

## Susquehanna River Intake Tunnel Wrightsville, PA



### PROJECT OVERVIEW AND CHALLENGES

Bradshaw jacked twin 59" diameter steel casings 320 feet using a microtunnel boring machine (MTBM). The raw water intake alignment went from a new on-shore pump station to a new underwater intake structure in the Susquehanna River. The subsurface conditions consisted of weak to strong schist. The intake structure was under about 20' of water. Several interventions were made into the head of the MTBM to clear excavation spoils and replace disc cutters during the drives. Detailed planning and execution was key to coordinate the underwater retrieval of the MTBM and prevent the tunnel from being flooded. 36" DIP carrier pipe and steel air lines were pushed into the casings and grouted in place. Divers removed caps from the ends of the casings and connected the carrier pipes to the new intake structure.



### PROJECT INFORMATION - 420

**OWNER:**

York Water Company  
Jeff Hines  
717-848-2984

**ENGINEER:**

Rummel, Kiepper, & Kahl  
Joe Tack  
410-728-2900

**CONTRACTOR:**

Kinsley Construction

**COMPLETION DATE:**

4/1/2004

**GEOLOGY:**

Rock

**EXCAVATION METHOD:**

Herrenknecht AVN-1200 MTBM

**MINING DIMENSIONS:**

640' x 59" Ø

**FINAL LINING:**

36" Ductile Iron Pipe  
Steel Air Lines

**FOR MORE INFORMATION:**

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Refer to Project 420