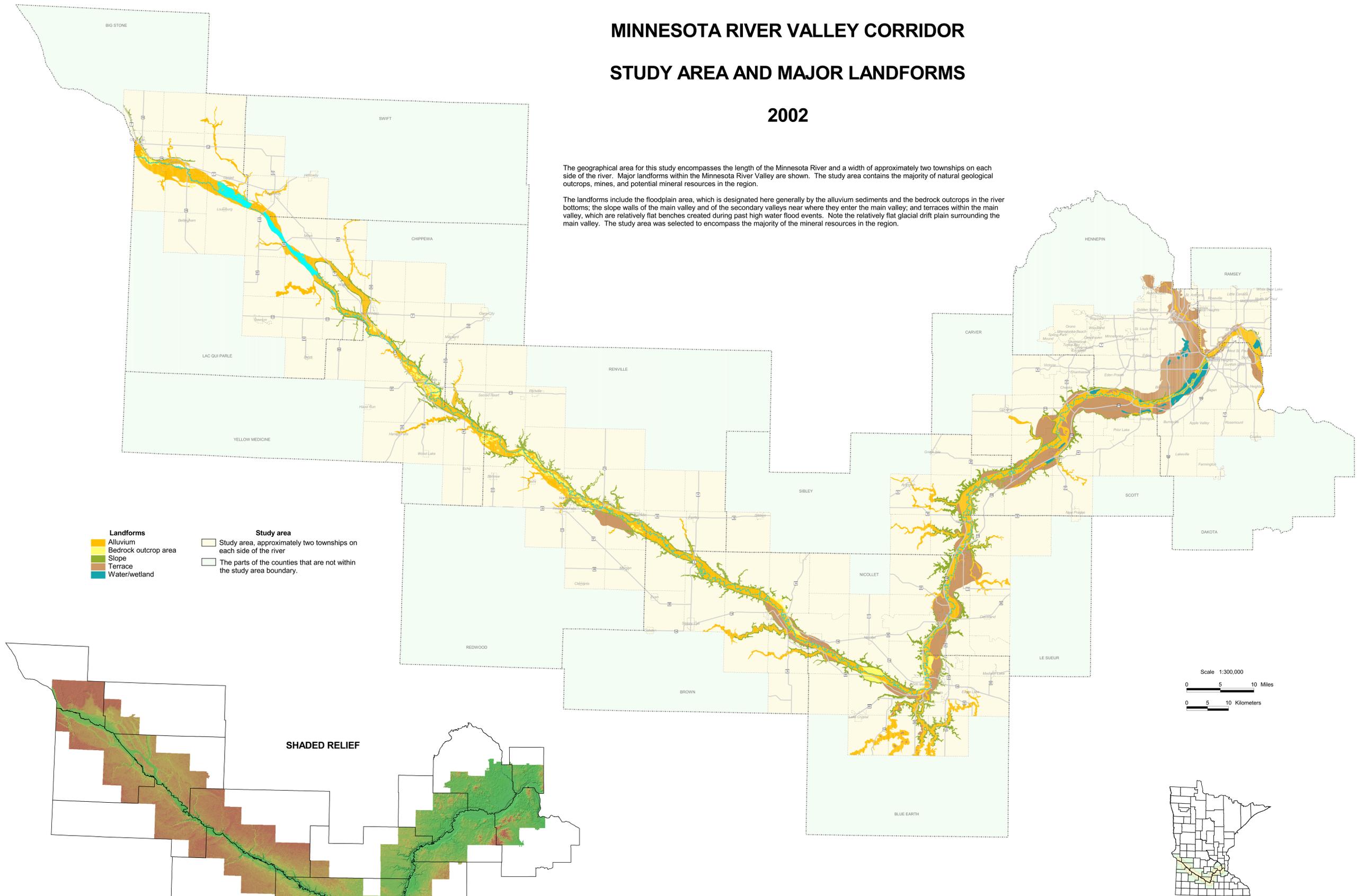


MINNESOTA RIVER VALLEY CORRIDOR STUDY AREA AND MAJOR LANDFORMS

2002

The geographical area for this study encompasses the length of the Minnesota River and a width of approximately two townships on each side of the river. Major landforms within the Minnesota River Valley are shown. The study area contains the majority of natural geological outcrops, mines, and potential mineral resources in the region.

The landforms include the floodplain area, which is designated here generally by the alluvium sediments and the bedrock outcrops in the river bottoms; the slope walls of the main valley and of the secondary valleys near where they enter the main valley; and terraces within the main valley, which are relatively flat benches created during past high water flood events. Note the relatively flat glacial drift plain surrounding the main valley. The study area was selected to encompass the majority of the mineral resources in the region.



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|----------------------|--|
| Landforms | Study area |
| Alluvium | Study area, approximately two townships on each side of the river |
| Bedrock outcrop area | The parts of the counties that are not within the study area boundary. |
| Slope | |
| Terrace | |
| Water/wetland | |

SHADED RELIEF

The shaded relief plot of the Minnesota River Valley was derived from Digital Elevation Model data and the use of a hillshade command to make the elevation appear 3-dimensional, by adding bright spots and shadows as they might be cast by the sun. In general, the green colors are lower elevations and the brown colors are higher elevations. Darker shades of the colors are those in shadow, due to the hillshading. The actual elevations range from up to 1200 feet in the highest areas of Big Stone County to approximately 685 feet in the lowest areas along the Mississippi River in Dakota County.

Digital Elevation Models (DEMs) are digital files storing terrain elevations at regularly spaced, horizontal intervals derived from U.S. Geological Survey (USGS) 7.5-minute quadrangles. The DEM data used in this case are available at 30-meter spacing from the USGS.

Landforms data reference:
 Minnesota Department of Natural Resources, Management Information Systems Bureau, Geomorphology of Minnesota, 1998, scale 1:100,000. [Arc/INFO export file available for download from DNR Data Deli (deli.dnr.state.mn.us)]

Base map data references:
 Roads from State of Minnesota Basemap, 1998, Department of Transportation Surveying and Mapping BaseMap Development Group.
 Minor Civil Divisions (cities and townships) from the 1990 TIGER line files.