

Watching Every Drop. The Irrigation Industry.



Agriculture

Agricultural water use decisions are made using science and practical economics. The technology to more efficiently utilize water exists. The challenge is to adopt modern technology and progressive water management at a faster pace.

Annually, 25% of the country's renewable water supplies are withdrawn from aquifers, streams and lakes.¹ Of the 25% taken out, agriculture utilized nearly 79.6% of it.² We can and must reduce the amount of water removed if we are to meet our future water needs.

Technology is the Key

Virtually all types of modern irrigation have become more efficient. The development of advanced irrigation technology has given farmers the ability to increase their effective use of water from less than 50% to more than 90%. In addition to using water more efficiently, properly managed irrigation enables farmers to utilize fertilizers and chemicals more effectively.

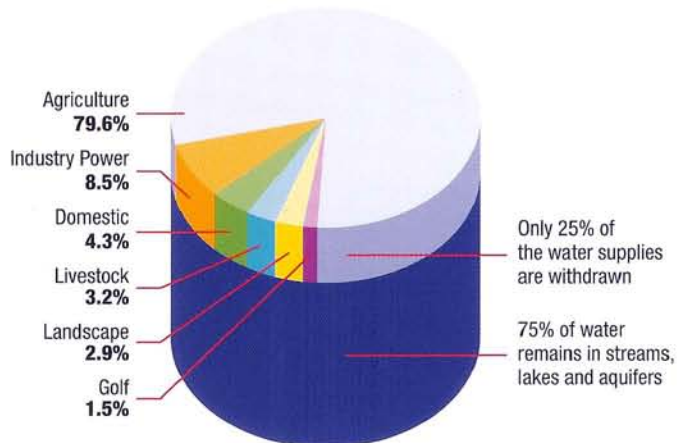
The reasons to support efficient agriculture irrigation techniques are clear:

- Irrigated acres account for only 15% of U.S. farmland, but produce 38% of farm revenue.³
- Irrigation ensures higher, more predictable yields.
- Growers can increase production without increasing acreage.
- Irrigated fields are more productive, so growers use less water per unit of crop harvested.

We Have the Management and Technology To Conserve Water on Our Farms

Dramatic water savings are possible with modern technology. These savings are only possible if farmers actually put this new technology and best management practices to work. Growers with less efficient systems should be encouraged to upgrade. And growers who do not presently irrigate should consider the benefits efficient irrigation practices could provide.

Fresh Water in the United States



Pie chart represents 100% of fresh water

In the U.S., traditional gravity/surface irrigation uses 63% of the water while progressive sprinkler and drip systems use only 37% of the water.²

Present irrigation techniques include:

Surface/Gravity

Certain crops require surface/gravity irrigation which accounts for 51% of the irrigated cropland, but 63% of the water usage.²

Sprinkler

Currently, 45% of irrigated cropland use this method while consuming only 33% of the irrigated water used.²

Drip/Micro

This technique, employed on 4% of irrigated cropland, uses 4% of the available irrigated water supply.²

¹ Agricultural Resources and Environmental Indicator

² Bureau of Census Farm and Ranch Irrigation Survey 1998 USDA/ERS

³ A New Era for Irrigation, National Research Council

More Food with Less Water...

Modern Irrigation Guarantees Food Supply While Preserving Our Environment and Water Quality

Modern agriculture is based on sustainability—the process of protecting the soil and water required to grow plants for years to come. Millions of acres of crops help feed and clothe us, generate the oxygen for us to breathe, conserve our soil, and trap rainfall to recharge our aquifers. This huge task is frequently threatened by drought, disease and pests. Properly managed irrigation technology helps protect the environment and improve water quality by using a lower level of resources.

The reduction in the amount of water applied each year by agriculture adopting more efficient irrigation practices equals the water needed for the personal use of every man, woman and child in the nation's 29 largest cities.

Efficient Irrigation Use Protects the Environment in Many Ways:

Reduces non-point source water pollution

Eliminates runoff, which historically has been a major source of non-point pollution in our streams—chemicals and fertilizers won't run off and damage our water supply.

Keeps groundwater clean

Reduces percolation of fertilizers and chemicals into groundwater supplies and preserves watersheds and wetlands.

Allows precise application of nutrients

The irrigation system acts as a conduit that delivers nutrients precisely to the plant with no waste.

Prevents erosion of top soil

Greatly reduces silt deposits that fill our lakes and streams.

Protects the soil and water from destructive salt buildup

Prevents buildup of salts in the soil, keeping crop root zones productive and eliminates salts entering streams.

Permits land treatment of animal waste

Distributing untreated animal waste over the land with irrigation systems, filters the water for return to the environment.

Putting Recycled Water to Work

Recycling water for use in irrigation is technology that will benefit everyone. Recycled water technology is available today that can convert our cities' sewage and drain water into a beneficial product for agriculture. The high nitrogen water output from our treatment plants that pollutes our rivers must be recycled and put to productive use in agriculture irrigation. We only need to create the delivery system.

A Positive Course of Action for the Future

In the future, advanced irrigation will provide higher quality fresh water supplies to a growing population while maintaining the food security Americans expect. Before this happens, we must assist farmers in installing or converting to modern irrigation technologies and practices immediately.

The greatest deterrent to agricultural conversion to new technology is the initial cost involved with the adoption of these advanced ideas. Therefore, policy makers must consider the following initiatives to increase the conversion rate of non-irrigated or older systems to proven, modern irrigation techniques.

- ▶ Create conversion incentives for farmers to embrace modern technologies.
- ▶ Establish tax credits for investment in irrigation systems.
- ▶ Offer low-interest loans to encourage purchase of more efficient technology.
- ▶ Adjust the price of water to more closely reflect its market value.
- ▶ Measure all water used in agriculture.
- ▶ Remove obstacles to utilize recycled water for irrigation.
- ▶ Assure those farmers who invest in efficient irrigation technologies that they will have the water they need to produce food for America and the world.
- ▶ Educate farmers to the economic advantages of environmentally sound irrigation practices.

The technologies to improve irrigation efficiency and water quality are available now. It is only a matter of putting them in place.

Since 1949, Irrigation Association (IA) members have led the advance in water-use efficiencies to create smarter solutions for agricultural, residential and commercial landscape irrigation. The IA is comprised of industry professionals from both public and private sectors—researchers, technicians, manufacturers, distributors, dealers, system designers, consultants, installers, and contractors—all dedicated to assisting the irrigation community develop and effectively utilize our most vital resource.



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