



NEBRASKA
Good Life. Great Resources.

Department of Environment and Energy

Air

Water

Land

Energy

CIFA SRF Workshop

Online Session

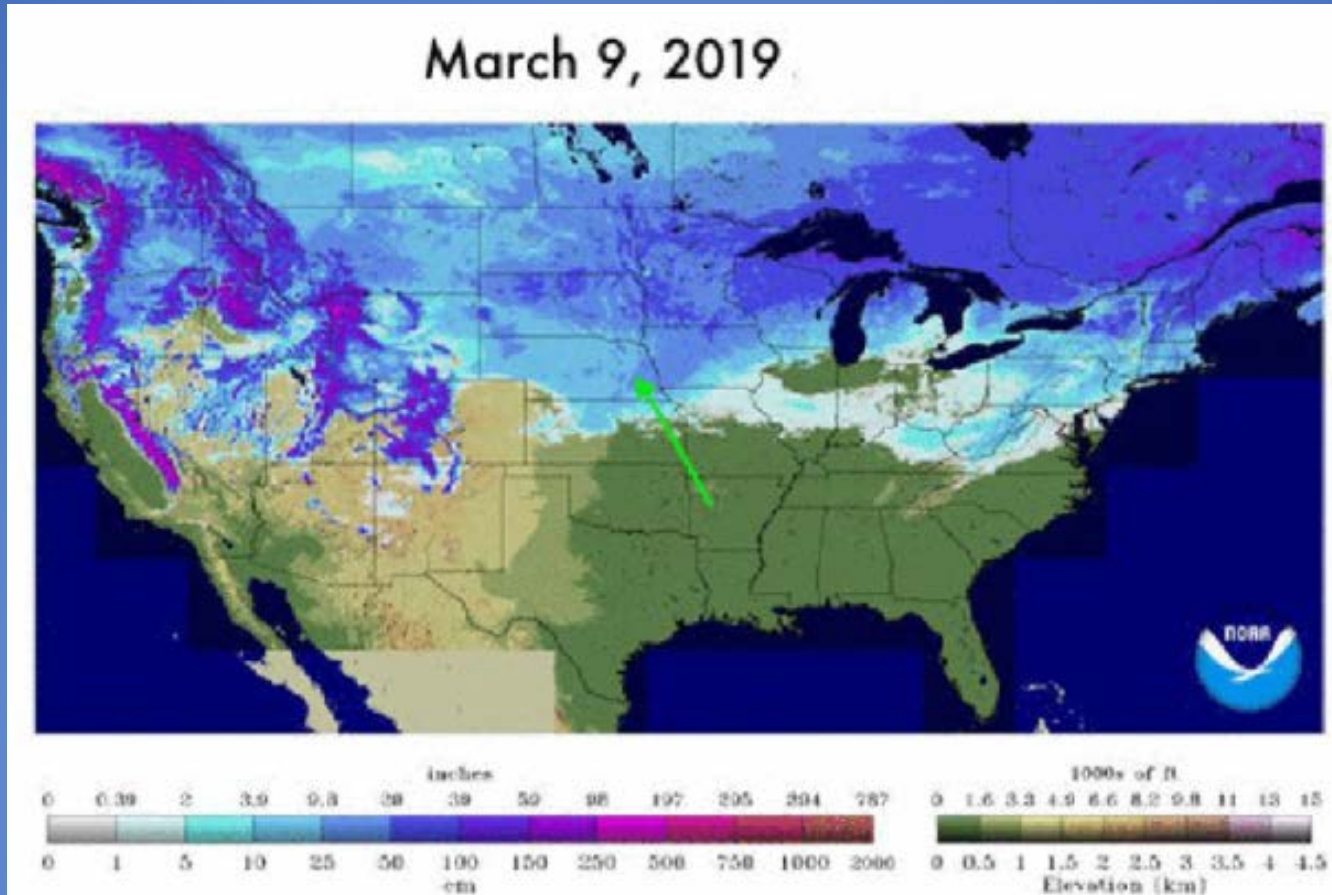
FEMA MOU/Bridge Financing

March 2019 Flood Response & Recovery

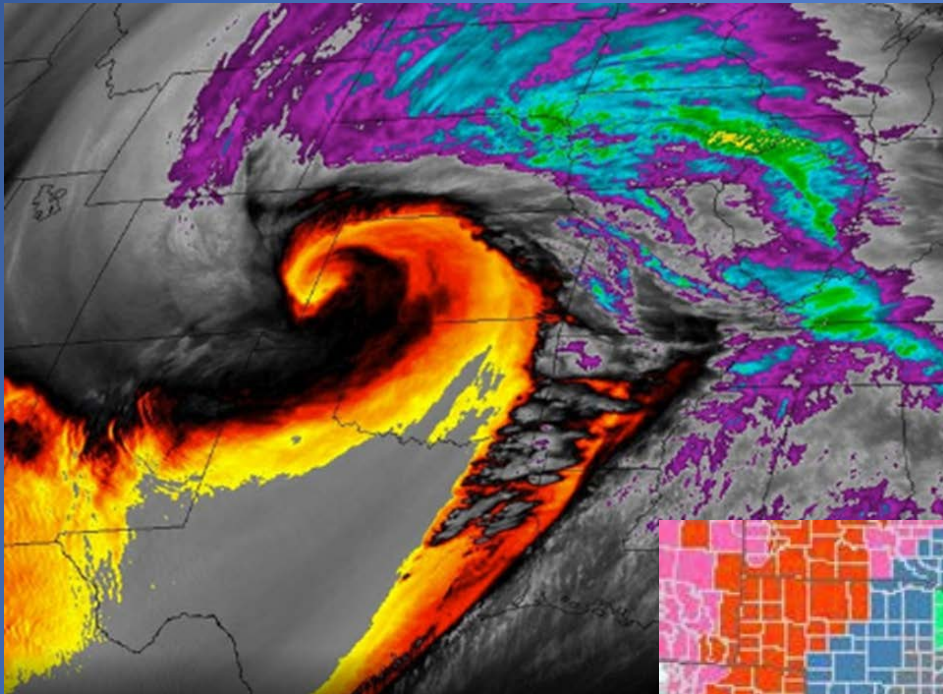
September 27, 2021

Conditions Leading Up to the Event

- Wet fall and winter. Measurable snowpack and rivers remained iced over.
- Long winter with temperatures below 0° into early March.
- At the time of the event there was ~18" of frost in the ground.



Winter Storm Ulmer Bomb Cyclone (bombogenesis)



3/13/19 Ulmer becomes a Bomb Cyclone (NASA)

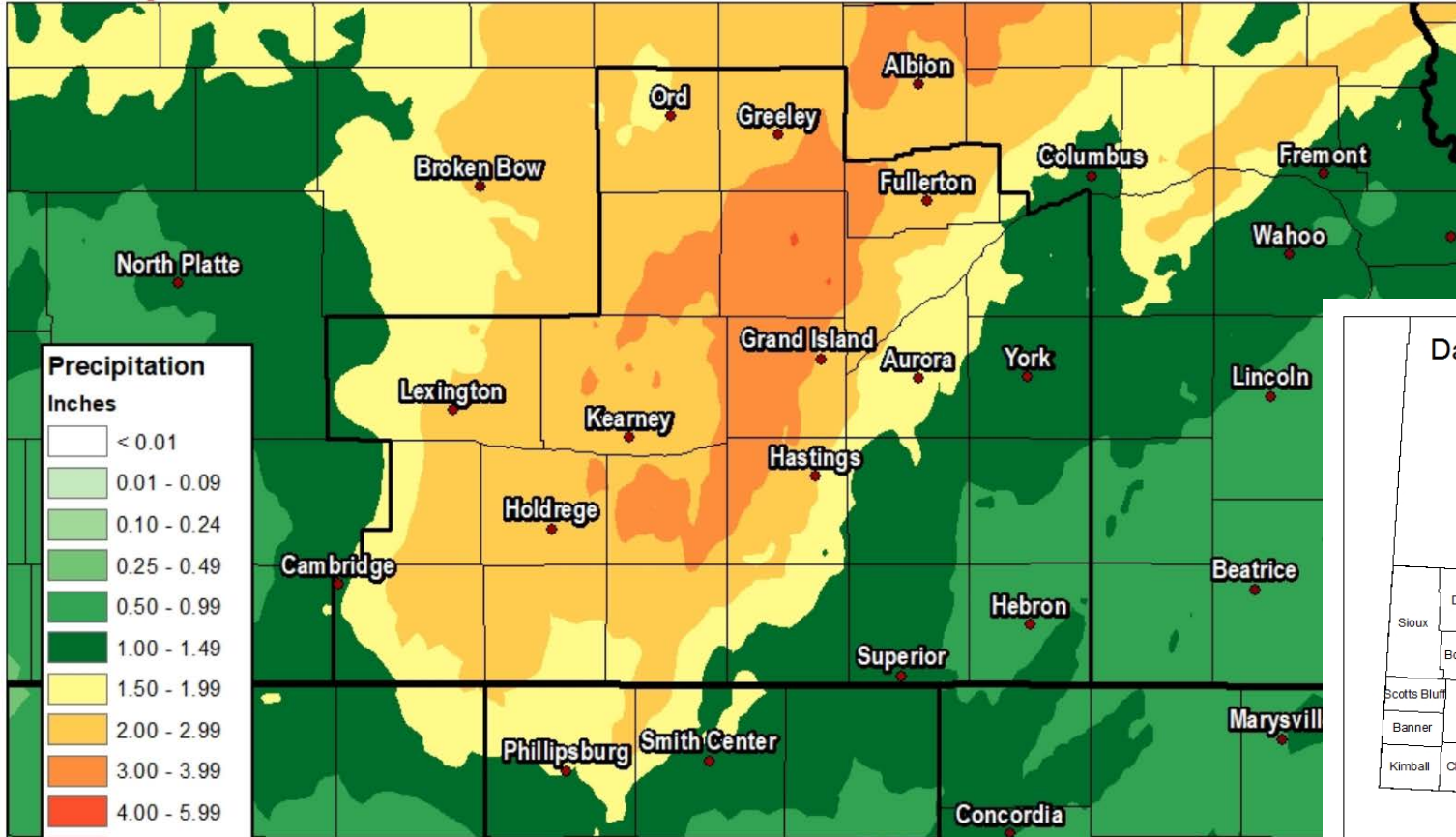


3/12/19 Winter Storm Ulmer (NWS)

- National Weather Service Map
 - Red = Blizzard Warning
 - Blue = Winter Storm
 - Grey = Dense Fog
 - Brown = Wind Warning
 - Green = Potential Flooding
 - Yellow = Tornado Watch
- Sharp drop atmospheric pressure (>24 millibars within 24 hours)
 - Dropped 34 millibars to 971 = Category 3 Hurricane
 - Results in extreme winds and heavy precipitation

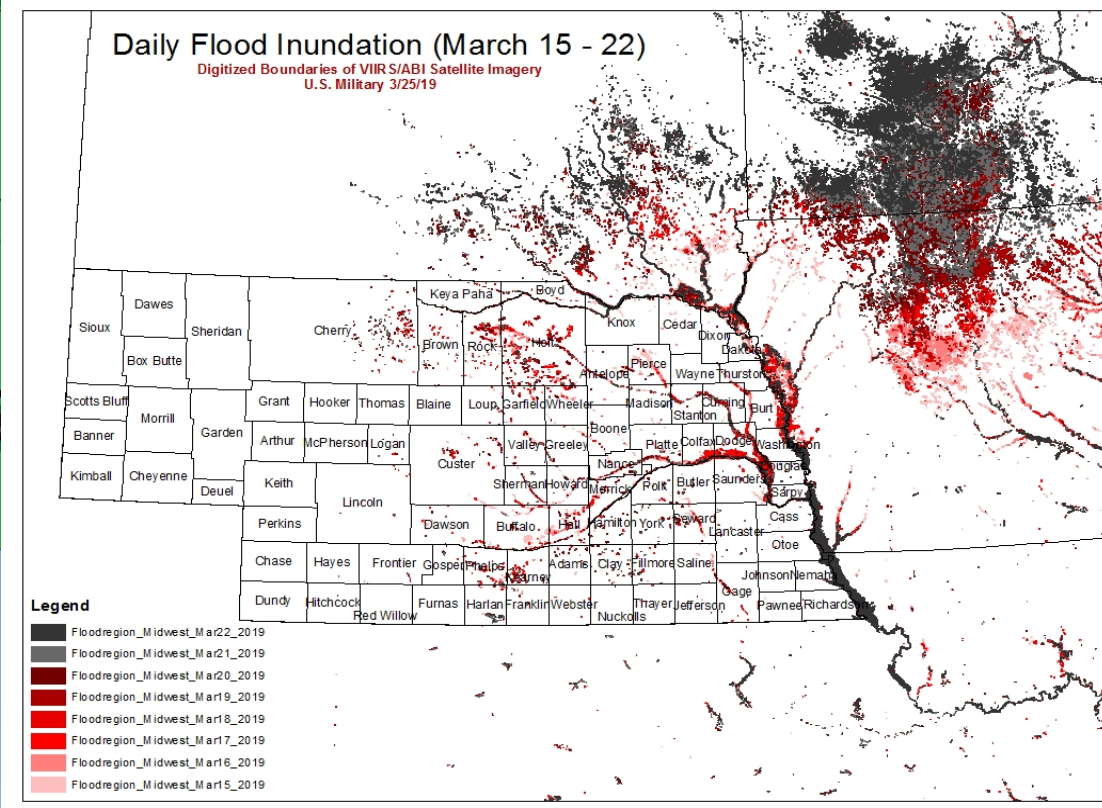
48 Hour Precipitation

March 14, 2019
As of 6 AM CST



Daily Flood Inundation (March 15 - 22)

Digitized Boundaries of VIIRS/ABI Satellite Imagery
U.S. Military 3/25/19





Platte River

Elkhorn
River

Omaha

Missouri River

Nasa, 2019

March, 2018



Platte River

Elkhorn River

Omaha

Missouri River

Nasa, 2019

March, 2019

Boyd County Rural Water District No. 2

Boyd County Rural Water District 2

450 rural customers

455 customers Village of Spencer - consecutive system

240 customers Village of Lynch - consecutive system

Transmission line between wells and distribution system gone





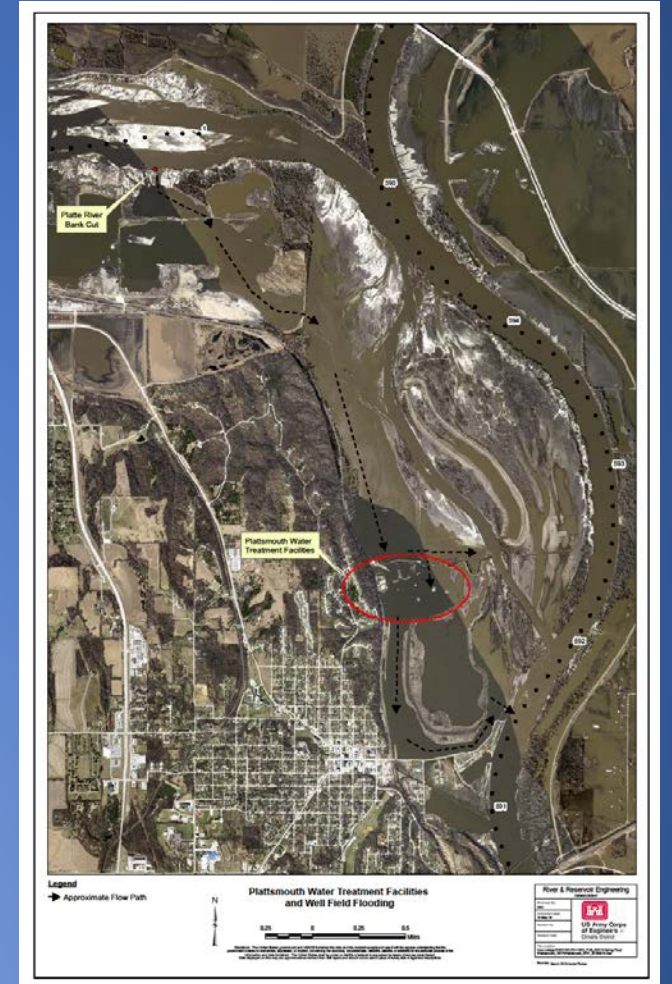
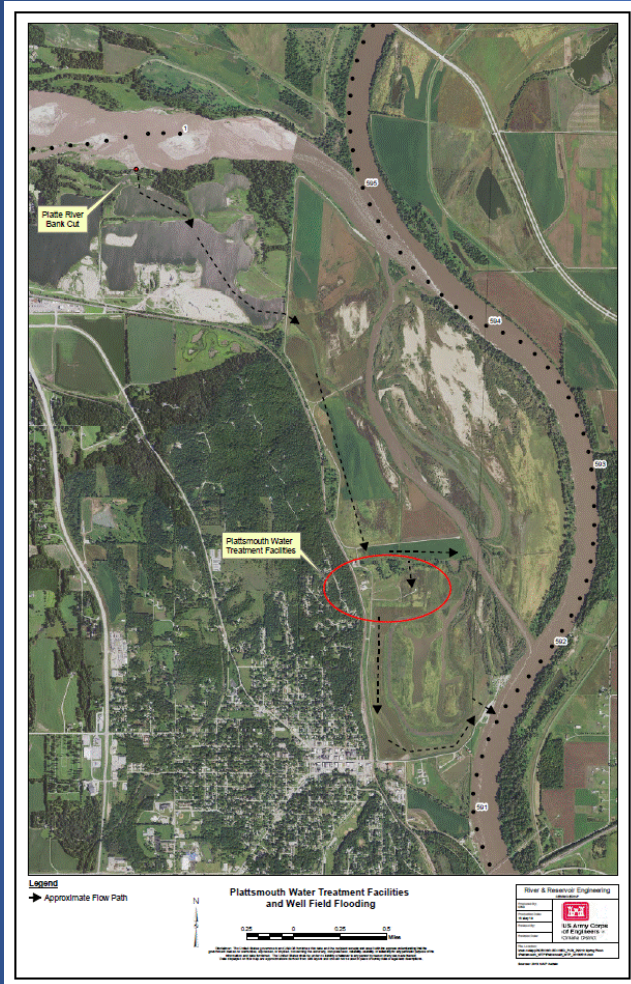
NPPD, 2019

Spencer Dam, on Niobrara River, before and after flood. Dam and dike overtopped by floodwaters and failed, rafted ice blocks battered the pump house. Most of Dike was completely washed away, only portions of concrete dam remain.



Next Major Impact - Plattsmouth

Platte River breach flowed into river bottom
Including wells & WTP



Water Treatment Plant Inundated

Plattsmouth serves over 6500 people and a consecutive water system



River Breach placed facilities in the “New” Channel

Plattsmouth well house and treatment facilities



Wastewater Treatment Facility



Last Major Stop - Peru



Peru serves over 1,200 people, including
Peru State College



After that Levee Failed



SRF – Engineering Response

- Review and permit the construction of all public water & wastewater infrastructure
- Project Stages of FEMA
 - Temporary, Permanent and Mitigation
- Priority given over all current workload
 - Both then and now, any assistance requested
- Director Waived all the “Red-Tape” requirements
 - Expedited project reviews
- Dedicated Staff to each Community
 - From event onset thru Permanent or Mitigation

SRF – Funding Response

- State Revolving Fund Section – Financial assistance for public water (DWSRF) and wastewater (CWSRF) projects
- EPA/FEMA Memorandum of Understanding
 - Streamlines coordination between FEMA and the SRFs to enable funding to support essential infrastructure projects to be made available as quickly as possible
- Nebraska's SRF
 - 0% Financing, Maximum year terms
 - Balloon repayment structuring (max. \$2,000)
 - Towns use the SRFs as a cash flow means while getting their infrastructure back

What it Takes

- EPA-FEMA MOU gave us permission – not direction
- Nebraska Emergency Management Agency
 - Prior Participation in past State workshops
 - Learn their process – Learn FEMA's process
 - Public Assistance Program and Policy Guide (PAPPG)*
- Adjust to everyone else
 - SRF requirements are not being waived under the MOU
 - No Lead Time – Program staff must work with Community Leaders, Consulting Engineers, Accountants, Lawyers and Contractors – All at the same time

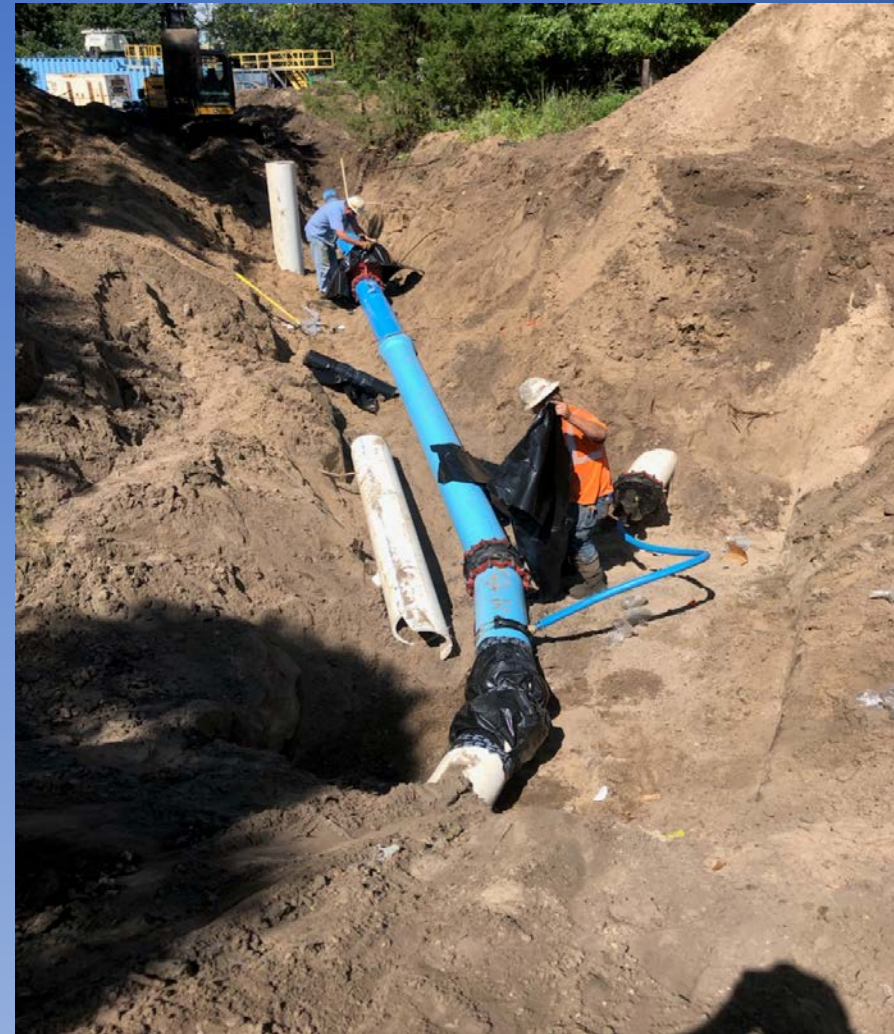
Peru – Temporary Water Treatment Plant

FEMA – Emergency Protective Measure



Boyd County RWD – Transmission Main

FEMA Permanent – Replacement of Existing w/Upgrades



Why? – The Easy Part

➤ Governor Ricketts Directed Us

- March 12, 2019 – Proclamation declaring State of Emergency
All State Agencies to cooperate and support
- Our Director was at NEMA from the start – told us to proceed

➤ NEMA and FEMA Deserved the Help

- May 2019 Event - Kearney – Grand Island
- Disaster not just Utilities
Public and Private to Commercial and Residential

Why? – The Hard Part

- The FEMA Process will not change
 - PPAPG is 277 pages that will be followed!
 - From the Start – Document, Document, Document
 - FEMA personnel will change – 11-Months on each Disaster
- SRFs can help
 - Community Assistance at a different level
 - De-obligation of FEMA funds is not just a utility problem
- \$40M in Bridge Financing need for less than 10,000 people
 - Next phase – Permanent projects about to start.

Plattsmouth – Out of the River Bottom

FEMA Mitigation – Interconnection w/ PWS & WWTF south of town

Figure 3
Proposed Action/Alternative 2
Water Supply Relocation Project
Plattsmouth, Nebraska

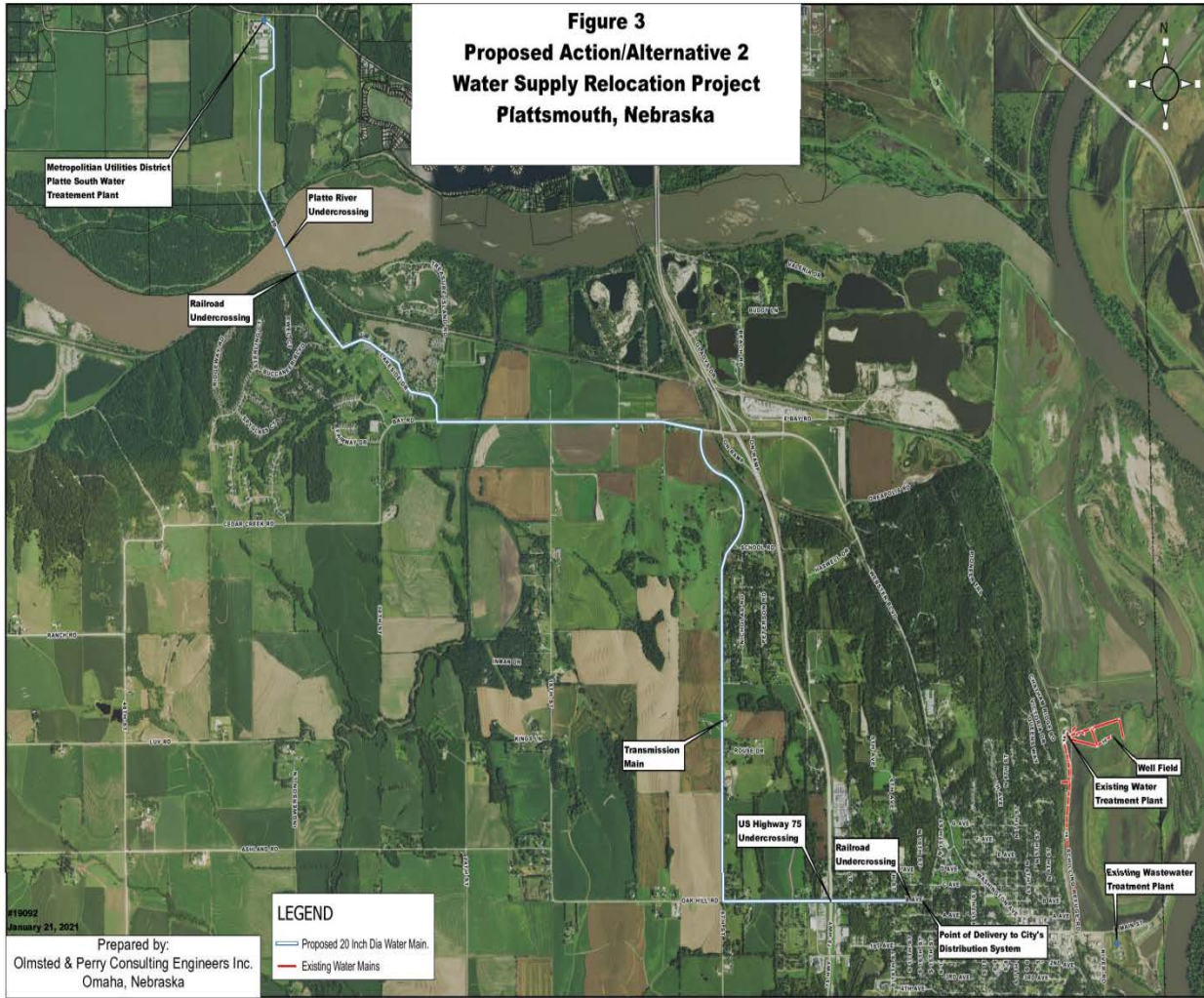
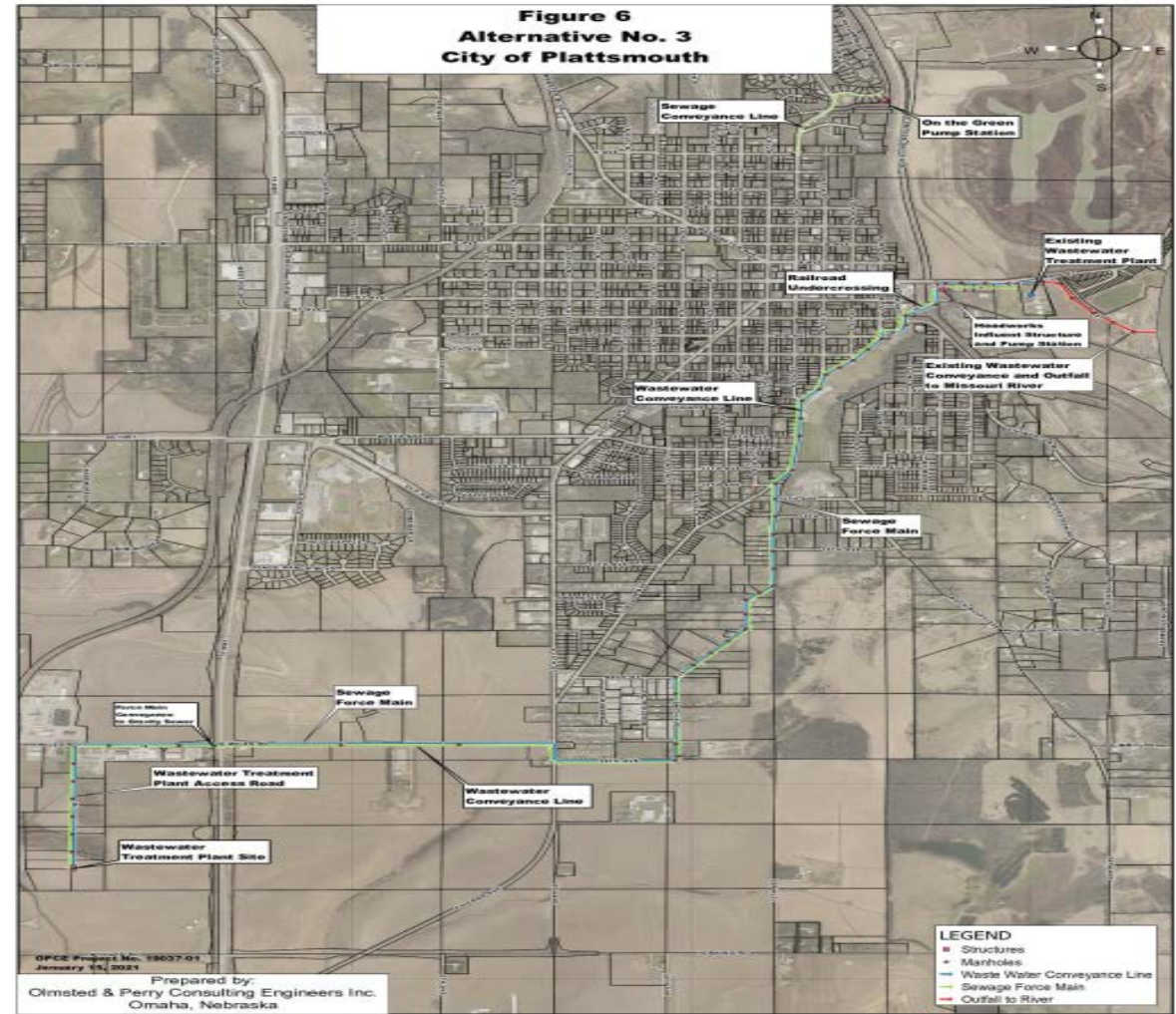
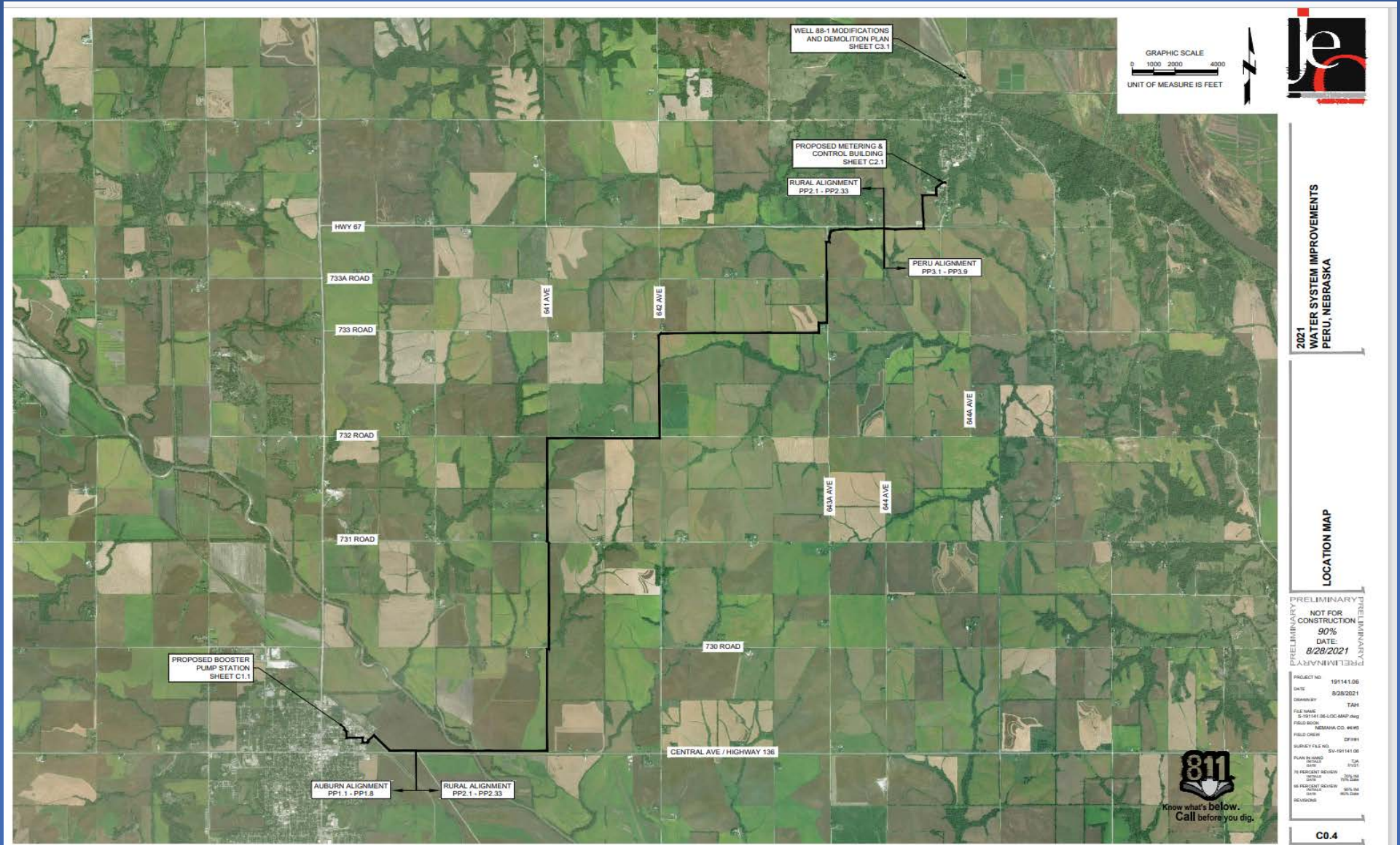


Figure 6
Alternative No. 3
City of Plattsmouth



Peru – Interconnection with PWS



2021
WATER SYSTEM IMPROVEMENTS
PERU, NEBRASKA

LOCATION MAP

PRELIMINARY
NOT FOR
CONSTRUCTION
90%
DATE: 8/28/2021
PRELIMINARY

PROJECT NO: 191141.06
DATE: 8/28/2021
DRAWN BY: TAB
FILE NAME: S-191141.06-LOC-MAP.AWG
FIELD BOOK: NEBRASKA CO. 4695
FIELD CDR: DF881
SURVEY FILE NO: SV-191141.06
PLAN PLotted: 8/28/2021
SCALE: AS SHOWN
PER PERCENT REVIEW: 100%
DATE: 8/28/2021
BY PERCENT REVIEW: 100%
DATE: 8/28/2021
BY PERCENT REVIEW: 100%
DATE: 8/28/2021



C0.4

Next Steps

- With the EPA-FEMA MOU we established a better working relationship with our counterparts at NEMA
 - A never ending Thank You to NEMA – Most importantly Molly Bargmann!
- New Goals with NEMA
 - Now the SRF needs to participate more actively
 - Not what we can do, but here is what we will do*
- Lesson Learned
 - There was a major 2011 Flood in Nebraska – no impacts to utilities
 - My advice – do not end up being me. Prepare rather than Respond