

OPERATIONS • MARKET DEVELOPMENT • PRACTICE

# Concrete

CONCRETEPRODUCTS.COM PRODUCTS

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- Housing recovery, p. 4
- EPA emissions rule and cement supply stability, p. 6
- Cemex water plan, p. 10
- Delaware Valley Concrete, p. 18
- Avan Precast, p. 26
- Integrally colored mixes, p. 37
- RCC plant equipment, p. 41
- Pumice pozzolans, p. 46
- Essroc eco-certification, p. 48

**INNOVATIONS**  
EQUIPMENT & PRODUCTS

## A SHOT AT RIVER RESTORATION

The Quikrete Shotcrete MS – Fiber Reinforced was used to fill channels and create weirs to help return the Spokane River to its natural flow pattern in downtown Spokane, Wash. The MS product is a single component Micro Silica enhanced repair and restoration material that achieves more than 9,000 psi at 28 days, and features very low rebound and permeability characteristics.

Prior to the restoration, that section of the river was mostly empty during hot, dry months as a result of manmade channels dating back more than a century. “In the late 1800s, channels were created at the bottom of the Spokane River to divert water from stagnant pools in the city’s downtown area to mills using hydropower,” said Quikrete Regional Sales Manager Don Dodroe. “While the channels did relieve many of the pools, they also prevented the Spokane River from flowing properly, which basically left the riverbed empty each summer. By building concrete weirs to redirect the flow, the contractor was able to spread water over a larger portion of the riverbed. However, the challenging terrain required the use of material that could be applied in tight spots at long distance and manipulated to match the surrounding landscape, which is why our shotcrete was chosen.”

The undulating riverbed is 150-ft. deep and 300-ft. wide in some areas, so the Quikrete Shotcrete MS – Fiber Reinforced was pneumatically pumped dry through a hose to each predetermined weir location, in some cases more than 500 ft. Water was then added to the mix at the nozzle during the spray application process. This minimized material waste, created a consistent application and

made the process extremely mobile, according to the shotcrete contractor. In addition, the shotcrete was customized to match the color, texture and shape of the natural basalt riverbed as well as the surrounding geology and landscape. The American Society of Landscape Architects recognized the Spokane River Restoration with an award in early 2012, and described the project as, “an excellent improvement to the river, producing an enjoyable amenity for the community and improving river flow and fish passage.”

