

# 2017 Patrick Denne Memorial Scholarship Winners

*The North Dakota Rural Water Systems Association (NDRWSA) received more than 100 applications from students throughout the state for this year's Patrick Denne Memorial Scholarship. Since 2012, NDRWSA has awarded money to students to use toward college-related expenses. This year, NDRWSA awarded 11 \$725 scholarships for a total of \$7,975. This money is raised during the live Patrick Denne Auction held every February during the annual Rural Water Expo. This year, applicants were asked to write an essay about the importance of the water industry. "When reviewing the applications, it became evident the young leaders of North Dakota are dedicated, hard-working individuals with a common goal, continuing their education," says Eric Volk, executive director of NDRWSA. NDRWSA is pleased to announce this year's winners of the Patrick Denne Memorial Scholarship.*

## ■ Essay Topic: Importance of the Water Industry ■

### ■ Amber Lingen

The water industry is important in keeping our water safe. People use water every day and probably do not understand the total importance of having good quality water. Some people could take having good water for granted and assume all water is safe and of good quality and that everyone has access to water. We are fortunate, in our area, we have water that is tested regularly and we can just turn on a faucet to take a shower or get a drink from a drinking fountain, but other areas may not have this opportunity because they do not have as good of water industry as we do, for example, third world countries.



If people don't have good quality water they could have stains on their laundry, sinks, and tubs. Poor quality water could have deposits that accumulate that cause clogs in dishwashers, washing machines, sprinklers, wells, etc. Clogs of this nature could lead to expensive repairs. An average American family could use up to 300 gallons a day.

Businesses such as manufacturing facilities

need and utilize water to run their manufacturing operations and their chillers. They use chillers to keep their equipment cool and functioning properly. Manufacturing facilities also use waste water treatment processes to remove contaminants from the waste water to produce environmentally safe water.

Grocery stores use water to keep their fruits and vegetables hydrated and clean; but not only does water keep our goods clean, we use water to grow our goods. Firefighters, pools, and parks especially use an abundance of water. The demand for fresh water is always increasing, and the supply needs to remain constant and healthy.

Droughts are a major stress factor when it comes to the water industry. California, for example, has struggled in the past with major water shortages causing streams and rivers to decline, as well as the water levels in their lakes and reservoirs. Industries then face challenges by having restrictions from the water shortages that could affect their delivery of products and services.

Safe water is essential for healthy living. Right now millions of people do not have access to safe water. Without this basic service, these people are forced to drink dirty water that could kill them. In many countries around the world, taps, wells, and pipes don't even exist.

Even where they do exist, many people can't afford

this basic necessity of life. Everyone everywhere deserves a safe, sustainable water source for drinking, washing, cleaning, cooking, and growing food. It has even been suggested that water pollution is the leading worldwide cause of deaths and disease.

Water use has been growing at more than twice the rate of the population increase during this century, and already there are many regions that are chronically water short. People will most likely live under conditions of significant water shortage in the very immediate future.

## ■ Blake Zirbes

Water is the most important natural resource on earth in terms of its overall usefulness. To most people the act of drinking fresh water is the most important use of the resource, but it really is not. The most important use of water to humans is everything we do with it besides drinking. As a community, we would be lost without water, and the workers for the water industry are the people in charge of supplying us with such an important nutrient.

To really understand the importance of the water industry, one must first consider how many times one uses water on any given day. I personally use water at least eight times a day: morning shower, brushing my teeth, using the restroom multiple times, and it is my go to drink throughout the day. I use tens of gallons on my own every day without any effort, and more than likely use over 1,000 gallons of water every month. Now take a moment to consider how much water the 80 people of Kensal use per month or even how much water all the residents of Bismarck use in a single month. As Americans, we need the water industry to keep us supplied at all times. We rely on the workers of the water industry to constantly keep us supplied either through our pipes or bottles to drink out of. I know how much pressure we put on these men and woman through experience as well. I cannot even remember how many times my father has been called to turn water either on or off. I also know firsthand how often he has been yelled at or threatened because he needed to turn off water for a household.



The water industry is essential to American life and is often taken for granted by the people. However, we should covet the industry, because when our water is taken from us we cannot handle the consequences of not being able to pay a bill. Workers such as my father work hard at all times to keep the people of America happy and supplied of their most needed resource. The water industry is hand-in-hand just as important as the oil industry in the United States, as it provides a life force people need to live their everyday lives. Simply put, we as Americans require the water industry to live our everyday lives peacefully, and the demand for the industry will never waver.

## ■ Cooper Lingen

Water industries are extremely important. They allow us to have access to clean and healthy water. Coming from a small town, I can speak for myself when I say that I'm truly grateful that we have water industries. Industries like the rural water systems are one of the most important industries we have. They are able to give small town, rural areas the ability to have easy access to water. Going back years ago, these small towns and farms didn't always have the cleanest and safest water to consume. So now that we have associations like rural water, these communities have access to clean and safe water, and I think we take that for granted sometimes. I remember one year, our town had an awful water line break and the whole town was out of water. My dad, who works for rural water, had to spend the entire night working on the water line just so everyone in town could wake up in the morning and do their daily routine. If we didn't have industries like rural water, no one would've been able to shower, brush their teeth, or utilize restrooms. As for farmers, they need water more than any of us. Their job depends on water. Many farmers raise livestock and having water access is critical to their survival.

Water is clearly one of the most important resources we can have. Without it, we couldn't survive. However, water does more than just keep us hydrated and keep us healthy, it's actually used for



more things than we think. Most industries all over the world use water to manufacture their products during some part of the production process. Industries that produce metals, wood and paper products, chemicals, gasoline, and oils are major users of water. Industrial water use includes water used for such purposes as fabricating, processing, washing, diluting, cooling, transporting a product, incorporating water into a product, or for sanitation needs within the manufacturing facility. So, without all these water industries, we wouldn't be able to have the resources we do today.

Water is essential to life. The water industry and its employees are critically important in ensuring that we are provided access to clean and safe water each and every day. From manufacturing essential products we need on a daily basis, to conducting daily life activities such as cooking, cleaning, watering our lawns, enjoying a cool glass of water, filling up the swimming pool during the summer months—the list goes on and on. I am extremely grateful for the water industry.

## ■ Dawson Rouse

Water is life. How simply said, and yet, without further explanation, this phrase does not fully do justice to the importance of the water industry to every facet of life. From meeting basic bodily needs, to supplying the neighborhood laundromat; from keeping the local drive-through car wash running, to coming through for municipal and rural fire departments; from supporting waste water collection and processing systems, to delivering for high-tech fabrication applications. Each use of water underscores its very critical place, and the importance of the water industry, in our lives. That is why the water industry, well-managed and properly self-regulated, is vital to life.

An old Korean fable tells of a crafty boy who sold access to “scarce” water to unwitting persons, when the source of that water, a major river, was actually nearby for all to use and enjoy. That story may have been believable in an age when water was considered free for use by anyone and in unlimited quantities.



However, today, nothing could be further from the truth. The recognition of water production and delivery as an indispensable industry has finally begun to take root at a time when access to good, clean, and safe water is, while maybe not “scarce,” nevertheless diminishing worldwide.

Globally, the importance of the world's water industries, and the implications of poorly managed water production and delivery systems by those industries, are staggering. According to the United Nations, 2.7 billion people in the world may lack access to clean drinking water by 2025, and one out of five countries could face water scarcity by the same year. Compounding those dismal statistics, water pollution has surfaced as a critical issue worldwide. About 1.1 billion people have no access to safe drinking water across the world, while 5 million people die of water-related diseases every year. That figure is 10 times higher than the number of people who die in wars every year.

Closer to home, however, the news is considerably more promising. The municipal and rural water systems in our state, many of which comprise the membership of the North Dakota Rural Water Systems Association (NDRWSA), recognize the immeasurable importance of quality water for all. And, fortunately for us all, the professionals within the water industry in North Dakota today have long-term memories and are very much aware of the “Dirty 30s” and other times when water was, indeed, scarce. But, the water industry in North Dakota is well-managed and properly self-regulated, thanks in part to the cooperative relationships it has with federal and state authorities, and the effective advocacy it enjoys from within the NDRWSA.

In the end, however, whatever its use, we should all consider ourselves fortunate to have good, clean, safe, and affordable water in North Dakota. Because of the important water industry we have in our state, we really do have quality on tap!

## ■ Jeremy Friesz

The water industry is very important for our daily life functions and our society as a whole. If you think back to earlier times when people did not have purified and running water easily accessible to them,



you will see just how important it is and just how far we have come as a society. In those times, dying from diseases related to drinking water was sky high and not all of that has completely gone away. Even today, if you look at third world countries, you will see that this is still evident. Every year, more than 800,000 people in the world die from diseases related to the water that they drink. Every minute a child somewhere in the world dies from a water-related disease. Statistics like these make you sit down and think about how lucky you truly are to not have to worry about things such as this. Instead of having to worry about if the water you drink today will ultimately lead to your death or not, we can focus our time on other tasks, and this is in thanks to the water industry and our standard of living.

Another thing the water industry does is it allows our daily lives to be easier and it allows for our time to be used more efficiently. Running water has been huge for our society as a whole. We no longer must go take our gallon pails every morning down to the river to grab water and then carry them back, doing our best farmer walk as our arms begin to shake. Instead, nowadays you just turn the handle on a faucet in your house and like magic there's clean running water right at your fingertips. Now when you need to cook food, you do not need to check to make sure you have water left from the day. We can turn on the dishwasher and not have to worry about the water supply running out and our dishes staying dirty. Water has become a luxury for many of us living in places such as the United States. We cannot take for granted all the things that the water industry has done and continues to do for us. The water industry truly makes our lives easier. Next time you turn on the faucet, make sure you think about the poor kids in the third world countries and stop and appreciate everything you have.

## ■ Kaitlyn Schaner

Water affects everything on earth, directly or indirectly. Without water what would the world be like? We would not have things like the plants or animals that we all have come to know and have helped us humans survive. Without them, human life would not exist. Water



provides all of us with the opportunity to grow crops and raise livestock. In turn, this helps produce the food that is brought into our grocery stores daily. Our livestock (cattle, pigs, sheep, chickens, horses) need water to drink to stay alive, and it is a necessity in growing the hay and food to feed the livestock. Farmers do not only provide for their own families. We depend on our farmers and ranchers to produce enough food to allow us to put meals on our tables every day and meals into our schools for healthy lunch programs.

Corn, a very important crop, is used in a variety of foods, but it also has become important for ethanol. Ethanol has become an alternative fuel important to the United States, and water is a must to keep the corn growing so that we can turn that crop into ethanol for fuel. Ethanol plants have popped up all around America. Without water, this type of fuel would not have come about. Ethanol definitely has become an important part of our country. It has produced more fuel and jobs for Americans and, with America's increasing population, we need to work hard to make sure we have enough water to keep all of us secure.

Many everyday items rely directly on the amount of water they receive. Water is responsible for many things. Photosynthesis, which produces breathable oxygen, uses water. Not all water is used by humans in the same way. Clean water is used for drinking; if it was not clean, people could end up very sick. However, many businesses work hard every day to keep our water clean and safe for us to consume. Just as we require clean drinking water to maintain our health, fish and other organisms need clean water to survive.

We rely on water to provide so many basic needs, and water sustainability and conservation have been becoming increasingly important. Government bodies are continuously monitoring our lakes, rivers, ponds, streams, and groundwater to ensure that the highest quality drinking water is available for all of us. These agencies help to minimize environmental concerns and also make sure that we have or keep providing efficiency in our waste-water treatment facilities. Another way water is used is for fun. Many families take trips to the beach, pool, or just simply turn their sprinklers on at home and enjoy the time spent together. Water keeps us clean when we shower or bathe. Water is necessary to keep people's bodies and the environment healthy, and it should be valued and protected as the precious resource it is.

## ■ Kelsey Purdue

The water industry has had positive impacts in my life and will continue to benefit the lives of the generations that are to follow. The way many people in rural communities receive their water has changed quite drastically in the last several years, and my family has been fortunate enough to be on the receiving end of that process.



Many years ago, my great-grandfather founded his homestead on a small piece of land just a few miles away from the nearest community. The only way to get water to your home in those days was to dig a well, and until just four years ago, my family used the water from that same well. Although the water industry was very innovative with the invention of the well, this process of receiving water is very cumbersome and has several drawbacks.

The three main drawbacks with receiving water from a well are the cost of maintaining and digging a well, softening the water, and having rust or bacteria in the water. In recent years, my family was notified that there was a type of bacteria that had inhabited our well. It was very expensive to remove that bacteria so my family had to boil the water we used for cooking purposes and had to buy bottled water for drinking. This was a huge inconvenience and added to the stress and costs of the maintenance of our well, as well as the cost of softening our water. Fortunately, the Williams Rural Water District brought rural water to our area at the same time these things were happening.

The water my family receives from the Williams Rural Water District is something we are all very grateful for. We no longer have to haul cases of water from the grocery store and can cook and do laundry with the water. The most exciting thing, perhaps, is that my family can now drink water from the tap of our kitchen sink, which is something we had not been able to comfortably do in my lifetime. The benefits of the water we now receive have been innumerable, and I look forward to the progression the water industry will continue to have.

The water industry has changed so much just

in my lifetime. Personally, I have seen my family transition from the use of well water to now receiving rural water. This change has been extremely positive, and I am grateful to my great-grandfather for digging the well, which provided my first source of water, and to the employees of the water industry that have made it possible for me to have a cleaner and more convenient source of water.

## ■ Kobi Allen

The water industry is one of the most important industries in not only America, but also the entire world. Water is necessary for life and needs to be made available for everyone. I hope to one day see water available to every living person on planet Earth.



The water industry in America is working to provide cheap, safe water to many rural communities. Many people in rural America were receiving water from underground wells. The problem with wells is that the water can easily be contaminated with minerals or chemicals that can be harmful to humans and animals. With the increased number of oil drillings and the waste left by protesters, these water sources can much more easily be contaminated. Water companies are building new water towers and pipes to transport water to houses, not only in cities, but also to houses and farms miles outside the city limits. The increase in water infrastructure is helping to provide the vast majority of rural Americans with uncontaminated water.

Water is one of the hardest resources to get in many developing countries. Many of the people living in these developing countries drink water from rivers or lakes, which are usually contaminated with waste. Drinking this contaminated water can cause people to be more susceptible to disease and, because many cannot get medical help, death. I hope to help in the future to contribute to the construction of water treatment plants in developing countries to help give the communities healthy, clean water to drink, as I would hope to see all humans do. The ability for the people in developing countries to have clean water will help the communities grow and develop, as they do

not have to worry about the constant threat of sickness and death from water. Teaching the locals about the importance of water safety will also help with the decrease of contamination in the drinking water, as well as regulating large corporations to not deposit waste in these very valuable water resources.

I hope to one day see that the entirety of the world's population will have access to fresh, clean water. The importance of the water industry needs to be one of the largest interests of governments from every corner of the world. The access to clean water will lead to more development, which all starts with the water industry.

## ■ Lucas Maurer

Living in a modern community in the United States, one can easily forget the immense improvement in quality of life we have over that experienced by our forebearers. From cheap and readily available food, to cheap and reliable electricity, and all the appliances and various gizmos that allow us to do everything from refrigerate food and light our living space cleanly and efficiently, to toasting bread for our breakfast in less time than it takes to brush our teeth.

These things, while probably not as appreciated as they should be, are occasionally made scarce, and their importance is highlighted by that sudden scarcity. A long blizzard can make getting groceries difficult and cause the power to go out for hours at a time, forcing families and roommates to have long conversations.

However, one thing that it seems is even less appreciated than refrigeration or sliced bread is the absolute importance to our modern world of the supply of clean drinkable water that allows the cities and towns we inhabit to exist in the first place. The great cities of previous centuries were all centered around a source for, what in those days passed for, easily accessible and clean water. A well or a river could provide the drinking water for an entire town and could occasionally function as a sewer as well. Such a situation was not conducive to healthy living. Diseases, such as cholera and dysentery, passed through infected water, and were the source of death and extreme illness for many people in the past. The fact that large



groups of people lived together in such unhygienic conditions formed a natural barrier to the size to which a city could grow to, and only the wealthiest capable of surpassing that barrier through massive public works projects which spanned generations in their construction. The clean water which seems to magically flow from an unknown location to our taps and our shower heads is not just a simple convenience, but a necessity for the survival of most modern humans. Without it, cities containing millions of people or even hundreds of thousands could not exist, and the people that make up those cities could not exist.

Through the water industry, one of humanity's necessities has become so common that most people start their day by pouring water, cleaner and safer than any available to past generations, all over themselves and immediately down a drain where it ceases to exist as far as most people are aware. This privilege is, I believe, something that most people from the past would take over any other technological advance. And, unlike the aqueducts of the past, this is not the privilege of one or two cities in the world, but something that even the smallest of towns have access to and, at such a cheap price, that even the poorest have access.

## ■ Sophia Muruato

"We forget that the water cycle and life cycle are one." – Jacques Cousteau.

This quote shows the importance of water in everyday life. My Native American friends have noted to me that water is life and without good clean portable water, there is no life. The importance of the water industry is just as important as life itself. The water industry gives us life by supplying clean water, having an impact on humanity, regulating water and waste, and educating people on the importance of water conservation.

In our rural area, we need water for not only our farms and ranches, but for our small communities. However, just because water is available, it doesn't always mean it's useable. It's important that the water industry tests water for pollution or chemicals before



it is used. I know the state of North Dakota has many safeguards in place to keep our water safe. We can learn a lesson from the city of Flint, Mich. Due to lack of treatment of their water, over 100,000 of their residents had to resort to bottled and filtered water for all uses such as drinking and bathing. Clean water is important, because it is a vital source to humans.

There are many examples of how the water industry impacts the life of humans. Even in North Dakota, we can see that from the front line. The Dakota Access Pipeline helped to open my eyes to how it affected the water in our great state. The water industry sets guideline for treatment of water. Water is not only impacted by humans, but it also helps regulate and control how human waste is processed. Everything that involves water has many rules and regulations to keep our water safe. This is an important factor to keeping life moving every day. The waste we create is affected by the water industry, too. The water industry controls the waste to ensure that it doesn't somehow contaminate the clean water. The water industry provides facilities to take our waste and keep our cities clean. Lagoons also help us to get rid of waste within our communities. The regulation of waste is an example of water conservation.

In our country today, much of the water we use is wasted. One example of this is car washes. Countless gallons of water are used for washing cars, but it is wasted because it cannot be reused. The water industry puts so much time and effort into cleaning our water just for us to waste it. Education about water conservation is paramount to the water industry and the many organizations which spend countless hours teaching communities how to conserve water. If we teach the kids while they are young about the importance of water, we can then preserve water and be better informed about it for the future.

Without the water industry, I would not have the luxuries I have today such as showering, brushing my teeth, and even the great tasting tap water! The water industry works hard to keep everyone satisfied and water healthy. I am thankful for everything the water industry does to keep life within our country moving.

## ■ Tyler Steffan

Water is an essential resource that many people in developed countries take for granted. It sustains all living things and without it, all living things would perish. The water industry provides an important role when it comes to supplying a steady flow of water to all people.

There are 768 million people around the globe that lack access to an improved water source, and more than 80 percent of these people live in a rural area. Poor water access is associated with a multitude of water-related illnesses, food insecurity, lost productivity, and poor school attendance. Daily access to clean water is necessary for cooking, cleaning, and bathing. In rural parts of the world, clean water is needed to fulfill the livelihood of individuals who farm and ranch. In 2010, a milestone was reached when United Nations General Assembly recognized "the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights sanitation." Establishing this as an essential human right obligates states to focus on public investments that aim toward the water sector.

A study done by researchers from the United States and Kenya compared health outcomes of people with an infrequent water supply versus those with a steady supply. The results of this study showed a 37 percent lower prevalence of colon and indigestion problems in children under five years living in poor conditions. Access to drinking water is a large problem for developing nations in arid regions of the world, so it is vital that the water industry works to provide people with reliable access to clean water.

Lack of clean water is responsible for more deaths today than war. One out of every six people do not have adequate access to clean water, and one out of every three people lack basic sanitation. Every day, roughly 5,000 children die from diarrhea-related diseases, a number that would surely drop if they had access to clean drinking water. A United Nations report states, "Overcoming the crisis in water and sanitation is one of the greatest human development challenges of the early 21st century."

Providing clean water to people all around the globe is definitely a challenge, but a challenge that should be met with a vigorous effort. People who have access to clean water should be grateful that the water industry provides them with a constant, clean supply of water.

