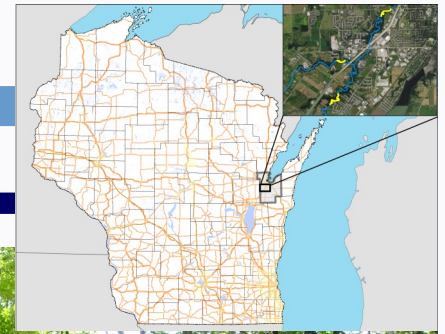


# Wisconsin Water Quality Handout

## Ashwaubenon Creek 2015 (EGAD 3200-2018-62)



### Watershed Details

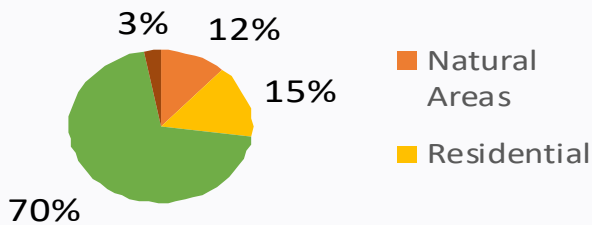
The Ashwaubenon Creek watershed in Brown County is predominantly agricultural in the upper reaches converting to residential and urban in the lower reaches prior to draining into the Fox River. In 1996, a priority watershed plan was developed for the Duck, Apple, and Ashwaubenon Creek watersheds to address 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



Hemlock Creek downstream Sand Acres Drive.

### Ashwaubenon Creek Watershed Land Use



### Physical Habitat

Streams in the three survey areas of Ashwaubenon Creek run through a residential/urban landscape. Habitat ratings ranged from fair to good. The stream segments lacked adequate pools, banks were significantly eroded, all habitats were dominated by fine sediments, and cover for fish was relatively absent.

### Chemical

Total Phosphorus concentrations at Grant Road peaked in May with spring runoff that exceeded Wisconsin's Water Quality Standard of 0.075 mg/L. Dissolved Phosphorus contributed a large percentage of the Total Phosphorus concentration.

### Biological

The three survey locations had a total of 18 fish species. All of which are at least moderately tolerant of environmental degradation. Two species of gamefish were captured, Northern Pike and Largemouth Bass. Round Gobies have established populations at the Grant Road site. Indexes of biological integrity (IBI) of fish data ranged from fair to good. Macroinvertebrate samples were collected at three locations and the Macroinvertebrate IBI scores rated fair to good.

### Map Of Ashwaubenon Creek



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# Wisconsin Water Quality Handout

## Ashwaubenon Creek 2015

### 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 soil loss 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 delivery to streams. Re-establishment of adequate vegetative buffers along stream corridors could include the removal of undesirable species such as box elder and buckthorn allowing for the management of more desirable tree species. Additionally, vegetative buffer widths should be expanded to prevent soils losses and increase distance of nutrient application in proximity to waterways. Conservation practices to address dissolved phosphorous should be a high priority in this watershed. Where possible, reconstruction of meandering stream with natural features should be a priority to increase habitat diversity within the stream.

Ashwaubenon Creek at Grant Road	May	Jun.	Jul.	Aug.	Sep.	Oct.	90% LCI-M*	WI WQ-STD
Total Phosphorus mg/L	0.513	0.435	0.472	0.226	0.258	0.259	0.275	0.075
Orthophosphate DRP mg/L	—	0.221	0.306	0.128	0.126	0.203		
Total Suspended Sediment mg/L	—	26.7	17.3	20.6	17.2	19.5		

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

### Fish and Habitat Ratings

Stream Site	Fish IBI	Habitat Rating	Macroinvertebrate IBI
Ashwaubenon Creek at Grant Road	Fair	Good	Fair
Ashwaubenon Creek at Creamery Road	Good	Fair	Fair
Hemlock Creek at Sand Acres Drive	Good	Good	Good



Old silt fence on the banks of Ashwaubenon Creek upstream Grant Road.



Ashwaubenon Creek above Grant Road.