



# The Floods of 2012 District 1 Duluth

Prepared for the Freight and Logistics  
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*Your Destination...Our Priority*



This is good.....



This is not good....



# Overview:

- ▶ Describe Impacts from the Event
- ▶ Describe The D1 District Emergency Operation Center
- ▶ Communication Methods
- ▶ Lessons Learned



# Emergency Declarations

- State of Minnesota
- Carlton County
- Lake County
- City of Duluth
- City of Moose Lake
- City of Wrenshall



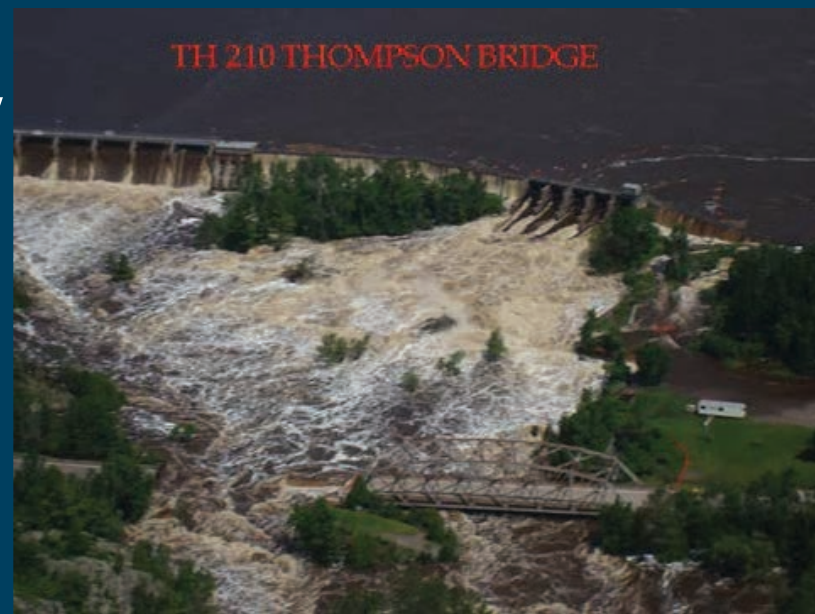
# Statistical Information

## ▶ Thomson Dam

- Summer 580 to 1,000 cfs
- Spring Runoff 10,000 cfs
- Alarms sound 25,000 cfs
- Spike 55,000 cfs

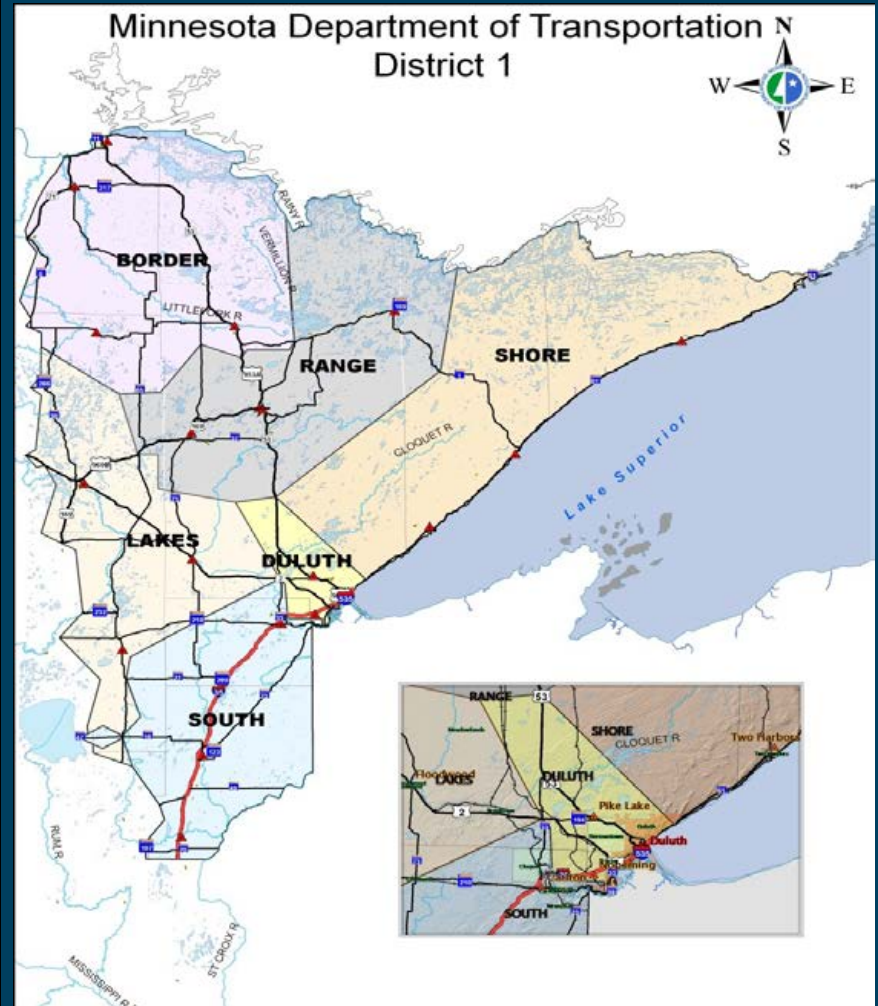
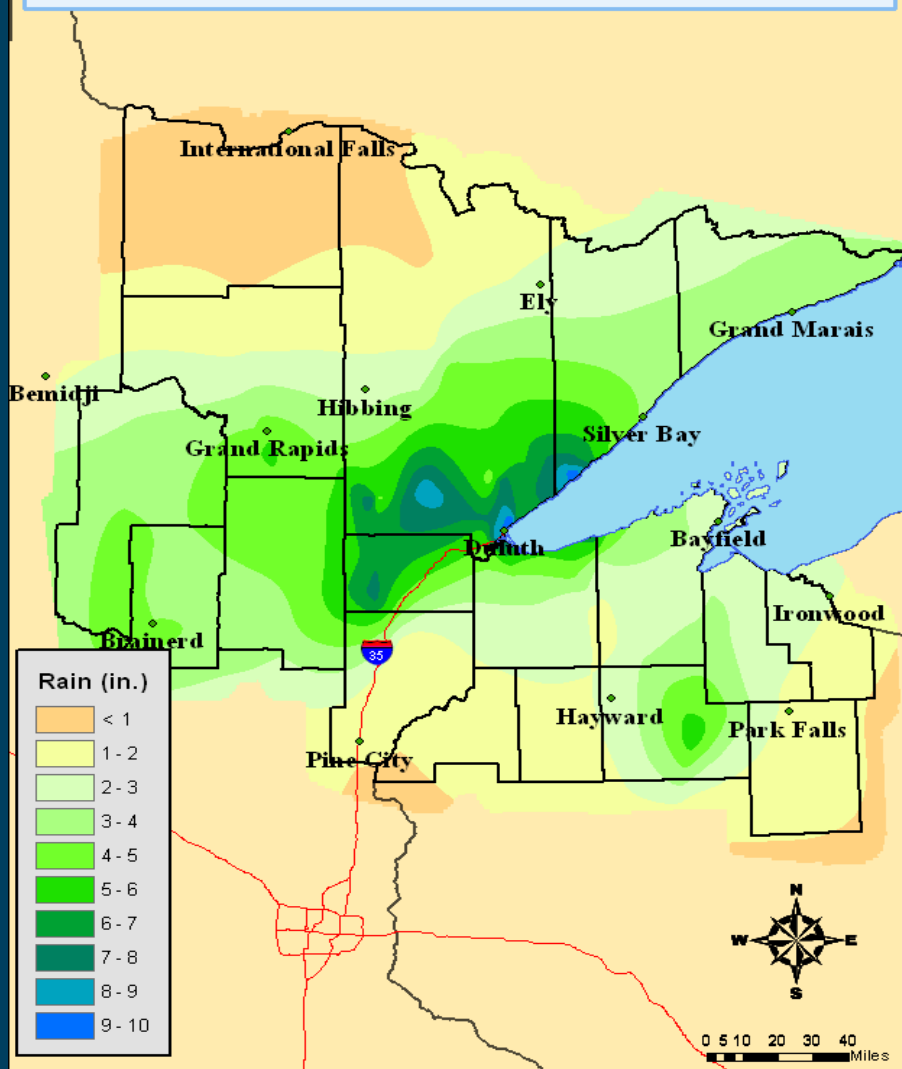
*Note: during the April 1, 1979, previous high was 39,600 cfs.*

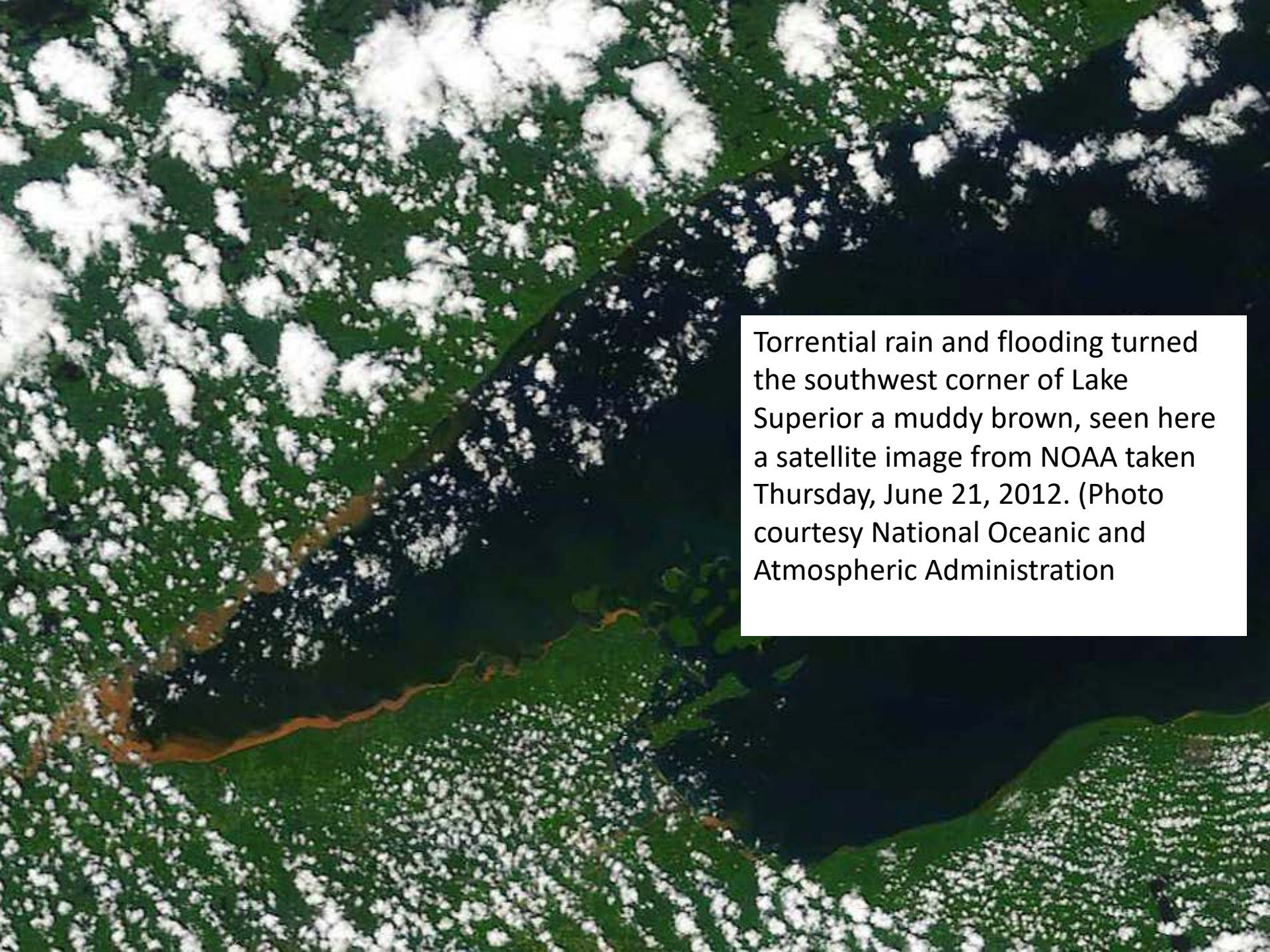
*For comparison, Niagara Falls carries 100,000 cfs*



# What happened?

## June 19-20, 2012 Flooding Rains





Torrential rain and flooding turned the southwest corner of Lake Superior a muddy brown, seen here a satellite image from NOAA taken Thursday, June 21, 2012. (Photo courtesy National Oceanic and Atmospheric Administration)



# TH 61 KNIFE RIVER



# TH 61 SILVER CREEK



06.20.2012

06.20.2012

# CITY OF THOMPSON

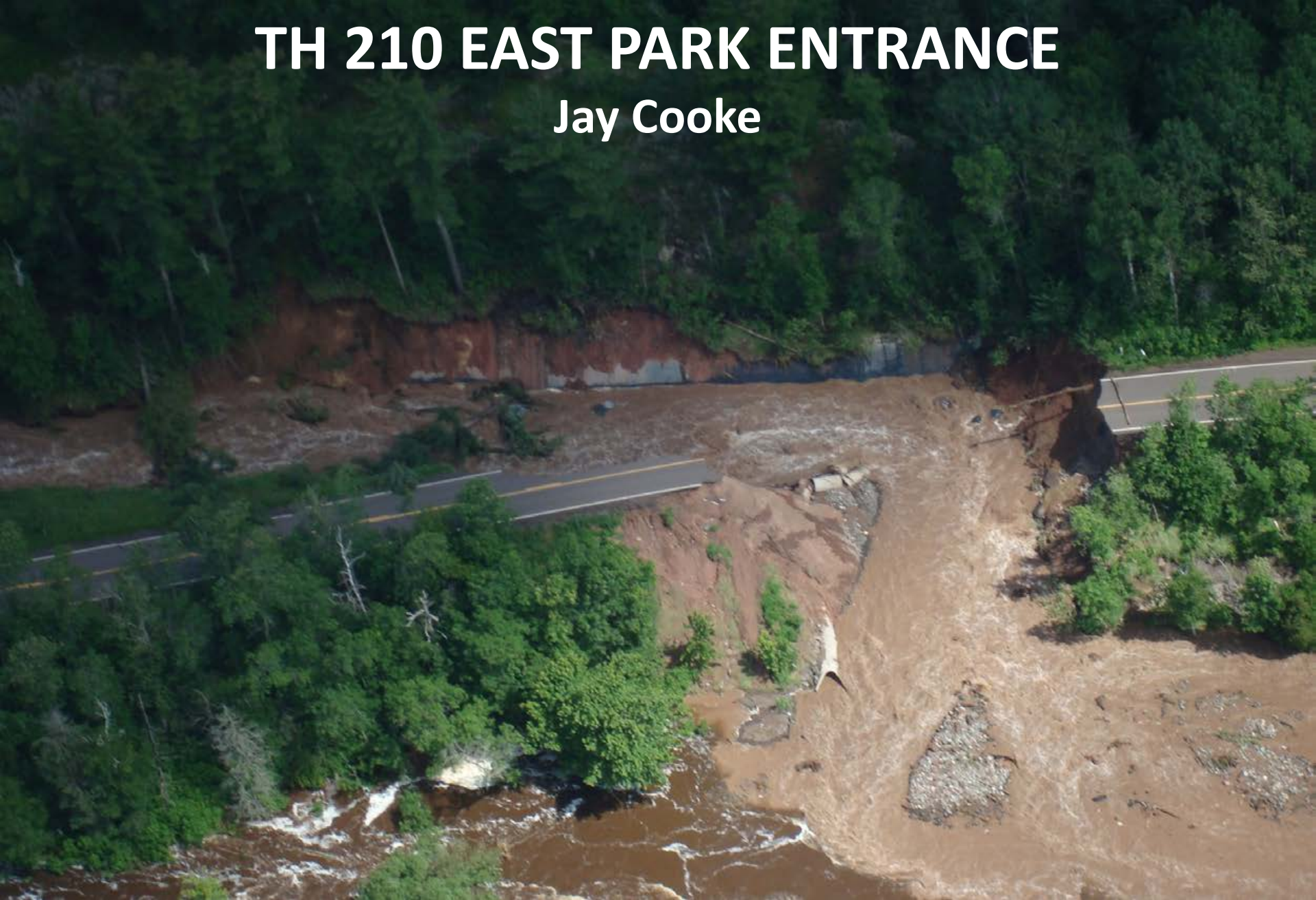


# TH 210 NEAR THOMPSON



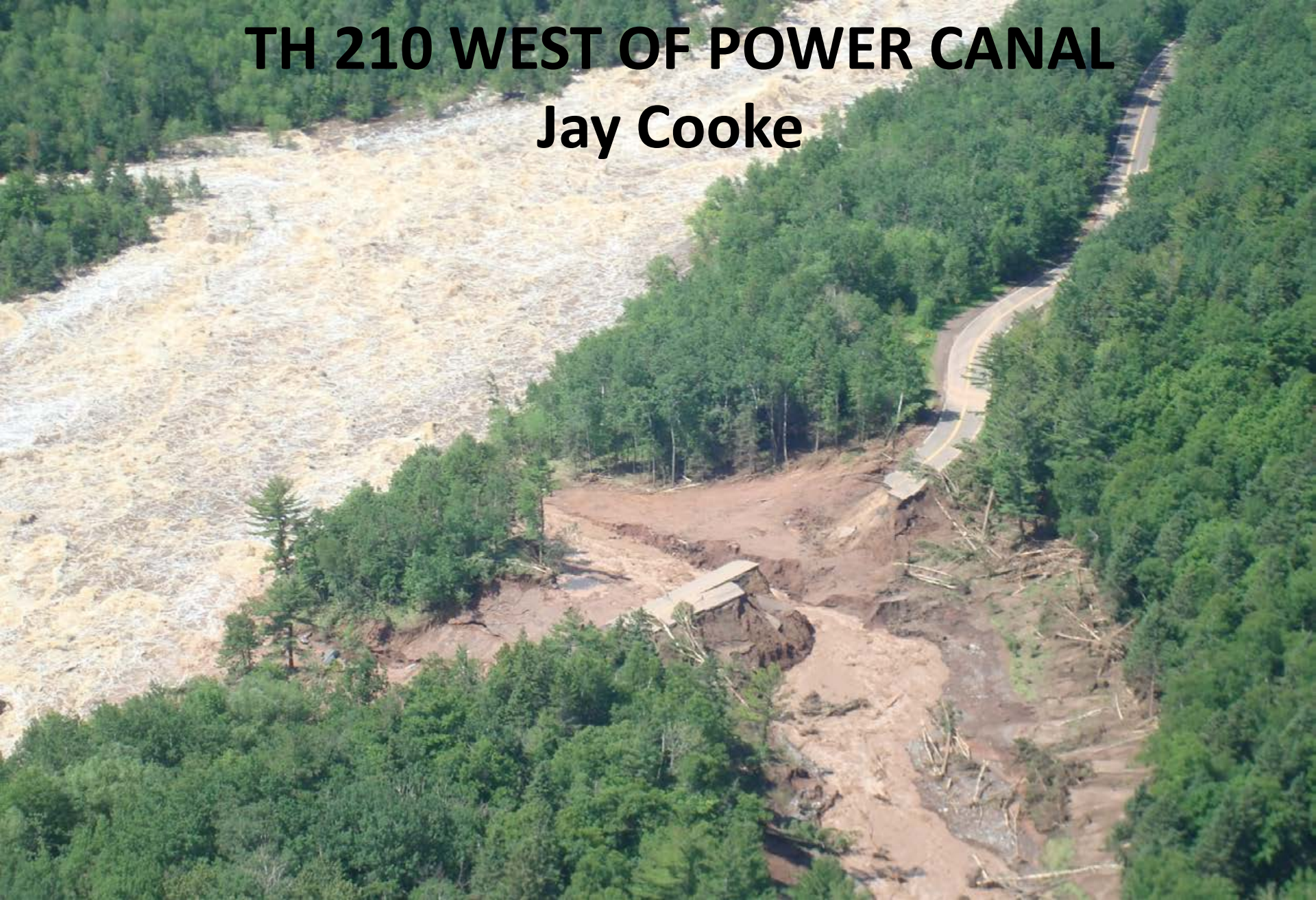
# TH 210 EAST PARK ENTRANCE

Jay Cooke

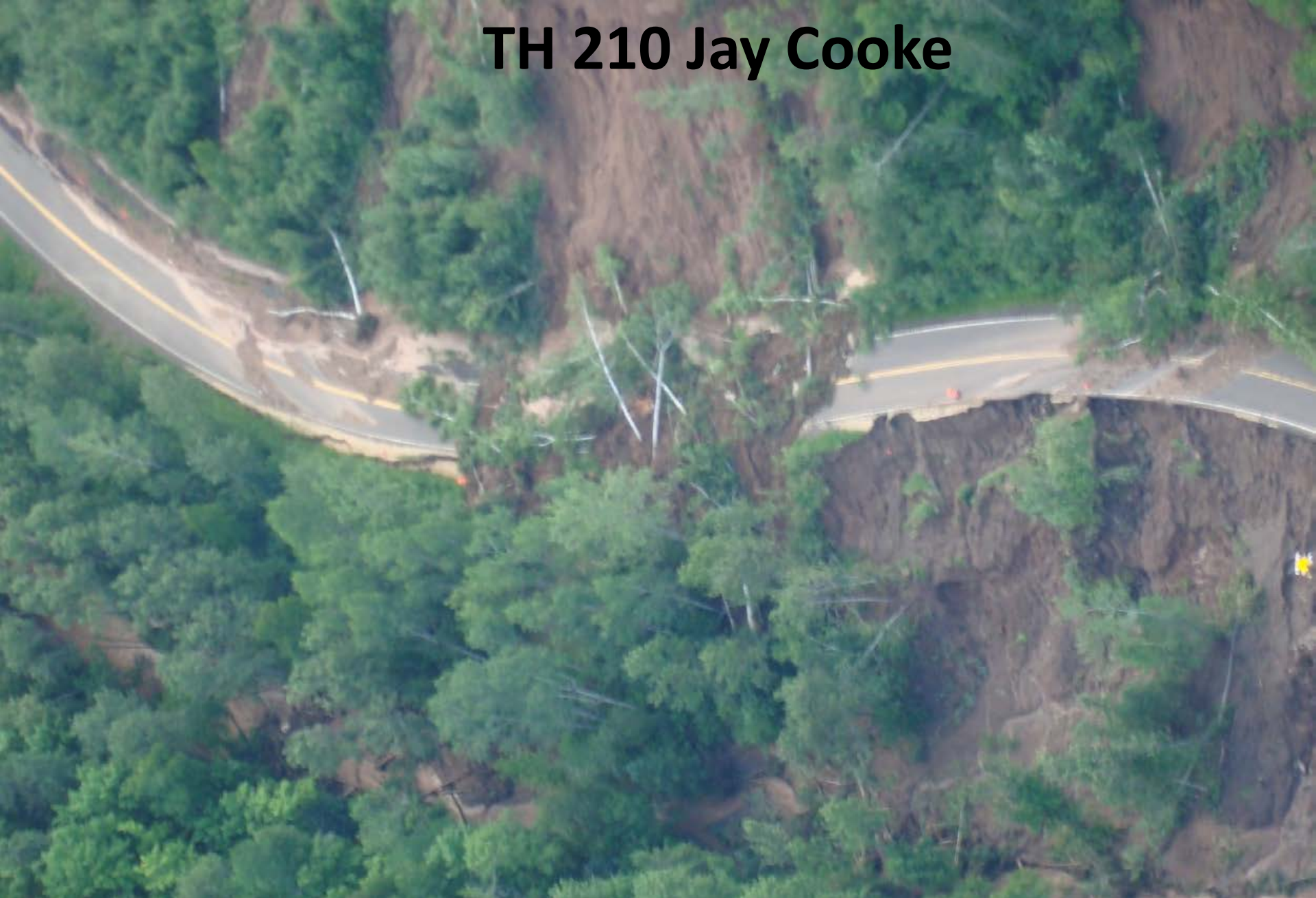


# TH 210 WEST OF POWER CANAL

## Jay Cooke

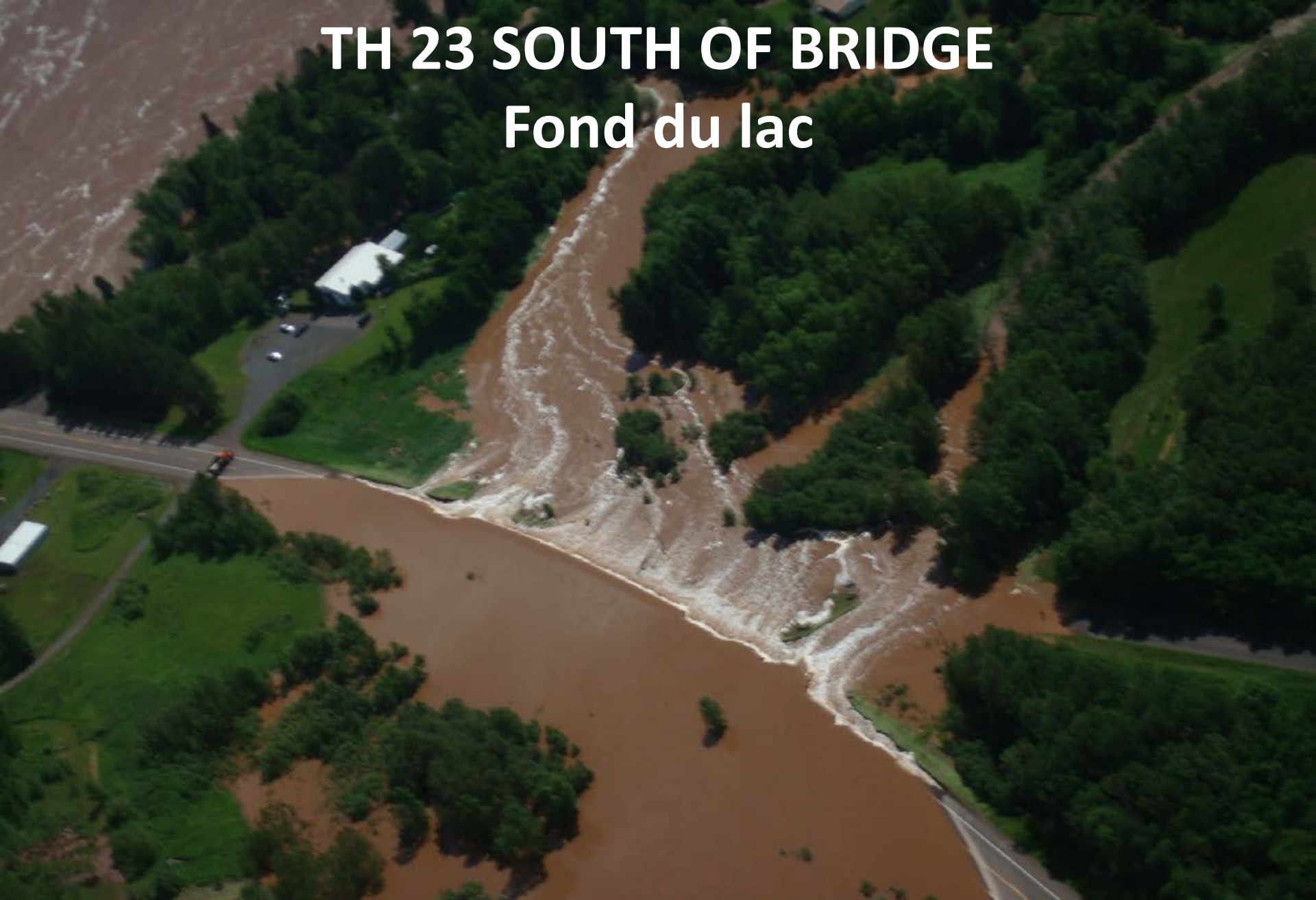


# TH 210 Jay Cooke



# TH 23 SOUTH OF BRIDGE

## Fond du lac





# TH 23 Fond du Lac



# TH 23 Fond du Lac near junction of TH 210



# TH 23 Fond du Lac Historic Mission Creek Bridge



# Water Street – Fond du Lac





**Caption not necessary**

# Initial Response

- ▶ Close roads as safety became compromised.
  - Up to 26 closures at one time
  - Many had no detours
  - Flooding was so widespread that MnDOT and local agencies ran out of signs
  - Personnel at barricades 24/7
- ▶ Get roads open



# Local Stories



# The missing truck.....





# Incident Command Structure

- MnDOT EOC
- Local EOC's
- Tactical Response Teams
  - Individual Emergency Repairs
  - Bridge Assessments
  - Corridor Assessments
  - Detour Signing Crews
  - Engineering Investigations
    - Bridge design
    - Foundation design
    - Environmental assessment



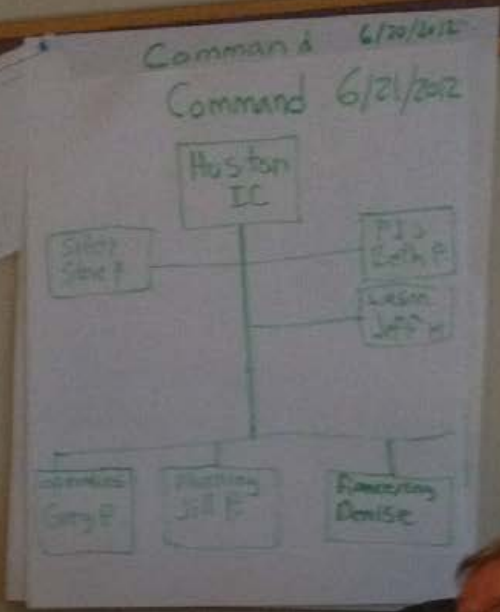
# Incident Command Structure







Phone #'s  
 St. Louis Co EOC 730-5799  
 Duluth PD 391-2950  
 USCG 218-345-3100  
 218-345-9902  
 218-348-1121  
 218-348-9957  
 218-348-2146  
 218-348-5972  
 218-348-5497



IAP Things to do

- List of Closed Roads
- Set up traffic Control
- 24 Operations?
- Day Not Open 23 until 1st Snow at
- Road 135 and 138 as main E Line
- (at 135 and 138) 250000?

Day Two

- Assess Damage to our Roads
- SP Center
- 8am Meeting with Empire
- Set Long term detours 23/24



Call  
Limits Ker  
e down  
water  
Test  
dye  
at coordination  
found de lac

to  
central HQ  
for the day  
evaluate  
Exp 2007



# Maintenance Team:

- ▶ Close for safety
- ▶ Clean up
- ▶ Open when safe





















# Communications

- Media Releases
- Interviews
- Web site
- Phone Calls
- Emails
- Constant Updates for Leadership
- Local Meetings

*Your Destination...Our Priority*





WCCO

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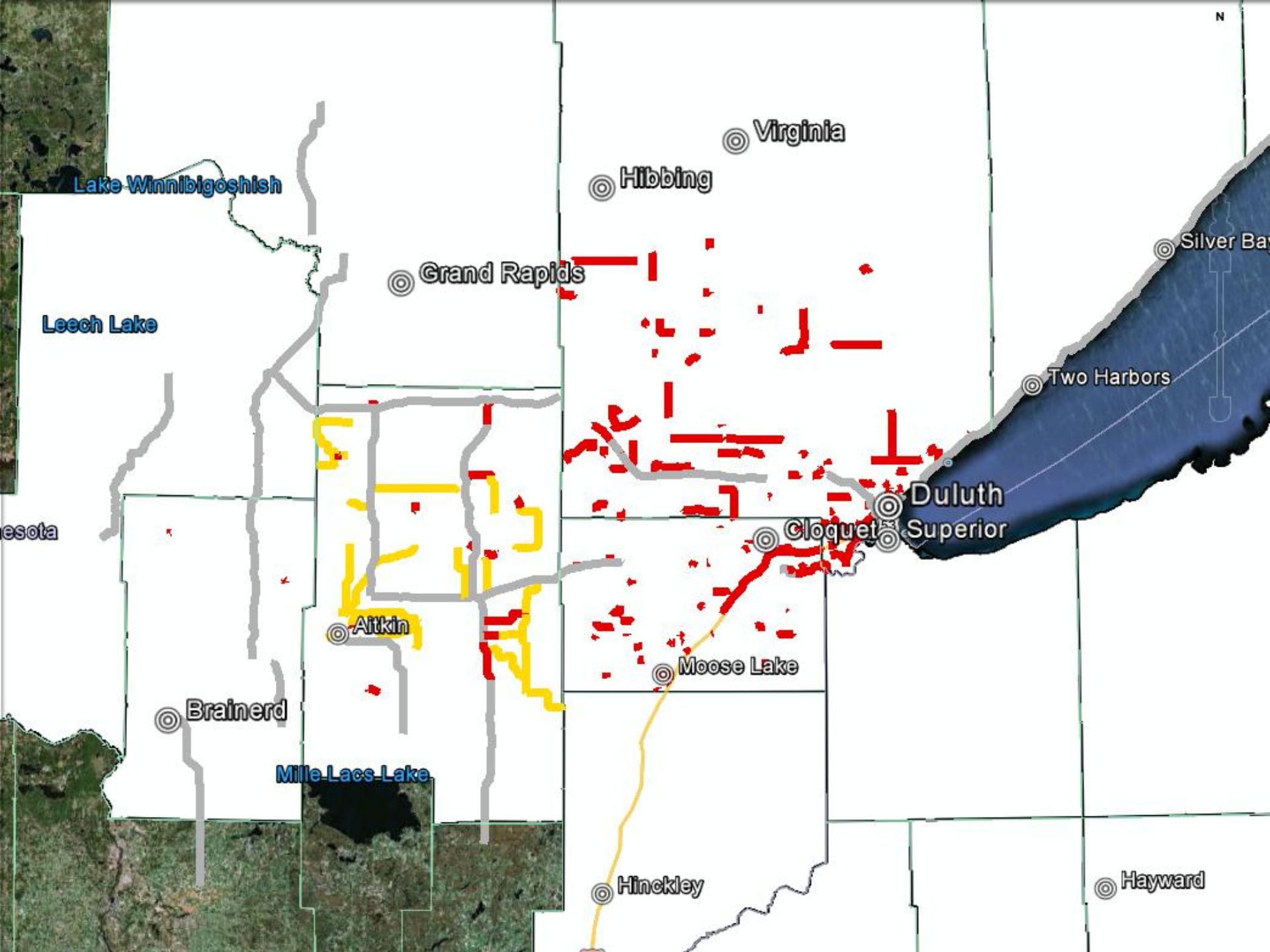
# Flood Incidents - District1



Scale 1:350,000







# Closure List Updated and Distributed Regularly

Time	HWY	RP start	RP end	From	To	Status	Description
	2	220.7	232	Floodwood	Brookston	Completely under water 1-2' MSP has closed	From floodwood to brookston
	2			Proctor	I-35 (Thompson Hill)	down bound from Proctor into Duluth closed - west also closed 2:44 pm	Up bound is open (East) - now closed 2:44 pm
	2			Iron Horse Saloon	To the Train	Proctor from Iron Horse Saloon to golf course (the train) closed	
	23			TH39 Gary New Duluth to 1/10th mile south of the St. Louis River in Fond du lac		completely closed evacuating community completely flooded and St. Louis River bridge closed	
	33	9		White Pine River	North of Cloquet	closed 3' water over the Rd	
	33	13.5				Both lanes - 6" deep water	signing water across road markers (open) - 7:00 p.m.
	33	17				Road open	Moving water over the road
	39			west bound by McQuen St.		traffic control devices at washout	single lane
	53			NB & SB @ Maple Grove Rd	Near Miller Mall	Water over road. All lanes closed.	Opened at 22:25 on 6-20-12
	53	26		Hellwig Creek		Open but check	Water up to the bridge
	61			at Knife River		closed with detour in place	
	61			at Silver Creek Tunnel		open with shoulder damage	
	65	107	112	8 miles south of McGregor	12 miles south of McGregor	completely shut down 1-3' water over rdwy could see washouts	
	65	145.95		1 mi. s. of Jacobson		culvert failed, road collapsed; single lane	one lane open with flagger - 4:48 pm
	73	31.5		6 miles north of Cromwell		1-2' water over rdwy still open undetermined damage - now open - 2:30 p.m.	
	73	46.3		3 miles north of Floodwood		1-2' water over rdwy still open undetermined damage	Combnd
	73	47.4		4 miles north of Floodwood		1-2' water over rdwy still open undetermined damage - in process of closing 2:30 p.m.	Combnd
	73	27.4 SB		2 miles north of Cromwell		shoulder completely gone - passable but no shoulder	
	200	196.2	TH65	Hwy 2	Hwy 65	Completely washed out	Local traffic only
	210	179				4 MILES east of McGregor - in process of closing 2:30 p.m.	closed as of 2:30
	210	179-190		McGregor	Tamarack		water over the road - State Patrol at each end routing traffic - 3:19 p.m. - Va sign shop going to fortify detour
	210	Jay Cook State Park		Jay Cooke Park		completely closed	
	73	15		West of Moose Lake		Closed	Road is washed out
	73 & 27			West of Moose Lake	At the exit		West of Moose Lake, Gillespe Creek under water
	135	236	227	Hwy 210	Mahtowa	closed	change detour sb to Barnum and contact 511
	135	thru downtown Duluth		Duluth near ore dock	South bound only	closed between Central Ave and 26th Ave E/3 different areas	cleared and now open - 3:37 p.m.

# Project Development

## Mission: Damage Assessment



# TH 23 Mission Creek Team Work!



# Community response:

- Working with partners – Cities and Counties including Duluth, Thompson, Carlton, Floodwood, Moose Lake, St. Louis County, Carlton County, Lake County, Pine County, Aitkin County.
- DNR (Jay Cooke Park)
- Minnesota Power (Hydro facilities on St. Louis River)
- Support from the top



# Community response:

- ▶ FHWA and FEMA Training
- ▶ Local Meetings with Governor and Legislators
- ▶ Community Meetings
- ▶ Press Conferences





# MnDOT Damage Repair

- MnDOT Forces
  - Focus on reopening roads and making them safe for travel
  - Set and remove road closure signing
  - Have presence at road closures when necessary
  - Replace washed out culverts
  - Remove debris
  - Fill in eroded areas
  - Perform damage assessments





# MnDOT Major Damage Areas

- ▶ TH 210 in Jay Cooke
- ▶ TH 210 in Thomson
- ▶ TH 23 in Fond du Lac neighborhood
- ▶ TH 2 from Proctor to I-35



# The Lessons

- ▶ Practice for Emergencies.
- ▶ No injuries in the flood response!
- ▶ We have an awesome bunch of people that worked together as a team.
- ▶ Don't be afraid to ask for help. People are happy to do it.
- ▶ Communication, communication, communication.
- ▶ Document, document, document.
- ▶ Debrief. Share lessons learned and apply them in the future.

