

## FAYETTEVILLE, NC COMMERCIAL STORMWATER MANAGEMENT

A store in Fayetteville, North Carolina provides the community with excellent customer service, and durable and long-lasting products that will hold their value for years to come.



### PROBLEM

For many years after development of this property, and construction of a retention pond to manage the stormwater runoff from impervious surfaces on site, the property was not maintained by a stormwater professional. The lack of the implementation of a maintenance program by a stormwater professional resulted in maturing tree growth from around 2002 to 2016. Volunteer, woody vegetation was able to proliferate throughout the slopes of the pond. In addition to creating a difficult to maintain facility, pines and other tree seedlings were maturing in the pond. Adult trees were spreading along the water's edge and in the mowed portions of the pond slopes. Tree growth was blocking clear sight lines for inspections and safety around the pond, decreasing the establishment of grassed slopes for long-term stabilization, impeding on existing structures, and creating debris that accumulated in the pond and stormwater structures. Large shrubs and seedlings were growing through, or leaning on, the fence around the stormwater asset. AQUALIS acquired maintenance of this retention pond around 2011, and brought the deficiencies to the attention of the property owner. For a few years, working with the property owner to stay within a budget, the system was maintained around the mature growth, and multiple trees were controlled during routine maintenance visits. Around 2015, it became clear that the correct approach toward full compliance and long-term system function would be to restore the wet pond back to its original condition in a single phase.

### SOLUTION

Often, pond or stormwater maintenance can be confused with landscaping, and the result is costly. In 2015, AQUALIS provided a scope for fully restoring the retention pond back to its original, design state. AQUALIS worked with the client to develop the optimal schedule and prepared them for an estimated total cost for the project. The client budgeted for the estimated spend, and approved AQUALIS to restore the pond in early 2016. AQUALIS provided all the equipment and labor for the restoration and went through a series of steps to correct the deficiencies at the retention pond. All trees had to be cut down from inside of the fence throughout the slopes and water line of the retention pond. The trees hanging over the fence were cut back and removed from the structure. All areas disturbed during restorative maintenance were seeded with a native, permanent blend, and temporary erosion control matting was installed to stabilize all the areas impacted. Potential long-term costs of fence damage repair, structural damage, and re-stabilization of slopes were avoided, and the system was brought back to its original design intent. Due to the steep slopes of the retention pond, specialized mowing equipment is required and is utilized by AQUALIS to ensure tree growth does not reestablish. Routine maintenance, if performed by a professional trained in stormwater, will ensure that this store's stormwater assets will be working at the standards they were intended for, and that the store will be aware of any future issues before they become large and costly.