



BIG SPRINGS

BIG SPRINGS COMMUNITY LAKE

Community ...

Big Springs is located in Deuel County. A one-acre community lake was constructed by volunteers in 1927 as part of a water system project. Given that the lake sits adjacent to South Platte High School, a tremendous outdoor classroom opportunity existed. Over the years, fish were stocked and some facilities were added by various civic groups and the village, however, use of this lake was minimal due to the lack of depth and access issues.

Challenges ...

Because the lake had only a maximum depth of five feet, it was susceptible to algae blooms and high turbidity. The lake also didn't support a large fishery due to its shallow depth, lack of habitat, poor water quality, lack of water level controls and steep shorelines. Given its shallowness and protection from wind, dissolved oxygen was also a concern, particularly during summer months with high temperatures and winter months with heavy snow and ice cover. In addition to all of these water-quality issues associated with the lake, there were also concerns about its high seepage rate, which was nearly two inches per day. Supplemental water for the lake came from groundwater pumped from a nearby well. In 2009 alone, 2.8 million gallons of supplemental water was pumped into the lake.

The village, civic groups and youth organizations were all concerned about degradation of this community resource and that it had become largely unusable to people in the area. Everyone recognized that a useable site would provide excellent outdoor educational opportunities for South Platte Public Schools students, as well as for family recreation. The village was also concerned about high

costs of pumping supplemental water into the lake.

Solutions ...

In 2009, Big Springs was approved for assistance through the CLEAR program. Given that the drainage area was mainly comprised of idle acres in grass, there was no watershed component to this project. Primary objectives for the project included removing 2,500 cubic yards of sediment, lake bottom contouring, nuisance tree and brush removal, shoreline shaping and planting, establishment of aquatic habitat and installing a liner to reduce seepage. The village also addressed access problems to facilitate use of this area by students and residents. The lake was stocked with bluegill, channel catfish and largemouth bass in 2010.

Results ...

With the project complete, the Village of Big Springs, in conjunction with local schools, will expand educational and recreational uses of the lake. Students will continue lake monitoring efforts that began before project construction. This will result in better understanding of watershed and lake management concepts and the potential impacts of nutrients and sediments found in runoff. The project was completed in 2010 at a cost of \$204,000. Of this amount, \$176,810 was provided through the CLEAR program and \$27,305 was provided by Big Springs. Other project partners include the Panhandle Resource Conservation and Development District, and T.C. Engineering Inc.

