



FRIEND LAKE

Community ...

Friend Lake was created in the early 1970s as a 1.1-acre pond in a residential neighborhood on the south side of town. The lake sits just west of the golf course near the city's 10-acre park that has recreational and picnicking facilities. Over the years, the pond steadily accumulated sediment that reduced its maximum depth to less than four feet, which wasn't enough to ensure fish survival. It also promoted algae growth and unpleasant odors; Community concerns were that it would become a weed-filled marsh. Access to the shoreline also was hampered from lack of a permanent trail.

Challenges ...

In addition to stormwater runoff from a small drainage area, the city recharges the pond from one of its wells about once per month. Nonetheless, the pond's shoreline and inlet were weed-choked and only a few carp existed in the pond before project work began. In 2006 water sampling confirmed that phosphorus, nitrogen and chlorophyll were all high and water clarity was poor.

Solutions ...

Restoration plans for the lake, with help from the CLEAR program, were straightforward: eliminate the water quality and fishery impairment problems so the pond would once again be a place for community fishing and outdoor recreation pursuits. Project objectives were: 1. Maintain aquatic macrophyte coverage to less than 25 percent of surface area and reduce phosphorus, nitrogen and chlorophyll by at least 50 percent. 2. Increase lake depths to 10-12 feet across 25 percent of the pond, eight to 10 feet over another 25 percent

and eight feet or less over the remaining 50 percent. 3. Establish a healthy population of bass, bluegill and catfish. 4. Construct recreational trails and parking. 5. Use the project to educate the community on water quality issues and environmental stewardship.

Results ...

In November 2007 the lake was drained and that spring, excavation of sediment was completed to restore the pond to desired depths. Some of the removed sediment was placed in low-lying areas around the lake and shaped for future trail construction. Plans went ahead to build a walking trail around the lake, as well as off-street parking and a picnic shelter. To help control further sedimentation of the lake, a sediment basin was built on the west inlet side of the lake. About two acres around the pond have been seeded with grasses to control erosion. The Nebraska Game and Parks Commission stocked bluegill and largemouth bass and a fishing deck was built in the southeast corner of the lake. Local public schools are working with water quality programs at the University of Nebraska–Lincoln on comprehensive environmental stewardship education for local students, using the lake as a focal point.

Total cost of the one-year project, completed in June 2008, was \$185,130. CLEAR contributed \$98,100, while the community provided \$87,030. Other project partners included the Friend Public Schools, Lower Big Blue Natural Resources District and Kirkham Michael Consultants.

