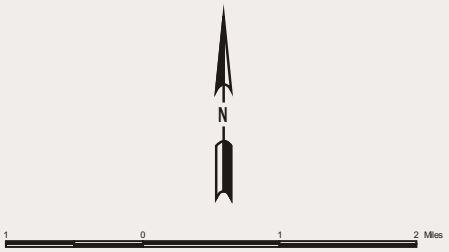
Nutrients Map

Oak Creek Watershed

Total Phosphorous
Total Nitrogen

- Meets Water Quality Criteria at least 85% of the time.
- Meets Water Quality Criteria between 50% and 85% of the time.
- Meets Water Quality Criteria less than 50% of the time.



Nutrients

Just by limiting the amount of fertilizer we apply to our lawns, we can help improve the state of our waterways. High levels of nutrients in rivers and lakes can promote excessive plant and algae growth, which can result in dissolved oxygen deficiencies, loss of habitat and noxious odors.

Another factor that affects water quality is the amount of ***nutrients*** in the water. Two of the major nutrients found in water are **phosphorous and nitrogen**, and both are necessary for living things to be healthy and grow. However, too much of these nutrients can cause excessive aquatic plant growth or algae blooms.

Algae blooms can decrease the amount of oxygen in the water, resulting in too little oxygen for fish and other aquatic animals to survive. These blooms can also create noxious odor problems once they begin to die off.

The concentration of nutrients and the form they are found in changes continually. How and why they change depends on a variety of complex factors. The total input of nutrients varies with land use and other factors. For example, during the summer, nutrient input may increase due to fertilization of cropland or lawns and gardens. During the autumn, high rainfall causes the increased wash-off of organic matter such as leaves, twigs, grass, and other debris. Because decomposition of this organic matter releases nutrients, it constitutes an important source of nutrient loading to the waterway.

Phosphorous and nitrogen are abundant in the waste material treated at the local or regional wastewater treatment plants. Municipal and industrial discharges as well as sewer overflows also are contributors of nutrients to our waterways. Urban stormwater runoff is another major concern because it too contains high nutrient levels. Nutrients in stormwater runoff come from lawn and garden fertilizers, pet and other animal wastes, organic leaf material, and soil from construction sites. This stormwater runoff enters the waterways every time it rains. Rural and agricultural areas also contribute to nutrient increases through failing septic systems, livestock feedlot operations, poor manure spreading techniques, fertilizing practices, and increased erosion from plowed surfaces or unstable stream banks. The EPA's recommended nutrient criteria for the eco-region that includes the Oak Creek is 1.59 mg/L for total nitrogen and 0.08 mg/L for total phosphorus. These are only recommended criteria that have not as yet been adopted or put into law.

Nutrient Stats

Most of the Oak Creek Watershed meets water quality criteria for total nitrogen or phosphorous 50 to 85 of the time. The majority of the Oak Creek Watershed does not meet water quality criteria 85% of the time for total phosphorous due to urban stormwater runoff, soil erosion, and lawn or agriculture fertilizers entering Oak Creek's waterways.