

Customer Success Story



Civil & Environmental
Consultants, Inc.



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Matthew D. Gramza, P.E., CFM, CPESC



Civil & Environmental Consultants, Inc. maximizes use of GeoHECRAS and launches projects with GeoHECHMS

Water resource experts and leads at CEC, Matt Gramza and Steve Casey, sat down with CivilGEO's engineering director, Chris Maeder, to share how CivilGEO's software products have helped CEC amp up its game and achieve new levels of productivity with river analysis and storm water modeling work.

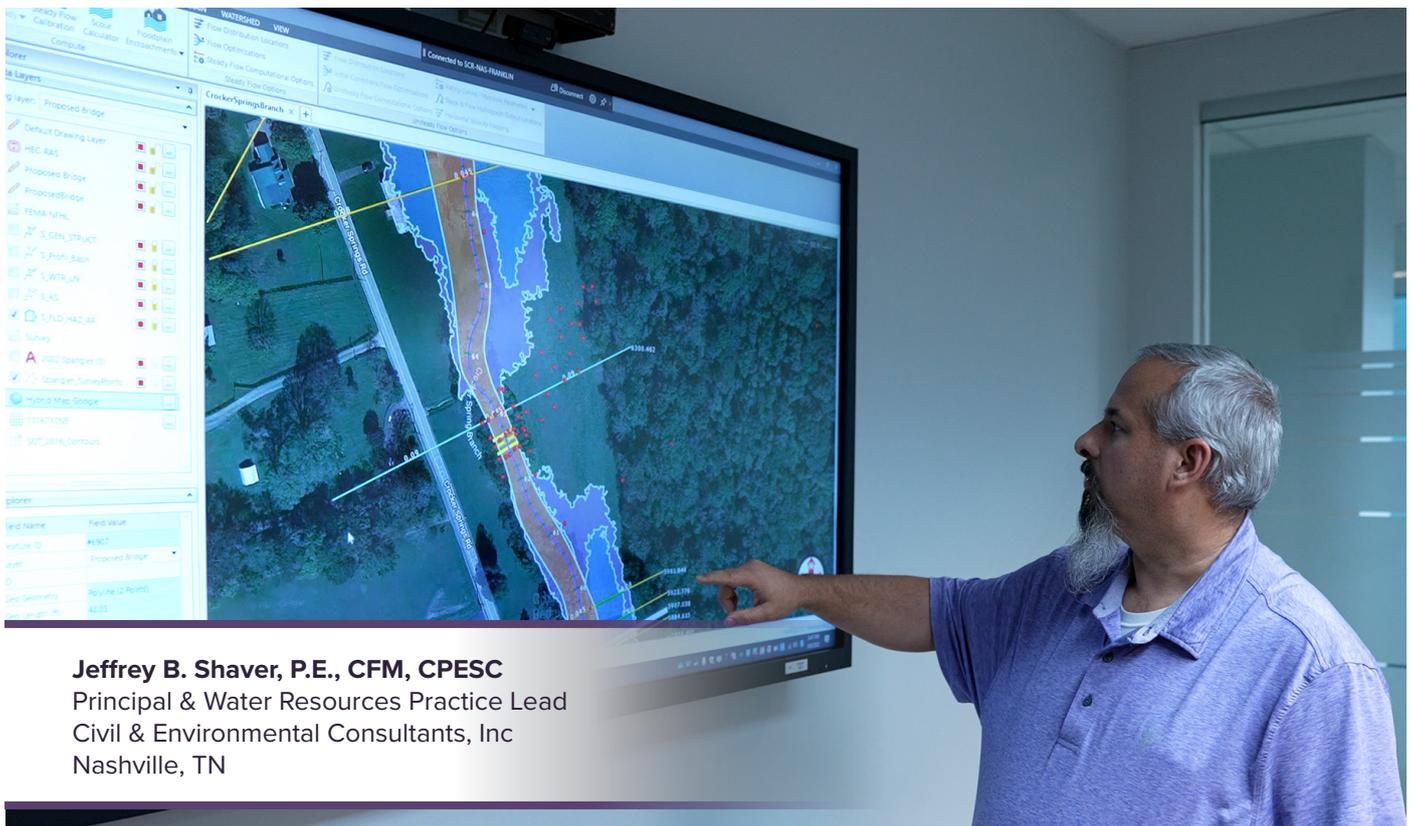
Matt Gramza described some inefficiencies the firm routinely encountered when using multiple software applications for 1D and 2D flood modeling projects.

"Before we started using GeoHECRAS, we felt our use of the U.S. Army Corps of Engineers' HEC-RAS software was pretty advanced. We would do automated model development in ESRI ArcGIS and then import the model into HEC-RAS. Even though we had developed efficient HEC-RAS workflow processes, we often needed to make adjustments—incorporating longer cross-sections or different terrain, for example. We would need to go back into GIS and make changes, and sometimes the people you needed to do the work were already busy on other projects."



About CEC

Civil & Environmental Consultants, Inc. (CEC), with headquarters in Pittsburgh, Pa., and offices across the U.S., is an engineering powerhouse. Highly ranked among the country's top engineering firms, this company places a premium on excellent client working relationships, high-performance standards and sound project outcomes. Since 2007, the firm's water resources sector has steadily grown in prominence and is a major area of practice in at least eight of the firm's national offices. Some of the firm's water resources practice areas include hydrologic analyses for dam safety; ecosystem restoration and post-flood rehabilitation; stormwater planning and compliance; municipal separate storm sewer system (MS4) permitting; wastewater treatment and facility design; and much more.



Jeffrey B. Shaver, P.E., CFM, CPESC
Principal & Water Resources Practice Lead
Civil & Environmental Consultants, Inc
Nashville, TN



The GIS integration that GeoHECRAS offers at the front-end has been very beneficial. GeoHECRAS lets an engineer fully develop, run, and get good results out of a model versus having 3 or 4 people doing the same amount of work.”

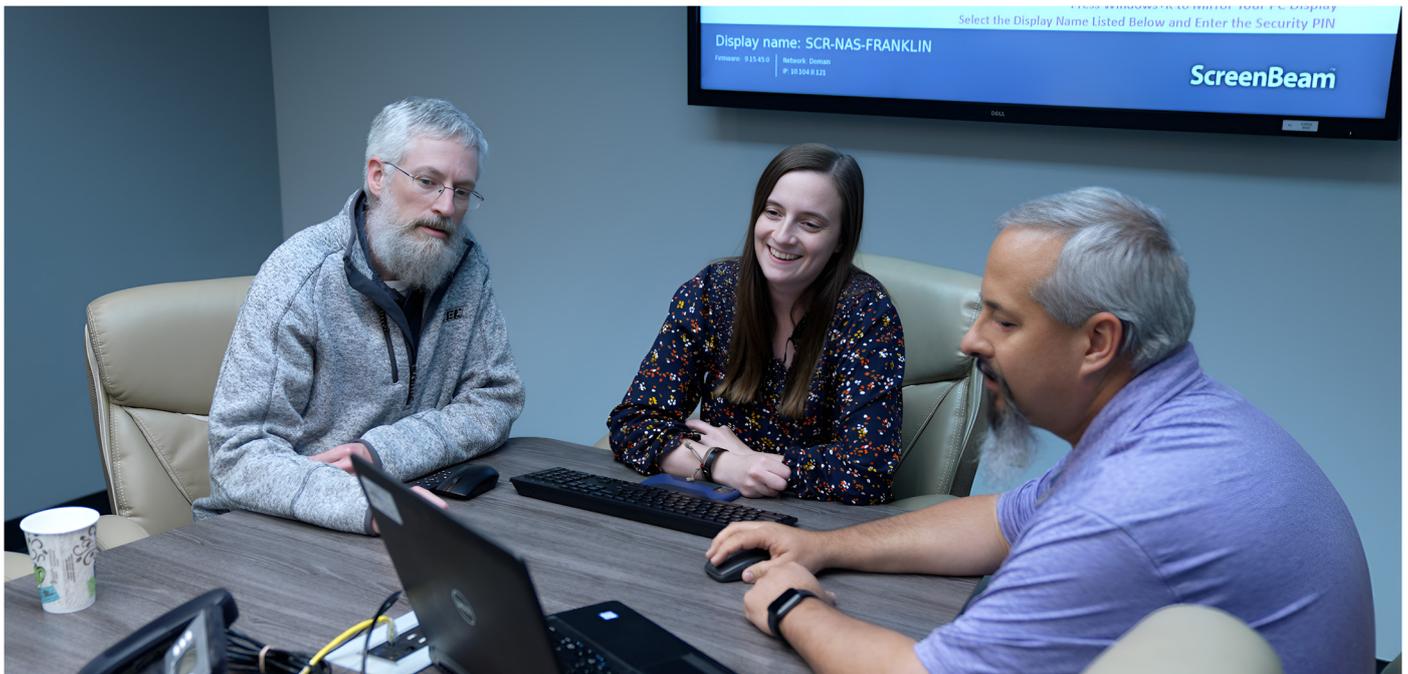
Matthew D. Gramza, P.E., CFM, CPESC

Vice President & Corporate Water Resources Practice Lead
Civil & Environmental Consultants, Inc
Cincinnati, OH



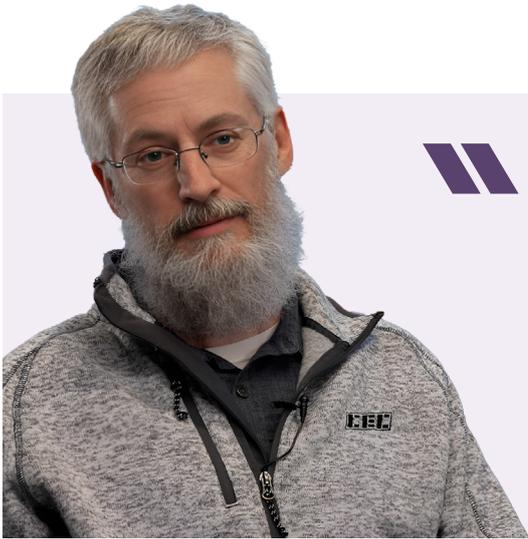
Terrain manipulation is extremely important for most of CEC’s projects, many of which cover large geophysically diverse areas within watersheds. The ability to import publicly available lidar data, merge it with the firm’s own detailed field survey data, and then make adjustments to the model directly on the map has been invaluable.

Gramza noted that relying on independent software programs—like ESRI ArcGIS and HEC-RAS—meant that 50% of the project’s budget could be used up just building the model. **Ever since CEC started using CivilGEO’s GeoHECRAS, Gramza says that the time spent on model development has been cut by 50%. Now only 25% of CEC’s project budget is used to build and calibrate the model, which has clearly helped the firm’s bottom line and overall productivity.** Now more time can be spent on the most important parts of a project: reviewing results, comparing scenarios, and developing the best solutions for the firm’s clients.



Engineer Steve Casey pointed out that his ability to perform project reviews has been enhanced due to GeoHECRAS’ interactive graphical user interface. He appreciated the software’s 2D and 3D viewing perspectives, which let the user zoom in and out of the digitized terrain map and view the project site at multiple scales—high-resolution panoramic to cross-section views—and make adjustments and modifications on-the-fly. These features make for an efficient and thorough review of a project and, in his words, gives engineers the ability “to easily dive into the minutiae of a flood study.”

The firm has only recently purchased GeoHECHMS but has already used the software on many large projects. Features that Casey finds useful are the ability to develop initial subbasin delineations, determine longest flow paths and times of concentrations, and make quick recalculations when necessary.



We have seen real gains in efficiency. One particular project had been modeled using the U.S. Army Corps of Engineers' HEC-HMS before purchase of GeoHECHMS. The first model (developed in HEC-HMS) was created in 8 hours. The second model, recreated from scratch using GeoHECHMS, was completed in a quarter of the time—only 2 to 3 hours—so we are already seeing huge gains in efficiency.”

Steve Casey, P.E.

Vice President, Water Resources Practice
Civil & Environmental Consultants, Inc
Nashville, TN

Engineers Gramza and Casey made clear throughout the interview that they are exacting “task-masters” for whom quality control is extremely important. In Gramza’s words: “Steve and I are very particular. We take our modelers to task if they take short cuts. Results we can stand by and trust are very important to us.”

That’s a guiding principle for everything we do at CivilGEO as well.



Connect with CivilGEO

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