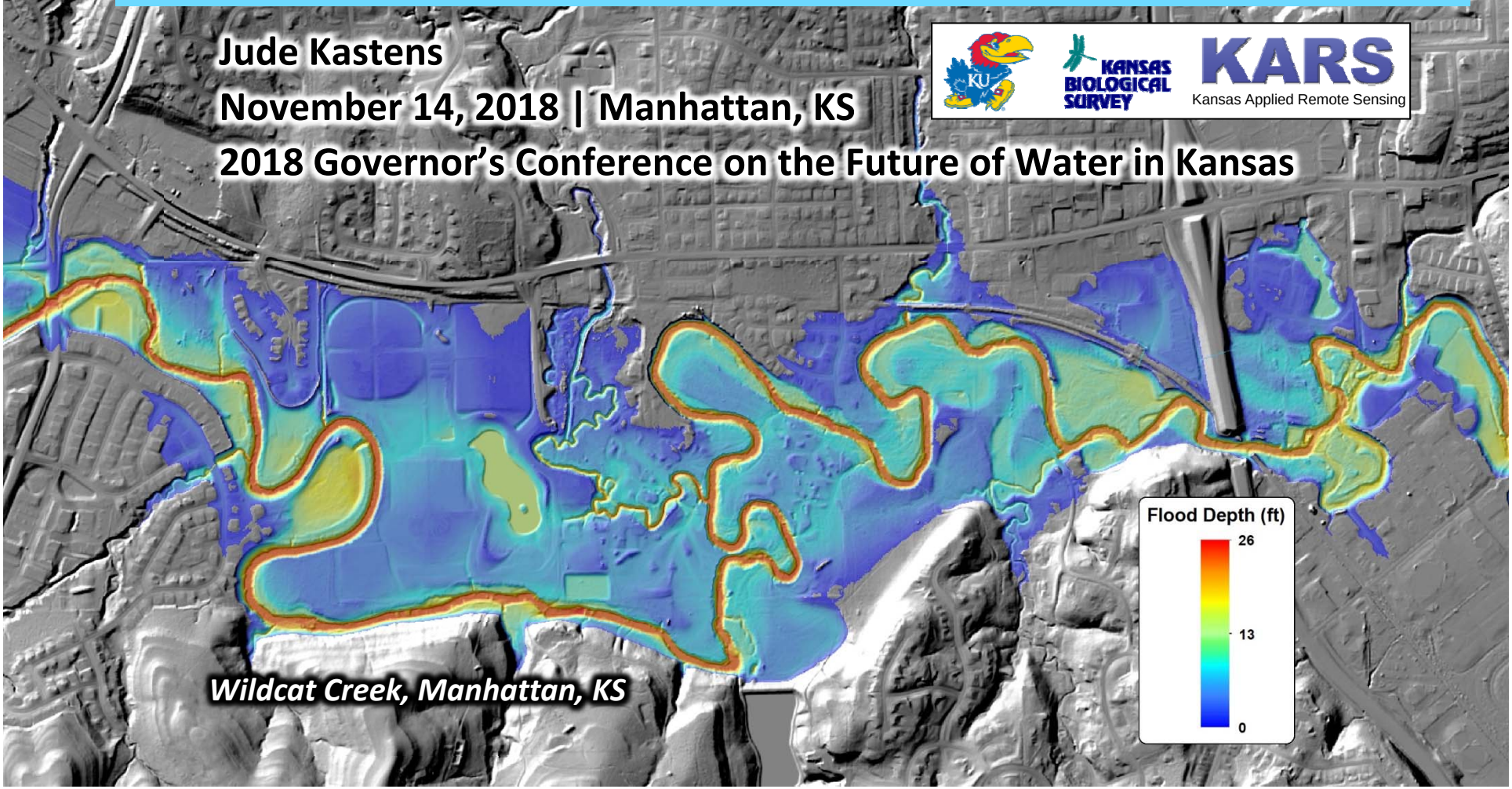
Tracking the Wildcat

A look at the 2018 Labor Day Flood

Jude Kastens

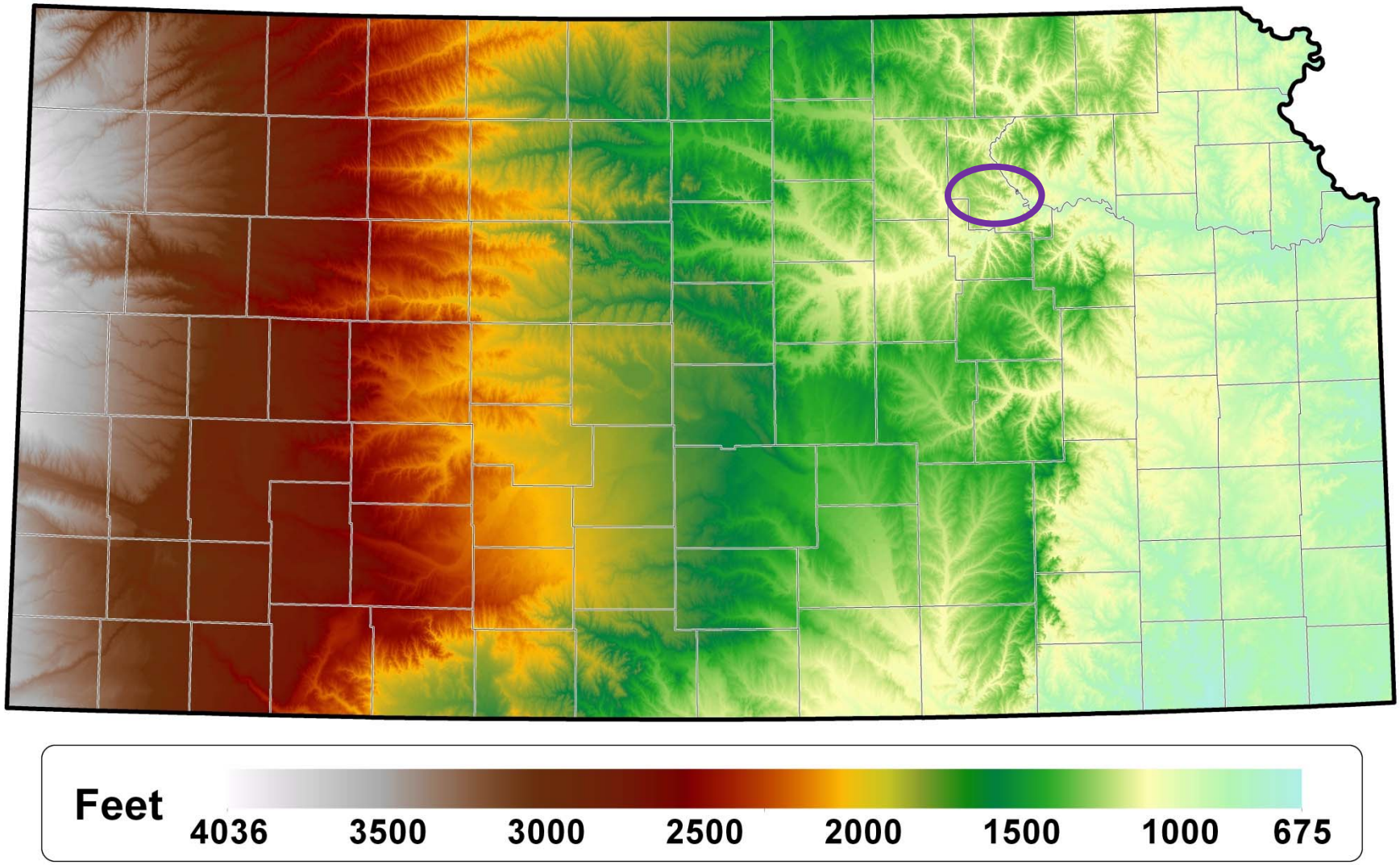
November 14, 2018 | Manhattan, KS

2018 Governor's Conference on the Future of Water in Kansas

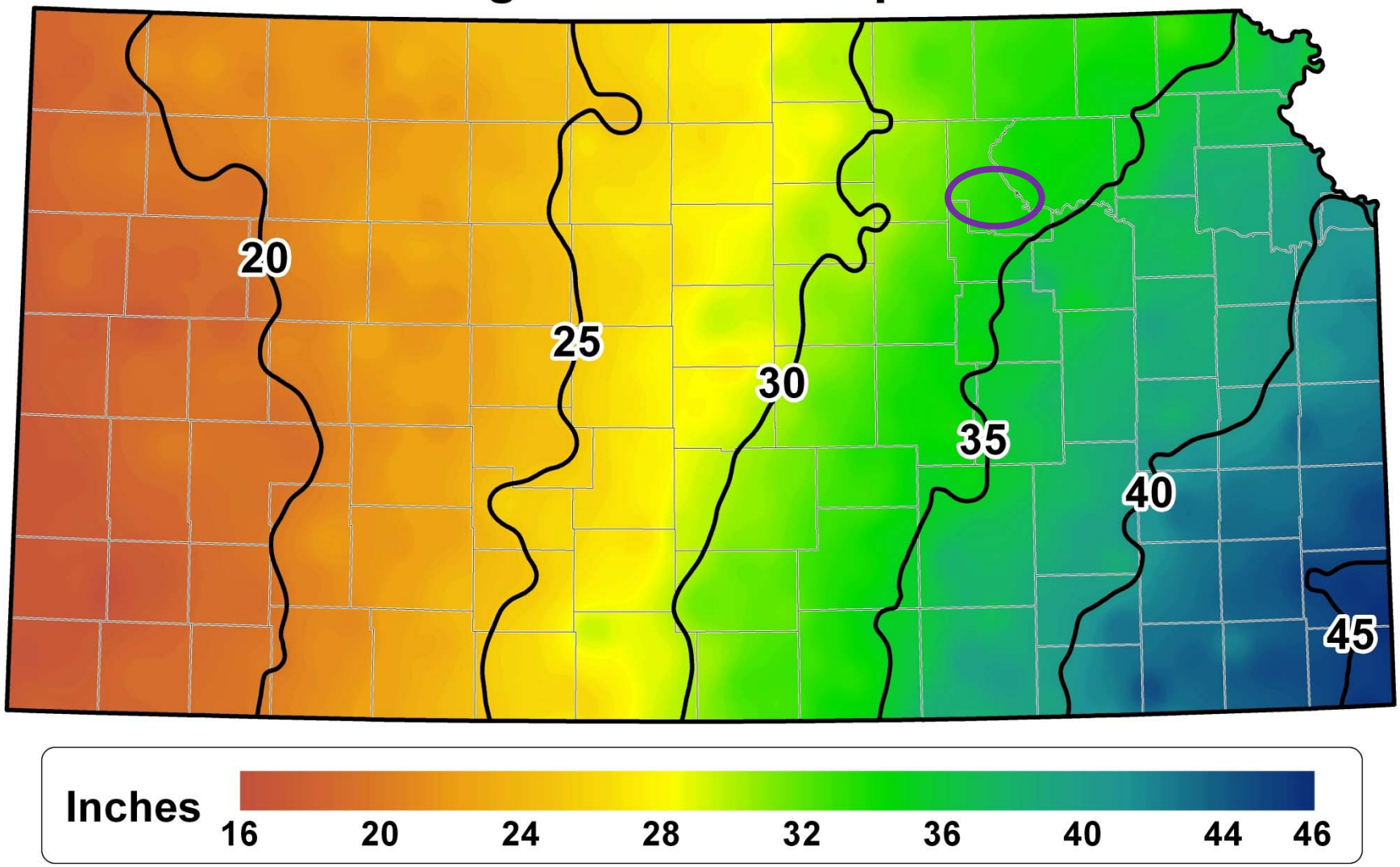


Wildcat Creek, Manhattan, KS

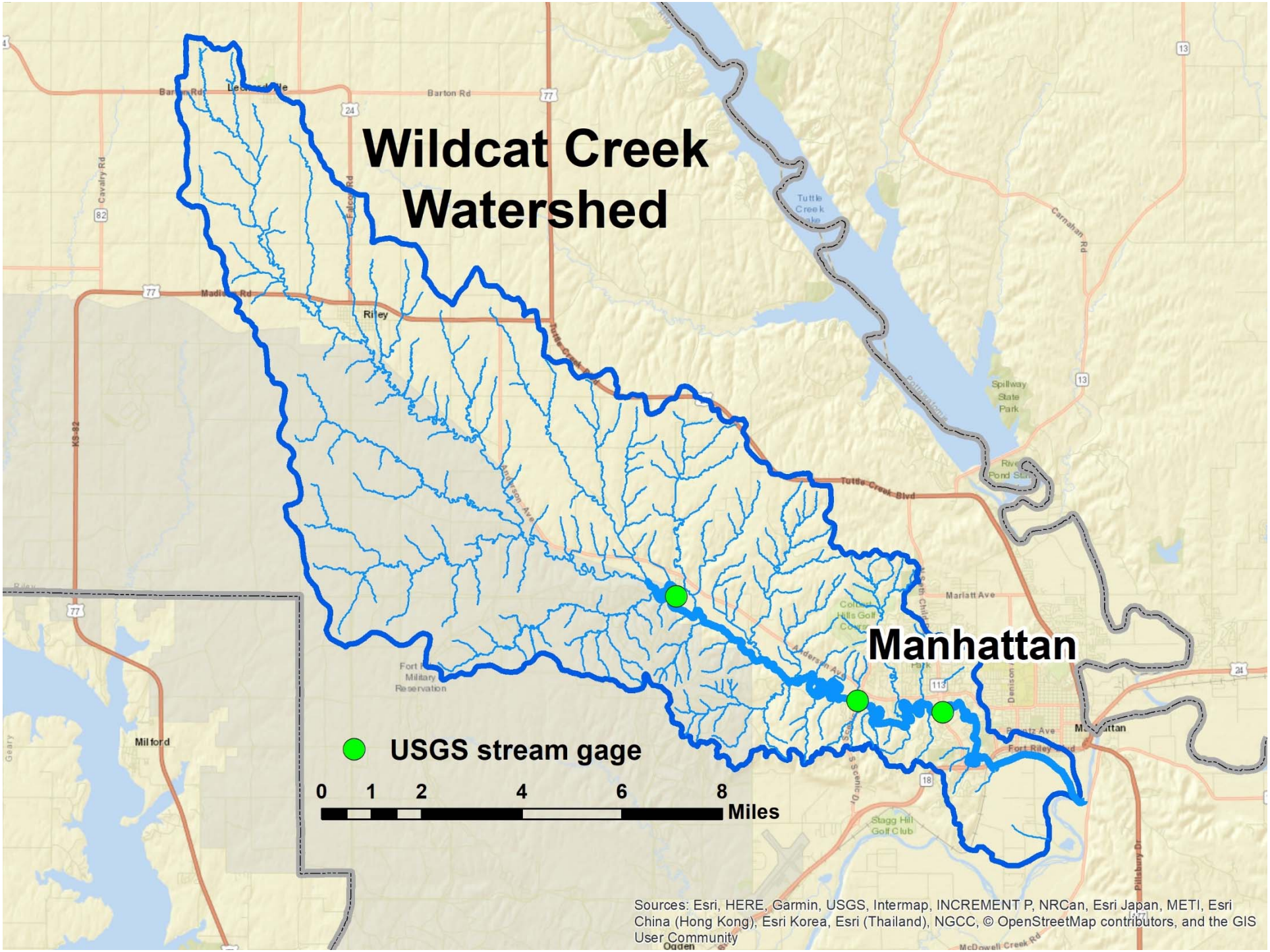
Elevation

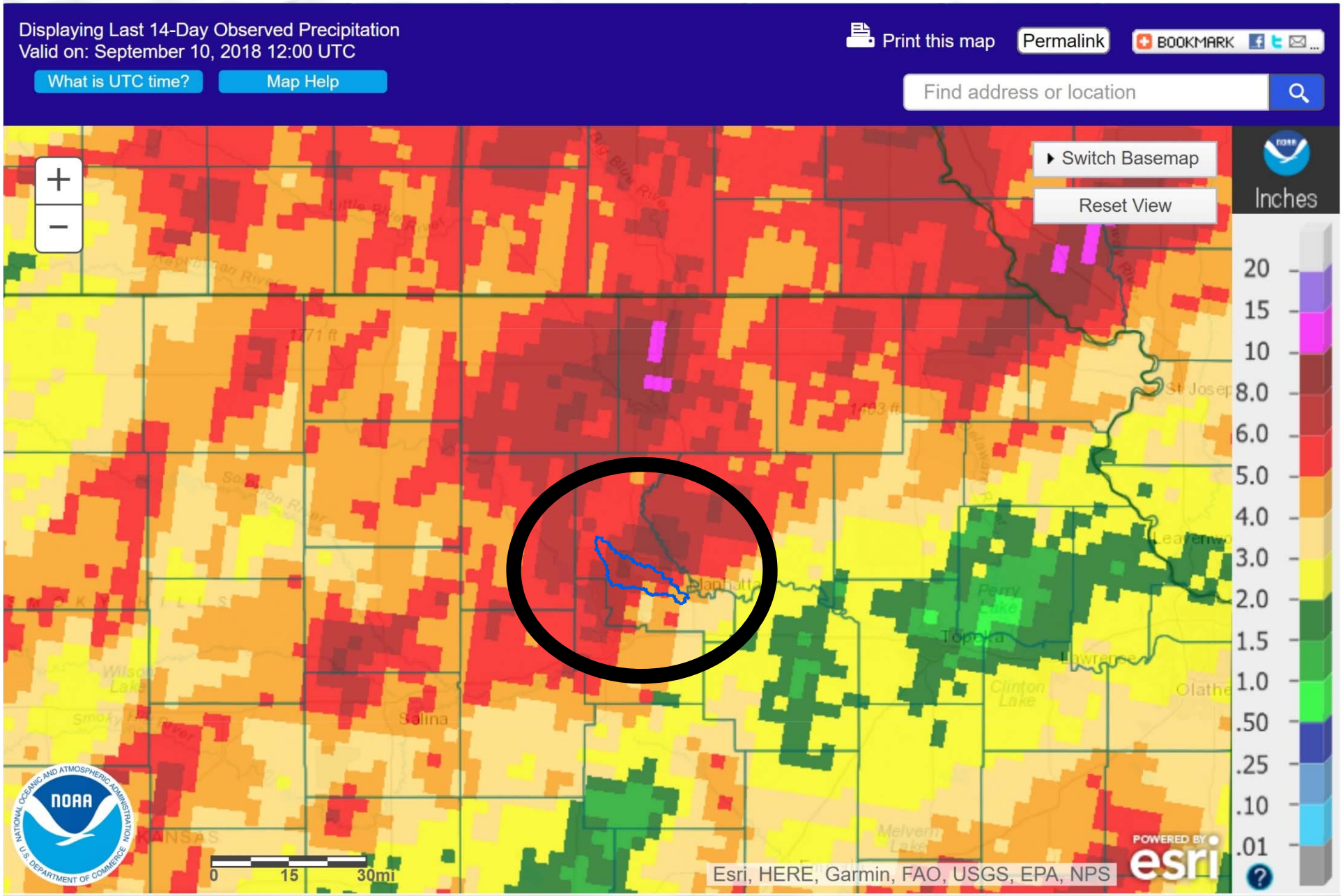


Average Annual Precipitation



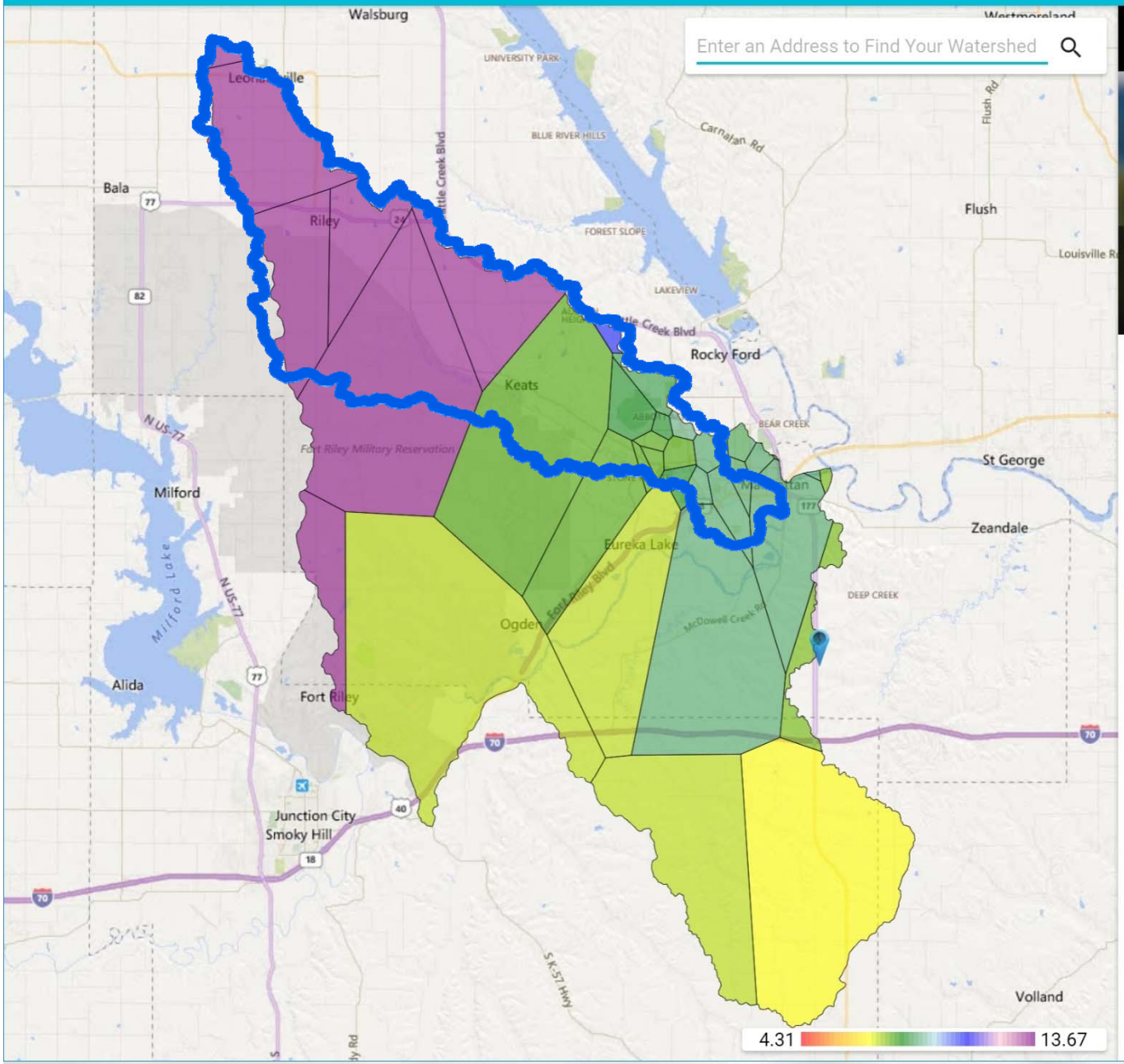
Wildcat Creek Flood, September 3, 2018


Wildcat Creek Watershed
Manhattan
USGS stream gage
0 1 2 4 6 8
Miles
Barton Rd
Madison Rd
Riley
Tuttle Creek Blvd
Mariatt Ave
Fort Riley Blvd
Milford
Tuttle Creek Lake
Spillway State Park
Fort Riley Military Reservation
Stagg Hill Golf Club
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

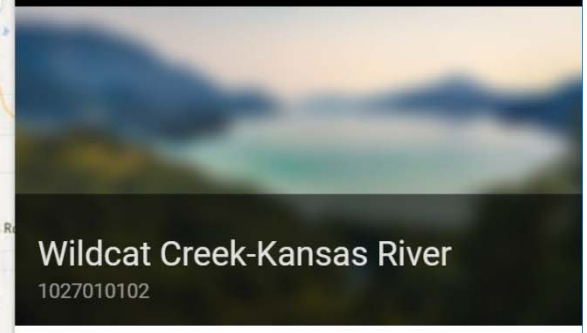

Displaying Last 14-Day Observed Precipitation
Valid on: September 10, 2018 12:00 UTC
What is UTC time?
Map Help
Print this map
Permalink
BOOKMARK
Find address or location
Switch Basemap
Reset View
Inches
20
15
10
8.0
6.0
5.0
4.0
3.0
2.0
1.5
1.0
.50
.25
.10
.01
0
15
30mi
Esri, HERE, Garmin, FAO, USGS, EPA, NPS
POWERED BY esri

CoCoRaHS Watershed Mapping

ABOUT



Watershed Details



Wildcat Creek-Kansas River

1027010102

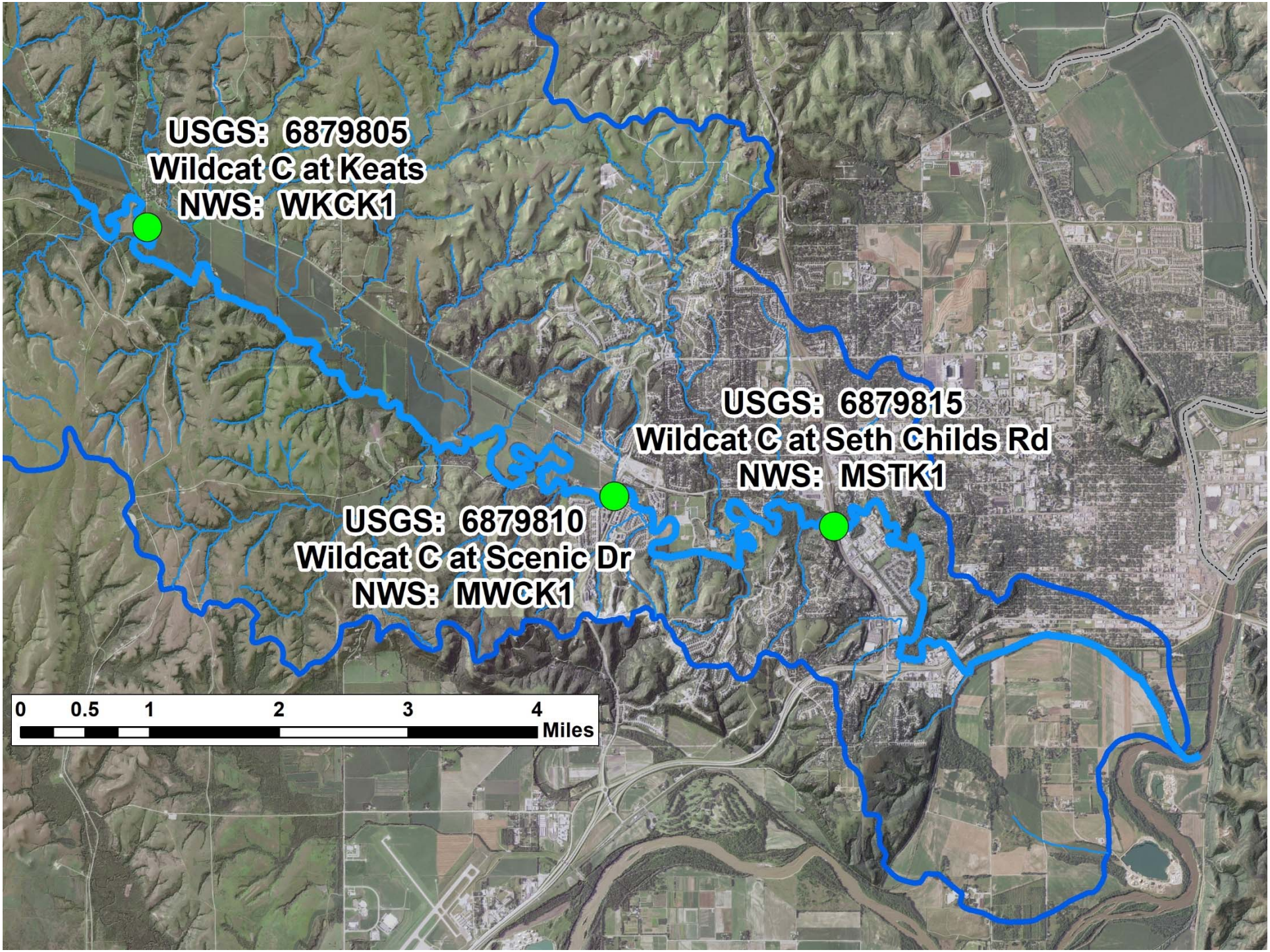
The Wildcat Creek-Kansas River watershed spans parts of Kansas. It has a total area of 183,663 acres or 287 square miles.

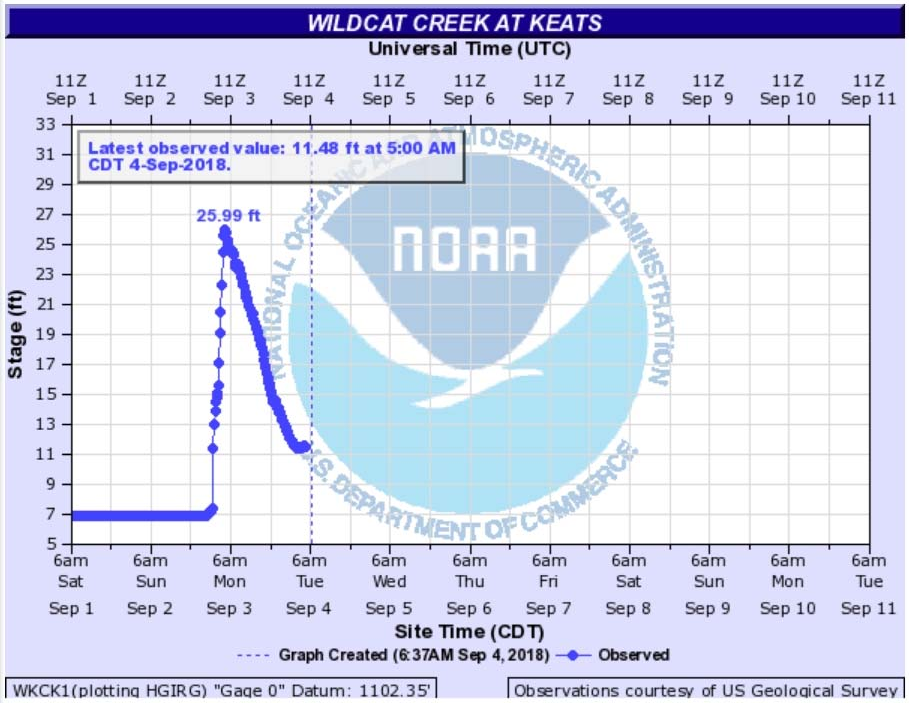
Accumulated Precipitation for September 2018: **7.68 in.**

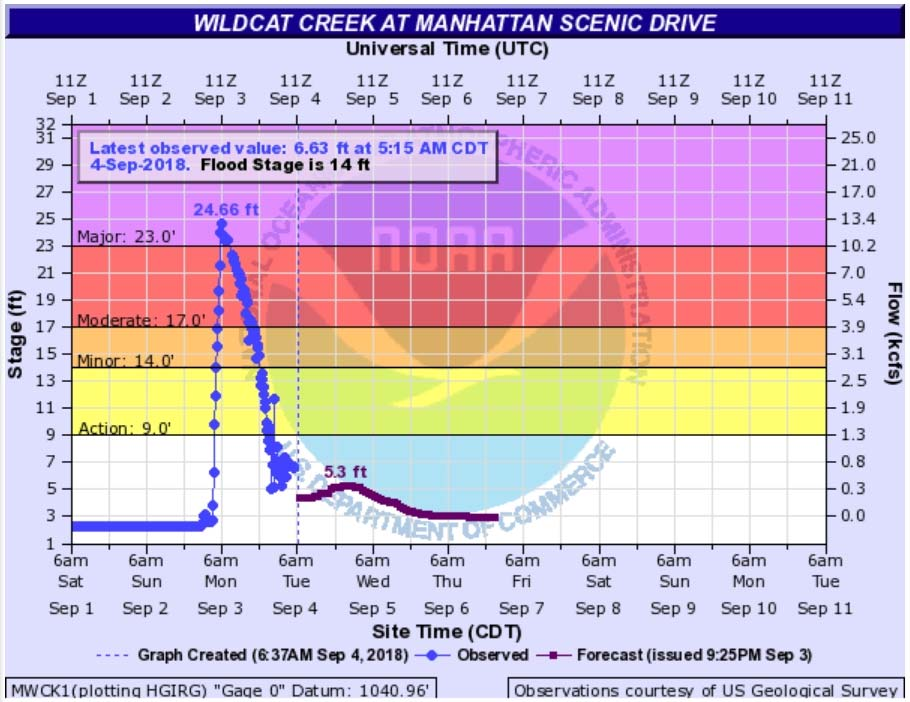
There are 36 CoCoRaHS stations in this watershed.

Search for CoCoRaHS Station

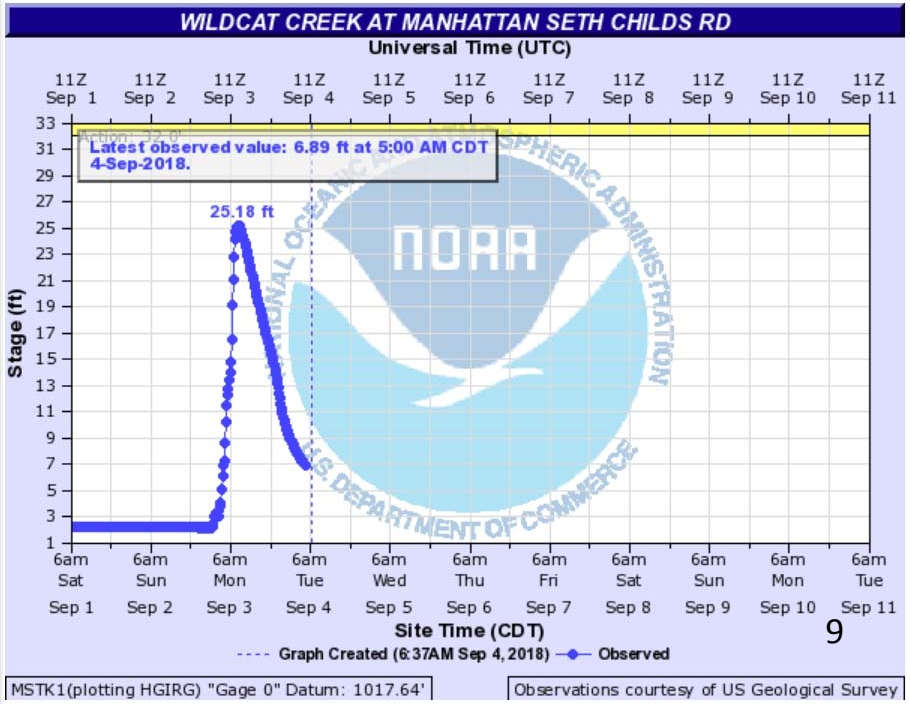
PRECIPITATION REPORTS

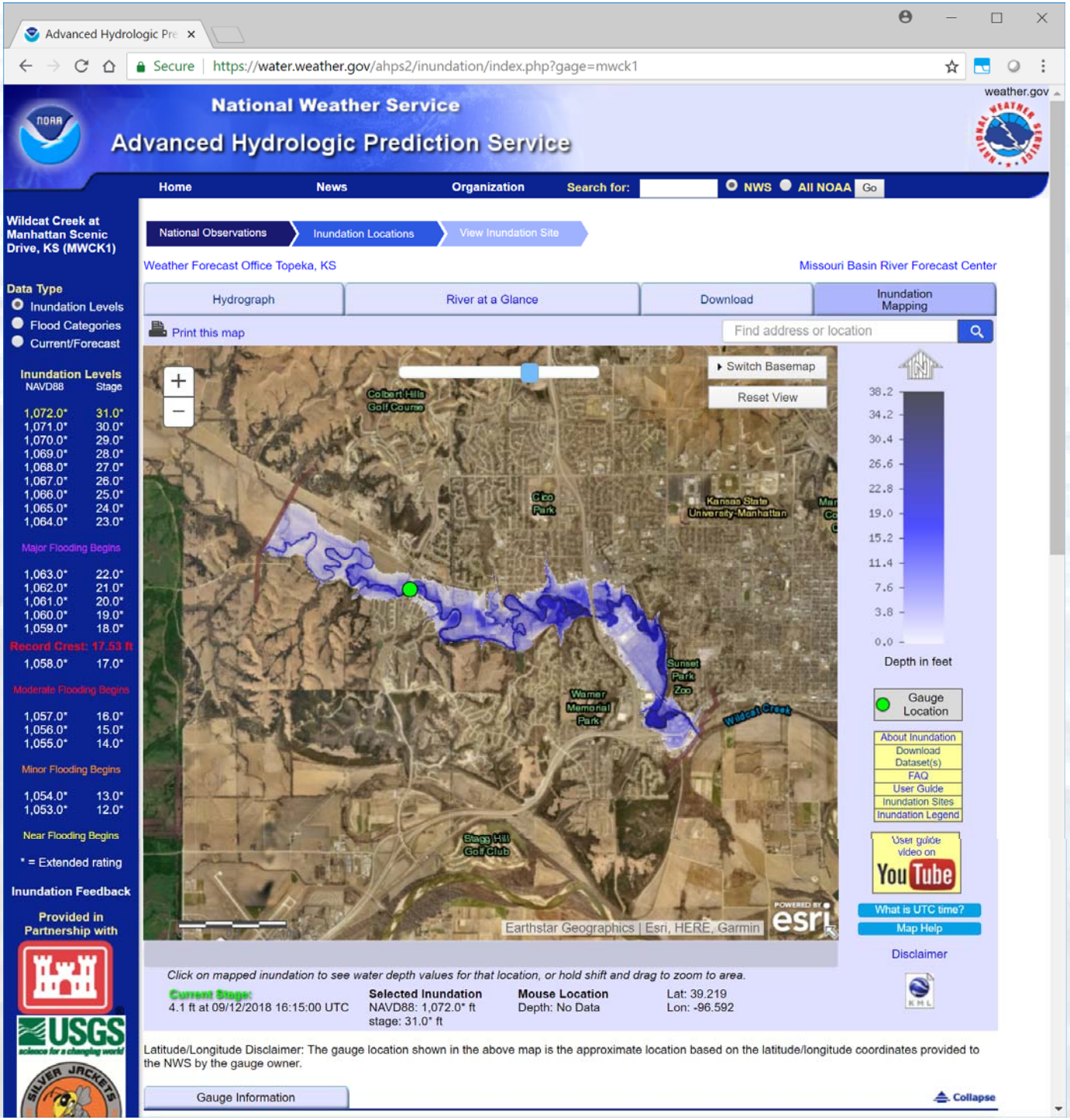

USGS: 6879805
Wildcat C at Keats
NWS: WKCK1
USGS: 6879815
Wildcat C at Seth Childs Rd
NWS: MSTK1
USGS: 6879810
Wildcat C at Scenic Dr
NWS: MWCK1
0
0.5
1
2
3
4
Miles

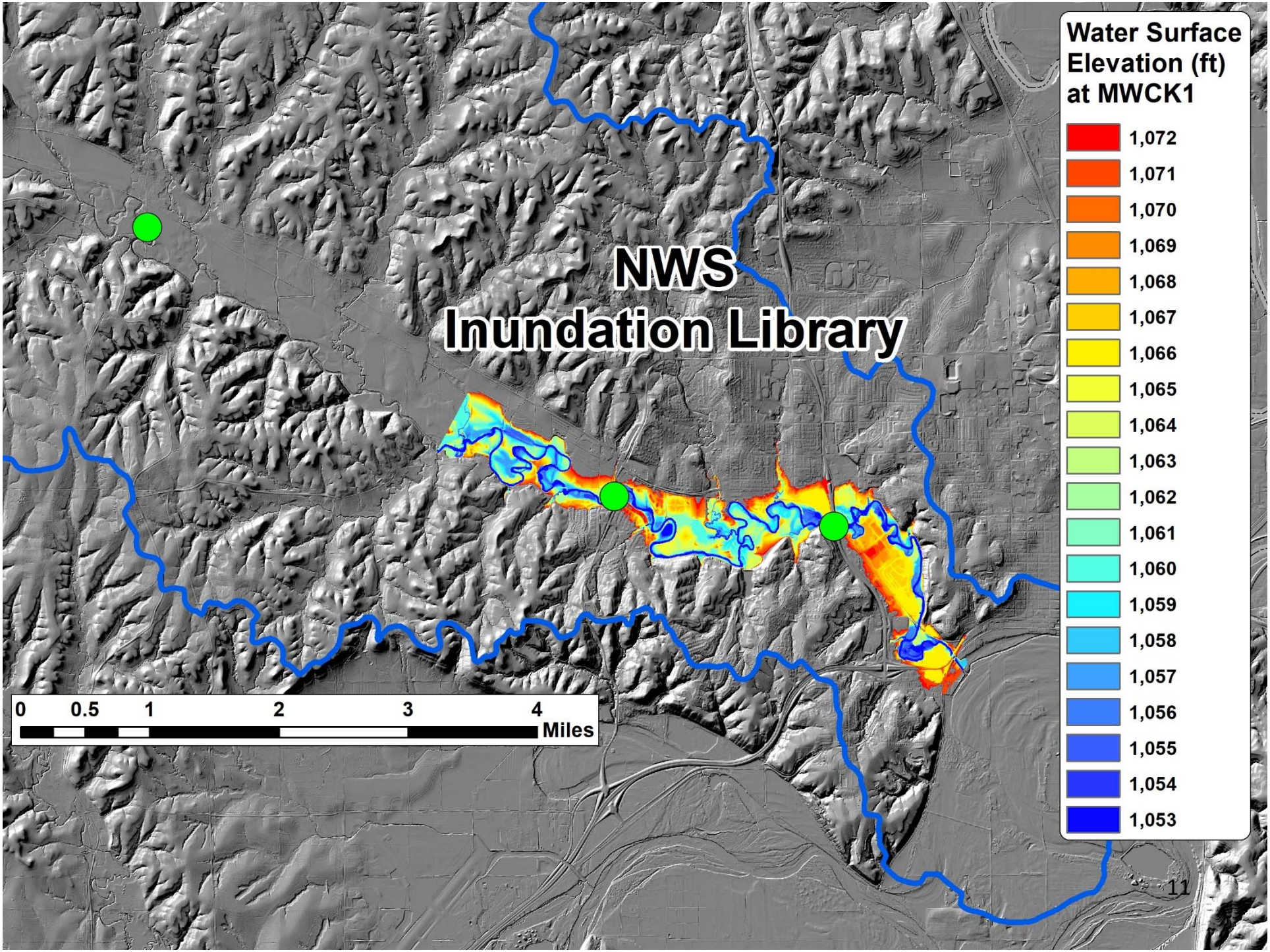


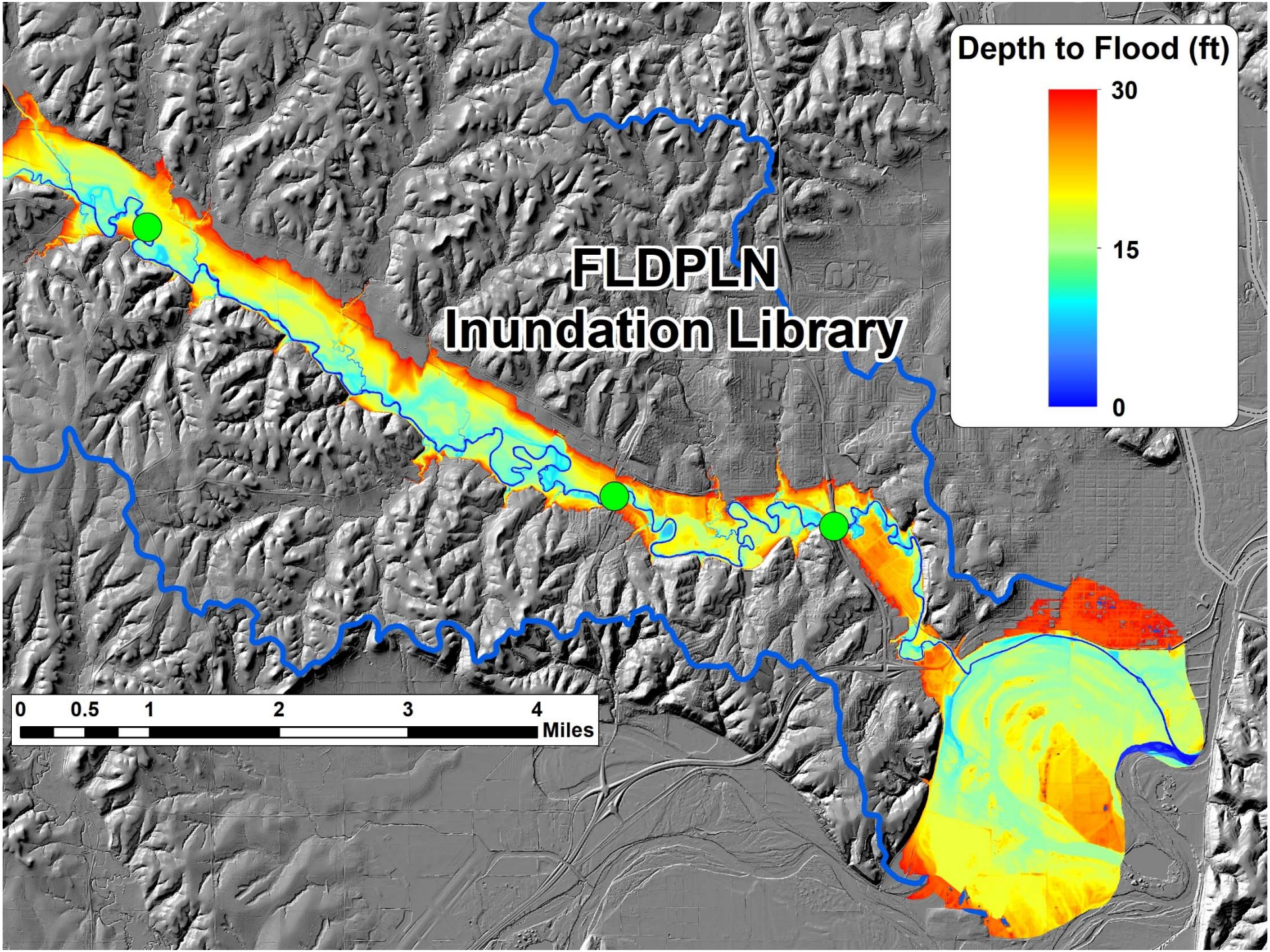


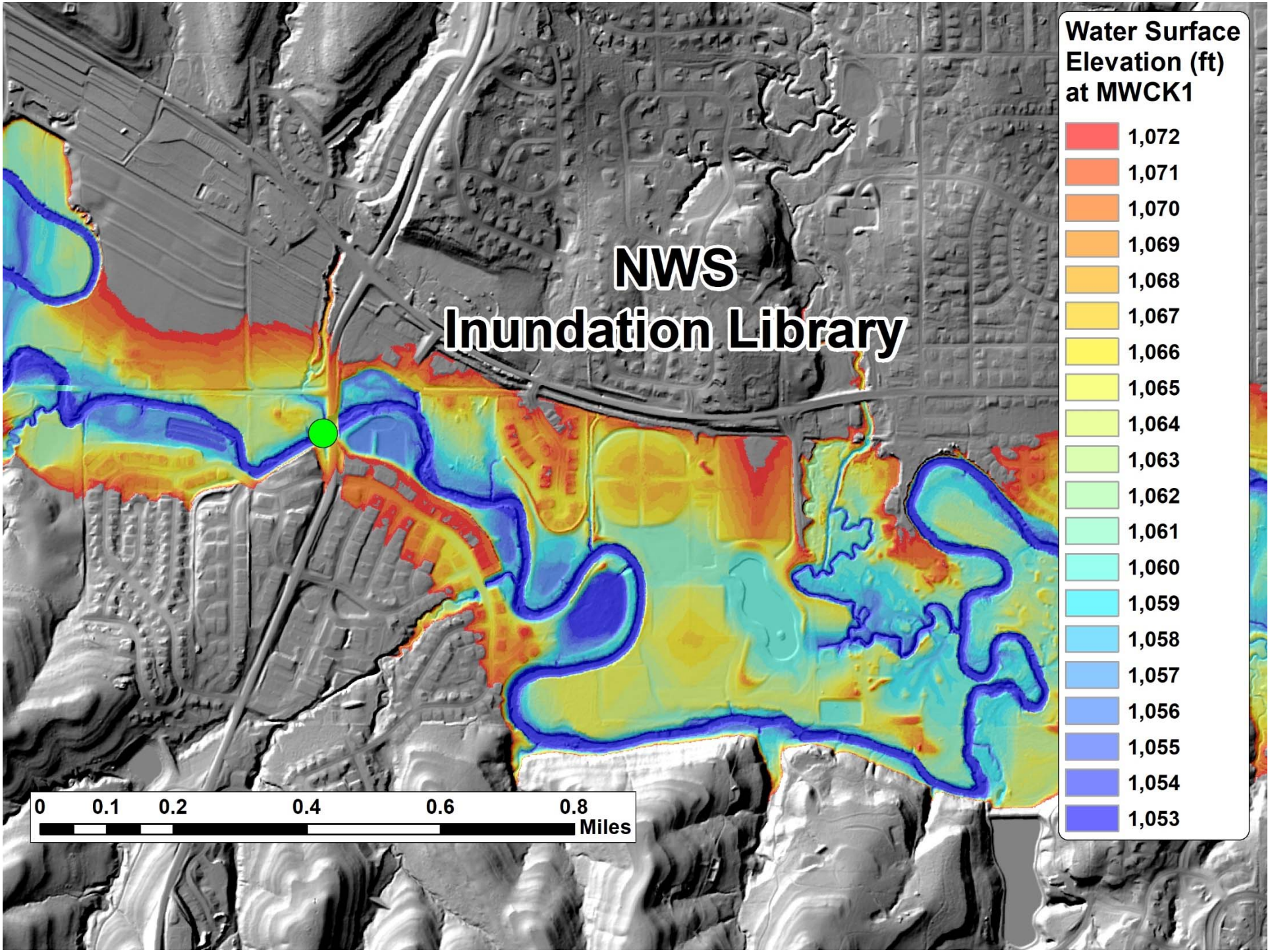
Hydrographs, the day after the flood

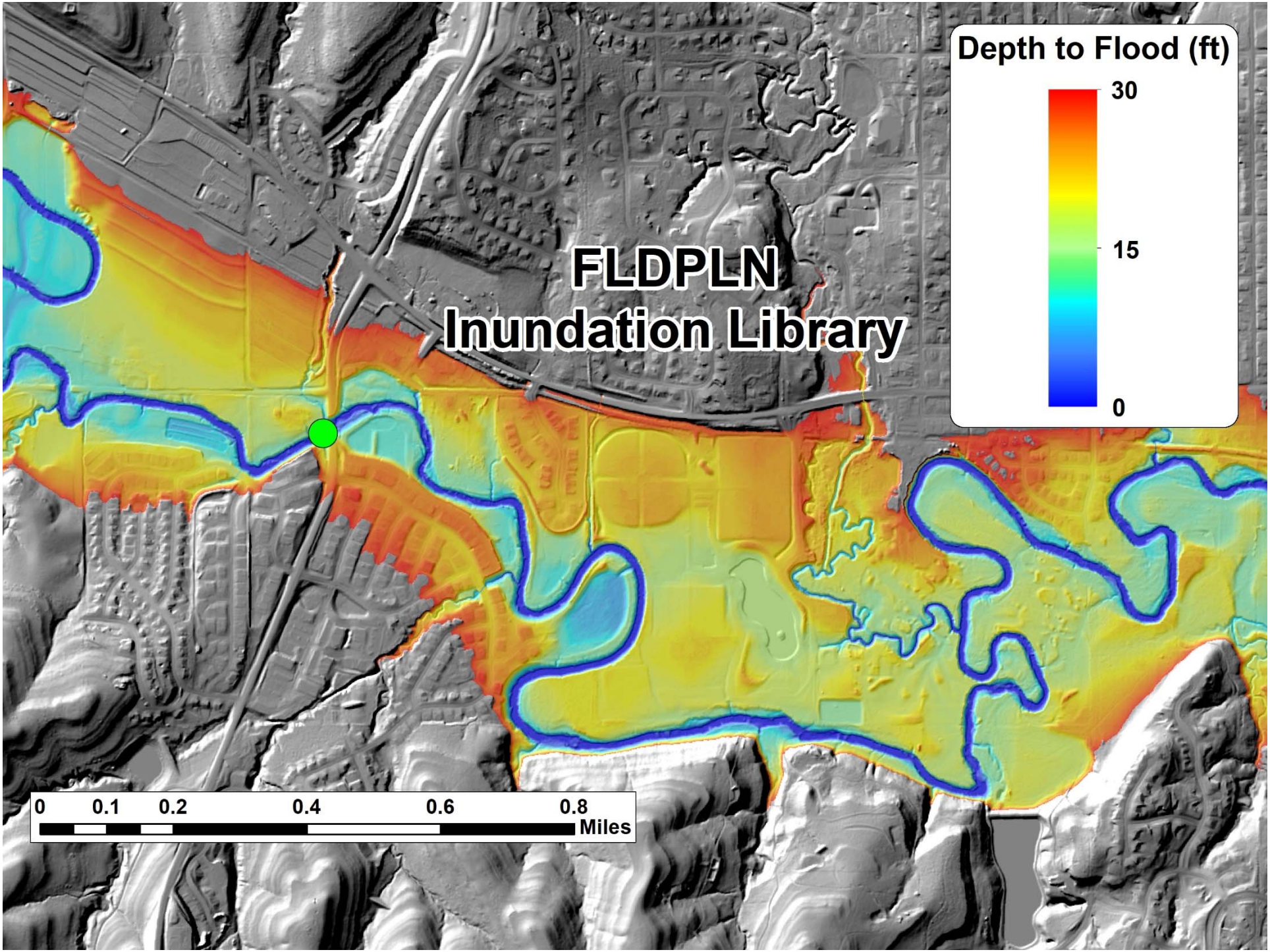


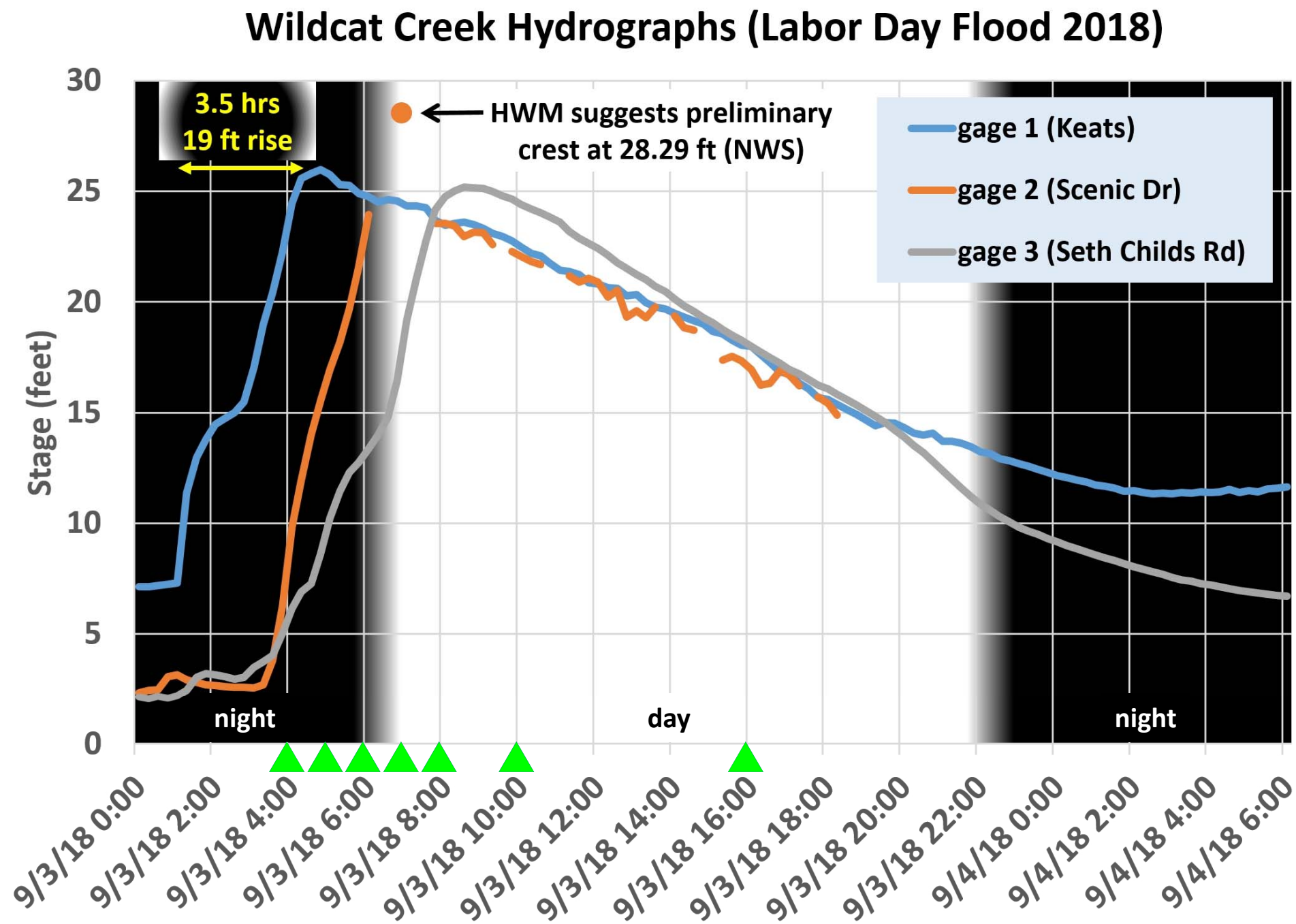

Advanced Hydrologic Pre
Secure https://water.weather.gov/ahps2/inundation/index.php?gage=mwck1
National Weather Service
Advanced Hydrologic Prediction Service
weather.gov
Home
News
Organization
Search for:
NWS
All NOAA
Go
Wildcat Creek at Manhattan Scenic Drive, KS (MWCK1)
National Observations
Inundation Locations
View Inundation Site
Weather Forecast Office Topeka, KS
Missouri Basin River Forecast Center
Data Type
Inundation Levels
Flood Categories
Current/Forecast
Hydrograph
River at a Glance
Download
Inundation Mapping
Print this map
Find address or location
Inundation Levels
NAVD88 Stage
1,072.0* 31.0*
1,071.0* 30.0*
1,070.0* 29.0*
1,069.0* 28.0*
1,068.0* 27.0*
1,067.0* 26.0*
1,066.0* 25.0*
1,065.0* 24.0*
1,064.0* 23.0*
Major Flooding Begins
1,063.0* 22.0*
1,062.0* 21.0*
1,061.0* 20.0*
1,060.0* 19.0*
1,059.0* 18.0*
Record Crest: 17.53 ft
1,058.0* 17.0*
Moderate Flooding Begins
1,057.0* 16.0*
1,056.0* 15.0*
1,055.0* 14.0*
Minor Flooding Begins
1,054.0* 13.0*
1,053.0* 12.0*
Near Flooding Begins
* = Extended rating
Inundation Feedback
Provided in Partnership with
Switch Basemap
Reset View
Colbert Hills Golf Course
Cico Park
Kansas State University-Manhattan
Sunset Park Zoo
Warner Memorial Park
Wildcat Creek
Stags Hill Golf Club
Earthstar Geographics | Esri, HERE, Garmin
38.2
34.2
30.4
26.6
22.8
19.0
15.2
11.4
7.6
3.8
0.0
Depth in feet
Gauge Location
About Inundation
Download Dataset(s)
FAQ
User Guide
Inundation Sites
Inundation Legend
User guide video on YouTube
What is UTC time?
Map Help
Disclaimer
Click on mapped inundation to see water depth values for that location, or hold shift and drag to zoom to area.
Current Stage:
4.1 ft at 09/12/2018 16:15:00 UTC
Selected Inundation
NAVD88: 1,072.0* ft
stage: 31.0* ft
Mouse Location
Depth: No Data
Lat: 39.219
Lon: -96.592
Latitude/Longitude Disclaimer: The gauge location shown in the above map is the approximate location based on the latitude/longitude coordinates provided to the NWS by the gauge owner.
Gauge Information
Collapse

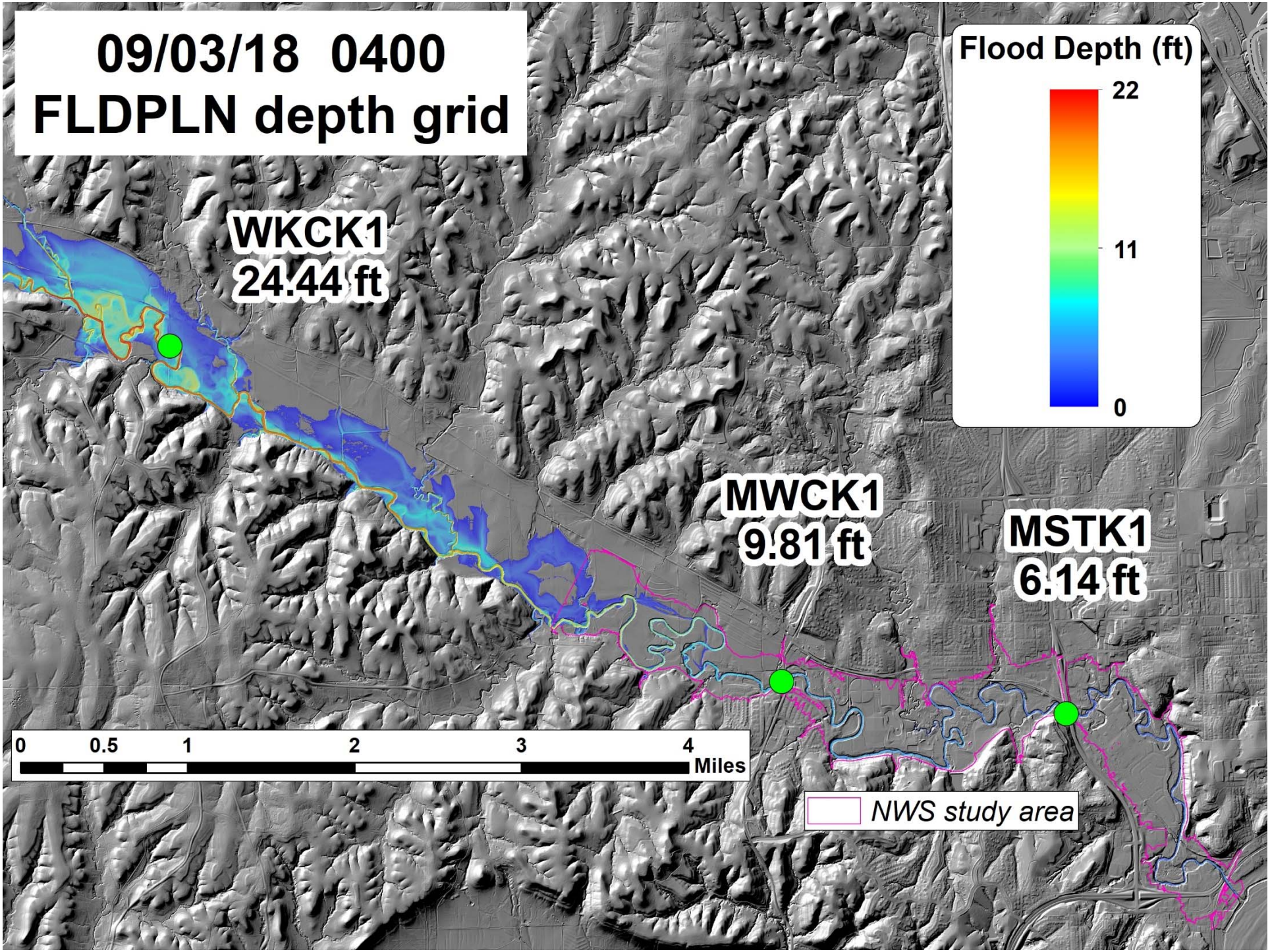

NWS
Inundation Library
Water Surface Elevation (ft) at MWCK1
1,072
1,071
1,070
1,069
1,068
1,067
1,066
1,065
1,064
1,063
1,062
1,061
1,060
1,059
1,058
1,057
1,056
1,055
1,054
1,053
0
0.5
1
2
3
4
Miles

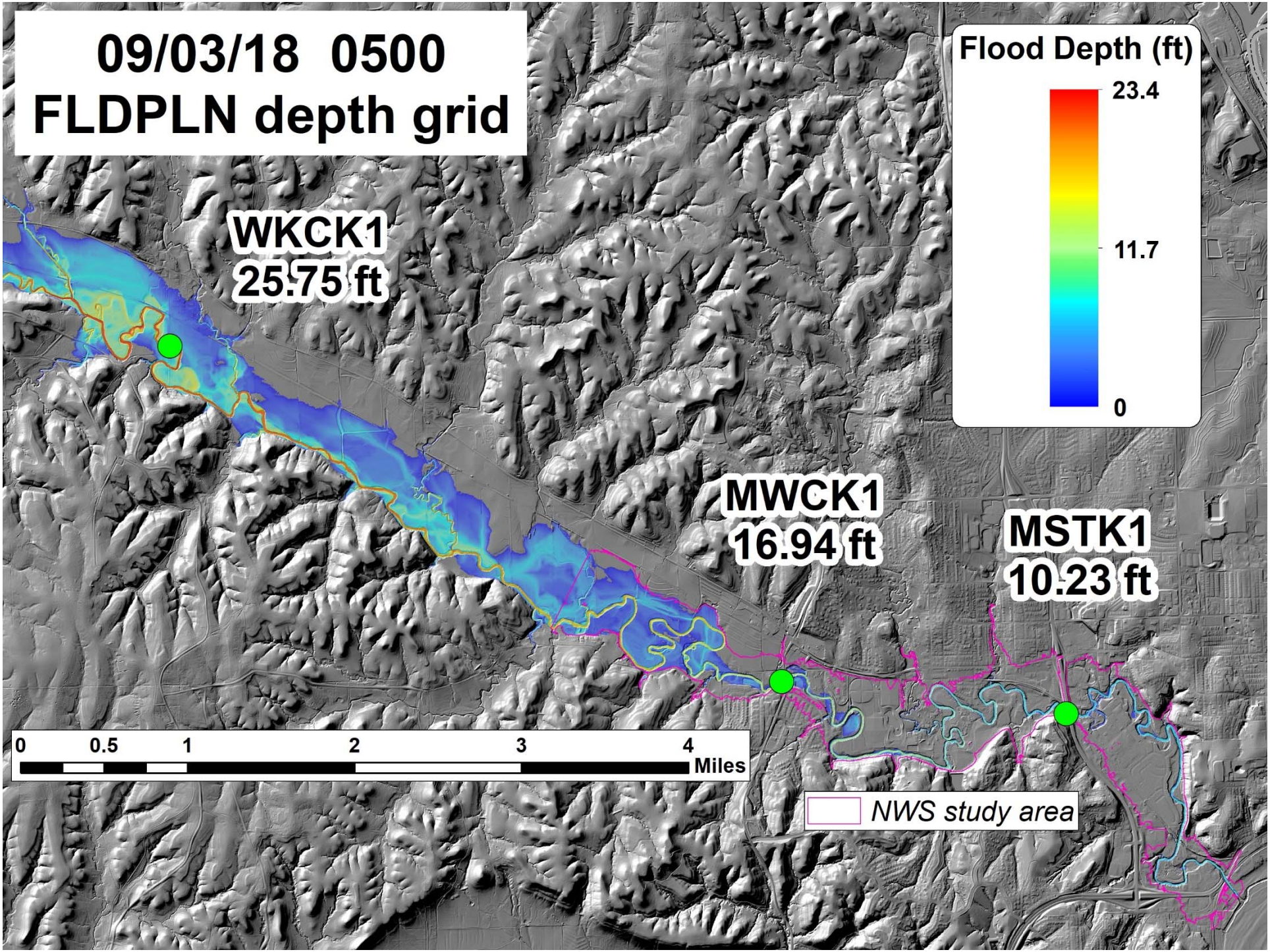

FLDPLN
Inundation Library
Depth to Flood (ft)
30
15
0
0
0.5
1
2
3
4
Miles

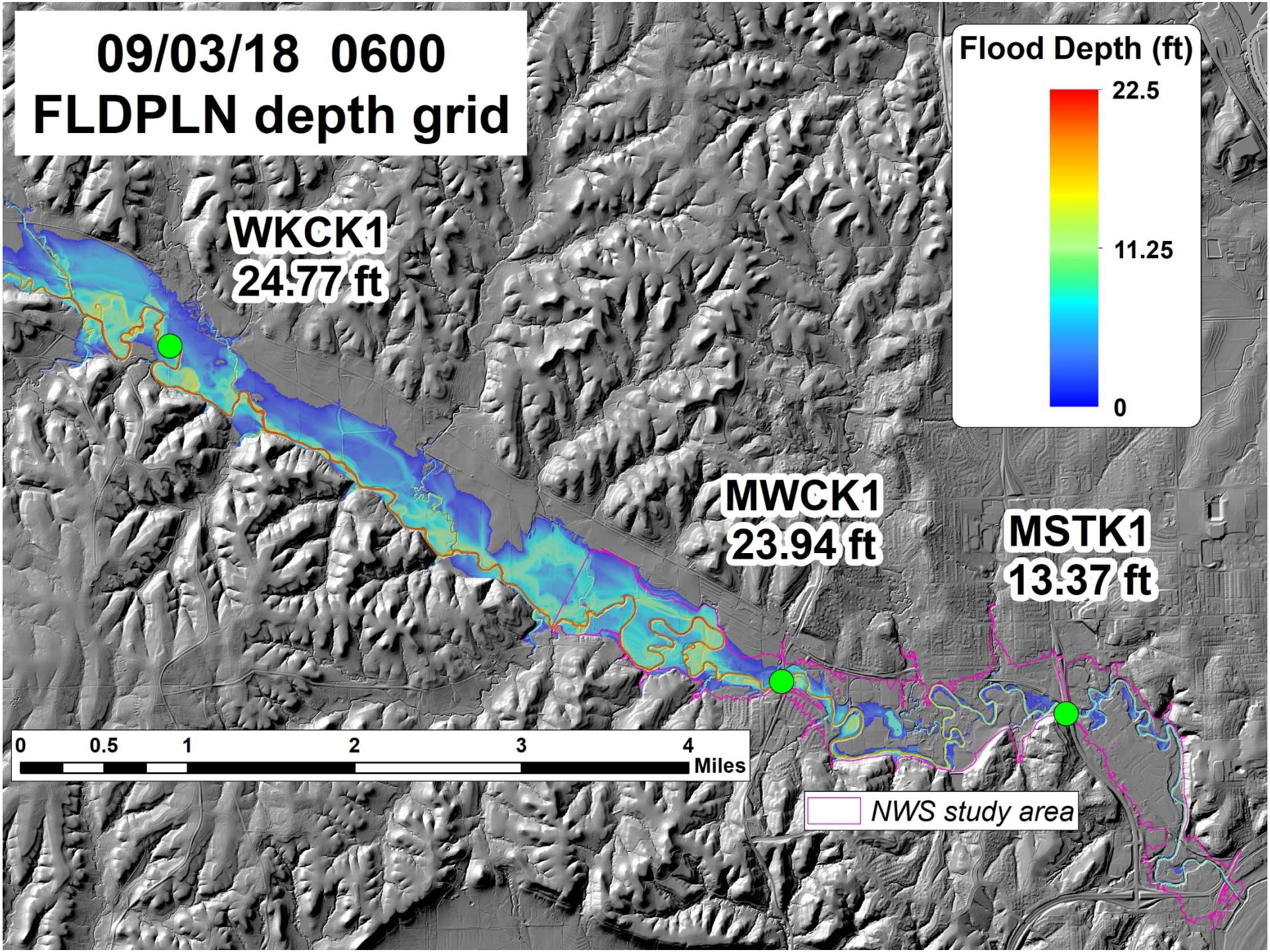

NWS
Inundation Library
Water Surface Elevation (ft) at MWCK1
1,072
1,071
1,070
1,069
1,068
1,067
1,066
1,065
1,064
1,063
1,062
1,061
1,060
1,059
1,058
1,057
1,056
1,055
1,054
1,053
0
0.1
0.2
0.4
0.6
0.8
Miles

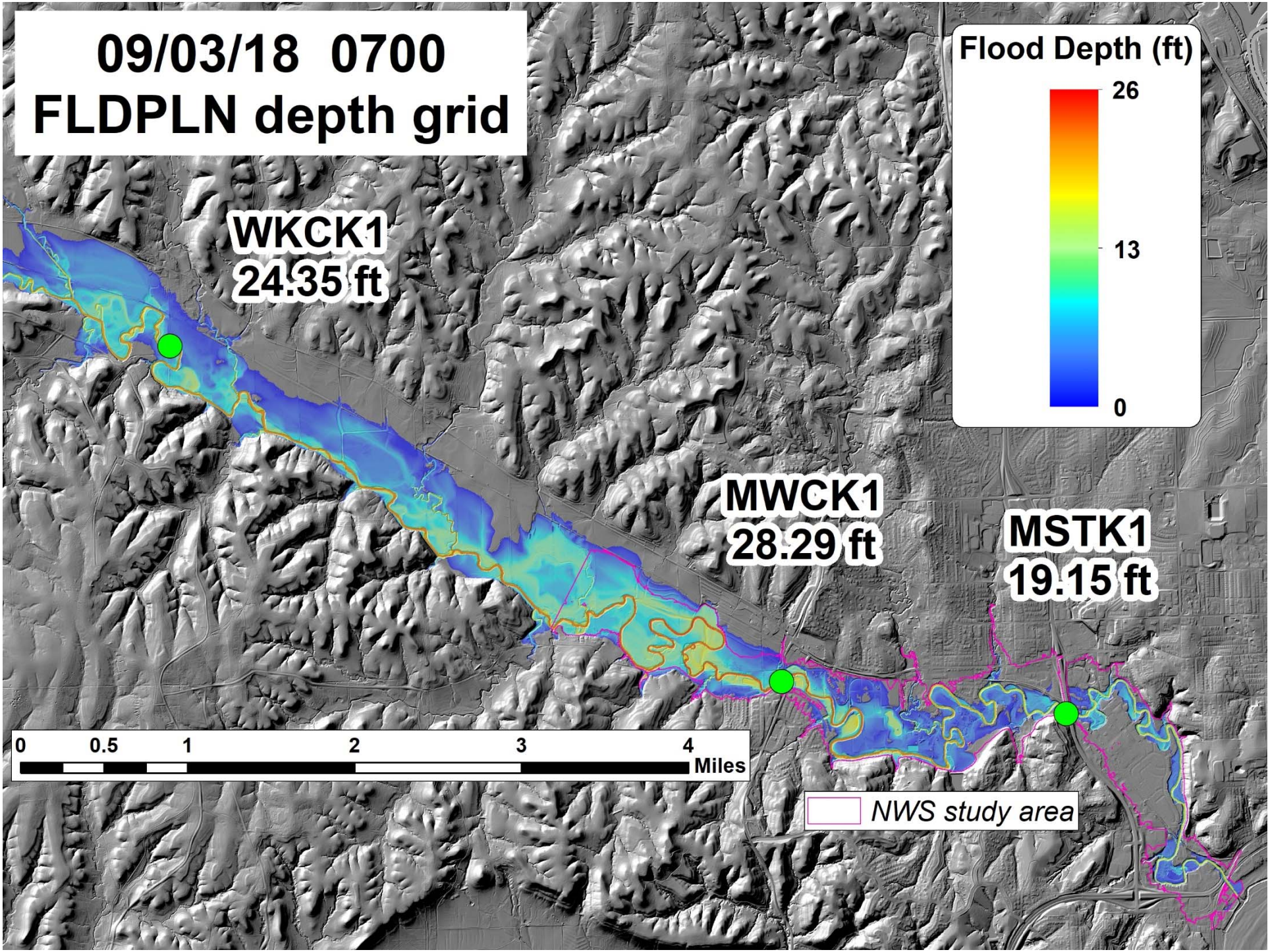

FLDPLN
Inundation Library
Depth to Flood (ft)
30
15
0
0
0.1
0.2
0.4
0.6
0.8
Miles

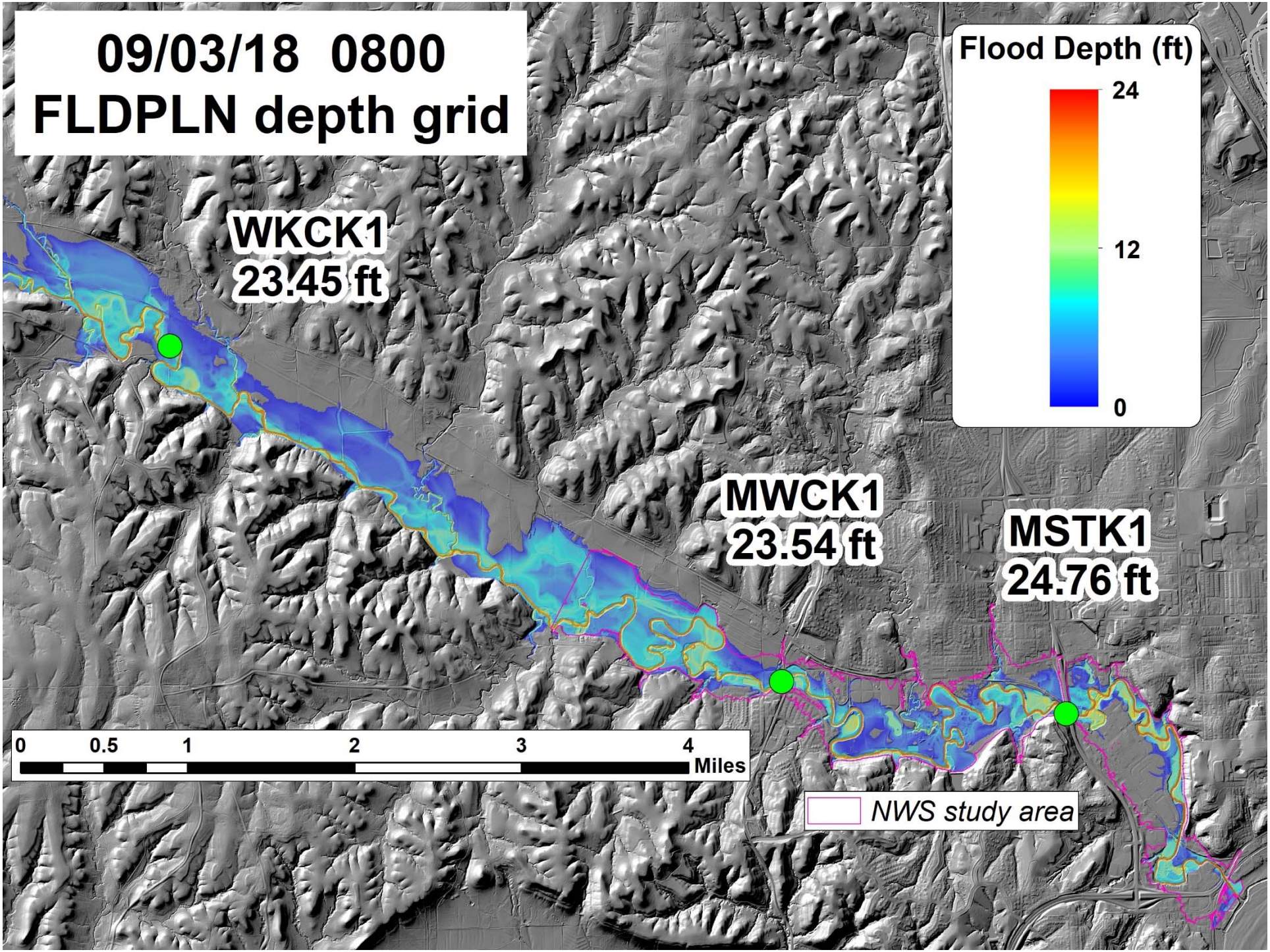

Wildcat Creek Hydrographs (Labor Day Flood 2018)
3.5 hrs
19 ft rise
HWM suggests preliminary crest at 28.29 ft (NWS)
gage 1 (Keats)
gage 2 (Scenic Dr)
gage 3 (Seth Childs Rd)
Stage (feet)
30
25
20
15
10
5
0
night
day
night
9/3/18 0:00
9/3/18 2:00
9/3/18 4:00
9/3/18 6:00
9/3/18 8:00
9/3/18 10:00
9/3/18 12:00
9/3/18 14:00
9/3/18 16:00
9/3/18 18:00
9/3/18 20:00
9/3/18 22:00
9/4/18 0:00
9/4/18 2:00
9/4/18 4:00
9/4/18 6:00

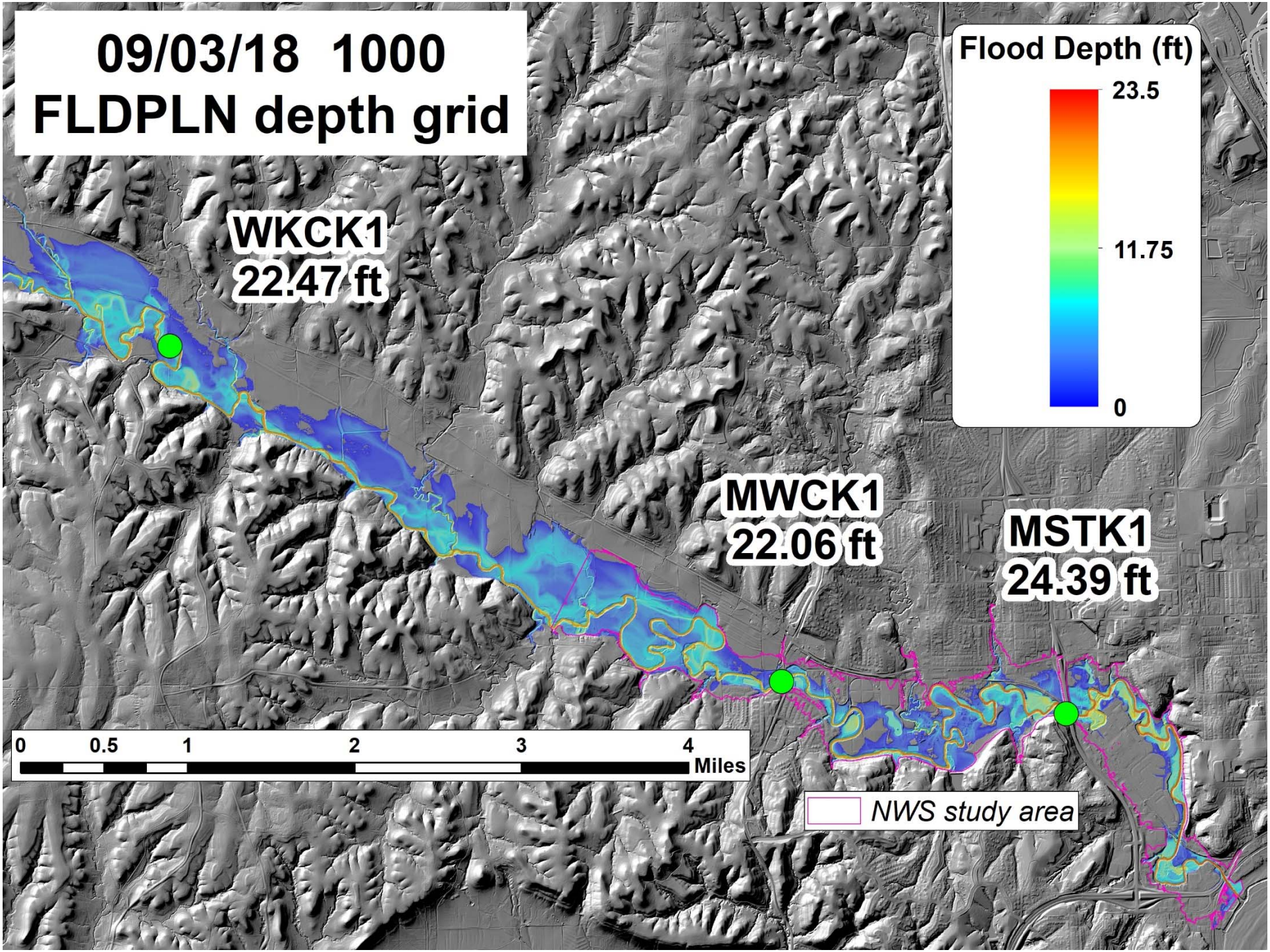

09/03/18 0400
FLDPLN depth grid
Flood Depth (ft)
22
11
0
WKCK1
24.44 ft
MWCK1
9.81 ft
MSTK1
6.14 ft
0
0.5
1
2
3
4
Miles
NWS study area

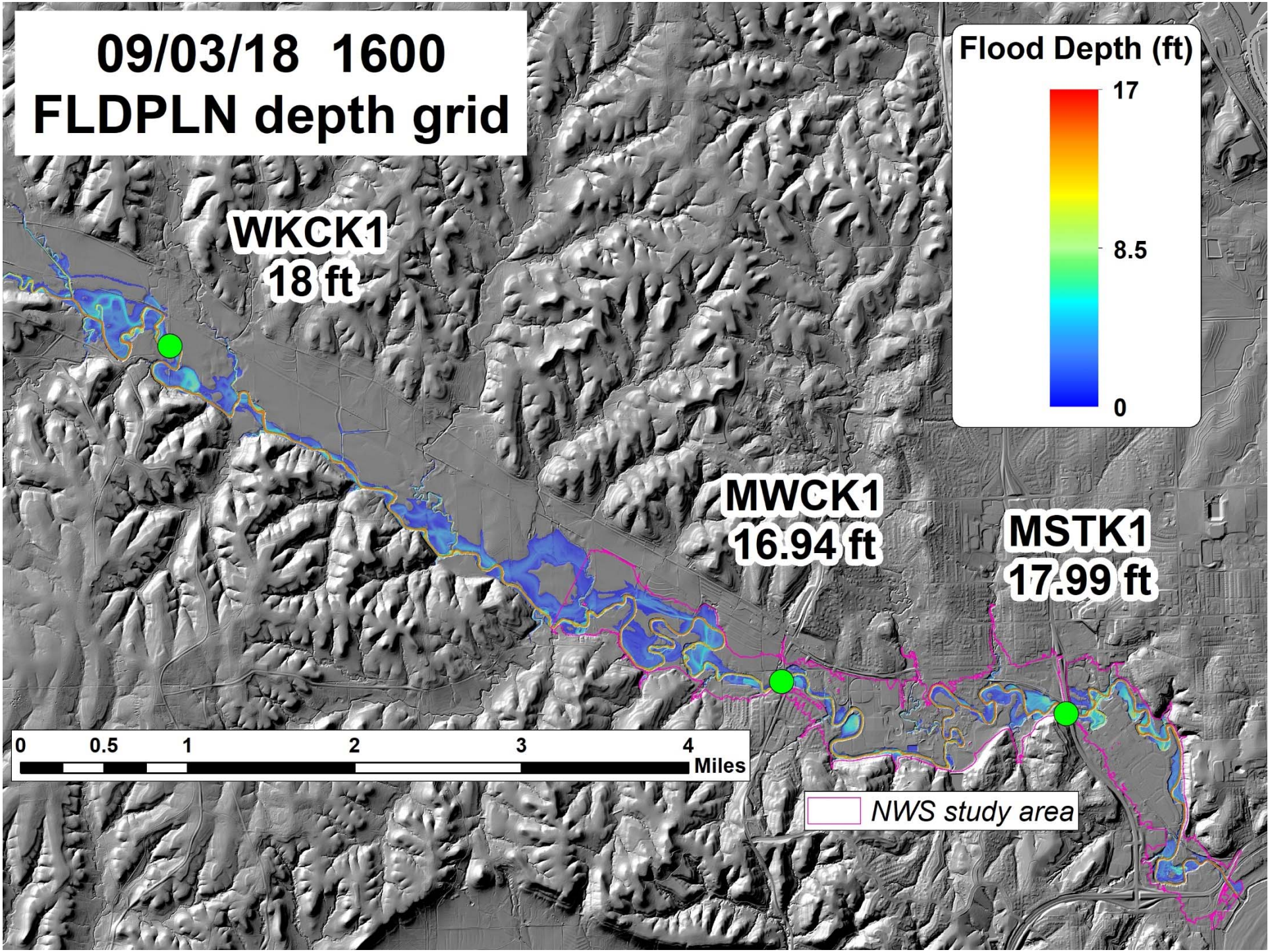

09/03/18 0500
FLDPLN depth grid
Flood Depth (ft)
23.4
11.7
0
WKCK1
25.75 ft
MWCK1
16.94 ft
MSTK1
10.23 ft
0
0.5
1
2
3
4
Miles
NWS study area

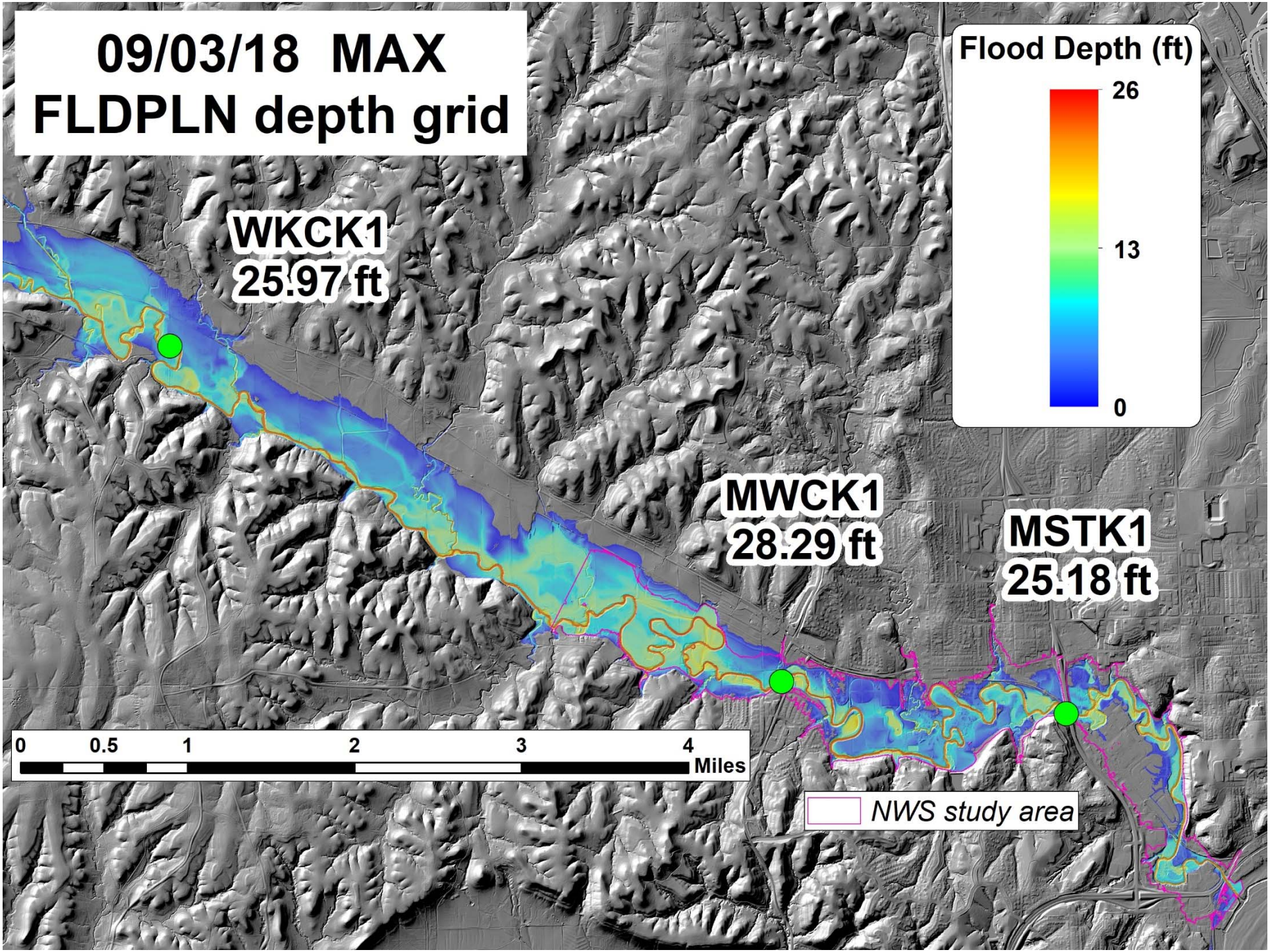

09/03/18 0600
FLDPLN depth grid
Flood Depth (ft)
22.5
11.25
0
WKCK1
24.77 ft
MWCK1
23.94 ft
MSTK1
13.37 ft
0
0.5
1
2
3
4
Miles
NWS study area

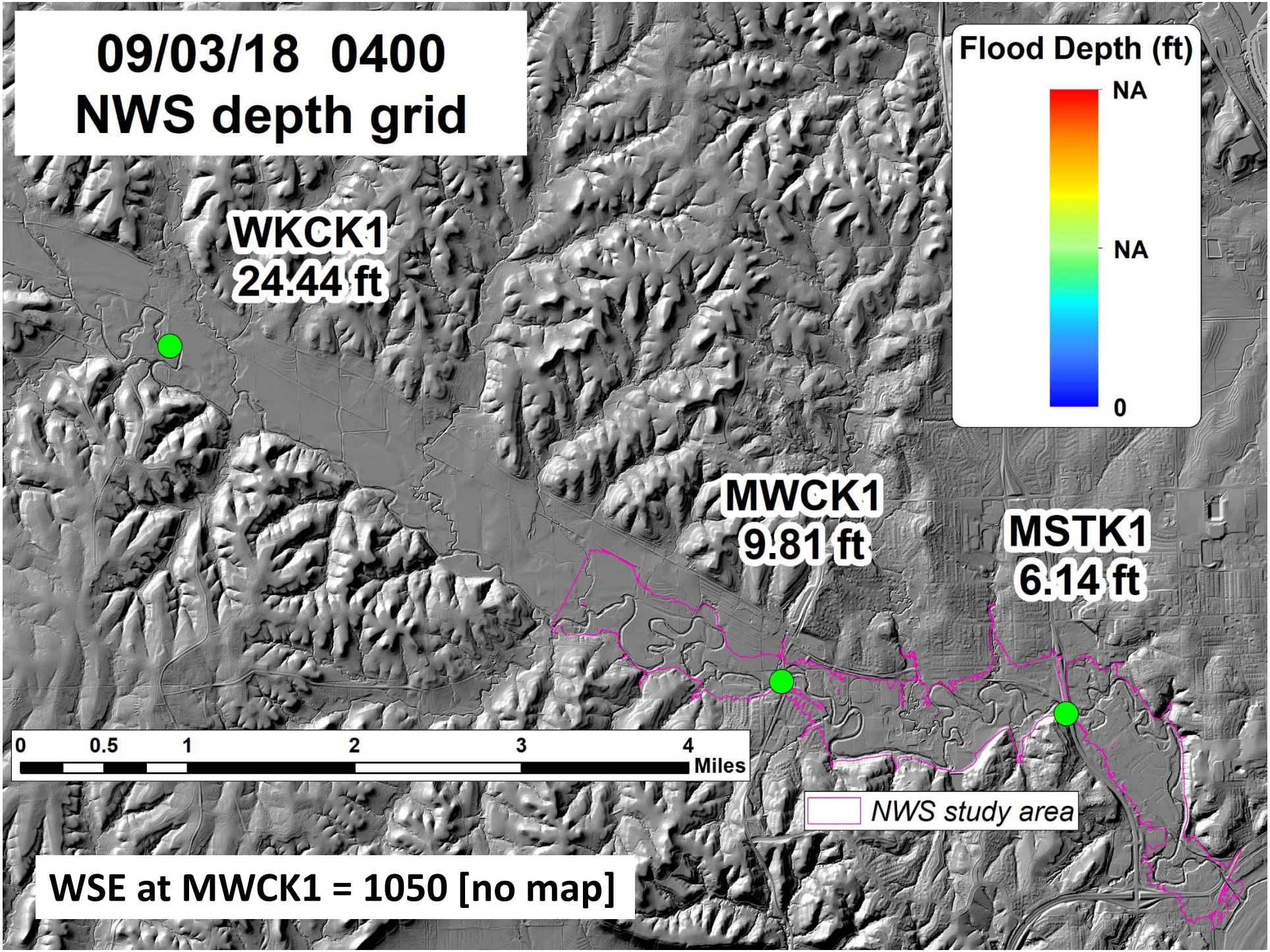

09/03/18 0700
FLDPLN depth grid
Flood Depth (ft)
26
13
0
WKCK1
24.35 ft
MWCK1
28.29 ft
MSTK1
19.15 ft
0
0.5
1
2
3
4
Miles
NWS study area

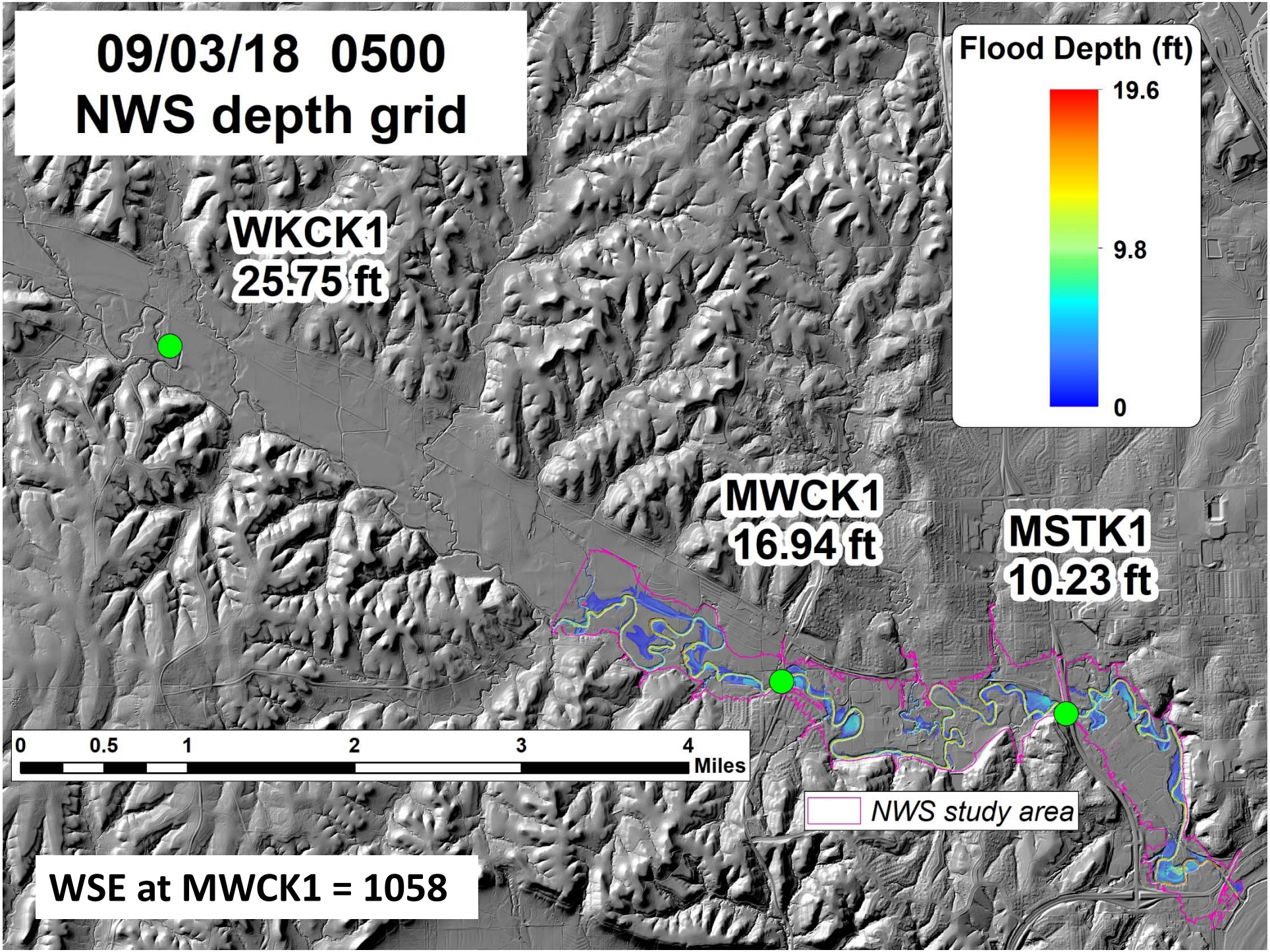

09/03/18 0800
FLDPLN depth grid
Flood Depth (ft)
24
12
0
WKCK1
23.45 ft
MWCK1
23.54 ft
MSTK1
24.76 ft
0
0.5
1
2
3
4
Miles
NWS study area

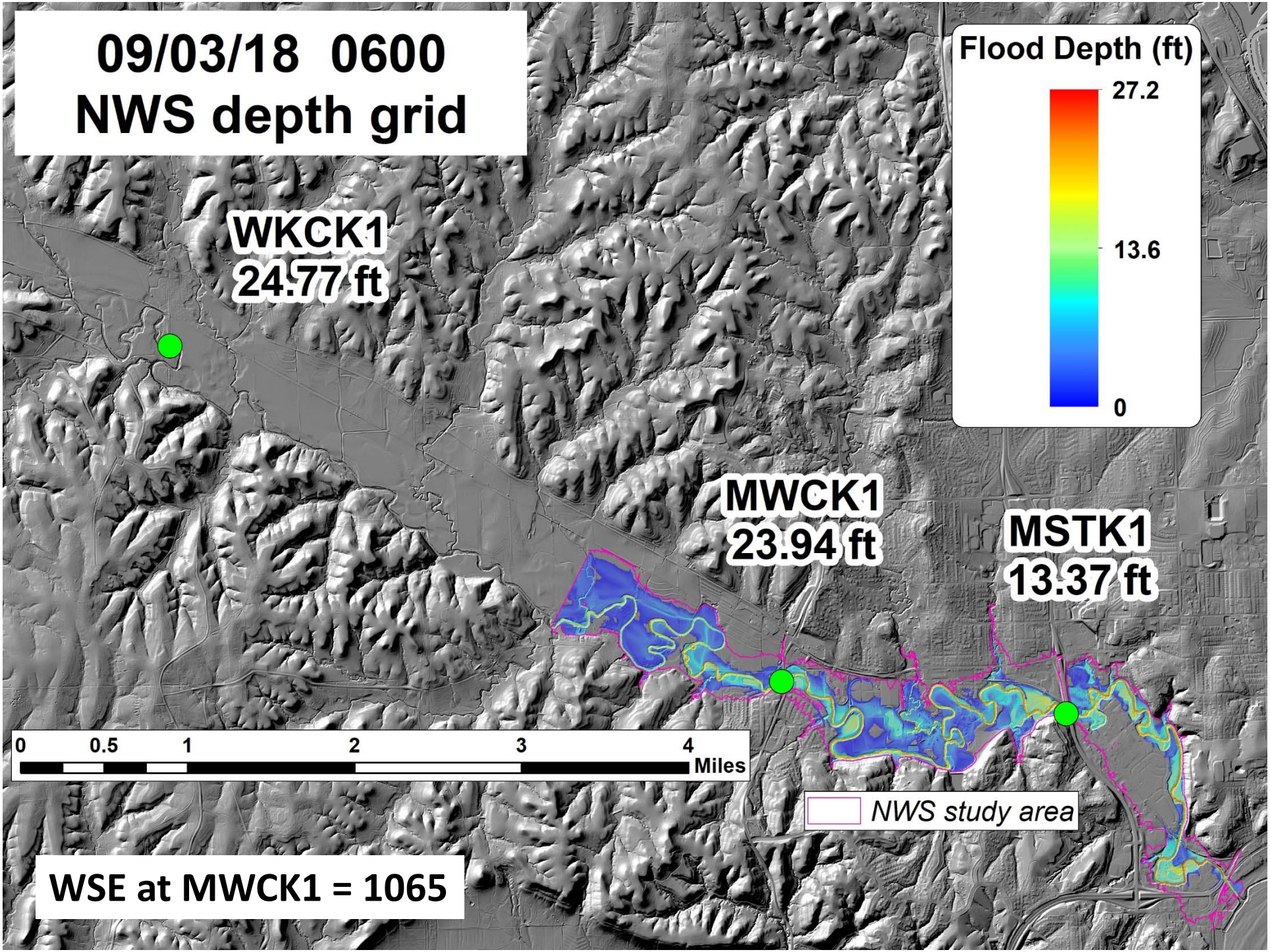

09/03/18 1000
FLDPLN depth grid
Flood Depth (ft)
23.5
11.75
0
WKCK1
22.47 ft
MWCK1
22.06 ft
MSTK1
24.39 ft
0
0.5
1
2
3
4
Miles
NWS study area

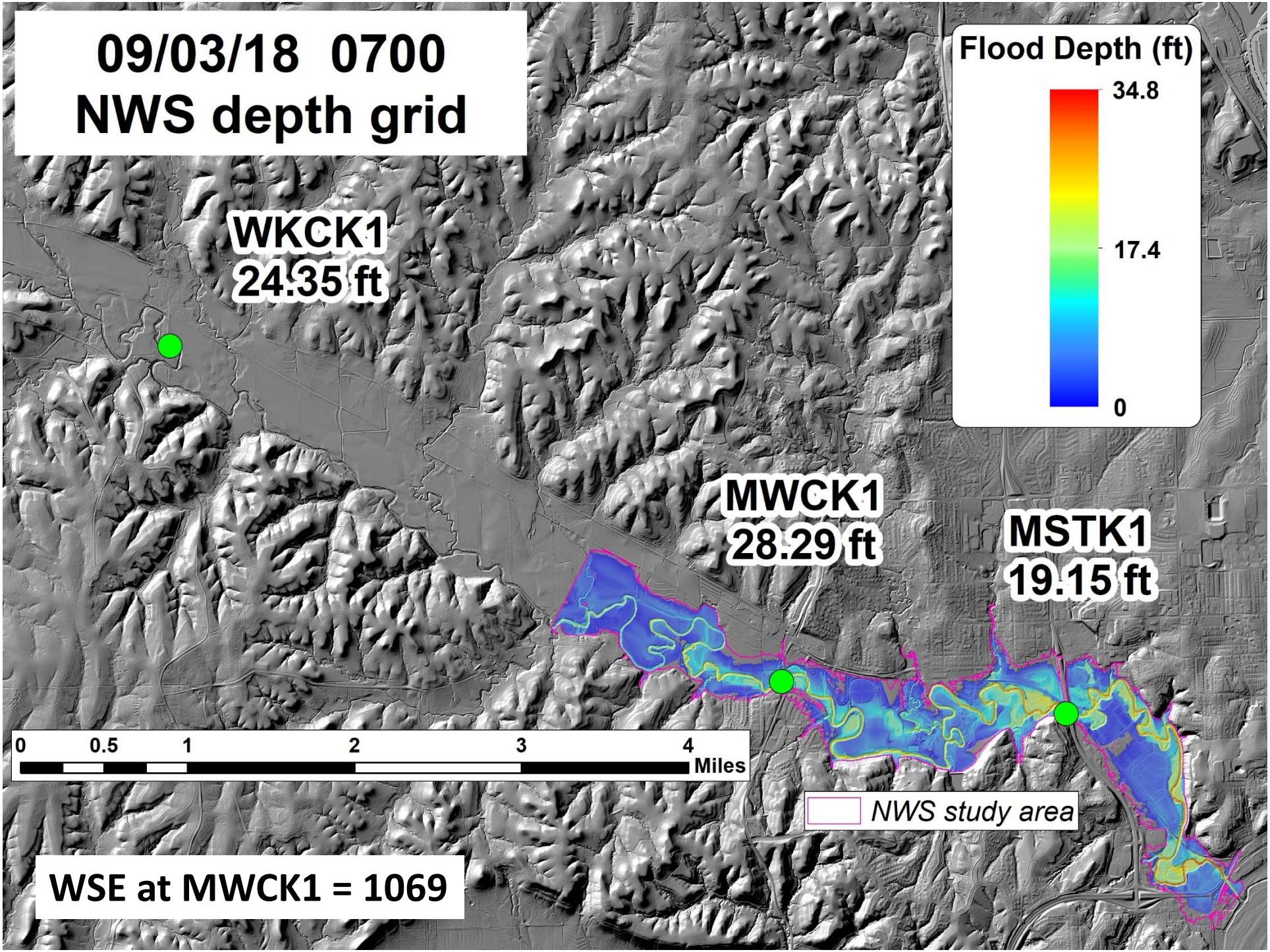

09/03/18 1600
FLDPLN depth grid
Flood Depth (ft)
17
8.5
0
WKCK1
18 ft
MWCK1
16.94 ft
MSTK1
17.99 ft
0
0.5
1
2
3
4
Miles
NWS study area

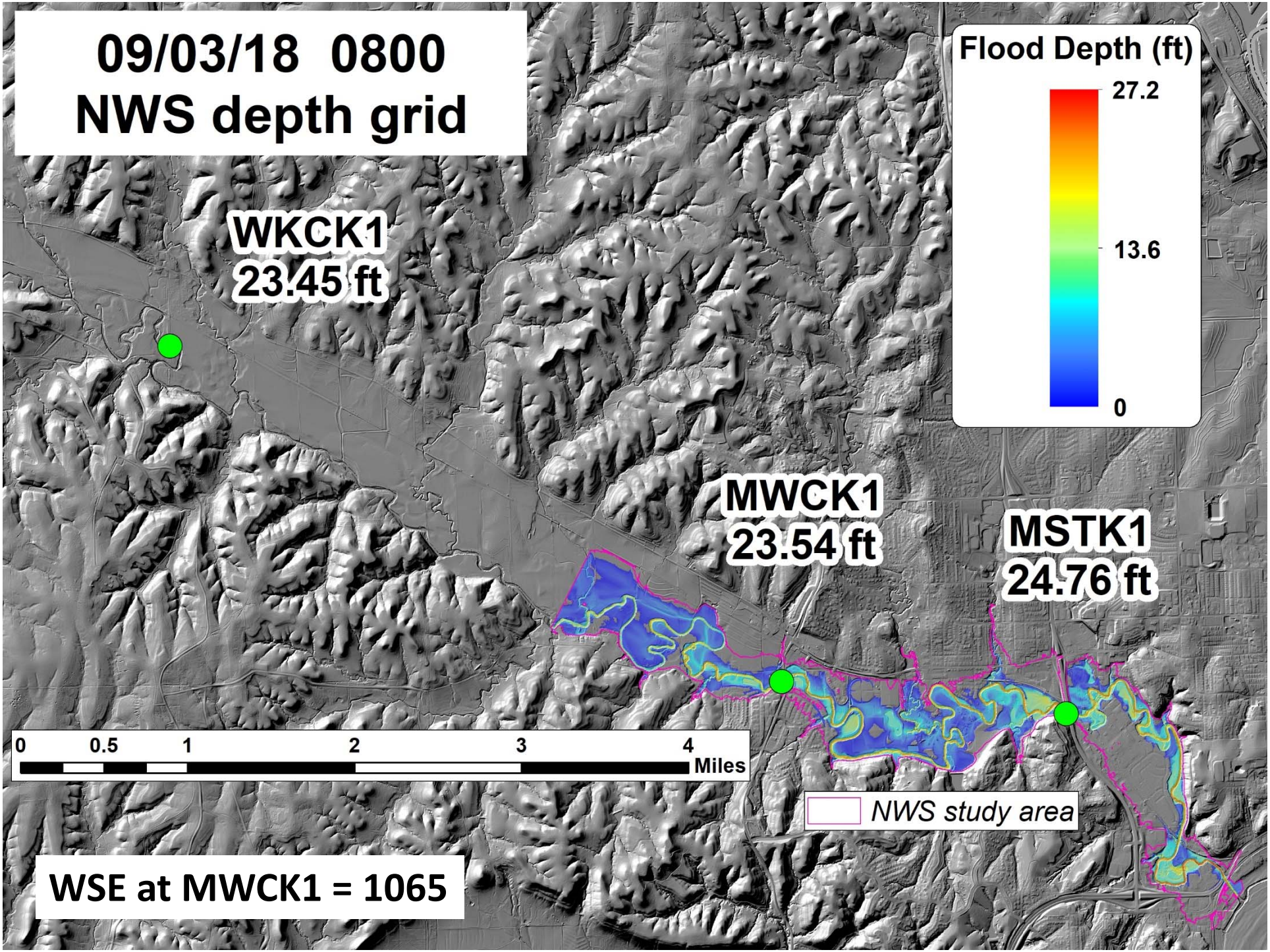

09/03/18 MAX
FLDPLN depth grid
Flood Depth (ft)
26
13
0
WKCK1
25.97 ft
MWCK1
28.29 ft
MSTK1
25.18 ft
0
0.5
1
2
3
4
Miles
NWS study area

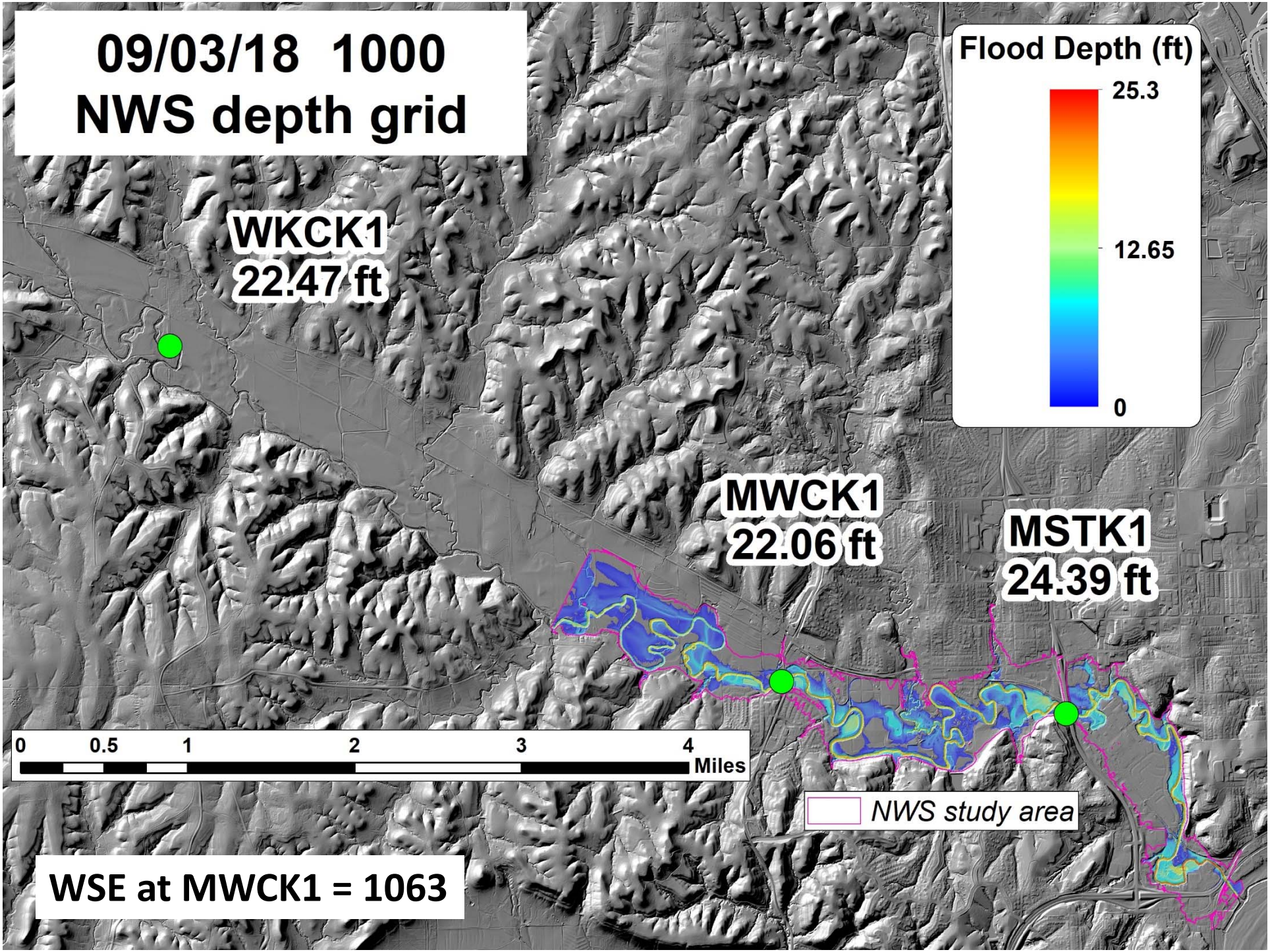

09/03/18 0400
NWS depth grid
Flood Depth (ft)
NA
NA
0
WKCK1
24.44 ft
MWCK1
9.81 ft
MSTK1
6.14 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1050 [no map]

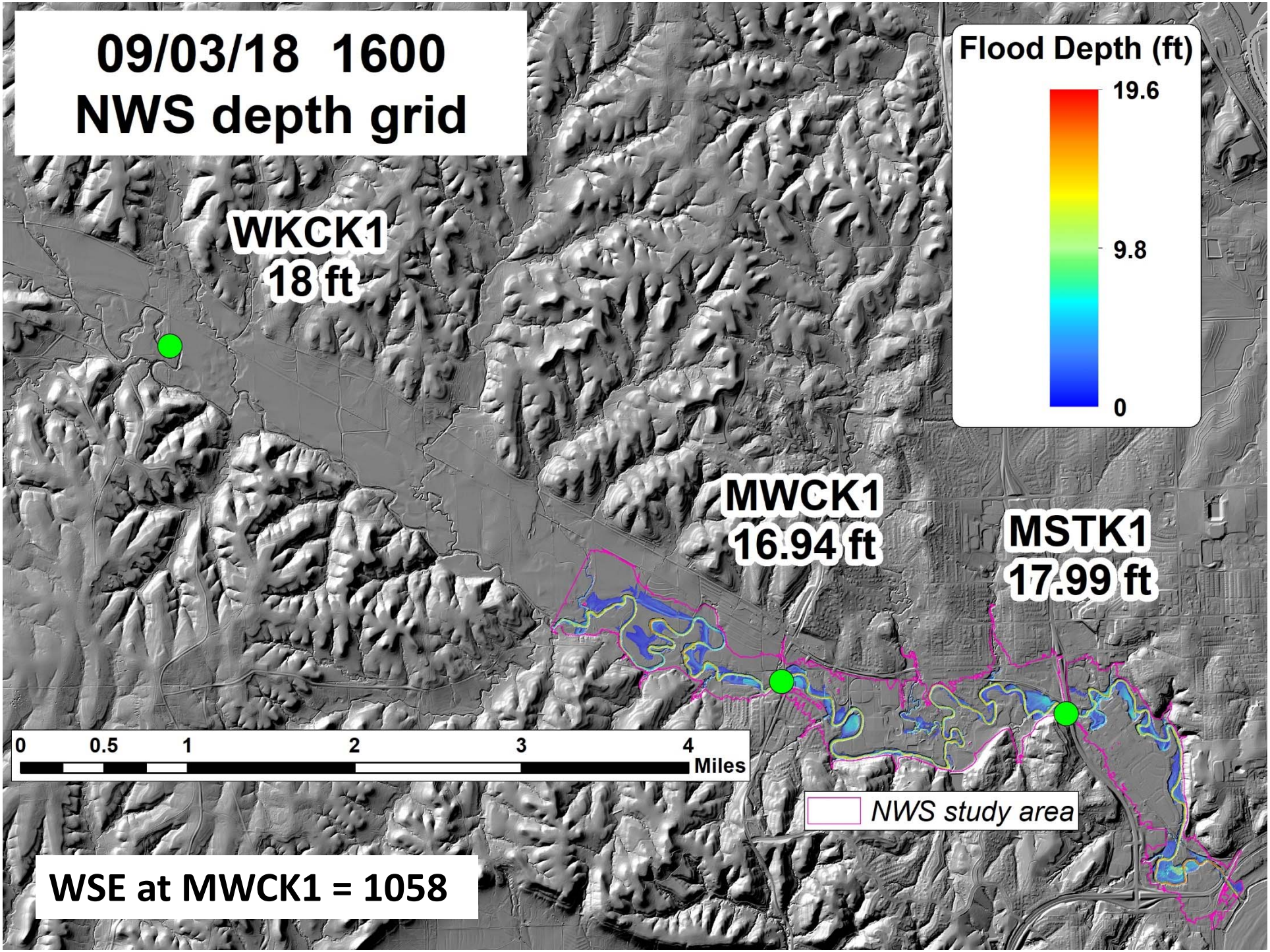

09/03/18 0500
NWS depth grid
Flood Depth (ft)
19.6
9.8
0
WKCK1
25.75 ft
MWCK1
16.94 ft
MSTK1
10.23 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1058

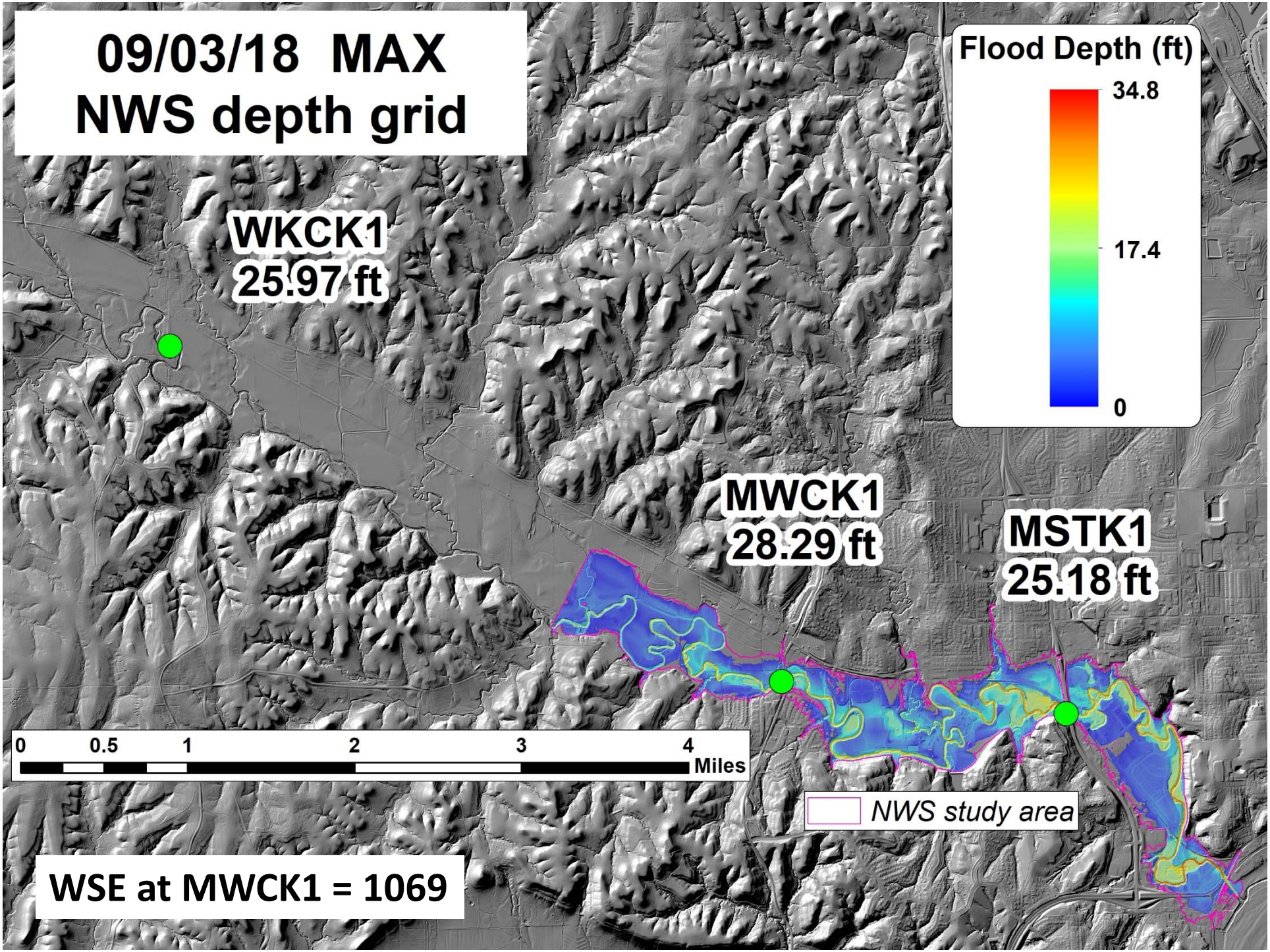

09/03/18 0600
NWS depth grid
Flood Depth (ft)
27.2
13.6
0
WKCK1
24.77 ft
MWCK1
23.94 ft
MSTK1
13.37 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1065

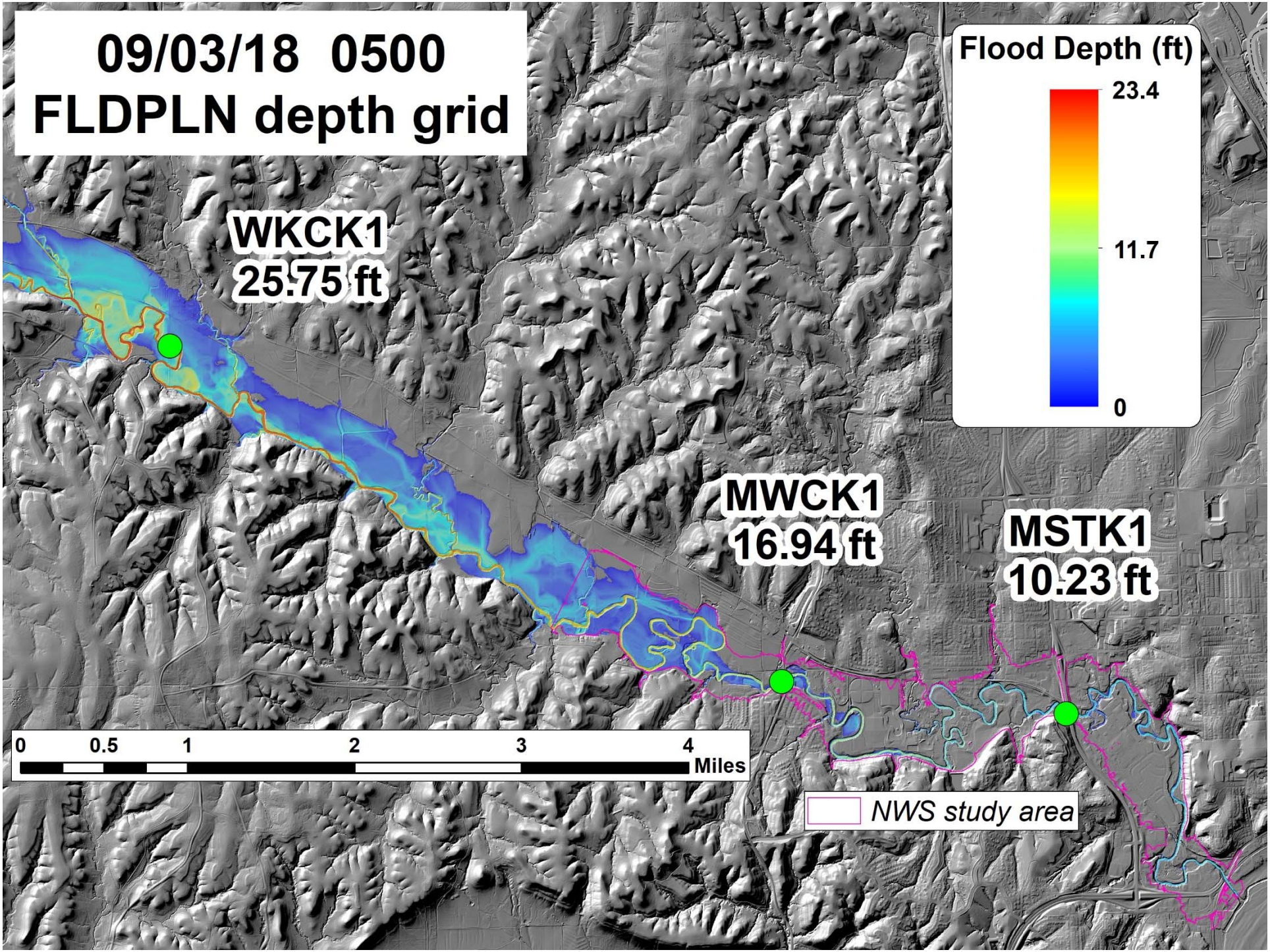

09/03/18 0700
NWS depth grid
Flood Depth (ft)
34.8
17.4
0
WKCK1
24.35 ft
MWCK1
28.29 ft
MSTK1
19.15 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1069

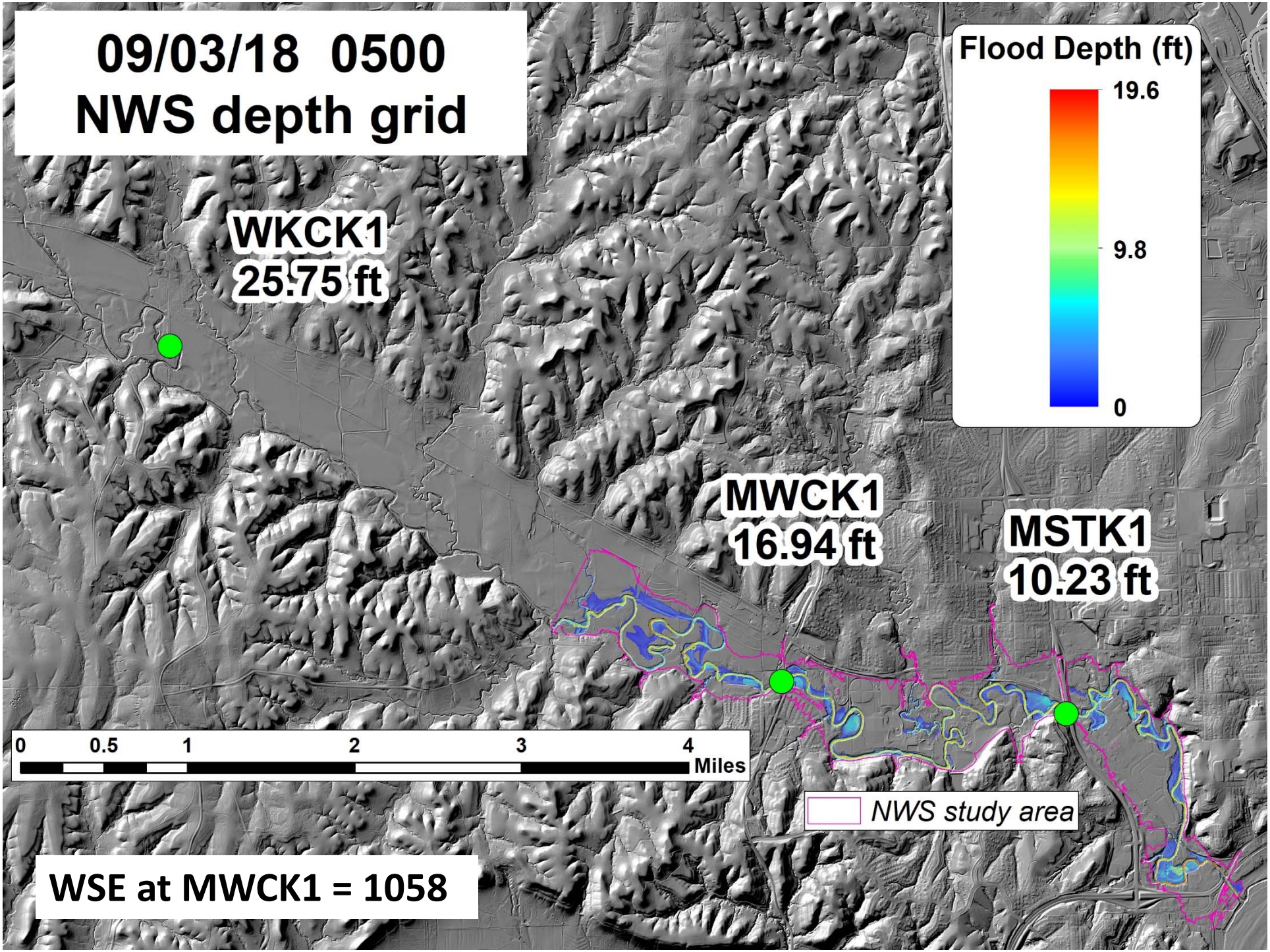

09/03/18 0800
NWS depth grid
Flood Depth (ft)
27.2
13.6
0
WKCK1
23.45 ft
MWCK1
23.54 ft
MSTK1
24.76 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1065

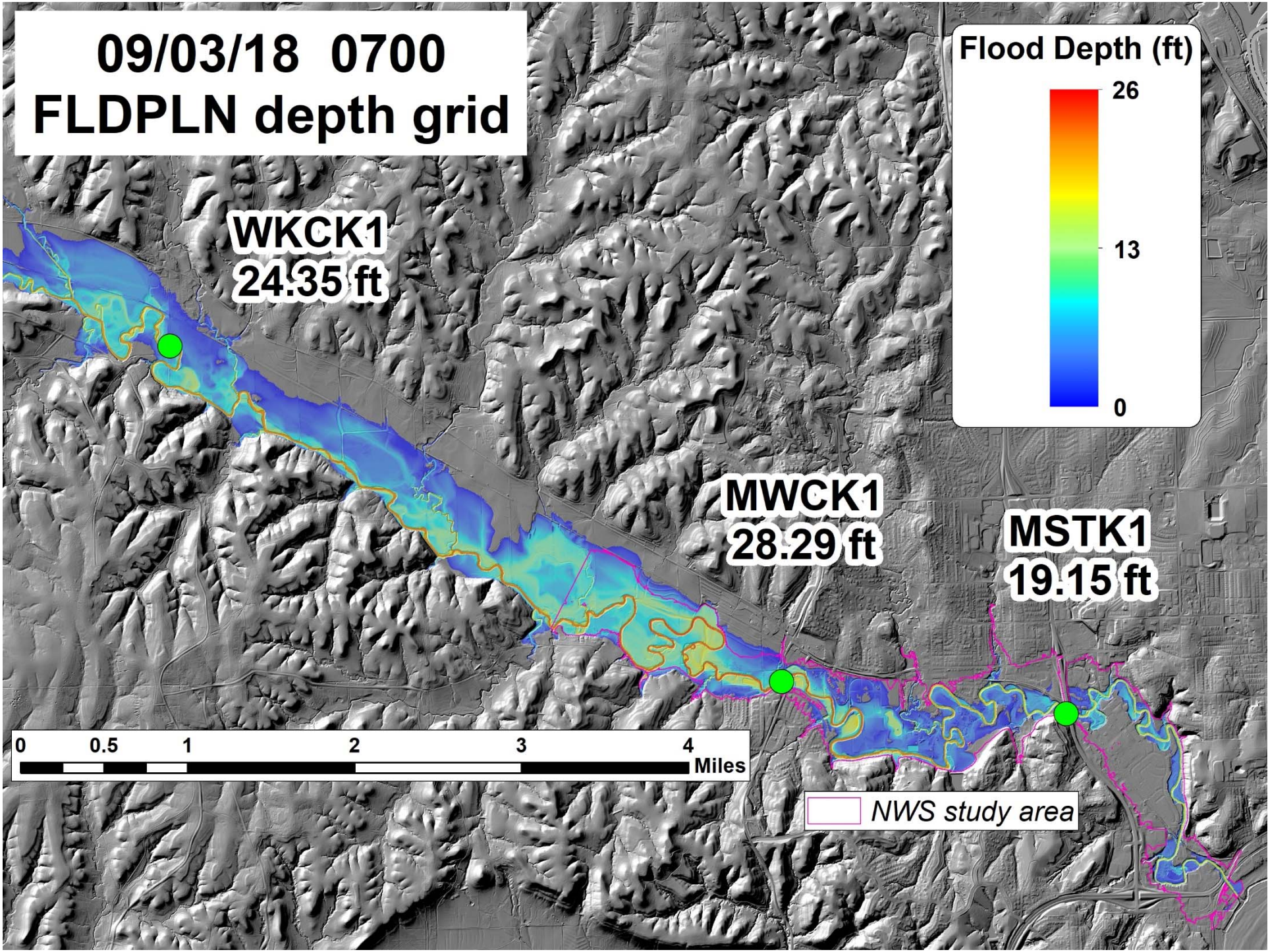

09/03/18 1000
NWS depth grid
Flood Depth (ft)
25.3
12.65
0
WKCK1
22.47 ft
MWCK1
22.06 ft
MSTK1
24.39 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1063

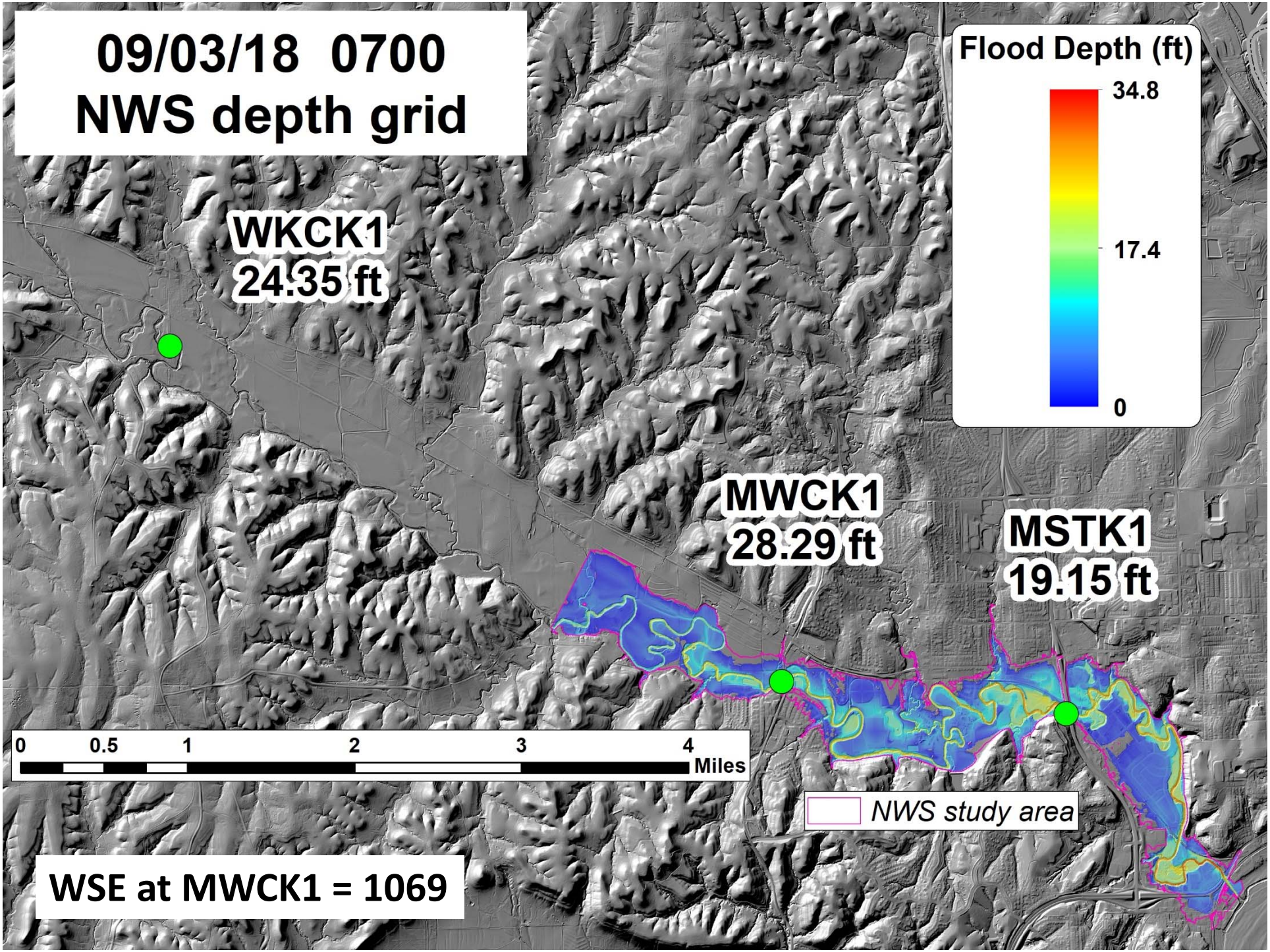

09/03/18 1600
NWS depth grid
Flood Depth (ft)
19.6
9.8
0
WKCK1
18 ft
MWCK1
16.94 ft
MSTK1
17.99 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1058

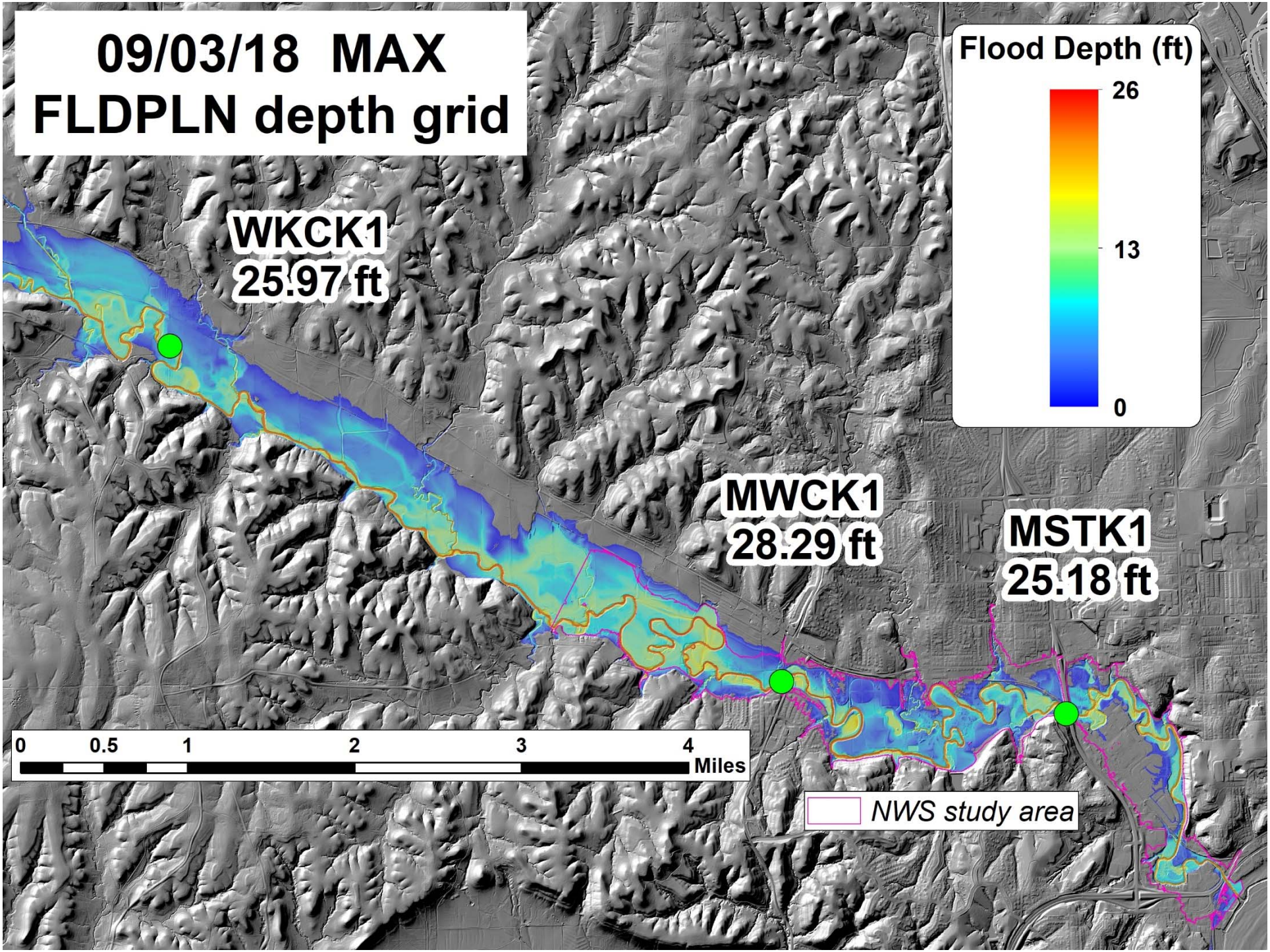

09/03/18 MAX
NWS depth grid
Flood Depth (ft)
34.8
17.4
0
WKCK1
25.97 ft
MWCK1
28.29 ft
MSTK1
25.18 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1069

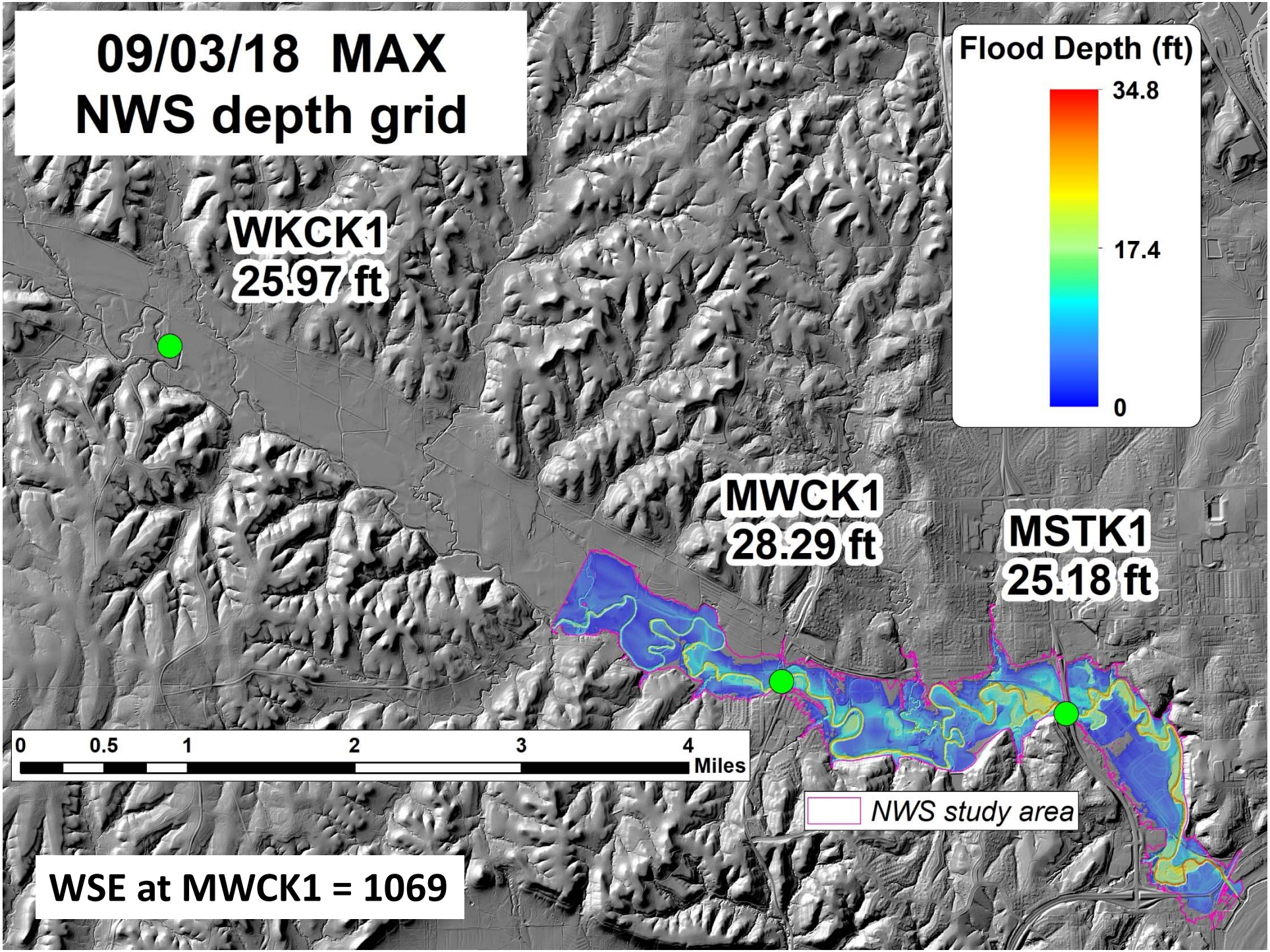

09/03/18 0500
FLDPLN depth grid
Flood Depth (ft)
23.4
11.7
0
WKCK1
25.75 ft
MWCK1
16.94 ft
MSTK1
10.23 ft
0
0.5
1
2
3
4
Miles
NWS study area


09/03/18 0500
NWS depth grid
Flood Depth (ft)
19.6
9.8
0
WKCK1
25.75 ft
MWCK1
16.94 ft
MSTK1
10.23 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1058

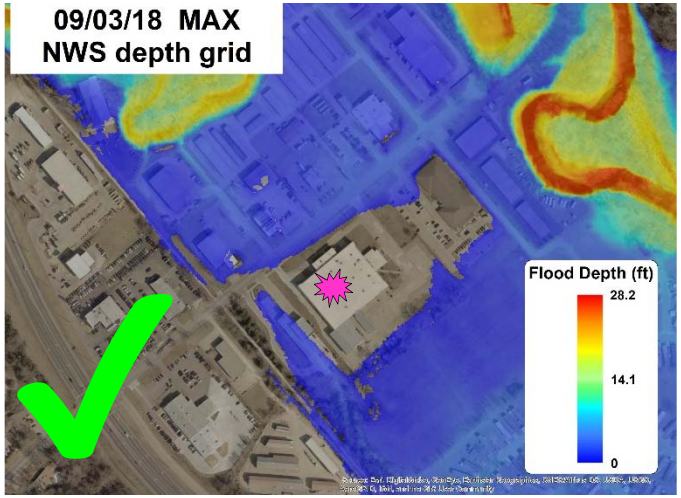

09/03/18 0700
FLDPLN depth grid
Flood Depth (ft)
26
13
0
WKCK1
24.35 ft
MWCK1
28.29 ft
MSTK1
19.15 ft
0
0.5
1
2
3
4
Miles
NWS study area

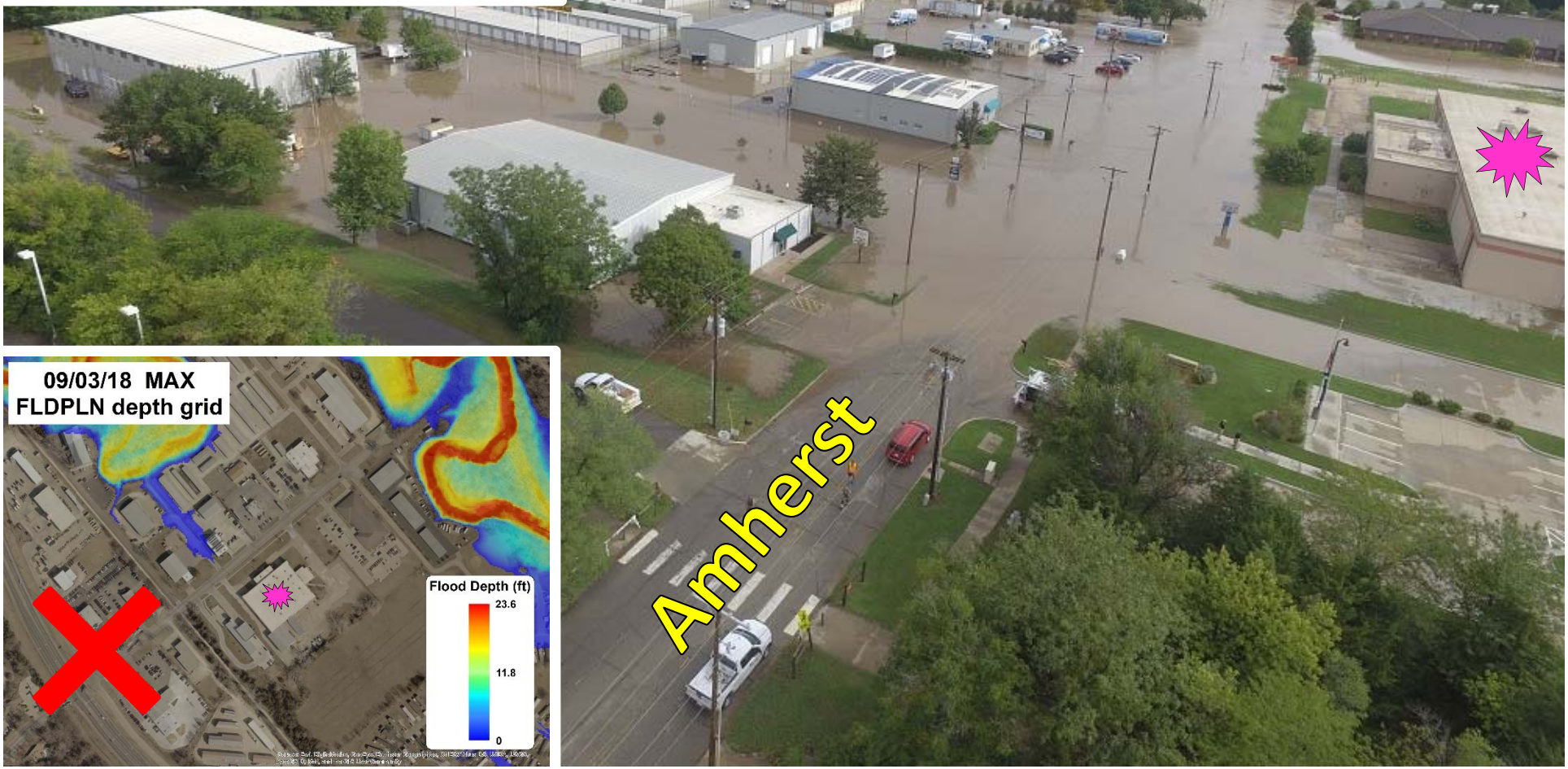

09/03/18 0700
NWS depth grid
Flood Depth (ft)
34.8
17.4
0
WKCK1
24.35 ft
MWCK1
28.29 ft
MSTK1
19.15 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1069


09/03/18 MAX
FLDPLN depth grid
Flood Depth (ft)
26
13
0
WKCK1
25.97 ft
MWCK1
28.29 ft
MSTK1
25.18 ft
0
0.5
1
2
3
4
Miles
NWS study area

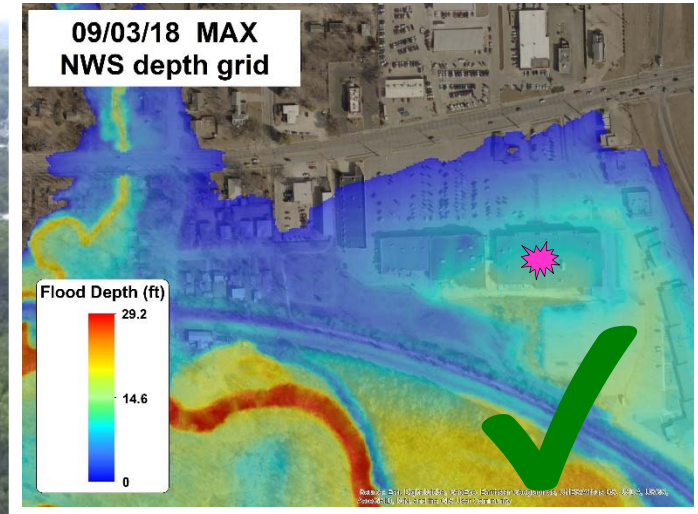

09/03/18 MAX
NWS depth grid
Flood Depth (ft)
34.8
17.4
0
WKCK1
25.97 ft
MWCK1
28.29 ft
MSTK1
25.18 ft
0
0.5
1
2
3
4
Miles
NWS study area
WSE at MWCK1 = 1069

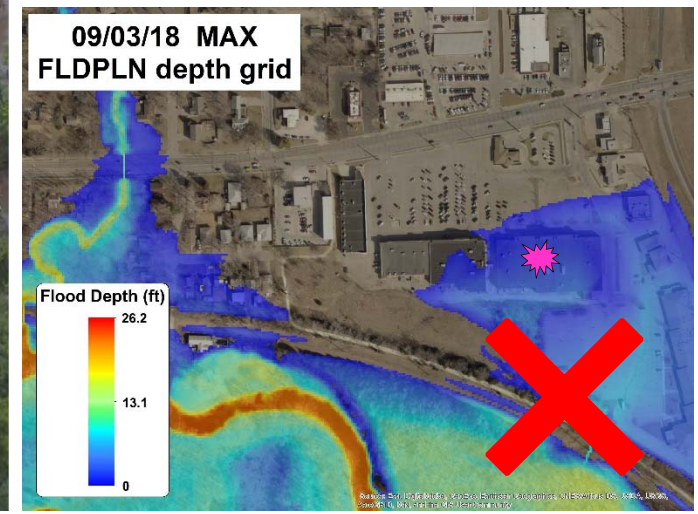
Seth Child Rd & Amherst Ave





Anderson Ave & Meadowbrook Ln (looking east)

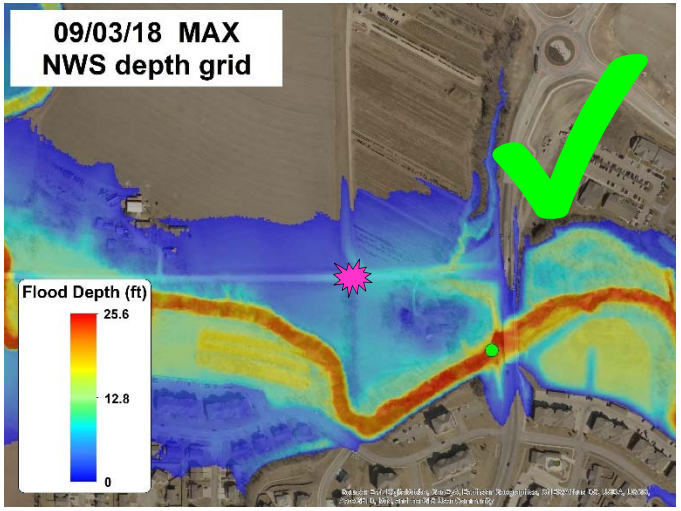




S Manhattan Ave bridge
(looking south/southwest)

Wildcat Creek is inside the Kansas River floodplain at this point

Scenic Dr bridge
(looking south)


09/03/18 MAX
NWS depth grid
Flood Depth (ft)
25.6
12.8
0

Looking southwest
from Scenic Dr bridge

09/03/18 MAX
FLDPLN depth grid
Flood Depth (ft)
26.2
13.1
0

Thanks for Listening…

Any Questions?

Email: jkastens@ku.edu