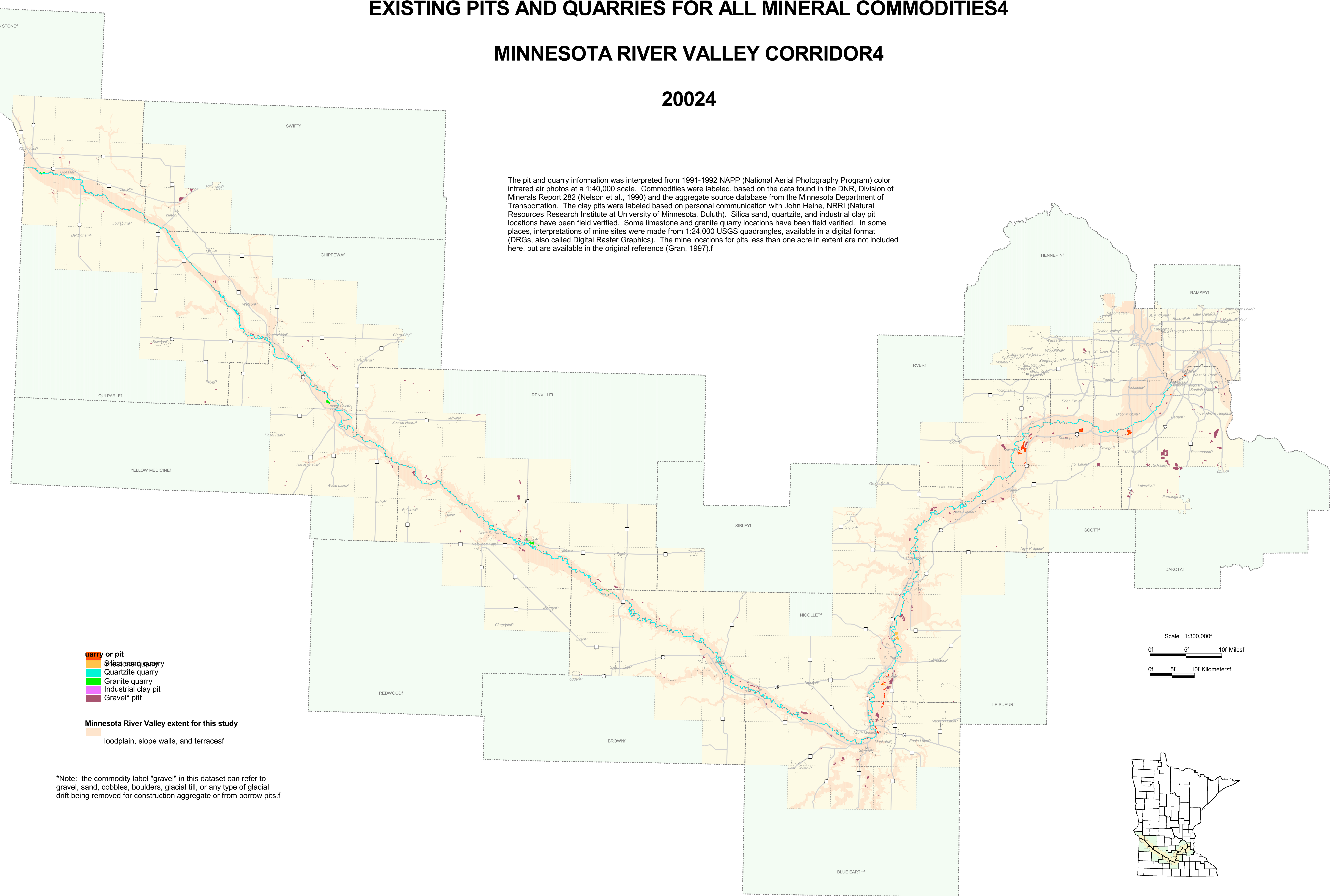


EXISTING PITS AND QUARRIES FOR ALL MINERAL COMMODITIES

MINNESOTA RIVER VALLEY CORRIDOR

20024

The pit and quarry information was interpreted from 1991-1992 NAPP (National Aerial Photography Program) color infrared air photos at a 1:40,000 scale. Commodities were labeled, based on the data found in the DNR, Division of Minerals Report 282 (Nelson et al., 1990) and the aggregate source database from the Minnesota Department of Transportation. The clay pits were labeled based on personal communication with John Heine, NRR (Natural Resources Research Institute at University of Minnesota, Duluth). Silica sand, quartzite, and industrial clay pit locations have been field verified. Some limestone and granite quarry locations have been field verified. In some places, interpretations of mine sites were made from 1:24,000 USGS quadrangles, available in a digital format (DRGs, also called Digital Raster Graphics). The mine locations for pits less than one acre in extent are not included here, but are available in the original reference (Gran, 1997).



*Note: the commodity label "gravel" in this dataset can refer to gravel, sand, cobbles, boulders, glacial till, or any type of glacial drift being removed for construction aggregate or from borrow pits.

Pits and quarries references:
 Gran, S., 1997, Mine Pits in the Minnesota River Valley Corridor; Minnesota Geological Survey, based on 1991 aerial photography. [Arcview shapefiles]
 Nelson, S.L., Oberhelman, M.W., and Olson, D.J., 1990, Inventory of Industrial Minerals Pits and Quarries in Minnesota; Minnesota Department of Natural Resources, Division of Minerals, Report 282, Volumes 1 and 2.f

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

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.f