

The ASCII raster file format

The ASCII raster file format is a simple format that can be used to transfer raster data between various applications. It is basically a few lines of header data followed by lists of cell values. The header data includes the following keywords and values:

- `ncols` - number of columns in the data set.
- `nrows` - number of rows in the data set.
- `xllcenter` or `xllcorner` - x-coordinate of the center or lower-left corner of the lower-left cell.
- `yllcenter` or `yllcorner` - y-coordinate of the center or lower-left corner of the lower-left cell.
- `cellsize` - cell size for the data set.
- `nodata_value` - value in the file assigned to cells whose value is unknown. This keyword and value is optional. The `nodata_value` defaults to `-9999`.

For example,

```
ncols 480
nrows 450
xllcorner 378923
yllcorner 4072345
cellsize 30
nodata_value -32768
43 3 45 7 3 56 2 5 23 65 34 6 32 etc
35 45 65 34 2 6 78 4 38 44 89 3 2 7 etc
etc
```

The first row of data is at the top of the data set, moving from left to right. Cell values should be delimited by spaces. No carriage returns are necessary at the end of each row in the data set. The number of columns in the header is used to determine when a new row begins. The number of cell values must be equal to the number of rows times the number of columns.

The ASCII raster file format can only be imported or exported using the Spatial or 3D Analysts.

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