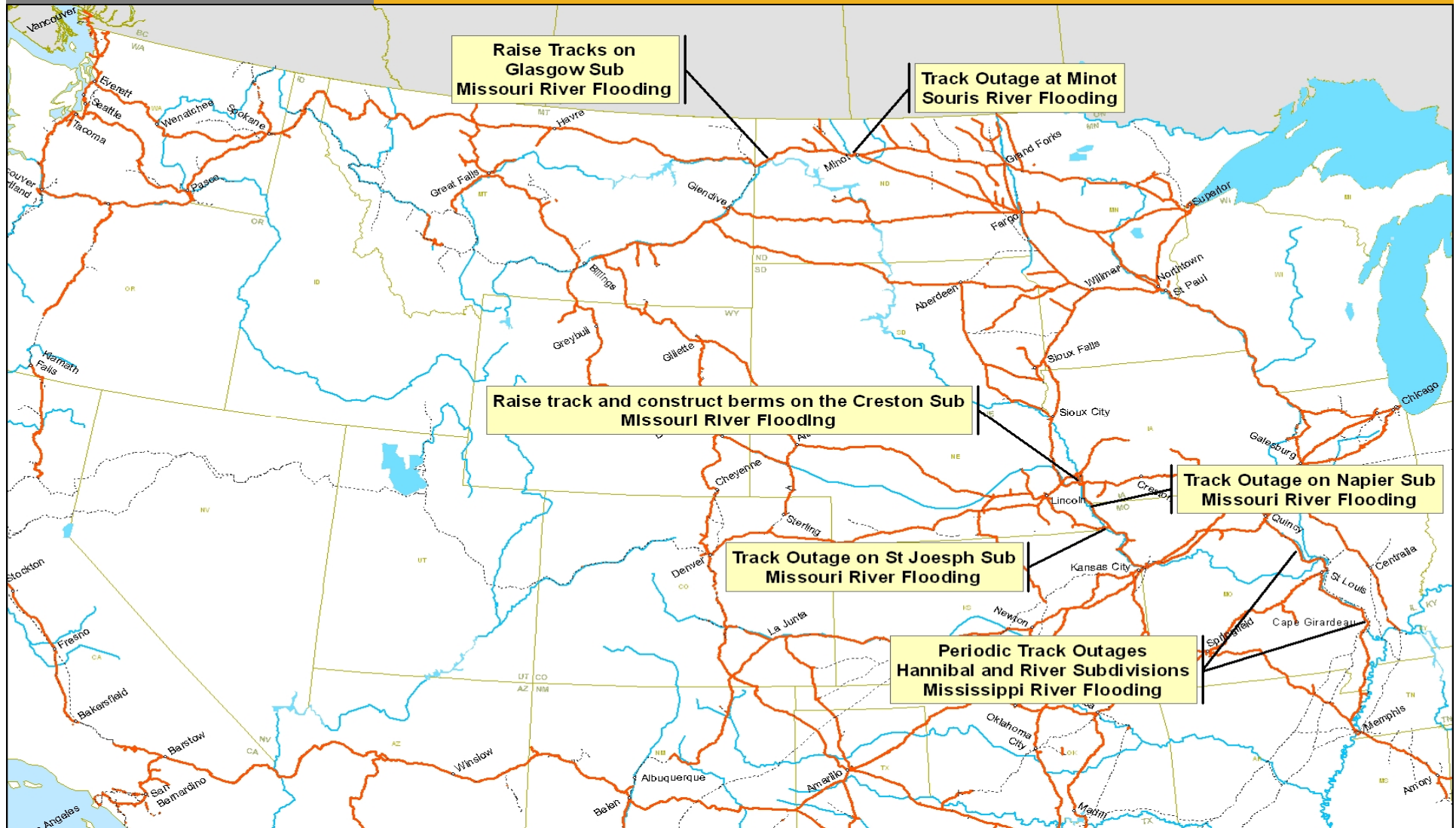


# BNSF Railway

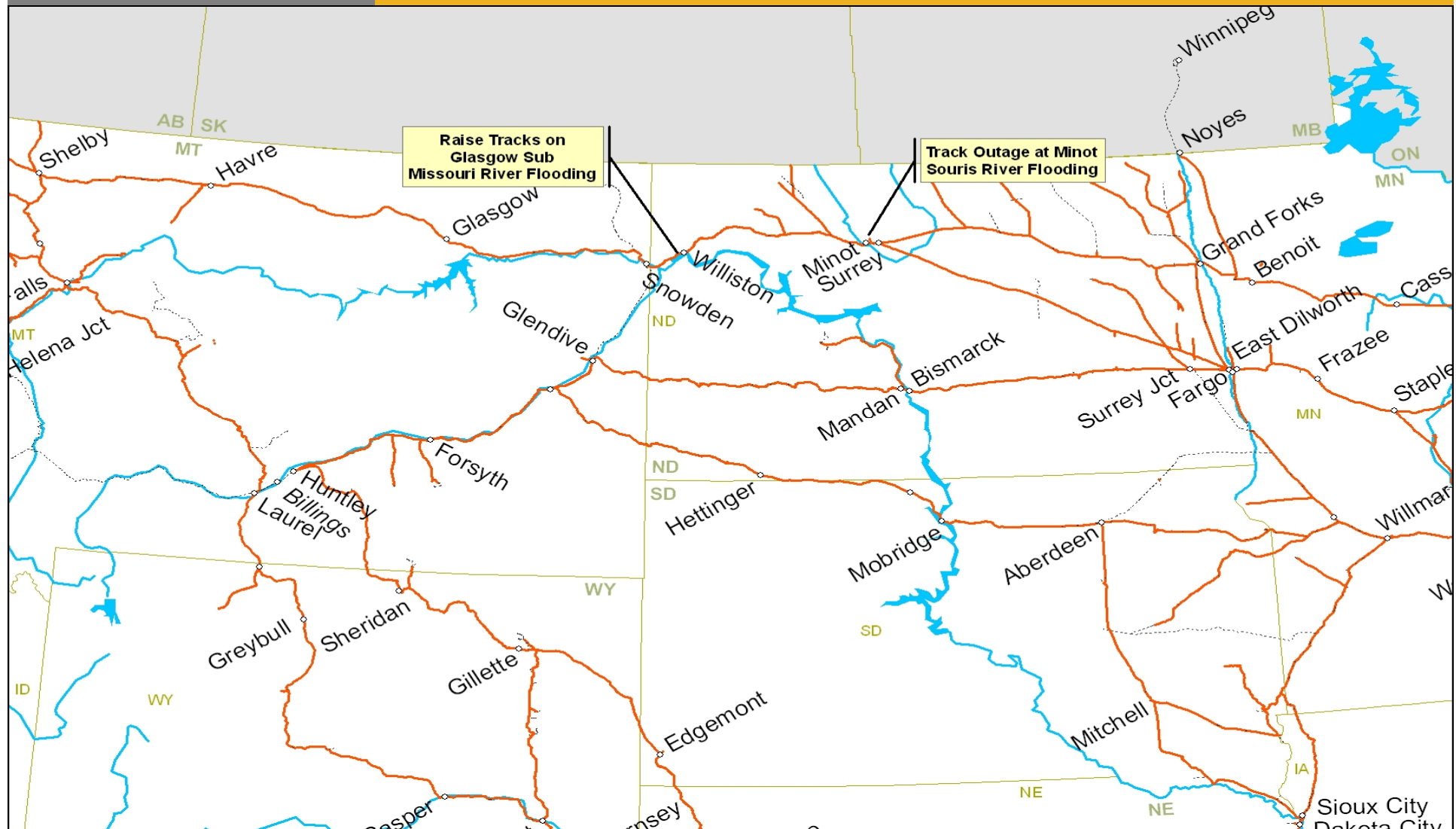
## 2011 Flood Remediation Efforts



# Overview of BNSF 2011 Flood Impact



# Northern Transcon Flood Impact



# Montana Division – Glasgow Subdivision

Missouri River at record flood stage near Williston, ND



# Montana Division – Glasgow Subdivision

Track raised a total of 5 feet in order to remain in service



# Montana Division – Glasgow Subdivision

Over 300 cars of ballast and rip rap were used to raise and fortify the track



# Montana Division – Minot, ND

Friday, June 24: Mainline remains in service  
0800 hours



# Montana Division – Minot, ND



**Friday, June 24: mainline removed from service  
1000 hours**



# Montana Division – Minot, ND

Tuesday, June 28: Mainline remains out of service

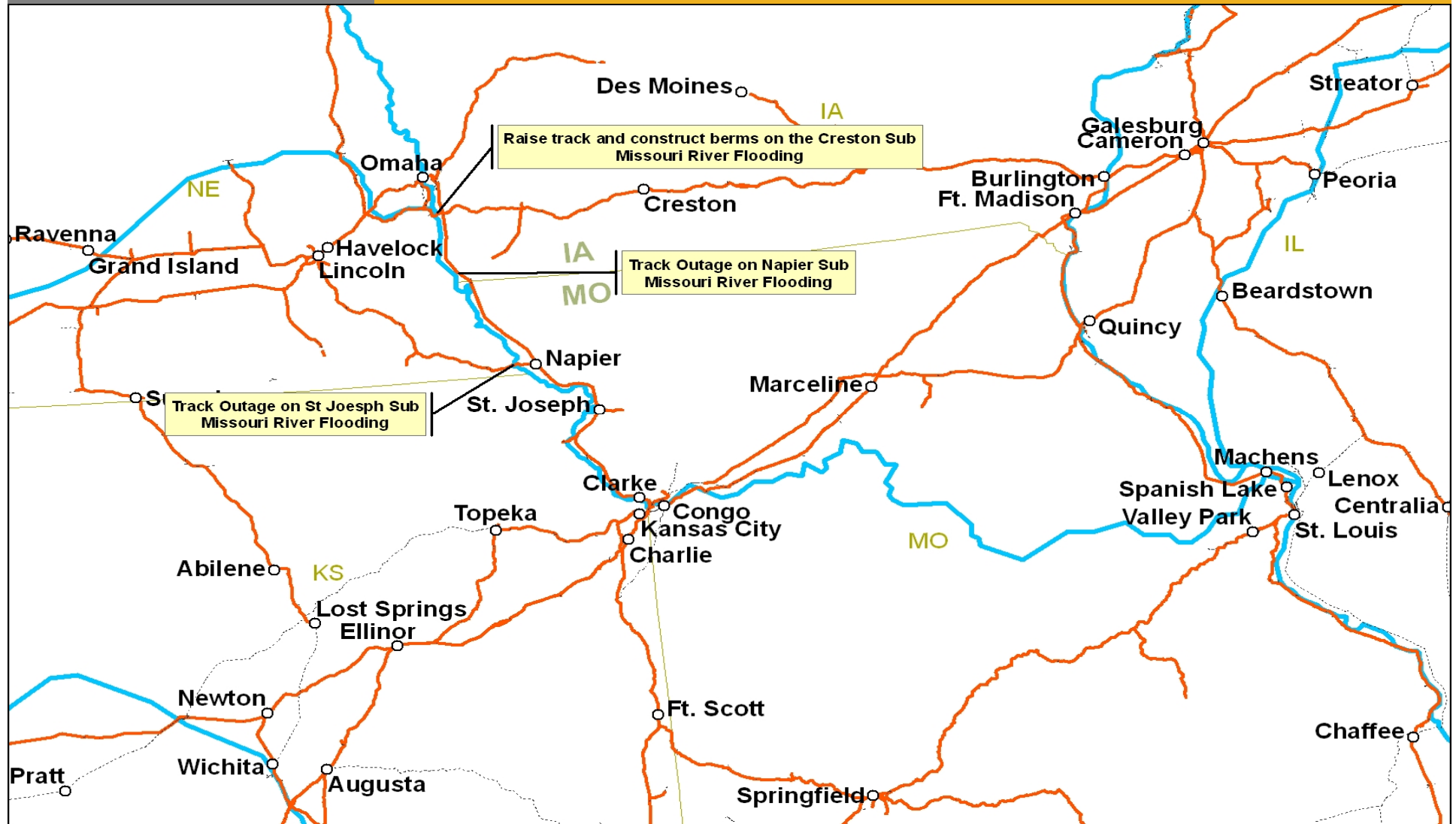


# Montana Division – Minot, ND



**Tuesday, June 28: Mainline remains out of service**

# Central Region Flood Impact



# Nebraska Division – Creston Subdivision

- Raised two mainline tracks up to 8 feet
- Rip rap bank to protect against wave action



# Nebraska Division – Creston Subdivision

Track was raised up to 12 inches at a time.  
Requires ~ 100 cars of ballast per mile



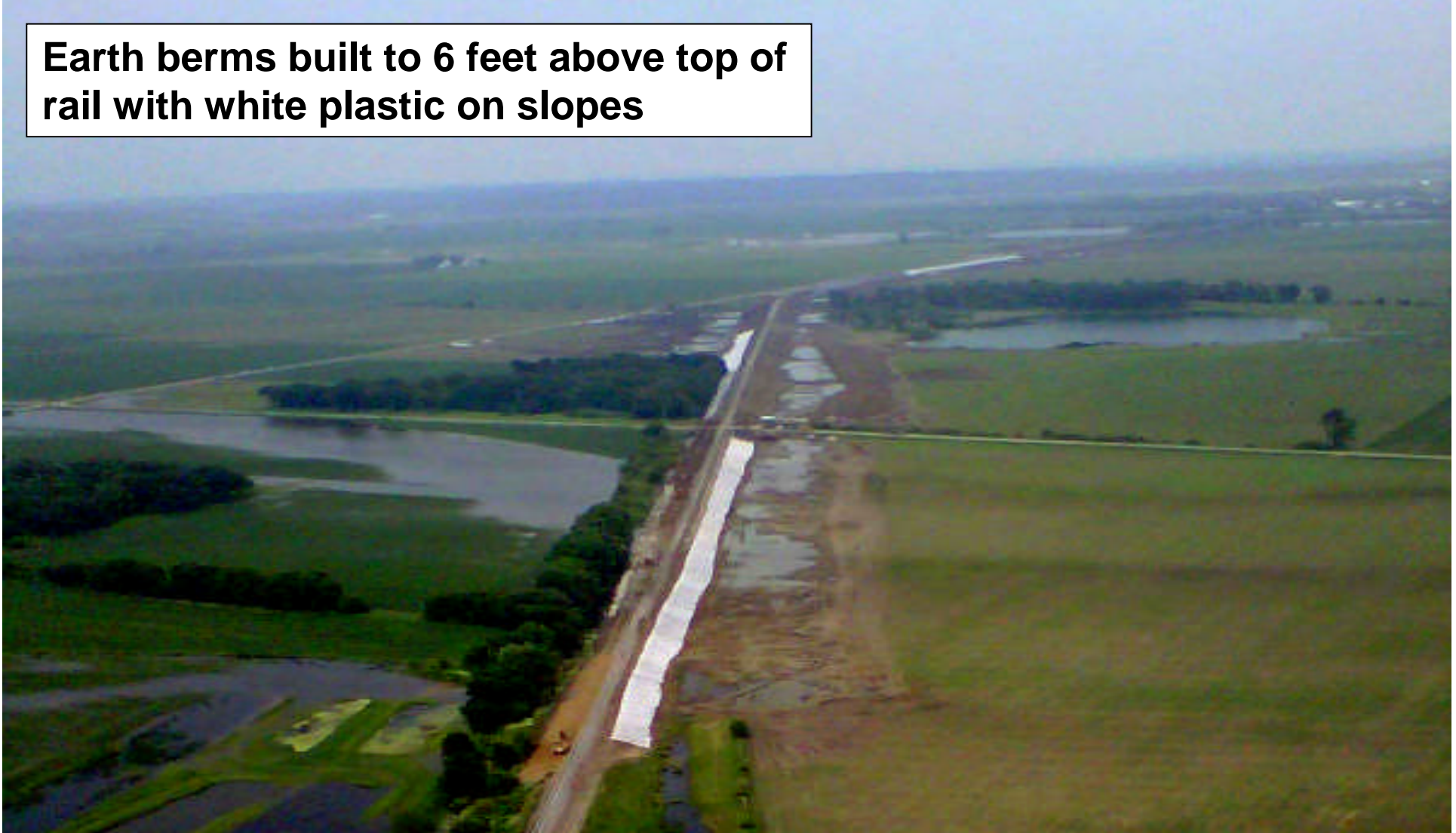
# Nebraska Division – Creston Subdivision

Placing rip rap along the Missouri River



# Nebraska Division – Creston Subdivision

Earth berms built to 6 feet above top of rail with white plastic on slopes



# Nebraska Division – Creston Subdivision

Earth berms built to 6 feet above top of rail with white plastic on slopes





# Nebraska Division – Creston Subdivision



Long pipes placed and to be filled to track level with earth berm

# Nebraska Division – Creston Subdivision

Plastic complete on berms

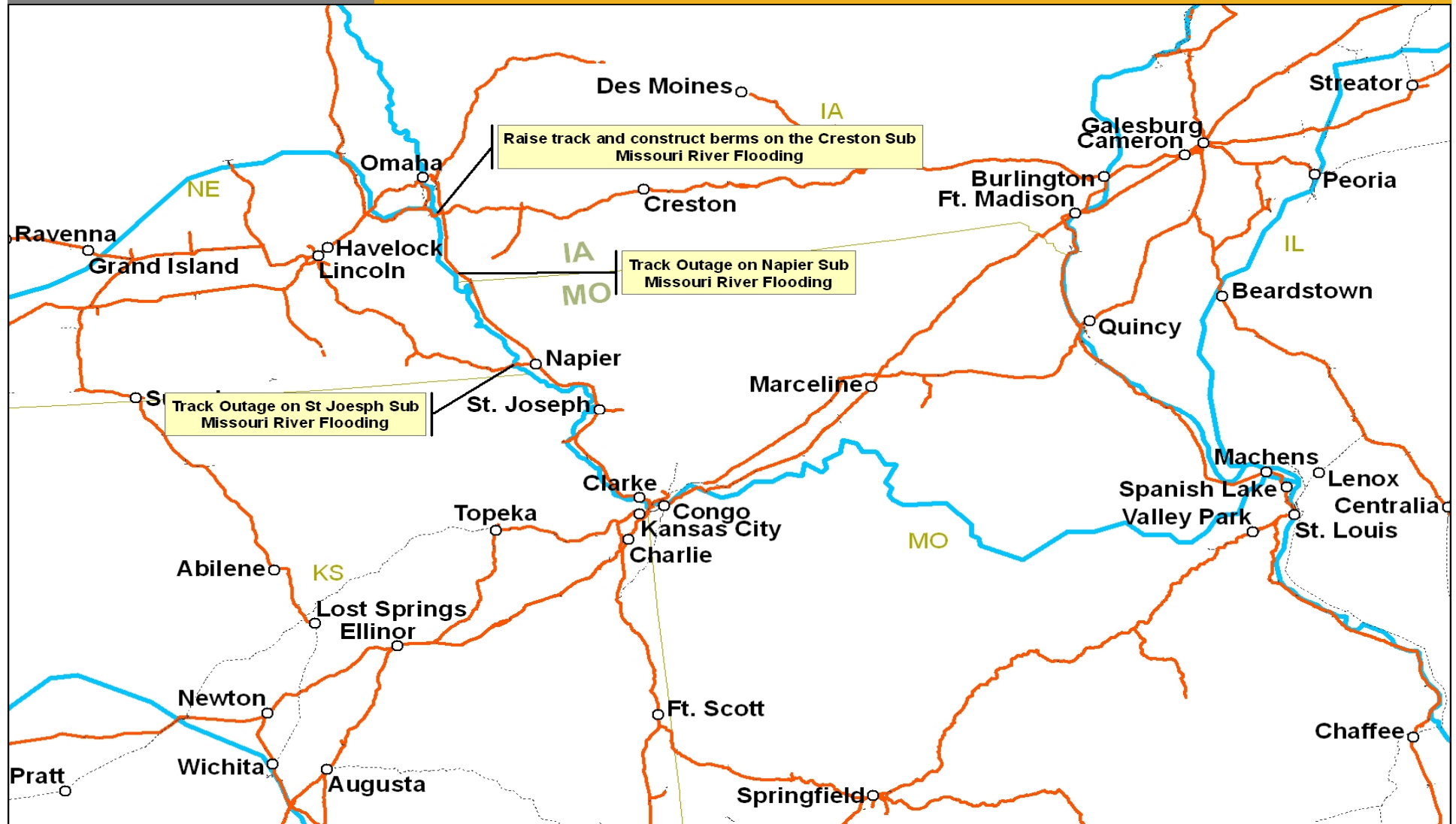


# Filling Sand Bags at Pacific Jct.



160,000 sandbags were filled and will be used on berms if needed

# Central Region Flood Impact



# Nebraska Division – St. Joseph Subdivision

Lifting track up to 8 inches at a time



# Nebraska Division – St. Joseph Subdivision

Signals must also be raised above high water level



# Nebraska Division – St. Joseph Subdivision

Rulo, NE river bridge June 10, 1030 hours



# Nebraska Division – St. Joseph Subdivision

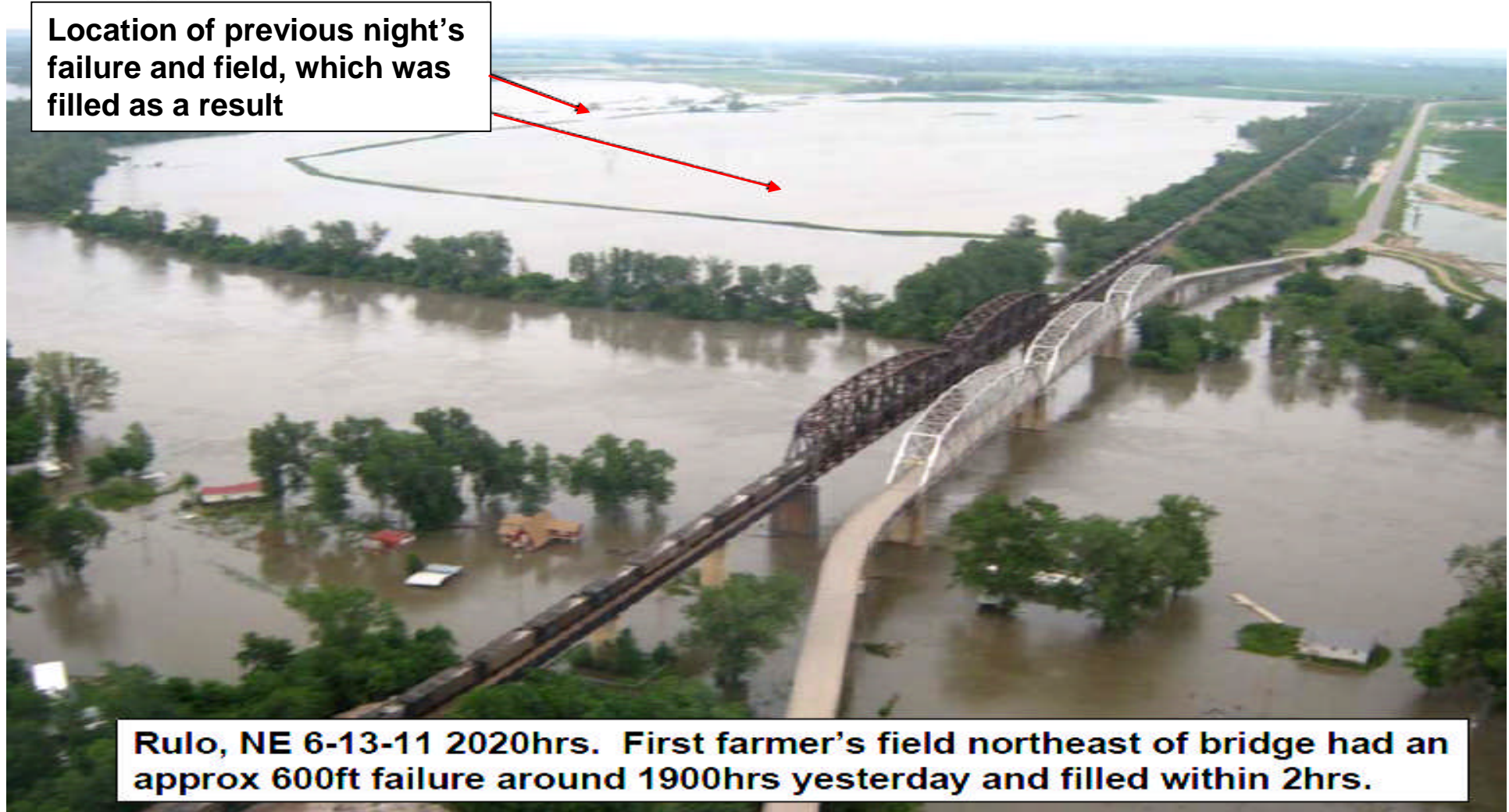
A levee breach occurred on June 13 at 2020 hours





# Nebraska Division – St. Joseph Subdivision

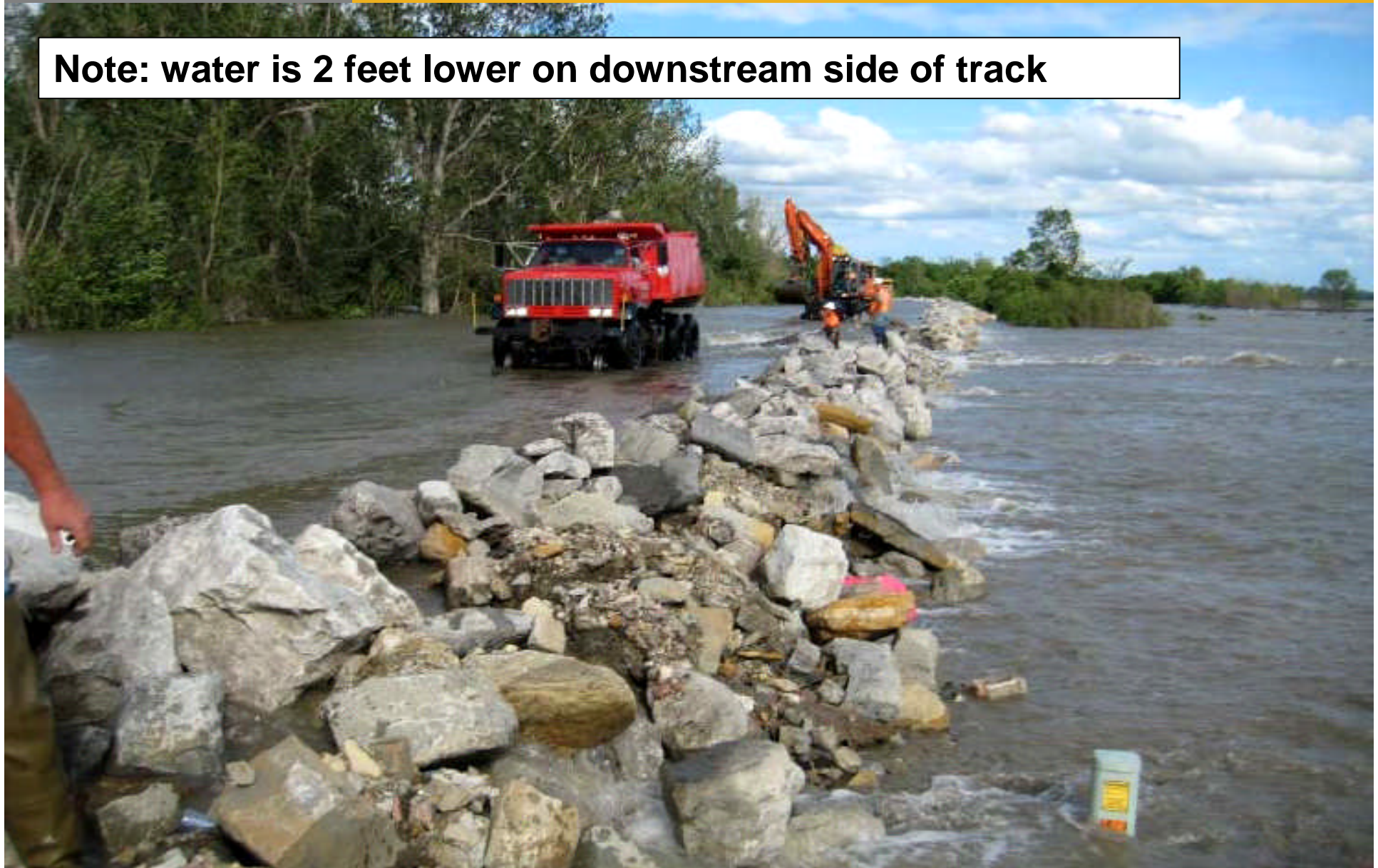
Location of previous night's failure and field, which was filled as a result



Rulo, NE 6-13-11 2020hrs. First farmer's field northeast of bridge had an approx 600ft failure around 1900hrs yesterday and filled within 2hrs.

# Nebraska Division – St. Joseph Subdivision

**Note: water is 2 feet lower on downstream side of track**



# Nebraska Division – St. Joseph Subdivision

Numerous levee failures and record river levels due to Missouri River flooding has resulted in water up to 2 feet deep over the track



# Nebraska Division – St. Joseph Subdivision

