



Ecological Drainage Strategies

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Landscape architecture plans precipitation run-off from roofs and topography to match the moisture requirements of landscape plantings. This can be manipulated by a number of active and passive water-harvesting methods. With proper water harvesting techniques, a site that receives 15 in. of precipitation annually and has a 50-percent lot coverage can sustain plants that rely on 15 to 30 inches of rain annually.

Swales or bio-swales, berms and boulder placement may be used to augment active methods such as guttering, downspout locating, underground piping and leach trenches. Cisterns or ponds may collect rainwater to be distributed through irrigation systems.

Slowing run-off and allowing it to saturate soil as much as possible reduces off-site storm erosion and promotes healthy habitat. Drip irrigation alone cannot bring a tree to maturity; trees will never fully mature until they have a consistent natural or augmented groundwater source.

Run-off should be well-planned and managed to prevent damage or adverse interruption of natural flow lines. The design must take care not to flood or super-saturate soil under building footings. Roofs, driveways and hard surfaces should be designed to collect water and draw run-off into adjacent landscape areas.

When using plants not native to the region, timing of moisture over the course of the year needs to be considered. Native plants are always a preferred option, as they're already adapted to the moisture regimen.