



Root River Teleost and Macroinvertebrate Survey Results 1979 - Present

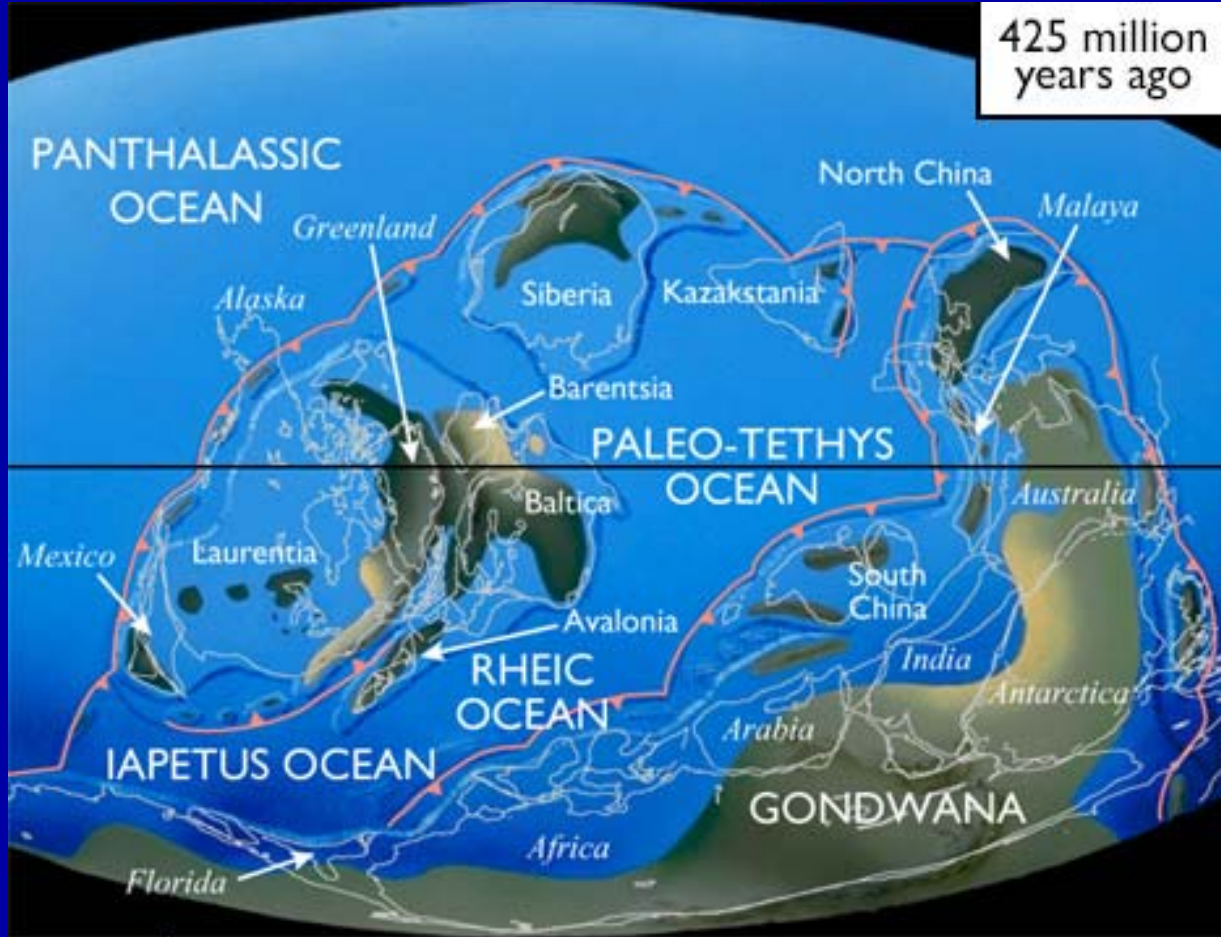
Craig Helker
WDNR
5/29/2013

or

FISH and BUGS
Then - Now

THEN

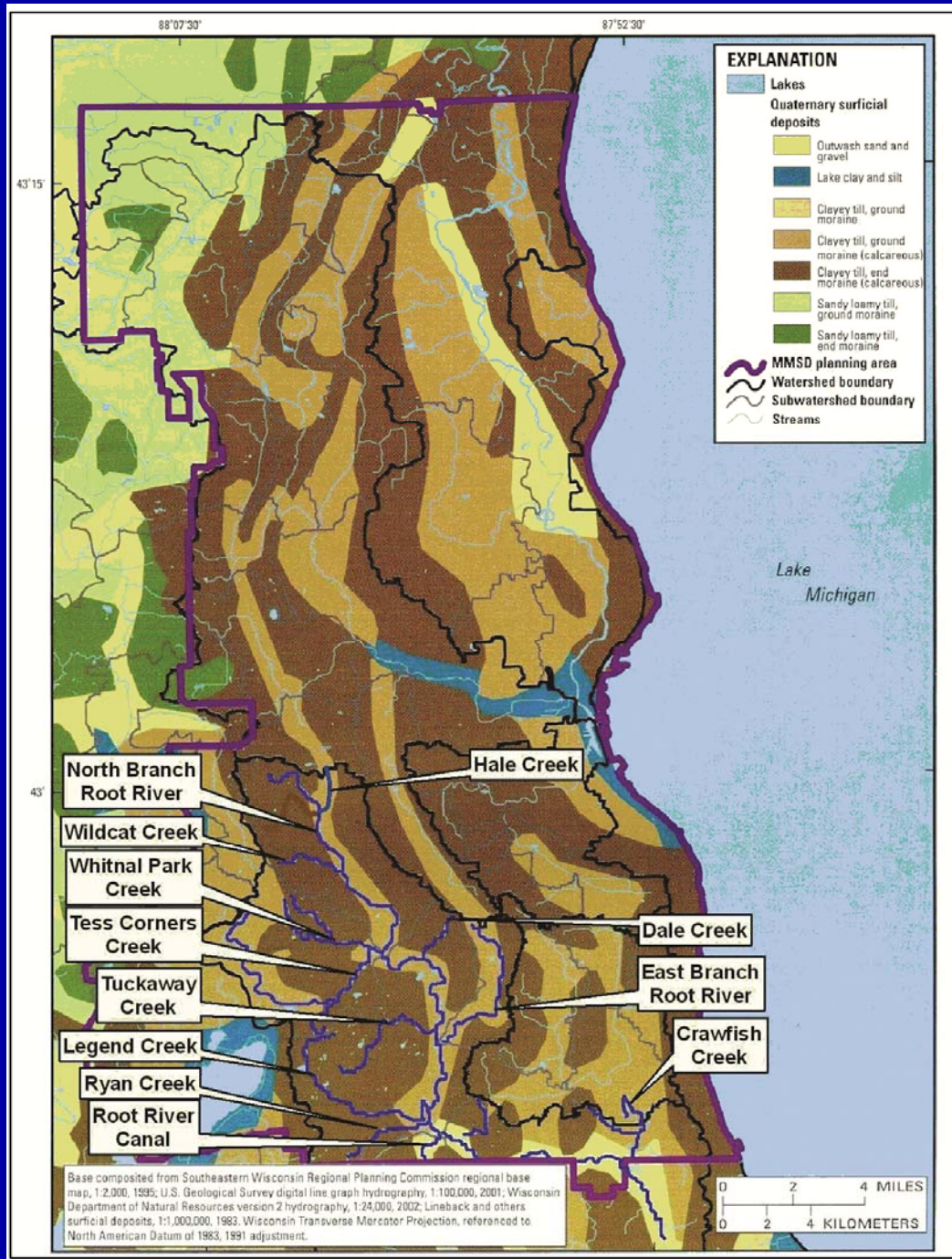
425 million years ago



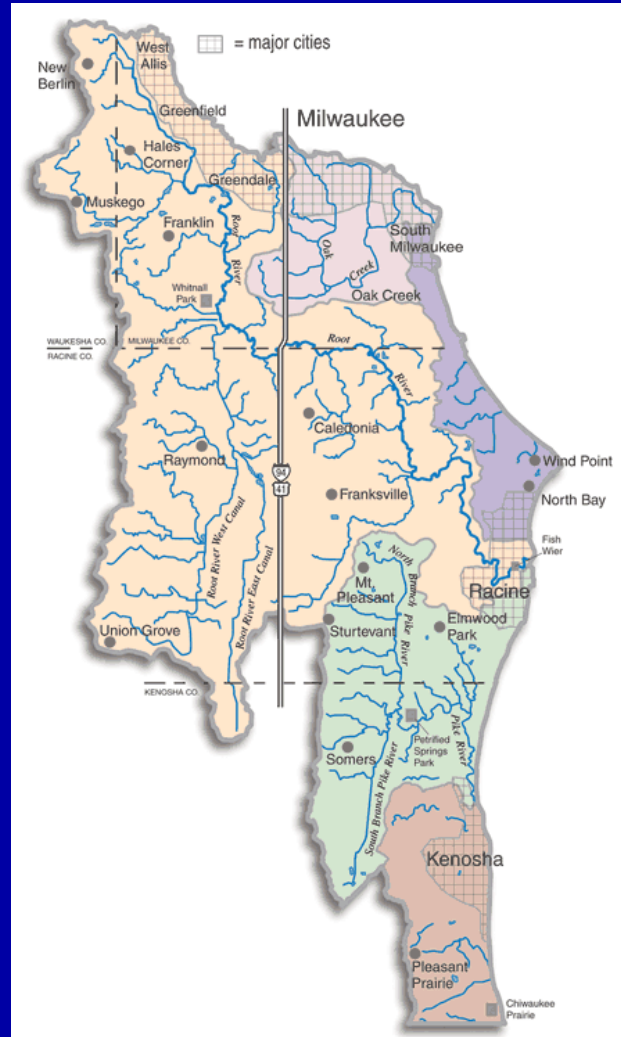
MAP KEY	Ancient landmass	Modern landmass	Ice caps & glaciers	Subduction zone (red arrow direction of subduction)	Sea floor spreading ridge



NOW



Root River Watershed







Teleosts

Fish Sampling





Peak Watts / 3500W
Warning Watts

WARNING!
Voltage

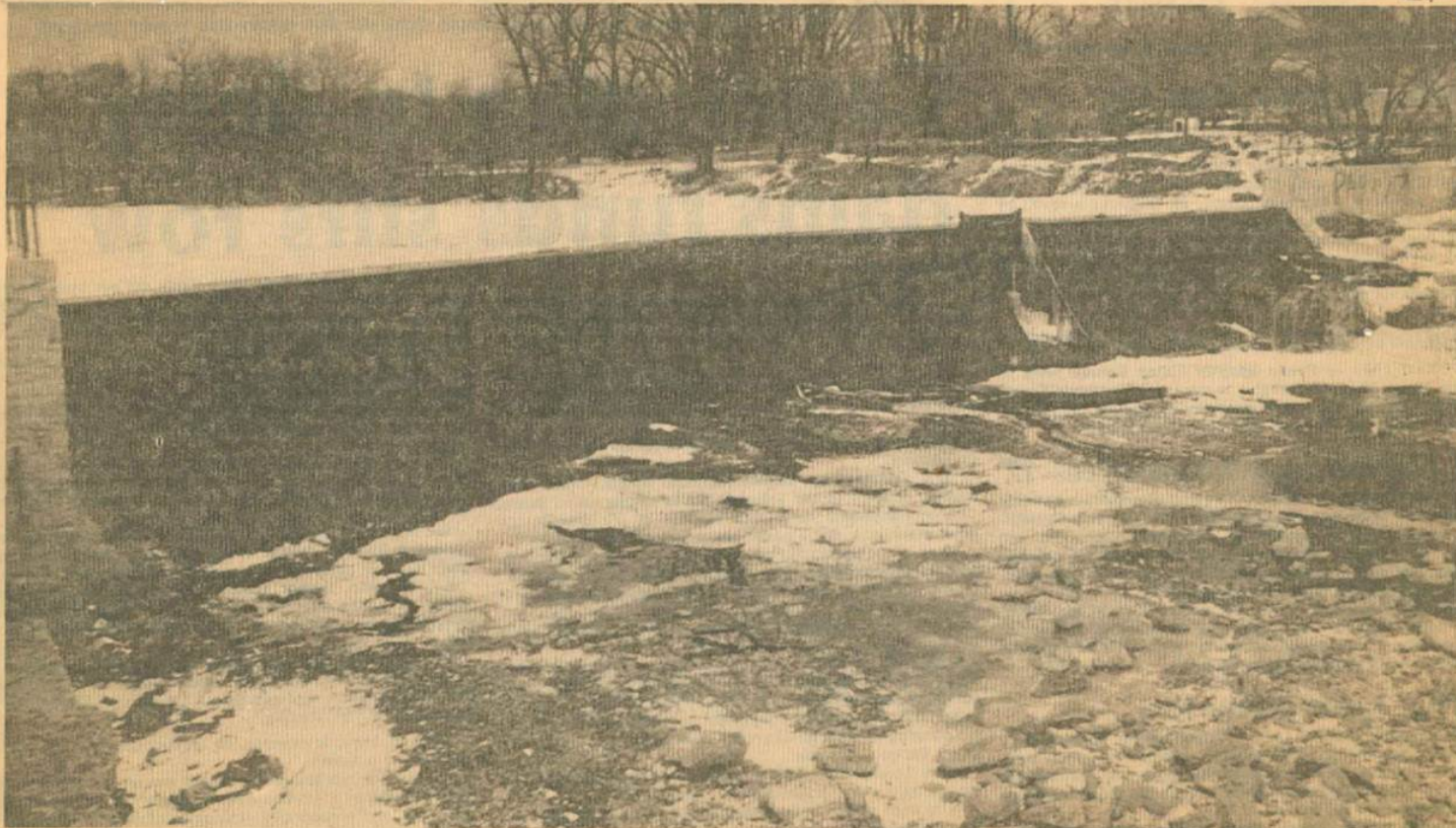




Findings

- Then

21 FEB 77

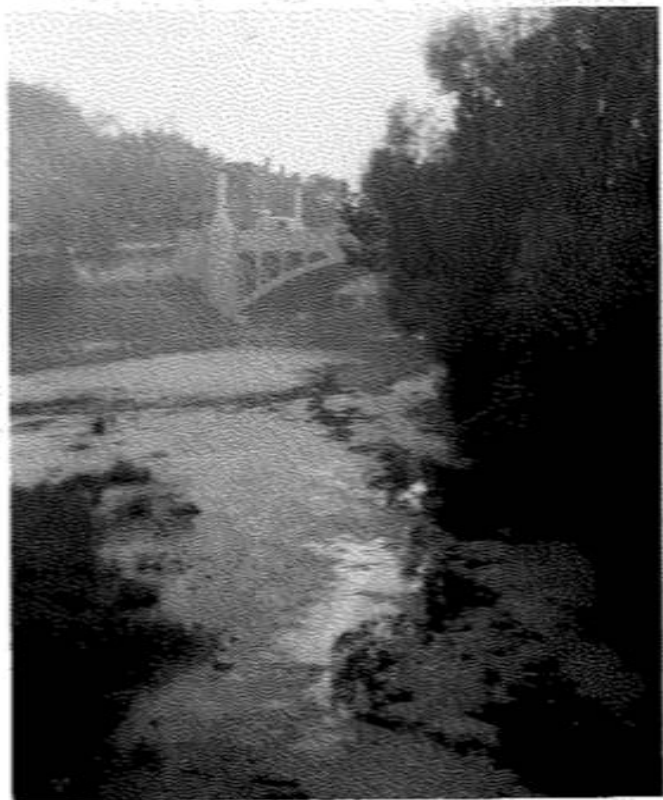


Dam polluted

Horlick Dam has been turned black by an oily substance discovered in the Root River last week. Racine County Emergency Government Director Nickolas Braun said ice made it impossible to locate source of the pollution, but he said the substance didn't appear to have been in any large quantity. The oily material was traced as far south as

Washington Park. Braun said he thought most of it had been flushed away by late last week, but others said the condition appeared worse by Sunday, when this photo was taken. The dam's normal color is cement gray, like that of the wall in the right background.

Journal Times Photo by Tom Houtch



South end of island in Island Park
looking downstream towards the
6th Street bridge. Note algae
matting.

Findings

- Now

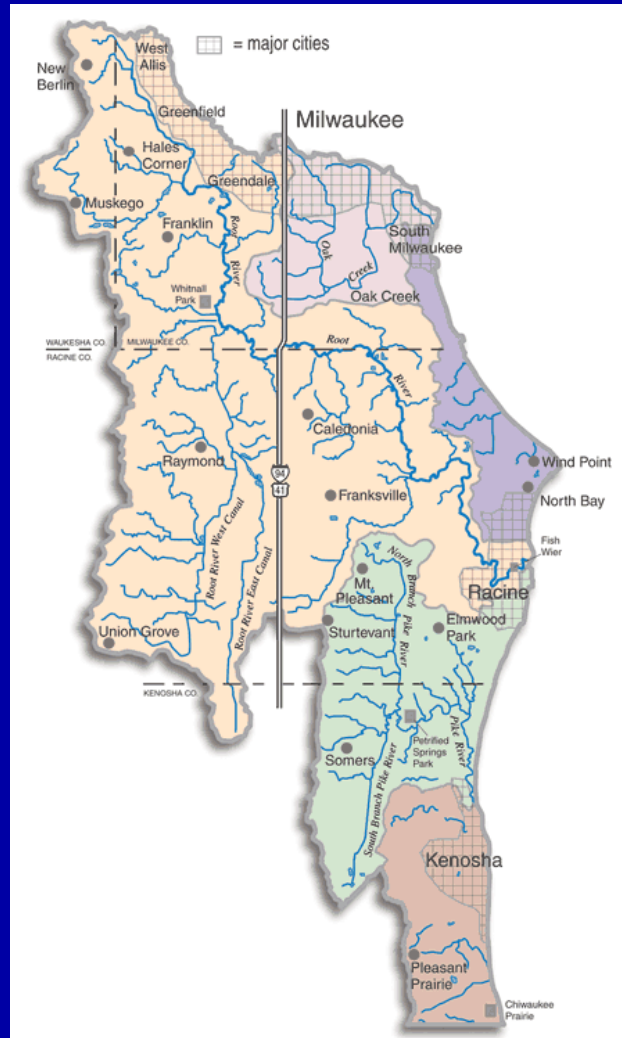
Protocols

- IBI for Warmwater Streams – Lyons, J.

Warmwater IBI

100 - 65	Excellent	Best situation with minimal impact
64 - 50	Good	Loss of intolerants
49 - 30	Fair	Intolerants decrease, tolerants increase
29 - 20	Poor	Few species, tolerant dominated
19 - 0	Very Poor	Very few species, exotic, tolerant

Root River Watershed



Findings

- Mainstem

Grange (Very Poor 10)





Findings

- Mainstem

Hwy 100 (Fair 42)



Findings

- Mainstem

Cty Hwy V (Fair 35)

Findings

- Mainstem
Hwy 38 (Fair)



Findings

- Mainstem

5-Mile (Good 56)

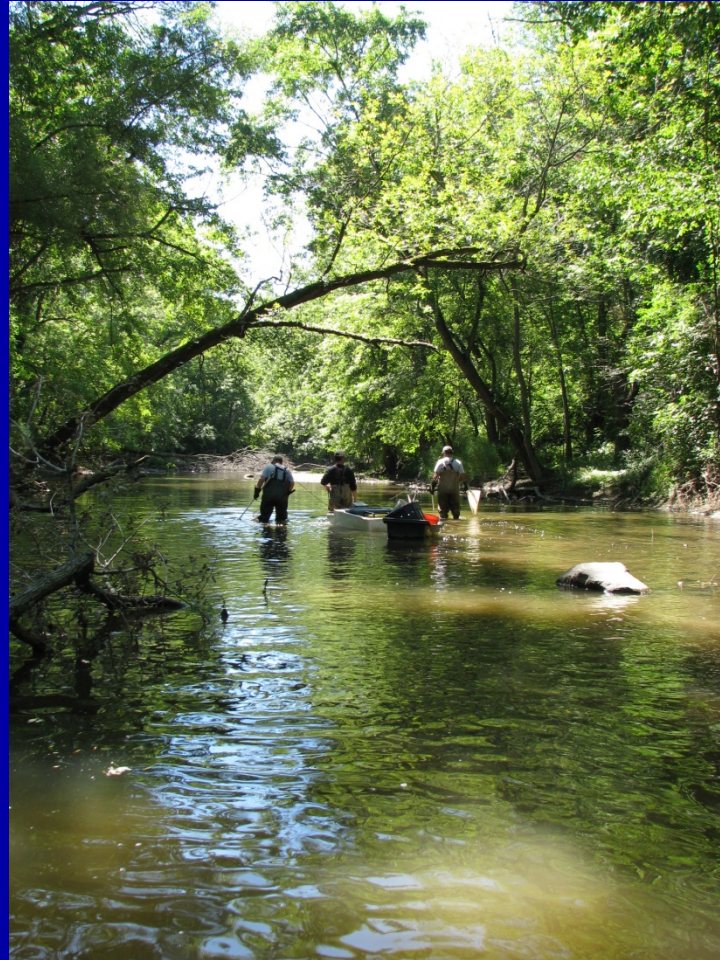




Thomas, Bonner, and Whiteside 2007

Findings

- Mainstem
Hwy 31 (Fair 30)







John Lyons

Findings

- Mainstem

Spring Street (Fair 35)





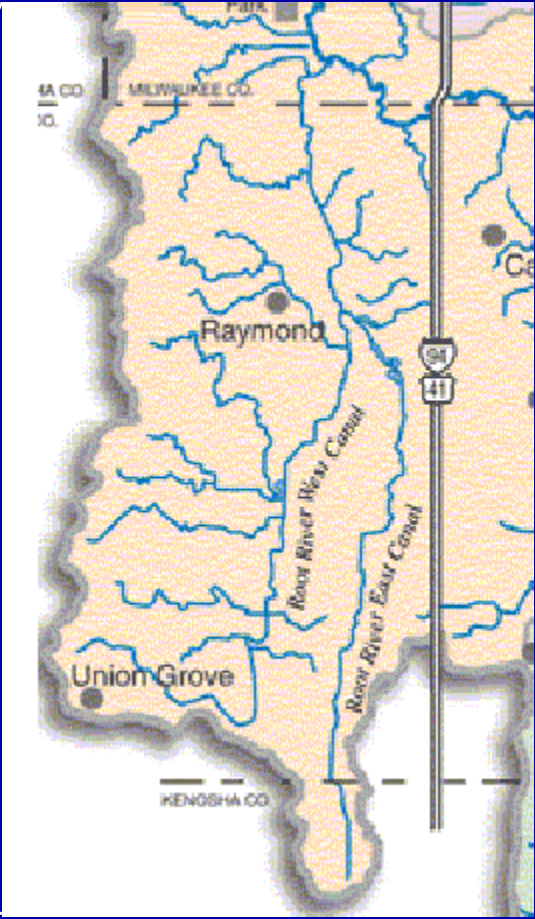


UGA1354047

Findings

- Root River Canal

Root River Canal



Findings

- Root River Canal
5-Mile (Poor 27)





Findings

- Root River Canal
East Branch (Poor 29)

Findings

- Root River Canal
West Branch (Poor 22)

Macroinvertebrates

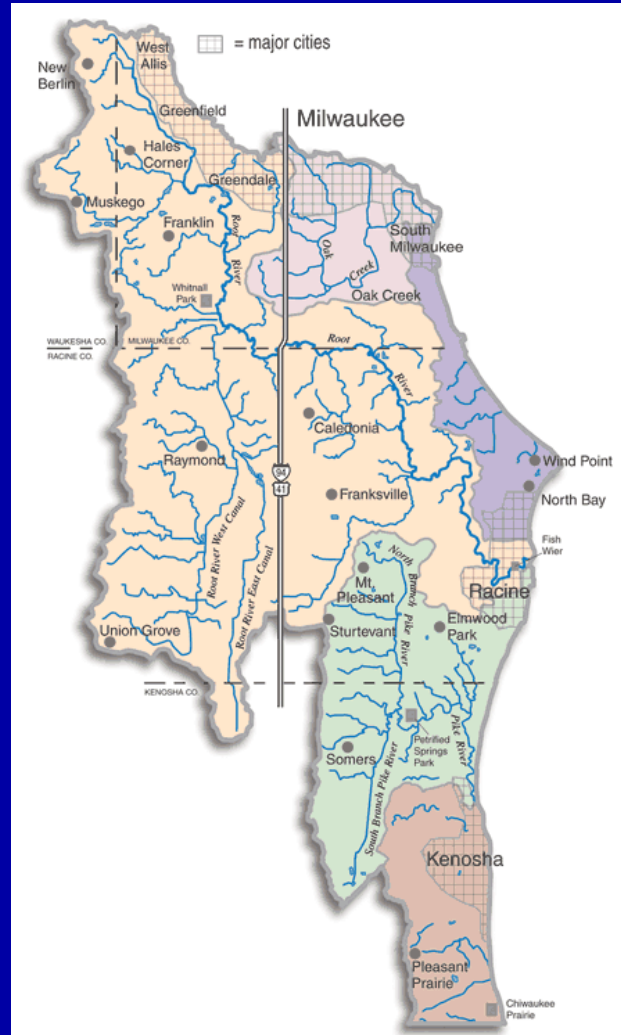
Protocols

- Hilsenhoff Index of Biotic Integrity

HBI

0.0 - 3.5	Excellent	No apparent organic pollution
3.51 - 4.5	Very Good	Possible slight organic pollution
4.51 - 5.5	Good	Some organic pollution
5.51 - 6.5	Fair	Fairly significant organic pollution
6.51 - 7.5	Fairly Poor	Significant organic pollution
7.51 - 8.5	Poor	Very significant organic pollution
8.51 - 10.00	Very Poor	Severe organic pollution

Root River Watershed

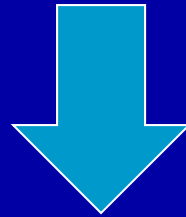


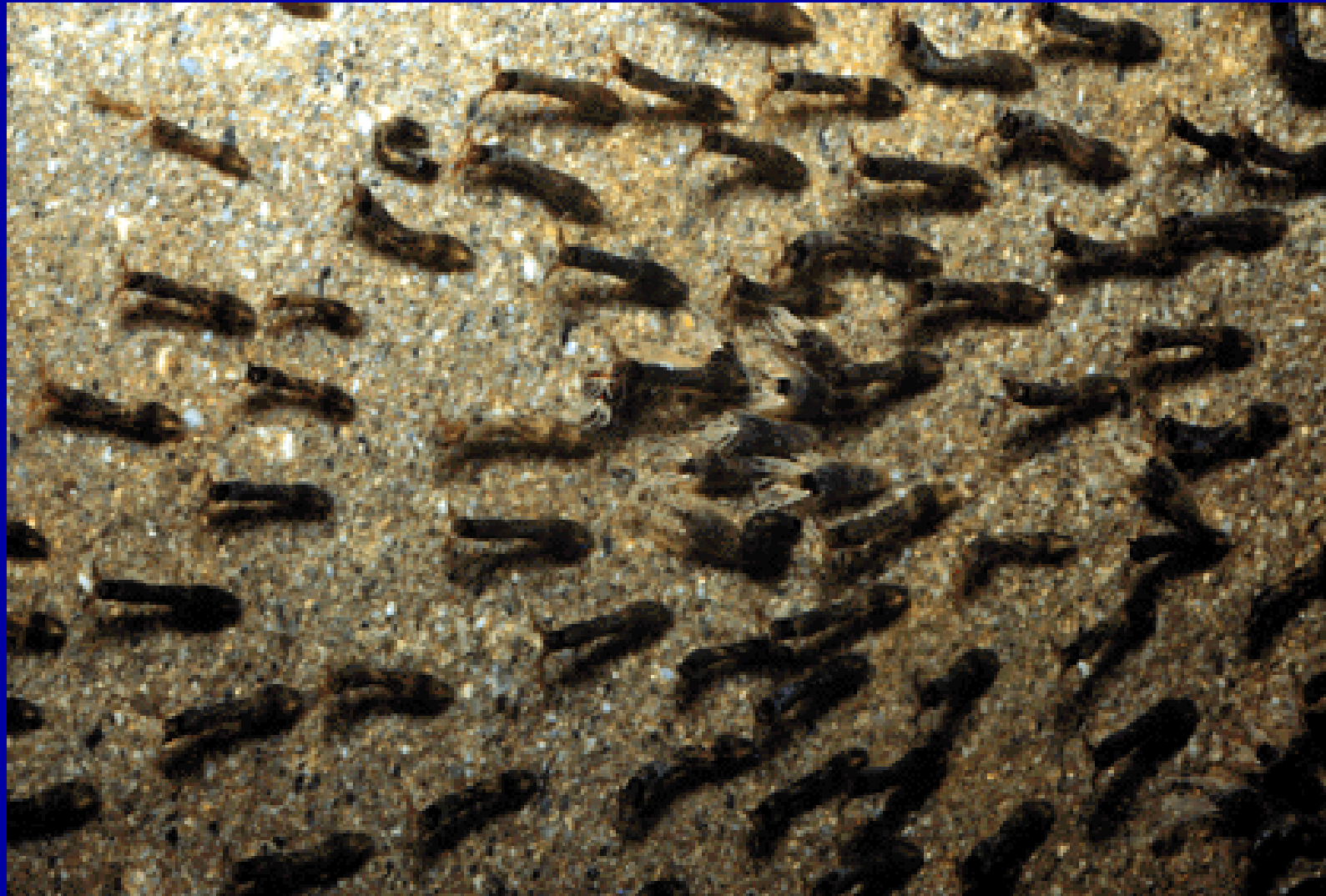
Findings

- Mainstem

Grange (Fairly Poor 7.4)

(Poor 7.8)



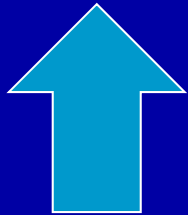


Findings

- Mainstem

Rawson (Fairly Poor 6.51)

(Fair 6.12)

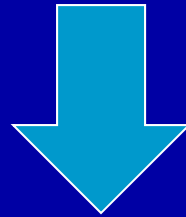


Findings

- Mainstem

Hwy 100 (Fair 6.18)

(Fairly Poor 6.63)





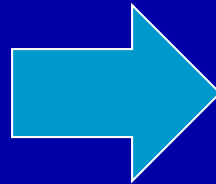


Findings

- Mainstem

Hwy V (Fair 6.17)

(Fair 6.44)





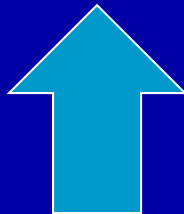


Findings

- Mainstem

Hwy 38 (Poor 8.16)

(Fairly Poor 7.57)

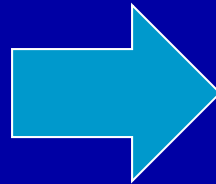


Findings

- Mainstem

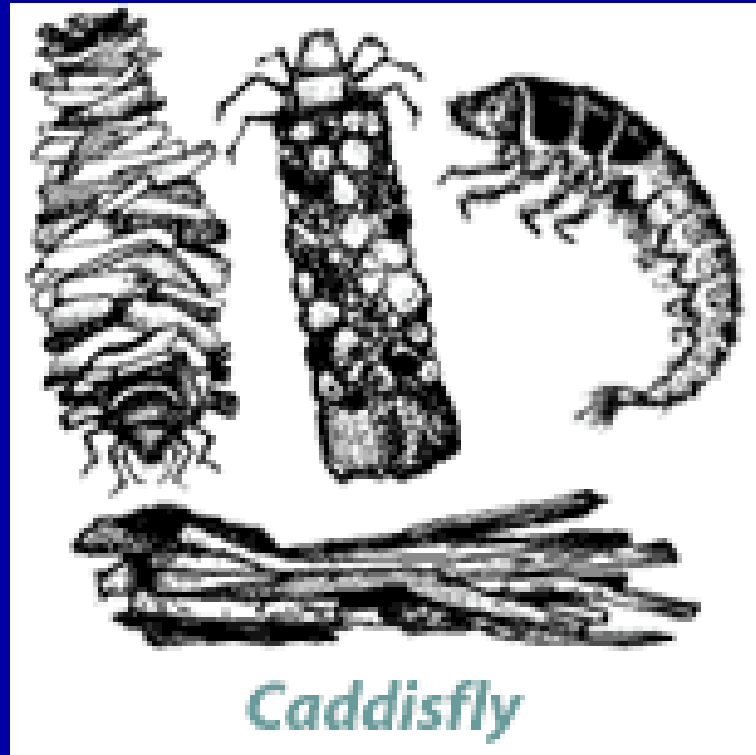
5-Mile (Fair 5.58)

(Fair 5.74)





Jason Neuswanger
www.troutnut.com



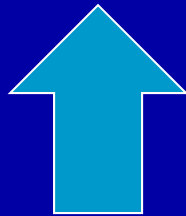
Caddisfly

Findings

- Mainstem

Johnson Park (Fair 6.25)

(Good 5.22)



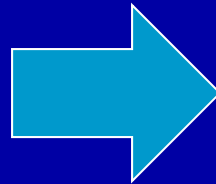


Findings

- Mainstem

Hwy 31 (Fair 5.55)

(Fair 5.78)



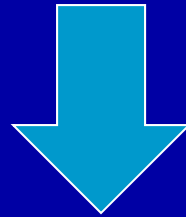


Findings

- Mainstem

Spring Street (Good 5.32)

(Fair 5.56)



Root River Canal

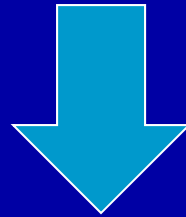


Findings

- Root River Canal

5-Mile* (Poor 7.77) (Poor 8.00)

7-Mile (Fair 5.71) (Poor 7.82)



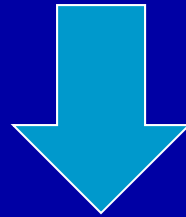


Findings

- Root River Canal – West Branch

67th Drive (Fair 5.95) (Fair 7.53)

4-Mile* (Fairly Poor 6.7) (Poor 6.4)





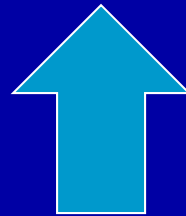
Jim on Newsweek
www.trout.com

Findings

- Root River Canal – East Branch

Hwy 11 (Poor 8.35) (Fairly Poor 7.47)

Cty Hwy A (Poor 8.08) (Fairly Poor 7.45)





Findings

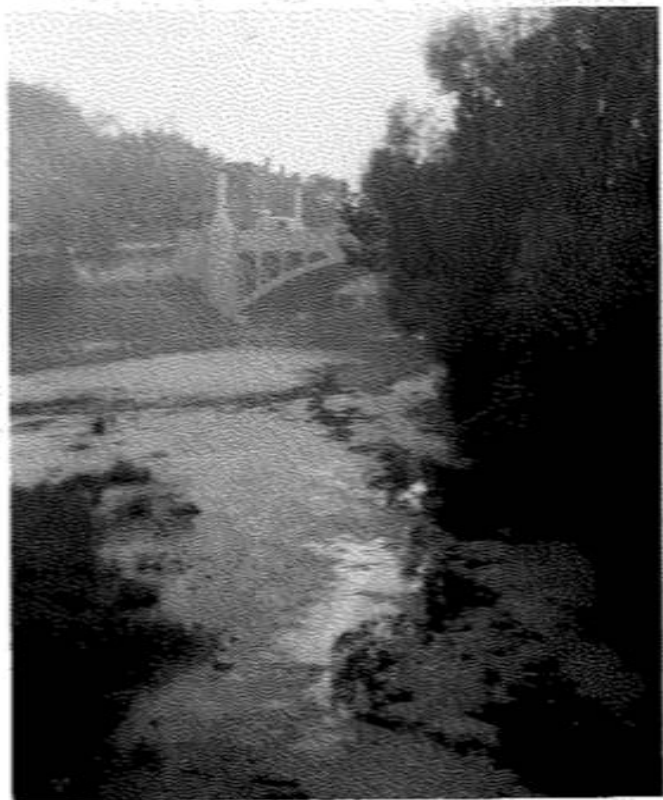
- Tributaries

Tess Corners	(Very Good 4.15)	(Good 4.55)
Franklin Trib	(Poor 8.12)	(Good 5.45)
Ryan Creek	(Very Good 3.67)	(Good 4.72)
Yorkville @ 20	(Very Poor 8.57)	(Good 4.66)
Hoods Creek	Improving	
Trib @ G	(Very Good 3.78)	

Ephemeroptera



Questions?



South end of island in Island Park
looking downstream towards the
6th Street bridge. Note algae
matting.



Black Bullhead
Black Crappie
Blacknose Dace
Blackside Darter
Blue/Green hybrid
Blue/Pumpkin hybrid
Bluegill
Bluntnose Minnow
Brook Stickleback
Central Mudminnow
Channel Catfish
Common Carp
Common Carp
Creek Chub
Fathead Minnow
Golden Redhorse
Golden Shiner
Green Sunfish
Green/Pumpkin hybrid
Iowa Darter
Johnny Darter
Largemouth Bass
Northern Pike
Pumpkinseed
Rainbow Trout
Rock Bass
Round Goby
Sand Shiner