

KNAPP CREEK WATERSHED (LW08)

The Knapp Creek watershed covers approximately 154 square miles and is located in the driftless area of western Richland and eastern Crawford counties. There are no major municipalities in the watershed and overall population in 2000 was estimated to be fewer than 2,000. Most of the streams in the watershed drain to Knapp Creek. Knapp Creek empties into the Wisconsin River above Boscobel.

Land cover in the watershed is mostly broad leaf deciduous forest, although a large portion of the watershed is used for agricultural production.

Table 1: Land Cover in the Watershed

<i>Land Cover</i>	<i>Percent of Watershed</i>
Forest (Total)	45.7%
<i>Broad-Leaf Deciduous</i>	45.3%
<i>Coniferous</i>	0.4%
Agriculture	36.9%
Grassland	9.0%
Wetland (Total)	6.3%
<i>Forested</i>	3.4%
<i>Emergent/Wet Meadow</i>	2.7%
<i>Lowland Shrub</i>	0.2%
Other	2.0%

In the watershed, there are no point source discharges to streams. The primary surface water quality problem is the result of nonpoint source pollution and the watershed has been as a medium priority for nonpoint source pollution. In addition, a portion of the watershed on the Lower Wisconsin River Valley is in an atrazine prohibition area, which indicates that elevated levels of atrazine, an herbicide used on corn, has been found in some tested private water wells. Permeable soils have allowed atrazine to reach groundwater in some locations. See Appendix B.

Another concern in the watershed is the impoundment of natural springs throughout the watershed. Springs are critical to the success of trout streams since they introduce water with minimal temperature fluctuations throughout both summer and winter (approximately 52 degrees Fahrenheit). This has caused stream temperatures that are warmer in the summer and colder in the winter, which stresses coldwater fish species in the summer and reduces spawning success through the winter.

Watershed At A Glance

Drainage Area (m²): 154.0

Total Stream Miles: 117.5

Trout Stream Miles: 53.6

Sport Fishery Miles: 12.5

Lakes: Garner Lake, Lower Lake

Exceptional/Outstanding Resource Waters: Boydtown Creek, Hoover Hollow Creek

Municipalities: None

Major Public Land:

- ◆ Knapp Creek Unit of the LWSR
- ◆ Marietta Unit of the LWSR
- ◆ Knapp Creek Wildlife Area

Concerns and Issues:

- ◆ Nonpoint source pollution
- ◆ Stream channelization
- ◆ Atrazine

Initiatives and Projects:

- ◆ Wild trout reintroduction

The Knapp Creek Watershed has a variety of good quality habitats and rare plant communities that are listed on the state's Natural Heritage Inventory, (NHI), which is kept by the Bureau of Endangered Resources. The communities found in the watershed include:

- ◆ Dry cliff
- ◆ Dry prairie
- ◆ Dry-mesic prairie
- ◆ Southern dry-mesic forest
- ◆ Southern mesic forest
- ◆ Emergent aquatic
- ◆ Floodplain forest
- ◆ Shrub-carr
- ◆ Southern sedge meadow
- ◆ Wet-mesic prairie

In addition to these special communities, the watershed is also home for a variety of rare plant and animal species including; 13 species of fish, 5 species of birds, 12 mussel species, 2 species of snakes, 1 species of beetle, 7 different species of dragonflies, 5 species of mayflies, 20 types of plants and 1 mammal species. These species are also listed on the NHI survey.

The Knapp Creek, and Marietta Units of the Lower Wisconsin State Riverway (LWSR) are in this watershed. The Knapp Creek Unit is 5,001 acres, of which 2,998 are WDNR owned and 2,003 contain WDNR easements. The Marietta Unit is 1,956 acres of publicly owned land. Both areas offer a variety of recreational opportunities.

STREAMS AND RIVERS IN THE WATERSHED

Beebe Hollow Creek

This creek is a small spring and seepage fed tributary to Knapp Creek. The creek is considered a Class II trout stream in the lower mile. Hydrologic modification of the creek is thought to cause some habitat problems. There is limited information about this creek.

Boydton Creek

Boydton Creek, located in southeast Crawford County, flows for approximately 1.7 miles in a southerly direction before reaching the Wisconsin River at Boydton. This stream originates at a large spring (approximately 700 gallons per minute) in its upper end and has an average gradient of 40 feet per mile. After Boydton Creek reaches HWY 60, the gradient is greatly reduced and it flows through wetlands adjacent to the Wisconsin River. Boydton Creek is a Class II trout stream for one mile upstream of HWY 60 and then Class I for the remaining 0.7 miles. The creek is an exceptional resource water (ERW) above Hwy 60.

The most recent biological survey, conducted in 1995, documented degraded in-stream habitat due to overgrazing and high water. Fish species included northern pike, grass pickerel, burbot and several minnow species. Watercress, an indicator of immediate groundwater influence was noted at many locations. Aquatic insects were abundant near the large springhead where Boydton Creek originates. Boydton Creek had a successful brook trout fishery in years past. Stocking of a more wild strain of brook trout into Boydton Creek may increase the chances of a successful trout fishery. Purchase of streambank easements should improve in-stream habitat. Since this stream discharges to the Wisconsin River, competition from brown trout will not occur. Access to Boydton Creek is from three road crossings.

Chitwood Hollow Creek

Chitwood Hollow Creek is a spring fed tributary to Gobin Hollow Creek. The creek has limited natural reproduction of brook trout and is classified as a Class II trout stream. A small wetland is located near the mouth of the creek. There is limited information available for this stream.

Clear Creek

Clear Creek is a tributary to the Wisconsin River. The creek is considered a Class III trout stream for about two and a half miles although the lower reaches have been known to support some smaller sport fish from the Wisconsin River. There is limited information available for this stream.

Dillenburg Spring

Dillenburg Spring currently a Class I trout stream and the natural reproduction of brown trout. The stream should be added to the list of exceptional resource waters (ERW).

East Branch Richland Creek

East Branch Richland Creek, located in southeast Crawford County, flows for 2.5 miles in a southwesterly direction before reaching Richland Creek just south of Plugtown. This stream has a gradient of 61 feet per mile and drains steep forested hillsides with some agriculture found in the valleys. East Branch Richland Creek is not a classified trout stream.

The most recent biological survey, conducted in July 1989, documented brown trout and numerous minnow species. East Branch Richland Creek was last stocked in the fall of 1989 with brook trout. A fish and habitat survey of East Branch Richland Creek should be conducted to determine the success of the brook trout stocking and a possible change in stream classification. Access to this stream is from three road crossings.

English Run Creek

English Run Creek, located in northeast Crawford County, flows in an easterly direction for 4.5 miles before reaching Knapp Creek. This stream has a gradient of 42 feet per mile. English Run Creek is a Class II trout stream for its entire length.

A fish and habitat survey of English Run Creek should be conducted to update the nearly 30 year old data collected in 1974. This stream has been stocked with brook trout since 1986. Access to English Run Creek is from two road crossings.

Gobin Hollow Creek

Gobin Hollow Creek flows for one mile in southeast Crawford County and an additional 1.9 miles in southwest Richland County before reaching Knapp Creek near Westport. This stream is a spring and groundwater seepage fed tributary to Knapp Creek. The entire stream is a Class II trout fishery and has some natural reproduction of brown trout. Water quality in the creek is affected by nonpoint source pollution.

Hall Bottom Creek

Hall Bottom Creek is a small seepage and spring-fed tributary to Knapp Creek. It is a Class II trout stream. Based upon baseline data collected in the 2000, the stream is considered a Class I trout fishery. Natural brook trout reproduction has been noted in some parts of the stream. Portions of the stream have been channelized and affects in-stream habitat. There is a high potential for erosion and an overall threat of nonpoint source pollution problems. The most prevalent problems are from streambank erosion and pasturing.

Hoover Hollow Creek

Hoover Hollow Creek flows for 2.7 miles from southeast Crawford County into southwest Richland County before reaching Knapp Creek. This stream has a steep gradient of approximately 100 feet per mile. Hoover Hollow Creek is a Class I trout stream.

A fisheries and habitat survey of Hoover Hollow Creek should be conducted to update the last biological survey in 1969. Access is possible from four road crossings.

Jimtown Branch

Jimtown Branch is a small spring-fed Class I trout stream tributary to Knapp Creek and has a naturally reproducing brook trout population. The creek was monitored as a 2000 baseline stream. Portions of the stream have been channelized, resulting in some habitat loss.

Knapp Creek

For about 15 miles above Excelsior, Knapp Creek is a Class I trout stream. The upper end of Knapp Creek supports a very good wild trout fishery and has good potential and habitat. Baseline data on this stream was collected in 2000.

A cursory habitat evaluation was conducted in 2001 and found the habitat in the stream to range from poor in some locations to good in others. The habitat in the upper headwater reaches of Knapp Creek are in good condition with little erosion and deposition of sediment present. Banks in this area have some vegetative cover to offer bank stability. The rest of the stream, with the exception of just below Jimtown Branch was determined to be in fair condition with more erosion, increased deposition and decreased vegetative cover. The habitat below Jimtown Branch is in poor condition and heavy erosion, and an obvious lack of habitat are apparent.

Sedimentation is one of the main problems in parts of the stream. Water quality and habitat may be threatened by the barnyards along the creek, although cattle grazing along the stream has been reduced. There are WDNR fishing easements in the headwater reaches of Knapp Creek. In addition, some state owned land and easements can be found at the mouth of Knapp Creek. This area is known as the Knapp Creek Wildlife Area.

Long Hollow Creek

Long Hollow Creek is a short tributary to Hall Bottom Creek. The creek is fed by streams and is thought to small forage fish. There is limited information available for this creek.

McCumber Hollow Creek

There is no information available for this creek.

McKinney Hollow

McKinney Hollow is a tributary to Knapp Creek. The creek is short, steep and lacks good habitat. There is little information available for this creek.

O'Conner Branch

This creek is located in Richland County and is managed as a Class II trout stream. Little information is available for this creek.

Pigeon Run

Pigeon Run Creek is a tributary of English Run Creek. It is thought that this creek may be able to support a Class II trout fishery, but more monitoring is needed. There is limited information available for this creek.

Plum Run

Plum Run Creek is a tributary to Knapp Creek. There is limited information available for this creek.

Richland Creek

Richland Creek, located in southeast Crawford County, flows for 9 miles in a southerly direction before reaching the Wisconsin River near Boscobel. This stream has a gradient of 55 feet per mile and drains steep forested hills with agriculture found mainly in the valleys. Richland Creek is a Class II trout stream for its entire length upstream of HWY 60.

The most recent biological survey, conducted in 1965, documented stocked brook, rainbow, and brown trout as well as northern pike, grass pickerel and rock bass. Some natural reproduction of brown trout was noted. Many springs were observed along the entire length of Richland Creek during this survey. A fish and habitat survey of Richland Creek should be conducted to update the nearly 40 year old data. The WDNR owns a portion of Richland Creek and a fishing easement. Anglers have reported excellent brown trout fishing since in-stream habitat structures were installed in 1996. Richland Creek has been stocked yearly with brown trout since the early 1960s. Access to this stream is from five road crossings, the WDNR owned land and WDNR easement property.

Taylor Hollow Creek

Taylor Hollow Creek is a small spring-fed stream tributary to Knapp Creek. It is considered to be a Class II trout stream, although it has not been formally classified. No chemical or biological sampling has been done. Parts of the stream have been channelized.

Welsh Hollow Creek

This creek empties into Knapp Creek and is fed by springs that are found in Crawford County. There is limited information available for this stream.

West Fork Knapp Creek

West Fork of Knapp Creek is a spring fed stream, which begins in east central Crawford County then flows into west central Richland County. This stream flows in an easterly direction for a total of 6.9 miles before reaching Knapp Creek and has an average gradient of 15 feet per mile. West Fork Knapp Creek is a Class II trout stream.

The most recent biological survey, conducted in 1980, documented brook and brown trout, burbot, white sucker, and several minnow species. In-stream cover consisted of overhanging grasses, woody debris and some undercut banks. West Fork Knapp Creek has the potential to become a quality trout stream, however overgrazing of streambanks, impounding of coldwater springs, high water temperatures and flooding limit the fishery. A fish and habitat survey of West Fork Knapp Creek should be conducted to update this 20-year-old data. West Fork Knapp Creek has been stocked with brown trout intermittently since 1977. Access to this stream is from seven road crossings.

Wisconsin River

This watershed is adjacent to a portion of the Wisconsin River. For more information on the Wisconsin River, see page 90.

Wolf Run

Wolf Run Creek is a tributary to English Run Creek. There is limited information available for this creek.

LAKES IN THE WATERSHED

Garner Lake

Garner Lake is approximately 10.5 acres and has a maximum depth of 8 feet. The lake is an oxbow lake of the Wisconsin River. The lake is fed by springs, groundwater seepage and floodwaters from the Wisconsin River. The lake has a permanent outlet to Lower Lake located to the west. The lake contains northern pike, large and smallmouth bass, channel catfish and a variety of panfish. The lake can be accessed by a town road.

Lower Lake

Lower Lake is an oxbow lake located on the outlet of Garner Lake. Lower Lake enters directly into Knapp Creek. The lake is susceptible to flooding from the Wisconsin River. The lake supports a sport fishery made up of northern pike, large and smallmouth bass, walleye and panfish, although a high carp population keeps the lake water turbid. The lake is accessible through an inlet, and access by private land must be given with the landowner's permission.

RECOMMENDATIONS (LW08)

- ◆ Collect fish, habitat, and water quality data for **Gobin Hollow Creek, O’Conner Branch, East Branch Richland Creek, English Run Creek, Hoover Hollow Creek, Richland Creek, West Fork Knapp Creek, and Dillenburg Spring.**
- ◆ Conduct stream classification monitoring on **Taylor Hollow Creek.**
- ◆ **Hoover Hollow Creek, Richland Creek, the West Fork of Knapp Creek, and Boydtown Creek** should be considered for a nonpoint source pollution reduction project such as a Targeted Runoff Management grant (TRM).
- ◆ Stock more wild strain brook trout into **Boydtown Creek** to try to increase the chances of a successful trout fishery.
- ◆ Purchase streambank easements on **Boydtown Creek** to improve in-stream habitat.
- ◆ Conduct a fish and habitat survey on **Pigeon Run Creek** to determine its potential as a trout fishery.

WATERSHED MAP

Streams in the Knapp Creek Watershed (LW08) Crawford and Richland Counties Area: 154 square miles

Stream Name	WBIC	Length (miles)	Existing Use	Potential Use	Supporting Potential Use	Codified Use and Trout Stream Classification	Proposed Codified Use	303(d) Status	Rare Aquatic Species	Use Impairment		NPS Rank	Monitored/ Evaluated/ Unassessed	Data Level	Trend	Ref.*	
										Source	Impact						
Beebe Hollow Cr.	1208800	0-1	COLD II	same	Part	COLD II	same	N	N	HM	HAB	NR	U		U	7, 8	
		1-3	U	U	U	DEF	same	N							U		
Boydton Creek	1205100	0-0.7	COLD I	COLD I	Thr	COLD/ERW	same	N	N	NPS	HAB	H	E(1995)	B2	U	7, 8, 14	
		0.7-1.7	COLD II	COLD I	U	COLD II	same	N									
Chitwood Hollow Cr.	1207600	0-0.5	COLD II	same	Part	COLD	same	N	N			NR	U		U	7, 8	
		0.5-1	U	U	U	DEF	same	N							U		
Clear Creek	1205500	0-0.7	WWSF	same	Full	DEF	same	N	N			NR	U		U	7, 8	
		0.7-3.1	COLD III	U	U	COLD III	same	N									
Dillenburg Spring (T10NR2W,30-2)		0.2	COLD I	same	Part	COLD II	COLD /ERW	N	N			NR	E		U	7	
		2.5	COLD	COLD I	U	DEF			N	N			NR	E(1989)	B3	U	8
English Run	1209400	0-4.4	COLD II	same	U	COLD II	same	N	N	NPS	HAB,SED	NR	E(19740)		U	7, 8, 14	
		0-1.9	COLD II	same	Part	COLD II	same	N	N	SB, BY	HAB	NR	U		U	1, 7	
Gobin Hollow Cr.		1.9-2.9	U	U	U	DEF		N									
		3.2	COLD I	same	Full	COLD II	COLD /ERW		N	NPS, PSB, SB, HM	HAB	L	M (2000)	B4, H3	I		6, 7, 8
Hoover Hollow Cr.	1207000	0-1.5	COLD I	same	U	COLD /ERW	same	N	N	HM, NPS	HAB	H	E (1978)	B1	U	6, 7, 8, 9, 15	
		1.5-2.7	COLD I	same	U	COLD II	COLD /ERW	N							U		
Jimitown Branch	1210000	0-2.4	COLD I	same	Full	COLD II	COLD /ERW	N	N	HM	HAB	L	M (2000)	B4, H3	I	6, 7, 8	
		0-11.8	WWSF	same			DEF		N	NPS, HM	HAB, SED	M	M (2000, 2001)	B4, H3	U	3, 6, 7, 13, 15, 18	
Knapp Creek		11.8 - 24.5	COLD I	same		COLD II	COLD /ERW	N							I		
		24.5-26.2	COLD I	same		DEF	COLD /ERW		N						U		
Long Hollow Cr.	1209300	26.2 - 29	U	U		DEF											
		1	COLD	same	U	DEF	same	N	N			NR	U		U	15	

Stream Name	WBIC	Length (miles)	Existing Use	Potential Use	Supporting Potential Use	Codified Use and Trout Stream Classification	Proposed Codified Use	303(d) Status	Rare Aquatic Species	Use Impairment		NPS Rank	Monitored/ Evaluated/ Unassessed	Data Level	Trend	Ref.*	
										Source	Impact						
McCumber Hollow Cr.	1209900	0.5	COLD	same	U	DEF	same	N	N			NR	U		U	15	
McKinney Hollow	1207800	1	COLD	same	U	DEF	same	N	N			NR	U		U	15	
O'Conner Branch	1208700	1.2	COLD II	same	Part	COLD II	same	N	N	HM	HAB	NR	E		U	7, 8	
Pigeon Run	1209700	2	COLD	U	U	DEF		N	N			NR	E		U		
Plum Run	1210200	3	COLD	U	U	DEF		N	N			NR	E		U		
Richland Creek	1206000	8.7	COLD II	U	U	COLD		N	N	NPS, HM	HAB	H	E(1965)		U	6, 8, 14	
Taylor Hollow Cr.	1207700	2	COLD II	same	Part	DEF	same	N	N	BY, PSB, SB, NPS, HM	HAB	L	U		U	8, 14, 15	
W. Fork Knapp Cr.	1207900	0-1.5	COLD II	same	Part	COLD II	same	N	N		HAB	H	M(1997)	H1, B2	U	7, 8, 15	
		1.5-6.9	COLD II	same	Part	COLD III	COLD II		N		NPS, HM	HAB					
Welsh Hollow Cr.	1209100	2	COLD	U	U	DEF		N	N			NR	U		U	6	
Wolf Run	1209800	1	COLD	U	U	DEF		N	N			NR	U		U	6	
Unnamed streams		32.1				DEF									U		
Total Stream Miles		117.5															
	COLD	13															
	COLD I	23.6															
	COLD II	27.6															
	COLD III	2.4															
	WWSF	12.5															
	U	38.4															

***The numbers in this column refer to the References found in the corresponding Watershed Narrative. See Appendix J: "How to Read the Stream Tables," in Chapter 7 of the State of the Lower Wisconsin River Basin Report.**

Lakes in the Knapp Creek Watershed (LW08)

Crawford and Richland Counties

Lake Name	WBIC	County	Surface Area (Acres)	Max Depth	Lake Type	Winterkill	Access	SH	Hg	MAC	LMO	TSI	Lake Plan or Prot	P Sens	Comments
Lower Lake	1206800	Richland	25	6	DG	N	NW							2	

See Appendix K: "How to Read the Lake Tables," in Chapter 7 of the Lower Wisconsin State of the Basin Report.

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