

```

<?xml version="1.0" encoding="ISO-8859-1"?>
<metadata>
  - <idinfo>
    - <citation>
      - <citeinfo>
        <origin>Manitoba Remote Sensing Centre</origin>
        <pubdate>1998-02-01 00:00:00.0</pubdate>
        <title catid="urn:noah:f5c9cba6-1343-3b6a-a45e-2df407c26988">LandSat-
          Based Land Use-Land Cover (Raster)</title>
        <mgmg1cid/>
      - <pubinfo>
        <publish>Minnesota DNR - MIS Bureau</publish>
      </pubinfo>
      <onlink>http://deli.dnr.state.mn.us/</onlink>
    </citeinfo>
  </citation>
  - <descript>
    <abstract>Raster-based land cover data set derived from 30 meter resolution Thematic
      Mapper satellite imagery. Classification is divided into 16 classes with source
      imagery dates ranging from June 1995 to June 1996. DNR performed additional post
      -processing steps to replace transportation class cells with surrounding
      values.</abstract>
    <purpose>Land use planning, natural resource monitoring</purpose>
    <supplinf>An area covering the Arrowhead region of Northeastern Minnesota, roughly
      corresponding to the principal forested region of the state. Counties included in the
      coverage at the time of this writing are: Aitkin, Cass, Crow Wing, Hubbard, Itasca,
      Koochiching, Pine, and Wadena. At the time of this writing, Carlton, Lake, and
      Lake of the Woods counties have been completed but not acquired, and St.Louis and
      Cook counties are in progress.</supplinf>
  </descript>
  - <timeperd>
    - <timeinfo>
      - <sngdate>
        <caldate>6/18/1995</caldate>
      </sngdate>
    </timeinfo>
    <current>Date of source imagery (LANDSAT-5 TM, bands 3, 4, and 5) ranges from
      September 20, 1991 to August 30, 1996. Data production was conducted during the
      period of July 1996 to Summer 1998. The path/row number and image date for each
      county are: Aitkin_027/028_6/13/96, Carlton_027/028_6/13/96,
      Cass_028/027_6/18/95, Cook_026/027_6/1/94, Crow Wing_028/027_6/18/95,
      Hubbard_028/027_6/18/95, Itasca_028/027_6/18/95,
      Koochiching_028/027_6/18/95, Lake_026/027_6/1/94, Lake of the
      Woods_027/028_8/30/96, Mille Lacs_027/028_9/20/91, Pine_027/028_6/13/96, St.
      Louis_027/027_6/8/94, Wadena_028/027_6/18/95</current>
  </timeperd>
  - <status>
    <progress>In progress</progress>
    <update>None Planned</update>

```

```

</status>
- <spdom>
  - <bounding>
    <westbc>-97.5</westbc>
    <eastbc>-89</eastbc>
    <northbc>49.5</northbc>
    <southbc>43</southbc>
  </bounding>
</spdom>
- <keywords>
  - <theme>
    <themekey>Land Cover, Land Use, Vegetation Cover, biota</themekey>
  </theme>
  - <place>
    <placekey>Minnesota, Northeastern Minnesota, Iron Range, Mesabi Range,
    Aitkin, Carlton, Cass, Cook, Crow Wing, Hubbard, Itasca, Koochiching, Lake,
    Lake of the Woods, Mille Lacs, Pine, St. Louis, Wadena</placekey>
  </place>
</keywords>
  <acconst>None</acconst>
  <useconst>None</useconst>
- <ptcontac>
  - <cntinfo>
    - <cntperp>
      <cntper>Tim Loesch</cntper>
      <cntorg>DNR-MIS</cntorg>
    </cntperp>
    <cntpos>GIS Manager</cntpos>
  - <cntaddr>
    <addrtype>Mailing and Physical</addrtype>
    <address>500 Lafayette Road, Box 11</address>
    <city>St. Paul</city>
    <state>MN</state>
    <postal>55155-4011</postal>
  </cntaddr>
    <cntvoice> 651-259-5475</cntvoice>
    <cntfax>(651) 297-4946</cntfax>
    <cntemail>tim.loesch@state.mn.us</cntemail>
  </cntinfo>
</ptcontac>
- <browse>
  <browsen>http://jmaps.dnr.state.mn.us/gis/dp_datasample.jsp?
  mpid=25000012&ptid=6&fcid=4&lname=LandSat-Based Land Use-Land Cover
  (Raster)</browsen>
  <browsed/>
</browse>
  <native>ARC/INFO GRID</native>
- <crossref>
  - <citeinfo>

```

```

        </title>
      </citeinfo>
    </crossref>
  </idinfo>
- <dataqual>
  - <attracc>
    <attraccr/>
  </attracc>
  <logic>Data are stored within a valid ARC/INFO GRID data structure.</logic>
  <complete>Data provides complete coverage over the stated extent of the data</complete>
  - <posacc>
    - <horizpa>
      <horizpar>Source layer lusatra3: Unknown. The 30 meter source imagery
        sampling size automatically introduces a potential offset of this amount.
        Georegistration processes would likely introduce an additional 30-60 meters
        offset. Individual area feature boundaries may exhibit additional offsets of up to
        1/2 pixel (15 meters) based on theoretical limitations in image sampling
        devices. Additional offsets may be present due to a lack of boundary clarity
        between some classes, edge pixel effects, and image post-processing
        (smoothing) effects.</horizpar>
    </horizpa>
    - <vertacc>
      <vertaccr>Source layer lusatra3: Not Applicable</vertaccr>
    </vertacc>
  </posacc>
  - <lineage>
    - <srcinfo>
      <srcscale>Source layer lusatra3: 60000</srcscale>
    </srcinfo>
    - <procstep>
      <procdesc/>
    </procstep>
  </lineage>
</dataqual>
- <spdoinfo>
  <indspref>Not Applicable</indspref>
  <direct>raster</direct>
  <mgmg3obj>grid</mgmg3obj>
  <mgmg3til>county</mgmg3til>
</spdoinfo>
- <spref>
  - <horizsys>
    - <geograph>
      <latres/>
      <longres/>
    </geograph>
    - <planar>
      - <mapproj>
        <mapprojn>Transverse Mercator</mapprojn>

```

```

        <mgmg4par>Not Applicable</mgmg4par>
        <otherprj>Not Applicable</otherprj>
    </mapproj>
- <gridsys>
    <gridsysn>UTM</gridsysn>
    - <utm>
        <utmzone>15</utmzone>
    </utm>
    - <spcs>
        <spcszone/>
    </spcs>
    <mgmg4coz/>
    <mgmg4adj>Not Applicable</mgmg4adj>
</gridsys>
- <planci>
    - <coordrep>
        <absres>30</absres>
        <ordres>30</ordres>
    </coordrep>
    - <distbrep>
        <distres/>
    </distbrep>
    <plandu>meters</plandu>
</planci>
</planar>
- <geodetic>
    <horizdn>NAD83</horizdn>
    <ellips>GRS1980</ellips>
</geodetic>
</horizsys>
- <vertdef>
    - <altsys>
        <altdatum>Not Applicable</altdatum>
        <altunits>Not Applicable</altunits>
    </altsys>
    - <depthsys>
        <depthdn>Not Applicable</depthdn>
        <depthdu>Not Applicable</depthdu>
    </depthsys>
</vertdef>
</spref>
- <eainfo>
    - <overview>
        <eaover/>
        <eadetcit/>
    </overview>
</eainfo>
- <distinfo>
    - <distrib>

```

```

- <cntinfo>
  - <cntperp>
    <cntper>Hal Watson</cntper>
    <cntorg>DNR-MIS</cntorg>
  </cntperp>
  <cntpos>GIS Database Coordinator</cntpos>
  - <cntaddr>
    <addrtype>Mailing and Physical</addrtype>
    <address>500 Lafayette Road, Box 11</address>
    <city>St. Paul</city>
    <state>MN</state>
    <postal>55155-4011</postal>
  </cntaddr>
  <cntvoice>(651) 259-5508</cntvoice>
  <cntfax>(651) 297-4946</cntfax>
  <cntemail>hal.watson@state.mn.us</cntemail>
</cntinfo>
</distrib>
<resdesc>lulc_ic96ra3</resdesc>
<distliab>The Minnesota Department of Natural Resources makes no representation or
warranties, express or implied, with respect to the reuse of data provided herewith,
regardless of its format or the means of its transmission. There is no guarantee or
representation to the user as to the accuracy, currency, suitability, or reliability of this
data for any purpose. The user accepts the data 'as is', and assumes all risks associated
with its use. By accepting this data, the user agrees not to transmit this data or provide
access to it or any part of it to another party unless the user shall include with the data a
copy of this disclaimer. The Minnesota Department of Natural Resources assumes no
responsibility for actual or consequential damage incurred as a result of any user's
reliance on this data.</distliab>
- <stdorder>
  - <digform>
    - <diginfo>
      <formname>TIFF with TFW, DBF</formname>
      <formvern>Unspecified</formvern>
      <transize>14.5</transize>
    </diginfo>
  </digform>
  <ordering>See Online Linkage or Distribution Contact</ordering>
</stdorder>
</distinfo>
- <metainfo>
  <metd>2006-08-09 09:12:03.0</metd>
  - <metc>
    - <cntinfo>
      - <cntperp>
        <cntper>Tim Loesch</cntper>
        <cntorg>DNR-MIS</cntorg>
      </cntperp>
      <cntpos>GIS Manager</cntpos>
    </cntinfo>
  </metc>
</metainfo>

```

```
- <cntaddr>
  <addrtype>Mailing and Physical</addrtype>
  <address>500 Lafayette Road, Box 11</address>
  <city>St. Paul</city>
  <state>MN</state>
  <postal>55155-4011</postal>
</cntaddr>
  <cntvoice> 651-259-5475</cntvoice>
  <cntfax>(651) 297-4946</cntfax>
  <cntemail>tim.loesch@state.mn.us</cntemail>
</cntinfo>
</metc>
  <metstdn>Minnesota Geographic Metadata Guidelines</metstdn>
  <metstdv>1.2</metstdv>
- <metextns>
  <onlink>http://www.gis.state.mn.us/stds/metadata.htm</onlink>
</metextns>
</metainfo>
</metadata>
```