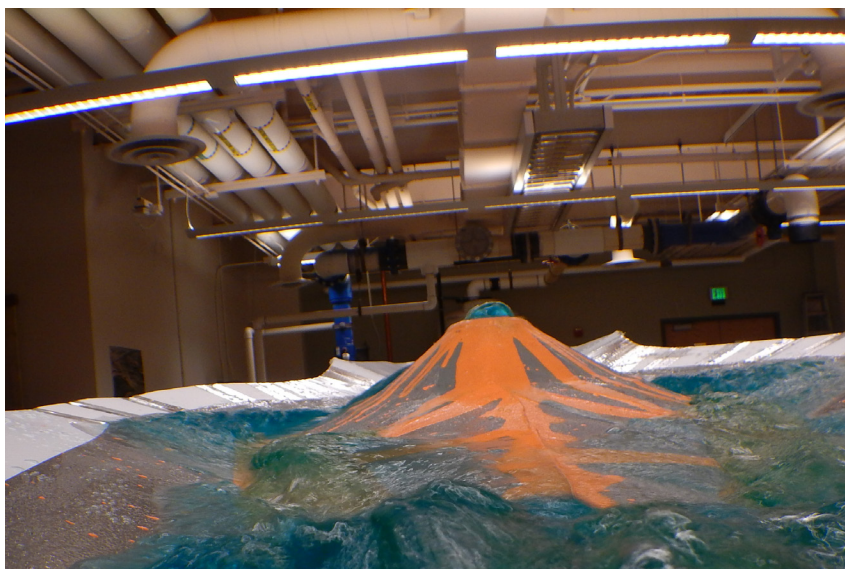

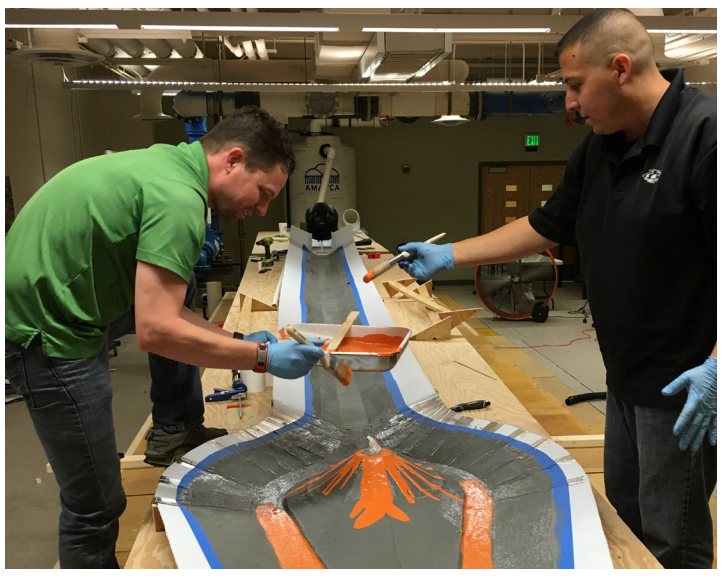

Thought Leader

Join Us at the ASCE Fall Conference at the University of New Mexico *Albuquerque, NM*

A Controlled Eruption for Water Quality
2:30 pm, Friday, September 23, 2016, Science and Technology Park, 851 University Blvd SE

The West I-40 Phase IV project is an innovative solution on many levels. Wilson & Company has been working on this project since 1999, and this phase is one of the last pieces of the plan that protects the South Valley of Albuquerque. Each phase to this point has included aspects a little different than what a typical engineering solution provides, and this phase takes that tradition to a new level. A portion of this project lies on a steep, highly erosive sandy material that is erodes after every storm event, causing constant maintenance for the owner, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA). To resolve this, we collaborated with AMAFCA to solve not only the erosion problem, but also address water quality as it pertains to dissolved oxygen in the water. Our engineering solution twist this time? A volcano. The project location made it a perfect chance to think outside the box, and the topography allowed for enough fall from the capture point of the water to work using only gravity. The location is located on the west side of Albuquerque near three dormant volcanos, so the solution reflects the historical geology of the area.

Speakers:
- **Tyler Ashton, PE, Wilson & Company, Albuquerque, NM**

Did You Know

Modeling the project at the UNM Hydraulics lab allowed the team to work though critical project issues and address design challenges. The team developed multiple scenarios that were quickly tested to determine which option would work best for the ultimate design. The model confirmed calculations made for the height of volcano "eruptions," and allowed for refinement of the piping system that delivers water for the "eruption."

Meet Our Presenter

Tyler Ashton, PE, has experience in water resources deisgn including recreational park storm management systems, hydrology/hydraulic studies, sanitary sewer, and water distribution lines. He has significant modeling and analysis expertise, including in AHYMO, HEC-RAS, HEC-HMS, FLO-2D, SWMM, WMS, StormCAD, and Hydraflow. He recently completed a 40-foot long 1:36 scale physical model for the West I-40 Channel Improvements project.

tyler.ashton@wilsonco.com

4900 Lang Avenue NE | Albuquerque, NM 87109

WILSON & COMPANY

discipline | intensity | collaboration | shared ownership | solutions