

Colorado's Natural Resources Issues and Trends

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Land Types

Colorado is dramatically diverse in land and natural resources that are attractive to tourists and residents alike. Private lands represent 59% or 39 million acres of all 66.3 million acres of Colorado terrain, with 41% or 21 million acres held by public entities. Most private land is on flatter terrain and river bottoms and includes rangelands (30%), croplands (16%), other farms (3%) and other rural lands (8%). Three percent of the developed land is along the major rivers of the state and along Interstates 25 and 70. The National Resource Inventory identifies 24 million acres as range, 8.9 million acres as croplands, 3.7 million as forest, 1.9 million as Conservation Reserve Program (CRP) lands, 1.2 million as other rural land, .3 million as pasturelands, .3 million as water areas, and .14 as developed land. Between 1987 and 1997, 1.4 million acres of agricultural land were converted to other land uses, specifically urban building and low-density non-agricultural rural lands as well as public open lands.

As the population has exploded, particularly along the Front Range and in forested areas of the state, competition over access to land and policies developed for wise stewardship are becoming increasingly conflicted. The aesthetics and health of both human and natural communities in Colorado are at risk.

A review of the base industries for Colorado (see Garner, Elizabeth "Colorado Economy Trends and Issues") identifies three major areas of the state including approximately 25 counties which show base industries related to the natural resources of the environment. These three classifications include scenic, ski resort, and retiree destinations and include activities such as hunting, fishing, skiing, hiking and rafting. Our rich natural resources are an important base of the state's economy, but particularly in these 25 counties.

History and Present

Throughout its history, the Colorado economy often has been based on exploitive use of resources and has therefore cycled from boom to bust. Early hunters, trappers and explorers were followed by homesteaders who moved into the high plains with agricultural enterprise plans. Miners and mining claims pockmarked hillsides and stimulated major metropolitan centers that were later abandoned when the ore did not prove rich enough to support the development. More recently, tourism activity such as skiing, rafting and hiking crowd pristine areas of the Colorado landscape. Currently the boom in Colorado supports immigrants seeking jobs in industries which have expanded during the 1990s and real estate developers have built entire new communities with limited regional planning and integration of service needs across a geographic area.

Small acreage owners are among the largest group of land and home purchasers in Colorado. Many real estate professionals report that the turn-over of land ownership on these small parcels is higher than any other real estate sector largely due to the new owners lack of experience and skill in managing the natural resources they purchase.

Natural resource income sectors

In fiscal year 2001, a national survey documented that 2.1 million individuals participated in wildlife associated recreation in Colorado mainly hunting and fishing. These persons added \$1,652,892,000 to Colorado's economy with approximately one-third of the purchases made by out-of-state visitors. In addition, \$1.4 billion are added to Colorado's economy by services purchased by hunters and anglers in the state. The importance of the wildlife related income was illustrated by the concern expressed in 2002 when the Chronic Wasting Disease (CWD) epidemic appeared to threaten the viability of the hunting industry. In selected areas of the state, 20% of deer and elk herds were culled, and 24,864 CWD specimens were submitted to the Colorado State University Diagnostic Laboratory for testing in the hunting season. From 2001 to 2003, a total of \$2,630,896 in supplemental appropriations were passed by the Colorado legislature in order to deal with control and research documentation of CWD.

In summer of 2002, the eruption of West Nile Virus in Colorado, particularly along the Platte River, alarmed horse owners and presented another challenge for the Department of Agriculture, the state veterinarian, and other businesses related to the equine industry.

In the winter of 2003, exotic Newcastle Disease has moved from California to Nevada and is demanding surveillance and planning by the Colorado Department of Agriculture.

The tourism industry in Colorado accounts for \$8.5 billion of the state's economy, provides 220,000 jobs, and is the third largest economic sector. In addition, tourism provides \$550 million sales tax revenues to state and local governments each year.

A new economic extraction development in Colorado involves energy deposits from coal, gas, oil and coal-bed methane. Such enterprises may offer employment in some regions of the state, but related economic and environmental impacts frequently cause community divisiveness.

Weeds

The increasingly deleterious effect of noxious weeds in Colorado has created a need for additional public resources. In fiscal year 2001, the County Weed Program office of the Department of Agriculture reported that \$4,622,310 was spent by six major Colorado departments in attempts to control noxious weeds in Colorado. It is projected that these expenditures will increase by 17% in fiscal year 2002. One of the three special initiatives to the Colorado Legislature for targeted funding presented by the Colorado Forest Service, the Agricultural Experiment Station and Cooperative Extension was for research and education around noxious weeds. The current inventory of the 20 major species of noxious weeds in Colorado shows that these noxious weeds impact a total of 553,163 acres in the state. Seventy-eight percent of these acres are damaged by the five most

common species (diffuse knapweed, Russian knapweed, leafy spurge, perennial pepperweed, and yellow toadflax).

Drought

The prolonged state-wide drought and above average temperatures are threatening the economic employment sectors related to agribusiness and tourism, significant parts of the green industry and by diffusion much of Colorado's economy. Recent market-driven transfers (sales and leases) of water to urban locations facilitate urban growth and deplete water access for productive land in rural areas. In February of 2003, the Colorado reservoirs stood at 48% of capacity. With decreases in open space in and around cities, there is a compelling need for deliberate planning for Colorado's future.

The summer of 2002 brought 2,012 forest fires which burned 501,630 acres in Colorado. The prolonged drought that currently shows no signs of lifting is likely to yield another spring and summer with severe limitations on access to water. The changes in municipality and water managers' practices in relation to junior water rights holders, and reduction in tourism activities such as rafting will be immediate and obvious effects of a prolonged drought. Commercial rafting was down by 39% in Colorado in 2002. Over a longer period of time, individuals may need to transition out of water-based tourism enterprises. Almost 53% of tourism jobs are likely to be impacted by the drought.

As drought continues, one effect is the movement by wildlife into areas where they might access human food resources. Canada geese, deer, elk, prairie dogs, bears, coyotes, bats, raccoons, skunks, woodpeckers, and seed eating birds increasingly are creating conflicts in rural and urban areas. Human adapted wildlife species tend to be increasing while original species are diminishing in the state.

Property owners' opinions about forest management and defensible space impact dramatically on the ability of community service providers to protect property in times of drought. Aging forest stands that have not been managed with fire as a tool now stand in mature, dense configurations and are loaded with fuel. In such a mature forest, snow evaporates from the branches rather than changing to water and soaking into the ground. The dramatic infestation of insects following both fire and prolonged drought is another example of an ecological imbalance in the current natural resources of Colorado.

Forest Health

In 2002, powerful interactions between drought, wildfires, disease and insect activity caused landscape scale changes in Colorado's forest. The fire suppression cost in Colorado in 2002 was \$152 million, 9 lives and 81,000 residents that had to evacuate. In the southwest, southeast and south central areas, ISP beetles are now threatening 50 to 80 percent mortality of the pinyon forests. An outbreak of mountain pine beetles in the central low and mid-elevation mountain areas is killing ponderosa, lodgepole, and limber pines. The spruce beetles are destroying thousands of firs in the 13,000-acre Rout Divide blowdown.

The aftermath of drought-induced forest fires is a threat to water quality posed by excessive run off and sedimentation. The need is critical for local landowners to work

together to provide fire mitigation and defensible space efforts which are at landscape levels and are maintained over time.

Major Issues for Colorado Natural Resources

1. Access to public lands with reasonable management strategies to protect the natural resources.
2. Development tools such as land trusts, transfer of development rights, cluster development, community supported agriculture, etc. that facilitate population growth and protect public access to natural resources.
3. Access and control of water including decision-making on transfer of water rights, the need for increased storage facilities, urban claims to rural water, community regulations regarding the selection of plant materials for landscaping, and access to water for water-based industries including tourism, etc.
4. Education for new immigrants on how to manage life in the west.
5. Landscape level interagency public/private planning to protect forests, water and open space.

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