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Safeguard Water Usage

Water conservation involves the responsible use of water to safeguard and maintain this invaluable resource, minimize waste, ensure availability for both current and future generations, and protect the environment. It is important to enhance water usage efficiency by implementing different strategies.

Different frameworks are used for water conservation, but the 5 Rs are commonly referred to: Reduce, Reuse, Repurpose, Recycle, Refuse.

- Reduce usage, keep equipment maintained to avoid leaks
- Reuse rainwater or leftover drinking water for gardening and plants
- Repurpose different ways to use water, giving old ways a new function
- Recycle by implementing systems to treat and reuse water
- Refuse refers to disposable materials, including both recyclable and non-recyclable items

Water Scarcity

Water scarcity has a huge impact on food production. Without water, people do not have a means of watering their crops and, therefore, to provide food for the fast-growing population. According to the International Water Management Institute, agriculture, which accounts for about 70% of global water withdrawals, is constantly competing with domestic, industrial and environmental uses for a scarce water supply. In attempts to fix this ever growing problem, many have tried to form more effective methods of water management. One such method is irrigation management. (The Water Project, 2025)

Implementing Center Pivot Irrigation Methods

Implementing center pivot irrigation methods can increase water-use efficiency, enhance soil health, minimize water loss, and improve crop yields.

Brandt Underwood is an agronomist with the Natural Resources Conservation Service in Texas. Underwood has seen first-hand the conservation efforts of farmers and works directly with them to enhance their conservation practices. He said in conservation, it is important to make the best use of our resources. In times when irrigation is necessary, efficient irrigation systems are one component that can help farmers do just that. (Water Grows, 2025)



Positive Impact on Water Conservation

Let's turn our attention to Reinke irrigation systems and products to discover the ways they are making a positive impact on water conservation. We will learn about Reinke's innovative solutions for improving water efficiency.

Delivering precise water application is done with the Reinke E3™ irrigation system. It is engineered with uniform coupler spacing to establish a consistent application rate from the first span to the last. The grower knows the precise amount of water being applied to the crop.

For uniform water distribution in fields with oddly shaped or previously unirrigated corners, the ESAC™ (Electronic Swing Arm Corner) maximizes irrigation coverage and efficiency. Utilizing a center pivot irrigation system optimizes water usage to ensure growers get more crop per drop.

Insights Into Water Needs

Every field and crop is unique, and Reinke offers the answer. With Variable Rate Irrigation (VRI), precise water implementations are tailored to specific variables within each field. Based on soil types and topography, diverse prescriptions can be generated, resulting in the efficient use of resources.

Growers using technology that involves sensors, weather data, and other information to optimize water delivery for crops are practicing smart irrigation. Using Reinke Direct ET™ by CropX®, the grower receives clear, real-time insights into the crop's water needs. The Actual Evapotranspiration (Eta) of the crop is measured directly and in real-time. Insights into the water needs of the crop are easily understood and measured over a broad area of the field.

It is also helpful to know what is taking place above the ground and below it. With the CropX soil monitoring sensor, data is collected on soil moisture status, crop behavior, and soil health. The grower determines the time to water and the locations for applying chemicals. From the roots to the shoots, the grower is aware of what is happening.



Remote Management

When a remote management system is implemented, a grower greatly enhances precision irrigation practices. With the ReinCloud® remote platform, pivots and irrigation equipment can be controlled from anywhere, day or night, using a smart device.

Irrigation decisions are made by the grower using ReinCloud, without having to actually go to the field. Water management is in the hands of the grower.

- ▲ Numerous pivots can be monitored from a single location, from anywhere, at any time.
- ▲ The grower can quickly view the status of the irrigation system and equipment.
- ▲ Real-time updates, able to make real-time decisions.

Using Innovative Solutions

Precision and efficiency are essential in agricultural irrigation. Incorporating technology is important for managing and distributing water resources effectively. Reinke is providing innovative solutions to growers, contributing to the advancement of water conservation.

NRCS emphasizes a “systems approach,” meaning conservation practices are recommended to be applied together to protect water quality and quantity, while meeting producer needs. Keeping soil and nutrients on the land, where they belong, is a shared goal that helps to boost crop yields, bottom lines, and water quality benefits all at once. A “systems approach” can also help optimize the application of nutrient and agrichemical inputs, reducing producer costs. (USDA, 2025)

Essential Factor

Water is an integral factor for agriculture, industry, and overall economic growth. It takes everyone working together to manage and keep water sources healthy, not only for ourselves, but also for future generations. You can make a difference!

References:

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