Madison Metropolitan Sewerage District

MMSD is pioneering a new regulatory approach to address phosphorus, called **"watershed adaptive management".** Excessive levels of phosphorus can impact the quality of Wisconsin's lakes and streams. Regulatory approaches to address phosphorus have traditionally focused on controlling phosphorus from point sources, which include wastewater treatment plants and municipal stormwater control facilities.

That is too narrow of a focus, because in most watersheds, the majority of phosphorus reaching lakes and streams comes from non-point sources, which include runoff from agricultural fields, construction sites, and urban areas.

Stormwater retention pond

Usually, each source of phosphorus has independently put phosphorus control practices in place. Resulting approaches tend to be expensive, resource intensive, and discharge focused. In addition, independent actions result in missed opportunities to make meaningful improvements in water quality throughout the watershed.

Water quality monitoring

In adaptive management, all sources of phosphorus work collaboratively to implement cost effective phosphorus control practices throughout the watershed. Control practices will vary, and will likely involve a mix of agricultural and urban best management practices (BMPs).

Contour farming-agricultural BMP

MMSD, in partnership with Dane County, DNR, and multiple cities, villages in the Yahara watershed, is implementing an adaptive management pilot project. It is anticipated that the pilot project will lead to implementation of a full scale adaptive management project beginning in 2016.

Contact Information for Adaptive Management:
Dave Taylor, Director of Special Projects
P: 608.222.1201 ext. 276
davet@madsewer.org

Madison Metropolitan Sewerage District

Yahara WINs – Pilot Project

Yahara Watershed Improvement Network

Regulatory Driver

The Wisconsin Department of Natural Resources (WDNR or the department) has developed numeric water quality criteria for phosphorus. These criteria were used as the basis for developing a total maximum daily load (TMDL) for the Rock River Basin. A TMDL establishes the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The Rock River Basin TMDL was approved by EPA in September, 2011. The TMDL requires phosphorus reductions from all sources of phosphorus, including municipal/industrial waste-water treatment plants, municipal stormwater discharges, and agricultural sources.

Pilot Project

The following group is working together to test a new, innovative and collaborative approach called watershed adaptive management designed to meet regulatory requirements in a cost-effective manner and improve water quality in our rivers, streams and lakes. Additional participants may join this effort.

Towns	Villages	Towns	Others
Blooming Grove	Arlington	Fitchburg	Clean Lakes Alliance
Bristol	Cottage Grove	Madison	Clean Wisconsin
Burke	DeForest	Middleton	Dane County
Cottage Grove	Maple Bluff	Monona	MG&E
Dunn	McFarland	Stoughton	MMSD
Westport	Oregon		Sand County Foundation
Windsor	Shorewood Hills		Stoughton Utilities
			USGS
			Yahara Pride
			WDNR

This project is the first of its kind in the State of Wisconsin and nationally. Project details are given below:

Location:

Six Mile Creek Watershed (see attached map)

Duration:

4 years (2012-2015)

Cost:

$3 million

Goals:

- Evaluate the cost, performance and ability to implement phosphorus control practices
- Gage the level of community support for a full-scale project
- Evaluate water quality impacts associated with implementing phosphorus control practices.

Practices:

A mix of agricultural and non-agricultural phosphorus control practices will be evaluated.

Monitoring:

Traditional water quality monitoring and edge of field monitoring.

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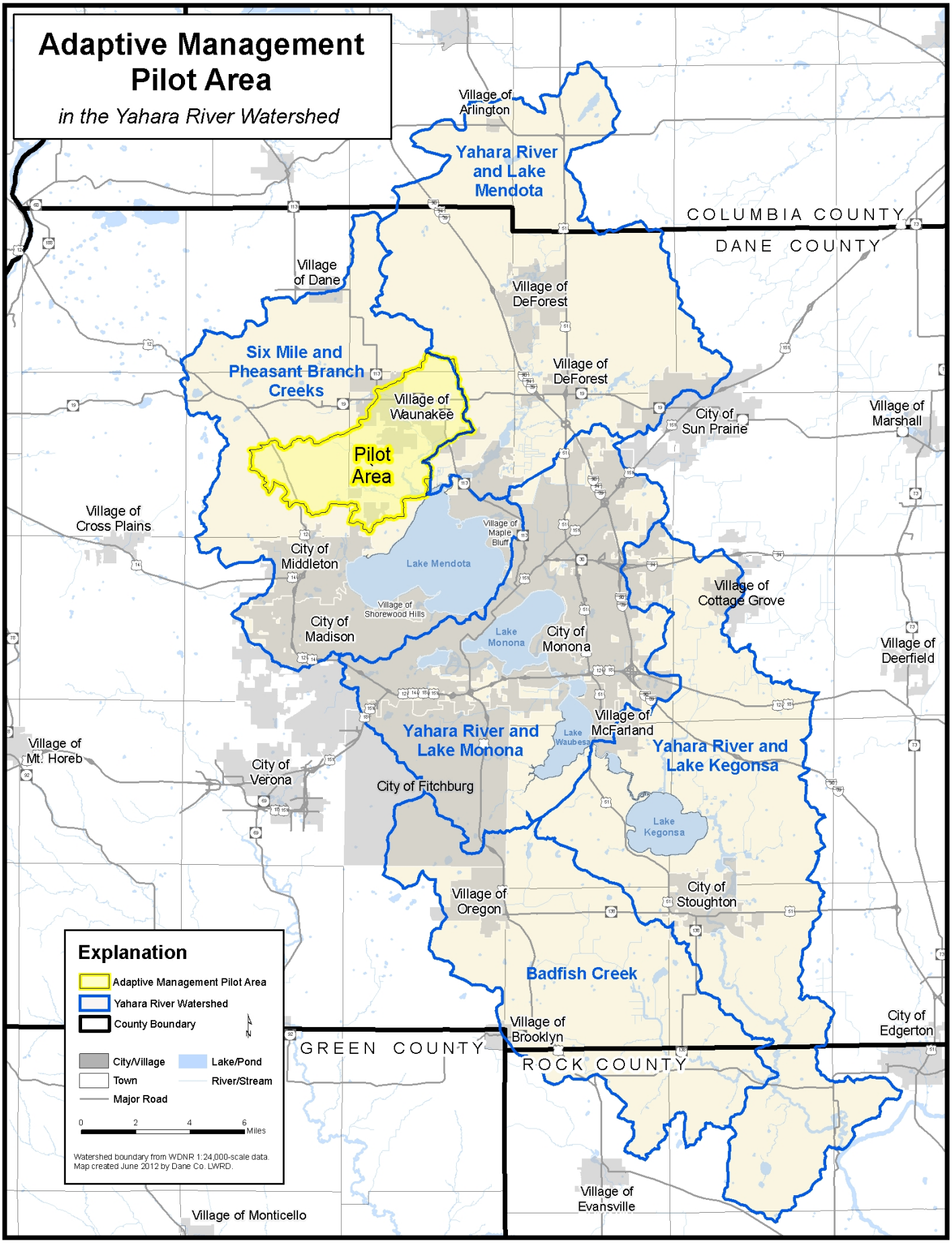
Adaptive Management Pilot Area
in the Yahara River Watershed
Village of Arlington
Yahara River and Lake Mendota
COLUMBIA COUNTY
DANE COUNTY
Village of Dane
Village of DeForest
Six Mile and Pheasant Branch Creeks
Village of DeForest
Village of Waunakee
Pilot Area
City of Sun Prairie
Village of Marshall
Village of Cross Plains
Village of Maple Bluff
City of Middleton
Lake Mendota
Village of Cottage Grove
Village of Shorewood Hills
City of Madison
Lake Monona
City of Monona
Village of Deerfield
Village of McFarland
Yahara River and Lake Monona
Lake Waubesa
Yahara River and Lake Kegonsa
Village of Mt. Horeb
City of Verona
City of Fitchburg
Lake Kegonsa
City of Stoughton
Village of Oregon
Badfish Creek
Village of Brooklyn
City of Edgerton
GREEN COUNTY
ROCK COUNTY
Village of Evansville
Village of Monticello
Explanation
Adaptive Management Pilot Area
Yahara River Watershed
County Boundary
City/Village
Lake/Pond
Town
River/Stream
Major Road
0 2 4 6 Miles
Watershed boundary from WDNR 1:24,000-scale data.
Map created June 2012 by Dane Co. LWRD.