

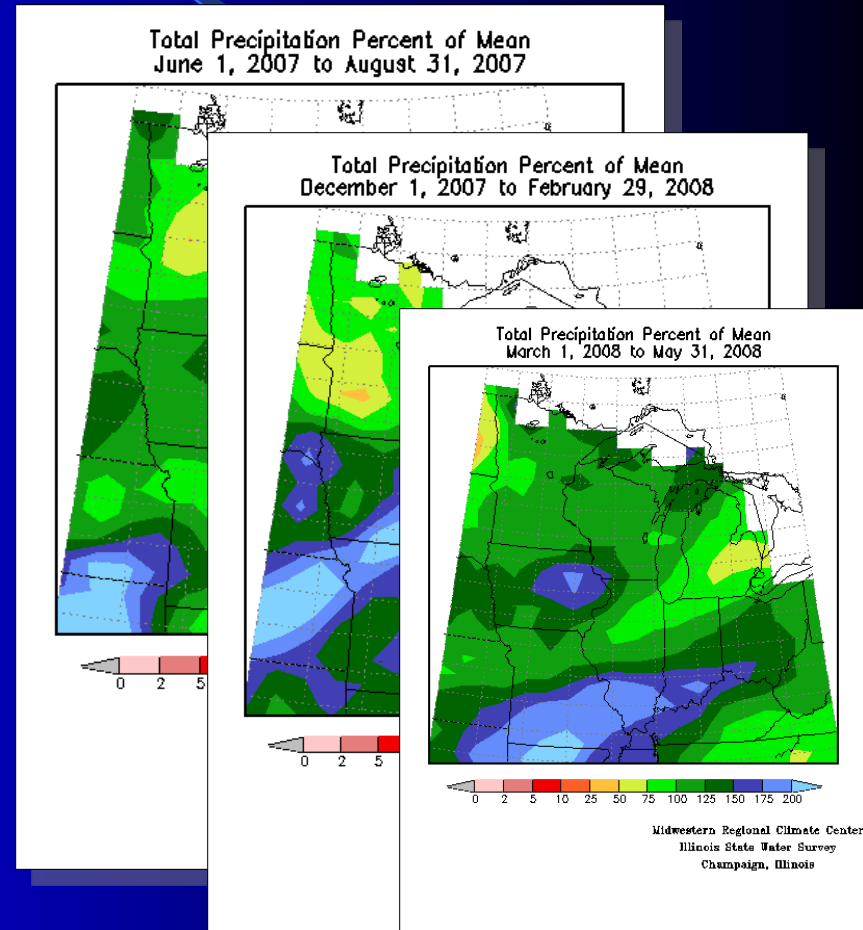
June 2008 Flooding Summary



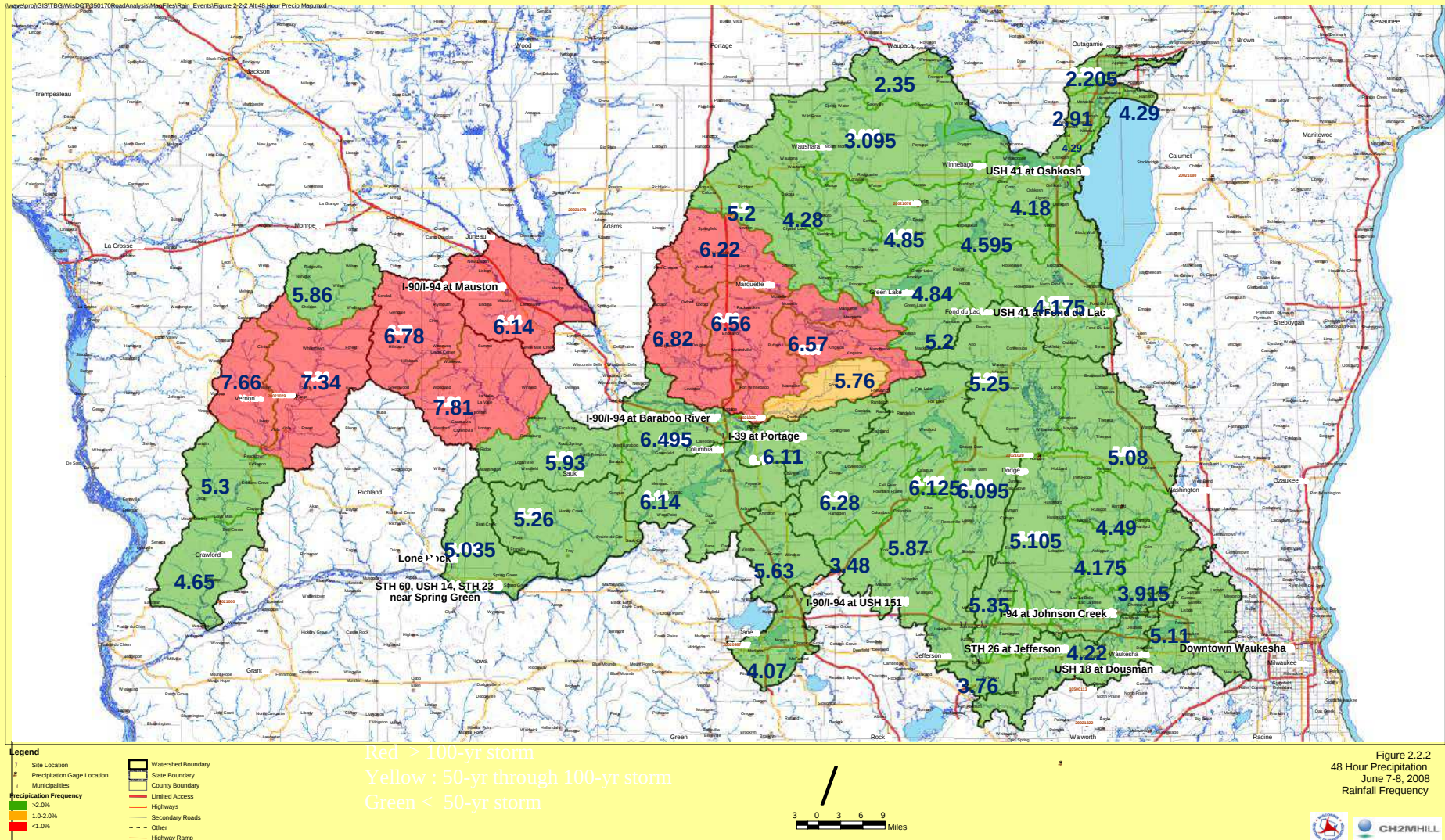
Todd Matheson, P.E.
SW Region Madison
Maintenance Supervisor

Pre-Flood Conditions

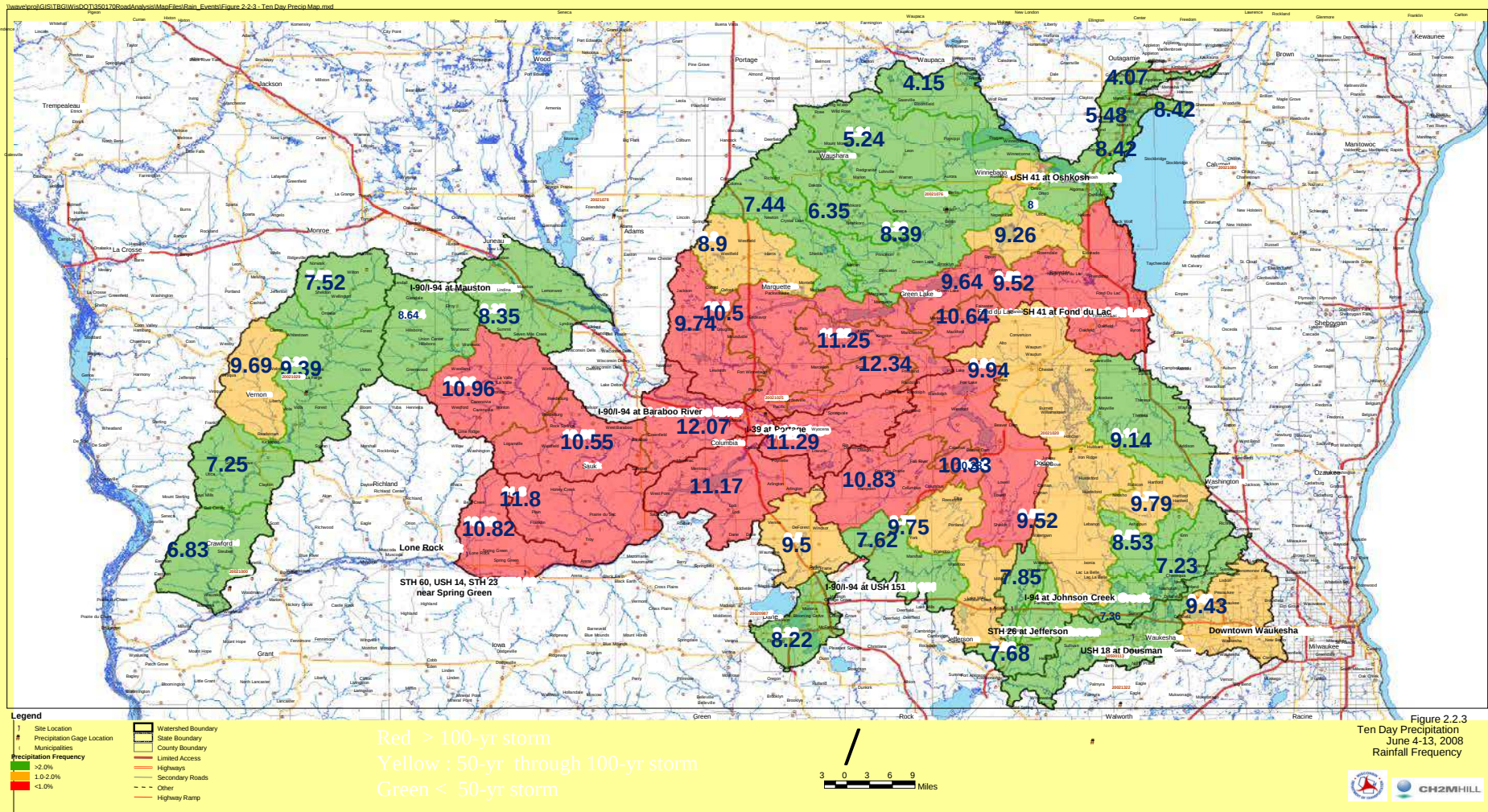
- **Summer 2007**
 - Heavy Rains
(125 – 175% of mean)
- **Winter 2007**
 - Record Snowfall
(175 – 200% of mean)
- **Spring 2008**
 - Normal to slightly above normal rainfall
- **High Groundwater Table**
 - Diminished or no soil capacity to absorb rainfall
 - Higher than normal stream levels



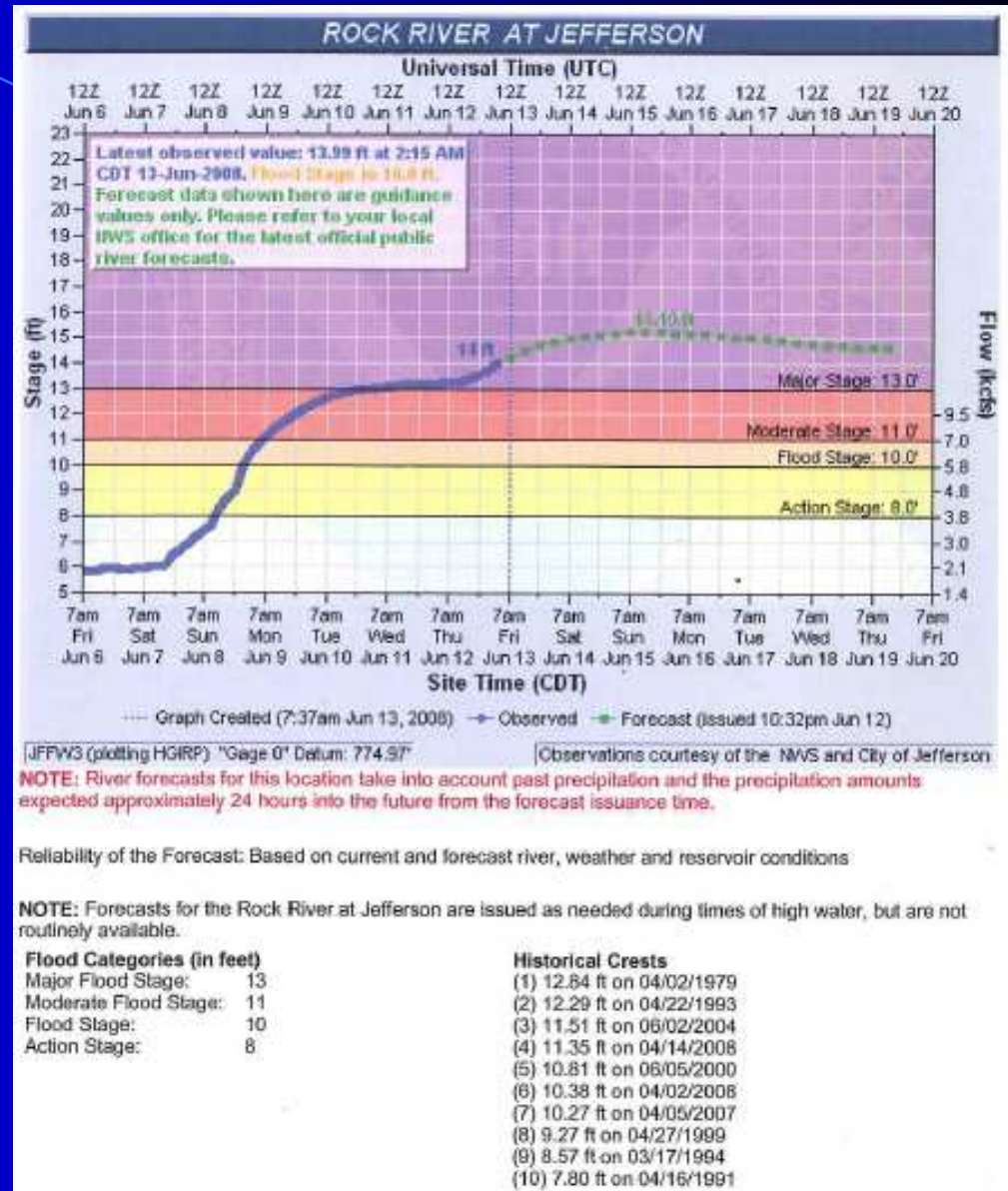
June 7 – 8 Rainfall



June 4 – 13th Rainfall



National Weather Service (Advanced Hydrologic Prediction Service)



Stream Gauge Analysis

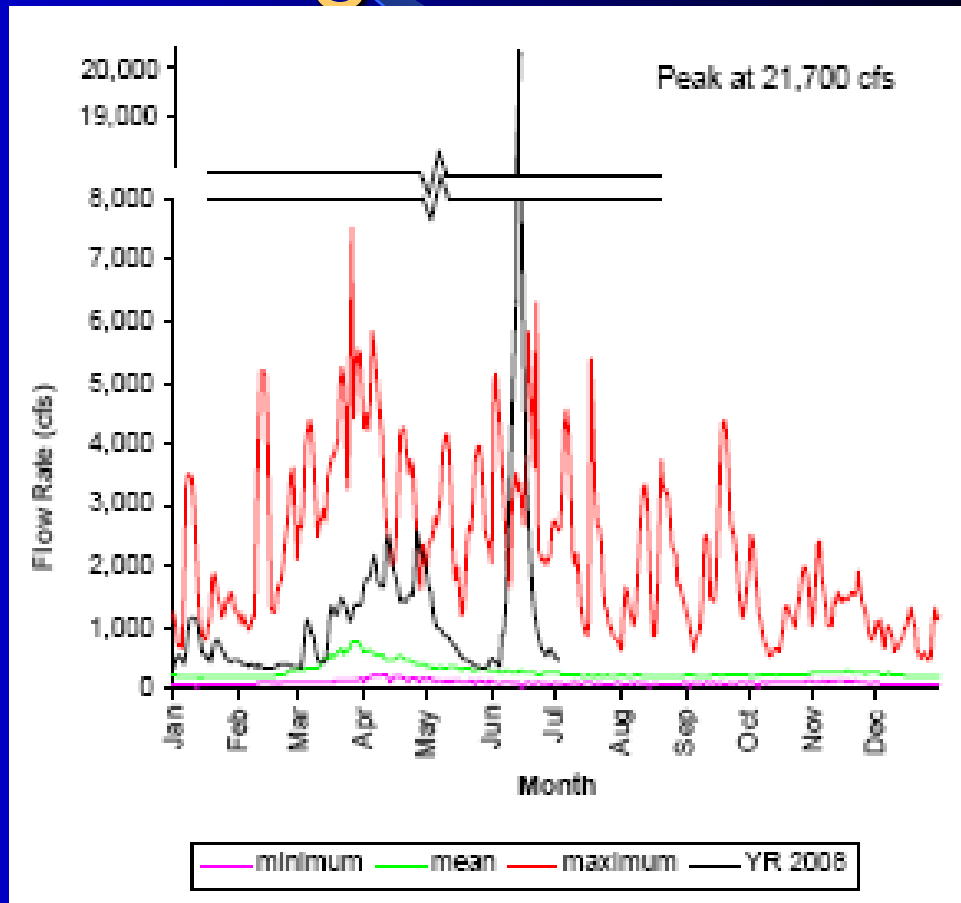
Baraboo River

Stream Gauge

Flood Frequency Table for the Baraboo River

Recurrence Interval (Years)	Discharge (cfs)
2	2,832
5	4,345
10	5,355
25	6,619
50	7,546
100	8,457
200	9,358
500	10,540

Note: Estimated flows represent the systematic record obtained using PeakFQ for the period of record: 1915-2007.



Flood History of Baraboo River

- **Flood Categories (in feet)**

Major Flood Stage: 23.1

Moderate Flood Stage: 22

Flood Stage: 16

Action Stage: 14

- **Historical Crests**

- (1) 27.48 ft on 06/13/2008
- (2) 25.10 ft on 03/26/1917
- (3) 22.78 ft on 07/18/1993
- (4) 22.68 ft on 02/13/1966
- (5) 22.04 ft on 06/02/2000
- (6) 21.35 ft on 04/05/1959
- (7) 21.16 ft on 03/29/1950
- (8) 20.96 ft on 07/06/1978
- (9) 20.66 ft on 09/20/1992
- (10) 20.63 ft on 03/21/1948



STH 33

(Portage – Baraboo)



SW Region

Interstate Closures

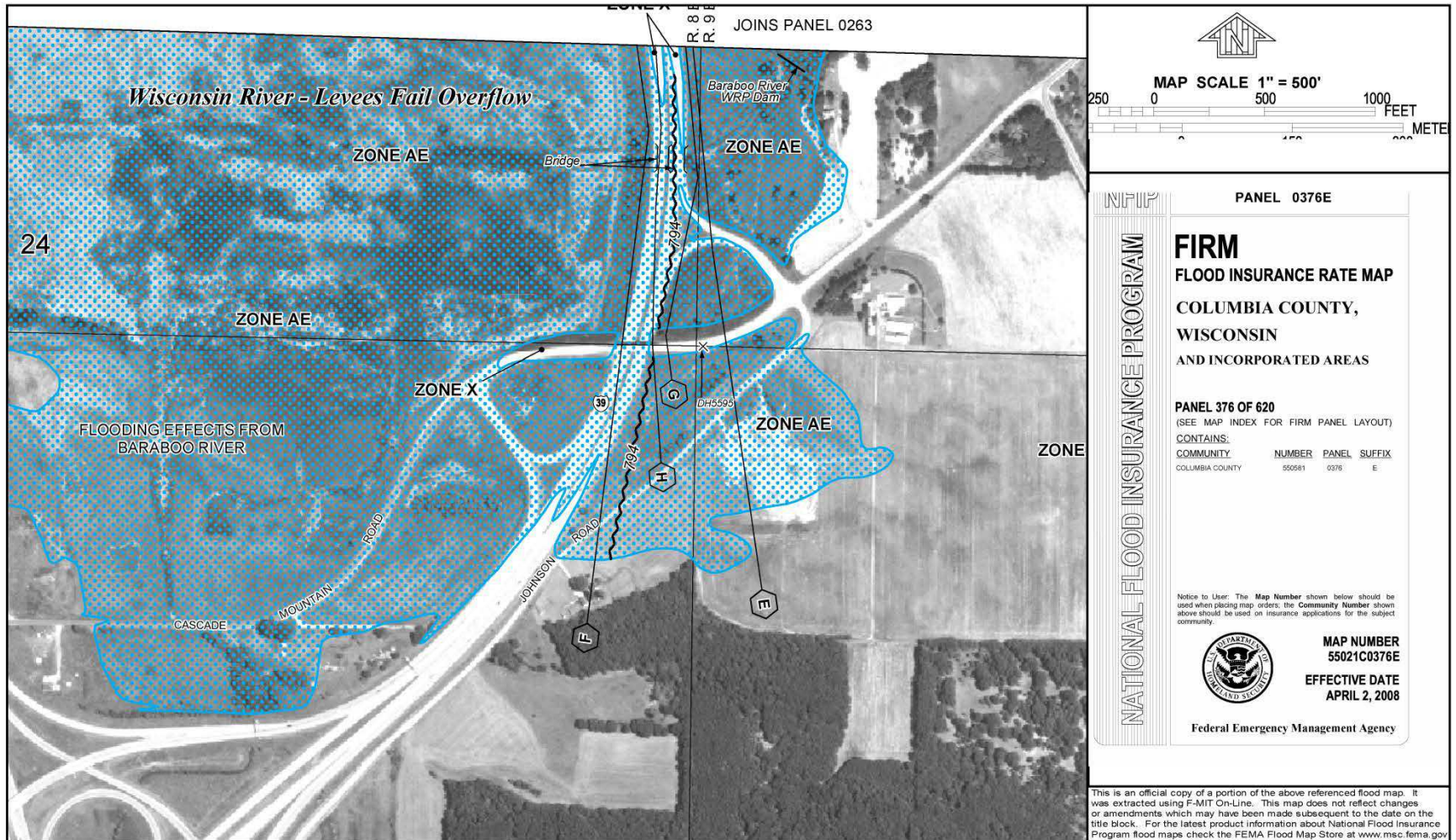
- IH 94 between Milwaukee and Madison
 - Westbound Lanes at Crawfish & Rock River in Jefferson County
- IH 90/94 north of Madison
 - STH 33 Interchange in Columbia County
- IH 39 north of Madison
 - Cascade Mtn. Road Interchange
 - STH 33 Interchange + 1000' North

IH 39/STH 33



Aerial View of Extent of Flooding for IH39 at STH 33

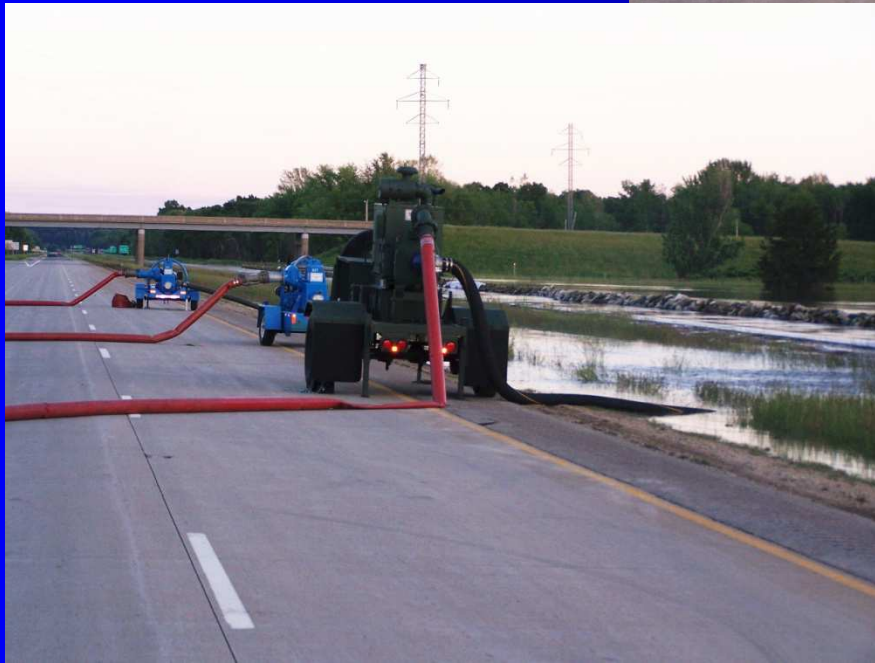
IH 39 & Cascade Mtn. Road



IH 39 & Cascade Mtn. Road



I39 North of Portage



STH 90/94 at Petro Interchange



IH 90/94 & STH 33 Interchange



IH 90/94 at STH 33



06/13/2008 09:10

IH 94

(between Madison and Milwaukee)





SW Region

Interstate & State Highways Closed

SAUK

USH 12
STH 23
STH 33
STH 58
STH 60
STH 113
STH 136
STH 154
STH 159

GRANT

STH 61
STH 81

DANE

USH 14
STH 104

VERNON

USH 14
STH 33
STH 56
STH 80
STH 82
STH 162

RICHLAND

STH 56
STH 58
STH 80
STH 130
STH 133

ROCK

STH 140

DODGE

USH 151
STH 73
STH 16
STH 60
STH 49

IOWA

STH 23
STH 80
STH 130
STH 133

MONROE

STH 33

COLUMBIA

STH 33
STH 16
STH 44
STH 73

JUNEAU

USH 12
STH 33
STH 80
STH 82

LAFAYETTE

STH 23

CRAWFORD

STH 60
STH 131
STH 171
STH 179

JEFFERSON

IH 94
STH 19
STH 106
STH 18

GREEN

STH 59
STH 92
STH 104

Typical Shoulder Damage



STH 67 Neosho

June 9th



STH 33 Reedsburg – June 9th





STH 58 LaValle



USH 14 Spring Green – June 9th



USH 14 Brooklyn (Southern Dane County)





STH 60 Dodge County



STH 73





STH 133 Avoca





STH 113 Sauk County



STH 113 Sauk County





STH 33 Near IH 39 Portage





STH 33 Near IH90/94





Damage Totals State & Interstate Highways

- 150 Individual Sites
- Damage Recovery Costs
\$12 million
- Betterment Costs – TBD
 - Based on Improvements to the
Interstate System

What's DOT Going to Do Next?

- Initial Flood Assessment Completed
- Conduct a risk assessment of the Interstate Highway System.
- Create Hydraulic Model of Flooded areas Impacting the Interstate.

Organizational Improvements for Future Events

- Emergency Transportation Operations Plan (ETO Plan) – October 2008
- Adverse Weather Plan – November 2008
- Additional Training for Regional Incident Management Coordinators (RIMCs)
- Implementation of On Call Duty Officers
- 511 System / STOC

Keys to Success

- Teamwork
- Communication
- Pre-planning & Training