



Yahara Future

MEMORANDUM OF UNDERSTANDING

Between Dane County, the City of Madison, the Department of Natural Resources and the Department of Agriculture, Trade and Consumer Protection Regarding Efforts to Improve Water Quality in the Yahara River Chain of Lakes

I. BACKGROUND

The Yahara River Watershed and the Chain of Lakes includes Lakes Mendota, Monona, Waubesa, Kegonsa and Wingra in central Dane County. They are valuable resources contributing to our quality of life and our area's economy. Residents and visitors to the area enjoy the swimming, boating, fishing, and a variety of other activities, and the scenic beauty that these water resources provide.

In February, 2008 Dane County Executive Kathleen Falk, City of Madison Mayor Dave Cieslewicz, Department of Natural Resources Secretary Matthew Frank and the Department of Agriculture, Trade and Consumer Protection Secretary Rod Nilsestuen signed Yahara CLEAN (Capital Lakes Environmental Assessment and Needs), a Memorandum of Understanding committing the partnership to assess the nutrient, sediment and beach bacteria affecting the Yahara watersheds streams and lakes and to make recommendations on how to improve water quality. The assessment and recommendations were completed in September, 2010 and can be found at www.yaharawatershed.org.

While the Yahara CLEAN planning efforts were underway, a number of early recommendations were implemented. Early accomplishments include:

1. Construction is finished for the first Dane County Community Manure Digester complex with the second digester complex to begin shortly. The first digester is accepting manure during the winter of 2010-11. Both digester complexes will produce energy and allow for nutrient export from the Yahara Watershed. The digester complexes are located in areas identified by the Yahara CLEAN MOU work as having some of the highest phosphorus and sediment contributions to Lake Mendota. The State of WI provided a \$6.6 million grant to Dane County to advance this technology.
2. Dane County applied for and received a \$2 million grant from the Natural Resources Conservation Service to implement phosphorus and sediment reduction activities in two of the highest contributing subbasins to Lake Mendota. Madison Community Foundation granted \$75,000 to assist with the implementation. Sand County Foundation has committed additional funding for implementation.
3. City of Madison, working with Public Health-Madison and Dane County, DNR, UW, Madison Community Foundation and others, made changes to Vilas Beach and Bernie's Beach to reduce runoff to the beach sand and swimming areas. Several demonstration projects were implemented to evaluate beach water quality benefits and other activities are budgeted for 2011.
4. Twenty municipalities in the watershed continue to improve storm water runoff quality to meet their DNR permits.
5. Dane County, through its Land and Water Legacy Fund, has invested \$3.6 million since 2007 to complete a wide range of lake and stream improvements, including Yahara watershed-wide and field-specific modeling, land purchases, a feasibility study and preliminary design of the community manure digester, navigational improvements, and stream bank and wetland restorations.

The Yahara CLEAN effort and future work will produce cleaner lakes that will provide greater public use and enjoyment. Improved water quality in the lakes and reduced bacteria at area beaches will improve our quality of life and provide economic benefits. Yahara Future is intended to avoid additional federal regulations and improve water quality. Six beaches on the Yahara chain of lakes and several stream segments in the watershed are already on the EPA's Impaired Waters list (303 (d) list). Designation on the 303 (d) list requires that a plan be developed to reduce pollutants that are impairing the water body. Yahara CLEAN developed an alternate plan that would accomplish the needed water quality improvements.

Further implementation of the Yahara CLEAN recommendations will require new agreements. Yahara Future is the next step.

II. PARTIES

The Parties to this Memorandum of Understanding ("the MOU") are the signatories below and their successors and assigns. Additional watershed partners may be added and sign on to this effort if they are in agreement with the provisions outlined in this document and wish to play a formal role.

III. PURPOSE

The purpose of this Memorandum of Understanding is to create a detailed action plan or road map to implement recommended activities in order to reduce nutrients and sediment delivery to the lakes and streams within the Yahara watershed and to reduce the number of days beaches are closed due to elevated bacteria levels.

Successful implementation of the activities proposed by this road map will require the participation of other entities such as members of the Madison Area Municipal Storm Water Partnership (MAMSWaP), the Madison Metropolitan Sewerage District (MMSD), agricultural operations in the watershed, the Capital Area Regional Planning Commission (CARPC), private businesses, nonprofit organizations, and other interested parties.

BEACHES

The City of Madison agrees to form a task force that will create a beach management plan for each of the impaired beaches identified in the original MOU. These plans shall consider all sources of bacteria and examine all possible methods to reduce the bacterial contamination to the beach areas including but not limited to species control, stormwater treatment, in-lake treatment, and permanent beach closure.

LAKES

After analyzing state of the art computer models and monitoring gages in the watershed, the MOU partners agree that a preliminary goal of 50% (approximately 50,000 lbs.) annual reduction in phosphorus delivered to the lakes (compared with no controls) is needed to improve the water quality of the Yahara chain.¹ When this reduction is achieved, the expected result will likely be gradual change in the Yahara Lakes from a eutrophic to a mesotrophic state. A change to a mesotrophic state would mean increased water clarity in our lakes and a 50% reduction in the number of blue green algal blooms during the summer months. The phosphorus reduction will also indicate a concurrent reduction of both nitrogen and sediment delivered to the lakes

The MOU partners agree that while the need for nutrient reduction is distributed throughout the watershed, Lake Mendota's has the greatest load and reduction needs. The lower lakes will receive significant benefits from the phosphorus reductions made in the upstream lakes due to the large amount of phosphorus that passes through to the downstream lakes. The partners also recognize that the greatest needed reduction and benefit will come from activities in the Lake Mendota watershed.

Future work as part of the road map creation will define specific reductions required in each watershed and by land type (urban/agricultural) and a means for proportionate implementation by all required entities in each watershed including the agricultural sources. The opportunity for pollutant trading will be assessed and reviewed as part of a program to optimize the cost-benefit relationship associated with the control of phosphorus to the lake system.

¹ The phosphorus reduction target may be modified if new in-lake modeling, expected to be completed by UW-Madison professors in August 2011 provides support for more specific reduction targets.

IV. Yahara Future

Dane County, the City of Madison, DNR and DATCP agree to a variety of activities that will create the road map and partnerships necessary to reduce the existing nutrient and sediment loading to the Yahara Chain of Lakes. Yahara Future will include the following steps or actions:

- A. Widen Watershed Representation Involvement** – During 2011, the MOU partnership will include other entities such as the members of the Madison Area Municipal Stormwater Partnership (MAMSWaP), the Metropolitan Sewerage District (MMSD), active farms and agricultural operations in the watershed, Capital Area Regional Planning Commission (CARPC), private businesses, non-profit organizations, and other interested parties in developing their portion of the implementation road map.
- B. Create a Network to Coordinate Efforts and to Share Information** – Create a Yahara Watershed network to link all parties in the Yahara Future implementation as well as broader issues in the Yahara Watershed. This will provide a forum to share information, coordinate efforts and funding and avoid duplication.
- C. Create a Detailed Road Map Identifying Specific Activities by Watershed that Will Achieve the Desired Goals** - The road map will include proposed actions, anticipated costs and the expected nutrient, sediment or bacterial reduction and implementation methods. In addition, the road map will include a load accounting mechanism and agreed-upon baseline.
- D. Develop the implementation and construction plans including cost estimates, for two of the impaired beaches to reduce beach closure due to bacteria by 50% or more.**
- E. Perform outreach to the appropriate municipalities, agricultural groups, NGOs and businesses explaining the proposed road map along with the particular entity's suggested role.**
- F. Fully Explore Nutrient Trading** – The partnership commits to fully investigate the feasibility of implementing nutrient reductions through a trading program between and among regulated and non-regulated entities. The trading program will be explored in the context of improving water quality in the Yahara Lakes and the Yahara River.
- G. Provide staffing commitments at levels to support the completion of Yahara Future as budget constraints allow.**
- H. Provide a progress report by December 31, 2011 and the road map report by June 30, 2012.**

Dane County, DNR, the City of Madison and DATCP agree to be supportive of each other and future partners' pursuit of funds and staff to sustain these activities. Potential funding sources that may be explored include annual budgets, grants and community partners.

V. General Conditions

- A. Dane County, DNR, the City of Madison and DATCP will each designate a representative to lead and coordinate implementation of this MOU, including agency communication, representation and participation.
- B. If the designated representatives are unable to resolve an issue, the issue will be raised in briefing papers to the Dane County Executive, DNR's South Central Regional Director, City of Madison's Mayor, and the DATCP Administrator for Agricultural Resource Management for resolution.
- C. All Parties acknowledge that this executed MOU presents a reasonable approach to assessing and identifying needs to improving water quality in the Yahara Chain of Lakes.
- D. This MOU will remain in effect until December 31, 2012 to guide the implementation plan and the development of the Yahara Comprehensive Watershed Restoration Plan.
- E. The Parties agree to amend this MOU as updates to Yahara Future are available and warrant change to the process or activities.
- F. The effective date of this MOU is the date of the latest signature below.
- G. It is anticipated that this effort will result in other partnerships and the need for additional MOUs.

For Dane County

By: _____
Joe Parisi **Date**
County Executive

For the Department of Natural Resources

By: _____
Cathy Stepp **Date**
Secretary

For the City of Madison

By: _____
Paul Soglin _____
Mayor **Date**

For the Department of Agriculture, Trade and Consumer Protection

By: _____
Ben Brancel _____
Secretary **Date**