

ARIZONA TOPIC SUMMARY

Recreational Impacts on Natural Resources

Recreation, whether active or passive, is vitally important to everyone and offers physical, emotional, and spiritual benefits. The amount of time and money people spend on recreation is rising, along with the diversity of recreational opportunities.

What impacts might these have upon the natural world? We need to more fully examine their 'footprints' upon our natural resources. This is especially true in the arid West, particularly in AZ where...

- The Sonoran, Mohave, Great Basin, and Chihuahuan Deserts together cover much of Arizona.
- The largest stand of ponderosa pine forest on the continent stretches from near Flagstaff along the Mogollon Rim to the White Mountains region.

Webster's defines recreation as "refreshment in body or mind, as after work, by some form of play, amusement, or relaxation" and includes games, hobbies, sports, and other activities. For our purposes, we will narrow the focus to outdoor activities within a natural setting. Examples for Arizona include hunting, fishing, hiking and backpacking, skiing, mountain biking, rock climbing, rafting and kayaking, bird watching, and cultural observations/explorations. These may be low- or high-tech, low- or high impact, and require little or strenuous physical exertion. No matter the form of recreation, humans are consumers and leave behind some trace upon the earth. This 'trace' often grows considerably as the number of people using that resource increases and can negatively impact vital natural resources.

Recreation is important to the economy. Consider these statistics for Arizona: in 2005, according to the National Park Service, more than 11.5 million people visited Arizona's 21 National Parks and National Monuments. According to Dr. John Silberman from Arizona State University West, fishing and hunting alone generated nearly \$1 billion in retail sales for 2001. Applying this data to Arizona's economy, these sales provided a statewide economic impact of \$1.34 billion, which supported 17,190 jobs, created \$314 million in household income, and added \$58.2 million to annual state tax revenues... just for hunting and fishing in Arizona! And, Dr. Silberman indicates that economic significance is tied to the location and natural resource as well.

How might recreation impact natural resources? One impact often gives rise to more, creating a cascading effect that may become difficult for land managers to control. Changes in water quality and alteration of surface flows impact water. Compaction and erosion often degrade soils. Non-native flora and fauna can be introduced into the ecosystem, causing shifts in the balance from native to non-native species. The frequency of wildfire can change, causing shifts in the flora and fauna of an area. Recreation leads to an increase in the use of energy, especially fossil fuels, leading to air and water pollution. Noise pollution may alter natural range and habitat especially critical to sensitive species. And, how do we manage human waste that is a by-product of our lifestyle?

These are only a few of the potential impacts. And, all are intertwined. A prime example: as soils are disturbed they may erode with resulting debris creating runoff into nearby streams, thus changing the water quality. The change in water quality may have serious repercussions for native species that rely on cleaner water. Non-native species may outcompete native species if they can tolerate the sediment load while the natives do not. This, of course, is a simplified version of a possible chain of events. In reality, the impacts are far more extensive and complicated.

Some questions to ponder:

- What is your favorite recreational activity? How do you think this activity impacts natural resources? How might you reduce any negative impacts that directly or indirectly result from this pastime?
- What might be the impact of limiting certain recreational activities? Is preservation (no use) better than conservation (managed use)? How can we manage use in order to minimize negative impacts?
- In the face of increasing demand for both traditional and new forms of recreation, how can we balance our need to enjoy the natural world with maintaining the quality of the environment?
- Although recreation can add significantly to both local and state economies, are there options through preservation and conservation to off-set the losses due to decreased recreation?