



River Ecology & Governance Task Force

March 12, 2023 3:00 PM – 4:30 PM

Agenda

1. Task Force Work Plan for 2024
2. River Edge Access Study Update and Q&A – CDOT team
3. IEPA Triennial Review Process and Q&A – Illinois EPA
4. Presentation on Trash/Litter Ecological Dynamics – Loyola University
5. Summary of Debris Collection Program - MWRD
6. Adjourn and 2024 Task Force Meeting Dates Reminders

Task Force Objectives

Transforming Chicago's unique waterway system into a **thriving and ecologically integrated natural asset**, capable of accommodating the needs of people, requires **coordinated planning**, investment and management.

Aspire to, and realize no later than 2040, inland waterways in Chicago that are **inviting, productive and living**, that **support wildlife in-stream and on their banks**, and that **contribute to our city's resiliency**

Task Force Work Plan for 2024

Goal #1: Review current polices and create recommendations to strengthen them

Goal #2: Inform near-term planning opportunities to advance collective priorities

Goal #3: Develop criteria to prioritize projects for identified funding opportunities

Goal #4: Ensure process for development reviews is followed and continues to improve new riverfront developments

Goal #1: Review current policies and create recommendations to strengthen them.

- The sub-task topic that was prioritized with the highest amount of votes in the December quarterly meeting was to **explore river edge access issues and opportunities.**
- **The System Plans Working Group will take on this task** as part of the CDOT River Access Study participation and more broadly through Systems Plans Working Group discussions.

System Plans Working Group, 2024 Work Plan Goals: Improving River Edge Access

1. Discuss challenges and successes to the current state of river edge access.
2. Use discussion outcomes to inform near-term planning opportunities to advance collective priorities.
 - CDOT: River Edge Access Study
 - DPD: Calumet Design Guidelines and Land Use Update
3. Review other river edge access policies and identify opportunities to strengthen them in future plans and projects.

What We Learned

1. **Barriers** to further expanded river access in Chicago.
2. **Existing case studies and success stories** that can serve as a model for improved river access here in Chicago.
3. **Data that is missing/needed** to continue researching the barriers and opportunities for increasing river access.
4. **Existing policies, regulatory incentives, and opportunities** to expand/improve river access.

"Who owns the asset?" is still a challenge for some property owners or stewards of public spaces (e.g. some entities aren't in the business of owning bridges)

+1
San Antonio River Authority (Tax funded river recreation and management agency)

MISSING DATA: Where are the Gaps? How are they defined? How does the City prioritize river edge development and required setbacks / access where it is most needed?

Easements as a tool should be explored

Chicago Rivers – Partner-Gathered Context Information



Note: The Calumet River area was part of a more extensive stakeholder coordination process, that is ongoing, so it is not included in this resource document. Please view the links on page 5 to view Calumet resources and maps.

3/11/2024

Chicago Rivers – Partner-Gathered Context Information | REGTF System Plans Working Group

Purpose and Process

The desire to collect the data outlined in this document was established in annual work plan discussions of the System Plans Working Group, which is a sub-group of the full River Ecology and Governance Task Force. The System Plans Working Group focuses on exploring innovative approaches to river corridor planning through research, data collection, and community engagement activities. Over the course of six months, workshops were held with Working Group members and other river partners to collect the contextual qualitative data outlined in this document. The overall goal of the process is to better document issues, ideas, and opportunities that are relevant to river edge projects.

The primary question that the group wanted to ask in this process is:

If a project was proposed within this stretch of the river, what would you want the involved developers, planners, owners, designers, partners, and/or agencies to consider that isn't documented in existing City plans and policies?

The outcomes of these workshops are documented in the following maps and summary notes organized by river branch within the City of Chicago municipal boundary.

Links and Resources

River Relevant Community Plans By Geography:

North Branch:

- [Lakeview Roscoe Village Master Plan \(2023\)](#)
- [Avondale Neighborhood Plan \(2023\)](#)
- [Confluence Vision Plan \(2021\)](#)
- [Wild Mile: Framework Vision \(2019\)](#)
- [Upper North Branch River Audit \(2019\)](#)
- [North Branch Framework Plan \(2017\)](#)
- [Riverbank Neighbors](#)

Main Stem:

- [Chicago Riverwalk Main Branch Framework Plan \(2009\)](#)
- [DuSable Park](#)

South Branch:

- [South Branch Community Engagement Outcomes \(2022\)](#)
- [McKinley Park Neighborhood Plan \(2021\)](#)
- [Bridgeport and Canaryville Priorities Plan \(2019\)](#)
- [South Branch Parks Framework Plan \(2019\)](#)
- [Pilsen and Little Village Action Plan \(2017\)](#)
- [South Branch Parks Access Study \(In Progress – Chicago Department of Transportation\)](#)

Calumet River System:

- [Calumet Area Land Use Plan \(2002\)](#)
- [Calumet Open Space Reserve Plan \(2004\)](#)
- [Calumet Design Guidelines \(2004\)](#)
- [Hegewisch Neighborhood Plan \(2023\)](#)
- [Little Calumet River Conservation Action Plan \(2022\)](#)
- [Calumet River Communities Planning Framework \(2019\)](#)
- [Calumet Connect Databook \(2021\)](#)

River System Wide Resources:

- [US Army Corps of Engineers – Chicago Waterways Restoration Framework Master Plan](#)
- [US Army Corps of Engineers – Chicago Waterways Restoration Framework StoryMap](#)
- [Chicago River Design Guidelines](#)
- [Calumet Design Guidelines](#)
- [Our Great Rivers Vision Plan](#)
- [Friends of the Chicago River - Developer Resource Guide](#)
- [Bird Friendly Design Chicago](#)
- [Active Transportation Alliance - Chicago River Trail Action Plan](#)
- [Forest Preserves of Cook County - Natural and Cultural Resources Master Plan](#)
- [H2NOW Real Time Water Quality Data](#)
- [City of Chicago Barge Study \(2015\)](#)

River System Maps and Databases:

- [Calumet River Coordination Map \(2022 - REGTF\)](#)
- [Explore the Chicago-Calumet River Data Map \(Friends of the Chicago River\)](#)
- [Habitat Connectivity Action Plan \(2021, Friends of the Chicago River\)](#)
- [Natural Solutions Tool \(Greater Chicago Watershed Alliance, Friends of the Chicago River, Trust for Public Land\)](#)
- [The Chicago Wilderness Alliance Hub](#)
- [Our Great Rivers Story Map \(Metropolitan Planning Council\)](#)

3/11/2024

Chicago Rivers – Partner-Gathered Context Information | REGTF System Plans Working Group

5

Next Steps

We will focus in on a few key policy interventions, barriers, case studies, and opportunities from the last meeting's Jamboard/discussion to facilitate the next Working Group discussion around improving public access to the river.

Goal #2: Inform near-term planning opportunities to advance collective priorities.

- CDOT: River Edge Access Study
 - DPD: Calumet Design Guidelines and Land Use Update
-
- Facilitate points of integration with the Task Force, when appropriate, to weigh in on these key river edge projects.

CDOT: River Edge Access Study

- We'll hear an update on this today and have a discussion with CDOT and their consultant team.

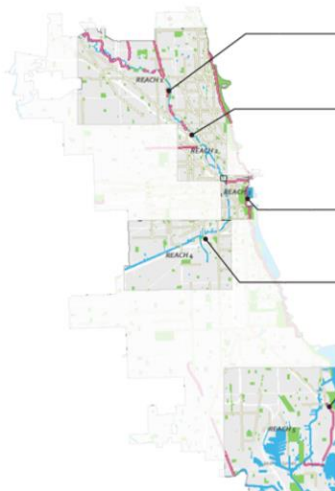
DPD: Calumet Design Guidelines and Land Use Update

- DPD update on process

Project Study Area + Objectives

Study Objectives:

- Identify opportunities to improve and expand continuous riverfront access for pedestrians, cyclists, and wildlife
- Compile datasets to develop a tool that will help City staff assess river-edge project opportunities
- Using selection criteria, identify those actions that would be best led by the public-sector
- Summarize and classify City-led project opportunities that may be good candidates for federal funding assistance



REACH 1
North Branch / North Shore Channel
Long stretches of existing trail within park and public open space
Overall Length: 10.5 Miles


REACH 2
Chicago River
Planned developments will have extensive river edge improvements; Wild Mile destination feature
Overall Length: 4.5 Miles

REACH 3
Main Branch
Popular Riverwalk and privately owned public space promenade
Overall Length: 3.5 Miles

REACH 4
South Branch / Sanitary & Ship Canal
Well-organized efforts to expand trail and wider connectivity; westward extents include protected industrial corridors
Overall Length: 6.5 Miles

REACH 5
Calumet River
Extensive trail network in and around Calumet Lake and adjacent suburbs with protected industrial corridors along the Calumet River
Overall Length: 13.0 Miles

Source: AECOM



Goal #3: Develop criteria to prioritize projects for identified funding opportunities

Related to this goal, we will be adding additional subtasks based on feedback, including:

- Form a new REGTF “Governance Working Group” that includes participation by all key relevant agencies and City departments as well as other relevant partners such as substantial riverwalk private property owners / public easement holders and land trusts.
- Identify opportunities and barriers that are important considerations before pursuing a governance entity.
- Research case studies from Chicago and other similar cities regulatory and funding models to review within the Working Group.
- Using the information and feedback gathered in these discussions, compile a long term work plan for assessing the feasibility of these governance concepts including an outline of approvals and coordination needs.

Goal #4: Ensure process for development reviews is followed and continues to improve new riverfront developments.

- Provide development teams with the “*Chicago Rivers – Partner-Gathered Context Information*” document developed in the 2023 System Plans Working Group meetings.
- Formally roll out guidelines for development review working group process.
 - [*Now on REGTF Development Review Working Group webpage*](#)
- Track how feedback has informed changes to riverfront development and create a checklist to ensure process is followed.

Chicago River Edge Access Study

REGTF Quarterly Meeting

03.12.2024



Delivering a better world

AECOM

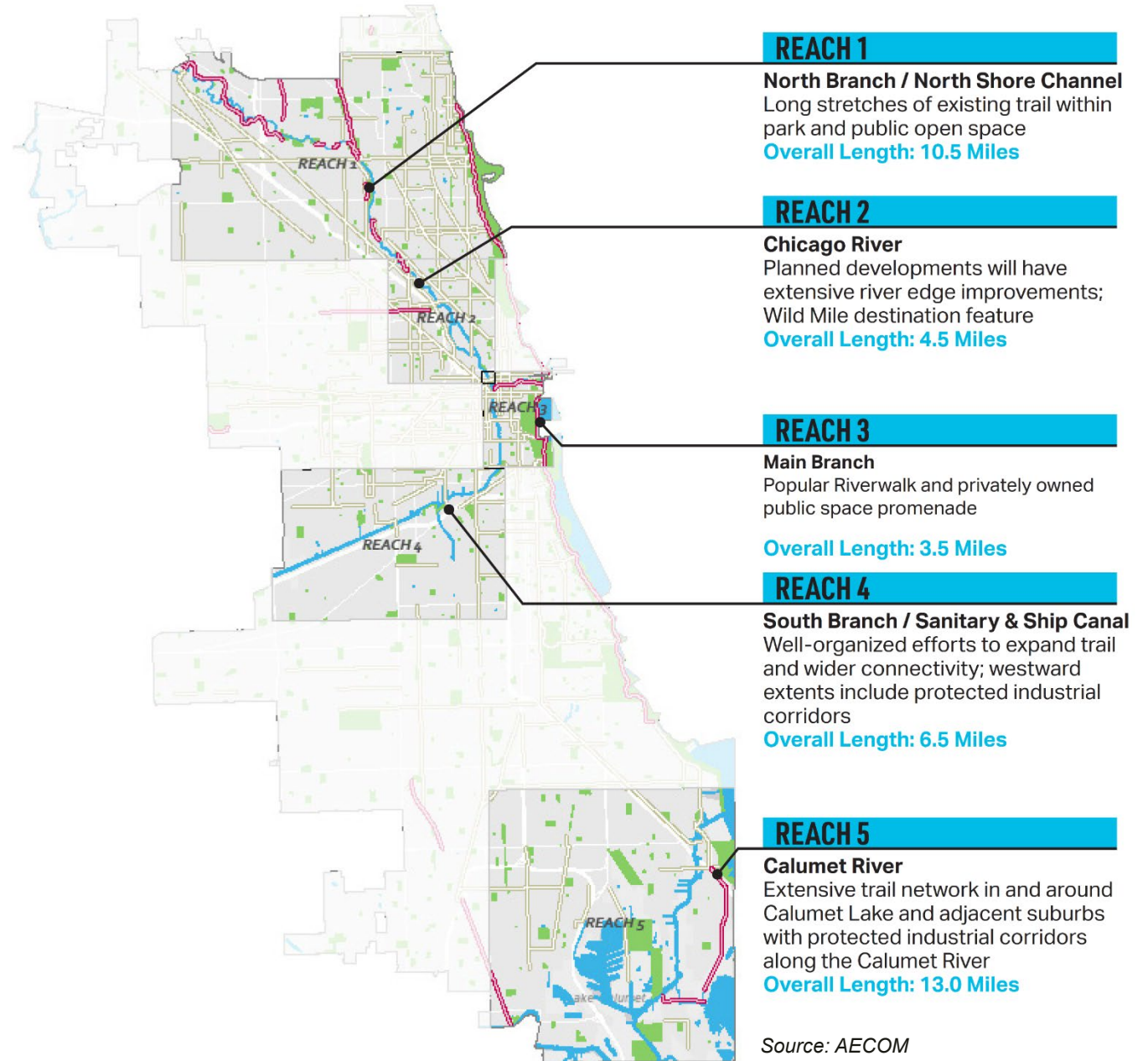
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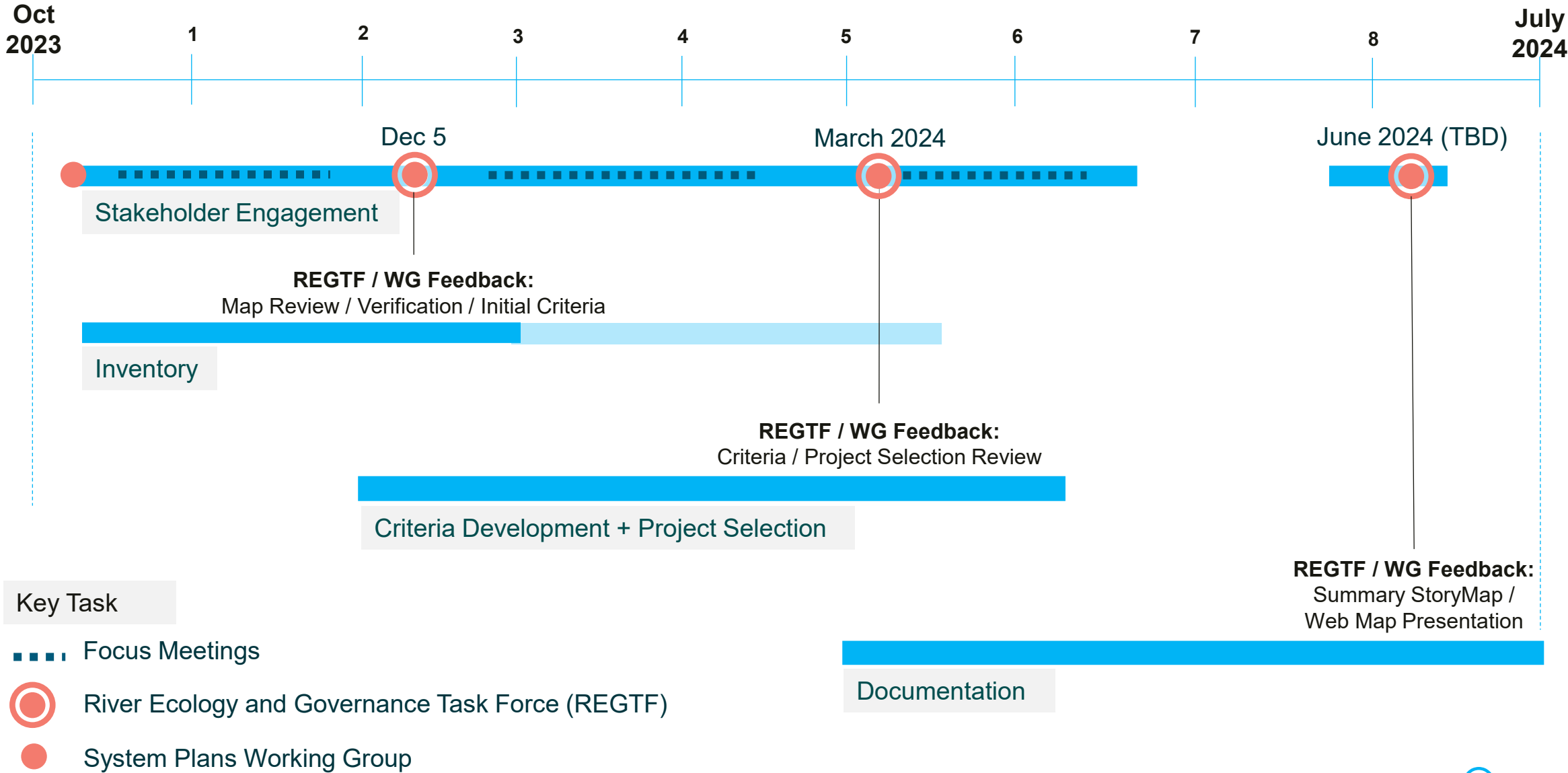
Project Study Area + Objectives

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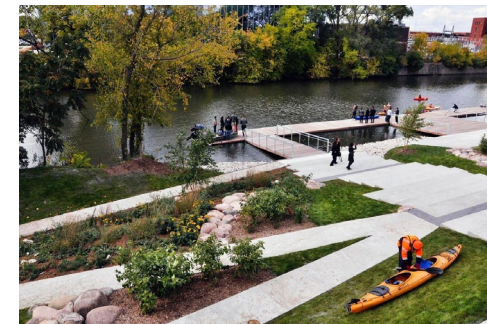
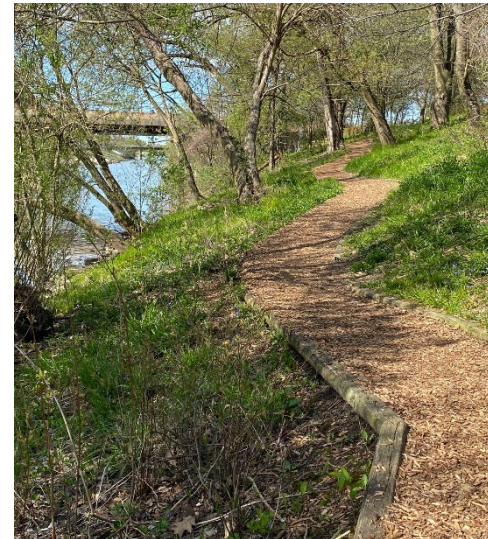
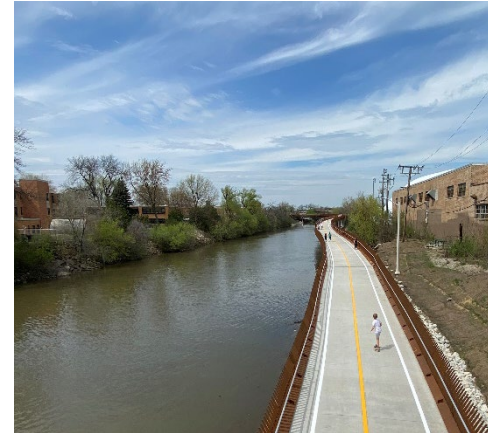


Timeline + REGTF and System Plans Working Group Engagement



Guiding Principles

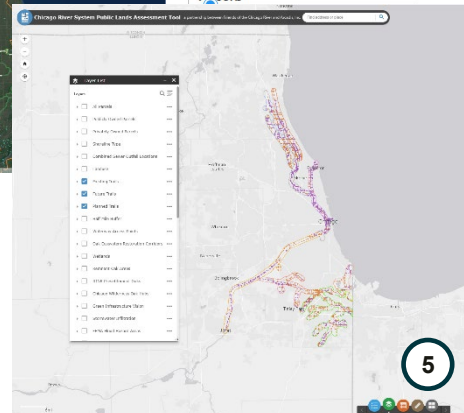
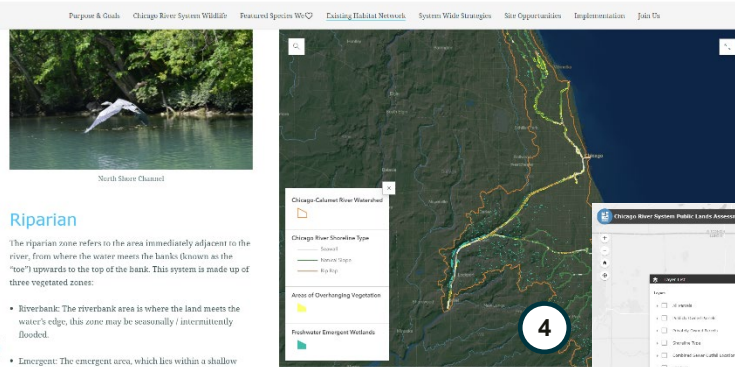
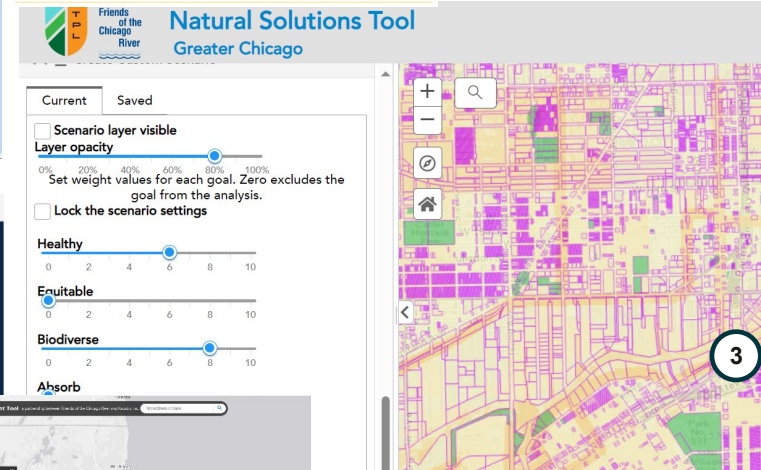
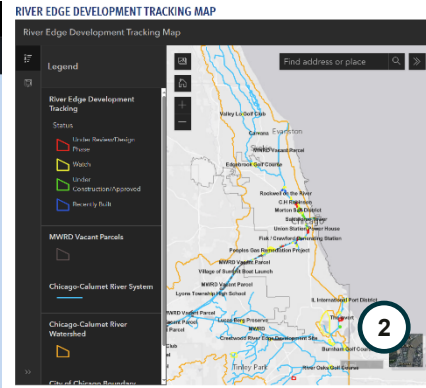
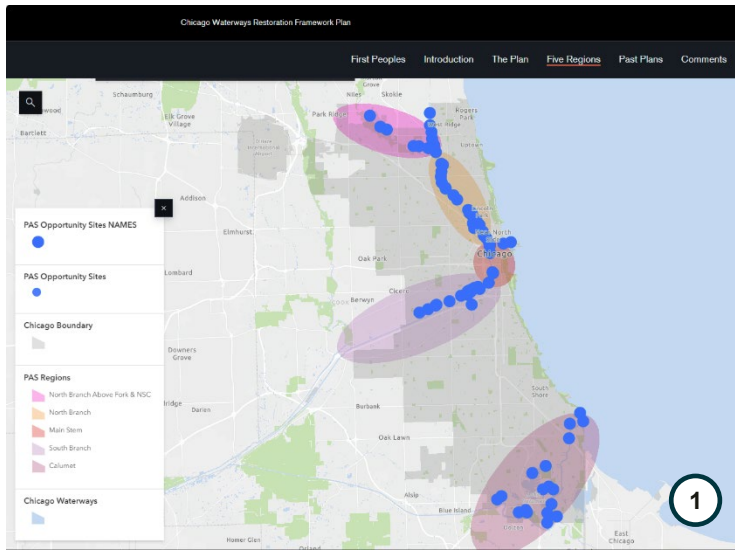
- Chicago Riverfront trails are an asset to the City and its residents
- Riverfront trails present a beneficial link in developing the transportation network, expanding passive and active recreation, building natural habitat and enriching urban experiences
- Properties adjacent to the river largely determine the type of Riverfront trail development
- Public Riverfront access should be available to all communities
- Engagement of all potential users and owners of Riverfront property is key in Riverfront trail development



Relevant Plans and Mapping / Tools

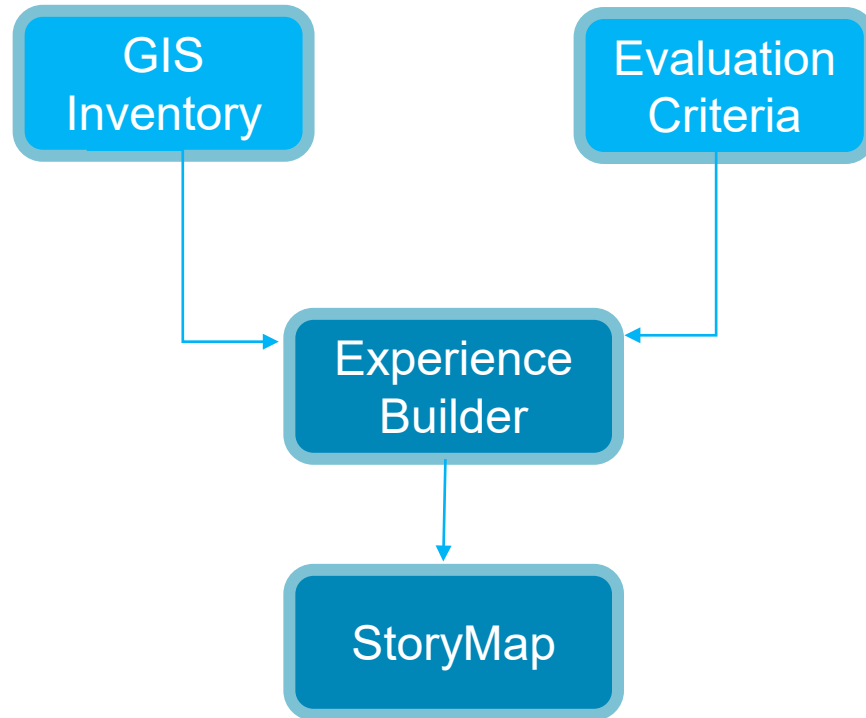
Key Tools and Datasets

- Natural Solutions Tool (2020) – Trust for Public Lands, FOCR
- Public Lands Assessment Tool (2019) – FOCR, Arcadis
- Chicago River Edge Development Tracking Map (2022) – FOCR
- City Portal, CMAP and other files



1. Chicago Waterways Restoration Framework Plan (2023) – USACE, DPD, et al
2. Chicago River Edge Development Tracking Map (2022) – Friends of the Chicago River (FOCR)
3. Natural Solutions Tool (2020) – Trust for Public Lands, FOCR
4. Wildlife Habitat Connectivity Action Plan (2020) – FOCR
5. Public Lands Assessment Tool (2019) – FOCR, Arcadis

ArcGIS Experience Builder

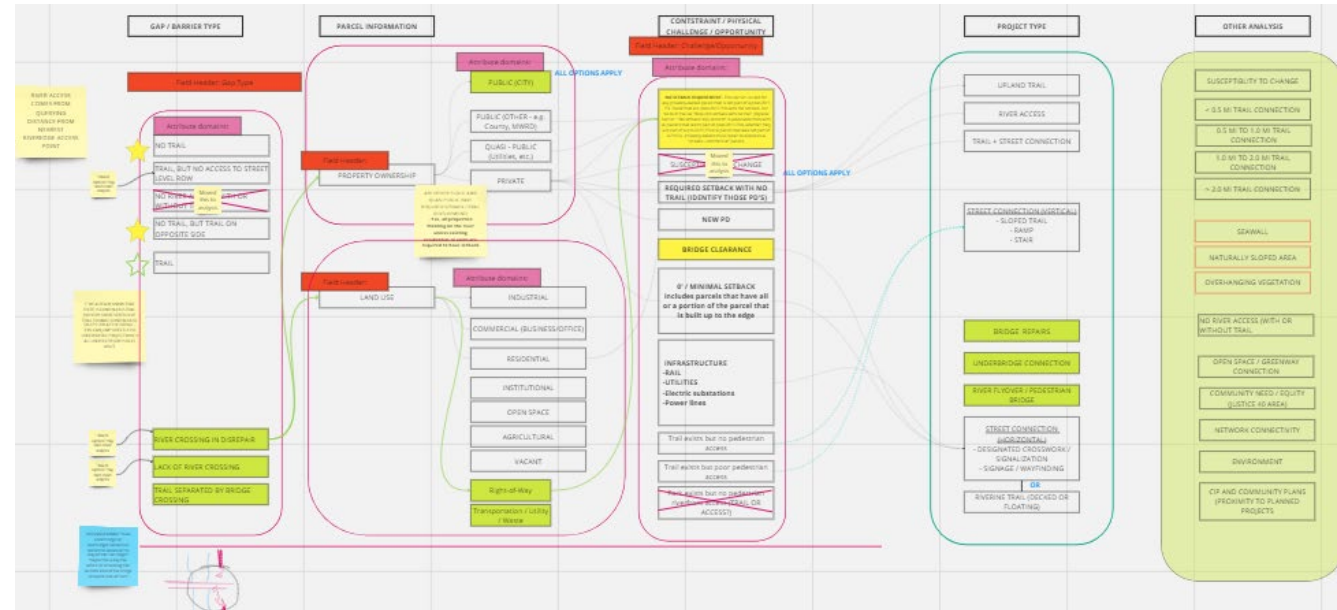


- Experience Builder is an Esri ArcGIS Online web application builder that allows you to create custom web experiences by combining maps, data, widgets and interactions
- Experience Builder serves as a dynamic dashboard with linked GIS data visualizations and interactive maps to help CDOT identify the challenges and opportunities related to creating a connected river trail at the parcel level
- The Experience Builder app will be embedded in the project Esri ArcGIS Online StoryMap deliverable

Design Tree / Decision Flow

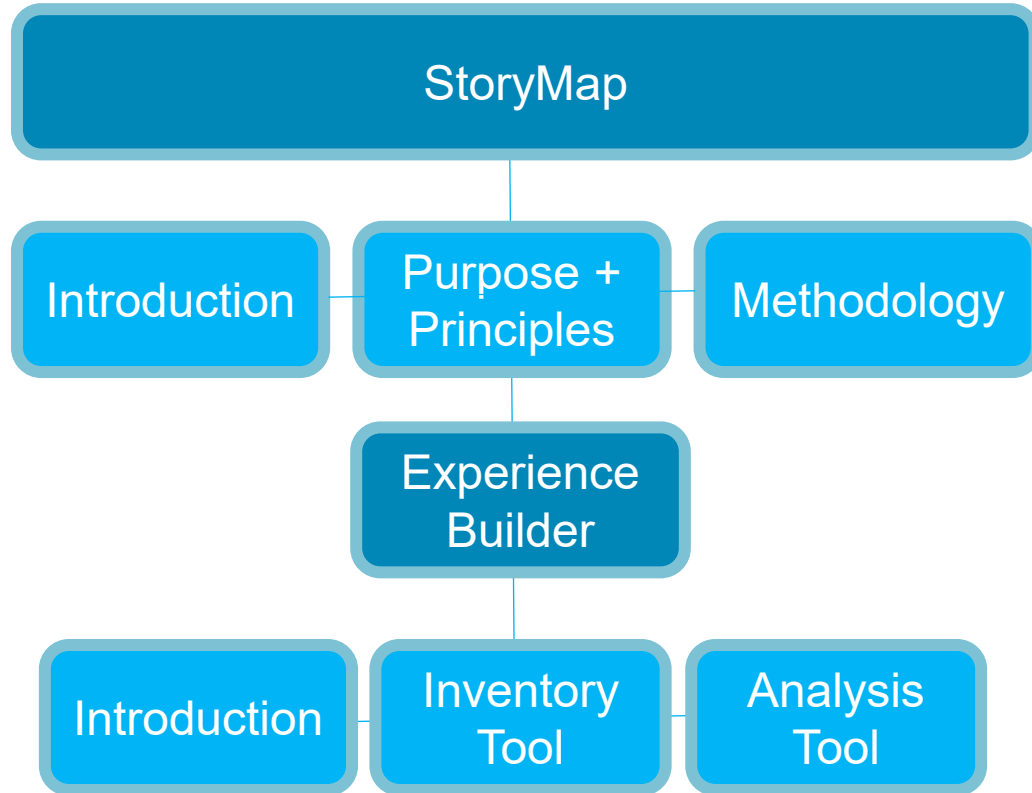
Potential planning queries:

- Gain quick snapshot of river edge trail gaps as a whole or by a specified area
- Identify context, synergies and opportunities that advance trail development to leverage PD or other development proposals
- Coordinate with short term proposed capital projects and future CIP
- Identify susceptible parcels for focused riverfront development
- Track trail development proposals from multiple sources
- Evaluate projects through different lenses of community / equity, environmental and transit connectivity and implementability
- Comprehend context and issues to more efficiently arrive at project solutions, challenges, timelines and impacts



"Inventory" and "Analysis" tools identify the context, barriers and opportunities of trail gaps and access to organize a suite of project types

Tool Applications and Share Usage – For Discussion



- Both StoryMap and Experience Builder apps (and the GIS data within the apps) will be hosted on the City's ArcGIS Online account, allowing CDOT to directly access and edit the project GIS data and applications beyond the delivery of the project
- StoryMap app (and embedded Experience Builder) will be publicly accessible with access restricted to select data
- Lindsey Frey will serve as application administrator
- Updates can be initiated by submitting a request form to CDOT

Inventory Tool

CHICAGO RIVERS EDGE ACCESS STUDY

Home About Inventory Tool Instructions Inventory Tool Analysis Tool Instructions Analysis Tool

Inventory Tool
Select features to identify opportunity parcels based on the following topic areas of analysis.
Click on the "i" for more information on each category or hover over each criteria title to see the methodology.

Land Use PD Ward TIF District

Property Ownership:
- All -

River Edge Condition:
- All -

Trail Status:
No Trail

Reach Number:
2

Underbridge Connection:
No Underbridge Connection

Trail Gap Length by Parcel:
Short Medium Long

Selection Summary
Total Parcel Count: **206**
Length of Trail Gap: **28,117 ft**
Length of Existing Trail: **0 ft**

Parcel Data Edge Information Measurements

PIN10	Land Use	Property Owners...	Active Barge Users
1313216009	Residential	MWRD	Not Active
1313208007	Multi-Family Residential	MWRD	Not Active
1313216007	Residential	MWRD	Not Active

Total: 206 | Selection: 0

Existing Greenway / Trail
Type: Existing Greenway / Trail
Source: CMAP
Sidewalk on Both Sides?: N/A

Key Outputs:

- Existing conditions emphasize the type of trail gap, parcel information and constraints or opportunities
- Queries and Searches allow for targeted understanding of issues on a parcel or gap basis
- Preliminary planning and decision-flow charts can be refined through the Analysis Tool

LET US KNOW

- Are there layers or concepts in the proposed inventory that are missing?
- What are other queries the tool can address?

Analysis Tool

CHICAGO RIVERS
EDGE ACCESS STUDY

Home About Inventory Tool Instructions Inventory Tool Analysis Tool Instructions Analysis Tool

Analysis Tool

Select features to identify opportunity parcels based on the following topic areas of analysis.
Click on the "I" for more information on each category or hover over each criteria title to see the methodology

Land Use PD Ward TIF District

Parcel Suitability

Ownership
Public Private

Susceptibility to Change

Network Connectivity

Distance to Green Space
<.25 mi .25 - .5 mi >.5 mi

Community Equity / Need

Vulnerable Populations (Percentiles)
<80th 80th - 90th >90th

Air Quality (Percentiles)

Environment

Urban Flooding
High Medium Low

Selection Summary

Total Parcel Count:
854

Length of Trail Gap:
233,218 ft

Length of Existing Trail:
86,349.849 ft

PIN10	Property Owners...	PD Association	TIF District
1705121004	Likely Private	1049	TIF CITY OF CHICAGO-N
1705121008	Likely Private	1049	TIF CITY OF CHICAGO-N
1705121003	Likely Private	1049	TIF CITY OF CHICAGO-N

Total: 854 | Selection: 1

1430401020

Zoom to

Trail Status	No Trail, But Trail on Opposite Side
Property Ownership	Likely Private
Access Physical Challenge	Rip Rap, Overhanging Vegetation, No Setback Requirement
Land Use	Industrial
River Edge Status	Failed
Edge Type	Rip Rap

Key Outputs:

Tool development is based on four main criteria, each with their own unique sets of data and evaluation:

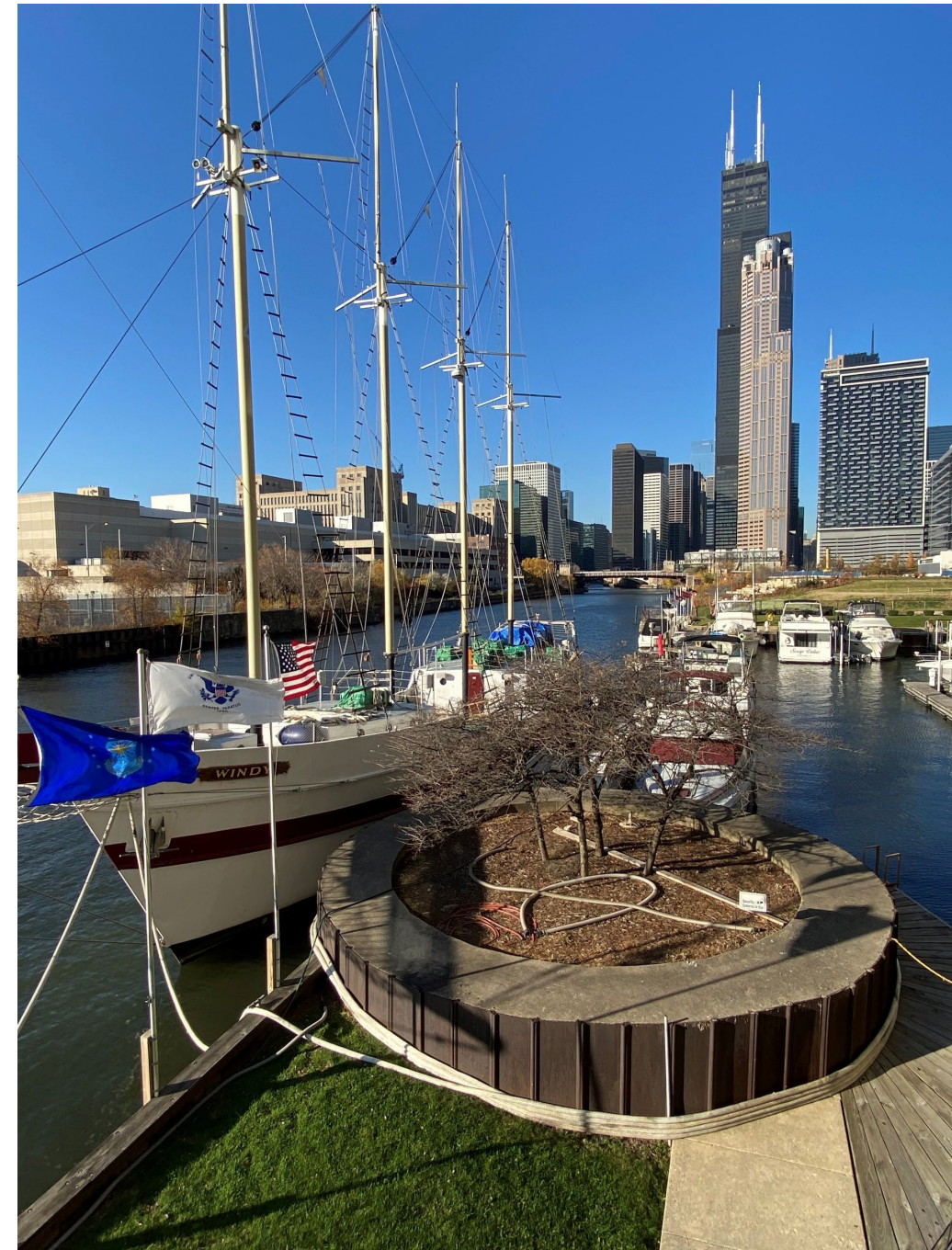
- Parcel Suitability
- Network Connectivity
- Community Equity / Need
- Environment

LET US KNOW

- After seeing the tool's analysis, do you have ideas of how this could be applied to some of the connectivity projects happening today or in the future?
- Do you have thoughts about how to show some of this data to be useful for exploring river connectivity/access work?

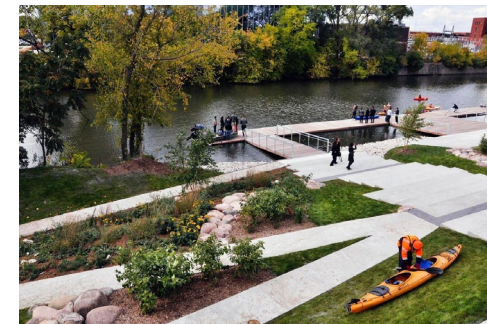
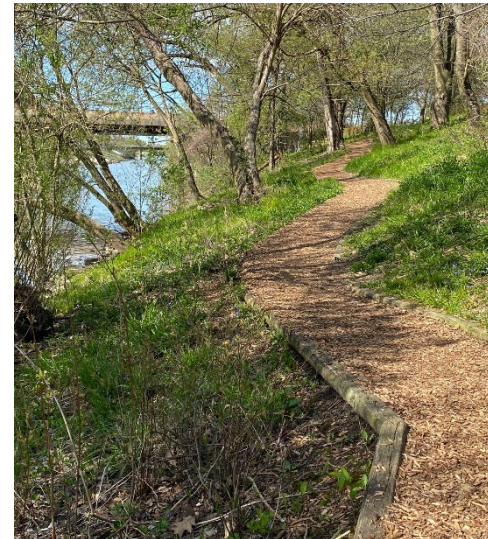
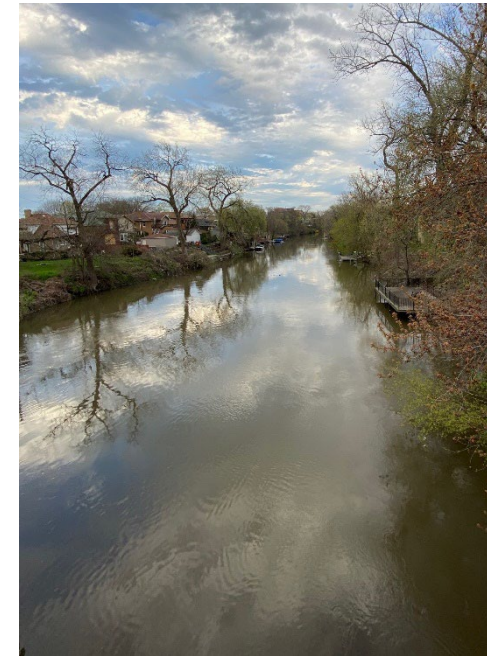
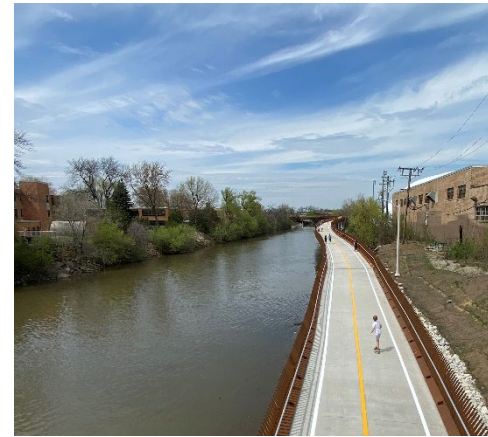
Feedback Request

- What improvements can be made to the overall tool content and organization?
- Can site investigation help validate conditions in specific locations?
- How do you propose capturing connections from the river back into the neighborhoods? Are there layers that would help to visualize that important access concept?



Next Steps

- Refine content, functionality and graphics in Experience Builder application
- Define external tool access and database update procedures
- Present final StoryMap report to REGTF in next Quarterly Meeting





Thank you!

REGTF Quarterly Meeting

03.12.2024



Delivering a better world



Triennial Review

Scott Twait, Manager
Water Quality Standards Section
Bureau of Water



Triennial Review Steps Completed

- Public Hearing (July 6, 2023)
 - Comment Period (May 10, 2023 – September 7, 2023)
 - Ranking Topics via Survey Monkey
- Selection of Topics
 - Based on:
 - Comments
 - Rankings
 - USEPA Comments
 - Agency Needs



Triennial Review

- Propose Updates to Subpart F: Procedures for Determining Water Quality Criteria (35 Ill. Adm. Code 302.210)
- Evaluate Designated Recreational Uses:
 - Chicago Sanitary and Ship Canal from the confluence of Bubbly Creek to the confluence of the Calumet-Sag Channel
 - South Fork of the South Branch Chicago River (Bubbly Creek)
- Address US EPA Disapprovals for Chicago Area Waterway System (CAWS)\Recreation (R2008-009(A))
 - Calumet River from Lake Michigan to the O'Brien Lock and Dam
 - Upper North Shore Channel from the Wilmette Pumping Station to Northside Water Reclamation Plant
 - Chicago Sanitary and Ship Canal from its Confluence with the Calumet-Sag Channel to its Confluence with the Des Plaines River
 - Lower Des Plaines River from its Confluence with the Chicago Sanitary and Ship Canal to the Brandon Road Lock and Dam



Next Steps

- Write regulations for a step-by-step process for instituting up-to-date methodology
- Determine how to complete Recreational Survey
 - Hire contractor
 - Schedule Public Meetings
- File Rulemaking to the IPCB
 - Regulations
 - Statement of Reasons
 - Justification Documents
- Communication
 - Stakeholders
 - Public
 - EJ communities
 - USEPA



Questions?

Scott Twait, Manager

217 – 782 – 3362

scott.twait@illinois.gov





Trash in Freshwaters:

What's there? What policies can help?

Timothy Hoellein, Ph.D.

Professor, Dept. Biology, Loyola Univ. Chicago

City of Chicago's River Ecology and Governance Task Force

March 2024



Photo: Sylvia Lee



Litter





Plastic debris on East Beach, Henderson Island

Jennifer Lavers

A Remote Paradise Island Is Now a Plastic Junkyard

Henderson Island is isolated and uninhabited—but its beaches are still covered in garbage.

The Atlantic. May 15, 2017

1. State of 'trash' science

2. What's in our freshwaters?

🚣 Kayakers

🗑️ Seabin

🚶 Beach clean ups

🔬 Microplastics

3. Policy targets

Wastewater

'Nurdles'



1. State of 'trash' science

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Wastewater

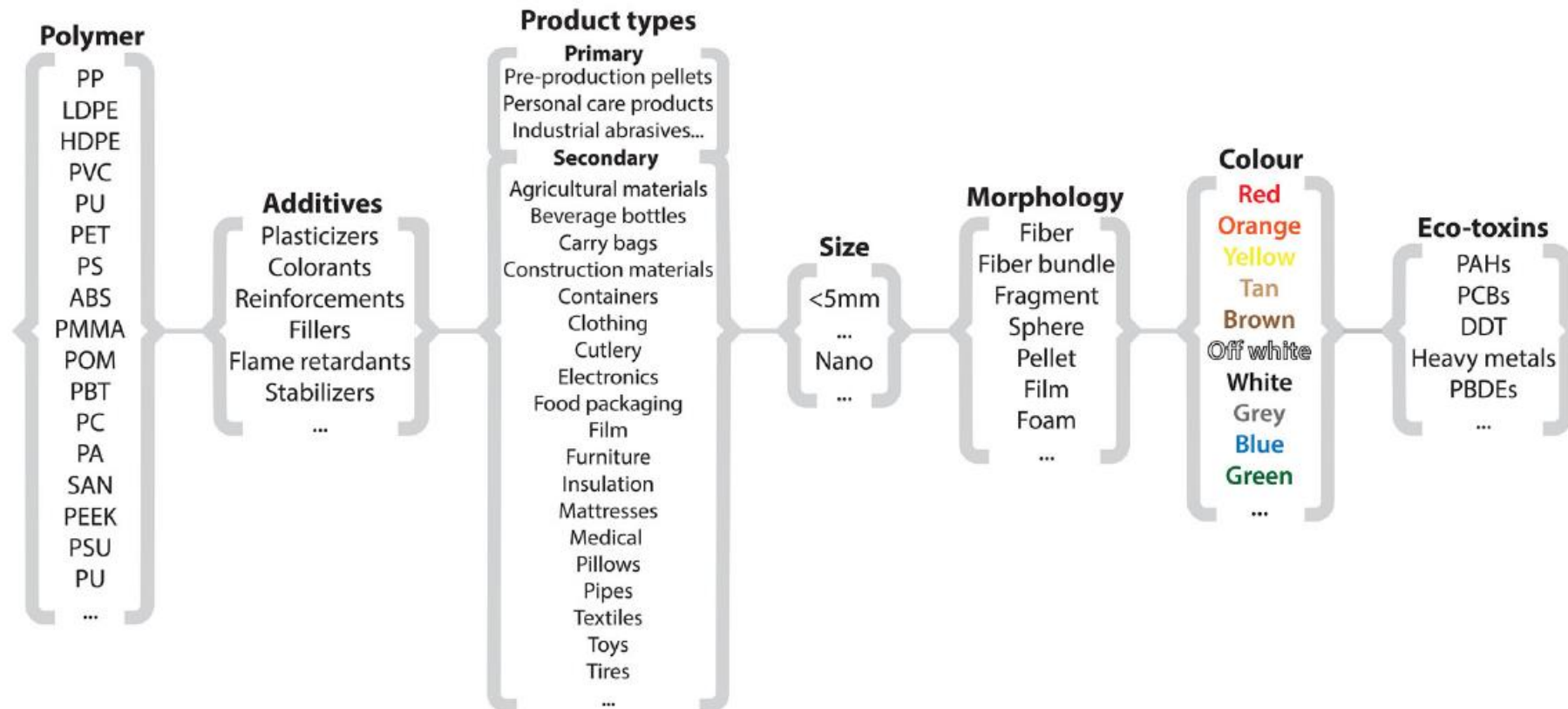
'Nurdles'



Trash = Anthropogenic Litter = Marine debris



Terms: Plastic, highly variable



Terms: Microplastic (1 um - 5 mm)

Production pellets "Nurdles"



www.frbiz.com



www.alibaba.com

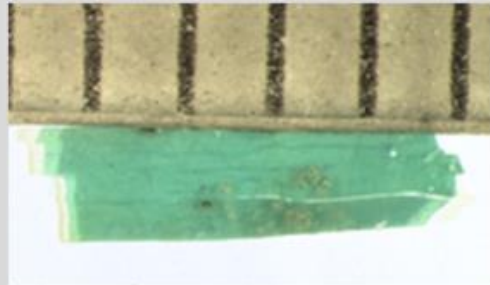
Personal care products



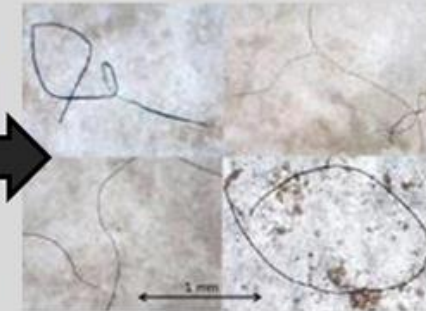
Fragmentation (ex: single use plastics)



archipelago.gr

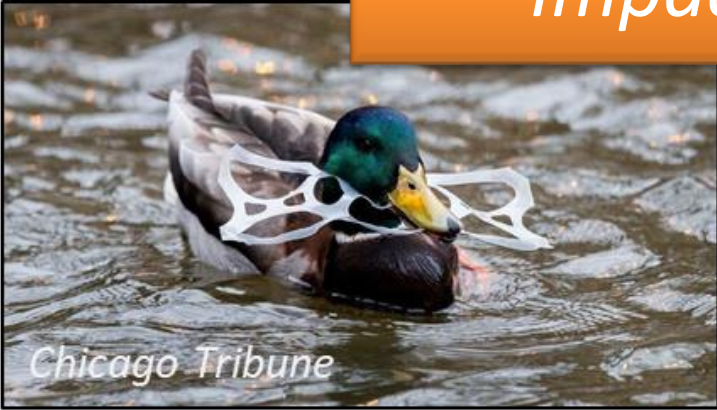


Synthetic fibers

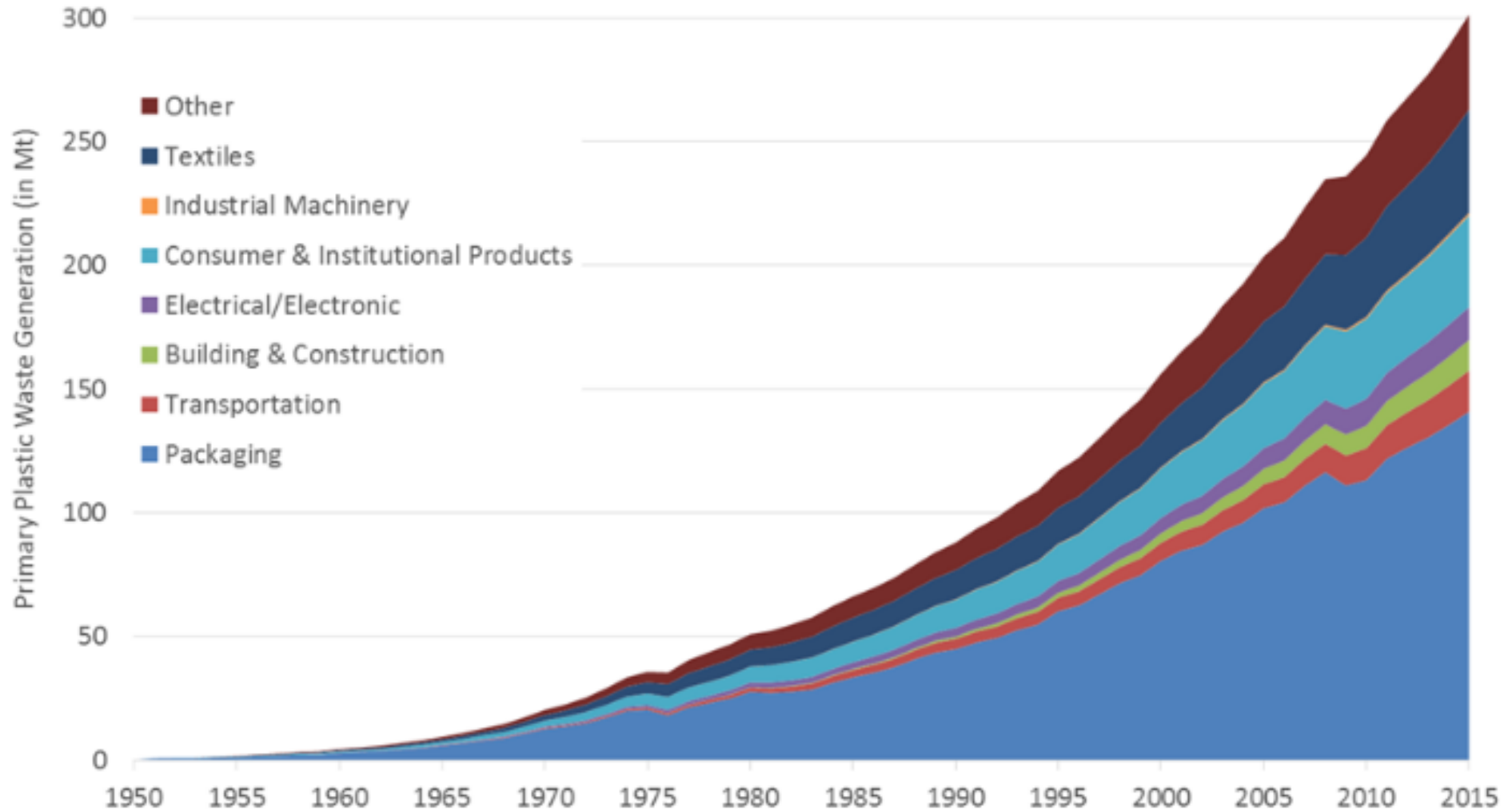


<http://workjournal.archipelago.gr/tag/microplastics/>

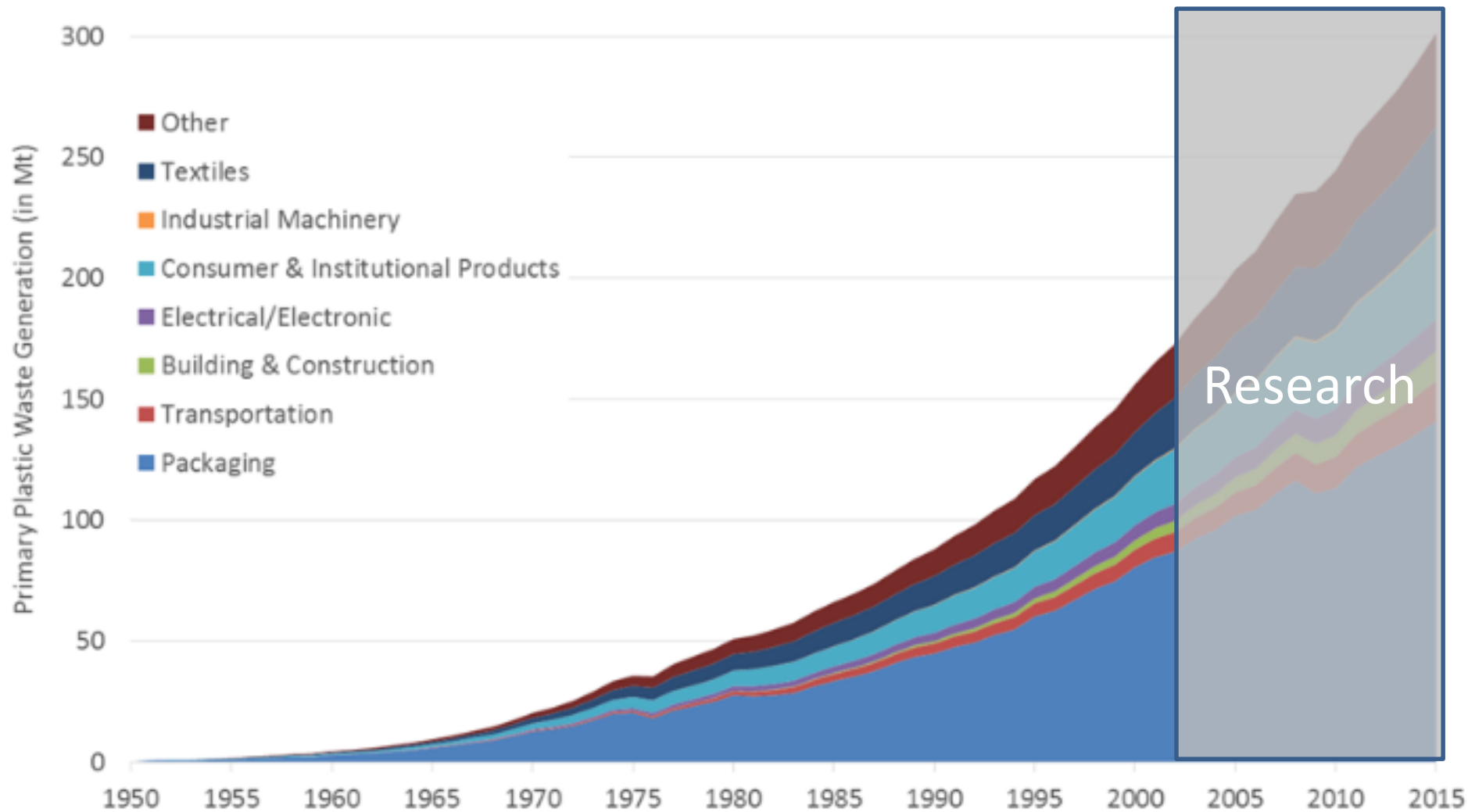
Impacts: Variable



Plastic waste generation is accelerating



Plastic waste generation is accelerating



When did plastic pollution start?

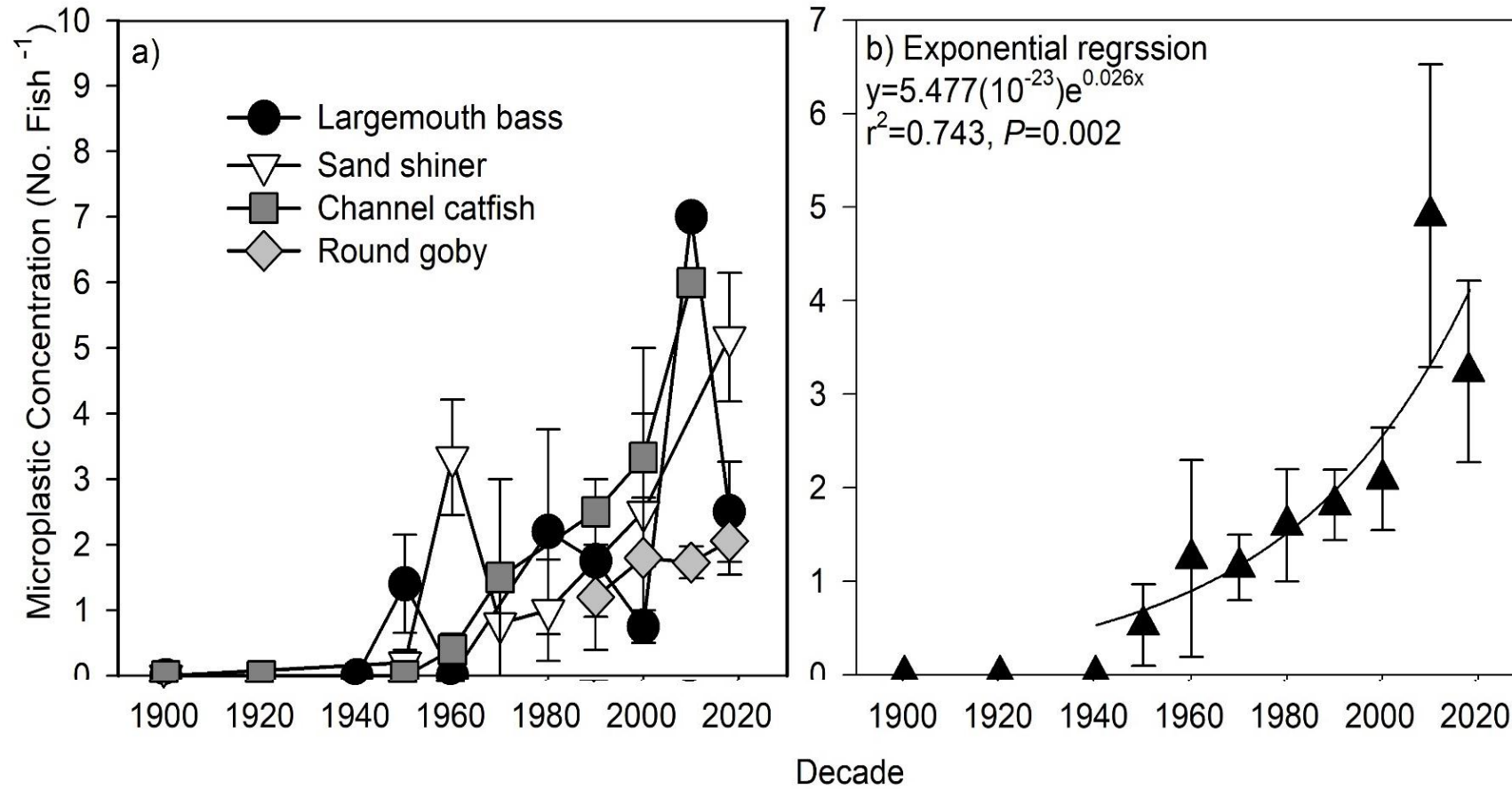


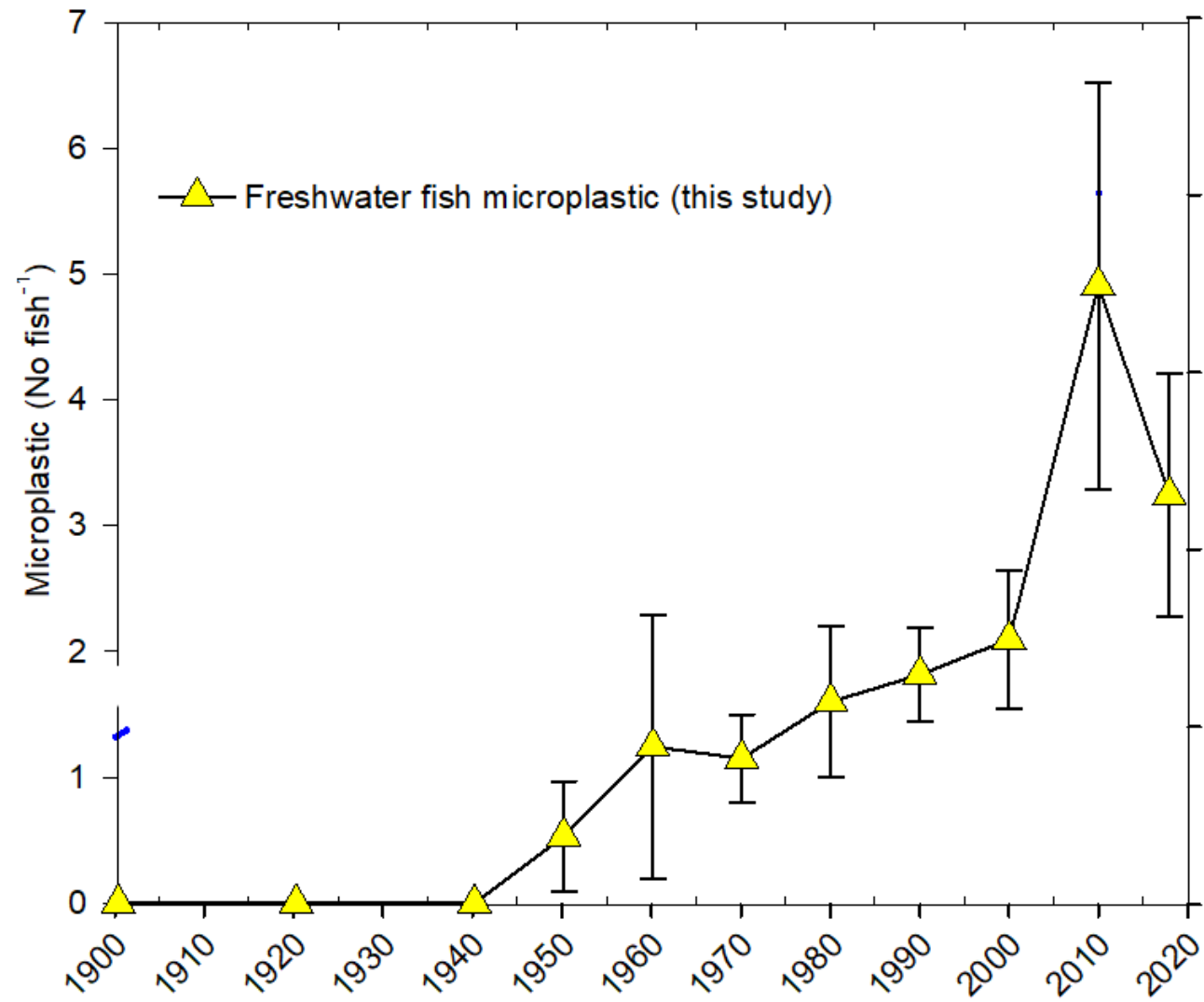
Loren Hou

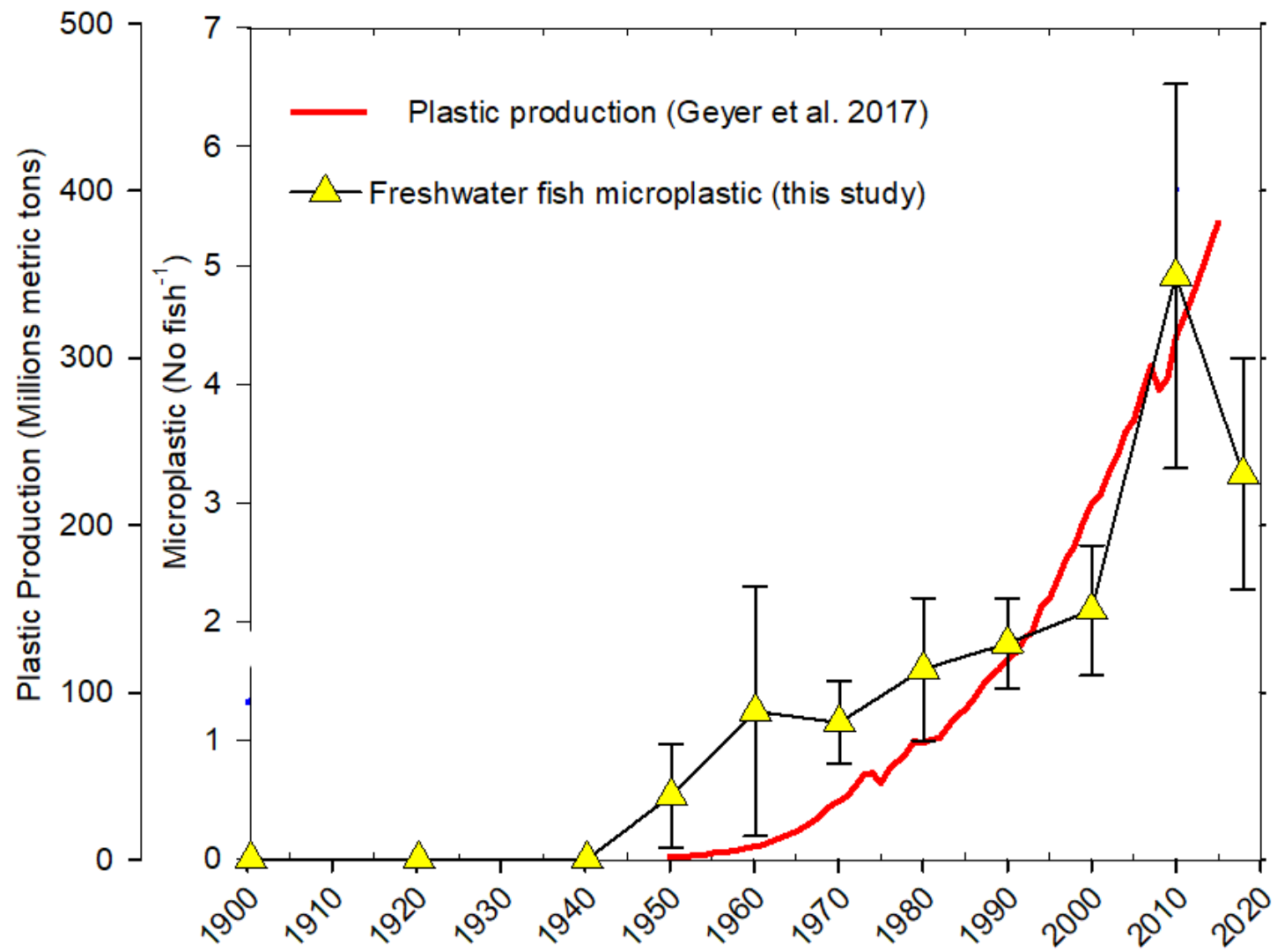


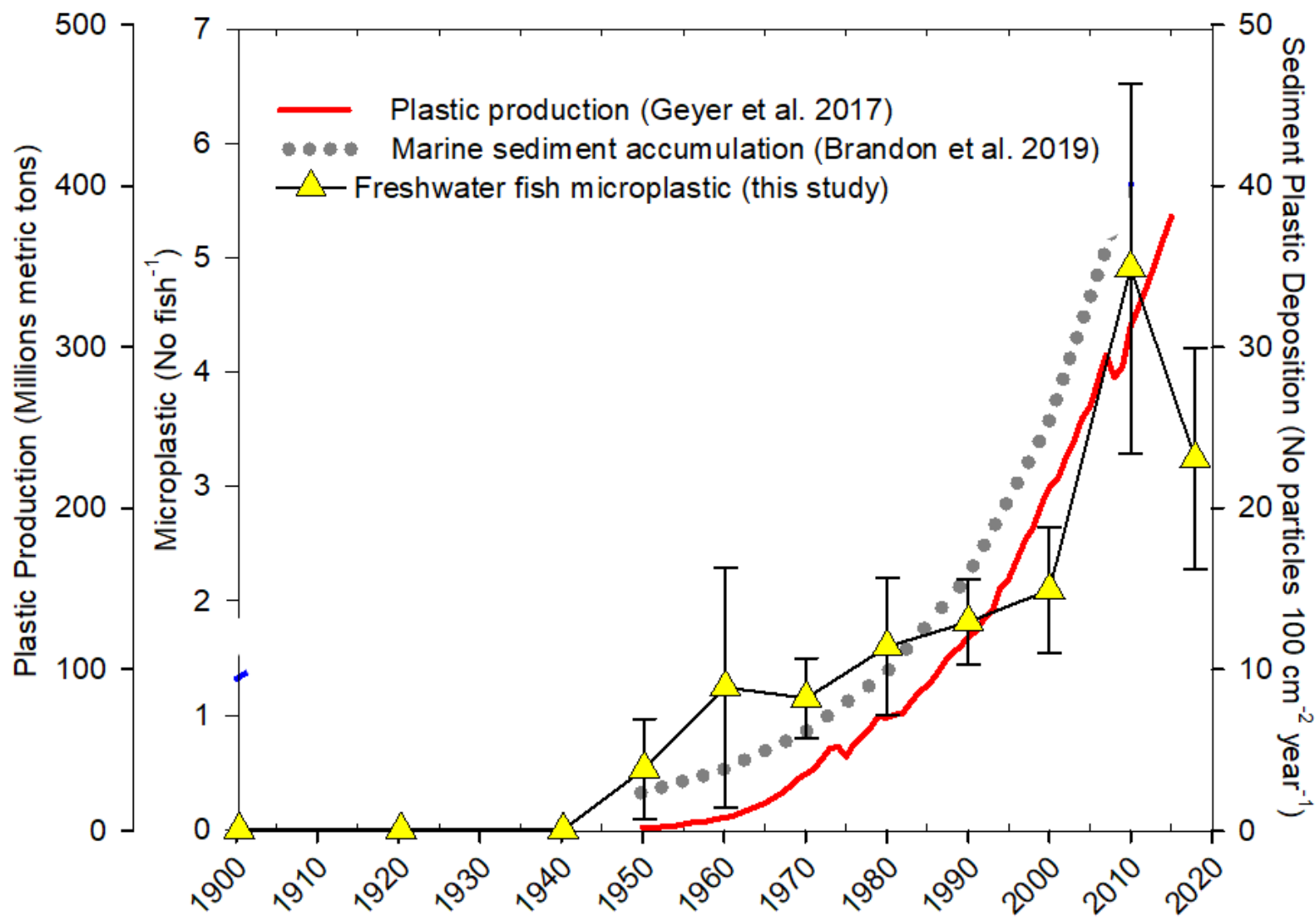
Caleb McMahan

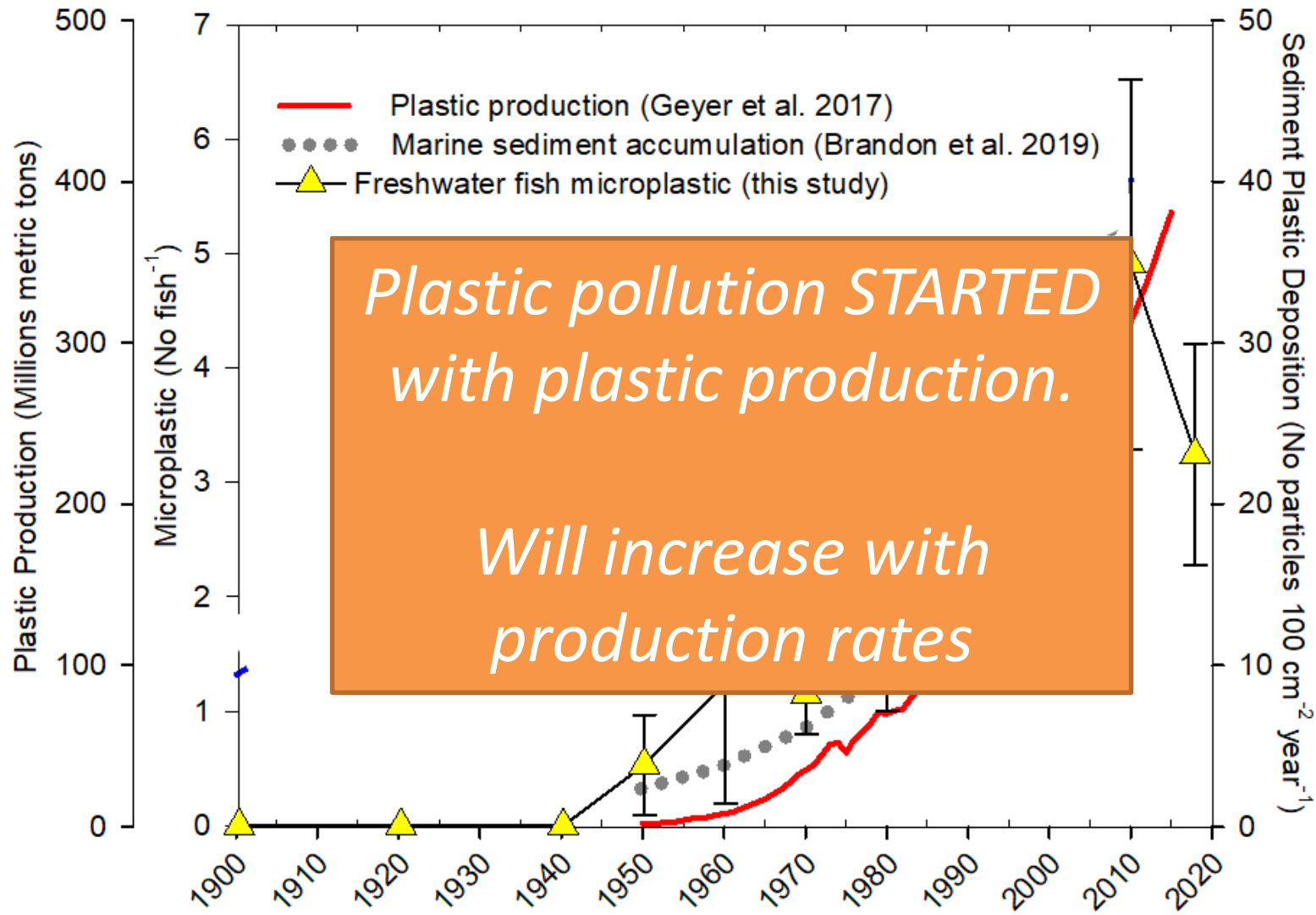












1. State of 'trash' science

2. What's in our freshwaters?

 Kayakers

 Seabin

 Beach clean ups

 Microplastics

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Wastewater

'Nurdles'



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Wastewater

'Nurdles'



Volunteers: N. Branch Chicago River (*Goose Island*)



Liz Kazmierczak

Raúl Lazcano

Bailey Schwenk

CHICAGO RIVER
Litter Task Force



Site: _____ Number of Participants _____ Date: _____ Time Start: _____ Time End: _____

* Please don't pick up items that you don't want to handle, but do record them on the litter sheet.

* Smaller than 1 inch? **It's a fragment!** _____"

SMOKING-RELATED

		Tally	Total
Cigarettes, butts & filters	Cigarettes		
Cigars (plastic tips and other)	Plastic		
Lighters	Plastic		
Packaging for cigarettes, cigars	Plastic		

FOOD-RELATED

		Tally	Total
Cups	Paper		
	Styrofoam		
Bottles, jars	Glass		
	Plastic		
Aluminium cans	Metal		
Bottle caps, lids, pull tabs	Plastic		
	Metal		
6-pack rings, carriers	Plastic		
Straws, stirrers	Plastic		
Food wrappers/packaging	Plastic		
Food trays, takeout containers	Plastic		
	Styrofoam		
Food trays, containers, food wrappers	Paper		
	Plastic		
Bags (grocery, shopping, fast food)	Paper		
	Plastic		
Foil wrappers, aluminum foil	Metal		
Cutlery (knives, spoons)	Plastic		
Paper towels/napkins	Paper		
Popsicle sticks, toothpicks, corks	Wood		
Food items	Food		

MEDICAL/PERSONAL HYGIENE

		Tally	Total
Toiletries (flossers, toothbrush)*	Plastic		
Syringes*	Plastic		
First Aid supplies and packaging, band aids*	Other		
Sanitary* (diapers, wipes, fem. hygiene)	Other		
Medication, drugs, drug paraphernalia*	Other		
Condoms*	Rubber		
Gloves*	Rubber		
Facemasks and PPE*	Plastic/ Cloth		

FRAGMENTS

		Tally	Total
Paper/cardboard fragments	Paper		
Plastic fragments	Plastic		
Styrofoam fragments	Styrofoam		
Glass fragments	Glass		

DUMPING

		Tally	Total
Aerosol cans	Metal		
Bottles (not food-related)	Plastic		
Containers or drums (gas, oil)	Metal		
Packing materials (strapping, packing peanuts, cardboard boxes, paper bags)	Plastic		
	Styrofoam		
Baskets, crates, trash bags	Plastic		
	Paper		
Insulation, coolers	Styrofoam		
Carpet, large fabric	Cloth		
Cloth (clothing, cloth bags)	Cloth		
Footwear (shoes, flip-flops)	Rubber		
Batteries, electronics, appliances	Mixed		
Tires	Rubber		
Wire (wire, mesh, barbed wire)	Metal		
Construction materials (metal screws, metal bolts, ceramic brick, cement)	Metal		
	Wood		
	Ceramic		

WATERWAY ACTIVITIES

		Tally	Total
Fishing related (sinkers, line, hooks, nets)	Metal/ Plastic		
Rope	Plastic		
Foam buoys	Styrofoam		

MISCELLANEOUS

		Tally	Total
Toys	Plastic		
Balloons, balls, toys	Rubber		
Other ceramics	Ceramic		
Other plastics	Plastic		
Other styrofoam	Styrofoam		
Other wood	Wood		
Other paper	Paper		

* Please don't pick up any dead animals that you find.

CHICAGO RIVER Litter Task Force

Friends of the Chicago River

LOYOLA

MARS WRIGLEY

REI

Shedd

WM

Site: _____ Number of Participants _____ Date: _____ Time Start: _____ Time End: _____

* Please don't pick up items that you don't want to handle, but do record them on the litter sheet.

* Smaller than 1 inch? **It's a fragment!** _____"

SMOKING-RELATED

		Tally	Total
Cigarettes, butts & filters	Cigarettes		
Cigars (plastic tips and other)	Plastic		
Lighters	Plastic		
Packaging for cigarettes, cigars	Plastic		

FRAGMENTS

		Tally	Total
Paper/cardboard fragments	Paper		
Plastic fragments	Plastic		
Styrofoam fragments	Styrofoam		
Glass fragments	Glass		

FOOD-RELATED

		Tally	Total
Cups	Paper		
	Styrofoam		
Bottles, jars	Glass		
	Plastic		
Aluminium cans	Metal		
Bottle caps, lids, pull tabs	Plastic		
	Metal		
6-pack rings, carriers	Plastic		
Straws, stirrers	Plastic		
Food wrappers/packaging	Plastic		
Food trays, takeout containers	Plastic		
	Styrofoam		
Food trays, containers, food wrappers	Paper		
Bags (grocery, shopping, fast food)	Paper		
	Plastic		
Foil wrappers, aluminum foil	Metal		
Cutlery (knives, spoons)	Plastic		
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Popsicle sticks, toothpicks, corks	Wood		
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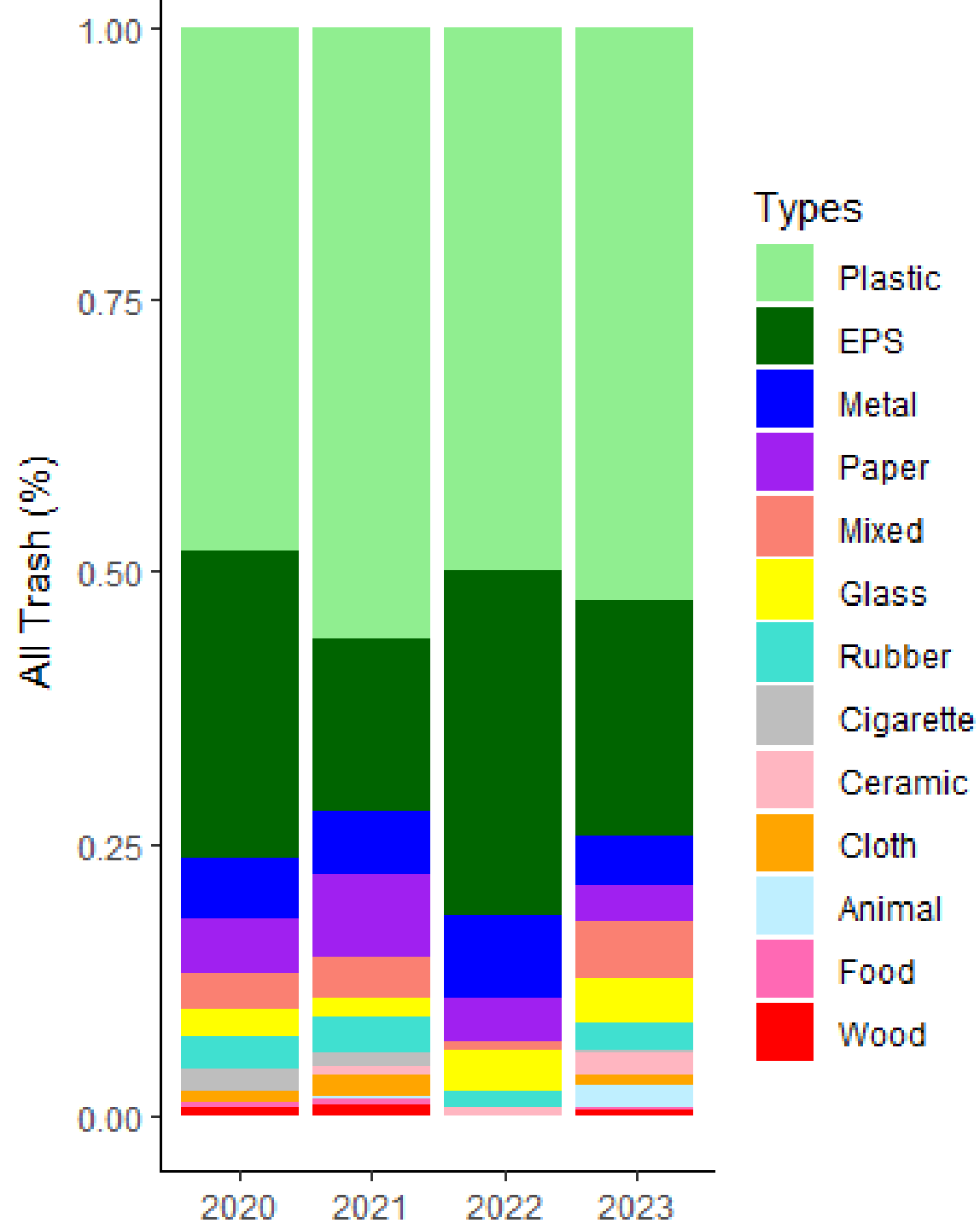
* Please don't pick up any dead animals that you find.

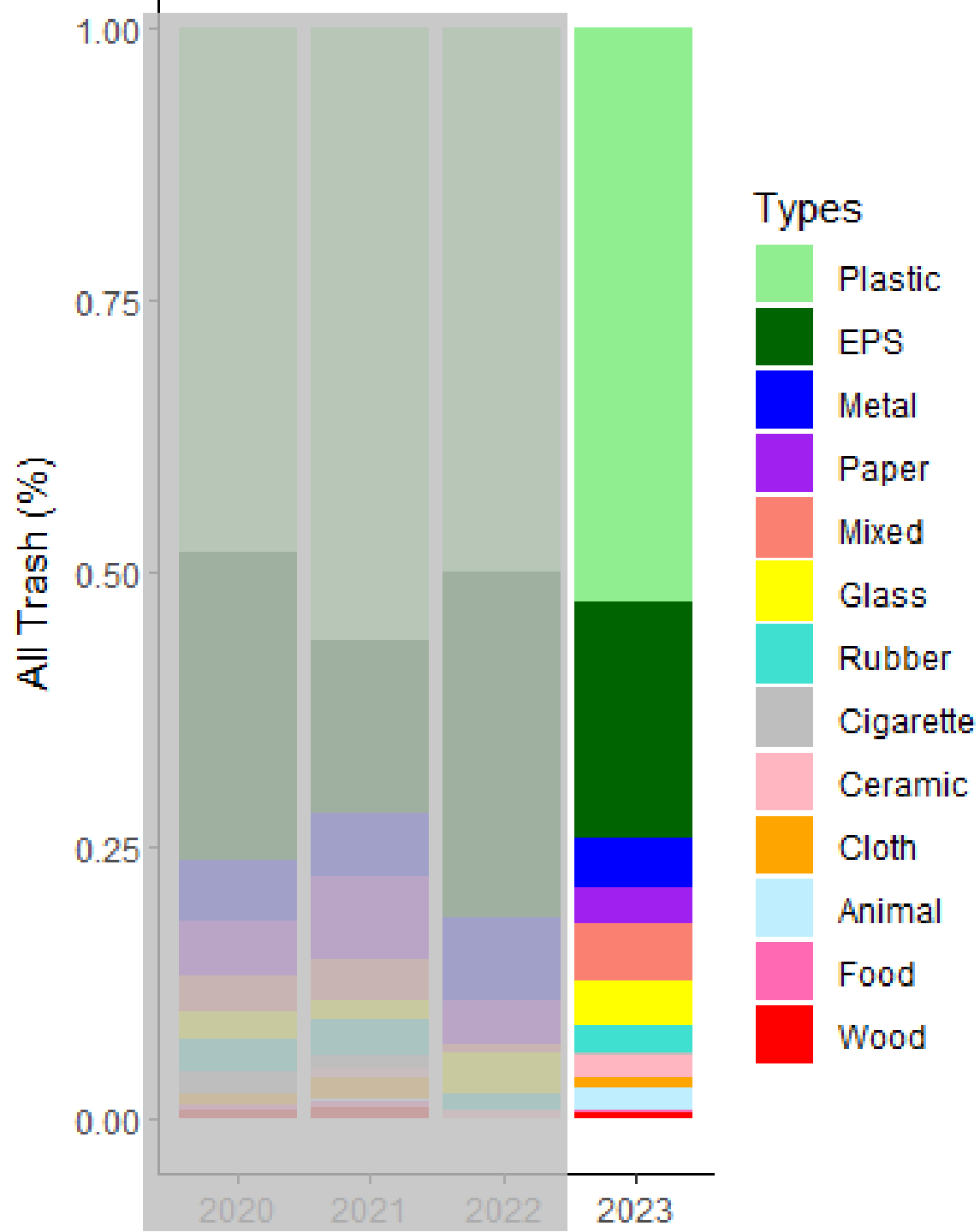
FOOD-RELATED

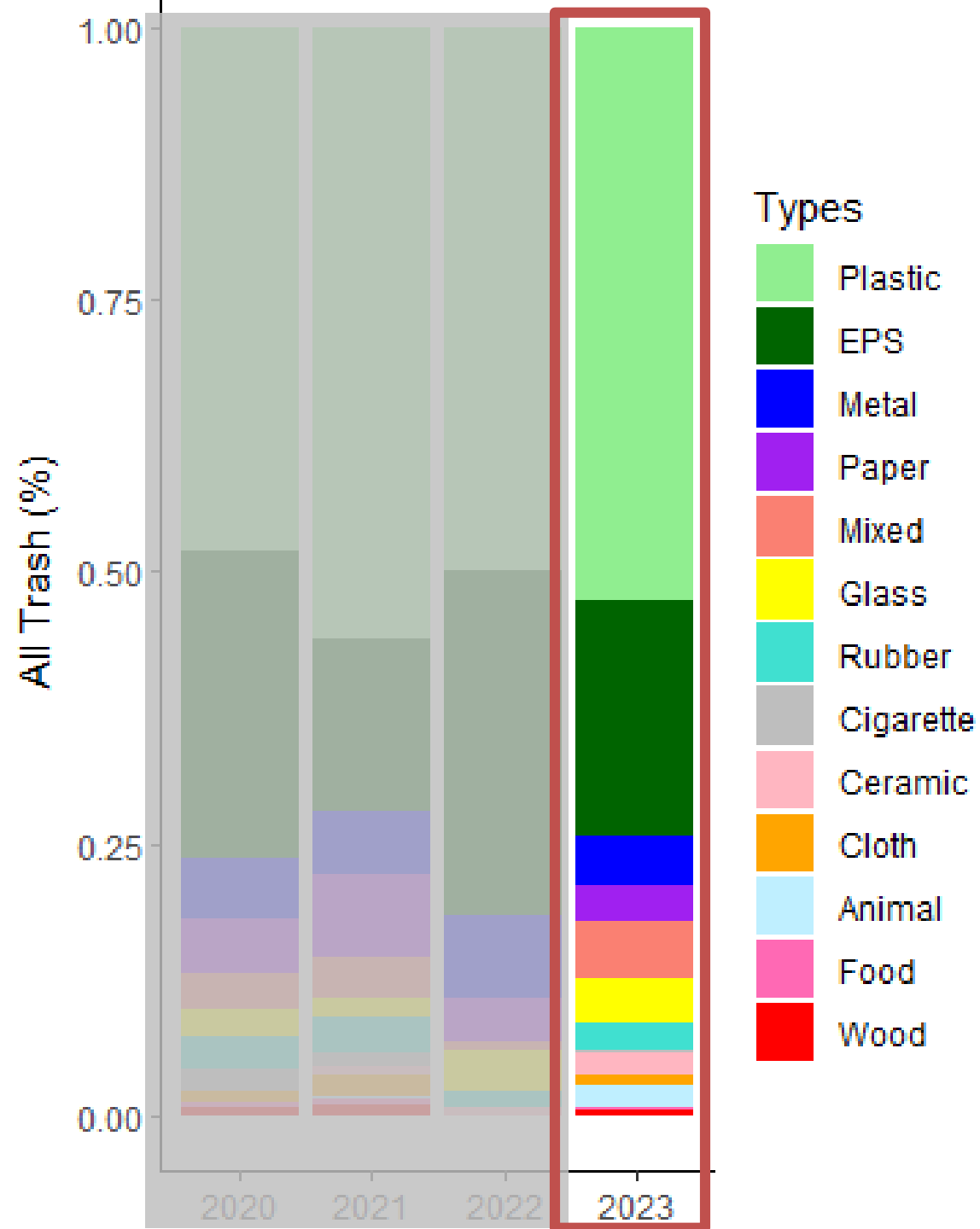
Tally

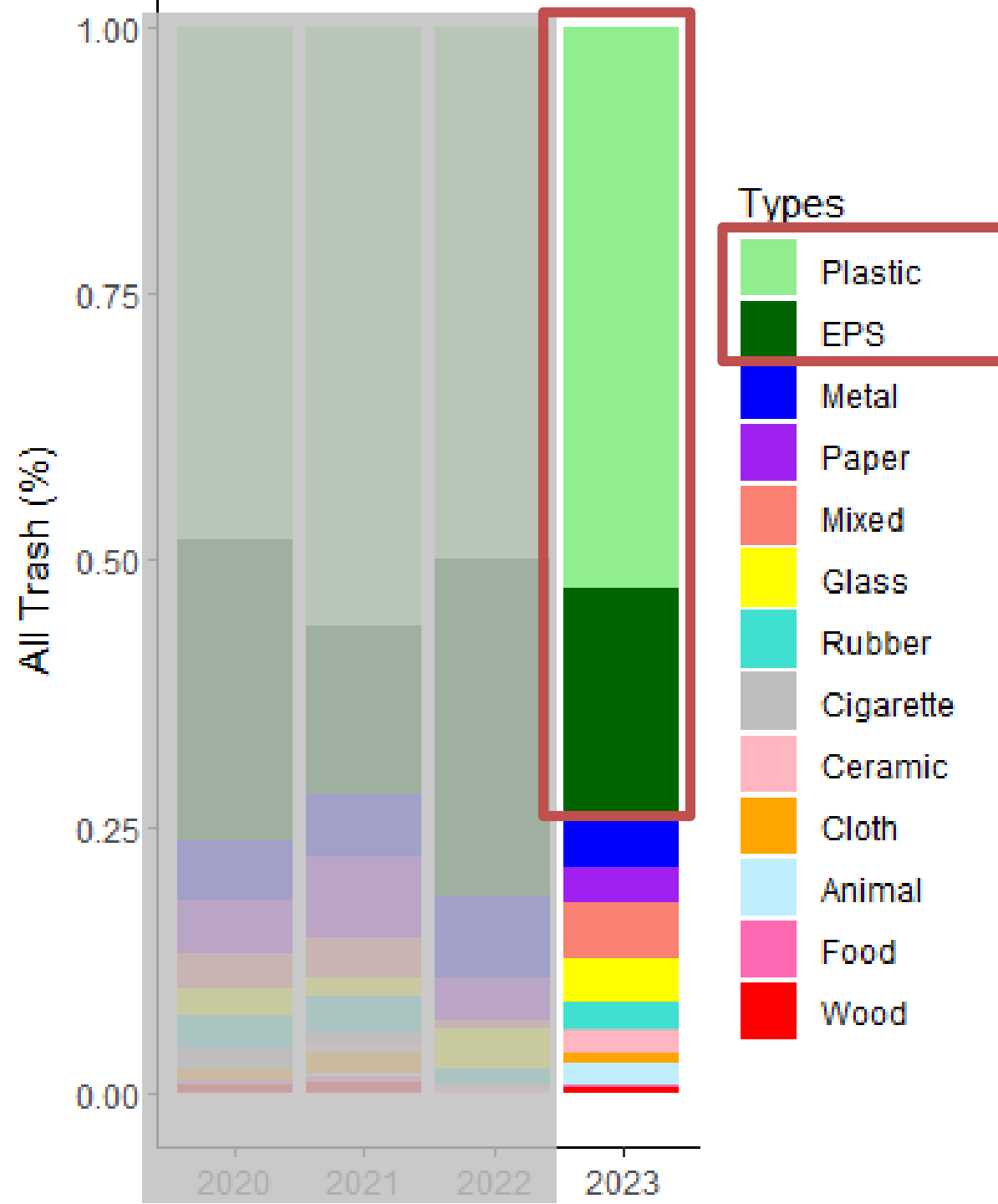
Total

Cups	Paper		
	Styrofoam		
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“Seabin”: Chicago River (*downtown*)



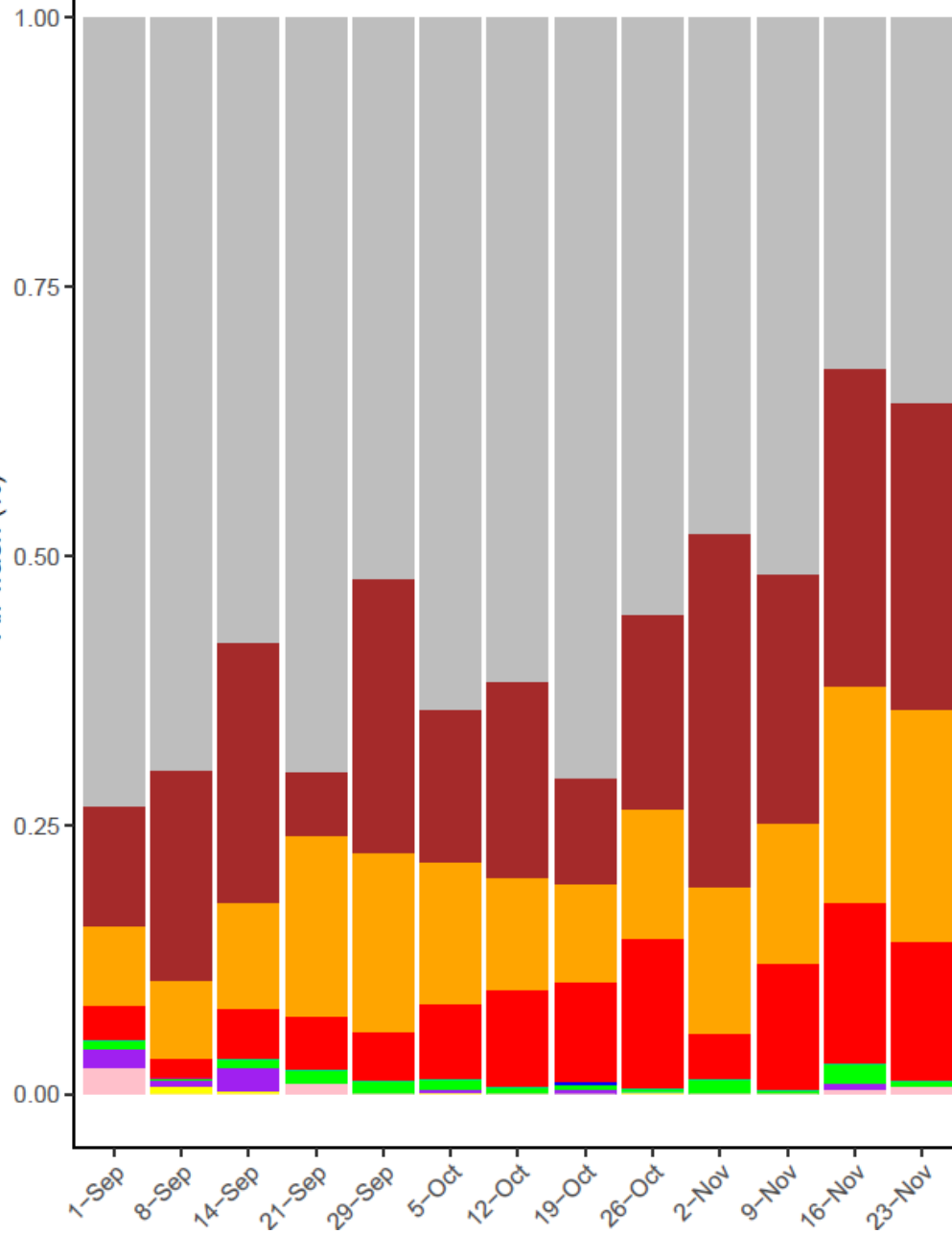


Caitlin Hyatt





All Trash (%)



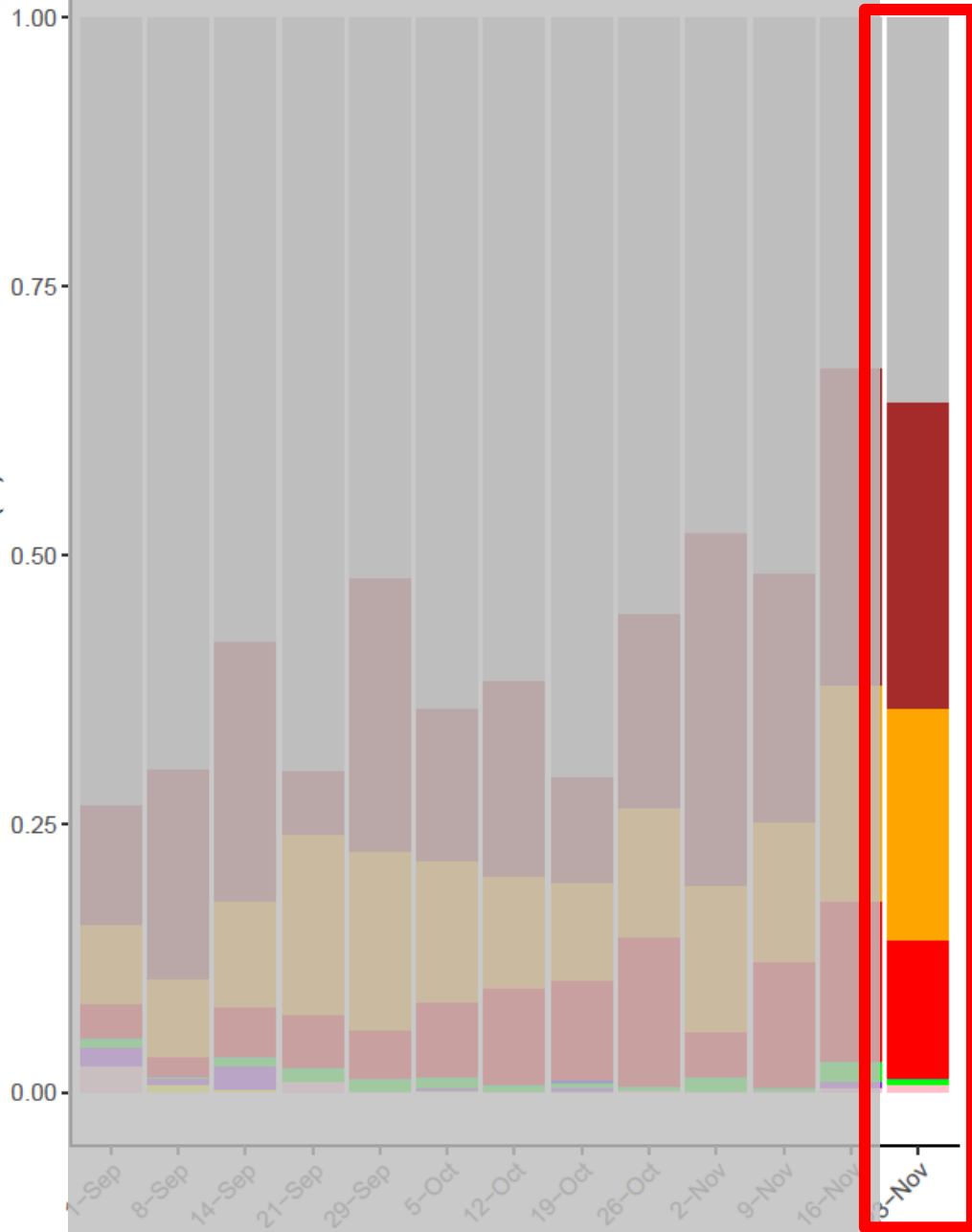
Trash Categories

- Small trash (< 3 cm)
- Fragments (> 3 cm)
- Food-related
- Smoking-related
- Boating/fishing
- Medical/hygiene
- Leisure/sports
- Dumping
- Miscellaneous

Fall 2023



All Trash (%)



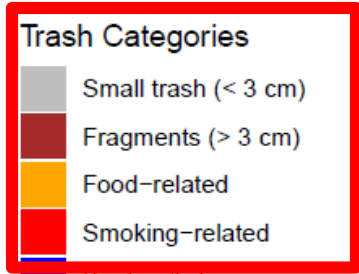
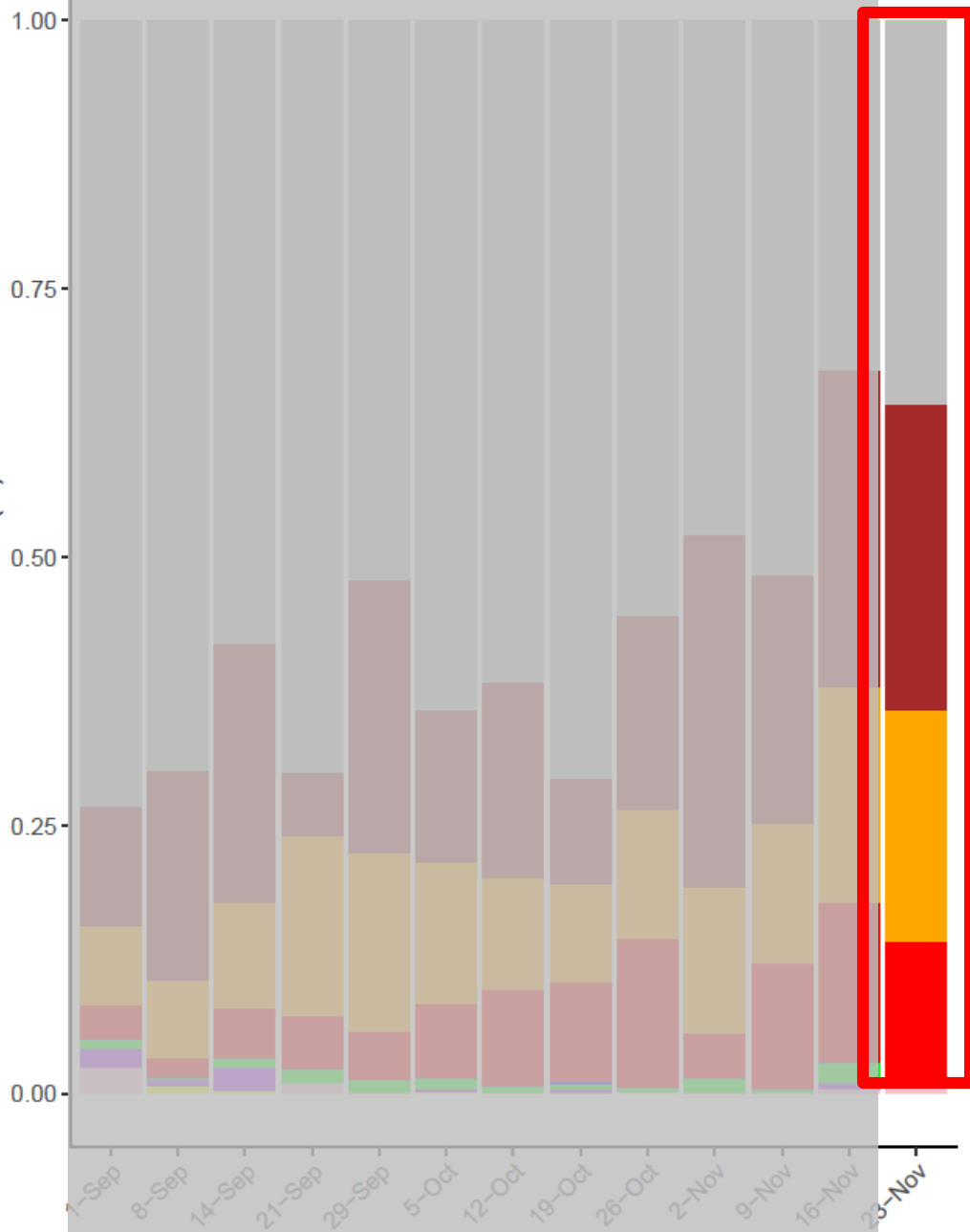
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- Leisure/sports
- Dumping
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Fall 2023



All Trash (%)



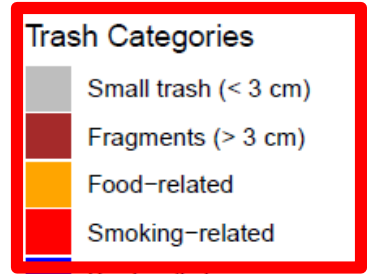
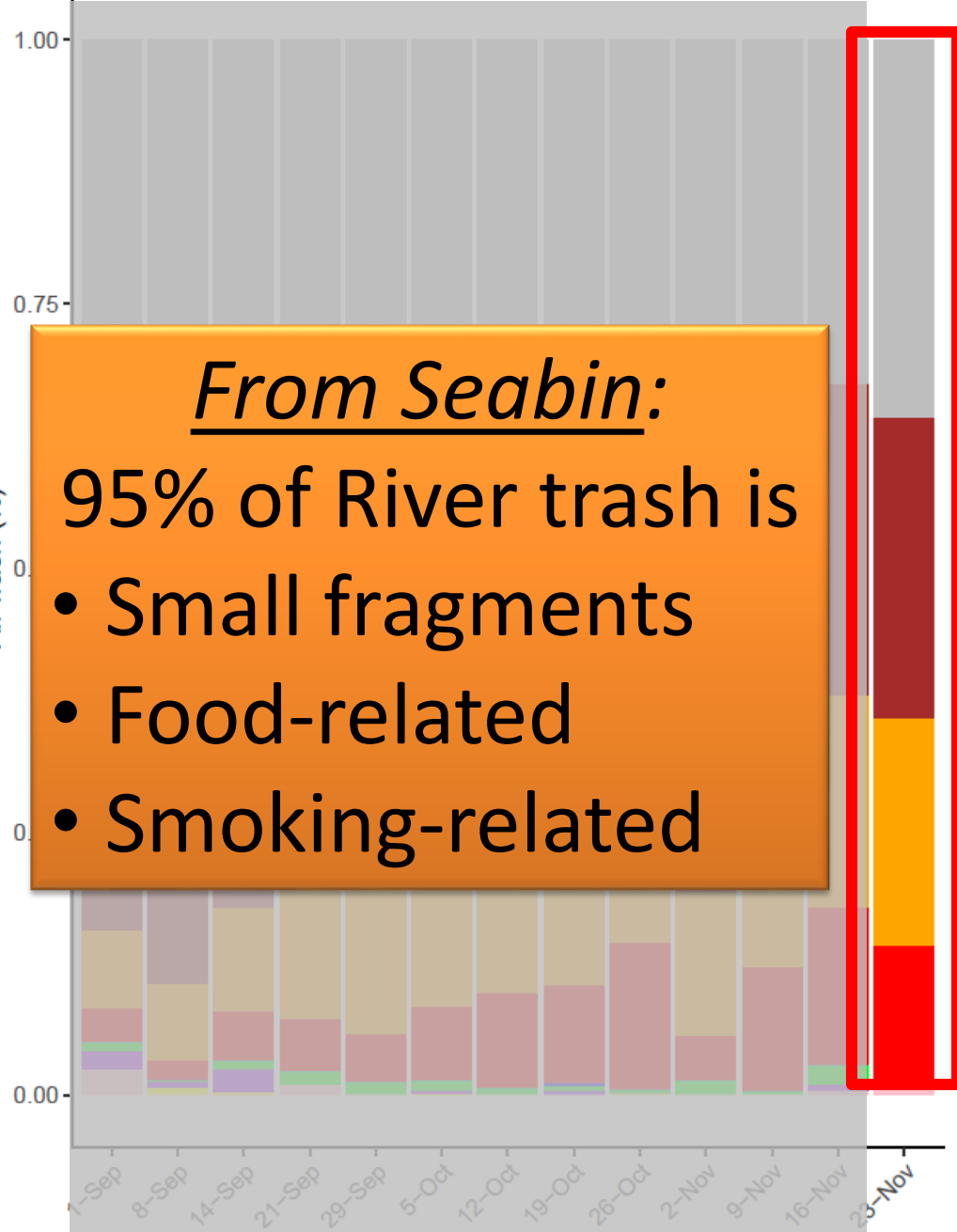
Fall 2023



All Trash (%)

From Seabin:
95% of River trash is

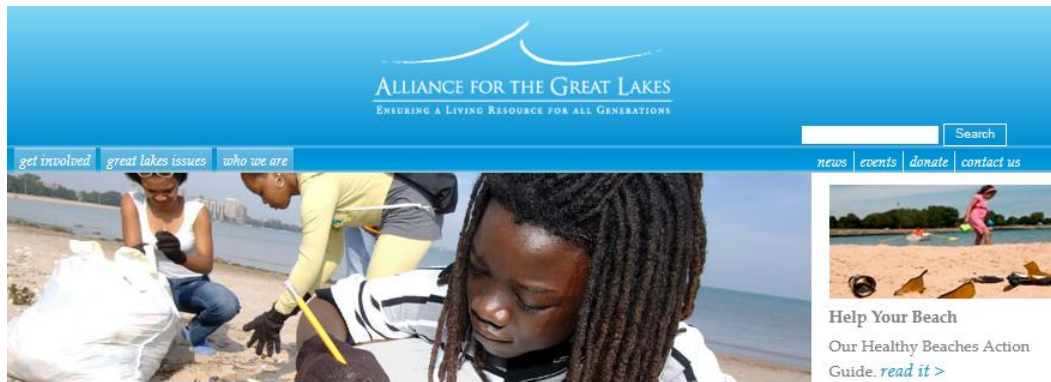
- Small fragments
- Food-related
- Smoking-related



Fall 2023



- Adopt-A-Beach
- Volunteers collect trash
- Report what they find
- > 20 years dataset



Great Lakes Issues

- [Clean Water, Healthy Beaches >](#)
- [Adopt-a-Beach™ Newsletter >](#)
- [Sponsors >](#)
- [Conserving Water >](#)
- [Invasive Species >](#)
- [Coastal Conservation >](#)
- [Great Lakes Education >](#)
- [Special Reports >](#)

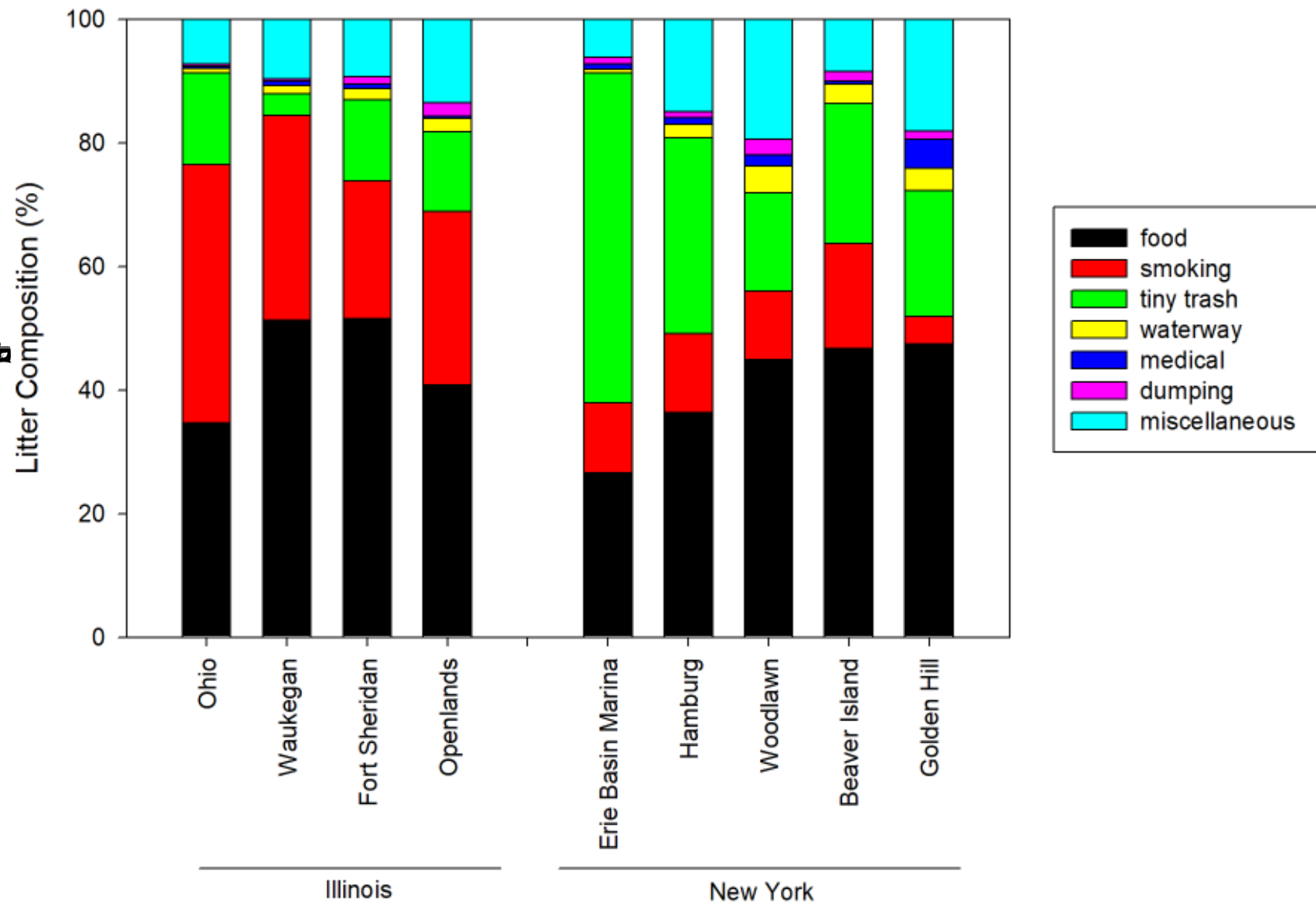
[Home](#)

Adopt-a-Beach™

Adopt-a-Beach™ is the Alliance's premier volunteer program, with some 10,000 participants ranging from individuals and families to schools and businesses. More than just a beach sweep, Adopt-a-Beach™ teams conduct litter removal and monitoring and complete a beach health assessment that includes science-based observation and testing. The teams collect information and enter it into our Adopt-a-Beach™ online system, where it is used to educate the public, share with local beach authorities and improve beaches.

Current Adopt-a-Beach™ Team Leaders

- [Schedule a new event or enter your visit results >](#)





Litter Composition (%)

100
80
60
40
20
0

Ohio

Waukegan

Fort Sheridan

Openlands

Erie Basin Marina

Hamburg

Woodlawn

Beaver Island

Golden Hill

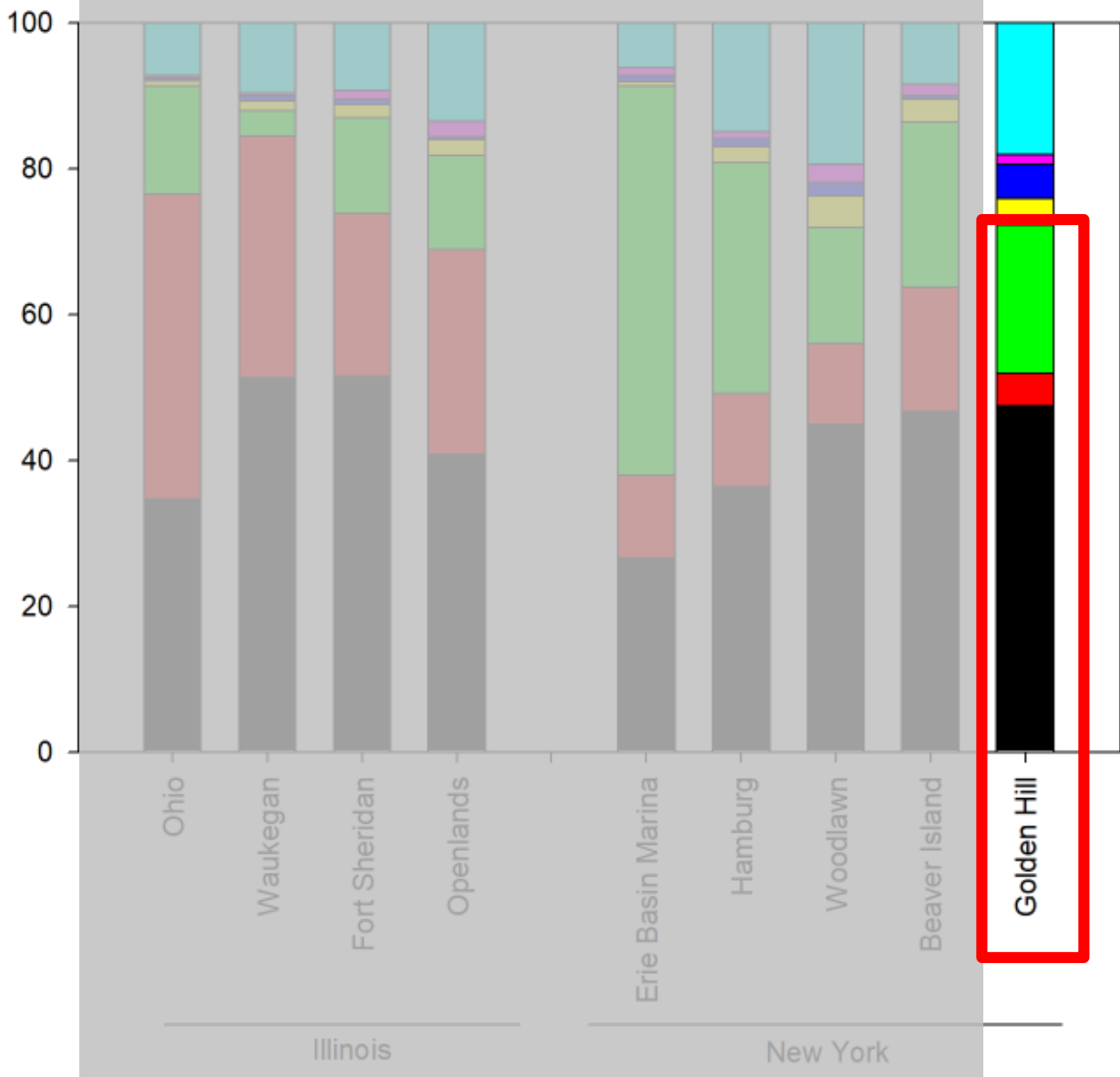
Illinois

New York

- food
- smoking
- tiny trash
- waterway
- medical
- dumping
- miscellaneous

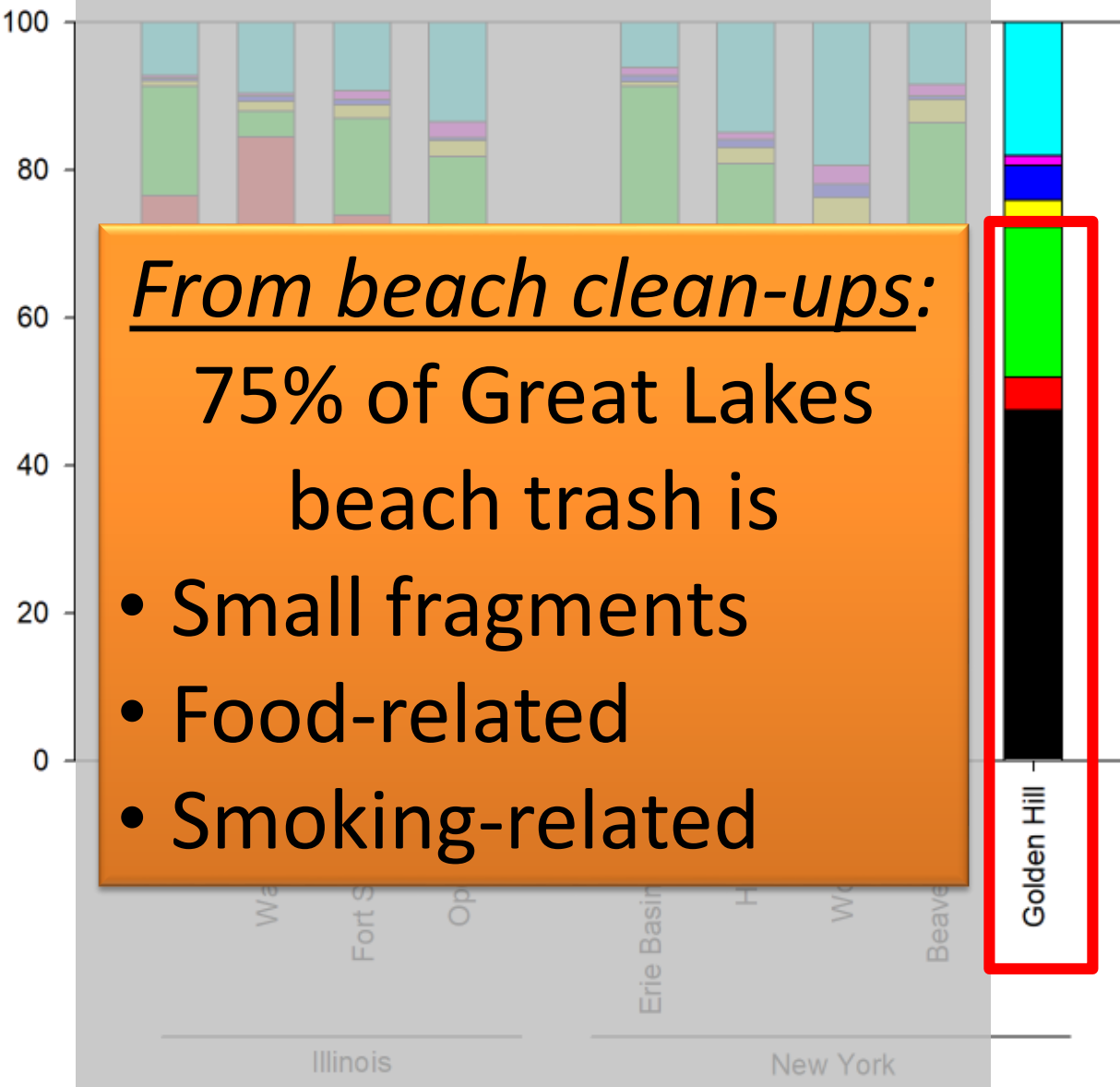


Litter Composition (%)





Litter Composition (%)



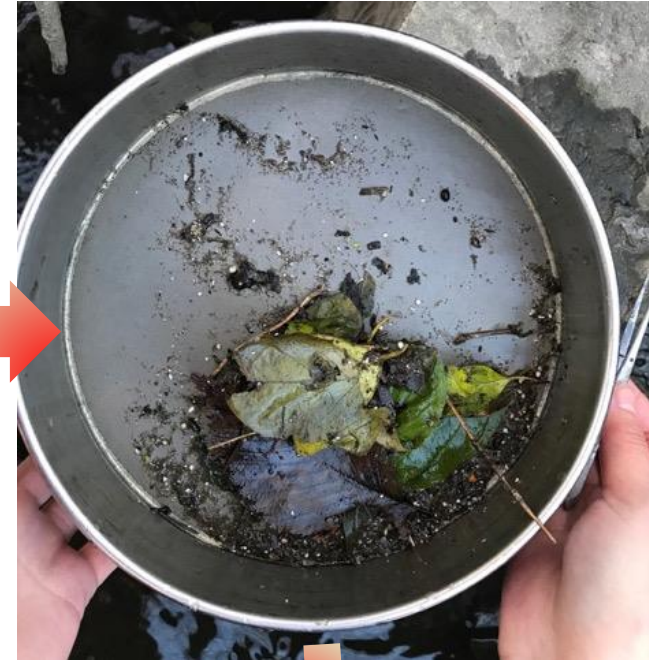
From beach clean-ups:

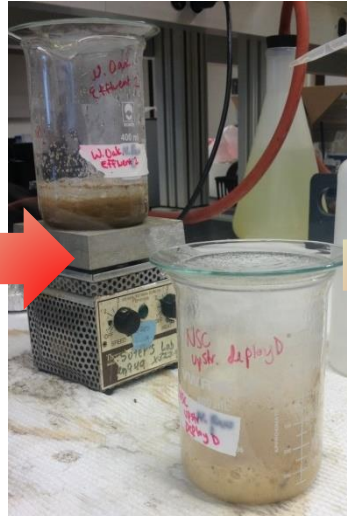
75% of Great Lakes beach trash is

- Small fragments
- Food-related
- Smoking-related



Microplastics: Sample collection





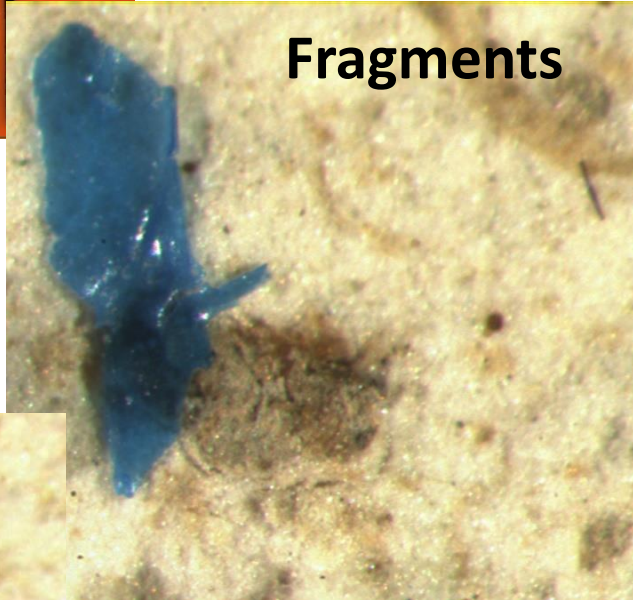
Foam



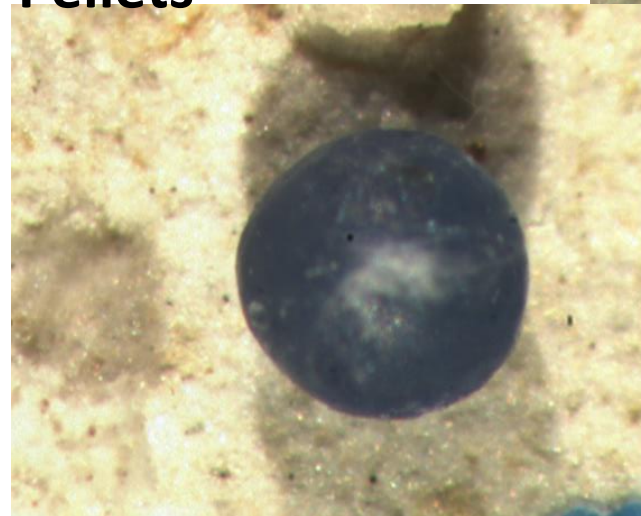
Fibers



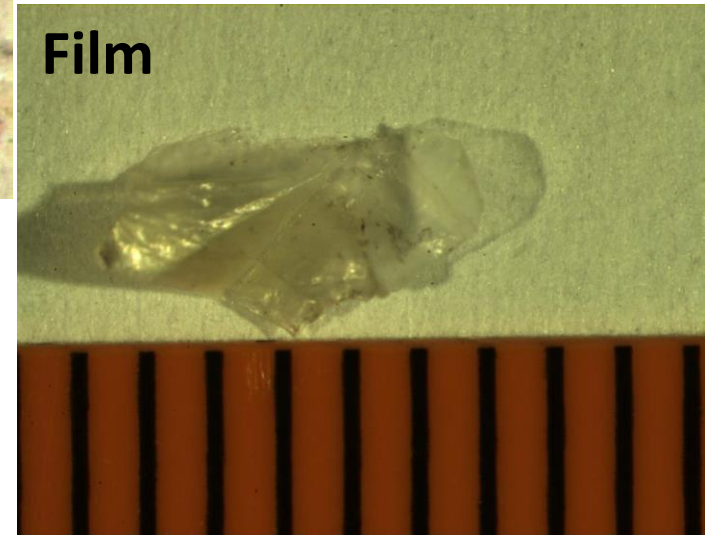
Fragments

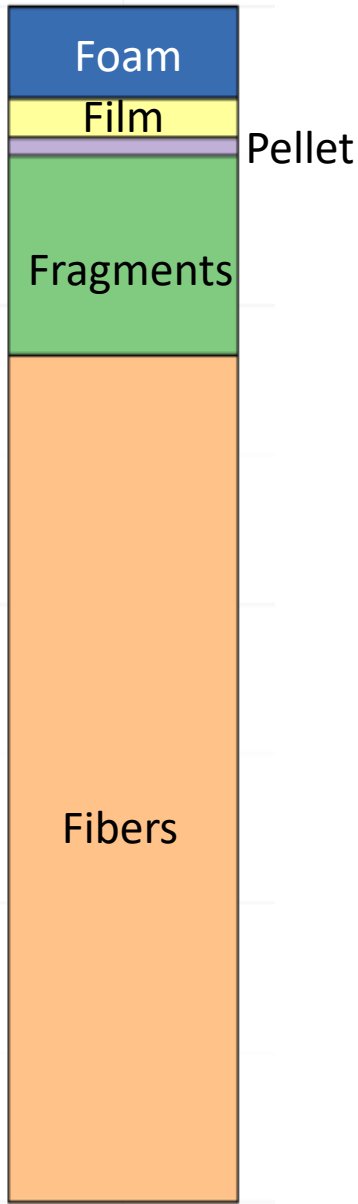


Pellets

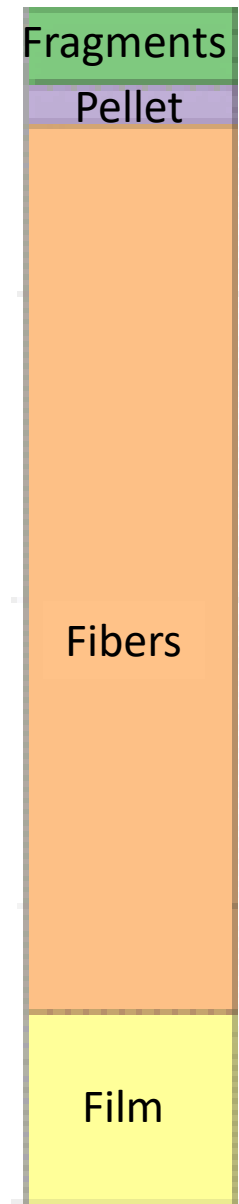


Film

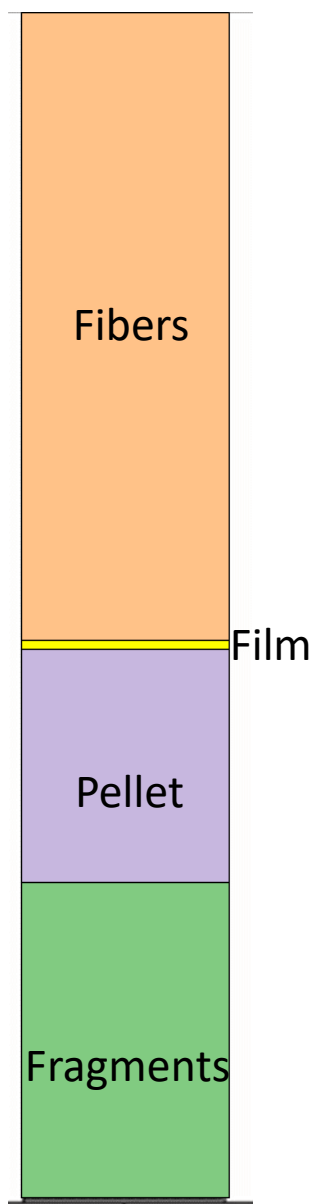




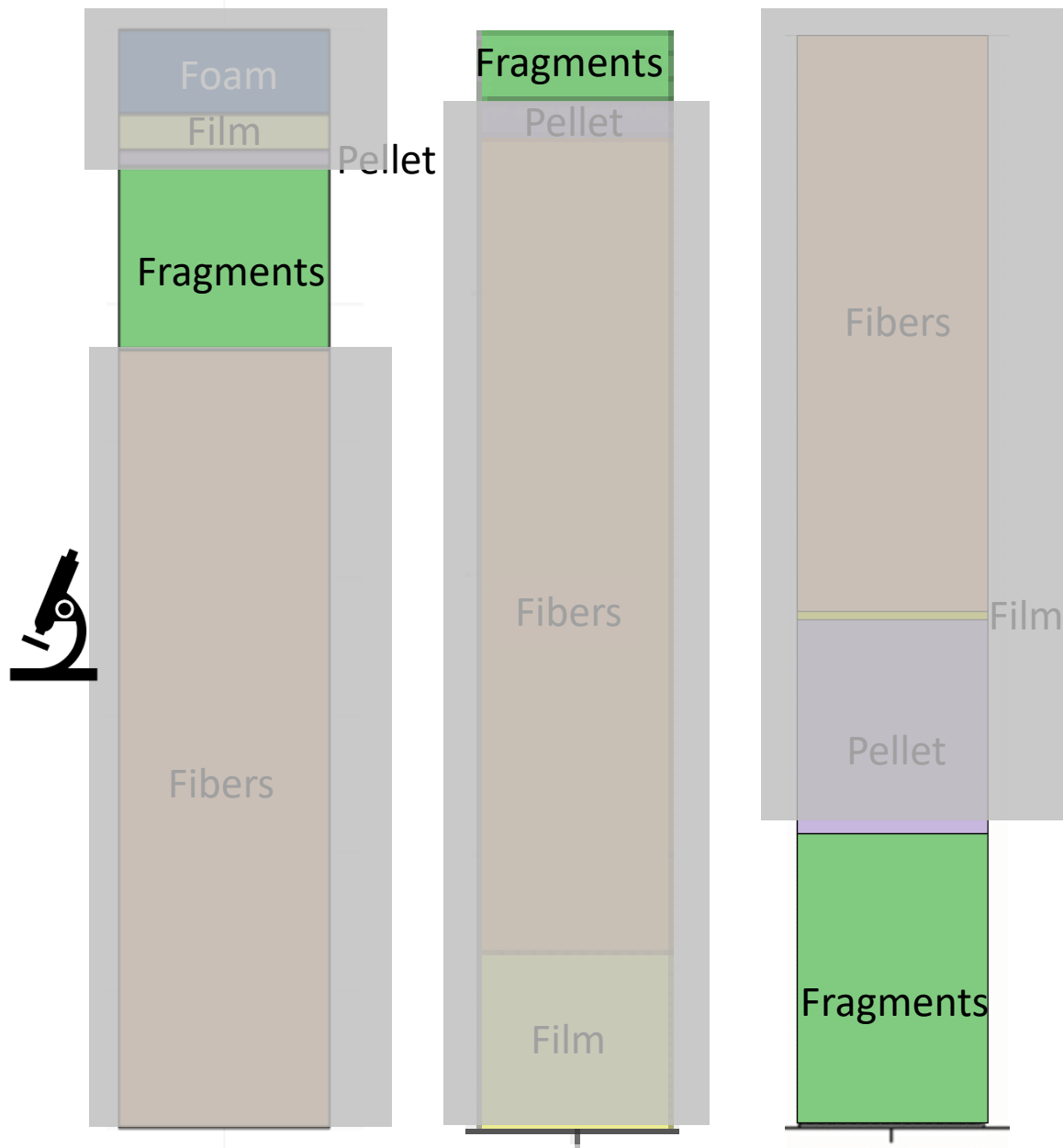
Gr. Lakes tribs
Baldwin et al. 2016



Lake Michigan
Lenaker et al. 2019



Illinois streams
McCormick et al. 2016

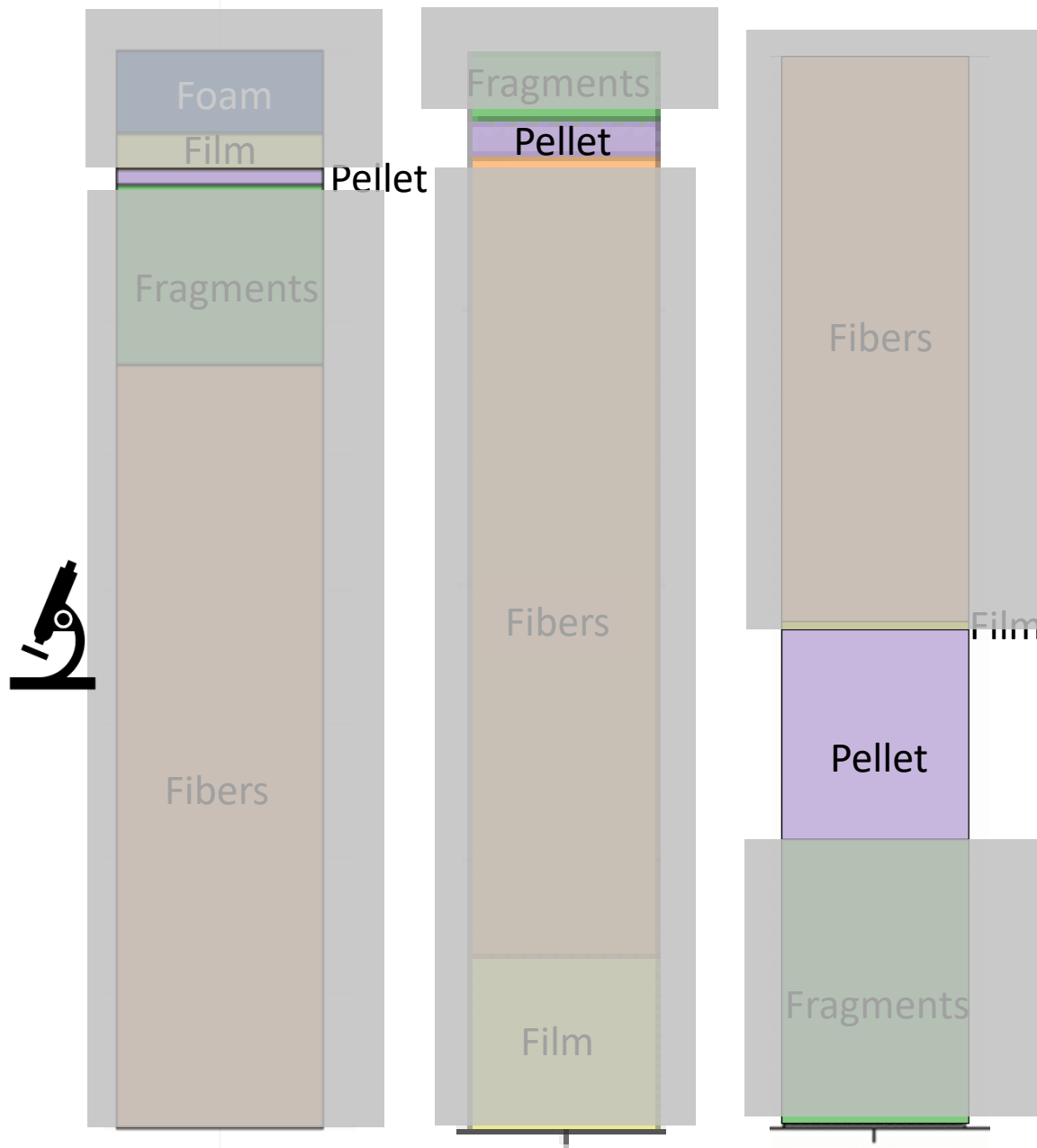


Gr. Lakes tribs
Baldwin et al. 2016

Lake Michigan
Lenaker et al. 209

Illinois streams
McCormick et al. 2016

Fragments:
Breakdown of larger items
Sol'n: Less plastic pollution



Gr. Lakes tribs
Baldwin et al. 2016

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Fragments:

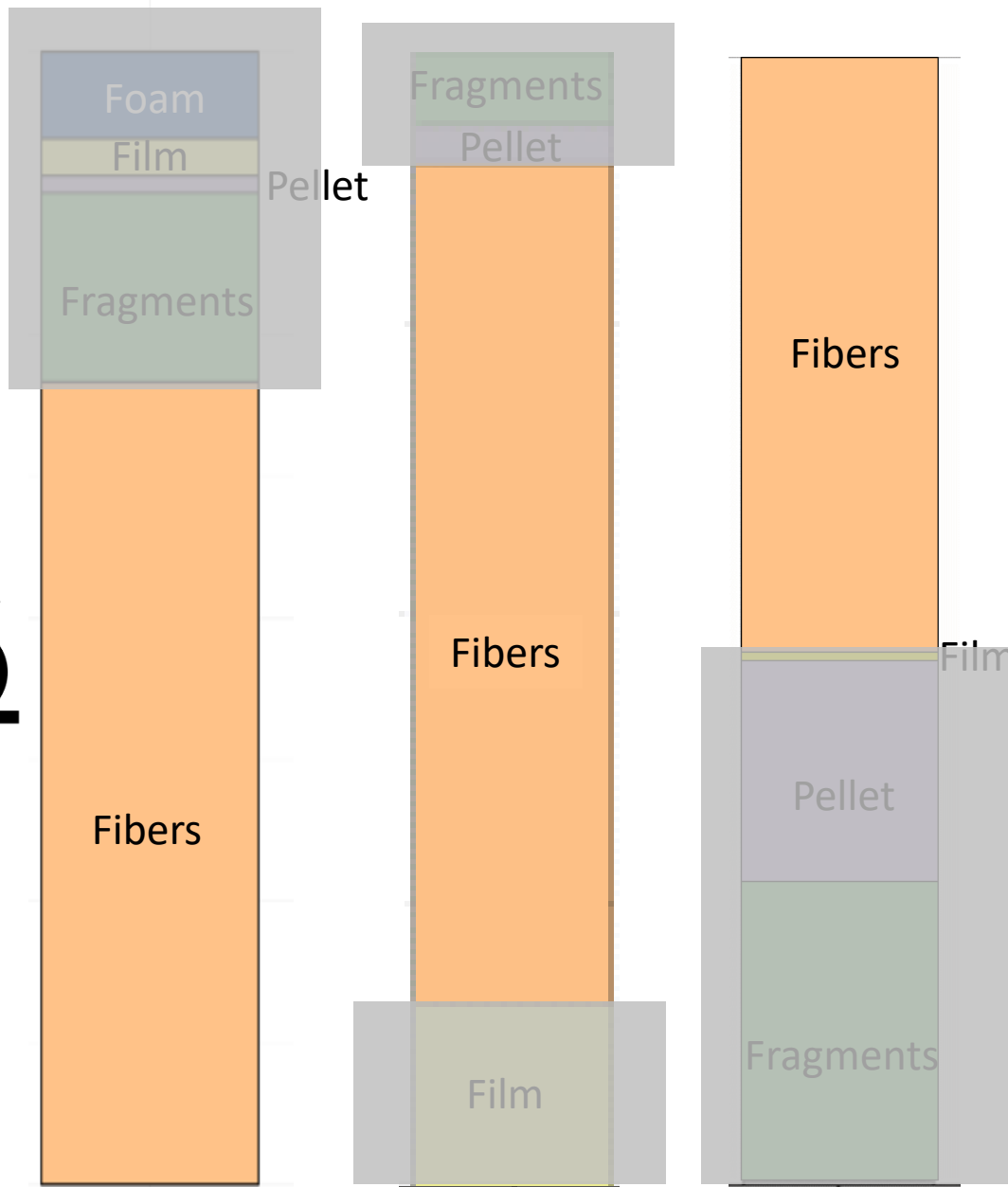
Breakdown of larger items
Sol'n: Less plastic pollution

Pellets:

Personal care, soaps
"Nurdles", pre-production

Sol'ns:

Soaps: Banned in 2019
Nurdles: NEW policies



Gr. Lakes tribs
Baldwin et al. 2016

Lake Michigan
Lenaker et al. 209

Illinois streams
McCormick et al. 2016

Fragments:
Breakdown of larger items
Sol'n: Less plastic pollution

Pellets:
Personal care, soaps
"Nurdles", pre-prodcution
Sol'ns:
Soaps: Banned in 2019
Nurdles: need NEW policies

Fibers:
Most abundant shape
Textiles, wastewater
Sol'ns: Need NEW policies

1. State of 'trash' science

2. What's in our freshwaters?

🚣 Kayakers

🗑️ Seabin

🚶 Beach clean ups

🔬 Microplastics

3. Policy targets

Wastewater

'Nurdles'



1. State of 'trash' science

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 Kayakers

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 Beach clean ups

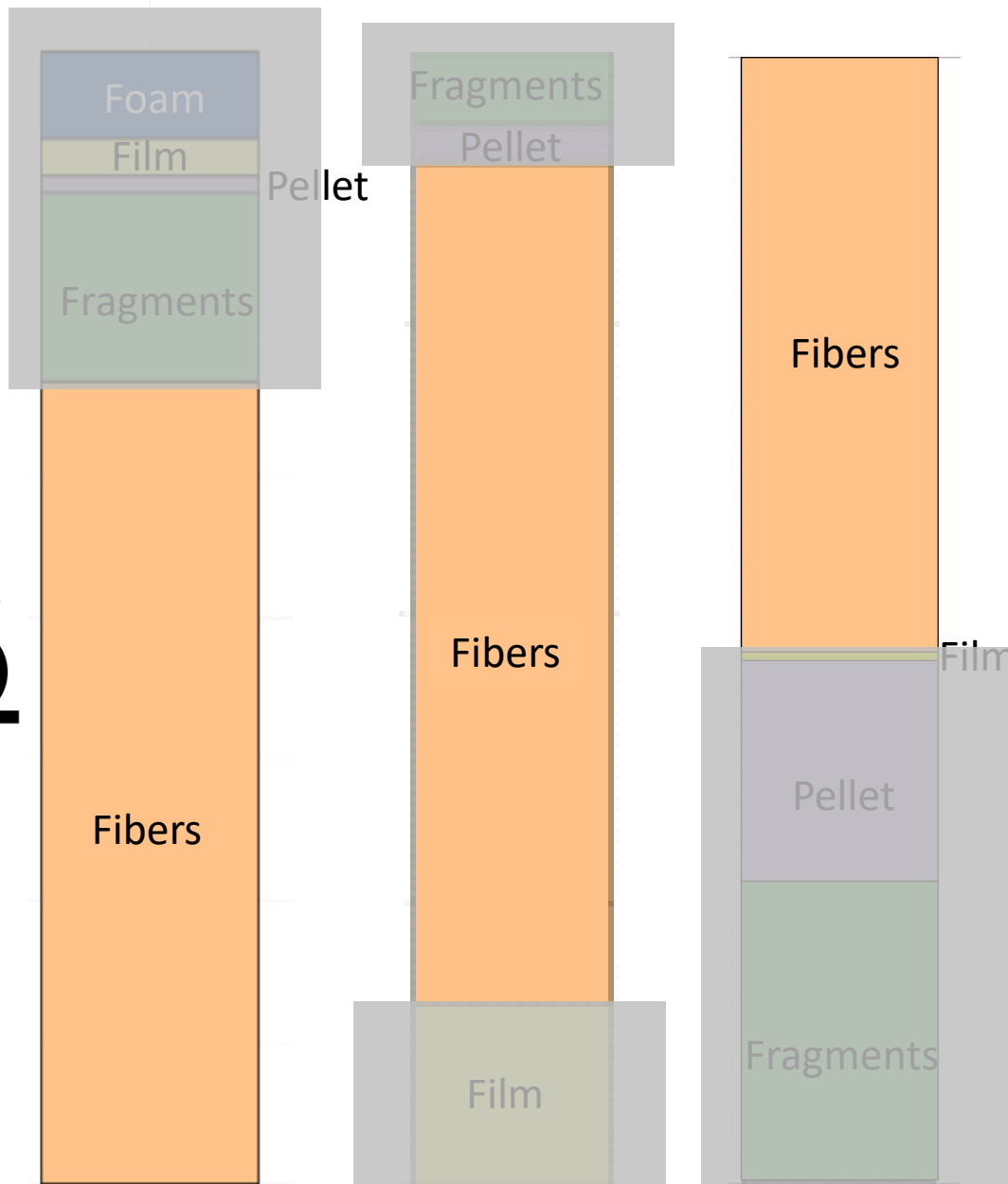
 Microplastics

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Gr. Lakes tribs
Baldwin et al. 2016

Lake Michigan
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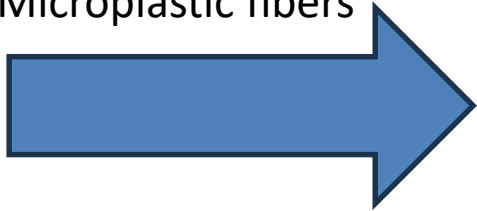
10 IL streams
McCormick et al. 2016

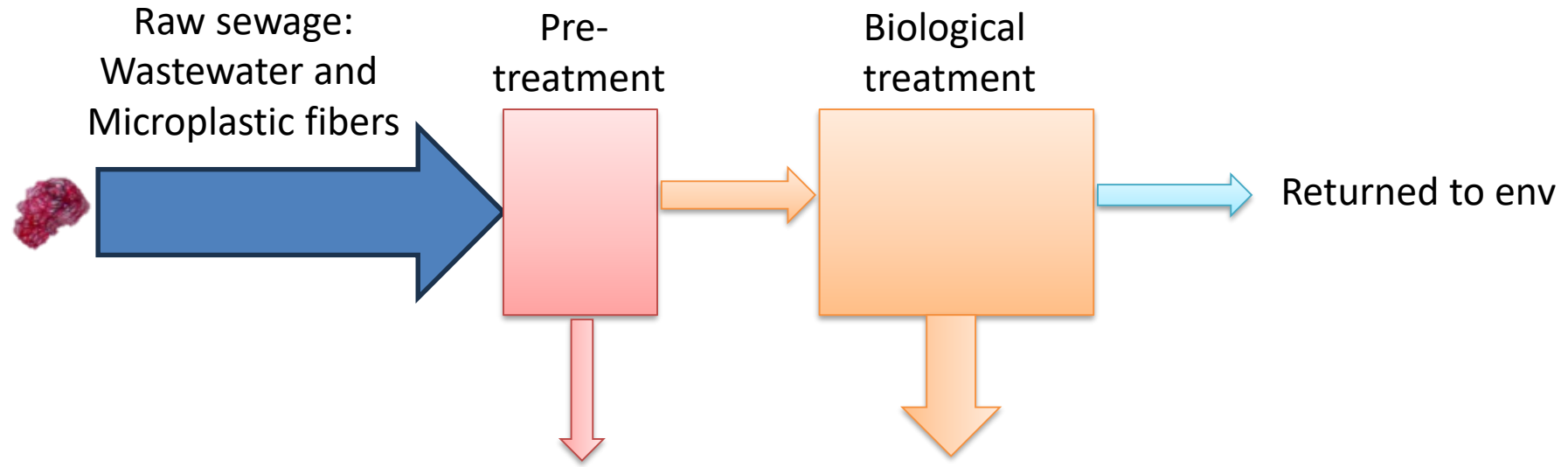
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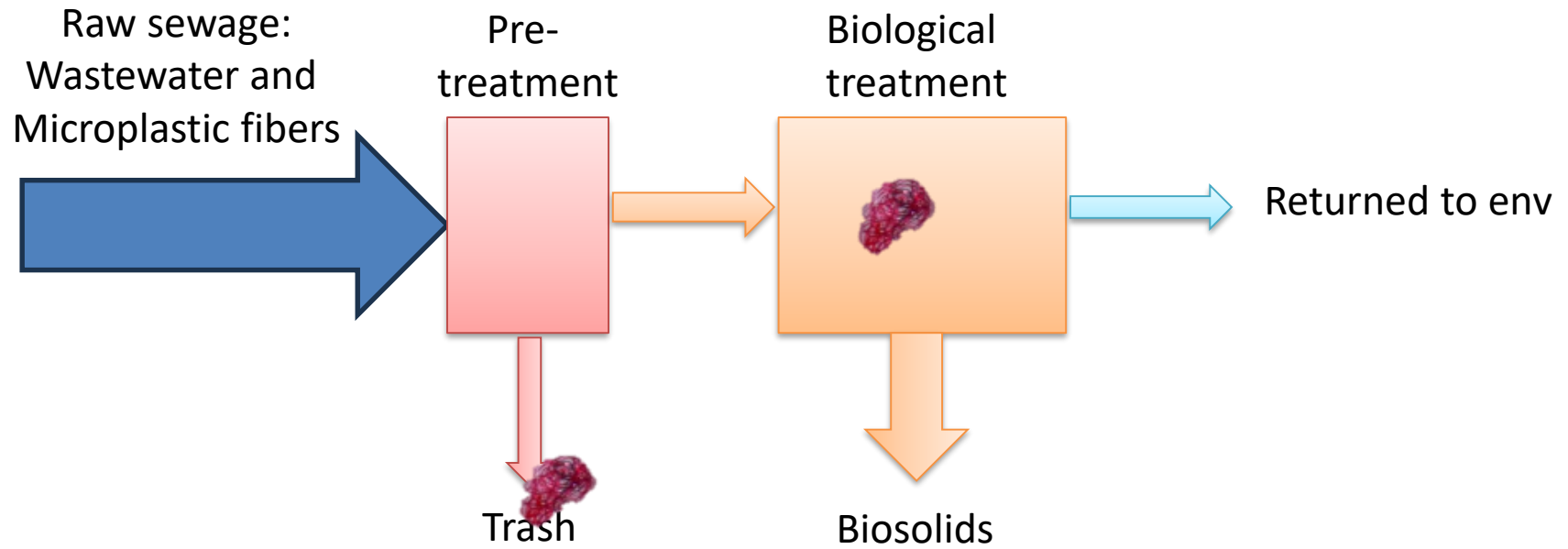


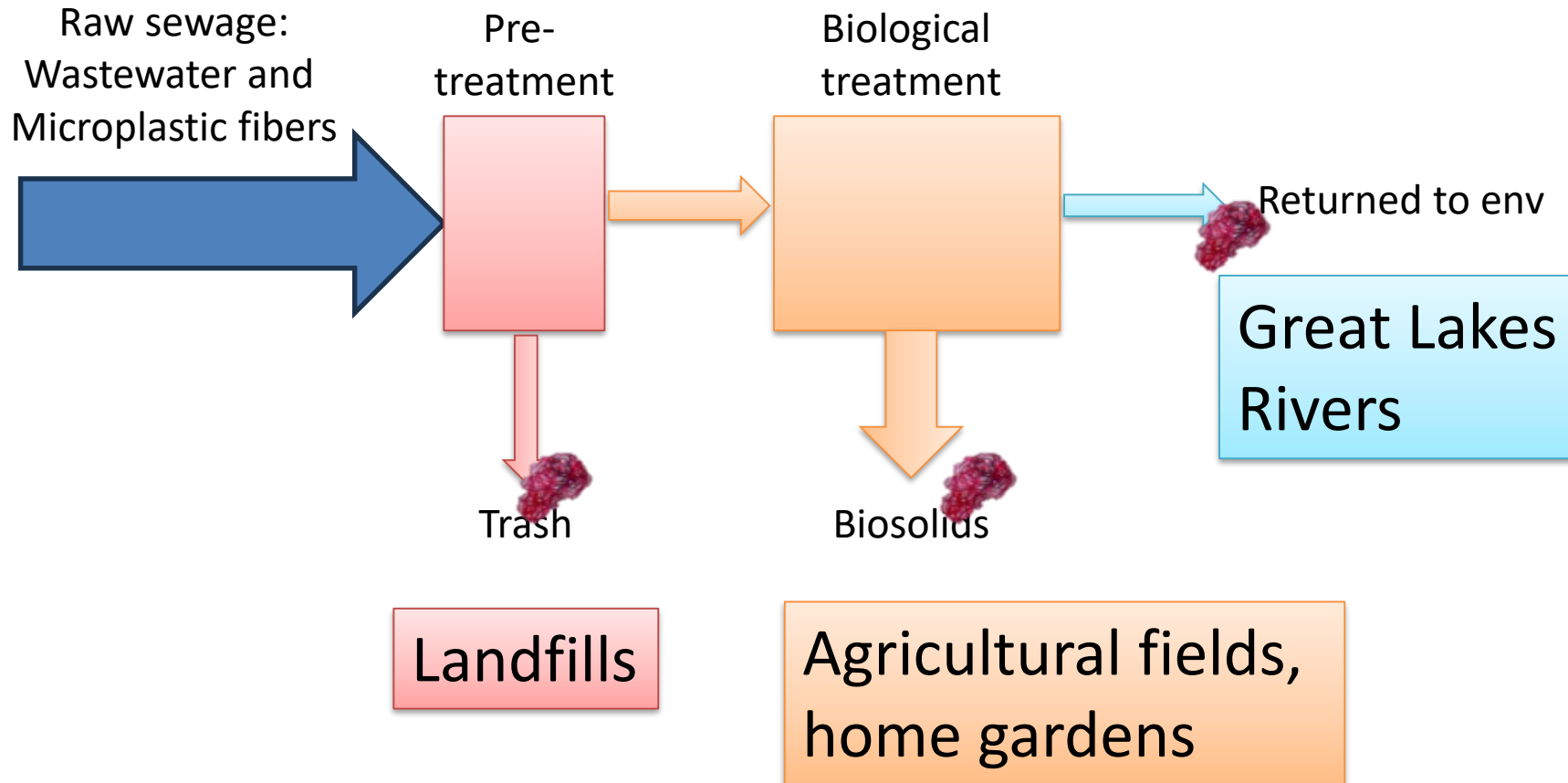


Raw sewage:
Wastewater and
Microplastic fibers



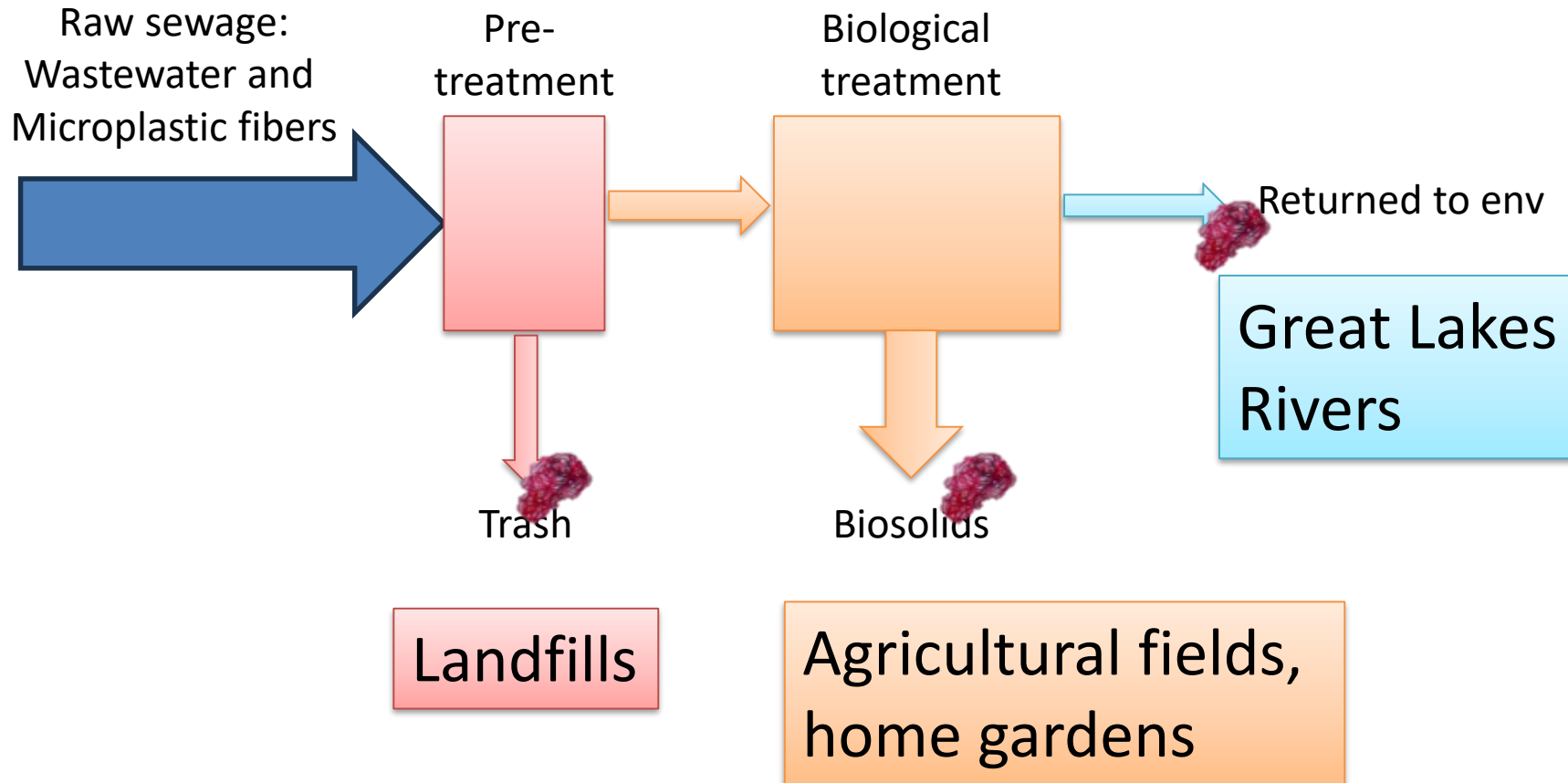








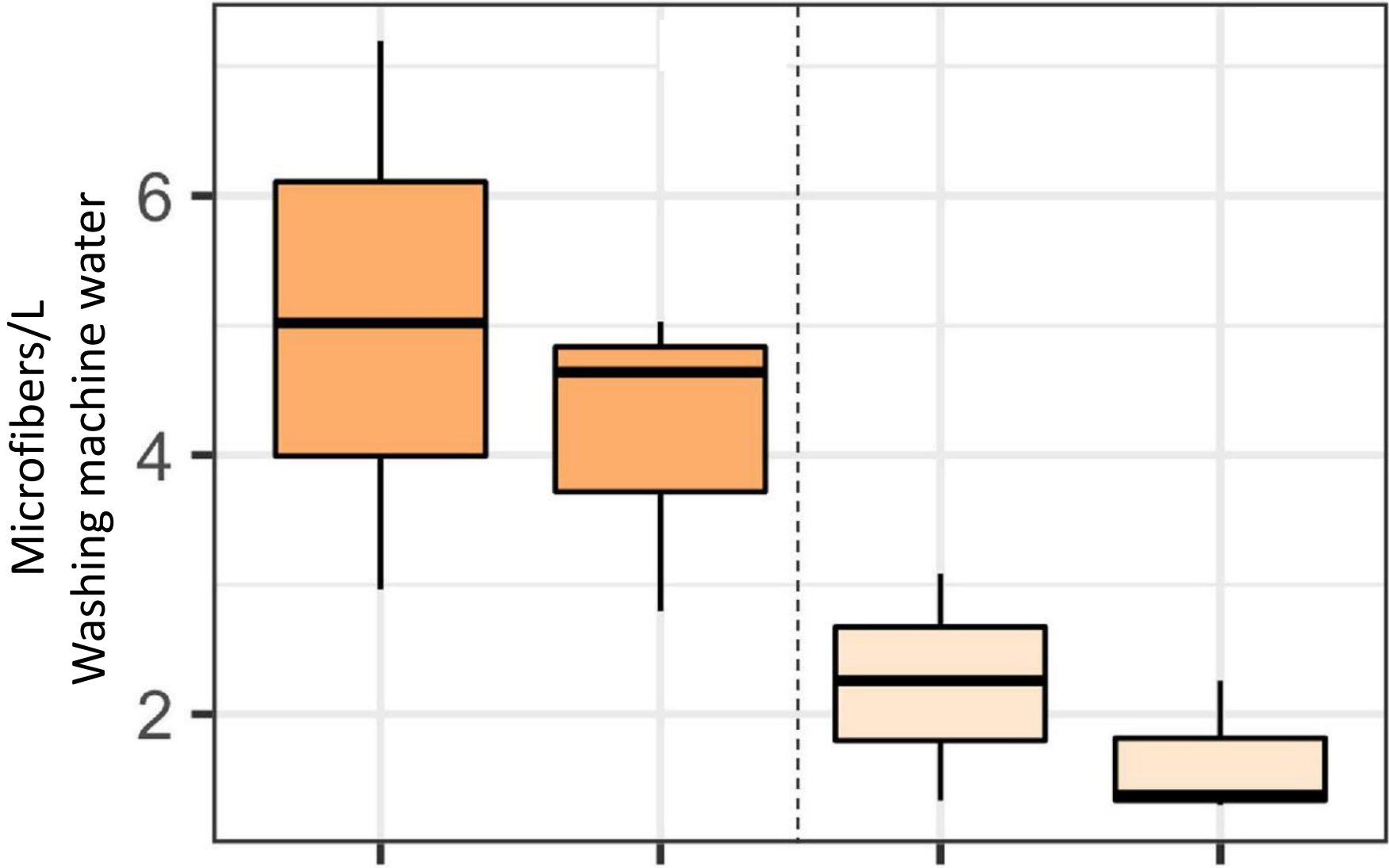
Washing machine filters
PREVENT microplastics
from becoming pollution

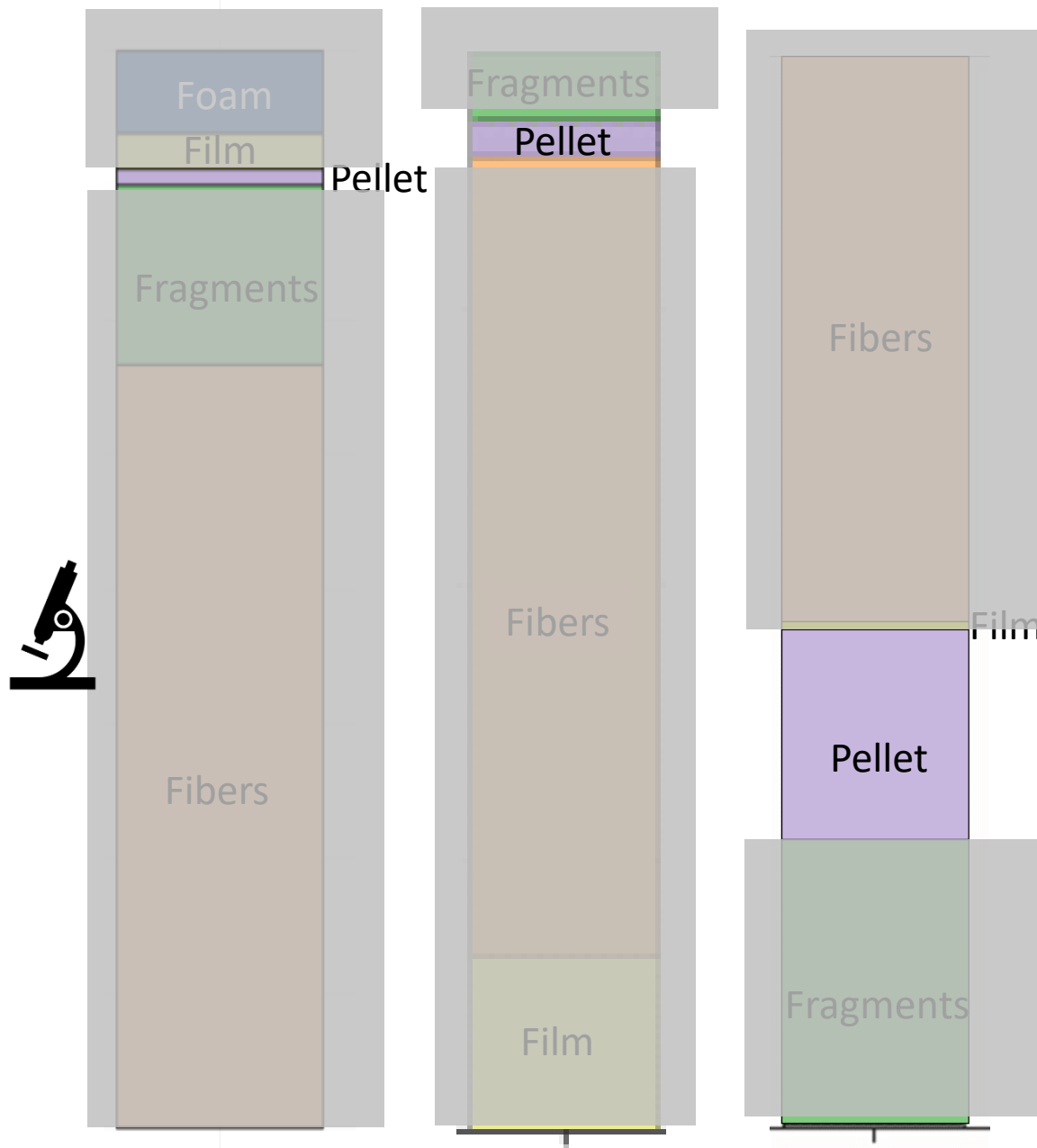




BEFORE filter installation

AFTER filter installation





Gr. Lakes tribs
Baldwin et al. 2016

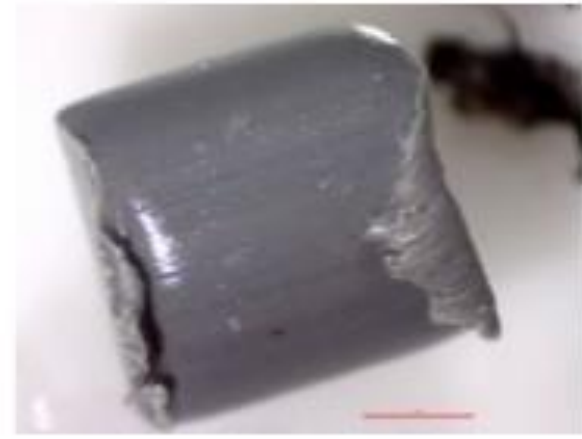
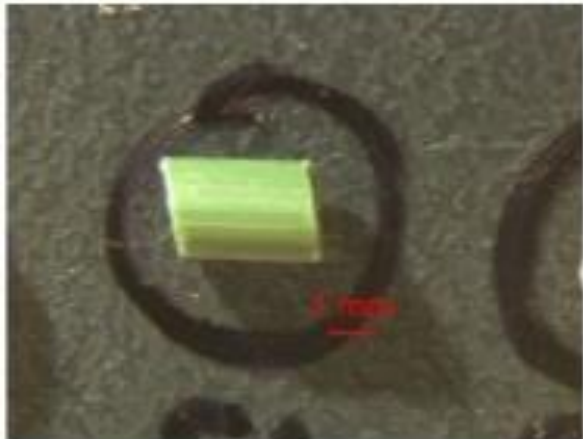
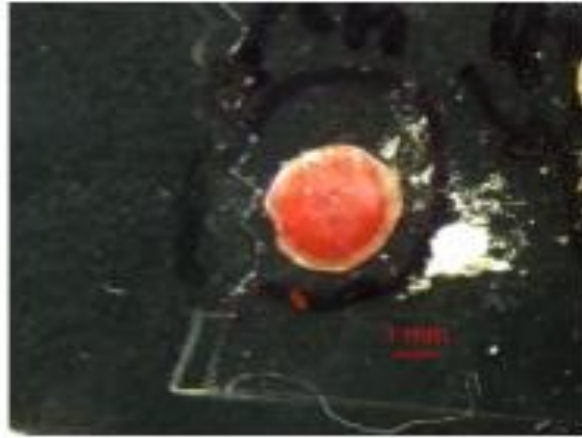
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“**Nurdles**”, pre-production

Sol’ns:
Soaps: Banned in 2019
Nurdles: **NEW policies**











Nurdles: **NEW** policies

- **Transport**
- **Storage**
- **Manufacturing**



Isolated islands
Sources: Global



Our waterways, Gr. Lakes
Sources: Local



Isolated islands
Sources: Global



Our waterways, Gr. Lakes
Sources: Local
Solutions: Local/domestic

Agree on facts

- Litter is
 - Global
 - Pervasive
 - Increasing
 - Permanent
- Litter affects
 - Environmental health
 - Human health
 - Economies
 - Often in unjust ways
- We are collectively responsible for litter and the culture of consumption and disposal

- Litter data is needed
 - What, where, what kinds
 - Inform action and policy
- Improvements are possible
 - Materials innovations
 - Cultural Norms
 - *Policies*
- Improvements call for
 - Welcome for all to contribute
 - Wherever and however they can
 - A spirit of inclusion, optimism, creativity, service

Agree on facts

- Litter is
 - Global
 - Pervasive
 - Increasing
 - Permanent
- Litter affects
 - Environmental health
 - Human health
 - Economies
 - Often in unjust ways
- We are collectively responsible for litter and the culture of consumption and disposal

Move forward

- More data needed
 - What, where, what kinds
 - Inform action and policy
- Explore all solutions
 - Materials innovations
 - Education, cultural norms
 - ***Policies***
- Change is possible with
 - Welcome for all to contribute
 - Wherever and however they can
 - A spirit of inclusion, optimism, creativity, service

1. State of 'trash' science

2. What's in our freshwaters?

🚣 Kayakers

🗑️ Seabin

🚶 Beach clean ups

🔬 Microplastics

3. Policy targets

Wastewater

'Nurdles'



Loyola Undergraduate Students:

Paul Risteca
Anna Vincent
Randy Cybulski
Loren Hou
Aye-Aye Myint
Genesis Bustamante
Veronica Lourich
Tony Overhiser
Melissa Achettu
Catherine Rovegno
Deeb Omari
Nils Hoffman
Homira Wardak
Sameer Khan
Daniella Drapatsky
Hailey Chan
Janet Ross
Mia Wrey
Stuti Desai
Alejandra Bravo
Ricardo Tijerina
Naiha Sharma
Rachel Meyer
Asad Hasan
Mohammad Baleegh
Ian Comerford
Reyan Atassi
Raul Lazcano
Hamza Asim
Omer Quddus
Taha Saddiqui
Homira Wardak
Amy Fetters
Micah Zaker

Thank you

Senn High School:

- Brandon Cifuentes
- Aamna Siddiqui
- Fatima Ghulam

Loyola Graduate Students:

- Lisa Kim
- Anna Vincent
- Loren Hou
- Elizabeth Berg
- Lauren Wisbrock
- Liz Kazmierczak
- Bailey Schwenk
- Raul Lazcano

Post-doctoral Scholars

- Rachel McNeish
- Sam Dunn
- Adit Chaudhary
- Fritz Petersen

Collaborators:

- John Kelly
- Sherri Mason
- John Scott
- Lara Smetana
- Paul Chiarelli
- Jennifer Tank
- Olga Lyandres
- Elie Rivkin
- Abby Barrows
- Caleb McMahan
- Chelsea Rochman
- Wil Wollheim
- Richard Lammers

Cities , Parks



Institutions



Funding





Skimmer Boat Operation and Floatable Control

Skimmer Boat Specifications

- Length is 23'
- Depth is 2'
- Width is 8'6"
- Maximum draft is 15"
- Gross weight (boat , two 25 HPs, and basket without fuel) is 4,145 lbs
- Fuel tank is 40 gallons
- Briggs and Stratton generator fuel tank is 4 gallons
- Max crew is 2
- Max cargo is 1,311 lbs



Trash Collection Basket

Otis, winner of Alaska's Katmai National Park
Fat Bear Week.



Trash Collection Basket

- Weight of basket empty is 265 lbs
- Maximum capacity of basket is 1,102 lbs
- The basket can be lifted with a winch to improve water flow for increased speeds when not actively skimming floatable debris



Operation

- MWRD Operates two skimmer boats for floatable debris
- Cruising Speed 4 knots (4.6 MPH)
- Optimum speed for floatable debris collection 2 knots (2.3 MPH)

Floatable Log

Floatable Log

FLOATABLE LOG													
PILOT: _____	BOAT: _____ DATE: / /												
Start Location: _____	End Location: _____ Crew Size: _____												
Location (Waterways): Check all that apply													
<input type="checkbox"/> Zone 1: North Branch and North Shore Channel, Kinzie Street to Main Street <input type="checkbox"/> Zone 2: Chicago River and South Branch of the Chicago River, CROW to Amtrak <input type="checkbox"/> Zone 3: South Branch Chicago River and South Fork of the SBCR, Amtrak to RAPS <input type="checkbox"/> Zone 4: Chicago Sanitary & Ship Canal, Damen Avenue to Cal-Sag Junction <input type="checkbox"/> Zone 5: Cal-Sag Channel and Little Calumet River, Bishop Ford to Cal-Sag Junction <input type="checkbox"/> Other _____													
ROUTINE OPERATIONS:													
Est. Amount of Debris during Routine Operations (Cubic Yards): _____													
(Note: one garbage bag = 50 gallons = 6.0 cubic feet = 0.25 cubic yards); Full Skimmer Basket = 2.5 cubic yards													
SPECIAL OPERATIONS - (CSO Events):													
Location (Waterways): Check all that apply on back of form													
A. Storm Number _____ (if available at the time of Call out, or TBD and written in after event)													
B. All Clear issued at _____ Date and Time (Call Systems Dispatcher to get official all clear)													
C. Start time: _____ Date and Time (Must be within 24 hours of the all clear)													
D. Justification for delayed start if not within 24 hours of the all clear:													
<input type="checkbox"/> Mechanical Failure <input type="checkbox"/> Unsafe Conditions <table border="0" style="margin-left: 20px;"> <tr> <td><input type="checkbox"/> Fog</td> <td><input type="checkbox"/> Limited Visibility</td> <td><input type="checkbox"/> Other _____</td> </tr> <tr> <td><input type="checkbox"/> Ice</td> <td><input type="checkbox"/> Lightning</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Equipment Idling</td> <td><input type="checkbox"/> High flow</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Wind</td> <td><input type="checkbox"/> Darkness</td> <td></td> </tr> </table>		<input type="checkbox"/> Fog	<input type="checkbox"/> Limited Visibility	<input type="checkbox"/> Other _____	<input type="checkbox"/> Ice	<input type="checkbox"/> Lightning		<input type="checkbox"/> Equipment Idling	<input type="checkbox"/> High flow		<input type="checkbox"/> Wind	<input type="checkbox"/> Darkness	
<input type="checkbox"/> Fog	<input type="checkbox"/> Limited Visibility	<input type="checkbox"/> Other _____											
<input type="checkbox"/> Ice	<input type="checkbox"/> Lightning												
<input type="checkbox"/> Equipment Idling	<input type="checkbox"/> High flow												
<input type="checkbox"/> Wind	<input type="checkbox"/> Darkness												
E. Additional Comments: _____													
Est. Amount of Debris during Special Operations (Cubic Yards): _____													
(Note: one garbage bag = 50 gallons = 6.0 cubic feet = 0.25 cubic yards); Full Skimmer Basket = 2.5 cubic yards													
DESCRIPTION & POSSIBLE SOURCE: Check all that apply for Routine and Special Operations													
Material Type Windblown:													
NB = Non-Biodegradable	NB = Non-Biodegradable												
<input type="checkbox"/> Cans	<input type="checkbox"/> Logs												
<input type="checkbox"/> Glass Bottles	<input type="checkbox"/> Rubber Material												
<input type="checkbox"/> Tires	<input type="checkbox"/> Construction Wood												
<input type="checkbox"/> Styrofoam Products	<input type="checkbox"/> Milk Crates												
<input type="checkbox"/> Plastic Bags/Bottles	<input type="checkbox"/> Other _____												
<input type="checkbox"/> Clothing/Apparel	<input type="checkbox"/> Other _____												
<input type="checkbox"/> Sporting Goods	<input type="checkbox"/> Other _____												
B = Biodegradable	Sources: CSO												
<input type="checkbox"/> Paper Products	<input type="checkbox"/> Food												
<input type="checkbox"/> Tires Debris	<input type="checkbox"/> Fish												
<input type="checkbox"/> Cardboard	<input type="checkbox"/> Condoms												
<input type="checkbox"/> Other _____	<input type="checkbox"/> Sanitary Napkins												
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____												
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____												

(Office Use Only) File Maker Pro Record ID: _____

iPad App

AT&T LTE 9:40 AM 95%
SSMP Floatable Log No Current Log [Logout](#)

[Check-In & Create New Log](#)

Map Controls: Track Location Follow Me

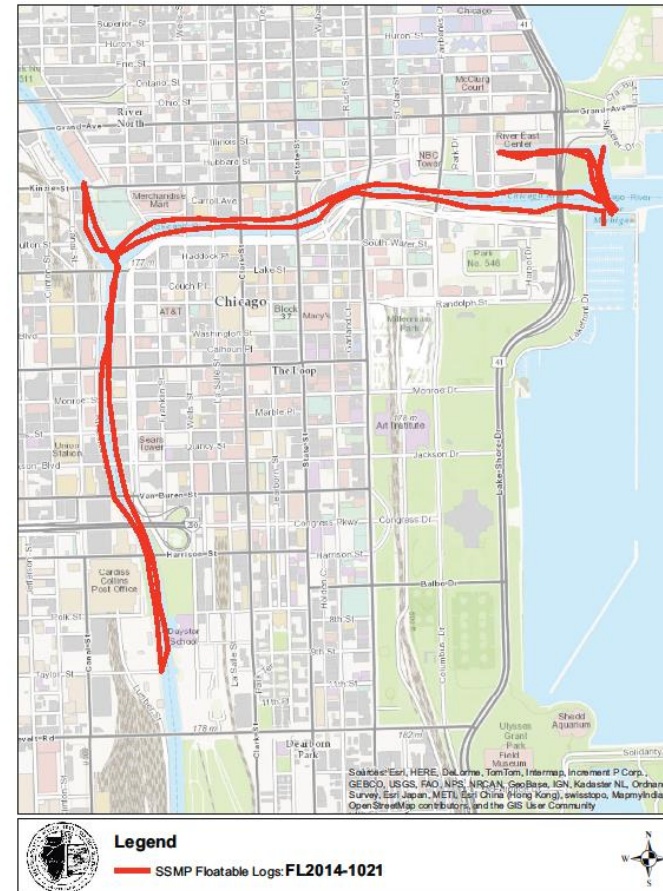
Topographic Satellite

Open Report
Submit Floatable Log

Floatable Log Example

Consent Decree Reporting

FLOATABLE LOG			
PILOT: vonheimburg.mwrld		Date: 2014-09-12	Log ID: FL2014-1021
BOAT: Pontoon Boat 2 (PB2) # of Pilots: 1		Number of Hoisters: 0	Number of MLAS: 0
ROUTINE OPERATIONS:			
Location (Waterways):			
No	Zone 1: North Branch and North Shore Channel, Kinzie Street to Main Street		
Yes	Zone 2: Chicago River and South Branch of the Chicago River, CRCW to Amtrak		
No	Zone 3: South Branch Chicago River and South Fork of the SBCR, Amtrak to RAPS		
No	Zone 4: Chicago Sanitary & Ship Canal, Damen Avenue to Cal-Sag Junction		
No	Zone 5: Cal-Sag Channel and Little Calumet River, Bishop Ford to Cal-Sag Junction		
No	Other Zone: None		
0.0	Est. Amt. of Debris from Routine Operations (Cubic Yards) (Note: one garbage bag = 50 gallons = 6.0 cubic feet = 0.25 cubic yards)		
SPECIAL OPERATIONS (CSO Events):			
Location (Waterways):			
A. Storm Number	None	(If available at the time of Call out, or TBD and written in after event)	
B. All Clear Issued at	None	Date and Time (Call Systems Dispatcher at get official all clear)	
C. Start Time:	None	Date and Time (Must be within 24 hours of the all clear)	
D. Justification for delayed start if not within 24 hours of the all clear:			
No	Mechanical Failure		
No	Unsafe Conditions		
No	Fog	Limited Visibility	No Other
No	Ice	Lightning	None
No	Equipment Icing	High Flow	
No	High Wind	Darkness	
E. Additional Comments: None			
0.0	Est. Amt. of Debris from Special Operations (Cubic Yards) (Note: one garbage bag = 50 gallons = 6.0 cubic feet = 0.25 cubic yards)		
DESCRIPTION & POSSIBLE SOURCE:			
Material Type Windblown:			
NB = Non-Biodegradable		NB = Non-Biodegradable	
Yes	Cans	No	Logs
No	Glass Bottles	No	Rubber Material
No	Tires	No	Wood
Yes	Styrofoam	No	Milk Crate
Yes	Plastic	No	Other None
No	Clothing/Apparel	No	Other None
No	Sporting Goods	No	Other None
B = Biodegradable		Sources: CSO	
Yes	Paper	Yes	Condoms
Yes	Tree	Yes	Sanitary Napkin
No	Cardboard	No	Other None
No	Other None	No	Other None
No	Other None	No	Other None



Routine Operations

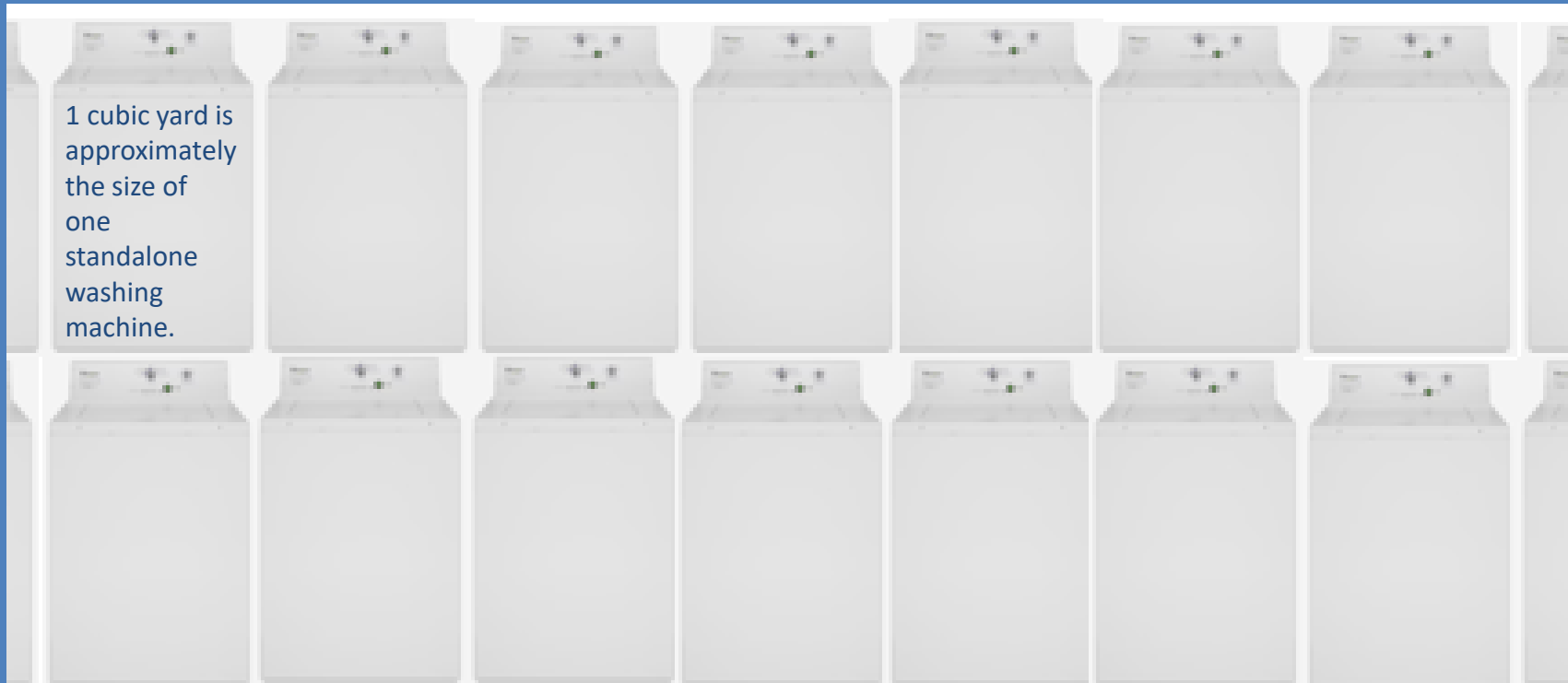
- Daily operations start on or before April 15th, and continue to October 15th annually
- Bubbly Creek is serviced on Tuesdays and Thursdays
- The Main Branch, North Branch up to North Ave, and the South Branch down to the Amtrak bridge at Ping Tom Park are serviced daily
- SB1 and SB2 dock at CRCW-South

Routine Operations, continued

- The skimmer boats skim the water surface collecting floatable debris in the collection basket.
- The collection basket is emptied into a dumpster at Taylor Street using a jib crane to lift the basket.

Special Operations

- Special operations are triggered by a Combined Sewer Overflow into the CAWS.
- MWRD debris collection boats are deployed to the zone where the CSO occurred within 24 hours after the storm ends.



2023 Skimmer Boat collections

- **141.75 Cubic Yards (CY)** in routine collections, **19.4 CY** In special operations collections.
- Grand total of **161.15 CY** collected by skimmer boats in 2023.
- Total including large debris collected by debris barge, pontoon boat and work boat is **2, 027.17 CY**.
- Small Streams Maintenance Program removes approximately 15,000 CY per year to help reduce flooding.

Reporting to MWRD

Waterway blockages, spills, odors, water pollution, or other incidents potentially impacting waterways in Cook County can be reported to the MWRD by visiting mwrdd.org and scrolling down to the Citizen Incident Reporting (CIR) system, or by calling **800.332.3867**. Incidents can also be reported on iOS devices by downloading the free CIR app from iTunes. Search **MWRD CIR**.

2024 Task Force Meeting Dates

Quarterly Meetings: 3:00 – 4:30 pm

- June 11th
- September 17th
- December 3rd

System Plans Working Group: 12:00 – 1:00 pm

- May 22nd
- August 21st
- November 13th