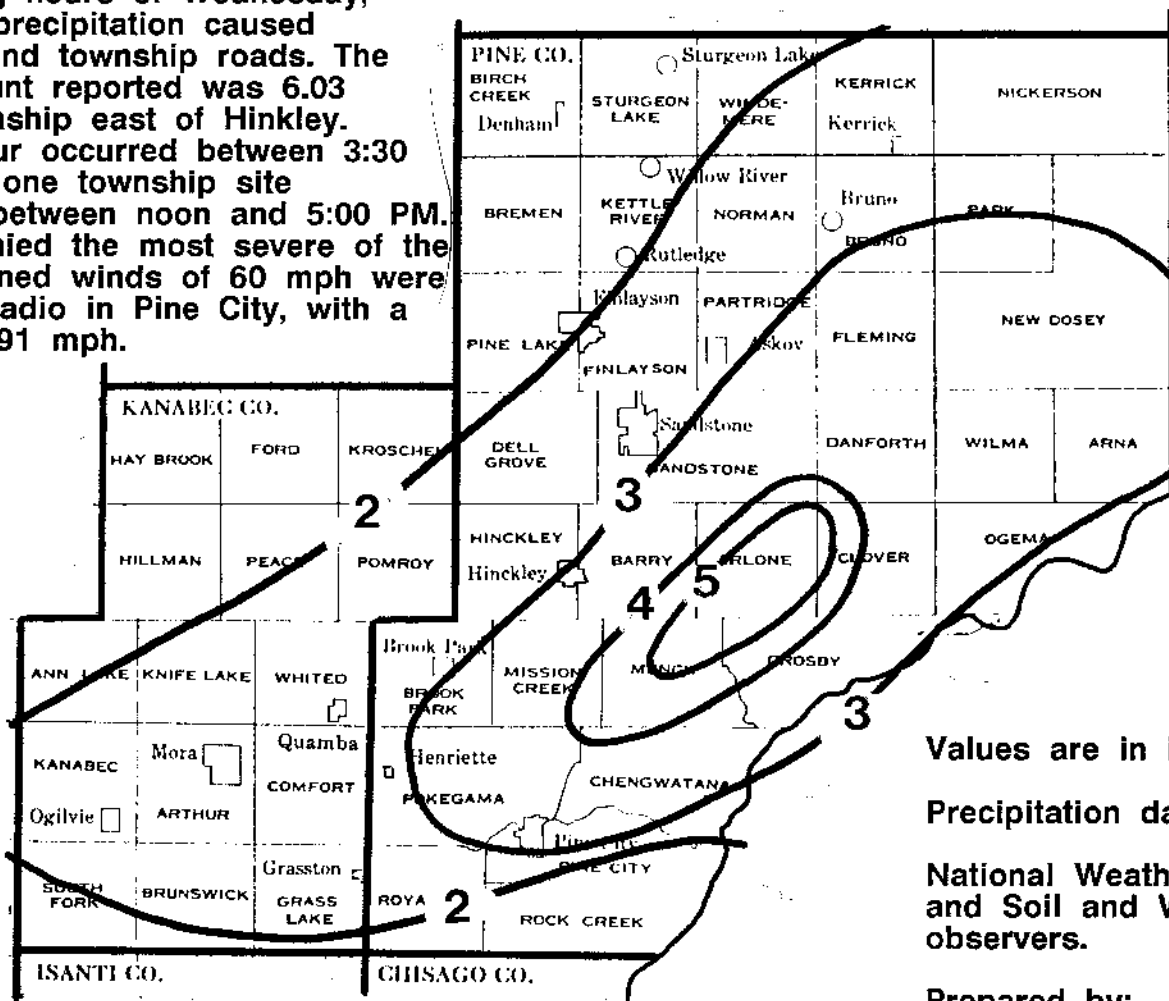


HEAVY RAINS FALL ON PINE COUNTY - MAY 24, 1989

(preliminary summary)

Heavy rains fell upon Pine County during the afternoon and evening hours of Wednesday, May 24th. Torrential precipitation caused washouts of county and township roads. The greatest rainfall amount reported was 6.03 inches in Arlone township east of Hinkley. The heaviest downpour occurred between 3:30 and 4:30 PM. The Arlone township site received five inches between noon and 5:00 PM. High winds accompanied the most severe of the thunderstorms. Sustained winds of 60 mph were observed by WCMP radio in Pine City, with a single gust reaching 91 mph.



Values are in inches.

Precipitation data gathered by:

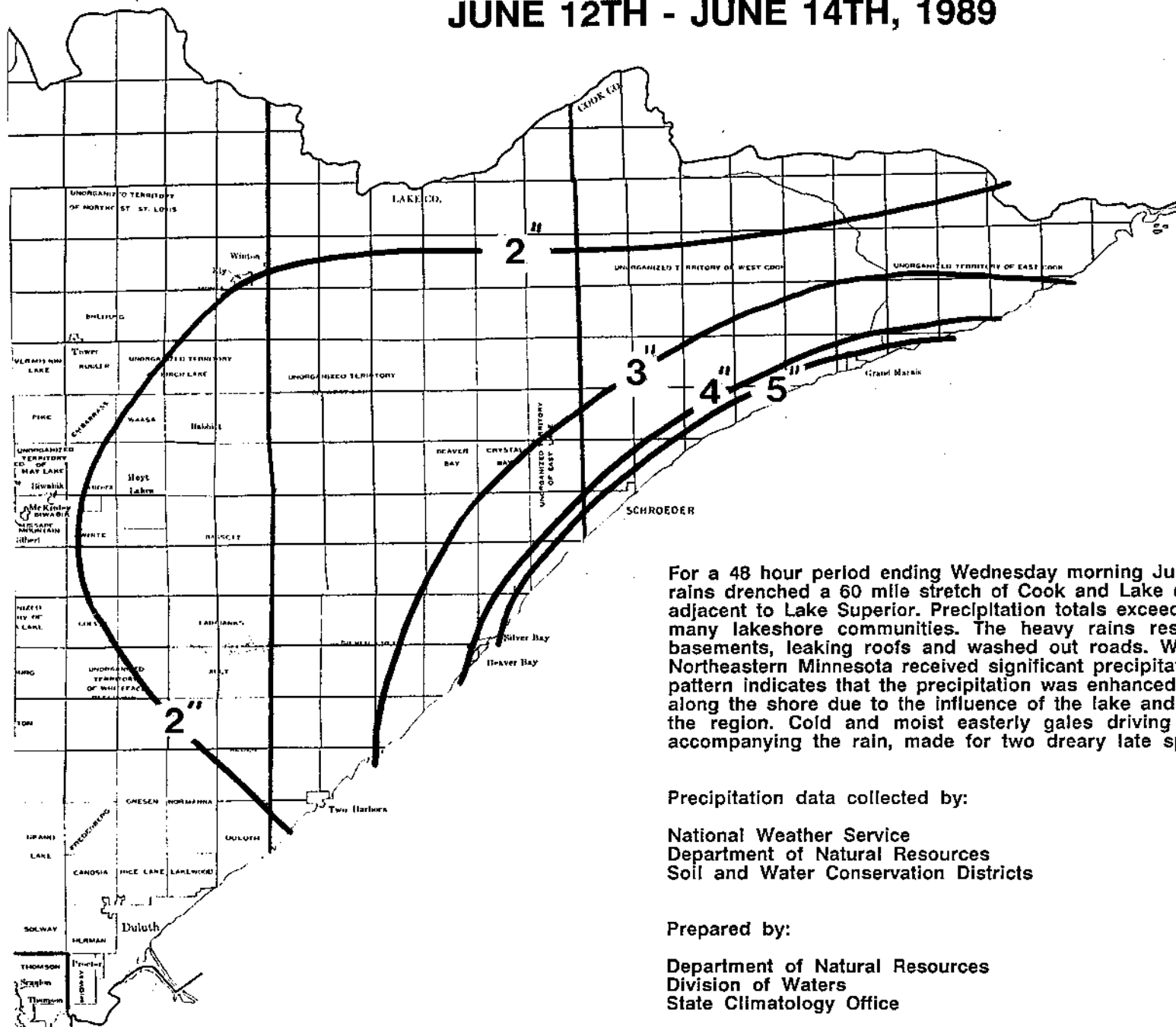
National Weather Service, D.N.R. Forestry,
and Soil and Water Conservation District
observers.

Prepared by:

Department of Natural Resources
Division of Waters
State Climatology Office

HEAVY RAINS DOUSE THE NORTH SHORE

JUNE 12TH - JUNE 14TH, 1989



For a 48 hour period ending Wednesday morning June 14th, torrential rains drenched a 60 mile stretch of Cook and Lake counties immediately adjacent to Lake Superior. Precipitation totals exceeded five inches in many lakeshore communities. The heavy rains resulted in flooded basements, leaking roofs and washed out roads. While the whole of Northeastern Minnesota received significant precipitation, the rainfall pattern indicates that the precipitation was enhanced significantly along the shore due to the influence of the lake and the topography of the region. Cold and moist easterly gales driving off the lake, accompanying the rain, made for two dreary late spring days.

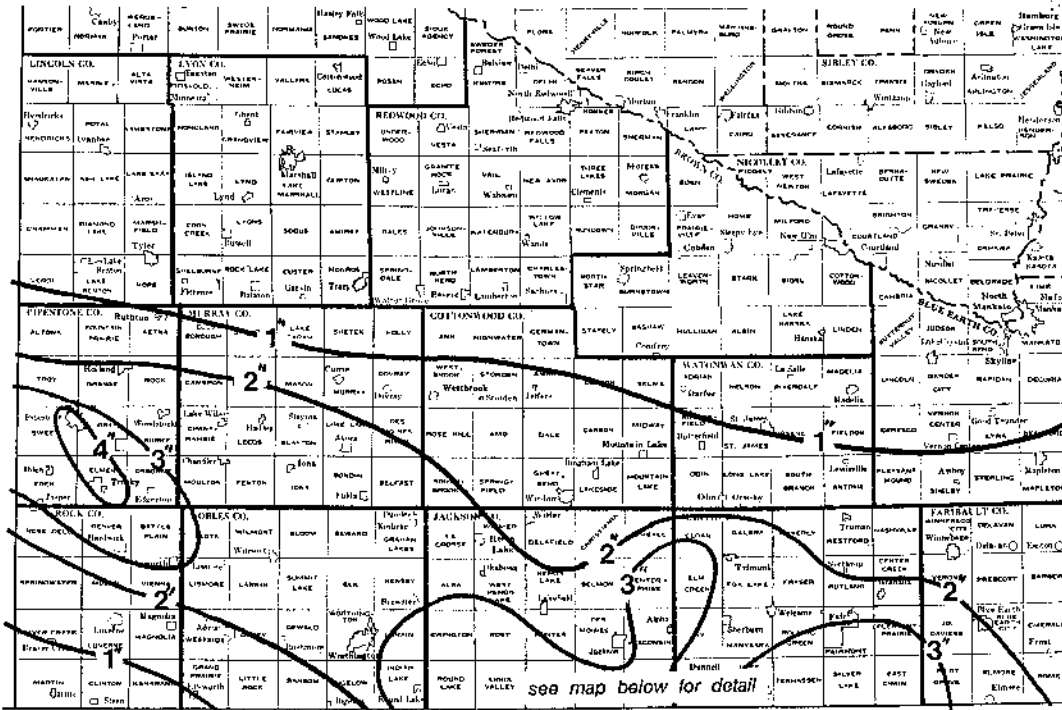
Precipitation data collected by:

National Weather Service
Department of Natural Resources
Soil and Water Conservation Districts

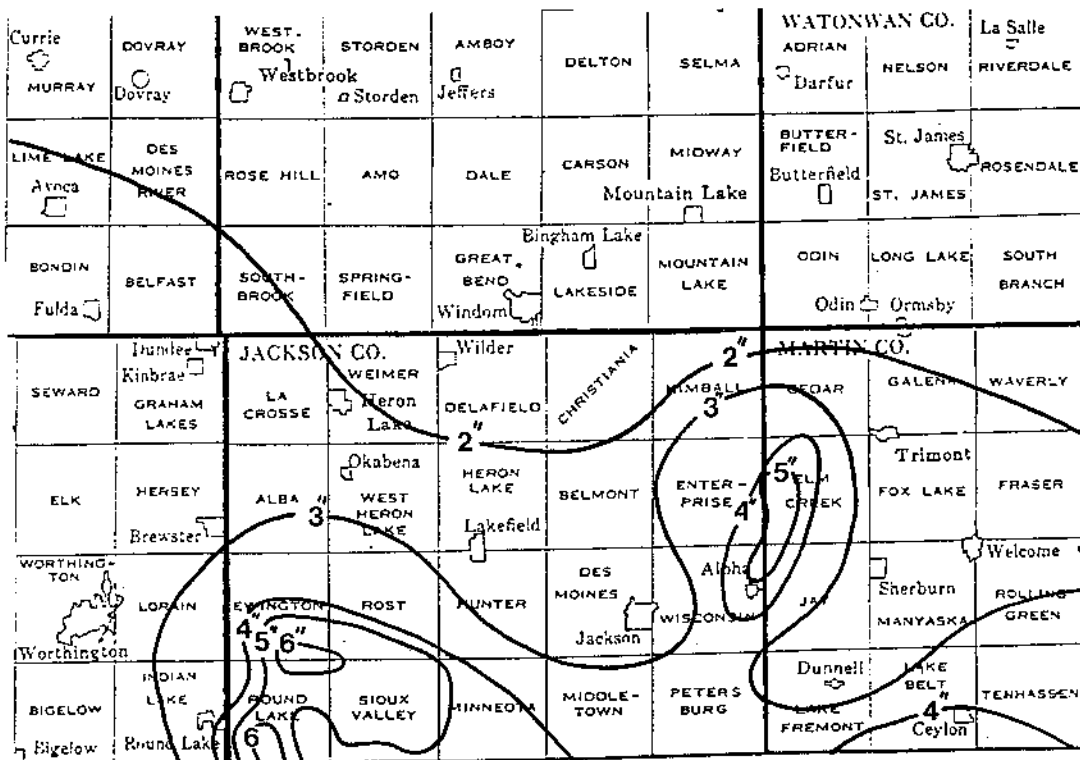
Prepared by:

Department of Natural Resources
Division of Waters
State Climatology Office

HEAVY RAINS FALL ON SOUTHWESTERN MINNESOTA JULY 10TH AND 11TH



JACKSON COUNTY AND SURROUNDING AREAS JULY 10TH AND 11TH



Data collected by National Weather Service and Soil and Water Conservation Districts. All values are in inches.

... AND NOW THE GOOD NEWS!

HEAVY RAINS FALL ON SOUTHWESTERN MINNESOTA
JULY 10TH AND 11TH, 1989

On the evening of July 10th and the morning of July 11th portions of southwestern Minnesota were favored by much-needed rainfall. Parched from a week of searing heat and desiccating winds, soil moisture reserves were running short. Thanks to precipitation associated with a slow moving low pressure system, many areas in this region received a welcome recharge of the soil moisture reservoir. This is especially critical as we enter the crucial reproductive stages in row crop development.

The rains began in the early evening hours of July 10th. It was a general, consistent rain which fell more or less continuously into the mid-morning hours of July 11th. Imbedded within the general showers were heavy downbursts which led to impressive rainfall amounts in some areas. The heaviest rainfall total reported was 6.70 inches which fell in Round Lake township of southwestern Jackson county. Six inch rainfalls at any one spot in Minnesota are statistically projected to occur only once in every one hundred years. Other heavy rainfall events included four to five inch amounts in Pipestone and Martin counties.

Remarkably, the heavy rain events were not accompanied by the severe weather (hail, high winds, tornadoes) that often is associated with summer storms. In addition, the rainfall rates were such that the soil was very efficient at adsorbing the incoming moisture. After receiving many recent atmospheric heartaches, southwestern Minnesota was indeed due for a positive contribution from Mother Nature.

State Climatology Office
Department of Natural Resources
Division of Waters
St. Paul, Minnesota