## 2019 ACEC of Maine Engineering Excellence Awards

At the ACEC of Maine Fall Forum on October 25, 2019, Wright-Pierce was awarded an Honor Award for Cost-effective Solutions in Engineering Design for its ACB's of Flood Mitigation at Corcoran's Pond Dam project.

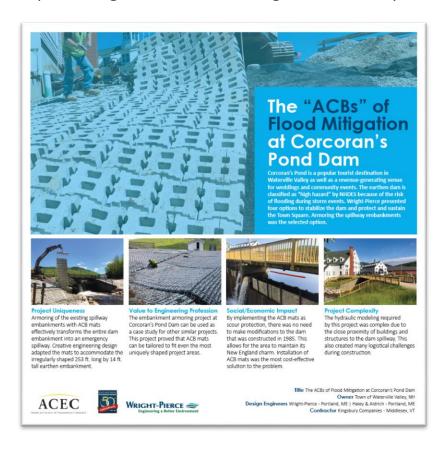
Corcoran's Pond is a popular tourist destination in the "ski town" of Waterville Valley and a revenue-generating venue for weddings and community events. The Corcoran's Pond Dam is an earthen embankment dam which has been classified as "high hazard" by the New Hampshire Department of Environmental Services (NHDES) due to the risk of flooding during storm events. Because of this classification, modifications to the dam were required in order for it to be compliant with current flooding standards.

In order to sustain the site as a Town amenity and also maintain a safe, working dam, the Town worked with Wright-Pierce, an award-winning environmental engineering firm, to assess options that would fortify the dam while having the least visual impact on the town-center site.

After a thorough engineering analysis and extensive hydraulic modeling to determine the scouring effect of rising water on the river



embankments, armoring of the existing dam embankments was selected as the best option to bring the dam into compliance with NHDES requirements. It was determined that the armoring would need to extend to a height of at least one foot above the highest water surface elevation anticipated during a flood condition. The selected method of armoring was Articulating Concrete Block mats (ACBs). Puzzle-like pieces of concrete blocks are held together with metal cables to form mats, which are fit together to serve as an armor, protecting the river embankment from erosion. Due to the irregular contours of the site, a complex geometric customization of the mats was engineered to accommodate the 253-foot long by I4-foot tall earthen embankment. Once the mats were in place, they were covered with 9 inches of topsoil making them invisible, sustaining the natural beauty of the riverbed.



The project was bid in the summer of 2018 for fall construction with a completion in July 2019. Wingard, Vice President at Wright-Pierce and Principal in charge of the project, commented "The project goals were accomplished. The ACB armor has strengthened the dam, bringing it well into compliance with DES dam hazard regulatory requirements while protecting the natural beauty of the site. Through a collaborative effort, the engineering team worked closely with the Town and the Contractor to disruption minimize construction allowing the Town to continue using the site as a popular and important revenue-generating venue for community activities."