

Friends of Cherokee Marsh & Upper Yahara Watershed

Response to DRAFT Cherokee Special Area Plan

GENERAL CONSIDERATIONS

The *Friends of Cherokee Marsh & Upper Yahara Watershed* (FoCM) want to thank the developer, City of Madison staff, and the Plan Commission for the excellent work that has been done on this plan to date. We appreciate that so many of the community's comments and concerns have been addressed as planning has advanced to this stage.

We now wish to take this opportunity to begin addressing remaining concerns, and to propose changes in the Special Area Plan (SAP) that would help create a truly outstanding development and community resource.

We want to praise the City for their commitment to restoring the full extent of the Cherokee Marsh to a high quality wetland community. This will benefit all of us as it works to help keep the Yahara and Starkweather watersheds flowing with clean, healthy water. We hope that the developer and the City will work to apply current Best Management Practices (BMP) when planning for stormwater management, as is stated in this version of the SAP. We are prepared to assist the City and the developer in any way we can to advocate for appropriate stormwater management practices that will protect the Marsh from any runoff that would be detrimental.

LAND USE

In your packet you will find a description of a re-visioning of a part of this development. We acknowledge that this is a bold concept, and ask that you allow yourselves to consider the possibility. We are faced with the opportunity to create a winning development plan for all players: the community, the environment, the developer, and the City.

Our proposal enhances the marsh's conservation function by providing more of the uplands crucial for wildlife habitat. It leaves a larger swath of open space north of Wheeler Road, which was how the area was envisioned in previous City plans. In addition, it better protects the wetlands adjacent to Subarea 1 (Hornung Range) and Subarea 4 (Wheeler Triangle). Finally, it could preserve all or most of the existing 20-acre forest on the western edge of Subarea 2 (Hornung Woods/Fields).

All this is accomplished by increasing density in the eastern area of Subarea 2 to a level that still falls within the range recommended in the SAP, while also allowing a large number of Dwelling Units to be built and providing the developer investment returns similar to those that might be predicted from the SAP.

Adopting this new version would mean that the City would not have to extend the Central Urban Service Area into Subarea 1, thus saving money for both the City and the developer. This would also guarantee that the City and the developer would not have to go to extraordinary lengths to manage runoff so that it does not end up damaging the

delicate nearby area designated as "high quality peat wetland". Our proposal would also mean that the neighborhoods directly to the south would have improved access to a large network of trails into the Marsh Conservation Area. Property values in the area (anywhere from ¼ mile to a mile from this expanded park) would improve, as studies indicate is correlated with proximity to accessible natural areas or open spaces.

We believe that it is possible to provide a mix of housing types with a higher density in Subarea 2, and allow Subarea 1 to be restored to a high quality uplands or mesic prairie, with walking and bike trails that connect it to the larger marsh conservation area to the north. Shifting the development planned for Subarea 4 to Subarea 2 will better protect the wetlands adjacent to Subarea 4.

We understand that this proposal will require re-thinking and additional creativity in considering the development of Subarea 2, and we hope that the City and the developer will rise to the challenge. There are a variety of ways that we might work together to achieve this vision, and we hope that we have the opportunity to do so.

SUB AREA 4 (Wheeler Triangle)

There are neighborhood concerns about development in Subarea 4, as well as environmental concerns about the problem of pesticides being used so close to the adjacent wetland (even commercially applied pesticides are a problem for the wetland ecology). Housing on that corner will require significant stormwater management in order to prevent runoff from going into the neighboring wetland, which is not clearly stated in the SAP. Runoff is of great concern to both the neighbors and those of us who are concerned about the maintenance of adequate buffers between any development and the neighboring wetland.

If development must occur in Subarea 4, we ask that the City make it very clear that none will be allowed within the existing Open Space Easement, a portion of which is a county-designated environmental corridor.

POROUS PAVEMENT

Porous pavement is a new technology that is not addressed in the SAP. The technology for this product is continually advancing, but it is already being used in many new developments to improve groundwater recharge and reduce the burden of stormwater management.

Use of porous pavement will greatly decrease the amount of runoff that needs to be "managed", while also reducing the stormwater fees that the developer or residents have to pay.

We ask the City and the developer to use porous pavement for all paths, driveways and sidewalks constructed in all the Subareas that will be developed, including the paved path between Burning Wood Way and Subarea 5 (the Fifth Addition).

We ask that you make porous pavement a requirement for the paved service road that the City will be constructing, and that you either require or strongly encourage the developer to utilize this pavement in all the Subareas that will be developed.

We encourage the City to consider porous pavement for the streets in this development as well.

We are attaching a description of porous pavement along with some of its benefits.

SUMMARY

The FoCM are committed to working as partners with the neighborhood groups and other concerned citizens, as well as the developer and the City staff, to help this Plan become a truly great one for all of us. We look forward to seeing the plans as they develop, and being a part of the process that refines those plans.

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LAND USE CONSIDERATIONS

SUBAREA DU/ACRE RELOCATION

The *Friends of Cherokee Marsh & Upper Yahara Watershed* (FoCM) respectfully request consideration of a reallocation of Dwelling Units (DUs) as proposed in the Draft Special Area Plan (SAP).

The SAP narrative and its maps outline recommended DU numbers and densities for each of the Subareas. 338 DUs are recommended for 39.5 acres in SubArea 2 (Hornung Woods), for an average density of 8.6.

FoCM proposes that the DUs planned for Subarea 1 (242), SubArea 4 (24) and Subarea 5 (5, potential future development area), be transferred into a 35-45 acre portion within the eastern two-thirds of Subarea 2, currently mostly cropland.

Even if all those DUs were added to the 338 DUs already proposed for Subarea 2, the total DUs would be 609, creating an average density ranging from 13.5-17.4 DUs/acre, close to the City's Low Density Range (8-15 DUs/net acre) designation for much of this area in the SAP.

Based on recent discussions with the Whitetail Ridge Neighborhood Association (WRNA), which will be nearest to Subarea 2, there is general agreement that the FoCM proposal enhances the current SAP environmentally, through the addition of open space north of Wheeler.

FoCM's proposal allows all or most of the 20-acre forest on the west edge of Hornung Woods to be saved, in which case the WRNA desires that the forest will be restored for ecological sustainability, appearance, and user/neighbor safety.

The safe foot/bike route that an eco-overpass would provide is also desirable to WRNA. It is also likely that restricting development to the south of Wheeler Road will enhance traffic safety, a major concern of this neighborhood (and the neighbors near Subarea 4, Wheeler Triangle).

Based on WRNA input, FoCM tentatively recommends limiting average density in SubArea 2 to an average 11 DUs/acre, while also taking steps to

- * preserve/enhance the proposed land and visual (trees) buffer behind homes on Gulseth; this buffer must be functional toward providing privacy for existing WRNA homes, providing year-round screening from new development to the north)
- preserve most or all of the SAP's proposed 6.1-acre Whitetail Ridge Park addition (to the north of the existing park), or take great care to protect the proposed addition's privacy function for existing WRNA homes, providing year-round screening from new development to the north)

FoCM feels that it is possible that even higher density may be acceptable to WRNA residents, if further meetings are held and visual examples could be provided that allow a better feel for the resulting function and appearance.

We hope that the City Planning & Development staff will work with FoCM, the WRNA, the developer, and the Northside community, using the services of Northside Planning Council facilitator, to investigate this possibility.

FIRST-RIGHT-OF-REFUSAL

The FoCM requests the addition to the SAP of language giving a conservancy designated by the FoCM to have the first-right of-refusal on all properties in the proposed development, with a purchase decision deadline that mutually agreeable to the City, developer, and FoCM, to be determined.

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STORMWATER/GROUNDWATER CONSIDERATIONS

The Friends of Cherokee Marsh and the Upper Yahara Watershed (FOCM) recognize the many wetland functions provided by Cherokee Marsh.

The Draft Special Area Plan (SAP) summarizes these functions well, including the critical role the Marsh plays in maintaining water quality in the Madison Lakes.

Directly or indirectly, degradation of the Marsh would severely impact the quality of life and economy of Dane County and the Upper Yahara region.

Stormwater management activities, changes in groundwater recharge and increased groundwater extraction may all contribute to degradation of the Marsh.

We reviewed the SAP with these considerations in mind, and provide numerous recommendations to help strengthen the City's stated goals.

1. FOCM strongly endorse the City's stormwater management goal stated on page 18 of the Draft SAP: "One additional goal of stormwater management planning should be to divert urban runoff away from high quality peat wetlands, and into other water ways and wetlands that are less susceptible to impact."

Specifically, we support efforts to divert stormwater away from the wetlands located north of Wheeler Road and east of Sherman Avenue. Therefore, the two proposed detention basins located north of Wheeler Road and illustrated on Draft Map 9A should be removed until a more satisfactory stormwater management plan is proposed for that area.

2. FOCM also strongly endorses the statement on page 17 of the Draft SAP: "Stormwater management facilities should be designed to protect the Marsh to the greatest degree possible." We therefore request that consideration be given to providing for design standards and stormwater management requirements beyond those routinely required under City Ordinances and State Codes.

This may contradict statements in the MOU and Annexation Agreement referring to routine regulatory requirements.

3. FOCM further endorses the statement on page 29 of the Draft SAP: "A high priority has been placed on a detailed study of groundwater resources and restoration of groundwater and surface water levels to protect the State Natural Area in the eastern part of the marsh."

Neither CPI nor the City has provided enough information to assure that the wetlands, springs and fens at Cherokee Marsh and at the nearby Yahara River edge would not be affected adversely by increased groundwater extraction at Municipal Well UW-13, located on Wheeler Road. FOCM continues to encourage the City of Madison, Dane County and DNR to fund a revised and updated regional hydrogeologic model for the Upper Yahara Watershed. The fine-tuned model would help planners and the public understand how proposed developments, including that at Cherokee, would affect surface water features such as wetlands, springs, and fens as a result of groundwater extraction at municipal wells.

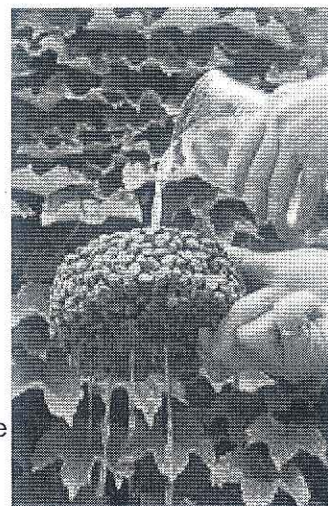
4. FOCM welcomes the City's "Management Plan for Eastern Wetland." The level of detail describing each named management unit and the "General Land Management Recommendations," indicate sensitivity to the biodiversity and general importance of the Marsh. We recommend that the City establish baseline conditions for biodiversity and water levels in the marsh so that development impacts might be monitored over time. For example, should water levels appear to be declining due to groundwater pumping at UW-13, restricting water usage and/or using UW-7 may be necessary.

Overall, it would be prudent for the City to approve phased development in the Marsh area, so that short-term adverse effects could be remedied through changes in water usage, alteration of stormwater management plans, or the modification of future development phases. Long-term adverse effects will be our legacy to future generations.

Porous (or Pervious Pavement) Information Sheet (from <http://www.perviouspavement.org/>)

Pervious concrete pavement is a unique and effective means to address important environmental issues and support sustainable growth. By capturing stormwater and allowing it to seep into the ground, porous concrete is instrumental in recharging groundwater, reducing stormwater runoff, and meeting U.S. Environmental Protection Agency (EPA) stormwater regulations. In fact, the use of pervious concrete is among the Best Management Practices (BMPs) recommended by the EPA-- and by other agencies and geotechnical engineers across the country-- for the management of stormwater runoff on a regional and local basis. This pavement technology creates more efficient land use by eliminating the need for retention ponds, swales, and other stormwater management devices. In doing so, pervious concrete has the ability to lower overall project costs on a first-cost basis.

In pervious concrete, carefully controlled amounts of water and cementitious materials are used to create a paste that forms a thick coating around aggregate particles. A pervious concrete mixture contains little or no sand, creating a substantial void content. Using sufficient paste to coat and bind the aggregate particles together creates a system of highly permeable, interconnected voids that drains quickly. Typically, between 15% and 25% voids are achieved in the hardened concrete, and flow rates for water through pervious concrete are typically around 480 in./hr (0.34 cm/s, which is 5 gal/ft²/min or 200 L/m²/min), although they can be much higher. Both the low mortar content and high porosity also reduce strength compared to conventional concrete mixtures, but sufficient strength for many applications is readily achieved.



While pervious concrete can be used for a surprising number of applications, its primary use is in pavement. This site focuses on the pavement applications of the material, which also has been referred to as porous concrete, permeable concrete, no-fines concrete, gap-graded concrete, and enhanced-porosity concrete.

Environmental Benefits

Pervious concrete pavement systems provide a valuable stormwater management tool under the requirements of the EPA Storm Water Phase II Final Rule. Phase II regulations provide programs and practices to help control the amount of contaminants in our waterways. Impervious pavements-- particularly parking lots-- collect oil, anti-freeze, and other automobile fluids that can be washed into streams, lakes, and oceans when it rains.

EPA Storm Water regulations set limits on the levels of pollution in our streams and lakes. To meet these regulations, local officials have considered two basic approaches: 1) reduce the overall runoff from an area, and 2) reduce the level of pollution contained in runoff. Efforts to reduce runoff include zoning ordinances and regulations that reduce the amount of impervious surfaces in new developments (including parking and roof areas), increased green space requirements, and implementation of "stormwater utility districts" that levy an impact fee on a property owner based on the amount of impervious area. Efforts to reduce the level of pollution from stormwater include requirements for developers to provide systems that collect the "first flush" of rainfall, usually about 1 inch (25 mm), and "treat" the pollution prior to release. Pervious concrete pavement reduces or eliminates runoff and permits "treatment" of pollution: two studies conducted on the long-term pollutant removal in porous pavements suggest high pollutant removal rates.

Economic Benefits

Parking areas paved with pervious concrete reduce the need for large detention ponds, because the pavement itself acts as a detention area. Parking lot owners that use pervious will spend fewer dollars on the labor, construction, and maintenance of detention ponds, skimmers, pumps, drainage pipes, and other stormwater management systems. Expensive irrigation systems can also be downsized or eliminated. In reducing runoff from paved areas, pervious concrete reduces the need for separate stormwater retention

ponds and allows the use of smaller-capacity storm sewers. This allows property owners to develop a larger area of available property at a lower cost.

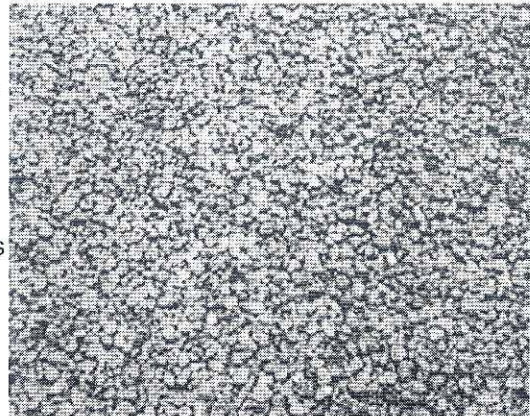
Structural Benefits

► *Textured Surface*

Pervious concrete, lacking the fine aggregates of conventional concrete, has a unique surface texture. Made up primarily of rounded and angular aggregates such as gravel and crushed stone, it has an appearance similar to that of a Rice-Krispie treat. The exposed course aggregates of pervious concrete provide enhanced traction for vehicles and prevent driving hazards such as hydroplaning. The textured surface is especially beneficial during the most difficult and dangerous of driving conditions, such as in rain and snow.

► *Void Structure*

The permeability of pervious concrete provides increased safety for drivers. When used instead of impervious asphalt as a parking area pavement, pervious concrete substantially improves driving safety during wet weather conditions. Rain seeps down through the concrete rather than remaining on the surface, which eliminates the spraying and pooling of water. This subsequently reduces nighttime glare for the driver and lessens the risk of hydroplaning. Anecdotal evidence also suggests that snow-covered pervious concrete clears more quickly than other pavements, as its voids allow for more rapid thawing.



After a rainfall, there is a significant visible difference between pervious concrete and asphalt pavements. While asphalt stays slick with rainwater, pervious surfaces are more likely to remain unaltered by the weather. [Click here to view pervious and asphalt comparison photos and see for yourself!](#)

► *Strength and Durability*

Pervious concrete is a strong and highly durable material. Parking areas properly designed and constructed will last 20-40 years with little or no maintenance. Unlike asphalt, surface raveling (the loosening of surface aggregates) is common only in the first few weeks after the concrete is laid, and it can be reduced with proper compaction and curing techniques.

Pervious concrete mixes contain minimal amounts of water and therefore have very low slump (i.e. a stiff consistency). A much smaller amount of drying shrinkage occurs in the placement of pervious concrete than dense, and it develops sooner, as well. This allows many pervious pavements to be constructed without crack-preventing control joints. Random cracks that do form are not abundant, and they have no significant impact on the structural integrity of the pavement. They also generally do not detract aesthetically from the concrete's appearance.

Pervious pavements can achieve strengths in excess of 3000 psi (strong enough to support a fire truck), and even more with special mix designs, structural designs, and placement techniques. The key to high-performance concrete is the use of supplementary cementitious materials such as silica fume, fly ash, and blast furnace slag, all which increase durability by decreasing permeability and cracking. Concrete strength can also be maximized by installing subgrade and subbase levels of coarse and/or fine aggregates beneath the pavement.

ANALYSIS: TABLES 5 & 6

CORE PLANNING SUB-AREAS

Dwelling Units / Acre (densities)	TOTAL		1 Hornung Range		2 Hornung Woods		3 Cherokee Country Club		4 Wheeler Triangle		5 Fifth Addition		6 High Hill				
	Acres	DUs	Acres	DUs / acre	Acres	DUs / acre	Acres	DUs	Acres	DUs	Acres	DUs	Acres	DUs			
Land Use																	
Residential	100.9	684	27.8	7.5	39.5	8.6	6.0	24	4.0	3.2	7.5	13.5	59	4.4	10.9	31	2.9
Low Density Range (<8 du/net ac)	71.5	371	15.7	5.7	22.3	143	6.4	24	4.0	3.2	7.5	13.5	59	4.4	10.9	31	2.9
Low Density Range (8-15 du/net ac)	29.4	313	12.2	9.7	17.2	195	11.3			0.0		0.0			0.0		
Commercial / Employment	11.5	34	3.4		0.0		8.1										
Neighborhood Mixed Use	3.4	34	10.1	10.1			0.0										
Cherokee Country Club	8.1	0	0.0				8.1										
Potential Future Development Area	2	5	2.5												2.0	5	2.5
TOTAL	114.4	723	6.3												2.0	5	2.5

609 DUs = (1) 242 + (2) 338 + (4) 24 + (6) Excludes 114 DUs = (3) 24, (5) 59, (6) 31	ALT-2B (35 acres) Hornung Fields	
	ACRES	DUs / acre
	35	609
	35	600
	35	550
	35	500
	35	450
	35	400
	35	385

ALT-2B (45 acres) Hornung Fields (+Woods, 5 acres)	ALT-2B (45 acres) Hornung Fields (+Woods, 5 acres)	
	ACRES	DUs / acre
	40	609
	40	600
	40	550
	40	500
	40	440

ALT-2B (50 acres) Hornung Fields (+Woods, 10 acres)	ALT-2B (50 acres) Hornung Fields (+Woods, 10 acres)	
	ACRES	DUs / acre
	45	609
	45	600
	45	550
	45	495

Eco-Alternatives

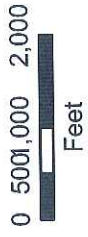
Cherokee Special Area Plan
November 28, 2006

Overview Map

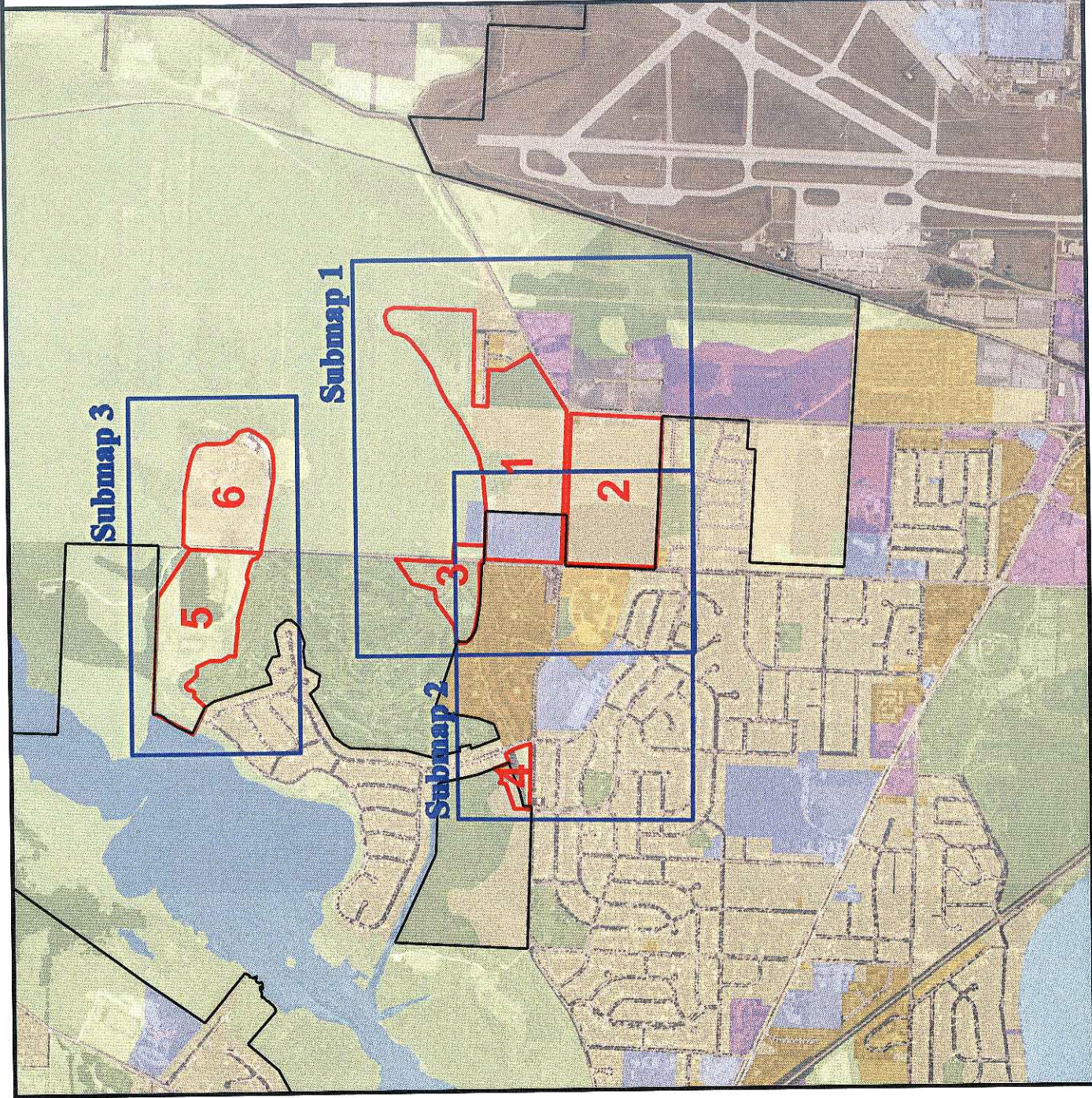


Data Source:

City of Madison
Dept. of Planning and Development
Planning Unit



Friends of Cherokee Marsh










Eco-Alternative

Cherokee Special Area Plan
November 28, 2006

Submap 1

Proposed Land Use

-  Open Space
-  Eco-Buffer
-  Inholder Relocation
-  Low Density
-  Medium Density
-  Eco-Overpass
-  Core Planning Sub-Areas

Data Source:
City of Madison
Dept. of Planning and Development
Planning Unit



Friends of Cherokee Marsh







Eco-Alternative

Cherokee Special Area Plan
November 28, 2006

Submap 3

Proposed Land Use

-  Open Space
-  Eco-Buffer
-  Inholder Relocation
-  Low Density
-  Medium Density
-  Core Planning Sub-Areas

Data Source:
City of Madison
Dept. of Planning and Development
Planning Unit

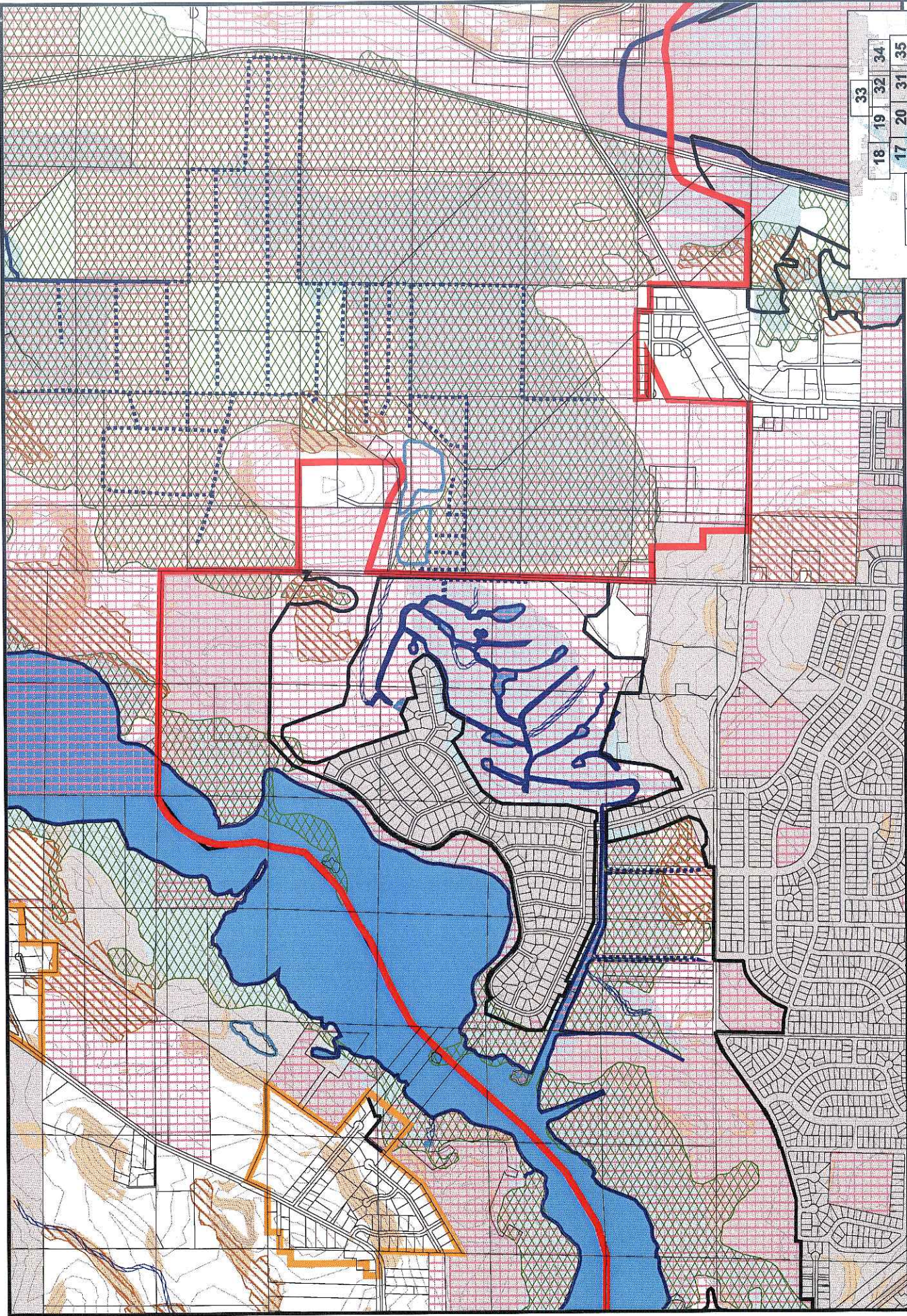


Friends of Cherokee Marsh





4-alt
Relocate proposed
DUs to Horning Fields



5	6	11	12
4	7	16	22
3	8	15	23
2	9	14	24
1	10	13	25
		20	21
		17	18
		19	33
		20	32
		21	31
		22	30
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		28	24
		29	23
		30	22
		31	21
		32	20
		33	19
		34	18
		35	17

- Urban Service Area
- Limited Service Area
- Environmental Corridor
- Isolated Resource Feature
- Perennial Stream
- Intermittent Stream
- Open Channel / Drainageway
- Shoreline
- Contour (10 foot interval)
- Slope (STE 12%)
- Existing Public Land
- Proposed Public Land
- Municipal Boundary
- Wetland
- Woodland
- 100 Year Floodplain
- Open Water

Environmental Corridors
Central Urban Service Area Map 19
Dane County, Wisconsin

Current as of 09/2005, updated by CAPD

0 1500 3000 Feet

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Parks, Timothy

From: Roll, Rick
Sent: Thursday, November 30, 2006 12:20 PM
To: Parks, Timothy
Subject: FW: Cherokee Marsh Development Plan - comments

Hi Tim: I just received this e-mail re:Cherokee.

Rick

From: Madison Audubon Society [mailto:masoffice@mailbag.com]
Sent: Thursday, November 30, 2006 12:03 PM
To: Roll, Rick; Murphy, Brad
Subject: Cherokee Marsh Development Plan - comments

Date: 30 November 2006
To: City of Madison Plan Commission members and staff
From: Madison Audubon Society

Re: Cherokee Marsh Development Plan

Please provide the following comments to any committees holding hearings on the proposal and to the council, as appropriate.

Madison Audubon Society favors adoption of the City of Madison proposals and plans related to Cherokee Marsh and Cherokee Park Inc.

* We represent over two thousand members in Madison and surrounding areas who have helped to purchase, preserve, and restore hundreds of acres of local wetlands and prairies.

* We represent many more members of the public who are active users of local outdoor resources, concerned about water quality and ecosystem management, and who support public efforts to maximize preservation of our shared investment in remaining natural areas.

* We support the efforts and public input provided by the Friends of Cherokee Marsh and the Upper Yahara River on this issue.

* The following points are particularly important.

(1) This plan will help to serve the public interest and achieve important environmental goals for the upper Yahara watershed, rare fens, birds, and wildlife.

11/30/2006

(2) The plan recognizes legitimate scientific concerns about the necessity to preserve large blocks of marsh and surrounding upland and woodland ecosystems for life cycle behavior.

(3) The plan will preserve publicly managed natural conservancy areas by significantly expanding the acreage, which will help enhance the many benefits to citizens and families.

(4) And the plan will focus plans for housing development at locations adjacent to existing street access and service infrastructure and minimize impact on sensitive runoff areas.

We recognize there will be some room for improvement in the details. While Madison Audubon would prefer to see no development in the area known as the 5th Addition and would support concentrating more of the development in areas furthest from the marsh with stronger runoff restrictions, the plan as proposed will restrict the impact. Most importantly, the plan contains restrictions to help assure both expanded restoration and limited development are done in an environmentally sound manner with opportunities for further public input related to detailed implementation plans and approvals.

Therefore Madison Audubon Society recommends that the City of Madison approve and proceed with the Cherokee Marsh revised Special Area Plan, Annexation Plan and Memorandum of Understanding.

Sincerely,
Joanne Herfel

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Joanne Herfel, President
Madison Audubon Society
222 S Hamilton St, Suite 1
Madison, WI 53703-3201
608/255-BIRD (2473)

--*Making Time for Birds*