

## Rainwater Catchment

*A simple, integrated approach to a complex issue.*

A drought, over allocated surface water diversions, the absence of forest management and a changing regulatory landscape has made rainwater catchment the only sustainable solution to meeting the irrigation requirements for agriculture in upland watersheds. This simple, integrated design will facilitate the catchment of rain off of any structure, provide primary filtration and a recharge source for groundwater that will ultimately enhance in-stream flows.



Image 1

Gutters are inexpensive, easy to install and can be rigged to accommodate any roof structure. At 600-gallons per 1-inch of rain per 1000ft<sup>2</sup>, connecting many roofs to one storage system can guarantee sufficient water volumes for agricultural purposes.

A debris screen (Image 1) in the downspout port is the first layer of filtration for storing clean water. A wet-conveyance system (Image 3) eliminates any overhead plumbing and acts as a secondary level of filtration. This integrated first-flush mechanism captures material that has bypassed the debris screen. Install a clean out at the lowest point of the system where built up debris can easily be purged.



Image 2

A bypass (Image 2) is recommended for systems connected to large roof structures, systems that experience frictional loss due to lengthy runs of horizontal conveyance and/or for sites that lack winter monitoring and maintenance. The bypass ensures that any back flow will be safely discharged through a traditional downspout setup and not into the gutter risking damage to the structure. Lastly, a passive overflow should lead to an infiltration basin or swale to recharge groundwater and enhance in-stream flows during the dry season.

### Why Rainwater Catchment is the Best Source for Irrigation Water

1. Eliminates multiple agencies and their associated permits, fees, monitoring and inspection requirements.
2. It is more ecological than surface water diversions (even with a forbearance period) and wells.
3. Eliminates the need for pumps near waterways and their potential for leaking gas or oil.
4. Branding and marketing to help your farm stay competitive.



Image 3