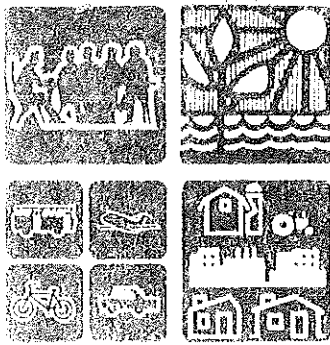




Dane County Regional Planning Commission

Room 523, City-County Building, Madison, Wisconsin 53709 Tel. 608/266-4137

September 18, 1991

Rahim Oghalai
Bureau of Water Resources Management
Wisconsin Department of Natural Resources
101 S. Webster
Madison, Wisconsin 53702

RE: Amendment to the Dane County Water Quality Plan: Addition to the
Central Urban Service Area, Village of McFarland Portion

Dear Mr. Oghalai:

Enclosed are two copies of Resolution RPC No. 580 amending the Central Urban Service Area boundaries and environmental corridors in the McFarland portion of the service area. This resolution was adopted by the Regional Planning Commission on September 12, 1991, following a public hearing held on August 22, 1991.

This amendment would add 157 acres to the Central Urban Service Area, including 124 acres of vacant developable land, 21 acres of environmental corridors, and 12 acres of existing residential and railroad right-of-way development. The area to be added is proposed for residential and recreational development, and is included in three separate parcels, all of which are located within the Village of McFarland boundaries.

Also enclosed are two copies of informational materials supporting the amendment, including: 1) minutes of the August 22, 1991, public hearing on the amendment; 2) planning reports (the McFarland Village East Long-Range Study, and Village of McFarland Proposed Central Urban Service Amendment) submitted by the Village of McFarland in support of the requested amendment; 3) RPC Staff Analysis (8/20/91) and Addendum (9/12/91) of the proposed amendment; and 4) maps showing street, utility and storm drainage layouts for the areas added.

The Central Urban Service Area Analysis, adopted by the Regional Planning Commission on October 12, 1989, and previously provided to you, provides the basis and criteria under which this amendment was considered. The CUSA analysis established the density standards and size limit for the Central Urban Service Area consistent with official population and growth forecasts. This proposed amendment is within the guidelines and consistent with the criteria and requirements of the Central Urban Service Area Analysis.

RPC

Rahim Oghalai

September 18, 1991

Page 2

We are submitting this amendment for Department review and certification as an amendment to the Dane County Water Quality Plan. Should you have any questions or need additional information, please contact me.

Sincerely,

Bill Lane

William N. Lane, Deputy Director and
Director of Environmental Resources Planning

WNL:mp

cc: Doris Hanson, President, Village of McFarland
James Nemke, Chief Engineer and Director, MMSD

RPC

PROPOSED AMENDMENT TO THE
DANE COUNTY REGIONAL DEVELOPMENT GUIDE, FARM
PRESERVATION PLAN AND WATER QUALITY PLAN

1. Applicant: Village of McFarland
2. Title of Proposal: Amendment to the Central Urban Service Area
(McFarland portion)
3. Location: Dane County
Village of McFarland
Section 35, T7N, R10E and Section 2, T6N, R10E

4. Summary Description

As a result of the McFarland Village East Long Range Plan, the village proposes to add 157 acres to its portion of the Central Urban Service Area. The proposal consists of 124 acres of vacant developable land, 21 acres of environmental corridors, and 12 acres of existing residential and railroad right-of-way development. The area to be added is proposed for residential and recreational development.

All lands lie within the Village of McFarland.

5. Population

The village population is 5,232 (1990 Census), a 38.3% increase from 1980. The area to be added has eight existing houses and an estimated population of 20. The village accounts for about 2.1% of the total 1990 estimated CUSA population of 245,390. The 2010 CUSA population forecast of 257,138 would not be affected or changed by the proposed additions, which are within the guidelines of the land area necessary to accommodate future CUSA growth.

6. Projected Wastewater Flows and Loadings

The entire CUSA, including the areas proposed to be added, are within the MMSD service area and flows are treated at the Nine Springs Wastewater Treatment Plant. The 2010 wastewater flow forecast for the Nine Springs plant is 44.5 million gallons/day (mgd), well within the plant design capacity of 50 mgd. The forecast flows include growth in the CUSA, and are not affected or changed by the proposed additions.

7. Existing Environment

Area A is a 38-acre parcel consisting of an 18-acre park, two acres of existing residences, and the remainder is vacant. The parcel is adjacent to existing and developing residential land in the village, as well as to vacant land in the City of Madison. Proposed development includes a 5.5-acre hockey complex and residential development of about 30 housing units. The park is proposed to be delineated as an environmental corridor.

Area B is a 39-acre parcel with 3 acres of existing development and 36 acres of vacant developable land presently in agricultural use and part of an approved preliminary plat called Ridge View.

The vacant land has few limitations for development and is subject to an 86 lot preliminary plat for single family residential use. No environmental corridors are delineated for this parcel. The land adjoins an existing residential neighborhood to the south, and vacant land in the Town of Blooming Grove and City of Madison to the west, north and east.

Area C is an 80-acre parcel in the southeast corner of McFarland. It consists of 4 acres of existing residential and commercial development, 3 acres of proposed environmental corridors, 3 acres of railroad right-of-way, and 70 acres of vacant developable land. The area is proposed for future residential development of about 232 housing units. Proposed environmental corridors consist of a 100' wide buffer along a drainageway on the east boundary line, and a 75' buffer around a wetland which lies on an adjacent property. The remaining land is agricultural, with few limitations for development.

Water Resources

All of the land classified as the Marsh property (Area A), as well as the northwestern portion of the Smith property (Area B) in the proposed urban service area additions are located in the Lake Waubesa drainage basin. The remaining portion of the Ridge View plat and all of the Urso property (Area C) are in the Lower Mud Lake drainage basin.

Water runoff from the Marsh and northwestern portion of the Smith property enters an open channel drainageway, which leads to an intermittent stream discharging to Lake Waubesa near McDaniel Park. Water runoff from the Urso property flows southeast to a largely off-site wetland area and south to an open channel drainageway discharging to Lower Mud Lake. The wetland is approximately 8 acres in size and is classified as emergent wet meadow. Outside of this wetland, there are no significant permanent water bodies or perennial streams in or immediately adjacent to the proposed service area additions.

Geology and Soils

The surficial geology of the proposed service area additions consists primarily of ground moraine and drumlins. There is a drumlin that encompasses most of the Ridge View preliminary plat and another drumlin located on the northern part of the Urso property. The southern part of the Urso property consists of lacustrine plain (glacial lake bottom). These surficial materials generally are fine- to medium-grained. The predominant bedrock type is sandstone, which is found five to ten or more feet below the land surface.

The soils for each of the service area additions are primarily silt loams underlain by sandy loam glacial till. The predominant soil association is the Dodge-St. Charles-McHenry association, which consists of moderately well-drained, deep silt loams. However, somewhat poorly

drained soils, such as the Virgil and Radford series, are found on the southern portions of the Urso and Smith properties.

Soils of the Dodge-St. Charles-McHenry association have slight to moderate limitations for urban development and are considered "prime" agricultural soils by USDA definition. These soils generally have good pollution attenuation capacities. Virgil and Radford soils have moderate to severe limitations for urban development, largely due to seasonal high water tables. Very steep sloping (20-35% slope) Kidder series soils are found on the northern part of the Urso property, which create significant erosion potential and development constraints.

Archeological and Endangered Resources

The Wisconsin Natural Heritage Inventory database within the DNR's Bureau of Endangered Resources was reviewed for identifying any rare animal and plant species in the proposed service area additions. No endangered or threatened species have been recorded for these sites.

According to the report Literature and Records Search on Prehistoric Cultural Resources of Dane County by Philip Salkin, there are no inventoried prehistoric cultural sites in the proposed service area additions.

8. Consistency with Plans

The proposal is consistent with adopted plans for the area. An analysis of residential growth in the village shows that only 83 platted lots remain in McFarland in the urban service area, with a potential for approximately 400 more on unplatted land. At an average building rate of 52 units per year, the potential supply is 9.5 years. The areas proposed for addition will provide for residential development after existing available land is built out.

The Central Urban Service Area Analysis (CUSA), 1989, concluded that up to 2,950 acres of vacant developable land could be added to the urban service area and still be considered within the 2010 development limits. After the Junction Neighborhood Amendment was approved, the CUSA capacity was reduced to 2,634 acres. The 124 acres of vacant developable land included in this proposal are within the remaining 2,634 acre allowance.

The village has prepared and submitted the McFarland Village East Long-Range Study (Feb. 1990) and the Village of McFarland Proposed Central Urban Service Area Amendment report (June 11, 1991) as the planning documents and supporting information for the proposed amendments.

9. Urban Service Provisions

It is intended that all of the land within the CUSA amendment will ultimately be provided with a full range of urban services. The full range of urban services would include the provision of public sanitary sewer and public water, and a higher level of other services, especially police and fire protection.

The provision of urban services to the areas to be added is described in the village's report on the Proposed Central Urban Service Area Amendment (June 11, 1991) and the Village East Long-Range Study (Feb. 1990). These reports generally satisfy the adopted CUSA criteria for a development and urban services plan to be submitted by the village. Specific layouts of sanitary sewerage, water supply and storm drainage facilities have not, however, been submitted, although the aforementioned reports describe how these urban services are to be provided.

Sanitary Sewerage

There are no public sanitary sewers in the following areas, but service is adjacent. The Village of McFarland has proposed to serve the entire planning area. A specific map layout of sanitary sewerage facilities to serve the proposed additions has not been submitted by the village.

The Urso property (Area C) is included in the Panorama lift station and Interceptor district, which includes about 400 acres. Public sanitary sewer services were recently installed in the Country Woods Subdivision immediately west of the Urso property. The proposed sanitary sewer service and layout is shown in the Village East Long-Range Service Area Study.

The Smith property (Area B) north of Curtis Street would be served by the Interceptor for the Woodland Estates and Sunny View Subdivisions, which are immediately south and southwest, respectively, of the Smith property. The detailed sanitary sewer service and layout is shown on the approved preliminary plat of Ridge View.

The Peterson, Hockey Association and Marsh Playfield properties (Area A) north of Siggeikow Road would be served from the Kegonsa sewer Interceptor. This sewer extension could ultimately serve a 400-acre area including the April Hills Subdivision.

Full development in the areas to be added would generate about 77,000 gal/day of wastewater, which has been included in the wastewater flow forecasts.

Storm Sewer and Storm Drainage

Greenways are proposed in portions of Area C to carry stormwater runoff. The greenways will be open channels and grass lined, and will have both water quality and infiltration features. Also, detention basins are proposed in several locations to retain stormwater. The detention basins will be designed to reduce peak runoff rates and provide groundwater recharge. Underground storm sewer facilities will be constructed as required on certain streets and other locations.

A specific layout of proposed storm drainage facilities to serve the added areas has not been submitted by the village.

Water Supply and Distribution

A map layout of proposed water supply and distribution facilities has not been submitted by the village.

The village has proposed a water system to service the entire planning area. Well number 4 has recently been installed at the corner of Creamery and Elvehjem Roads to serve a 400-acre area including the Urso property. Public water mains recently have been installed on a portion of the Country Woods Subdivision, which abuts the Urso property. A new storage tank may be sited in this area after the area is completely developed.

The Smith property would be served from the water mains in the Sunny View and Woodland Estates Subdivisions as indicated on the approved preliminary plat of Ridge View.

The Peterson, Hockey Association, and Marsh Playfield properties would be served by well number 3 located on Siggeikow Road and Autumn Lane within 400 to 1,600 feet of the proposed development.

Emergency Services

Police service is now provided to the areas within the village by the McFarland Police Department, an eight-person force. Police service levels will be increased with more development in the Country Woods, Osborn Estates and other new subdivisions.

Fire protection and emergency medical service is provided by the McFarland Fire District and the McFarland Area EMS District. This combined volunteer force of 30 persons provides fire and ambulance service to these areas from the fire station on Milwaukee Street, within one mile of all three proposed development areas. An average response time to these areas will be seven to eight minutes, depending on the status of first due apparatus, time of day, and weather conditions.

Solid Waste Collection

Solid waste collection service is now being provided to all the properties located in the proposed CUSA amendment, which is within the village. As more development occurs, this same service will be extended to other properties within the village and will include the following: (1) residential waste collection--once a week; (2) large-item collection--once a week; (3) recyclable materials collection--once a week; (4) brush collection--three times a year; and (5) yard waste and leaf collection--spring and fall.

Although many commercial property owners have contracted with private firms for solid waste collection services, the above-mentioned collection services are also available to commercial properties provided certain requirements, such as number and size of containers and amount of refuse, are adhered to.

Schools

Students from the proposed CUSA amendment areas are within the McFarland School District and are served by Elvehjem Elementary, Indian Mound Middle and McFarland High Schools. Since new school sites are being studied within this area by the McFarland School District, future students from the Smith and Peterson areas may be served by a new elementary school. All three areas are within one mile of existing schools.

Parks and Recreation

A 19-acre existing playfield and two neighborhood parks are in the proposed amendment to the urban service area. The playfield area is intended for all age groups and will normally include a park shelter and other recreational facilities, such as a soccer field, softball diamond and an ice-skating rink. The neighborhood parks are intended primarily for younger age groups and will usually include playground equipment and apparatus for children.

Transportation

Roadway System Impacts. The proposed roadway system to serve the requested additions to the urban service area, which is shown on Map #7 of the Village of McFarland's Village East Long Range Public Facility Study, is consistent with the Long Range Regional Transportation Plan.

The proposed additions will have minimal impact to the existing collector and arterial roadways which currently have very low traffic volumes. Existing traffic volumes in the areas of the proposed additions show 1,310 vehicles/day on Siggeikow Road, 1,670 vehicles/day on CTH "MN", and 2,650 vehicles/day on Creamery/Elvehjem Roads. The Marsh Park area development is expected to generate an additional 280 vehicle trips/day, while the Smith and Urso development parcels are expected to generate an additional 990 trips/day and 1,800 trips/day, respectively.

CTH "MN", Holscher Road, and Creamery/Elvehjem Roads will receive the greatest impacts as other lands in the area develop. Holscher and Elvehjem roadways will eventually need to be upgraded to collector standards, especially if Holscher Road is extended to the south to connect to Elvehjem Road. Elvehjem Road will likely need to be upgraded sooner than Holscher Road since a greater amount of development is proposed in that area.

Siggeikow Road and Marsh Road are presently in poor condition. Siggeikow Road is scheduled for widening and upgrading in 1993. Creamery Road is scheduled for improvement in 1993. Creamery Road is scheduled for improvement in 1993. A time period for improvement of Marsh Road has not been determined.

Pedestrian/Bicycle Impacts. Less than half of the streets in McFarland have sidewalks to accommodate pedestrian movement. However, sidewalks are provided to the high school, elementary and middle schools.

Sidewalks are usually recommended on both sides of proposed collector and arterial streets where traffic volumes are heaviest. The village's Outdoor Recreation Plan (Nov. 1990) does propose a system of pedestrian walkways with E/D access throughout the village connecting various neighborhoods to its park and open space system. This same plan also identifies collector streets which are planned for bike lanes. When Holscher Road and Elvehjem Roads are upgraded to collector standards, pedestrian and bicycle needs will need to be accommodated.

Transit. Transit service is presently not provided to the Village of McFarland and none is expected in the near future. A park-and-ride lot with transit service is located approximately one mile north of the village.

10. Surface and Ground Water Impact Evaluation

The primary impacts of urban development in the proposed areas would be to increase stormwater runoff rates and volumes, reduce groundwater recharge and introduce more contaminants to downgradient receiving waters as a result of roadway, parking area and residential building construction.

The village proposes to mitigate these impacts by incorporating a storm drainage and environmental corridor system for the proposed service areas which includes vegetated drainageways and detention basins. In addition, the village's erosion/runoff ordinance provides control of construction site erosion, and prevents increases in runoff rates from larger residential sites or developments.

Emphasis in initial stormwater management planning has been placed on the Urso property because of its larger size and potential to cause water quality impacts compared to the Marsh and Smith properties. A proposed environmental corridor on the eastern boundary of this site should direct water runoff to the south and around the nearby wetland to an open channel drainageway. Substantial park and open space land adjacent to this drainageway is being planned (McFarland Village East Study), which could serve as a large regional stormwater management structure (e.g., wet detention basin) that could provide water quality benefits to runoff from the Urso property as well as other planned future developments in this area. The village should ensure this open space land is preserved and begin to pursue detailed stormwater quantity and quality planning.

Without these mitigating measures (with total storm-sewerage), erosion and runoff from the area would be substantially increased (peak rates of runoff could increase three to five times current levels), having significant downstream effects on erosion and water quality that would impact Lower Mud Lake.

Water runoff from the Marsh property and northern half of the Smith property will flow to an open channel drainageway that discharges to Lake Waubesa. Runoff from the southwestern portion of the Smith property will flow to an existing village storm sewer. Because these developments are relatively small and will consist of low density residential land use only, water quantity and quality impacts will

probably not be substantial. Erosion and runoff control ordinance requirements should be sufficient to address water resource concerns. However, like the Urso property, off-site wet detention basins or other water quality control structures should be planned to address cumulative stormwater flows that are likely to be realized from long-term future development of the area. Since all of the Marsh property and part of the Smith property are located in the Yahara-Monona Priority Watershed, state funding is available to the Village of McFarland and the City of Madison to conduct feasibility or siting studies for stormwater quality management practices in this area. The village should pursue this funding and planning assistance in association with the City of Madison, which has jurisdiction over some adjacent properties.

Based on surficial geology, the entire planning area is probably not a significant regional groundwater recharge zone. Urban development in the proposed areas, however, will reduce infiltration and groundwater recharge by increasing impervious areas. Average urban development may result in about one-third of the land surface converted to impervious surfaces (e.g., streets, rooftops, driveways). This impact can be substantially reduced by increasing infiltration on the remaining pervious area by detaining and infiltrating stormwater.

Urban development in the southeastern part of the McFarland area is served by the recently installed Well #4. As development occurs and pumping from Well #4 increases, the drawdown area or zone of influence of the well will expand to the southeast, affecting a maximum area of 3,000 feet beyond the presently mapped well protection zone. Some drawdown in shallow groundwater levels may result from this pumping.

A small effect on drawdown in the shallow groundwater table in the area could result from this pumping and decreased recharge, but this should have no significant effects on nearby surface water bodies. The extent of mitigation of possible impacts by drainage system measures (detention, infiltration, etc.) cannot yet be determined. However, it is prudent to minimize possible hydrologic effects to the extent practicable by incorporating site design and drainage provisions that maximize groundwater recharge.

In summary, the village's conceptual proposals for mitigating impacts on water resources appear to meet the minimum requirements for consistency with the Dane County Water Quality Plan. It is recommended, though, that the village continue to pursue and refine stormwater management plans to address water quality concerns associated with these developments and longer term future development proposals.

Environmental Corridors

The planning area contains few sensitive or significant environmental resources needing specific protection. There are some steep slopes in the northern part of the Urso property and an adjacent off-site wetland. An environmental corridor is proposed on the east side of the Urso property to buffer the wetland and to provide for a stormwater drainage and greenway system. A 20-acre playfield on the Marsh property also is to be designated as environmental corridor for recreational purposes. The village's conceptual proposal for environmental corridors appears to

meet the minimum requirements for environmental corridor delineation. The village should officially adopt the finally agreed upon environmental corridor delineation for the planning area and incorporate this delineation into their presently adopted environmental corridor system and plans.

11. Public Hearing

A public hearing before the Dane County Regional Planning Commission is scheduled for August 22, 1991.

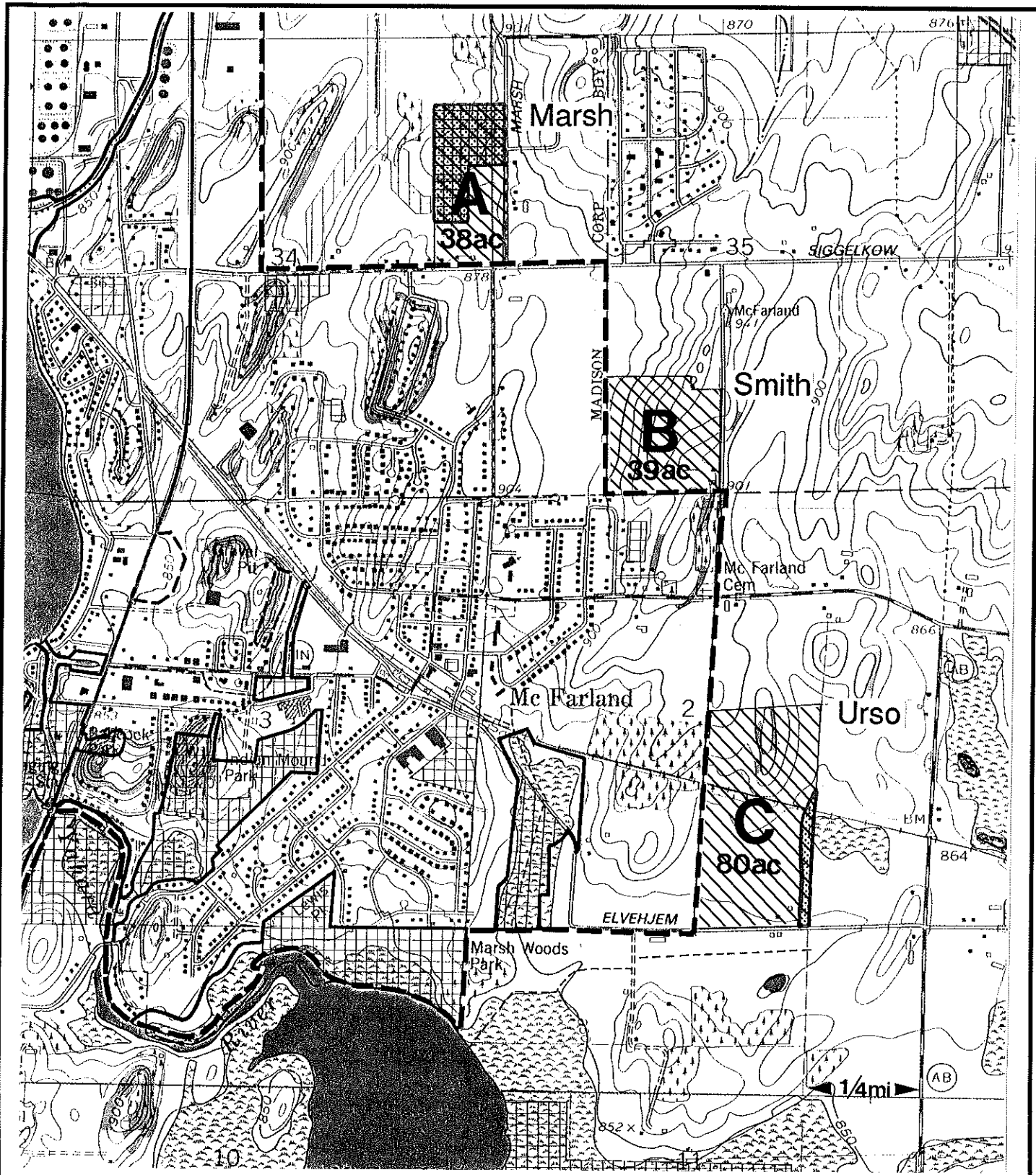
A public hearing was also held by the village.

12. Staff Recommendation

The Central Urban Service Area amendment proposed by the Village of McFarland meets most of the requirements and criteria for planning, consistency with regional objectives and policies, and provision of a full range of urban services. Specific map layouts of proposed sanitary sewerage, water supply and distribution, and storm drainage facilities are required and need to be submitted and evaluated; however, it appears that the services are intended to be provided at suitable levels.

The staff of the Dane County Regional Planning Commission recommends approval of the request with adoption of the environmental corridors as depicted on the attached map, but that action should be postponed until map layouts of water, sewer and storm drainage systems (as required by the adopted CUSA requirements) are received from the village and reviewed.

lel



McFarland Portion of the Central Urban Service Area

-  Proposed Environmental Corridors
-  Areas proposed for addition to CUSA
-  CUSA Boundary

N ↑
AUG 1991

ADDENDUM TO THE STAFF ANALYSIS
ON THE PROPOSED AMENDMENT TO THE CENTRAL URBAN SERVICE AREA
(McFARLAND PORTION)

In response to the issues and concerns raised by the staff analysis of August 20, 1991 on the proposed action, the following information has been received:

1. Layout Map of Storm Drainage Facilities

A map showing the proposed layout of storm drainage and detention facilities has been submitted by the Village. The proposal for mitigating impacts on water resources has been evaluated and appears to meet the requirements for consistency with the Dane County Water Quality Plan.

2. Layout Map of Water Supply and Distribution Facilities

A map showing the proposed layout of water distribution and supply facilities has been submitted by the Village.

The level of water service has been evaluated and appears to meet the standards established by the adopted CUSA requirements.

3. Layout Map of Sanitary Sewerage Facilities

A map showing the proposed layout of sanitary sewerage facilities has been submitted by the Village. The level of sanitary sewerage service has been evaluated and appears satisfactory for the Urso (area C) and Smith (area B) properties.

The Marsh property (area A) is to be served by a proposed main connection to the MMSD McFarland Relief Interceptor. The proposed sewer main would be located in the City of Madison and would serve areas in the City of Madison, the Village of McFarland, and the Town of Blooming Grove. The ownership of the proposed sewer main is to be determined by negotiations between the Village, the City of Madison, and MMSD.

Conclusion and Staff Recommendation

The Village of McFarland has submitted adequate planning and supporting information to satisfy the adopted criteria and planning requirements for additions to the Central Urban Service Area; therefore, the staff recommends approval of the applicant's request.