

Wastewater Reclamation

CLEANER.
WATER.
FASTER.

PHOSPHORUS REMOVAL AND ITS IMPLICATIONS

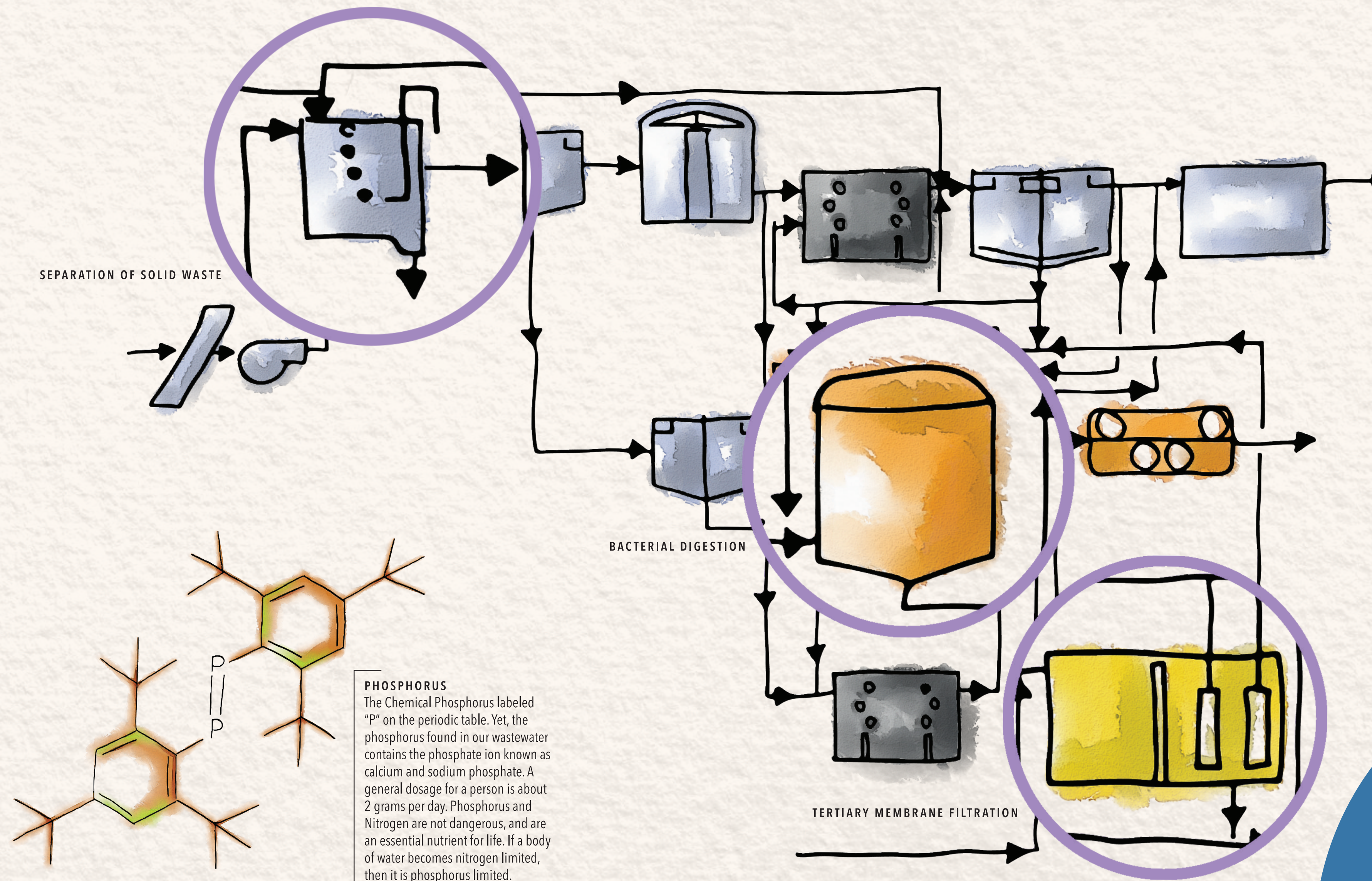
HOW ONE ELEMENT CAN CHANGE AN ENVIRONMENT

EVERYTHING IN MODERATION

Phosphorous is an element, and acts as a nutrient that plants need to survive. As a nutrient, it limits the amount of vegetation that grows in and around lakes and rivers. When phosphorous is low, plants and the animals that forage on them die off. However, fertilizers from yards and farms pollute waterways with such high amounts of this nutrient that populations of algae skyrocket, covering the surface of lakes and rivers. Sunlight can't reach water plants below, which in turn die off and can destroy freshwater environments.

HOW IS PHOSPHOROUS REMOVED FROM WATER?

There are three stages to remove phosphorous from water. Primary treatment separates particulate solids using gravity. Secondary treatment utilizes microorganisms that convert dissolved and colloidal solids into biomass, which is broken down by other organisms. Tertiary treatment adds chemicals to the water, in this case aluminum sulfate that separates particles to be filtered.



PHOSPHORUS
The Chemical Phosphorus labeled "P" on the periodic table. Yet, the phosphorus found in our wastewater contains the phosphate ion known as calcium and sodium phosphate. A general dosage for a person is about 2 grams per day. Phosphorus and Nitrogen are not dangerous, and are an essential nutrient for life. If a body of water becomes nitrogen limited, then it is phosphorus limited.

A HISTORY OF PROTECTION

In 1972, the Clean Water Act was passed, requiring all U.S. wastewater treatment plants to use second stage treatment. The Coeur D'Alene water treatment facility was operating according to this standard some 50 years before the mandate was met nationally.

Did You Know?

85% of the phosphorous in your body is in your bones and teeth. Pumpkin seeds contain 123% of your daily recommended value of phosphorous.

You Can Help!

Don't flush chemicals or non-degradable substances down faucets or toilets, they can clog up or containment the treatment process.

Learn More!

