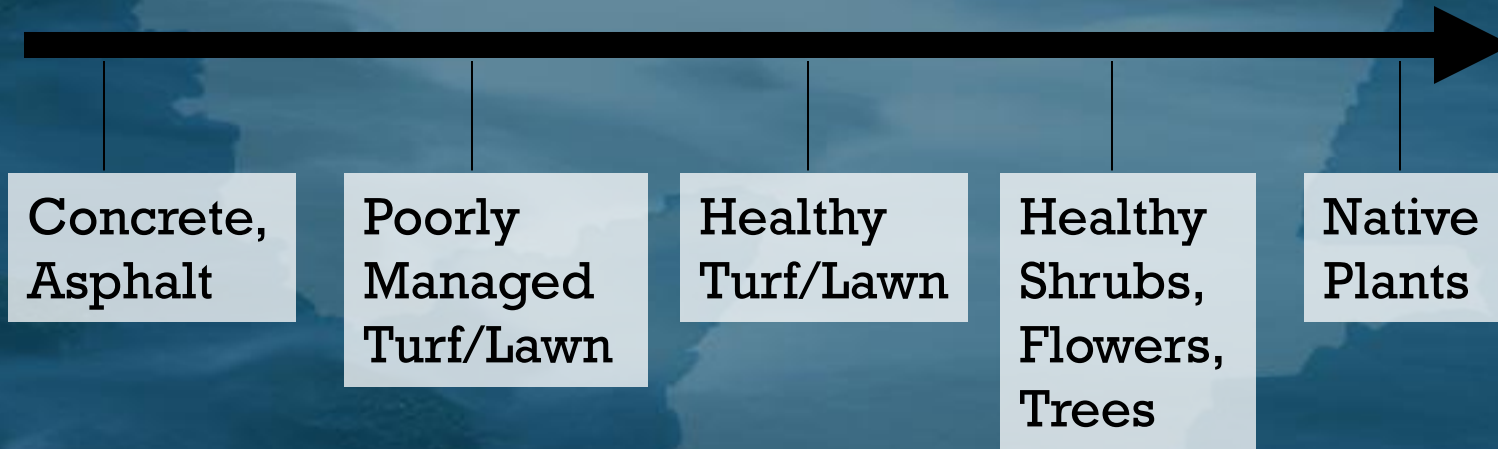
- Use Pesticides Sparingly
- Use Mulch and Compost
- Choose Native Plants
(when correct)
- Water Wisely
(1 inch/week)
- Sweep Debris onto Lawn
- Soil Test
- Healthy Lawn Programs



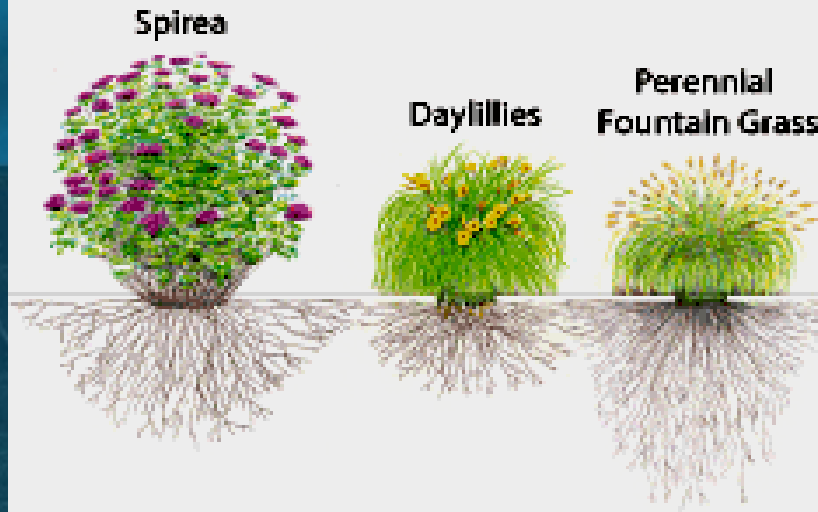
Native plants are best for protecting water quality and reducing stormwater volume.

Poor Filtering,
Poor Absorption

Best Filtering, Best
Absorption



Non-Natives



Natives



Funded through the Michigan Nonpoint Source Program*

There are roughly 40 million acres of suburban lawn in North America...



Recommended Structure

Multidimensional



Perennial
Plants and
Grasses

Shrubs

Softwood
Trees - Pines

Hardwood
Trees

Trees provide food, cover, cooling and water infiltration



Most beneficial:

- Oak
- Willow
- Birch
- Poplar
- Maple

Shrubs and understory trees

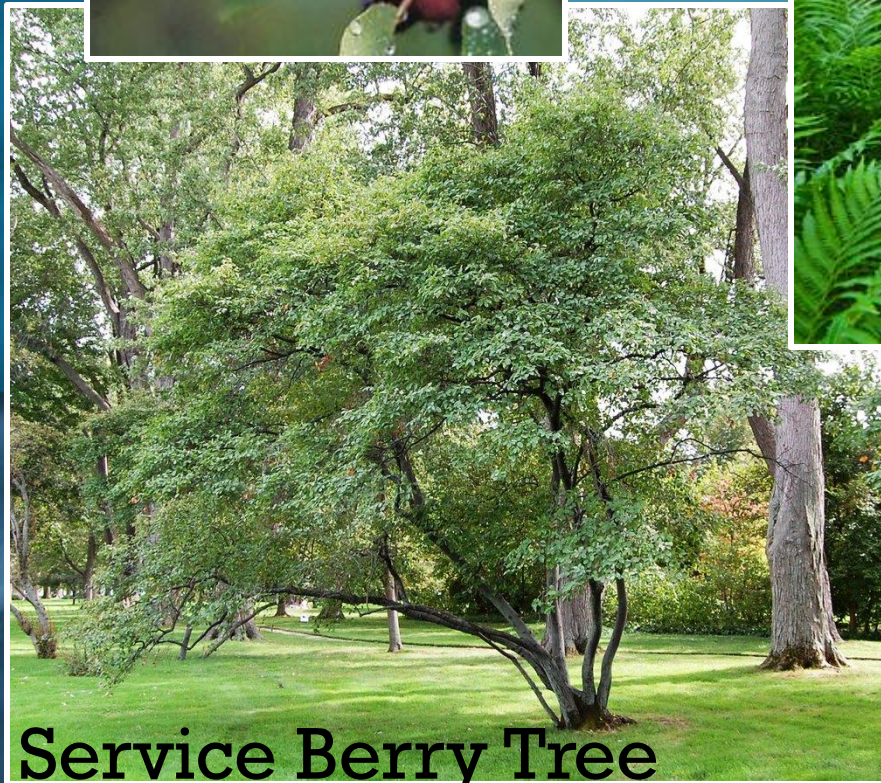
provide food, cover, cooling and water infiltration



Ferns



Button Bush



Service Berry Tree



Wildflowers

Add beauty, cooling, food and
absorption

Woodland Sunflower



Jack in the Pulpit



Trillium





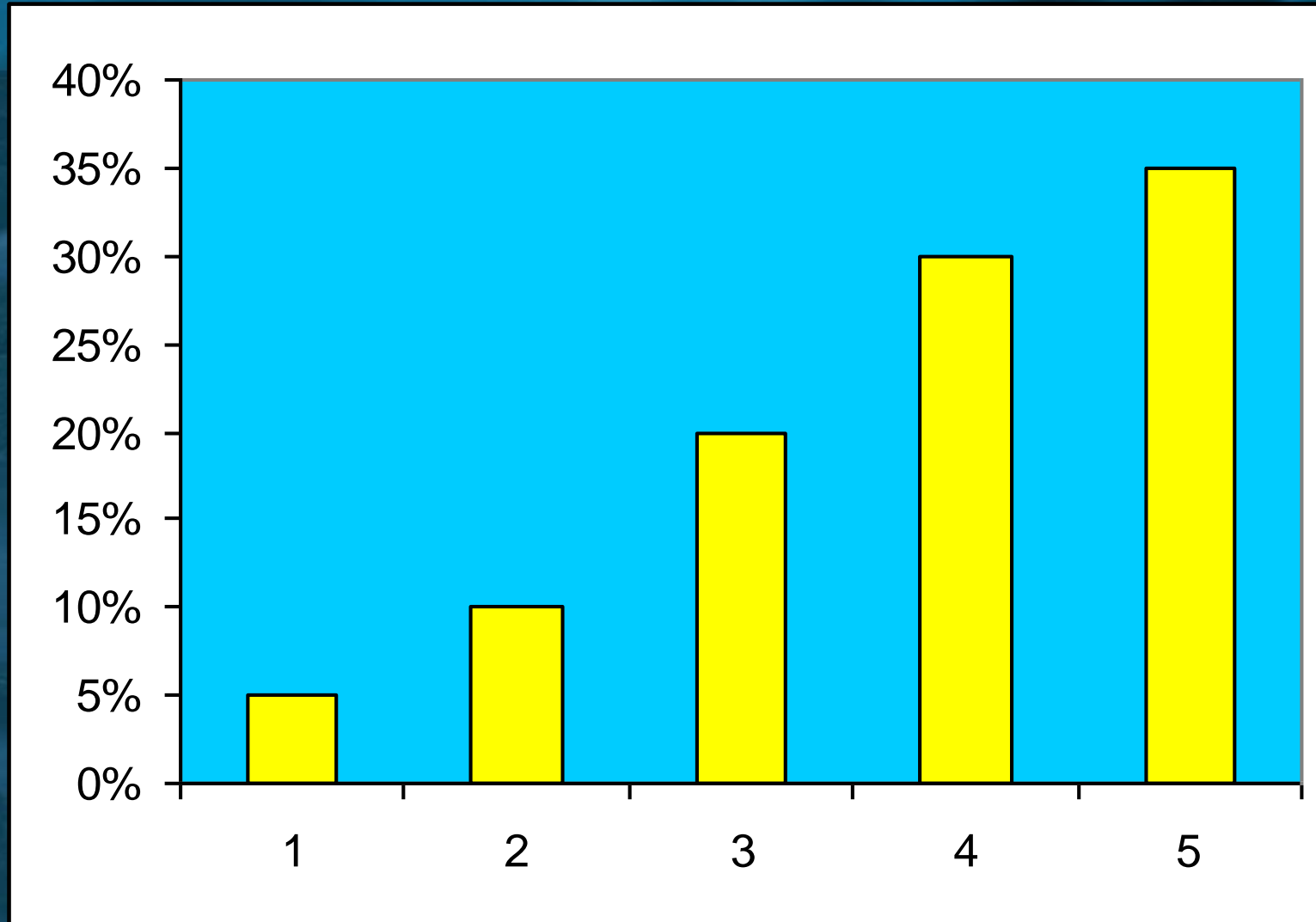
Clean Up After Pets



How do you use water ?



Household Water Use Percentages



9 gallons	13 gallons	53 gallons	65 gallons	100 gallons	120 gallons
130 gallons	850 gallons	1800 gallons	2464 gallons	7300 gallons	65,000 gallons

Car

lb. of hamburger

One orange

Wool sweater

Glass of Milk

Newspaper

Bicycle

egg

One pair of leather shoes

Pair of jeans

Desktop computer

lb. of chicken

Newspaper



Orange



Leather Shoes



Glass of Milk



Wool Sweater



Egg



Bicycle



One lb of chicken



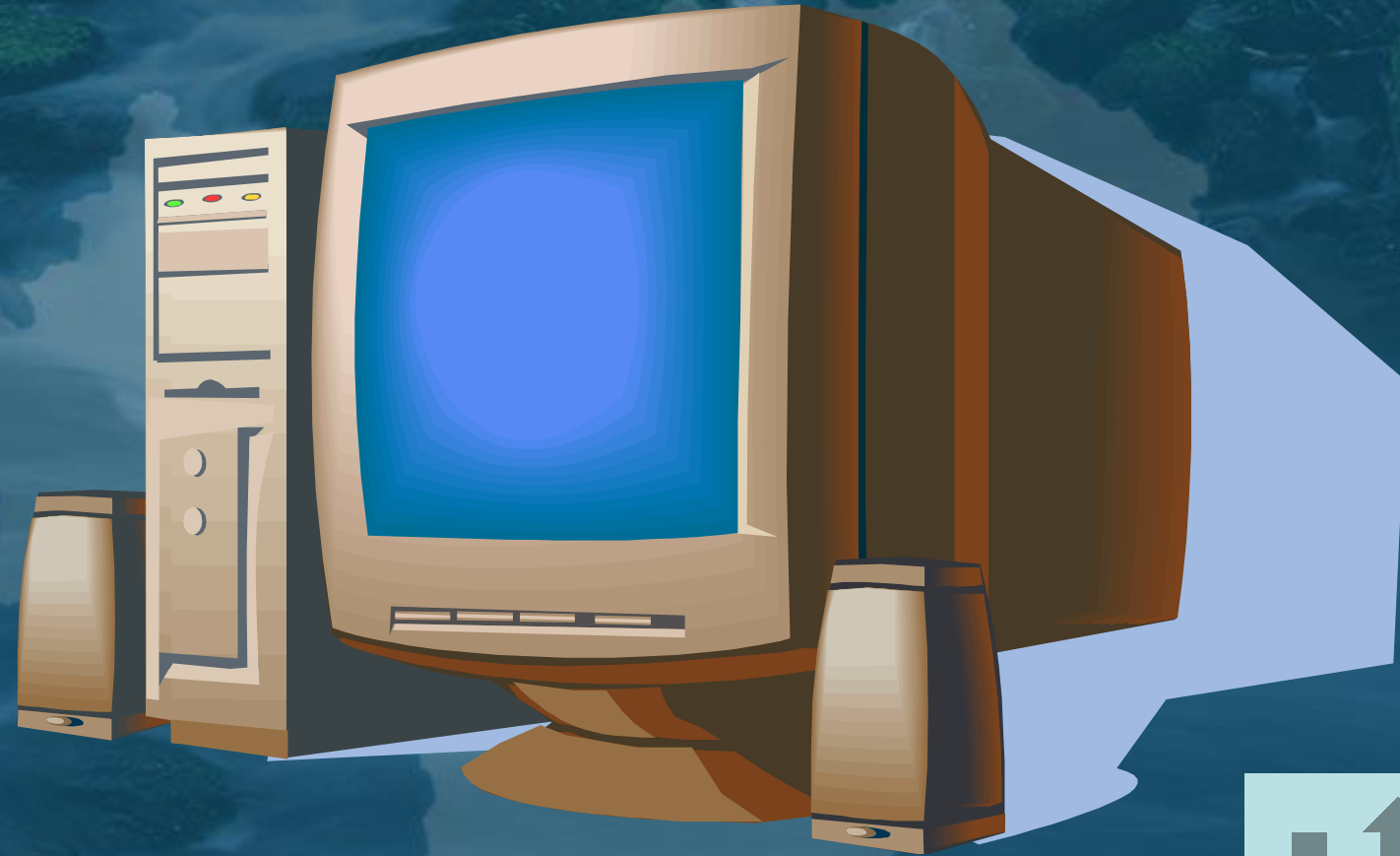
Pair of Jeans



Pound of Hamburger



Desktop Computer



Car



Inspire a new generation of water enthusiasts



Water isn't just about this...



**It's about all of
this...**

