



# North McGaw Park Neighborhood Plan Steering Committee

June 19, 2008

Facilitated by:



## Natural Resource Analysis

### Phase 1

- Water resource & ecological resource assessment input into early planning

### Phase 2

- Conceptual Stormwater Management Plan
- Ecological Impact Analysis

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# Fitchburg's Planning Approach

### Focus on:

- Stormwater quality
- Stormwater impacts on habitat
- Groundwater recharge
- Natural resource protection

### Consistent with:

- CARPC goals & criteria
- LEED for neighborhood design
- Sustainable Sites Initiative (ASLA)

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# Local Water Resources

### Nine Springs Cr.

Degraded → restoration & enhancement (Dane Co.)

### Waubesa

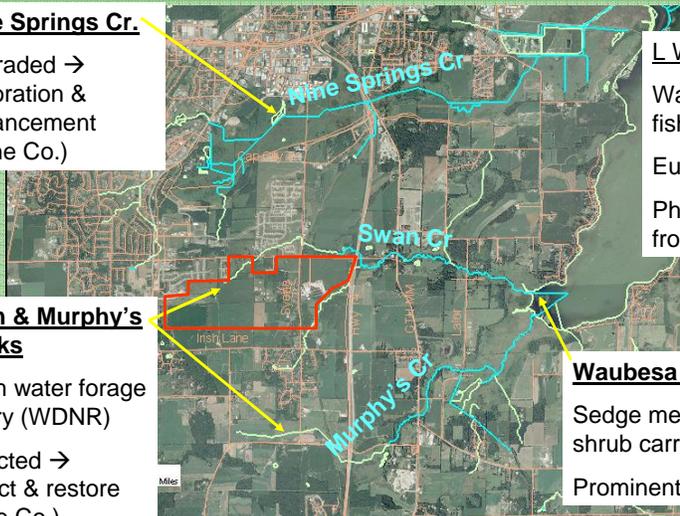
Warm water fishery.  
Eutrophic.  
Phosphorus from runoff.

### Swan & Murphy's Creeks

Warm water forage fishery (WDNR)  
Impacted → protect & restore (Dane Co.)

### Waubesa Wetlands

Sedge meadow, fen, shrub carr.  
Prominent springs



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North McGaw Park Neighborhood Plan

# Recent Flooding

## Swan Creek at Lalor Road



May 29, 2008



June 13, 2008

Facilitated by:



North McGaw Park Neighborhood Plan

# Recent Flooding

## Murphy's Creek at Syene Road



May 29, 2008



June 13, 2008

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# Recent Flooding

## Swan Creek headwaters at Swan Creek development



May 29, 2008

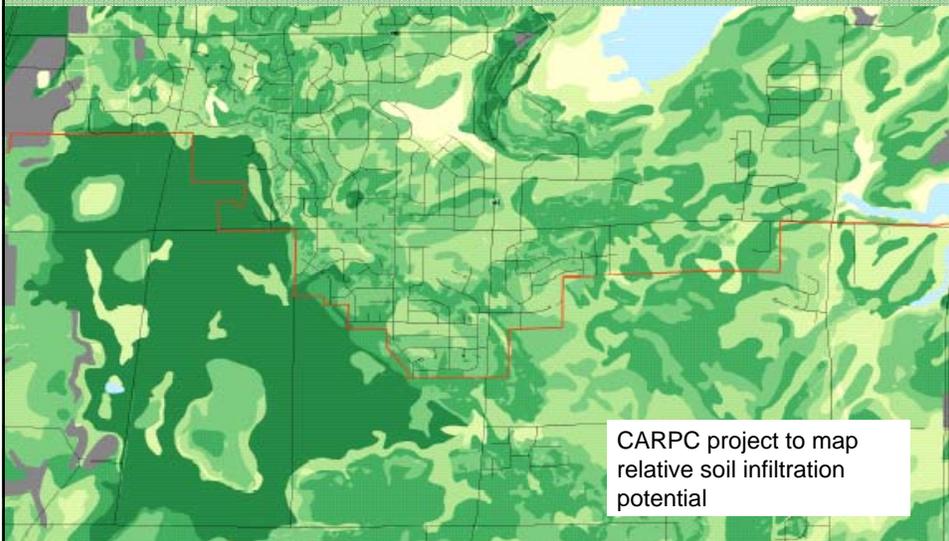


June 13, 2008

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# Existing Data: Soil Infiltration Potential





## Existing Data:

### Nine Springs Groundwater Study (Susan Swanson, UW-Madison & Beloit College)

- Spring flow measurements in Fitchburg & Dunn
- Monitoring well drilling, detailed geologic observations & hydraulic testing
- Refined groundwater model construction



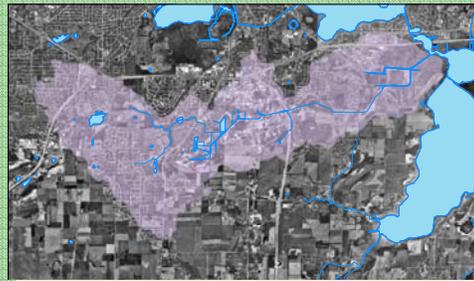
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## Existing Data:

### Nine Springs Groundwater Study (Susan Swanson, UW-Madison & Beloit College)

- Loss of springflow most likely caused by reduced recharge
- Spring source areas impacted by land use
- Pumping impacts limited by Eau Claire shale above the deep aquifer



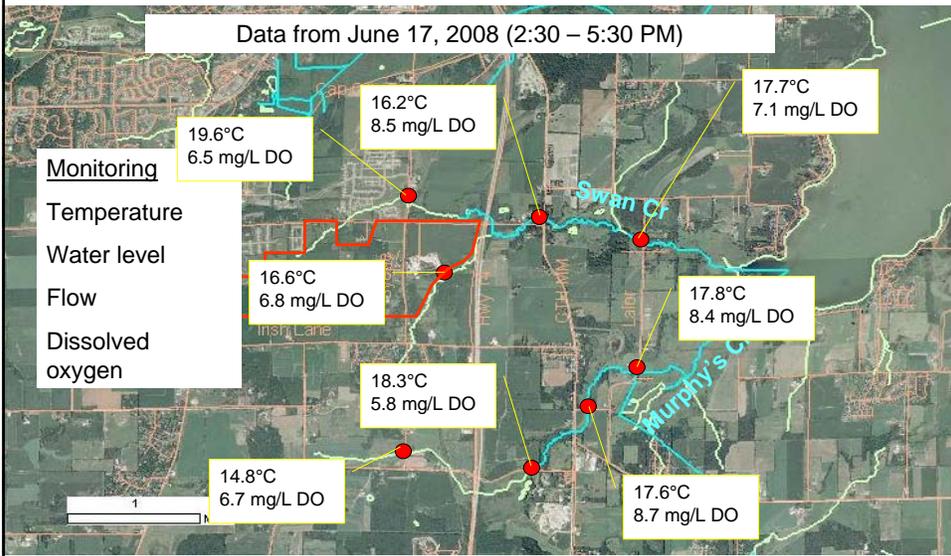
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# Water Resource Assessment

Data from June 17, 2008 (2:30 – 5:30 PM)



### Monitoring

Temperature

Water level

Flow

Dissolved oxygen

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# Temperature Monitoring

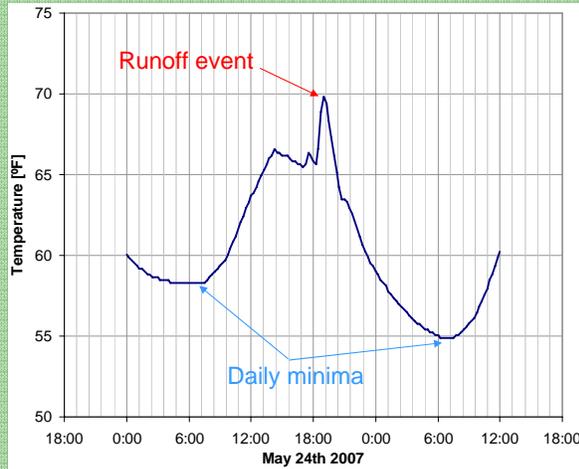


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# Example Temperature Data

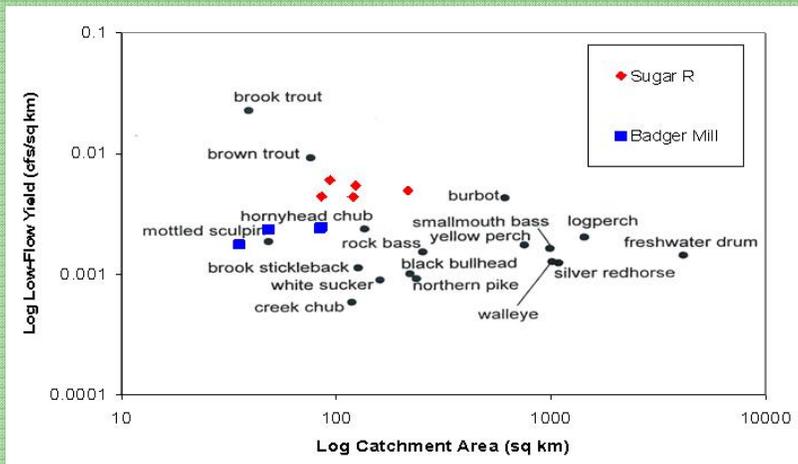


Badger Mill Creek at Verona

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# Streamflow & Habitat Relationships



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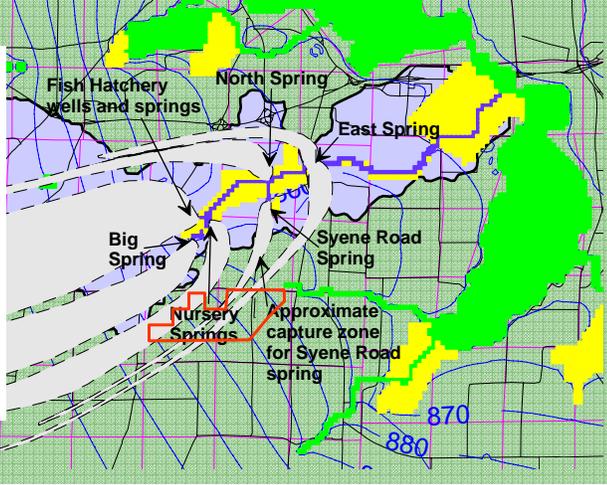


# Groundwater Impacts

Capture areas of springs in upper bedrock (from Susan Swanson)

## Water balance

- Groundwater pumping for water supply
- Recharge rates
- Impact on streams & springs



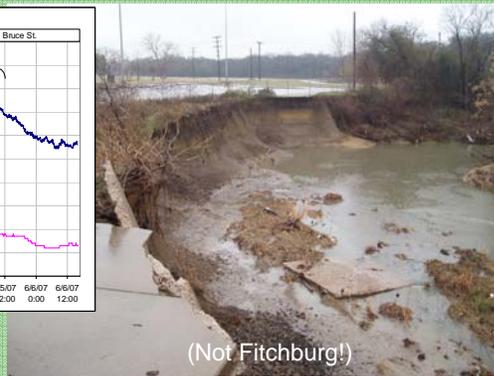
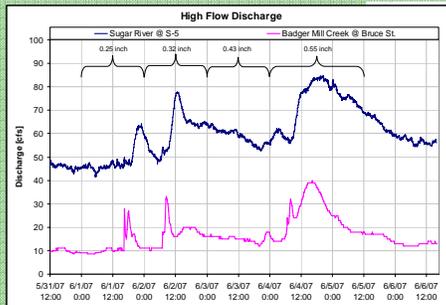
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# Stormwater Impacts

Urbanization can increase stream "flashiness" (rapid runoff response).

Increases flashiness & runoff volume can lead to channel erosion.



(Not Fitchburg!)

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## Planning Implications

- Comparison of water resource impacts of different land use scenarios
- Development of performance standards for stormwater management
- Implications for water use & conservation
- Baseline data for future monitoring of key resources

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## NRC Study Plan & Schedule

City of Fitchburg, WI

- **Review & Evaluate Available Resources – On-going**
  - Baseline environmental maps developed
- **Completion of Fieldwork - 60% complete**
  - Vegetation, natural community, & wetlands: Summer, 2008
  - Aquatic resource sampling: Late Summer, 2008
  - Soil Evaluations: Fall, 2008 (following crop harvest)
- **Process, Map, & Evaluate Field and Baseline Data**
- **Identify Resource Opportunities & Constraints**
- **Prepare Final Report "Natural Resource Inventory & Assessment".**
  - Draft to be completed by Fall, 2008

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# Summary of Fieldwork Progress

## -Cultural Resource Screening-

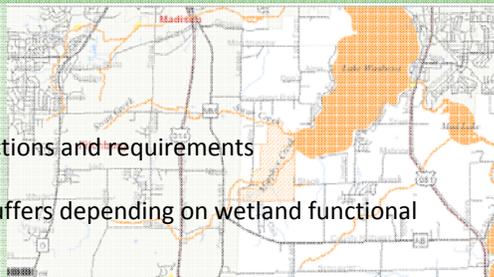
- Cultural Resource Screening Completed through the WI State Historic Preservation Office
  - Screening Consisted of a Literature Review that Identifies Documented Cultural Resources within 1-mile Radius of Study Area
- Architecture and History Inventory Database
  - Review of Registered Historic Properties
- Archaeological Site Inventory Database
  - Listed Archaeological and burial sites
  - Atlas of Wisconsin Archaeology compiled by C. E. Brown and W.W. Hixon & Co. in 1924
- Results:
  - No Registered Historic Properties or Known Archeological Resources were Identified through the Cultural Resource Screening.

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# Discussion of other Natural Resource Issues

- Wetland Buffers:
- Identify current City policy
- Define wetland buffer restrictions and requirements
- Consider variable wetland buffers depending on wetland functional values:
  - Maximum Buffer - Wetlands within or directly connected to areas of special natural resource interest as defined in Wis. Adm. Code. NR 103.04
  - Moderate Buffer – Wetlands with intact native plant communities
  - Minimum Buffer – Wetlands that are comprised of monotypic stands of invasive species.

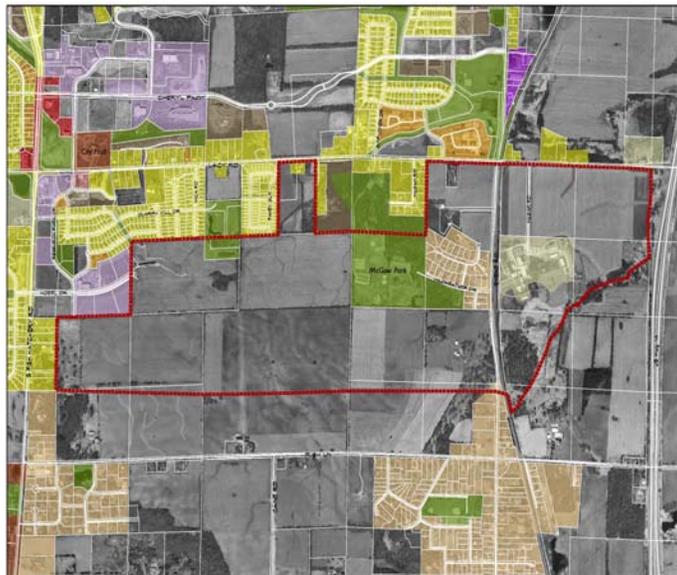


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# Land Use



## NORTH MCGAW PARK Neighborhood Plan City of Fitchburg, WI

### Existing Land Use Map

DRAFT

#### LEGEND

	Study Area Boundary
	Existing Land Use (2002)*
	Agriculture 657.7 acres 84.2% of total Study Area
	Rural Development 29.6 acres 4.1% of total Study Area
	Residential 1.8 acres 0.2% of total Study Area
	Rural Residential 201.2 acres 2.6% of total Study Area
	Medium Density Residential
	High Density Residential
	Business
	City Center
	Industrial - Commercial
	Industrial - General
	Mixed Use
	Parks & Open Space 38.3 acres 5.0% of total Study Area
	Open Water

\*Numbers to the right of the land use categories represent the land use acreage & percent of total within the Study Area which covers 733.0 acres to total east of total area represented within the Study Area

June 2008

Map was prepared by City of Fitchburg & Capital Area RPC  
Map prepared by The Fitchburg Area Council



# Land Use Issues and Opportunities

- Mix of uses
- Subareas have unique characters
- Mostly agricultural land (84.2%) now
- Adjacent proximity to Urban Service Area
- Proximity to transportation nodes
- Challenge to create a unified land use plan that recognizes unique uses within area





# Public Information Session

June 19, 2008

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## North McGaw Park Neighborhood



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## North McGaw Park Neighborhood Plan

Phase	Month											
	June 2008	July	Aug	Sep	Oct	Nov	Dec	Jan 2009	Feb	Mar	Apr	
I. Background and Issues and Opportunities	→											
II. Neighborhood Plan Land Use Part 1			→									
Land Use Part 2				→								
III. Traffic Impact Analysis			→				→					
IV. Storm water Study	→		→			→						
V. Environmental and Ecological Studies	→		→			→						
VI. Final Plan Preparation and Presentation									→			



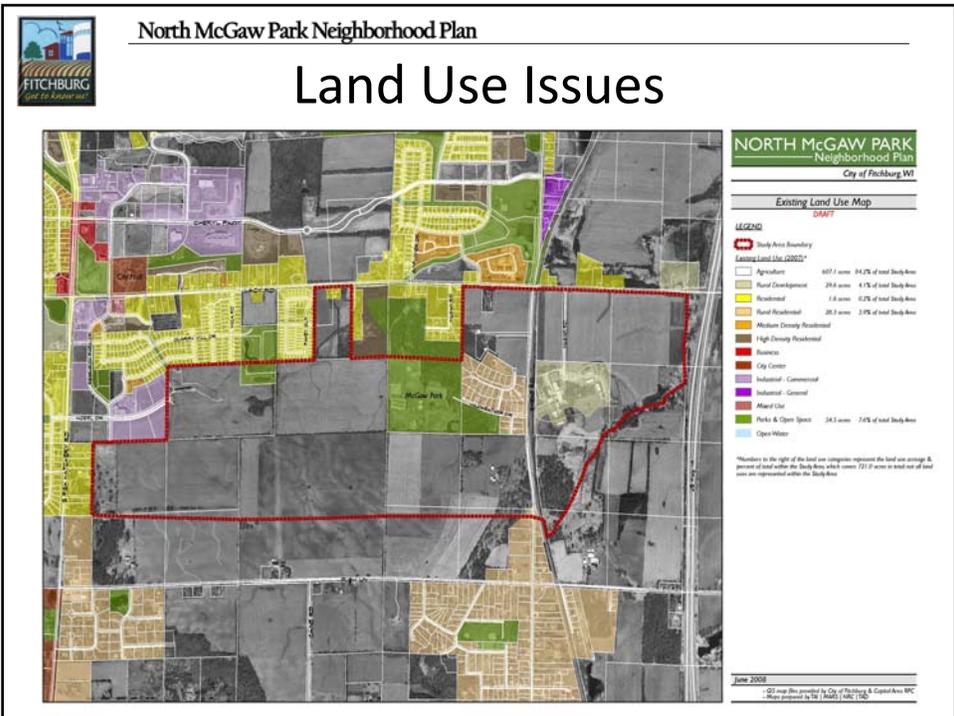
## North McGaw Park Neighborhood Plan

# Continuous Public Input

- Public Information Sessions
  - June 19, September 18
- Neighborhood Summits
  - July 10, August 21, January 19, February 19
- Steering Committee Meetings, Plan Commission, Transportation, City Common Council
- Final review and hearings in March and April, 2009

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# Environmental Issues

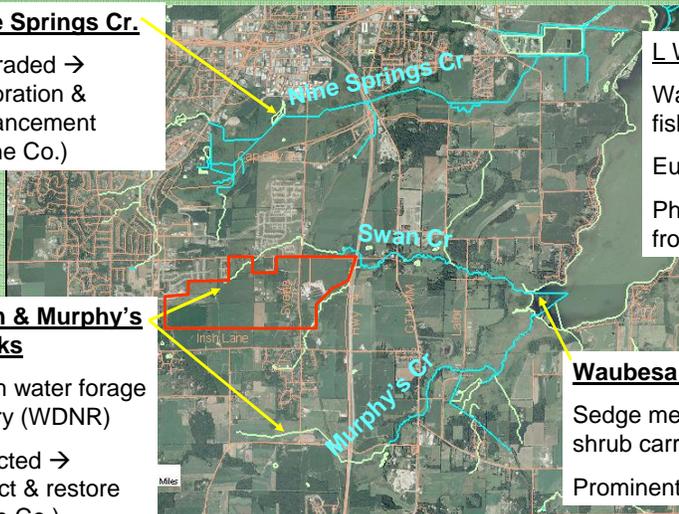
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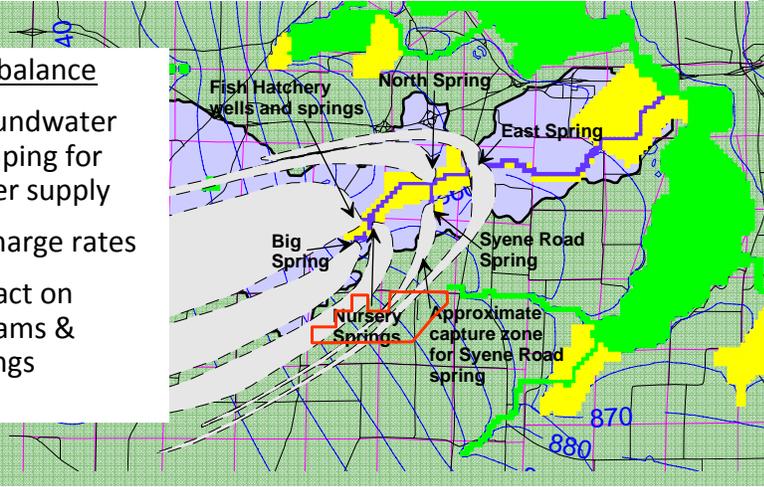


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# Evaluation of Existing Information

## -Park & Open Space Evaluation-

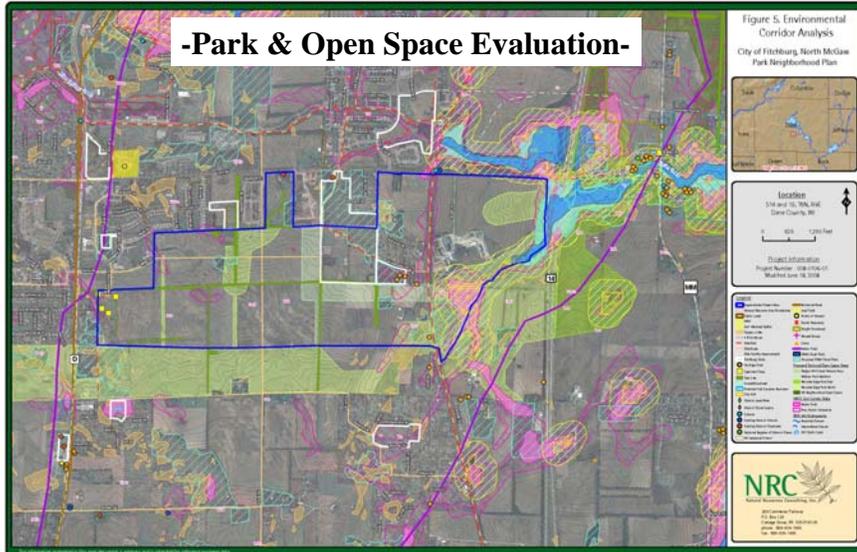


Figure 5. Environmental Corridor Analysis  
City of Fitchburg, North McGaw Park Neighborhood Plan



Location  
514 West 28th Street, 2nd  
Dane County, WI  
Scale: 1" = 1000' 1:2500 Feet  
Traffic Information  
Project Number: 2016-0106-01  
Modified Date: 06/20/16

Legend	Symbol
Wetlands	Blue hatched area
Riparian Corridors	Green hatched area
Open Space	Yellow hatched area
...	...



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## Next Steps

- 1<sup>st</sup> Neighborhood Summit July 10
  - Transportation
  - Environmental
- Questions?
  - Scott Goldstein, Teska Associates, 847 869-2015  
or [sgoldstein@teskaassociates.com](mailto:sgoldstein@teskaassociates.com)

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