

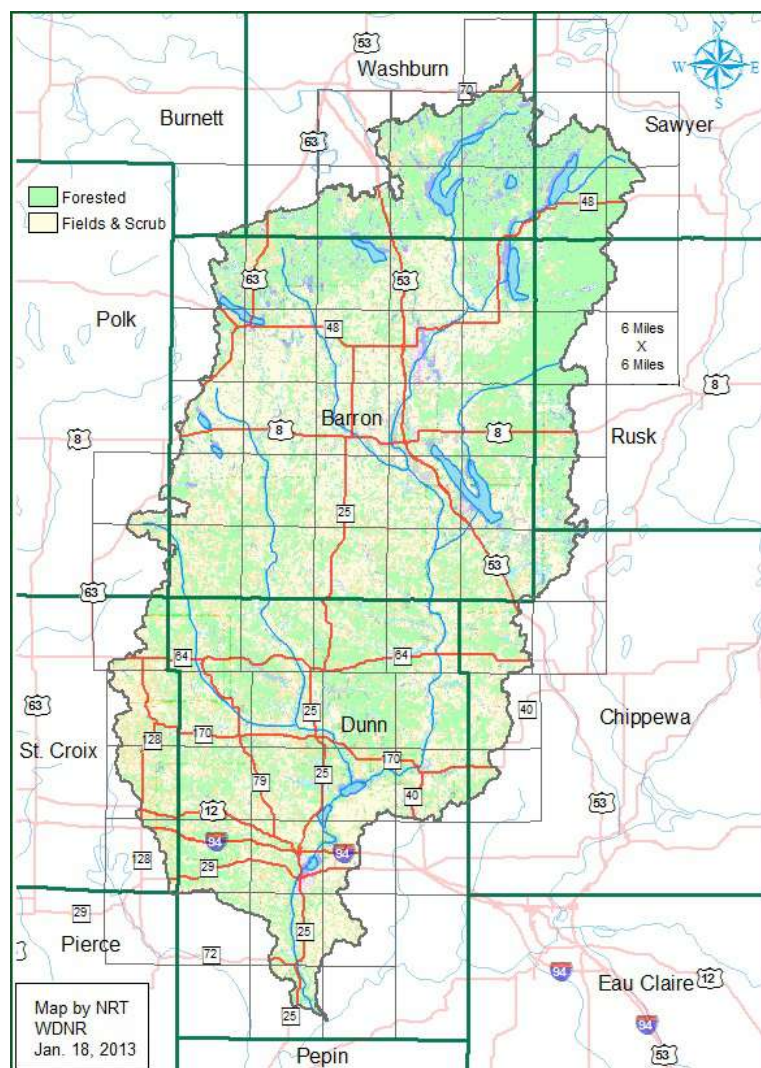
# Restoring Water Quality in the Red Cedar River Watershed

*A Community's Guide*



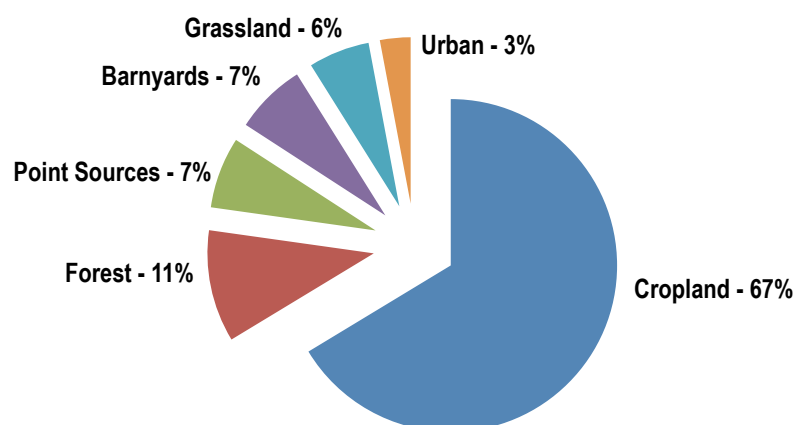
## The Red Cedar Watershed

For an overview of the landscape and demographics of the watershed see [Rapid Watershed Assessment Red Cedar River Watershed](http://ftp-fc.sc.egov.usda.gov/WI/rwa/rwaredcedar.pdf) (ftp://ftp-fc.sc.egov.usda.gov/WI/rwa/rwaredcedar.pdf) USDA NRCS Wisconsin 2008. For information on water quality reports, conditions, and more maps, go to: <http://naturalresources.uwex.edu/redcedar/>



County	Acres in RCRW	% of Co. in RCRW
<b>Barron</b>	<b>533,555</b>	<b>93.7</b>
<b>Dunn</b>	<b>363,570</b>	<b>65.8</b>
<b>Washburn</b>	<b>105,846</b>	<b>19.4</b>
<b>Rusk</b>	<b>60,568</b>	<b>10.2</b>
<b>St. Croix</b>	<b>49,946</b>	<b>10.6</b>
<b>Chippewa</b>	<b>46,694</b>	<b>7.0</b>
<b>Sawyer</b>	<b>41,913</b>	<b>4.9</b>
<b>Polk</b>	<b>6,734</b>	<b>1.1</b>
<b>Burnett</b>	<b>574</b>	<b>0.1</b>
<b>Pierce</b>	<b>66</b>	<b>0.0</b>

## Red Cedar Watershed Land Uses





## Introduction

This Guide is a call to action.

Due to the nature of runoff pollution, restoring the water quality of our lakes, rivers and streams will require a community-wide effort. This Guide provides ideas, examples and models of participatory action that individuals and organizations can use to build effective working relationships. Preventing runoff will require citizens who understand the causes and solutions to runoff pollution. This Guide provides an introduction to resources about runoff pollution and what it will take to improve water quality.

For full technical details on the water quality problem see the *Phosphorus Total Maximum Daily Loads (TMDLs) Tainter Lake and Lake Menomin Dunn County, Wisconsin*. Additionally, a full suite of references and background reports that accompanies this Guide can be found on the Red Cedar River website:

<http://naturalresources.uwex.edu/redcedar/>

The main goal of this Guide is to kindle your interest, start conversations and build relationships that engage citizens in new ways, in actions large and small that will lead to the ultimate goal of clean lakes, streams and rivers. The great wealth of community, economic and environmental benefits that flow from clean, healthy lakes, rivers and streams cannot be overemphasized. This Guide is but a starting point.

## Understanding the Causes, Magnitude and Nature of Runoff Pollution

The lakes, rivers and streams in the Red Cedar River Watershed (RCRW) are seriously degraded. They have been this way for a long time. Water quality is so bad that people are getting sick from being in or even near the water. The main pollutants affecting these waters are phosphorus and sediment.

Runoff pollution – aka nonpoint source pollution – is by far the largest source of water pollution in this watershed, and phosphorus (P) is the major component of runoff pollution. Runoff pollution comes from innumerable small sources scattered throughout the watershed. This means that no single source contributes significantly to the water pollution problem. Not one field, but thousands of fields. Not one yard, construction site or parking lot, but thousands of them throughout the watershed.



**Runoff pollution is all around us and goes largely unnoticed.** Photo Karl Hakanson

An untold amount of excess phosphorus and sediment has already been deposited on lake bottoms and streambeds throughout the RCRW – a "legacy" from decades of industrial and municipal discharges and runoff pollution.

Lakes, rivers and streams are naturally very low in phosphorus which limits aquatic plant and algae growth. The human-managed landscape is exceedingly rich in phosphorus. Water pollution comes from human activities on the land. The excess phosphorus – the limiting nutrient – carried in runoff to surface waters is what stimulates excess plant and algae growth. This is why the lakes and rivers are green with algae and excessive aquatic plant growth.

## When it Rains, Pollution Happens

The majority of runoff – and runoff pollution – comes from a few major rain and snow melts each year. When it rains a little, the soil can absorb much of the rainwater before water begins to run off the surface. Rain water and snowmelt that soaks into the ground is the source of groundwater and provides the base flow for streams and rivers. When we get heavy rains, the water cannot infiltrate and hence runoff occurs. On paved areas there is zero infiltration so smaller rains can produce a large amount of stormwater flow in urban and suburban areas. Understanding "runoff events" is key to understanding the nature of and solutions to runoff pollution.

Perhaps the single most valuable lesson to understand runoff pollution is to go outside during a heavy rain. Follow the water. See where it is coming from, where it is going, and what's in it. Look at storm sewer inlets and try to find the outlets. Look at waterways and small creeks. Look at barnyards, parking lots and the water coming off fields. Take a camera along.

The issue of runoff may become even more apparent in the years to come. Climate change research from the Wisconsin Initiative on Climate Change Impacts shows that since 1950, average annual precipitation in Wisconsin has increased about 15 percent. A trend has also become apparent showing more intense weather events in which more precipitation is coming in fewer, larger events. Projections for the future show this trend continuing in Wisconsin. More intense rain events mean the potential for more runoff delivering larger amounts of sediment and phosphorus to our water bodies.



Late winter runoff flowing to the nearest stream, lake or river – carrying whatever it picks up.

## Clean Water is Everybody's Business

Clean, healthy, *usable* water, and the many services it provides, most of which we take for granted, is essential to the health and welfare of the community. Canoe outfitters, bait/fishing suppliers, boat and related equipment sales/services are but a few of the businesses that benefit from the activity that clean water generates. One can easily include restaurants and other hospitality businesses that benefit from the free "amenities" that waterfronts provide and that make these establishments more inviting to patronize.

People are naturally drawn to the water's edge to live, recreate, or to enjoy the peace and tranquility. People deliberately choose to live in communities with abundant opportunities to enjoy natural resources. Clean, healthy lakes, streams and rivers are critical to the economic health and well-being of any area. Algae and sediment-choked waters significantly detract from a region's full economic and social potential. The fact that lakes Menominee and Tainter, lakes with persistent algae blooms, have some of the lowest real estate values of any lakefront property in the state attests to this. Restoring water quality is not merely a matter of pretty scenery. Imagine what would come from clean water; more commerce, more recreation, more beauty, pride of place. Healthy natural environments and water quality strengthen a region's economy and social fabric for the benefit of everyone.

## What is the Solution? Infiltration is a Key!

The opposite of runoff is infiltration. Infiltration occurs when runoff water flows slowly across or settles over permeable surfaces and the water can soak into the ground. When water soaks into the ground the sediment and phosphorus (and everything else carried in the water) settles out and is deposited on the land. Compared to natural lands, human-managed landscape has a greatly reduced ability to infiltrate water. We cannot prevent runoff from large runoff events, but we can reduce it, and manage the amount of pollutants in runoff water.

### Water Infiltration Rates of Native Soil, Conventional and No-Till Systems

(adapted from *Future Friendly Farming*, National Wildlife Federation. 2011.)

Time needed for 1 inch of water to infiltrate into the soil	
Native soil	Less than 1 minute
No-till	Less than 2 minutes
Conventional Tillage	Over 14 minutes

streams, springs and wetlands. Recharge is greatest in the spring and fall because the ground is not frozen and because plants are not using large amounts of water. Most of the Wisconsin's water supply needs are met by groundwater, and recharge is critical to maintaining the abundance and quality of groundwater. Groundwater contributes to wells, base flow of streams, springs, and wetlands year-round, sustaining them during droughts and dry summer months. Infiltration is the key!

The ability of the land to infiltrate rain water has been significantly decreased. Huge amounts of soil and phosphorus-rich pollutants lay exposed on the land surface, and are picked up by increased volumes of runoff. The good news is nature has a tremendous capacity to heal these wounds, if we care enough give her a helping hand.

### What Can You do to Help?

Urban storm drains usually deliver all the runoff water from city streets and paved areas directly and untreated to the nearest river or lake. Pavement equals 100% runoff. Grass, leaves, grass clippings, soil, pet wastes, etc. left on pavement wash into the nearest storm sewer after every rain. If you know nothing else about water quality, know that the more we can infiltrate rain and snowmelt the cleaner surface waters will be. To control runoff pollution we need to **slow down** the velocity of runoff water, and **spread it out** across permeable surfaces so that sediment and pollutants can **settle out** and the water can **soak into** the ground.



Enjoying our waterfront the right way! Photo: A.T. Cusick Photography

In urban areas grass, leaves, pet waste, fertilizer, soil (including construction site erosion), oil, trash – and everything else – needs to be kept off pavement and all non-porous surfaces. A major solution to controlling urban runoff is to direct runoff water to natural or constructed areas where runoff water can soak into the ground (e.g., swales, rain gardens, detention ponds).

There are many urban practices that residents and municipalities can employ. All *riparian* areas (i.e., along rivers, streams and lakeshores) should be stable (not eroding) and naturally vegetated to filter runoff. Shorelands should be considered special, fragile environments that require special care. Well-buffered streams, lakes and rivers provide the last chance to filter runoff from upland sources and can prevent significant amounts of polluted runoff from reaching the water. Properly vegetated riparian buffers also provide vital terrestrial and aquatic wildlife habitat – yet another example of water quality practices providing multiple benefits.



## Runoff Pollution Basics, in summary:

- Every significant rain and snow melt washes phosphorus, sediment, and a host of other pollutants, from a multitude of landscapes and land uses directly to the nearest stream, river or lake.
- The human-managed landscape is the source of runoff water pollution.
- Runoff pollution is disproportional across the landscape.
- The key is to mimic nature: infiltrate as much water into the ground as possible.

## Farming: Landscapes, Land Use and the Concept of Disproportionality

Cropland being the biggest source of runoff pollution in the watershed is not an unusual situation. Cropland is not only a major land use but it is also intensively managed every year – tilled, manured, fertilized – when the risk of major runoff events is often the greatest. Preventing runoff from cropland is difficult. Farmers have been working with conservationists for decades to prevent erosion and runoff, yet there is more to be done.

***The fact that cropland is the largest source of runoff pollution does not imply that individual farmers or the agricultural community are negligent or are not motivated to reduce runoff pollution. Phosphorus runoff rates are high anywhere farmland is a major land use.***



Excessive soil erosion on a Dunn Co. field, May, 2012. Poorly managed cropland is the single biggest source of runoff pollution. If we want to clean up local waters this kind of poor land management needs to be identified and prevented. This level of soil erosion far exceeds State regulations. Photo Karl Hakanson.

Some of the major **landscape** determinants of runoff pollution from cropland are: slope, slope length, soil type, and proximity to waterways. The main **farm management** determinants of runoff pollution from cropland are: crops grown, tillage, inappropriate fertilizer application, soil cover, soil test phosphorus levels, manure management and timing of field operations. Achieving water quality goals will require significantly less soil erosion than current standards. Achieving water quality goals will also require significantly less phosphorus runoff than current standards.

The good news is that a minority of farm fields contribute the majority of the runoff pollution in any particular watershed. This means it will not be necessary to address all 330,000 acres of cropland in the RCRW. The identification of the highest phosphorus-loading fields, and subsequent work to find ways to sustainably reduce runoff, is the focus of the farmer-led project discussed below.

## What is Already Being Done?

There is a wealth of technical expertise, practical experience, public and private know how, and an extensive "tool box" of *best management practices* (BMPs) that can be brought to bear on the runoff pollution problem. Researchers and practitioners from a wide variety of disciplines have developed, demonstrated and proven many practices, techniques, methods and systems. There are also many examples of what concerned and committed people and organizations are doing right now to address this seemingly intractable problem. This problem can be solved. The means are at our disposal.

## A Great Beginning! *Land, Water & People Coming Together*



Farmer Tony Thompson's opening keynote at the 1st annual Red Cedar River Watershed conference – increased food production and restoring ecological health; *Agroecology*. Photo Karl Hakanson

On March 22, 2012, well over 200 people from many backgrounds and perspectives came together to begin the conversations and to learn from each other what it will take to restore the quality of the waters in the Red Cedar River Watershed. The event was called ***The Red Cedar: Land, Water & People Coming Together***.

Participants and speakers included farmers, homeowners, municipalities, civic groups, businesses and scientists ready to collaborate and take positive action.

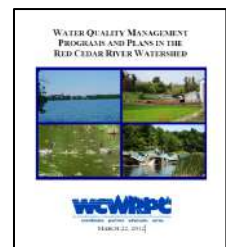
Discussions involving core values and priorities with vital interest throughout the region included: farm, city and waterfront success stories; profitable land management solutions; latest research findings and efforts; and regional networking and alliance building.

## Water Quality Projects Already Underway in the Watershed

There are many people and organizations hard at work in the RCRW working on solutions to the runoff pollution problem. We are not starting from scratch! Here are brief summaries of some noteworthy projects already underway in the RCR watershed:

- Tainter Lake Nutrient and Sediment Reduction Project
- Tainter/Menomine Lake Improvement Association, Inc.
- Turtle Lakes Watershed Education & BMP Lake Protection Program
- Healing a Sick Little Lake: Desair Lake Turns the Corner on Water Quality
- Rice Lake Protection and Rehabilitation District: Managing the City Lake
- Red Cedar Basin Monitoring Group: Scientific Methods, Ecological Education
- City of Menomonie and the Chippewa Valley Stormwater Forum
- City of Cumberland Phosphorus Trading: Farm-City Partnership for Water Quality

For a summary of the water quality related projects in the RCRW also see **Water Quality Management Programs and Plans in the Red Cedar River Watershed** (<http://naturalresources.uwex.edu/redcedar/publications.html>) compiled by the West Central WI Regional Planning Commission, another local organization at work for a sustainable future; <http://www.wcwrpc.org/>.



## More Ways You Can Help

Below are highlighted some *best management practices* (BMPs) that can be used to effectively reduce runoff pollution. Further details and links can be found at <http://naturalresources.uwex.edu/redcedar/>. These are the tools and techniques that can be employed once we become aware, educated, inspired and committed to doing our part. That is, BMPs are not *the* answer. **People are.**

### Highlighted Farm & Country Best Management Practices

- |                        |                     |
|------------------------|---------------------|
| ✓ Cover Crops          | ✓ Grassed Waterways |
| ✓ Conservation Tillage | ✓ Logging BMPs      |

- ✓ Streambank/Lake Shore Buffers
- ✓ Barnyard Runoff Controls
- ✓ Grassed-Based Livestock Systems
- ✓ Whole-Farm Nutrient Management

### Highlighted Urban & Suburban Best Management Practices

- ✓ Rain Gardens/Bioretenention
- ✓ Porous Pavement
- ✓ Runoff Detention Ponds/Swales
- ✓ Low Impact Development
- ✓ Street/Pavement "Hygiene"
- ✓ Yard Waste Management
- ✓ Construction Site Erosion Control
- ✓ Public/Municipal Staff Education

### Time for a New Approach

Wisconsin has a great legacy of efforts to protect and manage the priceless natural resources of the State. From Aldo Leopold to John Muir to Gaylord Nelson, the cast of conservation leaders and innovative programs is world renowned. The State's Priority Watershed Program that ran from 1979 to well into the 2000's was another major effort to address water quality. Ongoing efforts by the DNR, DATCP, USDA NRCS, County Land and Water Conservation Departments, and many, many others, continues this legacy.

Many of these efforts and resources have proven to be less than effective when it comes to water quality and the problem of runoff pollution. The fact remains our water resources in the RCRW and elsewhere across Wisconsin, the Midwest, and nation, generally are not getting better. Many lakes and rivers are getting worse with respect to phosphorus runoff. While the terrific losses of soil and farm productivity that were the norm 50 years ago have been largely abated (to say nothing of the vast reductions from industrial and municipal discharges), it must be recognized that most of the regulatory and conservation assistance has not been *primarily* water quality-based. Our efforts regarding farmland have largely focused on a strategy that relies on improving agronomic efficiency and avoiding excess nutrient applications and soil losses. While it is true that excess application along with losses of soil, fertilizers and manures are both economically and environmentally detrimental, agronomically-based standards are increasingly viewed as not sufficient to achieve the goal of "swimmable and fishable" waters.

Our current approach, which relies primarily on regulations and promotion of BMPs to control runoff pollution, is increasingly limited in other ways as well. Scarce public resources, social animosity towards regulations and taxation, and the increasing complexity of the issues all point to the need for new approaches.

***The key principle of this Guide is that solving the problem of excessive phosphorus runoff will only come about with the involvement and concern of the citizens of the watershed.***

That is, it can no longer be the exclusive responsibility of academic researchers, government agencies and environmental organizations. The nature of runoff pollution is very different than point sources, which have been significantly addressed by governmental regulation and technical solutions. The phrase *total maximum daily load* (TMDL) is a term originally applied to point sources. Point source pollutant loads can be easily measured at the end of the discharge pipe and an average daily amount of pollutants calculated. Nonpoint source runoff pollution is much harder to identify, quantify and address.

Solving the nonpoint runoff problem is not a simple matter of applying technical solutions and adding up the financial price tag. Many past efforts, including in the RCRW addressing this very same issue, emphasized cost sharing and installation of "hard" practices such as barnyard runoff controls. As effective as these programs were their limitations are now apparent: water quality is not getting better or, perhaps more accurately, water quality is still not good enough. Much more needs to be done. ***The main focus is to involve a significant portion of the citizens, municipalities, organizations, schools, colleges, universities and businesses in the watershed to learn about, come to understand and lead their own efforts to reduce runoff pollution.***



Success in solving the runoff pollution problem rests on the extent to which:

- *Citizens and community leaders understand the nature, causes, and consequences of, and solutions to, runoff pollution*
- *Citizens and community leaders understand how poor water quality negatively impacts the region's economy and the health and well-being of their communities*
- *Citizens become leaders*
- *Citizen leaders, organizations, institutions and municipalities become involved, work together and take action*
- *Everyone takes responsibility for the runoff from their land, including public property*
- *Solving the runoff pollution problem becomes a community-wide priority*

All rivers, lakes and streams should be, and at one time were, "fishable and swimmable." The immeasurable opportunities and benefits that clean, unpolluted water can provide are currently severely limited by excessive sedimentation and runoff pollution.

### **Adaptive Management: A Data-driven, Flexible Approach in a World of Uncertainty**

*Adaptive management deals with the unpredictable interactions between people and ecosystems as they evolve together. It is a way of going forward with natural resource management when one does not have all the answers; learning by doing based on careful observation and experimentation. Perhaps the most important concept is that of opportunity.*

Adaptive management sets a course for problem-solving, but allows that course to be changed as more is learned along the way.

### **Appreciative Inquiry: The Positive Way to Make Progress**

*Appreciative inquiry is a strategy for intentional change that identifies the best of "what is" to pursue possibilities of "what could be;" a cooperative search for strengths, passions, successes and positive actions that are found within every system and that hold potential for inspired, positive change. "Systems" can be organizations, communities, businesses, or almost any level of human interaction.*

In fact, this Guide is based on the AI model: moving forward with what we know and what works.

### **The Iowa Model of Civic Engagement: Resident-Led Watershed Councils**

*When the health of our streams, rivers and lakes is threatened, each of us is threatened. Resident-led watershed management initiatives offer the opportunity for people to voluntarily get involved in their watershed and make a difference. Resident-led watershed groups consist of people bound together by the physical flow of their local streams, rivers, or lakes. They are people who live and work in the same watershed and are willing to work together to develop local policies and practices that protect their waters.*

This model involves farmers learning together, solving their common problems together, and working to help other farmers become better at managing their land for water quality.

## Farmer-led, Landscape-targeted, Performance-based Water Quality Projects

*A strategy based on the very best from the social and natural sciences for achieving sustainable phosphorus load reductions based on local farmer leadership, the disproportional nature of cropland runoff and the necessity of civic engagement for lasting solutions.*

This groundbreaking project takes the best ideas from all the above. A pilot project based on this model was begun in the Red Cedar Watershed in 2013.

***It should be understood that Civic Engagement is not easy, does not create quick results, nor is it a panacea for all our water quality problems. In some places where it has been tried, for example in some of the Iowa resident-led watershed projects, people do not engage and the process does not work.***



**Getting out on the river – or stream or lake – is perhaps the best way to bring people together for the health and care of our priceless gems. Lots of fun too!**

Photo River Alliance of WI.

cruisers on the Fox River to learn about that river's recovery; visited family farms using practices that are gentle on the rivers; and bicycled to mussel beds on the Chippewa River to "pollywog" for those fascinating river creatures. No matter which river it is, or who the river expert is, or the means of conveyance, participants in the events come away from them with new appreciation for rivers, how much progress we have made in restoring them, and the challenges we face in keeping them healthy.

## Getting Out on the Water: Making Dates with Rivers

The River Alliance of Wisconsin has for years sponsored a series of events it calls *Make a Date With a River*. The purpose is to intimately engage the public in the wonder and beauty of rivers. All rivers tell stories – geological, historical, biological, economic – and the River Alliance's Make a Date events always feature people who know that story and whose passion for the river infects event participants.

The vehicles for enjoying rivers through these events are many, and not limited to canoes or kayaks. Event participants have hiked the ancient portage between Lake Superior and the St. Croix River; motored in Chris Craft

For more on the Wisconsin River Alliance and Making Dates with Rivers: <http://www.wisconsinrivers.org>

## St. Croix 360: Informing and Engaging the Public on Stewardship



St. Croix 360 launched in July 2011 to provide a dedicated website ([www.stcroix360.com](http://www.stcroix360.com)) for news and information about the St. Croix River and the surrounding region. It was created partly due to the growth of the St. Croix River Facebook page, which today has over 20,000 fans. The goal is to engage citizens through celebration of the river and accurate reporting about issues facing it, and provide a forum for dialogue and citizen journalism. The sites feature regular news postings from up and down the river, including photos, video and articles about recreation, fishing and wildlife, community events, and conservation.

By reporting objectively while accepting environmental stewardship as mainstream community values, St. Croix 360 intends to broaden the base of informed and active river advocates. It does this by translating complex issues for the public in ways that can be understood, and by highlighting opportunities for individuals and organizations to participate in stewardship efforts. The ultimate mission is to develop a sense of *watershed citizenship* in people who live near and love the river.

## One More Idea for Facilitating the Process of Civic Engagement

### Mind Mapping

A mind map is a graphical way to represent ideas and concepts. It is a visual thinking tool that helps structure information, helping you to better analyze, comprehend, synthesize, recall and generate new ideas.

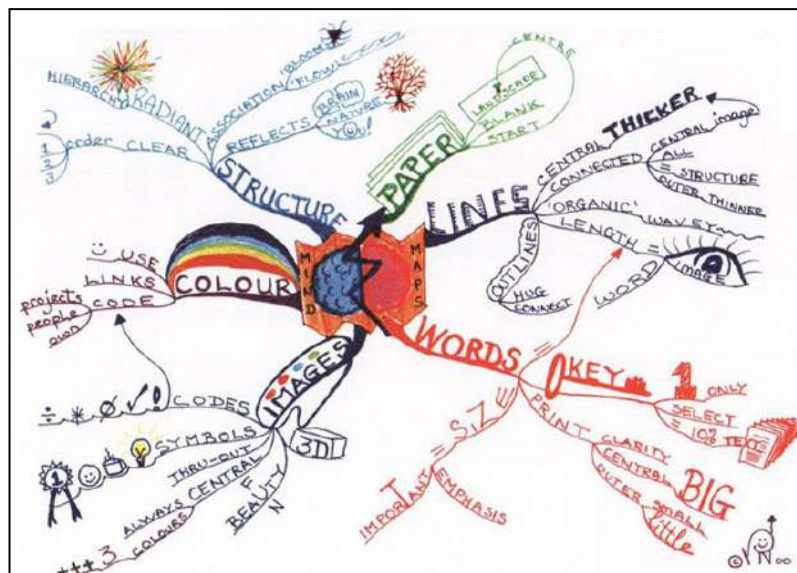
In a mind map, as opposed to traditional note-taking or a linear text, information is structured in a way that resembles much more closely how your brain actually works. Since it is an activity that is both analytical and artistic, it engages your brain in a much richer way, helping in all its cognitive functions. And, best of all, it is fun! Basically, mind mapping avoids dull, linear thinking, jogging your creativity and making note-taking fun again.

### How to Draw a Mind Map

- **Start** in the middle of a blank page, writing or drawing the idea you intend to develop. Try using the page in landscape orientation.
- **Develop** the related subtopics around this central topic, connecting each of them to the center with a line.
- **Repeat** the same process for the subtopics, generating lower-level subtopics as you see fit, connecting each of those to the corresponding subtopic.

Some more recommendations:

- **Use colors, drawings and symbols copiously.** Be as visual as you can, and your brain will thank you.
- **Keep the topics labels as short as possible**, keeping them to a single word – or, better yet, to only a picture. Especially in your first mind maps, the temptation to write a complete phrase is enormous, but always look for opportunities to shorten it to a single word or figure.
- **Vary text size, color and alignment.** Vary the thickness and length of the lines. Provide as many visual cues as you can to emphasize important points. Every little bit helps engaging your brain.





## In Conclusion: What do we know for sure?

- ✓ ***Runoff pollution is the biggest source of water pollution in the RCRW – by far.***
- ✓ ***Significantly and sustainably reducing runoff pollution will require a very different approach compared to controlling industrial and wastewater treatment discharges.***
- ✓ ***Runoff pollution comes from countless, individually inconsequential sources on the landscape.***
- ✓ ***Runoff pollution only happens when rain falls and snow melts.***
- ✓ ***Current standards (e.g., NR151) are a great foundation for addressing runoff pollution in WI, but will not be enough to achieve our water quality goals.***
- ✓ ***We can all take responsibility for the water that runs off the property we manage.***
- ✓ ***The technical "hardware" (BMPs) to reduce runoff is proven and widely available.***
- ✓ ***There are no quick fixes. It will require our best efforts. Civic engagement is the key.***

## Be a Part of the Solution!

Having read this Guide it is hoped you come away with one key insight: Water quality has to become a community-wide priority – in our personal, civic and institutional lives – if we are to muster the attention, resources, creativity and actions needed to tackle this serious, economically and socially damaging problem. It's up to me and you and all of us!

***Restoring the Red Cedar River Watershed will not be easy. It will take a long time. There will be many naysayers and detractors and setbacks. But it can be done if we make it a community-wide priority and we all become informed, active stewards of these priceless resources that we have so carelessly spoiled. Addressing runoff pollution watershed-wide will require an approach that relies on robust civic engagement; an enlivening of the democratic, "can do" attitude.***

## Together we can do it!

All Wisconsin citizens have the right to boat, fish, hunt, ice skate, and swim on navigable waters, as well as enjoy the natural scenic beauty of navigable waters, and enjoy the quality and quantity of water that supports those uses.

The public's rights supersede those of the individual.

The State is required to intervene to protect the public's rights.

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Champions of the Public Trust, A History of Water Use in Wisconsin. 1995.  
Wisconsin Department of Natural Resources Bureau of Water Regulation and Zoning.  
Link: **Champions of the Public Trust**. Web page: <http://dnr.wi.gov/waterways/shoreland/doctrine.htm>

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