Water Quality in Iowa

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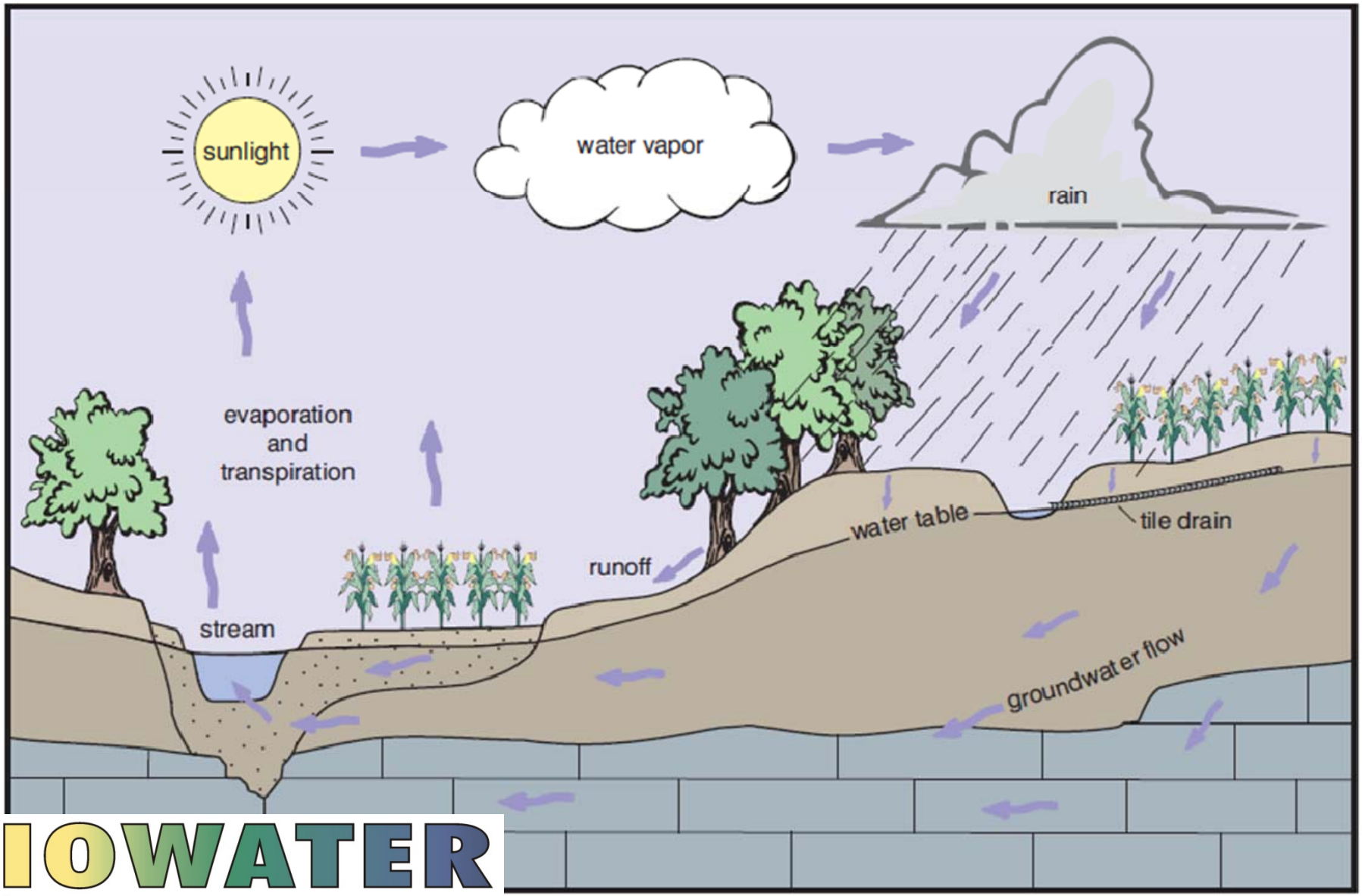
The Hydrologic Cycle in Iowa



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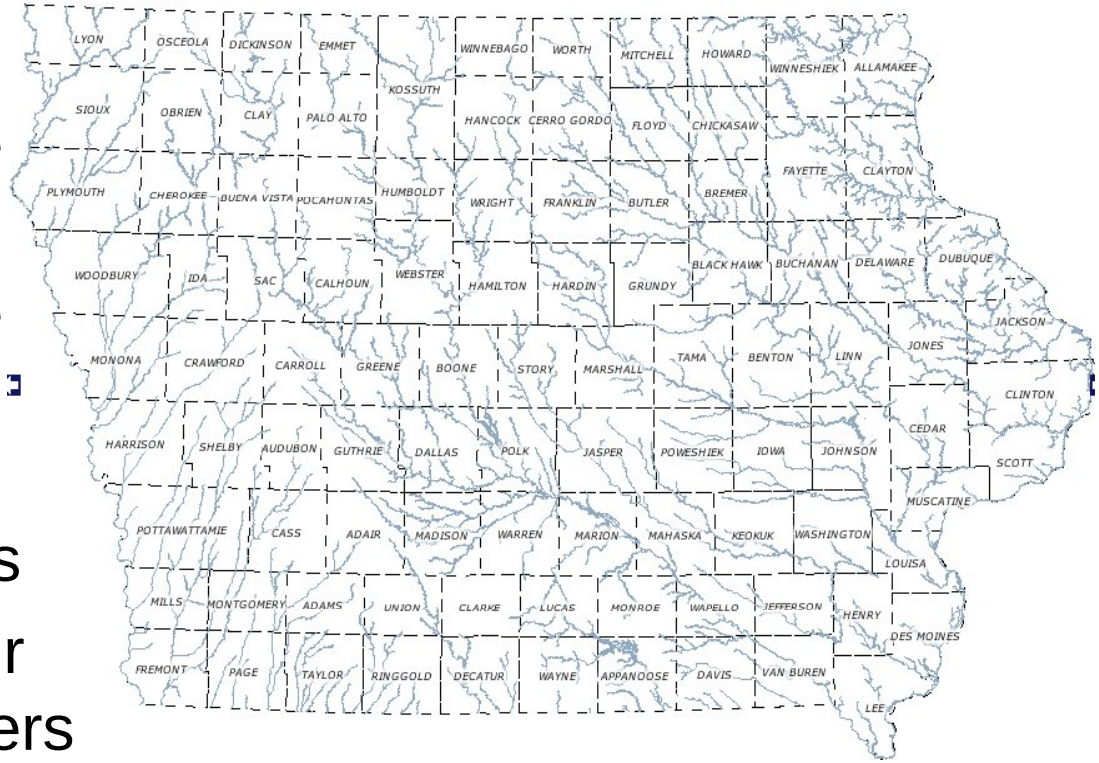
Iowa's Water

- Rivers & Streams
  - 72,000 miles!!
    - 26,600 miles are Perennial
    - 42,957 miles are Intermittent
    - 1,418 miles are Drainage Ditches
    - 660 miles are our large border Rivers



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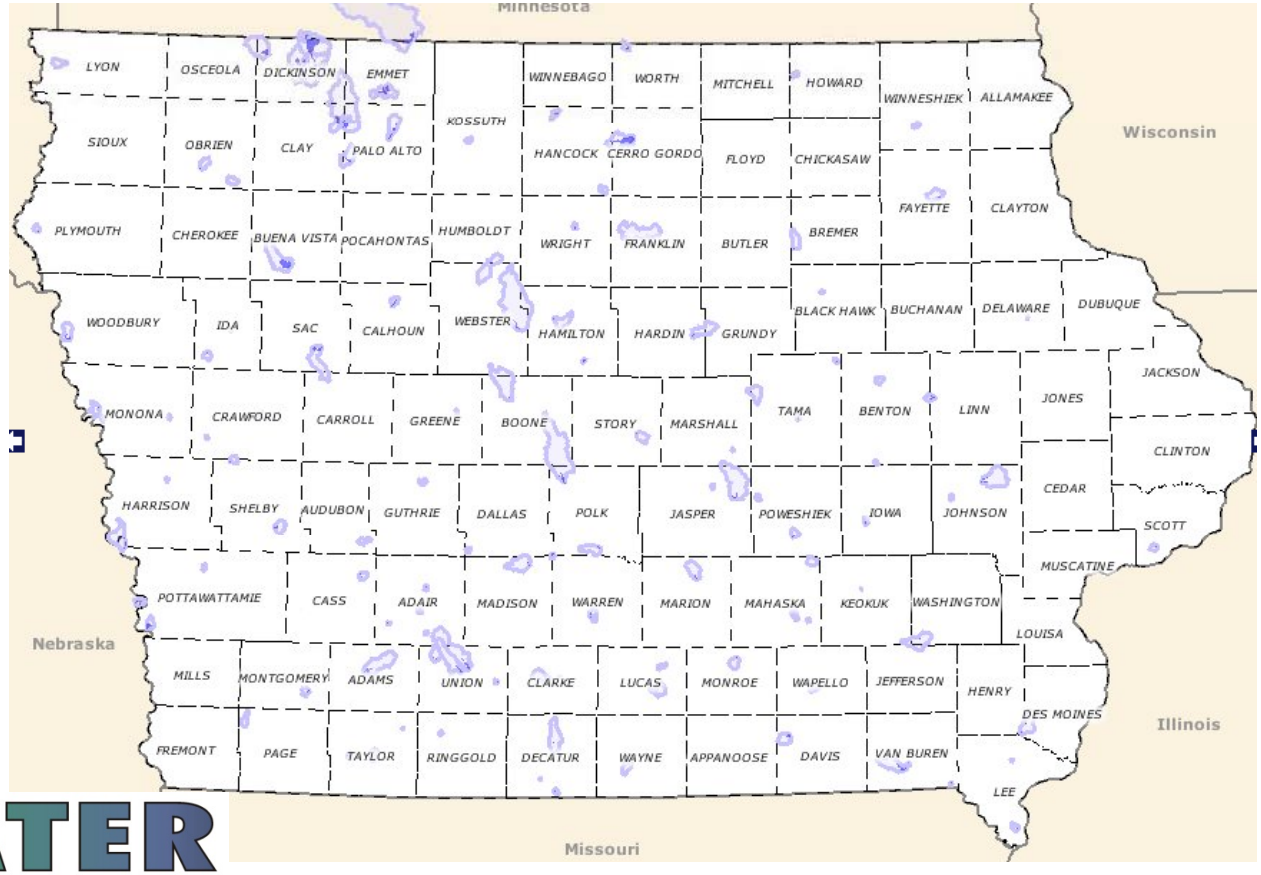
Iowa's Water

- 125,000 acres Lakes, Reservoirs & Ponds
- 50,500 acres of marshes



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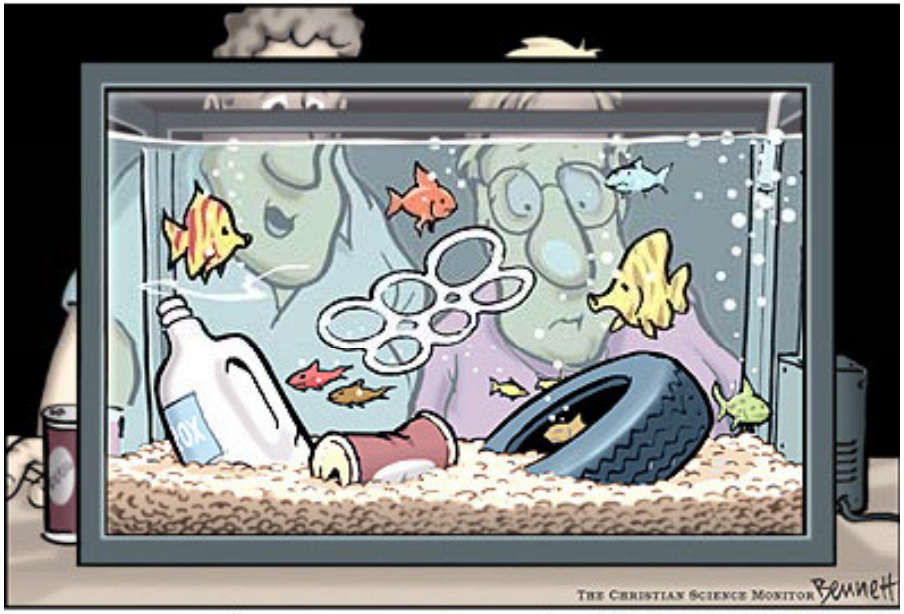
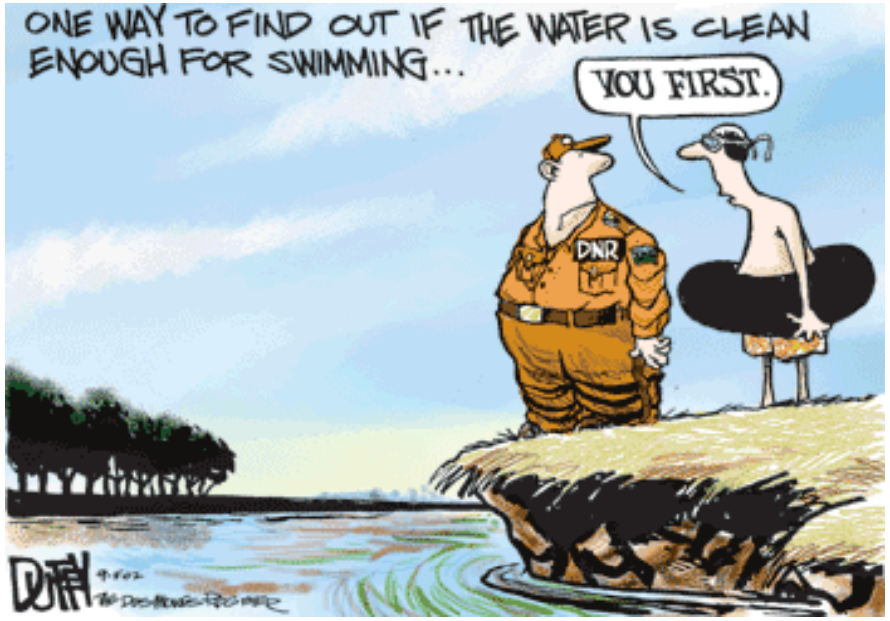
Water Quality Monitoring

What is it? Why is it important?

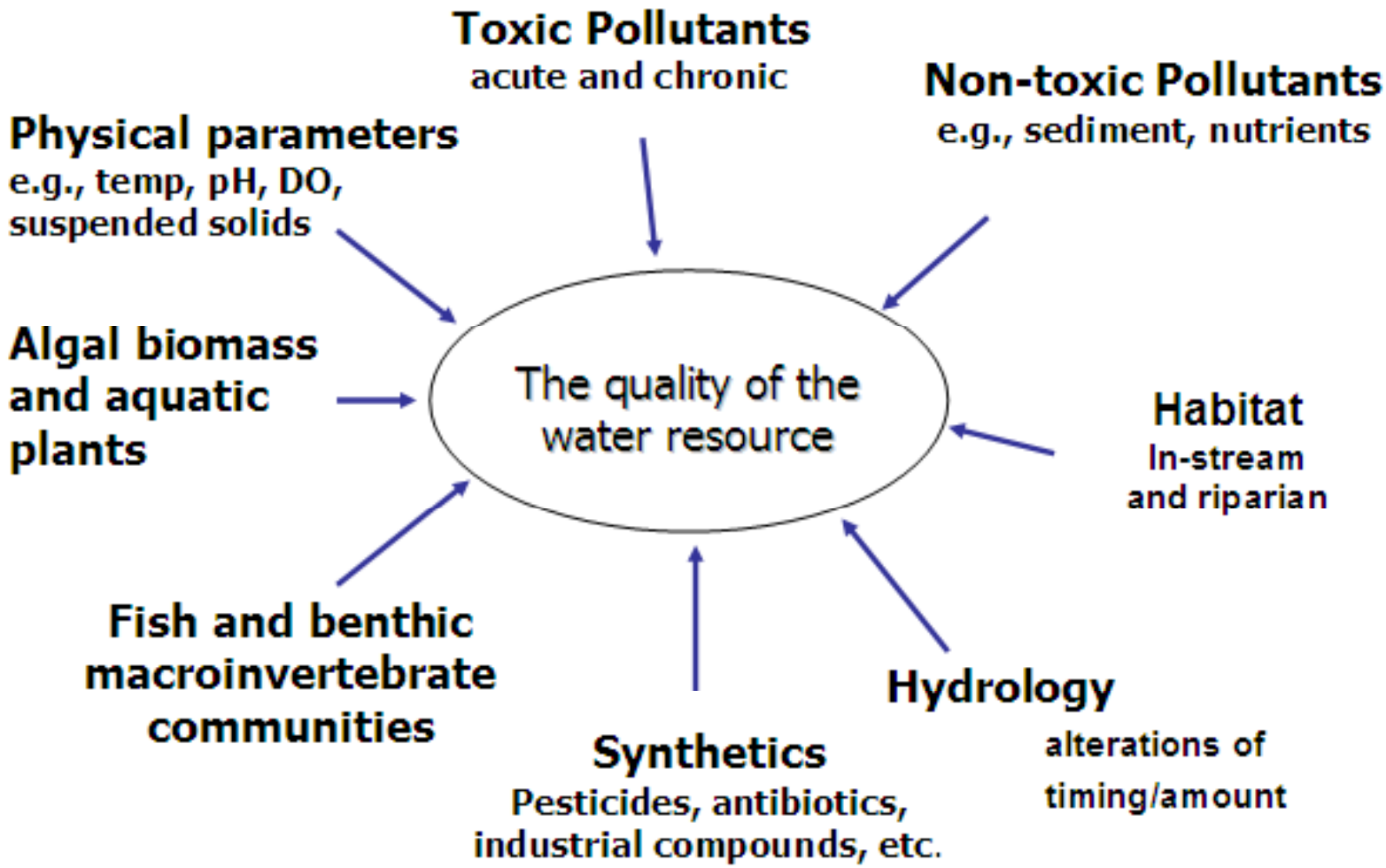


'...I tried to recreate their natural habitat...'



What is Water Quality??

Biological *Chemical* *Physical*



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DNR

Water Quality in Iowa

Point (●) Source Pollution

USGS photo

Photo by Dave Ratliff

Water Quality in Iowa

Nonpoint (⊘) Source Pollution

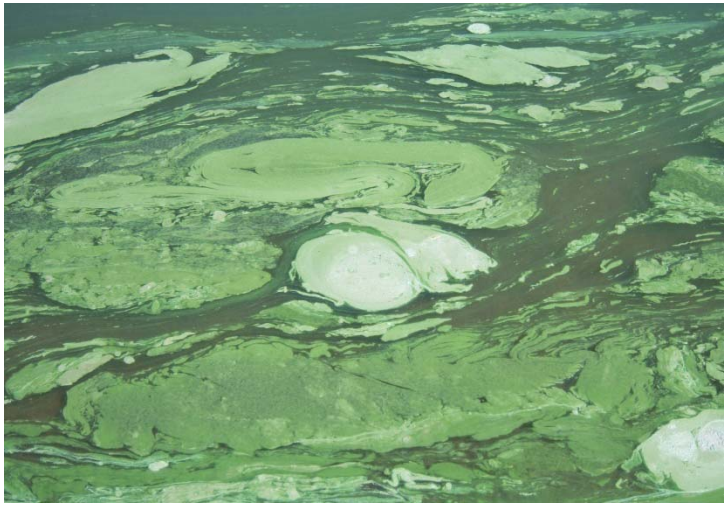
Sediment

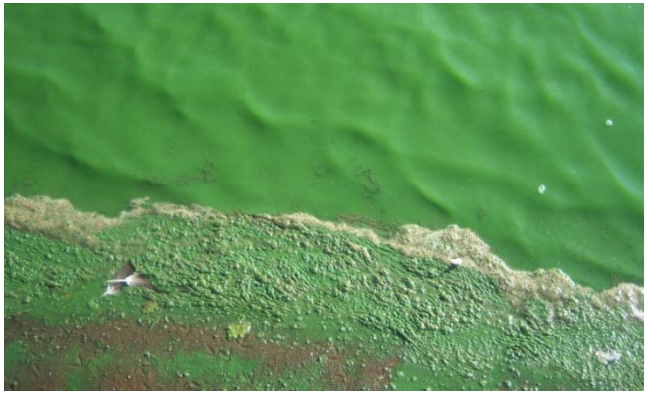
NRCS photos

Water Quality in Iowa

Nonpoint (⊘) Source Pollution

Nutrients – they are essential for life, but *it is possible to have too much of a good thing*





Why is Water Quality Important?

- Monitoring is the only way we will know the status of our water & how it has changed over time

How to Monitor Water Quality?

- Step Right In! The Basics:
  - Collect from the middle of the stream flow
  - Move slowly to avoid stirring sediments
  - Face upstream

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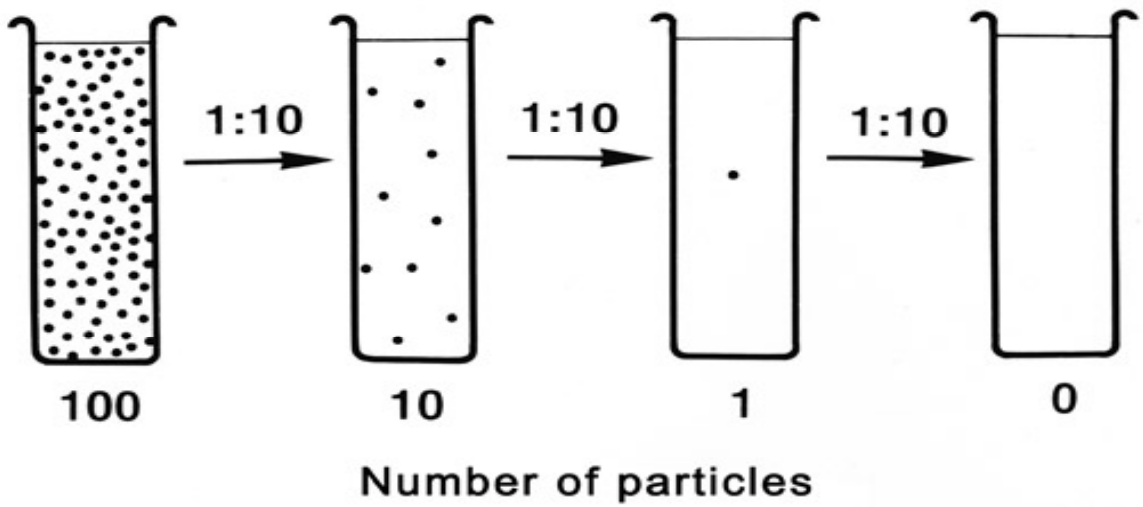
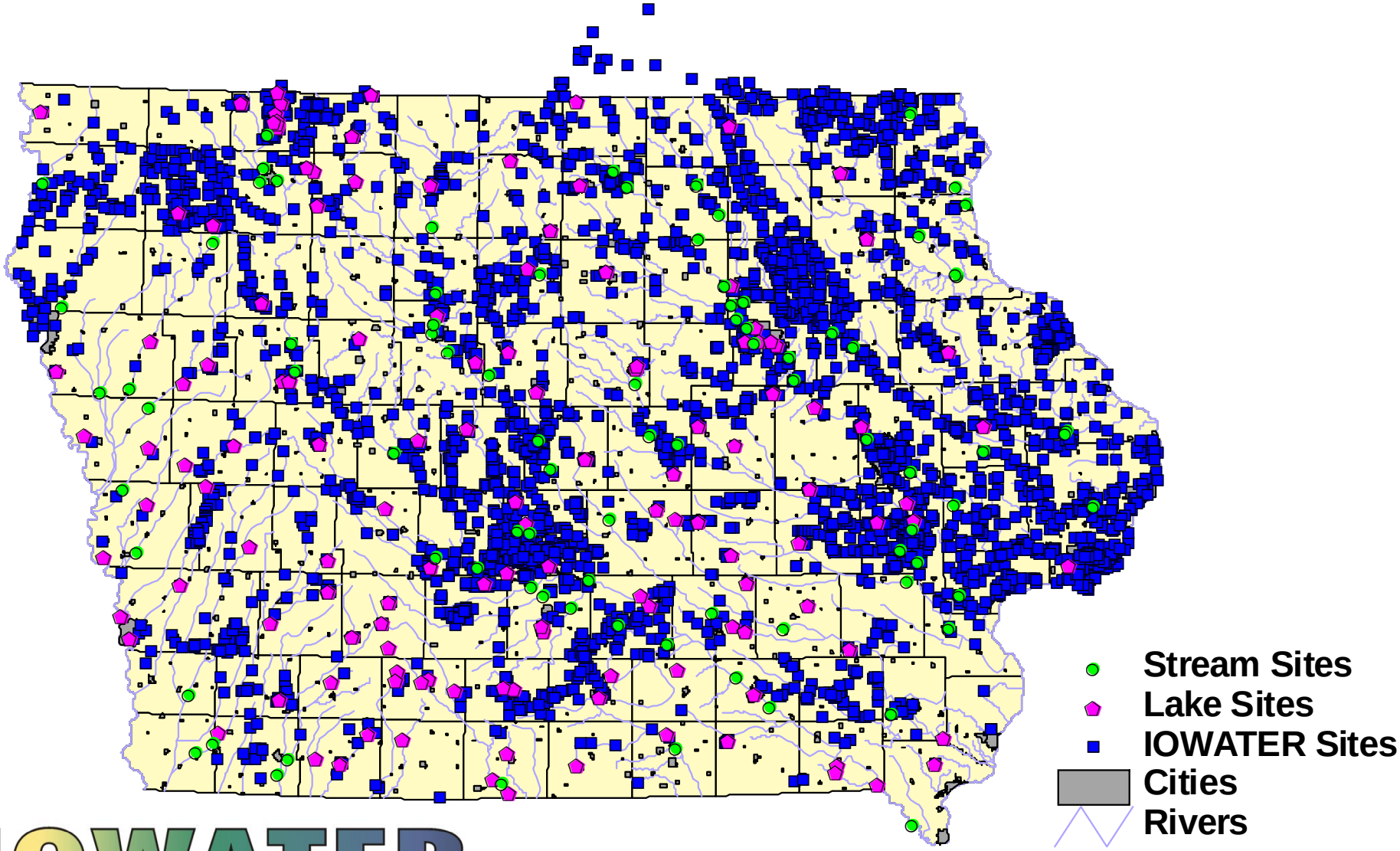
Understanding Test Results

- Concentration: weight or mass of the measured chemical per volume of water

Concentration Units			
abbreviation	definition	mass ratio description	mass ratio
mg/L	milligrams per liter	parts per million	1:1,000,000
ug/L	micrograms per liter	parts per billion	1:1,000,000,000
ng/L	nanograms per liter	parts per trillion	1:1,000,000,000,000



Current Monitoring



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