

# Coal's War on Wildlife

*Wildlife Bears the Burden of Big Coal's Failure to Reclaim Western Lands*



Colin Ruggiero

**T**he American West is home to an impressive array of native wildlife. Pronghorn graze the sunny, open grasslands; elk silently wander dense winter forests; sage-grouse strut across vast expanses of sagebrush; grizzly bears roam the valleys and mountaintops; and trout fill the blue ribbon streams and rivers. Enormous stretches of wild lands give residents and visitors an opportunity to experience wildlife and nature in a way that is unparalleled in the Lower 48.

These same rugged and wild Western landscapes, however, also house millions of tons of coal deep underground. And, unfortunately, as has been the case all too often in the West, our beloved lands are being sacrificed to dirty energy industries at the expense of wildlife and their habitat.

Safeguarding Western wildlife and ecosystems from the dangers and destruction of coal mining was a need foreseen by lawmakers decades ago. In 1977, Congress enacted the federal Surface Mining Control and Reclamation Act (SMCRA) to ensure that coal

mining operations are designed and operated to protect land, water, wildlife, and local communities. SMCRA also dictates that coal mines are to be reclaimed in a complete and timely fashion so that mined lands can return to their pre-mining uses (e.g., wildlife habitat).

Frustratingly, a recently released report authored by the National Wildlife Federation, Natural Resources Defense Council, and Western Organization of Resource Councils, *Undermined Promise II*, finds that coal companies have fallen far behind in reclaiming mined lands, and, with the coal industry on shaky financial ground, the public faces increasing liability for massive reclamation costs of more than \$3.5 billion as well as damage to landscapes, wildlife, and crucial water supplies.

## Mining 101

Surface coal mining is a destructive process. It requires large areas of land to be disturbed resulting in a number of environmental concerns that can have both direct and indirect impacts on wildlife.



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Bill Dvorak



Colin Ruggiero

In most cases in the West, in order to expose coal deposits, water must be pumped out of surrounding aquifers, reducing the amount of water available for agricultural, domestic, and wildlife uses. As the mining process continues, heavy equipment like bulldozers and excavators remove the existing surface topsoil and rocks to expose large beds of coal. Large amounts of rock are pulled out of the ground and piled up into gigantic on-site waste dumps. Heavy metals, minerals, and sometimes toxic substances that are trapped within this waste rock can become harmful to human and wildlife health once exposed to air or water.

## Reclamation in an Arid Climate

Even if enforced and executed properly, reclamation is particularly difficult to achieve in the West. Arid conditions place soils at increased risk to damage caused by mining. And, once native vegetation is removed, erosion tends to increase dramatically.

One of the most common reclamation problems at Western mines is meeting SMCRA's requirement of establishing a "diverse, effective, and permanent vegetative cover ... capable of self-regeneration and plant succession at least equal ... to the natural vegetation of the area." Native vegetation in the West has adapted to the arid climate to provide maximum soil stability during drought periods as well as food and shelter for wildlife species throughout the year.

Unfortunately, because re-vegetation of native plant species can be time-consuming and expensive, many coal companies choose to instead use non-native

vegetation in their reclamation efforts, which stabilizes the soil in the short term, but often does not meet the food and shelter needs of the species that depend on native vegetation and is likely incapable of the long-term self-regeneration that is required by SMCRA.

## What This Means for Wildlife

Coal mining has serious, lasting negative impacts on wildlife. In the short term, species can be killed or displaced from their habitat. In the long term, many wildlife species face severe impacts resulting from their habitat being destroyed.

Construction and mining activities can cause wildlife deaths and can disturb and displace wildlife populations. Typically, direct mortalities from mining activities occur as the result of interactions between wildlife and mining equipment, increased traffic, and other development.

Reptiles, amphibians, and small mammals are generally not mobile enough to avoid mining equipment. Bird mortalities are caused by collisions with electrical transmission lines and other mine support structures, while fish mortalities result from the rerouting of streams as well as heavy construction activity near stream channels.

Coal mining displaces and disturbs wildlife populations, in the most obvious way, by forcing wildlife living on that landscape to move. The survival likelihood of wildlife species that are mobile enough to avoid development decreases when they are forced to move



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to locations already occupied by other wildlife. In these situations, displaced wildlife are forced into greater competition for the resources they need to survive.

Other impacts of coal mining include air pollution and water contamination. The exhaust from heavy equipment and transport vehicles contains harmful gases, including sulfur dioxide and nitrous oxide as well as trace metals such as lead. In areas near access roads and other locations with heavy traffic, increased levels of lead in vegetation and wildlife have been documented. In the long term, increased exposure of wildlife to trace toxic elements through dust from mining activities can cause animals to suffer from a variety of disorders (e.g., pulmonary complications, mucous membrane dysfunction).

Surface water contamination from increased sediment loads can cause decreases in aquatic oxygen content and light penetration, reducing the growth of aquatic plants and resulting in the direct mortality of fish and other aquatic species dependent on the plants as a food source. In addition, toxic elements can leach from rocks exposed by mining. Although there is less water to contaminate in arid areas, the general lack of surface water means that contamination that does occur can be more concentrated and have a greater impact on wildlife dependent on the water source.

Some species depend on a very particular native habitat, such as the sagebrush steppe, which has proven to be nearly impossible, or at least very time intensive, to restore. Expansive mining development can also disrupt migration routes and damage critical winter range for large game species.

Restoring mined land to meet the needs of native wildlife and plant species is a significant, long-term challenge. The goal is to reestablish a diverse, productive, functional, and sustainable ecosystem of wildlife and native plants that resembles the diversity and the health that existed before the lands were mined.

Unfortunately, successful reclamation as defined by agencies implementing SMCRA is not designed to assess full ecosystem recovery. Instead, successful reclamation involves meeting certain criteria, which, in most states, includes replacing the topsoil, restoring disrupted water flow, preventing erosion, and reestablishing a diverse, effective, and permanent vegetative cover. Although important, these standards are not restoring quality wildlife habitat.

Due to the challenges of restoring native wildlife habitat in arid regions, not a single mined area in the West has been fully restored to its pre-mining wildlife habitat conditions. Mining *always* permanently alters the

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ecosystem, and the long-term and cumulative impacts of coal mining and the subsequent lack of reclamation are *significant and permanent* for wildlife.

## What Can We Do?

Meeting the challenge of conserving Western wildlife and their habitats in the face of continued coal mining and lack of reclamation will require aggressive action on a number of fronts:

1. Federal agencies need to stop issuing permits for new mines in areas that are not being reclaimed.
2. Federal agencies need to stop issuing permits to companies who have yet to reclaim already mined land.
3. The U.S. Department of the Interior should stop leasing public lands until at least 50% of existing mined lands have fully completed the reclamation process.

4. The Office of Surface Mining (OSM) must ensure that wildlife habitat is actually restored to pre-mining conditions and functionality – and is not merely “restored” to an aesthetically pleasing condition.

5. OSM must ensure that companies are achieving adequate native plant diversity and restoring topographical features as part of the reclamation process.

6. OSM needs to track invasive species throughout the reclamation process (as reclaimed land is more susceptible to non-native species). Invasive species are a current barrier to re-establishment of pre-mining conditions in wildlife habitat.

7. OSM needs to ensure that bonding amounts and terms are sufficient to fully restore wildlife habitat.

## Conclusion

The time for mining companies to finally fulfill their responsibilities is now. Their bill is past due. Our wildlife and wild places should no longer be sacrificed in the name of coal-mining and profits for coal companies. The above changes need to be implemented immediately if we have any hope of saving the American treasure that is the abundance and diversity of wildlife in the West. It's time for our state and federal governments to step up and protect our iconic wildlife populations from destructive mining practices before it's too late.

### For More Information



303 East 17th Ave., Ste. 15  
Denver, CO 80203

[www.nwf.org](http://www.nwf.org)



317 E. Mendenhall St. Suite D  
Bozeman, MT 59715

[www.nrdc.org](http://www.nrdc.org)



220 South 27th St.  
Billings, MT 59101

[www.worc.org](http://www.worc.org)