

## The *bitmask.tif* raster, explained

This is a UInt8 bitmask raster in which the three least significant bits (LSB) X-X-X (rightmost being the least significant bit) correspond to the presence of Cloud-Water-Edge components of the mask, respectively. When interpreting the pixel values in base 10, this means 0=good data, 1=edge, 2=water, 4=cloud, with integers in-between and up to 7 (1-1-1 in binary) meaning that pixel is covered by a combination of the three components. A lookup table is provided below.

Using this mask, the water and/or cloud filters as they are computed for each scene/strip during the filtering step of the scenes2strips program can optionally be applied to any (unfiltered) strip (or scene) DEMs after they have been created, using the `batch_mask.py` script. The edge component of the mask is always applied in both the coregistration and mosaicking steps of the scenes2strips program because currently bad data is always present on the edges of the scene DEMs when they come out of SETSM.

	Bit Values					
Bit Index (zero-based, from LSB)	3-7	2	1	0		
Bit Indication	Not used	Cloud	Water	Edge	Decimal Value	Interpretation
	00000	0	0	0	0	“Good data”
	00000	0	0	1	1	Bad edge data
	00000	0	1	0	2	Water
	00000	0	1	1	3	Water and edge
	00000	1	0	0	4	Cloud
	00000	1	0	1	5	Cloud and edge
	00000	1	1	0	6	Cloud and water
	00000	1	1	1	7	Cloud, water, and edge

For additional information, please visit PGC’s [setsm\\_postprocessing\\_python](#) repository on GitHub.