

Idaho Irrigation Equipment Association



Irrigation in Idaho: The basics

To control snow and water run-off and manage water resources in Idaho, many dams, canals, and ditches have been built. These man-made structures have enabled the water to be diverted to water crops, parks, and landscaping.

Irrigation is the controlled application of water for agricultural and landscape purposes through man-made systems. Because of Idaho's climate, farmers can't count on regular rainfall to water plants. So they use irrigation to water their plants which results in producing some of the best landscapes, crops and seed in the world.

The 2018 USDA Irrigation & Water Management Survey reported that United States farmers and ranchers irrigated 58 million acres of farmland. Idaho had almost 3.4 million acres of irrigated land. The states with the largest area of irrigated lands are: 1) California 2) Nebraska 3) Arkansas 4) Texas and 5) Idaho.

This flyer will discuss six kinds of irrigation: land-



Lucky Peak Reservoir helps to divert water into the canal system in Western Idaho.

scaping- including home, parks and commercial- flood, siphon tube, wheel line, center pivot and drip line.

Landscaping

Sprinklers are a vital part of landscaping for homes, parks, golf courses and businesses. Instead of growing food, desired crops are flowers, trees, and grass. A good sprinkler system helps conserve water and produces beautiful landscapes and scenery.



A sprinkler system waters the grass and trees at a park in Meridian, Idaho.

Flood Irrigation

Flood irrigation is water that is pumped or brought to the fields and is allowed to flow along the ground among the crops or fields. This method is simple and cheap, and is widely used by societies in less developed parts of the world as well as in the United States. Farmers can capture the runoff in ponds and pump it back up to the front of the field where it is reused for the next cycle of irrigation.



Flood irrigation



Siphon Tube Irrigation

Siphon tubes are a basic implement used in irrigation to transfer water over a barrier (such as the bank of a raised irrigation canal), using the siphon principle. At the simplest, they consist of a pipe with no working parts. To work they rely on the water level in the canal being at a higher level than the water level in the field being irrigated. Like any siphon they must be primed (that is, filled with water) before they will start reliably transferring water. Once primed and positioned correctly, they will continue transferring water from the source to the destination.

Wheel Lines

Wheel Lines come in 40-foot sections and can be assembled into whatever length a farmer needs to cover. They are normally propelled by a motor/mover in the middle of the line that rolls the wheel line across the field, usually 50 feet to 60 feet per move. Crops are limited because of the short height of the pipe.



Drip Irrigation

For irrigating fruits and vegetables this method is much more efficient than flood irrigation. Water is sent through plastic tubes (with holes in them) that are either laid along the rows of crops or even buried along their rootlines. Evaporation is cut way down, and 40 percent of the water used is saved, as compared to flood irrigation. The photo at the left shows a field being irrigated by drip irrigation. The right side of the picture is after 24 hours and the left side is after 12 hours.

Center Pivots

The center-pivot systems have a number of metal frames (on rolling wheels) that hold the water tube out into the fields. There can be a very big water gun at the end of the tube. Electric motors move each frame in a big circle around the field (the tube is fixed at the water source at the center of the circle), squirting water.

