Vance J. Campos
Hydrogeologist

Education
- M.Sc., Environmental Science, Colorado School of Mines,1997
- B.S., Engineering Physics, Colorado School of Mines, 1979

Registrations/Affiliations
- EIT Exam Passed
- National Ground Water Association

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Experience Overview

Mr. Campos has experience in creating groundwater computer models, contaminant fate and transport modeling, and environmental field investigations. He has worked on various modeling projects involving alluvial and sedimentary systems. He has specific expertise with modeling aquifer-stream interactions and the use of GIS to aid groundwater model creation. He has experience in data manipulation, computer programming, 3-D graphics, and geographic information systems. He has created multiple innovative methods to manipulate data. Also experienced in field studies, including monitor well setting, well construction and aquifer testing.

Representative Experience

- Primary modeler in the SACWSD model. The model covers approximately 100 square miles in Adams County. The primary feature of this model is the leakage from the canals, ditches and streams which traverse the area. The model was used to locate wells and predict monthly pumping rates. Unit response functions for each well were calculated using the model. Also the model was used to estimate lawn return flow lags.

- Primary modeler on the Bambei Reservoir project. The model features a lined reservoir and a drain. The goal of the model was to create the depletion factors for the drain. The close proximity and complex geometry of the South Platte River and the reservoir made use of a model necessary.

- Experienced in using Excel pivot tables. Pivot tables allow data summary, extraction of needed information, and fast creation of multiple types of tables. By using graphs linked to pivot tables large amounts of data can be quickly reviewed.

- Planned, completed and analyzed a recharge test in eolian sand. During this recharge test, approximately three acre-feet of water was recharged in a natural topographic depression. The rise and fall of the water table mound resulting from the concentrated recharge were measured in a nearby observation well using an automated datalogger. The rate of rise and fall of the water table then were matched to best-fit hydraulic conductivity and specific yield values using standard analytical methods.

- Developed a method to create Modflow stream packages with ArcMap. The method allows the use of stream names and calculates streambed conductance using stream length. Also ground surface elevations are carried into the Modflow stream package.

- Experienced in installing monitoring wells, preforming split-spoon sampling and aquifer tests. Has tested alluvial wells near boundaries. Is familiar with In-Situ equipment and software.

- Skilled at using image wells to create analytic solutions to depletion problems. The freeware program Octave was used to aid in handling the complex repeating pattern of wells needed for most problems. The integrals involved were also handled in Octave.

- Mr. Campos has expert level knowledge of Groundwater Vistas modeling program and is an experienced ArcMap user. He is also skilled with various aquifer test analysis software including Aqtesolv. When necessary he writes his own programs using Fortran, Python, and GAWK.

Presentations and Papers