



LANDCOVER

VEGETATION

SOIL

Recode landcover to "giscode" (0 - 90) using table by Dunne & Leopold 1978

Recode vegetation to "giscode" (100 - 900) using table by Dunne & Leopold 1978

Recode soil to "giscode" (1000 - 4000) based on 4 hydrologic groups using table by Dunne & Leopold 1978

Weighted Landcover Giscode Grid

Weighted Vegetation Giscode Grid

Weighted Soil Giscode Grid

Add gridcodes using grid algebra. Recode gridcodes to curve number using table by Dunne & Leopold 1978

Stormflow Modeling in the San Diego River Watershed
By Judd Curran

Cell-Based SCS Curve Number Grid

PRECIPITATION Point Coverage 15 Stations, Total Event Value For 3/12/86 - 3/16/86

Calculate water retention grid (S) using grid algebra
 $S = (1000/CN) - 10$

Cell-Based Water Retention Grid (S)

Create cell-based precipitation grid using the Kriging interpolation method

Cell-Based Potential Stormflow Runoff

SCS Model to create cell-based potential runoff for storm event.
 $Q = \frac{(P - 0.2 S)^2}{P + 0.8 S}$

Precipitation Grid

Conversion to cubic meters of runoff per cell (900m²)
 $Q(900)(0.0254)$

Cubic Meters of Potential Runoff Per Cell

DEM

Calculate Flow Direction Fill Sinks in Dem Run Flowaccumulation

Predicted Stormflow Total in Cubic Meters for 5-Day Event
*Convert to average flow in CFS. Analysis. Compare results with San Diego RA Gaging Station