A Tale of Destruction, Renewal and Hope for the Future

- Charles -

Driftless Waters

David Vetrano Fisheries Supervisor Wisconsin DNR Retired

The Driftless Area 🕨

No Natural Lakes
1,500 miles of Rivers & Streams



The word "Coulee" originates from the French verb Couler – "to flow".



Northern European Settlement 1820's



Prairie Fires



The Kickapoo River acted as a firebreak.

East side of river is characterized by dense stands of pine and hardwood.



Steep Terrain



Brook Trout



Logging Industry 1830 – 1840's



Agriculture – 1850's

Wheat Farming 1860 – 1880's

Land - \$2.00 acre Wheat - \$1.00 bushel

Dairy Farming still the main industry today.

Dairy Farming - 1880's





Hillside grazing became common... leaving many bluff sides devoid of vegetation.



Rill Erosion



Row Cropping



Accelerated Runoff



Headcutting

Flash flooding common by 1900.



Erosion rates in mid – 1930's: 1.8 million tons per year.



Only 2% of watershed was ungrazed woodlot.



12-15 feet of sediment filled the valley floors.



Damage to infrastructure



As sediment filled the valley...

water temperatures began to rise.



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Redhorse



Cropping Methods



Great Depression

CCC - Civilian Conservation Corps

WPA - Works Progress Administration





Contour Strips



Flash Floods

"Coulee region streams are in extremely poor shape because of watershed management problems and it is probable that the habitat conditions will continue to be degraded."

> "Because of this fact, it is also likely that trout stream fishing in the coulee region may practically disappear in the future."

NEW COLUMN

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John Brasch, Wisconsin Conservation Department, March 18, 1958



Public Law (PL) 566 Water Retention Structures



Lateral Stream Movement



Brown Trout

Habitat restoration efforts began in the 1950's.

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Acreage under tillage stayed the same, however acreage under conservation tillage increased significantly.





Major Flood 1978



Little

Underwater

Neighborhood

Keepers

Encompassing

Rheotactic

Salmonids



Timber Coulee Creek

Habitat Restoration 1985



Before

Conservation Reserve Program

Cross Compliance

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1985 Farm Bill

By the late 1980's, <u>perennial</u> hillside vegetation allowed greater groundwater infiltration from snowmelt and rain water...

> resulting in increased base flow and spring flow, as well as colder water temperatures.



Carry over of adult brown trout



Natural Reproduction

By the late 1980's, anglers from outside the area "found" southwest Wisconsin trout streams.



By 1991, more land sold for recreation than for farming.

1996

Kickapoo Valley Watershed Conservation Project





LIFE OF A

Trout need a consistent flow of cold, clean water to survive. They iso need varied stream habitats to provide them with insects, worms and minnows for food, cover from predators, and suitable places to rest and spawn (reproduce)

A healthy population of trout indicates that the watershed and streams are in good condition









Sponsored by ONTARIO BUSINESS ASSOCIATION



projects.



Brook Trout



Brown Trout

Economic Benefits

Two Vernon County Streams

<u>1994</u>

4,000 trips / year \$190,000 to local economy

<u>1999</u>

8,800 trips / year \$1.2 million to local economy 1,000 cars from 14 states noted



Same old issues... still a problem.

In coulee region streams, 85% of in-stream sediment is "legacy" soil from stream banks.

High commodity prices

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The return of up and down farming.





Grazed Woodlots



Headcutting... still an issue.



Feedlots are direct conduits...



Inadequate Erosion Control.



Hope for the Future?



In 2016, Wisconsin lost more than 400 dairy farms.



High nitrate levels in private wells are linked to CAFO's.



Mangaged Grazing is the answer to Driftless Waters Woes.

Wisconsin Trout Streams

A DNR Publication states...

Since 1995, in the La Crosse area alone, more than 325 miles of new or upgraded streams have been added to the "Trout Book".

There are now over 1000 miles of classified trout water in Lacrosse, Vernon, Crawford, and Monroe counties. Almost all streams now have enough natural reproduction to maintain the fishery.





Trout Fishing in the Driftless Area



2008 Trout Unlimited Study found a 1.1 Billion dollar industry. By 2016 the economic impact increased to 1.6 Billion dollars. Thank you for your interest in our cold water resources.

For more information, feel free to contact me at :

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THANK YOU