

## Why Manage Water for Conservation

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I was taking my horse, Elvis, for a trail ride through some CRP land, a creek, and then through an alfalfa field to get in his daily exercise to keep him in shape. I have him on a workout schedule to condition him and make sure he stays healthy. Along with exercise he is also on a routine diet of hay and grain to make sure he gets the nutrients he needs, with the exception of a few peppermints, because well, he's spoiled. I learned early on that I had to take care of Elvis because if I didn't he would soon waste away due to this neglect and our time out in the rolling hills of Sica Hallow would be limited. This philosophy of taking care of Elvis can be applied to "why manage water for conservation." If we do not- the activities we enjoy, the lives we lead, will not continue.

As I saddle up Elvis for his daily ride I make a quick check of history to ensure Elvis is getting the correct balance of exercise and feed. The same goes for water management. Generations of farmers and ranchers have been able to balance domestic, industrial, and the agricultural needs of people. However, according to new NASA data our world is running out of this freshwater. The 0.7% of freshwater available to humans is shrinking as the demand exponentially increases. Satellite images have revealed that more than half of Earth's 37 largest aquifers, including the Big Sioux and Ogallala aquifers in South Dakota are being depleted, according to gravitational data from the GRACE satellite system. Meaning that our water supplies is shrinking, and water will now have to be found in other places, or we have to face the stark reality that a way of life that South Dakotans have enjoyed for five generations will blow away in strong SD wind.

There are two main draws on our water resources pushing them to become scarcer. First, is that our world's population is increasing and is larger than it has ever been before, which means that our water usage for domestic, industrial, and agriculture will exponentially increase so South Dakota will have to use more water to produce more food. Second, much of the fresh water supply that we have is currently being contaminated by chemicals and pesticides. However, South Dakota tries to manage this by determining whether the pollution came from point or nonpoint source. Without enough water crops will fail to produce the demand for food that we need to prevent hunger. However, this can be better controlled just by simply managing water.

Every week I have to manage Elvis's water by dumping his water buckets to ensure that his water stays clean and he doesn't get sick. We also need to manage our water to make sure it stays healthy. Water management, as described by the United States Department of Agriculture, is the control and movement of water resources to minimize damage to life and property and to maximize efficient beneficial use. By managing water for conservation we are able save water that might otherwise be wasted, and we can produce cleaner water that is less contaminated with chemicals and pesticides.

South Dakota, like many states, has been working on managing water so that we don't have to worry about a shortage, or how we will grow food. According to South Dakota Corn, farmers are hard at work managing and protecting our freshwater. Farmers place natural vegetation "filter strips" to intercept and trap pollutants and soil from fields before they reach waterways. They align furrows to reduce the amount of runoff from rain or irrigation. They use diversion channels to send runoff to safe areas. Make use of buffer strips and grass waterways in ditches to capture sediments or nutrients and prevent erosion. Solar powered wells are also being introduced, because they allow clean water that is

not contaminated with nitrates or bacteria, to quench the thirst of livestock, which allows them to gain weight faster. Farmers have started to take land out of production and put it into CRP and will have to stop growing water intensive crops like corn and go back to wheat and barley, and will soon start investing into drought resistant crops.

Just like how I have to exercise, condition, and feed Elvis to keep him healthy, the same is true for our water. I can't just decide that I don't want to take care of Elvis for the week and then expect him to be fine the next. I made a commitment to take care of him and we need to make that commitment with our water. We need to take measures to ensure that our water for conservation is abundant and clean by managing it. Managing water for conservation ensures that there will be enough clean water to produce fields of crops for hundreds of generations to come, and ensures us that our farmers and ranchers of America will continue to sew the seeds of a bright future for generations to come.