

APR 17 2015

**Notice:** This application form template was created by the Wisconsin Department of Natural Resources. Application is hereby made to the Wisconsin Department of Natural Resources, Bureau of Watershed Management, for grant assistance consistent with s. 281.66, Wis. Stats., and Chapters NR 151, 154, and 155, Wis. Adm. Code. Collection of this information is authorized under the authority of s. 281.66, Wis. Stats. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law [ss. 19.31 - 19.39, Wis. Stats.]. *Unless otherwise noted, all citations refer to Wisconsin Administrative Code.*

Please read the [instructions](#) prior to completion of this form. Complete all sections as applicable. Tab to each section or click in answer spaces.

### Applicant Information

Calendar Year of Grant Start 2016

Project Name

Cedarburg City-Wide Stormwater Quality Management Plan Update

Applicant (governmental unit applying; name and type, e.g. Wausau, City; Randall, Town; Waunakee, Village)

Cedarburg, City

Name of Government Official - Authorized Signatory (First Last)

Tom Wiza

Name of Government Official - Grant Contact Person (First Last)

same

Title

Title

Director of Engineering and Public Works

Area Code + Phone Number

(262) 376-3904

Area Code + Phone Number

E-Mail Address

twiza@ci.cedarburg.wi.us

E-Mail Address

Mailing Address - Street or PO Box

P.O. BOX 49, W63 N645 Washington Ave.

Mailing Address - Street or PO Box

City

Cedarburg

State

WI

ZIP Code

53012

City

State

WI

ZIP Code

### Project Information

#### A. Location of Project

County

Ozaukee

State Senate District number:

20

State Assembly District number:

60

Minor Civil Division (city, town, village, e.g., Wrightstown, Village of)	Township (N)	Range	E or W	Section	Quarter	Quarter- Quarter	Latitude (North, 4 to 7 decimal places)	Longitude (West, 4 to 7 decimal places)
Cedarburg, City of	10 N	21	E				43.3012	-87.9868
Cedarburg, City of	09 N	21	E				43.3012	-87.9868
	N							

Method for Determining Latitude & Longitude (check one)

☐ GPS ☒ DNR Surface Water Data Viewer (<http://dnrm.wi.gov/SWViewer=SWDV>)

☐ Other (specify):



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**B. Project Summary and Description. Use this space for the project summary and description, not an attachment.**

Mention every activity being proposed in Part II; Question 1.

In September 2007 the City completed a stormwater pollution modeling analysis using WinSLAMM. That analysis determined that the City of Cedarburg was in compliance with water quality discharge requirements at the time. Since then, the WDNR has implemented new policies and procedures for the stormwater pollution analysis under the WDNR MS4 permit.

In addition, the City of Cedarburg is the Milwaukee River Basin and a Total Maximum Daily Load (TMDL) analysis is currently underway and anticipated for release in 2015. Stormwater discharges from areas of the City will be assigned a Waste Load Allocation (WLA) for sediment and phosphorus.

The City will utilize WinSLAMM to update the pollution loading on a city-wide basis for the WDNR MS4 permit requirement based on the most recent WDNR guidance. Also, a city-wide analysis will be conducted to evaluate the City's pollution loading for purposes of comparison with the WLAs being developed for the Milwaukee River TMDL following the WDNR guidance released in 2014.

Because it is anticipated that TMDL reduction requirements will be higher than the current levels achieved by existing best management practices, previously identified additional practices will be evaluated. A general feasibility discussion on how to fund future practices will be included in the study.

Additionally, a number of City ordinances require review and update including the City's erosion control, post construction stormwater management, and illicit discharge prohibition ordinance. (A detailed scope of services is attached to this application.)

**C. Watershed, Waterbody and Pollutants** (see [Attachment A](#) and <http://dnrmaps.wi.gov/SL/?Viewer=SWDV>).

*Note: Planning areas may encompass several square miles and may affect multiple watersheds.*

Watershed Name	Watershed Code	12-digit Hydrologic Unit Code (HUC)	% of Project Area	Nearest Waterbody Name
Cedar Creek	MI04	040400030304	90	Cedar Creek
Milwaukee River South	MI02	040400030604	9	Tributary to Milwaukee River
Milwaukee River South	MI02	040400030603	1	Pigeon Creek

Nonpoint Source Pollutant(s) Controlled by the Project

☒ Nutrients ☒ Sediment ☐ Other, specify:

**Part I. Screening Requirements**

**A. Maps and Photographs**

Yes

☒ An 8.5" x 11" map from the DNR data/map viewers, showing the project area, is attached (link to <http://dnrmaps.wi.gov/SL/?Viewer=SWDV>).

☒ Aerial photo maps and project area photos are also included.

**B. Filters** *Note: The applicant must be able to check "Yes" to questions 1 through 8 below to be eligible for a grant. Check "Yes" to question 9, if applicable.*

Yes

- ☒ 1. Project is in an area that is urban or will be urban within 20 years (see [Attachment B](#)).
- ☒ 2. Project will be completed within 24 months of the start of the grant period.
- ☒ 3. Staff and consultants designated to work on this project have adequate training, knowledge, and experience to implement the proposed project.
- ☒ 4. Staff or contractual services, in addition to those funded by this grant, will be provided if needed.
- ☒ 5. Planning products prepared under this grant will not work at cross-purposes to (are consistent with) the non-agricultural performance standards under ch. NR 151 (see [Attachment D](#)).
- ☒ 6. The local DNR District Nonpoint Source Coordinator has been contacted and the project was discussed. See contacts at: <http://dnr.wi.gov/topic/nonpoint/NPScontacts.html>.

Name of the District Nonpoint Source Coordinator Contacted	Date Contacted	Subject of Contact
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Name of the District Nonpoint Source Coordinator Contacted	Date Contacted	Subject of Contact
Jamie Lambert	04/02/2015	Review of proposed grant application and discussion of specific grant questions
Pete Wood	04/02/2015	Municipal budget question for application
Petwara Toyingtrakoon	04/06/2015	Susceptibility to Groundwater Concerns

- ☒ 7. The applicant can declare that one of the two statements below is TRUE.
- ☒ a. Statement A: The grant application is for a local governmental unit that has jurisdiction over the project area. (Jurisdiction over the project area means that the governmental unit has control over whether the planning recommendations are carried out.)
- ☐ b. Statement B: The applicant does not have jurisdiction over the project area; however conditions "i" and "ii" or "i" and "iii" are met
- ☐ i. The applicant is required to obtain a permit under subchapter I. of ch. NR 216; and
- ☐ ii. In addition, Inter-Governmental Agreements (IGAs) are in place,
- ☐ iii. or, will be put in place prior to the commencement of the grant period, to assure urban best management practices included on the grant are installed and maintained (see [Attachment G](#)).
- ☒ 8. The applicant can declare that one of the two statements below is TRUE.
- ☒ a. Statement A: The applicant is not the University of Wisconsin Board of Regents.
- ☐ b. Statement B: The applicant is the University of Wisconsin Board of Regents and the project will develop recommendations for a UW Campus area located in a municipality that meets both of the following criteria:
- ☐ i. The municipality is required to obtain a municipal storm water permit under ch. NR 216 and
- ☐ ii. The municipality is located either in a priority watershed or lake area identified under s. 281.65, Wis. Stats., or in an area of concern as identified by the International Joint Commission under the Great Lakes Water Quality Agreement.
- ☐ 9. This application is a joint application among local units of government, and
- ☐ If yes, the required Inter-Governmental Agreement (maybe a DRAFT) is attached (see [Attachment G](#)).

If the applicant answered "No" to any of the items in 1-8, above, stop here. This project is ineligible.

## Part II. Competitive Elements

### Question 1. Project Activities and Extent of Pollutant Control

A project can consist of one or more of the following planning activity categories (A through F). For each category below, check the boxes that describe the work products which will be produced under this grant. Do not check boxes based on prior work.

#### A. Ordinance Preparation

Develop New Update Existing The project is to develop or update one or more of the following ordinances (must be the applying Governmental Unit's ordinances), including associated information, education and public participation activities. Check all that apply.

- ☐ ☒ 1. Construction erosion control ordinance including all the requirements of s. NR 151.11.
- ☐ ☒ 2. Storm water ordinance for new development and re-development including all the requirements of ss. NR 151.12, NR 151.121-128, and NR 151.241-249.  
(See NR 151 at: [http://docs.legis.wi.gov/code/admin\\_code/nr/100/151.pdf#page=1](http://docs.legis.wi.gov/code/admin_code/nr/100/151.pdf#page=1).)
- ☐ ☐ 3. Low impact development/conservation subdivision ordinances.
- ☐ ☒ 4. Other ordinances such as an illicit discharge ordinance, storm water ordinances affecting runoff from developed urban areas (e.g., pet waste management ordinances, nutrient management ordinances), or ordinances that regulate the application of fertilizers to non-municipal properties in accordance with s. NR 151.14.

#### B. Financing Mechanisms

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Develop New ☐ Update Existing ☐ The project will evaluate financing mechanisms for storm water management, including associated information, education and public participation activities. Recommendations will be presented to the governing board for approval and DNR will be notified of the governing board's action. Check **one** of the following:

- ☐ ☐ 1. The project develops a dedicated revenue source, such as a storm water utility, to implement a storm water program focusing on implementation of performance standards in Subchapter III of ch. NR 151.

OR

- ☐ ☒ 2. The project is a general feasibility analysis of alternative funding mechanisms

**C. Storm Water Plan for Developed Urban Areas (includes redevelopment)**

Develop New ☐ Update Existing ☒ The project is to develop or update a storm water management plan for developed urban areas, including redevelopment, which addresses all applicable performance standards under NR 151 including associated information, education and public participation activities. Check **one** of the following

- ☐ ☒ 1. This project will cover the entire geographic area of the governmental unit.

OR

- ☐ ☐ 2. This project will cover only part of the geographic area of the governmental unit.

**D. Storm Water Plan for New Development**

Develop New ☐ Update Existing ☒ The project will develop or update a storm water management plan for new development that addresses all of the performance standards under ss. NR 151.12, NR 151.121-128, and NR 151.241-249, including associated information, education and public participation activities. Check **one** of the following:

- ☐ ☒ 1. This project will cover the entire geographic area of the governmental unit.

OR

- ☐ ☐ 2. This project will cover only part of the geographic area of the governmental unit.

**E. Comprehensive Storm Water Information and Education Program**

- ☐ Check this box if the project will develop and/or implement a comprehensive storm water information and education program. *Note: This category may not be checked if any boxes in categories A through D, above, have been checked. Information and education activities are expected to be included as necessary components of projects under categories A through D.*

**F. Inter-Municipal and Watershed-based Cooperation (bonus)**

- ☐ Check this box if this project is being conducted as part of an inter-governmental storm water management strategy for a common water resource. This also includes entering into a Watershed-based Storm Water Management Permit with other municipalities.

*Note: If more than one local unit of government is joining in this project application (a "joint application"), then an Inter-Governmental Agreement (IGA) meeting the requirements of Attachment G must be submitted with this application.*

Provide a description of the inter-governmental effort that will be used to complete the project.



**Question 2. Fiscal Accountability**

**A. Timeline and Source of Staff**

For each applicable milestone listed below, fill in the appropriate data.

Milestone	Target Completion Date (month/year)	Source(s) of Staff
<b>Basic Milestones</b>		
Prepare preliminary scope of services and discuss with DNR NPS Coordinator	01/2016	City Staff
Prepare Request for Proposal	02/2016	City Staff
Select Consultant	03/2016	City Staff
Finalize Scope of Service and Professional Services Contract	04/2016	City Staff and Consultant
Get DNR approval of Professional Services Contract	04/2016	City Staff and WDNR
Hold "kick-off" meeting	05/2016	City Staff and Consultant
Interim meeting with DNR	12/2016	City Staff, WDNR, and Consultant
Presentation to Municipal Council	05/2017	City Staff and Consultant
Submit project and final report to DNR	07/2017	City Staff and Consultant
<b>Additional Milestones (list below)</b>		
Model MS4 No-controls Loads	07/2016	Consultant
Model TMDL No-controls Loads	08/2016	Consultant
Model Existing MS4 Loads	10/2016	Consultant
Model Existing TMDL Loads	11/2016	Consultant
Evaluate BMPs and funding	04/2017	City Staff and Consultant
Prepare Report	07/2017	City Staff and Consultant
Erosion Control and Post-Construction and Illicit Discharge Ordinance Updates	07/2016	City Staff and Consultant

**B. Adequate Financial Budget**

Provide detailed budget information for every proposed project activity in Question 1. and supporting activities for which DNR funding is requested. Please note: the state share may not exceed 70% of eligible costs. The grant amount is capped at \$85,000 for the eligible planning activities.

**B.1. Financial Budget Table - Planning Activities**

A	B	C
Project Activity for Which DNR Funding is Requested Use this space, not an attachment.	Estimated Total Cost (\$)	Amount from Column B Eligible for DNR Cost Sharing (\$)
Develop updated MS4 no-controls loadings	9,900	9,900
Develop TMDL no-controls loadings	8,900	8,900
Develop updated MS4 existing conditions (with BMP) loadings	11,600	11,600
Develop TMDL existing conditions loadings	6,600	6,600
Evaluate previously identified BMPs and funding mechanisms	900	900

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Prepare Report	11,500	11,500
Review and Update Ordinances	6,600	6,600
Meetings and Council Presentation	10,000	10,000
<b>1. Total</b>	<b>66,000</b>	<b>66,000</b>

**B.1. (continued) Cost Sharing Worksheet**

**Eligible Costs:**

2. 70% of Column C Total Row 1 above	\$	46,200
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**Cap Test:**

3. Maximum State Share Row 2 or \$85,000, whichever is less	\$	46,200
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**State and Local Share:**

4. Requested State Share Amount (Enter Requested Grant Amount)		46,000
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5. Local Share Amount (Total of Row 1 Column B less Row 4)	\$	20,000
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**B.2. Use of Additional Funding**

☒ Check this box if both of the following conditions are met.

- The requested state share amount in row 4 is less than the \$85,000 grant cap.
- The requested state share amount in row 4 is below the maximum state-share in row 3.  
(The resulting cost-share rate is less than 70%.)

**B.3. Cost Estimate Quality** Describe the quality of cost estimates including whether the cost estimate is based on a competitive bid, scope of services, similar projects conducted locally, similar projects conducted elsewhere in the state or region, or other more generalized data. Provide documentation.

Based on consultant experience developing scope of services, cost estimates, and completing other similar stormwater management plan updates and TMDL preparedness evaluations within the past 5-years including the City of Appleton, City of Green Bay, City of Beloit, City of Oshkosh.

Identify the source of the local share:

General Funds



**Question 3. Project Evaluation Strategy**

Information that will be developed and presented to DNR to evaluate the environmental benefits of completing this project. Check all that apply.

- ☒ A. Information that quantifies how project implementation is projected to decrease storm water impacts on state waters will be provided to the DNR. The information may be provided as part of the planning product (e.g., storm water plan, I&E plan) or in the Final Report.
- ☒ B. Information that tracks progress in carrying out recommendations of this project will be provided to the Department for one or two years after the project is completed. Specify if it is going to be one or two years that tracking information will be provided and describe how this annual post-project tracking process will work:  
 Part of WDNR Annual Report

**Question 4. Water Quality Needs**

The project must be consistent with at least one of the following seven watershed priorities. For each watershed in the project area, identify the category that best identifies the project goals. If more than one category is checked (because the project area contains more than one watershed), estimate the portion of the project area to be assigned to each category.

*Note: For border waters where a State of the Basin Report does not exist, another governmental document acceptable to the District NPS Coordinator may be used to identify the water quality need.*

	Percent of Project Area (Total should equal 100%)	Surface Water Considerations
<input checked="" type="checkbox"/>	100	<p><b>A. Clean Water Act section 303(d) List of Impaired Waters</b>                      Project with water quality goals directly dealing with a water body (lake or stream) on the latest Clean Water Act (CWA) s. 303(d) List of Impaired Waters, where the cause of the impairment is nonpoint source pollution and this project will reduce the type of nonpoint pollutants for which the water is listed (see <a href="#">Attachment A</a> and <a href="http://dnrmmaps.wi.gov/SL/?Viewer=SWDV">http://dnrmmaps.wi.gov/SL/?Viewer=SWDV</a>).</p> <p><b>Name of Applicable Impaired Water:</b>                      Milwaukee River</p> <p><b>Name of Pollutant Causing Impairment:</b>                      Sediment and Phosphorus</p>
<input type="checkbox"/>		<p><b>B. Outstanding or Exceptional Resource Waters or Other Areas of Special Natural Resource Interest</b>                      Prevention of degradation due to nonpoint sources of outstanding resource waters (ORW) (per s. NR 102.10) or exceptional resource waters (ERW) (per s. NR 102.11) or other areas of special natural resource interest (ASNRI).                      To locate ORW/ERW and other ASNRI's see <a href="#">Attachment A</a> and go to DNR's Surface Water Data Viewer Designated Waters Theme at <a href="http://dnrmmaps.wi.gov/SL/Viewer.html?Viewer=SWDV&amp;runWorkflow=DesignatedWaters">http://dnrmmaps.wi.gov/SL/Viewer.html?Viewer=SWDV&amp;runWorkflow=DesignatedWaters</a>.</p> <p><b>Name of Applicable ORW/ERW or ASNRI:</b></p>
<input type="checkbox"/>		<p><b>C. Not Fully Supporting Uses or NPS Ranking of High or Medium</b>                      A water body (lake or stream) identified in a DNR-approved Basin/Watershed Plan as not supporting designated uses due to nonpoint sources, but is not on the section 303(d) List. In newer plans, these waters are categorized as "supporting" (as opposed to "fully supporting") designated uses; in plans prior to 2010 they were labeled as "partially meeting" designated uses. Or, the project is located in watershed, lake watershed, or other area ranked high or medium on the NPS Rankings List, where the goals of the project are directly associated with the reason for the ranking on the NPS Rankings List.</p>
<input type="checkbox"/>		<p><b>D. Surface Water Quality</b>                      Prevention of degradation of surface water quality due to nonpoint sources</p>
		<p><b>Groundwater Considerations</b> For assistance with this section, please consult the DNR District Drinking Water and Groundwater Specialist at: <a href="http://dnr.wi.gov/topic/drinkingWater/documents/CountyContacts.pdf">http://dnr.wi.gov/topic/drinkingWater/documents/CountyContacts.pdf</a> or the County Extension office.</p>



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<input type="checkbox"/>		<b>E. Exceeds Groundwater Enforcement Standard</b> Groundwater within the project area where representative information indicates that stormwater pollutants in groundwater exceed the Enforcement Standard (ES).
<input type="checkbox"/>		<b>F. Exceeds Groundwater Preventive Action Limit</b> Groundwater within the project area where representative information indicates that storm water pollutants in groundwater exceed the Preventative Action Limit (PAL).
<input type="checkbox"/>		<b>G. Groundwater Quality</b> (see <a href="#">Attachment F</a> ) The project area is within a geological area defined in Attachment F as susceptible to groundwater contamination.
<b>Total:</b>		
100		

## Drinking Water Bonus Points (see [Attachment E](#))

- Yes Check this box if the project water quality goals identified above relate to the reduction of nonpoint source contaminants in community or non-community public drinking water supplies. This includes any of the following: Municipal supplies governed by chs. NR 809 and 811; Other-Than-Municipal (OTM) water supplies governed by chs. NR 809 and 811; Non-Transient water supplies governed by chs. NR 809 and 811; Transient water supplies governed by chs. NR 809 and 812.
- ☒
1. If "Yes," and you checked boxes E, F, or G, above, then mark a, b, or c, below and move on to question 6. (You will need assistance from your DNR District NPS Coordinator at <http://dnr.wi.gov/topic/nonpoint/NPSContacts.html> or Water Supply Specialist at <http://dnr.wi.gov/topic/drinkingWater/documents/CountyContacts.pdf> to answer.)
- ☐ a. Check this box if the project is located: within the wellhead protection area of a municipal well; or within 1,200 feet of a municipal well for which a wellhead protection area is not delineated; or within 1,200 feet of an Other-Than-Municipal (OTM) water supply well; or within 1,200 feet of a Non-Transient water supply well.
- ☐ b. Check this box if the project is located within 200 feet of a Transient water supply well.
- ☐ c. Check this box if neither a nor b applies
2. If "Yes," and you checked box A, B, or C or D above, then place a check mark next to the appropriate drainage area where the project is located. If the project is in more than one drainage area, enter the appropriate percentages in the boxes provided. (See [Attachment E](#).)

Source Water Drainage Area	Portion of Project in Assessment Area (%)
<input type="checkbox"/> Pike River and Creek	<input type="text"/>
<input type="checkbox"/> Root River	<input type="text"/>
<input type="checkbox"/> Oak Creek	<input type="text"/>
<input checked="" type="checkbox"/> Milwaukee River	<input type="text"/>
<input type="checkbox"/> Sauk Creek	<input type="text"/>
<input type="checkbox"/> Sheboygan and Onion Rivers	<input type="text"/>
<input type="checkbox"/> Manitowoc River	<input type="text"/>
<input type="checkbox"/> Twin Rivers	<input type="text"/>
<input type="checkbox"/> Kewaunee and Ahnapee Rivers	<input type="text"/>
<input type="checkbox"/> Menominee River	<input type="text"/>
<input type="checkbox"/> Fish Creek	<input type="text"/>
<input type="checkbox"/> St. Louis and Nemadji Rivers	<input type="text"/>
<input type="checkbox"/> Lake Winnebago	<input type="text"/>

## Question 5. Evidence of Local Support

For A. and B., check the applicable situation that exists at the time of application. Submit supporting information and documentation with the application.

### A. Government



- ☐ 1. The local-share funds for this project's expenses are already included specifically in an **adopted** budget.
- ☐ Evidence of the adopted budget is included with the application submittal.  
Describe the document and list date of adoption: \_\_\_\_\_
- ☒ 2. The local-share funds for the project expenses are or will be included in a **proposed** budget.
- ☒ Evidence of the proposed budget is included with the application submittal.  
Describe the document and list date for adoption;  
As part of the resolution for this grant application, the City is committing to funding this project and will establish a budget appropriate to fund the City's share of this project for 2016 and 2017. The budget will be adopted in Fall of 2015.

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**B. Community Supporting information must be submitted with the application.**

- ☒ 1. There is local community support from community stakeholders specifically for the project.
- ☒ a. There is local support from citizen groups.
- ☒ b. There is local support from municipal committees or councils representing the applicant.
- ☐ 2. There is community support for addressing general water resource needs in the community, even though there may not be evidence of support for this specific project.
- ☐ a. There is general support from citizen groups.
- ☐ b. There is general support from municipal committees or councils representing the applicant.

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**Question 6. Plans and Regulations**

**A. Consistency With Resource Management Plans**

- ☒ Check this box if the proposed project focuses on plans to implement a water quality recommendation from a locally-approved resource management plan. Examples include Smart Growth plans, Legacy Community plans, Water Star plans, local Storm Water Management plans, wellhead protection, lake management, regional water quality plans, Remedial Action plans and other watershed-based nonpoint source control plans.

*(This question does not include a TMDL report, TMDL implementation plan, or County Land and Water Resource Management Plan.)*

If Yes, summarize the water quality recommendation and describe how it relates to the goals of this proposed project. Cite the title, author and date(s) of publication of the resource management plan. Attach pertinent page(s) or provide URL and page numbers.

This project seeks to further the city-wide water quality planning work initiated by the City of Cedarburg in 2007 and furthered in 2009. (ABCOM, 2007/2009 Memoranda) See City of Cedarburg 2008 NR 216 Annual Report summary pages 12-13 and 2009 Memorandum (attached).

The project is also consistent with "A Nonpoint Source Control Plan for the Milwaukee River South Priority Watershed Project, WDNR 1991. Select relevant pages are attached.

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**B. Supporting Regulations**

Check the box for the statement(s) that applies to this project. The project is located within an area which has:

- ☒ 1. The applicant (applying governmental unit) has regulations in place to administer and enforce construction erosion controls in the governmental unit that are consistent with the non-agricultural performance standards in s. NR 151.11 Include the web site where the regulation can be found (most direct web page URL) and page number(s).  
<http://www.ci.cedarburg.wi.us/wp-content/uploads/TITLE15.pdf> (Title 15, Chapter 2, p 62-73)



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☐ Or check the box if a copy of the regulation is attached to this application.

- ☒ 2. The applicant (applying governmental unit) has regulations in place to administer and enforce post-construction runoff for areas of new development and redevelopment in the governmental unit consistent with the non-agricultural performance standards in s. NR 151.12.

Include the web site where the regulation can be found (most direct web page URL) and page number(s).  
<http://www.ci.cedarburg.wi.us/wp-content/uploads/TITLE14.pdf> (Title 14, Chapter 2, p58-77)

☐ Or check the box if a copy of the regulation is attached to this application.

**Question 7. City of Racine**

- ☐ Check this box if this is an application from the City of Racine for a project that is necessary for the city to comply with state storm water permitting requirements.

**Part III. Eligibility for Multipliers**

Completion of this part of the application is optional. However, an applicant can increase the final project score by qualifying for a project multiplier.

**Local Implementation Program** (select all that are in place as of the application submittal date)

- ☒ A. The governmental unit is implementing a pollution prevention information and education program targeted for property owners and other residents.
- ☒ B. The governmental unit is tracking storm water permitting activity (construction and post-construction) in the governmental unit and can make summary information available to the DNR upon request.
- N/A
- ☒ ☐ C. The governmental unit is implementing a nutrient management plan for municipally-owned properties of pervious area where nutrients are applied.

**Optional Additional Information**

Carefully review the answers to all of the questions above. Is there additional information that will add to the understanding of this project? If so, describe here.

Previous planning efforts have focused on TSS per the NR 216 stormwater discharge permit requirement and NR 151 performance standards. TMDLs are currently under development for the Milwaukee River Basin. While the final wasteload allocations are not available at the time of this grant application, the City of Cedarburg is attempting to be proactive in preparing for the reality that new water quality targets for TSS and TP will be developed as a part of that study.

**Applicant Certification**

A Responsible Governmental Official (authorized signatory) must sign and date the application form prior to submittal to the DNR. The governmental official with signatory authority must be the person authorized by the Governmental Responsibility Resolution. I certify that, to the best of my knowledge, the information contained in this application and attachments is correct and true.

Signature of Government Official - Authorized Signatory

Date Signed

Name (Please Print)

Title

Tom Wiza

Director of Engineering and Public Works

- ☒ Check this box if the required, completed Governmental Responsibility Resolution (GRR) (see Attachment H) is attached. Authorized signatory must be approved in the GRR.

**Submittal Directions**



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To be considered for funding, provide the following for each application submitted:

- One hard copy of the completed application form [DNR Form 8700-299A (R 1/15) with [original signature in blue ink](#) and all attachments.
- Three additional hard copies of the completed, signed application form and all attachments.
- One electronic copy of the completed application form (this saved application form) in **PDF format only** plus all attachments on CD.

All application materials must be postmarked by midnight **April 15 of the same calendar year**.

Mail to: State of Wisconsin  
Runoff Management Section-WT/3  
Department of Natural Resources  
101 South Webster Street  
Madison, WI 53703

PO Box 7921  
or Madison WI 53707-7921

Project Name:

Cedarburg City-Wide Stormwater Quality Management Plan Update

**UNPS&SW Program - Planning Grant  
Application**

Form 8700-299A (R 1/15)

Page 12 of 12

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**Please use this page to write any constructive comment(s) you might have to improve this application.**

Thank you.

We appreciate how the grant application form has become more user friendly over the last several years, allowing for cut and past and edit features that were not previously available. Links within the form also assist in the timely location of relevant data. We have no other comments to offer at this time. Thank you.



## **Addendum to Application**

## **Project Information**

### **A. Location of Project**

- The City of Cedarburg is located across multiple sections within Townships of 09-10N and Range 21E. The City is primarily within Township 10N Range 21E sections: 14, 15, 21-23, and 33-36. The remaining portion of the town is within Township 09N Range 21E sections 2 and 3. No Quarter or Quarter-Quarter is given because of the large extent of the project.



## Part II. Competitive Elements

### Question 4: Water Quality Needs

- Impaired waters are only listed on application if the 303(d) impairment is a traditional non-point source pollutant where estimating loading and BMP reductions is possible. For this reason, it is possible that impairments such as fecal coliform or E. Coli are not listed even if a contribution to loading of the impairment could be due to storm water runoff (i.e. pet waste contributing fecal coliform and E. coli levels). In addition, current WinSLAMM files for Wisconsin do not have reliable data sets for E. coli or fecal coliform. Therefore, the City-wide Storm Water Quality Management Plan will not attempt to estimate E. coli, fecal coliform or other pollutant loading which is not considered a traditional non-point pollutant.

## **Appendix A - Figures**

**Figure 1: Part I. Screening Requirements: Location Map**

**Figure 2: Part I. Screening Requirements: Aerial Map**



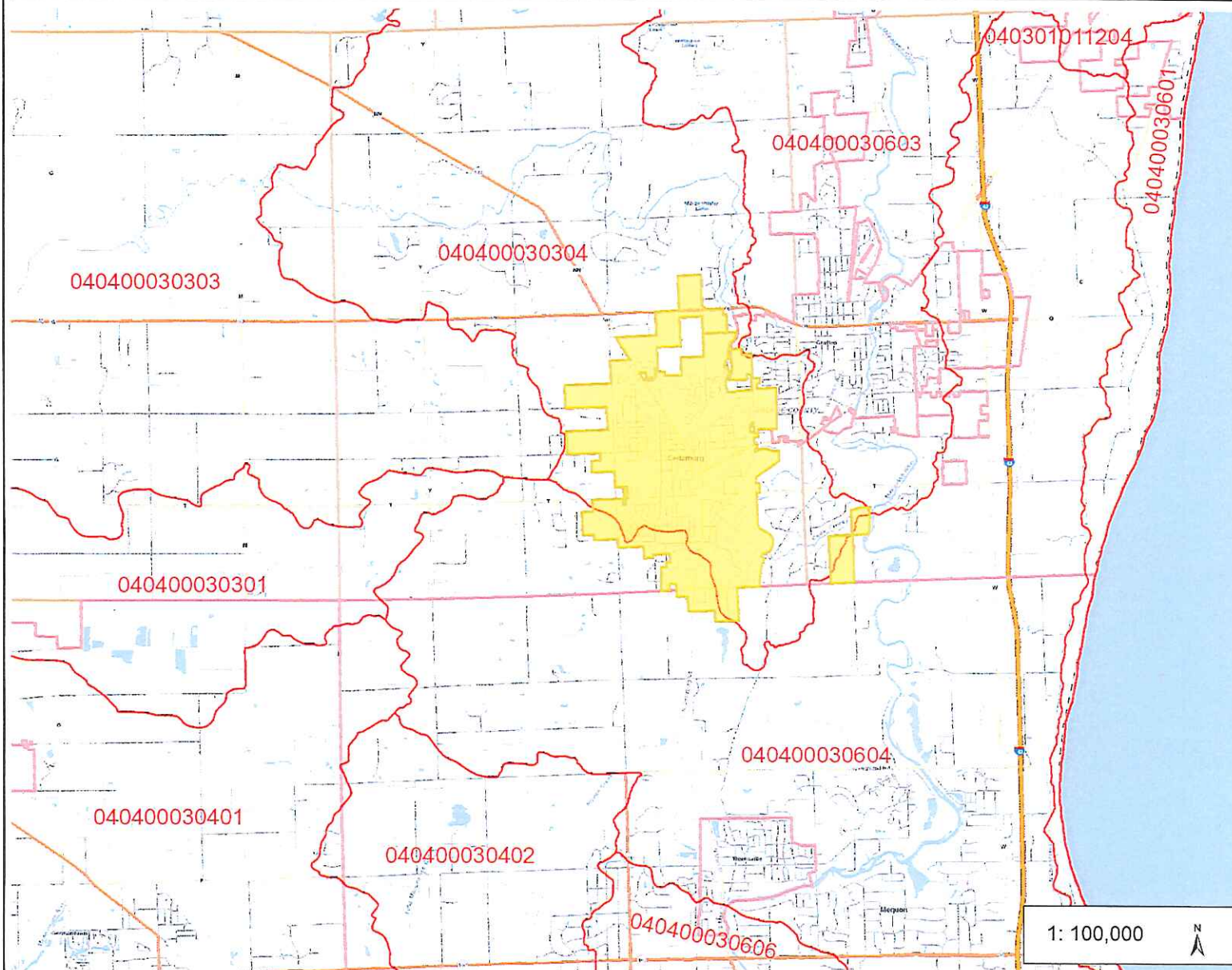
## **Figure 1**

### **Part I. Screening Requirements: Location Map**



# Cedarburg City-Wide Stormwater Quality Management Plan Update

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## Legend

- 12-digit HUCs (Subwatersheds)
- Cities, Towns & Villages
  - City
  - Village
  - Civil Town
- Rivers and Streams
- Open Water

1: 100,000



3.2 0 1.58 3.2 Miles

NAD\_1983\_HARN\_Wisconsin\_TM  
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Notes



## **Figure 2**

### **Part I. Screening Requirements: Aerial Map**





## Aerial Map

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### Legend

#### Cities, Towns & Villages

City

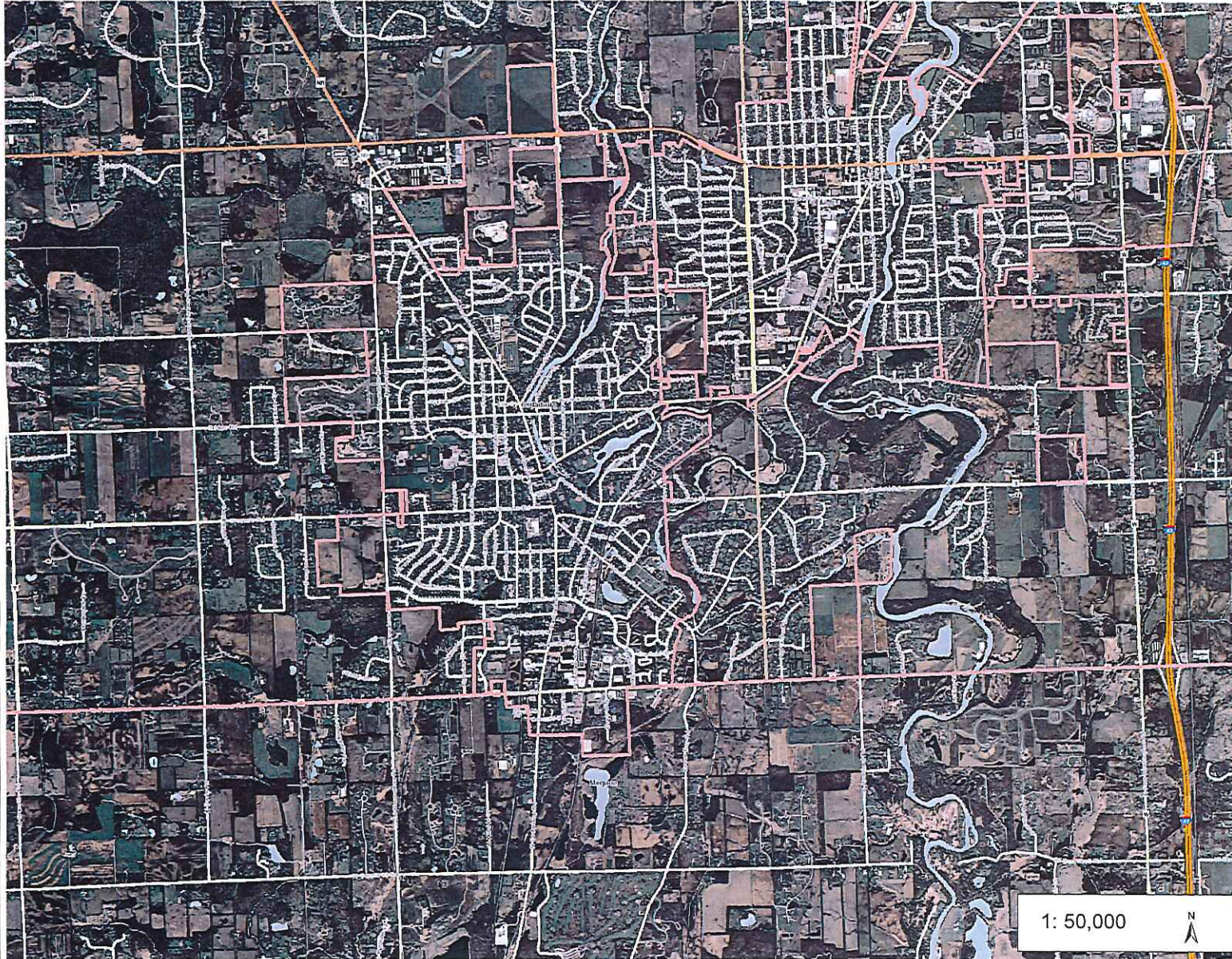
Village

Civil Town

Rivers and Streams

Open Water

2010 Air Photos (WROC)



1: 50,000



1.6 0 0.79 1.6 Miles

NAD\_1983\_HARN\_Wisconsin\_TM  
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Notes



## **Appendix B - Supporting Documentation**

**B-1** Project Summary and Description: Detailed Scope of Services

**B-2** Part II. Competitive Elements, Question 5B: Local Support (Citizen Groups, Committees and Councils)

**B-3** Part II. Competitive Elements, Question 6A: Consistency with Resource Management Plans, Pertinent Pages from Reports

**B-4** Government Responsibility Resolution

## **Appendix B-1**

### **Project Summary and Description: Detailed Scope of Services**



## A. BACKGROUND

Stormwater pollution from the City of Cedarburg's stormwater conveyance system is regulated under a Wisconsin Department of Natural Resources (WDNR) permit (known as the WDNR MS4 permit). The permit requires the City calculate the quantity of stormwater pollution (sediment as TSS and Total Phosphorus) from the City's system under: "base" or "no-controls" and "existing" or "with controls" conditions as described below.

In September 2007 the City completed a stormwater pollution modeling analysis using WinSLAMM. That analysis determined that the City of Cedarburg was in compliance with water quality discharge requirements at the time. Since then, the WDNR has implemented new policies and procedures for the stormwater pollution analysis under the WDNR MS4 permit.

Another factor impacting stormwater pollution requirements for the City of Cedarburg is the Milwaukee River Basin Total Maximum Daily Load (TMDL) Analysis which is currently under development and anticipated for release in 2015. Stormwater discharges from areas of the City will be assigned a Waste Load Allocation (WLA) for sediment and phosphorus.

The City will utilize WinSLAMM to update the pollution loading for the WDNR MS4 permit requirement based on the most recent WDNR guidance. Also, an analysis will be conducted to evaluate the City's pollution loading for purposes of comparison with the WLAs being developed for the Milwaukee River TMDL.

This water quality evaluation will allow the City to compare their current level of stormwater runoff management to the reduction levels required under the pending TMDLs. BMPs and associated reductions identified in previous studies will be utilized if additional reductions are needed to meet TMDLs. Following this study, the City will decide if additional best management practices (BMP) are required and will conduct future BMP planning if needed.

Additionally, the City's erosion control and post construction stormwater management ordinances need to be updated to align with current state statutes. The current illicit discharge prohibition ordinance will also be evaluated.

The tasks below alternate between the work to be conducted for the WDNR MS4 permit and the work to be conducted for the TMDL analysis. Although the scope language separates the two analyses, the two analyses are intertwined and data from all tasks will be used interchangeably.

## B. TASKS

*Task 1.0 Re-establish WDNR MS4 permit No-Controls (Base) Load using Most Recent WDNR Guidance*

### 1.1 Review GIS data per WDNR Guidance

Consultant will compare the Analyzed Area in the 2007 study to the guidelines in the existing WDNR guidance and modify where needed. Consultant will rely on City staff review of data to aid in the process.

City of Cedarburg  
Stormwater Pollution Modeling Update for WDNR MS4 permit and TMDL Assessment

Examples of areas that will be reviewed include:

- October 2004 Land Use
- Undeveloped/Agricultural lands as of October 1, 2004
- Industrial permitted land as of January 2015
- County/State right-of-way areas within the municipal boundary
- Riparian lands

## 1.2 Update Watershed Boundaries

The City will review the watershed boundaries used in the 2007 study based on current storm sewer system mapping. Consultant will update the reviewed / revised watershed boundaries provided by the City. Consultant will then group the boundaries into reachsheds that align with the TMDL analysis.

## 1.3 Re-run MS4 No-Controls Conditions

The WinSLAMM stormwater pollution model will be used to analyze the stormwater pollution discharged from the City's regulated MS4.

The no-controls conditions are defined by NR216 and subsequent policy memos from the WDNR. Consultant will conduct this analysis in accordance with the NR216 and WDNR written guidelines. In general, the "no-controls conditions" represent the urban stormwater pollution that existed under the land use conditions as of October 1, 2004, assuming all roads have curb and gutter drainage, and with no other stormwater control practices in place. The TSS loading under base conditions establishes the benchmark against which the 20 percent TSS reduction is measured.

The results for the study will be reported on an average annual basis for both Total Suspended Solids and Total Phosphorus.

### *Task 2.0 Establish TMDL No-Controls Load Using Most Recent WDNR Guidance*

The data used for the TMDL analysis was different than the data used for the WDNR MS4 permit analysis. The TMDL analysis will follow the WDNR document "TMDL Guidance for MS4 Permits: Planning, Implementation, and Modeling Guidance".

Consultant will update the following GIS coverages used for the TMDL analysis:

- Excluded Areas
- Land use
- Municipal boundary

Consultant will compare the data used for the TMDL analysis against the data used for the WDNR MS4 permit analysis. The comparison will include a table showing the tabular differences as well as a figure showing the graphical differences. Consultant will then set up a meeting with City staff and WDNR staff to review the differences and discuss resolutions to the differences if needed.



## 2.1 Excluded Areas

Review and update required and optional excluded areas to align with the current guidance document.

## 2.2 Update TMDL Land Use

Update land use areas to align with the current guidance document.

## 2.3 Update TMDL Municipal Boundary

Update the municipal boundary used for the TMDL to reflect the most accurate municipal boundary as of January 2015 per WDNR guidance.

## 2.4 Calculate TMDL No-Controls Load

The TMDL no-controls load for each TMDL reachshed will be calculated using data developed in Tasks 2.1 through 2.3.

### *Task 3.0 Re-establish NR216 Existing Conditions (with controls) Load as of January 2015*

Consultant will conduct the following subtasks to re-analyze the pollution reduction achieved by the City's existing stormwater control practices. Practices in existence as of January 2015 will be included in the analysis.

### 3.1 Update Street Cleaning

The model will be updated to reflect the City's current street cleaning practices, schedule, and equipment. Reductions for TSS and TP will be reported.

### 3.2 Evaluate Existing Structural Best Management Practice (BMP) Performance

Consultant will review existing structural BMPs which would have been included in prior analyses to evaluate pollutant management effectiveness. It is assumed that the prior BMP modeling is sufficient to describe the pollutant removal effectiveness and can be incorporated into this analysis.

### 3.3 Summarize Existing Conditions MS4 Permit Results

Consultant will model annual loadings of stormwater pollutants for Particulate Solids (TSS) and Total Phosphorus (TP) using WinSLAMM for the City's existing stormwater control practices. The results will be presented in the following formats:

- 1) Tabular
  - a. No-controls TSS and TP load for each watershed
  - b. Existing TSS and TP annual load for each watershed
- 2) Graphically
  - a. GIS map of no-controls TSS or TP load by watershed, and by load/acre/yr for each watershed
  - b. GIS map of existing TSS or TP load by watershed, and by load/acre/yr for each watershed

#### *Task 4.0 Establish Existing Conditions TMDL Load*

##### **4.1 Calculate Existing Conditions TMDL Permit Load**

Consultant will use the information collected and developed in Tasks 2 and 3 to establish the City's current progress towards meeting the TMDL WLA for each sub-basin. The existing stormwater control practices will be applied to the TMDL base conditions pollution load.

##### **4.2 Analyze Stormwater Control Practices for New Development**

Because it is likely that new development will be included in the City's TMDL analysis, the City will provide Consultant with the data needed to model the stormwater control practices treating new development. It is assumed four (4) sites will be analyzed. The data needed to perform this analysis includes:

- an electronic delineation of the drainage area,
- hard or electronic copies of the design drawings/as-builts, and
- any stormwater management plan data, including model information that was developed as part of the project.

##### **4.3 Summarize Existing Conditions TMDL Results**

The TMDL existing load for each TMDL sub-basin will be calculated two ways: 1) the percent reduction from the existing stormwater control practices will be applied to the unit TSS and TP loads published in the TMDL and 2) the percent reduction from the existing stormwater control practices will be applied to the base pollution loaded generated using the WinSLAMM model files developed for the City and used in Task 1.4.

The results will be presented in the following formats:

- 1) Tabular
  - a. No-controls TSS and TP load for each sub-basin
  - b. Existing TSS and TP annual load for each sub-basin
- 2) Graphically
  - a. GIS map of no-controls TSS or TP load by sub-basin, and by load/acre/yr for each sub-basin
  - b. GIS map of existing TSS or TP load by sub-basin, and by load/acre/yr for each sub-basin

#### *Task 5.0 Evaluation of Proposed Stormwater Control Practices Identified in the 2007 Study*

While the City has met the current 20% TSS reduction goal, it is assumed that additional BMPs will be required to move towards compliance with the pending TMDL WLAs. This task will include estimated reductions associated with previously identified BMPs assuming that further pollutant reductions are needed. The TSS and TP reductions for these BMPs will be based on prior modeling and will not include additional modeling or identification of additional BMPs at this time.



#### *Task 6.0 Prepare Report*

Consultant will prepare a report which: 1) documents modeling methodology, 2) compiles TSS and TP pollution loadings into an appropriate tabular formats, 3) documents the pollution control (TSS and TP) achieved by existing management measures, and 4) summarizes the potential control practice removal efficiency of previously identified BMPs.

The report will also contain maps displaying the results of the modeling; and the potential locations of proposed stormwater control practices.

The report will describe the analyses for purposes of both WDNR MS4 NR 216 permit and TMDL compliance.

The City will review this report before it is finalized. Consultant will provide one (1) hard copy draft report and one (1) electronic copy in Adobe format to the City for review. Consultant will provide five (5) hard copies and a complete copy in an Adobe format of the final report to the City. In addition, Consultant will provide GIS files and Tables in Excel format prepared under this scope of work as requested by the City.

#### *Task 7.0 Ordinance Updates*

Several municipal ordinances are in need of updating to align with current state regulations or could benefit from a review to evaluate the potential to make improvements that better protect the environment. Ordinances planned for review and potential update include:

- Title 14 Chapter 2 – Stormwater Management (post construction and Illicit Discharges)
- Title 15 Chapter 2 Construction Site Erosion Control

The Illicit Discharge Prohibition and Disconnection Section of the ordinance will be reviewed for changes in best practices associated primarily with enforcement components.

Model ordinances that are being prepared by the WDNR in 2015 will be compared to the current City Erosion Control and Post-construction Stormwater Management Ordinances and recommend and draft updated ordinances for review by City staff and attorney for presentation and approval by the Common Council to update the current ordinances.

#### *Task 8.0 Meetings and Presentation*

Two meetings with City staff and Consultant staff are budgeted during the course of the project. One meeting may also include WDNR staff. The first meeting is anticipated during Task 2. The second meeting is expected to occur during Tasks 5 and 6 prior to the Common Council presentation.

A presentation to the City Common Council will be conducted at a point in the project that the City feels is appropriate to inform and gain the feedback and concurrence of public officials.



### **C. ASSUMPTIONS**

1. The City shall furnish Consultant all available maps, orthophotographs, stormwater conveyance system drawings, stormwater management plans, parcel graphical and tabular data, and other relevant stormwater management data, all of which may rely upon without independent verification in performing the Scope of Work. It is also assumed that the above information will be provided at no cost to the project. Data files will be provided digitally to Consultant on a CD if available or paper copy format (if a digital format is not available).
2. Some information provided by the City may be inaccurate or unreliable. Consultant cannot be responsible for inaccuracies in the data supplied by the City. Field verification of the data is not included in the Scope of Work.
3. Preparation of design plans, specifications, or construction documents are not included in this scope of work.
4. All budget items assume one review per task by City staff. Consultant will confirm the results of the City's review before proceeding with the next step of the process. If more than one review per task is conducted or additional information is provided after a review task is completed, a budget amendment may be requested.

## **Appendix B-2**

### **Part II. Competitive Elements, Question 5B: Local Support (Citizen Groups, Committees and Councils)**

# SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607

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April 3, 2015

Mr. Thomas Wiza, P.E.  
Director of Engineering and Public Works  
City of Cedarburg  
W63 N645 Washington Avenue  
Cedarburg, WI 53012

Dear Mr. Wiza:

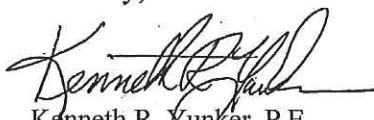
We are writing in support of the City of Cedarburg's application for a Wisconsin Department of Natural Resources (WDNR) Urban Nonpoint Source and Storm Water Management Planning Grant. The grant would be used to update the City's current water quality management plan to aid in understanding the effects of the total maximum daily load limits that are under development and will affect municipalities and other entities in the Milwaukee River Basin.

The proposed update will build upon previous planning efforts dating back to 2007 and 2009 when the City conducted its last comprehensive stormwater quality analysis and best management practices (BMP) alternatives analysis. The plan will also review the findings and recommendations from other regional water quality plans, including the plan documented in SEWRPC Planning Report No. 50, *A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds*, December 2007.

The plan update will follow the WDNR's TMDL Guidance for MS4 Permits. The plan will assess the current level of compliance with TMDL wasteload allocations, and will reevaluate the effectiveness and feasibility of implementation of potential best management practices (BMPs) identified in the previous City stormwater study. The study will result in an implementation plan that will guide the City towards the long term goal of cost-effectively meeting TMDL wasteload allocations.

We commend the City on undertaking this update to its plan and support its application for State stormwater management planning funds.

Sincerely,

  
Kenneth R. Yunker, P.E.  
Executive Director

KRY/MGH/dd  
#00224871





April 10, 2015

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Sharon Gayan, Wisconsin Department of  
Natural Resources (non-voting advisor)

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Andy Holschbach  
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Clean Wisconsin

Neil Palmer  
Village of Elm Grove

Karen Sands  
Milwaukee Metropolitan Sewerage District

Dan Stoffel  
Washington County

**STAFF**

Melissa Ugland, Interim Executive Director

600 East Greenfield Avenue  
Milwaukee, WI 53204-2944

(414) 382-1766

[swwtwater.org](http://swwtwater.org)

Mr. Tom Wiza, P.E.  
Director of Engineering and Public Works  
City of Cedarburg  
W63 N645 Washington Avenue  
Cedarburg, WI 53012

Dear Mr. Wiza,

Sweet Water - Southeastern WI Watersheds Trust is pleased to write in support of the City of Cedarburg's application for a Wisconsin Department of Natural Resources (WDNR) Urban Nonpoint Source and Storm Water Management Planning Grant. The grant would be used to update the City's current water quality management plan to aid in understanding the impacts of the pending total maximum daily load limits that are under development and will impact municipalities and other entities in the Milwaukee River Basin.

We understand that the proposed update will build upon previous planning efforts dating back to 2007 and 2009 when the City conducted its last comprehensive stormwater quality analysis and best management practices (BMP) alternatives analysis. The plan will also review the findings and recommendations from other regional water quality planning documents to maintain consistency with other planning efforts.

We further understand that the plan update will follow the WDNR's TMDL Guidance for MS4 Permits. The effort will include modification of the current city-wide GIS data drainage basins into appropriate reach-sheds, update land use and included/excluded areas, and assess the current level of compliance with TMDL waste load allocations. Potential best management practices (BMPs) identified in the previous study will be re-evaluated for effectiveness and feasibility. BMPs will be compared and ranked in a matrix format that looks at a number of factors including capital and operation and maintenance costs. The study will results in an implementation plan that will guide the City towards the long term goal of meeting

TMDL waste load allocation targets in a cost-effective manner. With the proposed grant funding, this project is intended to review, protect, and move forward effective storm water management in the City.

We commend the City on undertaking this update to its plan and fully support its application for State stormwater management planning funds.

Sincerely,



Melissa Ugland, MPH  
Interim Executive Director



Nancy Frank, Ph.D., AICP  
Board Chair

## **Appendix B-3**

### **Part II. Competitive Elements, Question 6A: Consistency with Resource Management Plans, Pertinent Pages from Reports**



### **3.3.8 Spills Responses**

The objective of the spills program is to have a system in place to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer system. The City's Spill Prevention Control and Countermeasures Plan (SPCC) was initiated in August of 2003. A copy of the program was submitted with the 2003 Annual Report.

There was one minor hydraulic oil spill which occurred on West Highland Drive in May of 2008. A private landscape contractor broke a hydraulic hose and spilled about a gallon of oil on the pavement. Liberal amounts of oil dry were used to blot up the spill and the City repeatedly swept the pavement and applied additional oil dry. No free oil escaped the immediate pavement area.

### **3.3.9 Fertilizer and Pesticide Use on Municipal Properties**

The City has virtually eliminated the use of non-organic fertilizers and pesticides on park land in the City. Grass clippings are mulched and left on the lawn.

### **3.3.10 Staff Knowledge of WPDES Permits and Requirements**

The City will train appropriate staff on the MS4 permit and conditions and ensure all DPW or utility staff are aware of general WPDES permits and requirements. A list of these permits and requirements can be found at <http://dnr.wi.gov/org/water/wm/www/pmttypes.htm#general>

## **3.4 Any Other Measurable Activities**

No other measurable activities are identifiable at this time, except as noted in the following areas:

### **3.4.1 Estimate of Pollutant Removal Reductions of Management Practices**

Pollutant removal reductions achieved by management practices need to be estimated. The estimate of pollutant removal reductions of management practices can be assessed by indirect or programmatic measures. Statistical information shall be documented and reviewed and include the following activities:

#### **Volume of Used Oil Collected**

There was approximately 3,000 gallons of used motor oil collected in 2008. Approximately 1,700 gallons were burned in a waste oil furnace to heat one of the public works garage buildings. The remaining oil was picked up by OSI for recycling.

Used antifreeze may be disposed of at the Ozaukee County Hazardous Waste collection site.

#### **Number of Catch Basins Installed**

Approximately 31 existing catch basins were replaced with new catch basins with 2 foot sumps, and 9 new catch basins were installed in a new subdivision in 2008. The new catch basins incorporate the "Dump No Waste Drains To Stream" logo.

## **3.5 Stormwater Quality Management – Part II(G)**

An analysis was conducted for the City of Cedarburg (memo dated September 26, 2007) to determine the urban stormwater pollution base conditions load and the amount of load reduction currently controlled by the city's existing stormwater management practices. The policies and procedures set forth by the Wisconsin Department of Natural Resources (WDNR) to analyze developed urban areas were followed throughout the analysis. This modeling analysis shows that the City's existing stormwater management

practices achieve a 32 percent TSS reduction over base conditions and therefore exceeds the 20 percent TSS reduction by the year 2008 required by the City's stormwater permit.

### 3.5.1 Best Management Practices (BMP) Alternative Analysis

The September 2007 WinSLAMM analysis documented a gap in TSS reduction of about 23 tons per year to achieve the required 40 percent. To assist with identifying potential future projects that could provide new or increased TSS reductions and help close the remaining gap, 20 sites were identified for evaluation in the Best Management Practices (BMP) Alternatives Analysis Memo, dated February 9, 2009. The potential BMPs considered include new wet detention ponds, modified/retrofitted detention ponds, sub-surface sedimentation/treatment devices, and biofiltration or sedimentation forebays. Opportunities totaling a potential TSS reduction of 87 tons per year were identified. It is the intention of the City to strategically and systematically pursue the most feasible/cost-effective BMPs in an effort to continue to reduce TSS loads.

These sites along with a description of the BMP approach, contributing land area, TSS, and potential TSS removal are listed on Table 1 and shown on Figure 1 in the complete BMP Alternative Analysis Memo found in Appendix D.



## AECOM

1020 North Broadway, Suite 400, Milwaukee, Wisconsin 53202  
T 414.225.5100 F 414.225.5111 www.aecom.com

## Memorandum

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Date: February 2, 2009  
To: Mr. Tom Wiza, PE  
From: Mr. Chuck Boehm, PE  
Subject: City of Cedarburg Water Quality  
Best Management Practices (BMP) Alternatives Analysis

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The City of Cedarburg has a history of proactive storm water management, including a previously completed city-wide stormwater management master plan, and a number of storm water analyses and design projects. Storm water discharges from the city are regulated by the Wisconsin Department of Natural Resources. In 2007, the city received their renewed storm water discharge permit under the Wisconsin Pollutant Discharge Elimination System (WPDES) in accordance with the requirements of Chapter NR 216 of the Wisconsin Administrative Code. That permit requires an assessment of compliance with NR 151.13(2), which is the section of Wisconsin Administrative Code requiring the city to meet specific performance standards with regard to the management of total suspended solids (TSS). Specifically, the city is required to show a TSS reduction of 20 percent from a determined baseline level by March 10, 2008 and 40 percent by March 10, 2013. The analyses are to be conducted using a WDNR approved water quality model such as the Source Loading and Management Model for Windows (WinSLAMM).

In September of 2007, the city completed an initial assessment to determine the baseline and existing TSS conditions. WinSLAMM (version 9.2.4) was used to estimate a baseline TSS load of 292 tons per year. A total phosphorous load of 1,854 pounds per year was also estimated as required by the permit, although no specific reduction requirement currently exists for this pollutant. The analysis also estimated TSS removals for existing best management practices (BMPs) of street cleaning and catch basins, manufactured BMPs, and wet detention ponds, resulting in an estimated existing TSS load of 198 tons per year. This equates to a TSS reduction of 32 percent from the baseline loading.

From that analysis, there remains a gap in TSS reduction of about 23 tons per year to achieve the required 40 percent. To assist with identifying potential future projects that could provide new or increased TSS reductions and help close the remaining gap, 20 sites were identified for evaluation. The potential BMPs considered include new wet detention ponds, modified/retrofitted detention ponds, sub-surface sedimentation/treatment devices, and biofiltration or sedimentation forebays. These sites along with a description of the BMP approach, contributing land area, TSS, and potential TSS removal are listed on Table 1 and shown on Figure 1. A total TSS reduction of 87 tons per year could be achieved if all of these potential BMPs were implemented.

Table 1

## Potential Water Quality Best Management (BMP) Practices

BMP ID Number	Best Management Practice Description	Contributing Area (acres)	Contributing TSS Load (tons)	Estimated Existing Treatment Efficiency	Estimated Potential Treatment Efficiency	Potential TSS Removal (tons)
1	Outlet Retrofit - per 1997 report, could increase TSS removal from 40 to 80+%.	74	4.1	40%	40%	1.6
2	Wet Pond or bioretention/rain garden - in green space at High School. Could include information and education element. Dependent on adjacent sewer depth and has potential to be impacted by bedrock.	51	3.8	20%	60%	2.3
3	Outlet Retrofit - TSS reduction percentage depends on pond drainage. Potential contamination issues.	158	19.9	80%	further analysis required	
4	Wet Pond - potential wet pond location would also help eroded channel downstream.	233	24.6	0%	80%	19.7
5	Wet Pond - potential small wet pond could treat 15-20 acres of primarily industrial land area. Dependent on adjacent sewer depth.	18	2.3	0%	80%	1.8
6	Wet Pond - Could potentially treat 100+ acres. Land ownership and final size restrictions may reduce treatment effectiveness.	133	17.5	25%	60%	10.5
7	Wet Pond - per 1997 report. Pioneer Rd reconstruction has reduced drainage area. Could redirect drainage from outfall CM01. Potential wetland issues.	133	17.5	25%	60%	10.5
8	Wet Pond Retrofit - could potentially increase water surface area to improve TSS reduction. Need to evaluate existing flow through efficiency. Potential contamination issues.	69	4.2	Already getting credit for 80%		0.0
9	Wet Pond - would treat drainage area associated with basin/outfall CC06. Would need to be on private property adjacent to creek, access is poor.	18	1.6	0%	80%	1.2
10	Wet Pond - would treat drainage area associated with basin/outfall CC03. Would face several challenges including land ownership and steep slopes.	78	10.1	0%	80%	8.1
11	Wetpond Retrofit - would treat basin/outfall CC01 + CTH C runoff outside of city. Challenges include locating pond outside of city limits.	14	2.5	0%	80%	2.0
12	Wet Pond - would be an alternative to BMP ID Number 11 and faces similar challenges.	14	2.5	0%	80%	2.0
13	Wet Pond - would treat basins/outfalls CC21 and CC22. Would be constructed on or off-line of the mill tail-race. Potential contamination.	239	20.0	5%	80%	16.0
14	Sub-surface Sedimentation - Install one on each of the small storm sewer systems / outfalls discharging into Cedar Creek (up to 10 outfalls)	40	3.3	0%	25%	0.8
15	Sub-surface Sedimentation - Install one on each of the small storm sewer systems / outfalls discharging into Cedar Creek (up to 7 outfalls)	52	5.7	0%	25%	1.4
16	Sub-surface Sedimentation - Install one on each of the small storm sewer systems / outfalls discharging into Cedar Creek (up to 8 outfalls)	34	3.0	0%	25%	0.7
17	Wet Pond - would treat basin/outfall CC40. Would likely be located on private property adjacent to creek and could have floodplain issues.	165	10.0	18%	60%	6.0
18	Sub-surface Sedimentation - Install in cul-de-sac island	17	1.4	0%	25%	0.4
19	Sub-surface Sedimentation - Install in green space between road and path.	13	1.1	0%	25%	0.3
20	Wet Pond - would treat basin/outfall CC15. Would be located on private property. Close to creek	20	1.8	0%	80%	1.4

**AECOM**

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Following the development of the site specific approach and information, the potential sites were reviewed with City staff for future consideration. In several cases, current site conditions reduce the feasibility of implementing the BMP at the given site and those sites were assigned a low probability or initially removed from further consideration. In several other cases, the proposed BMP was identified as possible, or in some cases identified with an alternative approach that appears more probably because of available land area or other considerations. The result is a listing of 13 potential sites/BMPs as shown in Table 2 that present an opportunity for further consideration. These 13 sites could achieve a total TSS reduction of up to 56 tons per year if all were implemented.

Several of the sites will not be able to provide TSS reductions to the level initially estimated because of site limitations or other considerations. For example, proposed wet detention ponds could be decreased to proposed sediment forebays. However, the updated list of 13 sites are a promising list of potential project locations that will assist the likelihood that the City of Cedarburg will ultimately meet the 40 percent reduction required by their WPDES permit. Several of these sites will be investigated further and could be implemented to incrementally reduce TSS loads from the City of Cedarburg and improve water quality.



Table 2

## Potential Water Quality Best Management (BMP) Practices for Further Consideration

BMP ID Number	Best Management Practice Description
1	Outlet Retrofit - potential to increase TSS reduction.
2	Bioretention or rain garden in green space at High School potential candidate. Could include information and education element. Dependent on adjacent sewer depth and has potential to be impacted by bedrock.
4	Forebay - potential wet forebay may be better alternative to a wet detention pond given land availability.
6	Forebay - potential wet forebay area appears more probably than a wet detention pond.
7	Forebay - potential forebay/sediment trap and ditch stabilization project is more likely than wet detention pond and would require coordination with WDNR for wetland and other permit considerations.
14	Sub-surface Sedimentation - Install one on each of the small storm sewer systems / outfalls discharging into Cedar Creek (up to 10 outfalls)
15	Sub-surface Sedimentation - Install one on each of the small storm sewer systems / outfalls discharging into Cedar Creek (up to 7 outfalls)
16	Sub-surface Sedimentation - Install one on each of the small storm sewer systems / outfalls discharging into Cedar Creek (up to 8 outfalls)
17	Forebay - potential forebay area appears more probable than a wet detention pond. Adjacent to creek and may have floodplain impacts.
18	Sub-surface Sedimentation - Install in cul-de-sac island
19	Sub-surface Sedimentation - Install in green space between road and path
20	Forebay - potential forebay area appears more probably than a wet detention pond.

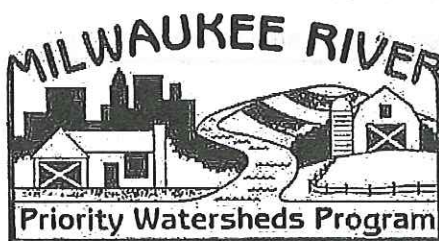
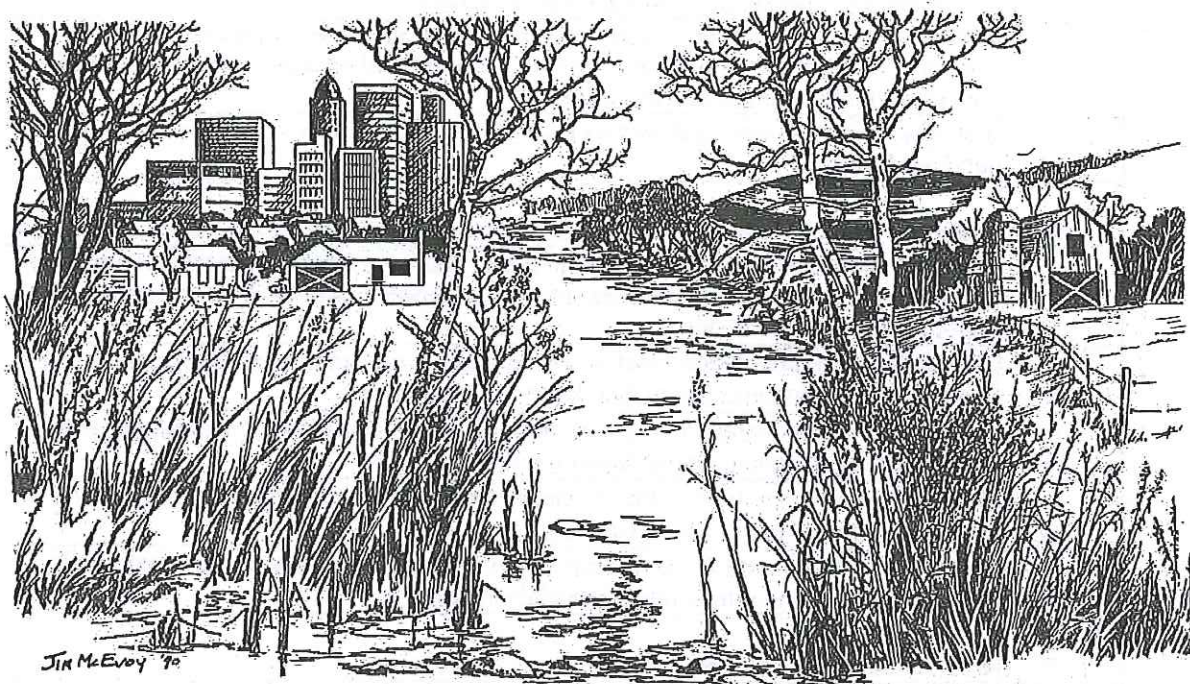
— River edge with  
connected to CSB  
Sump

Ditch way - CSB  
Ditch stabilization

Station - CSB + 8" Shrub +  
2' Sump

- Grout

# A Nonpoint Source Control Plan For The Milwaukee River South Priority Watershed Project



Prepared by  
The Wisconsin Department of Natural Resources and  
Department of Agriculture, Trade, and Consumer Protection  
In Cooperation With The  
Ozaukee County Land Conservation Department  
And The Milwaukee River South Advisory Subcommittee



ordinance modification, and ordinance administration/enforcement is also presented in Chapter VI.

### SPECIFIC NEEDS OF LOCAL GOVERNMENTS:

- \* Ozaukee County and Milwaukee County. These governments need to: develop ordinances that cover unincorporated areas of each county; identify and fulfill staffing and training needs for ordinance administration and enforcement; and effectively administer and enforce ordinance provisions. Alternatively, such coverage in Ozaukee County could be provided by the towns of Fredonia, Saukville, Port Washington, Cedarburg, and Grafton, either in cooperation with Ozaukee County or as freestanding programs.
- \* The villages of Brown Deer, Fox Point, Fredonia, River Hills, Bayside, Grafton, Shorewood, Whitefish Bay; the city of Mequon. These governments need to: develop ordinance provisions; identify and fulfill staffing and training needs for ordinance administration and enforcement; and effectively administer and enforce ordinance provisions.
- \* Village of Thiensville. The village needs to: review existing ordinance with DNR to determine need for revisions; identify and fulfill staffing and training needs for ordinance administration and enforcement; and effectively administer and enforce ordinance provisions.
- \* Cities of Cedarburg, Glendale, Milwaukee, village of Saukville. These governments need to: identify and fulfill staffing and training needs for administration and enforcement of their existing ordinances; and effectively administer and enforce ordinance provisions.

**Established Urban Area Element-Existing Areas:** The control program for existing urban areas is driven by the pollution reduction goals for urban toxic materials, as indicated by lead and other heavy metals. Sediment control will come primarily from the construction erosion control efforts.

**General Requirements.** The long-term management goal for all subwatersheds is to achieve a high level of control for existing critical land uses. A level of control equivalent to providing wet detention for 100 percent of the existing critical land uses is required as part of the control program for established urban areas. Infiltration should be considered as an alternative to wet detention where conditions are suitable for providing an equivalent level of control and where the conditions for groundwater protection can be met. Infiltration basins or trenches may be used following wet detention where needed to provide groundwater recharge and base flow enhancement. In the Haneman Lake Subwatershed, wet detention should not be used by itself. To protect base flows and stream temperatures in Mole Creek, infiltration should be used wherever possible. Wet detention, when used, should be followed by infiltration.

A combination of increased street sweeping and detention may be used as a stepping stone to achieving the significant level of detention required. As



Table 5-19. Recommended urban best management practices for existing urban areas, Milwaukee River South Watershed(1).

Community	Management Plans(acs)(2)	Wet Detention(3)		Street Sweeping (curb mf/yr)(4.)
		Pond Area (acres)	Total Area (acres)	
OZAUKEE COUNTY				
V. of Fredonia	90 to 380	0.5 to 1.1	1.1 to 2.2	60
V. of Saukville	110 to 630	0.8 to 1.2	1.6 to 2.4	110
V. of Grafton	580 to 1,490	4.3 to 8.6	8.6 to 17.2	100
C. of Cedarburg	170 to 460	1.4 to 2.8	2.8 to 5.6	340
V. of Thiensville	90 to 740	0.7 to 1.4	1.4 to 2.8	800
C. of Mequon	1,200 to 6,300	9.5 to 19.1	19.1 to 38.2	350
Unincorporated Areas	" " "	1.8 to 3.8	3.6 to 7.6	450
MILWAUKEE COUNTY				
V. of Brown Deer	610 to 2,500	5.0 to 10.0	10.0 to 20.0	1,160
V. of River Hills	50 to 1,240	1.6 to 3.1	3.2 to 6.2	350
V. of Bayside	150 to 220	0.9 to 1.5	1.8 to 3.0	350
V. of Fox Point	550 to 1,030	2.5 to 4.7	5.0 to 9.4	1,200
C. of Glendale	1,470 to 3,710	10.9 to 20.2	21.8 to 40.2	2,150
V. of Whitefish Bay	380 to 430	1.4 to 2.8	2.8 to 5.6	
V. of Shorewood	340 to 460	1.3 to 2.6	2.6 to 5.2	470
C. of Milwaukee	10,240 to 15,120	45.9 to 91.5	91.8 to 183.0	13,900
WATERSHED TOTAL	16,030 to 34,710	88.6 to 174.4	177.2 to 348.8	21,790

(1) Infiltration may be feasible in some areas as an alternative or addition to detention.

(2) Low end of range includes only critical acres, high end represents all urban land uses.

(3) Low end of range is sufficient to detain runoff from 50% of critical urban land use.

High end of range is sufficient to detain runoff from 100% of critical urban land use.

Pond area is surface area of wet pond needed to trap 5 micron particle size.

Total area includes pond surface and surrounding land required to contain the pond.

Source: Wisconsin Department of Natural Resources.

## Appendix B-4

### Government Responsibility Resolution

**RESOLUTION 2015-08  
CITY OF CEDARBURG**

**GOVERNMENTAL RESPONSIBILITY RESOLUTION  
FOR RUNOFF MANAGEMENT GRANTS**

WHEREAS, the City of Cedarburg is interested in acquiring a Grant from the Wisconsin Department of Natural Resources for the purpose of implementing measures to control urban stormwater runoff pollution sources (as described in the application and pursuant to ss. 281.65 or 281.66, Wis. Stats., and chs. NR 151, 153 and 155); and

WHEREAS, a cost-sharing grant is required to carry out the project:

THEREFORE, BE IT RESOLVED, that the City of Cedarburg Common Council

HEREBY AUTHORIZES Thomas Wiza, Director of Engineering and Public Works to act on

behalf of the City of Cedarburg to:

Submit and sign an application to the State of Wisconsin Department of Natural Resources for any financial aid that may be available;

Sign a grant agreement between the local government (applicant) and the Department of Natural Resources;

Submit reimbursement claims along with necessary supporting documentation;

Submit signed documents; and

Take necessary action to undertake, direct and complete the approved project.

BE IT FURTHER RESOLVED that the City of Cedarburg shall comply with all state and federal laws, regulations and permit requirements pertaining to implementation of this project and to fulfillment of the grant document provisions.

Adopted this 30<sup>th</sup> day of March, 2015.

  
Kip Kinzel, Mayor

I hereby certify that the foregoing resolution was duly adopted by the City of Cedarburg Common Council at a legal meeting on 30<sup>th</sup> day of March, 2015.

Authorized Signature: Constance K. McKinley Title: City Clerk