Methods have been developed to measure the dimensions of erosion features from digital elevation data. At the heart of the method is determination of the convergence of the flow-direction (downhill unit) vector field. Convergent flow areas are candidates for incision; these are identified by a threshold value of scalar convergence and are then morphologically winnowed down to a skeleton. Starting at the skeleton, a lateral search is made for areas of constant elevation, and these are equated to the bottoms of incisions. Where the lateral search terminates, the elevation change is equated to the height of the incision wall. Simple methods have been applied to eliminate features bounded by low walls. Preliminary calculations of incised volume have been based on the product of mean wall height $\times$ floor area. This method of calculation overestimates volumes because many arroyos are narrow where they are deep; unbiased volume estimators are under development. Test areas for this work lie in the Rio Puerco and Middle Rio Grande basins of New Mexico.