

**Status of Yahara Lakes Advisory Group Recommendations  
July 2008**

No	Lakes Management & Operations	Strongly Agree	Agree	Status
1	All control structures from Lake Mendota to below the Stebbinsville Dam be unified under a coordinated and recordable management strategy based on a Yahara River System management plan to be developed which would be able to articulate responses to various scenarios such as development of the basin.	17	1	<p>Daily logs are kept for lake level adjustments, precipitation and corresponding lake levels. All adjustments for LaFollette communicated with the Stoughton Dam Operator and the City. Coordination with the City of Monona is made when releasing large volume of water out of Mendota. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08.</p> <p>Better coordination is happening, however there is still a need for increased flows to help relieve upstream conditions.</p>
2	Evaluate methods such as modification of bridge constrictions, aquatic plant modification, dredging, channel modification, etc. to increase flow conveyance.	12	5	<p>DNR and County staff have visually evaluated flow restrictions, and \$35,000 has been included in the County Executive's 2005 budget for dredging to remove the restriction at the RR trestle between Upper Mud Lake and Lake Waubesa. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08. Dredging of the eastern most bay was completed in September 2005 Prof Hoopes' Open Channel Hydraulics class is evaluating the constriction. Data collected on 4-30-08 shows a 7 inch difference between Upper Mud Lake and Lake Waubesa with an estimated flow of 500 cfs. County Executive placed in the 2008 LWRD budget planning funds for the bike-pedestrian trail and improved flow. Advisory group has also included improved navigability. An RFP is about to be released for removal of the railroad trestle flow restriction between Upper Mud Lake and Lake Waubesa. We have not explored other down stream modifications.</p>

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3	Operations rules for the lakes must provide for stable and predictable lake levels that are protective of public and private properties, wetland, shorelines, fisheries, water quality and recreational users.	11	7	DNR has begun an internal discussion on how to change the operating rules for the Yahara River. The Bureau of Legal Services has agreed that a system wide order is appropriate. DNR expects to see this effort move to an external work group at some point. The City of Madison has expressed some desire to move this issue forward by suggesting a lowering of the ordered levels for Lakes Mendota , Monona and Waubesa . The DNR has expressed some interest in postponing this issue until Yahara CLEAN is thoroughly underway.
4	Design orders to address all four seasons, not just summer maximum and winter minimum.	3	10	Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08. For status see # 3 above.
5	Develop lake and shoreline regulations affecting all riparians, both public and private, in a uniform way.	4	8	Dane County completed Phase I of a Water Classification study in March 2005. The Phase II report is expected to be completed in summer 2008. The Phase II report will include an evaluation of actions to protect and restore the classified waters, including regulatory options that could be applied to both unincorporated and incorporated riparians. See <a href="http://www.danewaters.com/management/water_body_classification.aspx">www.danewaters.com/management/water_body_classification.aspx</a>
6	Establish a structure and process for planning and funding capital improvement and maintenance of flood control and navigation structures on the Yahara River system (i.e. locks, dams, conveyance channels).	11	7	Dane County's 2003 adopted budget included \$600,000 (total includes a 60% Wisconsin Waterways Commission grant) for renovation of the Tenney, Babcock, and LaFollette locks and dams. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08. Tenney Lock and Dam were improved in 2005. Plans have been developed for both Babcock and Lafollette lock and dams, and the County is awaiting funding. DNR recently completed a Dam Safety report, and Dane County has retained a consultant to perform dam break and structure stability analyses on both Tenney and Babcock dams. The Advisory Group had anticipated that funding would be primarily from user groups.
7	Establish specific processes for responding to flooding that set specific standards for use restriction on recreational users necessary to protect property and the environment.	3	13	Procedures remain informal. For high water in 2004, historical lake level and slow-no-wake order information was used to establish targets for when to impose emergency slow-no-wake orders for recreational users. The County continues to improve the informal process.

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8	Consider property values and uses in adjusting lake levels.	5	8	Property owner calls and complaints inform Dane County Land & Water Resources Department lake level adjustments.
9	A flood management plan shall be developed with shoreline protection elevations.	9	7	Dane County Board adopted the Flood Mitigation Plan on 7/22/04. Shoreline protection elevations were not specifically included. The full plan is available at <a href="http://www.co.dane.wi.us/commissions/lakes/floodmitigation.shtml">www.co.dane.wi.us/commissions/lakes/floodmitigation.shtml</a>
10	Dane County Public Works and DNR fisheries should coordinate lake levels in the Yahara River system and particularly Lake Mendota must remain high enough from March 15 to mid-May to allow fish to spawn, young fry to grow to sufficient size to survive once water levels are lowered.	12	4	Beginning in 2004, the Dane County Land and Water Resources Department assumed responsibility for lake level management. Department and DNR staff formally meet two times/year to coordinate lake level management with fisheries protection. Dane County staff and DNR staff are in routine and constant communication concerning dam management decisions. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08.
11	Reevaluate user fees to finance operations and maintenance of boat launch facilities and locks.	6	6	Dane County Parks established a Lake Access Permit fee in 2004, which now applies to users year round and not just summer boat launches. Dane County established a Tenney lock fee effective in 2004. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08.

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12	<p>When the level of Lake Mendota rises above the OHWM (850.7 MSL)* a state of high flow shall be declared. This state of high flow will remain in effect until all the lakes in the chain are at or below their maximum summer operating level. A declared state of high flow will result in 1. The Babcock and LaFollette Dams discharging under free flow conditions (without stoplogs) and the Stoughton Dam increasing discharge in order to maximize discharge at LaFollette. During this period of declared high flow the Stoughton dam's minimum operating level will not apply. The discharge of the Stoughton dam will be increased until the flow at the LaFollette dam is unaffected by downstream conditions (or until some upstream restriction becomes apparent). 2. Discharge of the Tenney Park Dam will consider flow conditions at the LaFollette Dam and will operated in order to maximize discharge (downstream channel bank full) at the lock but not exacerbate flooding on the downstream lakes as long as dam conditions at Tenney are deemed safe (2000 flood levels minus six inches*). When levels of Lake Mendota approach unsafe conditions the gate setting at the Tenney Dam shall be increased to prohibit any increasing in the lake level of Lake Mendota.</p> <p>*recommended levels to be reviewed and finalized later based on further studies and public and expert input</p>	8	8	<p>This has been informally implemented by Dane County, in consultation with DNR and the Stoughton dam operator. Spring and Summer of 2004 were a good test of this policy and while it was not implemented to the fullest, our analysis is that the concept works and needs to be formally recognized in Order format. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08.</p> <p>DNR's assessment is that Dane County has done a great job moving toward this recommendation. We could do even better if certain areas in Monona were flood proofed. The Dane County Land and Water Resources Department will be working with NOAA regarding a potential flood forecasting system for Lakes Mendota, Monona and Waubesa.</p>
13	<p>Evaluate the need to renovate Tenney, Babcock and LaFollette lock and dams. The evaluation should include the possibility of automating the gates at one or all of the dams.</p>	13	4	<p>Dane County's 2003 adopted budget included \$600,000 (total includes a 60% Wisconsin Waterways Commission grant) for renovation of the Tenney, Babcock, and LaFollette locks and dams. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08. Tenney improvements are complete. No work on Babcock or LaFollette. Need to evaluate the automation so that staff could instantaneously respond to flow conditions from a central position.</p>
<b>No</b>	<b>Monitoring/Modeling</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Status</b>
1	<p>Maintain an active monitoring program on the lower Yahara River to obtain accurate data on channel hydraulics.</p>	16	2	<p>Ongoing. Current system working well.</p>
2	<p>Reconvene Yahara Lakes Advisory group or modified group to evaluate and act on the flow measurements, data, provide education, and monitor progress of recommendations after one year.</p>	11	6	<p>Full group last reconvened on 10/6/04 to evaluate progress.</p>

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3	Use the calibrated USGS Yahara Lakes model currently under development to optimize management of Yahara Lake system and to achieve multipurpose objectives.	8	5	USGS reservoir routing model completed under contract to the Dane County Regional Planning Commission ( <a href="http://pubs.er.usgs.gov/usgspubs/ofr/ofr9967">http://pubs.er.usgs.gov/usgspubs/ofr/ofr9967</a> ). It has not been used for lake level management.
4	Promote and continue development of a state-of-the-art hydrologic monitoring network (i.e. rain gages, lake level recorders, river flow gages) for the Yahara River system	17	1	Acoustic velocity meters installed at the following stations in 2003 using Dane County funds and USGS match: Madison – Main Street Bridge (new acoustic velocity meter), McFarland - Exchange Street Bridge (upgraded existing station with an acoustic velocity meter), and Stoughton – Forton Street Bridge (new acoustic velocity meter). Yahara River staff gages between Lakes Waubesa and Kegonsa monitored by Dane County staff several times in 2004, and staff are working with DNR to survey in these gage elevations. Monitoring and rain gage network etc has been evaluated as part of the Yahara River Modeling Scoping Study in 2004. Money is an issue.
5	Survey and evaluate the recreational trends, and uses, and economic impacts by various user groups of the Yahara River System.	7	6	No action. Dane County Office of Lakes and Watersheds intends to submit grant proposal in August 2008 to fund this work in 2009.
6	Promptly develop and apply a continuous hydraulic/hydrologic/water quality model of the watershed including the lakes and connecting channels that can account for present and potential land use conditions and land management practices in the watershed and the potential modification of control structures and channels.	16	1	Scoping study completed by USGS; W.F. Baird & Associates contracted to develop full model beginning in 2005. MG&E contributed \$200,000 to support model development. Final report and model were delivered to the county in October 2007. Baird is preparing options for County consideration to improve the operational use of this model.
No	<b>Land Use</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Status</b>
1	A standard watershed-wide legal ordinance be instituted to infiltrate runoff from impervious surfaces at a target level.	6	7	An infiltration task force was convened to develop infiltration standards for county-wide implementation. The task force's final report ( <a href="http://www.danewaters.com/pdf/2006StormwaterReport.pdf">www.danewaters.com/pdf/2006StormwaterReport.pdf</a> ) was delivered in July 2006 and the recommended infiltration targets were adopted by the county board in November 2006.
2	Low-lying riparians be invited to voluntarily provide right-or-first-refusal for future ownership of their property in order to revert it to public ownership.	3	9	No Progress

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3	Opportunities to significantly increase the infiltration of stormwater and snow melt into the groundwater should be identified and emphasized to all areas that significantly impact lake levels.	14	3	<p>Five infiltration practices were installed by MG&amp;E to be operational in 2005, as part of its permitted water mitigation requirements. Dane County staff continue to implement their erosion control and stormwater management ordinance, and encourage infiltration above ordinance requirements. Rain garden is research being conducted as part of the Madison Area Municipal Storm Water Partnership (NR 216 permit).</p> <p>MGE's effort morphed into a state of the art infiltration gallery on the Odana Golf course. While not a classic passive stormwater system, this effort is functioning very well to infiltrate a significant amount of stormwater.</p>
4	Commercial, industrial and residential development north of Lake Mendota, should if necessary, be restricted by zoning to minimize the impact of stormwater runoff caused by development into the Yahara River system.	11	2	County Board has adopted an intergovernmental agreement related to the North Mendota Parkway that would identify and map a North Mendota E-Way. A draft, expanded Natural Resource Area that includes significant water and upland features has been identified. No progress on the specific recommendation.
5	Planning and new laws be introduced to reduce stormwater volumes delivered to the Yahara River system.	10	7	Same as #1 above.
6	Where possible we should encourage reestablishment of natural vegetation along public and private lake frontage.	5	7	<p>Being considered at staff level for amendments to Dane County Shoreland Zoning Ordinance. Rock River Coalition has held shoreline vegetation restoration workshop, and a demonstration restoration project at the former Camp Wakanda on Lake Mendota is a partnership between Dane County Lakes and Watersheds, DNR, and the Madison Fishing Expo. Shoreland zoning regulations require the establishment of a 35-foot native buffer if the shoreline cover has been removed due to grading activities. In addition shoreland zoning also requires a 75-foot structural setback from wetlands, streams, rivers, and lakes. Water Body Classification Phase II (see #5 in Lakes Management above) also includes draft recommendations for natural shoreland vegetation reestablishment.</p>

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7	Control the inflow of sediment, animal waste, pesticides, fertilizer and other pollutants into the Yahara River system.	14	4	Being implemented through the Dane County erosion control and stormwater management requirements, in towns, cities and villages. Dane County adopted use and retail display restrictions on phosphorus in lawn fertilizer that went into effect in 2005 ( <a href="http://www.danewaters.com/management/phosphorus.aspx">www.danewaters.com/management/phosphorus.aspx</a> ); and in 2007 its regulation on coal tar sealants went into effect ( <a href="http://danewaters.com/business/coalTar.aspx">http://danewaters.com/business/coalTar.aspx</a> ). Dane County now has a permit system in place regulating the spreading of liquid manure on snow-covered and frozen ground.
8	Stop the draining of wetlands for either farming or possible future development within the Yahara River System.	13	2	1985 Farm Bill contains the Swampbuster provision. This discourages previous non-cropped wetlands from being drained and brought in to production of a commodity crop. Current programs (CREP and WRP) restore wetlands. Marginal lands are now being brought back into corn production to satisfy the demand for ethanol production. Dane County Land and Water Legacy Fund provides \$2 million for acquiring previously drained land to convert back to wetlands.
9	Ensure new developments adhere to current standards of control to prevent sediment and erosion into the Yahara River system	15	3	Being implemented through the Dane County erosion control and stormwater management requirements, in towns, cities and villages. Dane County is implementing its oversight policy to ensure consistent implementation in towns, cities, and villages. The Green Tier Clear Waters Initiative is a collaborative effort between Veridian, Sun Prairie, Madison and DNR to develop a different model for controlling storm water from construction sites. This effort appears to be successful.
10	Strengthen county stormwater ordinance to control floodwater from the real 100-year rain event using current rainfall information	8	6	No action. Dane County staff believe that accurate use of TR55 with the current 10-year storm rate requirement is adequate, and that current rainfall information cannot be used until the NRCS updates its rainfall information.

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11	Preserve and restore wetlands to improve lake quality, natural habitat, and flood storage within the Yahara River System.	11	3	See #8 above. DNR is actively negotiating the purchase of drained wetlands within the watershed. DNR and Dane County have purchased wetlands within the Door Creek Watershed, and in 2007 the Dane County Land and Water Legacy Fund has supported an 80 acre purchase for wetland restoration.
12	Develop better county internal coordination between Land Conservation Department, Lakes and Watershed Commission and Parks Department.	7	5	These units were merged into the Land and Water Resources Departments in January 2005 and the Department's strategic plan includes a focus on internal and external communication and coordination.
13	Setup a purchase and/or transfer development rights program to reduce the future development footprint north of the lakes in the entire floodplain.	2	10	Policy language recommending adoption of countywide PDR and TDR programs adopted as part of the Dane County Comprehensive Plan, effective 1/1/08. Dane County Board adopted a transfer of development rights (TDR) ordinance in early 2008, but the ordinance was defeated by a majority of town boards. A revised TDR ordinance may be reintroduced later in 2008.
14	Update the 100-year flood maps and end new building in 100-year floodplain area.	9	5	FEMA recently released digital versions of the existing FIRM maps. Dane County received a \$50,000 grant, to be matched with state funds. As a result, 300 miles of existing flood studies will conform to digital elevation model, and 50 miles of new detailed studies will be completed. Dane County Board revised the county floodplain zoning ordinance (Chapter 17, Dane County Code) to meet WI DNR and FEMA standards in the spring of 2007. Preliminary review of new floodplain mapping, based on county digital elevation models, was completed in spring of 2007. The county is currently awaiting FEMA approval of final revised floodplain maps
15	Identify and target sites for wetland restoration that offer the greatest promise for preventing future increases in flooding in the Yahara lakes.	10	8	Wetland restoration sites for water storage were identified in the Lake Mendota Priority Watershed Plan, and there's a start toward acquiring some of them through the Dane County Land and Water Legacy Fund. We also have similar recommendations in the Door Creek Watershed Report. Similar policy language adopted as part of the Dane County Comprehensive Plan, effective 1/1/08.

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No	Education and Other Efforts	Strongly Agree	Agree	Status
1	Create an account and increase support to fund watershed restoration and improvement work.	8	5	No account created. Federal and state cost-share \$ continues to be used for rural conservation. Beginning in 2005, the Dane County Executive has set aside funds in a waters initiative which includes money for urban catchment basins, streambank protection, habitat improvement, an increase in the Conservation Fund, new weed cutters. In 2007 this became the Land and Water Legacy Fund, and in 2008 \$2.6 million was budgeted (largely for land acquisition)..
2	Create educational programs focusing on increasing awareness of lake and watershed issues among the general public.	9	9	Ongoing Dane County Lakes and Watershed Commission educational efforts. Madison Area Municipal Storm Water Partnership (NR 216 group permit) educational efforts have included media campaigns, a Dane Waters DVD, articles for municipal newsletters and much more.
3	Communicate all key recommendations to officials and the general public via e-mail, brochures, newsletter and other educational efforts.	11	7	Olbrich Gardens YLAG recommendation public information session held in June 2002. YLAG information has been available on the Office of Lakes and Watersheds web site since the group completed its work. YLAG materials used in citizen work group development of the Dane County Comprehensive Plan.
4	Encourage the development and real estate industry to go beyond minimum water quality best management.	13	4	Dane County staff continue to encourage developers to go beyond county minimum requirements. Several workshops have been provided for developers, contractors and planners. Dane County, DNR, the City of Madison, the City of Sun Prairie and a major Dane County builder are actively working under a Green Tier agreement aimed at going beyond minimum standards.
5	Investigate and implement more efficient public access to Yahara lakes information on the Internet.	9	8	There have been continuous improvements in web access to Dane County water resources information. The Land and Water Resources Department web pages contain streamlined access to lake and watershed information, including current lake levels and aquatic plant harvesting program information. See <a href="http://www.countyofdane.com/lwr/">www.countyofdane.com/lwr/</a> The Dane County Planning and Development web page ( <a href="http://www.countyofdane.com/plandev/">http://www.countyofdane.com/plandev/</a> ) includes information about floodplain zoning and FIRM map updates.

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6	Implement demonstration practices (i.e. Rain gardens, shoreline habitat, stormwater detention, aquatic vegetation control) and evaluate their effectiveness.	9	9	Dane County Lakes and Watershed Commission holds annual Better Lawns and Gutters tour to showcase rain gardens. Several research projects on rain gardens are underway, including at Dane County’s Lussier Heritage Center, Edgewood College, and in the City of Madison through the Madison Area Municipal Storm Water Partnership. DNR’s South Central Region headquarters includes a demonstration rain garden. A 5-year Dane County/DNR/Corps of Engineers research project began in 2008 in Turville Bay of Lake Monona. There, low-level, selective herbicide application and cutting of aquatic plants are being used to evaluate control methods for Eurasian water milfoil (an invasive aquatic exotic plant) and to restore native plant communities.
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The complete YLAG report is available at [www.danewaters.com/management/ylag.aspx](http://www.danewaters.com/management/ylag.aspx)