



HALLECK PARK

Community ...

Halleck Park in Papillion is a 102-acre park with a small lake in the east-central part of the city. It has been a part of Papillion for more than 30 years, beginning as a small fishing lake in the 1970s in the eastern portion of the park. The lake was periodically stocked with game fish and its surrounding area saw extensive public use. Halleck Park facilities now include picnic shelters with grills and electrical outlets, play equipment, metropolitan area trail systems, horseshoe and tennis courts, lighted athletic fields, concessions and limited camping.

Challenges ...

Shoreline erosion and algae growth began affecting Halleck Park Lake's water quality. Sediment accumulation made the lake shallow, resulting in turbid water and poor conditions for aquatic life. Geese and ducks contributed to the problems by adding nutrients that lead to excessive algae growth.

Solutions ...

The City of Papillion developed a park and recreation plan in 2003. Through extensive community input it was determined that the renovation of the lake, arboretum and picnicking facilities were the most popular public recommendations. In April 2006, Halleck Park Lake was excavated to create two areas covering approximately 25 percent of the lake to a depth of 12 feet. The remaining portion of the lake was excavated to about eight feet and the lake's overall surface area was expanded.

Bentonite, commonly used to seal abandoned water wells, was mixed into the soil, helping to seal the lake bottom and minimize seepage. Multiple fishing points with a variety of shoreline features were created along the lake to reduce erosion. Rock edging, hard edge lake walls and sections vegetated with plants such as Broadleaf Arrowhead, Green Stem Bulrush and Blue Flag Iris helped prevent erosion and create habitat. To help decrease algae growth, nutrient loaded sediment was removed from the lake, placed in a green space east of the lake and vegetated. Also as part of this project, an additional section of trail and boat ramp was installed to aid in fish stocking and aquatic surveys. Six educational sign pedestals were installed around the lake, with content including current fishing regulations and identification of bird species commonly found in the park.

Results ...

The Halleck Park Lake Restoration and Enhancement project expanded the existing shallow lake into an aesthetically pleasing lake capable of supporting a number of different fish species. The project resulted in drastic water quality improvements, including an 80 percent decrease in phosphorus, 58 percent decrease in nitrogen and 96 percent decrease in turbidity. Total project cost was approximately \$861,206 with \$300,000 being provided through the CLEAR program and \$561,206 matching funds from the City of Papillion. Engineering Services were provided by Thompson, Dressen and Dorner, Inc.

