



Black River Area of Concern Advisory Committee

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BLACK RIVER AREA OF CONCERN Advisory Committee Meeting Minutes

Thursday, February 26, 2015

2:00 PM

Carlisle Visitor Center, Lorain County Metro Parks

12882 Diagonal Road, LaGrange, OH 44050

In Attendance:

Beaver Creek Watershed Group (Matt Nahorn); City of Elyria Wastewater (Tony Nigro); City of Lorain (Derek Feuerstein, Kate Hoffmann); Lorain County Community Development (Lyn Ickes, Don Romancak); Lo Co 'Yaks (Robb Koscho); Lorain County General Health District (Stephanie Lesco, Jill Lis, John Sabo); Lorain County Metro Parks (Bryan Goldthorpe); Medina County Soil and Water Conservation District (Jeff Van Loon); Ohio EPA (Ted Conlin); ODNR Office of Coastal Management (Steve Holland); US Fish and Wildlife Service (JoAnn Banda)

Agenda Items

Approval of Draft Meeting Minutes from 11-13-2014

- Minutes approved as submitted

Request for Letter of Support

- Presentation by Kate Hoffmann (presentation follows meeting minutes)
- Highlighted work that has been completed through grant funds in the City of Lorain and future projects
- Asked for Black River AOC Advisory Committee to support a NOAA grant proposal for a new bulkhead habitat project
- US EPA and GLNPO will be putting less weight on letters of support and more weight on if the projects will help remove a BUI or restore an AOC
 - They want AOC committees to develop a list of projects that are needed to remove a BUI and/or restore an AOC
- Approved letter of support; Committee requested updated throughout the project

AOC Funding Support/Opportunity for Extension

- Current grant funding will be extended for approximately 2-2.5 months (Summer 2015)
- Discussion on types of projects that could potentially be funding with extension dollars

- Operating support
- Website redesign
- Black River Clean-Up on May 2-3
- Black River Kayak-A-Thon on June 27
- Outreach to schools/creation of curriculum focused on invasive species (to go along with PIPE theme)

AOC Re-Designation Status

- Presentation by Ted Conlin (presentation follows meeting minutes)
- Possible resizing from the entire Black River watershed to the Mainstem and French Creek; will allow focus on most pressing issues of the river/narrows scope of focus
- Upper watersheds could be better handled with watershed action plans, TMLD, and sub-watershed groups
- Next steps
 - Get approval from Advisory Committee to start re-designation process
 - May require a meeting in March depending on how the process is moving with EPA; will require a vote from members
 - Approval from Ohio EPA
 - Approval from US EPA

Next Steps for AOC Advisory Committee

- Finalize bylaws
- Appointment of officers
- Meeting schedule for 2015
 - Advisory Committee requested a March meeting; use meeting scheduler to determine date
- Miscellaneous
 - Members are required to complete a training on Ohio ethics laws (per new policy document); need to determine how and when this training will take place

Old Business

None

New Business

Metro Parks Lakeview Beach Program

- Received a grant to use border collies to help clear beach of seagulls
- Will test to see if the lack of seagulls has an impact of the *E. coli* levels at the beach (expecting them to decrease)
- Program will run the week before Memorial Day through September

Black River Clean-Up

- Clean-up will be held Saturday and Sunday, May 2-3 at the Black River Wharf
- Get more information and register for the event at <http://blackrivercleanup.webs.com/>
- Any participation is greatly appreciated

5th Annual Black River Kayak-A-Thon

- Event will be held on Saturday, June 27 at the Black River Wharf
- Will take place all at one location this year; more information will follow

Rock For Water Recycled Fashion Show

- A David Anthony Salon puts together a recycled materials fashion show as a fundraiser
- This year proceed go toward the Black River Clean-Up and Sierra Club
- Event is Saturday, April 18 at 8:00 PM at Nick Abraham Ford in Elyria
- For more information visit their Facebook page:
https://www.facebook.com/RockForWater?sk=timeline&app_data

Willow Creek Project Update

- All field assessments are completed
- Ranking to narrow projects to top 3 and create conceptual plans
- Will be completed in April
- Have EnviroScience present at April meeting

Next Meeting - Thursday, April 23, 2015 at 2:00 PM in the Carlisle Room of the Carlisle Visitor Center (12882 Diagonal Road, LaGrange, OH 44050)

A meeting to finalize bylaws and structure will be planned for March 2015.


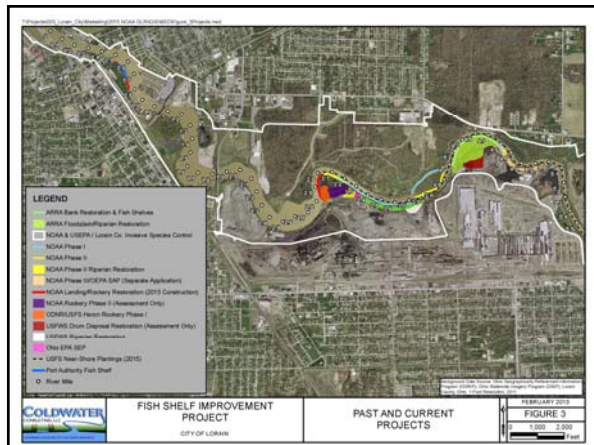
Black River Restoration City of Lorain, Ohio

Black River AOC Advisory Committee

February 26, 2015

Outline

- Completed Projects (2010-2013)
- Biological Data
- Recent Project Activity
- Proposed 2015 Habitat Projects (Letter of Support)
- Future Projects

Black River Restoration Projects - Lorain

Agency/ Project	Amount	Restoration Components	Completion
OEPA ARRA	\$6.3M	Slag removal, floodplain restoration, fish shelves, bank stabilization	Summer 2012
OEPA SEP	\$100,000	Slag removal, revegetation	Fall 2011
USFWS	\$340,000	Bioremediation system removal, reveg	Winter 2011
NOAA P1	\$1.6M	Fish shelves, bank stabilization	Spring 2013
NOAA P2	\$1.1M	Fish shelves, bank stabilization	Summer 2014
NOAA P3	\$350,000	RM 4.7 to 5.0 assessment and design	Winter 2012
ODNR	\$238,000	Heron Rookery Phase I Restoration	Winter 2014
OEPA	\$200,000	Additional RM 4.7 to 5.0 design	Winter 2014
USEPA	\$250,000	Lakeview Beach Green Infrastructure	Winter 2016
ODNR	\$250,000	Restored 4 acres adjacent to Rookery	Spring 2015
NOAA Rookery/Landing	\$1.3M	Restore 1,370' of bank and 1,000 feet of fish shelves	Fall 2016
NOAA Rookery PII	\$175,000	Assessment of the BOP Pond adjacent to the Rookery	Spring 2015
USFWS Drums	\$284,500	Assessment of 4 acre drum disposal area	Fall 2016

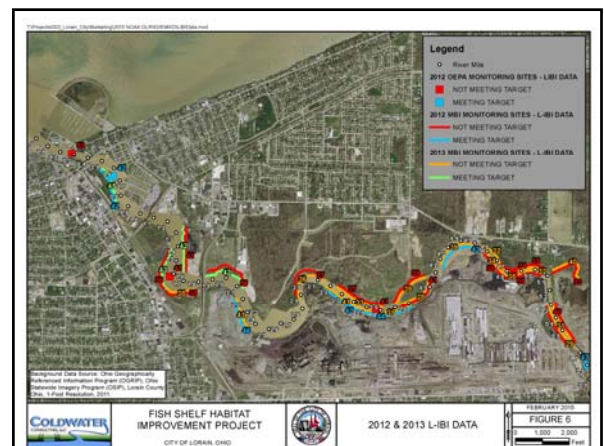
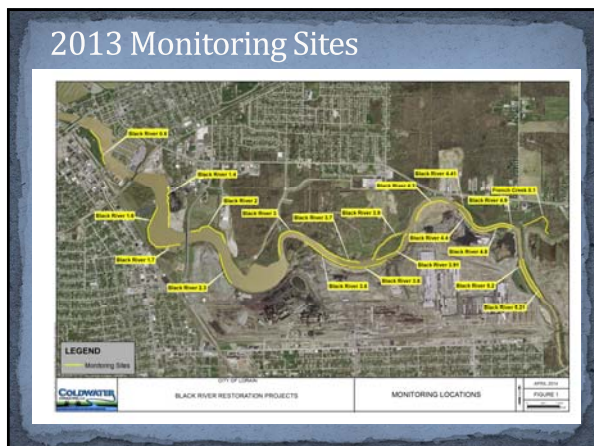




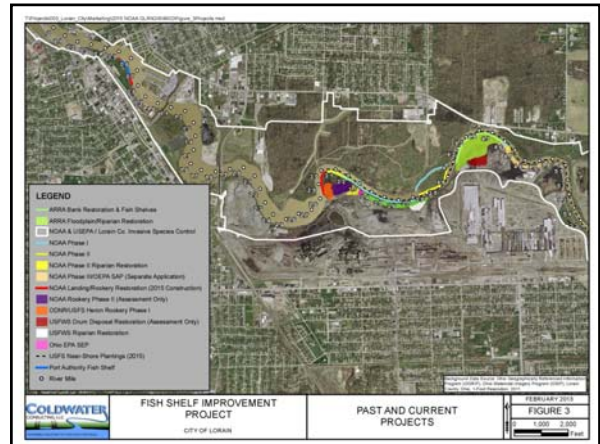
What does the data tell us??

- ### Monitoring Plan
- Evaluate Success of Projects
 - Relate Success Back to BUI Delisting Targets
 - Track Long-Term Progress of Restoration

- ### Delisting Goals
- Habitat
 - L-QHEI = 55 (Physical Condition – Trees, substrate, water depth, vegetations, etc.)
 - Fish
 - LIBI = 42 (Species and numbers)
 - MIwb = 8.6 (Visual wellbeing – tumors, etc)
 - Invertebrates
 - LICl = 34 (bugs)
- 



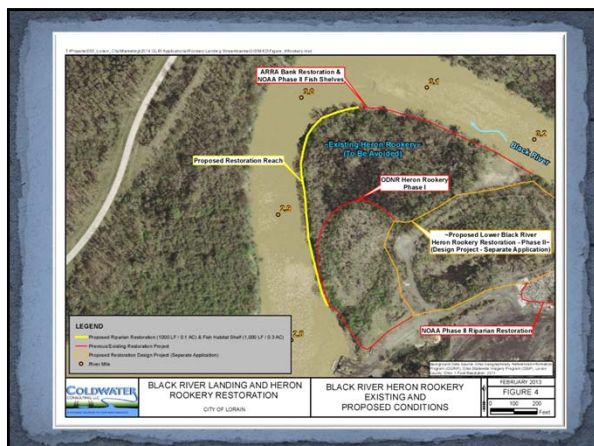
Current Projects



- ## Recent Activity
- Completed or near completion:
 - Heron Rookery Phase II – Recently completed
 - Ohio EPA Assessment (Seep) – design complete, awaiting funding
 - NOAA– BOP Pond Assessment
 - Ongoing:
 - USFWS Drum Assessment – start in summer/fall 2015

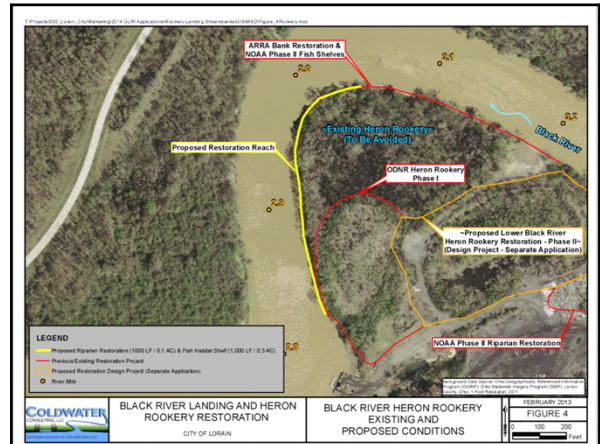
Rookery/Landing

2014 NOAA

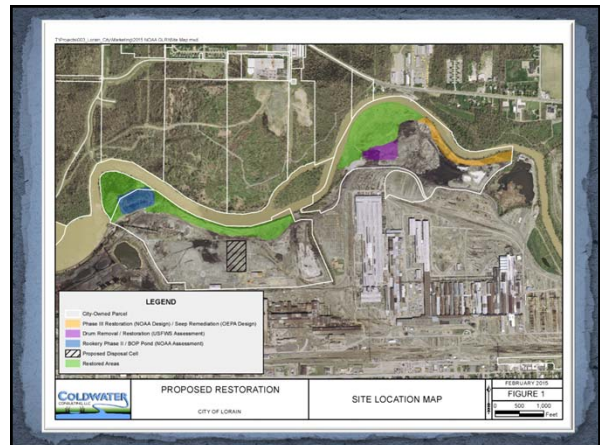


BOP Pond Assessment

(2014 NOAA)



Proposed 2015 NOAA Applications



What does disposal cost?	
Off-site Disposal at LC Landfill In Special Cell	\$16,098,500
On-site Disposal Cell Creation for BOP Material	\$5,005,600
Expansion of On-site Cell for Drum Disposal	\$2,689,400
On-site Cell for BOP and Drums Total	\$7,695,000
Cap In-Place	\$1,347,600

And so we switched gears...

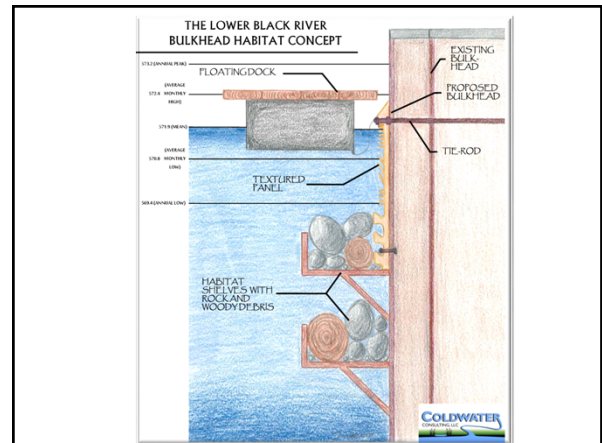
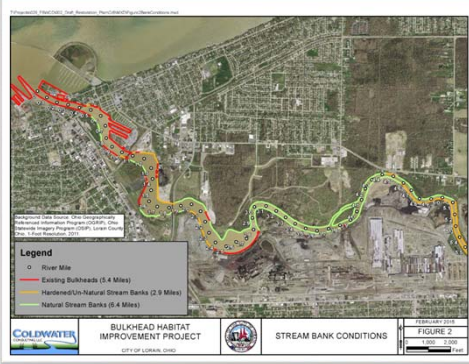
IN-STREAM HABITAT RESTORATION DESIGN AND IMPLEMENTATION PROJECT

Proposed Bulkhead Habitat

- RM 0-3:
 - 28,500 feet of hardened/unnatural streambank
- Habitat restoration objectives – cover and structure



Hardened/Unnatural Streambanks



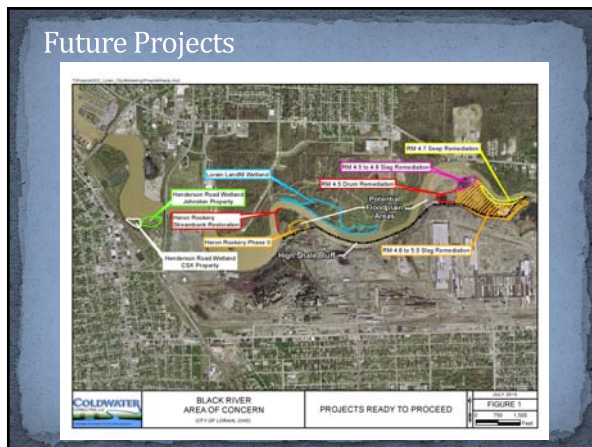
RM 0-3 Bulkhead Habitat – NOAA 2015 Application

- Phase I (\$2,993,813):
 - Assessment of RM 0-3
 - Design & construction at LSYC/City property
- Phase II (\$6,656,250):
 - Design & construction of 1,500 additional feet of traditional or bulkhead fish shelves
- Phase III: Post-construction monitoring (\$50,000)

Lower Black River Habitat Restoration Project Phase III

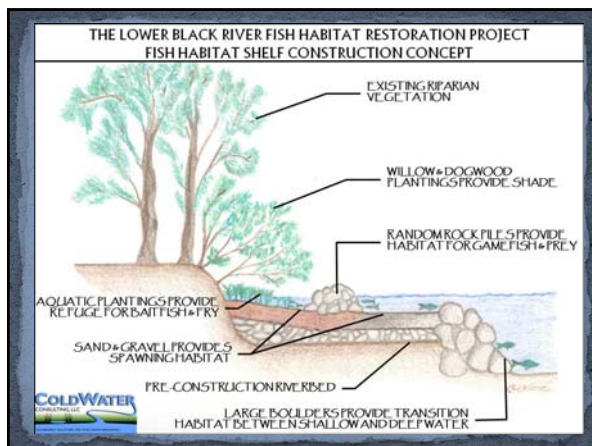


- ### Structural Habitat – 2015 NOAA Application
- 4.4 acres of riparian restoration
 - 1,800 feet of in-stream habitat to include:
 - Streambank stabilization, boulder clusters, woody debris clusters, and rootwad revetments
 - Total request approximately \$1.6 million



Questions?

- Kate Hoffmann
City of Lorain
(440) 204-2003
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- Kristen Risch
Coldwater Consulting, LLC
(740) 936-5368
kdrisch@coldwaterconsultants.com



Fish Shelf Design

- Fish Shelves and Other In-Stream Structures
 - Substrate Diversity
 - Shallows
 - Cover and Structure
 - Spawning and Refuge
- Bank Restoration
 - Erosion Reduction
 - Native Vegetation

BACK TO THE FUTURE RE-SIZING THE AOC

FEBRUARY 2015 PRESENTATION TO THE BLACK RIVER
AOC ADVISORY COMMITTEE

HOW WERE THE BUIS LISTED AS IMPAIRED?

BUI	Stage 1 Report
Fish Consumption	Nearshore & Mainstem: Impaired FC: <i>Potential</i> Remainder: <i>Low potential</i>
Fish Populations	Nearshore: Unknown; Mainstem, FC, EB & WB: Impaired based on OEPA data
Fish Tumors	Nearshore & Mainstem: Impaired; Remainder: <i>Low potential</i>
Benthos ¹	Nearshore: Unknown; Mainstem & Remainder: Impaired
Dredging	Mainstem: Impaired; Remainder: <i>Not applicable</i>
Eutrophication/Algae ²	Nearshore: <i>Low potential</i> ; Mainstem: <i>Potential</i> ; EB: Impaired @ Brentwood Lake; WB: Impaired @ Findley Lake; Remainder: <i>Potential for low DO</i>
Beach Closings (Recreational Use)	Nearshore: Occasionally impaired; Mainstem: <i>Impaired for contact (was lifted by ODH)</i> ; Remainder: <i>Occasionally Impaired</i>
Aesthetics ³	Nearshore, Mainstem and Remainder: Impaired
Fish Habitat	Nearshore & Mainstem: Impaired due to dredge activities and shoreline alterations Remainder: Impaired <i>in certain locales due to excessive sedimentation, localized channelization and flow modifications</i>

AOCs WERE INTENDED TO BE THE "WORST OF THE WORST" SITES IN THE GREAT LAKES

- The U.S.-Canada Great Lakes Water Quality Agreement (Annex 2 of the 1987 Protocol) defines AOCs as "geographic areas that fail to meet the general or specific objectives of the agreement where such failure has caused or is likely to cause impairment of beneficial use of the area's ability to support aquatic life." (GLNPO webpage)
- "Each of the 43 AOCs contains at least one BUI that represents an extraordinary problem that is measurably worse than most waters of the Great Lakes." (Ohio EPA delisting guidance, emphasis added)

SUPERScript NOTES (FROM PREVIOUS SLIDE)

- Water chemistry data did not reveal any contaminants in the water column that would be associated with the observed impacts on benthic populations.**
 - Non-point sources, erosion and agricultural runoff are the major sources of sediment.
- Turbidity, nutrient loadings & sediment noted (Eutrohication/Algae)**
 - Agricultural and urban runoff are the major sources of sediment & in upper watersheds were the major cause of water clarity conditions
 - Nutrient loadings primarily from sewage treatment facilities, failing and direct discharge HSTs and agricultural runoff
- Litter and cloudy appearance of water (Aesthetics)**
 - Litter was noted as "general littering."
 - Cloudy appearance due to erosion of upland areas, loss of riparian vegetation due to ag & developmental activities

These are special notations from the Stage 1 Report.
Are they a reason to say the upper watersheds are among the worst of the worst?

THE BLACK RIVER AREA OF CONCERN

- Original AOC delineation was only the lower six miles**
 - With the prevalence of fish tumors, the designation of the lower six miles of the mainstem was warranted
- During the seating of the local Coordinating Committee, the delineation was expanded to include the entire Black River watershed because:**
 - Although, "... the primary portion of the AOC is defined to be the lower 6.5 miles of the river, significant sources of pollutants that contribute to the degradation of the AOC occur upstream."
 - And any remedial measures proposed in the Stage 1 Plan "will focus on sources of pollution throughout the river basin."

From BR Stage 1 Report

The question is if the "significant sources of pollutants" are remaining and still contributing.

Agricultural land use and associated problems are not unique.

The land uses in the upper watersheds of the Black River are not extraordinary and are similar to most of western LE watersheds.

CURRENT STATUS OF BUIS IN THE BLACK RIVER AOC

ARE THE UPPER SUB-WATERSHEDS AFFECTING THE MAINSTEM?

BEACH CLOSINGS (RECREATIONAL USE)

Originally	Current
<ul style="list-style-type: none"> • Mainstem - Unknown • French Creek - Unknown • East Branch - Unknown • West Branch – Unknown • Lake Erie beaches <ul style="list-style-type: none"> • Century Park met criteria • Lakeview Park failed to meet criteria 	<ul style="list-style-type: none"> • Mainstem – Impaired but TMDL written • French Creek – Now NA • East Branch & West Branch – Impaired but TMDL & WAP written • Lake Erie beaches (change in bacteria testing) <ul style="list-style-type: none"> • Century & Lakeview beaches fail to meet <ul style="list-style-type: none"> • Waterfowl may be the source

- ### BUIS NOT APPLICABLE TO UPPER WATERSHEDS
- **Dredging**
 - Then, according to US ACE and Ohio EPA, all sediments from the federal navigation channel had to be placed in CDF
 - Now, according to US ACE, all sediments from the federal navigation channel are ‘eligible’ for open-lake placement
 - **Fish Tumors**
 - Then, DELTs = 11.1% and Bullhead liver rate = 32%
 - Now, the BUI is In Recover Stage
 - DELTs = 0.45% and Bullhead liver rate = 11% in 2013
 - Was 7% in 1998

BACTERIA SAMPLING

Bacteria Data 2006-2013

• Average of all Lake Erie streams	952
• East Branch Black River	1389
• Black River-All streams	1104
• Black River-u/s Lacustuary	1030
• Black River-Mainstem	915
• West Branch Black River	896
Other Nearby Streams	
• Ashtabula AOC	3228 (BUI not Impaired)
• Ashtabula River-All streams	1815
• Huron River	1440
• Vermilion River	947

FISH CONSUMPTION

Originally	Current
<ul style="list-style-type: none"> • Do not eat any fish from mainstem (this advisory was mainly listed due to prevalence of fish tumors) 	<ul style="list-style-type: none"> • Mainstem fish advisories to 1 meal/month & 1 meal/two months • Advisories for upper areas meet BUI removal criteria

It is unlikely there was or is any impact from the upper watersheds to the mainstem for this BUI.

EUTROPHICATION/ALGAE

Originally	Current
<ul style="list-style-type: none"> • Eutrophication - Mainstem <ul style="list-style-type: none"> • DO = Unknown • Algae <ul style="list-style-type: none"> • French Creek <ul style="list-style-type: none"> • Unknown • East Branch <ul style="list-style-type: none"> • Brentwood Lake impoundment causing algae blooms • Grafton WWTP – Algae blooms downstream • West Branch <ul style="list-style-type: none"> • Findley Lake algae blooms 	<ul style="list-style-type: none"> • Eutrophication - Mainstem <ul style="list-style-type: none"> • DO meets removal criteria • Algae <ul style="list-style-type: none"> • French Creek <ul style="list-style-type: none"> • No problems recorded • East Branch <ul style="list-style-type: none"> • Brentwood Lake: Dam removed, impoundment gone • Grafton WWTP – Phosphorus removal added • West Branch <ul style="list-style-type: none"> • Phosphorus removal added

No impacts from upper watersheds to the mainstem for this BUI.

AESTHETICS

Originally	Current
<ul style="list-style-type: none"> • Mainstem, French Creek, East Branch, West Branch <ul style="list-style-type: none"> • Impairment due to litter and cloudy appearance of water column 	<ul style="list-style-type: none"> • Mainstem, French Creek, East Branch, West Branch <ul style="list-style-type: none"> • Was (or is) the accumulation of 'general litter' worse than other non-AOC watersheds?? • Cloudy appearance of water column due to agricultural activities is no longer considered to be an impairment

Turbid water due to agricultural activities is no longer an impairment, so any impact to mainstem from upper watersheds no longer exists.

FISH HABITAT

Originally	Current
<ul style="list-style-type: none"> • Mainstem <ul style="list-style-type: none"> • QHEI = 60.6 • Lacustuary = 52.7 • French Creek <ul style="list-style-type: none"> • QHEI = 64.5 • East Branch <ul style="list-style-type: none"> • QHEI = 67.6 • West Branch <ul style="list-style-type: none"> • QHEI = 63.8 	<ul style="list-style-type: none"> • Mainstem <ul style="list-style-type: none"> • LQHEI = 44.5 • Lacustuary = 32.7 (MBI = 46.8) • French Creek <ul style="list-style-type: none"> • QHEI = 66.6 • East Branch <ul style="list-style-type: none"> • QHEI = 66.7 • West Branch <ul style="list-style-type: none"> • QHEI = 65.9

No apparent impact of upper watersheds to the mainstem.

BENTHOS

Originally	Current
<ul style="list-style-type: none"> • Mainstem <ul style="list-style-type: none"> • ICI = 25.4 • Lacustuary = 22.0 • French Creek <ul style="list-style-type: none"> • ICI = 40, 22, 40 all at 1 site (1982, 1992, 1997) • East Branch <ul style="list-style-type: none"> • ICI = 46 <ul style="list-style-type: none"> • Willow Creek ICI = 40 (1 site) • West Branch <ul style="list-style-type: none"> • ICI = 46 (2 sites) 	<ul style="list-style-type: none"> • Mainstem <ul style="list-style-type: none"> • ICI = 22.2 • Lacustuary = 15.3 (MBI = 17.2) • French Creek <ul style="list-style-type: none"> • ICI = 36 (3 sites) • East Branch <ul style="list-style-type: none"> • ICI = 43 (RM 0.3 = 8) <ul style="list-style-type: none"> • Willow Creek ICI = 29.5 (2 sites) • West Branch <ul style="list-style-type: none"> • ICI = 38.9* (7 sites)

* May be due to low flows

No apparent impact of upper watersheds to mainstem.

BIOLOGICAL INDICES

Averages in the Upper Watersheds	Mainstem Averages
<ul style="list-style-type: none"> • IBI = 101.6% of removal criteria • MIwb = 102.8% of removal criteria • QHEI = 103.8% of removal criteria • ICI = 91.8% to 109.0% of removal criteria 	<ul style="list-style-type: none"> • L-IBI/IBI = 91.5% in Lacustuary and 120% u/s of Lacustuary • MIwb = 98.7% in Lacustuary and 117.8% u/s of Lacustuary • L-QHEI/QHEI = 79.7% in Lacustuary and 130.7% u/s Lacustuary • L-ICI/ICI = 46.7% in Lacustuary and 108.3% u/s Lacustuary

FISH POPULATIONS

Originally	Current
<ul style="list-style-type: none"> • Mainstem <ul style="list-style-type: none"> • IBI = 16 & MIwb = 4.6 • Lacustuary: IBI = 13.6 & MIwb = 4.4 • French Creek <ul style="list-style-type: none"> • IBI = 23.3 & MIwb = 6.4 • East Branch <ul style="list-style-type: none"> • IBI = 32.7 & MIwb = 7.8 <ul style="list-style-type: none"> • Willow Creek IBI = 18 • West Branch <ul style="list-style-type: none"> • IBI = 27.9 & MIwb = 6.7 	<ul style="list-style-type: none"> • Mainstem <ul style="list-style-type: none"> • IBI = 41.2 & MIwb = 8.9 • Lacustuary: IBI = 39.5 (MBI: 34.2 & 37.9) & MIwb = 8.27 (MBI: 8.07 & 8.0) • French Creek <ul style="list-style-type: none"> • IBI = 33.8 & MIwb = 7.6 • East Branch <ul style="list-style-type: none"> • IBI = 37.2 & MIwb = 8.9 <ul style="list-style-type: none"> • Willow Creek IBI = 24 • West Branch <ul style="list-style-type: none"> • IBI = 31.1* & MIwb = 6.9*

If there were any previous impacts, it appears that there are no current impacts to the mainstem for this BUI. * May be due to low flows

IF THE UPPER WATERSHEDS ONCE AFFECTED THE ORIGINALLY DESIGNATED AOC, DO THEY STILL?

- Improvements have been documented
- Upgrades to treatment facilities
- Agricultural land use and its associated turbidity issue is no longer a cause for impairment

Discussion

