

Iowa's first Watershed Cooperative Agreement Project

The first WCPA project in Iowa was the Red Rock Environmental Education Fund (RREEF) partnership. The RREEF project is an AML/AMD abandoned surface coal mine site, mined prior to 1938. The site is located near the town of Pella, Iowa and the largest reservoir in Iowa, Lake Red Rock.

The abandoned surface coal mine site consists of a rectangular area of approximately eight acres of highly eroded soils along a flood overflow ditch. There are large erosion gullies, acidic spoil material and 0.2 miles of clogged stream lands. The area consists of poorly vegetated lands.

No permanent or perennial surface water is present on the site. The wildlife benefits of the area are limited and there are no Threatened and Endangered (T&E) species or unique habitat on the site.

The acidic spoil piles contribute to the degradation of the immediate area by killing vegetation, creating massive erosion gullies, and damaging downstream habitat by transporting acid forming materials and excessive sediment into Lake Red Rock.



Figure 1. Gully erosion of acid materials



Figure 2. AMD proximity to Lake Red Rock

Reclamation of the site eliminated erosion of the acidic spoil material by creating terraces that direct water flow to multiple wetlands that will control and

filter surface runoff. The site was graded to approximate original contour. To neutralize the acidic spoil material, agricultural limestone at a rate of 15,000 tons per acre was disked into the top 24 inches of the subgrade. Borrow material from the adjacent, undisturbed area was used to cover the entire site with approximately 12 inches of high quality growing material. The area was seeded with native vegetation to stabilize the slopes. Trees will be planted in selected areas as part of the habitat restoration. Terraces and wetland were also added to control surface water runoff.



Figure 3. Topsoiled & ready for seeding.



Figure 4. Sedimentation pond – wetlands & adjacent area ready for seeding.

The reclaimed site is now more aesthetically pleasing to the thousands of visitors who utilize the Lake Red Rock Recreation Area every year and the AMD concern has been eliminated.

The RREEF project is a partnership of over 9 organizations, including state, county, federal, local organizations such as the Pleasantville Vocational Agriculture/FFA Program, Knoxville High School FFA Chapter, Pheasants Forever, Trees Forever, and other local groups.