



## Project Profile

### Iron/Manganese Removal

Layne Christensen Construction Division



**Location:**  
Choptank, DE

**Process Design:**  
2.4 MGD, 7.0 ppm iron

**Equipment:**  
(4) Vertical LayneOx Pressure Filters

**Date Installed:**  
June 2003.

Layne was retained by Artesian Water Company to design and construct an iron removal facility for their Choptank Road site. Iron levels over 7 mg/L in some wells made the design of an efficient filtration process challenging. Pilot plant testing showed that direct filtration with LayneOx™ media could provide filter runs of 24 hours. Iron is oxidized with chlorine. Backwash water recovery is provided. Iron settles out of the backwash wastewater in a holding tank. The supernatant is recycled to the front of the process. The sludge is removed periodically for disposal.

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Layne Christensen Company

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