

# Dane County Land & Water Resource Management Plan

An Overview of the Plan Updates



LAND&WATER  
RESOURCES  
DEPARTMENT

LAND CONSERVATION COMMITTEE MEETING

SEPTEMBER 27, 2018

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Land Conservation Division

# Topics for Today

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Plan purpose and requirements

Overview of county trends

Highlights from the draft 10-year work plan

Timeline for approval



# What is a Land & Water Resource Management Plan?

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A long-term strategic plan (10 year) including an assessment of resource conditions and needs in the County

Provides for input from local citizens and resource professionals

Directs conservation efforts and assists in forming annual work plans

Supports applications for additional conservation grant funds



**Holistic approach** to land and water resource management

Focus on **partnerships and collaboration**

# LWRMP Requirements....

*... at a minimum*

- ✓ Water quality & soil erosion conditions
- ✓ State & local regulations used for implementation including compliance procedures
- ✓ Water quality objectives
- ✓ Key water quality and soil erosion problem areas
- ✓ Conservation practices to address resource concerns
- ✓ Process to identify priority farms
- ✓ Strategies to encourage voluntary implementation of conservation practices
- ✓ Information & education
- ✓ Coordination with partners including local, state and federal agencies
- ✓ Multi-year work plan to implement conservation practices and achieve compliance with performance standards
- ✓ Includes benchmarks for progress and performance towards plan goals and objectives
- ✓ Estimated costs needed to implement the plan including staffing and cost-share funding

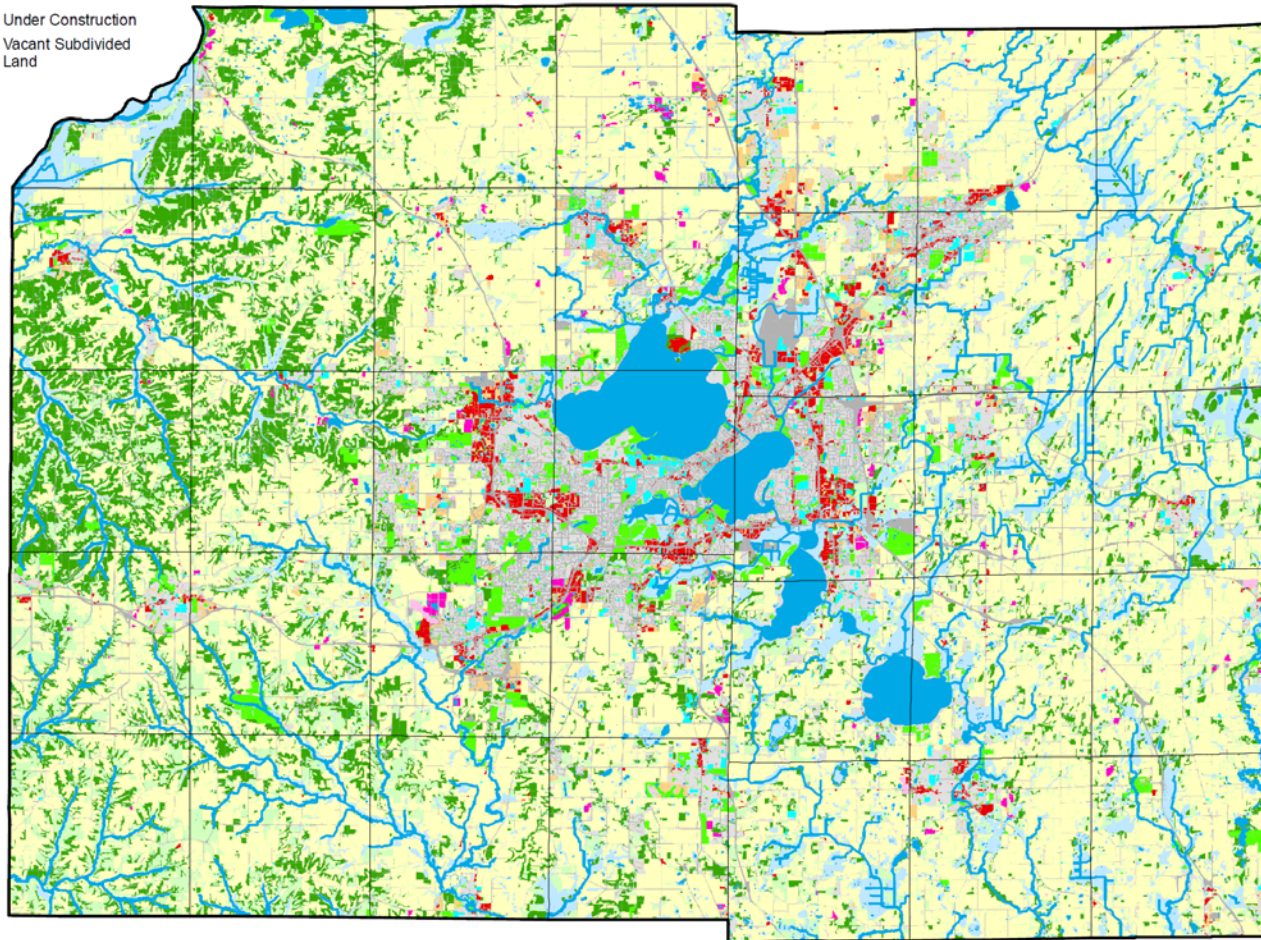
# DATCP Funding

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Approved plan is required to receive...

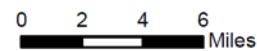
- Annual Staffing Grant (**\$174,201** for 2019)
- Bond Funding for Structural Practices (**\$45,250** for 2019)
- SEG Funding for Nutrient Management Planning (**\$75,000** for 2019)

### Landcover/Landuse (2015)





Land Use Category	Acres (2005)	Acres (2015)	% Total	% Change
Residential	56,552	59,548	7.5%	5.3%
Industrial	7,682	6,775	0.9%	-11.8%
Transportation	46,075	48,152	6.1%	4.5%
Communications & Utilities	1,249	2,271	0.3%	81.8%
Commercial	7,387	8,797	1.1%	19.1%
Institution & Government	5,544	5,203	0.7%	-6.2%
Recreation	15,835	26,207	3.3%	65.5%
Agriculture & Undeveloped	651,643	635,047	80.2%	-2.5%
<b>Total Developed Area</b>	<b>140,324</b>	<b>156,953</b>	<b>19.8%</b>	<b>11.9%</b>
<b>Total Area</b>	<b>791,967</b>	<b>792,000</b>	<b>100.0%</b>	<b>0.0%</b>

Landcover Sources: Capital Area Regional Planning Commission, Dane County Planning and Development, and Wisconsin Department of Natural Resources (wetlands only)



**Explanation**


 Major Basin Boundary


 Watershed Boundary


**Major Basins**


 Lower Rock


 Lower Wisconsin

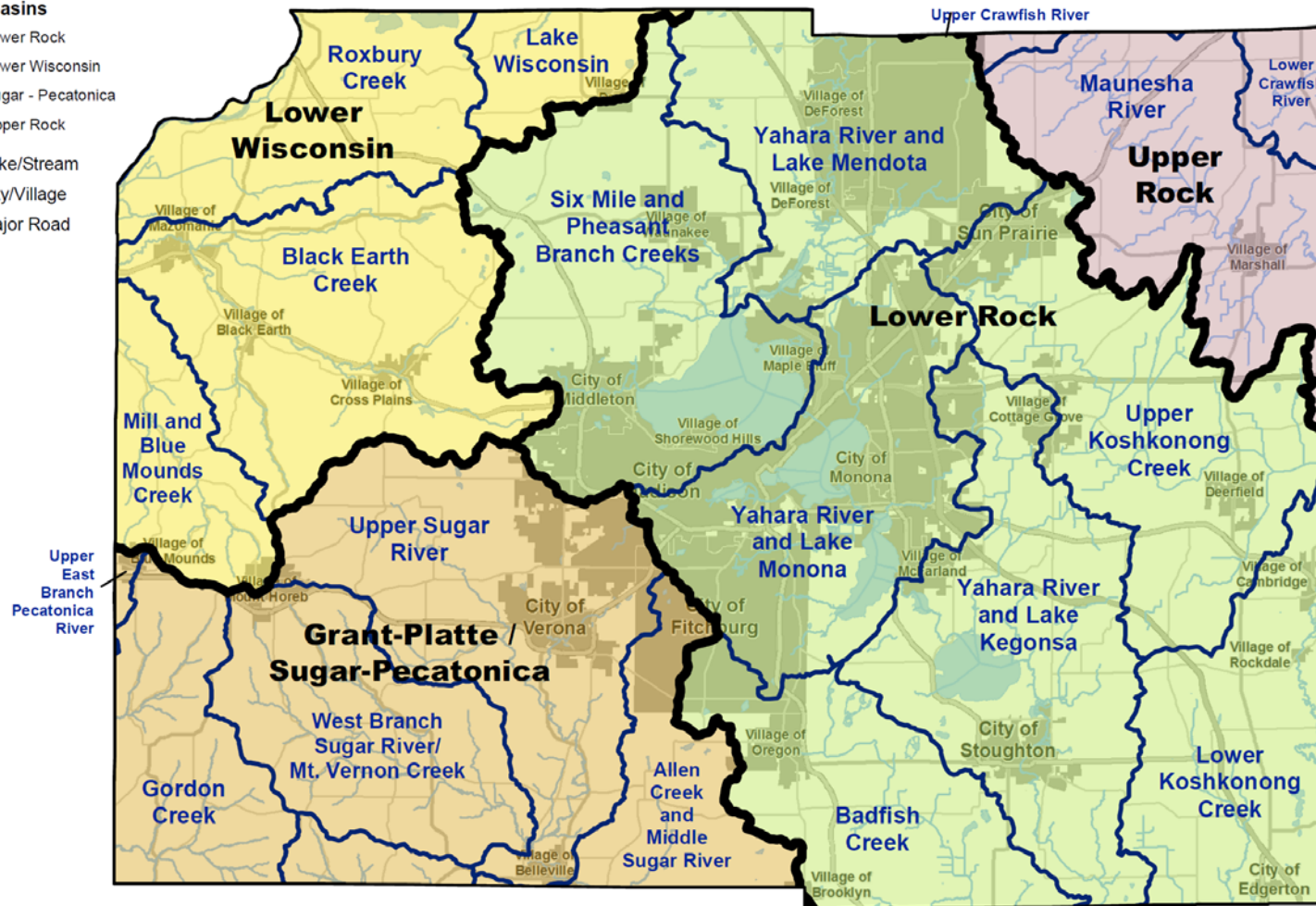
 Sugar - Pecatonica

 Upper Rock

 Lake/Stream

 City/Village

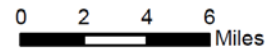
 Major Road



4 Basins

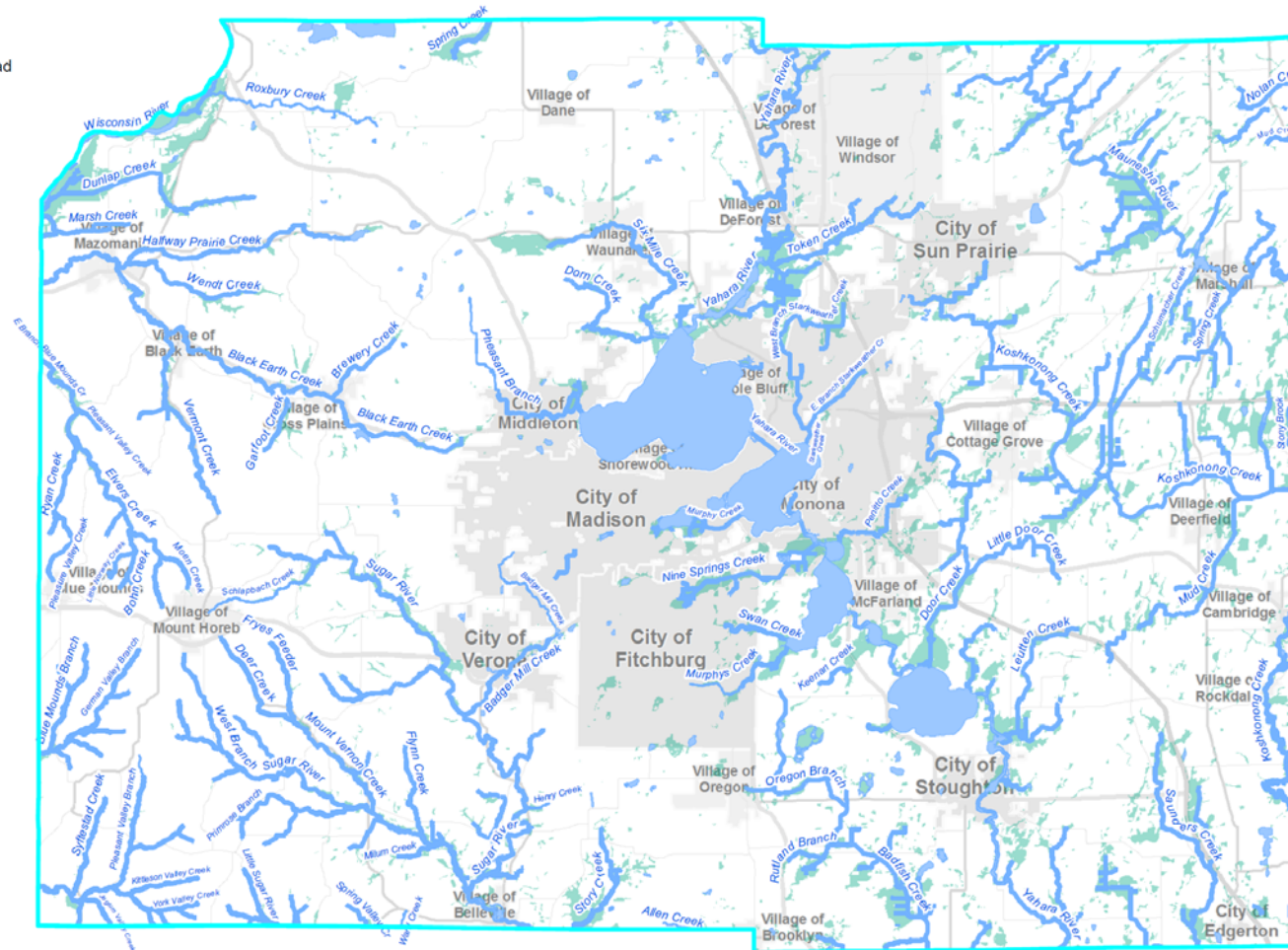
20 Watersheds

Many Sub-watersheds



### Explanation

- Major Stream
- Major Lake
- City
- Village
- Major Road



68 named lakes & ponds  
(33 square miles)

52 named streams & rivers  
(435 stream miles)

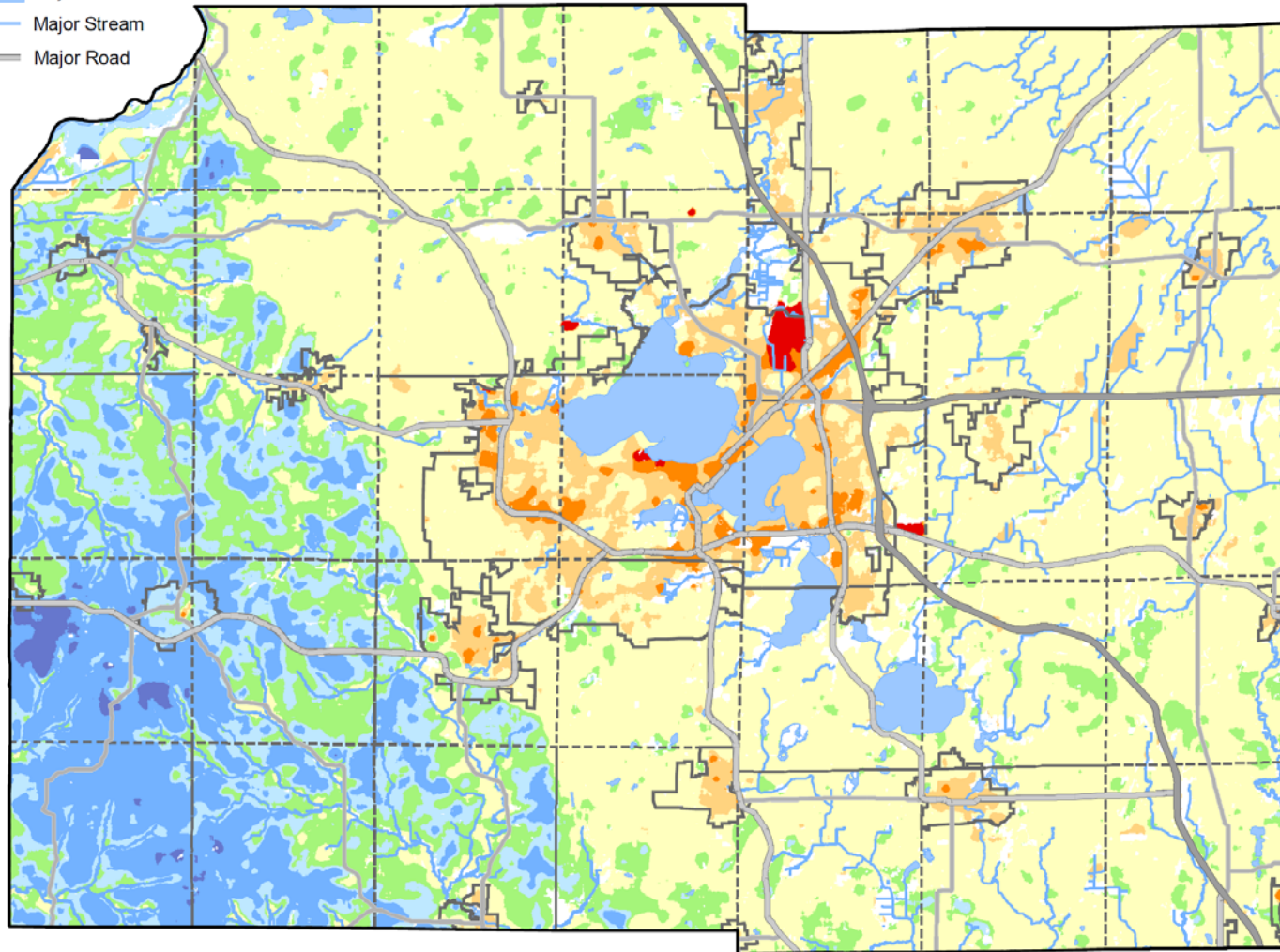
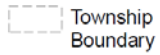
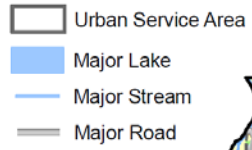
Data Source: Dane County, 3/2018

0 2 4 6 Miles

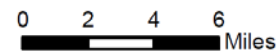




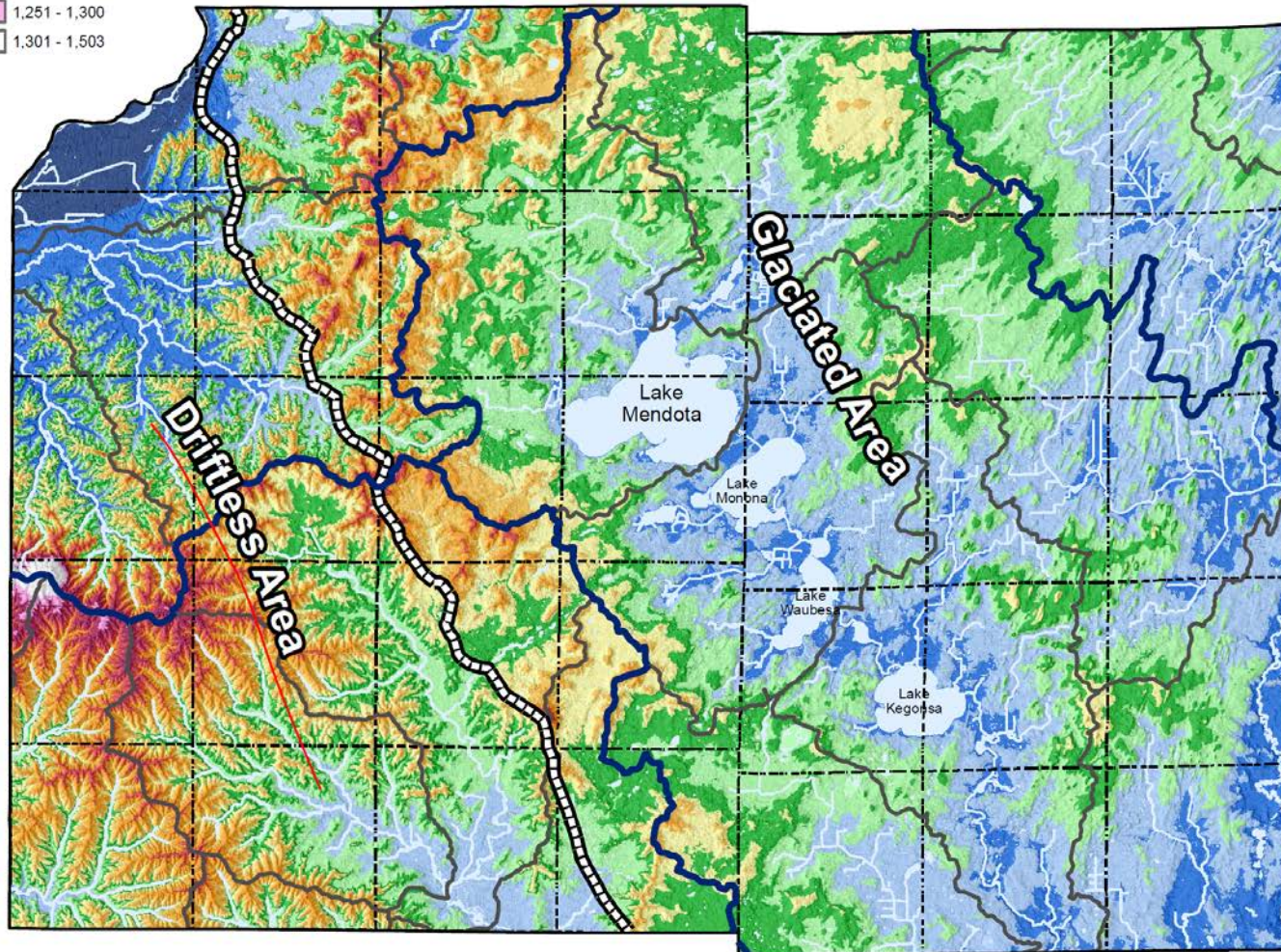
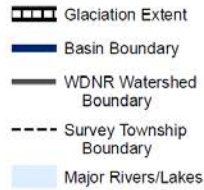
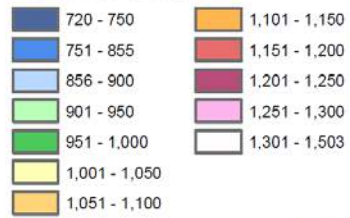
**Groundwater Recharge  
(inches/year)**



Groundwater is the only source of drinking water in Dane County



### Elevation (feet)



## Tale of Two Counties...

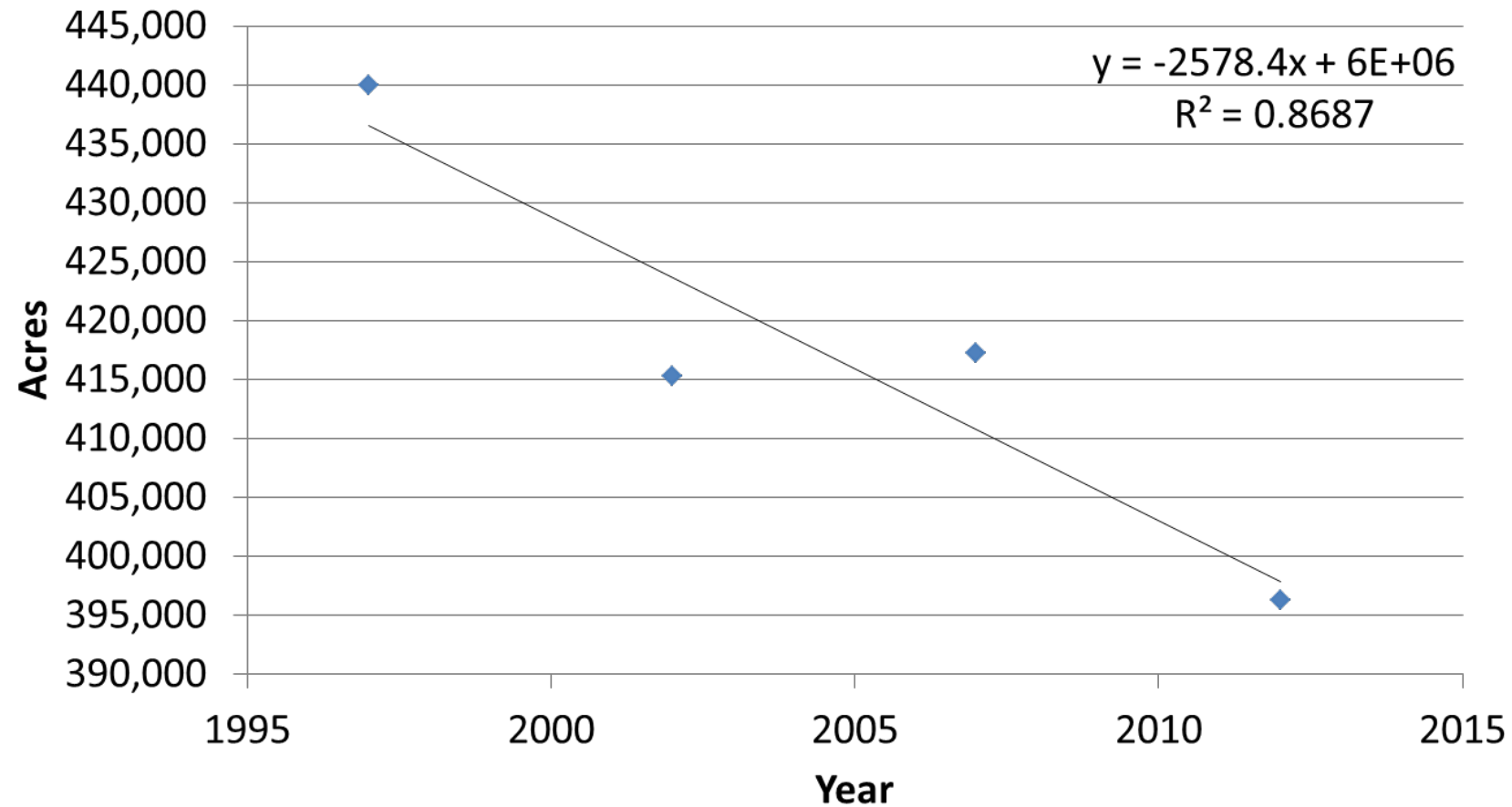
### ➤ *Glaciated Area*

- Low gradient streams
- Sand, silt, and muck
- Deep glacial deposits

### ➤ *Driftless Area*

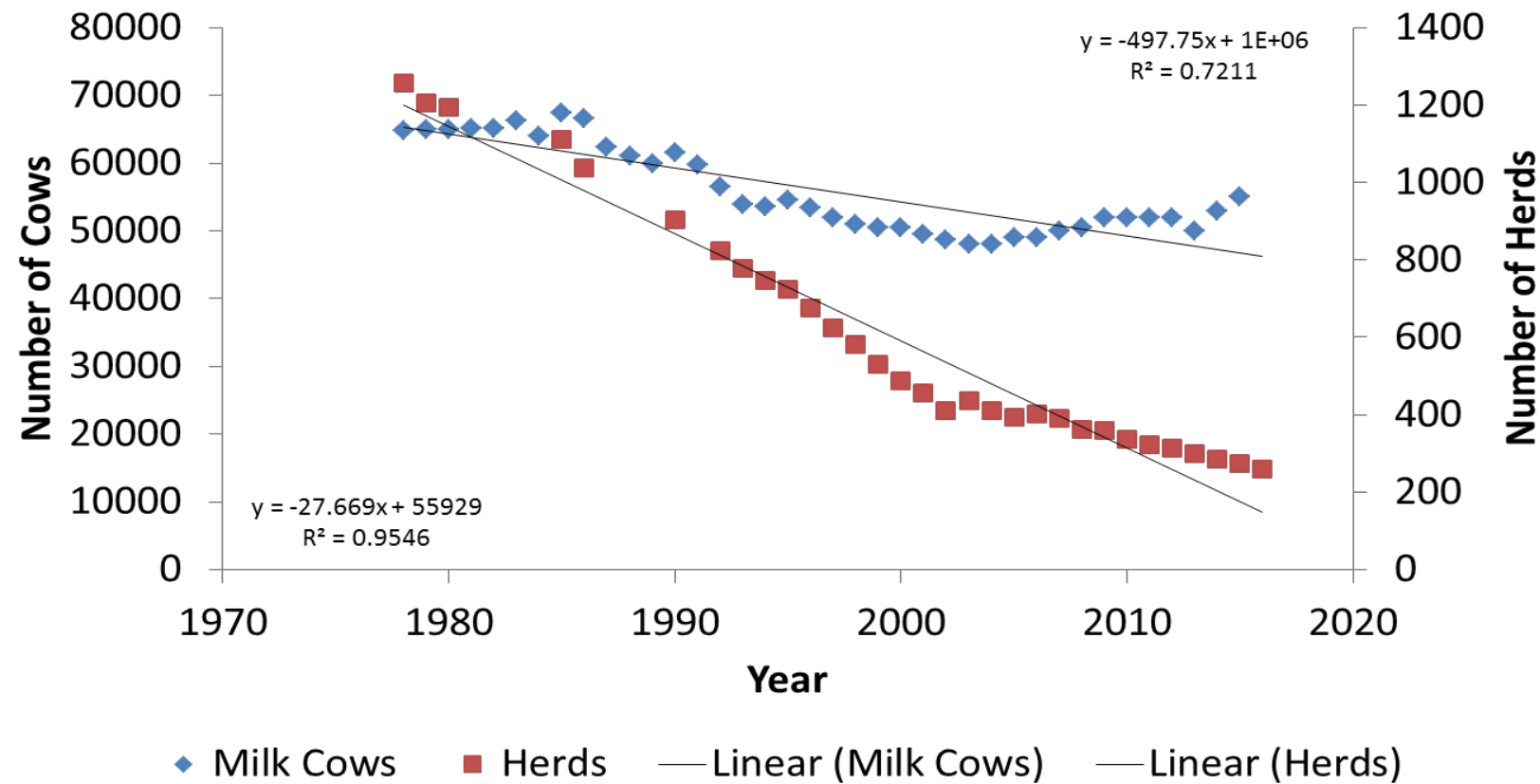
- Steeper topography (hills & valleys)
- Shallow depth to bedrock
- Springs and seeps

# Dane County Cropland Acres



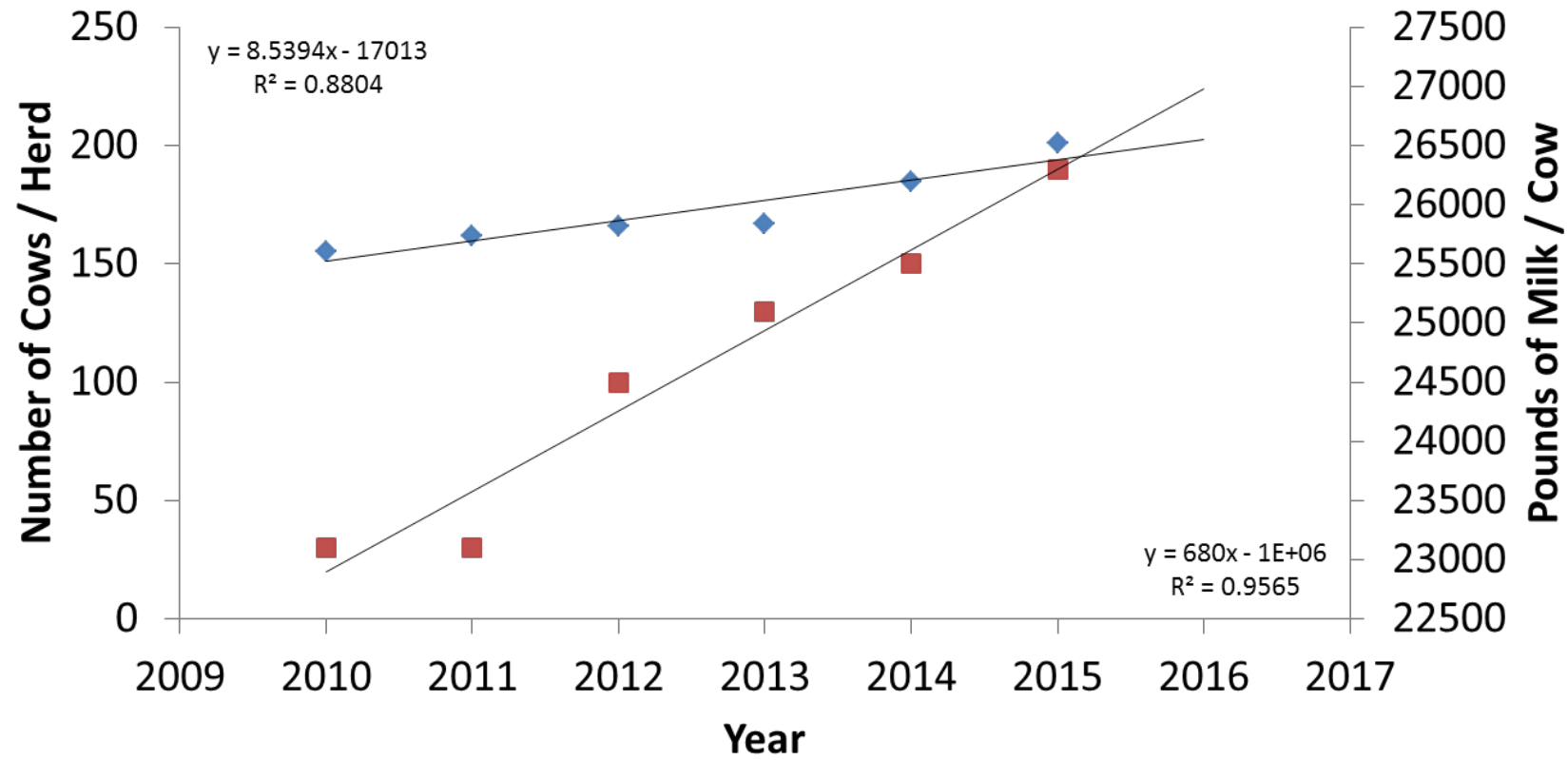
Losing  
~ 2,500 acres  
annually

# Cows and Herds in Dane County



Losing  
~500 milk cows  
and 28 farms  
annually

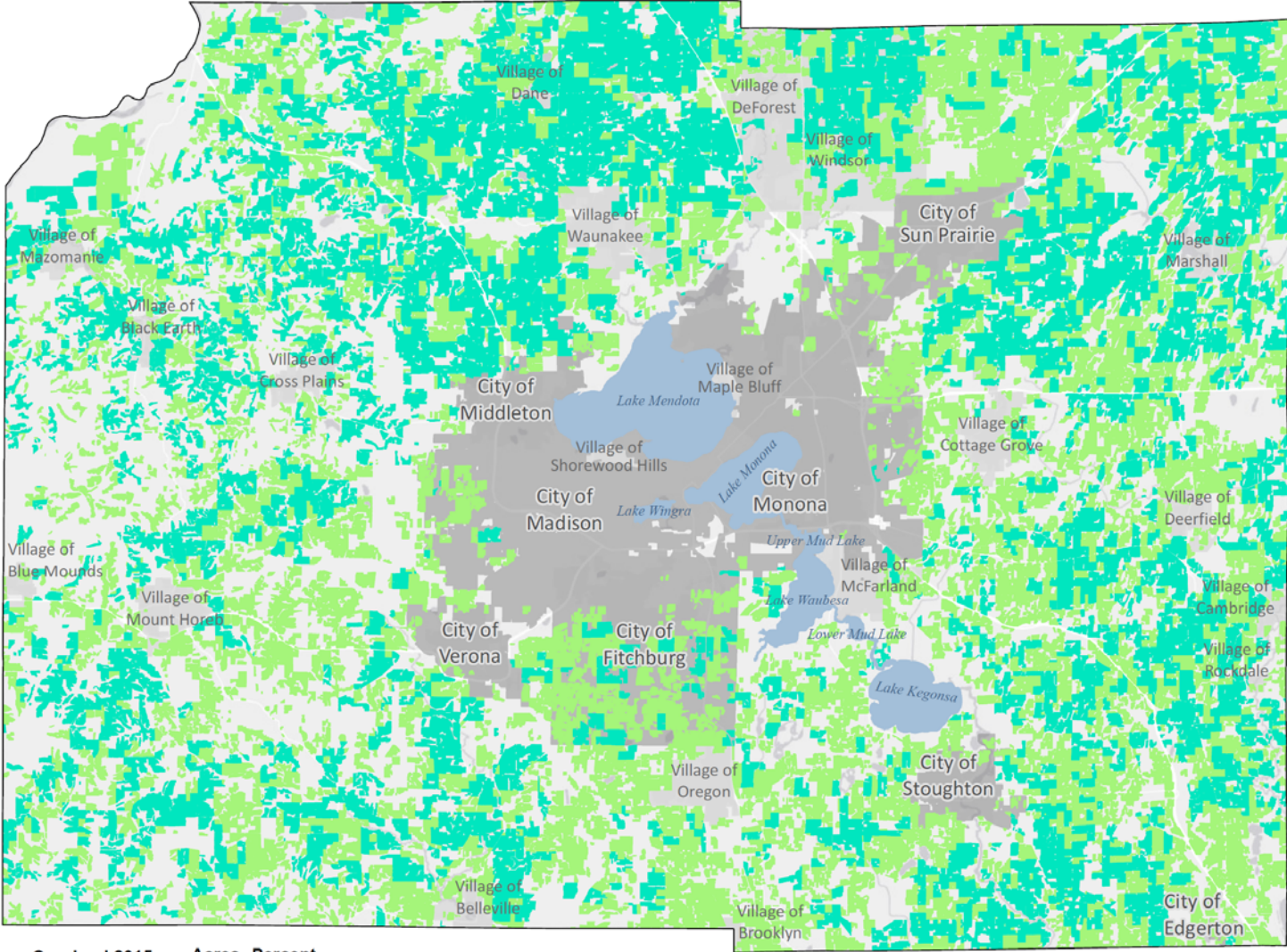
# Herd Size and Milk Production



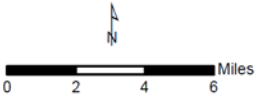
Increasing  
Herd Sizes and  
Milk Production

◆ Cows/Herd ■ Milk lbs/cow — Linear (Cows/Herd) — Linear (Milk lbs/cow)

Nutrient management (590) implementation increasing in the county



Cropland 2015	Acres	Percent
590 NMP	168,933	48.3%
No 590 NMP	181,062	51.7%
Total Acres: 349,995		



Data Sources: County Parks, FPP, LWRM NMPs, Permitted Manure Storage NMPs, Land Use 2015  
 Created April 5, 2018  
 Document Path: H:\LCD\LWRM\GIS\Eligibility\NMPs\_590.mxd

# Local Advisory Committee

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Citizens and resource professionals representing a wide range of interests

18 members

2 meetings

- April 26, 2018 – reviewed current plan goals and objectives and brainstormed new ideas
- Between meetings, staff compiled and organized results
- July 25, 2018 – reviewed summary of previous meeting, prioritized objectives and identified actions

# What is a Goal?

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An observable and measurable end result having one or more objectives to be achieved within a more or less fixed timeframe.

## Example Goals from LWRMPs around Wisconsin

- Reduce the quantity and improve the quality of storm water runoff from developed and developing areas (Washington County)
- Improve and protect groundwater and surface water quality (Calumet County)
- Protect and enhance natural communities (Sauk County)
- Protect and enhance the soil resources of the county (Trempealeau County)



# What is an Objective?

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A specific result to be achieved within a time frame and with available resources that is more specific and easier to measure than goals.

Objectives are basic tools that underlie all planning and strategic activities and serve as a basis for creating policy and evaluating performance.

## Example Objectives from LWRMPs around Wisconsin

- Expand the adoption and implementation of the county's erosion control and storm water management ordinance or equivalent for new developments. (Washington County)
- Increase the use of nutrient management planning. (Calumet County)
- Maintain diverse flora and fauna by reducing the impact of invasive species. (Sauk County)
- All croplands shall be cropped to equal or less than "T" and a phosphorus index (PI) less than 6. (Trempealeau County)

# Goals & Objectives

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## **Goal I: Assess, protect and improve surface water and groundwater resources**

- Reduce the quantity of sediment and nutrients reaching surface waters and groundwater. (H)
- Decrease the amount of pharmaceutical compounds reaching surface waters. (L)
- Improve soil health to reduce soil erosion, improve infiltration and reduce nutrient losses. (H)
- Build awareness regarding economic and environmental value of developing and implementing a nutrient management plan. (L)
- Assess and protect groundwater resources. (H)
- Improve and enhance erosion control and storm water management runoff to reduce the quantity and improve the quality of runoff. (H)
- Reduce salt utilization to minimize impacts on surface water and groundwater resources. (M)

# Goals & Objectives...

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## **Goal II: Maintain viable agricultural lands for long-term production**

- Reduce the rate of urban expansion by preserving priority farmlands and open space. (M)

## **Goal III: Develop, explore and implement innovative ideas**

- Encourage new methods of water quality improvement. (M)
- Enhance renewable energy opportunities. (L)



# Goals & Objectives...

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## **Goal IV: Protect and enhance in-stream, riparian, wetland and upland habitats**

- Protect, restore and stabilize stream banks and shorelines. (H)
- Restore wetland and upland habitat. (M)
- Protect springs. (H)
- Minimize conversion of wetlands to agricultural and urban development. (M)
- Develop/expand invasive species programs (i.e. aquatic and terrestrial) aimed at preventing the introduction of new species and reducing existing species. (L)

# Goals & Objectives...

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## **Goal V: Partner with and involve citizens on soil and water protection and initiatives**

- Support individuals, watershed groups and organizations with education about resource improvement and pollution prevention. (M)
- Educate urban and rural residents on health and value of land and water resources and protection measures. (M)
- Educate and inform the public about threats posed by aquatic and terrestrial invasive and exotic species. (M)
- Inform and educate county, municipal and town officials on the health and value of land and water resources. (L)
- Promote sustainable recreational opportunities. (M)
- Make grants available to local units of government and non-profits to protect and enhance land and water resources. (H)
- Work with agencies, consultants, contractors and developers to ensure erosion control and storm water management are met. (L)
- Promote partnerships to leverage funding and resources for conservation practices in order to target funding or resource gaps. (M)

# Example Actions

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Each objective has a series of actions to work towards over the life of the plan.

Example actions include:

- Monitor and enforce winter manure spreading permit requirements
- Promote no till and reduced tillage in cropping systems, cover crops and other management practices that will improve soil health
- Promote rainwater capture to reduce storm water runoff
- Provide incentives for landowners to permanently conserve land
- Research and develop new methodologies to mitigate adverse effects of storm water runoff
- Work with private landowners to plan and oversee installation of streambank and shoreline protection projects including instream habitat
- Implement the aquatic invasive species management plan and update as needed.
- Support efforts of producer-led watershed groups

# Approval Process

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- Submit draft plan to DATCP and DNR – October 1<sup>st</sup>
- Post draft plan on LWRD website for public input – October/November
- Public comment meeting – November 15<sup>th</sup> (LCC Meeting)
- Incorporate comments and submit final draft to DATCP and DNR – November
- Introduce to County Board for approval – November 29<sup>th</sup>
- Present to state Land & Water Conservation Board for approval – December 4<sup>th</sup>
- Approval of authorizing resolution by LCC – December 13<sup>th</sup>
- Approval of authorizing resolution by County Board – December 20<sup>th</sup> (tentative)
- Approved plan effective January 1, 2019 – December 31, 2028

# Implementation

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Development of annual work plans submitted to DATCP

Year 5 – mid point review of implementation progress to Land & Water Conservation Board

Year 10 plan update and work through this process again





# Questions?

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