
**Staff Analysis of the Proposed Amendment to the
Dane County Land Use and Transportation Plan and Water Quality Plan,
Revising the Central Urban Service Area Boundary and Environmental Corridors in the
Village of McFarland**

1. Applicant: Village of McFarland

2. Description of Proposal

The proposed amendment adds 34.4 acres to the Central Urban Service Area (CUSA), includes 1.6 acres of existing development (street r.o.w.), resulting in a net developable area of 32.8 acres. The addition is for residential development, which will accommodate 153 housing units and a population of 313 including 55 school age children. The area is in the Village of McFarland. Most of the area is located north of CTH MN and east of Holscher Road (parcel B), except for a small portion of land (0.9 acres) south of CTH MN (parcel A) included to provide continuation of Holscher Road and to add depth to a residential lot. (See Table 1 and Maps 1, 2 and 3, and photographs).

Table 1: CUSA - Village of McFarland

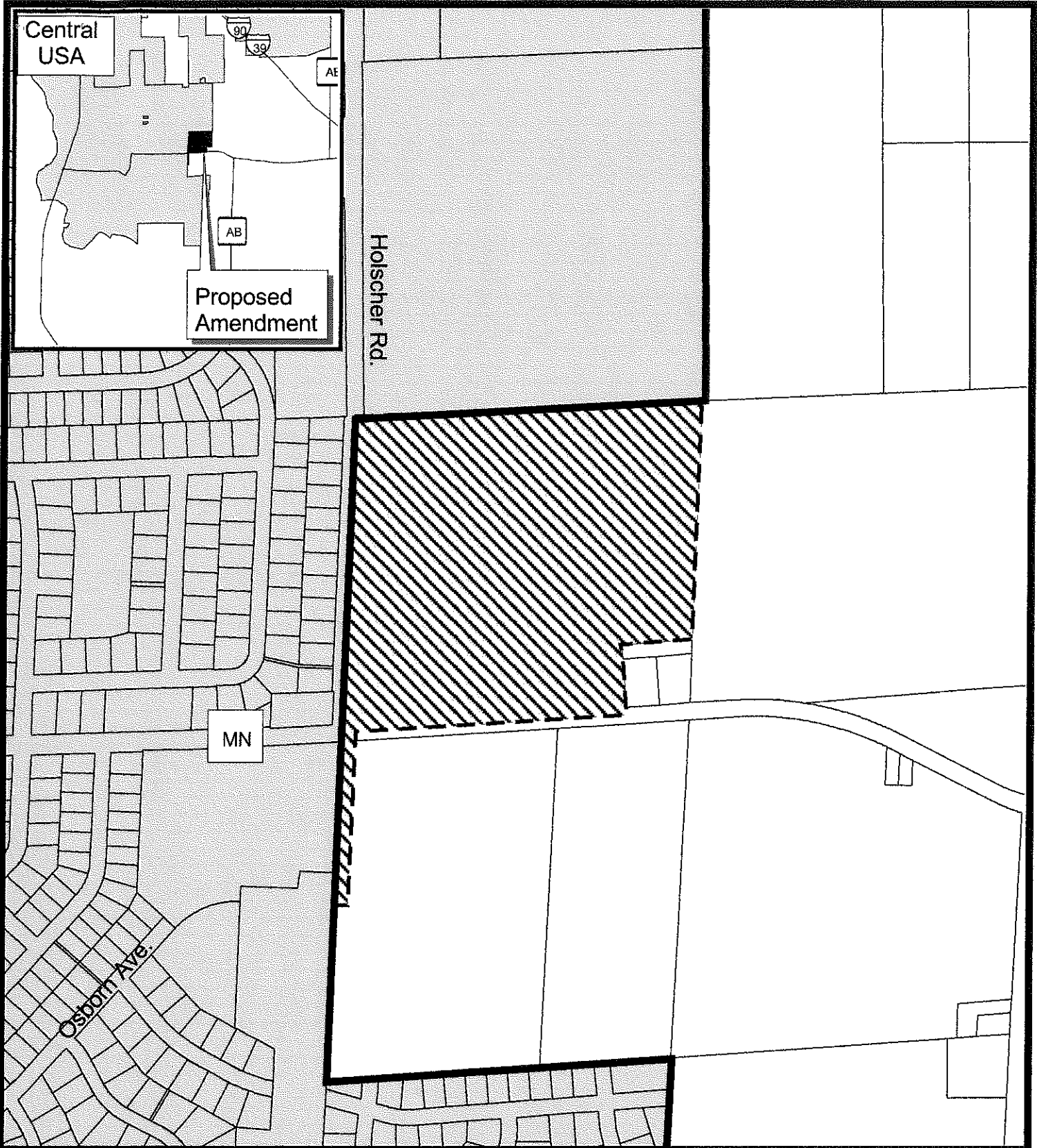
Proposed Land Use	Density (units/acre)		Total acres	% of Total	Housing Units	No. of Persons	No. of Students	Existing Develop.	Environ. Corridor	Develop- able
	Proposal	CUSA								
Single Family Detached	5.2	4.2	8.3	24.0%	43	126	29			
Other Residential	11.2	14.5	9.8	28.6%	110	187	26			
Residential Total	8.5	6.6	18.1	52.6%	153	313	55	0.0	0.0	
Street R-O-W			7.2	20.8%				1.6		
Storm water basin			9.2	26.6%						
TOTAL			34.4	100%				1.6	0.0	32.8

Source: Village of McFarland Planning Submittal and Dane County Regional Planning Commission % Single Family: 28%

3. Existing Environment

Land Use. Most of the land within the proposed addition is in agricultural use. Land uses adjacent to the proposed amendment are as follows:

- North: Residential and Agricultural (Village of McFarland)
- East: Agricultural and Open Space (Town of Dunn)
- South: Agricultural (Town of Dunn)
- West: Residential (Village of McFarland)



Central
USA





Proposed
Amendment

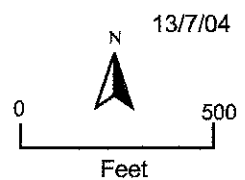
Holscher Rd.

MN

Osborn Ave.

**Map 1 Amendment
to the Central
Urban Service Area,
Village of McFarland**

-  Service Area to be added
-  Existing Urban Service Area Boundary
-  Proposed Urban Service Area Boundary
-  Incorporated Area



Prepared by staff
to the DCRPC.

Central
USA

90
39
AE

AB





Proposed
Amendment

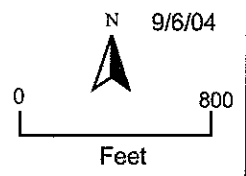
Holscher Rd

MN

55000 AVG

**Map 2
Amendment
to the Central
Urban Service Area,
Village of McFarland**

-  Service Area to be added
-  Proposed Environmental Corridor
-  Existing Urban Service Area Boundary
-  Proposed Urban Service Area Boundary



Prepared by staff
to the DCRPC.

Planned Land Use

- 2004 Municipal Boundaries
- 2004 Central Urban Service Area Boundary
- Potential Central Urban Service Area Expansion Boundary
- Lake Waubesa Limited Service Area Boundary
- Railroad
- Proposed Collector Roads

Planned Land Use Categories

- Agricultural Preservation Areas
- Single Family Residential - Rural
- Single Family Residential - Sewered
- Two Family/Townhouse Residential
- Mixed Residential
- Office
- Neighborhood Commercial
- Planned Commercial
- General Commercial
- Downtown
- Planned Mixed Use
- Planned Industrial/Business Park
- General Industrial
- Government and Institutional
- Parks and Public Recreation
- Environmental Corridor/Open Space Corridor*
- Woodlands (Dane Co)/Open Space (Madison)
- Surface Water
- Existing Rights of Way

1. Planned Commercial
2. Office/Business Park
3. Government & Institutional
4. Mixed Residential

* Long Range Intergovernmental Planning Area

Shapes on map represent general recommendations for future land use. Actual boundaries between different land use types and associated zoning districts may vary somewhat from representations on this map

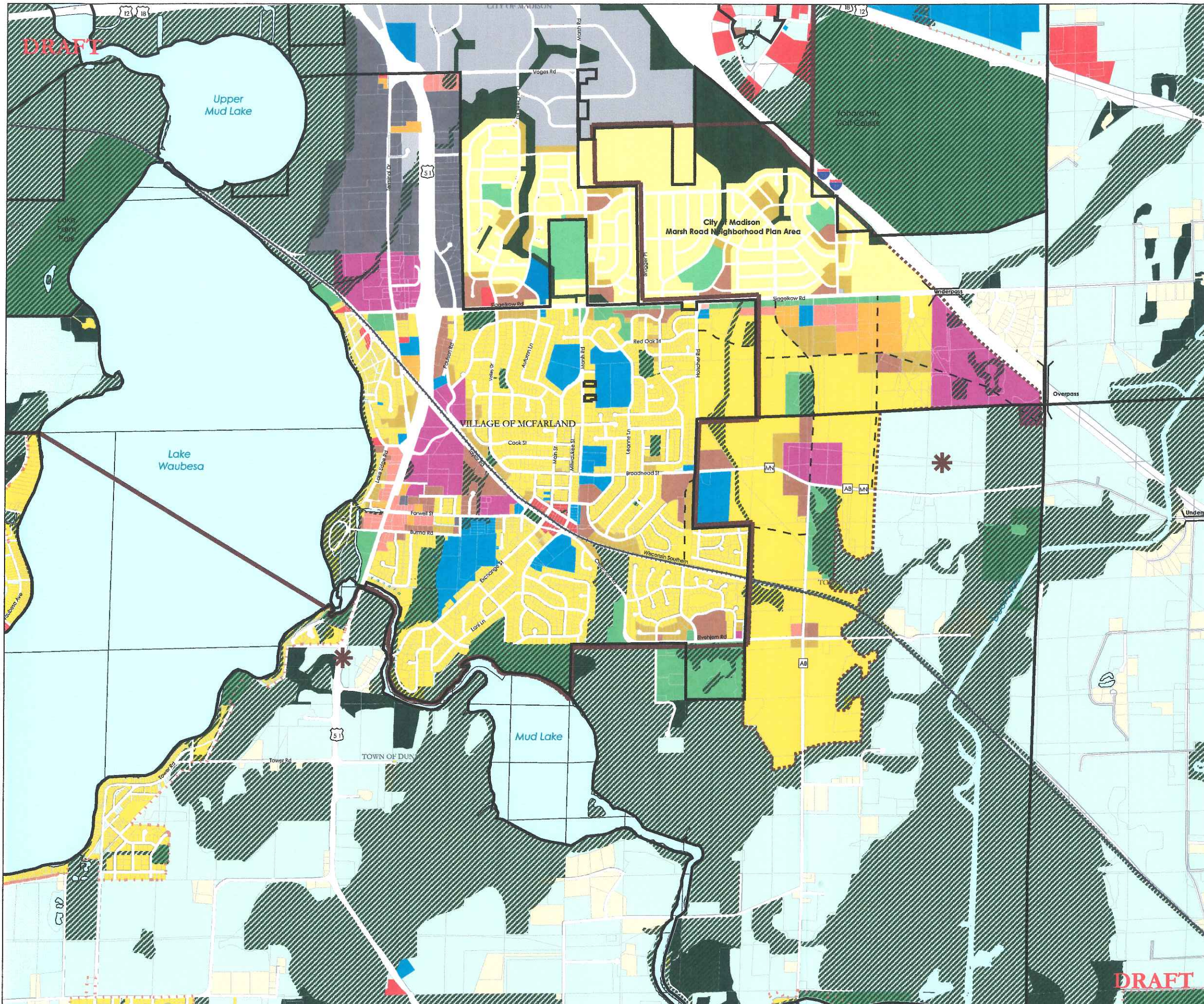
*Environmental Corridors depicted on this map use generalized boundaries of environmental features identified on air photos by the DNR and the Dane County RPC. These generalized boundaries are refined through detailed on-site investigation at the time of land division and site plan review. The boundaries also includes locally identified drainageways that may not all meet RPC criteria for Environmental Corridors

2000 0 2000 Feet

June 2004

Sources: Dane County LIO, Dane County RPC, & Village of McFarland.

Created by Vandewalle & Associates



Revising the CUSA in the Village of McFarland



Northwesterly view of the amendment area from the southwest.



View of the narrow portion of the amendment area south of CTH MN.



Southeasterly view from the northwest corner.

Natural Resources. The area proposed for addition is in the Yahara River watershed. Parcel B drains to a low area in the south central portion of the parcel where water infiltrates into the ground (this area is subject to seasonal flooding; see Map 4). There is no natural outlet for this depression area other than in large flood events, when overflow to the south and southeast across CTH MN can occur.

The southeast flow path, is 1,700 feet via the CTH MN ditch to a wetland area associated with a tributary of Door Creek. Door Creek is one mile south-southeast of the wetland. Door Creek supports a Limited Forage Fishery with potential for a Warm Water Sport Fishery (with improvements in the water quality).

The south flow path is 2,400 feet to a wetland area south of the railroad tracks (see Map 3), and then south and west through a tributary, to Mud Lake one mile downstream. Lower Mud Lake is part of the Yahara River chain of lakes. The Yahara River supports a Warm Water Sport Fishery.

Depth to the water table in the amendment area is generally over 25 feet except in the southeast corner where it is 10-25 feet. Depth to bedrock is over 50 feet. The bedrock type is sandstone.

The soils of the area are in the Dodge-St. Charles-McHenry Association. This association is characterized by moderately well-drained and well-drained deep silt loams. The area has substrates with rapid and moderately rapid permeabilities, making it ideal for infiltration measures. Approximately 65% of the amendment area contains prime agricultural soils. Table 2 describes the soils of the amendment area in detail. Parcel A contains only St. Charles silt loam (ScB) while parcel B contains all the soil categories included in Table 2.

The State Historical Society records do not report archaeological sites within the project area.

The Natural Heritage Inventory records, maintained by the Department of Natural Resources, do not indicate the occurrence of threatened or endangered species in the area, though there are incidences of endangered species downstream, through the south drainage flow path near the wetland area south of the railroad tracks.

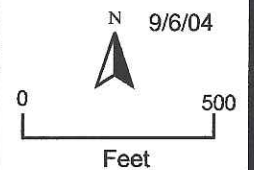
Transportation System. The proposed amendment area is north of CTH MN (Broadhead Street) on the east side of the Village. CTH MN and Holscher Road will provide access to the proposed subdivision. CTH MN is a two-lane, east-west minor arterial street. Holscher Road is a planned future collector street, which will be extended south of CTH MN to Elvehjem Road.

Public transit service is currently not available in the Village. The closest Madison Metro transit route is #12, a commuter route that serves the Dutch Mill Park & Ride lot just north of the USH 51 and South Beltline (USH 12/18) interchange. Ridesharing services are available through the Madison Area MPO Rideshare, Etc. Program. Private taxicab service is available from three different companies. The Dane County Department of Human Services contracts with a private provider for limited group ride service for persons aged 60 and over and those with a disability. The service provides



**Map 4 Soil Characteristics
Amendment
to the Central
Urban Service Area,
Village of McFarland**

-  Prime Agricultural Soils
-  Severe Limitations for Development
-  Existing Urban Service Area Boundary
-  Proposed Urban Service Area Boundary



Prepared by staff
to the DCRPC.

Table 2 - Soil Characteristics

Soil	Percent of Area	Prime Ag Soils?	Characteristics
Virgil Silt Loam; VwA	34	Yes	Formed on bench lands on outwash plains. Deep, poorly drained soils. Gravelly substratum, rapid permeability substrate. Hazard of erosion. Severe limitation to development due to seasonal flooding and high water table. High fertility. 125 Bu/acre corn yield.
Dodge Silt Loam; DnB/C2	32	Yes, where slopes less than 6%	Formed on glaciated uplands on terminal moraines. Deep, well drained. Moderate to severe hazard of erosion. Moderately rapidly permeable. Slight to moderate limitation for development. 100-115 Bu/acre corn yield.
McHenry Silt Loam; MdC2	9	No	Deep, well drained soils on glaciated uplands and formed un sandy loam glacial till. Soils have medium fertility, moderate permeability, and pose severe hazard of erosion. Substratum is moderately rapidly permeable. Poses severe hazard of erosion. Moderate limitation for development.
St. Charles Silt Loam; ScB	13	Yes	Deep, well drained soils formed on glaciated uplands. Moderately rapidly permeable substrate. Poses severe hazard of erosion. Slight to moderate limitation for development. 135 Bu/acre corn yield.
Kidder, eroded; KrD2	5	No	Deep, well drained slopes formed in glacial till on drumlins and terminal and recessional moraines. These soils have moderate permeability and pose severe hazard of erosion. Poses severe limitation to development due to slope.
Plano silt Loam, gravelly substratum, eroded; PoB	4	Yes	Deep, well drained soils with high fertility, moderate permeability, and moderate hazard of erosion. Poses slight to moderate limitation for development. 140 Bu/acre corn yield
Kidder Loam, KdC2	3	No	Deep, well drained soils formed on glaciated uplands. Medium fertility. Moderate permeability and severe hazard of erosion. Substrate is moderately rapidly permeable. Poses slight to moderate limitation for development.

transportation to elderly nutrition sites, senior center activities, adult day care, and shopping.

CTH MN does not have paved shoulders to accommodate bicyclists. The roadway is still suitable for bicycling within the Village limits where the traffic speeds are lower. The USH 51 and South Beltline interchange is currently a major barrier for bicyclists, but the extension of Marsh Road across the Beltline, now being constructed, will provide an alternative route.

4. Consistency or Conflict With Adopted Plans and Policies

The Central Urban Service Area Analysis, adopted by the RPC in 1989, includes a list of criteria to be met by proposed amendments to the service area, including:

- preparation of an area plan which encompasses the proposed amendment
- a description of proposed land uses
- an evaluation of consistency with adopted plans
- methods of protecting environmental corridors
- an evaluation of urban services to be provided, including transportation, water, sewer, police, fire, solid waste, storm drainage and neighborhood facilities

The Village of McFarland has addressed these criteria through information presented in the Village's CUSA amendment proposal, dated July 2004, and its Comprehensive Plan, Public Review Draft dated June 2004.

The Village of McFarland *Comprehensive Plan* designates certain lands for future expansion of the Village. The proposed amendment area is part of the *Near-term Municipal Service Potential* area east of existing development and west of the Door Creek Watershed. The amendment area is also consistent with the 1994 Village of McFarland Master Plan and the 1998 Residential Growth Management Plan.

Table 3 presents the goal achievement checklist for the eleven major goals of the Vision 2020 *Dane County Land Use and Transportation Plan*. The proposed amendment is supportive of two goals. It promotes compact urban development, because it is adjacent to development on two sides and has proposed densities higher than the CUSA average. It also provides a range of housing with 72% of the amendment planned for housing other than single family. The amendment is neutral or has offsetting effects in terms of eight goals, and conflicts with one major goal of the *Plan*—protecting agricultural lands—because it converts an area of prime agricultural soils to urban uses.

Table 3
Dane County Land Use and Transportation Plan
Goals Achievement Checklist

Goals	Strongly Conflicts	Conflicts	Neutral or Offsetting Effects	Supports	Strongly Supports
Promote balanced communities with a mix of development.			X		
Promote compact urban development.				X	
Promote distinct communities, mixed use neighborhoods with a full range of public services.			X		
Provide a range of safe and affordable housing choices.				X	
Provide an integrated, all-mode transportation system.			X		
Concentrate employment and activity centers along transit corridors.			X		
Maintain Downtown Madison as the region's major activity center.			X		
Provide employment opportunities and a diverse economic base.			X		
Protect agricultural lands by limiting non-farm development in agricultural areas.		X			
Protect environmental, cultural and historic resources.			X		
Develop a system of open space corridors to preserve environmental functions, scenic value, and recreational opportunities.			X		

Proposal: Revising the Central Urban Service Area Boundary and Environmental Corridors in the Village of McFarland

Applicant & Submittal Date: Village of McFarland, July 2004.

5. Proposed Urban Services

Public Water System. The amendment area south of CTH MN is a portion of a lot in a large plat (Fieldstone Addition to Highland Oaks) to the southwest, and will be served from public mains in Holscher Road, part of a looped layout of mains that will provide domestic and fire flows. The rest of the amendment area will be served through an extension of public water mains from the southwest and the north, from the existing Village water distribution network. Development of both sites is within the capacity of the water system and will include hydrants. The water system currently provides a fire flow of over 2,000 g.p.m. for 2.5 hours adequate for fire-fighting purposes.

Wastewater. Sanitary sewer service to the area south of CTH MN is through gravity sewers serving the larger development to the southwest. The concept plan for the rest of the amendment area shows a system of sanitary sewers that will drain to a lift station in the Juniper Addition to Cedar Glade (immediately north of the amendment area in the current USA). This lift station will pump the wastewater to the existing Village collection system northwest of the amendment area. The system is tributary to the Madison Metropolitan Sewerage District's Siggelkow Extension. The lift station will be designed to serve other areas beyond the requested amendment area as well. Development of both sites is within the capacity of the collection system.

The Nine Springs Wastewater Treatment Facility will reach capacity before 2020, and a comprehensive facility plan will begin in 2006 to find the most effective approach to providing treatment capacity for the service area.

Stormwater Management System. Stormwater from the area south of CTH MN will be managed by a series of underground pipes flowing to a detention basin on Osborn Drive at the railroad tracks. This system will provide for settlement of particles allowing for release of treated storm water before discharging to Mud Lake.

The rest of the amendment area currently drains to a depression where underlying soils allow water to infiltrate. A similar system is proposed to manage stormwater on the property after development. A storm water basin is proposed in the low area. The proposed basin would be a wet pond with adequate storage capacity to hold the 100-year runoff from the development. Preliminary plans call for pre-treatment of stormwater followed by an infiltration basin. Alternatives are being examined to provide an outlet for larger storm events.

Environmental Corridors. No environmental corridors have been proposed as part of the amendment, however the proposed 9.2-acre wet pond should be designated as environmental corridors for two reasons. First, the wet pond conveys surface flows from the area to the north to the planned conveyance system to the south, therefore providing continuity for the drainage system (one of the functions of environmental corridors); and second, the wet pond is a stormwater management facility, which should be in the environment corridors to ensure protection of its environmental functions (stormwater management).

Public Safety Services. McFarland Fire and EMS provides fire protection and ambulance service from the station, located within a half-mile of the proposed amendment. The water system has sufficient capacity for fire-fighting purposes. The water distribution system will include fire hydrants. McFarland has an ISO rating of 4, exceeding DCRPC minimum criteria.

The Village of McFarland provides police services from the Municipal Building located within a mile of the proposed amendment. The Village maintains 1.8 police officers per 1,000 persons, above the DCRPC minimum standard of 1 officer per 1,000 population.

Other City Services. The Village of McFarland will provide solid waste collection and recycling as well as street repair, street cleaning and snow and ice removal.

Parks and Open Space. A proposed wet pond makes up 9.2 acres of the amendment area. Four neighborhood parks are within walking distance of the amendment area. William McFarland Park, a community park is within a mile from the amendment area.

Urban Transportation System. A concept plan for the residential development of the amendment area provided with the submittal shows a north-south street and two east-west streets serving the single-family units on the east side of the property, which provide for future connections to the north, south, and east. A street running between Holscher Road and CTH MN would serve the proposed multi-family units in the southwest corner of the property. Bicycle lanes are planned on Holscher Road. The submittal indicates that sidewalks are normally provided on both sides of all streets, except cul-de-sacs. CTH MN is programmed for resurfacing and intersection improvements in 2005 and 2007 from USH 51 to Anthony Place, one-half mile east of the amendment area.

6. Impacts or Effects of Proposal

Surface and Ground Water Impacts. The potential impacts associated with urban development include declining groundwater levels and dry-weather stream base flows resulting from groundwater pumping and wastewater diversion, increased stormwater runoff and flooding, reduced groundwater recharge resulting from increased impervious surface and storm sewer systems, erosion and sedimentation from construction and land disturbance, water quality degradation from polluted stormwater runoff, and impairment of critical environmental functions and habitat resulting from development.

The site is subject to the erosion control provisions of the Village of McFarland. This coverage provides adequate protection from construction erosion impacts. The Village requires detention ponds to be installed prior to other land disturbing activities, thus providing additional protection against construction impacts.

The statement on stormwater management submitted as part of the amendment request specifies a wet detention pond and a system of drainageways connecting to existing drainageways to the north, and proposed drainageways to the south of the amendment area. The plan would provide sufficient storage for the 100-year storm event, followed by an infiltration basin. The infiltration basin is to provide discharge to the groundwater, since the area does not have a natural surface discharge outlet. The approach is ideal for stormwater quality management. However, experience in Dane County has shown that infiltration basins can and will seal up (due to the presence of fine silt in Dane County soils) and cause flooding if a stable surface discharge outlet (channel in an easement) is not provided. Two options for surface discharge can be identified. The south flow path is shown on the Village plan map (as a greenway) extending to an isolated wetland south of the railroad tracks. This wetland may be habitat to threatened and endangered species and is itself not directly connected to a stream or other water body. This may cause flooding in the area. The southeast path is east-southeast along CTH MN, to a large wetland complex located at the southeast corner of the intersection of CTH MN and CTH AB, about 1,700 feet from the

amendment area. This flow path could be accommodated in the CTH MN ditch (in the r.o.w.), but it would require reconstruction of this stretch of highway with a new profile. Both flow paths would require easements and require comprehensive investigations to ensure that the additional stormwater discharge will not cause flooding and erosion in the areas downstream of the proposed amendment.

The Dane County Regional Hydrologic Study has evaluated the regional or cumulative impacts of planned 2020 pumping and land use. From a regional perspective, we anticipate continued water table declines and reductions in stream baseflows unless mitigating strategies are pursued. Mitigation measures to reduce the impacts of this development include water conservation and maximizing infiltration. The stormwater plan proposes a large infiltration area, significantly contributing to the goal of maintaining groundwater recharge in the area.

Transportation System Impacts. The proposed amendment area is intended for a residential subdivision with a mix of housing types, including 43 single-family units and 110 multi-family units. When fully developed, it can be expected to generate an estimated 1,100 one-way vehicle trips on an average weekday.

In 2002, CTH MN had an average daily traffic (ADT) volume of 2,600 east of Marsh Road. Traffic volume data is not available for Holscher Road, but the ADT is low. CTH MN and Holscher Road have sufficient roadway capacity to handle the traffic to be generated by the proposed amendment area.

School System Impacts. The proposed addition will be developed with approximately 153 residential units. Potential school enrollments resulting from development of the amendment area would include about 21 elementary school students, 17 middle school students and 17 high school students. The amendment area is in the McFarland School District. From 1993 to 2004, McFarland School District was the second slowest growing district in the county. The amendment area is within a half mile of both elementary schools and within 1.5 miles of a middle school and high school.

7. Alternatives

The Village of McFarland Residential Growth Management and Comprehensive Plans examined alternative locations for future development and makes recommendations for land use beyond the current edge of urban development. The entire developable portion of the service area amendment falls into the near-term municipal service area recommended for immediate development.

8. Controversies, Comments Received, Unresolved Issues

The Town of Dunn and other local units of government have been notified. Comment has been received from the Town of Dunn (attached), indicating concern with potential flooding downstream from the development.

9. Conclusions and Staff Recommendation

The requested amendment appears to be consistent with the criteria and planning submittal requirements for urban service area amendments, and with the goals of the *Dane County Land Use and Transportation Plan*. Staff recommends approval of the request conditioned on the Village of McFarland pursuing the following:

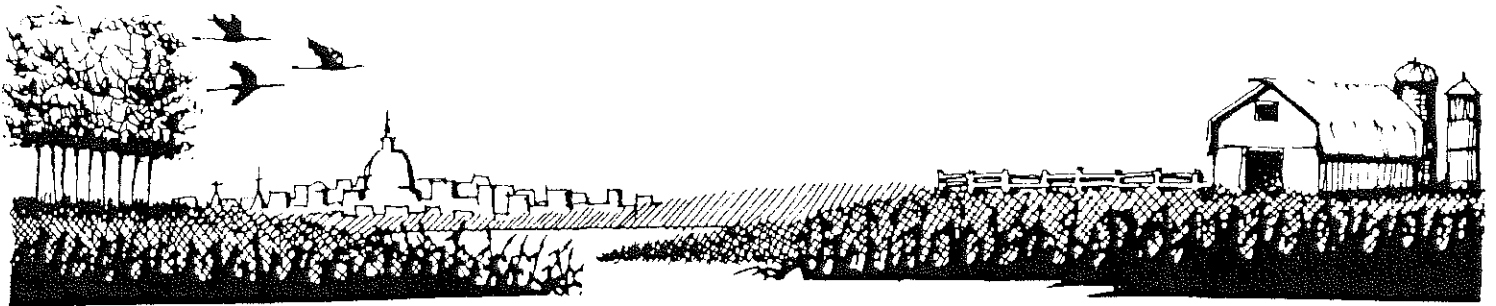
- Designating the 9.2-acre pond and greenway through the amendment area as environmental corridors.

- Submit a detailed stormwater management plan for DCRPC and DCLCD staff review and approval prior to development.
- Stormwater plan should mitigate the water quality and quantity impacts of the proposed development and should include stormwater quality measures (wet ponds) to meet, at minimum, the county stormwater quality standards, prior to discharge to infiltration basin(s). Infiltration basins should be protected during the construction phase of development. The pond and infiltration basin should have adequate combined storage for the 100-year storm event.
- Provide a stable surface discharge route for stormwater to a stream or channel. The discharge should be designed to prevent off-site erosion or increase in flooding.
- Secure the necessary easements for the surface discharge route.
- Install stormwater facilities prior to other land disturbing activities.

It is also recommended that the Village pursue the following:

1. Work with the developer to consider revising the concept plan to add a pedestrian/bicycle path connection between the multi-family development in the southwest corner of the property and the single-family development to the east to improve intra-neighborhood access. A street connection would be desirable, however the location of the wet pond/stormwater management area appears to make this type of connection not practicable.

cg



TOWN OF DUNN - 4156 COUNTY ROAD B, McFARLAND, WI 53558

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August 3, 2004

Dane County Regional Planning Commission
30 West Mifflin Street
Suite 402
Madison, WI 53703-2558

Re: Public Hearing on amendment to CUSA – Village of McFarland

Dear Regional Planning Commission:

The Town of Dunn would like to comment as part of the August 12, 2004 public hearing on the proposed addition of 34.4 acres to the Central Urban service Area.

The Town of Dunn is concerned about storm water runoff from the proposed development to surrounding agricultural lands and adjacent residences.

Thank you for the opportunity to comment.

Sincerely,

Rosalind Gausman
Clerk Treasurer