

Gulch. These locations corresponded to some, but not all, of the observed loading of nitrate.

Considering the detailed loading profiles of major ions, trace elements, nitrate, and *E. coli* together helps indicate many sources along the study reach. Loading of nitrate and *E. coli* occurred independently from the loading of major ions and most trace elements so it most likely does not represent the well defined geologic inputs. However, no clear tie to older septic systems was indicated by the results.

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