

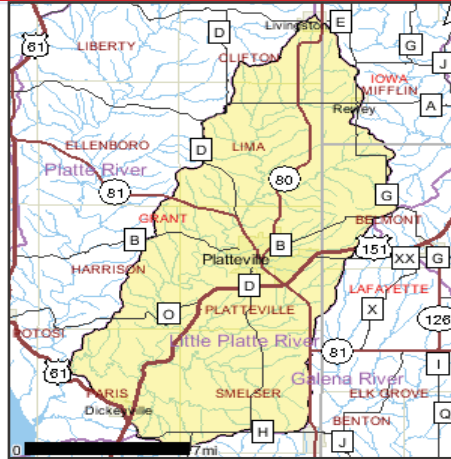
2010 Water Quality Management Plan Update

Grant-Platte Basin, Wisconsin

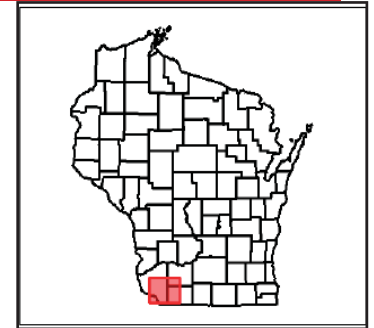
August 2010

The Little Platte Watershed is a 155 square mile area in eastern Grant County, the southwest corner of Iowa County and northwest corner of Lafayette County (Map 1).

The Little Platte River is the main waterbody giving the watershed its name and running 42 miles the length of the watershed where it finally joins the Platte River northwest of Dickeyville. The topography is rolling with moderate gradient streams incised in smaller, often steep-sided valleys. This lends to rapid runoff during storm events and major snowmelt (WDNR, 2001).



Map 1: Little Platte River Watershed



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Watershed Details

Land Use

Land use in this watershed is primarily agricultural. Over 80% of the watershed is used as row crop or pasture/hay production. Suburban and urban land uses comprise 7% of the land use in this area.

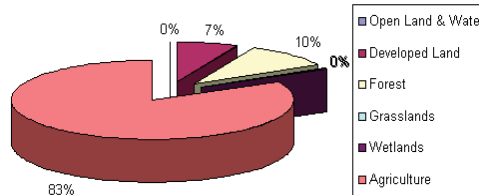


Figure 1: Land Use in the Little Platte River Watershed as reported in the 2001 National Land Cover Dataset.

The agriculture is a mixture of dairy-ing, cash cropping and feeder operations. Cultivation occurs on the ridge tops and on valley floors. Grazing usually occur adjacent to the streams. The steeper valley slopes are left in woodlots. Agricultural nonpoint source pollution has affected most streams in the watershed.

Hydrology

There are 184 stream miles in the watershed with 105 miles of named streams. Streams in the watershed are very flashy and water levels rise and fall rapidly due to runoff events. Despite heavy erosion from fields, pastures and stream banks, the stream's flashiness, along with their moderate gradient, scours the bottom and generally leaves a gravel and/or rubble/cobble bottom.



Flooding of a small unnamed trib to the Little Platte during 2008.

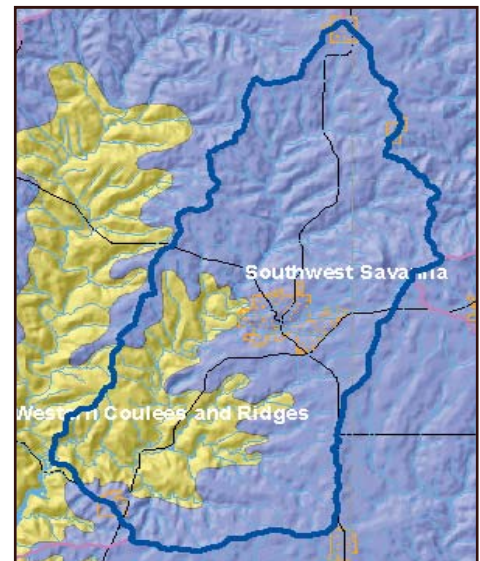


Typical of the small unnamed trib to the Little Platte, here showing dry land and normal water levels.

Ecological Landscapes

The Little Platte River Watershed is located primarily in the Southwest Savanna Ecological Landscape which is located in the far southwestern part of the state (Map 2). It is characterized by deeply dissected topography, unglaciated for the last 2.4 million years, with broad open hilltops and river valleys, and steep wooded slopes. The climate is favorable for agriculture but the steep slopes limit it to the hilltops and valley bottoms. Soils are underlain with calcareous bedrock. Soils on hilltops are silty loams, sometimes of shallow depth over exposed bedrock and stony red clay subsoil. Some valley soils are alluvial sands, loams, and peats. Some hilltops are almost treeless due to the thin soil while others have a deep silt loam cap.

Historic vegetation consisted of tall prairie grasses and forbs with oak savannas and some wooded slopes of oak. More than three-quarters of the current vegetation is agricultural crops with lesser amounts of grasslands, barrens, and urban areas. The major forest types are oak-hickory and maple-basswood. High-quality prairie remnants occur on rocky hilltops and slopes that are not farmed. Some prairie pastures and oak savannas still exist. The grassland areas harbor many rare grassland birds, invertebrates, and other grassland species. Relict stands of pine occur on bedrock outcroppings along some stream systems.



Map 2: The Little Platte River Watershed is located primarily in the Southwest Savannah Ecological Landscape.

Watershed Condition

Priority Issues

The following issues have been identified as priorities for resource improvements in the watershed.

- Agricultural nonpoint source pollution
 - Excessive nutrients and sediment loading;
 - Manure management is needed.
- Managed grazing is needed due to:
 - Streambank trampling and streambank erosion.
- Hydrologic modifications have occurred from:
 - Ditching and improperly placed culerts.
- Urban runoff results in:
 - Sediment loading;
 - Toxics loading;
 - Thermal issues (warming of surface waters, resulting in changes in aquatic habitat).

Water Quality Goals

- Minimize agricultural runoff from rural areas.
- Protect groundwater resources.
- Restore wetlands for water quality improvement and protection.
- Establish riparian buffers to protect water quality.
- Obtain water quality and biological monitoring data to adequately assess water resource conditions.
- Increase citizens' watershed awareness, understanding and stewardship activities.

Overall Condition

The topography of the watershed is rolling, with streams incised in smaller steep-sided valleys. This lends to rapid runoff during storm events and major snowmelts. Soil loss is a problem in this watershed, as it is in most watersheds in the unglaciated southwest part of the state. Average annual soil loss in the watershed has been estimated at 7.5 tons per acre per year (Fix, 1991). The streams in the watershed -- and the watershed in general -- have been ranked as a high priority with respect to non-point source pollution. The groundwater is at risk for potential contamination.



Little Platte River at County Highway B, west of Platteville, 2010.
Photo by Peggy Compton, UWEX.

Fish communities in the watershed are largely warmwater, with 67.5 stream miles considered warm water sport fishery that predominantly consists of smallmouth bass. Four miles of the upper end of the Little Platte River are considered Class II trout water as is the lower five miles of Snowden Branch.

Fish Consumption Advice

There are no specific advisories issued for waters in this watershed.

Point and Nonpoint Sources

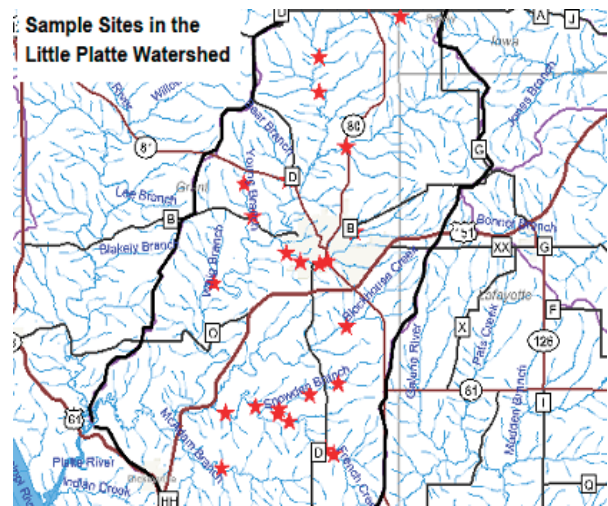
The watershed is predominantly agricultural with a mixture of dairying, cash cropping and feeder operations. Cultivation occurs on the ridge tops and on valley floors. Grazing usually occurs adjacent to the streams. The steeper valley slopes are left in woodlots. Agricultural nonpoint source pollution has affected most streams in the watershed. Another major non-point source pollution problem common in this and other watersheds in the Grant-Platte Basin is over-grazing of stream banks. This practice results in trampled banks, exposed eroding banks, streams becoming wider and shallower, and stream warming. Direct drainage from barnyards is a major source of nutrient loading to surface waters. Drainage from cropland to streams carries eroded sediments which affects in stream habitat and fish spawning areas. Nutrients, fertilizers and pesticides attach to soil particles and can further pollute streams.

Platteville (10,031) and Livingston (570) have municipal wastewater treatment plants which discharge to surface waters in the watershed. Two mobile home parks, Oak Park Community and GCA Evergreen Village, also have permitted wastewater discharges in the watershed. Platteville is the largest municipality in the Grant-Platte Rivers basin. Its 2000 estimated population was just under 10,000. Platteville, while growing slowly, is generating stormwater and sediment from construction sites which can affect instream water quality, habitat, and fisheries. Platteville has recently passed a construction site erosion control ordinance and is beginning to address community wide stormwater management planning. In addition, Platteville developed a stormwater management plan and utility (the utility has not been acted on) and a sewer service area (SSA) plan, which is required for municipalities with populations over 10,000. These plans are a means of planning for cost-effective sewered growth.

River and Stream Condition

Based on the WDNR's stream natural community model and assessment of sites in the watershed using the coolwater index of biological integrity (IBI), waters of the Little Platte watershed are "good" to "fair" meaning their status should

be maintained or monitored respectively. That's not to say the streams in the watershed are without problems and are meeting their full attainable use. Streams are being impacted by certain agricultural practices, and in particular manure runoff which leads to periodic fish kills and excessive algal growth which impacts habitat and dissolved oxygen levels. Intensive grazing is still taking place on much of the landscape, especially in stream corridors where it's causing bank trampling, bank erosion, and widening of the streams. Innovative practices such as installation of buffers or use of rotational grazing are still the exception. Improper barnyard and manure management causes periodic fish kills in the area. Some of these are large and catastrophic, but many smaller events which often go unnoticed can have a significant impact on sensitive species such as smallmouth bass numbers, especially if these events periodically kill off immature fish, which prevent reproduction and/or affect large numbers of young-of-the-year in nursery streams.



Map 3. Monitoring Sites, Little Platte Watershed Study, 2009.

Over the past 10 years, new information has been shed on the potential of many streams in the driftless area. Modeling of stream flow and temperature has shown that instead of trying to categorize the streams in this region as “warm” or “cold” and using those specific biotic indices to measure their quality, these streams should be considered “coolwater transitional”, that is, they have summer water temperatures suitable for both coldwater and warmwater species (Lyons, et. al. 2009). In the past, many streams were considered as degraded warmwater streams, even though they had diverse communities, some pollution intolerant species, and sometimes good smallmouth bass fisheries. Based on current modeling data, it may be more appropriate to consider them as “fair” to “good” coolwater systems, keeping in mind that water temperature is only one factor affecting species assemblage.

Some streams in the Little Platte River contain almost 20 species, including threatened, intolerant minnow and intolerant game species. Yet, scores range only low to mid “fair” in the warmwater IBI. Based on the draft model developed by Lyons (2008), the more appropriate natural community would be in the coolwater transitional regime. Indeed the *coolwater IBIs show the Little Platte to be a fair to good coolwater system.*

Based on qualitative habitat observations by biologists, most of the streams flow through pastured areas that have some trampled banks, yet most are grassed, but do contain raw outside banks. Despite this, there appears to be large stretches of gravel and/or rubble/cobble substrate owing to the high gradient of these streams. High gradient streams typical of this watershed may have actually benefited from high precipitation and runoff events which occurred in 2007 and 2009. The inherent scouring effect of intense, short duration flows common in the driftless area likely mobilized sediments from these streams while leaving behind coarser material such as gravel and rubble/cobble. General observation of aerial photographs, taken between 2005 and 2008, shows the redistribution of coarse substrate on many streams in the region. Species that are tolerant to disturbed habitat, such as blacknose dace, creek chub, and white sucker, were more prevalent than species which are tolerant to low dissolved oxygen. However, most of the species found in these streams do not fall into either form of



This tributary to Little Platte River shows bare soil and erosion caused by over grazing and stream bank trampling (2010).

tolerant category.

Most of the streams in the watershed harbor numbers of nongame species which prefer higher gradient, hard bottomed streams. The Little Platte River, the lower half of Snowden Branch, Blockhouse Creek, and Mounds Branch harbor smallmouth bass or serve as nursery streams for this species. Rountree Branch and the upper half of Snowden Branch contain brown trout. With the exception of one site on Snowden Branch where brown trout were the only species found, the poor coldwater IBIs reflected the lack of other intolerant, coldwater species and indicates these are likely not true coldwater systems, but cool-coldwater transitional systems with water temperatures capable of sustaining brown trout.

Individual Stream Narratives

Bear Branch: This small spring-fed stream is a four mile long tributary that enters the Little Platte River northwest of Platteville. There is very little biological data on this stream. A 2009 fisheries survey showed the presence of eight non-game species dominated by longnose dace and white sucker. Much of the stream corridor is pastured, with trampled banks and some raw vertical banks. Filamentous algae was present on many of the rocks. The stream has good gradient and much of the stream bottom is rubble/cobble or gravel.

Blockhouse Creek: Blockhouse Creek is one of the major tributaries to the Little Platte River. It begins in western Lafayette County and flows 14 miles toward the southwest where it joins the Little Platte River north of Dickeyville. Recent surveys have shown the upper half of Blockhouse Creek is mainly a coolwater non-game fishery, while the lower half also contains a decent smallmouth bass fishery with an occasional brown trout or walleye present. There are fishery easements in the lower creek upstream of Snowden Branch. The Ozark minnow, a state threatened species, was also found in this stream.



Blockhouse Creek, County Highway D, 2010.

French Creek: This six mile long stream begins just north of Cuba City and flows northwest where it joins Snowden Branch. A 2009 survey of three sites on French Creek showed it to be typical of small streams in this watershed. It is

generally a robust coolwater forage fishery although an occasional trout can be found in the lower section near the confluence with the Snowden Branch. Most of the stream is of higher gradient so the bottom is generally rubble/cobble. Much of the stream corridor is pastured, but grassed with a few raw outside bends.



Public fishing is available on the Little Platte River, just west of state Highway 80 at Arthur, WI.

Little Platte River: The Little Platte River rises in Livingston and flows southerly over 40 miles to its confluence with the Platte River near Dickeyville. The upper 1.5 miles of the Little Platte River are classified as a Limited Forage Fishery. The next four miles are classified as a Class II trout stream. The remainder of the Little Platte is classified as a Warm Water Sport Fishery and regionally important as a smallmouth bass fishery. The significance of the smallmouth bass fishery is one reason the stream was put on Wisconsin's Exceptional Resource Waters (ERW) list. In addition to the bass, the river also contains a diversity of coolwater non-game species, including the Ozark minnow.

Recent data shows the presence of several year classes of smallmouth bass although young-of-the-year were missing from the surveys. Major runoff events during 2007 and 2008 may have had an adverse impact on young bass.

McAdam Branch: This seven mile long tributary to the Little Platte River occasionally contains smallmouth bass in the lower reaches, but mostly it functions as a coolwater forage fishery. The stream has a hard bottom of rubble/cobble and gravel owing to its good gradient, but much of the stream corridor and subwatershed is heavily pastured and the stream is fairly wide and shallow. In 1978, good numbers of Ozark minnows were found in the stream. Subsequent surveys in 2005 and 2009 showed the presence of high numbers of forage species such as fantail darters, blacknose dace, central stonerollers, and common shiners, but no Ozark minnows were found.



Raw vertical banks are found on many of the pastured streams in the Little Platte River Watershed.

Mounds Branch: This eight mile long stream has its origins in extreme northwest Lafayette and southwest Iowa counties. Historically the stream has had a minor smallmouth bass fishery. Poor agricultural practices including excessive grazing and erosion and barnyard runoff resulted in fish kills in the 1980's. Monitoring in 2009 at a site just upstream from Sate Highway 80 showed the presence of smallmouth bass, as well as a diversity of cool-warm transitional forage species, including some very large specimens of common shiner and hornyhead chub. This section is still heavily pastured, with trampled banks and raw, slumping outside bends.

Rountree Branch: The Rountree Branch is a major tributary to the Little Platte River. It runs eight miles from the western edge of Lafayette County and through Platteville before entering the Little Platte a few miles west of the city. The lower section contains coolwater species typical of this area such as white sucker and creek chubs, as well as stonerollers, common shiner, and hornyhead chubs. It also contains game smallmouth bass and brown trout. As one moves upstream, the stream transitions into a cool-coldwater forage fishery that contains brown trout. In 2002, fisheries managers classified six miles of the stream upstream from Southwest Road as Class II trout water. Young-of-the-year brown trout were found at all four sites sampled in 2009, with the most being found upstream from State Highway 80/81. The Rountree Branch is impacted by both urban and rural nonpoint source pollution, and historically, mine runoff was considered to be impacting the stream. However, recent fisheries surveys indicate the stream appears to be meeting its potential as a coolwater transitional stream. An unnamed tributary to the Rountree (WBIC = 946200) was also surveyed in 2009. The



Photo showing stormwater drains outside of University of Platteville.

paucity of fish and abundance of iron precipitate led biologists to believe this particular tributary may be impacted by mine runoff. The Rountree Branch would benefit from better stormwater management from the City of Platteville. A number of parking lots adjacent to the stream discharge directly to it. Agricultural runoff continues to contribute sediment and nutrients to the stream.

Snowden Branch: Snowden Branch is a nine-mile long seepage and spring-fed tributary to Blockhouse Creek. The lower five miles are currently listed on the state's 303(d) list of impaired waters due to habitat impairment caused by sedimentation. A 2009 survey was designed to determine whether or not the stream should remain on the impaired waters list and whether or not two perched box culverts were impacting fish movement. The study showed a high diversity of cool-warm transitional species in the lower stream below Rock Road, including the pres-

ence of smallmouth bass and the Ozark minnow.

Upstream from the lower Rock Road crossing and junction with French Creek, Snowden transitions to more cool-cold-water species, including an abundance of brown trout. In fact, at one site upstream of the upper Rock Road crossing, only brown trout were found. Heavy rainfall and runoff events in 2007 and 2008 may have scoured sediment from the stream. Habitat surveys conducted in 2009 showed low impact on habitat from sediment. Whether or not the box culverts are impacting fish movement could not be determined with certainty although there were similarities in fish assemblage above and below the culverts. Some of this may be due to the diversity and abundance of fish that inhabit French Creek, which joins Snowden Branch upstream of the lower Rock Road culvert.

In 2002, fisheries management classified the lower five miles of Snowden Branch as a Class II trout water. The presence of numbers of multi-year class trout in this portion of the stream compared to nine years ago is remarkable, especially considering there has been *no stocking of trout into the stream*. Additional monitoring should be conducted to track the carryover of trout. While Snowden Branch can likely be removed from the 303(d) list due to sedimentation, temperature, monitoring and additional fishery surveys should be conducted on the upper portion of Snowden Branch to investigate reasons for the lack of fish found above Patch Road. A more detailed report on the 2009 survey of Snowden Branch can be found in Wisconsin DNR's Water Assessment, Tracking, and Electronic Reporting System (WATERS).

Whig Branch: This four mile long moderate gradient stream was formerly on the state's 303(d) list, but was removed in 2002 due to lack of supporting data. Indeed, there is very little data for this stream. The 2009 survey of the lower section of stream showed a fair assemblage of coolwater transitional forage species, typical of the rock, rubble/cobble streams in this area. The stream flows through a heavily wooded corridor for most of its length with some row cropping at its headwaters. Filamentous algae on the rocks was quite prevalent and indicative of nutrient loading from nonpoint source pollution.

Young Branch: This small three-mile long tributary to the Little Platte River flows through a highly pastured corridor. A 2009 survey at Pine Grove Road showed a fair assemblage of coolwater transitional species. Biologists felt there should be perhaps a few more species indigenous to the area present in the stream. Still, it scored "fair" on the coolwater index of biotic integrity.

The bottom was rubble/cobble and broken bedrock. Streambank pasturing has led to some trampled banks and there are some raw, slumping outside banks. Heavy rainfall and runoff events over the past two years has scoured the bottom and redistributed coarse material on inside bends.

Lake Health

There is one small unnamed lake in this watershed covering 2 acres.



Allowing cattle uncontrolled access to streams often leads to increased sediment and nutrient delivery due to loss of stream bank vegetation and manure washing from the stream bank or being directly deposited in the stream when cattle wade or stand in water.

Wetland Health

There remain about 500 acres of the more than 1100 presettlement wetland acres in the Little Platte River watershed (Figure 2). Most of these wetlands are emergent marshes and meadows (53%), with forested wetlands comprising 33% (Table 1).

Figure 2. Historical wetland loss from presettlement to current day, in the Little Platte River Watershed.

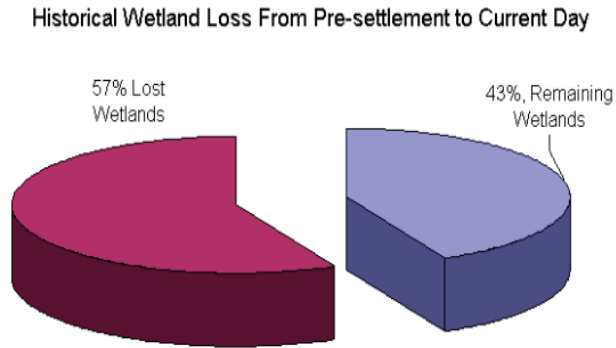


Table 1. Types of wetlands and percentage of each in the Little Platte River Watershed.

Major Wetland Types	Acres	% of Wetland
Shallow Open Water	3	1%
Emergent (Marshes and Meadows)	268	53%
Shrub	66	13%
Forested	170	33%
Other	3	1%
Total	510	100%

Little is known about the condition of the remaining wetlands but estimates of reed canary grass infestations, an opportunistic aquatic invasive wetland plant, into different wetland types has been estimated based on satellite imagery. This information shows that reed canary grass dominates 46% of all wetlands; specifically, 65% of all existing emergent wetlands and 26% of the remaining forested wetlands. Reed Canary Grass domination inhibits successful establishment of native wetland species.

Wetland Restorability

Of the estimated 684 acres of lost wetlands in the watershed, nearly all are considered restorable based on modeled data (Figure 3), including soil types, land use and land cover (Chris Smith, DNR, 2009).

Groundwater

No specific updates regarding groundwater are available for this watershed.

Waters of Note:

Outstanding or Exceptional Waters

The Little Platte River is considered a state Exceptional Resource Water (ERW). The river exhibits diverse fish assemblage and is an important regional smallmouth bass fishery.

Trout Waters

Four streams are formally classified as trout waters under the fisheries program. These Class II Trout streams exhibit natural reproduction and may have some limited stocking each year.

Impaired Waters

Snowden Branch is currently the only water from this watershed on the state's impaired waters list. In 2009, a detailed study was conducted to determine if fish and aquatic life use impairment were still occurring due to sediment loads from upstream erosion and soil loss to the

Table 2. Trout Waters in Little Platte Watershed

Official Waterbody Name	Local Waterbody Name	Start Mile	End Mile	Trout Class
Little Platte River	Little Platte River	33.98	38.33	CLASS II
Rountree Br	Rountree Branch	2.46	6.81	CLASS II
Snowden Br	Big Patch Creek	0	9.84	CLASS II
Unnamed	Creek 14-8	0	1.28	CLASS II

waters. Habitat surveys found the sediment loads to be fairly low, perhaps due to high flows and scouring of sediments over the past several years. The stream appears to be meeting its designated use with smallmouth bass and other cool-warm species found in the lower half of Snowden, and trout in the upper half. The study recommended temperature monitoring of the stream, as well as an evaluation of the effects of two box culverts on fish movement and continued monitoring of the trout populations in the stream.

Watershed Actions

Projects and Grants

A NPS Grant awarded to the Grant County Land Conservation Dept. in 2005 encouraged the installation of best management practices (BMPs) to reduce streambank erosion and barnyard runoff in the Snowden Branch of the Little Platte River watershed.

An Urban Nonpoint - Stormwater Planning Grant awarded to the City of Platteville Dept. of Public Works in 2003 provided a cost share at 70% for the preparation of a stormwater plan and development of stormwater utility. This initiative did not pass locally prior to state/federal requirements.

A River Planning Grant awarded in 2002, enabled the development of The Platteville Area Stream Stewardship Network, an organization that empowers individuals to implement changes that improve water quality.

A River Planning Grant awarded in 2007 is supporting the development of a Rountree Branch Watershed-Comprehensive Management Plan. The primary goals and objectives of the project are to:

- 1) Establish a collaborative organization of stakeholders that will work together on the management, recreation, conservation, restoration and understanding of the Rountree Branch watershed;
- 2) Develop a comprehensive management plan for the watershed; and
- 3) Facilitate educational opportunities.

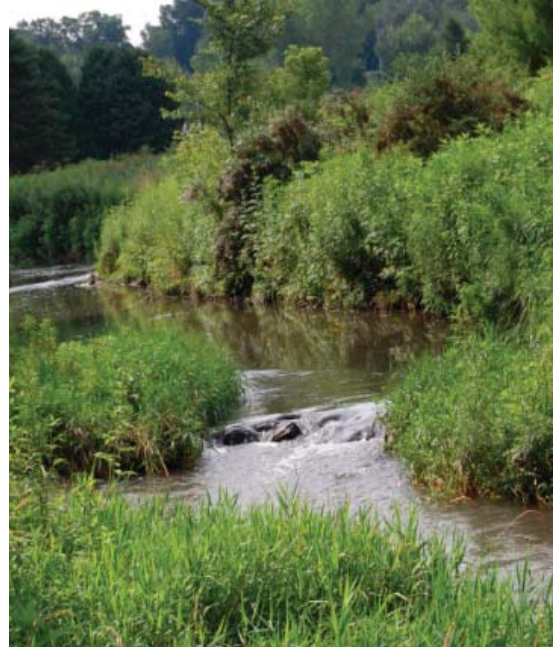
A River Planning Grant awarded in 2000 supported a planning project in the Rountree Branch. The Friends of the Rountree monitored the water quality, assessed physical and biological habitat, determined the need for stream channel improvements, assessed water quality using bioassay testing, identified pollution sources and effective abatement practices, and developed cooperative agreements between stakeholders to create and implement a management plan for the Rountree Branch of the Little Platte River.

A River Planning Grant awarded in 2002 allowed Southwest Badger Resource, Conservation & Development, Inc., together with UW-Platteville Department of Civil and Environmental Engineering, the Reclamation Program, and the Department of Biology to complete a planning study of the Snowden Branch of the Little Platte River watershed.

Monitoring

Monitoring studies include a wide variety of "baseline" monitoring and targeted fieldwork to gain specific knowledge related to a stream's fish, macroinvertebrate, water chemistry, and physical condition. Investigating fish communities helps managers determine the quality and attainability, or potential condition, of a stream or river.

In 2008, the area WDNR biologist conducted a study of streams in the watershed. The design of the study was not to necessarily gauge the health of individual waters, but to look at the health of the watershed overall. Biological metrics, such as the index of biological integrity (IBI), can be used from the various sites to formulate a picture of overall water quality in the watershed.



The Rountree Branch in the city of Platteville.

Fish, habitat and/or other aquatic life studies have been conducted on most named streams in the watershed including Blockhouse Creek, Little Platte River, McAdam Branch, Rountree Branch and Snowden Branch and several unnamed tributaries.

In 2007-08, the Wisconsin DNR worked in cooperation with DATCP to collect monitoring data for ambient pesticide concentrations and key sites throughout the state, including a site in the Little Platte River Watershed.

Little Platte River Watershed Assessment in 2009 monitored the contemporary status of streams within the Little Platte watershed and evaluated the overall health of the watershed. This data is necessary to determine whether these streams are achieving their attainable use and to assess the overall health of these watersheds as required by Section 305(b) of the Clean Water Act. This project was a combination of randomly selected and targeted sites on streams within the watershed.

In 2006, data was collected on Snowden Branch to write a total maximum daily load (TMDL) report. A follow up analysis was conducted to evaluate sediment loads. The study concluded, in part, that the greatest contribution landowners could provide would be to *introduce buffers along the stream, implement cattle crossings and reduce grazing along stream banks*. The rate of habitat degradation caused by bank load contributions of sediment can be greatly reduced and the stream has potential to decrease the amount of sedimentation along the substrate over time with continued bank stabilization practices.

Recommendations

- Determine if Snowden Branch is meeting water quality standards and if it can be removed from the impaired waters (303(d)) list.
 - Temperature monitors should be placed on Snowden Branch, upstream and downstream from the confluence with French Creek as well as on French Creek itself.
 - The effects caused by the presence of box culvers will also need to be more fully evaluated to determine if they are detrimental to fish movement upstream, particularly given the lack of fish at the headwaters of Snowden Branch at Patch Road.
 - Monitor Snowden Branch to track the carryover of trout to better understand coldwater fisheries reproduction and forage base in this stream.
- The DNR in partnership with Trout Unlimited, Grant County Land and Water Conservation Department (LWCD) and the U.S. Natural Resources Conservation Service (NRCS) should work with riparian land owners on to manage grazing, construct fencing, and help with the creation of buffers.
- In 2008, the area WDNR biologist conducted a study of streams in the watershed. The design of the study was not to necessarily gauge the health of individual waters, but to look at the health of the watershed overall. Biological metrics, such as the index of biological integrity (IBI), can be used from the various sites to formulate a picture of overall water quality in the watershed.
- The Grant County LWCD should work with landowners in subwatersheds containing valuable, but threatened, smallmouth bass fisheries and nursery streams to manage manure and to avoid application during high risk periods which could lead to runoff and fish kills. These streams include the Little Platte River, Blockhouse Creek, Snowden Branch, and Mounds Branch. The LWCD should also work with UW-Extension education and outreach to



promote rotational grazing and buffers along these streams to preserve habitat for these valuable fisheries.

- The DNR, Friends of Rountree Branch, Trout Unlimited, University of Wisconsin-Platteville, Grant County LWCD and the U.S. NRCS should continue improving the cold water fishery on Rountree Branch at Platteville. Specifically,
 - The city of Platteville should adopt a stormwater utility to fund implementation of the approved stormwater management plan.
 - The city of Platteville should work to identify opportunities to protect riparian habitat, add public open space and maintain buffers along Rountree Branch and implement the approved Sewer Service Area Plan which discourages development in environmentally sensitive areas such as steep slopes.
 - The Grant County LWCD should work with landowners in the subwatershed to implement agricultural best management practices to reduce sediment and nutrient runoff to Rountree Branch.
- The city of Platteville, with the assistance of the other governmental agencies and local conservation or watershed groups, should identify opportunities to protect riparian habitat, add public open space, recreation lands and/or public access along Rountree Branch, Little Platte River, Blockhouse Creek and Snowden Branch.
- The DNR, with assistance from the Grant County LWCD and local conservation and watershed groups, should identify opportunities for restoration or better protection of riparian habitat and in-stream habitat on reaches of the Little Platte River, Blockhouse Creek and Snowden Branch.
- The DNR should encourage the establishment of open space buffers around Ipswich Prairie Natural Area through educational and financial incentives.
- Local partner groups, the city of Platteville and DNR should implement a floodplain restoration project on the Rountree Branch south fork at the site designated in a donation to the DNR.



Snowden Branch (photo by Justin Haglund, 2010)

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Severely eroded streambanks of Coon Creek. Photo by Peggy Compton, UW Basin Educator.



DNR PUB.WT- 943

UW
Extension
Basin Education Initiative

Wisconsin DNR's mission involves preserving, protecting, and restoring natural resources. Watershed Planning provides a strategic review of water condition to enhance awareness, partnership outreach, and the quality of natural resource management.

Little Platte River