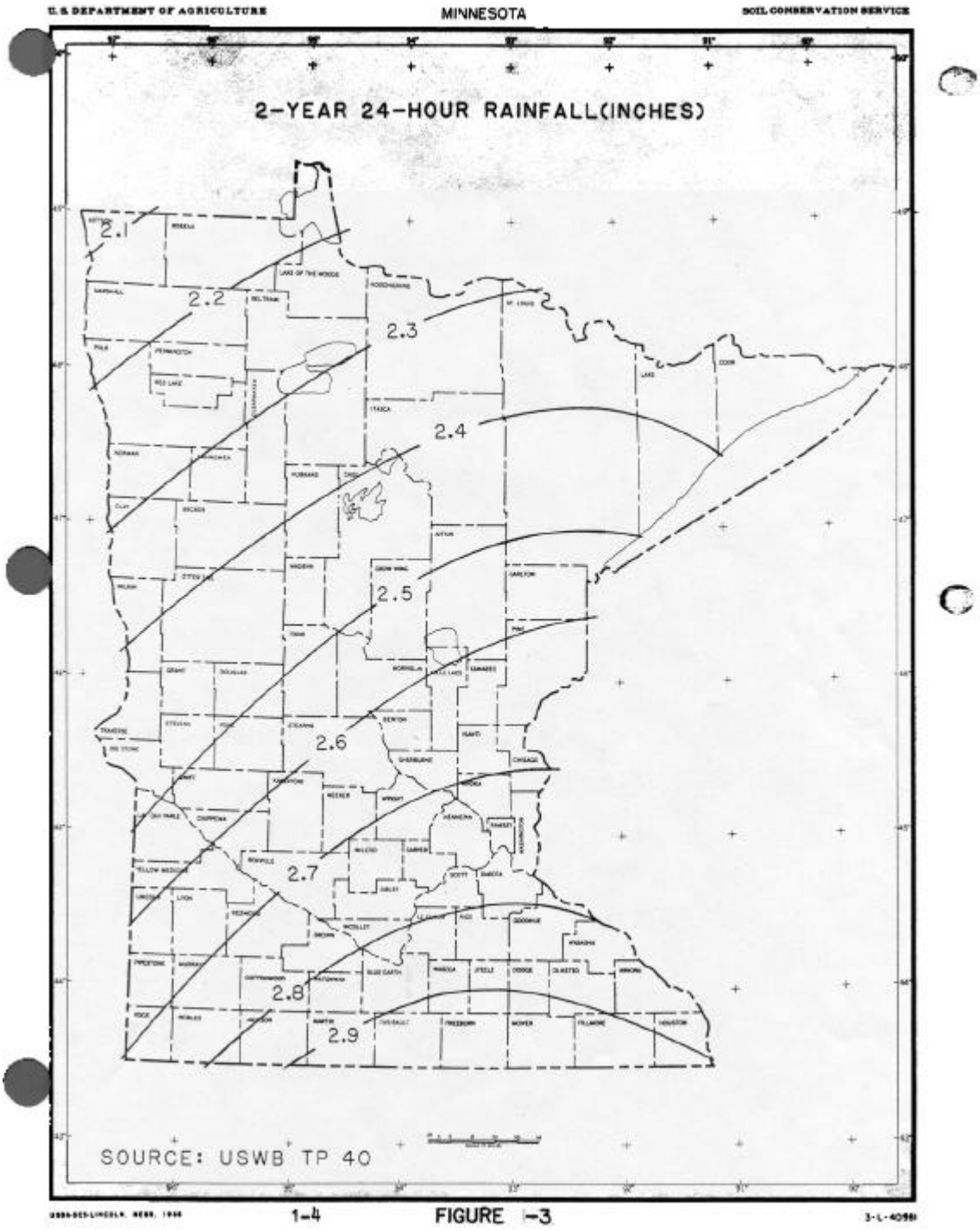
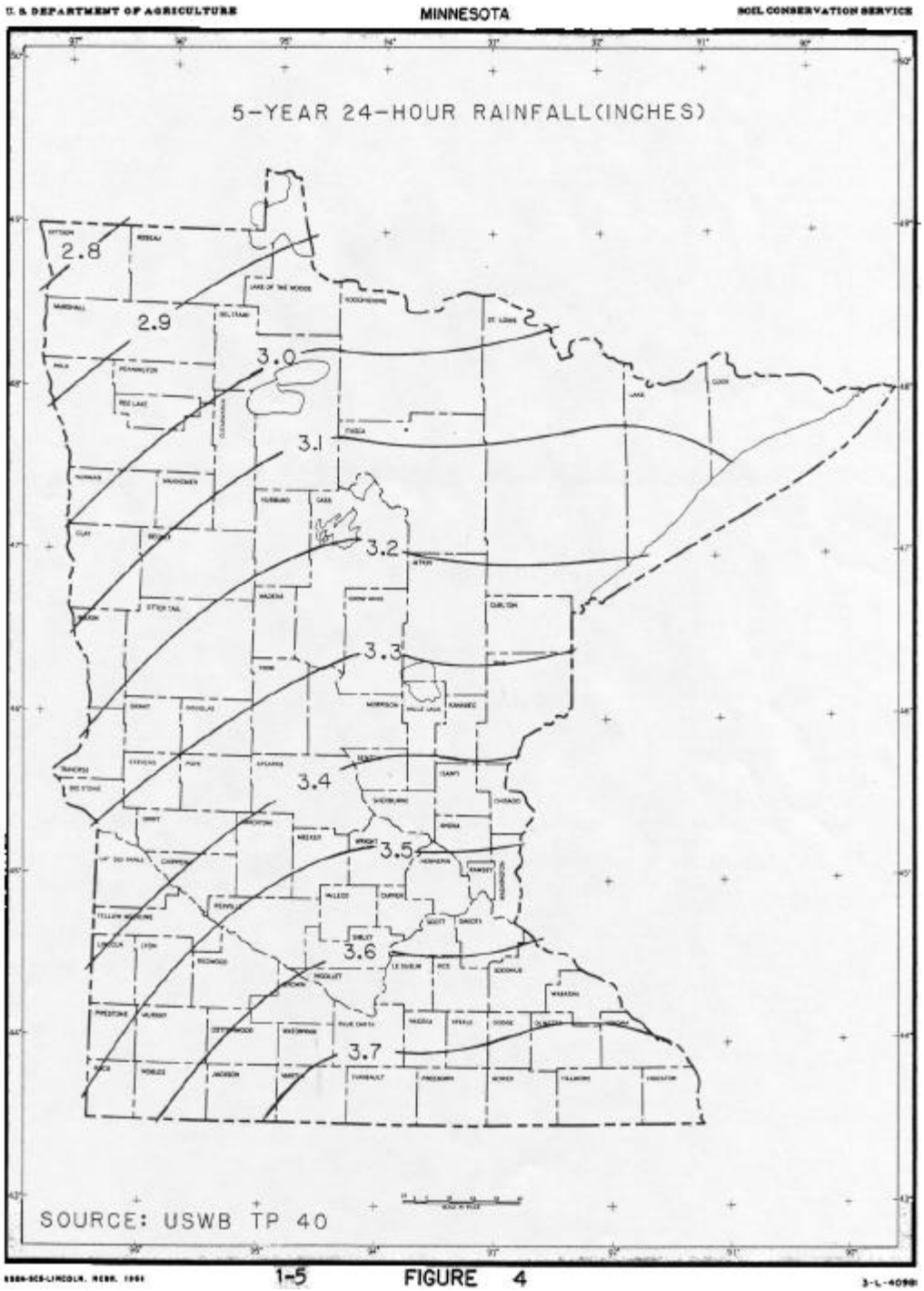
Minnesota Hydrology Guide
Select Pages from Chapter 1: Rainfall

The contents of this file are maps adapted from Technical Paper 40 (TP40), "Rainfall Frequency Atlas of the United States", by the U.S. Weather Bureau, which appear in the Minnesota Hydrology Guide, and are frequently requested from the Natural Resources Conservation Service (NRCS). The maps of Minnesota identify the 24 hour duration precipitation for the following return periods:

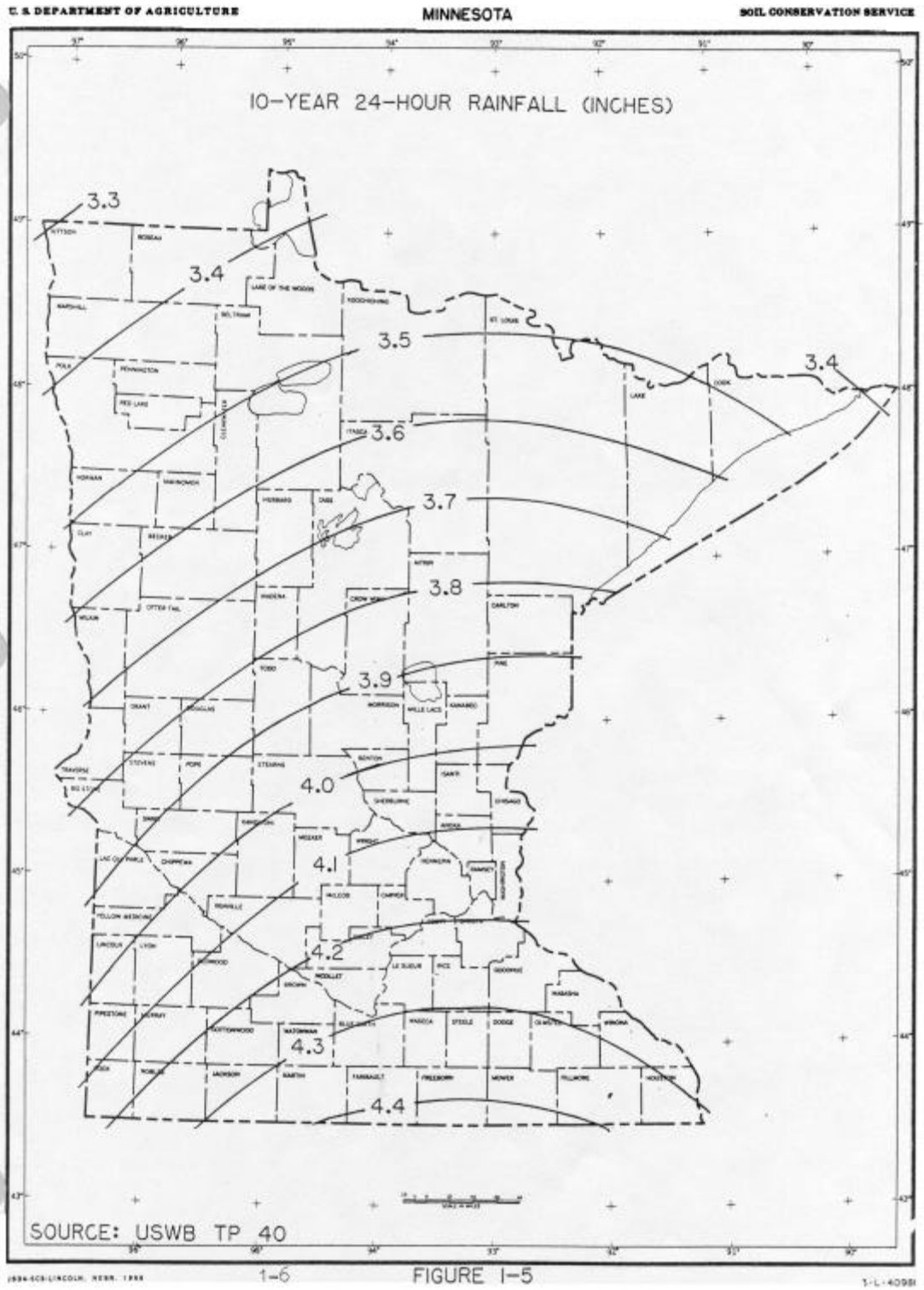
2 years
5 years
10 years
25 years
50 years
100 years

In addition, a map is provided of the Annual Normal Precipitation in inches using the normals for 1961-1990 prepared by the Minnesota State Climatology Office.

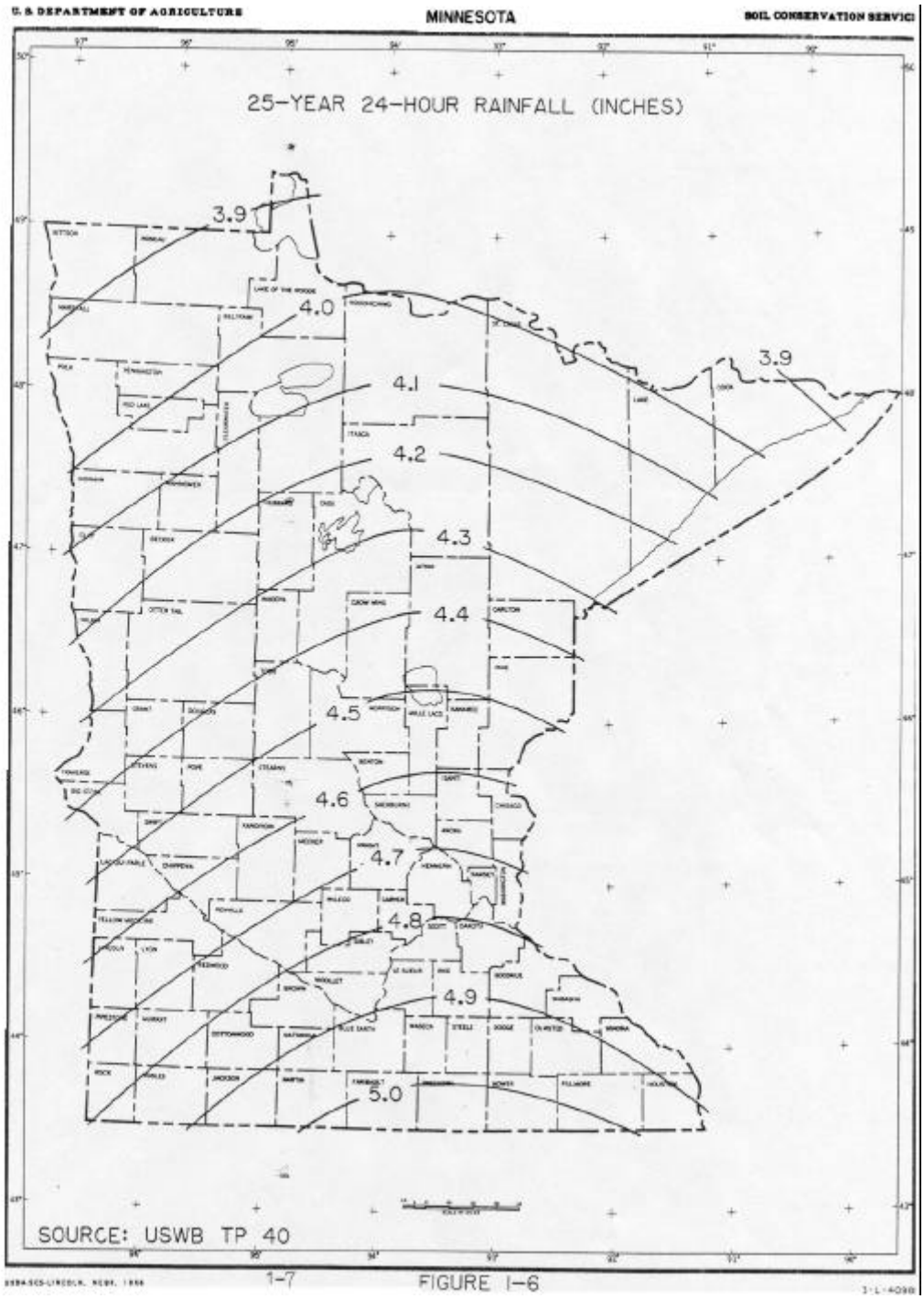

U.S. DEPARTMENT OF AGRICULTURE
MINNESOTA
SOIL CONSERVATION SERVICE
2-YEAR 24-HOUR RAINFALL(INCHES)
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
SOURCE: USWB TP 40
1-4
FIGURE 1-3
3-L-4098

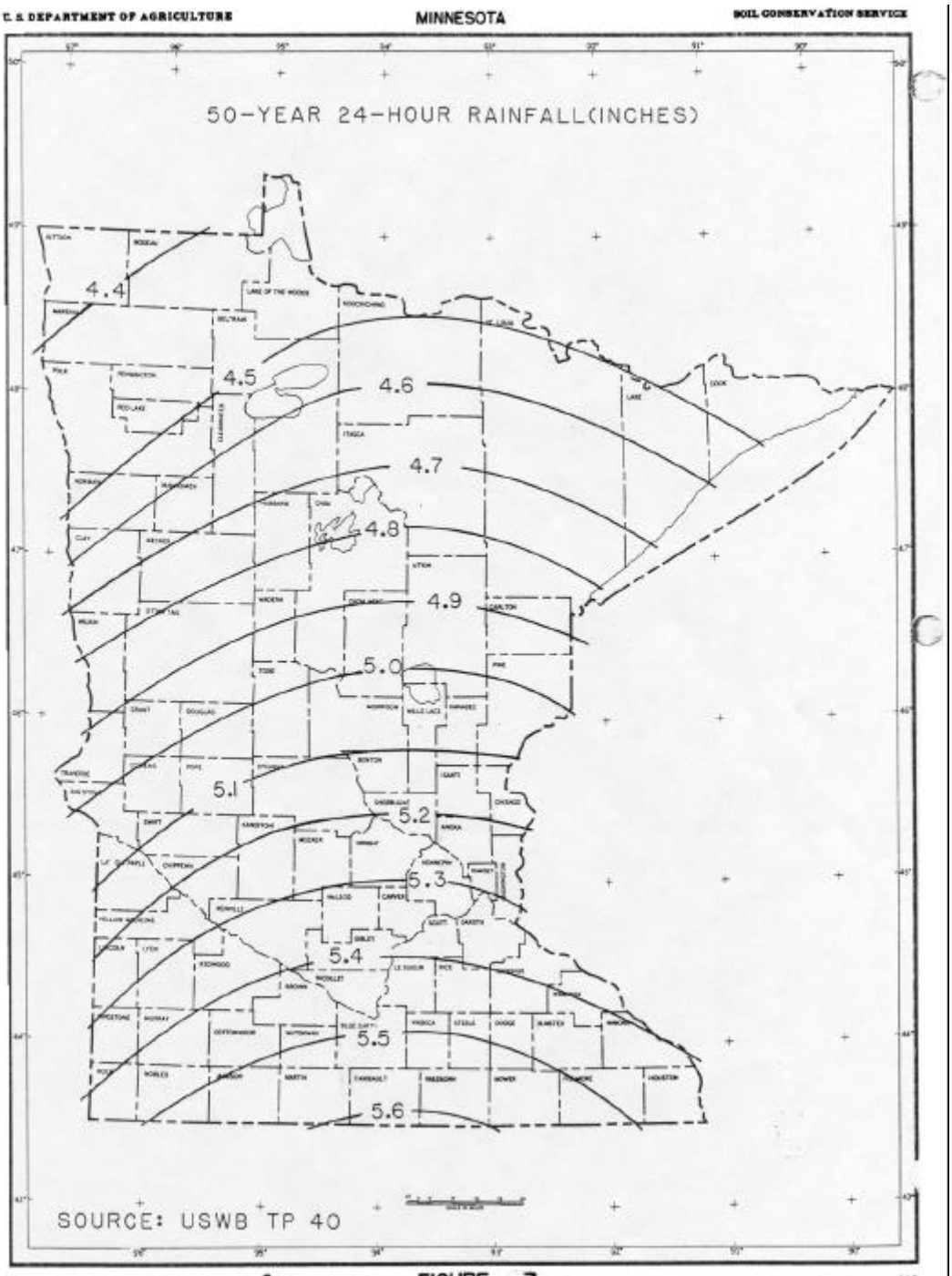

U. S. DEPARTMENT OF AGRICULTURE
MINNESOTA
SOIL CONSERVATION SERVICE
5-YEAR 24-HOUR RAINFALL(INCHES)
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7
SOURCE: USWB TP 40

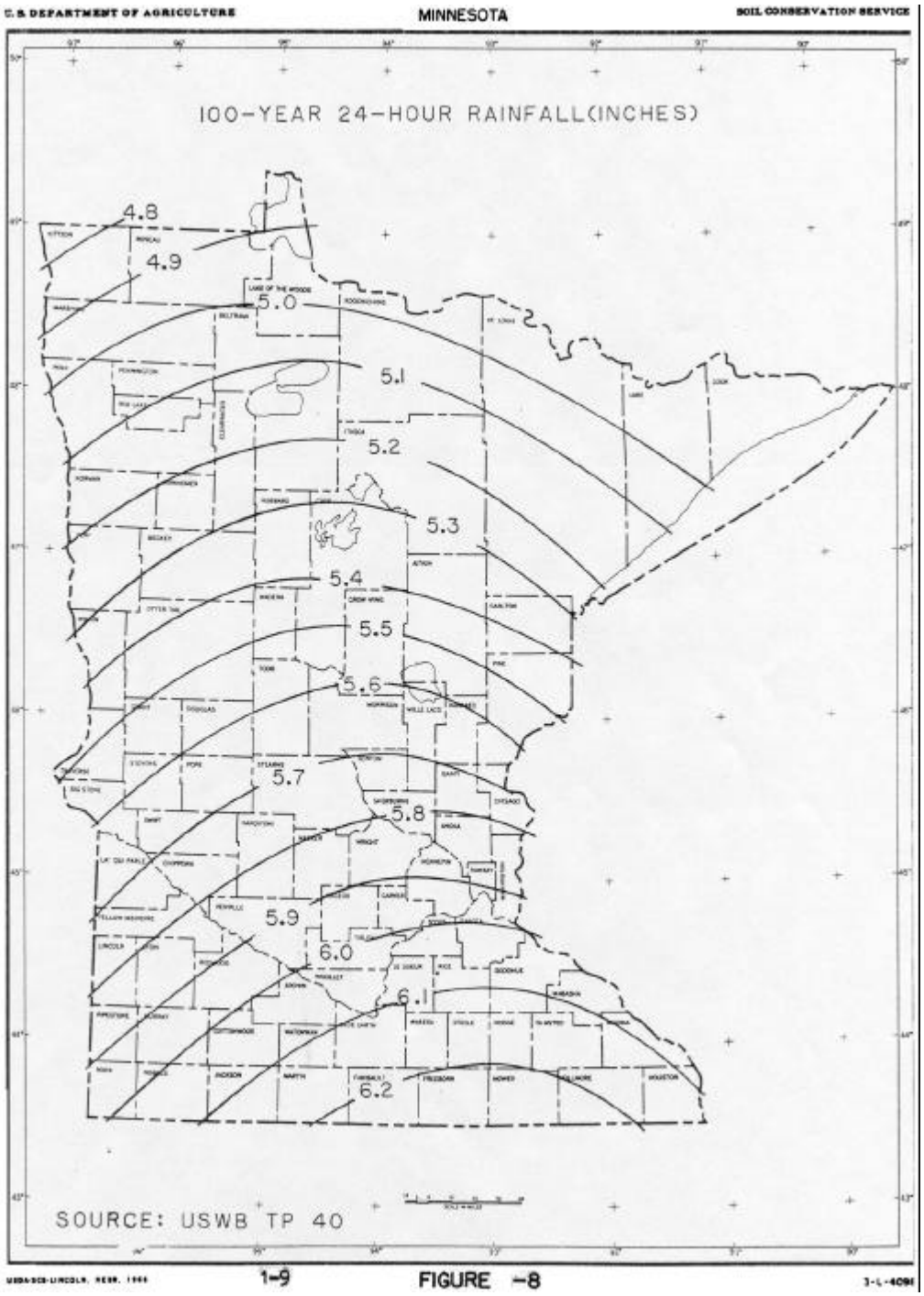
1-5 FIGURE 4


U. S. DEPARTMENT OF AGRICULTURE
MINNESOTA
SOIL CONSERVATION SERVICE
10-YEAR 24-HOUR RAINFALL (INCHES)
3.3
3.4
3.5
3.4
3.6
3.7
3.8
3.9
4.0
4.1
4.2
4.3
4.4
SOURCE: USWB TP 40

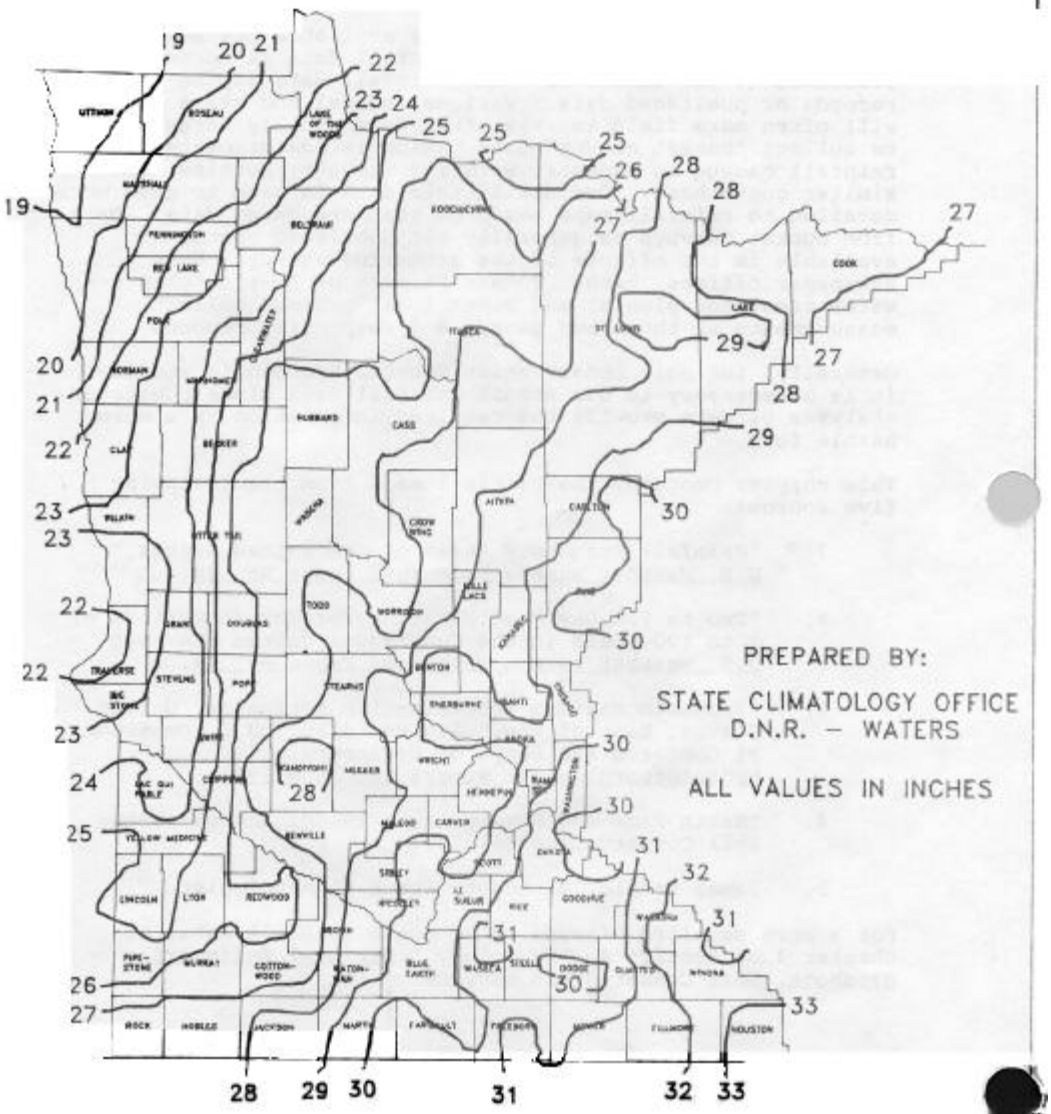
1-6 FIGURE 1-5


U. S. DEPARTMENT OF AGRICULTURE
MINNESOTA
SOIL CONSERVATION SERVICE
25-YEAR 24-HOUR RAINFALL (INCHES)
3.9
4.0
4.1
4.2
4.3
4.4
4.5
4.6
4.7
4.8
4.9
5.0
3.9
SOURCE: USWB TP 40
1-7
FIGURE 1-6


U. S. DEPARTMENT OF AGRICULTURE
MINNESOTA
SOIL CONSERVATION SERVICE
50-YEAR 24-HOUR RAINFALL(INCHES)
4.4
4.5
4.6
4.7
4.8
4.9
5.0
5.1
5.2
5.3
5.4
5.5
5.6
SOURCE: USWB TP 40
1-8
FIGURE -7


U.S. DEPARTMENT OF AGRICULTURE
MINNESOTA
SOIL CONSERVATION SERVICE
100-YEAR 24-HOUR RAINFALL(INCHES)
4.8
4.9
5.0
5.1
5.2
5.3
5.4
5.5
5.6
5.7
5.8
5.9
6.0
6.1
6.2
SOURCE: USWB TP 40
1-9
FIGURE -8

ANNUAL NORMAL PRECIPITATION IN INCHES
(NORMALS 1961–1990)



FIGURE

SOURCE: MIDWESTERN CLIMATE CENTER

PAGE 1–2