

Land Restoration: A Watershed Perspective

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Historically, humankind has exploited the earth and its resources with little thought toward the future. While reaping us short-term rewards, this pattern of exploitation has been gradually destroying the very resources we need to sustain us permanently. If civilization is to progress forward, our use of the land must shift in a direction of sustainable use.

Sustainable use of land and resources is the essence of conservation. While simple in concept, however, conservation sometimes requires a broad understanding of natural systems. Watersheds provide an excellent example.

Briefly, a watershed is all the land that drains into a specific watercourse. Large watersheds, such as that which feeds the San Pedro River in southeastern Arizona, are composed of many smaller watersheds.

Many conservation problems in the lower part of a watershed--e.g., erosion, flooding, and desertification--are actually the results of poor land use in the upper watershed. Practices such as overgrazing or inappropriate development in the upper part of a watershed, for example, can have a devastating impact downstream. Occasionally, even natural disasters such as fire can adversely affect an entire watershed--although under some circumstances fire may also be beneficial.

For maximum effectiveness, techniques used to control erosion on a lower watershed--such as the

construction of gabion walls--should be used in concert with good land use practices in the upper watershed.

The re-seeding of grasses can sometimes help to heal a degrading watershed. In the arid southwest, however, re-seeding projects often fail due to the unpredictable rainfall here. Such projects can also be costly. If undertaken successfully, re-seeding must be followed up with proper landuse. Often, simply shifting to environmentally sound land use practices can restore the landscape more economically and effectively than re-seeding.

If overgrazing is causing a watershed's deterioration, it must be permanently prevented. Otherwise the land will once again deteriorate. For cases in which land degradation is due to improper or poorly planned development, the solution may be more difficult to achieve. Clearly, conscientious land use planning prior to development is the answer; but this, unfortunately, is often neglected.

Addressing an entire watershed is not a simple task, particularly for the landowner who only lives on a small portion of the landscape. Being a conservationist means working with our neighbors to develop a plan that can heal the whole system. Aldo Leopold defined conservation as "living in harmony with nature." Determining how to apply this definition to the restoration of our land is a challenge. But it is a road we all must travel to create a sustainable future.