DANE COUNTY

LAND&WATER RESOURCES DEPARTMENT

Stormwater TAC Recommendations Update

May 4, 2022

Stormwater Technical Advisory Committee

- Flood risk in Dane County is increasing due to increased urban development.
- As a response to flood risk, the Stormwater Technical Advisory Committee was created to asses current stormwater management and to provide recommendations for improvements based on findings.
- Met throughout 2016 and 2017, final report May 4, 2017

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Stormwater Technical Advisory

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Increased Urban Development

- Development increases the amount of stormwater runoff by covering pervious surfaces with impervious surfaces.
- Approximately 2500 acres are developed in Dane County each year.
- This equates to about 1000 acres of impervious surface.
- Pervious surfaces: 2” of runoff/year
- Impervious surfaces: 21” of runoff/year

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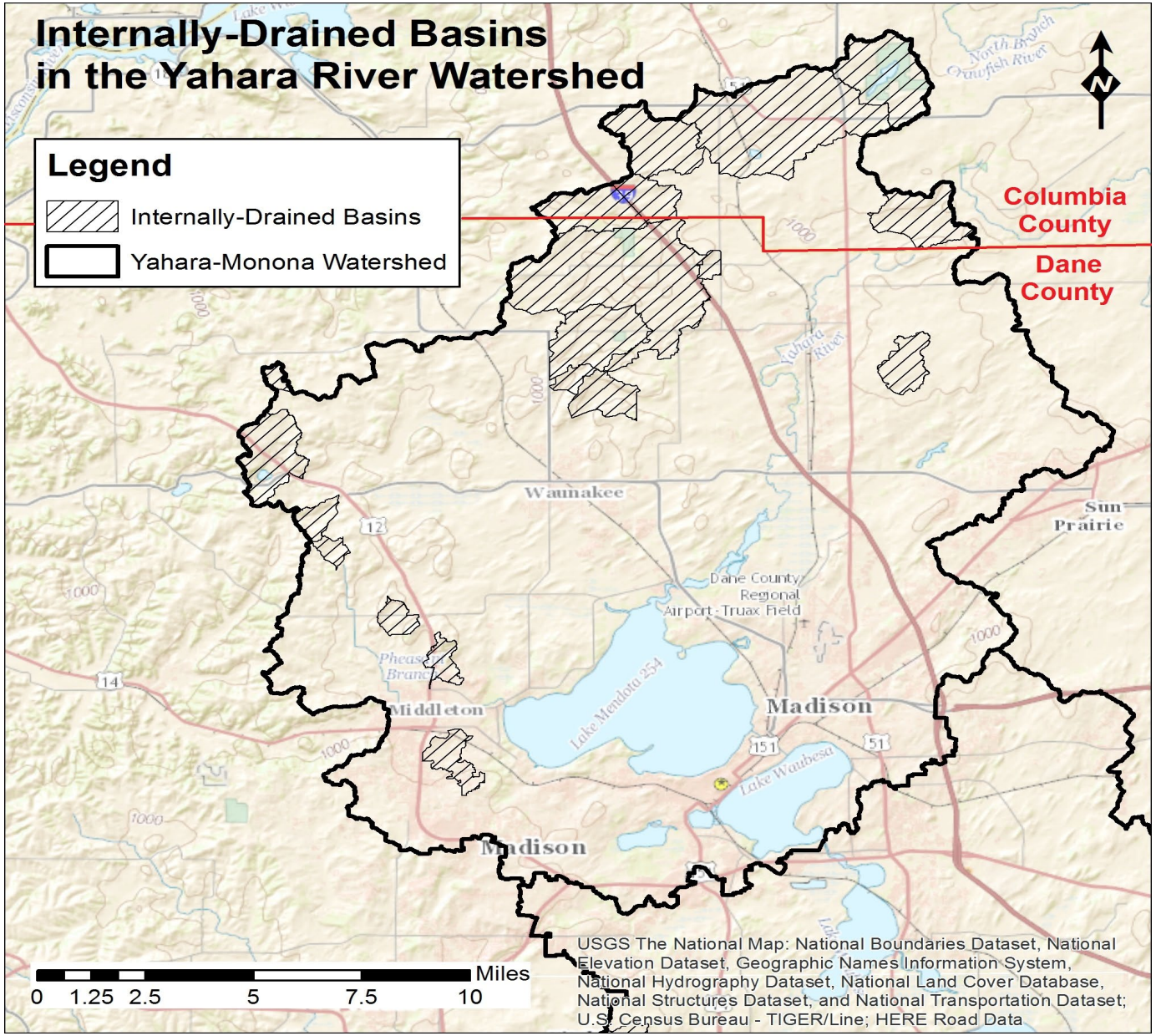
Internally Drained Watersheds

- Increase development within drainage area causes increased stormwater runoff
- Flooded area and ponded depths increase
- Outlets are constructed to drain the areas
- Stormwater that used to never leave the internally drained area now makes its way to the lakes.

Previous studies show 16% of the ***Mendota-Monona*** watershed is internally drained.

Further study has shown **35% of the watershed is internally drained**



Recommendations

- Aim to increase the amount of stay-on
- Reduce the risk of flooding
- Prevent increased channel erosion
- Improve groundwater recharge
- Maintain stream baseflow

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Stormwater Requirements Prior to OA

- Volume control requirement is 90% of pre-development stay-on.
- Exemptions are granted to redevelopment sites and sites with poorly infiltrating soils
- No specific requirements for internally drained areas

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Increased Runoff Volume Control

Recommendation:

- 100% of pre-development runoff volume
- Eliminate caps and exemptions to be replaced by fee-in-lieu program
- 90% should be met onsite where feasible

Update:

- No change. Superseded by state legislation

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Volume Control for Redevelopment

Recommendation:

- Require 50% predevelopment volume control
- Eliminate caps and exemptions to be replaced by fee-in-lieu program
- Currently no volume control requirements

Update:

- First ½ inch of runoff must be treated by green infrastructure
- No exemptions

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Internally Drained Areas

Recommendation:

- Require 100% control of predevelopment runoff onsite
- Require adequate storage for back to back 100 year storm events
- Must have emergency drawdown (pumping) plan to mitigate unanticipated local flooding.

Update:

- 90% volume control (100% not possible due to state legislation)
- Other recommended requirements have been implemented.

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Implement Fee-in-Lieu Program

Recommendation:

- Implement program to allow developers to meet some portion of volume requirements by buying credits.
- Funds to be used to construct or implement volume control practices offsite.
- Provide incentive for developers to exceed minimum requirements and sell credits.

Update:

- Collecting information on the cost to produce credits.
- Not implemented.

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Definition of Redevelopment

Recommendation:

- Increase disturbance trigger from 4000 to 20,000 square feet.

Update:

- Modified ordinance language to make clear that new development requirement do not kick in until over 20,000 square feet of impervious surface.

- Decided raising trigger was no longer necessary.

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Proper Design, Implementation, Documentation

Recommendation:

- Require as-built certification of permanent stormwater practices
- Require the use of approved modeling assumptions.

Update:

- As-built certification has been required, but P.E. certification forms and checklist have been developed and required.
- Modeling assumptions have been set by policy and are included in the Dane County Stormwater Manual.
- Developed “Wiki” online version of Stormwater Manual.

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Example of Bioretention Installation

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MAD CITY SALES
FULL
TRAIL KING

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TRAIL KING
BOWAR
KLEMM TANK LINES

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TRAIL KING
BOWAR


2700
TRAIL KING