



Aesthetic Flood Relief in Elm Grove

Village of Elm Grove, Wisconsin

AECOM

AECOM

ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES
of Wisconsin

Downtown Elm Grove has been subjected to repeated flooding from Underwood Creek over the years. The photos to the right show scenes of downtown area flooding in 1937 and in 1998. Back-to-back regional flooding in 1997 and then again in 1998 caused great hardship and loss, and prompted village leaders to pursue a solution.

AECOM (formerly Earth Tech) designed a solution that involved several key features, including:

- Excavating a large pond in the village park adjacent to the creek to detain flood waters;
- Constructing a nine-foot diameter diversion sewer to carry flood flows around the low-lying business district;
- Lowering the floodplain and creating a soccer field at the downstream end of the project to further reduce peak flood flows.

To reduce construction costs, soil excavated during pond construction was not trucked off site, but was instead used to raise the ground surface in the park. Two ball diamonds, several soccer fields, a sled hill and a parking lot were constructed on the filled area of the park. Walking trails and other amenities were added. Elm Grove's residents have thoroughly enjoyed the transformation of their park, with its new lake stocked with fish, improved recreational amenities, and paved trail system winding through natural areas, woods, and wetlands.

The flood relief system was put to the test in June 2008, the wettest June in Wisconsin's recorded history. In one 24-hour period during these storms, Elm Grove received more than 7.5 inches of rain (greater than the 300-year recurrence interval storm). Despite the seemingly unrelenting rain, not a single structure in the downtown area was flooded.

