

Stormwater TAC Final Report and Recommendations





Stormwater TAC

- 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 assess current stormwater management and to provide recommendations for improvements based on findings.



Increased Urban Development

- Urban and suburban development increases the amount of stormwater runoff by covering soils with impervious surfaces.
 - Rooftops
 - Streets
 - Parking lots



Developed Area in Dane County

- 1990: 112,660 acres
- 2000: 127,055 acres
- 2010: 157,907 acres

- On average development has increased about 2,300 acres per year.



Runoff Volumes

- Undeveloped = 2 inches of runoff
- Impervious = 21 inches of runoff
- Non-frozen precipitation



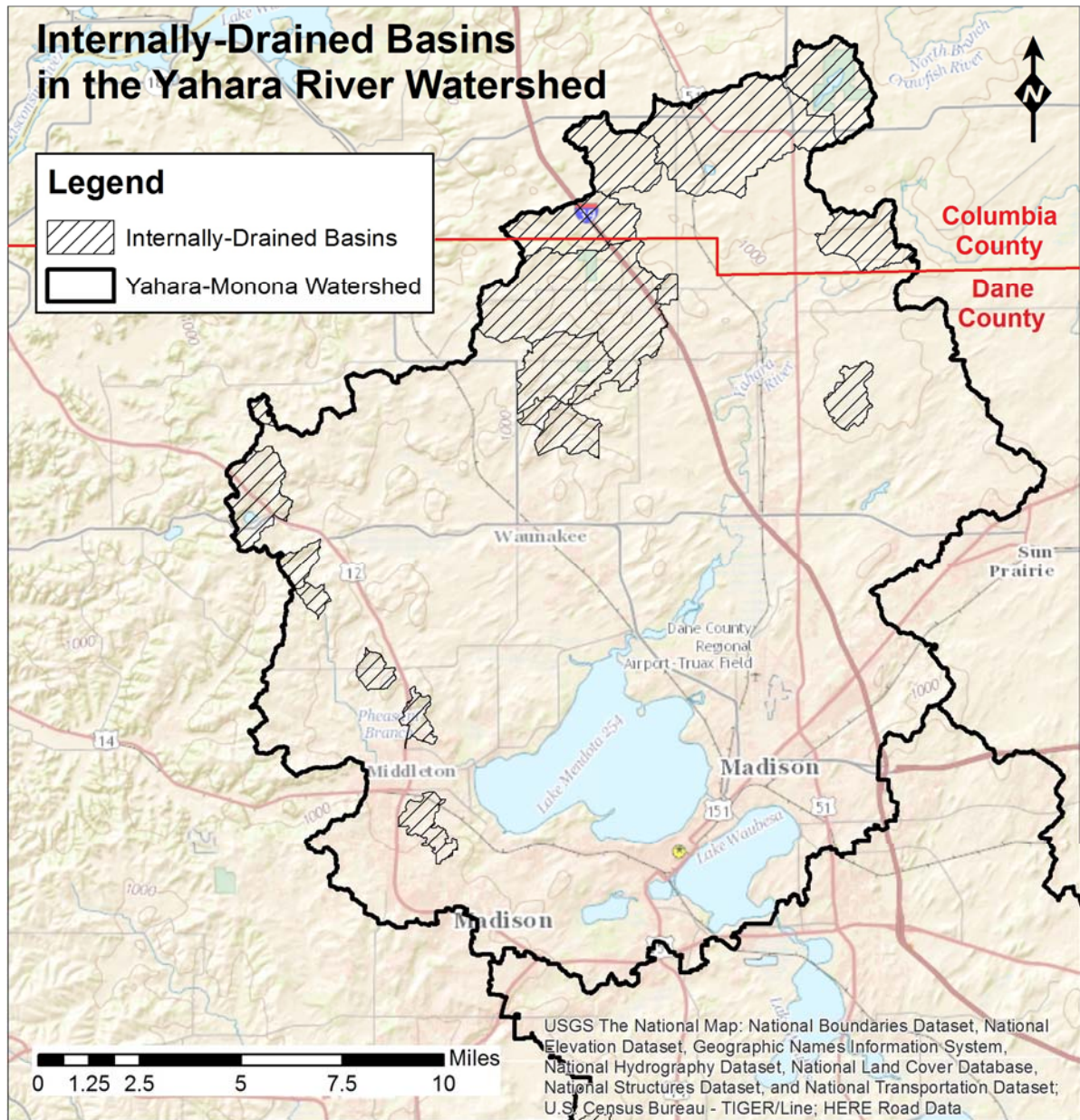
Internally Drained Watersheds

- 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.

About 16% of the ***Mendota-Monona*** watershed is internally drained.

About half of this area is in ***Columbia Co.***

The delineation of these areas is being refined for the entire Yahara Lakes watershed.





Current Stormwater Management Requirements

- 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



Recommendations

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



Increase Volume Control

- 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

Bioretention Basin at Babcock Park





Implement Fee-in-lieu Program

- Allows developer to meet some portion of volume control by paying a fee
- Offsite volume control
- Purchases of current or formal internally drained areas
- Fee could be used to reimburse new development for achieving higher than 100% control on site



Standards for Internally Drained Areas

- Require 100% onsite control of the average annual predevelopment runoff volume
- Require adequate storage for back-to-back 100-yr, 24-hr storm events
- Require development of an emergency drawdown (pumping) plan to mitigate unanticipated local flooding

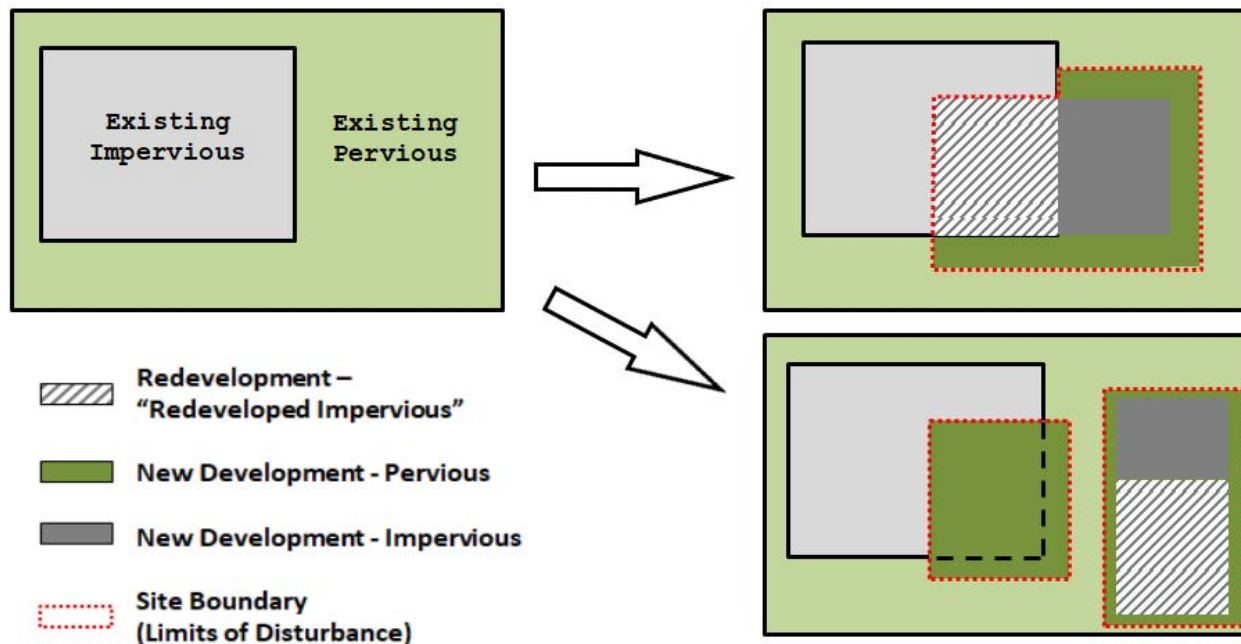


Require 50% volume control for Redevelopment

- Currently exempt from infiltration
- Can use fee-in-lieu credits

Revise the Definition of Redevelopment

- Increase the land disturbance trigger from 4,000 square feet to 20,000 square feet



Proper Design, Implementation, and Documentation

- Require as-built certification
- Require use of approved assumptions





Implementation and Current Status

- Joint CARPC/LWC Implementation Committee
 - Recommendations that can be implemented now
 - Recommendations that require fee in lieu program
- Changes to state statute
 - No standard greater than 90%
 - No collection of fees for greater than 90%