

# WATERTOWN FLOOD RISK MANAGEMENT GENERAL INVESTIGATION

*PUBLIC SCOPING MEETING*

Date: January 31, 2023

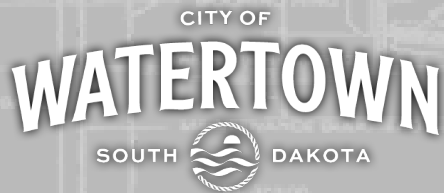
Sarah Miller

USACE Project Manager

Omaha District



US Army Corps  
of Engineers®





# INTRODUCTIONS



## USACE, Omaha District:

- **Drew Minert**– Branch Chief, Planning
- **Greg Johnson**– Section Chief, Plan Formulation
- **Sarah Miller**– Project Manager/Lead Planner
- **Allison Greathouse** – Outreach Specialist
- **Rebecca Podkowka** – Section Chief, Environmental and Cultural Resources
- **Adam Nebel** – Environmental Resources Specialist
- **Ryan Mathison** – Archaeologist
- **Justin Brewer** – Section Chief, Economist
- **Jeff Mihulka** – Lead Engineer
- **Tucker Richey** – Geotechnical Engineer

## Study Partner: City of Watertown

- **Amanda Mack** – City Manager
- **Heath VonEye**– Public Works Director/ City Engineer
- **Justin Petersen** – Assistant City Engineer
- **Wyatt Ewing** – Engineer
- **Brandi Hanten** - Watertown Community Development Manager

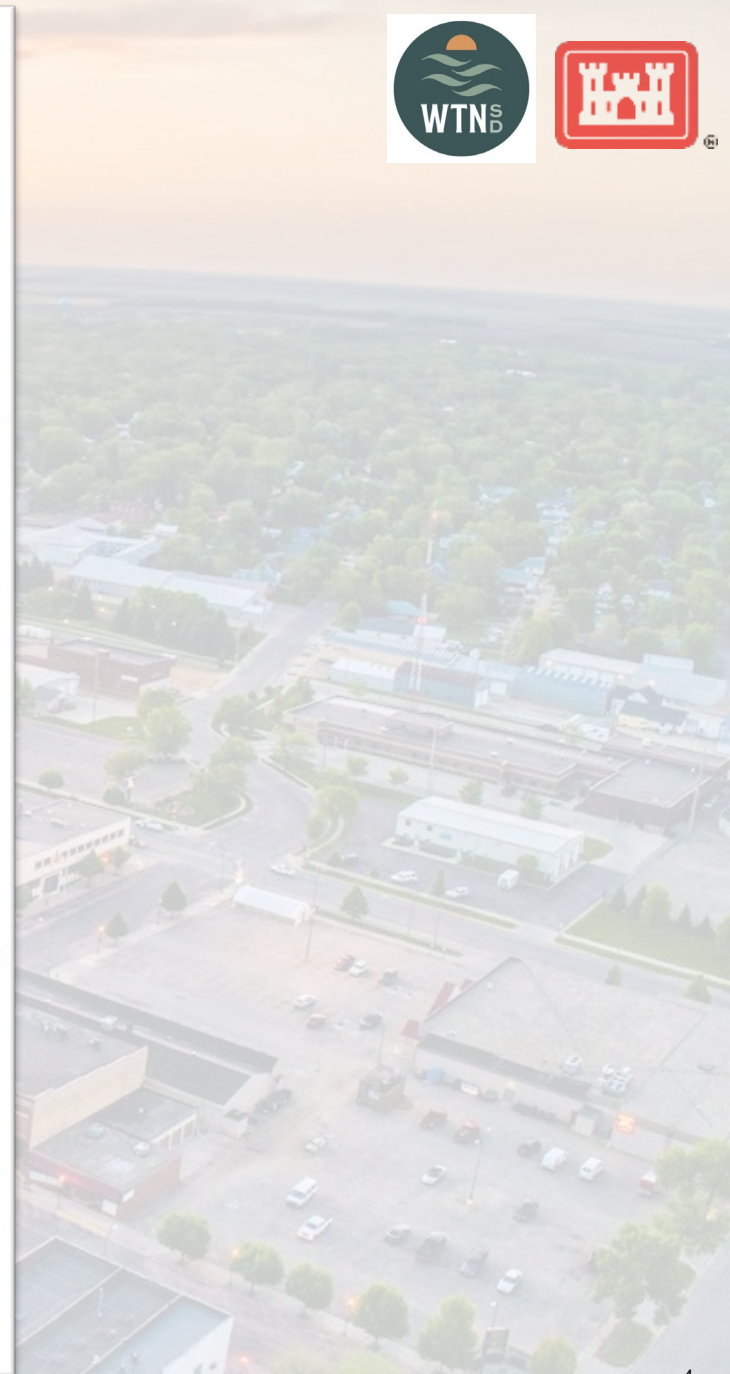
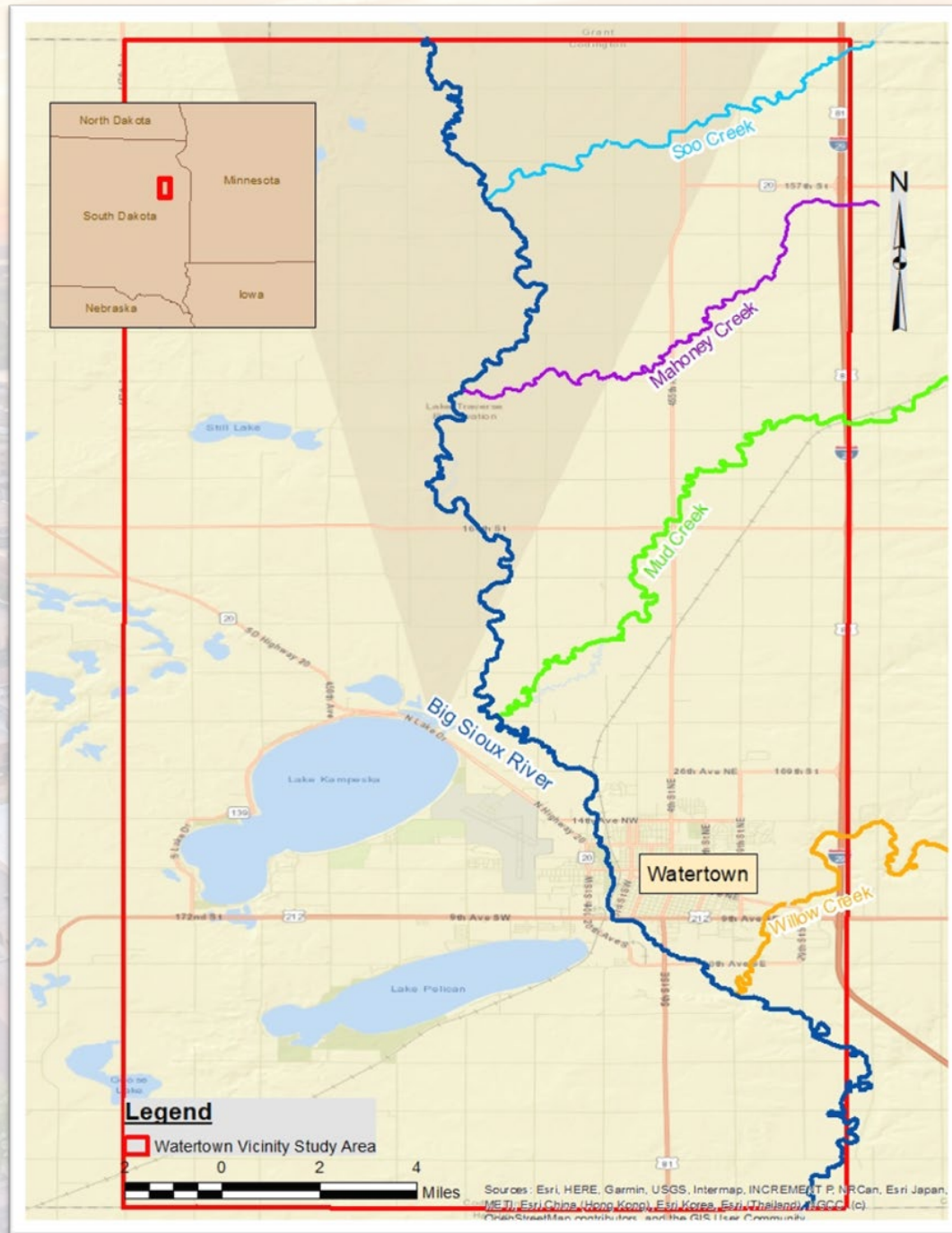


# AGENDA

- ✓ Introductions
- ✓ USACE Process
- ✓ Background/Previous Studies
- ✓ Problems, Objectives, Opportunities, Constraints, Considerations
- ✓ Potential Alternatives
- ✓ Environmental & Cultural Resource Considerations
- ✓ Questions/Comments



\*Photos from 1997 flood of record



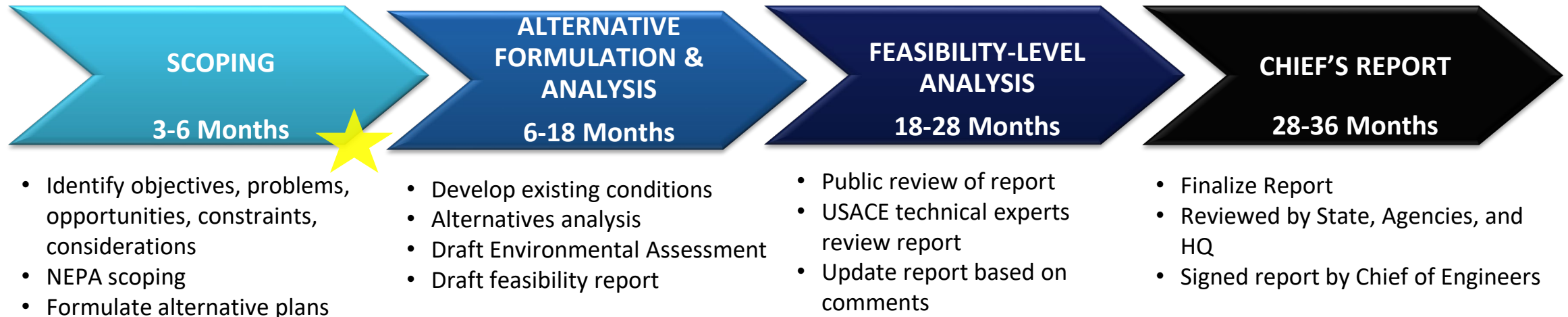


# USACE PROCESS



## General Investigations

- **Summary:** General Investigation (GI) studies refer to USACE assists a community in addressing large-scale, complex water resource problems.
- **Authority:** Section 201(a)(62) WRDA 2022 Big Sioux River, South Dakota - Project for flood risk management, City of Watertown and vicinity.
- **Timeline:** Officially began **August 19, 2022**
- **Cost Sharing:** the study is cost shared 50/50

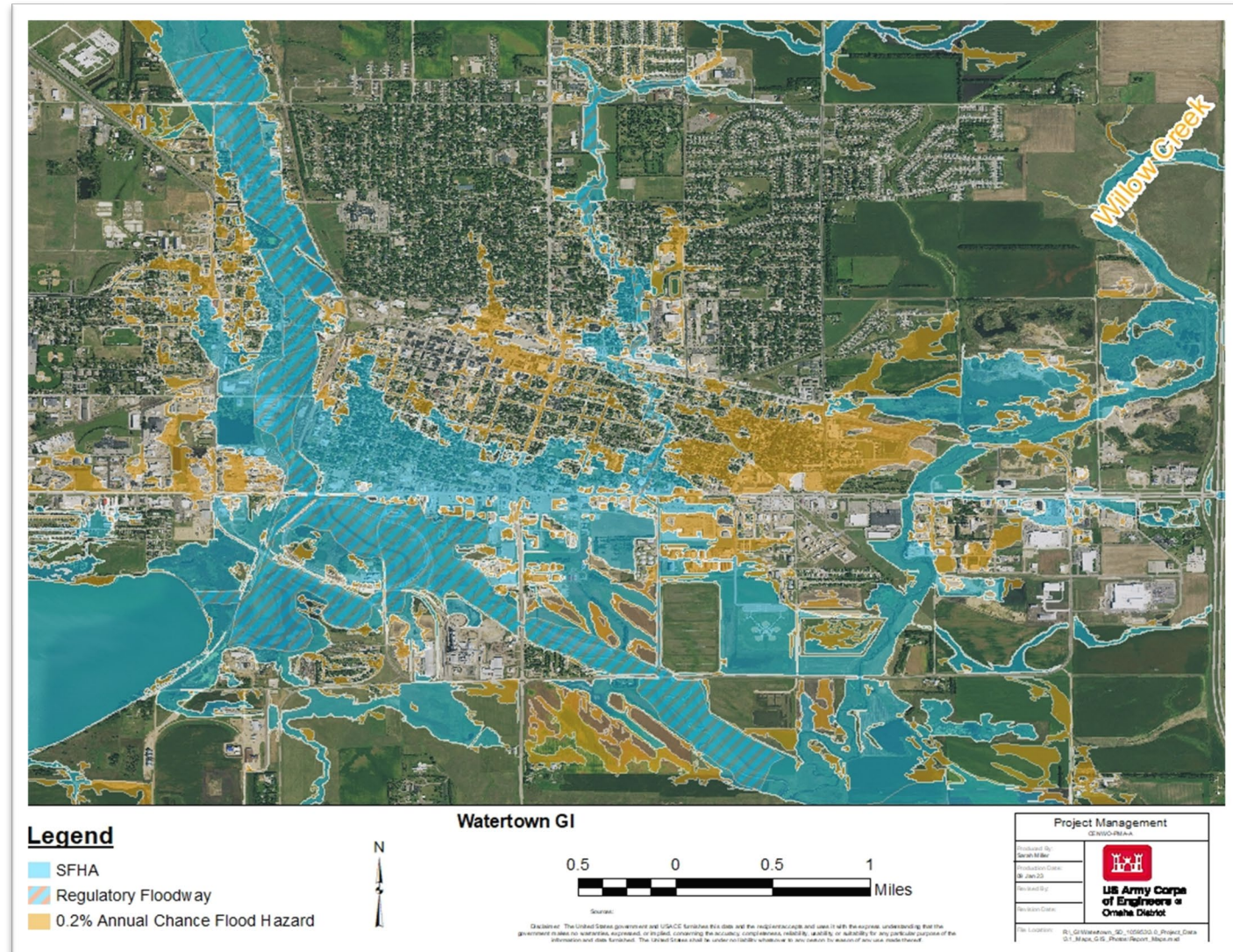




# BACKGROUND



- Watertown, SD has experienced 11 major floods since 1943.
- Watertown's susceptibility to flood damages has increased over time.
- Current FEMA floodplain maps (2009) expanded the area in the 1% and 0.2% annual exceedance floodplain.
- Since 1978 \$5.7M in homeowner insurance claims have been settled.
- There are approximately 4323 structures with a valuation of \$3.5 billion at risk within the study area.

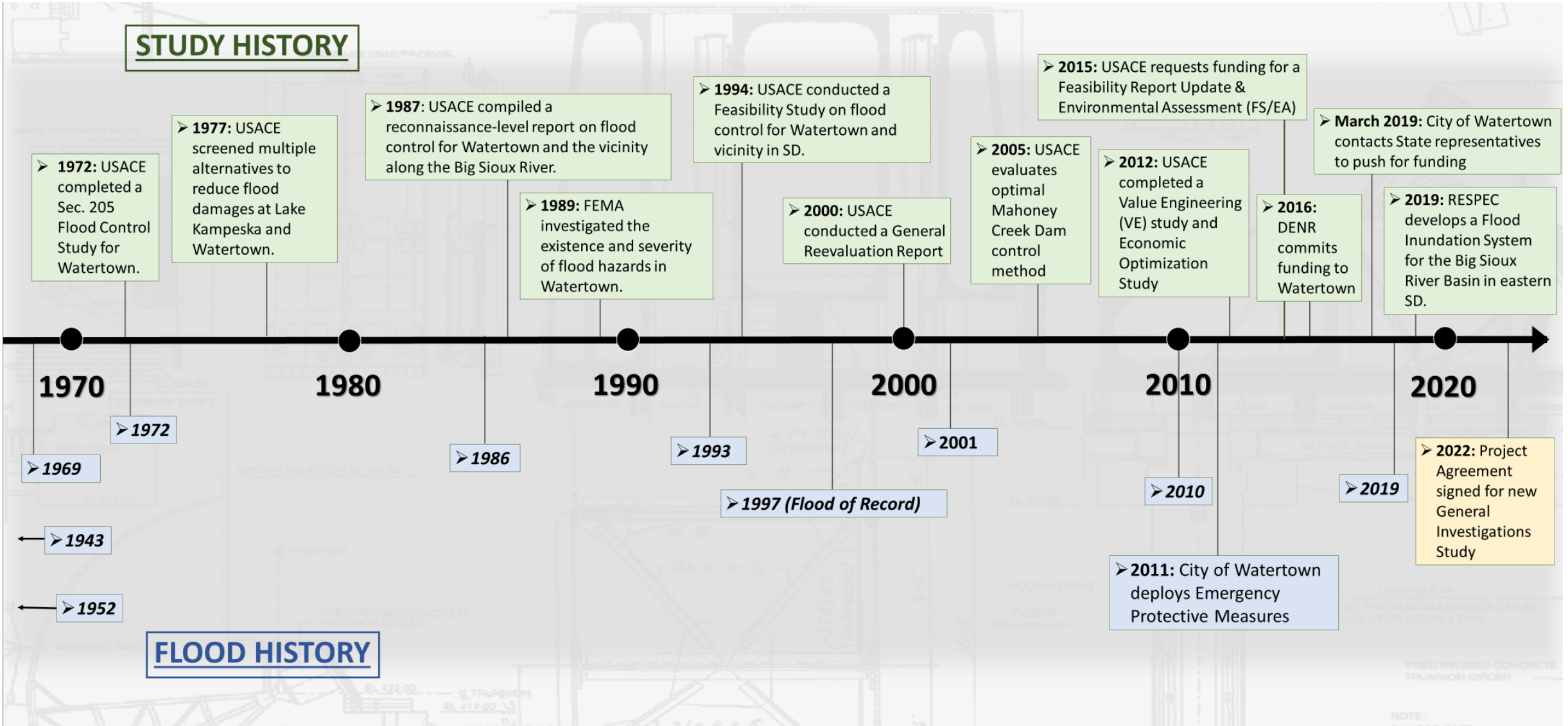




# STUDY AND FLOOD HISTORY IN WATERTOWN



## STUDY HISTORY



## FLOOD HISTORY



# PROBLEMS AND OPPORTUNITIES



## Problems:

- Recurring flooding presents risks to property and infrastructure within the city of Watertown and its vicinity.
- Frequency of flood fighting and cleanup costs.
- Safety risks associated with flooding, road closures, and water and wastewater infrastructure.
- Impacts to the wastewater treatment plant and risks to the city's permit and releasing untreated water into river.
- The large floodplain has an impact on property values and reinvestment opportunities.

## Opportunities:

- Reducing stress of flood fighting
- Accrue benefits downstream depending on alternatives
- Improve/Increase natural habitat
- Lower the number of houses that require flood insurance
- Improvement to the CRS rating for the community (currently 7)
- Increase outdoor recreation
- Improve water quality within lakes/river.



Example of Flood Fighting in 2019



# OBJECTIVES, CONSTRAINTS, & CONSIDERATIONS



## Objectives:

- Reduce the frequency and severity of flooding within the vicinity of Watertown.
- Reduce health and life safety impacts from flooding within the vicinity of Watertown.
- Reduce cost, frequency, and stress of emergency response efforts.
- Increase resiliency of infrastructure to flooding within the vicinity of Watertown.
- Reduce floodplain requirements within the vicinity of Watertown.

## Constraints:

- Airport and associated wildlife regulations

## Considerations:

- Tribal lands and concerns
- A defined drainage system doesn't exist on the west side of the BSR.
- Railroad crossings
- Zebra mussels in Lake Kampeska
- Agricultural drain tiling
- Debris clogging bridges and bottlenecks
- Political Implications dependent on certain alternatives.



Example of Flood Fighting in 1997





# ALTERNATIVES CONSIDERED

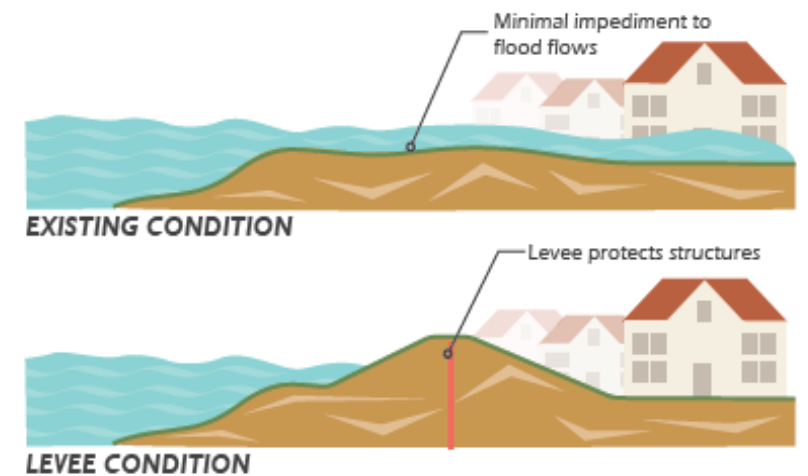


## Array of Alternatives Considered:

- No Action Alternative
- Levee Systems/Floodwall
- Channel Widening
- Diversion Channel
- Underground Conveyance
- Creating wetland habitat to retain runoff
- Reservoir
- Dry Dam(s)
- Gate at inlet of lakes
- Nonstructural measure / floodproofing non-residential buildings



## Potential Levee Alternative



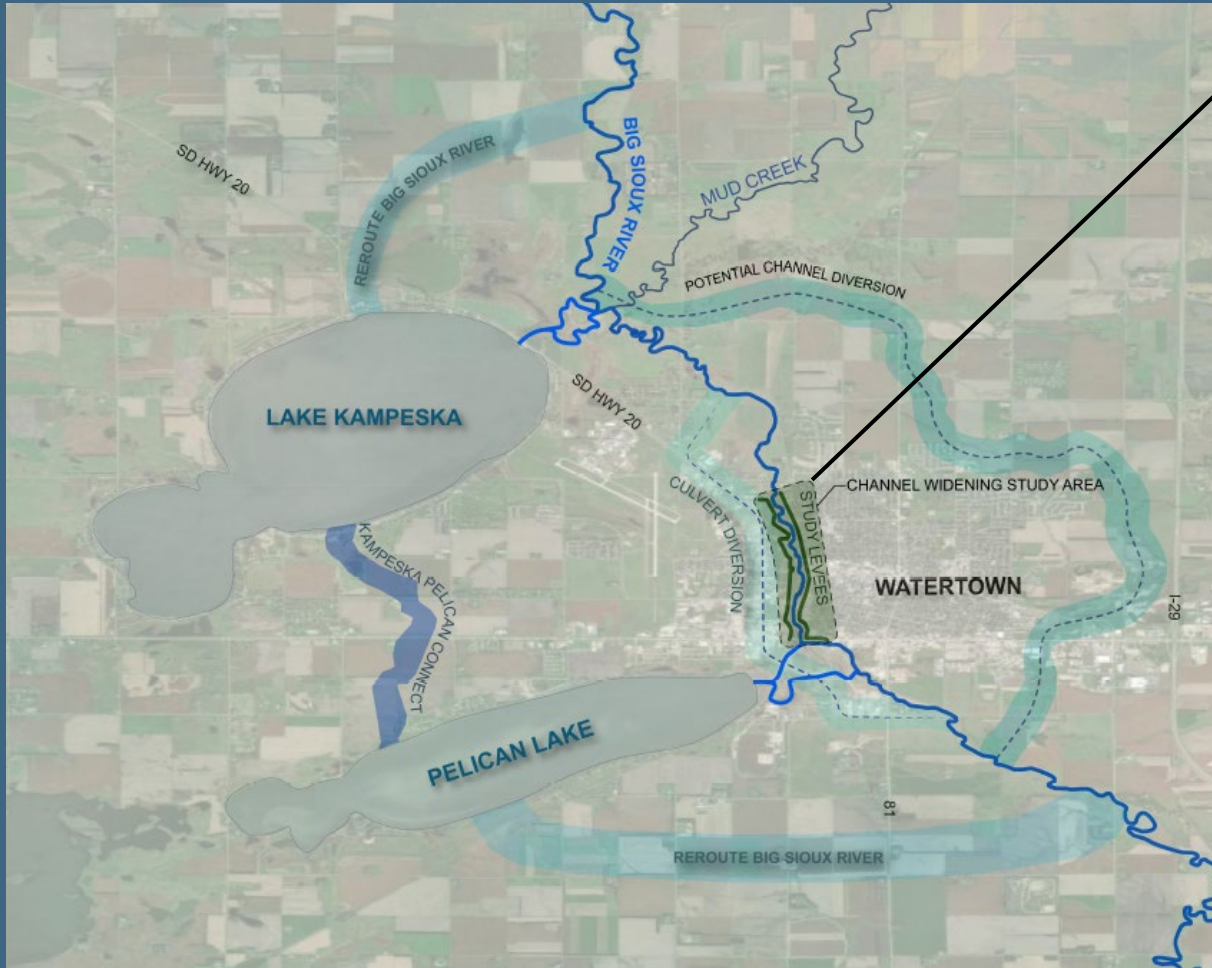
***Renderings of alternatives continued on the next slide.***



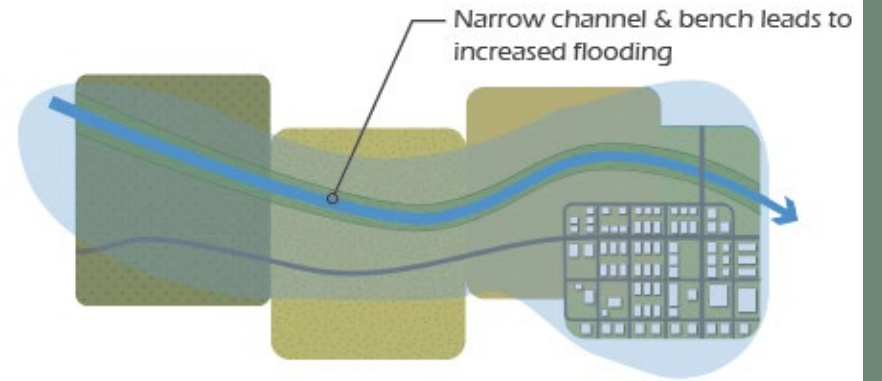
# CONCEPTUAL ALTERNATIVE RENDERINGS



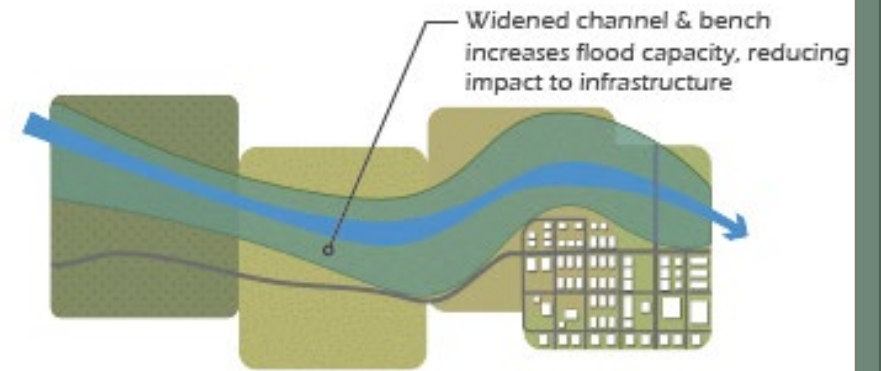
## Underground Conveyance, Channel Diversion, and Channel Widening



## Channel Widening Alternative



EXISTING CHANNEL FLOOD



WIDENED CHANNEL FLOOD



# ENVIRONMENTAL RESOURCE POLICY COMPLIANCE

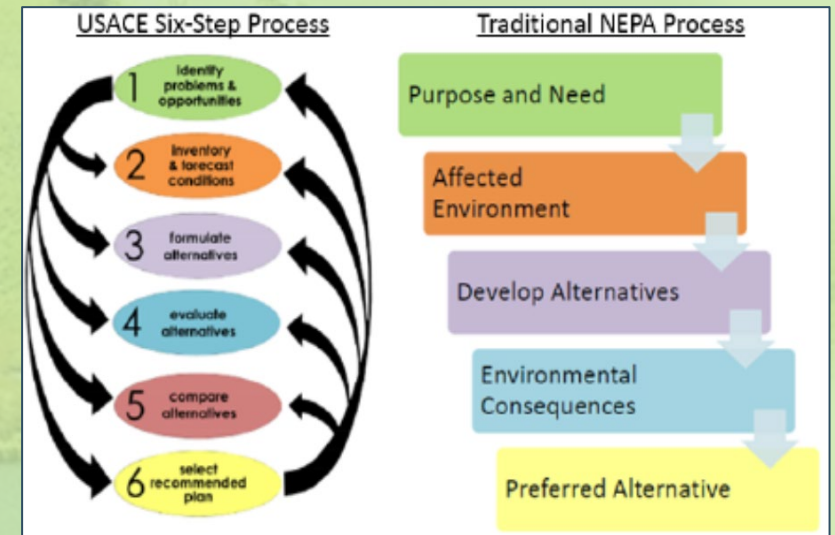


## NEPA: National Environmental Policy Act

- Process that informs federal decision making.
- Federal Agencies must consider reasonable alternatives and make diligent efforts to inform and involve the public in the NEPA process.
- Environmental Assessment (EA) / Environmental Impact Statement (EIS).
- Analyze significance of the social, economic and environmental impacts of potential alternatives.
- If significant environmental impacts are identified than an EIS will be prepared.
- Scoping Letters sent to Federal & State Agencies and Tribes
  - **Agencies:** USFWS, EPA, USDA-NRCS, BIA, SDGFP, SDSHPO, SWO THPO, SDDANR, SD Bureau of Administration.
  - **Cooperating Agency Requests:** BIA and Sisseton-Wahpeton Oyate Tribe (Lake Traverse Reservation)



**SMART Planning Feasibility Process and Principles** are consistent with the spirit of NEPA and CEQ's direction on NEPA implementation.



*NEPA process concurrent with Planning Feasibility Process.*



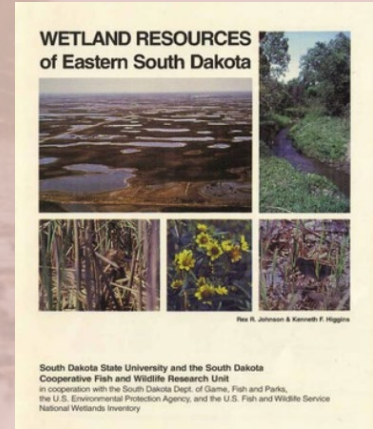
# EXISTING ENVIRONMENTAL CONDITIONS



- USFWS Waubay Wetland Management District, Waterfowl Production Areas
  - Grassland & Wetland Easements
- USDA-NRCS conservation lands / easements (WRP, EWPP-FPE; and CRP)
- Sharp-tailed Grouse – Habitat Prioritization Areas (Source SDERT)
- SD Game Production Areas & Parks and Rec Areas
- MBTA - 17 Birds of Conservation Concern (Source: IPaC, USFWS)
- ESA – Federally Listed Species (Source: IPaC, USFWS)
  - Note: No critical habitat within Codington County
- \*SD Species of Greatest Conservation Need (Source: SDERT)
  - Banded killifish, Piping plover, Poweshiek skipperling, Whooping crane



- Prairie Pothole Region, Big Sioux Basin (EPA Ecoregion Level IV), Prairie Coteau (MLRA)
- Native Prairies and Potentially Undisturbed Lands (SDERT)
- Conservation Opportunity Areas (SDERT) & Restorable Wetlands (EPA EnviroAtlas)
- Farmland Protection Policy Act (FPPA) - Prime & Unique Farmlands
- Riparian Areas & Woodlands
- Impaired Waters
- Beneficial Use Waters (Warmwater permanent fish life propagation waters)
- Invasive Species
  - Zebra Mussels
- Hazardous, Toxic, and Radioactive Waste (HTRW)



Dakota Skipper



Piping Plover



Topeka Shiner



Northern Longeared Bat



Rufa Red Knot



# CULTURAL RESOURCE ACTIVITIES



➤ **Section 106 of the National Historic Preservation Act of 1966 (NHPA)** - Initiated consultation and conducting background research regarding Historic Properties in the project area.

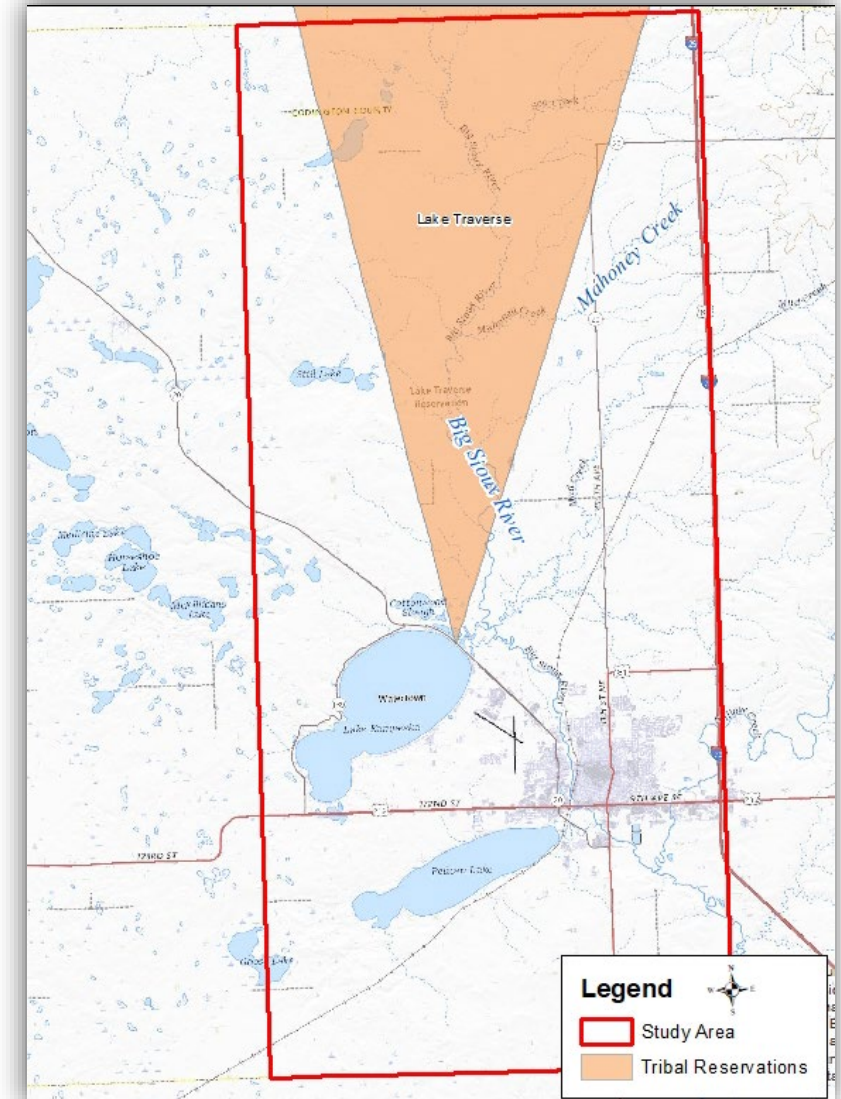


➤ Initial scoping letters have been sent to various Consulting Parties including:

- SD SHPO,
- Sisseton Wahpeton Oyate THPO,
- multiple Tribes that attach religious and cultural significance to the area
- the Codington County Historical Society.

➤ The study area includes portions of the Lake Traverse Reservation which is home to the Sisseton Wahpeton Oyate tribe.

➤ A virtual Tribal scoping meeting is planned for February 9<sup>th</sup>, 2023





# ENVIRONMENTAL JUSTICE CONSIDERATIONS



**EO 12898** directs each Federal Agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations,” including tribal populations.

## ***What is Environmental Justice?***

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income regarding the development, implementation and enforcement of environmental laws, regulations, and policies, with no group bearing a disproportionate burden of environmental harms and risks.

***Justice40 Initiative:*** provide benefits and avoid disproportionate impacts to underserved and disadvantaged communities.

***Our goal with this study is to make sure we’re capturing the ENTIRE array of the community’s viewpoints and concerns.***

- *Examples include specific flooding concerns or specific communities that may experience disproportionate impacts during flood events.*



## NEXT STEPS



- **Data Collection:** Gather data and develop more information on existing conditions
- **Plan Formulation:** Formulating, evaluating and comparing alternatives.
- **Report:** Drafting Feasibility Report and Releasing for Public Review Summer/Fall 2024





# OPEN HOUSE



**Thank you for taking the time to be here!**

## **Opportunities for Comment:**

**Open House:** Please stick around after this presentation for the open house to view the posters we have put together and converse with our technical experts.

**Comment Forms:** We value your opinion and will be collecting comment forms for you to fill out today or mail to us following this meeting.

**U.S. Army Corps of Engineers  
Omaha District**

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**Omaha, NE 68102**

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## **STAY UP TO DATE:**

View the project website for the most recent project updates using the link below

<https://www.nwo.usace.army.mil/Missions/Civil-Works/Planning/Planning-Projects/Watertown-SD/>

Or visit the website by scanning the QR code to the right

