

Wisconsin Water Quality Handout

Upper Kankapot Creek 2015 (EGAD 3200-2018-50)



Watershed Details

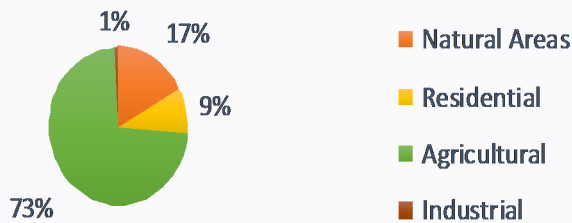
Kankapot Creek in Outagamie/Calumet County is heavily influenced by non-point sources of pollution prior to its confluence of the Fox River in Kaukauna. Kankapot Creek has been identified to be one of the highest contributors of phosphorus and sediment to the Lower Fox River. Overall this watershed is characterized to have poor aquatic life and habitat. A Nine Key Element Plan was enacted in the summer of 2015 to continue to address non-point sources of pollution in the watershed.

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.



Unnamed tributary to Kankapot Creek at CTH KK.

Kankapot Creek Watershed Land Use



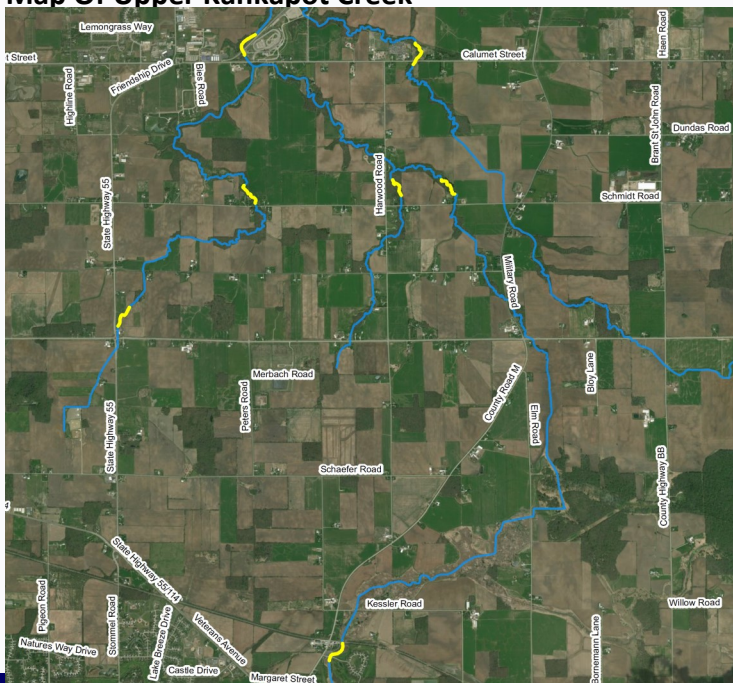
Physical Habitat

Streams in the Upper Kankapot have wide forested buffers with lower quality tree species such as box elder with steep exposed banks and little ground cover. Habitat ratings ranged from fair to good and scored well based on undisturbed buffer widths. Stream bed composition consisted of abundant clay and fine substrates. Fish habitat and pools are extremely limited further lowering overall scores.

Chemical

Total Phosphorus concentrations were collected on an Unnamed Tributary to Kankapot Creek and were 6-16 times higher than Wisconsin's Water Quality Standard of 0.075 mg/L. A spike observed in August likely coincided with a storm event.

Map Of Upper Kankapot Creek



Biological

The seven survey locations of the Upper Kankapot Creek had a total of six fish species, all of which are tolerant to environmental degradation. Indexes of biological integrity (IBI) of fish data were poor to fair. Macroinvertebrate samples were collected at five of the seven locations and all rated as fair on the Macroinvertebrate IBI.

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 significant erosional losses 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 soil loss and increase the distance between nutrient application and waterways. Areas of significant bank erosion and failures exist. Focused efforts to stabilize banks through a strategic approach should be enacted to prevent hard armoring in a small parcel by parcel approach.

Unnamed Tributary to Kankapot Creek at CTH KK	May	Jun.	Jul.	Aug.	Sep.	Oct.	90% LCI-M*	WI WQ-STD
Total Phosphorus mg/L	0.523	0.530	0.666	1.65	0.504	—	0.492	0.075

*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	Macro invert IBI
Kankapot Creek at CTH KK	Fair	Good	Fair
Unnamed Tributary to Kankapot at CTH KK	Fair	Good	Fair
Unnamed Tributary to Kankapot at Schmidt #5	Fair	Fair	—
Unnamed Tributary to Kankapot at Schmidt #6	Poor	Fair	Fair
Unnamed Tributary to Kankapot at Schmidt #7	—	Fair	Fair
Unnamed Tributary to Kankapot at HWY 10	Poor	Good	—
Unnamed Tributary to Kankapot at Robinhood Drive	Fair	Fair	Fair

Top: Unnamed tributary to Kankapot at Schmidt Road.

Middle: Unnamed tributary to Kankapot at Schmidt Road.

Bottom: Kankapot Creek At CTH KK.