AQUALIS

FLORENCE, KY

MUNICIPALITIES
STORMWATER MANAGEMENT

For decades, a store in Florence, Kentucky has provided innovative products that create a personalized shopping experience for customers. Their dedication to excellent customer service has made this store a go-to for customers of all ages.

PROBLEM

In 2014, this store was issued a Notice of Violation (NOV) from the Code Enforcement Officer for not complying with City of Florence ordinances pertaining to one of their stormwater assets. A dry detention pond that had previously been installed was full of sediment, trash, and substantial debris buildup that had accumulated over many years of not being properly maintained or rehabilitated. Without this issue being resolved, the sediment would continue to cause failure to the system, and potentially result in flooding, due to its significantly reduced storage capacity. The accumulation of sediment resulted in the proliferation of nuisance cattails, saturated conditions, and areas of pools and gullies. The result of this reduced capacity would be disruption to store operations, which could be costly. For this store to resolve the issue and make sure they are stormwater ready, there needed to be a solution to restore the detention pond back to its original design state and implement the appropriate maintenance plan to make sure this issue did not transpire again. Due to the age of this stormwater facility, design plans and calculations were not readily available. This store was able to resolve this issue quickly, by working with AQUALIS, who facilitated the appropriate communication of the action plan with the regulator, to ultimately avoid further damage and significant fines.

SOLUTION

AQUALIS developed a plan, with a scope of work and timeline, and was approved by the property owner to restore the system back to functionality. AQUALIS communicated with the regulator throughout the entire process to ensure there was no exposure to the property owner, and that the plan was approved such that the Notice of Violation would be closed. With the age of this stormwater control measure, all design elements of the system were not known. During the repair, which included dredging of all accumulated material, a concrete trickle channel was exposed underneath several feet of sediment. Cattails and other overgrown vegetation, that had been obstructing the systems function and creating a breeding ground for mosquitoes, was removed. By removing the sediment load, the channel was restored and was able to convey water at the volume intended for the system. All turf was restored with a native grass blend throughout the pond bottom, now at design elevation, and throughout the slopes. AQUALIS worked with this property owner to develop a long-term maintenance plan that would ensure stormwater compliance going forward. During routine maintenance, the detention pond is cleared of all trash, sediment and debris and vegetation is well maintained. AQUALIS has been maintaining the system since the rehabilitation in 2014, and the pond continues to function as designed. Sediment loads to the concrete trickle channel can be significant between maintenance visits and are managed during the preventative maintenance services in order to prevent a recurrence of capacity reduction. Oftentimes it is more costly to repair a failed system than to maintain an already existing system and it is important to have a maintenance plan in place to avoid unexpected costs.