DANE COUNTY LAKES & WATERSHED COMMISSION
2016 BUDGET RECOMMENDATIONS
(Adopted on August 20, 2015)

The Dane County Lakes and Watershed Commission's charge is to protect and improve water quality, as well as the scenic, economic, recreational, and environmental value of Dane County's water resources. Each year, by state statute, the Lakes and Watershed Commission carefully reviews the budget requests of those departments and divisions (the Department of Land and Water Resources, the Sheriff's Department, and the Department of Public Health) that have authority over our waterways, considers the cost-effective ways to protect and restore our watersheds, and makes recommendations to inform the County Executive's proposed budget.

OVERVIEW

Dane County has an amazing resource in its lakes, rivers, and streams, which provide quality of life for all residents and are a foundation for our economy. We are fortunate to have abundant water resources in our region. Lakes and rivers are where we spend time with family and friends, boat, fish, paddle, and simply enjoy nature. Most importantly, our groundwater is a source of safe drinking water for the approximately 500,000 residents of the county. Minimal expense is needed to provide safe drinking water because of the essentially unpolluted nature of our groundwater. In addition to recreational activities that contribute significantly to the economic well being of Dane County, our waters support industry and agriculture. Agriculture provides 17,294 jobs in Dane County, accounting for $3.4 billion in business sales, and contributes $1.3 billion to county income[1].

More than attracting money to Dane County, our waters attract the talent that runs our economy; studies show young entrepreneurs value accessible natural resources as one of the top qualities they look for when choosing a location to start their careers and/or businesses. In a recent national study by the American Sustainable Business Council, 71% of small businesses owners believe that "strong clean water protections are necessary to maintain a healthy economy and create local jobs[2]." While healthy lakes and streams require investment, that investment helps secure a tax base that provides for other community needs.

The Dane County Lakes and Watershed Commission (LWC) acknowledges the economic realities that must be balanced with effective funding. The LWC has identified several key goals to guide its specific budget recommendations. These goals are:

- Reduce excess phosphorus, nitrogen, chlorides, and dissolved solids in our lakes, rivers, and streams;
- Meet all regulatory responsibilities including county ordinances and state and federally mandated water quality guidelines;
- Engage citizens to address the use, quality, and safety issues associated with Dane County waters;
- Encourage sound scientific studies of water quality and use issues; and
- Provide the required resources for safety on and near surface water.

SPECIFIC BUDGET RECOMMENDATIONS

I. Initiatives to Reduce Phosphorus Pollution

Dane County has nearly 40 lakes, rivers, and streams that are polluted enough that they do not support their designated uses. Excess phosphorus is the primary pollutant in many of these public waters. Dane County is working with many partners on several fronts to reduce phosphorus levels, including the construction of manure storage facilities, construction of manure digesters, and installation of new technologies to remove phosphorus from manure. Almost 50% of annual phosphorus runoff that reaches county lakes and waterways comes from the manure that is spread on frozen and/or snow covered fields in January-March[3]. These improved means of managing and using manure can significantly reduce the levels of phosphorus in the surface waters of Dane County. The LWC supports the following specific efforts to manage and use phosphorus wisely in Dane County.

A. Watershed Adaptive Management. Watershed Adaptive Management is a phosphorus compliance option that allows point and nonpoint sources (e.g. agricultural producers, storm water utilities, developers) to work together to improve water quality in those waters not meeting phosphorus water quality standards. The LWC fully supports budget expenditures associated with watershed adaptive management through collaboration with the Madison Metropolitan Sewerage District (MMSD) and Yahara WINs. To achieve these phosphorus management goals in the Yahara watershed, an Adaptive Management Pilot Project has been established by MMSD and thirty partners. This pilot project has been successful and is in its last year. Based on the success of the pilot project, MMSD is now developing a full scale adaptive management plan for the entire Yahara watershed through intergovernmental agreements with the involved municipalities. This project will start in 2017. The county's efforts to engage agricultural producers are critical to the success of this plan and require a strong commitment from the county in the form of both operating and capital funds.

B. Innovation and Economic Development in Manure Management. Manure, in the right place at the right time, and in the right form, is a high-value resource. The LWC supports efforts for strengthening innovation in phosphorus and manure management in Dane County. The 2015 adopted Dane County budget included $500,000 for new technology at the Town of Springfield digester that will remove nearly 100% of the phosphorus from the manure processed there. County staff are currently evaluating proposals from companies that design and install these "nutrient concentration" systems, and once a vendor is selected, construction of the system will begin in late 2015 or early 2016 at the Town of Springfield digester. We ask that Dane County continue to fund innovative and market-oriented ways of using the nutrients and organic matter in manure for the benefit of agriculture and protecting surface and ground water.

C. Maintain Full Funding for Urban Water Quality Grants. Dane County's Urban Water Quality Grant program provides cost-sharing grants to municipalities for construction of best management practices that will provide efficient, cost-effective treatment of urban runoff. This collaborative program with municipalities has been very successful in meeting its goal of improving the quality of urban stormwater runoff entering Dane County lakes, rivers and streams. The LWC supports continuation of this program at the annual level of $2 million, and carry forward and award of all unspent funds in the program.

II. Initiatives to Reduce Chloride Pollution

Increasing chloride levels in surface and ground water pose a significant risk to aquatic life and to public health. The Department of Public Health for the City of Madison and Dane County has played a critical role documenting the rising risk that chlorides pose in annual Road Salt Reports since 2010. Chloride levels in Lake Wingra are quickly approaching the taste threshold for associated sodium. Madison Well 14 located on University Avenue is facing a similar threat.

Wastewater treatment plants must meet the federal Environmental Protection Agency (EPA) limits for the amount of chloride that can be discharged in their effluent. In the last couple of years MMSD, Sun Prairie, and Mount Horeb wastewater treatment plants all have had occasions where chloride levels were in excess of EPA limits. Sources of chlorides to the MMSD facility include water softener recharge water and salt infiltration from winter maintenance of roads, parking lots, and sidewalks. MMSD undertook a chloride compliance study in 2015, which documented that the net present value of treatment to remove chloride could cost MMSD as much as $2.3 billion. LWC supports collaboration between Dane County and municipalities to reduce the use of chlorides. Specifically, we support the constructive conversations that are occurring between the City of Madison and Dane County about measures to reduce the chloride contamination of Well 14. We believe that the collaborative approach to pollutant reduction that has been so successful in watershed adaptive management should also be used to address community concerns about elevated chloride levels in area waters.

There is a great amount of collaboration in our community related to reducing the negative impacts of increased chloride application and accumulation in Dane County waters. Two examples give a sense of the exciting partnerships underway. The first is the draft Lake Wingra Watershed Management Plan, prepared by Strand Associates for the City of Madison with support from the Friends of Lake Wingra (http://www.cityofmadison.com/engineering/stormwater/wingraplan.cfm). The second example is the multi-agency Wisconsin Salt Wise outreach campaign (https://www.wisaltwise.com). In late 2014 and early 2015, the following partners worked together to create a Wisconsin Salt Wise website and handouts tailored to several audiences: Madison Metropolitan Sewerage District, Madison Water Utility, Madison – Dane County Public Health, Dane County Office of Lakes and Watersheds (OLW), Madison Area Municipal Storm Water Partnership, UW-Madison Environment Health and Safety, and City of Madison Engineering. These partners are currently working together on a coordinated rollout of this campaign for fall 2015, and also supporting winter maintenance training for those who apply de-icers containing chloride to roadways, parking lots, sidewalks and driveways. The timing is right for increased Dane County leadership and participation in these efforts. We suggest the following Dane County contributions to maintaining and growing community collaborations to address chloride pollution.

A. Re-Allocate Existing County Staff Time to Focus on Efforts to Reduce Chloride Levels. The LWC requests a reallocation of LWRD and Extension staff support in 2016 to focus on collaborative chlorides work, to effectively roll out Wisconsin Salt Wise for the county, to develop a pilot program (see longer-term plans below) focused on private and public de-icing reduction in the Spring Harbor and Wingra watersheds, and to support MMSD in its water softener optimization campaign that would provide information regarding water softener efficiencies and the risks of wasted chloride reaching the water system.

B. Expanded Chloride Monitoring. LWC requests that $40,000 in capital funding be provided for expanded chloride monitoring. During 2016, the LWC proposes to work with LWRD, MMSD, the City of Madison, Friends of Lake Wingra, and other partners to design a chloride reduction pilot program for the Spring Harbor and Wingra watersheds. This pilot program would begin in 2017. The purpose of the pilot program would be to develop and test road salt optimization techniques and private applicator de-icing strategies in the Spring Harbor Stormwater and Well 14 Recharge Zone and the Lake Wingra watershed in Madison. The program would also develop community accepted application standards for chloride de-icers. To enhance baseline monitoring data in the Lake Wingra watershed prior to the pilot program, we suggest

using a small allocation of capital funds to have USGS add chloride monitoring capability (a specific conductance probe) to two existing City of Madison monitoring stations at Monroe Street and one other location, at an approximate cost of $10,000 each, and upgrade flow measurements at these same existing stations, at an approximate cost of $10,000 each; for a total of $40,000. This will provide baseline chloride loading estimates for comparison to the levels achieved after implementation of various de-icing practices.

C. Future Chloride Reduction Efforts. For 2017 and beyond, the LWC recommends that the county multi-year capital budget plan be amended to include funding for a limited-term equipment cost-sharing incentive program to assist private salt applicators with the purchase of new equipment or with retrofitting existing equipment that will facilitate a reduction in their use of salt for anti-icing parking lots, driveways and sidewalks or enhanced removal of snow from parking lots, driveways and sidewalks (e.g. brushes for snow removal). Anti-icing techniques, such as applying salt brine in advance of a storm to pavement, prevent frozen precipitation from bonding to the pavement. Dane County and many area municipalities already use this practice on roads. Anti-icing returns road surfaces to normal faster, resulting in fewer accidents and delays. Anti-icing practice uses 30-50% less salt than conventional de-icer application because carefully controlled brine spray doesn't bounce or blow off the road surface. This saves money and minimizes potential losses to the environment.

Our proposed program would facilitate private applicators in recycling industrial sources of waste salt brine (e.g. non contact cooling brines) and the recharging brine waste from commercial water softeners as a brine source for anti-icing. These waste brine sources are currently discharged into the sewer. An equipment cost-sharing program, as well as capital purchases to establish common brine storage and transfer capability, would facilitate private applicators being able to add anti-icing services to their existing winter maintenance services offered through contract.

III. Protecting Dane County Water Resources through Community Involvement

A. Continued County Investment in a Community Strategic Engagement Coordinator. The LWC requests continued county investment in the Strategic Engagement Coordinator position in the OLW. Dane County's investment in watershed leaders and volunteer engagement has paid great dividends, increasing awareness and focus of watershed organizations on county clean water goals. Community engagement resources can assist in addressing phosphorus management issues across the county, such as increasing adoption of urban and rural actions necessary to meet the water quality goals and objectives of the Door Creek Watershed Management Action Plan currently under development. They can also assist with addressing outreach efforts to reduce chloride use.

B. Maintenance of the Public Information Budget. We also request the maintenance of the public information budget in the Office of Lakes and Watersheds, a portion of which supports the Dane County Watershed Network and other community engagement program needs.

IV. Continued Support for Other County Investments in Water Resource Management

Water resource management is complex. It requires investment from county Departments and staff with diverse areas of expertise and authorities, as well as investment in Dane County citizens that are providing leadership throughout the county.

A. Maintain Funding for Other Operating Costs, such as gasoline and parts for equipment maintenance. Aquatic plant harvesting is one effort that suffers significantly when gasoline or replacement parts are not available. Like the need for appropriately trained dedicated staff, these supplies are critical to improving water quality as well as maintaining target lake levels.

B. Maintain High-quality Long-Term Water Quality Planning. The LWC believes it is important to update the county-wide water quality planning summary and maintain other long-term data analysis and planning functions. These planning reports assist the county, municipalities, and towns in making good decisions for future generations. This effort is especially important, as Dane County is one of the fastest growing areas in the State of Wisconsin; this growth will have a significant impact on the quantity and quality of our drinking water supplies.

C. Maintain Critical Water Programming by Extension Partners. The LWC applauds Dane County UW-Extension for the rich educational programming and assistance they provide to Dane County citizens. The Water Exploration after-school program links watershed groups with underserved communities. Additional staffing is the main need for this stellar program. The OLW supports the Water Resources Education Center by providing $500 annually for equipment that is lent to support citizen monitoring, storm drain marking, etc. (http://dane.uwex.edu/files/2010/05/WERC-brochure-with-graphic-2012.pdf) and requests that this level of support be maintained. We appreciate the Community Development Educator's work on the Yahara Lakes Advisory Group, assistance in our expanded community engagement program, and several other mutual initiatives over the years. We look forward to working more closely with the Crops and Soils Educator, Horticulture Educator, and the Dairy and Livestock Educator in coming years, as they advance nutrient management planning, cover crop research and education, manure management, and wise water use, among other important topics. We also request that UW-Extension staff focus on chloride reduction be increased, to work together with LWRD staff on these issues.

D. Fund the Water-related Budget Requests from the Department of Public Health for Madison and Dane County. These requests assure that the public is informed when our recreational waters are not safe for swimming, that spills of pollutants are investigated and remediated, and that agencies and the public are informed of chloride usage and effects on surface and ground waters. We strongly support adding funds to support more frequent monitoring of county beaches for bacteria, cyanotoxins, and chlorides. Prompt detection of hazardous conditions can significantly prevent human and animal illness.

[1] Dane County Agriculture: Value & Economic Impact 2014. University of Wisconsin - Extension, Wisconsin Milk Marketing Board, and Wisconsin Department of Agriculture, Trade and Consumer Protection.

[2] American Sustainable Business Council. 2014. Small Business Owners Favor Regulations to Protect Clean Water. http://asbcouncil.org/sites/default/asbc_clean_water_poll_report_july2014_sv_final_140721v2sm.pdf; accessed August 2, 2014.

[3] Lathrop, Richard C. Perspectives on the eutrophication of the Yahara lakes. Lake and Reservoir Management. 23:345-365. 2007.