MID-OHIO REGIONAL
MORPC
PLANNING COMMISSION

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CENTRAL OHIO BLUEWAYS ADVISORY PANEL
MID-OHIO REGIONAL PLANNING COMMISSION

HYBRID MEETING
August 9, 2023, 10:30 AM to 12:00 PM

AGENDA

Welcome & Purpose
Jonathan Miller opened the meeting with a welcome and a brief overview of the agenda. Jonathan acknowledged the contributions of intern Mara Villaseca, who had recently completed a project on trailhead typologies. The purpose of the meeting was to explore the ecological and safety implications of large woody debris (LWD), review access point design considerations, discuss updates to the partnership agreement, and identify potential advisory panel projects.

PRESENTATION: Woody Debris
Anthony Sasson, Midwest Biodiversity Institute, delivered a detailed presentation on large woody debris (LWD), emphasizing its ecological value and implications for paddling safety. LWD includes logs, branches, stumps, and other woody materials that naturally occur in stream channels. Anthony explained that LWD is essential for stream health, providing habitat for fish and other wildlife, stabilizing streambanks, and contributing to overall biodiversity. He clarified the term “strainers” as obstructions that paddlers might encounter and stressed the importance of paddler education and safety practices, such as avoiding high water conditions and wearing life jackets. Anthony also addressed misconceptions about LWD removal, noting that unnecessary removal can degrade stream quality and contradict restoration efforts. He referenced Ohio’s QHEI (Qualitative Habitat Evaluation Index) as a tool that links LWD presence to stream health.

Access Point Design Considerations
Jonathan presented findings from various guidance documents, particularly from the Iowa Department of Natural Resources, on best practices for designing waterway access points. He emphasized that access point design must be context-specific, considering factors such as slope, location, user type, and environmental impact. Key considerations included:

- Siting and Slope: Favoring naturally suitable locations with low slopes and avoiding outside bends prone to erosion.
- Parking and Staging: Designing lots to manage stormwater runoff and incorporating vegetative buffers and infiltration trenches.
- Walking Trails: Following topography and using trail designs that minimize erosion.
- Materials: Selecting materials based on accessibility needs and site conditions, including natural surfaces, stair-step designs, and concrete options.

DISCUSSION: Advisory Panel Projects
Jonathan initiated an open discussion on potential advisory panel projects. Member Weis proposed developing a set of standardized access point typologies (e.g., six models) that could be used statewide. These would include design criteria for different contexts and could be supported by grant funding. Members agreed this approach would help streamline future access point development and improve grant application success. Members also discussed the importance of including parking design and informational signage in these typologies. A survey will be distributed to prioritize project ideas and gather feedback on potential panelists for the Summit on Sustainability.

Partnership Agreements: Updated Draft
Jonathan reviewed updates to the partnership agreement draft based on prior feedback:

- Pickaway County was added as a participating entity.
- "Scenic Places" was revised to "Scenic Waterways."
- Appendix A map legend was clarified to indicate public access points.
- Language was updated to clarify that jurisdictions without public access points are not required to sign the agreement, though they will remain informed.

Summit on Sustainability: Blueways
Jonathan shared details about the upcoming Summit on Sustainability, scheduled for October 26, 2023, at the Hilton Columbus Downtown. The Blueways session will be titled "Navigating the Balance Between Ecology and Recreation" and will feature a panel discussion. The goal is to explore how to promote outdoor recreation while preserving ecological integrity. Jonathan requested suggestions for panelists and sponsors. REI has been contacted as a potential sponsor, and additional outreach is ongoing.

Wrap-Up & Next Steps
Jonathan summarized the next steps:

- Distribute updated partnership agreement drafts.
- Send out a survey to prioritize advisory panel projects and gather panelist recommendations.
- Share the presentation and access point design resources.

Adjourn

Please Notify Lynn Kaufman at lkaufman@morpc.org if you will not be able to attend this meeting, or if you require special assistance.

The next Central Ohio Blueways Advisory Panel Meeting will be Wednesday, September 13, 2023 at 10:30 AM, and will be held as Hybrid.

Mid-Ohio Regional Planning Commission
Hybrid Meeting

Central Ohio Blueways Advisory Panel Meeting

August 9, 2023

Members Present

- Mark Allen, ODNR
- Aryeh Alex, City of Columbus
- Shelly Beiting, RAPID 5
- Maria Conroy, OSU
- Julia Cumming, Madison Soil and Water Conservation District
- Tom Davis, Pickaway County Park District
- Tatiana Parfenova, Metroparks
- Anthony Sasson, Midwest Biodiversity Institute
- Dan Weis, T&M Associates

Staff Present

- Jonathan Miller
- Jennifer Noll
- Mara Villaseca

CENTRAL OHIO BLUEWAYS

ADVISORY PANEL

JULY 11, 2023

MID-OHIO REGIONAL PLANNING COMMISSION

AUGUST 9, 2023 AGENDA

I. Welcome & Purpose

II. PRESENTATION: Large Woody Debris

III. Access Point Design Considerations

IV. Partnership Agreements: Updated Draft

V. DISCUSSION: Advisory Panel Projects

VI. Summit on Sustainability: Blueways

VII. Wrap-Up & Next Steps

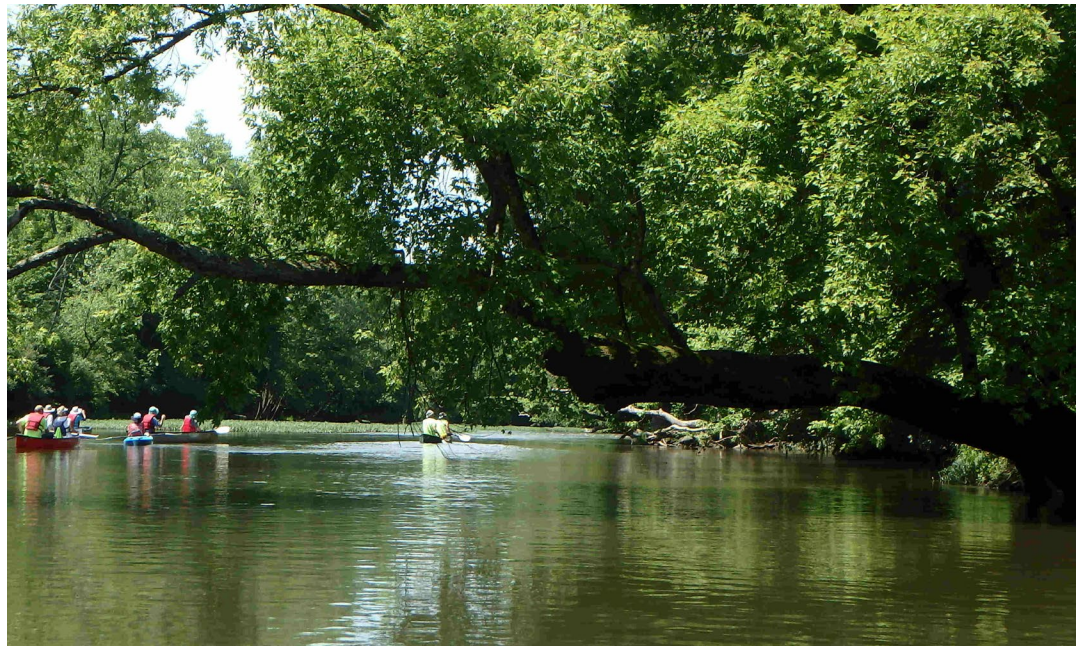
VIII. Adjourn

MORPC

CENTRAL OHIO BLUEWAYS

Large woody debris, protecting stream ecology and paddling safety

- What is Large Woody Debris (LWD);
  - what is a “strainer”
- Paddling safety
- Ecological value of Large Woody Debris in streams
  - Stream habitat and stream health
  - Missing or removing LWD is part of the “urban stress syndrome”
- Ohio references



Anthony Sasson, Midwest Biodiversity Institute August 9, 2023

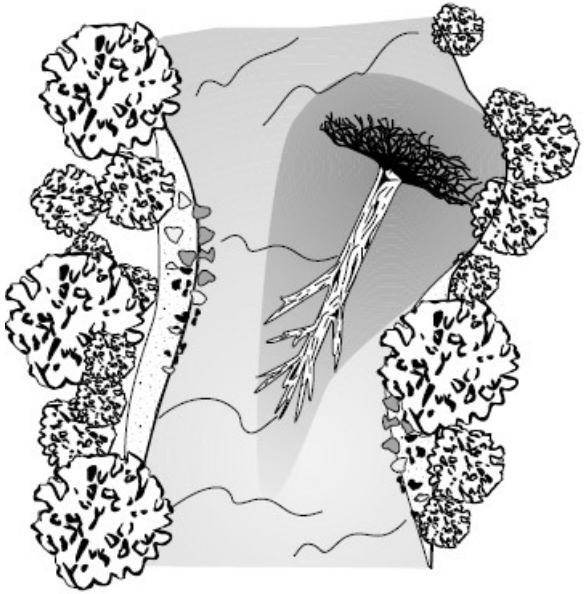
Large woody debris, protecting stream ecology and paddling safety

Large Woody Debris (LWD) refers to:

- "all wood naturally occurring or artificially placed in streams including branches, stumps, logs and logjams.
- Almost all LWD in streams is derived from trees located in the riparian corridor."
- "LWD is an essential component of a healthy stream's ecology and is beneficial"
- Source: Ohio Stream Management Guide, Large Woody Debris in Streams, Guide No. 21
- Also will refer to streambank/riparian trees, shrubs, branches - live and dying/dead
- Can mean "strainers" that paddlers might float into

Large woody debris, protecting stream ecology and paddling safety

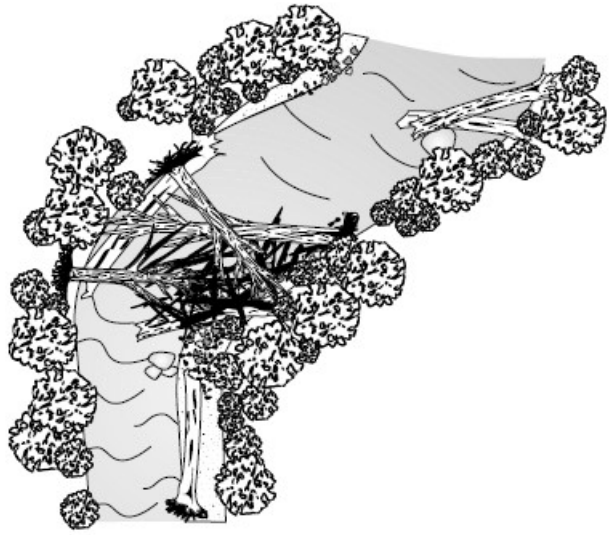
Large Woody Debris (LWD)



Source: Ohio Stream Management Guide, Large Woody Debris in Streams, Guide No. 21

Large woody debris, protecting stream ecology and paddling safety

Large Woody Debris (LWD)



Source: Ohio Stream Management Guide, Large Woody Debris in Streams, Guide No. 21

Large woody debris, protecting stream ecology and paddling safety

What is Large Woody Debris in streams?

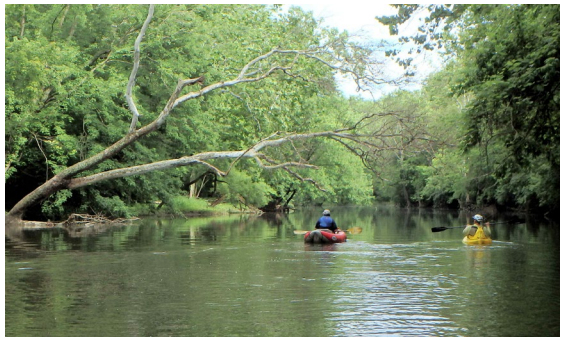
Large woody debris, protecting stream ecology and paddling safety

What is Large Woody Debris in streams?

Large woody debris, protecting stream ecology and paddling safety

Large Woody Debris (LWD) (my definition) includes:

- ✓Logjams
- ✓Logs
- ✓Strainers
- ✓Leaning trees
- ✓Streambank trees
- ✓Overhanging branches
- ✓Streambank shrubs



Large woody debris, protecting stream ecology and paddling safety

- Large Woody Debris (LWD) = logs, whole trees, shrubs, branches, “strainers” in the stream channel
- Can temporarily be above the channel (suspended above the water surface)
- Can be brief (one day) or multi-year location
- Ephemeral/temporary (eventually goes away or moves; mapping is impractical or misleading)

Large woody debris, protecting stream ecology and paddling safety

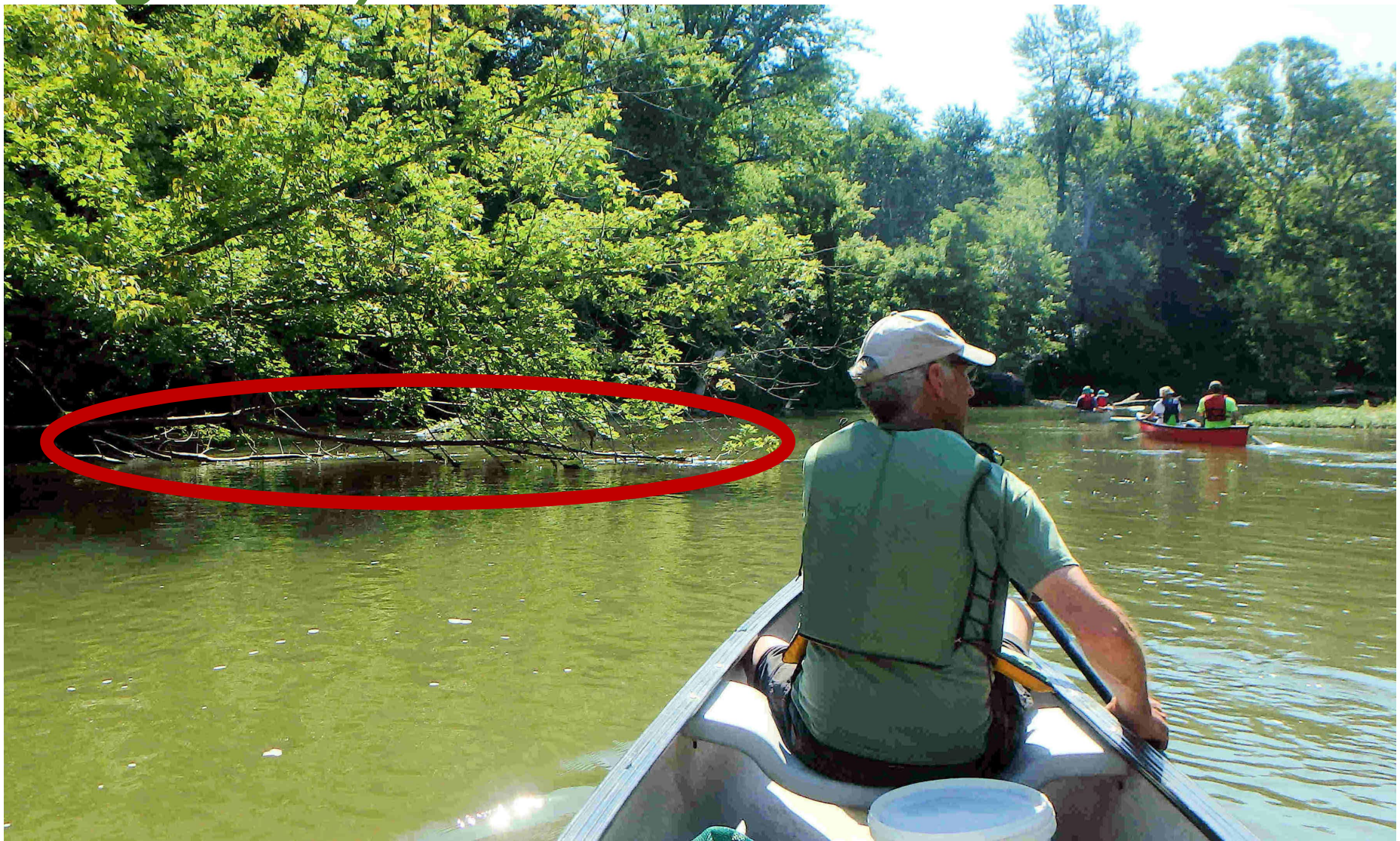
Large woody debris, protecting stream ecology and paddling safety

Big Darby Creek, Union County (~70 miles upstream and too small for regular paddling)

Large woody debris, protecting stream ecology and paddling safety

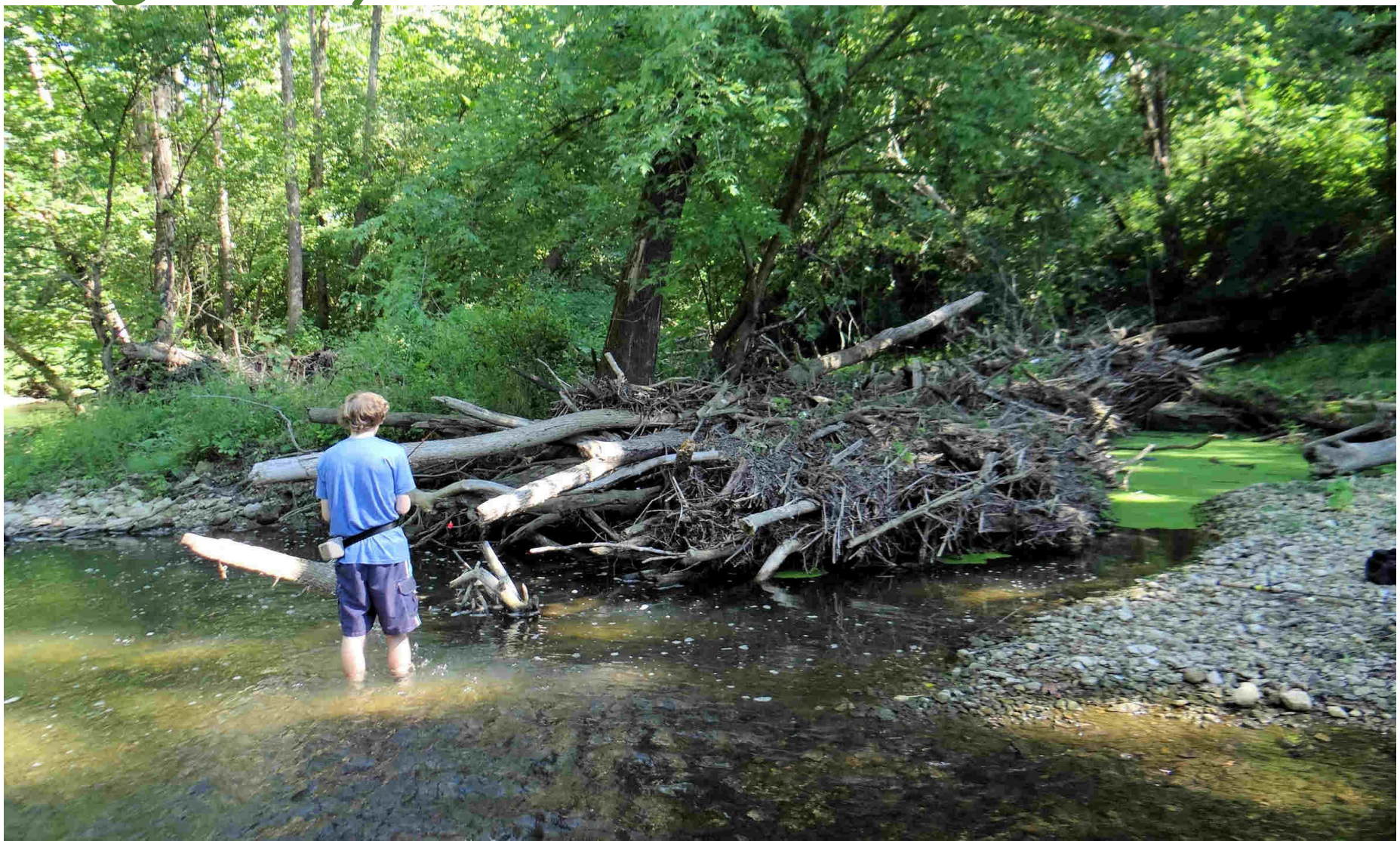
Remove this “strainer?”

Large woody debris, protecting stream ecology and paddling safety



Large woody debris, protecting stream ecology and paddling safety

Fishing



Large woody debris, protecting stream ecology and paddling safety

Fishing

Large woody debris, protecting stream ecology and paddling safety

Bank protection

Large woody debris, protecting stream ecology and paddling safety

Bank protection

Large woody debris, protecting stream ecology and paddling safety

When paddling, know how to deal with Large Woody Debris or "strainers"

Safety first!

Large woody debris, protecting stream ecology and paddling safety

Main points:

- Safety first
  - Be prepared; Get paddling instruction. Know how to paddle competently and safely; Wear PFDs; etc.
  - Know what a "strainer" is and how to avoid them
  - Do not paddle during high water events/floods (Check USGS gauge website for Ohio or related apps (e.g., "River Level" app) for high flow)
  - Know how to swim; Do not paddle alone or intoxicated

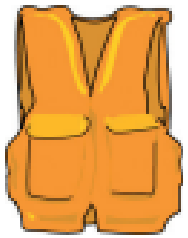
- Be aware of, understand and avoid large woody debris (LWD)/strainers/riparian trees while paddling

- Be aware of the positive ecological value of LWD, such as for good fish habitat
- Removal usually results in a negative impact on stream quality
- Minimize LWD removal

Large woody debris, protecting stream ecology and paddling safety

Safety First! American Canoe Association advice:

Type III—Flotation Aid
These lifejackets are generally considered the most comfortable, and are recommended for paddlesports



- Wear it Like a Pro
- The first sign of a rookie paddler is someone who isn't wearing a life jacket. Experienced paddlers wear life jackets whenever they're on the water.

- Don't Tempt the Odds
- Don't be a statistic. Wear your life jacket (PFD).
- 85% of fatal canoeing accidents and
- 48% of kayaking fatalities

  involve people who were not wearing a life jacket.

Type V "PFD"

Large woody debris, protecting stream ecology and paddling safety

Safety – Be prepared (trained!) first. Know your stuff – don't wing it!

- Watch the 8-part Safe Paddling Video Series, and find paddling tips, gear lists and IMMERSION safety resources from Canoe & Kayak magazine, the ACA Canoe-Kayak-SUP-Raft Rescue and the United States Coast Guard.
- https://www.boat-ed.com/ohio/studyGuide/Safety-While-Paddling/10103602_42994/
- https://www.boat-ed.com/ohio/studyGuide/River-Hazards/10103602_42995/
- canoekayak.com/safety
- americancanoe.org/instruction
- uscgboating.org
- nasbla.org/education

Large woody debris, protecting stream ecology and paddling safety

Safely Avoiding Large Woody Debris (LWD) in streams while paddling

- Always paddle with more experienced people who are at least at an intermediate skill level (safety-conscious, many float trips experience, know canoe strokes, can roll a kayak, always wear PFDs, whitewater experience, etc.). Accept and practice safety advice from these paddlers. Take paddling lessons/instruction. Know the flow level before going.
- Do NOT paddle at high water levels (check USGS stream flow gauge; brown/muddy water, flooding into floodplain, debris floating downstream, etc.) Avoid above median flow levels or when you seen the water flowing into the floodplain.
- Know how to recognize LWD/strainers in streams from upstream, and well in advance
- Know how to position and maneuver a boat well in advance to avoid LWD/strainers – practice paddling strokes and boat maneuvers that establish competent boat control
- Check the flow level! USGS gauges for Ohio, USGS Current Water Data for Ohio, Daily Streamflow Conditions: https://waterdata.usgs.gov/oh/nwis/rt Avoid paddling and practice safety precautions when flows are above median levels for the date, or when you see the water flowing into the floodplain or among trees along the bank.

Large woody debris, protecting stream ecology and paddling safety

Do not paddle when the stream is flooded or there is too much flow (check USGS gauge or flow apps)

Large woody debris, protecting stream ecology and paddling safety

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Large woody debris, protecting stream ecology and paddling safety

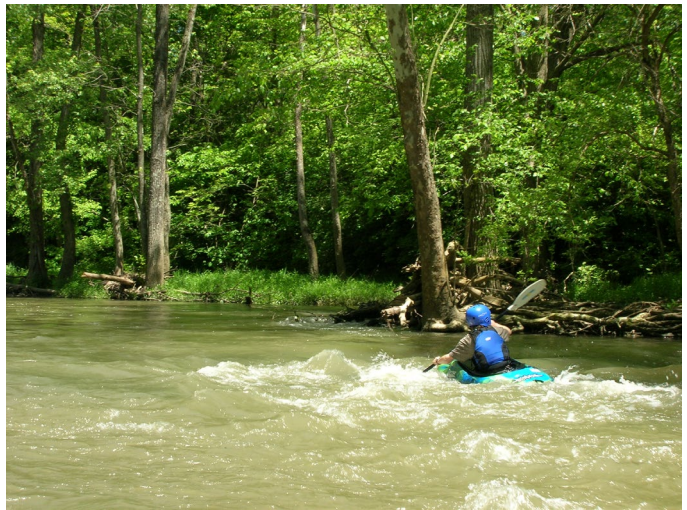
Do not paddle
when the stream is flooded
or there is too much flow
(check USGS gauge
or flow apps)

LWD in floodplain

Photo: C. Staudt

Large woody debris, protecting stream ecology and paddling safety

- Expect LWD/strainers/riparian trees to be present on any paddling trip on a stream/river
- These features are mobile and “come and go” – they are always appearing, reappearing and moving
- Mapping them is not practical; expect that they will be present somewhere and know how to avoid them when paddling



La… …gy an…

- Ex… …
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Large woody debris, protecting stream ecology and paddling safety

- Bridge log jams
- Feel free to cut/remove
- Created by bridge piers in stream (and often people cutting trees/logs)

Big Darby Creek – Photo credit Staudt

Large woody debris, protecting stream ecology and paddling safety

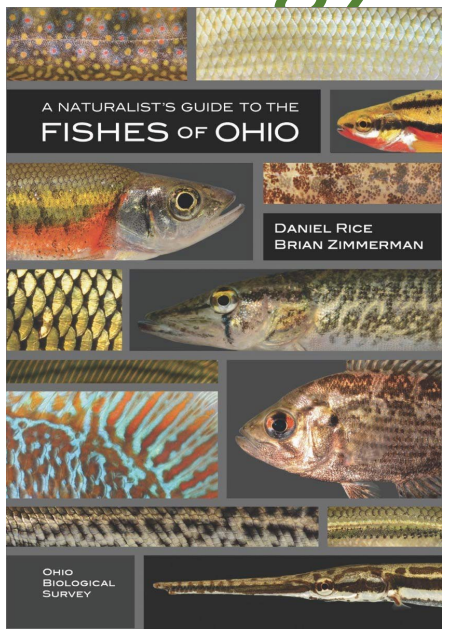
- Bridge log jams
- Feel free to cut/remove
- Created by bridge piers

in stream (and often people cutting trees/logs)

Alum Creek –
Photo credit Roseman

Large woody debris, protecting stream ecology and paddling safety

Ecological value of Large Woody Debris in streams

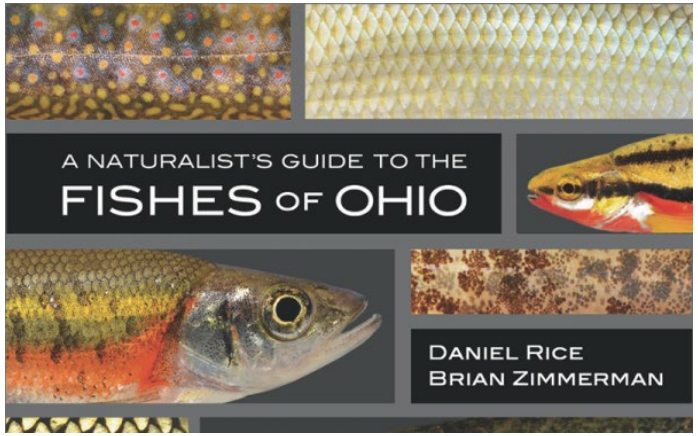


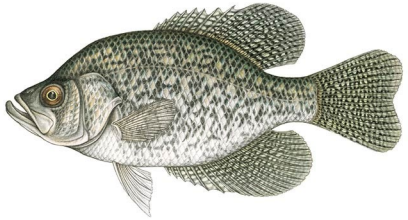
- Rice and Zimmerman book, “A Naturalist’s Guide To The Fishes of Ohio” http://www.ohiobiologicalsurvey.org/pub_highlight/

Large woody debris, protecting stream ecology and paddling safety

The ecological value of LWD

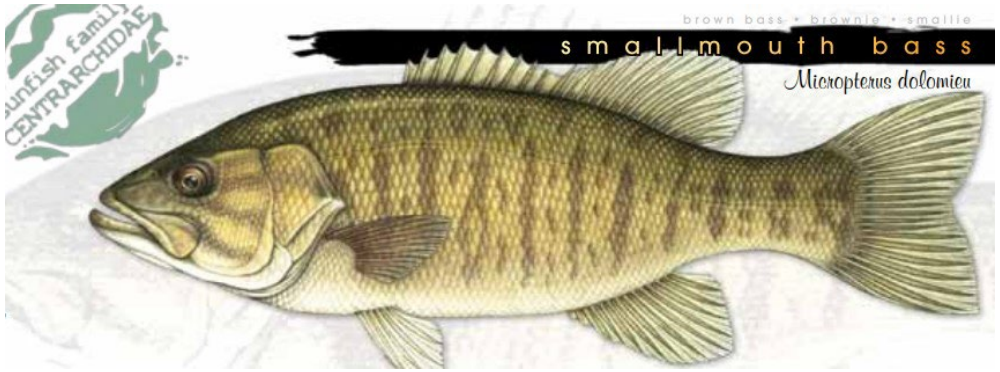
- Key habitat according to Rice and Zimmerman (2019) “A Naturalist’s Guide to the Fishes of Ohio” (e.g., pg 4)
- LWD can provide habitat for popular sportfish such as catfish, crappie, sunfish and bass – and a good place to fish





Large woody debris, protecting stream ecology and paddling safety

- **Fish habitat value of LWD**
- Fish need places to rest, escape predators and find prey to eat
- Logs, log jams, woody debris, overhanging trees and shrubs (and branches) provide fish habitat (and other species habitat)
- Sport fish often are found near LWD – catfish, crappie, sunfish, bass



Source: A Naturalists' Guide to the Fishes of Ohio – Rice and Zimmerman; Graphics - ODNR

Large woody debris, protecting stream ecology and paddling safety

Restoring Large Woody Debris to Streams

Terry Zapzalka 1997

Attitudes have changed about LWD and its removal

- The role of large woody debris in streams has become better understood in recent years. **Large woody debris (LWD) is an important structural and functional component of stream ecosystems** (Ramquist 1995, Richmond and Fausch 1995). LWD can consist of a wide range of types and sizes including logs, coarse roots, and smaller branches (Ramquist 1995). Research over the past two decades has shown that **LWD improves fish habitat by increasing types and sizes of pools, sediment storage, and scour** (Skaugset et al. 1996).

Large woody debris, protecting stream ecology and paddling safety

Logs provide habitat for basking turtles

Photo: C Staudt

Large woody debris, protecting stream ecology and paddling safety

Logs provide habitat for basking snakes

Photo: C Staudt

Large woody debris, protecting stream ecology and paddling safety

Predatory bird perches (e.g., herons)

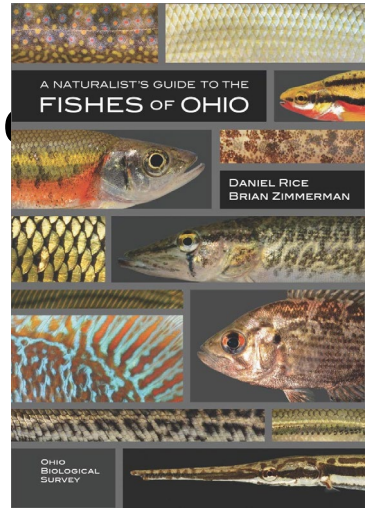
Large woody debris, protecting stream ecology and paddling safety

Removal or cutting of LWD and strainers can damage stream health

- Why? LWD forms important fish and macroinvertebrate habitat and partially protect streambanks from erosion.
- ODNR Guide 21 Large Woody Debris in Streams

https://ohiodnr.gov/static/documents/water/WIPP/21%20-%20Large%20Woody%20Debris%20in%20Streams.pdf

- Rice and Zimmerman book, “A Naturalist’s Guide To The Fishes of Ohio” http://www.ohiobiologicalsurvey.org/pub_highlight/



Large woody debris, protecting stream ecology and paddling safety

What is Large Woody Debris in streams?

- LWD: Trees, logs and large branches that have fallen into streams
  - Ecological value:
    - Forms fish habitat; helps create more diverse aquatic habitat and fish and macroinvertebrate communities – These are healthier, more biodiverse streams
    - Forms important spawning habitat for some fish species
    - Helps stabilize/protect streambanks
    - Riparian trees provides shade (don’t cut “leaners” or shrubs)
    - Provides perches and basking for birds and reptiles

Large woody debris, protecting stream ecology and paddling safety

Removal or cutting of LWD and strainers can damage stream health

- Why?
  - LWD forms important fish and macroinvertebrate habitat and partially protect streambanks from erosion.
  - Positive value of LWD is supported by 40+ years of stream data collection in Ohio
  - QHEI (Qualitative Habitat Evaluation Index) – Standard used to score stream habitat by Ohio EPA and others

https://epa.ohio.gov/static/Portals/35/documents/QHEIManualJune2006.pdf

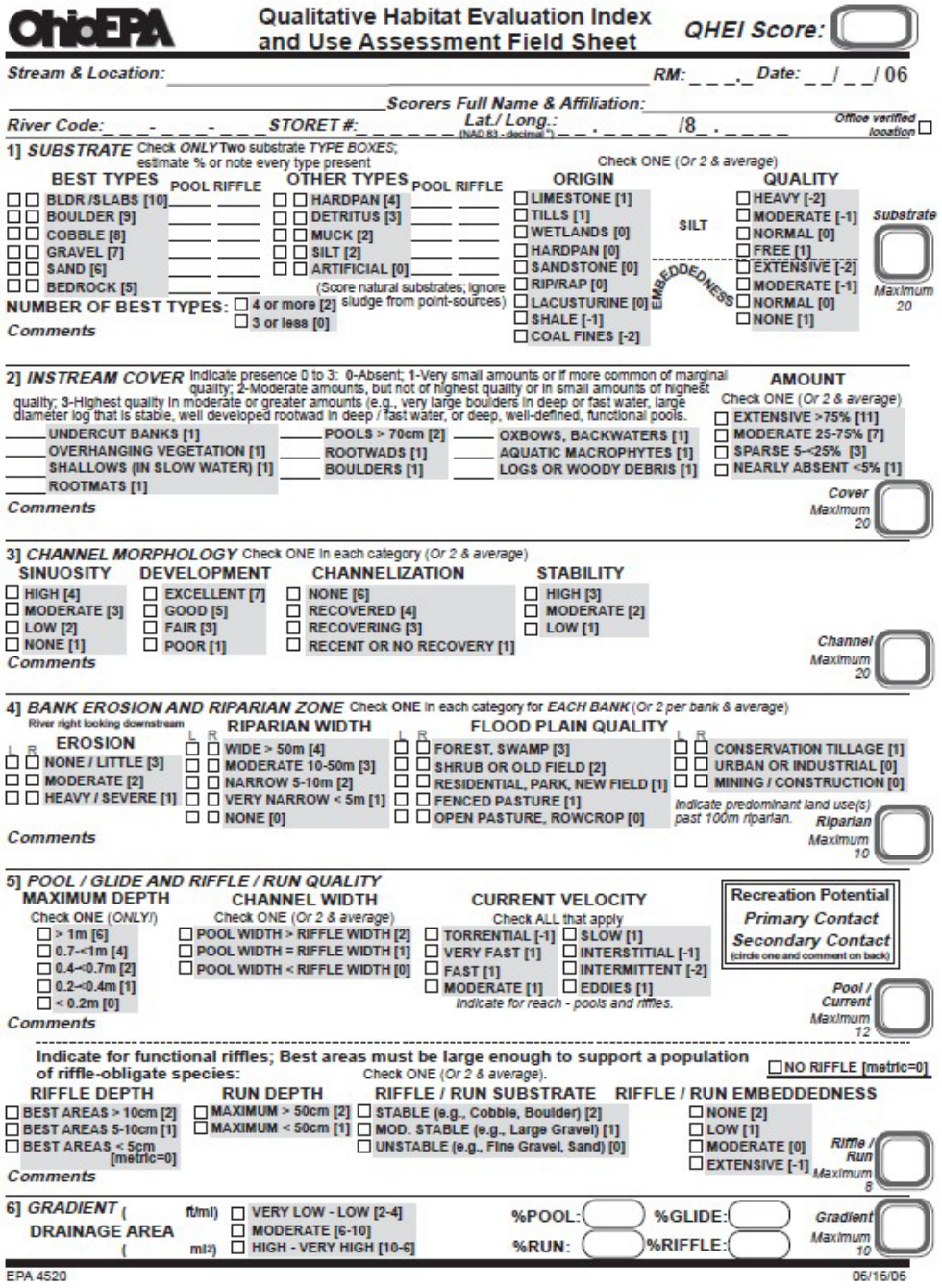
  - LWD quality and amount affects QHEI and therefore stream quality

Large woody debris, protecting stream ecology and paddling safety

- QHEI (Qualitative Habitat Evaluation Index) – Standard used to score stream habitat
- QHEI is highly positively correlated with stream biology and quality
- LWD quality and amount affects QHEI and therefore stream quality
- "LWD" and related components of QHEI:
  - Logs or woody debris
  - Overhanging vegetation
  - Rootwads
  - Rootmats, undercut banks
- Less LWD = Lower stream quality

Ohio's QHEI stream habitat form

- LWD is important for stream habitat and quality ("water quality")
- LWD quality and amount affects QHEI scores and therefore stream quality



OhioEPA

Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score:

Stream & Location: RM: _ _ . _ Date: _ _ / _ _ / 06

Scorers Full Name & Affiliation:

River Code: _ _ _ - _ _ _ - _ _ _ STORET #: _ _ _ _ _ _ _ Lat./ Long.: (NAD 83 - decimal °) _ _ . _ _ _ _ _ /8_ . _ _ _ _ Office verified location ☐

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR/SLABS [10]			☐☐ HARDPAN [4]		
☐☐ BOULDER [9]			☐☐ DETRITUS [3]		
☐☐ COBBLE [8]			☐☐ MUCK [2]		
☐☐ GRAVEL [7]			☐☐ SILT [2]		
☐☐ SAND [6]			☐☐ ARTIFICIAL [0]		
☐☐ BEDROCK [5]			(Score natural substrates; ignore sludge from point-sources)		

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☐ 3 or less [0]

ORIGIN	EMBEDDEDNESS	QUALITY
☐ LIMESTONE [1]	SILT	☐ HEAVY [-2]
☐ TILLS [1]		☐ MODERATE [-1]
☐ WETLANDS [0]		☐ NORMAL [0]
☐ HARDPAN [0]		☐ FREE [1]
☐ SANDSTONE [0]		☐ EXTENSIVE [-2]
☐ RIP/RAP [0]		☐ MODERATE [-1]
☐ LACUSTURINE [0]		☐ NORMAL [0]
☐ SHALE [-1]		☐ NONE [1]
☐ COAL FINES [-2]		

Substrate Maximum 20

Comments

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

			AMOUNT
____ UNDERCUT BANKS [1]	____ POOLS > 70cm [2]	____ OXBOWS, BACKWATERS [1]	Check ONE (Or 2 & average)
____ OVERHANGING VEGETATION [1]	____ ROOTWADS [1]	____ AQUATIC MACROPHYTES [1]	☐ EXTENSIVE >75% [11]
____ SHALLOWS (IN SLOW WATER) [1]	____ BOULDERS [1]	____ LOGS OR WOODY DEBRIS [1]	☐ MODERATE 25-75% [7]
____ ROOTMATS [1]			☐ SPARSE 5-<25% [3]
			☐ NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☐ HIGH [3]
☐ MODERATE [3]	☐ GOOD [5]	☐ RECOVERED [4]	☐ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☐ RECOVERING [3]	☐ LOW [1]
☐ NONE [1]	☐ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

L R EROSION	L R RIPARIAN WIDTH	L R FLOOD PLAIN QUALITY	L R
☐☐ NONE / LITTLE [3]	☐☐ WIDE > 50m [4]	☐☐ FOREST, SWAMP [3]	☐☐ CONSERVATION TILLAGE [1]
☐☐ MODERATE [2]	☐☐ MODERATE 10-50m [3]	☐☐ SHRUB OR OLD FIELD [2]	☐☐ URBAN OR INDUSTRIAL [0]
☐☐ HEAVY / SEVERE [1]	☐☐ NARROW 5-10m [2]	☐☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐☐ MINING / CONSTRUCTION [0]
	☐☐ VERY NARROW < 5m [1]	☐☐ FENCED PASTURE [1]	
	☐☐ NONE [0]	☐☐ OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH	CHANNEL WIDTH	CURRENT VELOCITY		Recreation Potential
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that apply		Primary Contact
☐ > 1m [6]	☐ POOL WIDTH > RIFFLE WIDTH [2]	☐ TORRENTIAL [-1]	☐ SLOW [1]	Secondary Contact
☐ 0.7-<1m [4]	☐ POOL WIDTH = RIFFLE WIDTH [1]	☐ VERY FAST [1]	☐ INTERSTITIAL [-1]	(circle one and comment on back)
☐ 0.4-<0.7m [2]	☐ POOL WIDTH < RIFFLE WIDTH [0]	☐ FAST [1]	☐ INTERMITTENT [-2]	
☐ 0.2-<0.4m [1]		☐ MODERATE [1]	☐ EDDIES [1]	
☐ < 0.2m [0]		Indicate for reach - pools and riffles.		

Comments

Pool / Current Maximum 12

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). ☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
☐ BEST AREAS 5-10cm [1]	☐ MAXIMUM < 50cm [1]	☐ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☐ BEST AREAS < 5cm [metric=0]		☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	☐ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8

6] GRADIENT (ft/mi) DRAINAGE AREA (mi2)

☐ VERY LOW - LOW [2-4]
☐ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]

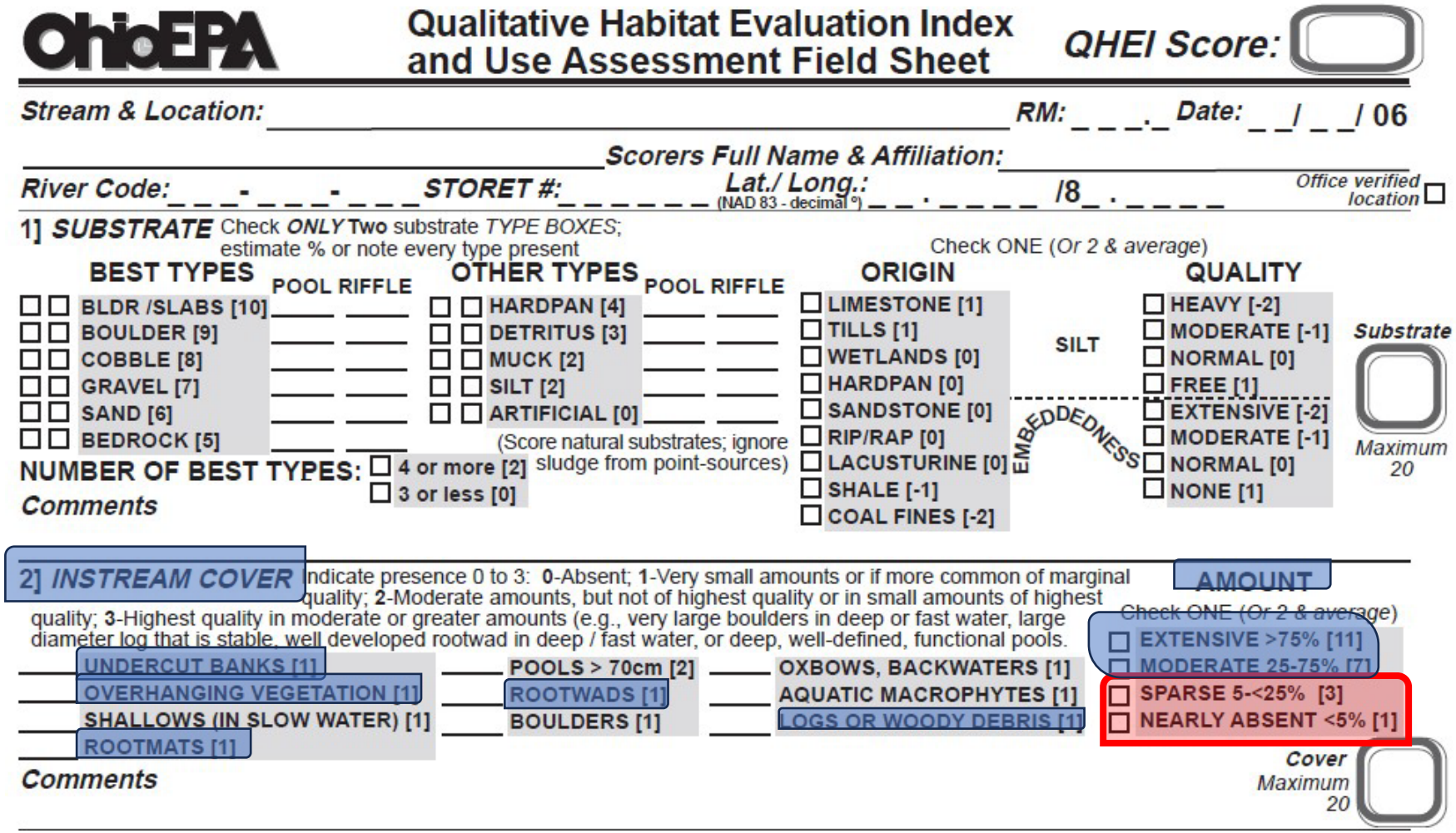
%POOL: %GLIDE:
%RUN: %RIFFLE:

Gradient Maximum 10

EPA 4520 06/16/06

Large woody debris, protecting stream ecology and paddling safety

- LWD is important for stream habitat and quality ("water quality")
- LWD quality and amount affects QHEI and therefore stream quality
- Higher QHEI = Higher stream quality



OhioEPA

Qualitative Habitat Evaluation Index and Use Assessment Field Sheet — *QHEI Score:* ☐

Stream & Location: _____ *RM:* _ _ _._ *Date:* _ _/ _ _/ 06

Scorers Full Name & Affiliation: _____

River Code: _ _ _ - _ _ _ - _ _ _ *STORET #:* _ _ _ _ _ _ *Lat./ Long.:* (NAD 83 - decimal °) _ _ . _ _ _ _ _ /8_ . _ _ _ _ *Office verified location* ☐

1] *SUBSTRATE* Check *ONLY* Two substrate *TYPE BOXES*; estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR /SLABS [10]	____	____	☐☐ HARDPAN [4]	____	____
☐☐ BOULDER [9]	____	____	☐☐ DETRITUS [3]	____	____
☐☐ COBBLE [8]	____	____	☐☐ MUCK [2]	____	____
☐☐ GRAVEL [7]	____	____	☐☐ SILT [2]	____	____
☐☐ SAND [6]	____	____	☐☐ ARTIFICIAL [0]	____	____
☐☐ BEDROCK [5]	____	____			

(Score natural substrates; ignore sludge from point-sources)

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☐ 3 or less [0]

Check ONE (*Or 2 & average*)

ORIGIN	EMBEDDEDNESS	QUALITY
☐ LIMESTONE [1]	SILT	☐ HEAVY [-2]
☐ TILLS [1]		☐ MODERATE [-1]
☐ WETLANDS [0]		☐ NORMAL [0]
☐ HARDPAN [0]		☐ FREE [1]
☐ SANDSTONE [0]		☐ EXTENSIVE [-2]
☐ RIP/RAP [0]		☐ MODERATE [-1]
☐ LACUSTURINE [0]		☐ NORMAL [0]
☐ SHALE [-1]		☐ NONE [1]
☐ COAL FINES [-2]		

Substrate ☐ *Maximum 20*

Comments

2] *INSTREAM COVER* Indicate presence 0 to 3: **0**-Absent; **1**-Very small amounts or if more common of marginal quality; **2**-Moderate amounts, but not of highest quality or in small amounts of highest quality; **3**-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

____ UNDERCUT BANKS [1]	____ POOLS > 70cm [2]	____ OXBOWS, BACKWATERS [1]
____ OVERHANGING VEGETATION [1]	____ ROOTWADS [1]	____ AQUATIC MACROPHYTES [1]
____ SHALLOWS (IN SLOW WATER) [1]	____ BOULDERS [1]	____ LOGS OR WOODY DEBRIS [1]
____ ROOTMATS [1]		

AMOUNT

Check ONE (*Or 2 & average*)

☐ EXTENSIVE >75% [11]
☐ MODERATE 25-75% [7]
☐ SPARSE 5-<25% [3]
☐ NEARLY ABSENT <5% [1]

Cover Maximum 20 ☐

Comments

Large woody debris, protecting stream ecology and paddling safety

Others' recommendations, policies and practices

Connecticut DEP LWD fact sheet

- "Removal … can have long lasting impacts to a stream's ecosystem for decades to come"
- "only the minimum necessary

amount of LWD should be removed

to enhance passage"

https://portal.ct.gov/-/media/DEEP/fishing/restoration/LargeWoodyDebrisFactSheetpdf.pdf

Large woody debris, protecting stream ecology and paddling safety

Cuyahoga SWCD:

Primarily, LWD promotes increased diversity in stream channels. It creates diverse directions and speeds of flowing water, which in turn leads to enhanced development of pools and riffles within a stream channel. Well-formed pools and riffles, and varying water currents are essential habitat for the great diversity of fish, bugs and other stream-dwelling aquatic life that we expect to find in healthy streams. Furthermore, the LWD itself provides in-stream cover for fish, and the leaves and other detritus that collect around woody debris provide food and shelter for the microbes and macroinvertebrates that sustain the stream ecosystem.

https://www.cuyahogaswcd.org/blog/2015/11/13/solving-stream-problems-in-your-back-yard-series--think-twice-before-removing-that-log-jam

Large woody debris, protecting stream ecology and paddling safety

Cuyahoga SWCD:

"One of the most common misconceptions that we encounter while providing technical assistance to landowners and municipalities is that all trees, limbs and other woody debris that fall into the stream channel need to be removed. This is seldom the case. In fact, many urban streams actually suffer from a lack of large woody debris (LWD), which benefits the stream environment in many ways."

https://www.cuyahogaswcd.org/blog/2015/11/13/solving-stream-problems-in-your-back-yard-series--think-twice-before-removing-that-log-jam

Large woody debris, protecting stream ecology and paddling safety

Wayne County, MI:

“Logjams, bank erosion and flooding are symptoms rather than the true cause of problems.”

Likely causes:

Tree cutting, riparian tree removal, impervious surfaces/stormwater increases from urban development and agriculture (especially degraded soil on ag land and artificially drained ag land).

https://www.mi-wea.org/docs/MBest_WDB(A).pdf

Large woody debris, protecting stream ecology and paddling safety

LWD legal references

Ohio Revised Code 1533.18 and 1533.181 pertain to recreational use

- ORC Section 1533.18 Recreational user definitions
- ORC Section 1533.181 Immunity
  - (A) No owner, lessee, or occupant of premises:
  - (1) Owes any duty to a recreational user to keep the premises safe for entry or use;
  - (2) etc. …

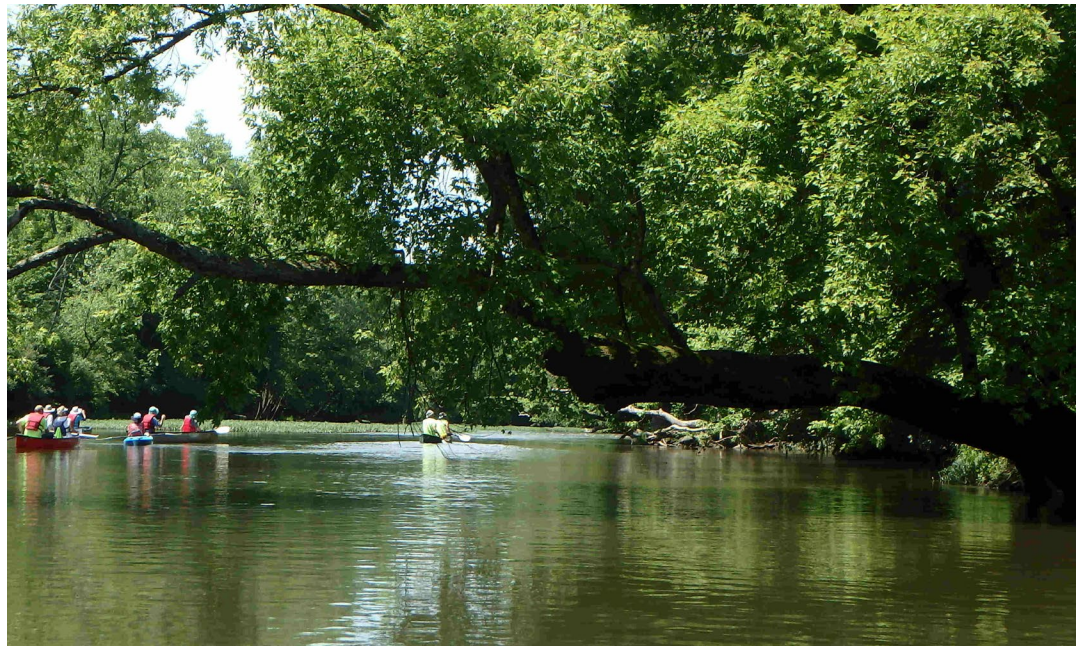
Large woody debris, protecting stream ecology and paddling safety

Removal of LWD

- Usually unnecessary; focus on bridge pier logjams (and adequate riparian setback policies)
- Causes other problems (stream degradation, downstream LWD transfer)
- Degrades stream quality
- Contradicts other projects like riparian and floodplain tree planting
- Directs attention from more important problems and from the sources of stream/water quality degradation
- It can require permission and a permit, and
- It’s dangerous and can be expensive

Large woody debris, protecting stream ecology and paddling safety

- What is Large Woody Debris (LWD);
  - what is a “strainer”
- Paddling safety
- Ecological value of Large Woody Debris in streams
  - Stream habitat and stream health
  - Missing or removing LWD is part of the “urban stress syndrome”
- Ohio references



Anthony Sasson, Midwest Biodiversity Institute August 9, 2023

Large woody debris, protecting stream ecology and paddling safety

Large woody debris, protecting stream ecology and paddling safety

ACCESS POINT DESIGN CONSIDERATIONS

I. CONTEXT

II. ACCESSIBILITY

III. ACCESS POINT ELEMENTS

- I. Siting / Slope
- II. Parking / Drop-Off / Staging
- III. Walking Trails
- IV. Materials

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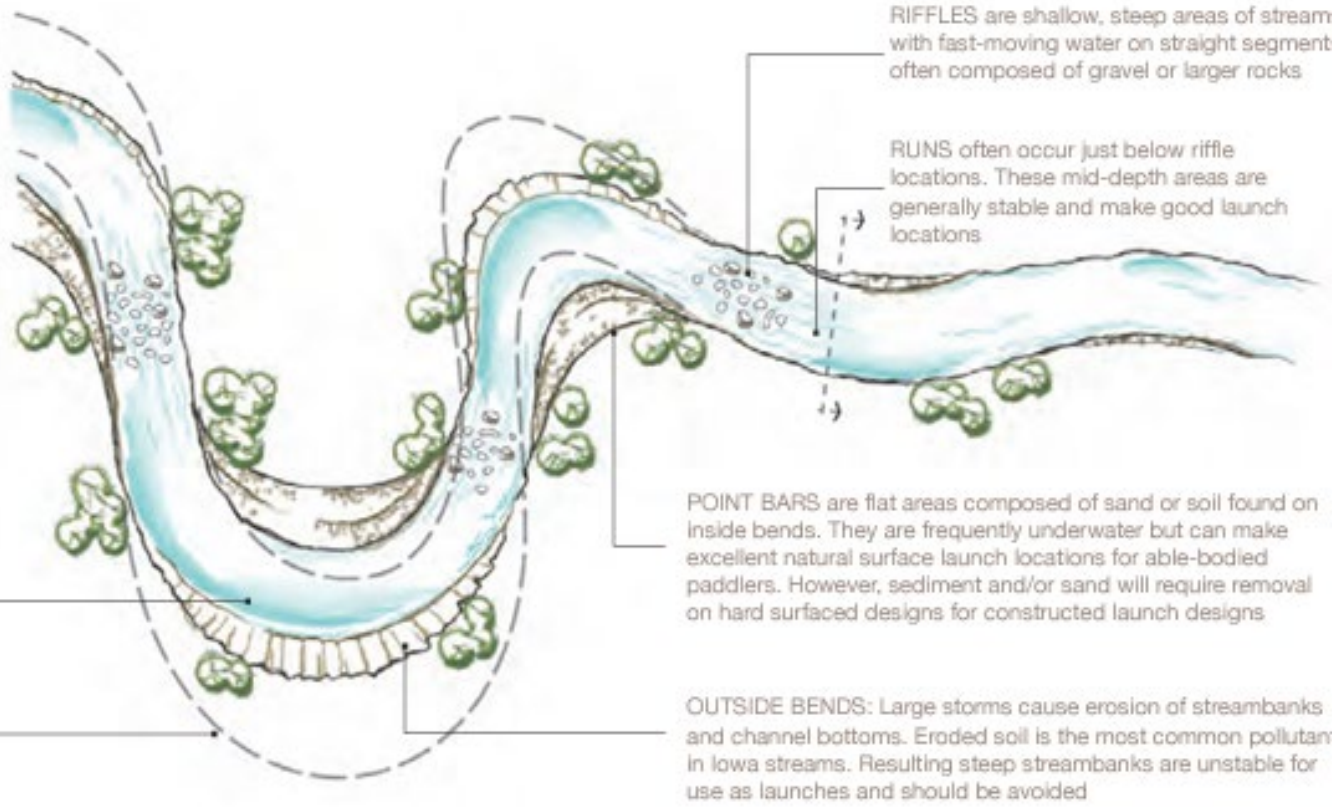
ACCESS POINT DESIGN CONSIDERATIONS: SITING / SLOPE



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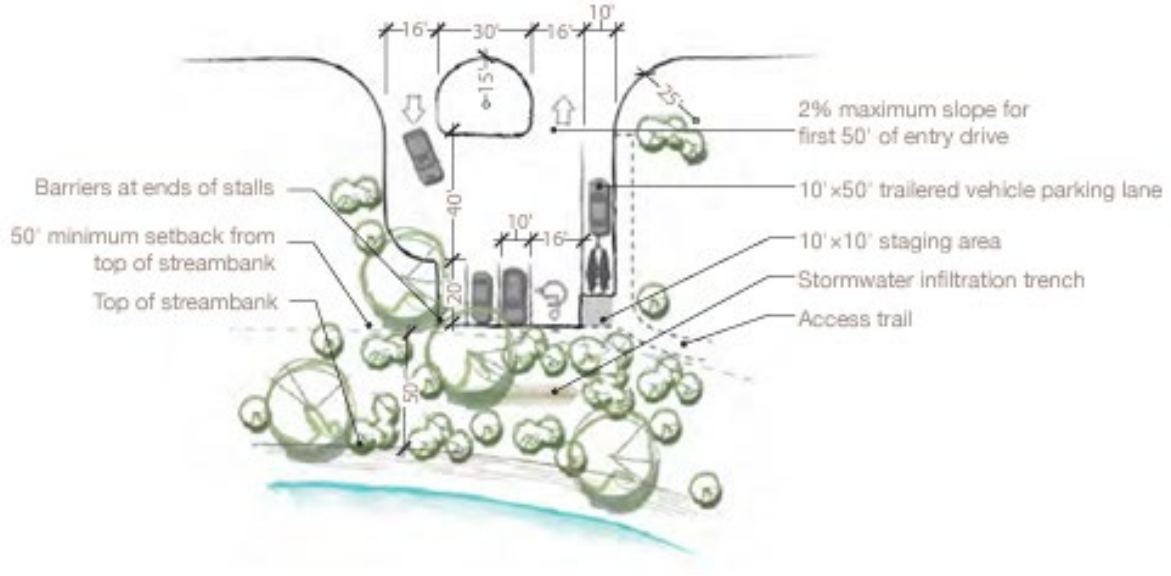
ACCESS POINT DESIGN CONSIDERATIONS:
PARKING / DROP-OFF / STAGING



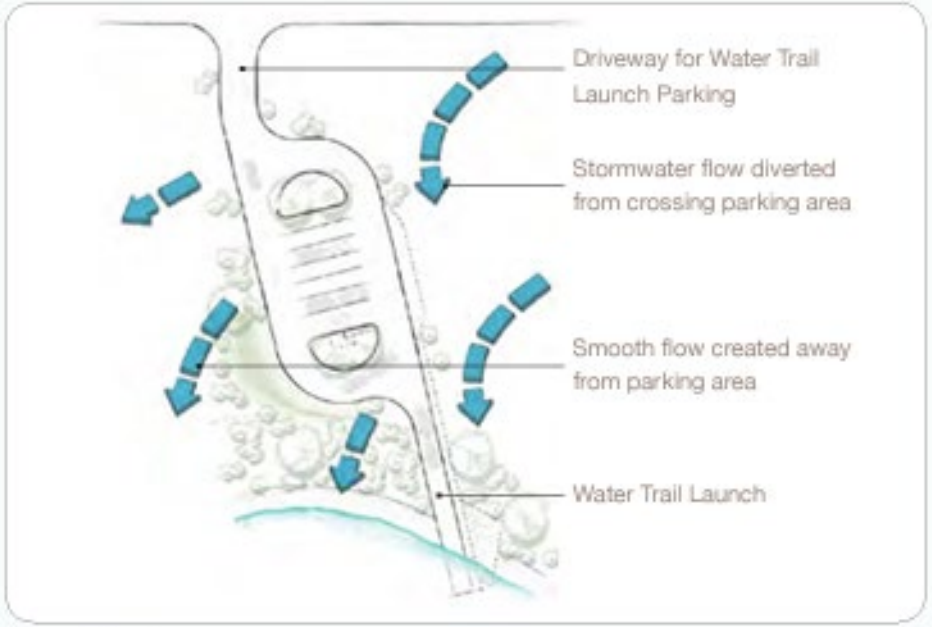
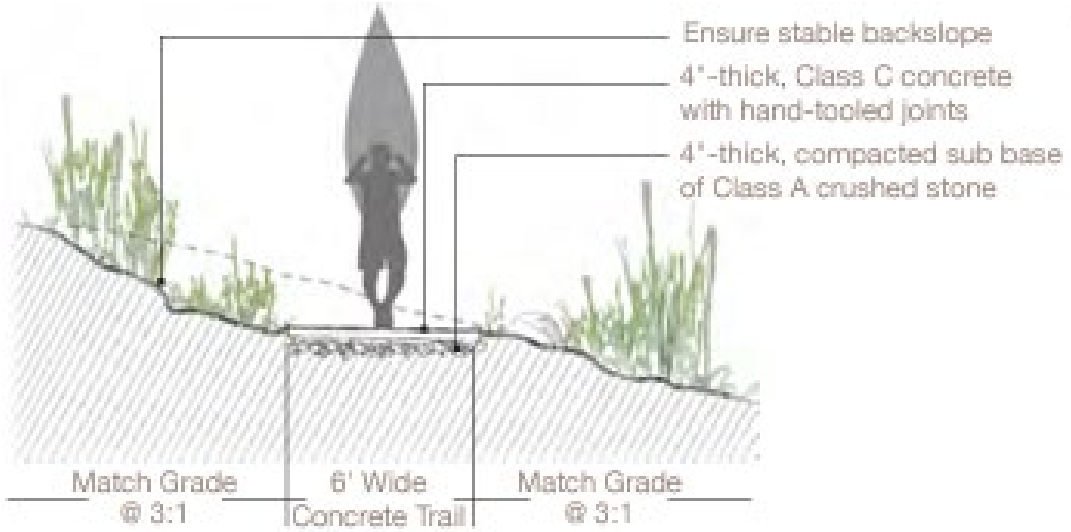
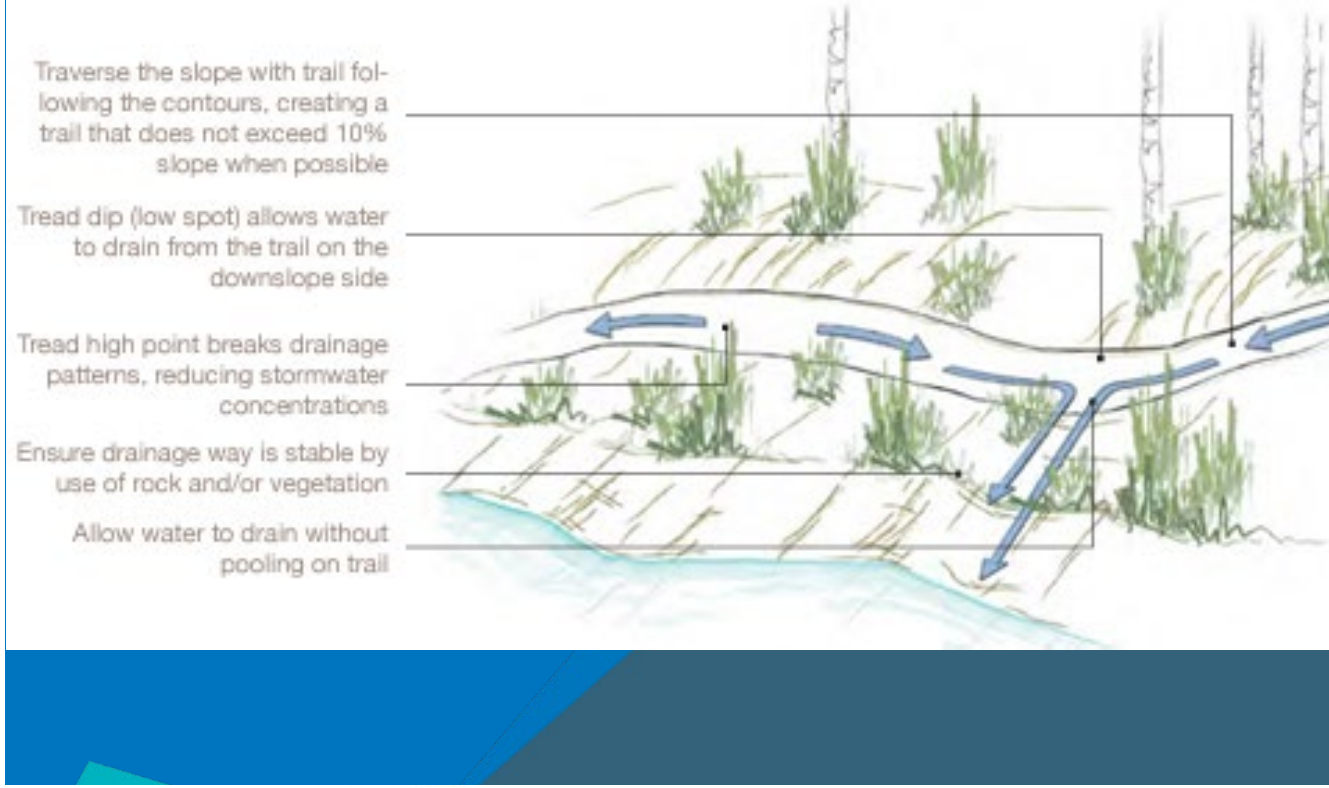


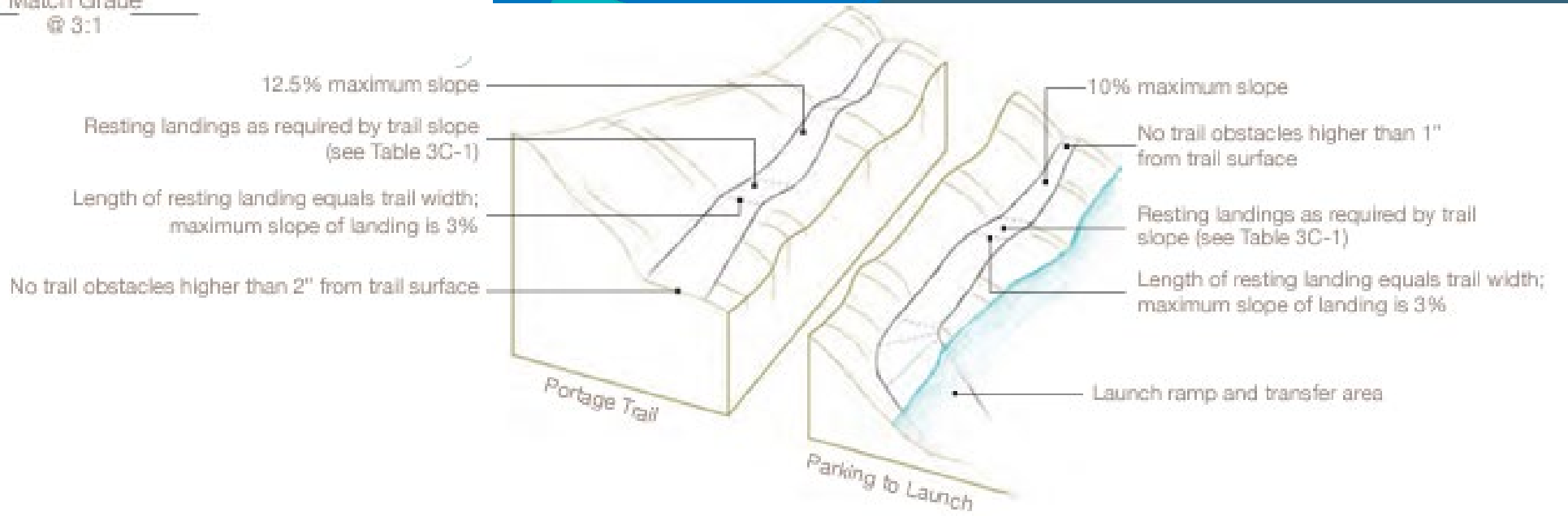
Figure 3B-1.
Stormwater Flow Near Parking Area

Figure 3B-2.
Stormwater Flow From Parking Area

ACCESS POINT DESIGN CONSIDERATIONS: WALKING TRAILS







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ACCESS POINT DESIGN CONSIDERATIONS: MATERIALS

I. CONTEXT DEPENDENT
   I. ACCESSIBILIITY CONSIDERATIONS
   II. ENVIRONMENTAL CONSIDERATIONS
II. NATURAL SURFACE
III. STAIR-STEP
IV. CONCRETE
   I. CAST-IN-PLACE
   II. PRE-CAST

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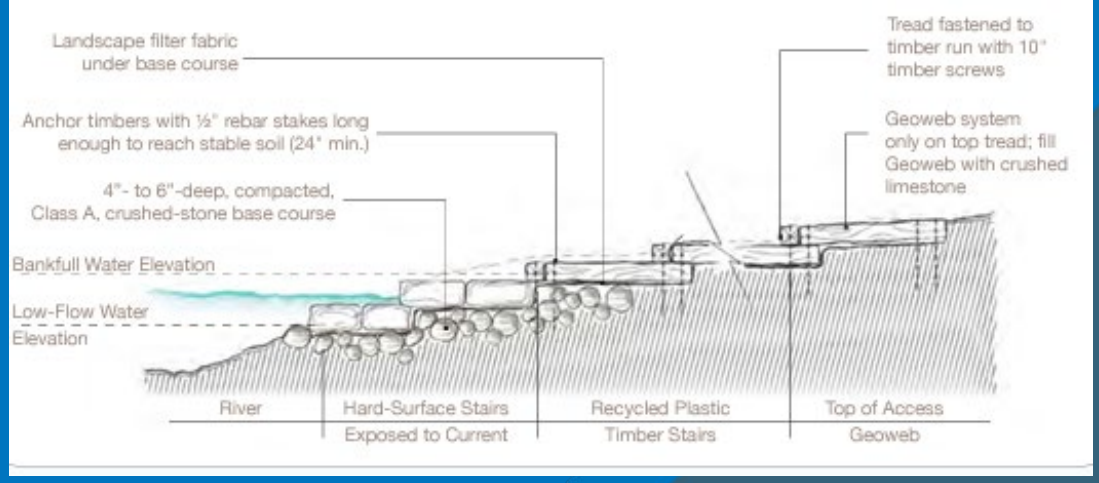

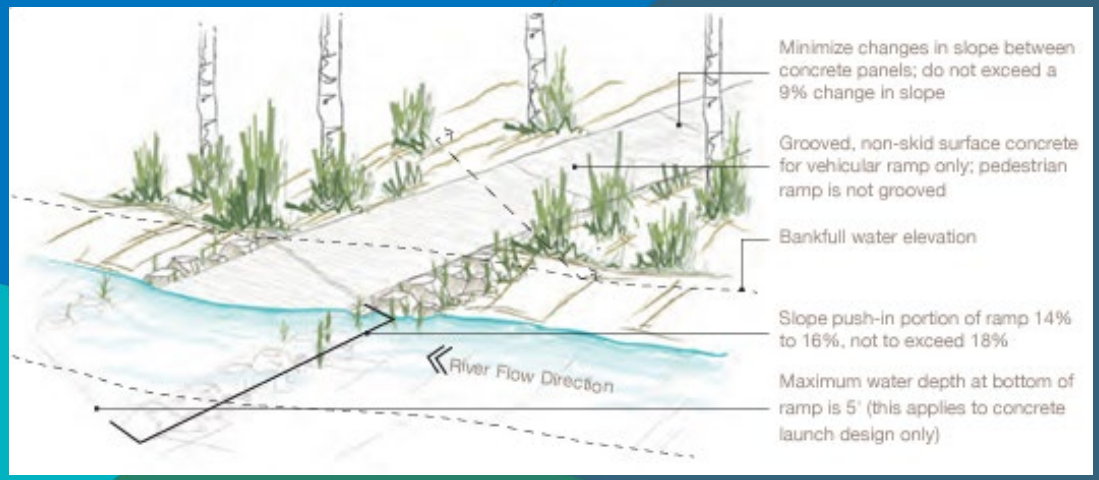

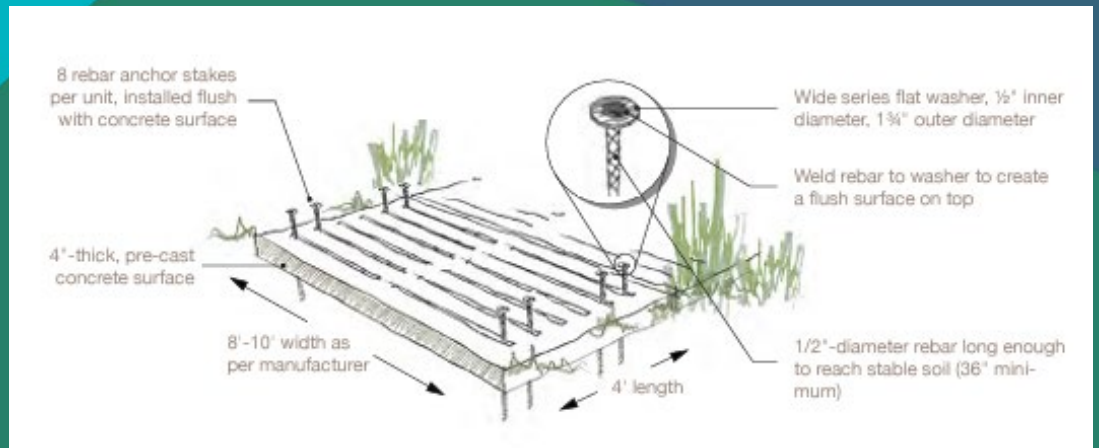

PARTNERSHIP AGREEMENTS: UPDATED DRAFTS

- Added Pickaway County as a Participating Entity
- Scenic Places to Scenic Waterways
- Updated Legend in Appendix A Map
- Updated Language to Not Require All Jurisdictions in the Partnership Agreement

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ADVISORY PANEL PROJECTS

I. ACCESS POINT DESIGN GUIDELINES

II. LWD MANAGEMENT PLAN

III. SAFE PADDLING PRACTICES

IV. WATERWAY STEWARDSHIP

V. PRIVATE PROPERTY INFORMATION

VI. UPDATE INTERACTIVE MAPPING

VII. OTHER?

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SUMMIT ON SUSTAINABILITY: BLUEWAYS

"COLLABORATE. INNOVATE. INSPIRE."

OCTOBER 26th, 2023

HILTON COLUMBUS DOWNTOWN

TITLE

Blueways: Navigating the Balance Between Ecology and Recreation

FORMAT

Panel Discussion

SPEAKERS?

SPONSOR?

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DESCRIPTION

Discover the delicate balance between encouraging outdoor paddling experiences and preserving the ecology of Central Ohio's waterways. Join our panel of environmental experts and paddling enthusiasts as we explore the significance of effective strategies for promoting responsible paddling. Through interactive discussions, we'll uncover innovative ways to nurture biodiversity, create environmentally conscious paddlers, and design sustainable water trails. By considering a well-balanced approach to the promotion of outdoor recreation on the waterways, this session aims to inspire a united front in safeguarding our water ecosystems while enhancing public health and quality of life.

Attendees will gain a profound understanding of the intersection between outdoor paddling and ecological preservation. Armed with practical strategies and tools, participants will leave with a vision for harmonizing human enjoyment of waterways with the protection of our natural treasures, ensuring that paddling in Central Ohio is beneficial for both people and the environment.

WRAP-UP & NEXT STEPS

- CONTINUE REVIEW OF UPDATED DRAFTS
- COMPLETE SURVEY FOR AP PROJECTS
- SEND RECOMMENDATIONS FOR SUMMIT ON SUSTAINABILITY BLUEWAYS PANEL
- REGISTER FOR SUMMIT ON SUSTAINABILITY

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THANK YOU

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