A sample of methods to create raster subsets

The problem:

You have the following DEM and wish to exclude the valleys

You have a layer depicting "valleys", with values ranging from 0 to 1, with increasing values being more like a "valley". You decide values from 0.9 to 1 represent valleys, as depicted above.
Method 1 - Extract by Mask

Open the Con tool under Conditional Toolbox

The condition will be values greater than or equal to 0.9. When that condition is met, a value of 1 will be assigned to the new raster “xcon”. Everything else in “xcon” will receive NoData.

Results of the Con statement, Green = 1, everything else = NoData
You want the “NoData” areas, so use Reclass to convert NoData to 1

Giving you what you want
Use **Extract by Mask** to get DEM of “non-valley” areas

DEM without “valleys”
Isn’t there a more direct way?

Method 2 – Con statement

If Values greater than 0.9 are “valleys”, we could select everything less than 0.9, set the true raster to dem, and get what we want in one step. Open the Con tool in the Conditional Toolbox, and change the expression to \( \text{Values} < 0.9 \) and the true raster to the DEM.

DEM without “valleys” in one step

You could change the expression to \( \text{value} \geq 0.9 \) to get DEM of “valley” only
Method 3 – Exclude areas with CNTSC tool, which uses Set Null and Euclidean Distance


You have a polygon file with “valleys” identified, which you want to exclude

Input the polygon file, input DEM, and output file in GUI
Results are elevations without “valleys”