OUR NATURAL *environment*

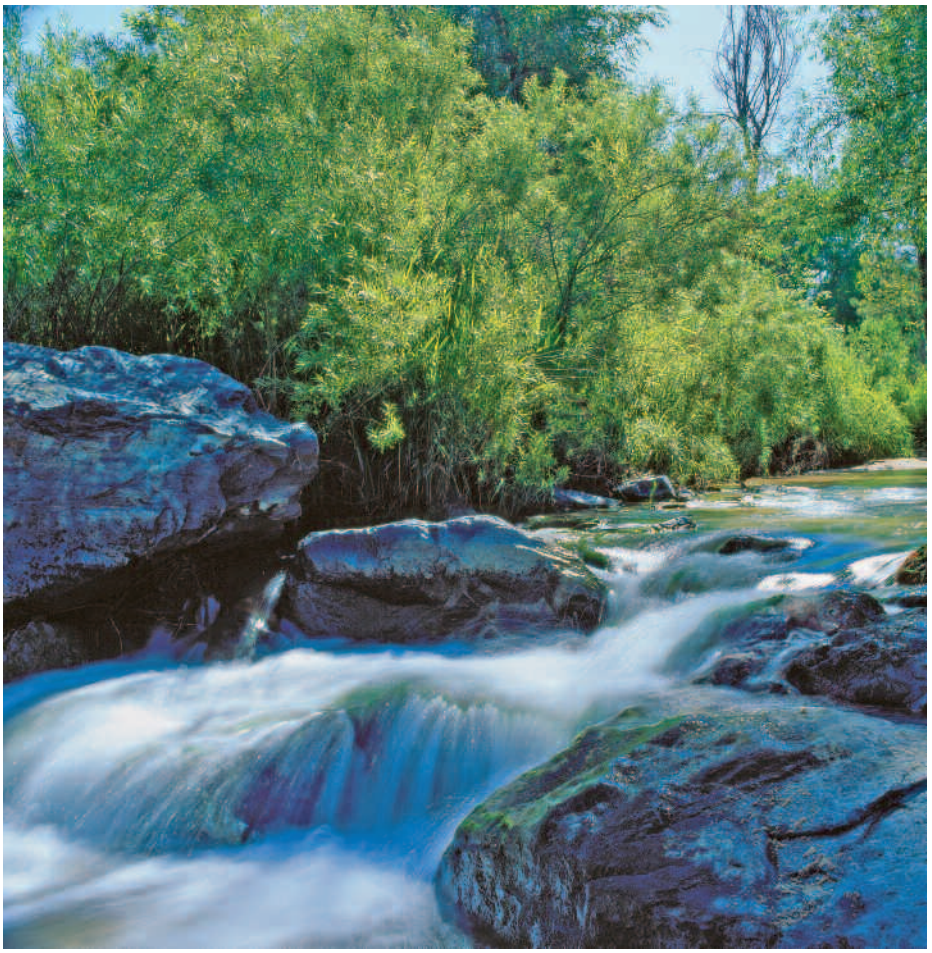
WATER: A PRECIOUS RESOURCE

Water plays an integral role in all aspects of life as it is broadly felt by all who see, touch and taste it. Second to the air we breathe, water is the basis for the survival of humans, animals, nature, the environment, and the economics of our community and the world.

STORMWATER POLLUTION

Water pollution is the contamination of waterways which include streams, creeks, lakes, ponds and reservoirs. Most people think water pollution comes directly from a factory or other known source. However, the biggest source of water pollution is people. When it rains or snows it causes water runoff to flow downhill along streets and in ditches. While it seems that this runoff simply disappears when it flows into a street grate or inlet, it flows through storm sewer pipes and is directly discharged into the environment. Many people mistakenly believe that runoff is treated but in fact, it flows untreated directly into waterways where wildlife live and people swim, fish and recreate.

The mistaken belief that runoff is treated results from a misunderstanding of sanitary and stormwater systems. Generally most indoor water fixtures such as a sink, toilet, bath and shower are connected to the sanitary sewer. Water produced by these fixtures is treated at a waste water facility where the harmful contaminants are removed and the clean water is released into the environment. Water produced by rain, snow, landscape irrigation and car washing becomes part of the storm sewer system. In contrast to a sanitary sewer system, a storm sewer system collects runoff that is never treated. It is transported and released directly into waterways.



The biggest source of water pollution is a direct result of the acts of people.

MAJOR POLLUTANTS

Several pollutants affect plants and organisms living in these bodies of water and in almost all cases the effect is damaging to native plants, wetlands, aquatic life, and can cause severe illness to humans. Pollutants include nutrients, pet waste, leaves and grass clippings, fertilizers (which contain phosphorous and nitrogen), soaps and detergents. All can be detrimental to water quality.

Nutrients

Phosphorous and nitrogen are necessary for plant life to survive and grow. When adequate nutrients are available, the algae and other plant life grow enough to provide food for the fish and other aquatic life in the water. However, when excess nutrients are

available, algae grows too quickly to be eaten by the fish and this causes the algae blooms that are visible at the surface of the water. When algae dies, the dead material sinks to the bottom and decomposes. As the material decomposes, the oxygen that is in the water is depleted. This reduces the ability of the water to support fish and aquatic life. The ultimate decomposition of these plants creates a toxic environment for other organisms and a major deterrent to recreational enjoyment as the water will turn green and smell.

Tip: *Become aware of the outcome of everyday activities that will help reduce the chances of pollutants like phosphorus becoming accidentally introduced into our water and the environment.*

Pet Waste

It is a courtesy to other parks and trails users to pick up after your pet. Pet feces deposited in yards, fields and trails run off into waterways. Estimated to cause 20 percent to 30 percent of stormwater pollution, dog waste contains nitrogen and phosphorus that negatively affects water quality. These nutrients promote algae growth that limits light available to aquatic habitat. Additionally, pet waste is known to carry common diseases including roundworm, giardia, campylobacter, leptospira, tapeworm, cryptosporidium, E-coli, and fecal coliforms. Dangerous bacteria from these diseases can spread to plants, animals and humans through stormwater and in waterways.

Tip: *Properly dispose of pet waste by throwing it away with your trash. Pet waste stations are available at many Village parks and trails.*

Leaves And Grass Clippings

Too many leaves and grass clippings remove oxygen from the water and suffocate the plants and animals who need oxygen to breathe, which could be harmful to fish, and cause other aquatic wildlife to die. Grass clippings contribute nutrients such as nitrogen and phosphorous, which cause unwanted and uncontrolled growth of algae and aquatic weeds.

Grass clippings create algae growth and are harmful to water quality.

Tip: *Properly dispose of grass clippings with your regularly scheduled trash pickup, or compost yard waste. Do not use the hose to wash clippings into the street, gutter, and storm drain; sweep them up with a broom and back into the lawn. You may also bag them and drop them off at a designated location as part of the Village's Leaf Recycling Program.*

Fertilizers

The improper use of organic and inorganic lawn fertilizers has the potential to harm stormwater due to the potential for increased nitrogen levels. Excess nitrogen in rivers and streams can be toxic to aquatic animals at high levels. This toxicity is due to ammonium hydroxide (NH4OH), which is produced at greater rates under conditions that are common where waste spills have occurred (such as low oxygen levels, high pH, and high temperature). Nitrogen pollution also leads to human health concerns. Unlike phosphorus, which binds to the soil's surface, nitrogen filters down through the soil easily and can enter drinking wells. Infants less than six months are most susceptible to nitrate poisoning. High nitrate levels in groundwater can reduce the blood's capacity to carry oxygen, causing a fatal condition in infants called "blue baby syndrome."

Tip: *Select a lawn fertilizer based on nutrient analysis. Slow release fertilizers contain nutrients in a form that become available to plants throughout the growing season, and are advantageous because fewer applications are required. Avoid fertilizers that contain post-emergence herbicides for broadleaf weed control. Instead, spot spray or pull weeds in trouble spots. Use only the amount of fertilizer that is recommended; more is not better. Keep fertilizers off sidewalks and driveways, and only wash off fertilizer application equipment on the lawn, not on the sidewalk or driveway. Consider reducing or discontinuing use of pesticides.*

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