

## Productivity First-Round Winner

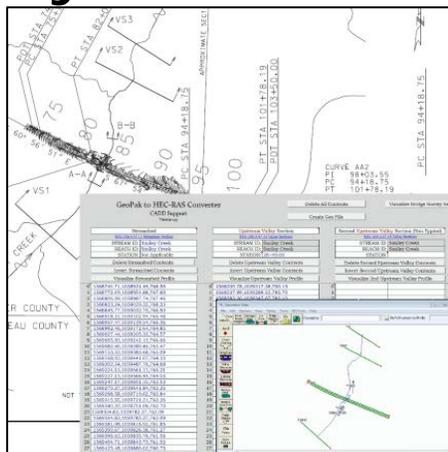
Innovations Challenge

<http://wwwi/intranet/cr/SolutionsAtWork/Innovations.htm>

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## Hydraulic Geometric Data Process



### Description

This innovation creates a .geo file that can be imported into the Hydraulic Engineering Center's River Analysis System (HEC-RAS) program from the Corps of Engineers to create hydraulic model geometric data. Data that is already available in GEOPAK is extracted and pasted into the GEOPAK to HEC-RAS Converter spreadsheet which is used to generate a geo file. The geo file contains point data for the valley sections, channel sections, streambed profile and three line profiles. When imported into HEC-RAS, geometric data for the hydraulic model is created. The GEOPAK to HEC-RAS converter and instructional videos on how to extract data from GEOPAK are available under section 1.3 Bridge Survey in the GEOPAK Road support materials on the CADD Services Support wiki page.

### Benefit

Before this process, depending on the number and length of the valley and profile sections, most valley sections and roadway profiles that were entered into HEC-RAS could vary from several hours to a few days. When a geo file is imported into HEC-RAS the stream reach, valley and profile sections and the stations and elevations for the valley sections and profiles are created. This reduces the time to create the same amount of the hydraulic model geometry that use to take hours or days to just a few minutes. Data for the geo files is already contained in GEOPAK, so the only process added is to extract the data and copy and paste it into the GEOPAK to HEC-RAS converter spreadsheet. Once the data has been entered into the GEOPAK to HEC-RAS converter spreadsheet the created geo file button is selected and the process of creating the geo file is complete. The geo file is included with the bridge survey documents which are sent to Bridge Division when the survey is complete. The process of creating the geo file takes about an hour to complete for most stream crossings. On average, this new process saves a day or two per bridge.

### For More Information Contact:

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Additional photos can be seen by accessing the Innovations Challenge homepage at: <http://wwwi/intranet/cr/SolutionsAtWork/Innovations.htm>.