



INSPECTION & REHABILITATION OF TIDE GATES

Client: Salem County Department of Engineering
Salem, New Jersey

Project: Fenwick Creek Tide Gates (7)
Salem, New Jersey

Description: **W.J. Castle, P.E. & Associates, P.C. & Hydro-Marine Construction Co., Inc.** were awarded a “design-build” contract to perform underwater inspection, rehabilitation design and construction for removal and replacement of seven (7) tidal gates. The gates were constructed of cast metal, approximately 2 feet wide x 4 feet high. These gates are attached to a concrete headwall on the downstream side of earthen fill dike. The 24" x 48" pipes extend through the dike and are encased into a concrete headwall on the upstream side. All seven (7) existing gates were apparently defective and leaking, which allowed for intrusion of salt and/or brackish water into fresh water. The fresh water is used for irrigation and therefore this created a problem. New “metal stop logs” were designed by our Company and built to our specifications. After being inspected, the gates were removed by placing inflatable air bags or pigs into the upstream end of the pipe. After repairs were made to the connections and concrete surfaces, a new gate was installed. This procedure was followed for each gate until all seven gates were removed and replaced. As-builts of all repairs were then developed on CAD in our office and given to Salem County for their records.



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