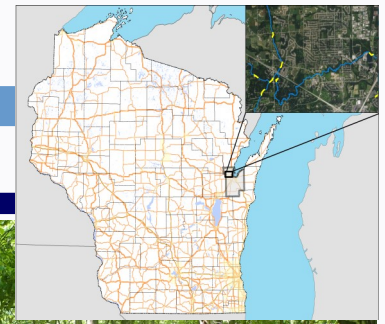


Wisconsin Water Quality Handout

Lancaster Creek 2015 (EGAD 3200-2018-64)



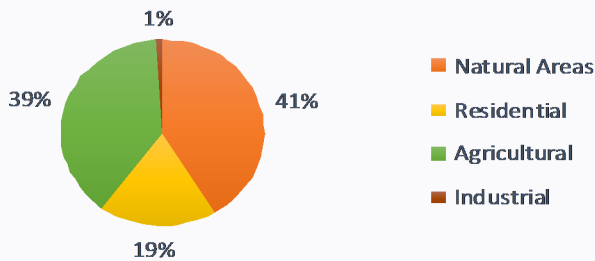
Watershed Details

The Lancaster Creek watershed in Brown County is predominantly residential/urban until it drains into Duck Creek. In 1996, a priority watershed plan was developed for the Duck, Apple, Ashwaubenon Creek watersheds to address potential non-point sources of phosphorus and sediment. Monthly water chemistry samples were collected by citizen monitoring volunteers from May to October. In addition, habitat, fish and macroinvertebrates surveys were conducted by the Wisconsin DNR at sites throughout the watershed to assess the physical and biological conditions of streams in the watershed.



Thornberry Creek at Forest Road.

Lancaster Creek Watershed Land Use



Physical Habitat

The seven survey areas of Lancaster Creek run through a residential/urban landscape before flowing into Duck Creek. Habitats were rated as fair to good. The pool abundance and depth was very poor. Fine sediments dominate the substrate composition at all sites. Cover for fish is limited at Navajo Trail, Hill Road, Evergreen Road, and Forest Road.

Chemical

Total Phosphorus and Total Suspended Solids peaked in August at Lakeview. A large event that carried extensive sediment occurred during August which also coincided with the highest Total Phosphorous concentration sample to Duck Creek.

Map Of Lancaster Creek



Biological

The five fish survey locations of Lancaster Creek had a total of 19 species. Two species intolerant to environmental degradation were captured in this sub-watershed, juvenile native Lampreys species and Rock Bass. Lancaster, Thornberry and the Unnamed Tributary to Thornberry are either Class I, II, or III trout streams. However, no Trout were found in the surveys. Non-native invasive Round Gobies were well established at the Lakeview site. Indexes of biological integrity (IBI) of fish data ranged from fair to excellent. Macroinvertebrate samples were collected at four locations and the Macroinvertebrate IBI were rated as poor to good.

Andrew Hudak
Water Resources Biologist
Phone: (920) 662-5117
Andrew.hudak@wisconsin.gov



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Management Recommendations

Soil Health principles should be adopted to improve infiltration along with sediment and nutrient retention on agricultural lands in the watershed. Construction site erosion control needs to be properly planned and maintained to adequately prevent erosion and sediment loss to the streams during events. Urban storm water best management practices should continue to properly site treatment ponds and consider additional infiltration practices to reduce the rate of storm water deliver to these coolwater streams and help supply continual ground water recharge.

Lancaster Creek at Lakeview **	May	Jun.	Jul.	Aug.	Sep.	Oct.	90% LCI-M*	WI WQ-STD
2016 Total Phosphorus mg/L	0.049	0.106	0.133	0.251	0.065	0.056	0.063	0.075
2016 Orthophosphate DRP mg/L	0.011	0.052	0.051	0.037	0.034	0.023		
2016 Total Suspended Sediment mg/L	8.0	20.3	12.0	133	3.2	—		

*Wisconsin applies the lower 90% confidence interval around the median for Total Phosphorus impairment decisions.



06/23/2015



06/02/2015

Top: Lancaster Creek upstream of Evergreen Road.

Bottom: Lancaster Creek upstream of Navajo Trail.

Fish and Habitat Ratings			
Stream Site	Fish IBI	Habitat Rating	Macro -invert IBI
1 Lancaster Creek at Lakeview ** 10034510	Excellent	Good	Fair
2 Lancaster Creek at Shawano Ave. Office 10008257	Fair	Good	—
3 Lancaster Creek at Evergreen Road 10008262	Fair	Good	Good
4 Lancaster Creek at Navajo Trail 10008261	Fair	Fair	—
5 Thornberry Creek at Centennial/CTH FF 10043700	Fair	Good	Fair
6 Thornberry Creek at Forest Road 10008267	Poor	Good	—
7 Unnamed Tributary to Thornberry at Hill Road 10043684	Good	Good	Poor