



THE SPIGOT

from the NORTH DAKOTA RURAL WATER SYSTEMS ASSOCIATION

KABIL RECEIVES North Dakota Rural Water Award

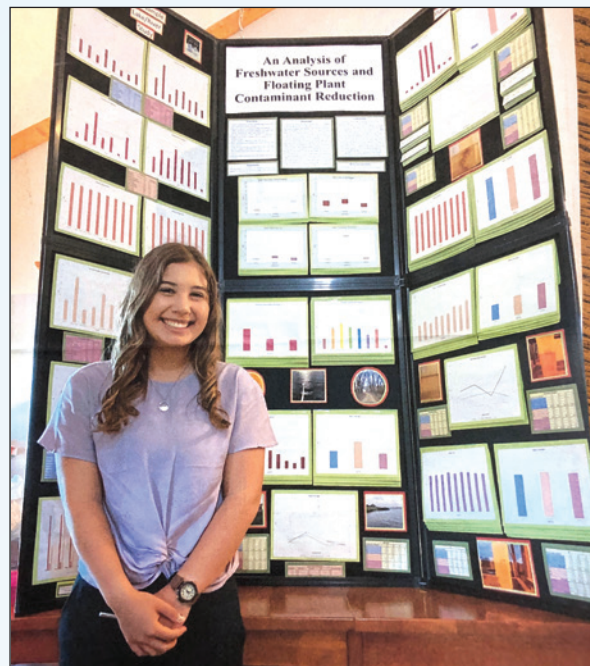
By Julie Hein, NDRW Source Water Specialist

Some lakes and rivers contain high levels of sulfates, nitrates and phosphates and are also low in dissolved oxygen. What can be done to help reduce the levels of these chemicals and increase the amount of dissolved oxygen? Allison Kabil, a student at Hankinson High School, Hankinson, N.D., has found a solution to this question.

Kabil recently competed in the Southeast Regional Science Fair, which was held in Fargo, N.D., in the spring of 2020. North Dakota Rural Water sponsored an award for the best drinking water-related project at the competition. This prize was awarded to Kabil, whose project is titled "An Analysis of Freshwater Sources and Floating Plant Contaminant Reduction." The purpose of her project was two-fold: to analyze the chemical levels of the Red River, Lake Tewaukon, Wild Rice River, Silver Lake, Horseshoe Lake, and Alkali Lake, all surface waters of southeastern North Dakota; and to use floating plants to decrease the sulfate, nitrate and phosphate levels and increase the dissolved oxygen levels of these surface waters. She concluded duckweed and hornwort were found to create a balance in chemical and dissolved oxygen levels of surface waters.

Nitrogen in waterways causes problems. Since nitrogen increases the rate of plant growth, it causes water plants to grow rapidly until they form thick mats at the water's surface. When mats become too dense for sunlight and oxygen to penetrate, the plants die and sink to the bottom where they are broken down by oxygen-consuming bacteria. Fast-growing bacterial populations can quickly use up all the available oxygen in the water, depriving other living things of the oxygen they need to survive. This process is known as eutrophication.

Natural eutrophication is a gradual process that occurs over decades as waterways age. However, problematic eutrophication occurs because of human activities that create runoff containing nutrients like nitrogen



Allison Kabil

and phosphorus. Some of the primary sources of nutrients in waterways include farmland, sewage treatment plants and erosion from farmlands. In a short time, nutrients accumulating in a body of water can destroy the ecosystem within it.

With the introduction of certain water plants, Kalib hypothesizes these plants could reduce the amount of eutrophication in surface water.

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Winter water line repairs.



Water operators continuing their education.

Serving the DRINKING WATER NEEDS of CONSUMERS

By Ward Heidbreder,
Circuit Rider for ND Rural Water

Drinking water systems throughout North Dakota have numerous things in common. Every water system exists for a singular purpose, to serve the drinking water needs of the consumer. Municipal water customers also may be fortunate to have their homes surrounded by a water supply system to protect their homes in the event of a fire.

To meet the expectations of the consumer to have water of sufficient quality and quantity, at an affordable price, every water system, large or small, needs employees. I would like to take this opportunity to introduce you to your water system employees.

These employees are your neighbors. They live among their customers, sending their kids to school, shopping in the same stores, and attending the same church and social events as the people they serve.

The employees of the water system that serves you are professionals. From the meter reader, water distribution operators, water treatment plant staff, office personnel, administration, and board members, each one is dedicated to serving your water needs in a skillful and courteous manner. In smaller water systems, one person may fill several of these positions.

There has, in the past, been a misconception that water is the simplest product to produce and transport to a consumer. North Dakota has been blessed with abundant water, although most of it is not drinking water quality. To make our water safe to consume is sometimes a complicated activity. The Environment Protection Agency administers the Safe Drinking Water Act, which sets the standards for drinking water in the U.S. To achieve compliance with these standards, water system employees, such as water distribution operators and water treatment operators, must meet standards as well.

Distribution and treatment operators are highly trained and tested. They must continue their education on an annual

basis to stay current on regulations and safe practices. The operators commitment to their education and training is in addition to their commitment to serve you, the consumer.

Supporting the operations staff and the consumer falls on the unsung heroes of every water system, the office staff. Knowledgeable, courteous, efficient, and patient, the employees of the water system office are the glue that holds a water system together. Handling customer calls, communicating customer concerns to the appropriate staff member and taking care of the finances and records of a water system is no small task.

Administration of a water system falls into the capable hands of the department managers, general manager or executive director. These staff members have the task of making sure the consumer's needs are met, regulations are adhered to and the financial stability of the water system is secure.

Keeping a watchful eye on all the water system staff and operations are your direct representatives to the water system, the board of directors and city councils. Representing every consumer the water system serves, developing policies to meet the needs of the consumers and system staff, and being good financial planners is their commitment.

Essentially, drinking water systems are made up of people serving people or, as I like to say, "neighbors serving neighbors." When the opportunity comes along, say hello to your neighbor or just smile and wave! "North Dakota Nice" isn't just a saying, it's who we are!