



**Overview of Corps of Engineers Programs
That Could Assist with Multi-Use Issues
at Lake Shady**

**Corps of Engineers
St. Paul District**

July 6, 2009

Who is the Corps, and what do they do?

- **Federal Agency**
- **Provides technical expertise in water resources**
- **Zumbro River Watershed is within St. Paul District**



Corps Mission Areas



Aquatic Ecosystem Restoration, Section 206

- **Section 206 of WRDA 1996**
- **Aquatic ecosystem restoration**
- **Little or no terrestrial restoration**
- **Cannot be used for remediation**
- **Land usually not a significant cost**
- **Includes both detailed studies and potentially construction (if project is feasible).**
- **Cost sharing: 65%/35%**

Planning Assistance to States, Section 22

- **Section 22 of WRDA 1974**
- **Provides planning assistance to states and Indian tribes in preparing plans to manage water and related land resources.**
- **In MN, major focus has been on development of technical and planning information to support basin-wide planning studies. Also includes studies of floodplain-related data, flood damage reduction measures, water quality, water demand and supply, and wetland resources.**
- **\$500,000 is the maximum federal funds available to any state or Indian tribe annually.**
- **Non-federal cost sharing of this program is 50 percent.**
- **Only provides for study assistance; does not provide for construction.**

Possible River Projects Under Section 206

- Many river restoration projects have focused on reconnecting rivers fragmented by dams.
 - Fish passage facilities.
 - Dam removal.
- Also stream habitat restoration.



Projects We Tend to Avoid under Section 206...

- **Dredging associated with dams and reservoirs.**
- **Why???**
 - **Dredging is expensive**
 - **Dredged material placement often difficult**
 - **Benefits are short-lived**
 - **Extensive O&M**
 - **Ecological benefits often limited compared to project costs (costs not justified compared to benefits.**



**Small hydraulic dredge;
Mississippi River backwater
dredging near Wabasha, MN**

Examples of Fish Passage Projects

Fish Passage Projects with Corps Involvement

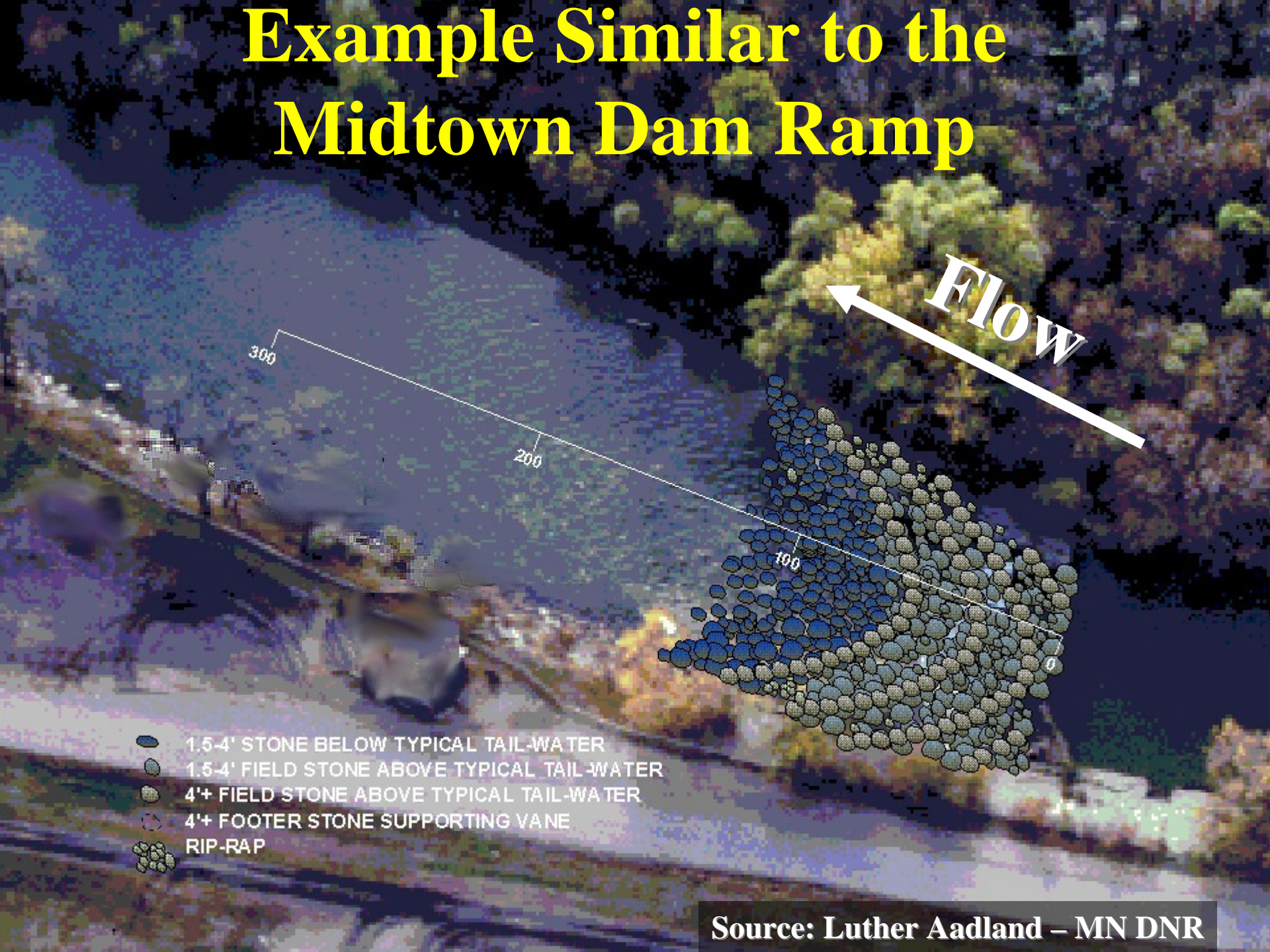
- **North Dam (Red River, Fargo)**
- **South Dam (Red River, Fargo)**
- **Riverside Dam (Red River, Grand Forks)**
- **Drayton Dam (Red River, Drayton, ND)**
- **Red Lake River**
- **Mississippi River, Lock and Dams 22 and 26**

Midtown Dam Prior To Rock Ramp Fishway Project



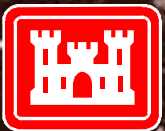
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Example Similar to the Midtown Dam Ramp



- 1.5-4' STONE BELOW TYPICAL TAIL-WATER
- 1.5-4' FIELD STONE ABOVE TYPICAL TAIL-WATER
- 4'+ FIELD STONE ABOVE TYPICAL TAIL-WATER
- 4'+ FOOTER STONE SUPPORTING VANE
- RIP-RAP

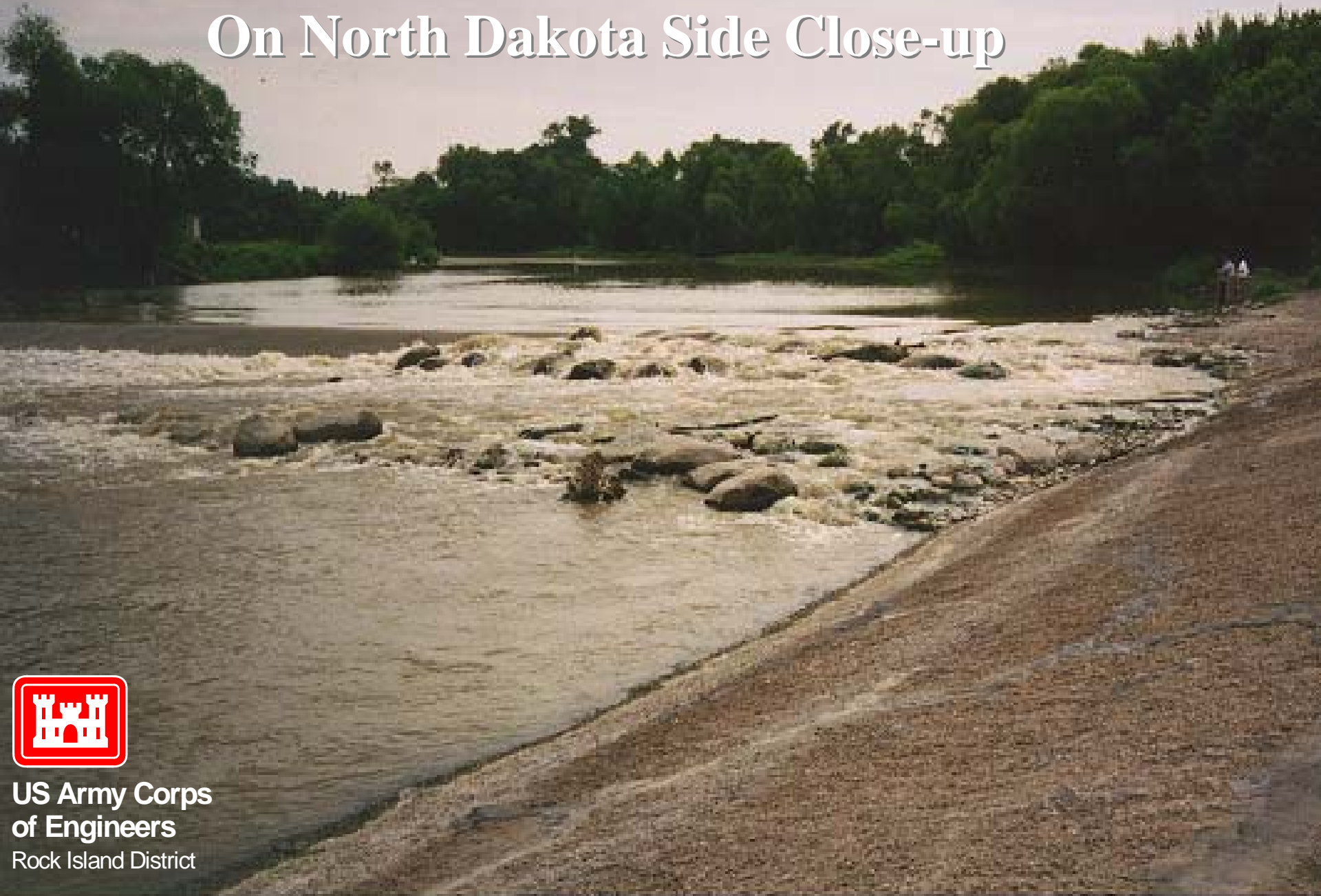
Midtown Dam- Excavator Placing Fieldstone on North Dakota Side



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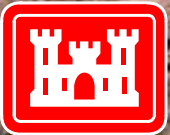
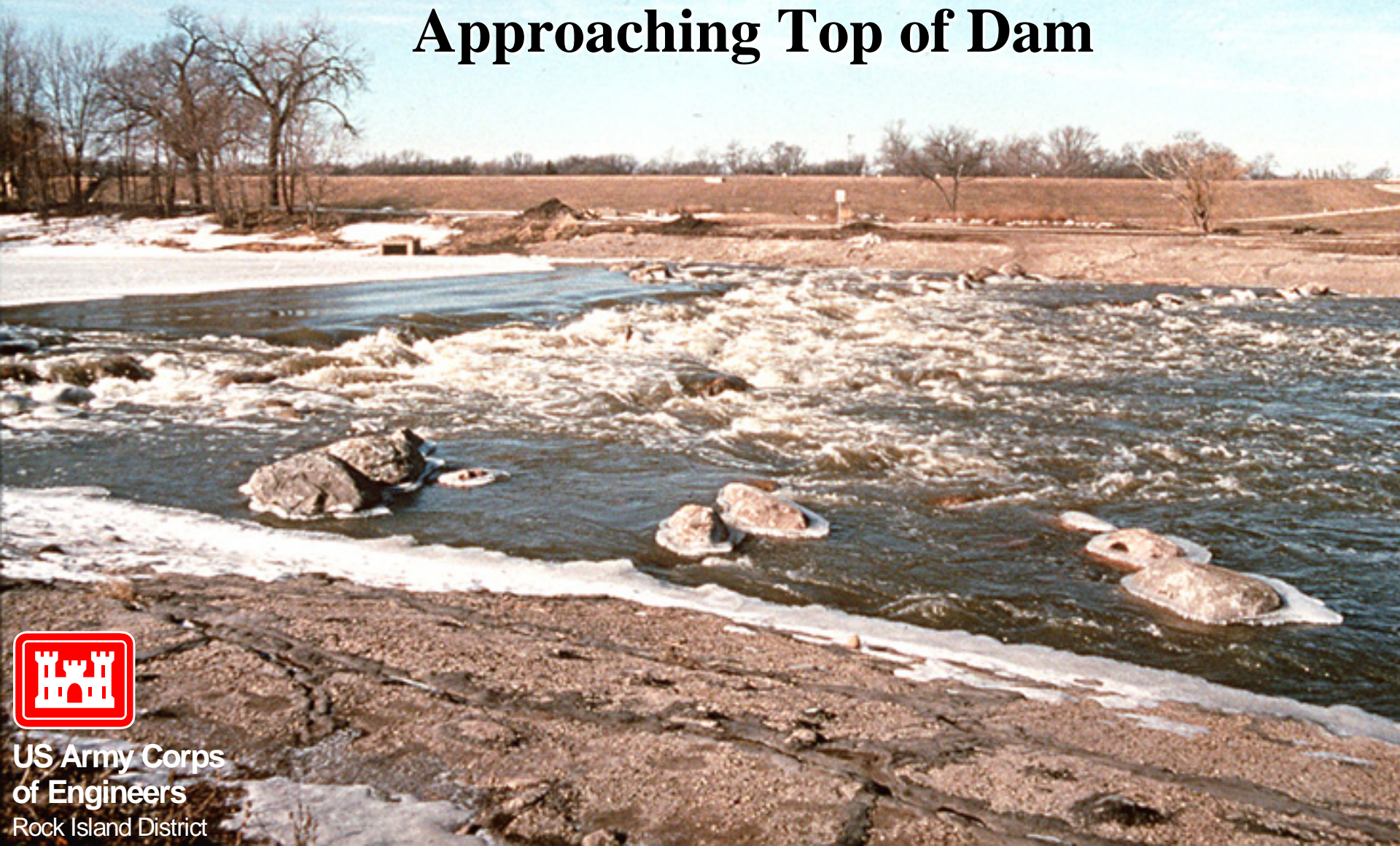
2011

Midtown Dam Interim Construction On North Dakota Side Close-up



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Midtown Dam - Rock Ramp Fishway with Tailwater Approaching Top of Dam



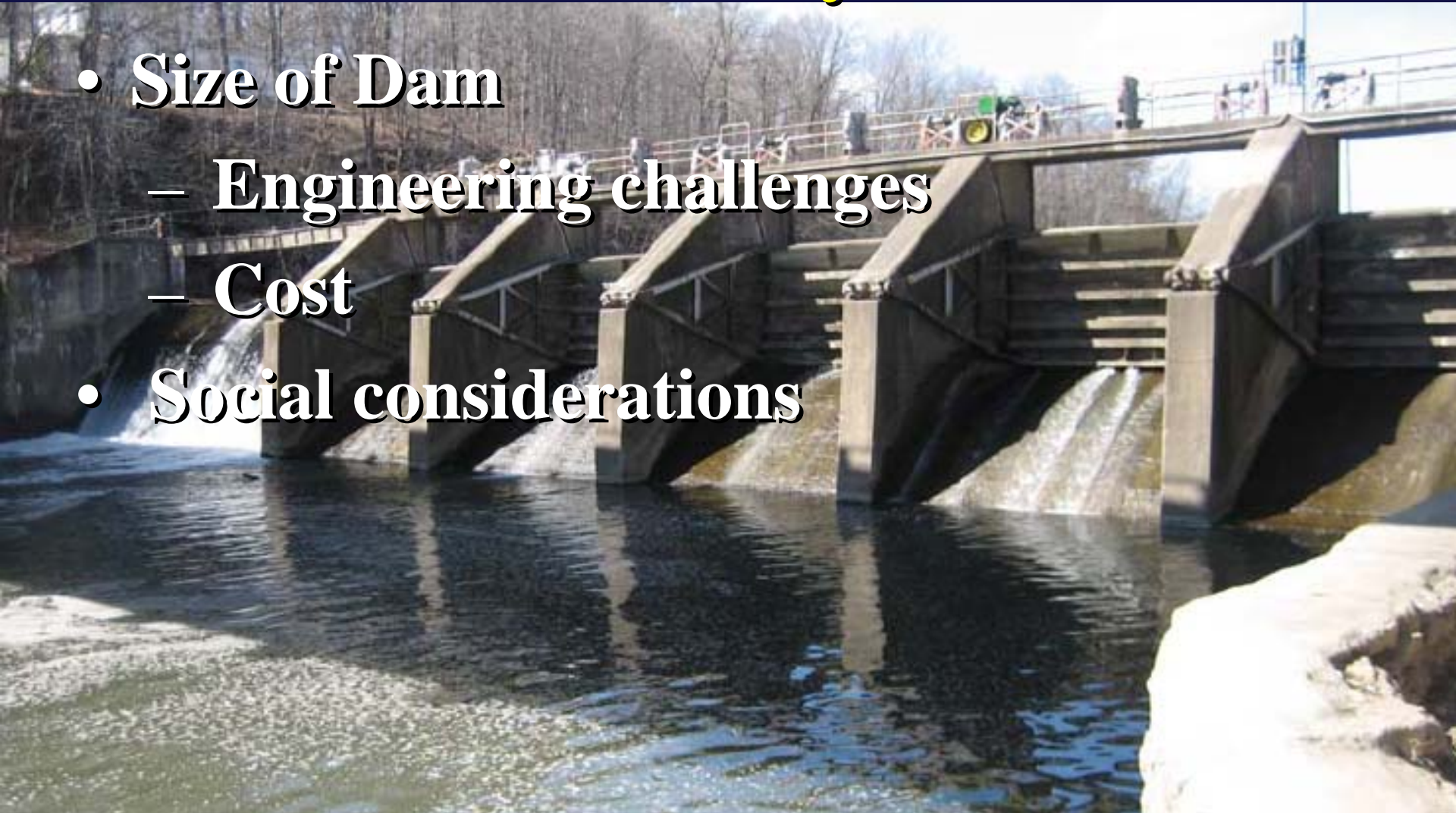
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Environmental projects like fish passage can accomplish multiple objectives:

- **Improved environmental conditions**
 - **Improved safety**
 - **Improved stability for failing dams.**
 - **Improved recreational opportunities**
 - **Fishing**
 - **Canoeing**
 - **Improved aesthetics**
 - **Educational tool**
- 
- A photograph of a river with a low dam or weir structure. The water is flowing over the dam, creating a small waterfall. The foreground is filled with large, dark grey rocks and some green vegetation. The background shows a line of trees and a sky with soft, orange and blue hues, suggesting a sunset or sunrise.

Challenges for Fish Passage at Lake Shady Dam

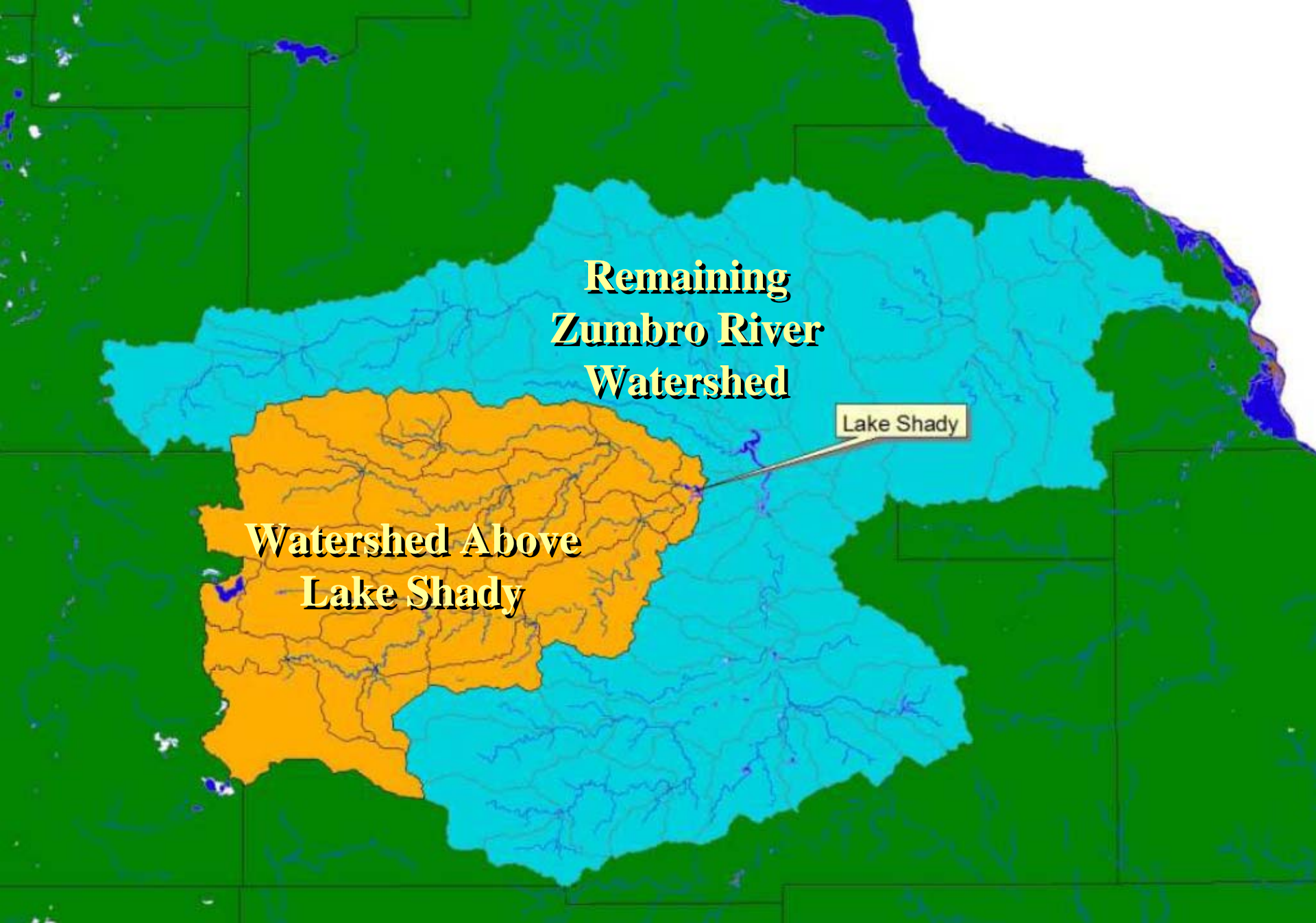
- **Size of Dam**
 - **Engineering challenges**
 - **Cost**
- **Social considerations**



Challenges for Fish Passage



- **Benefits?**
 - **Close proximity to Lake Zumbro limits effectiveness of lone project**



**Remaining
Zumbro River
Watershed**

**Watershed Above
Lake Shady**

Lake Shady

Options for Assistance???

- **First, identify what issues you want addressed with Lake Shady and/or the dam.**
- **Help could be available through either the 206 or Section 22 programs.**
- **Contact the Corps to identify the steps for a formal request (also see information papers provided).**
- **Recent successful projects using these programs needed strong congressional support to receive funds.**

Questions and Discussion

- **Points of Contact with the Corps of Engineers**

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