

## On water and the meaning of mud

Got mud? As we come to the end of this wonderfully wet winter, I'd bet most folks have had an experience landing them in the middle of some muck-filled morass.

As a sign of life, mud is most welcome in the desert but as a sign of our most precious resource soon vanishing into thin air, mud means a missed opportunity. Instead of soaking completely into the soil or being diverted to a cistern for future use, much of the water in the mud we see quickly evaporates with the inevitable re-emergence of our fervent sun. The good news is that there are numerous ways to reduce mud, while controlling erosion and harvesting precipitation. A few examples:

**check dam** — a permeable structure, usually made of rock, placed in an arroyo such that sediment is held back and the velocity of run-off water is decreased.

**cistern** — a water-storage tank in which runoff from an impervious surface such as

a roof is collected for future use, often to water plants via a drip-irrigation system.

**French drain** — a hole or trench filled with gravel or rocks sometimes containing a pipe to direct moisture toward a particular place.

**gabion** — a permeable dam similar to a check dam, but rocks are often wrapped in wire cages to prevent the structure from being washed away during heavy rain events.

**mulch** — any material that covers the ground while retaining moisture, shading the soil, controlling erosion and mitigating extreme shifts in ambient temperature.

Examples are straw, shredded bark, bark chips, compost, gravel, crusher fines, pecan shells, and tumbled glass.

**on-contour swale** — a ditch dug along the contour of a slope with the dirt from the ditch placed on the downhill side of the ditch in the form of a berm. After rain,

a bubble of moisture is formed under the swale.

**pumice wick** — a ditch filled with pumice and covered with soil, often containing a perforated drain pipe, that harvests water from an impervious surface for use at the root zones of plant material.

**straw bale gabion** — a wattle made of one or more straw bales nailed to the earth using 3-foot rods of five-eighth-inch rebar.

**straw bale swale** — a swale using one or more straw bales instead of the local earth. These often are used on steep slopes where dirt in an on-contour swale would slough off.

**straw book swale** — a swale using the distinct pieces (often called “flakes” or “books”) of a straw bale. These are buried about halfway into the ground when flow is likely to be light but the slope is still too steep for a standard earthen swale.

**swale** — see on-contour swale.



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If you can't wait for future columns for all the details, please join me at my next workshop, “Practical Permaculture”, on March 19 and 20 at EcoVersity. To sign-up, call 424-9797 or visit [www.ecoversity.org](http://www.ecoversity.org).

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