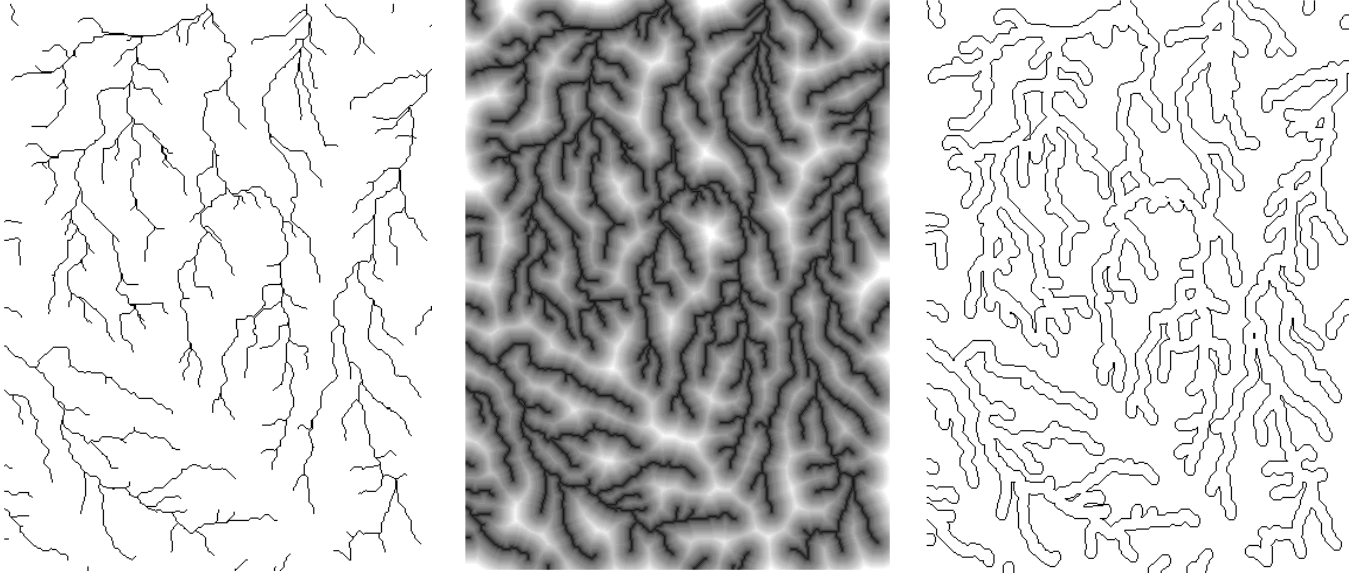


# Distance Rasters



**LEFT:** A binary input raster containing the drainages in the Crow Butte map quadrangle. **CENTER:** Output raster object with cell values that show the distance to the nearest black drainage feature. **RIGHT:** A buffer zone traced from the distance raster.

A new Raster Distances process (Interpret/Raster/Distances) analyzes a binary input raster and creates an output distance raster in which each cell contains the distance to the nearest binary feature in the input raster. The distance raster can be thought of as a continuous surface: low values are close to the input features, and high values are farther away. As a surface, the distance raster yields itself to further manipulations, such as contour tracing (Prepare/Convert/Raster to Vector/Contours). Contours derived in this way essentially define vector buffer zones around the original binary input features. The illustration at the top of this page shows a network of drainage lines used for input, the distance raster that results, and a set of vector contours traced on the distance raster.

Distance values in the output raster may be computed to black, to white, or to both kinds of binary

input features. The illustration above shows distances computed to only the black input features. For input that contains large extent features of both black and white, such as the coastline illustrated below, you may want to compute the distance to the feature boundaries from both directions. In the example below, values on the black side indicate the shortest distance to the white feature, while values on the white

side indicate the shortest distance to the black feature.

The distance raster may be used to generate large sets of nested vector contour lines, as illustrated above, or it could be used in raster GIS processes. For example, as a processing raster in Feature Mapping (Interpret/Raster/Classify/Feature Map), the distance raster would influence classification outcomes based on spatial proximity to the original binary features.

**LEFT:** A binary input raster that represents a shoreline. **RIGHT:** Output raster object with cell values that show the distance to the shoreline from both directions.

