



**LAND&WATER  
RESOURCES  
DEPARTMENT**

# **Green Infrastructure Implementation**

## 2025 BECWA Earth Day Forum

James Brodzeller, Watershed Coordinator

February 25, 2025





# Reference Reach



- Intact riffle pool sequences
- Coarse substrate
- Robust riparian vegetation
- Well-connected floodplain
- In-stream habitat variety



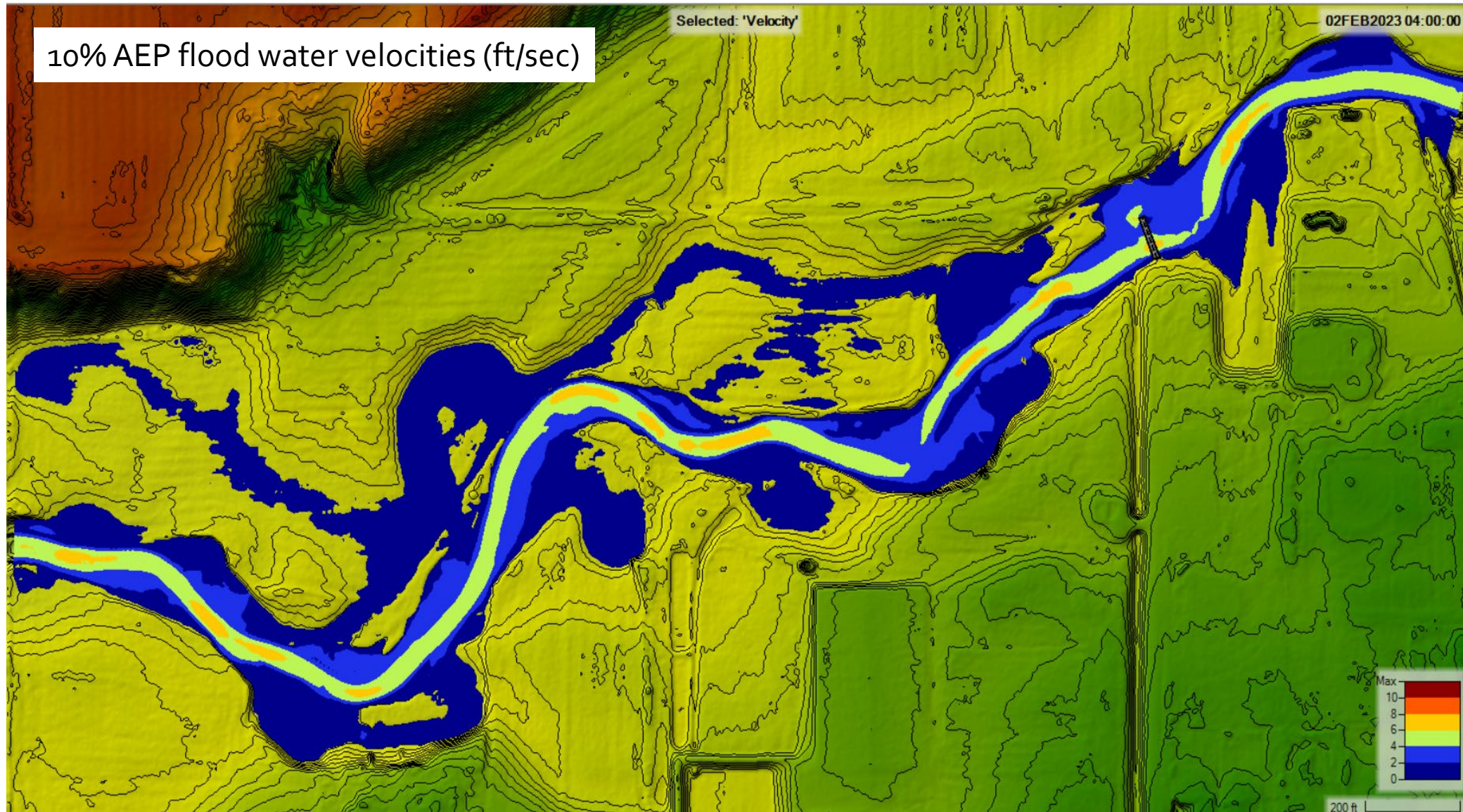
# Walking Iron Project Reach



- High banks
- Uniform depth, flow
- Homogenous bedform
- Aggradation & widening
- No large wood/habitat features
- Limited riparian buffer
- Channelized



# Flood Flows



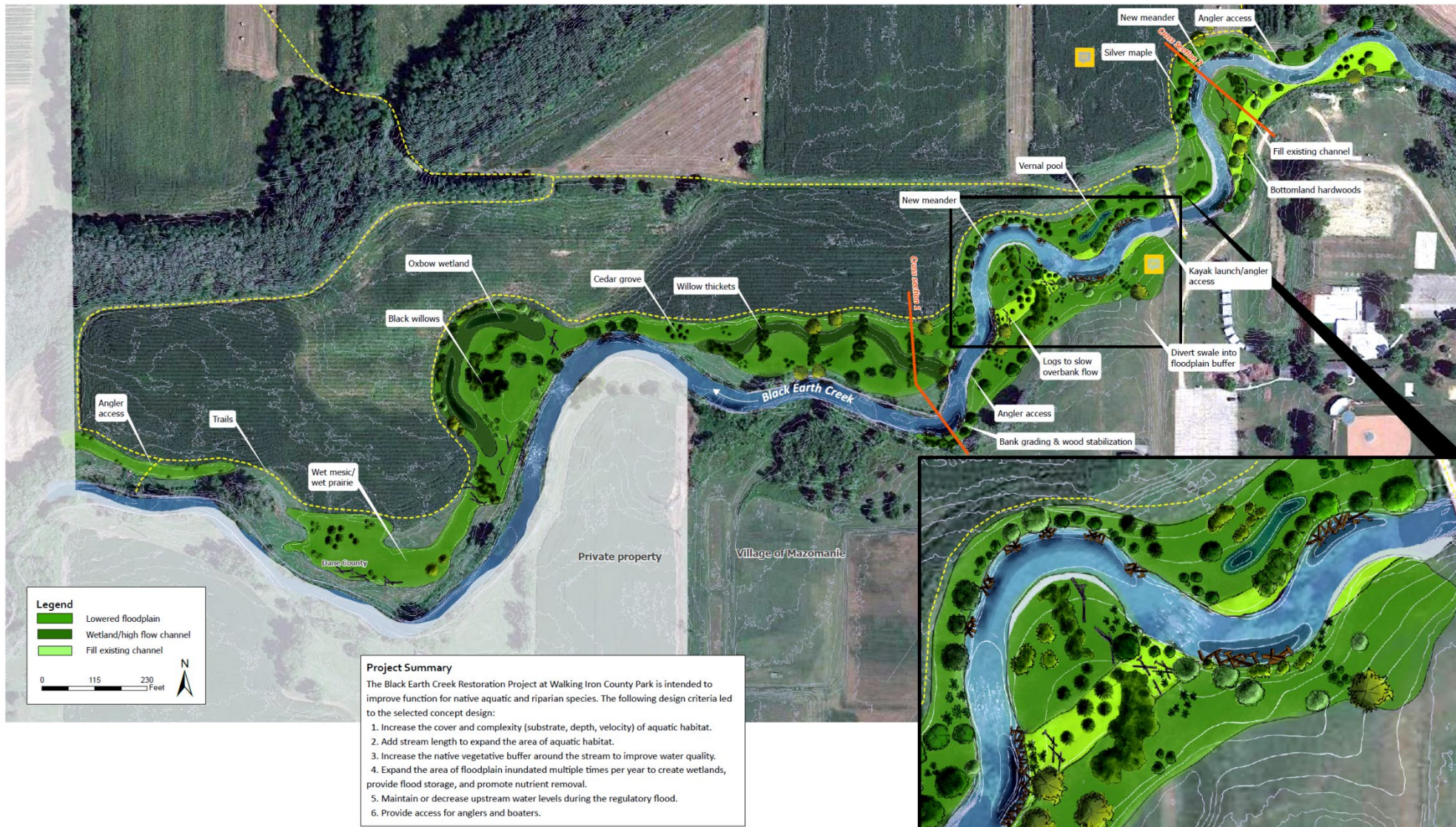
Credit: Fish Creek Restoration



# Concept Plan



## Black Earth Creek Restoration at Walking Iron County Park - Concept Design





# Timber Harvest



- Winter 2024
- Remove black locust to restore oak savanna
- Pre-project harvest to prevent resprouts



# Floodplain Excavation



- Remove post-settlement alluvium
- Depth of cut 1-6'
- Spoils disposed in crop field to be restored to prairie



# Floodplain Wood



- Slow and spread flood flows
- Increase infiltration
- Trap sediment and debris
- 32 trees, 64 log piles



# Channel Realignment & Angler Access



- 4 meanders
- Pool development
- Gravel bars



# Large Wood



- 530 pieces
- Multiple tiers
- Pack with slash
- Boulder accents



# Riffles



- 7 sections
- Keyed in to banks



# Fabric Encapsulated Soil Lifts



- High energy bends
- Assure stabilization
- Counter buoyant forces of bank wood



# Overflow Channel



- Invert near bankfull
- Activate multiple times per year
- Disperse high flows



# Before & After



- Upstream/east of pedestrian bridge
- Channel realigned north



# Before & After



- Downstream/west of pedestrian bridge
- Channel realigned south and north



# Before & After



- Upstream reach



# Before & After



- Central reach



# Before & After



- Downstream reach



# More Than Just Fish

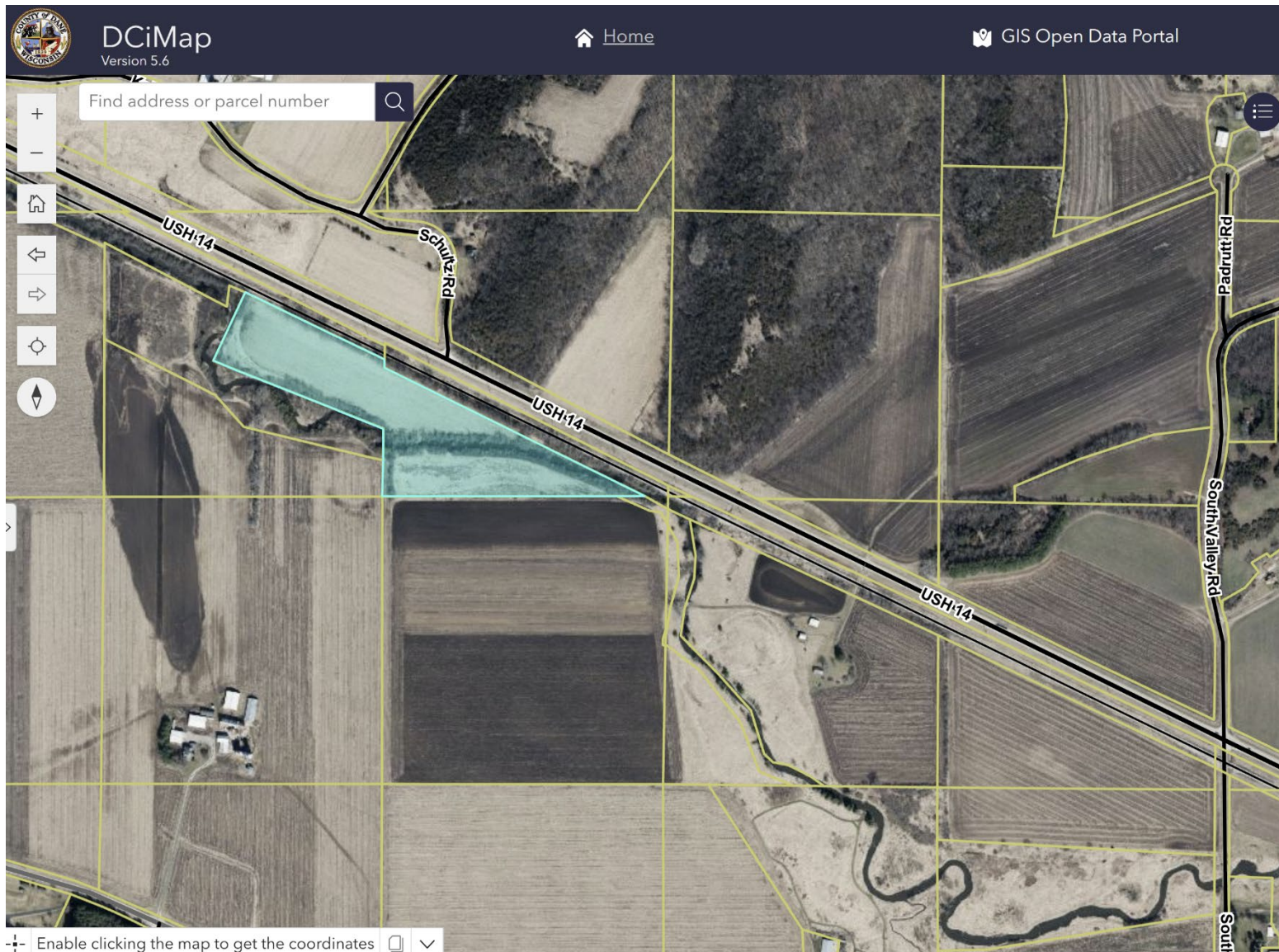


Credit: Marty Melchior

- Water trail enhancement
- Equitable access
- Flood abatement
- Water quality protection
- Pollinator, wetland habitat



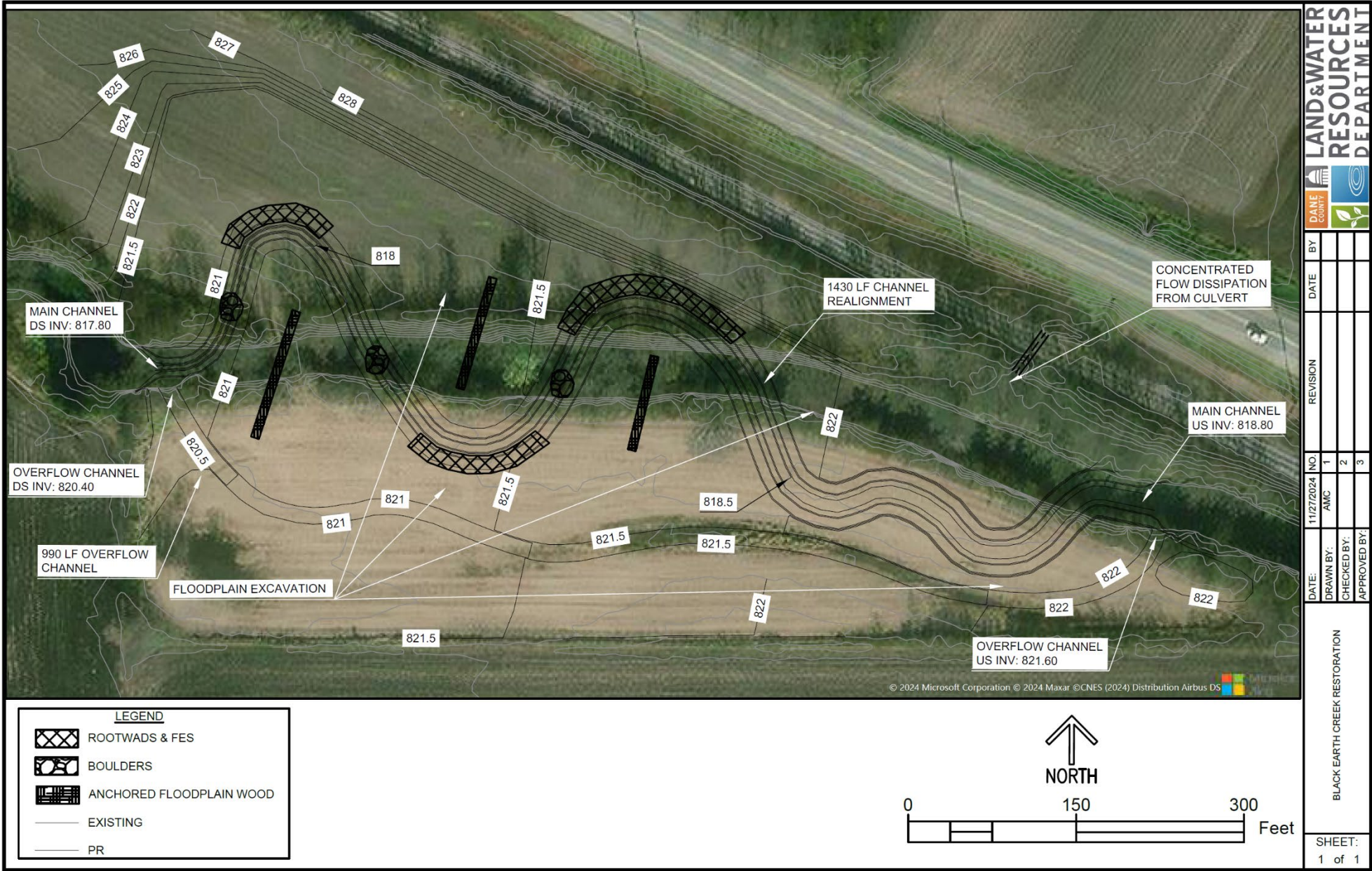
# Constructing in 2026



- Former SRR Properties
- 14 acres
- 1050' reach
- Channelized during construction of USH 14
- Adjacent to Pine Quarry Farm and DNR land

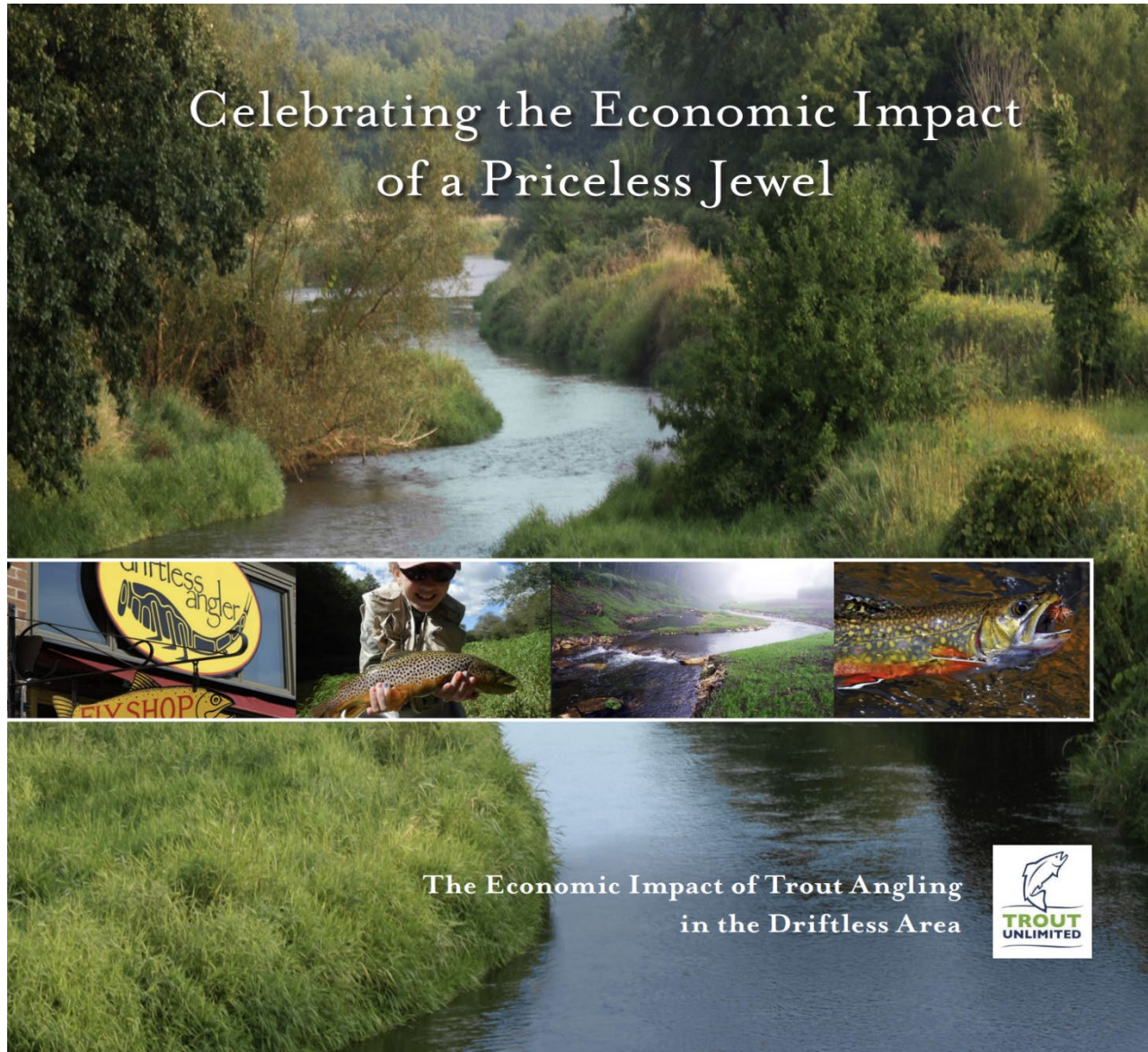


# Constructing in 2026





# Funding & Cost Benefit



Credit: Trout Unlimited



Pre-Disaster Flood Resilience Grant  
Implementation Grant Scoring  
Wis. Stats. 323.63



- \$250,000 grant awarded for next project on Black Earth Creek
- Utilized TU economic impact report
- Ecosystem services valued at \$593,175 per year, just in terms of infrastructure protection (FEMA)





# THANK YOU



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## Contact Information

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