Spatial Analysis, Martinez, California - Least Cost/Risk Path

This example shows the input data for a least cost/risk analysis. You can use the reclassified DEM slope cost raster grid and the landcover map reclassified for cost (risk) to generate your own least cost path for the proposed pipeline – with appropriate software.
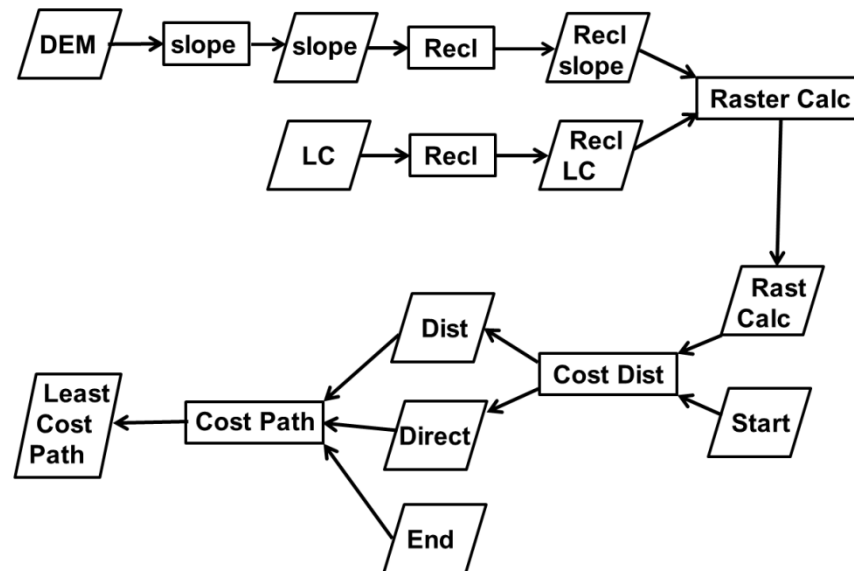

Figure 10-11. ArcGIS ModelBuilder used in the textbook example.

See Figure 10-10 for overview of spatial analysis and Figure 10-11 for ArcGIS Model Builder used for least cost path determination.

See Figure 10-5 for slope background and Figure 10-6 for drainage network.

SOME FILES PROVIDED:

The DEM has slope reclassified for cost.
    "DEM_Martinez_UTM10N_WGS84_GIS_slope_reclass2.tif"

The supervised classification (Chapter 9) has risk assigned in the attribute table (1 – 10 with 10 the highest risk).
    "Sup_6bnd_PC34_CLIP3_17ROIs_maj_Thematic_RISK_Attribute.tif"

A drainage network was modeled from the DEM using RiverTools v.3 software.
    "DEM_Martinez_4_Drainage_UTM10N_WGS84_CLIP3__links.shp"

The least cost path has source (start), destination (end) and path as shapefiles.