




Sears Dam

SEARS AND STEEL DAM HEARING
 HOSTED BY STATE SENATOR MIKE HALPIN,
 + ILLINOIS DEPARTMENT OF NATURAL RESOURCES




MONDAY, MARCH 16
 6 PM. - 7:30 PM.

IBEW HALL
 1700 52ND AVE, MOLINE, IL 61265

 www.SenatorHalpin.com  [@SenatorHalpin](https://www.facebook.com/SenatorHalpin)



Steel Dam

**SEARS AND STEEL DAM PROJECT
 PLANNING & FEASIBILITY REPORT
 ROCK RIVER**

AGENDA

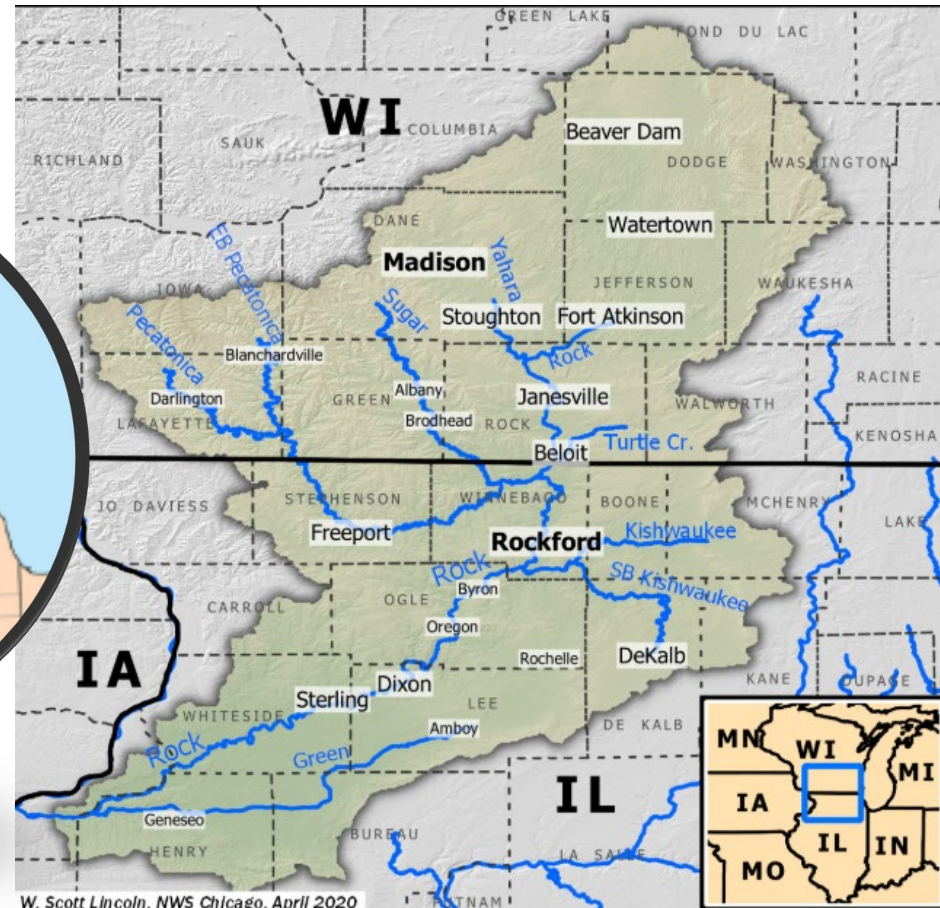
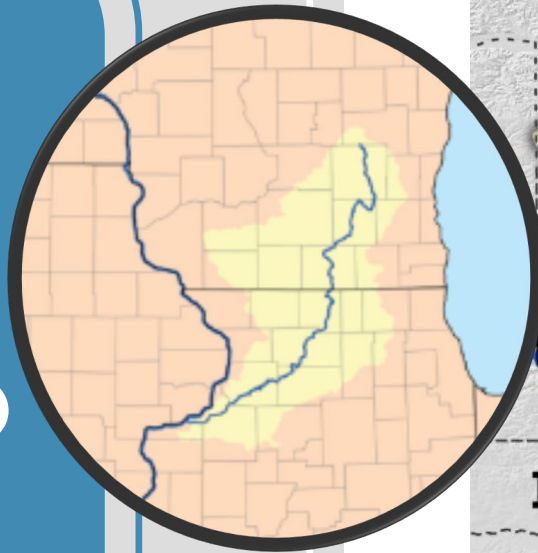
Location and Overview

Dam-Related Concerns

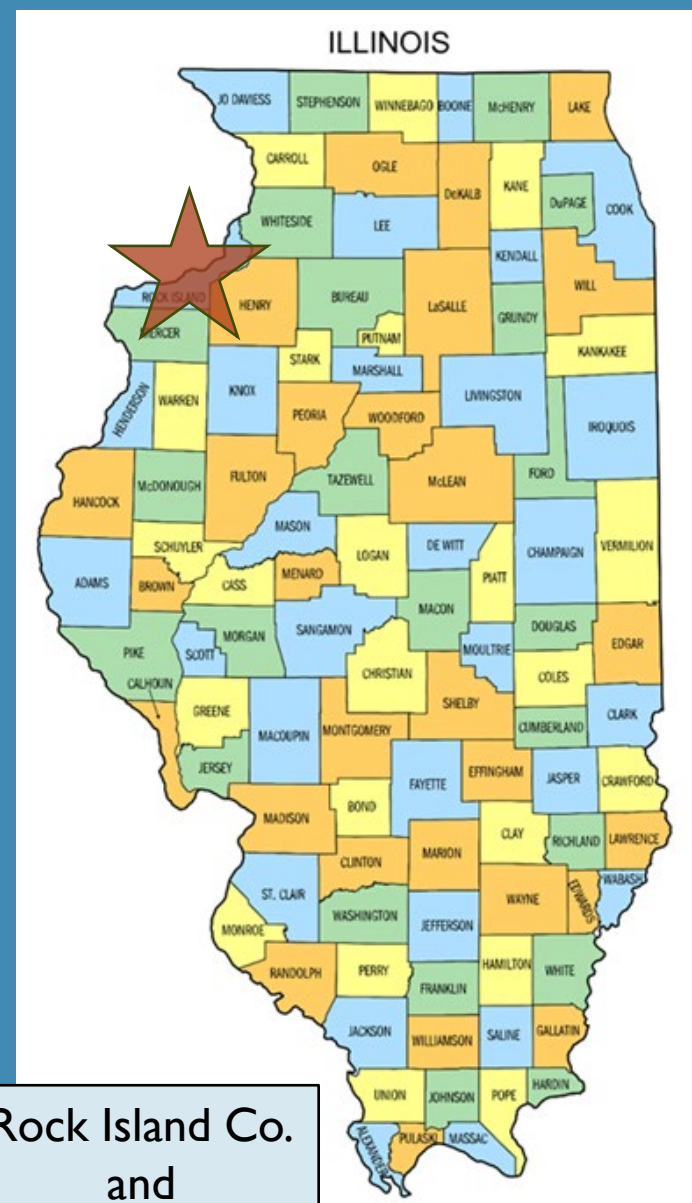
Study Overview and Alternatives

Results and Examples

ROCK RIVER WATERSHED

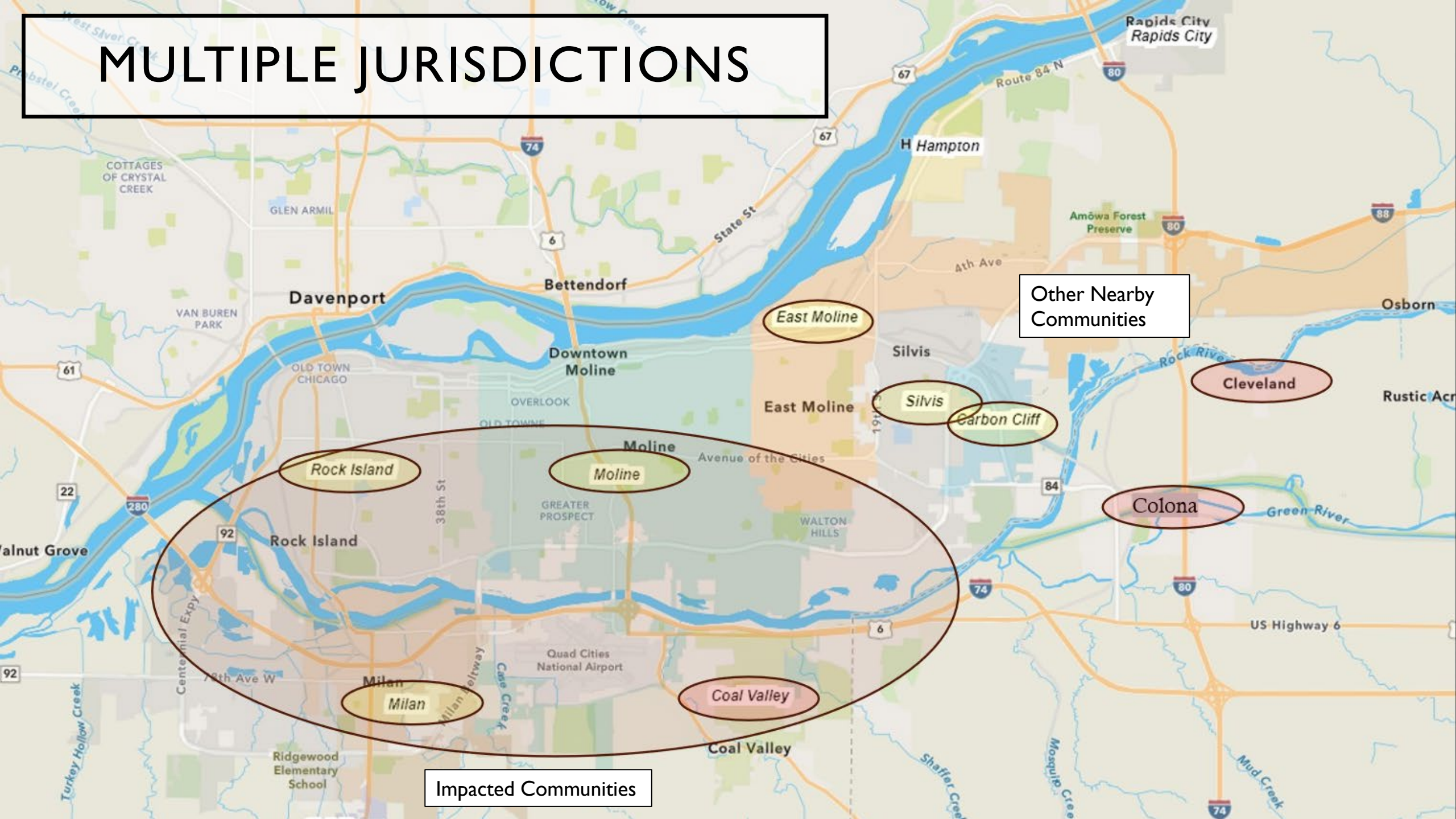


✓ Rock River is ~300 Miles Long in IL



Rock Island Co.
and
Henry Co.

MULTIPLE JURISDICTIONS



Other Nearby Communities

Impacted Communities

FACTS

Sears Dam

- Crest Elevation: 557.6-ft, NAVD88
- Dam Height: 16-ft
- Dam Length: 460-ft
- 100-year Flow: 16,036 cfs

Steel Dam

- Crest Elevation: 558-ft, NAVD88
- Dam Height: 5.5-ft
- Dam Length: 772.5-ft
- 100-year Flow: 35,797 cfs

- ✓ Original Purpose was hydroelectric
- ✓ Constructed Early 1900s
- ✓ Decommissioned in 2020
- ✓ State Owns both Dams and all Abutments



AGENDA

Location and Overview

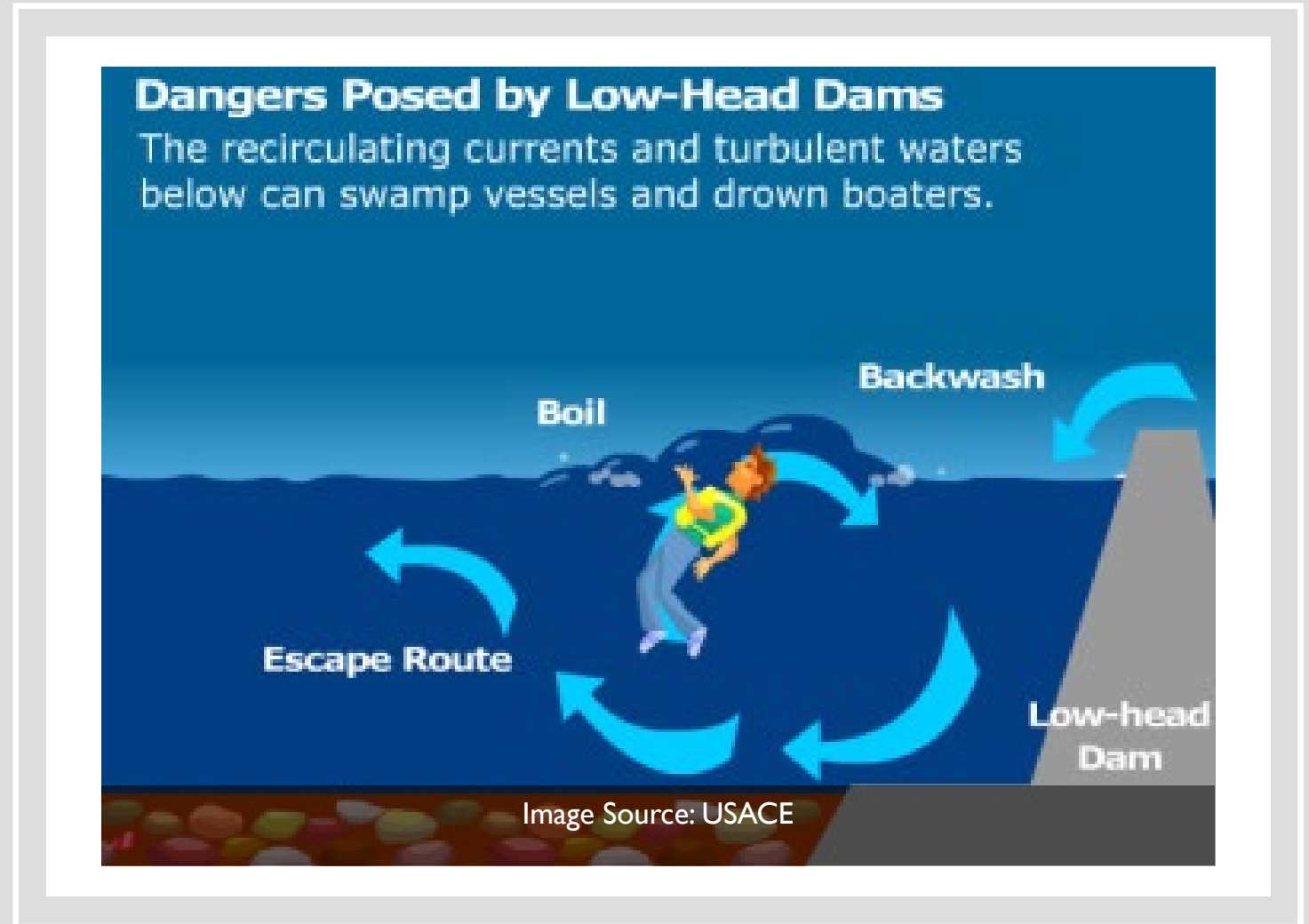
Dam-Related Concerns

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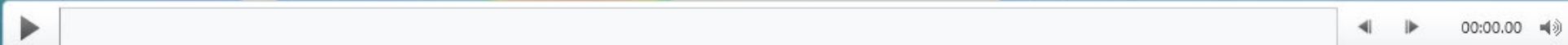
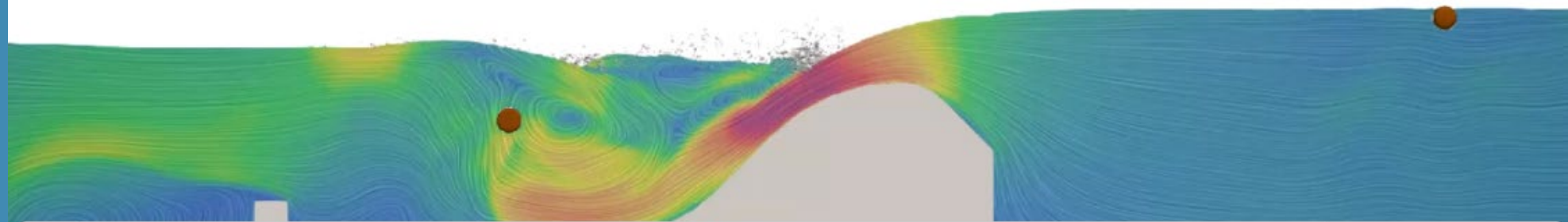
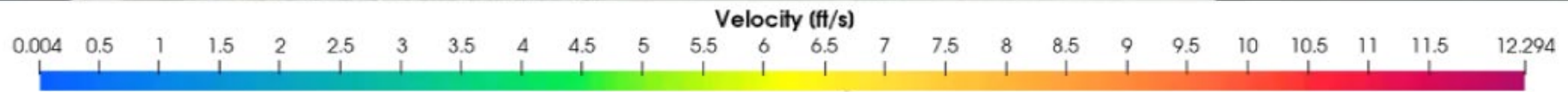
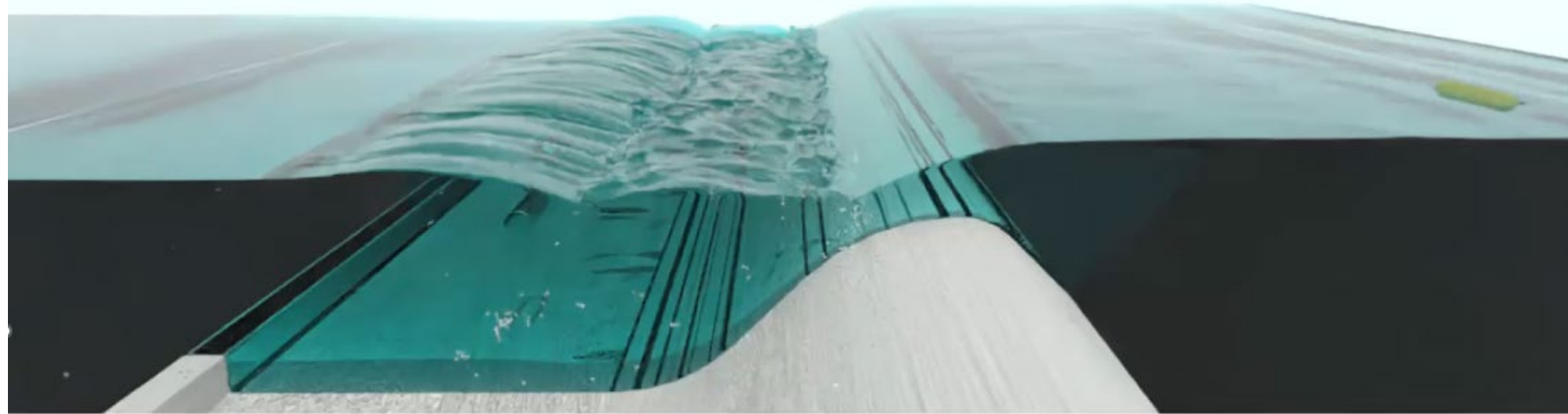
KNOWN PUBLIC SAFETY HAZARD

- Risk of life loss
 - Watercraft going over the dam
 - Fishermen getting too close from downstream
 - Falling in at the abutments
- Reduce risk of emergency responders or good Samaritans



Submerged Hydraulic Roller

VISUALIZATION - PUBLIC SAFETY



LIABILITY

Family Sues Wilmington Over Liz Larson's Drowning Death

WGLT | By **Ryan Denham**

Published February 15, 2018 at 12:52 PM CST



Wilmington Parks Facebook Page

The Wilmington dam on the Kankakee River.



LOCAL
GOVERNMENTAL
AND
GOVERNMENTAL
EMPLOYEES TORT
IMMUNITY ACT

Sec. 3-102.

“(a) Except as otherwise provided in this Article, a local public entity has the duty to exercise ordinary care to maintain its property in a reasonably safe condition for the use in the exercise of ordinary care of people whom the entity intended and permitted to use the property in a manner in which and at such times as it was reasonably foreseeable that it would be used, and **shall not be liable for injury unless it is proven that it has actual or constructive notice of the existence of such a condition** that is not reasonably safe in reasonably adequate time prior to an injury to have taken measures to remedy or protect against such condition.”

(745 ILCS 10/3-102) (from Ch. 85, par. 3-102)

PROJECT GOALS

Primary

- Public Safety

Secondary

- Ecological Improvements
- Water Quality Improvements
- Fish Passage

AGENDA

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DATA COLLECTION & TECHNICAL ASSESSMENTS



SEDIMENT
DEPTH
SURVEY



CHANNEL
SURVEY



SEDIMENT
SAMPLING &
TESTING



ISWS/USACE
EFFECTIVE
MODEL

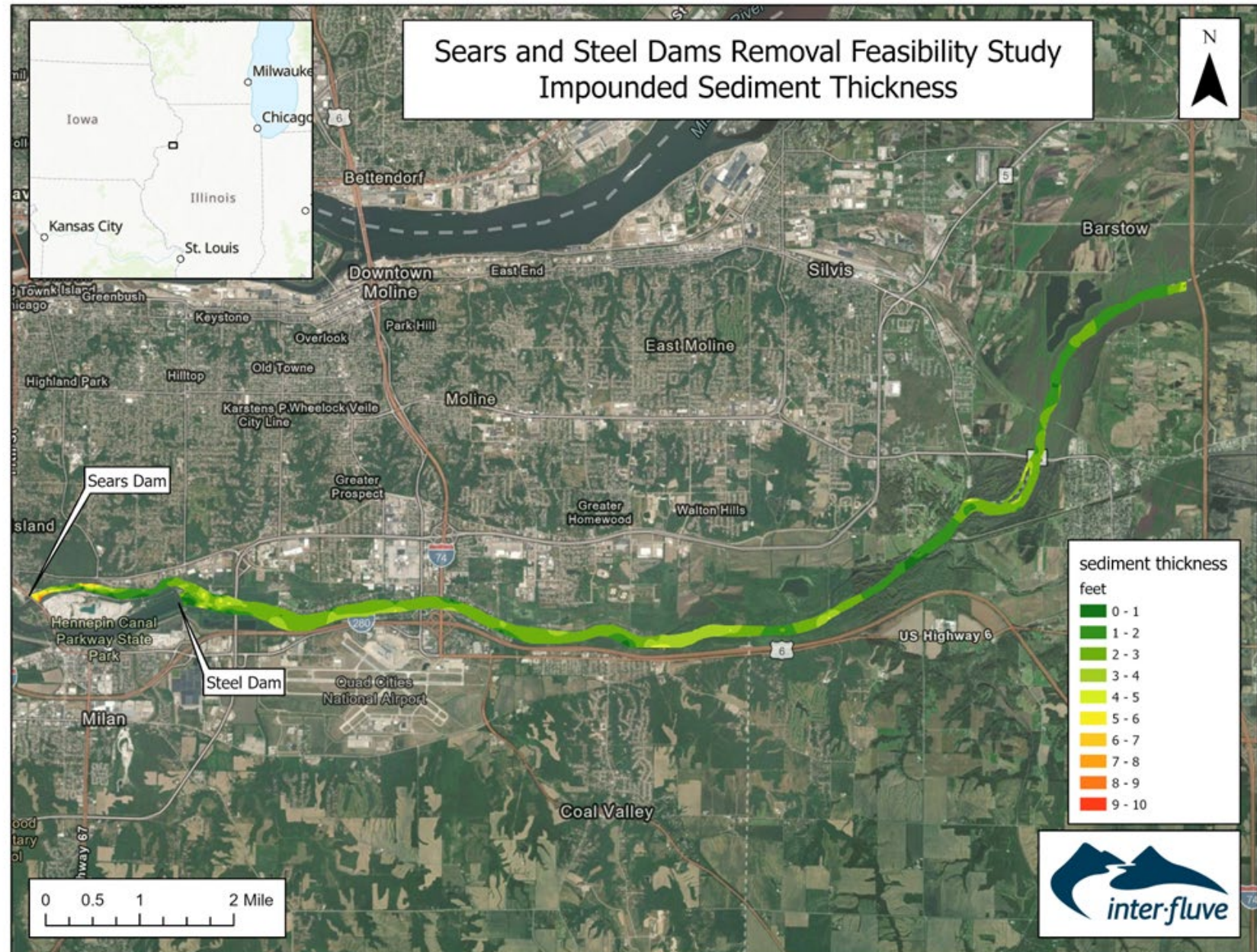


USGS STREAM
GAGE
ANALYSIS

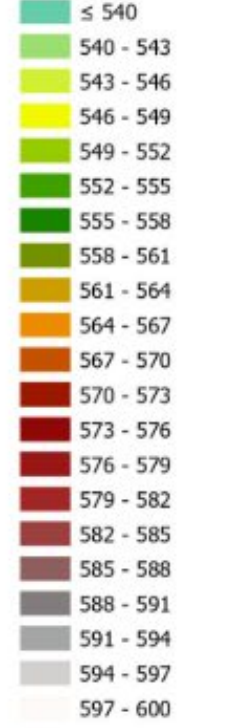
SEDIMENT

Quality

- Generally clean sediment
- Supports passive sediment release



Elevation (ft)



Legend



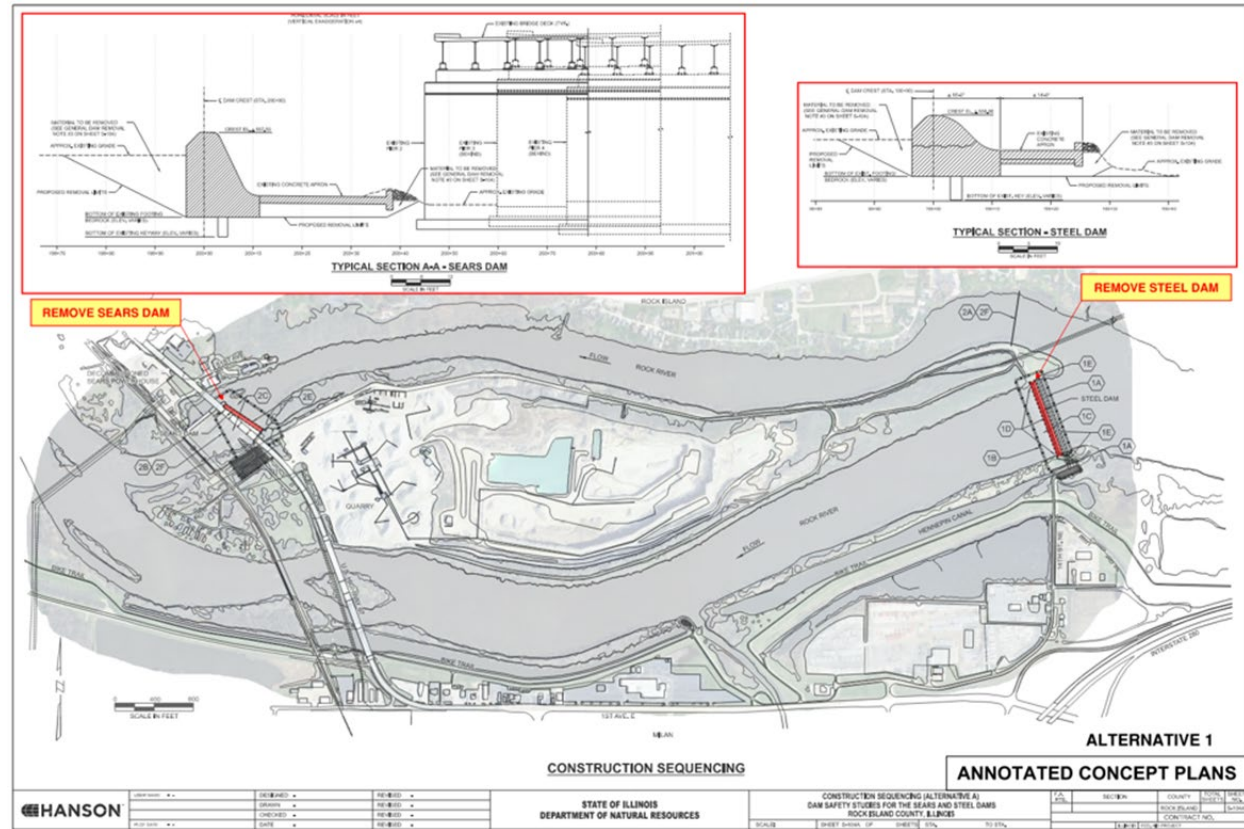
2D MODELING

- 1 • Both Dams Removed
- 2 • Remove Sears, Modify Steel (Steps)
- 3 • Remove Sears, Modify Steel (Rock Ramp)
- 4 • Remove Sears, Modify Steel (Steps), Add Riffles
- 5 • Remove Sears, Modify Steel (Steps), Add Fish Bypass

EVALUATED ALTERNATIVES

ALTERNATIVE I- FULL REMOVAL OF BOTH DAMS

- ✓ Eliminates all public safety hazards
- ✓ Restores natural river processes
- ✓ Maximizes ecological connectivity
- ✓ Most cost-effective short- and long-term
- ✓ Results in greatest reduction of recreational pool

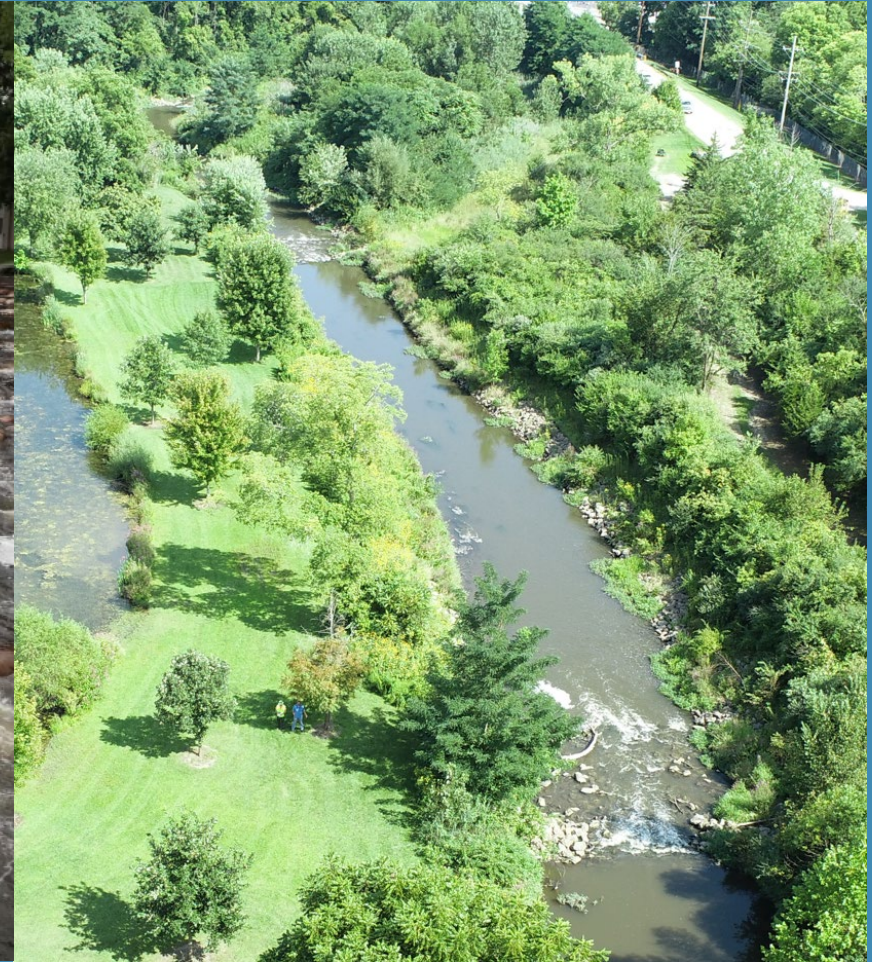




Stepped Spillway
Yorkville, IL

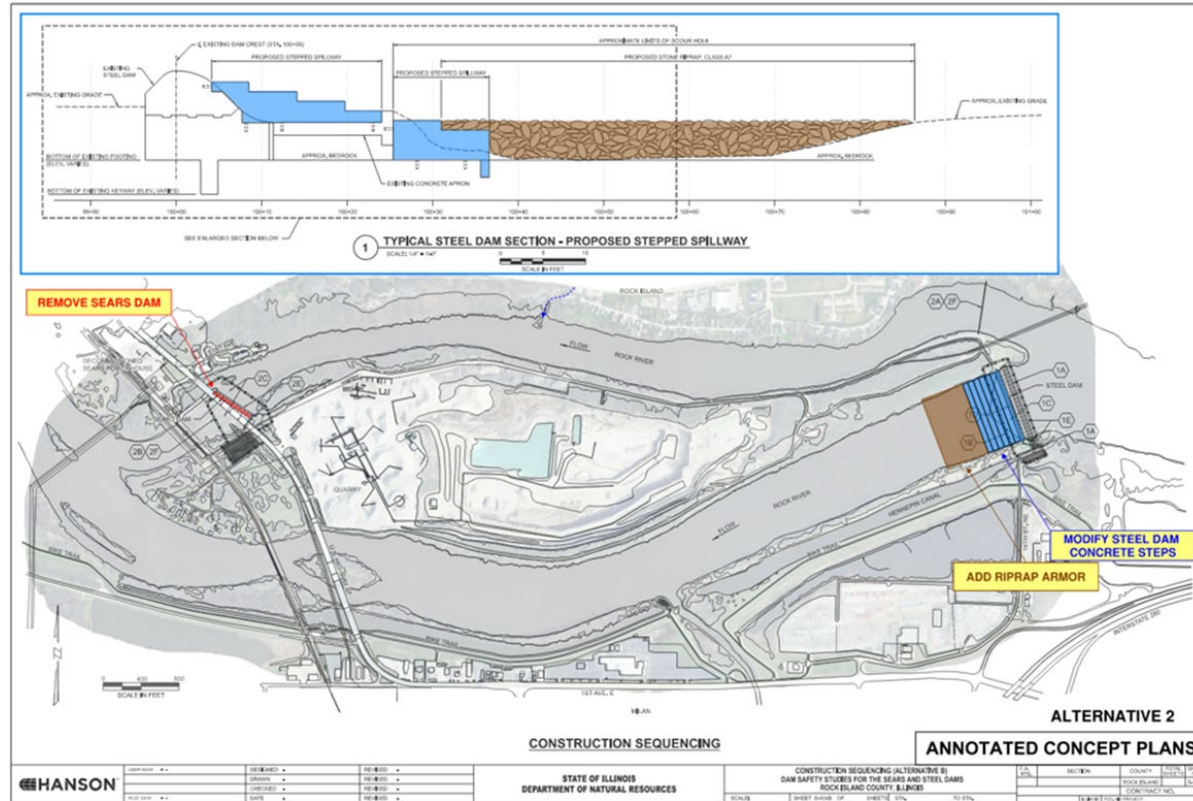


Rock Ramp
Pine River, MN



Riffles
Blackberry Creek, IL

DAM MODIFICATION OPTIONS

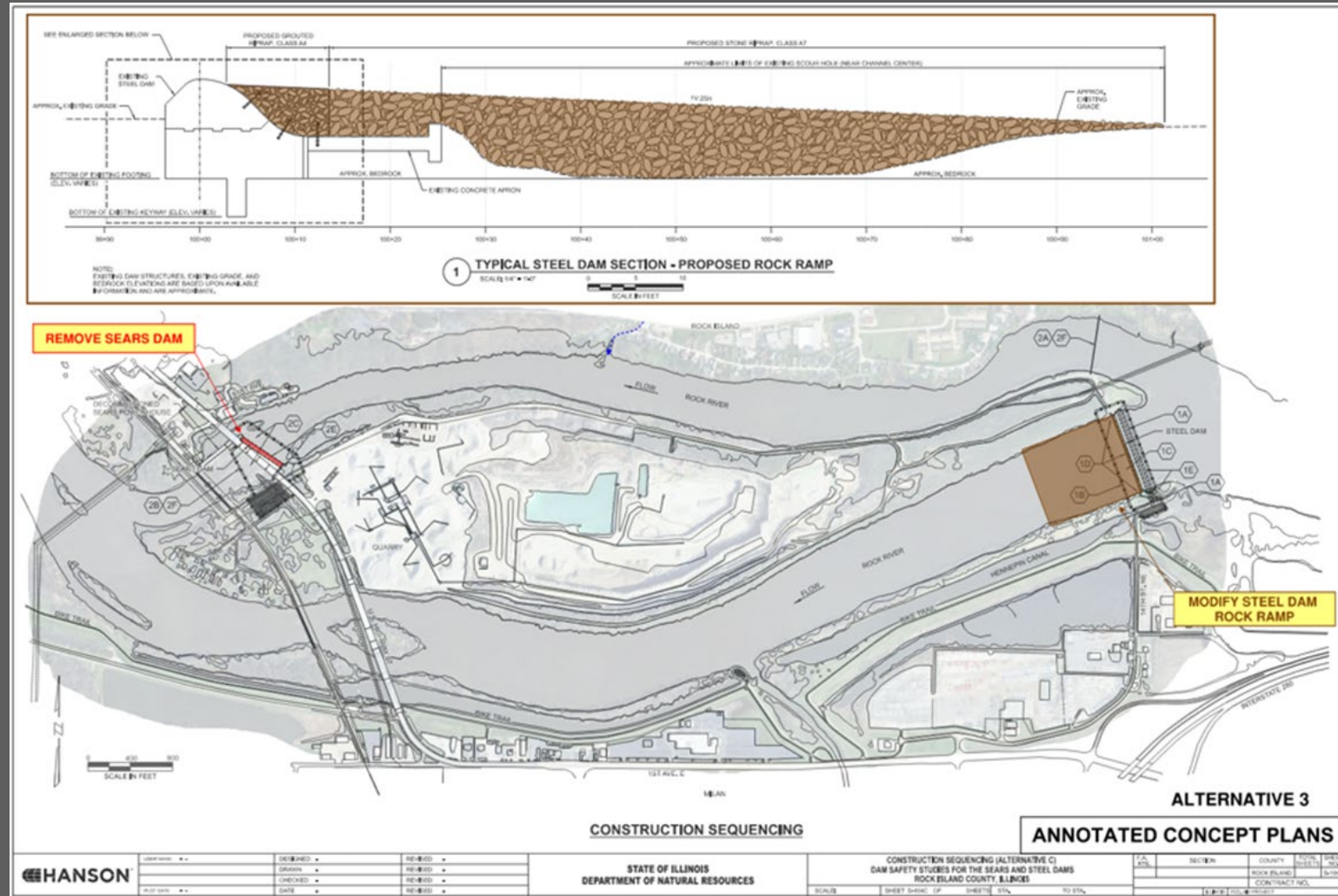


ALTERNATIVE 2 – REMOVE SEARS, MODIFY STEEL (STEPS)

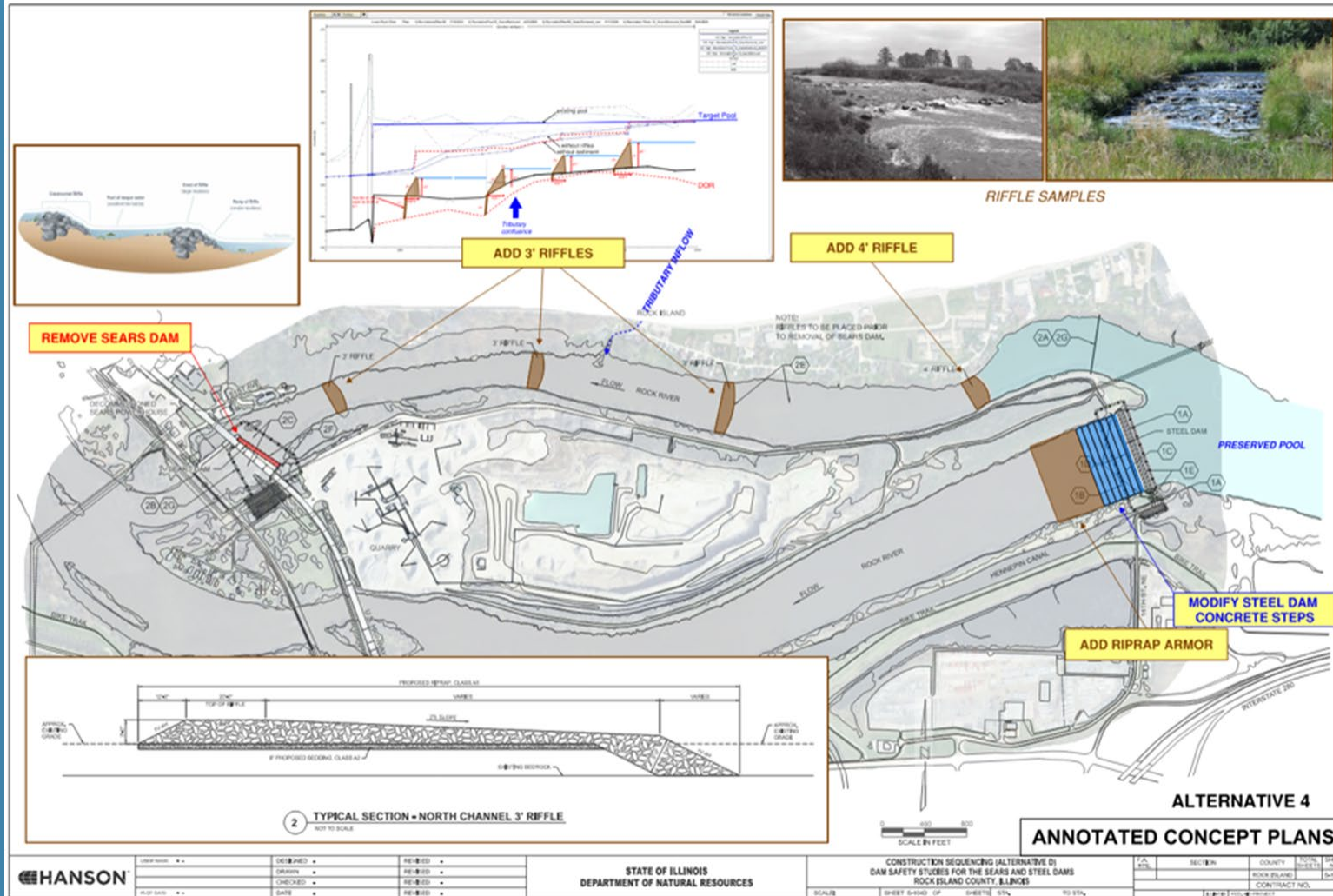
- ✓ Eliminates Steel Dam roller
- ✓ Maintains most of existing pool
- ✓ Improves fish passage

- ✓ Nature-based solution
- ✓ Improves aquatic organism passage
- ✓ Requires long ramp footprint + maintenance

ALTERNATIVE 3 - REMOVE SEARS, MODIFY STEEL (ROCK RAMP)



ALTERNATIVE 4 - REMOVE SEARS, MODIFY STEEL (STEPS), ADD RIFFLES



- ✓ Preserves recreational pool
- ✓ Improves fish passage
- ✓ Most expensive alternative

ALTERNATIVE 5-
REMOVE SEARS,
MODIFY STEEL
(STEPS), ADD
FISH BYPASS

- ✓ Enhances ecological connectivity
- ✓ Improves safety
- ✓ Higher complexity and cost



AGENDA

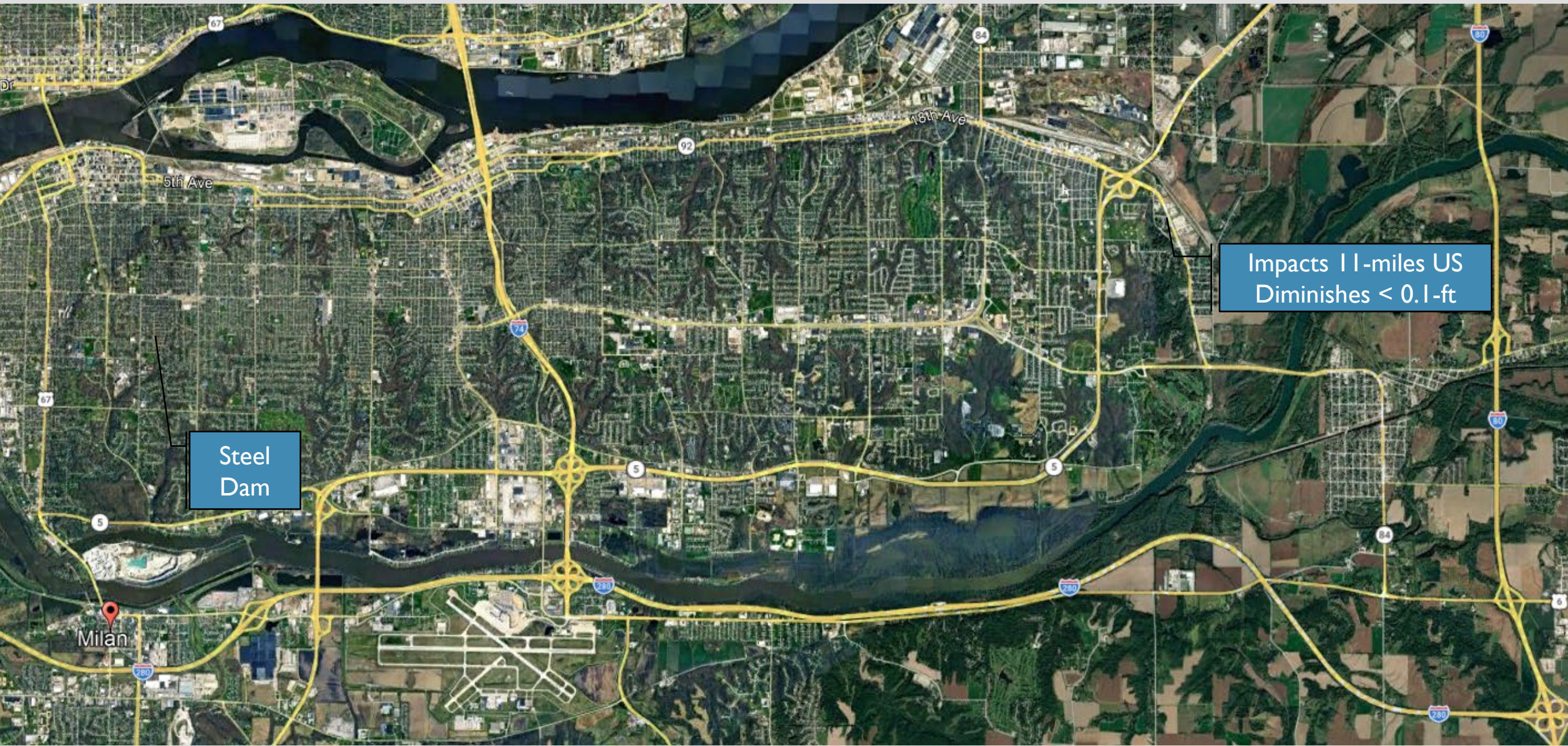
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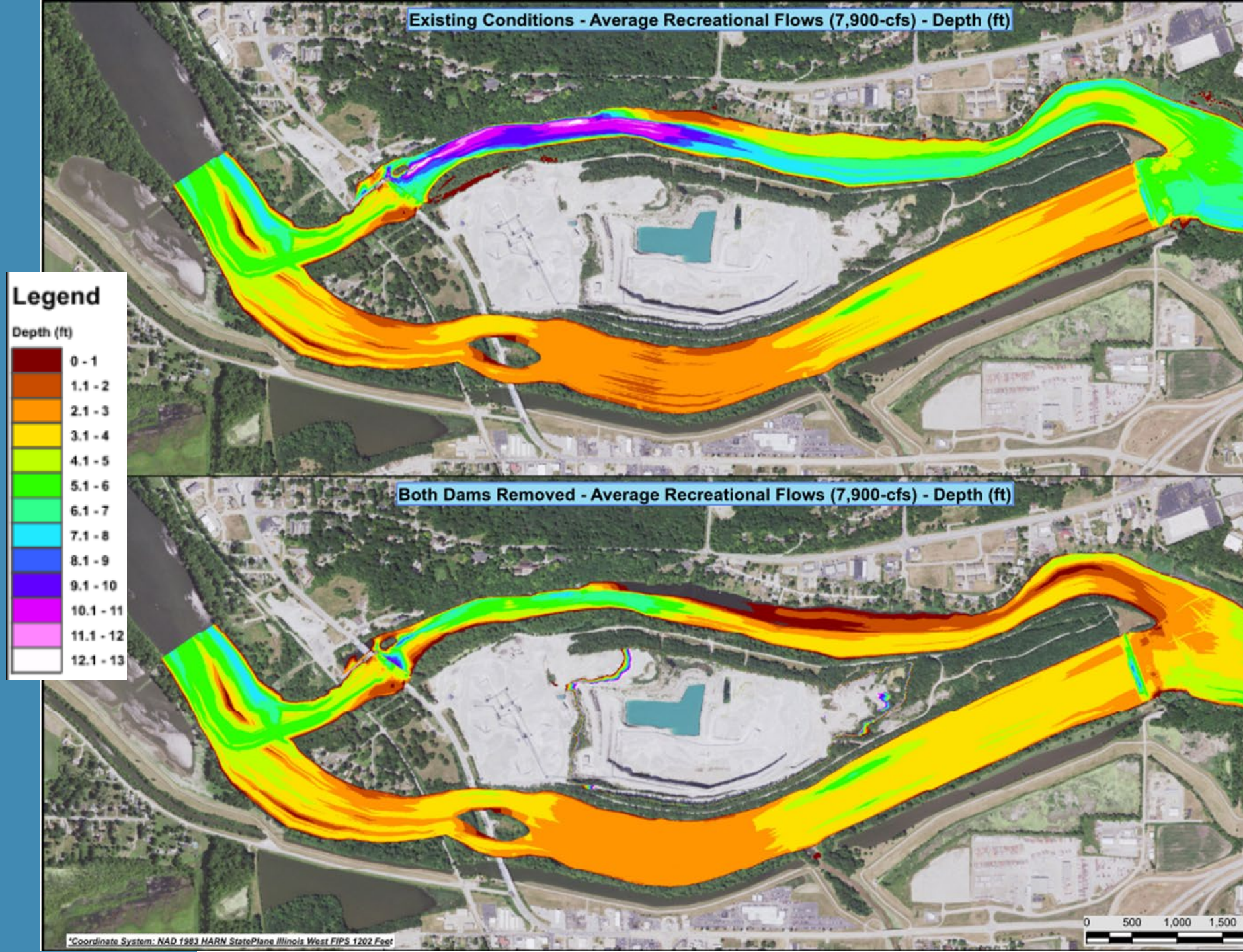
Study Overview and Alternatives

Results and Examples

Estimated Water Surface Impacts of Dams



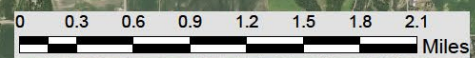
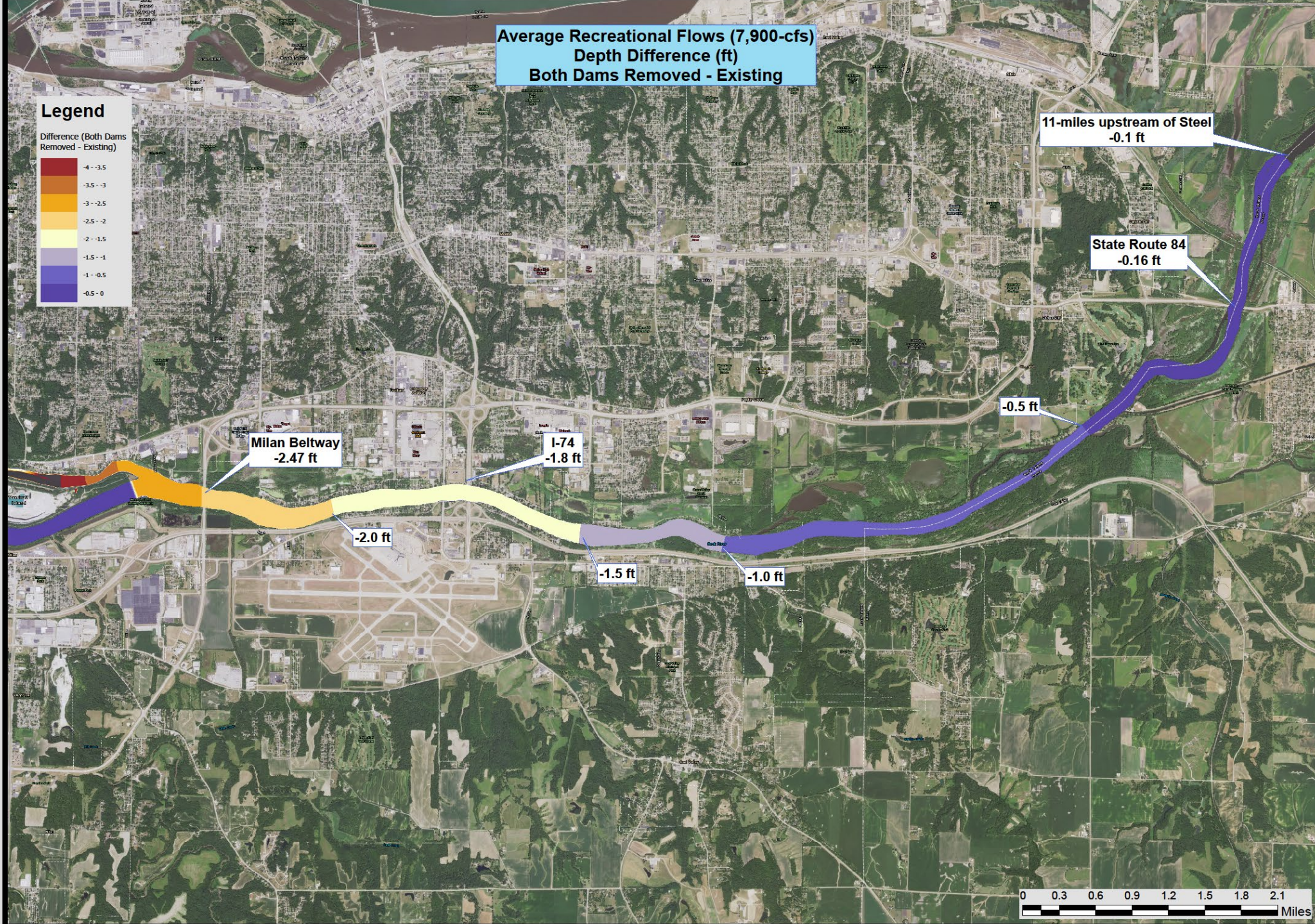
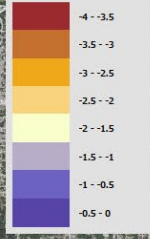
Depth Comparison Before and After Dam Removal



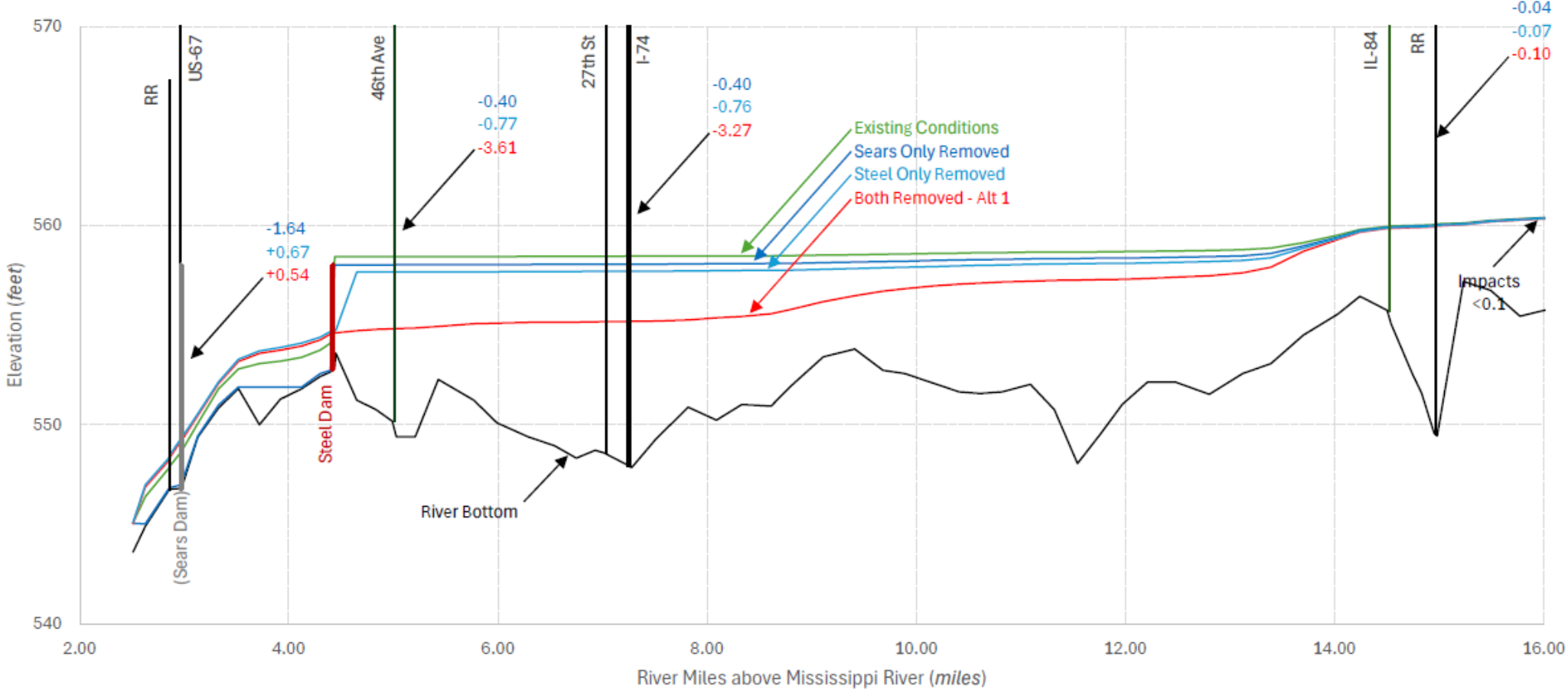
**Average Recreational Flows (7,900-cfs)
Depth Difference (ft)
Both Dams Removed - Existing**

Legend

Difference (Both Dams
Removed - Existing)

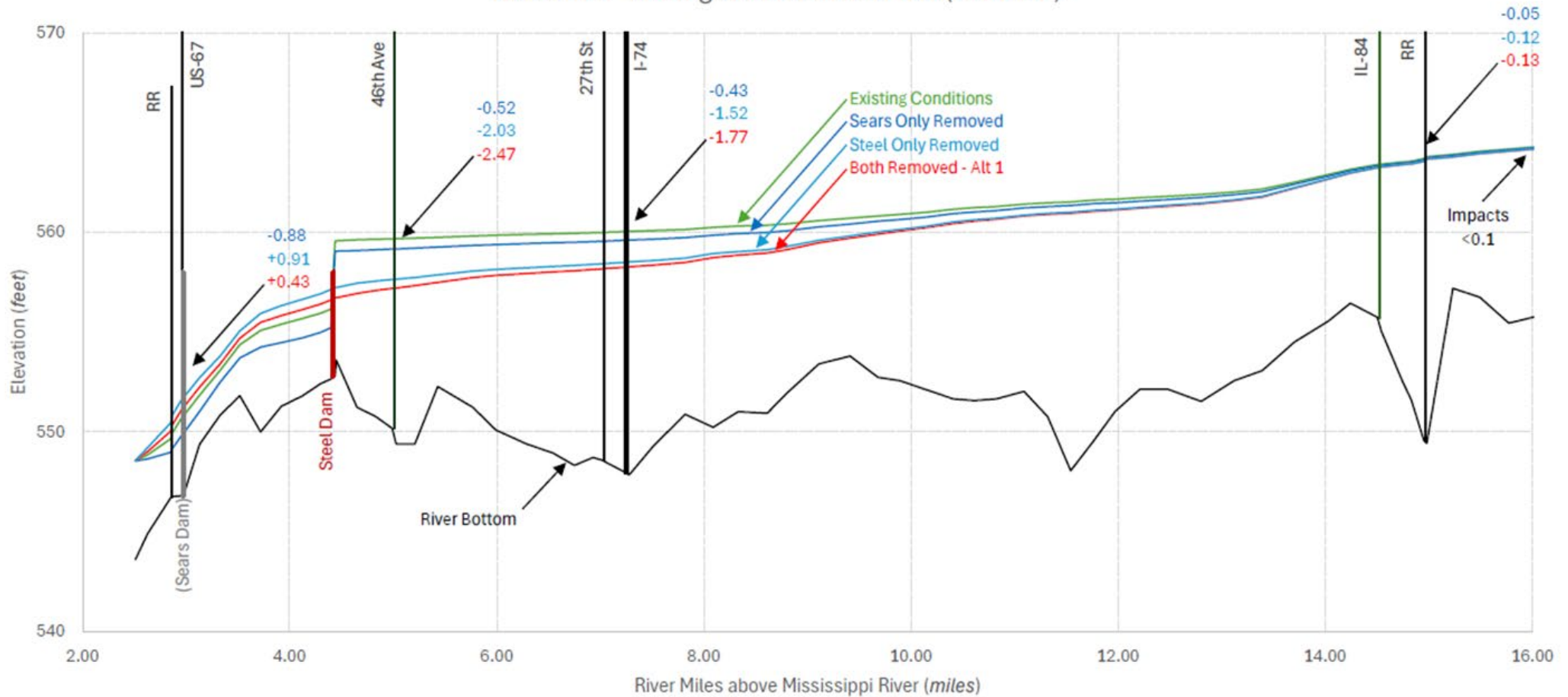


Rock River - 7Q10 Drought Flow (1520 cfs)



WATER SURFACE LEVELS DURING DROUGHT

Rock River - Average Recreational Flow (7900 cfs)



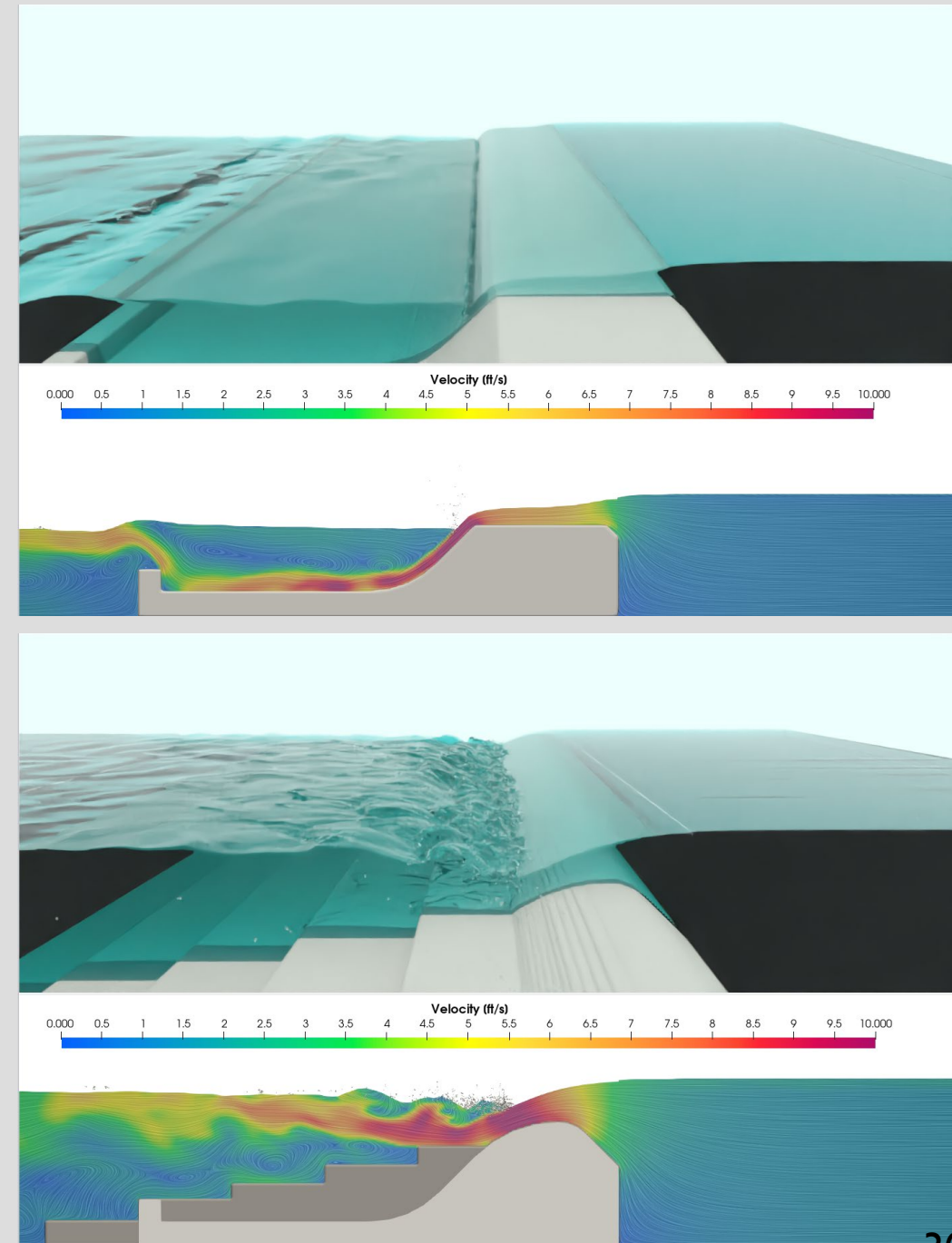
**WATER SURFACE ELEVATIONS DURING
AVERAGE RIVER FLOWS**

PERFORMANCE OF ALTERNATIVES

Safety:

Full removal best eliminates public hazard

Steel modification removes roller



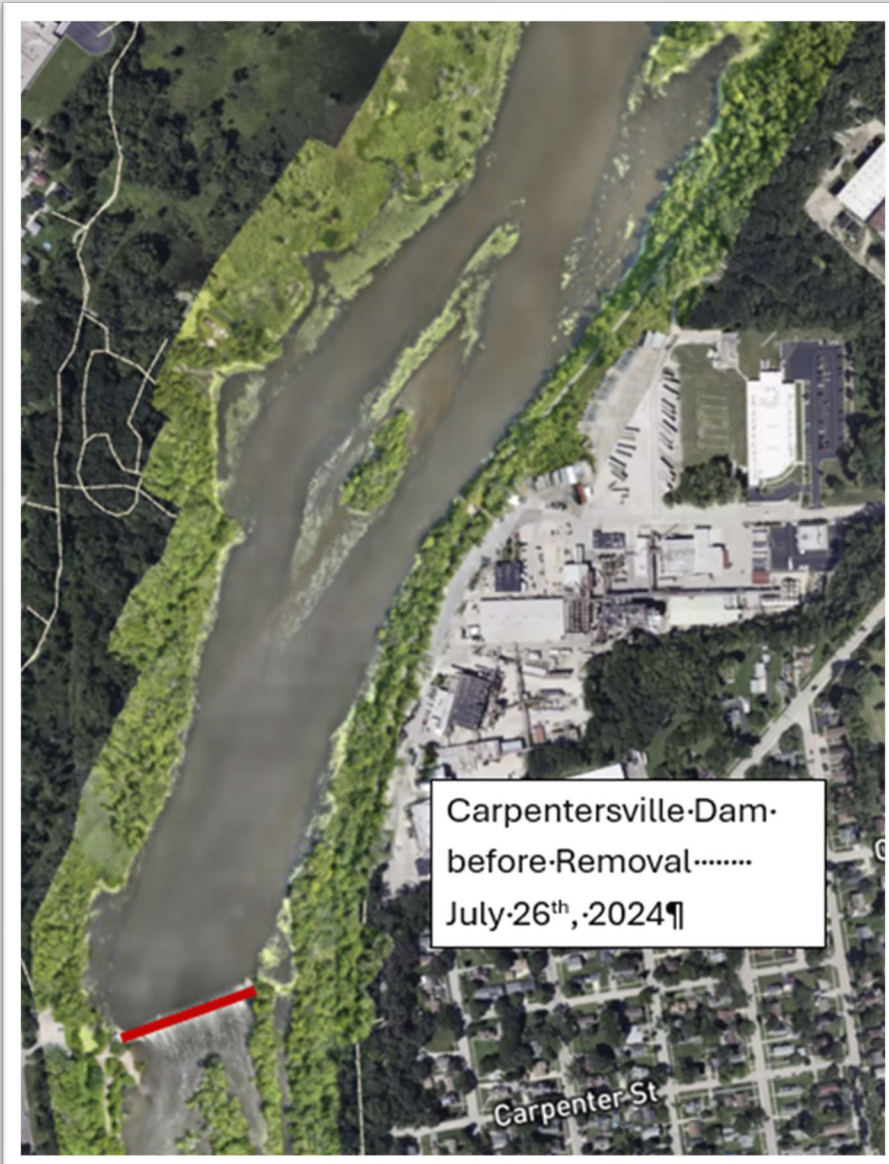
	<u>Do Nothing</u>	Full Removal of Spillway – Sears and Steel	Full Removal of Spillway –Sears Modification of Spillway – Steel (Stepped Concrete Spillway)	Full Removal of Spillway –Sears Modification of Spillway – Steel (Rock Ramp Spillway)	Full Removal of Spillway –Sears Modification of Spillway – Steel (Stepped Concrete Spillway) North Channel Riffles	Full Removal of Spillway –Sears Modification of Spillway – Steel (Stepped Concrete Spillway) South Channel Fish Passage
Evaluation Criteria	Alternative 0 (Do Nothing)	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Cost (OPCC)	\$0	\$10.97 M	\$15.93 M	\$11.24 M	\$24.14 M	\$19.81 M
	Alternative 0 (Do Nothing)	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Evaluation Criteria: 1 (low/negative) to 5 (high/positive) *						
Dam Safety	1	5	3	3	3	3
Maintenance	1	5	4	3	2	2
Pool Preservation	5	1	3	3	4	2
Sediment Management	5	1	3	3	4	3
Recreational Considerations	1	4	2	2	1	3
Aquatic Habitat Improvement	1	5	3	3	3	4
Environmental Considerations	1	4	3	2	3	3
Permitting Considerations	2	3	2	2	2	3
Cost	5	4	3	4	1	2
Rating Total	22	32	26	25	23	25

EVALUATION OF ALTERNATIVES: RATING MATRIX

Example Dam Removals

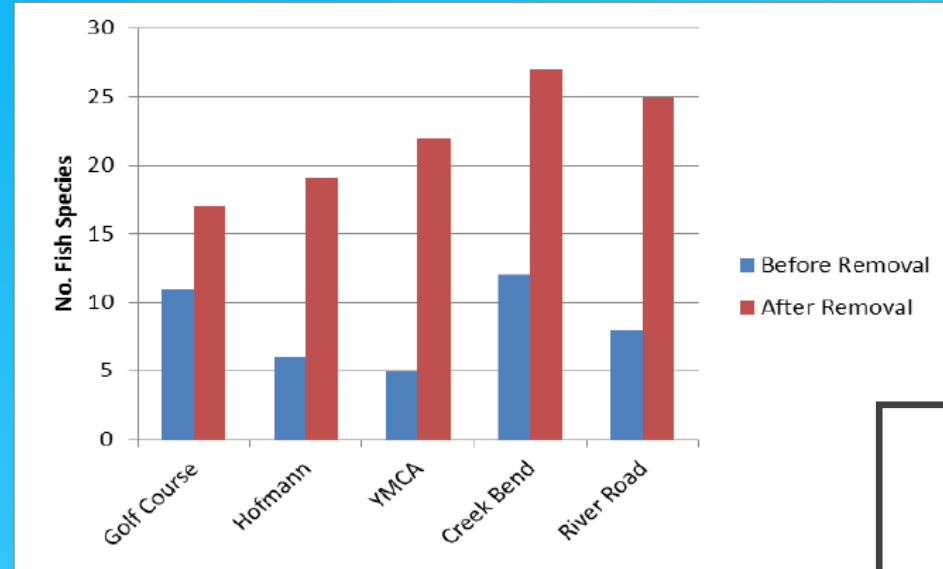
Carpentersville Dam Removal Project

Fox River

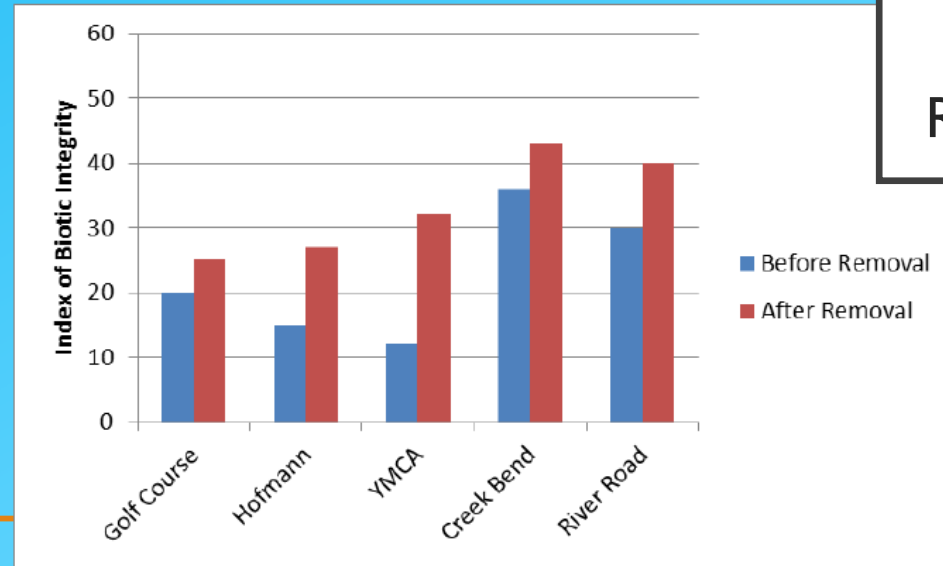
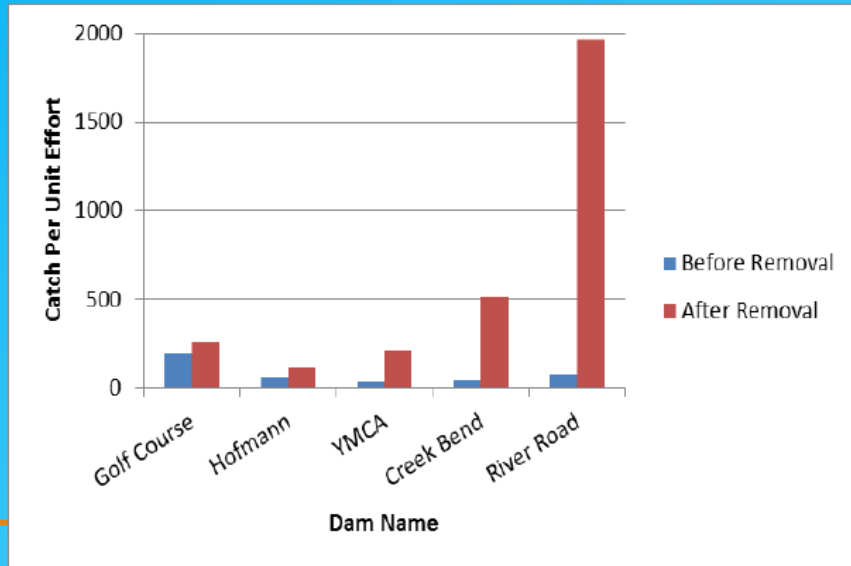


POST REMOVAL:

- 3X increase in no. fish species
- 8X increase in total fish
- 40% improvement in IBI



BEFORE
AND
AFTER
DAM
REMOVAL



MOVING FORWARD

- Comment Period through **March 31, 2026**
- All comments and responses will be included in the report appendix
- Final Report will be published by the end of June 2026
- Further Coordination to Determine the Next Steps

PARTNERS



Illinois
Department of
**Natural
Resources**



DTW and Associates, LLC



Danville Dam Post Removal



Des Plaines River – Dam I Post Removal



Thank You!

- Wes Cattoor
Wes.Cattoor@illinois.gov
OWR, Acting Division Chief
- Terra McParland
Terra.McParland@illinois.gov
OWR, Acting Engineering Studies Chief

Please Email Questions or
Comments:

DNR.OWRPlanning@illinois.gov