THE CITY OF Fitchburg
PUBLIC WORKS

Letter of Transmittal

Public Works Department
City Hall, 5520 Lacy Road, Fitchburg, Wisconsin 53711
Ph: 608.270.4260 | Fx: 608.270.4275 | fitchburgwi.gov

TO: **Department of Natural Resources**
Runoff Management Section-WT/3
101 South Webster Street
Madison, WI 53703

DATE: **April 15, 2015**

SUBJECT: **Fitchburg's UNPS&SW Construction Grant Application for Lacy Heights Bioretention Facility**

No.	Date	Description
1	4-15-15	One hard copy of the completed application form with original signature in blue ink plus all attachments.
2	4-15-15	Three additional hard copies of the completed, signed application form plus all attachments.
3	4-15-15	One electronic copy of the completed application form in PDF format plus all attachments and maps on CD.

Sent to you for the following reasons:

X	For Approval		Review Completed		Revise and Resubmit
	For Your Use		Not Reviewed		Returned
	For Review and Comment		For Signature		

Remarks:

Attached is Fitchburg's Urban Nonpoint Source & Storm Water (UNPS&SW) Program Construction Grant Application for the Lacy Heights Bioretention Facility Project.

Please feel free to contact Rick Eilertson at 608-270-4264 or rick.eilertson@fitchburgwi.gov if you have any questions.

Sincerely,

Signed: _____
Rick Eilertson, P.E., Environmental Engineer

ec: Cory Horton, Director of Public Works/City Engineer
Felipe Avila, GIS Engineering Specialist
Ian Hansen, Stormwater/Utility Engineering Intern

State of Wisconsin
Runoff Management Section-WT/3
Department of Natural Resources
101 South Webster Street
Madison, WI 53703 **or**
P.O. Box 7921
Madison Wi 53707-7921

Urban Nonpoint Source & Storm Water (UNPS&SW)Program Construction Grant Application

Form 8700-299 (R 3/15)

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: Lacy Heights Bioretention Facility

Applicant (governmental unit applying; name and type, e.g. Madison, City of): Fitchburg, City of

Name of Government Official - Authorized Signatory (First Last)	Name of Government Official - Grant Contact Person (First Last)
Cory Horton, P.E.	Rick Eilertson, P.E.
Title: City Engineer/Director of Public Works	Title: Environmental Engineer
Area Code + Phone Number: (608) 270-4261	Area Code + Phone Number: (608) 270-4264
E-Mail Address: cory.horton@fitchburgwi.gov	E-Mail Address: rick.eilertson@fitchburgwi.gov
Mailing Address - Street or PO Box: 5520 Lacy Road	Mailing Address - Street or PO Box: 5520 Lacy Road
City: Fitchburg; State: WI; ZIP Code: 53711	City: Fitchburg; State: WI; ZIP Code: 53711

Project Information

A. Location of Project

See Attachment A and Surface Water Data Viewer (SWDV) at http://dnrmaps.wi.gov/SL/?Viewer=SWDV for assistance in completing this question.

County: Dane

State Senate District number: 16

State Assembly District number: 47

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)
Fitchburg, City of	06 N	9	E	8	NE	SE	43.0061	-89.4471
	N							
	N							

Method for Determining Latitude & Longitude (check one)

○ GPS ● DNR Surface Water Data Viewer

○ Other (specify):

B. Project Summary and Description. Use this space for the project summary and description, not an attachment. Mention every BMP & activity for which funding is requested.

The 0.30 acre Lacy Heights Dry Pond, which provides stormwater detention for the Lacy Heights neighborhood, will be converted into a bioretention facility in order to increase pollutant removal efficiency and improve the vegetative conditions. This improved efficiency will decrease the amount of total phosphorus (TP) and total suspended solids (TSS) transported to nearby Nine Springs Creek, which is an impaired 303(d) waterway.

C. Watershed, Waterbody, and Pollutants See Attachment A and Surface Water Data Viewer (SWDV) at: http://dnrmaps.wi.gov/SL/?Viewer=SWDV for assistance in completing this question.
(For example: Watershed Name: Oconomowoc River; Watershed Code: UR09; Primary Waterbody Name: Oconomowoc River; Nearest Water body: Flynn Creek.)
Note: If the project is in more than one watershed, submit a separate application for each watershed, unless this application is for a high-efficiency street sweeper.

Watershed Name	Watershed Code	Primary Waterbody Name	Nearest Waterbody Name
Yahara River & Lake Monona	LR08	Nine Springs Creek	Nine Springs Creek

12-digit Hydrologic Unit Code (HUC): 070900020702

Nonpoint Source Pollutant(s) Controlled by the Project
☒ Nutrients ☒ Sediment ☐ Other, specify:

D. Pro-Rating for Existing versus New Development

☒ Check this box if the project will serve existing development only. *Existing means in existence on or before October 1, 2004.* If not, provide attachments and the following:

100% Percentage of design volume from *existing* development. The default is 100%. Please change the percentage as necessary.

E. Endangered and Threatened Resources, Historic Places and Properties and Wetlands
Check the appropriate box for each question based on what the governmental unit knows to occur where the project disturbs land:

☒ 1. There are endangered or threatened resources as identified in s. 29.604, Wis. Stats., and ch. NR 27 in the project area. (Refer to http://dnr.wi.gov/topic/erreview/publicportal.html?tm_source=featureimage&utm_medium=homepage&utm_campaign=20140929_nhiportal for assistance.)

☐ 2. There are archaeological sites, historical structures, burial sites, or other historic places identified in s. 44.45, Wis. Stats., in the project area.

☐ 3. There are wetlands in the project area that are governed by water quality standard provisions of ch. NR 103. (Answer with the SWDV map layer **Wetland Indicators** at http://dnrmaps.wi.gov/SL/Viewer.html?Viewer=SWDV&runWorkflow=Wetland)

F. Alternative Funding Possibilities

☐ Check this box if applicant requests that the DNR also submit a copy of this application to the Clean Water Fund Program or the Small Loan Program.

G. Environmental Hazards Assessment

☒ Check this box if this project includes excavation or purchase of land or easement.

☒ Check this box If a completed copy of the Environmental Hazards Assessment Form (required for a project that includes excavation or the purchase of land or an easement) is attached to this application. (See Attachment H and http://dnr.wi.gov/files/pdf/forms/1800/1800-001.pdf)
If this is a project that includes excavation or the purchase of land or an easement, consult the Bureau of Remediation and Redevelopment (R&R) Site Map and answer the following questions using a map scale of 1:8529 or larger.

☐ 1. There is one or more open (ongoing cleanup) R&R sites on the same property where the excavation is planned.

☐ 2. There is one or more closed (completed cleanup) R&R sites on the same property where the excavation is planned.

☐ 3. There is one or more open (ongoing cleanup) R&R site on an adjacent property.

☐ 4. There is one or more closed (completed cleanup) R&R site on an adjacent property.

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 and locations of proposed Best Management Practices (BMPs), 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 questions 9 through 14, if applicable. Applicants who answer "Yes" to Question 11 must check a, b, or c for Question 11.

Yes

☒ 1. Project is in an urban area as identified in Attachment B.

☒ 2. Project will be completed within 24 months of the start of the grant period.

☒ 3. Staff and contractors 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. Best management practices constructed under this grant will not work at cross-purposes to and are consistent with non-agricultural performance standards under ch. NR 151 (see Attachments C & 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
Wendy Peich & Eric Rortvedt	03/02/2015	DNR Water Resources Quarterly Meeting
Mike Gilbertson	04/08/2015	Phone Call and Email (Subject: Fitchburg UNPS Grant Applications)

☒ 7. Construction Ordinance: Local regulations are in place to administer and enforce construction erosion controls in the governmental unit consistent with the non-agricultural performance standards in s. NR 151.11.

☒ 8. Post-Construction Ordinance: Local regulations are in place to administer and enforce post-construction runoff from areas of new development and re-development in the governmental unit consistent with the non-agricultural performance standards in s. NR 151.12.

☒ 9. Navigable Waters Determination: If this project will install an urban storm water treatment practice, the applicant has determined that the practice will not be located in any intermittent or perennial waterway shown on a map from the DNR's Surface Water Data Viewer identified below.

☒ Check the box to indicate the Surface Water Data Viewer Map, 24K Hydro Layer at http://dnrmaps.wi.gov/SL/?Viewer=SWDV map has been consulted

☒ 10. Wetlands Determinations:

a. ☒ Mapped Wetlands: Check the box if the applicant has consulted the Wisconsin Wetlands Inventory at http://dnrmaps.wi.gov/SL/Viewer.html?Viewer=SWDV&runWorkflow=Wetland and has determined that the practice will not be located in a mapped wetland.

b. ☒ Potential Wetlands: Check the box if the applicant has consulted the Wisconsin Wetland Indicators map at http://dnrmaps.wi.gov/SL/Viewer.html?Viewer=SWDV&runWorkflow=Wetland and has determined either of the following:

☒ i. There is no wetland potential at the site, **or**

☐ ii. A wetland delineation completed by a qualified person shows the BMP will not encroach upon a wetland. Provide the name and phone number of the wetland delineator. Provide a copy of the wetland delineation report.

Name:	Phone Number:

☒ 11. This is a proposed urban project which requires that the applicant have control of the property. If "Yes," please check the applicable statement below:

◉ a. The applicant is stating that it currently owns the property or has control of the property through an easement or a construction and maintenance agreement.

○ b. The applicant has attached documentation to this application that states that the current owner of the property is willing to enter into a construction and maintenance agreement with the grant applicant prior to the award of the grant.

○ c. The applicant proposes purchasing the property (fee title) or an interest in the property (easement), and the applicant has attached documentation (*e.g.,* option to purchase or offer to purchase) that the sale will be completed prior to the award of the grant.

☒ 12. Applicant declares that *one* of the two statements below is **TRUE**. Please check the box to indicate that the statement is true.

◉ a. The applicant is not the University of Wisconsin Board of Regents.

○ 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 applicant is required to obtain a permit under subchapter I. of 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.

☐ 13. This application is a joint application among local units of government, and a DRAFT Inter-Governmental Agreement is attached (see Attachment I).

☒ 14. This applicant currently has existing Runoff Management grant(s), and the applicant hereby certifies that all such grant projects shall be completed within the applicable grant period for each.

C. Best Management Practices (BMPs) for Which Funding is Requested (check all that apply):
Eligible best management practices must be consistent with available storm water post-construction technical standards at: http://dnr.wi.gov/topic/stormwater/standards/postconst_standards.html. Include preliminary/conceptual designs and details sufficient to determine effectiveness of the practices.
Note. Storm water treatment practices on navigable waters or in wetlands, which includes non-navigable waters, are *not* eligible for funding under this program.

☒ Bioretention for Infiltration
☐ Infiltration Basin
☐ Infiltration Trench
☐ Vegetated Infiltration Swale
☐ Permeable Pavement

☐ Grassed Swale
☐ Vegetated Filter Strip
☐ Filtration Device
☐ Proprietary Filtration Device

☐ Wet Detention Pond
☐ Proprietary Storm Water Sedimentation Device
☐ Constructed Wetland Basin
☐ Other Structural Urban Best Management Practice

_____

☐ Shoreline Habitat Restoration for Developed Area NR 154.04(29)
Specify below:

_____

Activities necessary to implement BMP(s) above:

☐ Storm Sewer Rerouting
☐ Structure Removal
☐ Groundwater Monitoring Well Installation (if required by DNR)

☒ Engineering for BMP(s) above
☐ Land Acquisition for installation of BMP(s) above

☐ Accelerated/High Efficiency Street Sweeper

Part II. Competitive Elements

Question 1. 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
Completion of design	11/2015	Staff Task Force (Environmental Engineer, Director of Public Works, GIS-Engineering Specialist)
Obtaining required permits	01/2016	Staff Task Force
Landowner contacts	03/2016	Environmental Engineer
Bidding		Project will be completed by Fitchburg staff, therefore no bidding
DNR approvals	01/2016	Staff Task Force
Contract signing		Project will be built by Fitchburg Staff, therefore no contract
BMP construction	08/2016	Staff Task Force
Site inspection and certification	09/2016	Staff Task Force
Project evaluation	04/2017	Staff Task Force
Purchase street sweeper		
Other (specify)		

B.1. Financial Budget Table
Provide a detailed budget for each of the proposed BMPs for the project in the space available, not an attachment. The state share may not exceed 50% of eligible costs. The grant amount is capped at $150,000 for the installation of eligible BMPs and a maximum of $50,000 for property acquisition.

A List detailed construction components of the BMP activities for which DNR funding is requested.	B Estimated Total Cost ($)	C Amount Eligible for DNR Cost Sharing ($)
Clearing and Grubbing Existing Trees, Shrubs, and Stumps	1,350	1,350
Erosion Control (Rock weeper, silt sock, stone access, etc.)	2,250	2,250
Topsoil Stripping and Stockpiling	1,050	1,050
Rough Grading - Earthwork	4,000	4,000
Removal and Disposal of Excess Soil	5,000	5,000
Topsoil Placement and Preparation	750	750
Native Seeding, Turf Seeding, and Erosion Mat	2,600	2,600
Native Vegetation Maintenance (2016-2017)	1,500	1,500

1. Construction Subtotal	18,500	18,500
2. Design, Construction Management and Inspection	6,100	6,100
3. Storm Sewer Reroute	1,700	1,700
4. Structure Removal		
5. Subtotal: (add rows 1 through 4)	26,300	26,300
6. Property Acquisition (Fee Title & Easement see Attachment F for requirements)		
7. Grand Total: (add rows 5 and 6)	26,300	26,300

B.1. (continued) Cost Sharing Worksheet

Eligible Costs:	Prorate %	Cost-Share %	
8. Construction and Design (Row 5 * Prorate * Cost-share %)	100 %	50 %	$ 13,150
9. Property Acquisition: (Row 6 * Prorate * Cost-share %)	100 %	50 %	$

Cap Test:	
10. Construction and Design (Row 8 or $150,000, whichever is less)	$ 13,150
11. Property Acquisition (Row 9 or $50,000, whichever is less)	$
12. Maximum State Share (sum of Rows 10 + 11)	$ 13,150
State and Local Share:	
13. Requested State Share Amount (Enter Requested Grant Amount)	$ 10,520
14. Local Share Amount (Row 7, Column B, less Row 13)]	$ 15,780

B.2. Use of Additional Funding

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

- The requested state-share amount in row 13 is less than the $150,000 grant cap or $200,000 cap if the project includes property acquisition.
- The requested state-share amount in row 13 is below the maximum state-share in row 12. (The resulting cost-share rate is less than 50%.)

Identify the Local Share Source(s)

City of Fitchburg Stormwater Utility

B. 3. Method used to Calculate Cost Estimates: Check the appropriate box. Attach design, bid, estimate documentation, as applicable.

○ 1. Project costs are based on completed design and competitive bid on the project. Construction components and costs above in B.1. should be detailed. Provide documentation attached to this application.

○ 2. Project costs are based on completed design with materials and labor costs based on similar, recently bid projects. Construction components above in B.1. should be detailed. Provide documentation in this application.

◉ 3. Project design is not complete; however, the proposed project and costs are based on similar and recent projects and costs. Provide as much construction detail above in B.1. as possible. Provide documentation for this method in this application

○ 4. Project design is not complete and the cost estimate is based on an average or a range of projects and costs. Provide as much construction detail above as possible. Provide documentation for this method in this application.

○ 5. Project and costs are less specific than choices above. Provide an explanation for cost estimates attached to this application.

C. Cost-Effectiveness. Please provide narrative answers to Parts C.1. and C.2. You are advised to answer Part C.3., though you are not required to do so.

1. Describe the environmental benefits this project will achieve.

Converting the existing Lacy Heights Dry Pond into a bioretention facility will increase the pollutant removal efficiency and decrease the amount of phosphorus and suspended solids entering Nine Springs Creek. Removing the invasive species and replacing with native vegetation will provide an aesthetically pleasing environment for residents in the area as well as improve habitat quality for plants and wildlife. The City of Fitchburg intends to construct a sign indicating that the facility is a Fitchburg stormwater facility. These signs, which can be found near many Fitchburg stormwater facilities, increase community environmental awareness and provide various environment benefits such as increased utilization of rain barrels and preventing illicit discharges.

2. Describe why the proposed management measures are reasonable means to attain the project benefits based upon such factors as cost, effectiveness, site feasibility, available technical standards, and practicality.

Cost: Costs are lower for this project because the land is already owned by the City of Fitchburg and the facility will be designed and constructed in house, using City of Fitchburg staff. The City of Fitchburg maintenance facility contains a stockpile of sand and compost, which will allow the City to save money on engineered soil for the bioretention facility. Native vegetation costs are reduced through the Plant Dane! Cost-Share Program.

Effectiveness: The Lacy Heights Bioretention Facility will provide greater infiltration and be more effective at reducing pollutants than the existing dry pond. The existing TSS load for this site is 8371 lbs/year. By converting to a bioretention facility, WinSLAMM estimates 1960 lbs/year of TSS can be trapped providing a 23% greater reduction than the existing dry pond.

Site Feasibility: The project site location is currently utilized for stormwater detention as a dry pond, so there is no change in how the land will be used. The project site is already owned by the City of Fitchburg, so no land acquisition is needed. The nearest waterbody is Nine Springs Creek, which is an impaired 303(d) waterway. By implementing this BMP within a close proximity of an impaired waterway, the City of Fitchburg reduces the volume of stormwater and pollutants from the contributing drainage that would otherwise flow to Nine Springs Creek.

Available Technical Standards: DNR's technical standards for bioretention facilities (1004) will be utilized in the design and construction of this project. The City of Fitchburg has developed its own standards and recommendations for native seeding and maintenance of its bioretention facilities.

Practicality: The Fitchburg's Stormwater Utility has funds budgeted to carry out this project. The City of Fitchburg performed a nearly identical project in 2014 by converting the Pine Ridge Dry Pond into a bioretention facility. The Pine Ridge Project was also designed and constructed in house, using only City of Fitchburg staff. Based off of past successes with similar projects, it is practical that this project can be carried out.

3. If you evaluated one or more alternative management measures, describe why the alternative(s) is not being recommended.

Option 1: Do Nothing - The City of Fitchburg has the option to not go forward with this project. This option does nothing to help improve the water quality of the impaired Nine Springs Creek, vegetative conditions of the current stormwater facility, or provide a demonstration of Fitchburg's commitment to protecting water quality.

Question 2. Project Evaluation Strategy

A. Modeling and Measures of Change

Pre- and post-project evaluation measures used to ensure success in meeting project goals.

The applicant *must* agree to provide a description of the modeled results or changes in pollution potential in the final project report submitted for the project, and will provide their modeling and analysis to the storm water permit specialist responsible for their community. The project evaluation strategy will be based on comparing pre- and post-project changes in modeled pollutant loading to water resources or will be based on the quantity of units managed.

Check all that apply in the table below.

	Priority for Developed Urban Area		Units of Measure	Recommended Measurement Method
☒ 1.	20-40% Reduction in Total Suspended Solids (TSS)	a.	Pounds TSS reduced	SLAMM, P-8
		b.	% TSS reduction	
☒ 2.	Infiltration	a.	% Pre-development stay-on volume	Recarga, SLAMM, P-8
		b.	Cubic feet stay-on volume	

☐ 3.	Peak Flow Discharge	a.	Change in cubic feet per second	TR-55 or equivalent
☐ 4.	Protective Areas	a.	Feet of bank protected	Count
☐ 5.	Fueling and Maintenance Areas	a.	Oily sheen presence	Visual assessment
☐ 6.	Streambank	a.	Tons of bank erosion reduced	NRCS bank erosion formula
		b.	Feet of bank protected	Count
☐ 7.	Other (specify)			

B. Water Quality Monitoring (not eligible for cost sharing at this time)
If, in addition to the above, the project evaluation strategy includes evaluating BMP effectiveness and/or pre- and post-project water resource monitoring, and the information will be provided to DNR.in the final project report, check all that apply below.

☐ 1. A one-page summary of the monitoring strategy is attached.
☐ 2. The project will evaluate the in-stream physical habitat, fisheries, biological, or chemical conditions.
☐ 3. The project will evaluate BMP pollution reduction effectiveness (e.g. inlet/outlet monitoring).
☒ 4. The applicant is willing to participate with the Department to do monitoring in the project area should funding become available.

Question 3. Evidence of Local Support
For A and B, check the applicable situation that exists at the time of application. Provide evidence of the budget and the public outreach with this application.

A. Budget

○ 1. Adopted Budget: The municipal governing body or utility board has included the Local Share cost of this project within the municipal operating budget or utility district budget.
◉ 2. Capital Budget: The municipality or utility has included this project's anticipated costs within its adopted Capital Improvement Plan.
○ 3. Proposed Budget: The Public Works Department has or will include the costs for this project within its preliminary budget proposal to be submitted to committee.
☐ Evidence of the budget situation above is attached.

B. Public Information

○ 1. The applicant has already conducted public outreach activities about the proposed project with property owners in the immediate project area.
◉ 2. This project has been discussed at a governmental meeting open to the public.
☒ Evidence of the public outreach related to this project is attached.

Question 4. Water Quality Needs (check one, A through G)
The project must be consistent with at least one of the following seven watershed priorities. Check the **one** water quality category which best identifies the water quality need(s) which the project **directly deals** with: (check **only one**)
Note: For border waters where a State of the Basin Report does not exist, another governmental document acceptable to the Regional Nonpoint Source Coordinator may be used to identify the water quality need.

Surface Water Considerations

◉ **A. Clean Water Act section 303(d) List of Impaired Waters**
A water body (lake or stream) on the latest Clean Water Act (CWA) section 303(d) List of Impaired Waters, where the cause of the water quality impairment is nonpoint source pollution ***and this project*** will reduce the type of nonpoint source pollutants for which the water is listed. (See Attachment A)

Name of Applicable Impaired Water:
Nine Springs Creek

Name of Pollutant Causing Impairment:
Total Phosphorus and Total Suspended Solids (TSS)

○ **B. Outstanding or Exceptional Resource Waters or Other Areas of Special Natural Resource Interest**
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 ASNRIs see Attachment A and go to DNR's Surface Water Data Viewer Designated Waters Theme at http://apwmad0d1600/SL/Viewer.html?Viewer=SWDV&runWorkflow=DesignatedWaters.

Name of Applicable ORW/ERW or ASNRI:

○ **C. Not Fully Supporting Uses or NPS Ranking of High or Medium**
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.

○ **D. Surface Water Quality**
Prevention of surface water quality degradation due to nonpoint sources.

Groundwater Considerations For assistance with this section, please consult the DNR District Drinking Water and Groundwater Specialist at http://dnr.wi.gov/topic/drinkingwater/documents/countycontacts.pdf or the County Extension office.

○ **E. Exceeds Groundwater Enforcement Standard**
Groundwater within the project area where representative information indicates there are levels for NPS contaminants that exceed groundwater enforcement standards.

○ **F. Exceeds Groundwater Preventive Action Limit**
Groundwater within the project area where representative information indicates there are levels for NPS contaminants that exceed groundwater preventive action limits.

○ **G. Groundwater Quality**
The project area is within a geological area defined in s. NR 151.015(18) as susceptible to groundwater contamination. (See Attachment G)

Drinking Water Bonus Points

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 municipal water supplies governed by chs. NR 809 and 811; other-than-municipal (OTM) water supplies governed by chs. NR 809 & 811; non-transient water supplies governed by chs. NR 809 and 812; and transient water supplies governed by chs. NR 809 and 812.

1. If your project will reduce nonpoint source contaminants in community or non-community public drinking water supplies and you checked box E, F, or G in the "Groundwater Considerations" section above, please choose a, b or c below and move on to Question 5. (You will need assistance from your DNR District Grant Coordinator http://dnr.wi.gov/topic/nonpoint/NPScontacts.html or Water Supply Specialist 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 OTM water supply well, or within 1,200 feet of a transient water supply well.

○ b. Check this box if the project is located within 200 feet of transient water supply well.

○ c. Check this box if **neither** a nor b applies

2. If your project will reduce nonpoint source contaminants in community or non-community public drinking water supplies and you checked box A, B, C, or D in the "Surface Water Considerations" section above, please place a check mark next to the drainage area where the project is located:(See Attachment E)

☐ Pike River and Creek
☐ Root River
☐ Oak Creek
☐ Milwaukee River
☐ Sauk Creek
☐ Sheboygan and Onion Rivers
☐ Manitowoc River
☐ Twin Rivers
☐ Kewaunee and Ahnapee Rivers
☐ Menominee River
☐ Fish Creek
☐ St. Louis and Nemadji Rivers
☐ Lake Winnebago

Question 5. Extent of Pollutant Control

A. Ch. NR 151 Performance Standard for Total Suspended Solids

☒ Check this box if this project focuses on meeting s. NR 151.13 Total Suspended Solids (TSS) Performance Standard to control TSS carried in existing urban area runoff that enters waters of the state, as part of a NR 216 municipal separate storm sewer system (MS4) permit.
Note: This does not include stream bank restoration.

B. Other Water Resources Management Priority

☐ Check this box if the proposed project addresses a water resources management priority other than the ch. NR 151 performance standard in Part A., above.
If checked, describe the priority and how the project addresses this priority.

C. Planning Data And Source Targeting

☒ Check this box if the applicant has quantitative planning information that ranks pollution sources from highest to lowest in severity *and* the proposed project will manage a pollution source contained in the top 50% of the ranked list. If "Yes," provide the following information:

1. Summary of the targeting analysis that justifies the proposed project and provides the project's ranking from that analysis.
The Lacy Heights Bioretention Project addresses the following water quality recommendations that appear in the Yahara Monona Priority Watershed Project Plan (DCRPC, 1992).
1) Reduce non-point source pollutant loadings of phosphorus and sediment by 30% to 50%
2) Reduce urban non-point source pollutant loadings of heavy metals
3) Protect and enhance the functional roles of wetlands in the Nine Springs Creek corridor

2. Name of document(s):
Yahara Monona Priority Watershed Project Plan (DCRPC)

3. Date(s) published:
February 1992

4. Pertinent page number(s):
IV, 18, 28, 29, 96, 103, 109, Plan Summary Insert

5. A copy of non-state department document(s) is available (check all that apply):

☐ At this website:

☐ Attached to this application for:

☒ Contact this person: Name: Rick Eilertson Phone (608) 270-4264

Question 6. Consistency with Resource Management Plans And Supporting Regulations

A. Consistency with Resource Management Plans

☐ Check this box if the proposed project implements 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 checked, cite the name and date(s) of publication of the document and pertinent page numbers. Provide URL or attach pertinent pages. Summarize the water quality recommendation(s) and describe how it relates to the goals of this proposed project.

B. Supporting Regulations

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

☒ 1. One or more regulations that implement the non-agricultural performance standards for developed urban areas under s. NR 151.13;

☒ 2. Other regulations designed to reduce the impact on water quality from new development, other than construction site erosion control or a storm water ordinance.

Describe the regulations indicated above in relation to the goals of this project.
Chapter 41: Unlawful Waste Disposal - Chapter 41 provides regulations related to illegal dumping of refuse and recyclables, yard waste, and brush. Fitchburg City Staff follows up on complaints of these activities and provides verbal warnings, written warnings, and/or citations.

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

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

Optional Additional Information

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

Project Information.E.1: The City of Fitchburg is not aware of any endangered resources in the project area. However, the NHI Public Portal said there were endangered resources within the project site.

Part 1.B.14: The City of Fitchburg still has a planning grant for the Nine Springs Creek Watershed Master Plan. The City has a few edits to complete in the final report based off of the December 2014 navigability determinations made by DNR.

Part 2.Q3.B.2: Documents pertains to the Nine Springs Creek Stormwater Master Plan are posted on the Fitchburg website. http://www.fitchburgwi.gov/235/Nine-Springs-Creek-Watershed-Master-Plan

Part 3.A.Page 11: Fitchburg's website and Fitchburg Update newsletters appear to be doing a good job of keeping residents, businesses, and contractors informed of Fitchburg's pollution prevention program. Participation in education and outreach activities is very good. Residents are generally complimentary on staff's response to their questions and concerns. More information can be found at http://www.fitchburgwi.gov/233/Stormwater-Discharge-Permit

Part 3.B.Page11: Fitchburg staff and contracted crews only use fertilizer with phosphorus on newly seeded turf areas. The crews limit the use of fertilizer on municipally controlled properties (e.g. established medians, athletic fields, and turf lawns around municipal buildings) to fertilizer that contains only nitrogen and potassium. Fertilizer is not used on general park and open space land. This procedure addresses pollution prevention by minimizing the amount of nutrients applied to municipally controlled properties to only those areas that the nutrients are deemed necessary. This procedure is anticipated to minimize the potential nutrient runoff of those properties.

Part 3.C.Page11: Information on this can be found on the City of Fitchburg website. http://www.fitchburgwi.gov/231/ECSWM-Requirements

Applicant Certification

A Responsible Government 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 Responsible Government Official	Date Signed
Cory Horton	4/15/2015
Name (*Please Print*)	**Title**
Cory Horton, P.E.	City Engineer/Director of Public Works

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

Submittal Directions

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

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

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

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

or

PO Box 7921
Madison WI 53707-7921

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

WISCONSIN
DEPT. OF NATURAL RESOURCES

Endangered Resources Preliminary Assessment

Created on **Wednesday, April 08, 2015**. This report is good for one year after the created date.

Results

Endangered resources are present and the species present are legally protected. **Further actions are required to ensure compliance** with Wisconsin's Endangered Species Law (s. 29.604 Wis. Stats.) and the Federal Endangered Species Act (16 USC ss 1531-43). Therefore you should request an Endangered Resources Review http://dnr.wi.gov/topic/ERReview/Review.html.

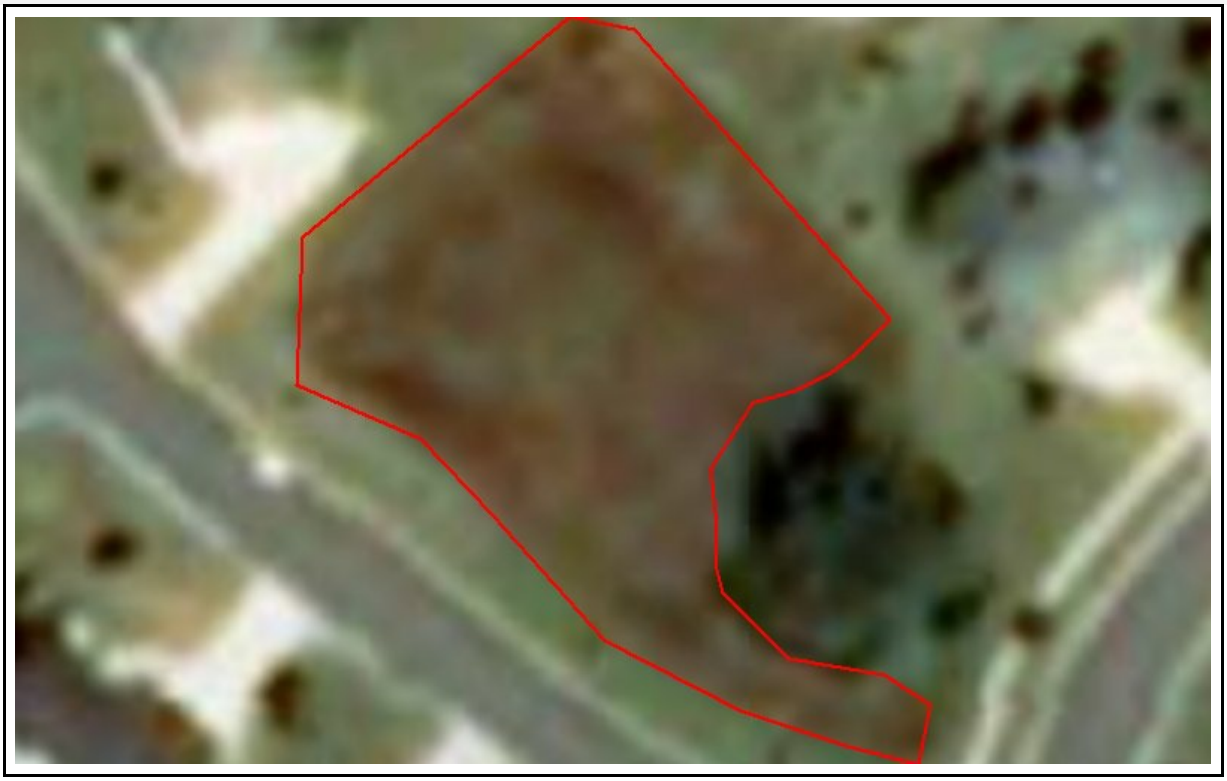
Project Information

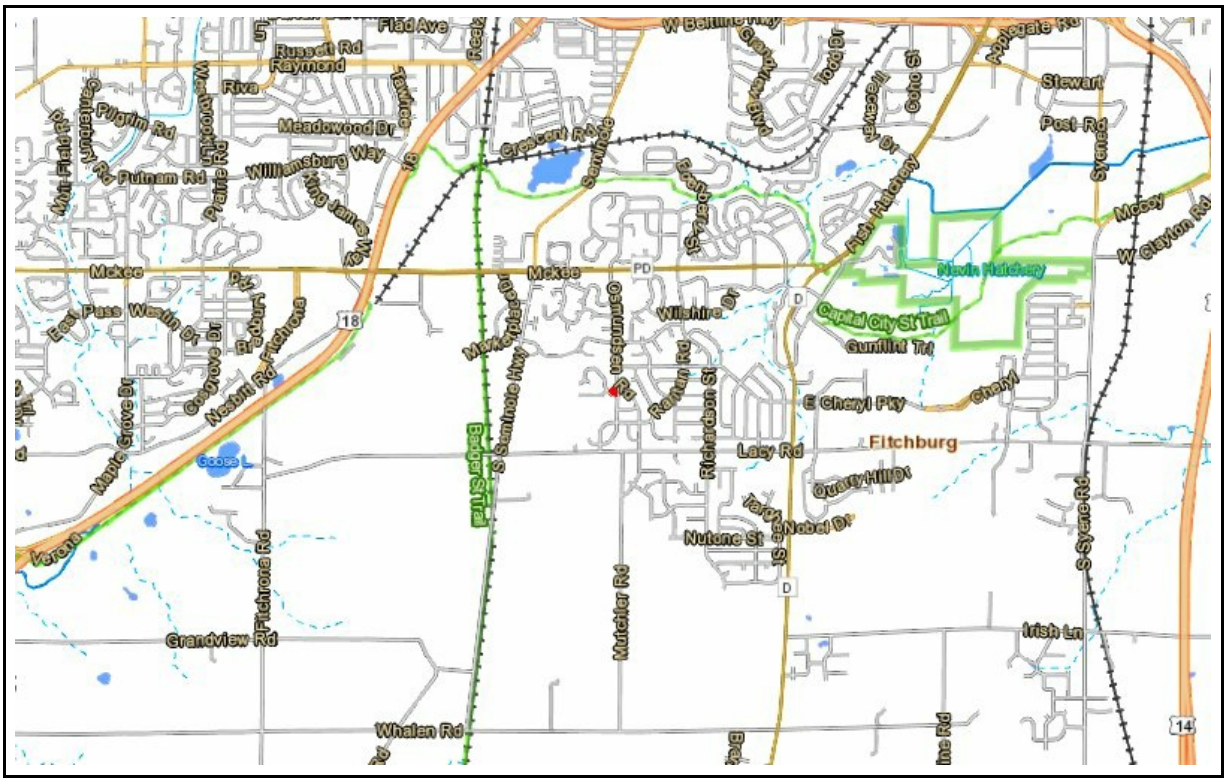
Landowner name	City of Fitchburg, WI
Project address	5824 Persimmon Drive Fitchburg, WI 53711
Project description	Converting an existing dry pond into a bioretention facility.

Project Questions

Does the project involve a public property?	Yes
Is the project on a federal property?	No
Is the project federally funded?	No
Is the project a utility, agricultural, forestry or bulk sampling (associated with mining) project?	No
Is the project property in Managed Forest Law or Managed Forest Tax Law?	No

Project Area Maps





Lacy Heights Bioretention Facility

Legend

- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled excavated pond
  - Filled/drained wetland
  - Wetland too small to delineate
- Filled Points
- Wetland Class Areas
  - Wetland
  - Upland
- Filled Areas
- NRCS Wetspots
- Wetland Indicators
- Rivers and Streams
- Open Water
- 2010 Air Photos (WROC)

Notes

Wetland Map

0.0 0 0.02 0.0 Miles

NAD_1983_HARN_Wisconsin_TM

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Instructions: Tab to each section

Environmental Hazards Assessment

Form 1800-001 (R 10/08)

Notice: This form must be completed and approved by the DNR before grant funds can be expended for land acquisition. Please complete all sections. Use additional page if necessary. Collection of this information is authorized under ss. 23.0915 - 23.0917, Wis. Stats. Failure to provide this information may result in denial or repayment of grant awards. Personal information collected on this form will be used for management of DNR programs and grants. Information may be made available to requesters under Wisconsin's Open Records laws (ss. 19.31-19.39, Wis. Stats.).

1. General Information

Applicant Name	Project / Parcel	County
City of Fitchburg, WI	Lacy Heights Bioretention Facility	Dane

Property Owner Name	Property Street Address
City of Fitchburg, WI	5824 Persimmon Drive, Fitchburg, WI 53711

Close / Intersecting Roads

Persimmon Drive and Jasmine Drive

Legal Description:	¼ / ¼	¼	Section(s)	Township		Range	E / W
	SE	NE	8	06	N	9E	

2. Environmental Condition Statement of Property

Complete the checklist to the best of your knowledge through inspection of the site. Indicate if any of the following conditions currently exist on site:

With your mouse, click on yes or no

Yes	No	
☐	☒	Known spills, release of chemicals, hazardous substances or fuels
☐	☒	Dumps, debris piles, stockpiles of waste, containers, barrels or drums
☐	☒	Sludge
☐	☒	Discolored or odorous soil
☐	☒	Areas of stressed vegetation, absence of vegetation, areas previously burned
☐	☒	Unusual or noxious odors
☐	☒	Discolored, polluted, foul water (in standing water, wells, or wetlands)
☐	☒	Is an existing well located on site? If yes, where is it located?
☐	☒	Old pipes, electrical equipment
☐	☒	Unusual or irregular depressions or mounds on surface
☐	☒	Other evidence of possible contamination – If yes, describe:

If the answer to any question above is yes:

- Attach description or explanation and site map showing location of item(s) checked.
- The property may require a Phase I or further investigation/inspection. Talk to your regional grant specialist listed in the application form.

3. Land Use History

A. Current Uses of the Property:

☐ Industrial ☐ Commercial ☐ Agriculture ☐ Orchards ☐ Railroads and Railroad Spurs ☐ Landfills

☒ Other – Explain: Residential

B. Historical Uses of the Property (for the past 20 years):

☐ Industrial ☐ Commercial ☐ Agriculture ☐ Orchards ☐ Railroads and Railroad Spurs

☐ Suspected Former Landfills ☒ Other – Explain: Residential

C. To the best of your knowledge does the property have evidence of the following?

Yes	No	
☐	☒	Has the site been used for the storage or warehousing of commercial or industrial materials?
☐	☒	Are there areas with a history or likelihood of underground storage tanks?
☐	☒	Are there monitoring wells on site?
☐	☒	Is there any history of contamination on the property?
☐	☒	Is there any history of contamination on any *adjacent* properties?

If you checked any boxes in Sections 3A or 3B above, or answered yes to any question in Section 3C, the property may require a Phase I or further investigation/inspection. Talk to your regional grant specialist listed in the application form.

4. Site Investigation Documentation

Has a Phase I or Phase II Site Investigation been completed on the property? ☐ Yes ☒ No

If yes, attach a copy of the conclusions.

5. Certification

I hereby certify that I have inspected the property and contacted the current owner regarding environmental contamination. The information provided is a full disclosure of my findings and is true and complete to the best of my knowledge.

Printed Name of Preparer	Title
Rick Eilertson, P.E.	Environmental Engineer
Signature of Preparer	**Date Signed**
[signature]	4-15-2015

If you are submitting this form as a condition of a Nonpoint Targeted Runoff Management or Nonpoint Urban Storm Water–Construction grant, please also indicate the following:

Printed Name of Authorized Representative	Title
Cory Horton, P.E.	City Engineer/Director of Public Works
Signature of Authorized Representative	**Date Signed**
[signature]	4/15/2015

Leave Blank – DNR Use Only

6. Search of DNR Records

A. Does the property appear on the most recent version of the Bureau of Remediation and Redevelopment Tracking System (BRRTS)? ☐ Yes ☐ No

If Yes, Site Name: _____ BRRTS Activity #: _____

B. Does the property appear on the most recent version of the DNR Registry of Waste Disposal Sites in Wisconsin? ☐ Yes ☐ No

If Yes, Site Name: _____

C. Does the property appear on the most recent version of the Solid and Hazardous Waste Information Management System (SHWIMS)? ☐ Yes ☐ No

If Yes, Site Name: _____

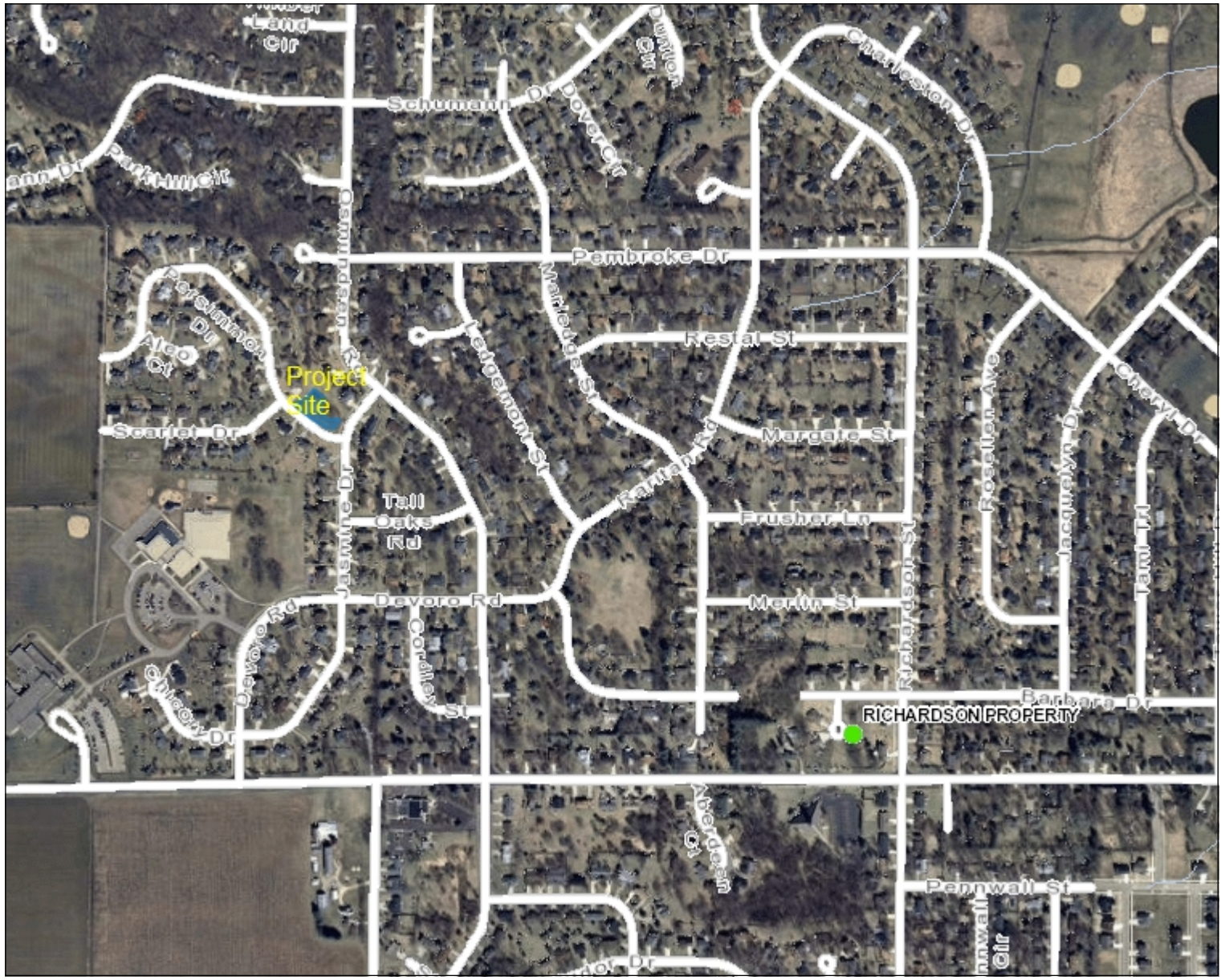
7. Conclusions

☐ Based on the information available in DNR's Regional files at this time, no additional investigation recommended.

☐ Further Investigation Needed; Consult with Region R&R Program for Recommendation

Printed Name of DNR Reviewer	Title
Signature of DNR Reviewer	**Date Signed**

Bureau of Remediation and Redevelopment (R&R) Site Map



Legend

- Open Site (ongoing cleanup)
- Open Site Boundary
- Closed Site (completed cleanup)
- Closed Site Boundary
- Groundwater Contamination
- Soil Contamination
- Groundwater and Soil Contamination
- Contamination From Another Property
- Dryclean Environmental Response Fund (DERF)
- DERF Site Boundary
- Green Space Grant (2004-2009)
- Green Space Grant Site Boundary
- Ready for Reuse
- Ready for Reuse Site Boundary
- Site Assessment Grant (2001-2009)
- SAG Site Boundary
- State Funded Response
- State Funded Response Boundary
- Sustainable Urban Development Zone (S
- SUDZ Site Boundary
- General Liability Clarification Letters
- General Liability Clarification Letter Site Boundary
- Superfund NPL
- Superfund NPL Site Boundary
- Voluntary Party Liability Exemption

0.3 0 0.13 0.3 Miles

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1: 8,529

Note: Not all sites are mapped.

Notes

Lacy Heights Bioretention Facility

Lacy Heights Bioretention Facility

Legend

- Rivers and Streams
- Open Water
- 2010 Air Photos (WROC)

Notes

Converting an existing dry pond to a rain garden

0.0 0 0.02 0.0 Miles

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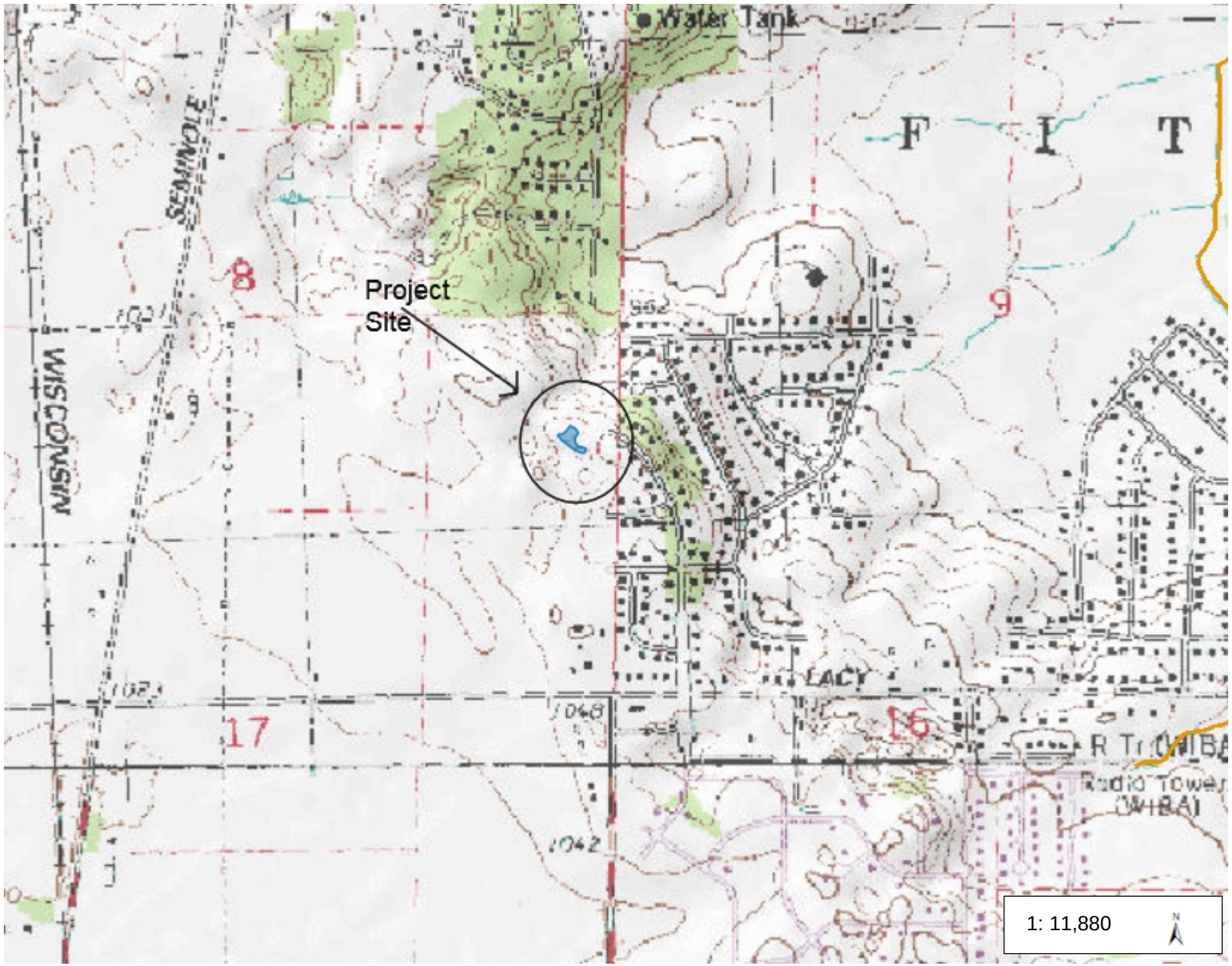
Lacy Heights Bioretention Facility Topographic Map



Legend

- PRF Sensitive Areas of Lakes
- PRF Other Public Rights Featu
- ASNRI Wild and Scenic Rivers
- ASNRI Outstanding and Excep
- ASNRI Trout Streams
- ASNRI Wild Rice Streams
- ASNRI Quality Wetland Strean
- ASNRI Endangered Threatene Concern Streams
- ASNRI Outstanding and Excep
- ASNRI Quality Wetland Areas
- ASNRI Wild Rice Areas
- ASNRI Trout Spring Ponds
- ASNRI Endangered Threatene Concern Areas
- ASNRI State Natural Areas
- PNW Musky Streams
- PNW Sturgeon Streams
- PNW Musky Areas
- PNW Sturgeon Areas
- PNW Walleye Areas
- PNW Lakes Less Than 50 Acr

Notes

0.4 0 0.19 0.4 Miles

NAD_1983_HARN_Wisconsin_TM

Ian Hansen

From: Rick Eilertson
Sent: Wednesday, April 08, 2015 4:43 PM
To: Cory Horton; Ian Hansen; Felipe Avila
Subject: Fwd: Fitchburg 2015 UNPS&SW grant applications
Attachments: image001.png

Fyi on grant eligibility...

Sent from my iPhone

Begin forwarded message:

> **From:** "Rortvedt, Eric - DNR" <Eric.Rortvedt@wisconsin.gov>
> **Date:** April 8, 2015 at 4:17:44 PM CDT
> **To:** Rick Eilertson <Rick.Eilertson@fitchburgwi.gov>
> **Cc:** "Gilbertson, Mike - DNR" <Mike.Gilbertson@wisconsin.gov>, "Talbot, Linda M - DNR" <Linda.Talbot@wisconsin.gov>
> **Subject: RE: Fitchburg 2015 UNPS&SW grant applications**
>
> Rick,
>
> I believe that I did indicate to you in our March 2, 2015 meeting that I thought the McKee Farms Northwest Pond would be eligible for a NPSSW grant as it was given such grant in the past and it is on an intermittent navigable waterway which is eligible for stormwater treatment credit under s. NR 151.003 (2)(d), Wis. Adm. Code. I was incorrect. Sorry I did not confirm this issue earlier.
>
> The 2015 UNPS&SW construction grant application has screening questions for grant eligibility. On page 3, question B.9. the applicant must be able to check the box which requires that the storm water treatment facility not be on an intermittent or perennial waterway as shown on the DNR surface water data viewer. Both the Shuman Greenway and the McKee Farms NW Pond are on an intermittent navigable waterway which is identified on the DNR surface water data viewer.
> UNPS&SW grant application information: http://dnr.wi.gov/Aid/UrbanNonpoint.html
>
> Note: I contacted Linda Talbot, UNPS&W grant coordinator, and she confirmed that even though we may have given this storm water pond a grant in the past, it is currently not eligible for funding if it cannot pass the screening questions.
>
> Eric S. Rortvedt, P.E.
> Phone: (608) 273-5612
>
> ---
>
> **From:** Rick Eilertson [mailto:Rick.Eilertson@fitchburgwi.gov]
> **Sent:** Wednesday, April 08, 2015 12:59 PM
> **To:** Gilbertson, Mike - DNR
> **Cc:** Rortvedt, Eric - DNR
> **Subject:** Fitchburg 2015 UNPS&SW grant applications
>
> Hi Mike,

Thanks for going over the 2 UNPS&SW grant application projects that Fitchburg is planning to submit with me and Ian this morning. I'm attaching maps for both of the following projects:

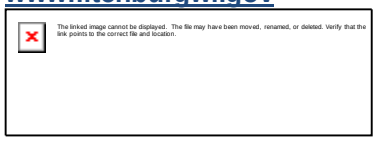
1. Schumann Greenway Restoration & McKee Farms Northwest Pond Enlargement, and
2. Lacy Heights Conversion from Dry Pond to Bioretention Facility

Eric agreed to doublecheck the UNPS&SW grant eligibility for the Schumann Greenway Restoration and McKee Farms NW Pond Enlargement project. My recollection of the past meetings I've had with DNR staff is that the Schumann Greenway Restoration itself would not be grant eligible since it has recently been determined to be navigable; however, that the McKee Farms NW Pond Enlargement Project would be grant eligible.

Please feel free to let me or Ian if you have any questions.

Thank you,

Rick Eilertson
Environmental Engineer
City of Fitchburg, Public Works
608-270-4264
rick.eilertson@fitchburgwi.gov
www.fitchburgwi.gov



From: Gilbertson, Mike - DNR [mailto:Mike.Gilbertson@wisconsin.gov]
Sent: Monday, April 14, 2014 9:06 AM
To: Rick Eilertson
Subject: Fitchburg UNPS grant applications

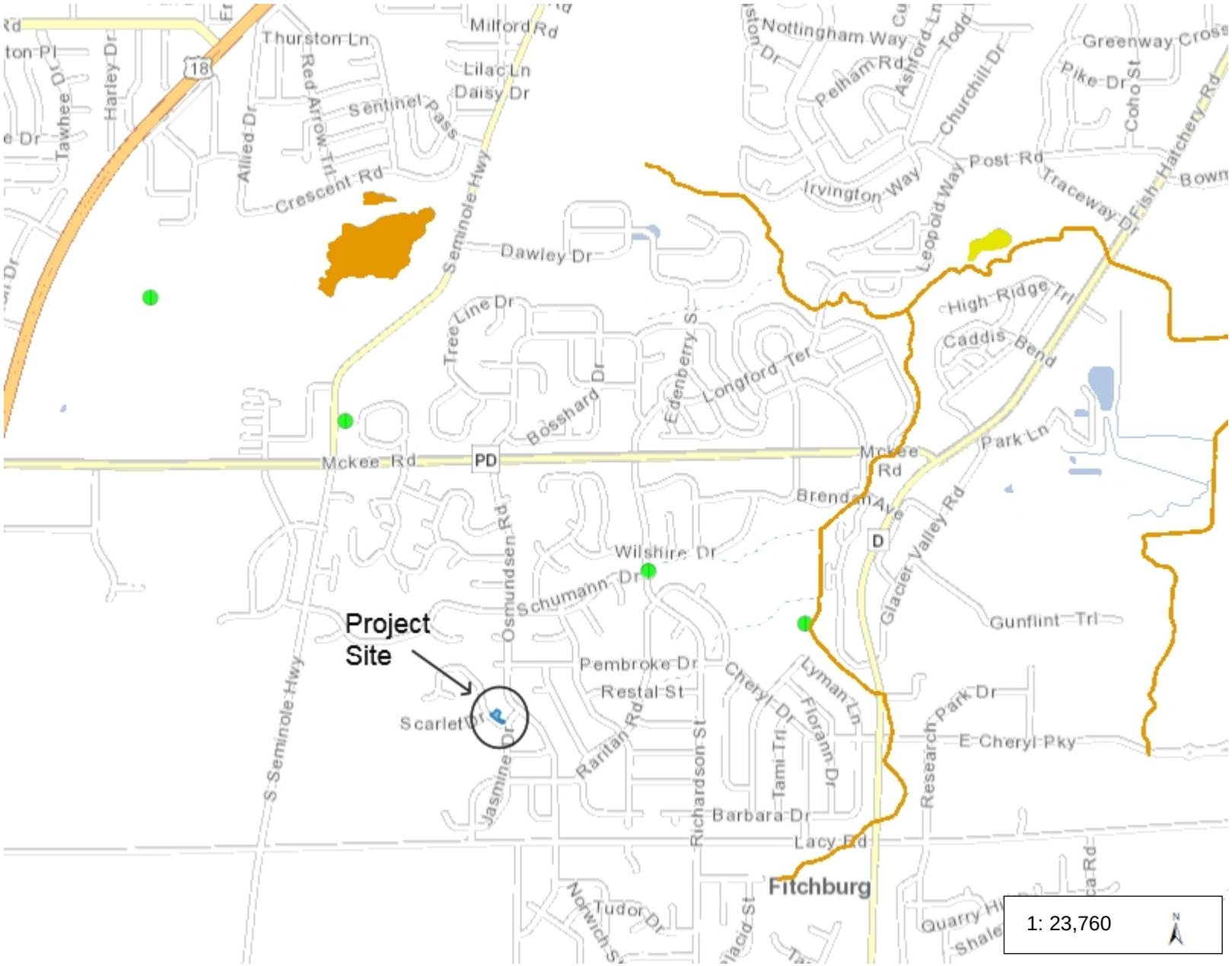
Hey Rick,

This email is confirming our discussions regarding the projects addressed in the City of Fitchburg's 2014 UNPS grant applications. If you have any further questions regarding the application process, please give me a call.

Mike

Mike Gilbertson
Nonpoint Source Coordinator
South District – Fitchburg
3911 Fish Hatchery Rd.
Fitchburg, WI 53711
Wisconsin Department of Natural Resources
Phone: 608-275-3288
Fax: 608-275-3339
mike.gilbertson@wisconsin.gov

Lacy Heights Bioretention Facility Navigable Waters Map



Legend

- PRF Sensitive Areas of Lakes
- PRF Other Public Rights Featu
- ASNRI Wild and Scenic Rivers
- ASNRI Outstanding and Excep
- ASNRI Trout Streams
- ASNRI Wild Rice Streams
- ASNRI Quality Wetland Strean
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- ASNRI Wild Rice Areas
- ASNRI Trout Spring Ponds
- ASNRI Endangered Threatene Concern Areas
- ASNRI State Natural Areas
- PNW Musky Streams
- PNW Sturgeon Streams
- PNW Musky Areas
- PNW Sturgeon Areas
- PNW Walleye Areas
- PNW Lakes Less Than 50 Acr
- Navigability Determinations
  - Yes
  - Yes with Agricultural Exemption
  - No
- Intermittent Streams
- Rivers and Streams

Notes

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made aregarding accuracy, applicability for a particular use, completemenss, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/org/legal/

Lacy Heights Bioretention Facility

Legend

- Wetland Class Points
  - Dammed pond
  - Excavated pond
  - Filled excavated pond
  - Filled/drained wetland
  - Wetland too small to delineate
- Filled Points
- Wetland Class Areas
  - Wetland
  - Upland
- Filled Areas
- NRCS Wetspots
- Wetland Indicators
- Rivers and Streams
- Open Water
- 2010 Air Photos (WROC)

Notes

Wetland Map

0.0 0 0.02 0.0 Miles

NAD_1983_HARN_Wisconsin_TM

Concept Plan of the Lacy Heights Bioretention Facility Construction Project

Last Revised: April 13, 2015

Basic Information: A bioretention device is an infiltration device consisting of an excavated area that is back-filled with an engineered soil, covered with a mulch layer and planted with a diversity of woody and herbaceous vegetation. Stormwater directed into the device percolates through the mulch and engineered soil.
Purpose: The bioretention device treats stormwater by a variety of physical, chemical and biological processes before infiltration into the native soil. A bioretention device may also be applied to a stormwater management system to accomplish the following purposes:

- Enhance stormwater infiltration
- Reduce loading of stormwater pollutants to surface water bodies and groundwater
- Decrease runoff peak flow rater and volumes
- Preserve base flow in streams
- Reduce temperature of stormwater

Site Criteria:

1. Bioretention devices are suitable for treating stormwater runoff for areas adjacent to source areas.
2. Bioretention devices can be damaged by heavy loading of salt-based deicers. City crews may need to be notified that salt base deicers cannot be used on the roads surrounding the bioretention pond.
3. Sloped vegetated areas immediately adjacent to the device shall be sloped greater 1% to ensure positive drainage into the device. Rough and final grading may need to be done to provide the proper drainage into the device.
4. The maximum drainage area shall not exceed 2 acres.

Design:

1. Configuration – The bioretention device will provide flow regulation, a pretreatment strip, ponding area, planting bed vegetation and surface mulch layer, engineered soil planting bed, storage layer, perforated underdrain pipe, over flow pipe and outlet structure.

2. The Target Stay-on Depth was determined by a SLAMM analysis to provide the best biological environment and to provide efficient treatment.

3. Flow Regulation
   - **a)** Inflow – Flow control will prevent erosion and provide uniform distribution over the surface of the bioretention bed.
   - **b)** Overflow- A weir or standpipe will regulate the maximum ponding depth by having an invert that is the height of the maximum ponding depth. The water discharged shall be conveyed to a swale.
   - **c)** Underdrain – The underdrain shall meet the requirements of section V.B.8.

4. Ponding Area
   - **a)** The maximum design ponding depth shall not exceed 12 inches.
   - **b)** The drawdown time shall not exceed 24 hours in order to sustain biological plant life.
   - **c)** The side slopes of the berm shall be 3H: 1V or flatter.

5. Planting Bed and Surface Mulch Layer
   - **a)** The vegetation plan shall identify planting zones based on anticipated depth of water and duration of inundation.
   - **b)** Rootstock and plugs shall be used to establish trees, shrubs and perennials.
   - **c)** The bioretention device shall inhabit plant density that is low enough to accommodate long-term maintenance or replenishment of the surface mulch layer.
   - **d)** Plants shall be native to the area and capable of withstanding environmental conditions of the device.
   - **e)** Woody vegetation shall not interfere with the water inflow.
   - **f)** The mulch shall include shredded hardwood that has ages a minimum of 1 year and shall be 2 to 3 inches thick.

6. Engineered Soil
   - **a)** The available surface area of the site is 4,500 sq ft.
   - **b)** The engineered soil depth will be at least 36 inches minimum and the surface slope shall be under 1%.
   - **c)** A 4 inch thick layer of pea gravel will be used to separate the engineered soil from the storage layer.
   - **d)** The composition of the engineered layer will be 70% washed and drained USDA coarse sand (.02-.04 inches) and 30% WDNR S100 compost mix.
   - **e)** The engineered soil will have a pH between 5.5 and 6.5.

7. Storage Layer
   - **a)** A washed coarse aggregate #2 gravel storage layer situated below the underdrain will facilitate groundwater recharge.
   - **b)** A storage layer is needed because the infiltration rate of the native soil layer is less than 3.6 in/hr.
   - **c)** The design thickness of the storage layer shall be determined by a drain time of 72 hours and will most likely be between 12 and 24 inches thick.

8. Underdrain
   - **a)** A perforated pipe will be placed at the top of the storage layer and will have a minimum pipe diameter of 6 inches.

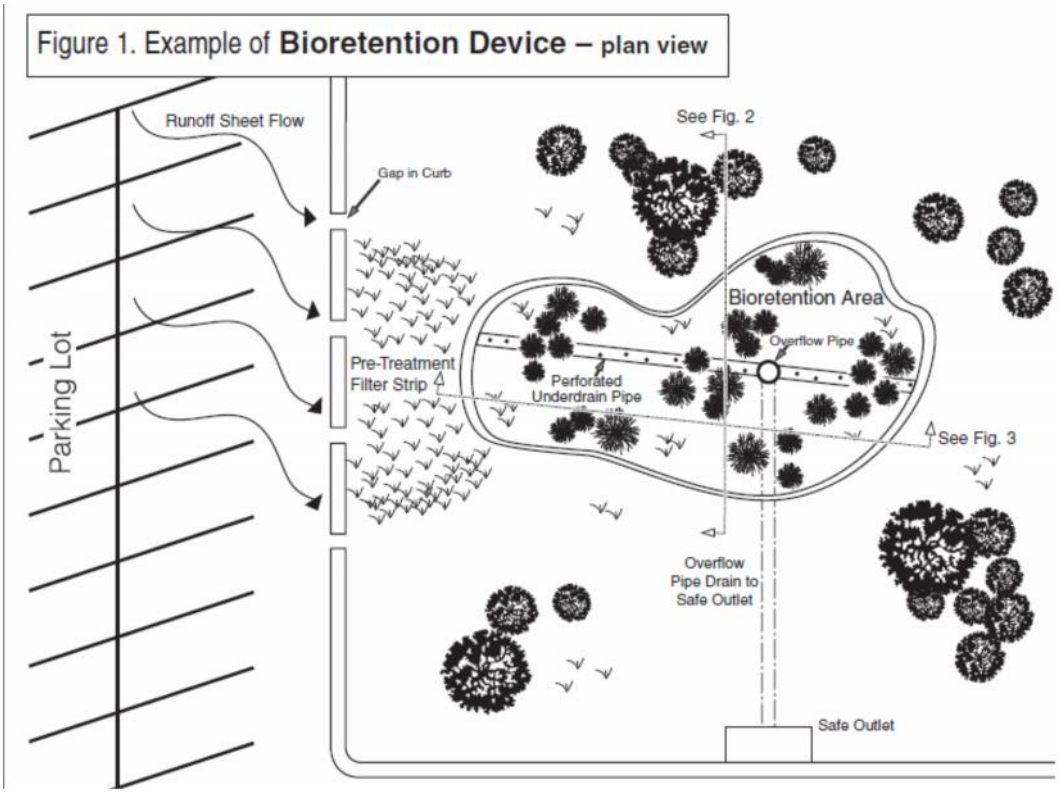
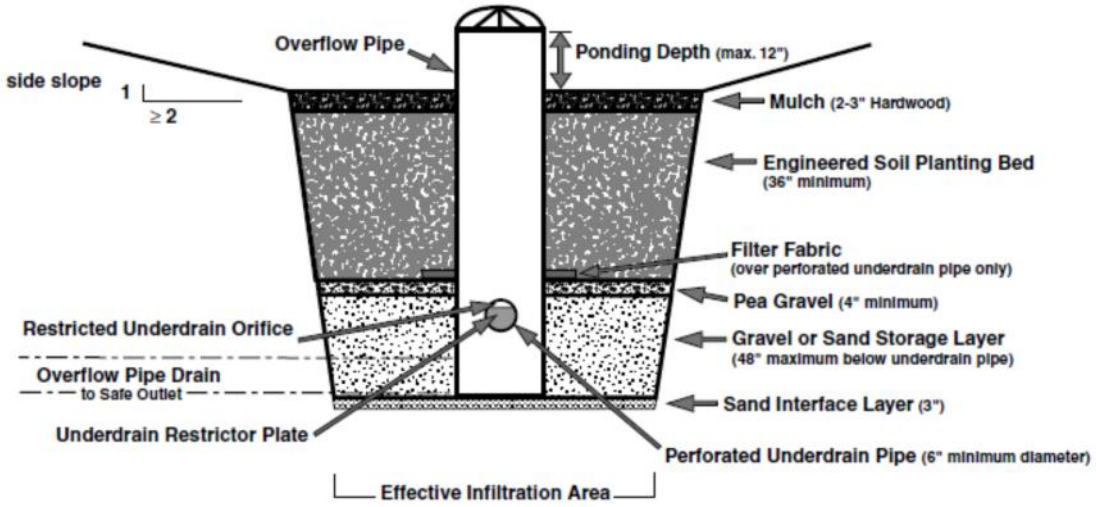


Figure 2. Example of **Bioretention Device** – cross-section across width of device



Sources

1. Wisconsin Department of Natural Resources. For Sizing Infiltration Basins and Bioretention Devices to meet State of Wisconsin Stormwater Infiltration Performance Standards. DNR Technical Notes. Last Update: July 2006.

Lacy Heights Bioretention Facility
Attachment For: Part 2.B1.Page5

UNPS Projected Cost Itemization Spreadsheet

	Construction Costs					Design & Construction Admin Costs				
	Contractor(s)					Fitchburg Staff		Consultant(s)		
	Quantity	Units	Unit Price		Cost	Hours	Cost	Hours	Cost	**Totals**
1. Clearing & Grubbing Existing Trees, Shrubs, and Stumps	0.3	acres	$4,500	/ac.	$1,350	5	$250	0	$0	**$1,600**
2. Erosion Control (Rock weeper, silt sock, stone access, etc.)	0.3	l.s.	$7,500	/l.s.	$2,250	16	$800	0	$0	**$3,050**
3. Topsoil Stripping and Stockpiling	0.3	acres	$3,500	/ac.	$1,050	4	$200	0		**$1,250**
4. Rough Grading - Earthwork	1000	c.y.	$4.00	/c.y.	$4,000	60	$3,000	0	$0	**$7,000**
5. Removal and Disposal of Excess Soil	500	c.y.	$10.00	/c.y.	$5,000	20	$1,000	0	$0	**$6,000**
6. Topsoil Placement and Preparation	600	s.y.	$1.25	/s.y.	$750	5	$250	0	$0	**$1,000**
7. Native Seeding, Turf Seeding, and Erosion Mat	1300	s.y.	$2.00	/s.y.	$2,600	4	$200	0		**$2,800**
8. Native Vegetation Maintenance (2017-2018)	0.3	l.s.	$5,000	/l.s.	$1,500	8	$400	0		**$1,900**
Total					**$18,500**	**122**	**$6,100**	**0**	**$0**	**$24,600**

9. Storm Sewer Reroute	0.2	l.s.	$8,500	/l.s.	$1,700	**$26,300**

This spreadsheet is attached to provide supporting evidence that the projected budget for the Lacy Heights Bioretention Facility is accurate. The 2014 Pine Ridge Bioretention Facility was a conversion from a dry pond to a bioretention facility and was completed entirely by Fitchburg Staff. From this spreadsheet you can see the difference between actual and estimated cost was $1,516.71.

Pine Ridge Bioretention Facility
UNPS Projected Cost Itemization Spreadsheet

	Construction Costs					**Design & Construction Admin Costs**				
	Contractor(s)					Fitchburg Staff		Consultant(s)		
	Quantity	Units	Unit Price		Cost	Hours	Cost	Hours	Cost	**Totals**
1. Clearing & Grubbing Existing Trees, Shrubs, and Stumps	0.2	acres	$4,500	/ac.	$900	5	$250	0	$0	**$1,150**
2. Erosion Control (Rock weeper, silt sock, stone access, etc.)	0.2	l.s.	$7,500	/l.s.	$1,500	16	$800	0	$0	**$2,300**
3. Topsoil Stripping and Stockpiling	0.2	acres	$3,500	/ac.	$700	4	$200	0		**$900**
4. Rough Grading - Earthwork	600	c.y.	$4.00	/c.y.	$2,400	60	$3,000	0	$0	**$5,400**
5. Removal and Disposal of Excess Soil	500	c.y.	$10.00	/c.y.	$5,000	20	$1,000	0	$0	**$6,000**
6. Topsoil Placement and Preparation	300	s.y.	$1.25	/s.y.	$375	5	$250	0	$0	**$625**
7. Native Seeding, Turf Seeding, and Erosion Mat	700	s.y.	$2.00	/s.y.	$1,400	4	$200	0		**$1,600**
8. Native Vegetation Maintenance (2012-2013)	0.2	l.s.	$5,000	/l.s.	$1,000	8	$400	0		**$1,400**
Total					**$13,275**	**122**	**$6,100**	**0**	**$0**	**$19,375**
9. Storm Sewer Reroute	0.2	l.s.	$8,500	/l.s.	$1,700					**$21,075**

Actual Cost	**$22,591.71**

Capital Improvement Program

2015 *thru* **2019**

City of Fitchburg, WI

Project # 4702

Project Name Stormwater Pond Dredging and Retrofits

Contact Director of Public Works
Department Stormwater Utility
Type Improvement
Useful Life 20 Years
Category Utility & Urban Services
Priority 3 Important

Total Project Cost **$1,085,000**

Description

This project consists of dredging and retro fits of existing stormwater facilities to provide water quantity and/or water quality benefits. Anticipated ponds to receive full or partial dredging include the following: 2015 - Harlan fills East Pond Dredging and Storm Sewer(~$160k), Ashbourne Pond Dredging (~$60k), and 2015 Veg Mgmt (~$20k); 2016-Seminole Village Pond Improvements (add berm to create upper pond ~$75k), Lacy Heights Pond Conversion (convert to bioretention facility ~$30k), Chapel Valley West Pond Partial Dredging (~$20), and 2016 Veg Mgmt (~$25k); 2017 - Byrne Pond Conversion (convert to bioretention facility ~$50k), 2017 Veg Mgmt (~$35k); 2018 - Triverton Greenway Restoration and Bioretention Facilities (~$85k), 2018 Veg Mgmt (~$30); 2019 - McKee Farms Southwest Pond (~$366k), McKee Farms Alum Injection (~$105k), and 2019 Veg Mgmt (~$30k)

Justification

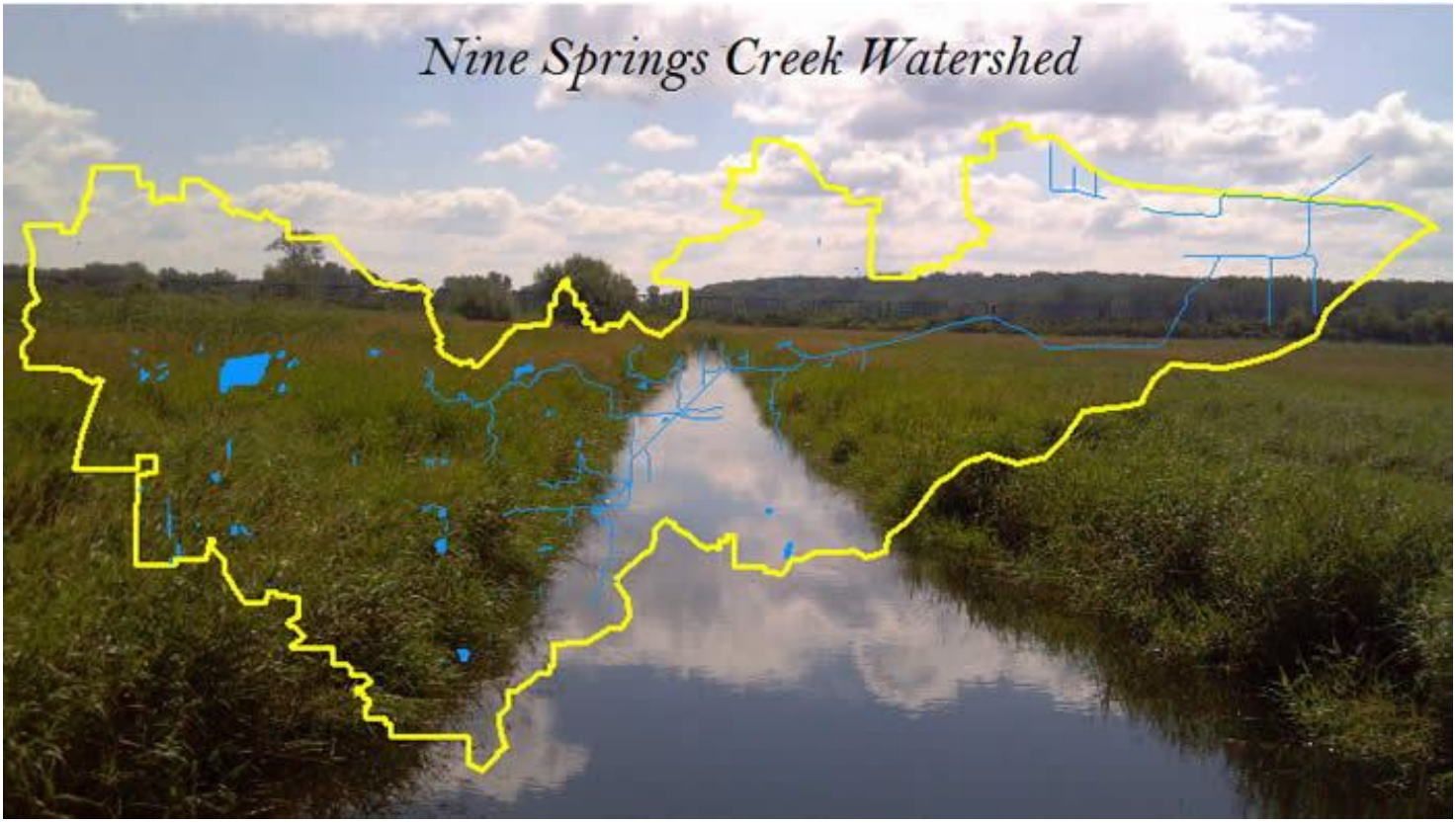
Stormwater ponds need occasional dredging when excessive sediment builds up. For wet ponds, a minimum of 3' pond depth is necessary to obtain water quality credit for the pond to meet DNR water quality permit requirements. Dry ponds receive no water quality credit from DNR, which is why Fitchburg has historically converted dry ponds into wet ponds. During the Nine Springs Creek Watershed Master Planning process, options for converting dry ponds to bioretention facilities were evaluated. Since bioretention facilities provide stormwater volume control through infiltration/recharge, the current recommendations for Lacy Heights Pond and Byrne Pond are to convert them to bioretention facilities.

Expenditures	2015	2016	2017	2018	2019	Total
Construction/Maintenance	240,000	150,000	85,000	115,000	495,000	1,085,000
Total	**240,000**	**150,000**	**85,000**	**115,000**	**495,000**	**1,085,000**

Funding Sources	2015	2016	2017	2018	2019	Total
Utility - Non-Assessed	240,000	150,000	85,000	115,000	495,000	1,085,000
Total	**240,000**	**150,000**	**85,000**	**115,000**	**495,000**	**1,085,000**

Operational Impact/Other

Nine Springs Creek Watershed Master Plan



The City of Fitchburg received an Urban Non-Point Source Grant from the WDNR in 2012 in order to improve the rate, volume and quality of stormwater within the Nine Springs Creek Watershed. This web site page was created to provide an open source of information about the Nine Springs Creek Watershed and the Master Plan. Click on the photo above for a detailed map of the watershed.

The Master Plan Process

The scope of the project consists of six activities, completed by Fitchburg staff and consultants, aimed towards producing an overall strategy for stormwater rate, volume and quality improvements and protection. These activities are:

1. Compiling historical information on stormwater facilities in the watershed
2. Holding public involvement meetings
3. Creating a Nine Springs Creek Watershed Master Plan including: Necessary maintenance and management projects
    - Nutrient management plan for the Nine Springs Golf Course
    - Pollutant-reduction strategies
    - Updates to water-resource related ordinances
    - Site reviews for clean wastewater re-use
4. Updating Fitchburg stormwater mapping
5. Making financial recommendations for the Fitchburg Stormwater Utility
6. Creating stormwater management plan for Dunn's Marsh

Master Plan Progress Reports and Meeting Minutes

City staff have compiled the following reports and meeting minutes which document the progress made by the City and the consultants, MSA Professionals and Stantec, Inc. on the Nine Springs Creek Master Plan

- Nine Springs Watershed Meetings Summaries and Notes
- Nine Springs Master Plan Progress Reports
- Public Involvement Meeting 9-26-13 (slide presentation) (video)
- Public Involvement Meeting 12-12-13 (slide presentation)

Nine Springs Creek Current Documents

- Nine Springs Suggested BMP Maps
- Dunn's Marsh Stormwater History
- Stormwater Algae Analysis and Nutrient Sampling
- Dunn's Marsh Plant Communities
- Vegetation Conditions and Recommendations
- Watershed Map
- Dunn's Marsh North Map
- Dunn's Marsh South Map
- Nine Springs Creek Watershed Previous Documents
  - This link provides a full list of stormwater reports and related articles, along with a description of each.

ECSWM Requirements

Permit Process Applicability

Erosion Control and Stormwater Management (ECSWM) Permits include a plan and checklist that describes the steps a developer, contractor,or landowner will take to prevent soil erosion on disturbed sites. Some projects will also require plans to permanently manage runoff from the site after all construction is complete.

- Information on Applicability and Filing
- Erosion Control Permit is required if project:
  - Disturbs more than 4,000 square feet
  - Removes or fills more than 400 cubic yards of material
  - Please use the 12/2014 version of the permit.
- Stormwater Management Permit is required if project:
  - Creates more than 20,000 square feet of impervious area
  - Development that requires a subdivision plat or CSM
  - Redevelops more than 4,000 square feet of impervious area
  - Please use the 12/2014 version of the permit.
- Erosion Control and Stormwater Management Narrative Template:
  - To be included with the permit application
- For a Mircosoft Excel or Word version of the permit or narrative template, please contact Felipe Avila

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Establishment of ECSWM Requirements

Chapter 30, Article II of the Fitchburg Code of Ordinances establishes the Erosion Control and Stormwater Management (ECSWM) requirements.

Updated Requirements

Chapter 30, Article II was updated in 2013; the following document the significant changes:

1. Land disturbing activity on a slope of greater than 12 percent was removed from the applicability requirements for erosion control permit Sec. 30-22.
2. Agricultural development that creates new impervious surface area exceeding 20,000 sq. ft. on the site was removed from the applicability requirements for stormwater control permits Sec. 30-23.
3. The wording “except the construction of a building or other structure” was added to Sec. 30-24 part a. limiting the exception of agricultural lands when buildings are being constructed on the land.
4. The curve numbers used for calculations were updated to reflect more accurate pre and post development run-off.

Upon completion of a project, some permits will require a Stormwater Maintenance Agreement for any new facilities installed such as rain gardens, swales, pervious pavement, and detention ponds.

PermiTrackESC

The city has contracted with SEHTS to create an on line system to allow active construction sites to be located easily on a map. The map provides markers showing all currently active construction sites in the city that require an ECSWM permit. The system will become active on January 1, 2014,

and to provide a comment on the condition of the site. If you submit a comment it will be sent to City Engineering and to the permit holder for the site.

Go to: Active Construction Sites in Fitchburg

For more information please contact Environmental Engineer Rick Eilertson at 608-270-4264.

Shawn Pfaff, Mayor
Introduced By

Public Works
Drafted By

Finance, BPW, RCC
Committee

March 11, 2014
Date

RESOLUTION R-31-14

APPROVING SUBMISSION OF GRANT APPLICATIONS FOR STORMWATER IMPROVEMENTS

WHEREAS, there are multiple grant opportunities available for stormwater improvement projects through Wisconsin Department of Natural Resources (WisDNR), Dane County, the Yahara Watershed Improvement Network (Yahara WINs), and other funding options. Such grants include, but are not limited to, WisDNR Urban Non-Point Source and Stormwater (UNPS & SW) grants, WisDNR Targeted Runoff Management (TRM) grants, Dane County Urban Water Quality grants, Yahara WINs Phosphorus Reduction grants; and

WHEREAS, the City has several projects that are identified in planning documents, included in the Nine Springs Creek Watershed Master Plan, or included in the 2014-2019 Capital Improvements Program (CIP) that are eligible for these grant opportunities, and

WHEREAS, there are five projects that city staff would like to submit grant applications for, as opportunities become available. These projects include:

1. Enlargement of McKee Farms Northwest Pond and Schumann Greenway Restoration
2. Seminole Village Pond Improvements
3. Traceway Drive Storm Sewer Reroute to Existing Pond
4. Renaissance Pond Stormwater Treatment Structure
5. Fish Hatchery Road at Nine Springs Creek Tributary Pond, and

WHEREAS, the grant applications will be prepared in accordance with the funding that has been identified for these projects through the Nine Springs Creek Master Plan process and the 2014-2019 CIP, and

WHEREAS, any grant agreements that are required for these projects, should a grant application be approved, will be sent to council for review and approval.

NOW THEREFORE BE IT HEREBY RESOLVED, by the Fitchburg Common Council, that it authorizes city staff to prepare and submit grant applications for the above-listed projects to the State, County, and other grant programs as they become available.

BE IT FURTHER RESOLVED that the City Engineer is authorized to sign the grant applications on behalf of the City.

Adopted by the Common Council of the City of Fitchburg this 25th day of March, 2014.

Approved By: _____
Shawn Pfaff, Mayor

Approved By: _____
Linda J. Cory, City Clerk