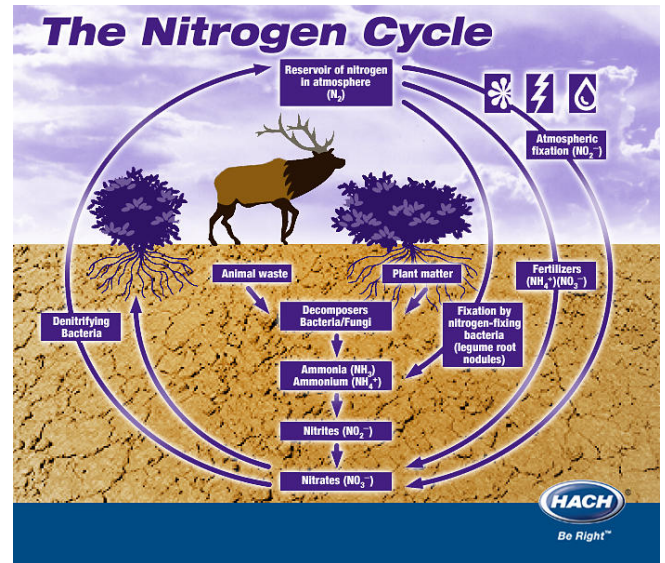


Water quality

<u>Component</u>	<u>Normal</u>	<u>Floodwater</u>
Tot. Susp. Solids (mg/L)	4	10,900
Conductivity (umhos/S)	72	352
Phosphorus (mg/L)	3	13
Nitrogen (mg/L)	0.3	23
Ammonia (mg/L)	< 0.1	1.65



Zeigler, Caldwell and Parmenter, *Effects of the 2011 Las Conchas Wildfire on Fish Populations and Habitat in Meadow Streams of the Valles Caldera National Preserve, New Mexico*. 2012.

Scientists study the components of water quality such as conductivity, phosphorus, nitrogen and ammonia. The chart above shows an increase in several components during the floodwater stage.

1. What are some of the factors that take place during a flood that would cause these increases?
2. Use the nitrogen cycle to help you think about the interactions that take place and how they would be impacted during a flood. View the PowerPoint titled *Effects of the 2011 Las Conchas Fire* under Resources in this unit.
3. Why would conductivity be increased?
4. Phosphorus, Nitrogen and Ammonia are all part of the nitrogen cycle. Use the USGS sites to explore the impacts of too much phosphorus, nitrogen and ammonia. The links are under Resources in the Impacts on Water Quality unit.
5. What indicators in the environment would signal an increase of ammonia and phosphorus?