

HFHL Task Force Recorded Recommendations	Category	Proposed Recommendation Wording	Technical Comments and Considerations	Modifications, Concerns and Barriers	Partners/ Collaborators	Funding Opportunities
Collect and compile soil P and P-Index data from NM plans. Report aggregate findings and trends (not individual farm data).	Data Collection, Accounting, and Reporting	Develop and maintain a comprehensive database whereby Nutrient Management Plans, soil test phosphorus, the WI Phosphorus Index, and other relevant information is housed with periodic data evaluation and reporting.	•What components would that need to contain for it to be useful?			
Systematically collect soil P and P-Index data from farm NM plans						
Comprehensive phosphorus accounting system – Develop a phosphorus accounting system for the watershed based on: a)The P index to promote a phosphorus balance that meets crop needs and helps us achieve our water quality goals, b) Accounting for projects that reduce phosphorus, c) In-lake phosphorus levels						
<p>Dane County will fully develop and maintain a database whereby soil test P, phosphorus index and other relevant information is housed, and will periodically evaluate the data and report on trends.</p> <p>a. DC appears to have taken steps related to database development, but this effort needs to be substantially completed within the next year if it hasn’t already been done.</p> <p>b. DC will commit funding to support this effort if it hasn’t already been done.</p> <p>c. Database should be populated with past data (say from the last four years) and then populated with new information going forward.</p> <p>d. Data should be “blinded” to folks outside of DC staff-data privacy as it relates to individual farmer information needs to be protected.</p> <p>e. At a minimum, when reporting, data should be aggregated by TMDL stream reach for the Yahara Watershed.</p>						
Develop an electronic system to manage NMPs county wide to allow for better watershed management, tracking of soil phosphorus levels, and identify high risk locations (this may be a system that reviews individual plans and highlights issues for staff review AND/OR that integrates electronic submissions for a larger watershed assessment).						
Tracking and accounting phosphorus coming into the system.	Data Collection, Accounting, and Reporting	Measure and track the amount of phosphorus imported to the watershed, exported from the watershed, and the net accumulation or reduction of phosphorus in the watershed.	Would this be county wide or on a watershed basis? What phosphorus sources should be tracked (manure, fertilizer, food waste, industrial waste, etc...)?			
<ul style="list-style-type: none"> <li>• Measure the annual amount of phosphorus imported to the watershed, exported from the watershed, and the net accumulation or reduction of phosphorus in the watershed in 2018.</li> <li>• Establish a five-year goal (2018-2022) to achieve a specified, measurable net reduction in the amount of phosphorus in the watershed by the end of 2022.</li> <li>• Measure progress toward this goal annually.</li> <li>• Set and achieve a follow-on five-year goal (2023-2027) for additional net phosphorus reduction with progress measured annually.</li> </ul>						
Improve data collection and reporting.	Data Collection, Accounting, and Reporting	Improve data collection and reporting.				

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Update winter spreading standards to reduce runoff risks. Incorporate latest NRCS 590 standards. Extend permit requirement to solid manure, and consider other changes that may be justified.						
Consider new revenue sources, including “water quality” fees on P fertilizer sales.	Policy and Ordinance Updates	Consider new revenue sources, including “water quality” fees on P fertilizer sales.				
<p>Dane County will evaluate opportunities for developing a more streamlined decision-making approach as it relates to approving cost share funding and related activities associated with P reduction practices.</p> <p>a. The current approach appears to be time consuming and may have redundant steps (e.g. multiple committees) that impact the timely delivery of cost share funds.</p> <p>b. More authority needs to be placed in the hands of the Land and Water Resources Department to make and carry out funding decisions.</p>	Policy and Ordinance Updates	Dane County will evaluate opportunities for developing a more streamlined decision-making approach as it relates to approving cost share funding and related activities associated with P reduction practices.				
Develop a baseline measurement for inorganic chemical fertilizer imports into the County and set limits to reduce incrementally over 10 years. NOTE: this will have to be evaluated every two years and may require funding if phosphorus needs are not being met or the burden for movement is becoming excessive for non-livestock farms.	Policy and Ordinance Updates	Develop a baseline measurement for inorganic chemical fertilizer imports into the County and set limits to reduce incrementally over 10 years.				
Ensure that current rules and regulations are being enforced.	Policy and Ordinance Updates	Ensure compliance with current regulations through more monitoring and oversight				
More regulatory monitoring and oversight						
Liquid Manure – If have 6 months of liquid manure storage no hauling of liquid manure on frozen or snow covered ground. If do not have 6 months of storage, need to have an approved winter hauling plan that is turned into DCLC Dept. This plan would need to be in conjunction with a Snap Plus format nutrient management plant. DCLC would be required to spot check 25% of the winter hauling plans, to making sure growers are in compliance with the plan submitted. Each grower would be checked at least once every 4 years.	Policy and Ordinance Updates	Liquid Manure – If have 6 months of liquid manure storage no hauling of liquid manure on frozen or snow covered ground. If do not have 6 months of storage, need to have an approved winter hauling plan that is turned into DCLC Dept. This plan would need to be in conjunction with a Snap Plus format nutrient management plant. DCLC would be required to spot check 25% of the winter hauling plans, to making sure growers are in compliance with the plan submitted. Each grower would be checked at least once every 4 years.				
Lower soil test P. Any field that has a soil test of over 100 ppm on average is limited to only applying manure at crop removal rates or less. Using a Snap Plus nutrient management plan to help growers move nutrient to fields that would benefit from additional nutrient while not increasing Phosphorus levels in the soil.	Policy and Ordinance Updates	Lower soil test P. Any field that has a soil test of over 100 ppm on average is limited to only applying manure at crop removal rates or less. Using a Snap Plus nutrient management plan to help growers move nutrient to fields that would benefit from additional nutrient while not increasing Phosphorus levels in the soil.				

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Supplement county authority to collect and compile key data as needed. Provide appropriate confidentiality guarantees for farmers.	Policy and Ordinance Updates	Supplement county authority to collect and compile key data as needed. Provide appropriate confidentiality guarantees for farmers.				
Creation of an environmental fund(a tax) to fund projects similar to the Minnesota Legacy Fund	Policy and Ordinance Updates	Creation of an environmental fund(a tax) to fund projects similar to the Minnesota Legacy Fund				
Dane County staff should propose policies to promote manure processing and other efforts that promote a phosphorus balance that meets crop needs and helps us achieve our water quality goals.	Policy and Ordinance Updates					
Dane County staff should propose policies to promote the preservation of farmland	Policy and Ordinance Updates					
Address importation of Metrogro into the watershed when it can be used outside of the watershed - Ban Metrogro in the Yahara Watershed	Nutrient Management	Address importation of Metrogro into the watershed when it can be used outside of the watershed - Ban Metrogro in the Yahara Watershed				
Conduct NM compliance surveys, and report aggregate results (not individual farmers).	Nutrient Management	Review, monitor and enforce nutrient management plan compliance.				
Monitor NM plan implementation (random audits).						
Enforcement of nutrient management plan						
Ensure that no farm field has a P-Index of more than 6 lbs./acre/year						
Implement a systematic NM compliance plan, initially focused on the Mendota watershed – the biggest source of P loading to the Yahara Lakes. Focus initially on priority watersheds, and on medium to large operations (especially livestock) that lack NM plans.	Nutrient Management	Implement a systematic NM compliance plan, initially focused on the Mendota watershed – the biggest source of P loading to the Yahara Lakes. Focus initially on priority watersheds, and on medium to large operations (especially livestock) that lack NM plans.				
Increase NM outreach, training and technical assistance. Increase coordination with certified NM planners, crop consultants, input suppliers and manure haulers.	Nutrient Management	Increase NM outreach, training and technical assistance. Increase coordination with certified NM planners, crop consultants, input suppliers and manure haulers.				
Offer cost-sharing for initial NM plan (4-year rotation), but then expect farmers to maintain compliance. Adopt a county ordinance authorizing civil citation for violators who refuse to comply despite legally adequate.	Nutrient Management					
Farm land that has corn removed as silage with a slope of 9% or greater requires a cover crop to be planted with minimal tillage practices. Cover crop funded by Dane County and to receive this funding the grower needs to have an approved nutrient management plan in Snap Plus format submitted to DCLC Dept. After 5 year time frame of doing cover crop on 9% or greater slope, have all corn silage ground be covered with a cover crop. After 5 years, no cost sharing for this practice.	Farm Practices and Incentives	Farm land that has corn removed as silage with a slope of 9% or greater requires a cover crop to be planted with minimal tillage practices. Cover crop funded by Dane County and to receive this funding the grower needs to have an approved nutrient management plan in Snap Plus format submitted to DCLC Dept. After 5 year time frame of doing cover crop on 9% or greater slope, have all corn silage ground be covered with a cover crop. After 5 years, no cost sharing for this practice.				
Cover crops and no-till – incentivizing rotations and crop cover to reduce runoff	Farm Practices and Incentives	Cover crops and no-till – incentivizing rotations and crop cover to reduce runoff				



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			<ul style="list-style-type: none"> <li>• Is there going to be need for farmer education and training</li> <li>• A review after the pilot is run and see how effective it would be large scale and how would we taper it off – set deadline for the sunset of the program and then everyone will be required to be in compliance</li> <li>• Farmer-led effort</li> <li>• Collective end of the pipe performance?</li> </ul>			
Implement an agricultural conservation easement/preservation program	Farm Practices and Incentives	<b>Implement an agricultural conservation easement/preservation program</b>				
Incentivize diversified cropping systems and explore new crop markets. This could also include creating bigger buffer strips and planting native vegetation like the Conservation Reserve Program.	Farm Practices and Incentives	<b>Incentivize diversified cropping systems and explore new crop markets. This could also include creating bigger buffer strips and planting native vegetation like the Conservation Reserve Program.</b>				
Incentivize the smaller farms in some sort of co-op program so they don't have to bear all of the costs (i.e. easements, practices, etc)	Farm Practices and Incentives	<b>Incentivize the smaller farms in some sort of co-op program so they don't have to bear all of the costs (i.e. easements, practices, etc)</b>				
Incentivize farmers and landowners to follow the rules and making sure the rules are clear and concise	Farm Practices and Incentives	<b>Incentivize farmers and landowners to follow the rules and making sure the rules are clear and concise</b>				
Increasing the use of digesters in the county	Farm Practices and Incentives	<b>Increase the use and piping of manure to digesters</b>				
Piping manure to digesters						
Promote headland stacking of solid manure in the winter months and composting the manure. Fund project upwards of 5 years so growers would have no out of pocket cost and see benefit of not having to be in field apply manure in winter months. Composted manure would allow nutrients to be transported farther and incentivize manure to leave watershed.	Farm Practices and Incentives	<b>Promote headland stacking of solid manure in the winter months and composting the manure. Fund project upwards of 5 years so growers would have no out of pocket cost and see benefit of not having to be in field apply manure in winter months. Composted manure would allow nutrients to be transported farther and incentivize manure to leave watershed.</b>				
Promote the use of LDMI, increase funding and make funding easier to acquire to subsidize this practice. To be used on higher sloped fields and hopefully eventually all fields. Make one of the requirements to receive funding, a nutrient management plan in Snap Plus format be turned into the DCLC Dept.	Farm Practices and Incentives	<b>Promote the use of LDMI, increase funding and make funding easier to acquire to subsidize this practice. To be used on higher sloped fields and hopefully eventually all fields. Make one of the requirements to receive funding, a nutrient management plan in Snap Plus format be turned into the DCLC Dept.</b>				

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Use the composting facility located at HWY 19 & 113 as a Dane County upcycling facility where biomass from nutrient buffer strips, road shoulder biomass and bedpack manure can be composted. This would be a Dane County facility.	Farm Practices and Incentives	Use the composting facility located at HWY 19 & 113 as a Dane County upcycling facility where biomass from nutrient buffer strips, road shoulder biomass and bedpack manure can be composted. This would be a Dane County facility.	•Could pay for itself in a more expensive energy environment. •Farmer would get compost back as a currency. •Market compost material to "field to table" markets.			
Coordinate with Yahara WINS and other farm and community initiatives.	Public Engagement	Coordinate with Yahara WINS and other farm and community initiatives.				
Create a Dane County Demonstration Farms/Fields Program	Public Engagement	Create a Dane County Demonstration Farms/Fields Program				
Dane County Land and Water Resources Department will reach out to farmers and landowners in 2018 with the intent of enhancing existing relationships and building new relationships. a. This may benefit from a facilitated approach. b. At a minimum, feedback should be requested on the following: i. What should we start doing? ii. What should we stop doing? iii. What should we do more of? iv. What should we do less of? v. What should we do differently?	Public Engagement	Dane County Land and Water Resources Department will reach out to farmers and landowners in 2018 with the intent of enhancing existing relationships and building new relationships. a. This may benefit from a facilitated approach. b. At a minimum, feedback should be requested on the following: i. What should we start doing? ii. What should we stop doing? iii. What should we do more of? iv. What should we do less of? v. What should we do differently?				
Dane County will empower famers to identify/develop specific solutions related to manure management that meet specific objectives/interests. An example might be to have farmers identify approaches that would eliminate winter application of manure by 2021, except in emergency situations. a. This approach empowers farmers instead of being a prescriptive, top down, “regulatory” approach. b. Solutions developed by farmers are much more likely to be embraced by farmers than more prescriptive approaches.	Public Engagement	Dane County will empower famers to identify/develop specific solutions related to manure management that meet specific objectives/interests. An example might be to have farmers identify approaches that would eliminate winter application of manure by 2021, except in emergency situations. a. This approach empowers farmers instead of being a prescriptive, top down, “regulatory” approach. b. Solutions developed by farmers are much more likely to be embraced by farmers than more prescriptive approaches.				
Develop a cost-share guide to help identify programs available to landowners and producers to understand the full options available to them	Public Engagement	Develop a cost-share guide to help identify programs available to landowners and producers to understand the full options available to them				
Evaluate Yahara Clean plan. With the next year it is recommended that Dane County staff work with community partners to evaluate the possible need to update the Yahara CLEAN plan to accommodate new information and assumptions used to estimate phosphorus reductions needed to reach our water quality goals.	Public Engagement	Evaluate Yahara Clean plan. With the next year it is recommended that Dane County staff work with community partners to evaluate the possible need to update the Yahara CLEAN plan to accommodate new information and assumptions used to estimate phosphorus reductions needed to reach				

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		our water quality goals.				
Identify and address key priorities in a clear and transparent way.	Public Engagement	Identify and address key priorities in a clear and transparent way.				
Work with community partners to make a unified statement about what citizens can do to make a difference, leveraging the strength of our community and watershed groups.	Public Engagement	Work with community partners to make a unified statement about what citizens can do to make a difference, leveraging the strength of our community and watershed groups.				
Develop a plan for a structured manure treatment option. Digesters, composting facilities, etc. Take manure and manage the byproducts.	Plans and Budgets	Develop a plan for a structured manure treatment option. Digesters, composting facilities, etc. Take manure and manage the byproducts.	Would this involve working with a consultant? This recommendation could have a serious financial commitment, who funds it?			
Net reductions in stored phosphorus will be accomplished through the following and other actions: <ul style="list-style-type: none"><li>• Set and achieve annual goals for reducing the amount of phosphorus in chemical fertilizers applied in the watershed.</li><li>• Lower the percentage of phosphorus in animal feed imported to the watershed, in such a way as to not jeopardize animal health or dairy productivity.</li><li>• Remove phosphorus from cow manure in the watershed (e.g., using the MAPHEX extraction system) with specific targeted amounts to be removed each year, exporting the concentrated phosphorus to locations outside of the watershed.</li><li>• Use other cost-effective technologies to remove phosphorus from “hotspots” identified on land in the watershed and export this phosphorus outside of the watershed.</li><li>• Have MMSD develop and begin implementing a plan to extract phosphorus from sewage and remove it from the watershed, rather than spreading it on farms in the watershed.</li></ul>	Plans and budgets	Net reductions in stored phosphorus will be accomplished through the following and other actions: <ul style="list-style-type: none"><li>• Set and achieve annual goals for reducing the amount of phosphorus in chemical fertilizers applied in the watershed.</li><li>• Lower the percentage of phosphorus in animal feed imported to the watershed, in such a way as to not jeopardize animal health or dairy productivity.</li><li>• Remove phosphorus from cow manure in the watershed (e.g., using the MAPHEX extraction system) with specific targeted amounts to be removed each year, exporting the concentrated phosphorus to locations outside of the watershed.</li><li>• Use other cost-effective technologies to remove phosphorus from “hotspots” identified on land in the watershed and export this phosphorus outside of the watershed.</li><li>• Have MMSD develop and begin implementing a plan to extract phosphorus from sewage and remove it from the watershed, rather than spreading it on farms in the watershed.</li></ul>				



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Set manure P export goals for the county over the next 10 years that falls into a larger goal or reaching a phosphorus balance. a. Develop a committee to evaluate phosphorus extraction/densification/export methods b. Fund up to three pilot scale systems c. Select locations based on impact d. Collect performance and economic data on the system to determine if future use makes sense	Plans and budgets	Set manure P export goals for the county over the next 10 years that falls into a larger goal or reaching a phosphorus balance. a. Develop a committee to evaluate phosphorus extraction/densification/export methods b. Fund up to three pilot scale systems c. Select locations based on impact d. Collect performance and economic data on the system to determine if future use makes sense				
Ensure adequate NM cost-share funding, and address non-monetary barriers to NM implementation.	Plans and Budgets	Ensure adequate NM cost-share funding, and address non-monetary barriers to NM implementation.				
New funding sources - decrease in funding from the state for conservation – difficult as a county to do the right thing when the state is going in the opposite direction (i.e. food land & water report)	Plans and budgets	New funding sources - decrease in funding from the state for conservation – difficult as a county to do the right thing when the state is going in the opposite direction (i.e. food land & water report)				
Increase taxes	Plans and Budgets	Increase taxes				
Need to offset rules/regulations with funding	Plans and budgets	Need to offset rules/regulations with funding				
Fund education and training to farmers (regardless of size) to keep them more informed of regulations, programs, etc	Plans and Budgets	Fund education and training to farmers (regardless of size) to keep them more informed of regulations, programs, etc				
Establish two watershed coordinator positions for Dane County to assist farmer-led watershed organizations with watershed planning and performance tracking.	Plans and Budgets	Establish two watershed coordinator positions for Dane County to assist farmer-led watershed organizations with watershed planning and performance tracking.	Would these be County positions?			
Provide adequate county staff and resources to get the job done.	Plans and budgets	Provide adequate county staff and resources to get the job done.				
Provide clear annual budgets. Separately identify funding for capital projects (e.g. manure storage and treatment facilities), remediation (e.g. stream dredging), farm cost-sharing, and program administration. Identify cost-share dollars that are available for new projects each year (not counting fund that are already encumbered for existing multi-year contracts).	Plans and budgets	Provide clear annual budgets. Separately identify funding for capital projects (e.g. manure storage and treatment facilities), remediation (e.g. stream dredging), farm cost-sharing, and program administration. Identify cost-share dollars that are available for new projects each year (not counting fund that are already encumbered for existing multi-year contracts).				
Provide matching grants for citizen organizations, including farmer-led watershed groups to participate in watershed planning, implementation and monitoring.	Plans and budgets	Provide matching grants for citizen organizations, including farmer-led watershed groups to participate in watershed planning, implementation and monitoring.				
Resources needed within the next year, it is recommended that Dane County staff write an implementation plan to identify the staff and financial resources needed to meet the Yahara CLEAN action targets.	Plans and budgets	Resources needed within the next year, it is recommended that Dane County staff write an implementation plan to identify the staff and financial resources needed to meet the Yahara CLEAN action targets.				
Revisit Yahara CLEAN report – many organizations are following the P reduction goals in the report	Plans and budgets	Revisit Yahara CLEAN report – many organizations are following the P reduction goals in the report				

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Set a target completion date- Set a goal of adopting an implementation plan for the Yahara CLEAN and include an agreed upon completion date.	Plans and budgets	Set a target completion date- Set a goal of adopting an implementation plan for the Yahara CLEAN and include an agreed upon completion date.				
Suck the muck should continue to be supported understanding that it happened decades ago and make sure the material is exported out of the watershed for stabilization	Plans and budgets	Suck the muck should continue to be supported understanding that it happened decades ago and make sure the material is exported out of the watershed for stabilization				
Encourage municipalities to put stands/trash cans for collecting domestic animal waste (dogs)	Urban	Encourage municipalities to put stands/trash cans for collecting domestic animal waste (dogs)				
Geese (excessive waterfowl) management on lakeshore properties in and around the lakes	Urban	Geese (excessive waterfowl) management on lakeshore properties in and around the lakes				
Incentives builders to develop agri-hoods (agricultural neighborhood)	Urban	Incentives builders to develop agri-hoods (agricultural neighborhood)				