

EXECUTIVE SUMMARY

In 2011, the Pennsylvania Department of Environmental Protection (PADEP) launched an \$8.8 million project to clean up the 32-acre Currie Landfill site in Millcreek Township. The former wetlands site, which had been filled with municipal and industrial waste during the 1950s, had groundwater, surface water, and sediment contamination. A waste layer estimated between 6 and 12 feet thick contained vinyl chloride, lead, cadmium and other contaminants, some having migrated to the West Branch of Cascade Creek. The goal of the state-funded cleanup was to transition the property into a useful, sustainable resource for recreational and commercial use.

To effectively meet this ambitious goal, Baker first performed a comprehensive site investigation to characterize the nature and extent of contaminants. Baker then developed complex, interwoven remediation and reconstruction designs that incorporated numerous innovative and sustainable features, including a sloped, vegetated soil cover to control waste; riparian buffers and constructed wetlands to protect the adjacent stream; and stormwater controls to minimize erosion and extend the life of the soil cover.

During construction, Baker established a web-based repository to transmit, store, and share documents generated by all project stakeholders. This modern technology greatly enhanced the speed and precision of information delivery, allowing stakeholders to accurately relay the project's goals, activities, and progress in order to avoid delays and facilitate open communication.

Baker's thorough, cooperative methodology can be repeated for projects of similar size and complexity, thus adding significant value to the environmental engineering profession.