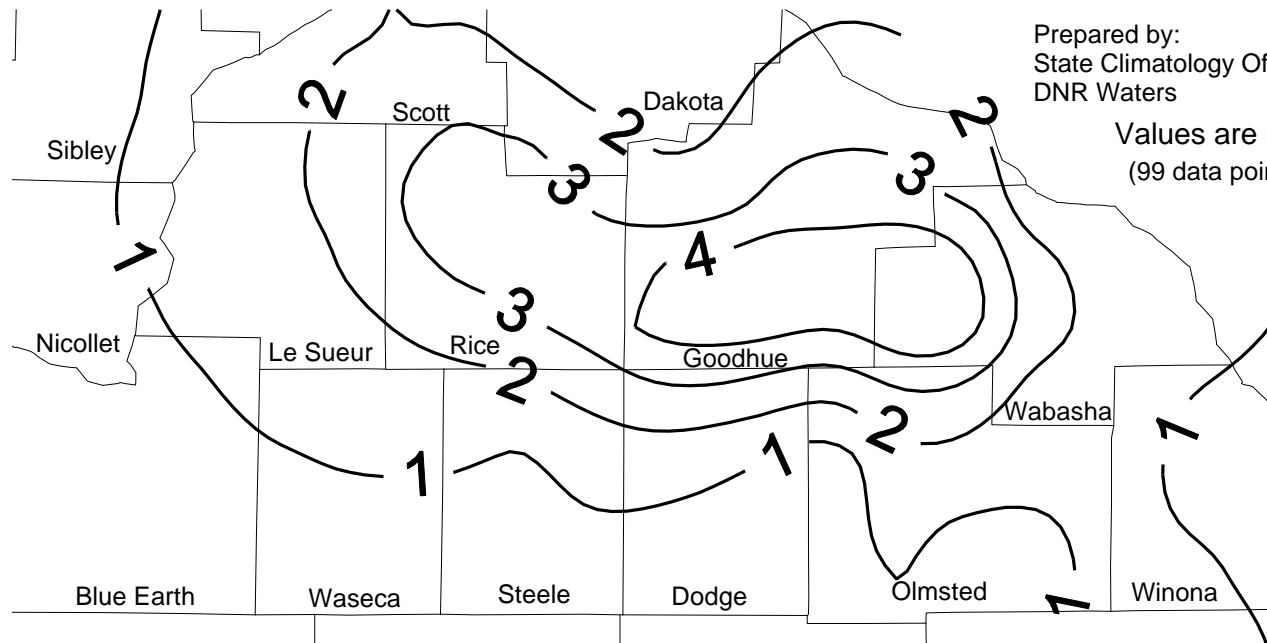


# Heavy rains fall on Southeast Minnesota June 7-8, 2005

Data provided by:  
Soil and Water Conservation Districts  
National Weather Service

Prepared by:  
State Climatology Office  
DNR Waters

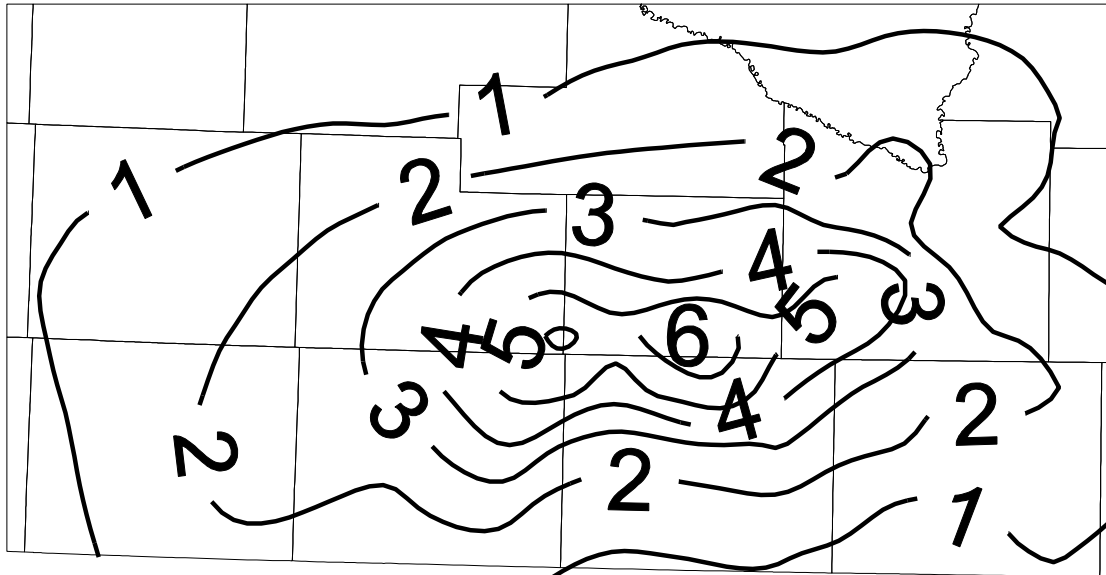
Values are in inches  
(99 data points used)



Strong thunderstorms developed along a stationary front in west central Wisconsin and southern Minnesota during the evening of June 7. The thunderstorms moved slowly north and dumped heavy rains over Wabasha, Goodhue, Rice and Le Sueur counties. A large area of thunderstorms at the same time covered a massive area over eastern South Dakota associated with an area of low pressure. This area of storms formed a bow echo and marched eastward across Minnesota in the wee hours of the morning on June 8th.

This line moved over the same area saturated by the thunderstorms over southeast Minnesota. 6.43 inches of rain fell in 24 hours at Zumbro Falls, 5.50 inches fell at Wanamingo. Water from the Zumbro River flooded over Highway 58 and closed the road. Sandbagging was underway on the morning of June 8th in low lying spots in Zumbrota. One woman was rescued and one man died after their separate vehicles were swept off Highway 1 and into an unnamed creek that flows into the Zumbro River.

# Heavy Rains Drench South Central Minnesota August 17-18, 2005



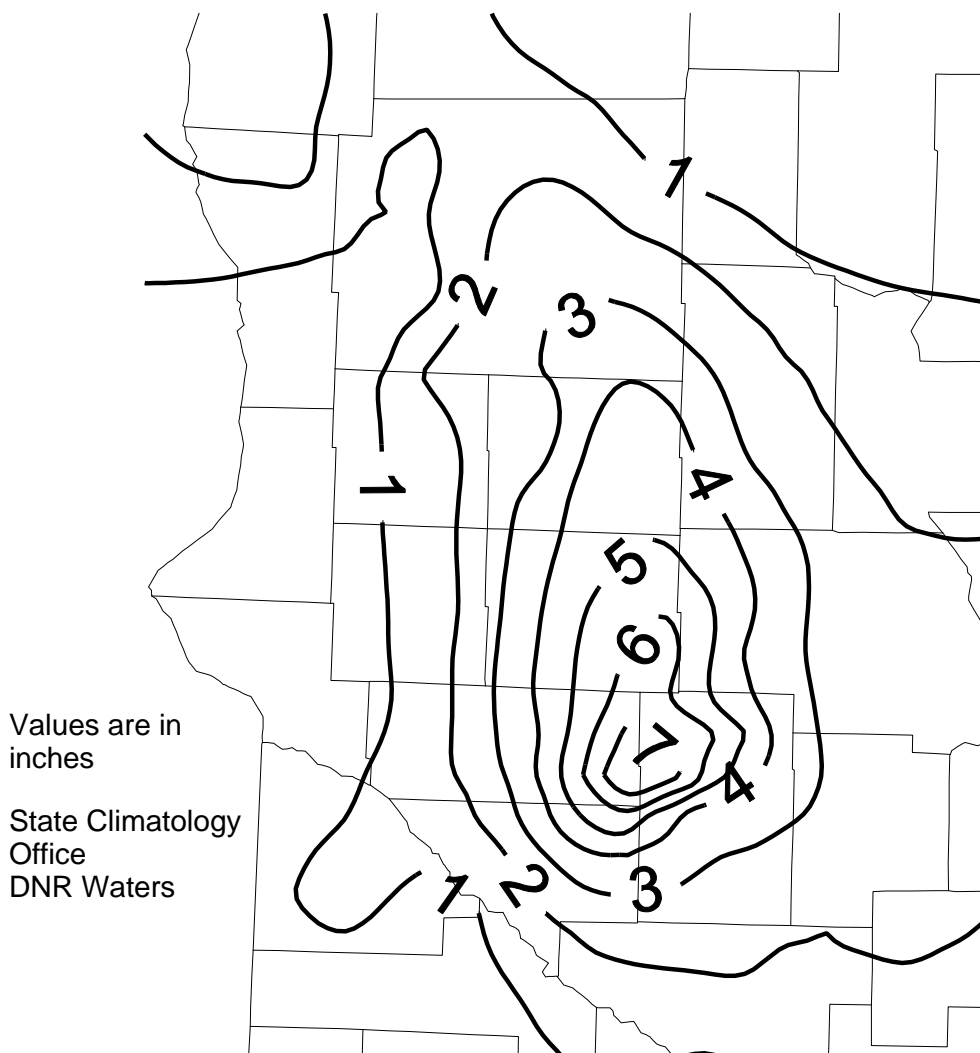
State Climatology Office - DNR Waters  
Data provided by: Soil and Water Conservation Districts  
National Weather Service

Values in inches

An area of intense thunderstorms dropped very heavy rains over south central Minnesota during the evening of August 17, and tapered off during the wee hours of the morning on August 18. The heaviest rain fell from 8:30-10:30pm in the Jackson area and from about 10pm to midnight in the St. James area. The heaviest rains were along the Martin and Watonwan border. The heaviest amount reported was around 8 inches in South Branch Township in South central Watonwan County.

There were some soggy basements and water in fields, but otherwise no widespread flooding was reported. The fact that the area was relatively dry before the rains may have helped.

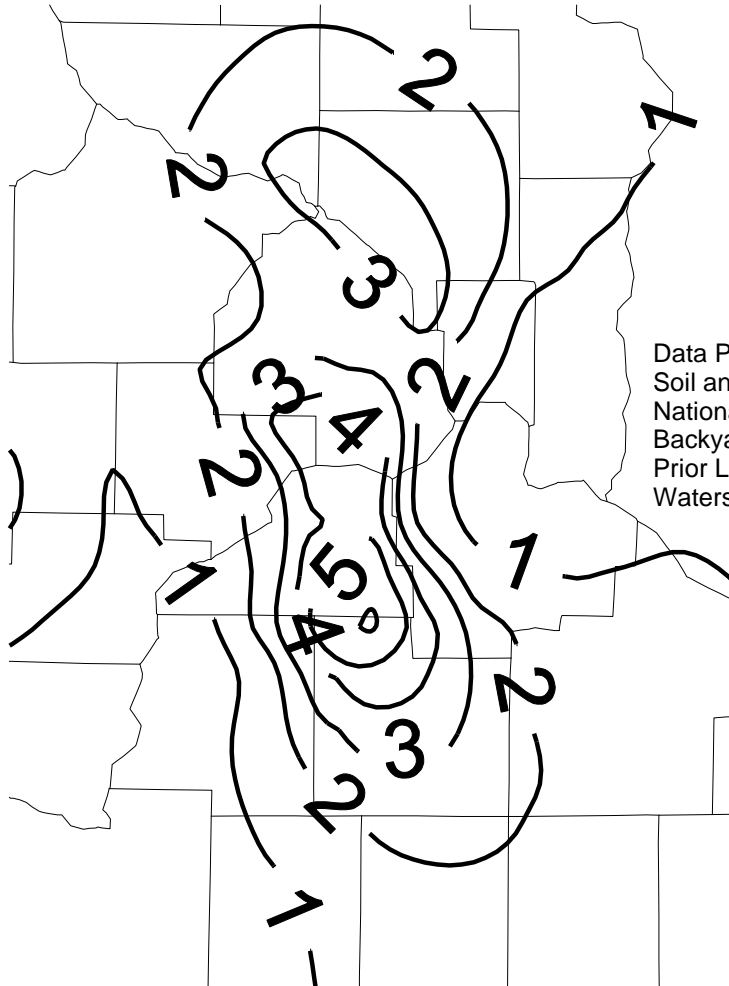
## Heavy Rains over West Central Minnesota August 25-26, 2005



High rainfall rates over short time periods led to urban and rural flooding. This was especially true in locations where soils were already damp from previous August rains. Urban flooding was reported in Clay and Wilkin counties. Water was several feet deep in some Fargo streets and Rothsay High School experienced flooding after the thunderstorms dropped over two inches of rain in less than hours. Nearly three inches of rain was reported in Glenwood of Pope county between 10pm and midnight on the 25th, causing ankle-deep water in some city streets.

The locations with the greatest rainfall totals were located in Douglas, Pope, eastern Swift, Kandiyohi, and western Stearns counties. The highest 24-hour rainfall total was 8.30 inches about three miles west of New London in Kandiyohi County. 8.18 inches was reported one mile southwest of the city of Kerkhoven in southeast Swift County. Other totals included 6.72 inches southeast of Sundburg in Kandiyohi County, New London with 5.52 inches and 5.45 inches at Carlos in Douglas County.

# Heavy Rains Over Western Twin Cities September 3-4, 2005



Data Provided by:  
Soil and Water Conservation Districts  
National Weather Service  
Backyard Rain Gauge Network  
Prior Lake-Spring Lake  
Watershed District

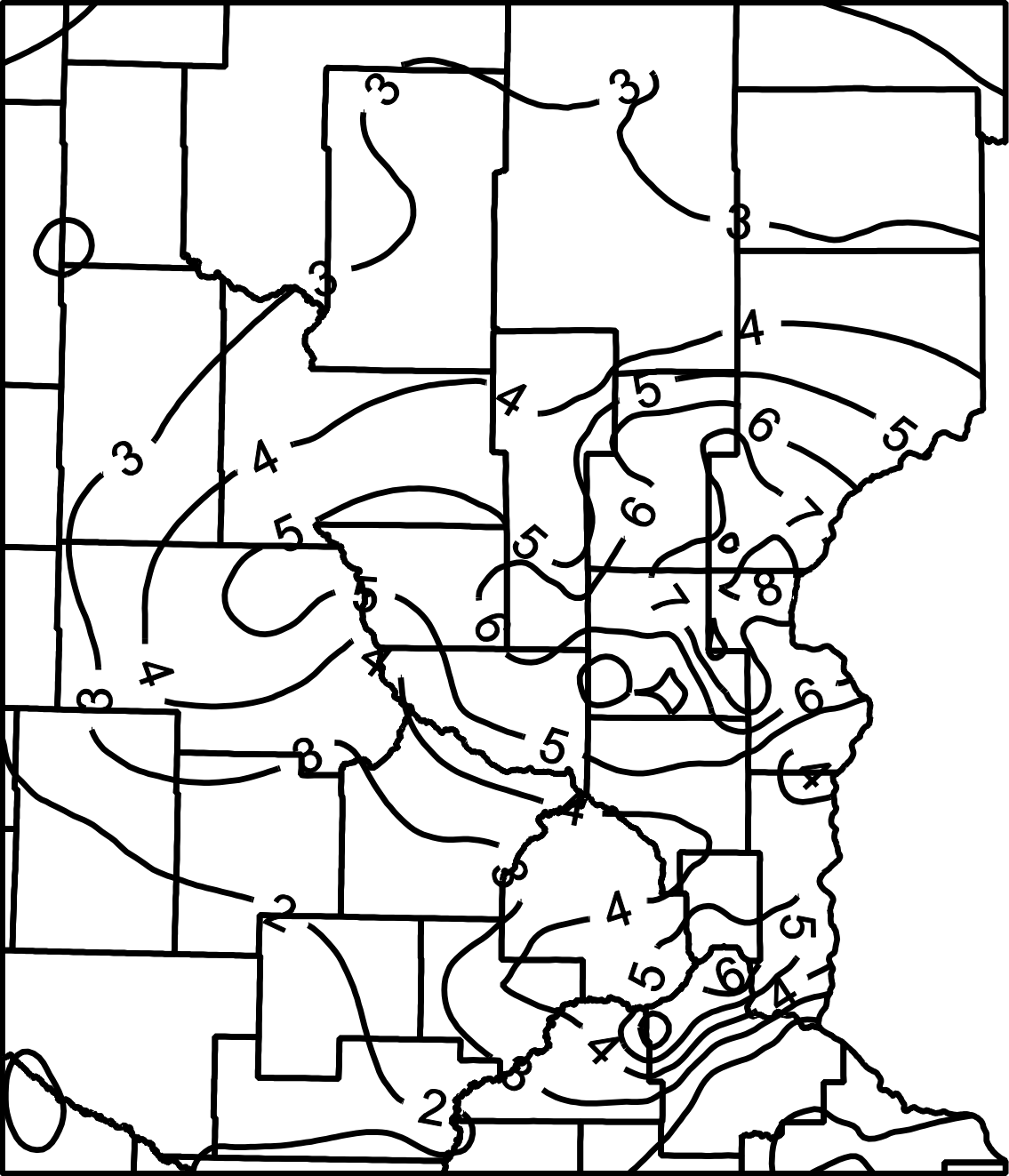
Prepared by:  
State Climatology Office  
DNR- Waters

values are  
in inches

A slow-moving warm front spawned waves of thunderstorms over central and east central Minnesota during Labor Day Weekend. The first wave began with lighter thunderstorms during the afternoon of Saturday, September 3rd. Later in the evening and during the overnight hours a line of heavy thunderstorms developed in a "training" pattern over the western Twin Cities metropolitan area and moved south. People had difficulty sleeping with the nearly constant rumbles of thunder all night long. When dawn came on Sunday, September 4th the rains totaled a half-foot in a few spots in the south west metro. The heaviest rains fell in a very narrow band following I-94 from Alexandria and then turned to the south along I-35 across the Twin Cities.

The most rain reported was 6.62 inches near Elko in New Market. 6.17 inches was reported in nearby Cedar Lake Township. 5.66 inches was reported 2 miles southwest of the downtown Chanhassen. The Chanhassen National Weather Service picked up 5.55 inches. The heavy rains caused street flooding in low lying areas. Some roads were blocked by water for a brief time. Water was up to the bumpers of cars in a parking lot in Excelsior. Other cities that experienced street flooding were Shakopee, Chanhassen, Eden Prairie, Brooklyn Park and Sauk Centre in Stearns County.

# Total Rainfall October 4-5, 2005



values in inches

State Climatology Office - DNR Waters

**A stationary frontal boundary bisected Minnesota into halves, with cooler and drier air to the north -- warmer and record-breaking muggy air to the south. This created a focal point for the formation of thunderstorms. Upper-level winds paralleled the frontal boundary, directing the thunderstorms over the same landscape over and over again.**

**Heavy thunderstorms began just before daybreak on October 4 and continued to develop off and on for the next 30-plus hours. A large portion of central and southern Minnesota received over two inches of rain. To put this in perspective, the normal MONTHLY October rainfall in these areas is around two inches.**

**Central and east central Minnesota received the most rain. Numerous reports of over four inches were reported in this area. Totals exceeding six inches were reported in portions of the following counties: Dakota, Benton, Mille Lacs, Isanti, Chisago, Kanabec, Pine and Washington. A six inch rainfall total in 24 hours is considered to be a 1% probability event for a given location in a given year.**

**A six-inch daily rainfall total in October is nearly without precedent, occurring only one other time in the historical record. The 6.61 rainfall report from Wild River State Park (Chisago county) is now the largest single-day October value reported by a National Weather Service Cooperative Observer.**

**Numerous non-National Weather Service observing location reported rainfall totals topping seven inches. The heaviest rainfall fell upon northern Chisago and southern Pine counties. The heavy band extended into northwestern Wisconsin. The highest total reported by a non-National Weather Service observer was 8.98 inches in Rush City. An automated rain gauge at the Rush City Airport recorded 9.59 inches. Heavy rains over six inches also fell in parts of Washington County as well with a total of 6.46 inches in north central Woodbury and 7.40 inches in southwest Woodbury.**

**There were sporadic reports of flooding from areas where the pockets of heavy rain were the most intense. Major road closures were common: including southbound I-35E at Highway 70 in Pine County and westbound I-494 at the Wakota Bridge in Newport. Water lapped at the doorstep of at least one home in Rush City while other homes had flooded basements. About a dozen homes were affected by a pond that overflowed in Inver Grove Heights. The lift stations in Hinckley were flooded.**