WATERTOWN STUDY UPDATE

Watertown Flood Risk Management
General Investigation Study

10JUN2024

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US Army Corps of Engineers®

CITY OF WATERTOWN SOUTH DAKOTA

INITIAL ENGAGEMENTS

May 2022 | Meeting with Watertown City Council

- Met with city officials and council to kick off recently authorized FRM study
- Council requested that USACE study an **implementable** alternative

October 2022 | Landowner Engagement & January 2023 | Public Scoping Meeting

- Feedback from landowners indicated strong opposition to alternatives north of Watertown

Themes of Common Comments & Questions from Public

Scope

- How was the study boundary determined?
- Pothole lakes to the north should also be included.

North of Watertown & Mahoney Creek Dam

- Strong feelings of opposition for any alternatives in this area.
- Upstream residents have expressed this project will likely not benefit them.

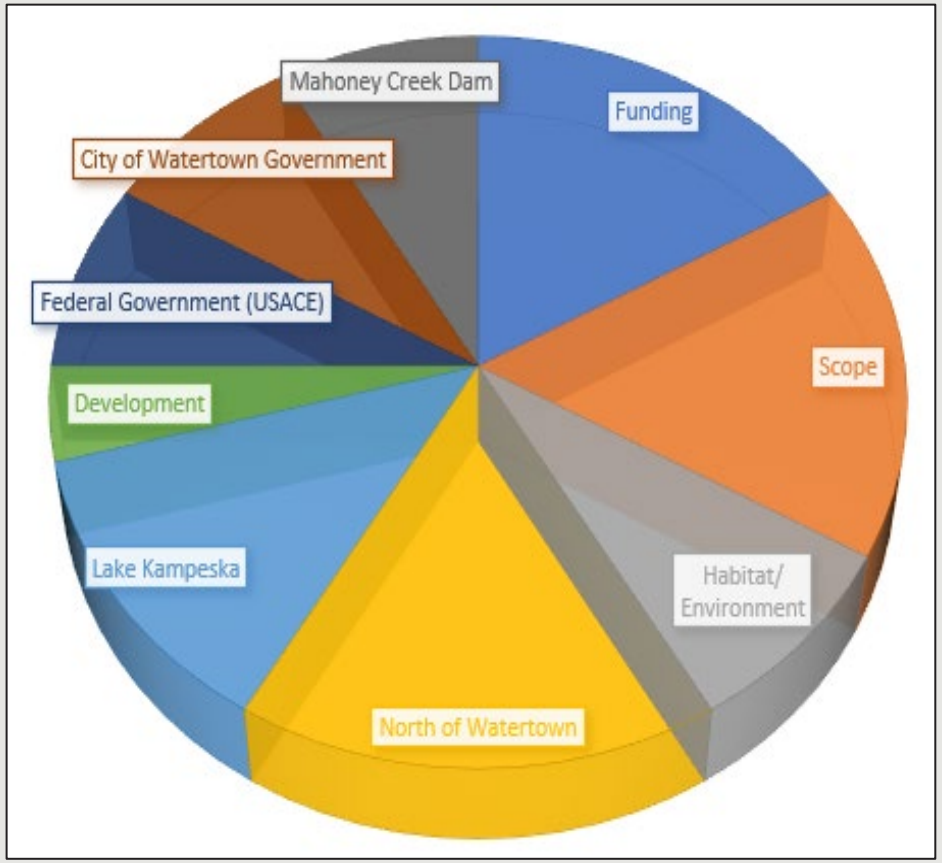
Floodplain Development & City of Watertown Government

- Concerns regarding allowing development within the floodplain
- Much of the development at risk is historic / pre-dates the FEMA floodplain.

Funding

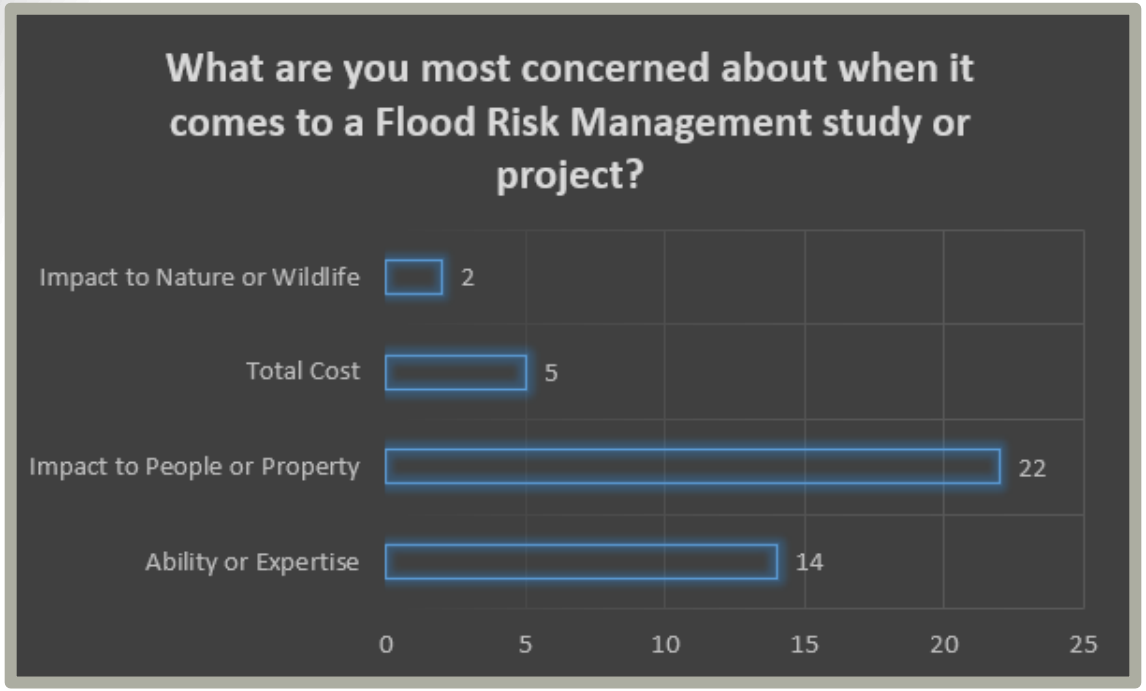
- What is the cost of this study and a potential project?
- How will Watertown will pay for said project?

Public Feedback



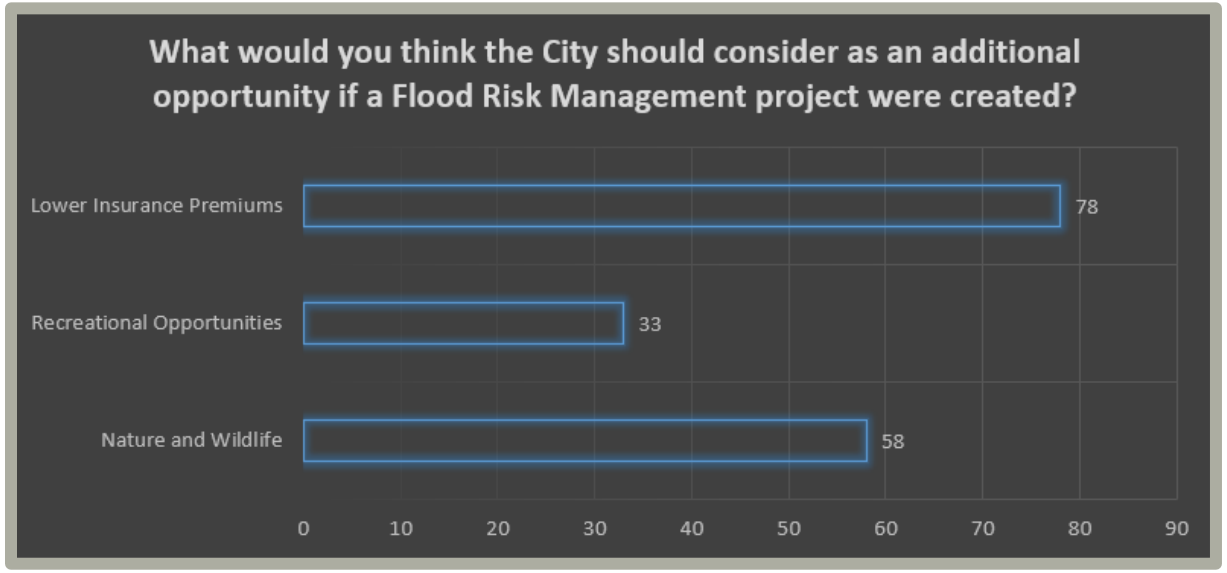
MAILED SURVEY FEEDBACK

Additional attempts were made to collect input from community members under-represented during formal public meetings through a mailed-survey in late 2023.



- 46% of respondents indicated they are at least **somewhat concerned** with a flood risk management study or project (32% of respondents felt neutral)
- Types of concerns reported are characterized above

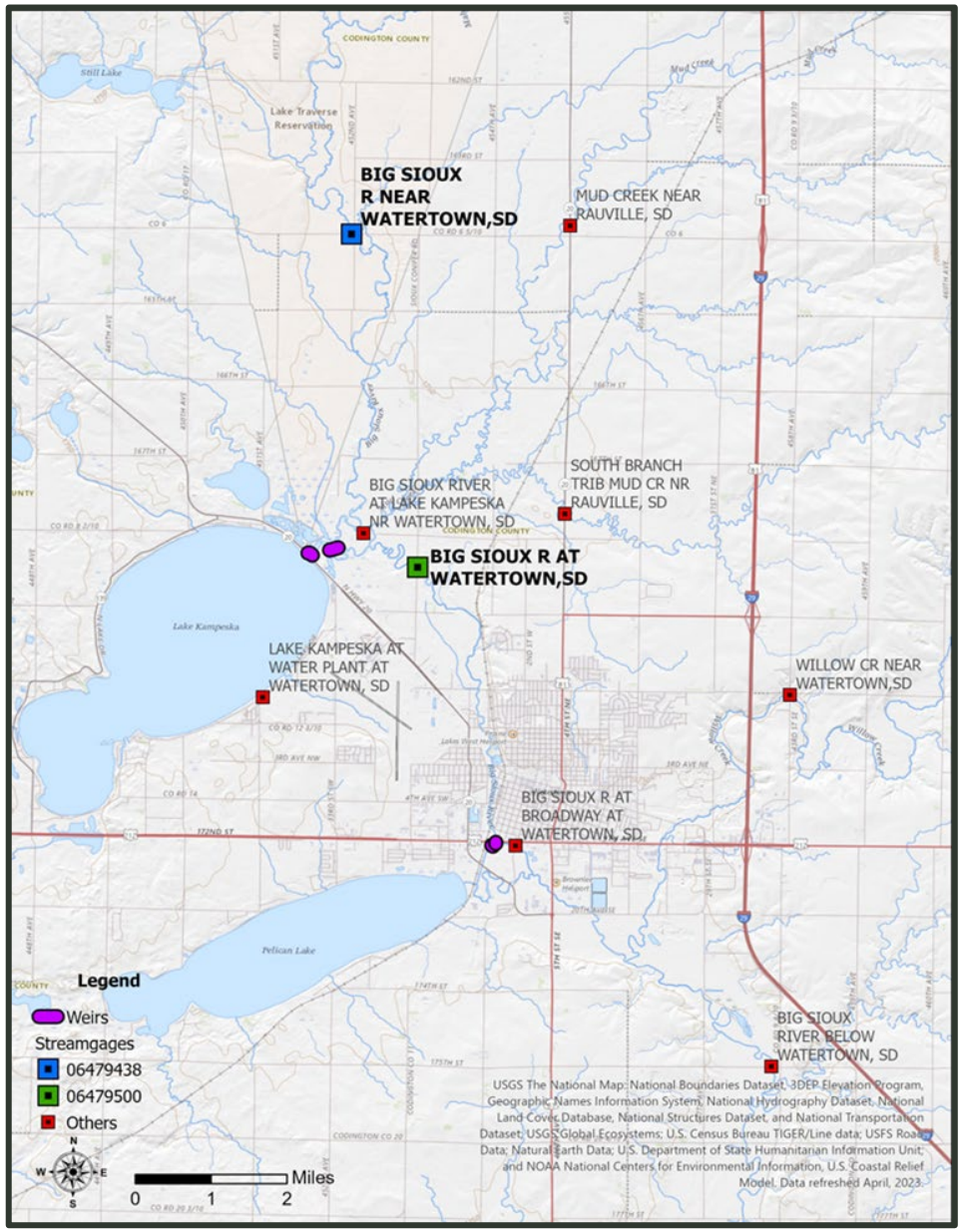
- The most important aspect of this study for respondents was the potential to **lower insurance premiums**
- **Nature and Wildlife** was also an important consideration for a potential project.



HYDROLOGIC ANALYSIS – EXISTING CONDITIONS

Hydrology Summary

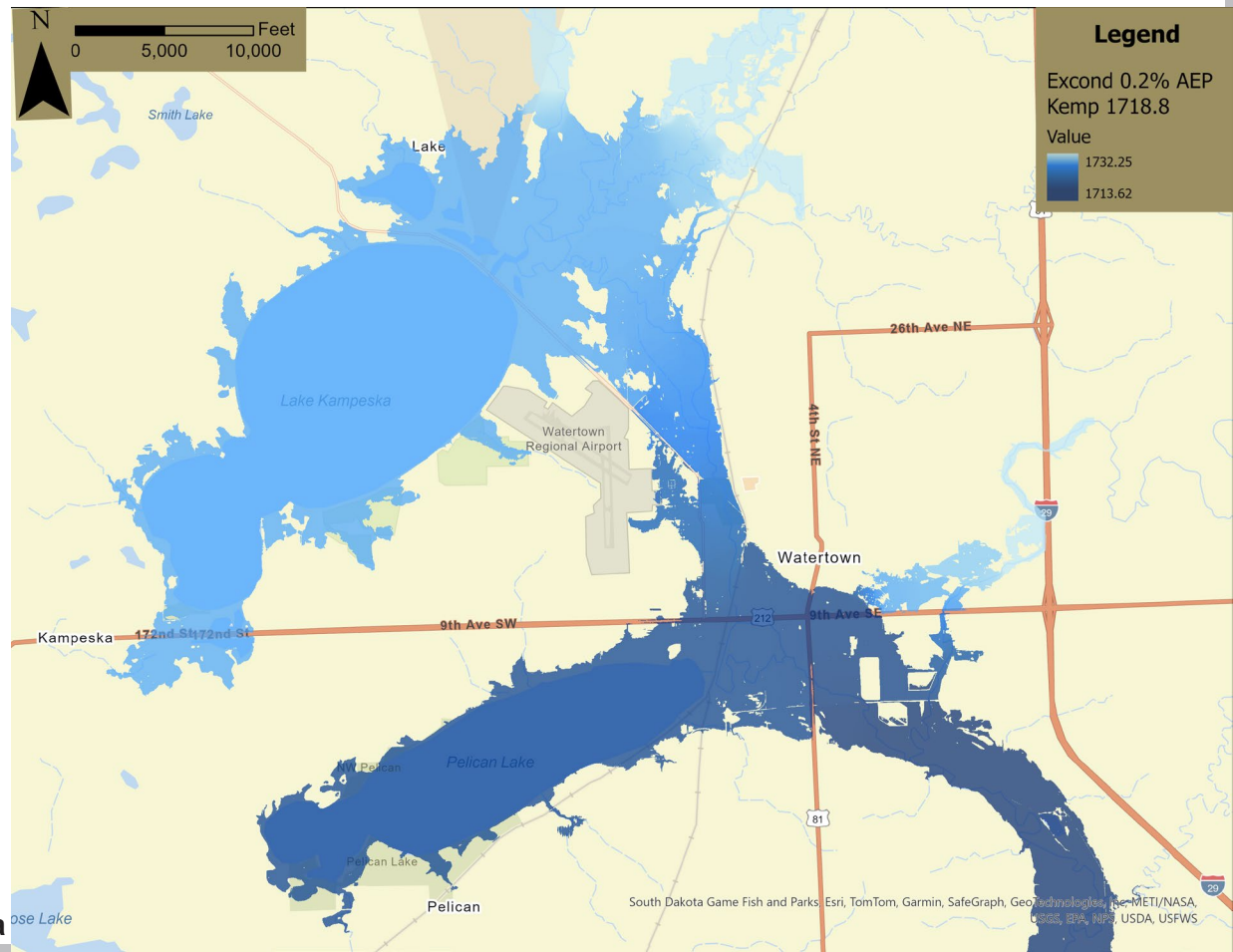
- Both DANR and RESPEC were contacted to determine whether their model could be used in the current study. RESPEC did not provide the model.
- USACE requires a high resolution/level of detail in modeling for economic and alternative design.
- USACE began developing a new, updated model that utilizes the current terrain and incorporates updated hydrology and gage data through 2022.
- The model peaks for the USACE and RESPEC models compare well with each other showing that both models have confidence in predicting the flood events.



Streamgages near Watertown

ECONOMIC ANALYSIS – EXISTING CONDITIONS

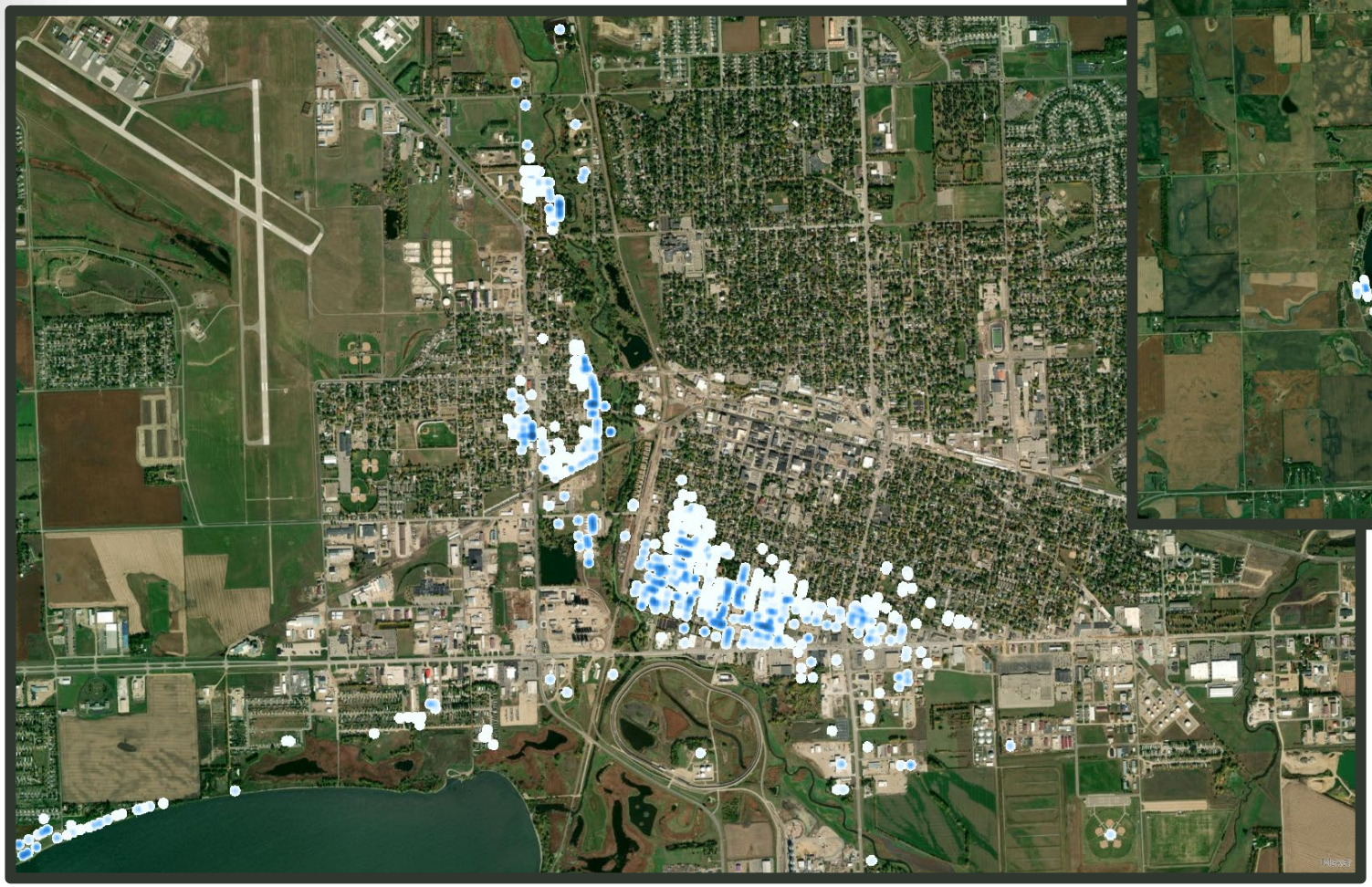
- To compute expected annual damage (EAD) values, the economics model requires the following data: structure inventory data, H&H data, depth damage functions, risk and uncertainty parameters.
- A total of 7,931 structures were included in the final structure inventory with an estimated value of just over $1.9 billion.
- The total expected annual damages are estimated to be approximately $3 million.
- Residential composes the largest proportion of the damages across all of the damage categories (Industrial, Automobile, Commercial, Public, Emergency Cleanup)



RIGHT: The modeled 0.002 AEP floodplain for the study area

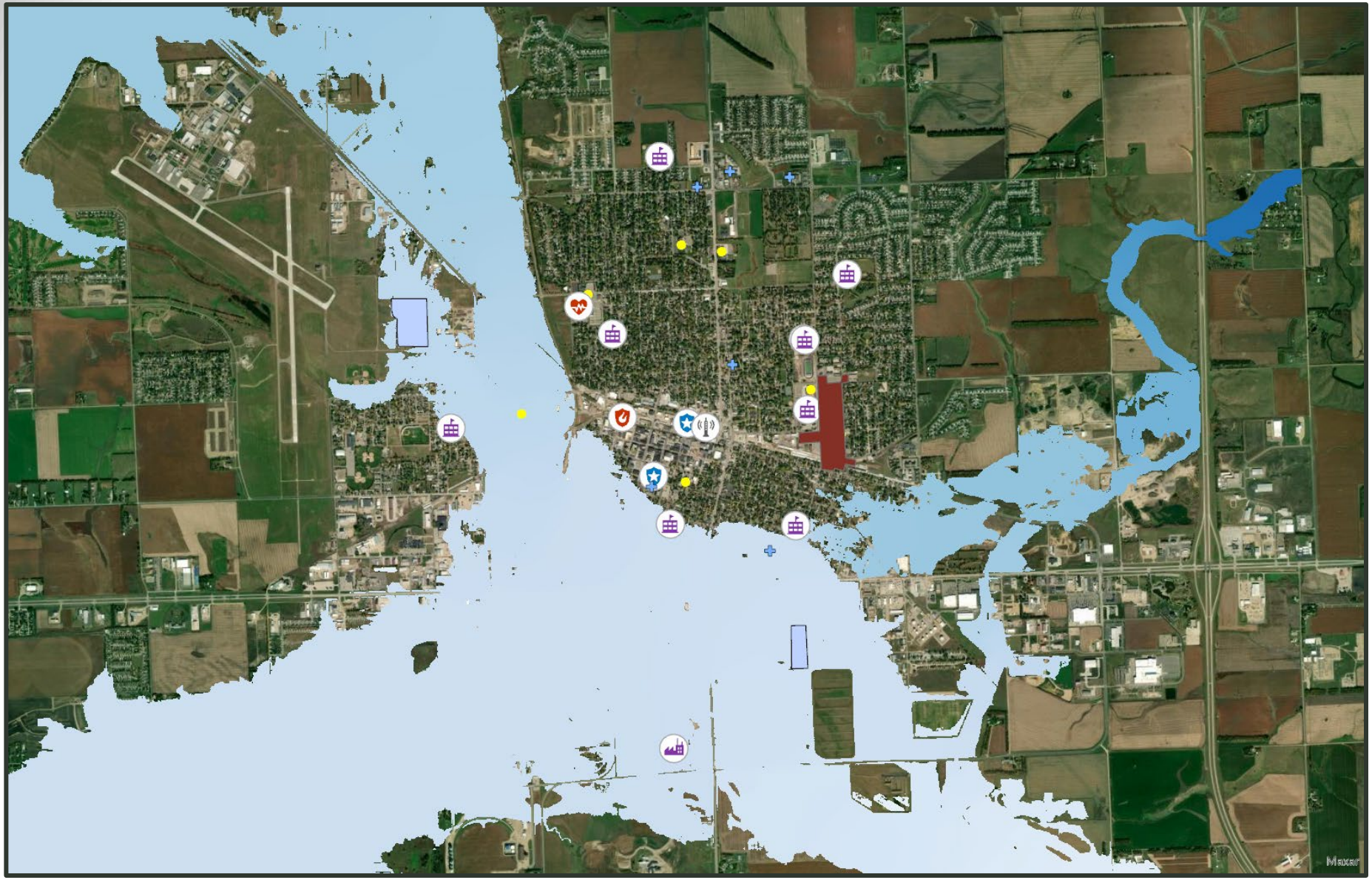
ECONOMIC ANALYSIS – EXISTING CONDITIONS

BELOW: Heat Map showing the level of damages by depth at the 1% event for below Lake Kampeska in Watertown.



ABOVE: Heat Map showing the level of damages by depth at the 1% event for Lake Kampeska.

ECONOMIC ANALYSIS – EXISTING CONDITIONS



This figure shows the critical facilities for the City compared to the 0.2% (500yr event).

While only 3 structures are inundated, several road crossings are also inundated and could cause transportation delays.

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PRELIMINARY - FINAL ARRAY OF ALTERNATIVES

Alternative	Description
1	No Action
6	Lowering Lake Kampeska to Elev 1718 + Levee Right/Left Banks with no closures
7	Lowering Lake Kampeska to Elev 1718 + Levee Left Bank Only
8	Lowering Lake Kampeska to Elev 1718 + Channel Widening + Levee Left Bank Only
9	Lowering Lake Kampeska to Elev 1718 + Channel Widening + Levee Right/Left Banks
10	Lowering Lake Kampeska to Elev 1718 + Channel Widening + Levee Right/Left Banks w/ 4ft Closure Structures
11a	Lowering Lake Kampeska to Elev 1718 + Levee Right/Left Banks w/ 4ft Closure Structures
11b	Lowering Lake Kampeska to Elev 1718 + Levee Right/Left Banks 1%
11c	Lowering Lake Kampeska to Elev 1718 + Levee Right/Left Banks 1% +1 ft
13	Lowering Lake Kampeska to Elev 1718

SCHEDULE

Schedule	Next Milestones
July 8, 2024	Tentatively Selected Plan
September 9, 2024	Release Draft Report for Public and Agency Review
January to May 2025	Further Optimization and Refinement of Selected Alternative and Risk Assessment
June 18, 2025	USACE and Sponsor finalize recommended plan
July 14, 2025	USACE District Releases Final Report for Review
November 5, 2025	USACE District Submits Final Report
May 5, 2026	USACE Headquarters Approves Project