Oak Creek Watershed Restoration Plan

Stakeholder Kickoff Meeting

April 12, 2016

Speakers

Michael Hahn, P.E., P.H. – Deputy Director

Joseph Boxhorn, Ph.D. – Senior Planner

Laura Kletti, P.E., CFM – Chief Environmental Engineer

Thomas Slawski, Ph.D. – Chief Biologist

Agenda

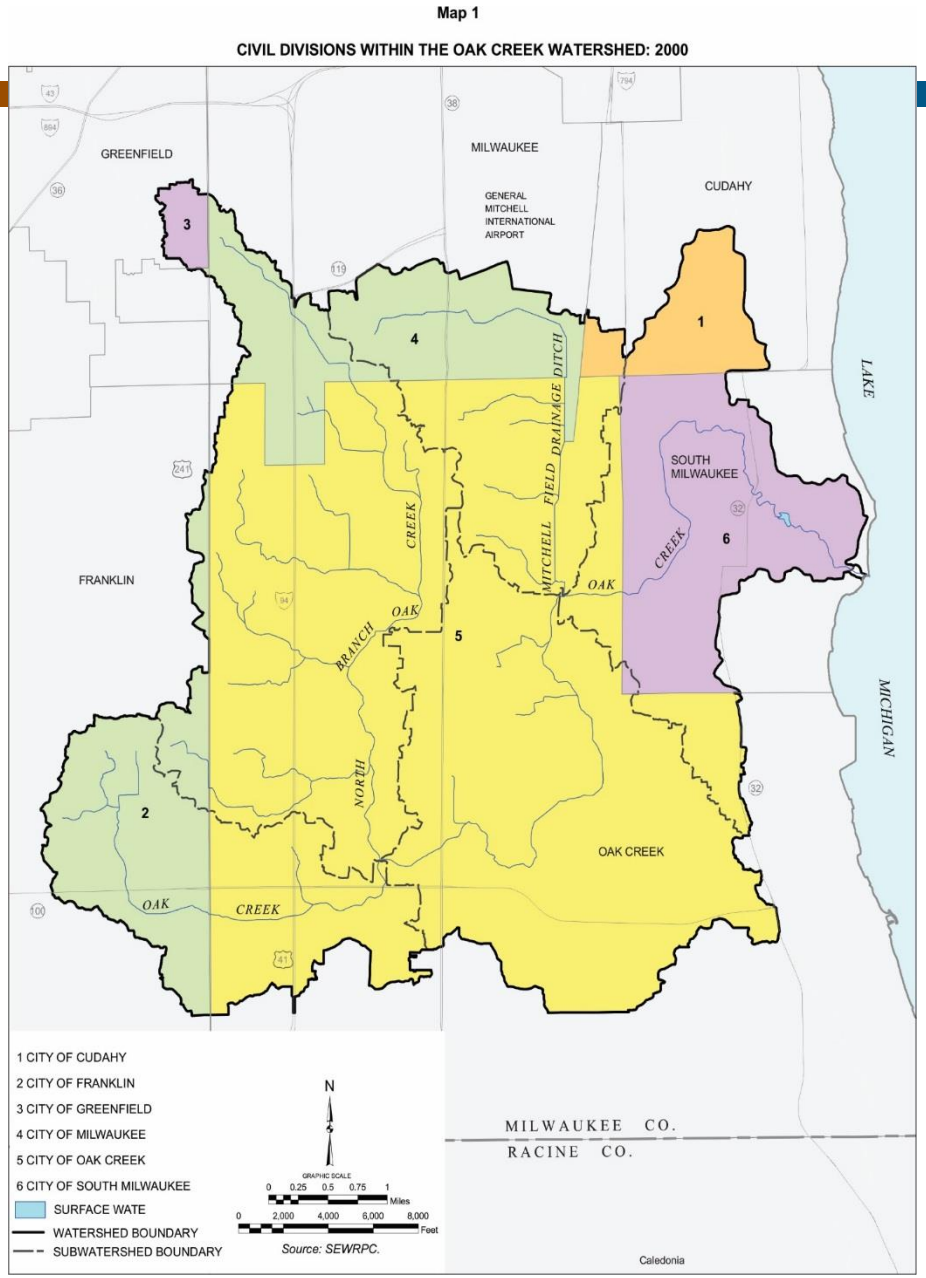
- Scope of the Plan
  - Background
  - Focus Areas
    - Water Quality
    - Recreational Access and Use
    - Targeted Stormwater Drainage and Flooding Issues
    - South Milwaukee Mill Dam
    - Habitat Conditions
- Next Steps / Questions
- Questionnaire

Agenda

- Scope of the Plan
  - Background

Background

- Civil Divisions in the 28 mi^2 Watershed
- 3 year study
- Build on 2007 Regional Water Quality Management Plan Update (SEWRPC)
- Planned 2050 Land Use



Agenda

- Scope of the Plan
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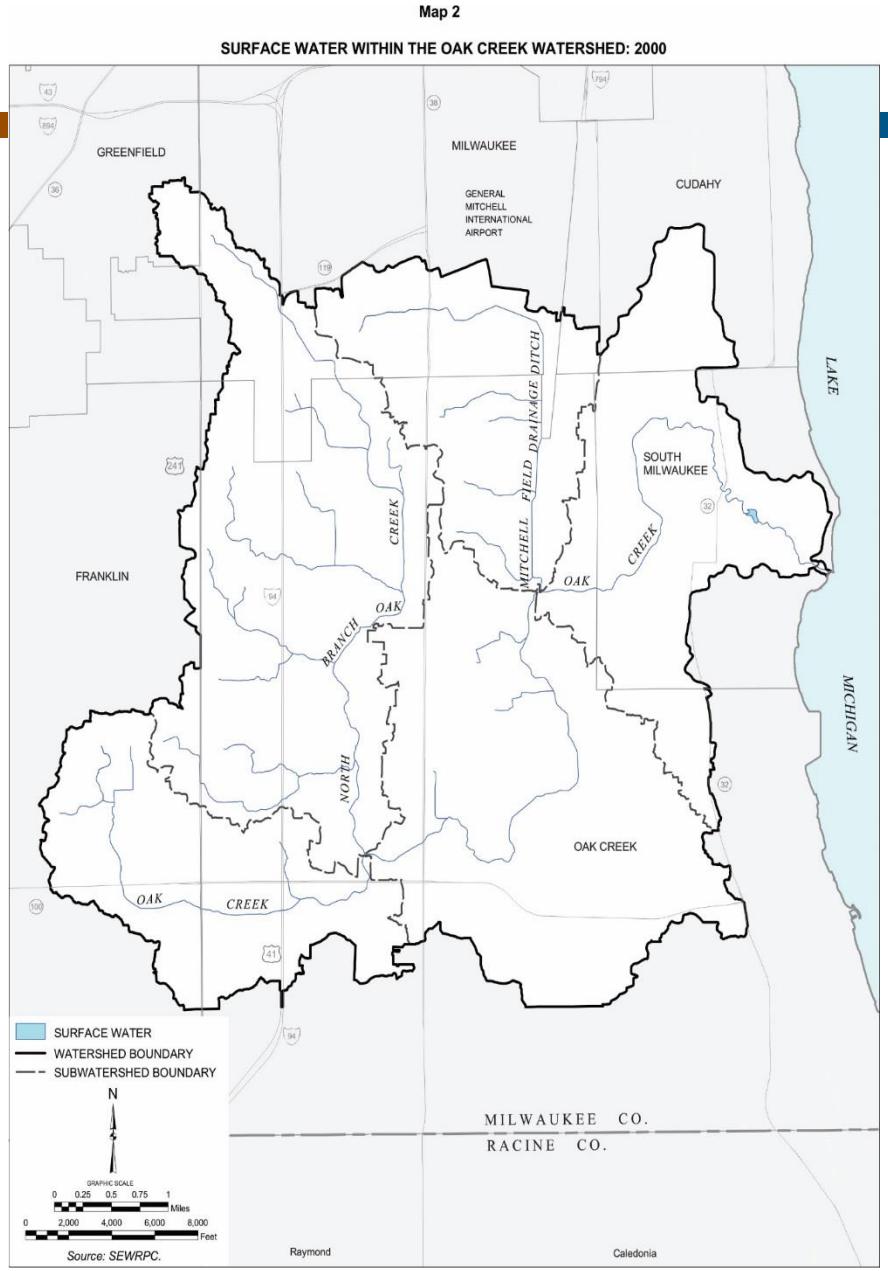
    - Water Quality

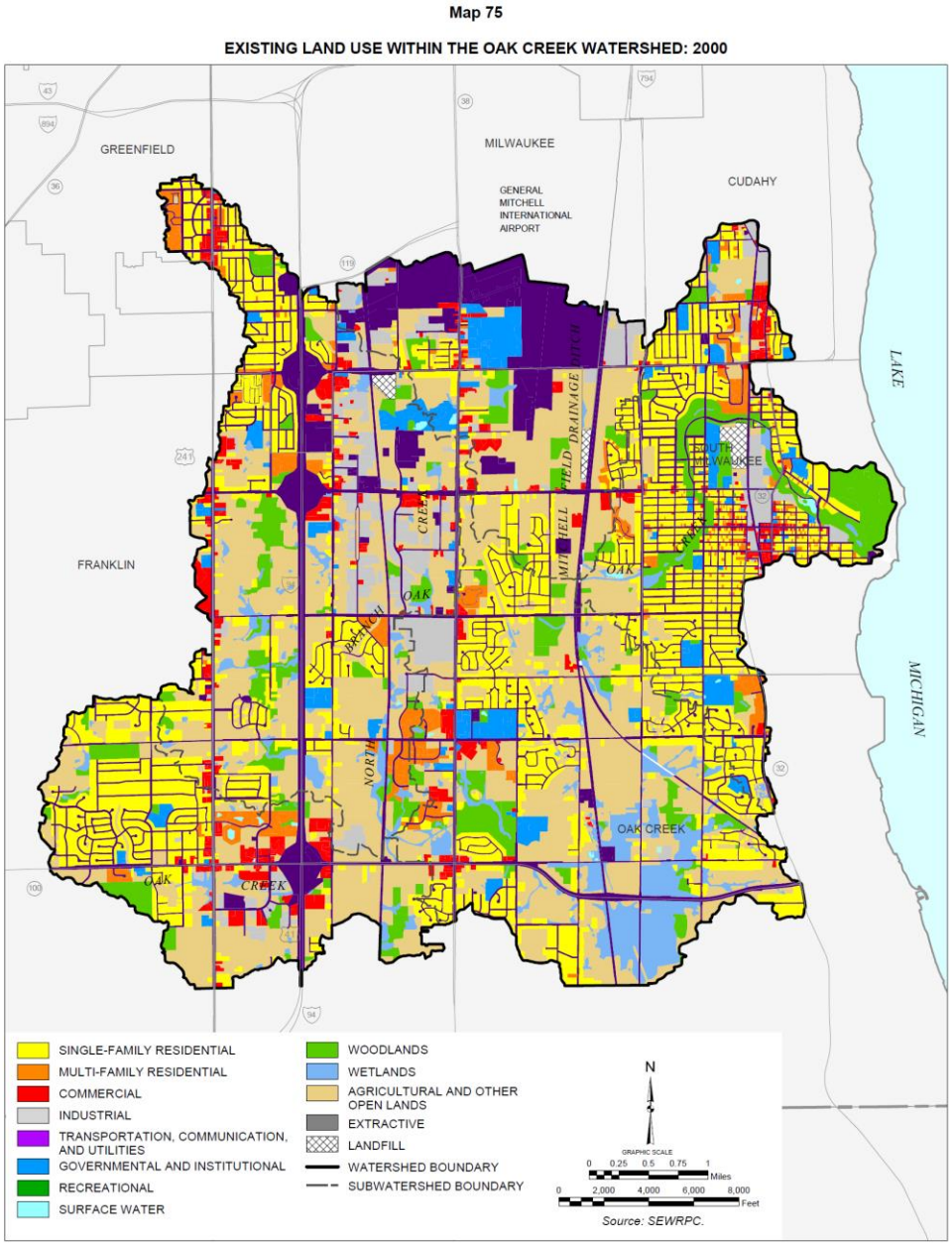
Water Quality

- Major Streams within the Watershed



Water Quality

- Existing Land Use within the Watershed
- Predominantly Urban by 2050



Water Quality

- Constituents of Concern
  - Phosphorus
  - Chlorides
  - Fecal indicator bacteria
  - Sediment

Water Quality

- Examples of Management Strategies for Water Quality Improvement
  - Road Salt Reduction
  - Stormwater Management Measures
  - Green Infrastructure

Minneapolis Star-Tribune

WDNR – bioretention

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Recreational Access and Use

- Surface Waters and Riparian Areas
  - Current level of Recreational Use
  - Potential level of Recreational Use
  - Health of Fishery
  - Corridor Issues
  - Safe for Human Contact


DS of Dam

Recreational Access and Use

- Examples of Management Strategies for Recreational Access and Use
  - Expand Access to Streams
  - Improve Water Quality
  - Improve Habitat
  - Improve Safety
  - Improve Connectivity to Corridor
  - Mill Pond Opportunities


NB - Puetz Rd

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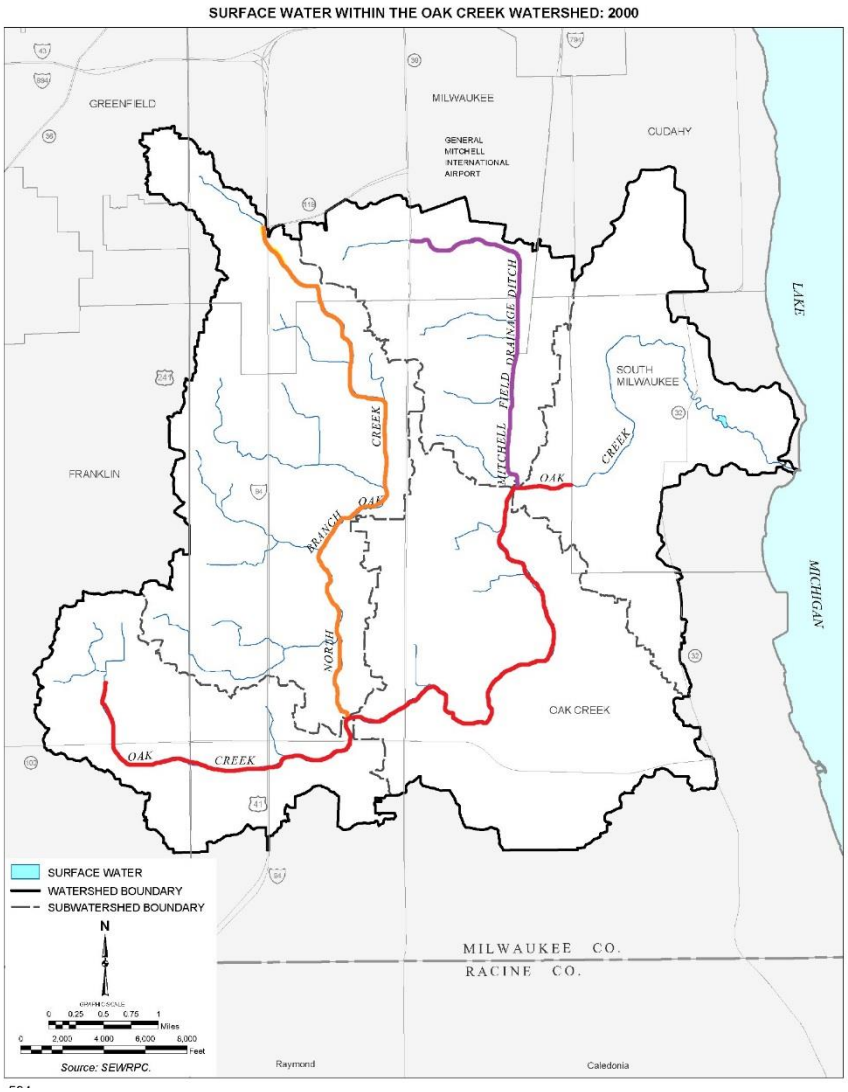
Stormwater Drainage and Flooding

- Targeted Issues
  - MMSD Jurisdiction for Flood Mitigation
  - Southwestern part of Cudahy at UP Railroad and College Avenue
  - Mainstem of Oak Creek in South Milwaukee at High School Athletic Fields
  - Work with Municipalities on limited additional locations of concern



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South Milwaukee Mill Dam

- Example Range of Alternatives for Mill Dam
  - Maintain Dam and Restore Mill Pond
  - Maintain Dam, Restore Mill Pond, and Provide Fish Passage
  - Remove Dam and Restore Free Flowing Stream

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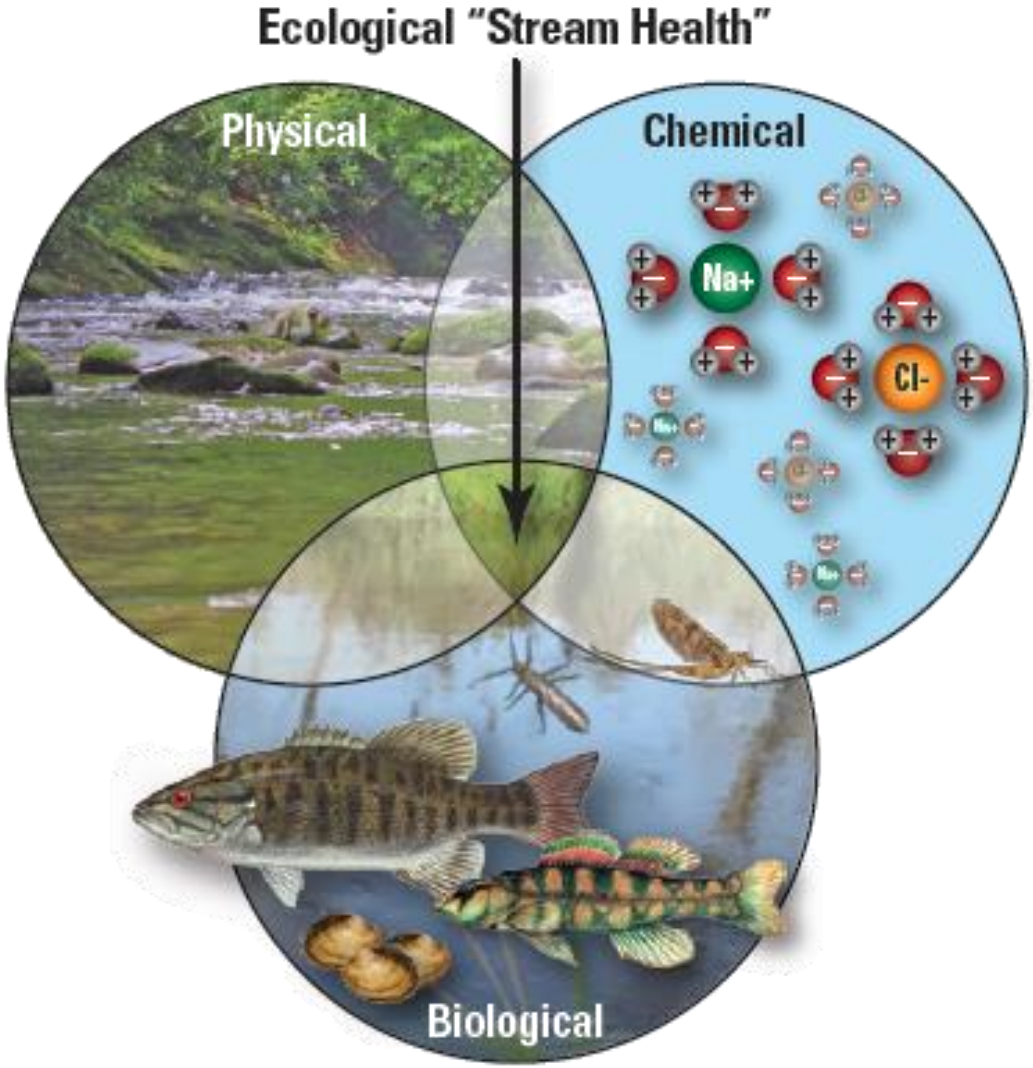
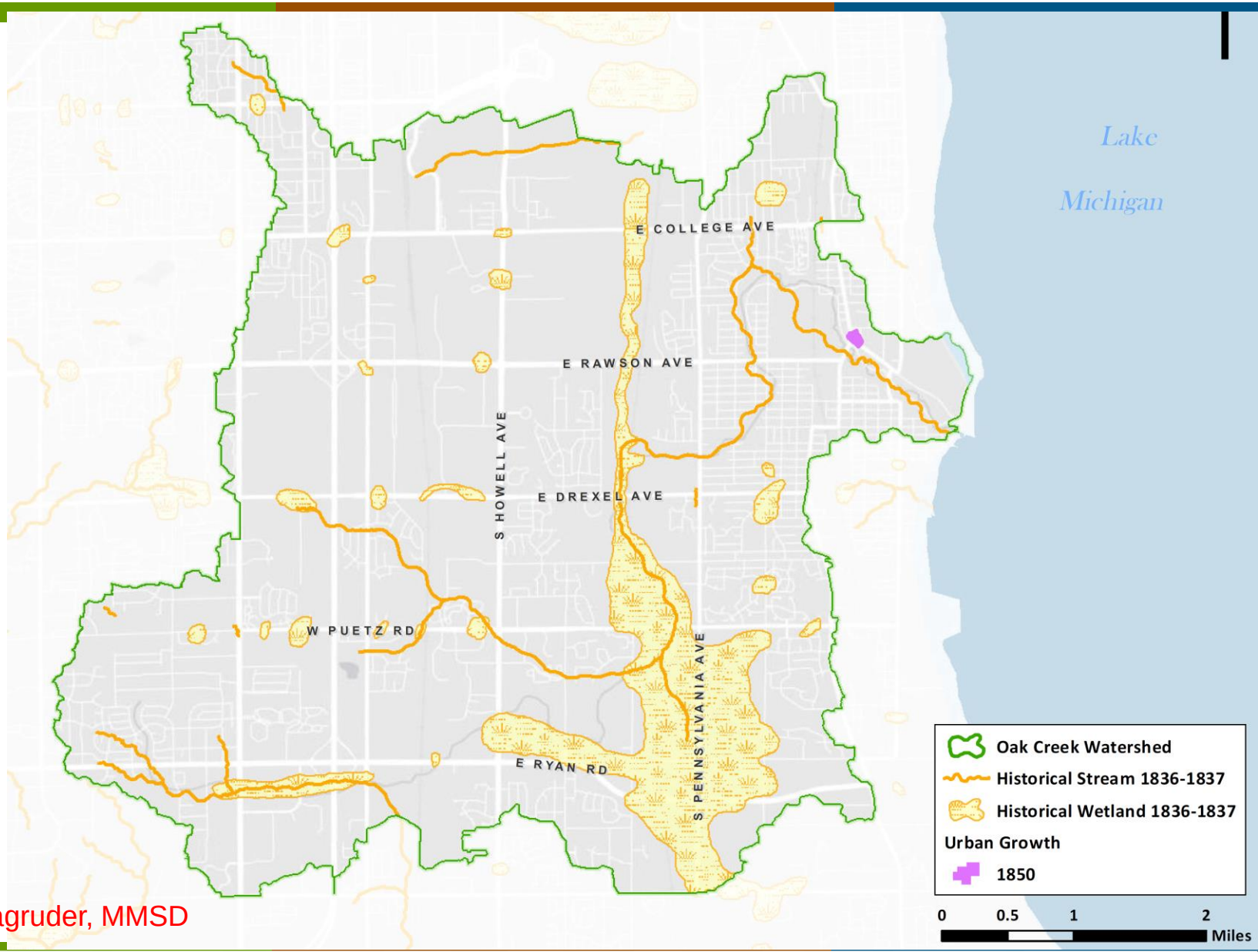
Habitat Conditions



Habitat Conditions

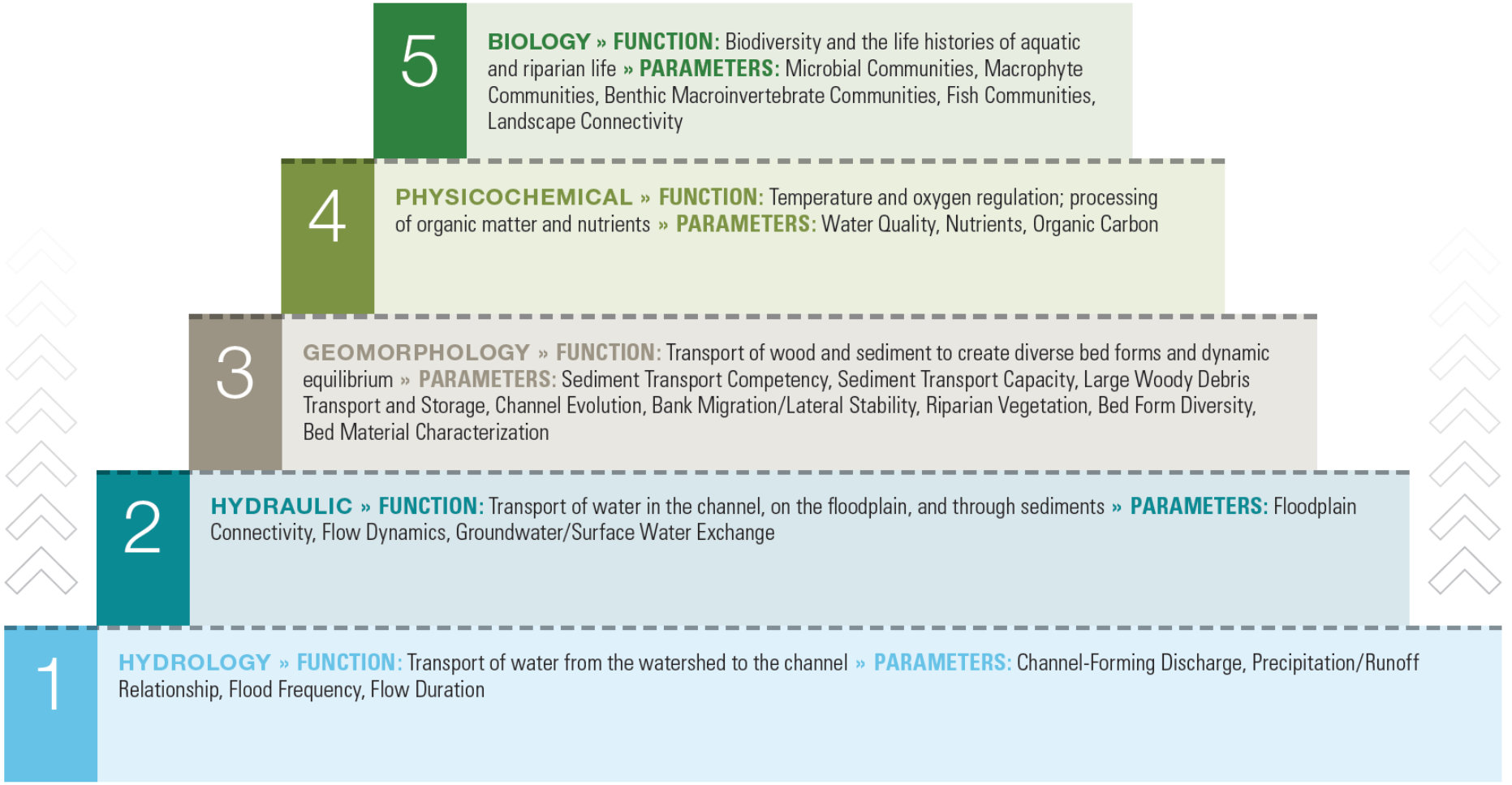
- Aquatic Habitat Issues
  - Fragmentation
  - Channelization
  - Erosion

Habitat Conditions: 1850



Source: Matt Magruder, MMSD

Habitat Conditions



Habitat Conditions

“Resistance” is the ability of a system to remain unchanged in the face of external forces.

“Resilience” is the ability of a system to recover from disturbance.

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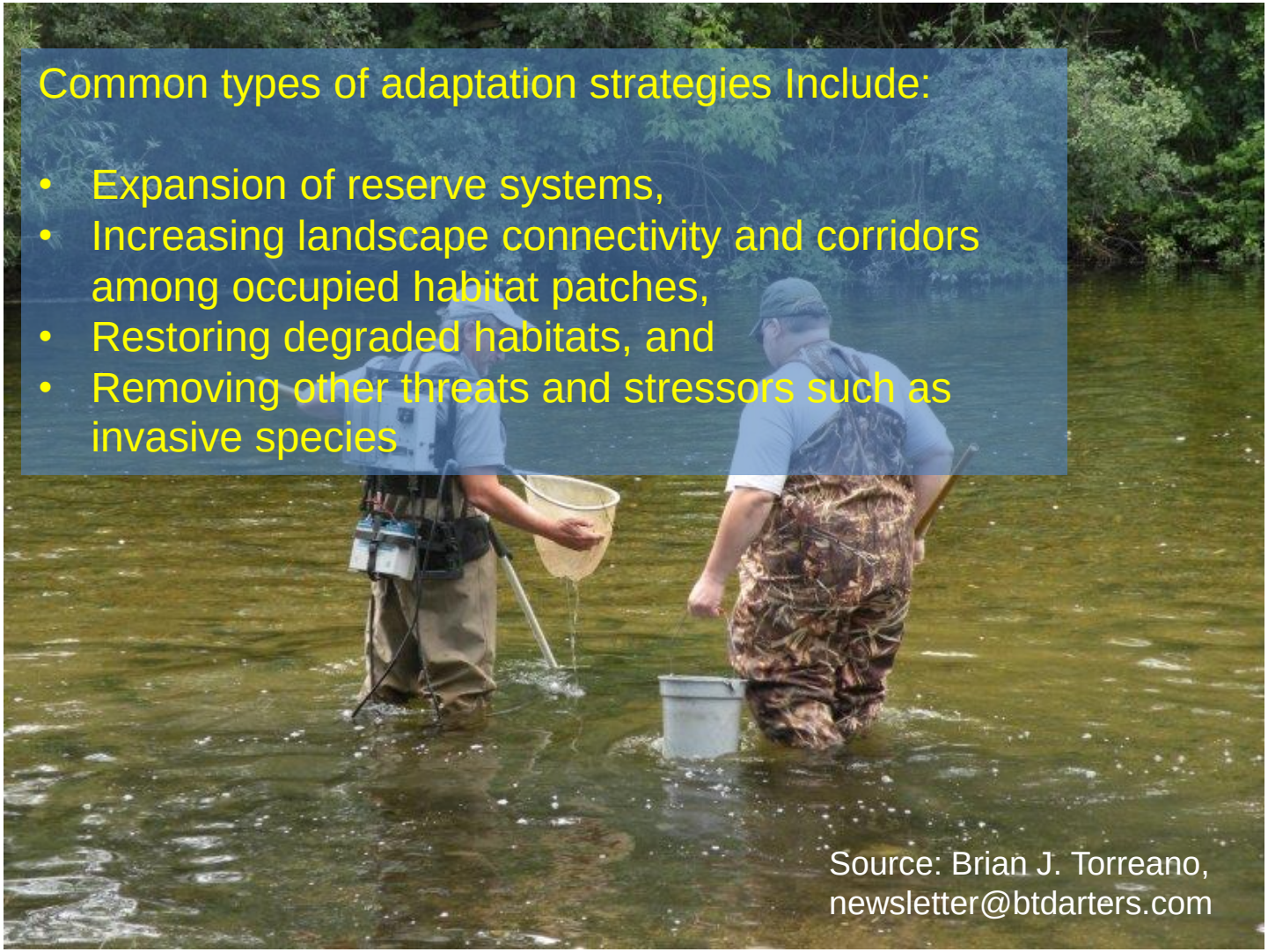
Fishery Quality

Fishery Quality



Habitat Conditions

- Physical Data - Survey
  - Stream Geometry Characteristics
  - Bank Erosion
  - Habitat Features
  - Riparian Vegetation
  - Trash
  - Debris Jams

Habitat Conditions

Trash in Channel

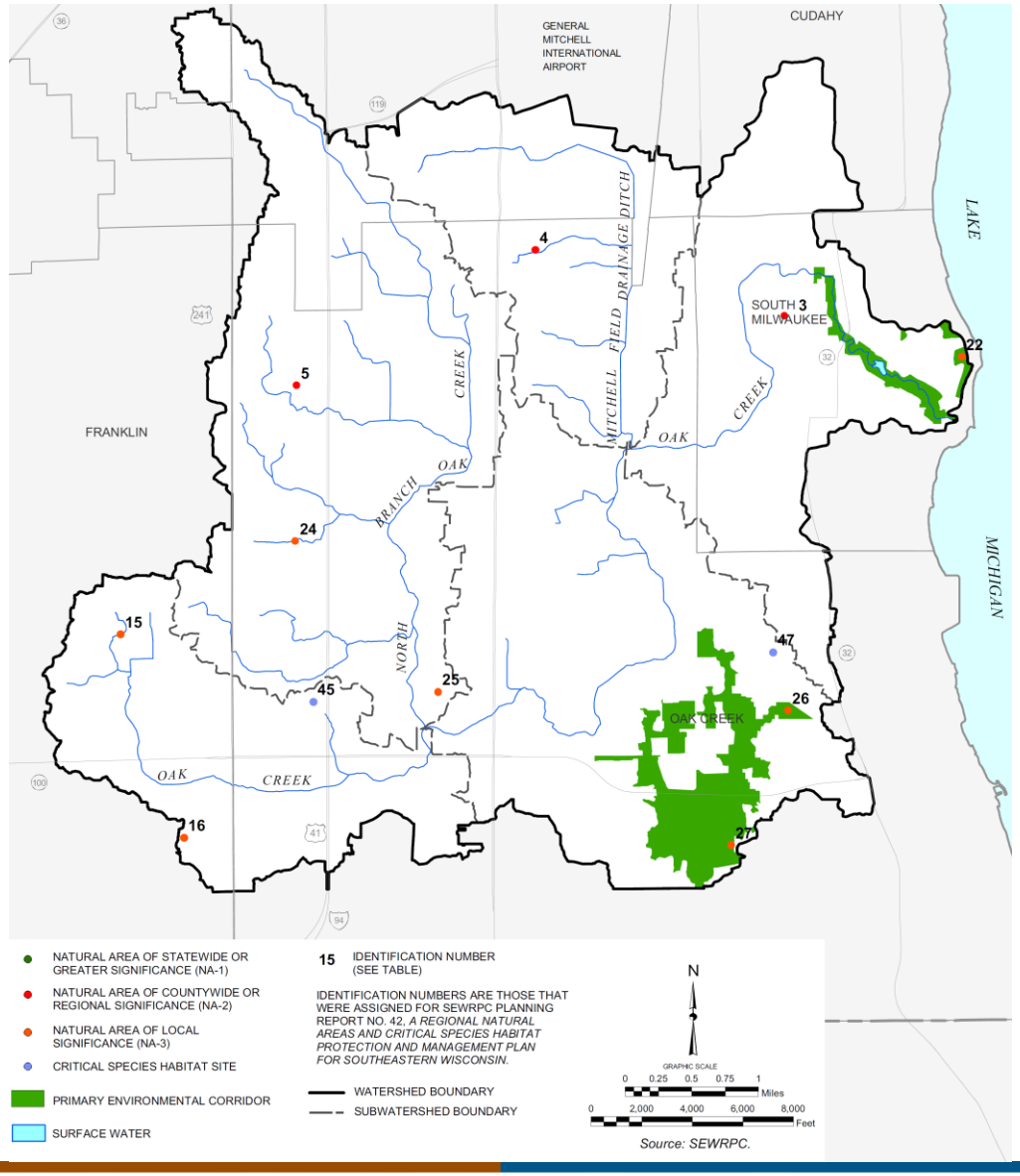
Woody Debris Jams

Habitat Conditions

Water Quality / Temperature Monitoring

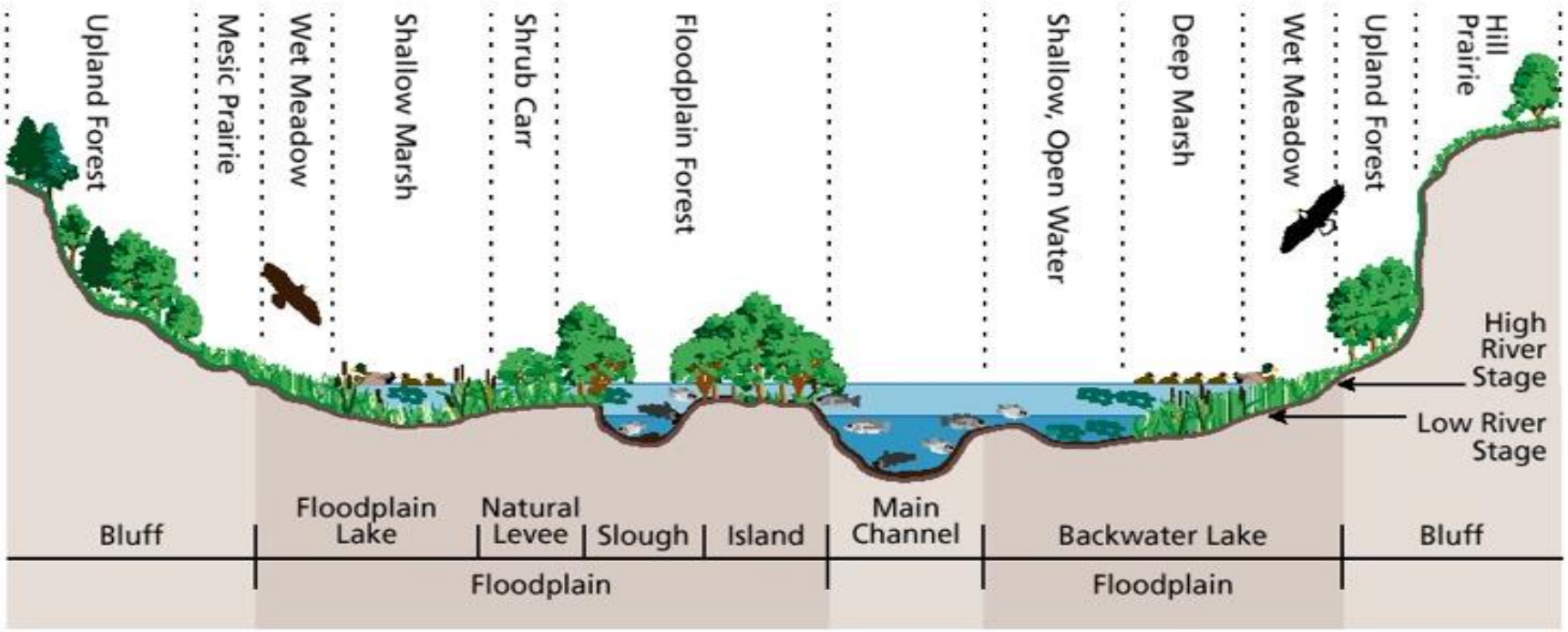
Fish Passage Assessments

Natural Areas Assessment



Prioritization Scheme

Protect the integrity of the existing landscape & identify opportunities to improve water quality and habitat



(From Sparks, Bioscience, 1995)

Habitat Conditions

- Examples of Management Strategies for Improving Habitat Conditions
  - Riparian Buffers
  - Address Invasive Species
  - Identify High Quality Habitat Areas

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Next Steps

- Field work to begin Summer 2016
- Stakeholder meeting to document problem areas and opportunities for improvement Summer 2016

OAK CREEK WATERSHED FUTURE

Next Steps

- Communication
  - SEWRPC website for documents and comments

    http://www.sewrpc.org/SEWRPC/Environment/Restoration-Plan-Oak-Creek-Watershed.htm

- Contacts
  - Laura Kletti – Chief Environmental Engineer lkletti@sewrpc.org
  - Tom Slawski – Chief Biologist tslawski@sewrpc.org

Questions?

OAK CREEK WATERSHED FUTURE

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Website and Contact Information

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  - Tom Slawski – Chief Biologist 262-953-3263 or tslawski@sewrpc.org