


City of
RIVER FALLS

WISCONSIN

**Sewer
Service
Area
Water
Quality
Management
Plan**

2000-2020

- City of River Falls
- Towns of Troy, Kinnickinnic, River Falls, and Clifton
- Counties of St. Croix & Pierce
- State of Wisconsin

ACKNOWLEDGMENTS



MAYOR: Katie Chaffee (seated) **COUNCIL MEMBERS:** Harris Kittelson, Gene Mulhollam, Lorin Frey, Sharon Graham, Bob Ebert, Tom O'Connell, Wayne Beebe

CITY ADMINISTRATOR: Bernard Van Osdale

PROJECT PLANNER: Mariano "Buddy" Lucero, Planning Director

SEWER SERVICE AREA COMMITTEE

Katie Chaffee, Mayor; Tom O'Connell, City Council; Mariano "Buddy" Lucero, Planning Director; Jim Dieck, River Falls Utilities Commission; Dean Albert, Chairman, Town of Troy; Charles Andrea, Chairman, Town of Kinnickinnic; Leroy Peterson, Chairman, Town of Clifton; Louis Campbell, Chairman, Town of River Falls; David Fodroczi, Director, St. Croix County Planning Department; Mark Schroeder, Pierce County Administrator; Dan Simonson, DNR Water Quality Planning Director

CITY PLANNING COMMISSION

Katie Chaffee, Mayor; Bob Ebert, Councilor; Warren J. Tracy; Ellen Smith; Mike Keenan; Marilynne Felderman-Baldwin; Tom Parent; Reid Wronski, City Engineer; Hal Watson

SEWER SERVICE AREA TECHNICAL ADVISORY COMMITTEE

Tony Steiner, City Planner; Michael Kornmann, City Planner; Todd Hepworth, Engineer; Victor Marma, General Manager, River Falls Municipal Utilities; Ellen Denzer, Planner, St. Croix County Planning Department; Dan Koich, Water Regulation and Zoning DNR; Steve Thon, Wastewater Engineer DNR; Lisa Helmuth, Water Quality Planning DNR; Robin Schrank, Typing

GIS MAPPING BY CITY STAFF AND BRW

EDITING: Nancy C. Ford Editing and Indexing





SEWER SERVICE AREA COMMITTEE

RESOLUTION NO. 2000 -1

A RESOLUTION
ADOPTING THE RIVER FALLS
SEWER SERVICE AREA
WATER QUALITY MANAGEMENT PLAN
2000-2020

WHEREAS, Federal Clean Water Act legislation and State Administrative Code NR 121 require sewer service area planning to protect water quality; and

WHEREAS, the Sewer Service Area Committee (SSAC) consisting of members of the City of River Falls, Counties of St.Croix and Pierce, Towns of Troy, Kinnickinnic, River Falls, and Clifton, and the Wisconsin Department of Natural Resources, have undertaken the necessary planning process to prepare the *River Falls Sewer Service Area Water Quality Management Plan, 2000 -2020*; and

WHEREAS, through City, Towns, and SSAC meetings and public review, information was provided, analyzed, and considered for inclusion into the Plan; and

WHEREAS, the Plan identifies environmentally sensitive areas and proposes environmentally sound sewer service extension themes, and guiding and implementation policies that will protect water quality within the sewer service area boundary; and

WHEREAS, the Plan provides land use classifications and a future land use diagram that will guide and shape the future land use for the area within the sewer service area boundary; and

WHEREAS, the Plan also identifies policies and procedures to make amendments.

NOW, THEREFORE, BE IT RESOLVED that the SSAC, having considered the input provided by the Sewer Service Area Planning Technical Advisory Committee and comments heard at public meetings, hereby adopts the *River Falls Sewer Service Area Water Quality Management Plan, 2000-2020*.

PASSED, APPROVED, AND ADOPTED THIS 26TH DAY OF OCTOBER, 2000.

A handwritten signature in cursive script, reading "Louis Campbell".

Louis Campbell, Chairman
Sewer Service Area Committee

A handwritten signature in cursive script, reading "Julie Bergstrom".

Attest: Julie Bergstrom, City Clerk



RESOLUTION 2000-CC 3685

**A RESOLUTION ADOPTING THE RIVER FALLS SEWER SERVICE AREA
WATER QUALITY MANAGEMENT PLAN, 2000-2020**

WHEREAS, Federal Clean Water Act legislation and State Administrative Code NR 121 require sewer service area planning to protect water quality; and

WHEREAS, the Sewer Service Area Committee (SSAC) consisting of members of the City of River Falls, Counties of St. Croix and Pierce, Towns of Troy, Kinnickinnic, River Falls, and Clifton, and the Wisconsin Department of Natural Resources, have undertaken the necessary planning process to prepare the *River Falls Sewer Service Area Water Quality Management Plan, 2000 -2020*; and

WHEREAS, through City, Towns, and SSAC meetings and public review, information was provided, analyzed, and considered for inclusion into the Plan; and

WHEREAS, the Plan identifies environmentally sensitive areas and proposes environmentally sound sewer service extension themes, and guiding and implementation policies that will protect water quality within the sewer service area boundary; and

WHEREAS, the Plan provides land use classifications and a future land use diagram that will guide and shape the future land use for the area within the sewer service area boundary; and

WHEREAS, the Plan also identifies policies and procedures to make amendments.

NOW, THEREFORE, BE IT RESOLVED that the Mayor and Council of the City of River Falls, having considered the input provided by the Towns, SSAC, Planning Commission, city staff, and comments heard at public meetings, hereby adopt the *River Falls Sewer Service Area Water Quality Management Plan, 2000-2020*.

PASSED, APPROVED, AND ADOPTED THIS 24 DAY OF OCTOBER, 2000

Katie Chaffee, Mayor

Attest: Julie Bergstrom, City Clerk



RESOLUTION 2000-PC 001283

**A RESOLUTION ADOPTING THE RIVER FALLS SEWER SERVICE AREA
WATER QUALITY MANAGEMENT PLAN, 2000-2020**

WHEREAS, Federal Clean Water Act legislation and State Administrative Code NR 121 require sewer service area planning to protect water quality; and

WHEREAS, the Sewer Service Area Committee (SSAC) consisting of members of the City of River Falls, Counties of St. Croix and Pierce, Towns of Troy, Kinnickinnic, River Falls, and Clifton, and the Wisconsin Department of Natural Resources, have undertaken the necessary planning process to prepare the *River Falls Sewer Service Area Water Quality Management Plan, 2000 -2020*; and

WHEREAS, through City, Towns, and SSAC meetings and public review, information was provided, analyzed, and considered for inclusion into the Plan; and

WHEREAS, the Plan identifies environmentally sensitive areas and proposes environmentally sound sewer service extension themes, and guiding and implementation policies that will protect water quality within the sewer service area boundary; and

WHEREAS, the Plan provides land use classifications and a future land use diagram that will guide and shape the future land use for the area within the sewer service area boundary; and

WHEREAS, the Plan also identifies policies and procedures to make amendments.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission, having considered the input provided by the Towns, SSAC, city staff, and comments heard at public meetings, hereby forwards the *River Falls Sewer Service Area Water Quality Management Plan, 2000-2020* to the City Council for public hearing with the recommendation of adoption.

PASSED, APPROVED, AND ADOPTED THIS 3RD DAY OF OCTOBER, 2000

Katie Chaffee, Mayor

Attest: Julie Bergstrom, City Clerk



RESOLUTION NO. 475

ADOPTING THE RIVER FALLS SEWER SERVICE AREA
WATER QUALITY MANAGEMENT PLAN, 2000-2020

WHEREAS, Federal Clean Water Act legislation and State Administrative Code N.R. 121 require sewer service area planning to protect water quality; and

WHEREAS, the Sewer Service Area Committee (SSAC) consisting of members of the City of River Falls, Counties of St. Croix and Pierce, Towns of Troy, Kinnickinnic, River Falls, and Clifton, and the Wisconsin Department of Natural Resources, have undertaken the necessary planning process to prepare the *River Falls Sewer Service Area Water Quality Management Plan 2000 -2020*; and

WHEREAS, through City, Towns and SSAC meetings and public review, information was provided, analyzed, and considered for inclusion into the Plan; and

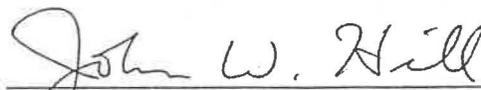
WHEREAS, the Plan identifies environmentally sensitive areas and proposes environmentally sound sewer service extension themes, guiding and implementation policies that will protect water quality within the sewer service area boundary; and

WHEREAS, the Plan provides land use classifications and a future land use diagram that will guide and shape the future land use for the area within the sewer service area boundary; and

WHEREAS, the Plan also identifies policies and procedures to make amendments.

NOW, THEREFORE, BE IT RESOLVED that the City of River Falls Utility Commission, having considered the input provided by the Towns, SSAC, city staff and comments heard at public meetings, hereby forwards the *River Falls Sewer Service Area Water Quality Management Plan, 2000-2020* to the City Council with the recommendation of adoption.

Dated this 23rd day of October, 2000.



John Hill, President

ATTEST:



Julie Bergstrom, City Clerk

TOWN OF RIVER FALLS

Resolution 2000-J

City of River Falls Sewer Service Area Water Quality Management Plan, 2000-2020

The Town Board, Planning Commission and the Land Use Ad Hoc Committee for the Town of River Falls in Pierce County, Wisconsin do hereby Ordain and Resolve as follows:

WHEREAS, the Federal Clean Water Act legislation and the State Administrative Code N. R. 121 require sewer service area planning to protect water quality, and

WHEREAS, such a plan should serve as the community Statement of Direction for physical development, conservation, capital improvements, annexation, and planning for extension of services.

NOW THEREFORE BE IT RESOLVED, that the following resolutions are made in reference to the boundary map on Figure 4-8 of the City of River Falls Sewer Service Area Water Quality Management Plan as indicated in the September 2000 working draft, and

BE IT FURTHER RESOLVED, that the boundary map not be changed unless areas outside the map are brought into the sewer service area, and

BE IT FURTHER RESOLVED, that it be recommended that only those areas within the boundaries of this map be allowed to be annexed to the City of River Falls, and

BE IT FURTHER RESOLVED, that the Town of River Falls continue to retain its jurisdiction, as allowed in the Wisconsin State Statutes, over land use planning, zoning and subdivision platting, public improvements, and utilities inside and outside the area of the Sewer Service boundary, and

BE IT FURTHER RESOLVED, that the Town refuse to accept that part of the Sewer Service Area Plan which would allow the City of River Falls to assess and collect impact fees, on Town residents and property located in the Town, regardless of whether the property is located inside or outside the area of the Sewer Service boundary until such time as the land is annexed, and

BE IT FURTHER RESOLVED, that the area in the ETZ be updated with a Town and City plan and zoning ordinance to reflect the Sewer Service Area Plan, and

BE IT FURTHER RESOLVED, that the Town retain the authority to protect Town residents and businesses so they will not be burdened with costs associated with new development, and

BE IT FURTHER RESOLVED, that because the Plan has gone from being a sewer service area plan to a more comprehensive land use plan, it be consistent with the Town of River Falls Master Plan, which was adopted on April 3, 2000, and

BE IT FURTHER RESOLVED, that it be requested that this Resolution become a part of the City of River Falls Sewer Service Area Water Quality Management Plan, and

BE IT FURTHER RESOLVED, that this Resolution be sent to the Department of Natural Resource to register our concerns,

AND BE IT FURTHER RESOLVED, that the Town of River Falls Town Board, Plan Commission and Land Use Ad Hoc Committee hereby adopt the preceding resolution.

Adopted this 16th day of October, 2000.

TOWN OF RIVER FALLS

PLAN COMMISSION

Louis P. Campbell
Louis P. Campbell, Chairman

LAND USE AD HOC COMMITTEE

John A. Kucinski
John Kucinski, Chairman

TOWN BOARD

Louis P. Campbell
Louis P. Campbell, Chairman
LeRoy Kusilek
LeRoy Kusilek, Supervisor
Maureen Ash
Maureen Ash, Supervisor

I, Janet A. Huppert, clerk for the Town of River Falls, do hereby certify that the preceding Resolution was passed by the Town Board at a legal meeting held on October 16, 2000.

Janet A. Huppert

Posted: _____

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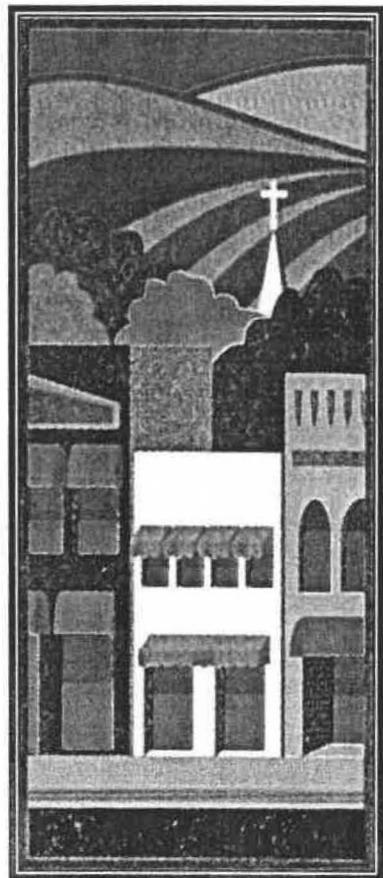
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LIST OF ACRONYMS

ACOE	Army Corps of Engineers
BOD/day	pounds of biochemical oxygen demand per day
Candidate 1	Federal Candidate Species, Category 1
Candidate 2	Federal Candidate Species, Category 2
CIP	Capital Improvement Program
DPA	Designated Planning Agency
ELF-EMF	Electric and Magnetic Fields
EMF	Electromagnetic Field
EMF-RAPID Program	Electric and Magnetic Field Research and Public Information Dissemination Program
ENN	Early Neighborhood Notification
EPA	Environmental Protection Agency
ETZ	Extraterritorial Zone
FAR	Floor Area Ratio
FTE	Full-time Equivalent
GIS	Geographic Information System
gpd	gallons per day
gpm	gallons per minutes
HC	head count
kV	Kilovolt
LOS	Level of Service
mgd	million gallons per day
NIEHS	National Institute of Environmental Health Science
RPA	Resource Protection Area
SRA	Sensitive Resource Area
SSAP or the plan	<i>River Falls Sewer Service Area Water Quality Management Plan</i>
STH	State Trunk Highway
USGS	U.S. Geological Survey
UWRF or the University	University of Wisconsin-River Falls
WDNR	Wisconsin Department of Natural Resources
WPPI	Wisconsin Public Power Incorporated

1
INTRODUCTION



November 2000

1. INTRODUCTION

The City of River Falls and its surrounding towns, Troy, Kinnickinnic, River Falls, and Clifton, along with the counties of St. Croix and Pierce face many pressing planning challenges ranging from protecting a rich heritage and a magnificent physical setting, to meeting the demands for protecting surface and ground water. This document, *The River Falls Sewer Service Area Water Quality Management Plan* (SSAP), shall serve as the community Statement of Direction for physical development, conservation, and planning for extension of services in an environmentally sound manner.

1.1 SCOPE AND PURPOSE

The SSAP is a comprehensive, long-term plan for the physical development, conservation, and extension of services, it lies at the heart of community decision making. It provides guidance for development proposals, capital improvements, annexation, and the extension of services. This plan will:

- Outline a vision, through the plan themes, that will reflect the aspirations of the community;
- Establish a basis for judging whether development proposals and public projects are consistent with the plan themes;
- Provide information that will enhance the character of the community, preserve critical environmental resources, and minimize hazards;
- Provide the basis for establishing and setting priorities and for implementing programs and regulations;
- Provide the basis for nurturing a vital community and reaching out to all segments of the population;
- Provide a plan that meets the requirements of the Federal Clean Water Act and Wisconsin Department of Natural Resources (WDNR) Chapter NR 121, Wisconsin Administrative Code;
- Outline areas where redevelopment proposals can offset negative new development; and
- Review environmental issues that can or do have a negative effect.

To ensure that a variety of community actions are consistent with this SSAP, regular ongoing use of the plan is essential. Because this plan is both general and long-term, there will be circumstances and instances when detailed studies are necessary to implement it. This plan represents the goals and desires of the community as a whole and should be recognized as the community's foremost public statement about the future.

The purpose is to plan for sewer line extensions in an environmentally sound manner that protects surface and ground water from point and non-point sources of pollution and that meets the requirement of the Federal Clean Water Act and State Administrative Code NR 121. Identification and mapping of environmentally sensitive areas, preparation and enforcement of erosion control plans, planning for sewer growth and development within a sewer service area boundary, and identifying administrative responsibilities for implementing policies are the major component of this plan.

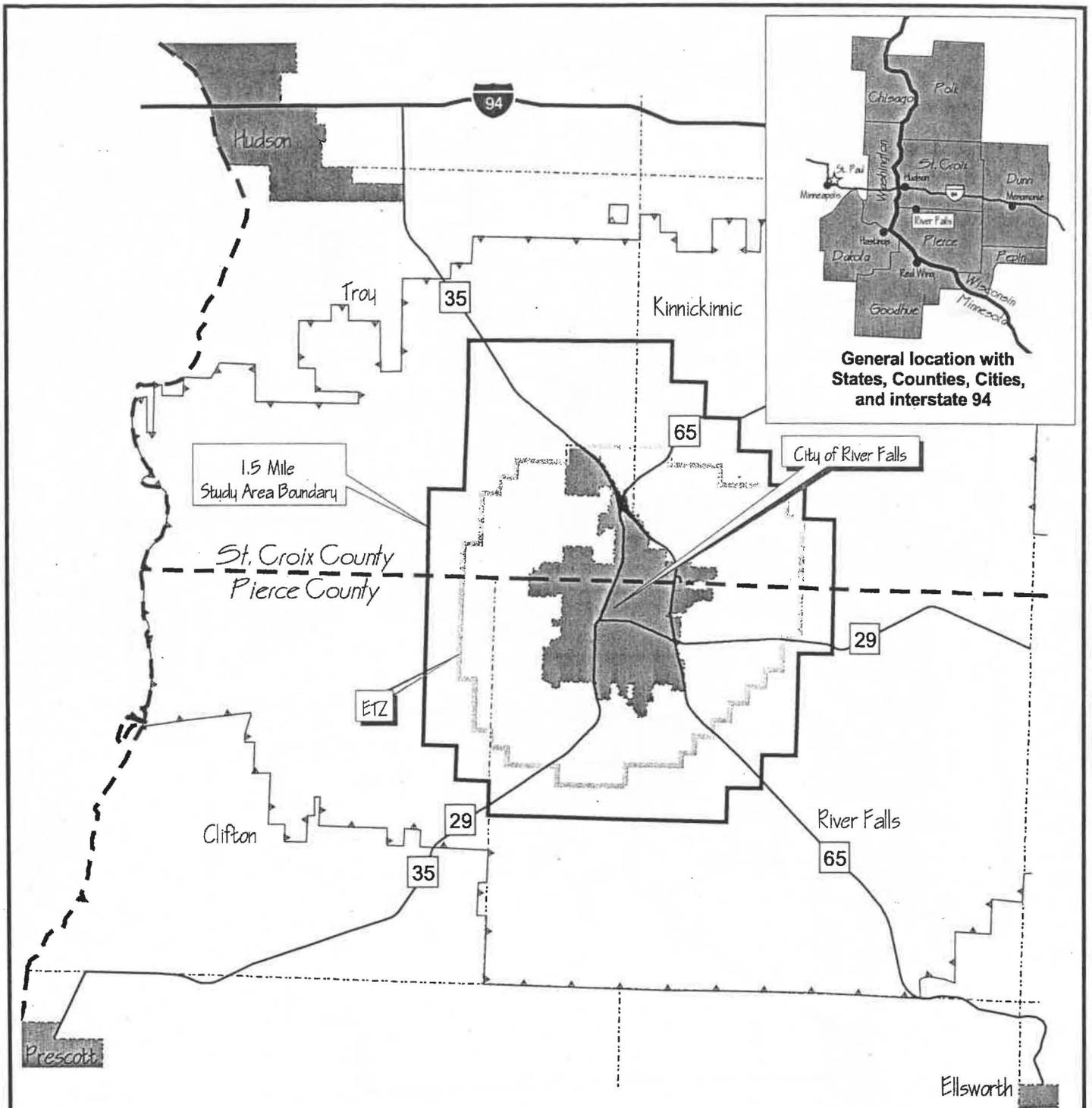
1.2 PLANNING AREA BOUNDARIES

Figure 1–1 depicts the regional location of the planning area, and Figure 1–2 depicts the study planning area and existing boundaries that include:

- All land within the current City of River Falls city limits
- Extraterritorial Zone (ETZ) boundary
- St. Croix County boundary
- Pierce County boundary
- Town boundaries
- School District boundary
- The study area, which is all of the land 1.5 mile from existing city limits, including:
 - Town of Troy, to the north
 - Town of Kinnickinnic, to the east
 - Town of River Falls, to the south
 - Town of Clifton, to the west

1.3 PLAN ORGANIZATION

- **Themes.** The policies within this plan reflect ten overall themes, which will closely track with public comments and adopted plans. The themes are representative of the community's concerns and lay the foundation for the guiding and implementing policies.
- **Guiding Policies.** Guiding policies are at the beginning of some chapters and state the community's goals and philosophy. The guiding policies describe the ways or methods that the themes listed in chapters can be achieved.
- **Implementation Policies.** Implementation policies are at the end of certain chapters and represent commitment to specific actions. They may refer to existing programs or call for the establishment of new ones.
- **Standards.** Standards are set out in certain chapters and represent policies that can be mapped or measured. Together themes, guiding and implementation policies, and standards articulate the vision for the community.
- **Policy and Number System.** Policies in this plan are organized using a numbering system tied to sections, with a letter designation to distinguish guiding policies from implementation policies. For example, the first guiding policy in Section 4.4 is number 4–4–G–1, and the first implementation policy is 4–4–I–1. Each policy in this plan has a discreet number.
- **Explanatory Material or Commentary.** Explanatory material or commentary, set in *italics*, accompanies some policies. This explanatory material provides background information or guides plan implementation.



Regional Location

- | | | | |
|---|-----------------------------|---|--|
|  | Major Roadways |  | City or Village |
|  | River Falls School District |  | Study Area |
|  | County Boundary |  | ETZ - Extraterritorial Zoning Boundary |
|  | Town Boundaries | | |

Chapter 1 Introduction

City of River Falls Sewer Service Plan

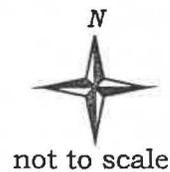
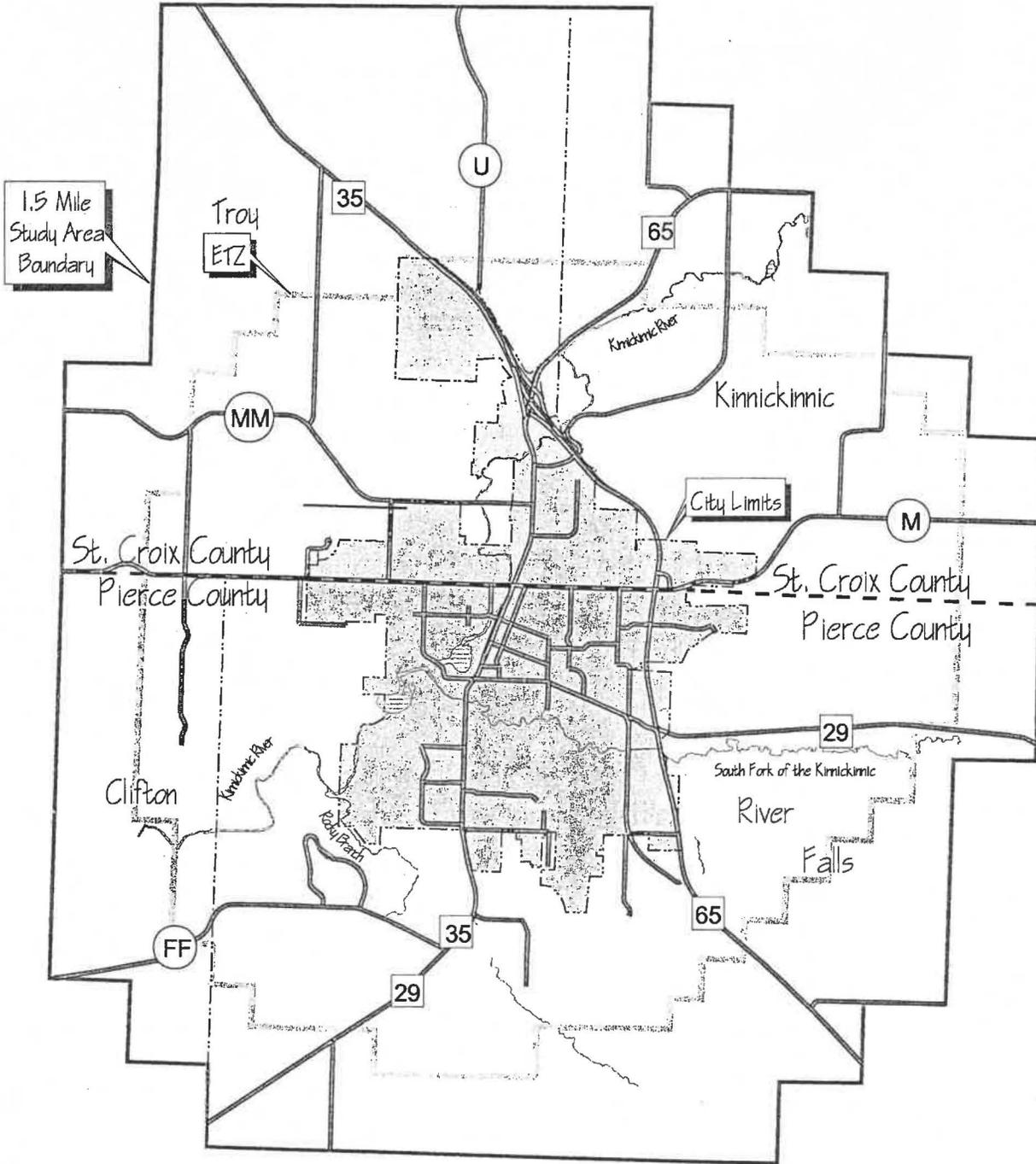


Figure 1-1



Boundaries Map

- | | | | |
|---|--|---|---------------------|
|  | Extraterritorial Zoning (ETZ) Boundary |  | Major Roadways |
|  | County Boundary |  | Lakes & Rivers |
|  | Town Boundary |  | City of River Falls |
|  | Study Area Boundary | | |

Chapter 1 Introduction

City of River Falls Sewer Service Plan



not to scale



Figure 1-2

1.4 PLANNING PROCESS

The planning process included development of the SSAP, implementation programs, and sewer service area boundary. This plan also outlines the need for more detailed planning for water line extensions, streets, paths, land use designations, and other special plans. An annual sewer service area report will provide an overview of the status of the SSAP and its implementation programs.

Sewer Service Area Plan

In order to protect sensitive environmental resources, this plan shall require sewer line extensions to occur in an environmentally sound manner that protects surface and ground water from point and non-point sources of pollution and meets the requirement of the Federal Clean Water and State Administrative Code NR 121. This plan shall map the location of environmentally sensitive areas, outline the preparation and enforcement of erosion control plans, plan for sewer growth and development within the sewer service area boundary, and identify the administrative responsibilities for implementing and monitoring policies.

Amendments to the Sewer Service Area Plan

This plan is the heart of the planning process. It is intended to be a living plan and, as such, will be subject to more site-specific and comprehensive amendments over time. Amendments also may be needed from time to time to conform to state and federal laws passed since adoption and to eliminate and modify policies that may have become obsolete or unrealistic because of changed conditions (such as completion of a task or project, development on a site, or adoption of an ordinance or plan). This plan may also incorporate by reference other detailed studies and plans that may be prepared. While the SSAP should be flexible enough to respond to changing conditions and can be amended over time to keep it current, it should not be amended so frequently as to diminish its authority. Amendments to this plan should be limited to once a year, although each amendment may include more than one change.

Semiannual Sewer Service Area Plan Report

A semiannual progress report shall be prepared that focuses on the implementation of this plan. This report shall be prepared by the City of River Falls staff and submitted to the city, towns, counties, and WDNR. The Semiannual Report shall include a summary of all amendments adopted during proceeding years, an outline of upcoming projects and planning issues to be addressed in the coming years, along with work programs and budgets. Public review and comment on the Annual Report shall be heard by the planning commissions, city council, and town boards at regularly scheduled public hearings.

Five-Year Review

The city will undertake a comprehensive review of this plan every five years after adoption. The Five-Year Review will include:

- Comprehensive evaluation of the plan policies;
- Analysis the effectiveness of the implementation programs and the strategies initiated to carry out the plan;
- Review of the five-year growth trends and reassessment of future land needs in light of the carrying capacity of the area and availability of land inventory; and
- Systematic assessment of the resource-based thresholds, environmental standards, resource management plans, and utility plans.

The focus of the Five-Year Review will be to determine how well this plan has performed, whether policies related to development and environmental conservation within the sewer service area have been effective. A report summarizing staff's findings and recommendations will be circulated for public comment and then presented to the planning commissions of the city and towns. The planning commissions will study the Five-Year Review and make recommendations to the city council, towns, counties, and WDNR. Public review and comment on the Five-Year Review will be heard by the planning commissions, city council, and towns at regularly scheduled public hearings.

1.5 BACKGROUND STUDIES

A comprehensive analysis of existing conditions and major planning options for the counties, city, towns, and the ETZ was performed prior to the preparation of this plan. Major documents that have been reviewed are included in Appendix A.

1.6 PUBLIC PARTICIPATION

Throughout the preparation of this plan, there has been an ongoing commitment to active public outreach and participation. The plan policies have been shaped by comments made in public meetings and adopted plans. Public participation included the following:

- **River Falls Sewer Service Area Committee.** The River Falls Sewer Service Area Committee (Appendix B) was the policy-making body responsible for overseeing the development of the SSAP. This committee is made up of representatives from the City of River Falls and each of the towns surrounding the city, WDNR, St. Croix County, and Pierce County.
- **Sewer Service Area Technical Advisory Committee.** The Sewer Service Area Technical Advisory Committee was responsible for reviewing and drafting this plan using existing and updated information. This committee consisted of representatives from the professional staff of the city; adjacent Towns of Troy, Kinnickinnic, River Falls, and Clifton; the St. Croix County Planning Department; Pierce County; and WDNR. Technical Advisory Committee representatives consisted of people with backgrounds in sewer service area planning and environmental issues (Appendix C).

Sewer Service Plan

- **Community Meetings.** At the outset of the SSAP process, public meetings were held to educate the public about the need for a plan. Public meetings were held in the City of River Falls and in each of the adjacent Towns of Troy, Kinnickinnic, River Falls, and Clifton.
- **Meetings.** All meetings and workshops with the River Falls Sewer Service Area Committee were open to the public.
- **Updates.** The city, counties, towns, and WDNR were updated periodically by memorandum or by presentation from their representatives on the Technical Advisory Committee or the Sewer Service Area Committee on the issues and progress of this plan while it was being developed.
- **Reports.** Quarterly progress reports were provided to the Sewer Service Area Committee, city, counties, towns, and WDNR.
- **Draft Plans.** The draft plans were the subject of public reviews and public hearings. Copies were provided for review and comment to the general public, city, counties, towns, and WDNR.
- **Postings.** For the public participation, the staff worked with the city and towns on posting notice of meetings; presented information and updates; documented the meetings; provided quarterly reports; mailed out information; printed ads, color maps, and draft plans.

1.7 SEWER SERVICE AREA PLAN THEMES

The policies of this plan reflect ten overall themes that track with the results of the public participation and adopted plans. These themes are followed by discussion in *italics*. For the purpose of this section, the themes are equally weighted. However, the themes may be prioritized and amended, either with specific cases or as a matter of general policy.

1.7.1 Quality of Life

Enhance the quality of life of the community and ensure provision of community services for residents.

This plan seeks to promote the interests of the community-at-large over private ones. Tools are provided for the public to be meaningfully involved in ongoing planning and decision making.

1.7.2 Sustainable Growth

Ensure that development is sustainable and that growth, conservation, redevelopment, and natural resource protection are balanced.

There is a clear consensus that growth should not diminish the quality and diversity of natural resources. Sensitive resources that require protection shall be mapped in the plan, and resource-based development standards and project review procedures shall be established.

1.7.3 Character

Maintain and respect River Falls' unique personality, sense of place, and character.

Increased travel and communication have diminished the remoteness that the community once afforded. The over 150 years of regional history of the city and towns today face the prospect of being overwhelmed by run-of-the-mill late twentieth century development. Residents have unequivocally stated that new growth should not erode the qualities that contributed to the communities' unique characters. This plan delineates a sewer service area boundary that calls for strong urban/rural edges. This plan shall also call for detailed land use and urban design standards and guidelines for new and infill development throughout the community.

1.7.4 Urban Form

Promote a compact urban form that encourages sensitive/compatible infill development.

Promotion of a compact urban form shall be the primary criteria in selecting new growth areas. Growth and reintensification areas shall be selected to minimize the distance between different parts of the city and between job centers and residential areas. Incentives shall be provided to promote infill development.

1.7.5 Community-Oriented Development

Orient new development to the community; foster public life, vitality and community spirit.

Plan policy shall call for new development to be directed to establish neighborhoods, to form urban contexts for pedestrians, and to promote active street and outdoor life. Plans shall call for detailed urban design standards that shall prevent neighborhoods from being isolated from each other and that shall maintain a continuum of urban fabric, particularly regarding public access and vehicular/pedestrian circulation. Parks, conservation areas, open space, and neighborhood services shall be located within neighborhoods.

1.7.6 Water Quality

Meet the requirements of the Federal Clean Water Act and WDNR Chapter NR 121, Wisconsin Administrative Code.

Growth is likely to increase reliance on services and require active steps to increase the availability of supply. This plan shall provide a comprehensive strategy to promote conservation, water quality policies, and goals to regulate sewer development within an environmentally sensitive area and within a defined sewer service growth boundary. Existing residents and businesses shall not bear the cost of additional services beyond what is required for infrastructure improvements that benefit the entire community.

1.7.7 Regional Perspective

Maintain a regional growth management perspective and work with other private and governmental entities towards that goal.

The future of the city and the surrounding areas are intertwined. This plan encourages city and other local towns and counties as well as state and federal agencies to work together on policies that are mutually supportive and to maintain consistent standards in the areas surrounding the city. This plan will outline a structure for anticipatory long-range planning and for the phasing of growth to minimize infrastructure costs.

1.7.8 Housing

Participate actively in the creation of housing.

Opportunities are provided for housing all income segments of the population in all areas of the community, while restricting the supply of large-lot housing, which belongs in rural areas outside the city and not inside it. Active efforts to increase the supply of housing are outlined in the City of River Falls Housing Needs Assessment Report (1999).

1.7.9 Review Process

Streamline the planning and development review process.

Greater certainty in the planning process will benefit residents and project proponents and permit long-range capital improvement planning. This plan calls for preparation of thresholds and procedures for detailed environmental and infrastructure impact analyses. Thresholds will be prepared to ensure that small-scale developments and businesses are not impacted. This will ensure that the approval process for routine or small-scale developments will be streamlined by going through administrative tracks rather than public hearings. Neighborhood participation is essential at all planning levels, and the planning process outlined

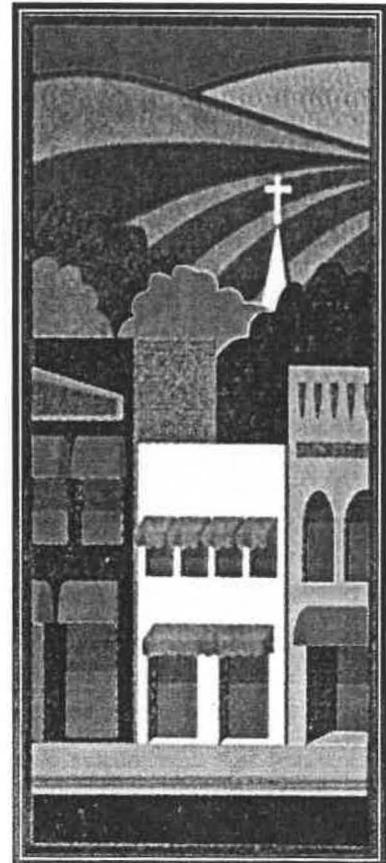
in this plan calls for the city's Geographic Information System (GIS) data base to be used in conducting project level analysis and design.

1.7.10 Implementation

Ensure consistency between this plan and implementing ordinances (including zoning and possible impact fees) and a Capital Improvement Program (CIP). To help implement this plan detailed studies, plans, and ordinances will need to be prepared, reviewed and approved. With this plan, the community is committing itself to consistency between existing plans, implementation programs, and regulations, including zoning, subdivision regulations, and the CIP.

2

CHARACTER AND DEVELOPMENT



November 2000

2. CHARACTER AND DEVELOPMENT

River Falls is a picturesque community located in southern St. Croix and northern Pierce Counties in west-central Wisconsin. River Falls lies about seven miles south of Interstate 94, along State Trunk Highway 65/35. There are many environmental features to be protected, enhanced, and enjoyed for years to come. River Falls is surrounded by many scenic vistas of bluffs, coulees, and valleys, and the Kinnickinnic River (a Class 1 Trout Stream) bisects the community from the northeast to the southwest. The University of Wisconsin-River Falls (UWRF) campus and the Chippewa Valley Technical College are located in the southeastern part of the City of River Falls. The southern branch of the Kinnickinnic River (South Fork) splits the UWRF campus. The Kinnickinnic and its tributaries are valuable trout streams representing a major natural amenity of the community. Four towns surround the city with the Town of Troy to the north, the Town of Kinnickinnic to the east, the Town of River Falls to the south, and the Town of Clifton to the west. The city and adjacent towns are undergoing rapid growth and development. The population trends of River Falls and the surrounding towns and counties have taken a consistent upward turn. In the early 1990s State Trunk Highway belt (STH 65/35) was completed. A new four-lane connector from Interstate 94 south to the City of River Falls will be completed in the year 2000. St. Croix and Pierce Counties are designated as part of the Twin City Metropolitan Planning Area. Over the past decades, employment has risen steadily in the community, but a higher percentage of the residents of this area are commuting to the Minneapolis/St. Paul area. The growth of the area's population and employment can be attributed to several factors: proximity to the Minneapolis/St. Paul metropolitan area, an aggressive economic development program, a high quality of life, the location of a University and a Technical College, proximity to transportation infrastructure, and natural resources.

It is the intent of *The River Falls Sewer Service Area Water Quality Management Plan* (SSAP) to provide the community with a statement of direction for physical development and conservation and a plan for extension of sewer service in an environmentally sound manner that would assist in guiding growth. This chapter provides a context for the existing character and development conditions of the City of River Falls and the surrounding towns and counties within a 1.5-mile study area from the city limits.

The following themes apply to this chapter.

THEMES

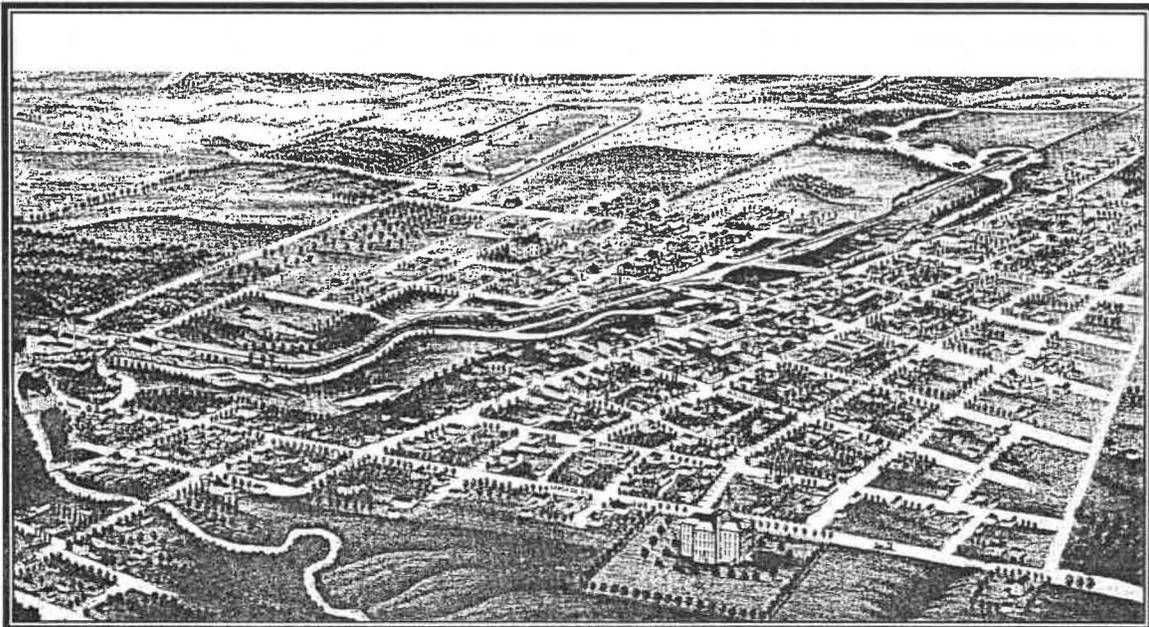
- ❑ **Quality of Life** - Enhance the quality of life of the community and ensure provision of community services for residents.
- ❑ **Sustainable Growth** - Ensure that development is sustainable and that growth, conservation, redevelopment, and natural resource protection are balanced.
- ❑ **Character** - Maintain and respect River Falls' unique personality, sense of place, and character.
- ❑ **Urban Form** - Promote a compact urban form and encourage sensitive/compatible infill development.

- ❑ **Community-Oriented Development** – Orient new development to the community; foster public life, vitality, and community spirit.
- ❑ **Regional Perspective** - Maintain a regional growth management perspective and work with other private and governmental entities towards that goal.
- ❑ **Housing** - Actively participate in the creation of housing.

2.1 EVOLUTION OF THE LAND USE PATTERN

Prior to the early settlement of River Falls and the surrounding region, Chippewa and Sioux Native Americans occupied the area. In 1837, the Chippewa ceded to the United States all of the land east of the Mississippi River extending north to the source of the Mississippi River. Despite the opening of the territory, settlement was rather slow until the mid-nineteenth century. St. Croix County was created in 1840, and in 1853, the State of Wisconsin divided it into three separate counties, each with its own seat. The southern section became Pierce County, the northern third was named Polk County, and the mid part remained St. Croix County. The plat of River Falls straddles the boundary between St. Croix County and Pierce County. The town is situated along the Kinnickinnic River, which flows west into Lake St. Croix. The Kinnickinnic River and its branch the South Fork, played a significant role in the settlement and growth of the community.

At the time of initial settlement, approximately three-fourths of Greenwood Town (later River Falls Town) in which River Falls is located was covered by prairie with black sandy loam soil. The remaining land was covered with timber. Some 2000 acres of land were under cultivation by 1856, and the prospects for agriculture were considered to be “first-rate.” To the north, the Town of Troy was organized in 1851 and was first called Malone by the Perrine brothers who were settlers from New York.

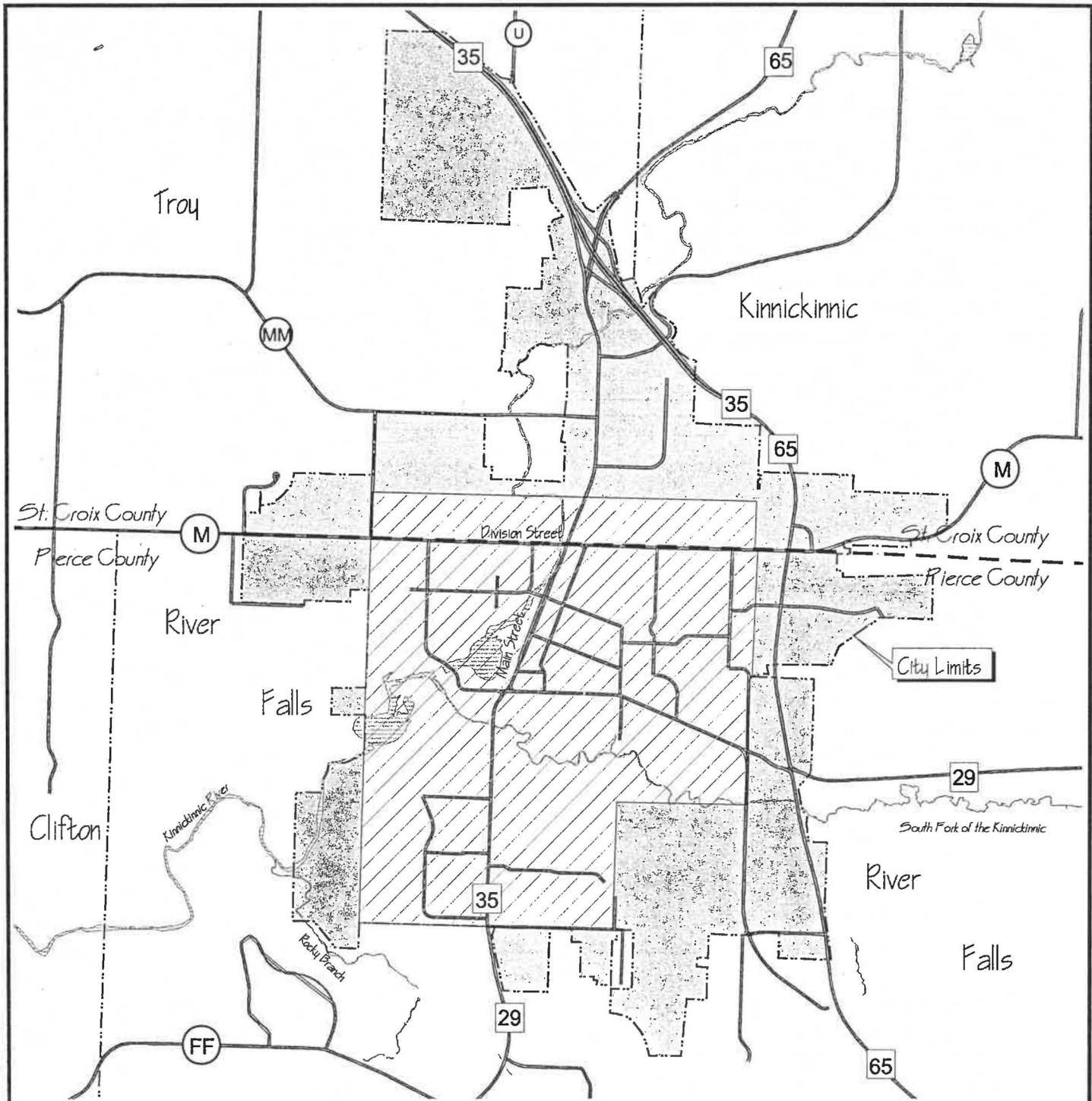


Bird's-eye view of River Falls, Wisconsin, circa 1880.

Arriving in the fall of 1848, Joel Foster was the first person to settle in what would soon be officially known as River Falls. He was followed by Duncan McGregor and his wife and Nathaniel and Oliver Powell. The Powell brothers built a sawmill in 1852, constructed the first frame dwelling, which later became a store, and in 1854, laid out a 60-acre plat on the east side of the river for the Village of Kinnickinnic. Although the original plat of River Falls is tilted so that Main Street and other streets are oriented to the Kinnickinnic River, the plat conforms to a common Midwestern form consisting of square blocks set on a grid of streets intersecting at right angles. Later plats followed survey lines and compass points thereby creating the familiar rectilinear grid. Early development was focused along the river. The Powells built their sawmill on the east bank, south of where the first flourmill would be constructed in 1854. The population increased from 312 in 1860 to 1,191 in 1870, and by the late 1870s four more flourmills had been constructed, which collectively produced 150,000 barrels of flour annually. Contributing to the growth and development of the village were the Fourth State Normal School, which was built in 1874, and the arrival of the Hudson and River Falls Railroad, which opened in 1878. The railroad significantly impacted development and growth in the River Falls area. By the late 1870s, River Falls had emerged as a local, if not regional, trade center. In spite of these developments, the city's early period of rapid growth ended, and the population expanded only 26% from 1870 to 1880 (1,191 to 1,499). Over the next decade, however, the number of residents increased by 975 (65%). As wheat production began to decline in the late 1890s, output from the local flourmills decreased considerably, largely because the Junction Mill, the city's most productive mill, closed in 1891. Compounding the problem were three consecutive years of crop failure due to drought and the chinch bug. The amount of wheat sold in 1889 was the lowest on record, less than 25% of the 1880 total. These changes had a profound impact on the city's growth between 1890 and 1910, nearly 500 residents moved away. Other industries such as a starch factory and creamery were established, although they remained rather small-scale operations that were primarily oriented to local and area markets.

The Village of River Falls was incorporated in April of 1885 as a city by action of the State Legislature. Its Charter outlined the city boundaries, governmental structure, election procedure, city officers and duties, and Common Council powers. In January 1922, on the basis of the Charter, River Falls was declared a 4th Class City by the State of Wisconsin. River Falls has experienced tremendous growth since the 1900s. Most of the growth has occurred since 1940. With a population count of 11,696 in 1999, River Falls has experienced approximately a 450% increase since 1940. While much of River Falls' growth has been incremental in nature, the city's form was fairly compact. Over the last three decades, large tracts have been annexed and developed to the north and to the southeast (Figure 2-1 Growth of City from 1965 to 2000).

Over this same period of time, development in the towns was agricultural in development. Rising housing prices and population growth in the region have prompted a more diffuse sprawl and nontraditional land use form of development. This type of development has ignored the long history of agricultural preservation.



Growth of City from 1965 to 2000

-  Corporate Limits 1965
-  Corporate Limits 2000
-  Lakes & Rivers
-  City of River Falls
-  County Boundaries
-  Town Boundaries
-  Major Roadways

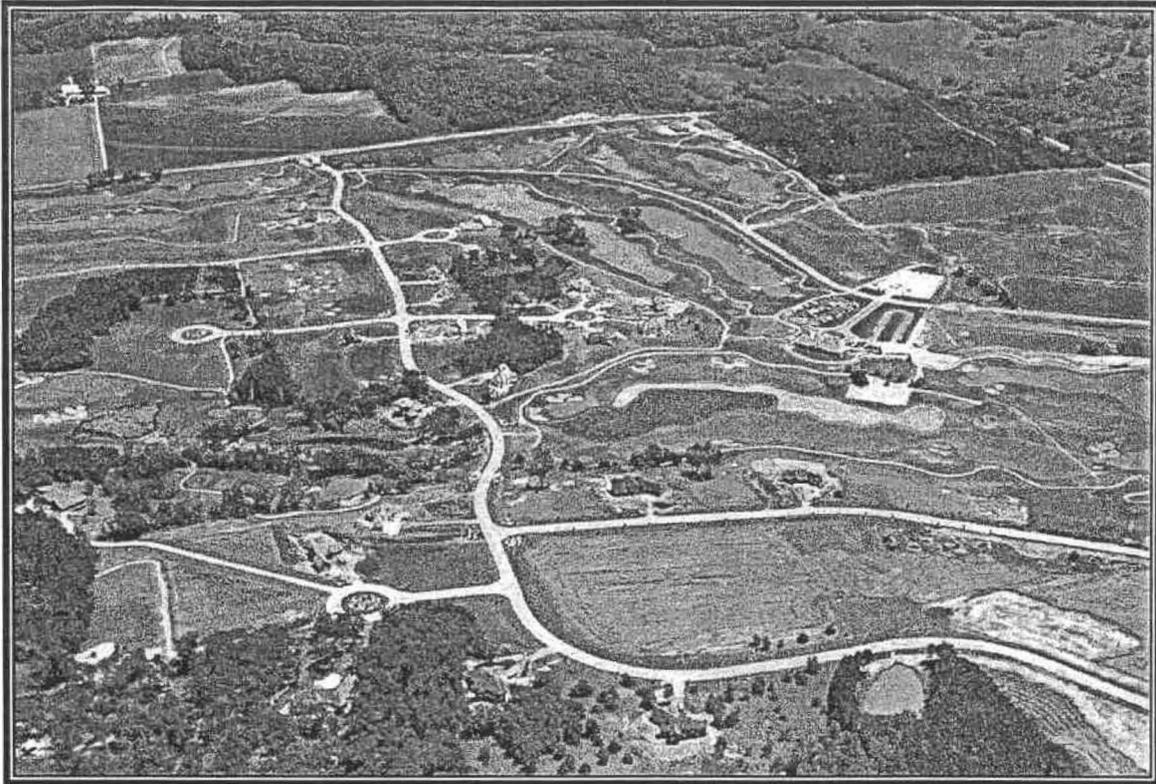
Chapter 2
Character and Development

City of River Falls
Sewer Service Plan



not to scale

Figure 2-1



Troy Burne Golf Village located within the Troy Town was created out of 500 acres of the Ruemmel Farm.

According to 1999 statistics, the county populations are increasing twice as fast as in previous years and are setting new records. In 1999, St. Croix County issued 488 sanitary permits for new houses, approved 594 lots for new construction, and approved rezoning for 766 acres of land. Pierce County issued 202 sanitary permits for new houses, approved 176 lots of less than 15 acres for new construction, and rezoned 539 acres in new land, compared to 62 acres in 1998.

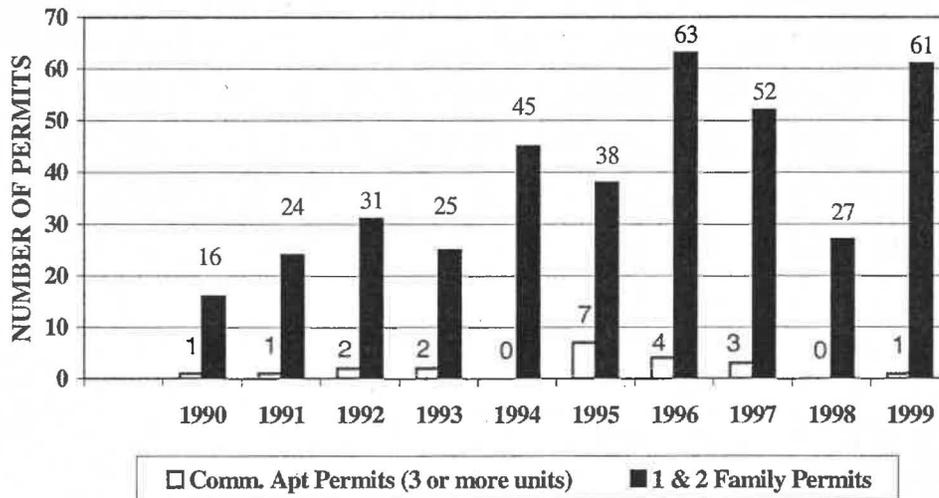
2.2 CURRENT LAND USE PATTERNS

2.2.1 Magnitude of Uses

According to a 1985 Land Use Inventory, 52% of the developed land in the City of River Falls is devoted to single and multifamily residential use, 11% for parks, 29% for public/semipublic, and 8% for commercial office and industrial uses. Presently in the City of River Falls, there are 3,214 acres (5 square miles) with a 1999 population of approximately 11,696. There are approximately 2.8 persons per dwelling unit. The average number of single and twin family permits in 1990 to 1999 was 38.2 and multifamily 2.1 (Table 2.1). The four towns are approximately 156 square miles with a 1990 total population of approximately 7,052.

Table 2.1

COMPARISON OF 1 & 2 FAMILY PERMITS TO MULTIFAMILY PERMITS, 1990-1999



2.2.2 Distribution of Uses

The River Falls' street system and the location of jobs and commercial activities reinforce the rectilinear grid development pattern of the city. Baring some relatively new infrastructure improvements such as the Division Street Bridge improvement at the intersection of Main and Wasson Lane, and the Highway 65/35 beltline along the eastern edge of the city, virtually all major roads lead to Main Street. Main Street and the adjoining UWRF campus along with the business district are home to a majority of wage and salary jobs in the city. This pattern of development has contributed to Main Street's vitality and, despite some parking and congestion problems, it remains a sought after business area. To the east of Main Street are generally older, moderately dense residential areas with a mix of housing sizes and types. To the west of Main Street are lower density residential areas. The residents of River Falls work in a variety of occupations. Professional services makes up the largest share (40%); second is wholesale/retail trade (26%), and third is manufacturing (15%). According to the 1990 census, out of a total workforce of 5,781, 2,787 report working in the area of residence, while 2,994 report working outside the area of residence. Most River Falls residents report driving to work alone. Although not as great as the national percentage of nearly 73%, it still shows that driving alone is a dominant form of commuting. Mean travel time to work was 18.6 minutes in 1990, 53.3% of workers reported traveling 45 or more minutes. This increasing distance between jobs and residences has also forced an ever-increasing number of commuters onto the same streets.

2.3 GENERAL PLAN LAND USE FRAMEWORK

The City of River Falls Master Plan focuses initially on present land uses. The Master Plan states that through an inventory of such uses, a true community profile can be seen. Such an inventory indicates the conditions of each of the areas, the general economic conditions, and a sense of historic development of the community. Land uses are slow to change, and therefore the present land use is seen as a baseline for future growth. Economic change can also be seen through evidence of land use conflict. For example, a downtown typically grows by land use intrusion into adjoining neighborhoods, and some neighborhood areas may experience increased traffic flow to and from employer/commercial areas, thereby causing a deterioration of property values and a conversion to alternative uses (rental, office).

In the 1960s, the City of River Falls adopted an Extraterritorial Zone (ETZ), a zoning district consisting of that area lying outside the city but within 1.5 mile of the city limits. The purpose of the extraterritorial district is to provide for proper zoning and control over the area and allow for orderly growth and development.

The counties of St. Croix and Pierce and the towns of Troy and River Falls have adopted land use plans. These plans consist of maps and policies that are intended to represent the communities' goals and objectives.

2.4 LAND USE CLASSIFICATIONS

This section describes the land use classifications as outlined in the Municipal Code and designated on the official City of River Falls Zoning Map (Figure 2-2) and the Extraterritorial and Town Zoning Map from September 25, 1974 (Figure 2-3). The land use parcels were classified by the following categories:

2.4.1 The City of River Falls Zoning Categories

- **Single Family (low density) Residential (R1).** The R1 District is intended to provide a quiet, pleasant, and relatively spacious living area protected from traffic hazards and intrusions of incompatible land uses. (One to three units per gross acre.)
- **Multifamily (medium density) Residential (R2).** The R2 District is intended to provide a limited or medium density (multifamily living area) that is compatible with existing single family dwellings. (One to eight units per gross acre.)
- **Multifamily (high density) Residential (R3).** The R3 District is intended to provide a district of higher density housing in multifamily structures and related complimentary uses. (1-14 units per gross acre.)

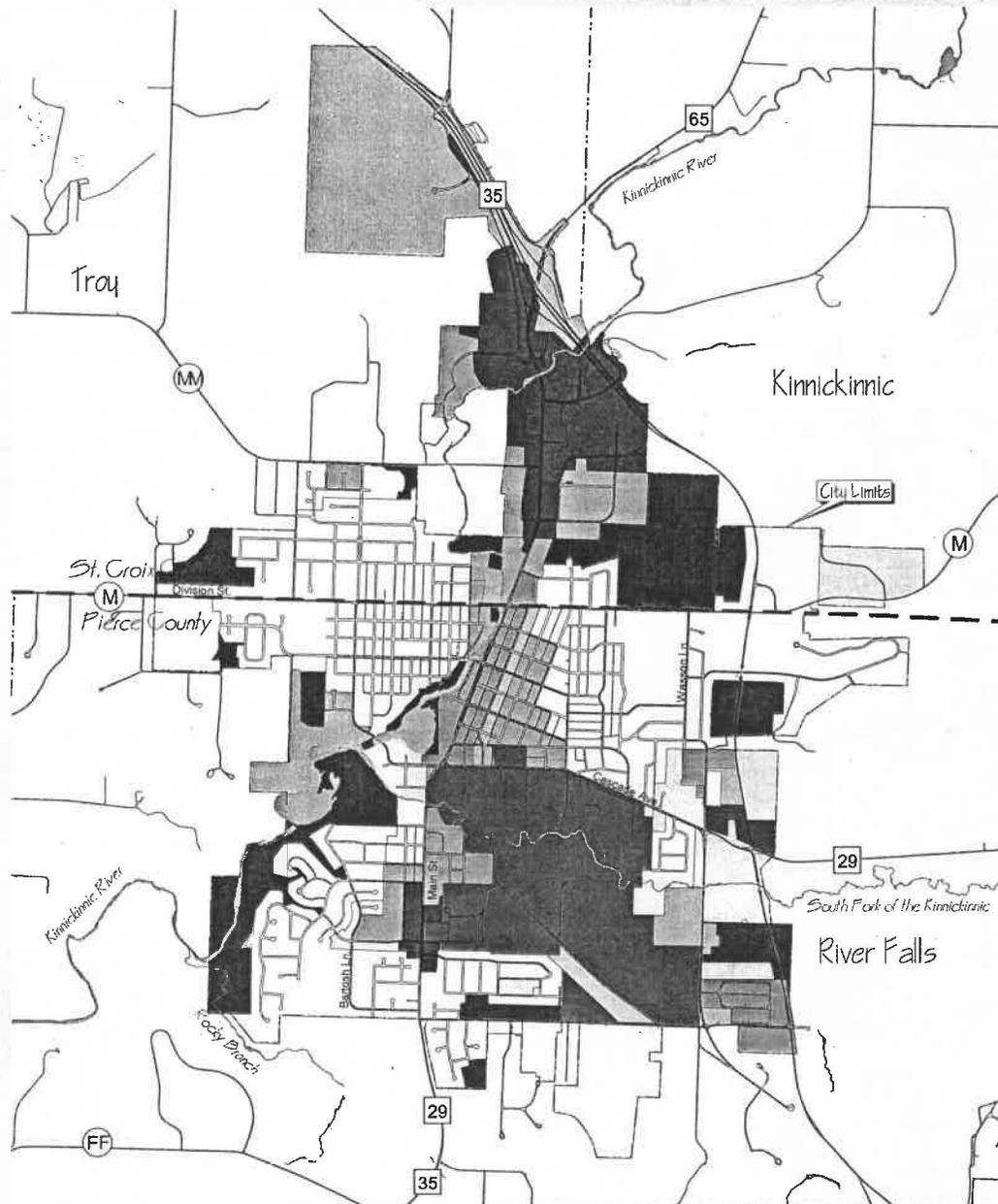
- **General Commercial (B1).** The B District is intended to provide for a business or shopping district enhanced by a central location, ease of access, and the proximity to other businesses.
- **Limited Commercial (B2).** The B2 District is intended to provide a transition zone between General Commercial (B1) and residential uses by allowing limited commercial uses which are compatible with commercial on one side and residential on the other while preserving the scale and character of existing neighborhoods.
- **Highway Commercial (B3).** The B3 District is intended to provide for service oriented enterprises and for quasi-industrial and commercial enterprises that have considerable contact with and dependence upon transit trade and traffic.
- **Industrial (I1).** The I1 District is intended to provide an area for light industrial uses that do not detract from adjacent areas or less intense land use or become a blight influence to the area.
- **Heavy Industrial (I2).** The I2 District is intended to provide for heavy industrial and manufacturing uses in an area generally separated from other sections of the city.
- **Agricultural (A).** The A District is intended to provide suitable areas for exclusive agricultural uses, to conserve good farming areas, to prevent the uncontrolled spread of development, and to secure the economical provision of public services.
- **Conservancy (C).** The C District is intended to preserve the natural state of scenic areas, to prevent the uneconomical spread of development, and to discourage development of land, which, if developed, might create a hazard to public and private property.
- **University (U).** The U District is intended to provide an orderly process whereby institutions of higher education can develop needed facilities yet exist and function in a manner compatible with surrounding land uses and the community as a whole.
- **Mobile Home Parks (MHP).** The MHP District is intended to enforce minimum standards for mobile home parks and to promote public health, safety and welfare. The zone establishes requirements for the design, construction, alteration, extension, and maintenance of mobile home parks and related facilities and utilities, authorizes issuance of permits for construction, alteration, and extension of mobile home parks. The zone also authorizes the licensing of operators of mobile home parks, authorizes the inspection of mobile home parks, regulates the location of mobile homes, and affixes penalties for violations.
- **Planned Unit Development (PUD).** The PUD special use is intended to provide a regulatory framework to encourage, promote, and improve environmental design in the city by allowing for greater freedom, imagination, and flexibility in the development of land.

Chapter 2
Character and Development

City of River Falls
Sewer Service Plan

City of River Falls
Zoning Map

-  Single Family Low Density Residential
-  Multiple Family Medium Density Residential
-  Multiple Family High Density Residential
-  Mobile Home Park
-  Agriculture
-  Limited Commercial
-  General Commercial
-  Highway Commercial
-  Conservancy
-  Industrial
-  Heavy Industrial
-  University
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers




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 City of RIVER FALLS



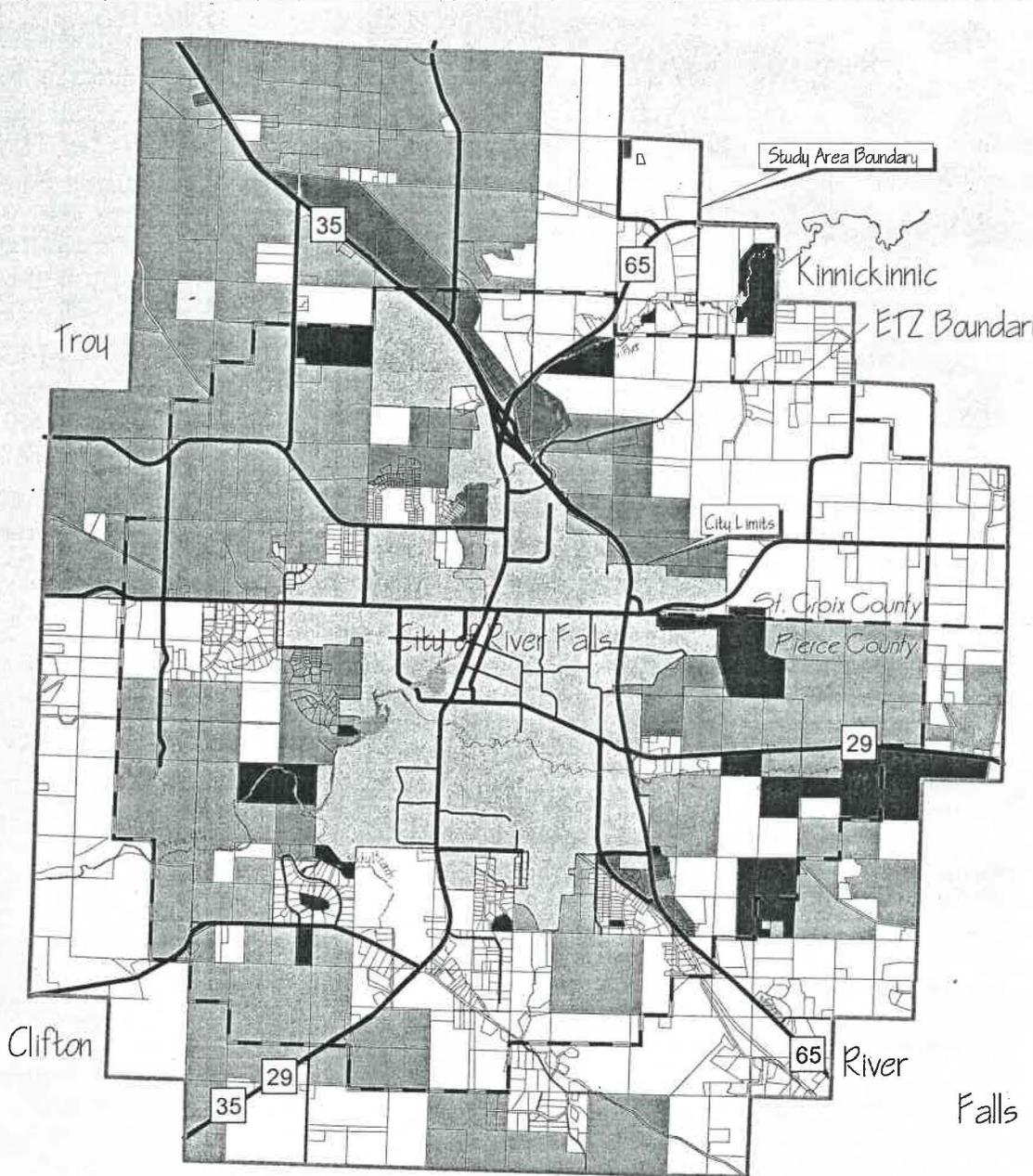

Figure 2-2

Chapter 2 Character and Development

City of River Falls Sewer Service Plan

Extraterritorial and Town Zoning Map

-  Single Low Density Residential
-  Multiple Medium Density Residential
-  Single Suburban
-  Agriculture
-  Exclusive Agriculture
-  Conservancy
-  Industrial
-  Highway Commercial
-  Lakes & Rivers
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Extraterritorial Zoning (ETZ) Boundary



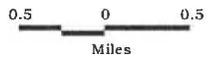


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City of
RIVER FALLS





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Figure 2-3

2.4.2 Extraterritorial Zoning Categories

- **Single Family Suburban Residential District (RS).** The RS District is intended to provide a pleasant and spacious living area. The large lot sizes encourage preservation of wooded areas and other green space yet enable development.
- **Single Family (low density) Residential (R1).** The R1 District is intended to provide a quiet, pleasant, and relatively spacious living area protected from traffic hazards and intrusion of incompatible land uses.
- **Multifamily (medium density) Residential (R2).** The R2 District is intended to provide a living area that is pleasant but not as spacious as the R1 District.
- **Highway Commercial (C).** The C District is intended to provide for commercial activity related to vehicular traffic along the highways.
- **Industrial (I).** The I District is intended to provide for industrial and manufacturing uses in an area separated from other sections of the city.
- **Agricultural (A).** The A District provides exclusively for agricultural uses. The intent is to help conserve good farming areas and to prevent uncontrolled, uneconomical spread of residential development that results in excessive cost to the community for premature provision of essential public improvements and services (sewer and water lines).
- **Exclusive Agricultural (A1).** The A1 District provides exclusively for agricultural uses. The intent is to preserve and protective agricultural soils, to maintain agricultural as a permanent, viable land use and economic activity. The zone controls untimely and uneconomical expansion of urban facilities and services, avoids conflicting land uses, and complies with the provisions of the farmland preservation law that permits eligible land owners to receive tax credits, per Wisconsin Statutes.
- **Conservancy Zone (W).** The W District is intended to prevent uncontrolled, uneconomical spread of development and to help discourage intensive development of marginal land so as to prevent potential hazards to the public and private property.

The Municipal Code of the City of River Falls, Chapters 20 and 21, provides detailed information regarding the above land use classifications.

2.5 NATURAL RESOURCE AREAS

Throughout the public participation process, open space, bluffs, coulees, rivers, and environmental resources were frequently cited as some of the communities' major assets. The preservation, enhancement, and restoration of the community's character and resources are pivotal issues that have shaped this plan.

Mapping of existing environmental resources, conditions and constraints provides the basis for resource conservation and management policies. It is resource conservation and management policies that help determine a sewer service area while protecting and preserving valuable areas from development. To do this, resource protection areas are delineated, and growth is prohibited or limited from occurring in these areas. Two classifications are defined in detail in Chapter 4 that protect habitat that is sensitive and declining or that represents valuable, biological resources in the community. In general, these two classifications are Resource Protection Areas (RPAs) and Sensitive Resource Areas (SRAs). The RPAs contain the most sensitive and valuable habitat and require protection. The SRAs shall be investigated with particular attention to sites that include habitat for sensitive species of plants and animals. The natural resource management and conservation issues are addressed in this chapter.

2.5.1 Habitat

Habitat is a term used for a set of natural conditions including climate, elevation, solar aspect, water, wind, soil, geology, and other elements combined. Plants are most often used to characterize biotic communities, which form habitat for animals and other plants. The Department of Natural Resources for the State of Wisconsin (WDNR) has developed a rare, threatened, and endangered species and natural communities list for St. Croix and Pierce Counties. A detailed vegetation study that maps River Falls biotic communities has not been performed. Such a study would help locate and designate critical habitat for threatened and endangered species and for species of concern. Future detailed study and mapping should be developed that locates habitats for these species.

As stated above, many scenic vistas of bluffs, coulees, valleys, and the Kinnickinnic River surround the community. The community is located in the northern part of the Coulee Region of southwestern Wisconsin. Most of the land within the community of River Falls is fairly level to gently sloping, except for the steep, rock bluffs along the Kinnickinnic River and the South Fork. Within the city, there are few steep slopes with a grade of 10% or more. Within the study area, there are lands that are quite hilly with many steep slopes and sharply defined bluffs and watercourses. The most sensitive and important of these biotic communities is the riparian area which provides prime food, water, and nesting habitat for migrant as well as resident species. Since most of the biotic community in the River Falls area occurs over a wide range of southwestern Wisconsin, few of the biotic communities are rare or unique, but many of them provide habitat for rare, threatened, or endangered species of both plants and animals.

2.5.2 Endangered Resources

The range of biological communities in the regional area and surrounding the city provides suitable environments for animals and plant species that are considered threatened, endangered, or of concern and are subject to protection under the Federal Endangered Species Act and the Wisconsin Endangered Plant and Animal Act. All site plan reviews for development should include the consideration of these endangered resources. These resources primarily occur within the bluffs and riparian corridors and other specific areas. Many of the animal species are migratory and are present

infrequently. In some cases, such as that of the endangered Crystal Darter fish or Higgins' Eye mussels, it is possible to enhance or restore habitat for a species to increase the possibility of its occurrence. Unlike the migrating animals, several of the rare plants that may occur within the area may be uprooted and destroyed as a result of construction and development.

The WDNR, Bureau of Endangered Resources conducts data searches for natural areas and endangered plants and animals. The Bureau urges that special care be taken to protect any and all endangered resources from development. The exact locations of the endangered resources can only be used for analysis and review purposes; therefore, they will not be used here for the environmental corridors. The following sections provide information and a list of those endangered plants and animals within the St. Croix and Pierce County area.

2.5.3 Plants

There are approximately 2,000 species of native and naturalized seed plants in the State of Wisconsin. Within the St. Croix and Pierce Counties, there are approximately 54 rare, threatened, and endangered plant species. Some of these endangered species consist of the following: Brook Grass, Carolina Anemone, Dotted Blazing Star, Ground Plum, Rough Rattlesnake-Root, Small Skullcap, Louisiana Broomrape, and Prairie Bush-Clover.

2.5.4 Woodlands

Woodlands provide habitat for a variety of plants and animals as well as adding scenic beauty to the landscaping. Woodlands exist near river and creek streams, wetlands, steep slopes, landscaped yards, and forest cropland. They are essential for erosion control, wildlife habitat, and the aesthetic environment. Retention of a maximum acceptable percentage of woodland cover in developable areas will greatly contribute to the environment and the value of the residential, commercial, and industrial development. Existing woodland cover provides an aesthetic area for group gathering and recreation. These areas should be reserved for those purposes through the planning and development process. The City of River Falls has an existing urban forestry program that revegetates and maintains woodlands for future generations.

2.5.5 Wildlife

Within St. Croix and Pierce Counties, there are approximately 61 rare, threatened, or endangered animal species. Approximately 17 of these animal species are endangered. They are as follows: Four birds—American Peregrine Falcon, Great Egret, Loggerhead Shrike, and Red-Necked Grebe. One butterfly—Regal Fritillary. Four fish—Crystal Darter, Goldeye, Skipjack Herring, and Pallid Shiner. Eight mussels—Butterfly, Ebony Shell, Elephant Ear, Purple Wartyback, Snuffbox, Spectacle Case, Winged Mapleleaf, and Higgins' Eye.

2.5.6 Riparian Corridors

The riparian areas in the River Falls area provide valuable habitat as well as corridors for wildlife movement. These areas include the Kinnickinnic and the South Fork of the Kinnickinnic River. The riparian corridors and wetlands include marshes, bogs, swamps, wet meadows, potholes, sloughs, and river over-flow lands. The significance of wetlands is that they provide habitat for wildlife and fish; reduce flood peaks; maintain water quality; and serve as groundwater recharge zones, open space, and educational areas.

Protection of these valuable resources from intrusion and filling due to development is important to assist in maintaining a balance between nature and manmade development.

Historically, wetlands have not been viewed as important and have been filled in for "convenience" and "progress." Updates in city codes have assisted in minimizing the effect of development on these areas.

2.5.7 Wetlands

Wetlands are defined by State Statute as areas where water is at, near, or above the surface long enough to support hydrophytic vegetation or water-loving plants with soils indicative of wet conditions. Wetlands may be seasonal or permanent and are commonly referred to as swamps, marshes, or bogs. These areas serve as groundwater recharge zones and also as a habitat for a variety of plants and animals. Wetlands act as a sieve, filtering out silt before it can enter streams and lakes. Particular attention must be given wetlands within lakes to assure that they are protected from development. The federal government and the WDNR restrict development in wetlands through Section 404 of the Clean Water Act and NR 103, respectively. Wetlands can be damaged, resulting in costs, fines, and/or restrictions. The WDNR has an inventory of wetlands of two acres and larger. All wetlands, no matter how small, which meet the state definition are subject to WDNR regulations. Even if state regulations do not apply, federal regulations may, making it necessary to review all wetlands against these regulations before they are disturbed. Particular attention must be given wetlands within shorelands to ensure protection from development. Site investigation is required to ensure compliance with federal and state regulations. The Wisconsin Wetland Inventory Map, along with aerial photographs, was used to assist in delineating all regulated wetlands within the planning area.

2.5.8 Floodplains

Floodplains primarily occur along the Kinnickinnic River, South Fork of the Kinnickinnic River, and along streambeds that serve as tributaries. Except north of the city, floodplains do not extend to any great distance beyond the shoreline of the Kinnickinnic River due to the steepness of the slopes. The South Fork of the Kinnickinnic River has a floodplain of approximately one-eighth to one-quarter mile because of the shallow flow and nearly level stream terrace. There are, however, tributary areas of the city that experience periodic flooding. Floodplain zoning is required and implemented by counties, cities, and towns by Wisconsin State Statute

87.30(1). The purpose of the Wisconsin Administrative Code NR 116, Floodplain Management Program is the protection of property and public investment from the effects of flooding. Federal Emergency Management Agency's 100-Year Floodplain Maps were used to delineate flood hazard areas within the planning area. Flood hazard areas are prevalent throughout the planning area. Variations in the width of the flood hazard zone are due to topography and water volumes, as noted above. In the sewer service area, there is minimal development within the 100-year floodplain. Enforcement of local floodplain ordinances has reduced the amount of development within the 100-year floodplain.

2.5.9 Shorelands

Lands within 1,000 feet of the ordinary high water mark of a lake or pond and 300 feet past the ordinary high water mark or landward edge of the floodplain, whichever is greater, of a river or stream are designated shorelands. Shorelands are usually considered prime development areas because of their scenic beauty. It is these shorelands that provide valuable habitat for both aquatic and terrestrial animal and vegetation. Shorelands also provide a buffer and serve to protect water quality. The State of Wisconsin requires communities to protect and prevent the loss and erosion of these valuable resources by adopting and enforcing a shoreland ordinance. The authority to enact and enforce this provision comes from Chapter 59.97 of the Wisconsin Statutes. Wisconsin Administrative Code NR 115 outlines the shoreland management program. Community ordinances can be more stringent but must not be less stringent than the Wisconsin Administrative Code. The City of River Falls and the surrounding towns have adopted the St. Croix and Pierce Counties' shoreland zoning provisions. These shoreland zoning provisions remain in effect with any land annexed into the city.

2.5.10 Steep Slopes

Steep slopes are characterized by stony land with soils that are shallow over bedrock. Along the River Falls area and along the Kinnickinnic River several areas exist with steep slopes. Steep slopes are any areas where the gradient of the land is 12% or greater (each percent of slope is measured as one unit in elevation for every hundred horizontal units). One category of steep slopes is 12% to less than 20% slope and consists of any soil type. It has been demonstrated that 12% slopes are a threshold at which impact from development becomes apparent. To allow development on these slopes, one should consider direct runoff into streams or rivers, follow state approved construction site erosion control standards, and institute best management practices, monitoring, and maintenance to control on-site runoff and pollution. Steep slopes of 20% or greater are subject to erosion impact, even from slight land cover disturbance. Development on these slopes results in high construction costs and severe erosion with resultant negative impacts to surface waters. Therefore, development on slopes 20% or greater shall be prohibited (roads and right-of-way easements shall be limited with guidelines). Both 12% to less than 20%, and 20% or greater slopes are shown on Figure 2-4 Natural Resource Areas.

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City of River Falls Sewer Service Plan

Natural Resource Areas

-  Slopes 12 - 20%
-  Slopes > 20%
-  500 Year Floodplain
-  Wisconsin Wetland Inventory
(Supplied by the Wisconsin DNR)
-  300 foot Shoreline Buffer
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers
-  Study Area
-  City of River Falls

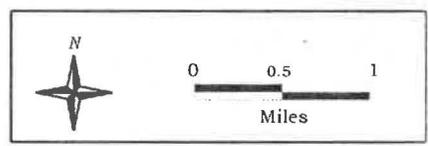
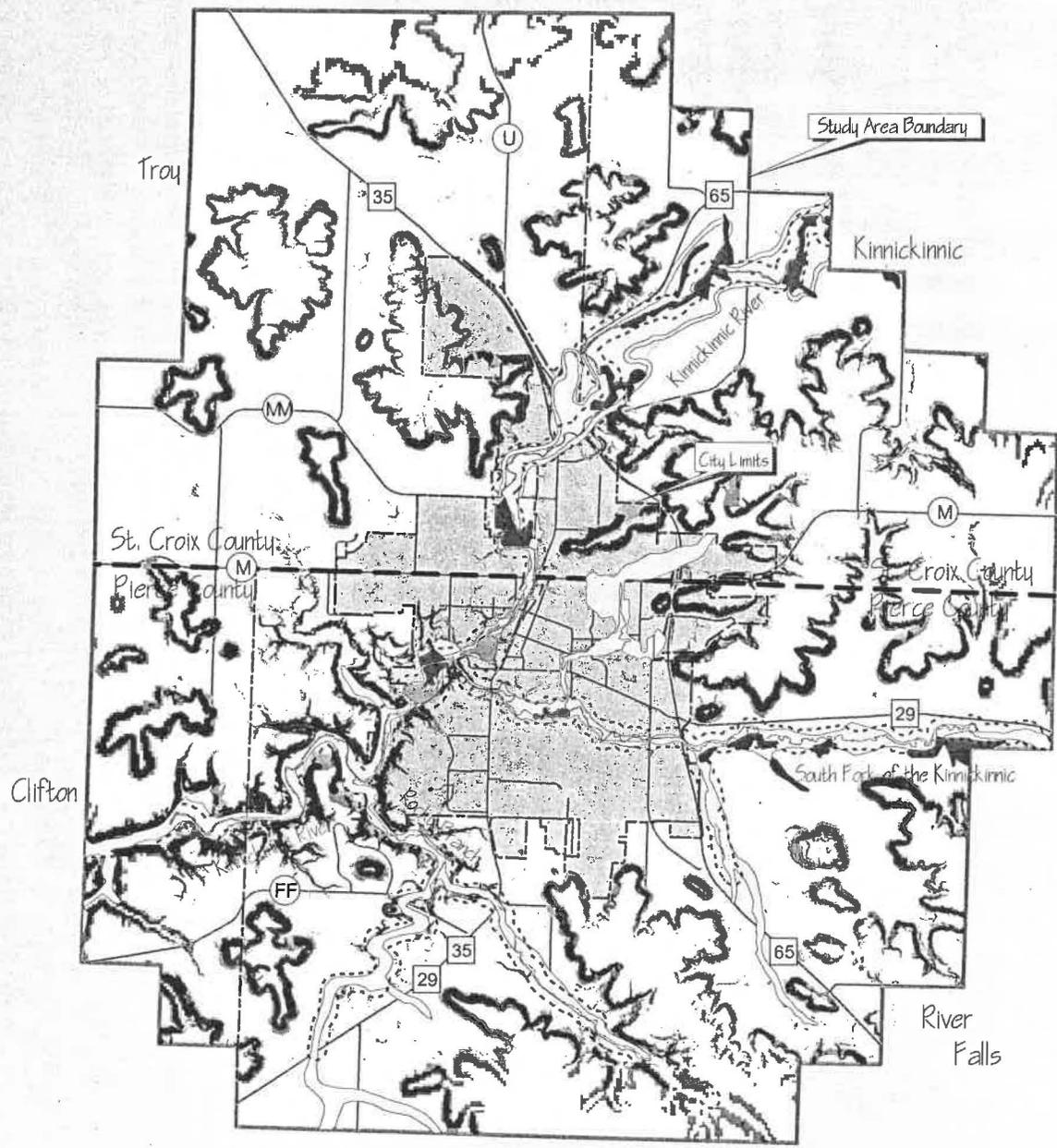


Figure 2-4

2.5.11 Natural Landscapes and Landmarks

Two areas of existing unique environmental features have been identified in the River Falls area. The first, a limestone outcrop north of the city, called the River Falls Monument, is visible from State Highway 65 during the fall, winter, and early spring. The second, called the Devil's Den, is southwest of the City of River Falls and is a unique geological depression along the Kinnickinnic River.

2.5.12 Prime Farmland

Prime farmland is the land that is best suited to food, feed, forge, fiber, and oil seed crops and may be cultivated land, pasture land, or other land, but it is not existing urban and built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for a well-managed soil to produce a sustained high yield of crops in an economic manner. Prime farmland produces the highest yield with minimal input of energy and economic resources, and farming it results in the least damage to the environment. Soils that fall into Class I, II, and III of the Soil Conservation Service (presently National Resource Conservation Service) capability unit classification system are considered prime agricultural land. The value of these lands is associated with not only their soil class but also with their size, present use, and any regulatory framework for their protection. The Land Evaluation Site Assessment system presents the opportunity to define agricultural lands that have the most productive potential. In 1980, St. Croix County and in 1982, Pierce County adopted farmland preservation plans. Both counties have exclusive agricultural zoning, farmland preservation areas within the county that are designated and managed by zones which conform to the Wisconsin Administrative Code. The ETZ also provides zoning classifications for agricultural lands. Low density, rural residential housing may be allowed in agricultural areas, depending upon

individual town policies and the ETZ. Rural housing is intended to be located and designed so as to have minimal adverse effects on surrounding farm operations and to blend into the rural character of the area. Housing sites should avoid prime agricultural land, be located where appropriate services can be provided, not conflict with neighboring uses, and protect natural resources.

2.5.13 Soils

City of River Falls

The 1965 *City of River Falls Comprehensive Plan* provides a detailed description and map of specific soil conditions, characteristics, and suitability of urban and rural uses in the River Falls area. This information was provided for the plan from the U.S. Department of Agriculture, National Resource Conservation Service. The plan states that soil productivity in the Towns of Troy, Kinnickinnic, and River Falls generally are below average compared to productivity in other parts of St. Croix and Pierce Counties. In some areas around River Falls, some of the best farmland has been gullied as a result of water and wind erosion. However, contour plowing and other soil conservation and

erosion control measures have been employed in most of the planning area. The plan states that soils in the River Falls area may be placed generally into nine major groups based upon their suitability for agricultural or urban uses. The nine major groups listed were: engineering conditions related to construction and maintenance, maintenance of roads, airports, pipelines, building foundations, water storage facilities, drainage systems, sewage disposal systems, and erosion control structures. The 1965 plan provided a summary of the suitability and limitations for the different uses and a list of the soils for the major groups.

St. Croix and Pierce Counties

As noted above soil, properties are an important factor in how land is used. The type of soils in an area often dictates the best use of land. Soil suitability interpretations for specific urban and rural land uses are essential for physical development, planning, and determining the best use of the soil on a site. The 1996 *Pierce County Land Management Plan* references the U.S. Department of Agriculture, National Resource Conservation Service map for the locations of important farmlands. This map indicates the general location of the best farmland in the county and towns. The 1996 *St. Croix County Development Management Plan* states that the County entered into an agreement with the National Resource Conservation Service to produce a digital soil survey. The soil survey has resulted in a detailed soil map for the County at a scale of one inch equaling 1,000 feet. The survey produced information on the physical, chemical, and biological properties of the soil and provided soil property interpretation for agricultural, engineering, planning, and resource conservation activities. The digital soil survey was used extensively for county planning efforts.

River Falls Town

The 1982 land use plan for the Town of River Falls also addresses soils capability and provides a soil class map. It states that the Soil Conservation Service (presently National Resource Conservation Service) considers the majority of land in River Falls Town a Class II-type soil and it is concentrated in the central and southern sections of the town. Class I, II, and III type soils are considered prime agricultural land and comprise 74% of the land in the town, however, only 3% is Class I. The area immediately south of and along County Highway 29 contains the highest portions of soils not suitable for farming. Depending on slope and the amount of wooded acreage, these areas are primarily used for grazing or pasture land, woodlands, and/or wildlife cover.

Troy Town

The 1992 *Town of Troy Growth Management Plan* also provides information on geology and soils, along with soil limitation maps. The plan states that the most fundamental criteria for development are the nature of the soils. A soil is defined (Hole et al.1953) as a distinctive portion of the top-most mineral layer of the earth, containing air, water, plants, and small animals mixed in a variable amount. The plan states that agricultural capabilities Class I and II might be called the town's prime agricultural land. Much of this land is presently under cultivation, but much of it is suitable for septic systems,

Sewer Service Plan

which has resulted in the present subdivision of many five-acre parcels in the area. The plan delineates the agricultural capabilities into eight classes provided by the Soil Conservation Service (presently National Resource Conservation Service) capability unit classification system.

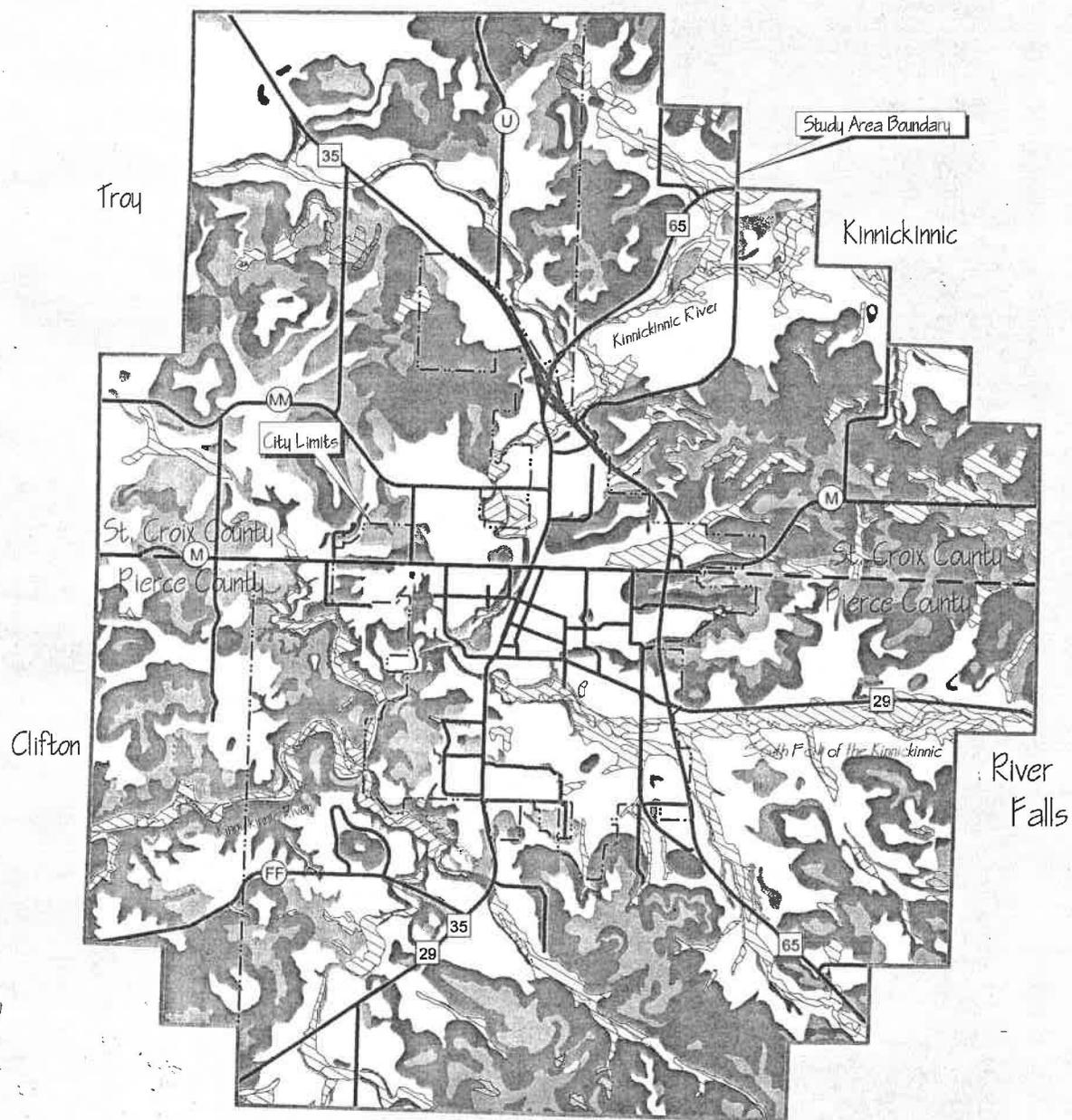
Those classes are as follows:

- Class I: Soils that have few limitations to restrict their use.
- Class II: Soils with some limitations that reduce the choice of plants or require moderate conservation practices.
- Class III: Soils with severe limitations that reduce the choice of plants or require special conservation practices, or both.
- Class IV: Soils with very severe limitations that restrict the choice of plants or require very careful management, or both.
- Class V: Soils that have little or no erosion hazard but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife food and cover.
- Class VI: Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, range, woodland, or wildlife food and cover.
- Class VII: Soils have very severe limitations that make them unsuited to cultivation, and their use should be restricted largely to grazing, woodland, and wildlife or water supply or to aesthetic purposes.
- Class VIII: Soils have very severe limitations that make them unsuited to cultivation, and their use should be restricted largely to grazing, woodland, and wildlife or water supply or to aesthetic purposes.

In the past, soils that fell into Class I, II, and III of the National Resource Conservation Service capability unit classification system were considered prime agricultural land. Presently the National Resource Conservation Service has developed a new system for evaluating agricultural lands called Land Evaluation and Site Assessment. This system uses a more detailed consideration of soil capability and potential yields and provides for the assessment of factors beyond soil productivity in the determination of agriculture potential. Figure 2-5 Soils Map, shows environmentally sensitive areas (bottomlands, terraces, foothills, etc.) such as highly erodible soils, hydric soils, and the leaching potential of soils. This map was developed using the St. Croix County digital soil survey and by converting applicable sheets of the Pierce County Soils Survey into electronic GIS versions.

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City of River Falls
Sewer Service Plan



Soils Map

- Highly erodable
- Potentially erodable
- Hydric soil
- Inclusion
- Major Roads
- County Boundary
- City or Town Boundary
- Lakes & Rivers

Figure 2-5

2.6 POPULATION

In the development of a sewer service area water quality management plan, it is important to know that a relationship exists between all planning elements and that these elements must be considered in the formulation of the plan. There is a bond between population, environment, and land use. Population affects land use through the environmental and geographic features of the community, and the geography dictates to some extent the desirability of the community and the location of certain land uses. These planning elements of population, environment, and land use serve as indicators for the future growth and vision of the community.

2.6.1 Historic Population Trends

As stated above in Section 2.1 Evolution of a Land Use Pattern, River Falls has experienced tremendous growth since 1900. After the arrival of Joel Foster in 1848, River Falls experienced relatively slow growth until 1940. Most of the growth has occurred since 1940. With a population count of approximately 11,696 in 1999, River Falls has experienced an approximately 450% increase. The following Table 2.2 illustrates the growth trends in the area since the 1900s and shows that River Falls is surrounded by four towns and two counties that have become a multigrowth area. The following sections contain information on the population characteristics of the City of River Falls. Data was obtained from the U.S. Census, Bureau of Information; the City of River Falls; and governmental units.

Table 2.2
RIVER FALLS AREA POPULATION HISTORY

Year	City of River Falls		Surrounding Towns*		Pierce and St. Croix Counties	
	Population	% Change	Population	% Change	Population	% Change
1900	2,008		3,299		50,773	
1910	1,991	-80.0%	3,033	-8.1%	47,989	-5.5%
1920	2,273	14.2%	2,990	-1.4%	47,769	-0.5%
1930	2,363	4.0%	2,819	5.7%	46,498	-2.7%
1940	2,806	18.7%	2,558	-9.3%	46,313	-0.4%
1950	3,877	38.2%	2,633	2.9%	47,353	2.3%
1960	4,875	25.7%	3,010	14.3%	51,667	9.1%
1970	7,238	48.5%	4,526	50.4%	61,006	18.1%
1980	9,036	24.8%	6,503	43.7%	74,411	22.0%
1990	10,610	17.4%	7,052	8.4%	83,016	11.6%

* Troy, Kinnickinnic, River Falls, and Clifton
Source: U.S. Census, Bureau of Information

2.6.2 Existing Population

River Falls and the surrounding communities have all experienced rapid growth between 1970 and 1990, which can be seen by comparing their growth rates to Pierce County (5.2%), St. Croix County (16.2%), the State (4%), and the nation (9.8%). When comparing growth rates with other communities, it is important to note that River Falls, with a 1990 population of 10,610, is the largest of the cities in this comparison.

The area surrounding River Falls has also shown considerable population growth. River Falls has been a growing city located within a growing region. Table 2.3, shows a significant growth of population in the towns surrounding River Falls. In the 20 years from 1970 to 1990, Clifton Town increased by 83%, Kinnickinnic Town by 51%, Troy Town by 88%, and River Falls Town by 18%. In 1990, with a population of 7,052, the surrounding towns have increased by 55.8%. Since 1990, the trend has continued. There has also been a noted rise in the equalized value of rural residential housing. There has also been a rise in the nonfarm population within the towns and counties, as shown in Table 2.4. The population trends of River Falls and its surrounding towns and counties have taken a consistent upward turn. According to the projections by the West Central Wisconsin Regional Planning Commission, Troy Town will continue to grow faster than the rest of the county. These trends have many causes and will impact on the environment and will increase provisions of services, infrastructures, and transportation.

Table 2.3
POPULATION GROWTH IN THE RIVER FALLS AREA

	City of River Falls	Clifton Town	Kinnickinnic Town	Troy Town	River Falls Town	Pierce County	St. Croix County
1970	7,238	612	755	1,517	1,642	26,652	34,354
(%)	(24.8)	(59.3)	(39.2)	(52.2)	(32.0)	(16.9)	(25.9)
1980	9,036	975	1,051	2,309	2,168	31,149	43,262
(%)	(17.4)	(14.8)	(8.4)	(23.4)	(-10.3)	(5.2)	(16.2)
1990	10,610	1,119	1,139	2,850	1,944	32,765	50,251

Source: U.S. Census (1990)

Table 2.4
RIVER FALLS RURAL POPULATION IN 1990

Population	Kinnickinnic	Troy	Clifton	River Falls
Farm	212	283	194	148
Nonfarm	907	1,661	945	846
Total	1,119	1,944	1,139	994

Source: Bureau of Intergovernmental Relations (1990)

2.6.3 Population Projections

Estimating population projections is much like predicting the weather. Although an effort is made to estimate an actual temperature, it is more important to forecast the trend that will occur. In the instance of population, it is important to identify a population growth or decline. All indications are that the population will continue to increase but not as rapidly as between 1960 and 1980. Elements that will impact, guide, and manage growth are: (1) proximity to the Twin City Metropolitan Area, (2) general land use policies, (3) improved infrastructure such as upgrading the State Highway from a two lane to a four lane and availability of water sewer and services, (4) future land use plans and zoning, and (5) boundaries such as an urban area boundary, extraterritorial boundary, and a sewer service area boundary.

There are various ways to project populations for the year 2020. Many factors, such as location, annexation, commercial and industrial development, and historic trends will contribute to a continuing growth in population during the next 20 years. As noted above, outside forces, such as the growth of the Twin Cities, the towns, and Counties of St. Croix and Pierce, will have an influence as will the change from two to four lanes on State Trunk Highway 35 connecting River Falls with the Metropolitan Area. Table 2.5 provides population projections from a variety of sources and models for the City of River Falls. In 1992, the West Central Wisconsin Regional Planning Commission provided population projections for the years 2000 to 2020 for the City of River Falls and for St. Croix and Pierce Counties. The Wisconsin Department of Administration also provided population projections. Table 2.6 shows a projected growth of 4,536, from 12,557 in the year 2000 to 17,093 in the year 2020.

**Table 2.5
POPULATION PROJECTIONS - CITY OF RIVER FALLS**

Source	2000	2010
River Falls 201 Plan	15,041	----
River Falls 1988 Park Plan	17,752	----
West Central WI Regional Planning Commission (low)	11,822	13,412
West Central WI Regional Planning Commission (high)	15,554	20,388
River Falls Planning Department (numeric)	10,802	11,685
River Falls Planning Department (geometric)	13,427	6,366
River Falls Planning Department (linear)	11,894	13,476
River Falls Planning Department (exponential)	14,047	17,993
Farmland Preservation Plans (MCD Models)	11,266	12,630
Wisconsin Department of Administration	11,762	12,720
Average	13,500	15,000

Trend: 10–25% Growth Per Decade

**Table 2.6
POPULATION PROJECTIONS BY COUNTY, 2000–2020**

County	Year		
	2000	2010	2020
Pierce	10,464	12,427	14,246
St. Croix	2,093	2,486	2,847
Total	12,557	14,913	17,093

Source: West Central Wisconsin Regional Planning Commission (1992)

2.6.4 University of Wisconsin-River Falls

The UWRF, formerly known as River Falls State College, was incorporated in 1875. The University, as an entity, impacts the community in many ways. As a population group, the University population is the largest, single, identifiable segment. UWRF indicates future growth and enrollment as follows:

A full-time equivalent (FTE) is considered 12 credits. Total FTE is usually 90 to 92% of the head count (HC). Head count figures include the number of part-time students. The University’s population has an important impact on the City of River Falls in terms of housing, jobs, and transportation; recreation; water consumption; and waste water processing. In this population analysis, 50% of the FTE students would be considered residents of River Falls (58% in 1999). For 1990, 50% would be 2,307 student residents (4,614 full-time). Tables 2.7 and 2.8 provide the UWRF enrollment history and the City of River Falls and UWRF population history comparison.

**Table 2.7
UWRF ENROLLMENT HISTORY**

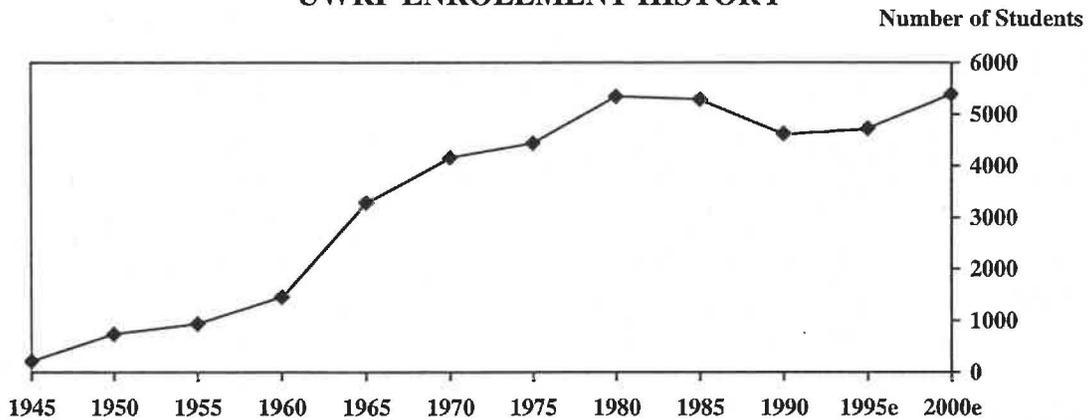


Table 2.8
UNIVERSITY OF WISCONSIN-RIVER FALLS ENROLLMENT
Full-time Equivalent (FTE) and Official Head Count (HC)

Year	FTE	HC	Year	FTE	HC
1980	5,220	5,339	1991	4,868	5,564
1981	5,372	5,502	1992	4,844	5,440
1982	5,261	5,334	1993	4,728	5,263
1983	5,199	5,368	1994	4,864	5,422
1984	5,066	5,287	1995	4,719	5,186
1985	4,954	5,284	1996	4,847	5,326
1986	5,185	5,613	1997	4,997	5,491
1987	5,095	5,420	1998	5,146	5,655
1988	5,017	5,544	1999	5,288	5,811
1989	4,912	5,236	2000	5,382	5,914
1990	4,614	5,196			

RIVER FALLS-UWRF
POPULATION HISTORY COMPARISONS

Year	University	City
1950	731	3,877
1960	1,445	4,875
1970	4,156	7,238
1980	5,339	9,036
1990	4,614	10,610
2000	5,382	12,557

2.6.5 Median Age

Comparing the median age of residents in River Falls with those in the counties, region, state, and nation shows that youth is a dominant characteristic of the city's population. River Falls has a very young population. Although it is generally becoming older as the baby-boomer generation ages (Table 2.9 River Falls 1990 Comparative Median Age). It is important to note that UWRF has an impact on the dominant character of the city's population, which is reflected the number of people in the 15 to 24 age group.

In comparison to the population characteristics of surrounding towns and similar size communities in the State of Wisconsin, the City of River Falls, as of the 1990 census, has a younger median age. The City of River Falls also has a smaller population of persons in the under 18 age group and a smaller population of persons in the 65 and over age group. The towns show a higher percentage of children under 18, indicating that young childbearing couples are selecting rural home sites. (Table 2.10)

Table 2.9
RIVER FALLS 1990 COMPARATIVE MEDIAN AGE

Location	Median Age (in years)
River Falls	23.29
St. Croix County	28.33
Pierce County	30.59
Region	32.40
Wisconsin	32.90
United States	32.90

Table 2.10
1990 POPULATION—AGE AND SEX DISTRIBUTION
CITY OF RIVER FALLS AND SURROUNDING AREA

Location	Population	% Male	% Female	% Under 18	% 65+	Median Age
River Falls	10,610	48.2	51.8	20.5	8.3	24.1
Pierce County	32,765	49.8	50.2	27.0	10.6	29.3
Clifton Town	1,119	52.4	47.6	31.1	4.9	33.1
River Falls Town	1,944	50.1	49.9	30.7	6.4	32.1
St. Croix County	50,251	49.9	50.1	30.1	10.1	31.6
Kinnickinnic Town	1,139	48.1	51.9	27.7	13.8	35.8
Troy Town	2,850	52.0	48.0	30.4	5.1	31.3
State of Wisconsin	4,891,769	48.9	51.1	26.4	13.3	32.9

Source: U.S. Census (1990)

2.6.6 Race

River Falls has a relatively low minority population. The largest minority group is of Asian or Pacific Islander origin. This group totals 108 or 1.02% of the total population in 1990. The other minority groups combined make up less than 1% of the city's population as a whole. (Table 2.11 Race)

Table 2.11
RACE

Ethnic Background	Number	Percent
White	10,330	97.36
Black	60	0.57
American Indian, Eskimo or Aluet	23	0.22
Asian or Pacific Islander	108	1.02
Other Race	20	0.19
Total	10,610	100.00

2.7 ECONOMIC DEVELOPMENT

A review of economic influences impacting the City of River Falls begins with the recognition of three major actor groups: (1) UWRF, (2) Twin Cities job market, and (3) local industries.

2.7.1 The University of Wisconsin-River Falls

The University impacts the economy of River Falls both in employment and retail (Table 2.12). UWRF employs approximately 650 people throughout the community. This results in approximately 500 jobs in the service sector, such as restaurants and taverns. In combination, service sector jobs represent almost one-third of all employment.

Table 2.12
ECONOMIC CHARACTERISTICS

Comparison of River Falls with Other University of Wisconsin Communities

Community	Unemployed	Manufacturing	Median Family Income	Poverty	Population
River Falls	6.3%	9.0%	\$30,535	14.7%	10,610
Menomonie	7.6%	7.4%	\$21,392	28.8%	13,547
Superior	9.8%	4.4%	\$20,905	17.2%	27,134
Whitewater	5.8%	5.2%	\$19,886	30.7%	12,636
Eau Claire	5.9%	6.5%	\$24,736	18.6%	56,930
Platteville	5.1%	5.0%	\$23,911	20.4%	9,708
Stevens Point	6.0%	5.9%	\$22,194	21.6%	23,006
LaCrosse	6.2%	8.2%	\$21,947	21.0%	51,003
Oshkosh	4.8%	13.3%	\$25,168	12.6%	55,006

Source: U.S. Census (1990)

2.7.2 The Twin Cities

An economic influence impacting River Falls is the Twin Cities job market. The 1990 census figures show that over one-half of River Falls' employable population works outside the community (Table 2.13 and 2.14). In 1999, 53.3% of the workers reported traveling 45 or more minutes to their jobs. This factor is evident in the high median family income compared to other university communities.

In comparison to similar communities, River Falls has a higher percentage of residents (workers 16 years and over) who are employed outside the community. Of the total workforce (5,781), 2,787 report working in the area of residence while 2,994 report working outside the area of their residence. (U.S. Census 1990, Table 172).

Table 2.13
EMPLOYMENT OUTSIDE
THE COMMUNITY

Community	Percent
River Falls	54.4
New Richmond	46.5
Hudson	51.7
Prescott	9.4
Pierce County	51.8
St. Croix County	50.4

Sources: U.S. Census (1990), City of River Falls Comprehensive Parks & Rec. Plan (1995)

Table 2.14
RIVER FALLS RESIDENT
COMMUTING MODES

Transportation	Percent
Drive Alone	66.8
Carpool	4.0
Public Transport	1.0
Walk/Work at Home	0.8
Other Means	17.4

Sources: U.S. Census (1990), City of River Falls Comprehensive Parks & Rec. Plan (1995)

2.7.3 Local Industry

Local industries employ 400 people, or approximately 9% of the labor force. This is only slightly behind other Wisconsin university communities. In general, local employment opportunities have been very good, which has led to a low unemployment rate when compared with other university communities. Tables 2.15 and 2.16 outline employment opportunities along with employment by industry.

Table 2.15
LOCAL INDUSTRIAL EMPLOYMENT

Employer	Employment Sector	Number of Employees
UWRF	Education	650
River Falls School District	Education	480
The Shannon Group (Kolpak)	Refrigeration Equipment	230
Allina Corp.	Medical/Health Care	200
River Falls Care Center	Nursing Home/Child Care	180
U.F.E., Inc.	Plastic Injection Molding	135
City of River Falls	Government	86
Smead Manufacturing Co.	Mfg. Filing Supplies	80
Quadion Company	Plastics	40*
Best Maid	Cookie Bakery/Distributor	30*

* Community Development Department Estimates
Source: Wisconsin Manufacturers Register (1995)

In 1995, a labor market study was completed by UW-Extension for St. Croix and Pierce Counties and points to a tight labor market. Some of the information includes the following:

- Thirty-one percent of full-time workers living in the county changed jobs last year.
- Only 7% of full-time workers say they are looking for new jobs.
- Only 7% of part-time workers are looking for full-time work.
- Seventy-five percent of commuting workers would prefer to work closer to home.

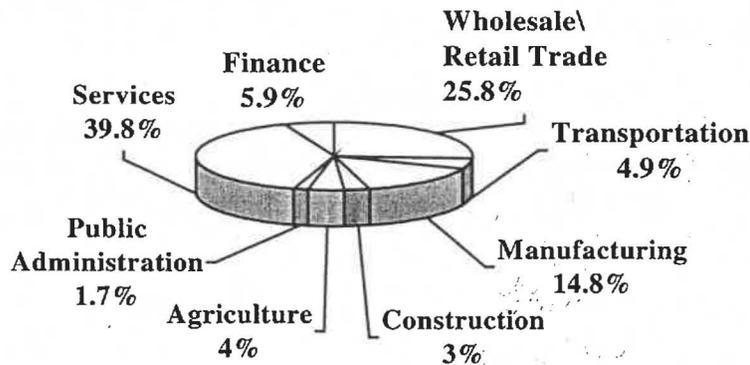
- Ninety percent of those commuters would consider taking a pay cut to work closer to home.
- The average wage of production workers commuting to Minnesota was \$13.50.
- The average wage of St. Croix County production workers was \$9.00.

Table 2.16
EMPLOYMENT BY INDUSTRY, 1990

Industry	Number of Employees
Services	2,038
Retail Trade	1,263
Manufacturing	757
Finance, Insurance, Real Estate	302
Transportation, Communication, & Utility	251
Agriculture	189
Construction	176
Public Administration	87
Wholesale Trade	56
Total	5,119

As noted above, the residents of River Falls work in a variety of occupations. Table 2.17 profiles what residents of River Falls do for work. This profile does not necessarily mean that the work is done in River Falls. What the profile does show is that professional services make up the largest share at 39.8%, and wholesale/retail trade at 25.8% is the second largest category. Service employment includes health services such as hospitals, physicians, nursing care facilities, etc. The major employment categories in the trade sector include eating and drinking places, grocery stores, new and used car dealers, and lumber and building materials outlets.

Table 2.17
LABOR FORCE PROFILE, 1990
River Falls Residents



There are a variety of occupations for residents of River Falls. However, there are many ways to measure their incomes. Household income includes the income of all members sharing a housing unit (family and nonfamily added together). Family income refers to the income from related individuals living in a household. Nonfamily income is the income from unrelated individuals in a household. Per capita income averages the total income in the community by the population to obtain an average. Tables 2.18 and 2.19 represent comparisons of median incomes in dollars.

Table 2.18
DOLLARS IN 1990

	River Falls	Pierce County	St. Croix County	Wisconsin	United States
Median Household Income	30,535	30,520	36,716	29,442	30,056
Median Family Income	39,609	35,677	41,843	35,082	35,225
Median Nonfamily Income	17,184	15,847	19,921	16,027	17,240
Per Capita Income	11,991	12,203	14,912	13,276	14,420

Table 2.19
RIVER FALLS INCOME IN DOLLARS

	1970	1980	1990
Median Household Income	--	15,439	30,539
Median Family Income	10,159	21,132	39,609
Median Nonfamily Income	--	--	17,184
Per Capita Income	2,764	5,940	11,991

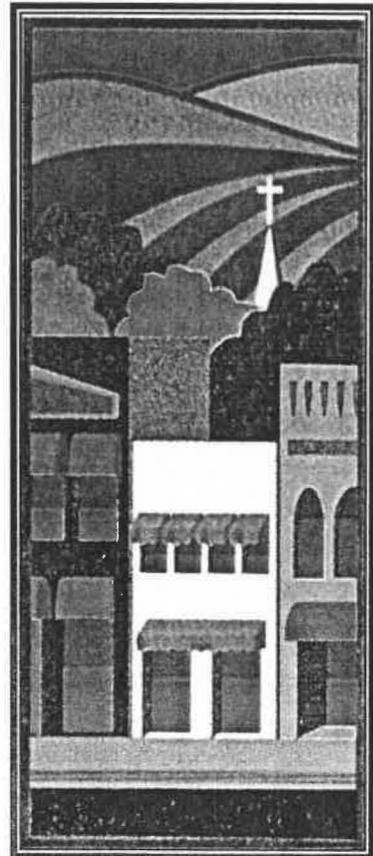
Source: U.S. Census

The economic well being of a community is also measured by the poverty status as set by the federal government (Table 2.20). Poverty levels are revised annually. As an example, for a family of four, the average poverty threshold for 1970 was \$3,745, for 1980 was \$7,412, and for 1990 was \$12,674. In 1989, the national percentage of residents below the poverty level was 13.1%. The percentage of population below the poverty level increased in River Falls from 5.7% in 1970 to 6.6% in 1990. This increased percentage is still lower than in Pierce County and the state.

Table 2.20
PERCENT BELOW POVERTY LEVEL IN RIVER FALLS

Year	River Falls	Pierce County	St. Croix	Wisconsin
1970	5.7%	9.7%	6.6%	7.4%
1980	9.7%	6.7%	5.3%	17.0%
1990	6.6%	10.4%	6.4%	10.7%

3
**INFRASTRUCTURE
AND SERVICES**



3. INFRASTRUCTURE AND SERVICES

River Falls has been experiencing dramatic and rapid changes. More are expected as the city's population continues to increase, as additional residents are employed in the Twin Cities area, as enrollment at River Falls State College increases and as more new industries move into the city. The community is already suffering from "growing" pains, and this situation will be intensified because of increased demands for more and better housing and community facilities including schools, parks, and recreation space, streets and utilities. (1965 City of River Falls Comprehensive Plan)

This chapter provides a context for the existing infrastructure and services in the community. By understanding the past and present conditions, we are then able to plan, guide, and manage future resources and demands. The following themes apply to this chapter.

THEMES

- ❑ **Quality of Life** - Enhance the quality of life of the community and ensure provision of community services for residents.
- ❑ **Sustainable Growth** - Ensure that development is sustainable and that growth, conservation, redevelopment, and natural resource protection are balanced.
- ❑ **Character** - Maintain and respect River Falls' unique personality, sense of place, and character.
- ❑ **Urban Form** - Promote a compact urban form and encourage sensitive/compatible infill development.
- ❑ **Water Quality** - Meet the requirements of the Federal Clean Water Act and WDNR Chapter NR 121, Wisconsin Administrative Code.
- ❑ **Regional Perspective** - Maintain a regional growth management perspective and work with other private and governmental entities towards that goal.
- ❑ **Housing** - Actively participate in the creation of housing.

3.1 WATER SERVICES

3.1.1 Water System

Water service has been provided for all City of River Falls residents by the City of River Falls through the Municipal Utility since 1894. As of January 2000, water was provided to approximately 3,400 customers. The River Falls Municipal Utility (Municipal Utility) is operated for and on the behalf of the City of River Falls. The existing service area includes all land within the corporate limits of the city, with some water lines extending within the extraterritorial zone (ETZ). The latter are based on agreements made between Municipal Utility and the individual owners of rights-of-way. Figures 3-1 and 3-2 show the existing water distribution and available fire flow contours for the city. Municipal Utility is treated as a separate entity with individually maintained booking and accounting records. They are responsible for the management of the water system.

The *River Falls Municipal Utilities Comprehensive Water Plan* of October 1999 will lead the effort for regional water planning. Growth patterns identified through this plan will be utilized for determining the need for future supply development.

3.1.2 Water System Facility

The main features of the city's water supply system are wells, storage tanks, and the distribution network. Currently, River Falls operates municipal wells that utilize the underlying Ordovician and Cambrian Sandstones. Specifically the wells obtain the city's water supply from the Jordan Aquifer. Total production for 2000 is predicted to be 1,200,000 gallons per day (gpd) with a per capita water usage of approximately 94 gpd.

Within the City of River Falls there are presently four municipal wells operating and two private wells. The following is a history of wells in the City of River Falls:

- **Well One**, located on North Main Street, has been and will stay abandoned. In 1965 this 504-foot well had a rated pump capacity of 400 gallons per minutes (gpm).
- **Well Two**, located on Oak Street, was constructed in 1948. This well is approximately 401 feet deep, and the groundwater flow is from the southwest. This well was capable of supplying 600 gpm in 1965, 580 gpm in 1987, and 560 gpm in 1995. In 1998, Well Two was reconstructed, and the pumping capacity for the year 1999 increased to 1,180 gpm. The electrical system for the well house was also updated.
- **Well Three**, located on Cedar Street, is west of the Kinnickinnic River. This well was drilled in 1953 to a depth of approximately 379 feet, and the groundwater flow is from the southwest. This well was capable of supplying 575 gpm in 1965, 635 gpm in 1987, and 680 gpm in 1995. In 1999, Well Three was also reconstructed which increased the pumping capacity to 1,200 gpm. The electrical system was also updated.
- **Well Four**, located on Sycamore Street, reaches a depth of 415 feet and was placed into service in 1967. This well was capable of supplying 985 gpm in 1987 and 1010 gpm in 1995 and 2000. Groundwater flow is from the west to northwest.
- **Well Five**, located on Division Street, was constructed in 1979. This well is approximately 440 feet deep and was capable of supplying 1500 gpm in 1987, 1,509 gpm in 1995, and 1,550 gpm in 2000. Groundwater flow is from the south to southwest.
- **Private Wells.** The University of Wisconsin-River Falls (UWRF) well and the Golf Course well are private. The golf course well, which is a major private well, provides water only to the golf course. The well is approximately 451 feet in depth and test pumped at 757 gpm. The golf course well has a calculated specific capacity of 30 gpm per foot of draw down; a specific capacity that is greater than the other wells. This well is located to the east at a higher elevation and obtains most of its water from the Prairie DuChien aquifer.

Chapter 3 Infrastructure and Services

City of River Falls Sewer Service Plan

Existing Water Distribution

-  less than 2" line
-  4" line
-  6" line
-  8" line
-  10" line
-  12" line
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers

Data extracted from River Falls Municipal
Utilities Comprehensive Water Plan
October 1999

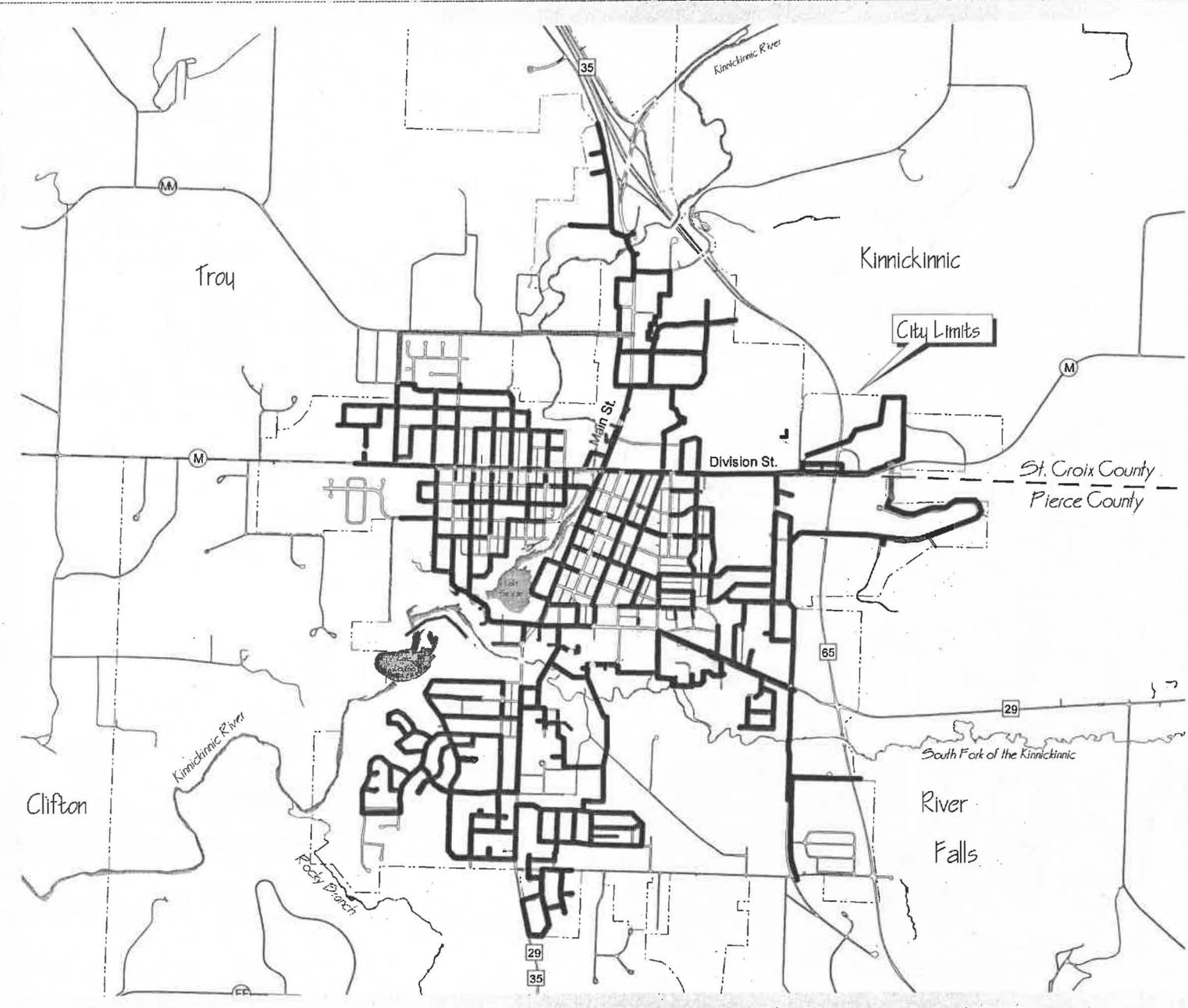


Figure 3-1

Chapter 3 Infrastructure and Services

City of River Falls Sewer Service Plan

Available Fire Flow Contours (gpm)

-  1000
-  2000
-  3000
-  Area with less than 2000 GPM fire flow
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers

Data extracted from River Falls Municipal
Utilities Comprehensive Water Plan
October 1999

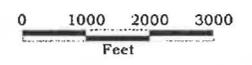
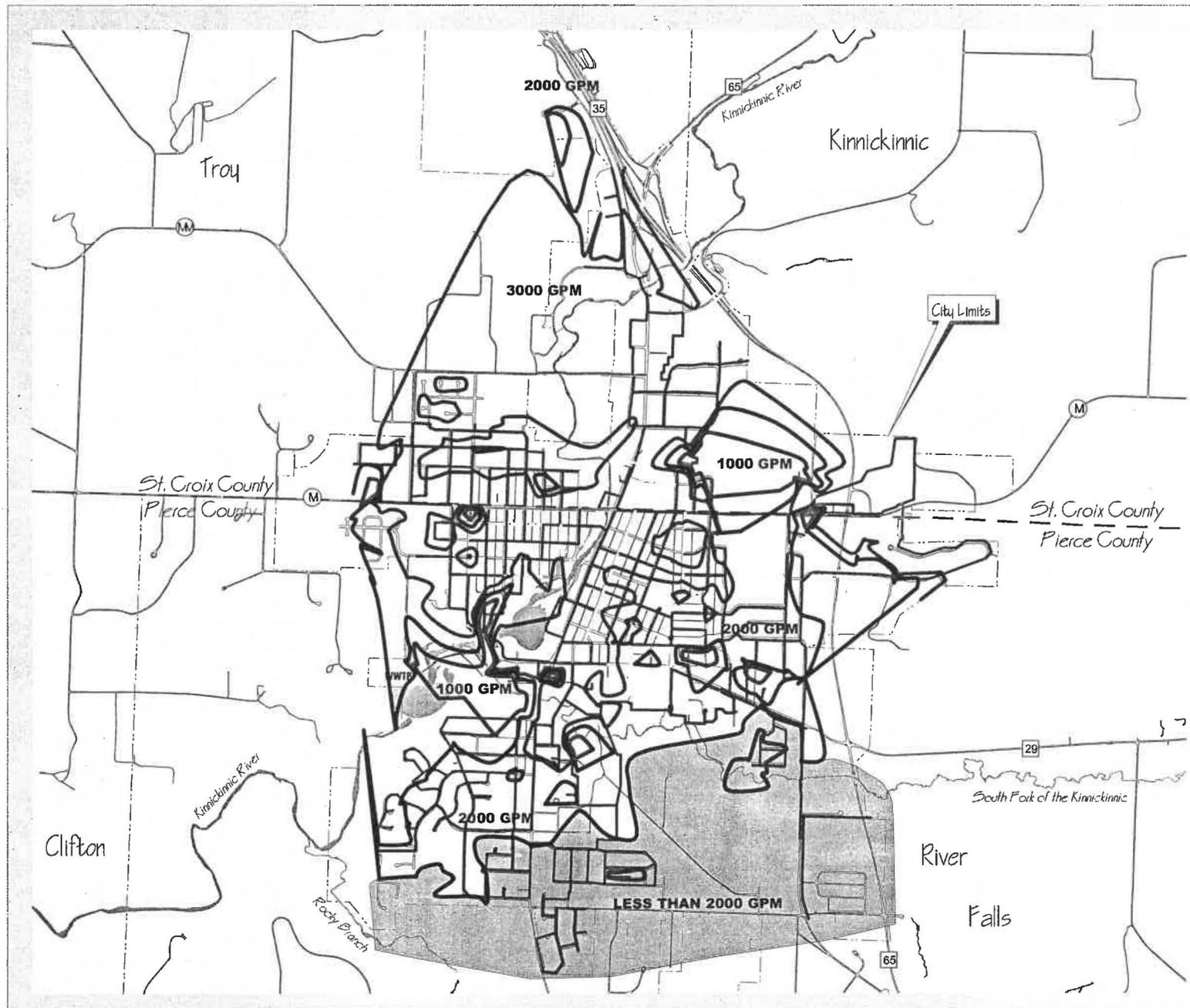
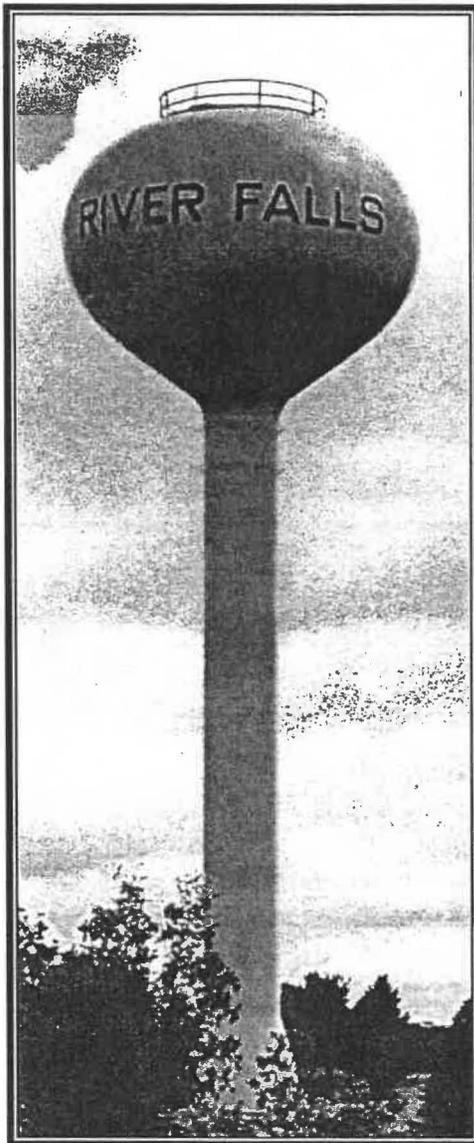


Figure 3-2



Storage and Distribution Network

Water is treated with fluoride, chlorine, and phosphate prior to delivery into a network of storage tanks and approximately 40 miles of transmission and distribution lines. Approximately five miles of the water mains are less than six inches in diameter. The smallest acceptable pipe allowed by the Wisconsin Department of Natural Resources (WDNR) for new mains is six inches. The smallest acceptable pipe allowed by the City of River Falls for new mains is eight inches. The largest pipe size used in the River Falls water system is 14 inches. The majority of pipe is either cast iron or ductile materials. The storage system consists of three water storage reservoirs ranging in capacity from approximately 250,000 to 750,000 gallons, totaling approximately 1,300,000 gallons. Ground storage capacity is 750,000, and elevated storage capacity is approximately 550,000 gallons.



Reservoir Three River Falls Golf Course

City of River Falls Reservoirs

- **Reservoir One** is located north of Division Street on top of Mound Park. The capacity was upgraded from 200,000 gallons to 750,000 gallons at an overflow elevation of approximately 1,056 feet U.S. Geological Survey (USGS) elevation (1989).
- **Reservoir Two** is located on Sycamore Street, adjacent to Well Four. This elevated tank has a storage capacity of approximately 300,000 gallons and was constructed in 1967.
- **Reservoir Three** is located on the northeastern edge of the city limits, adjacent to the River Falls Golf Course and near the end of Golf View Drive. This is the most recent of the above groundwater storage systems and was constructed in 1991. The storage capacity of this elevated tank is approximately 250,000 gallons.

3.1.3 Water Supply

Currently, River Falls operates four municipal wells that obtain a water supply from the Jordan Aquifer. Additional information on the four wells is presented in Table 3.1. Table 3.2 contains information for the Golf Course well, which is a major private well in the service area.

City of River Falls Well Fields

Recharge area information is based on *Ground-Water Resource and Geology of St. Croix County, Wisconsin* by R. G. P. Borman, USGS, 1976 and *Generalized Water Table Evaluation Map of the St. Croix County, Wisconsin* by I. D. Lippelt, 1990. The groundwater flow in this area and the recharge follows the Kinnickinnic River. Groundwater flow in this area is generally from the northeast to the southwest.

Table 3.1
EXISTING WELL INFORMATION

Well	1995			1999			Well Depth (feet)	Const.	Reconst.
	gpm	gpd	Yield	gpm	gpd ²	Yield ¹			
Well Two (Oak St.)	560	270,000	20	1,180	570,000	20	401	1948	1984, 1998
Well Three (Cedar St.)	680	320,000	16	1,200	580,000	18	379	1953	1979, 1990, 1999
Well Four (Sycamore St.)	1,000	480,000	25	1,010	480,000	25	415	1967	1995
Well Five (W. Division)	1,510	720,000	13	1,550	740,000	13	440	1979	1992
Total	3,750	1,790,000		4,940	2,370,000				

1 = Yield (specific capacity) units are in gpm/ft of draw down

2 = GPD rating is based on eight-hour run time

Table 3.2
EXISTING MAJOR PRIVATE WELLS

Well	Date Drilled	Depth (feet)	Formation	Static Water	Test Pumped (gpm)	Drawdown (feet)
Golf Course Well (Private)	—	451	25' into sandstone	1,180	757	25' 4"

Precipitation is the source of all groundwater in the region. In this area groundwater supplies 100% of the drinking water. Recharge is greatest in the areas where sand and gravel are at the surface. Areas with thin, unconsolidated material overlaying dolomite that contains fractures and solution channels has a higher rate of recharge. The recharge area for the municipal wells was determined from groundwater flow contours. The main recharge area for all of the wells is located generally east and north of the well sites.

The municipal wells utilize the underlying Ordovician and Cambrian Sandstones. All are located within the city limits. In Prairie DuChien/Jordan (Trempealeau) aquifer is the major principal groundwater source in the region. As noted above, the wells range in depth from 379 feet to 440 feet. None of the wells are located in floodplains.

Sewer Service Plan

City wells are on an eight-year routine maintenance schedule. Adding new wells in the city or replacing existing ones is difficult and expensive. Most of the city wells were drilled before 1967 and some date back as far as 1948. Only one new well has been drilled in the city since 1967.

3.1.4 Water Demand

Municipal Utility has the responsibility of ensuring that an adequate production margin exists between total demand and total supply. A reserve margin will help ensure an adequate supply of water for future growth as well as for present demand.

The current average daily usage is approximately 1,200,000 gallons. The total water pumped in 1998 was 449,571,000 gallons. The per capita water usage is approximately 94 gpd. The projected water usage over the next 20 years is estimated to increase at the rate of 1.7% each year. The projected daily usage in 20 years is 1,600,000 gallons. This is a result of the anticipated increase in population (Table 3.3).

Table 3.3
WATER DEMAND PROJECTIONS*

	1995	2000	2005	2010	2015	2020
Population	10,610	13,000	14,000	15,000	16,000	17,000
Average Day (gpd)	1,100,000	1,200,000	1,320,000	1,410,000	1,500,000	1,600,000
Max. Day (gpd)	2,530,000	2,760,000	3,036,000	3,243,000	3,450,000	3,680,000
Max. Day (gpm)	1,750	1,900	2,100	2,250	2,400	2,550
Peak Hour(gpm)	2,270	2,470	2,730	2,920	3,120	3,310

Sources: River Falls Municipal Utility Comprehensive Water Plan (1999), Population Projections - River Falls Master Plan, Update and Summary (1995)

The maximum day usage for 1995 was approximately 2.5 million gallons. The projected 2020 maximum day is 3.7 million gallons. The projected maximum day was calculated using the current maximum day to average day ratio and then applying that ratio to the 20 year projected average day. The 1995 peak hour (maximum day) was 2,270 gpm, and the projected 2020 peak hour (maximum day) is 3,310 gpm. The peak hour was calculated using a peaking factor of 3.0 over average day usage.

The River Falls water system provides fire flow volumes to assist the Fire Department in fighting fires. The upper limit of fire flow that River Falls is expected to provide is 3,000 gpm. The 3,000 gpm fire flow is an upper limit established by the Insurance Services Office.

3.1.5 Current Water Planning Efforts

The Municipal Utility prepared a *Comprehensive Water Plan* in the fall of 1999. This study was intended to cover five major, technical, areas: (1) system demands, (2) supply evaluation, (3) water treatment review, (4) distribution system modeling, and (5) Capital

Improvement Program (CIP). These five technical sections and a wellhead protection plan for the city wells are detailed in this 1999 *Comprehensive Water Plan*.

3.1.6 Water and Sewer Facilities in Rural Residential Areas

The counties and towns will review any new residential cluster or subdivision development to determine whether individual water and/or sanitary sewer systems will be sufficient to safeguard public health. This decisions will be based on local conditions and the proposed placement of the houses. The counties and towns will also seek advice from appropriate state agencies. In all cases, septic tank siting, design, and construction requirements must be satisfied.

3.2 WASTEWATER

The Municipal Utility has managed the wastewater since 1930. The Municipal Utility performs all administrative duties, plant operation, plant maintenance, development and review, facility planning treatment, collection system maintenance and repair, and mapping and modeling of the city's sewer system. The wastewater service area generally includes land whose sewage can be drained by gravity or by the use of lift stations to the city's Wastewater Treatment Plant. This area includes all land within the city limits as shown in Figure 3-3 Current Sanitary Sewer Service Area and Figure 3-4 Current Sanitary Sewer Flow Diagram.

The sewer system in River Falls consists of a Wastewater Treatment Plant, four small pumping stations, and collection and intercepting pipes. The existing system is capable of expansion to the northwest and northeast with some expansion to the north and very minor expansion to the south.

The city's Wastewater Treatment Plant was constructed in 1962-1963 and relocated in to its present location south of Maple Street at the south end of a private road called Apollo Road along the eastern city limits and adjacent to the Kinnickinnic River. In 1968, an aerobic digester was added, and in 1980 major upgrades of the facility were performed to provide the current treatment capacity.

3.2.1 Collection System

The existing wastewater collection system consists of approximately 41 miles of sewer mains and currently serves an area of 1,720 acres (2.7 square miles). The plant is a secondary-type treatment system utilizing a modification of the activated sludge process. Treated effluent is discharged into the Kinnickinnic River upstream of the "lower dam."

In 1997, the plant was treating an average of approximately one million gpd, approximately one-half of the total capacity. Presently River Falls wastewater is collected at the treatment plant via four major collection routes.

Chapter 3 Infrastructure and Services

City of River Falls Sewer Service Plan

Current Sanitary Sewer Service Area

-  Common Interceptor
-  Lametti Interceptor
-  South Fork Interceptor
-  South Side Lake George Interceptor
-  Interceptor
-  Lift Station
-  Wastewater Treatment Plant
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers

Data extracted from River Falls Comprehensive Sanitary Sewer Study
October 1998

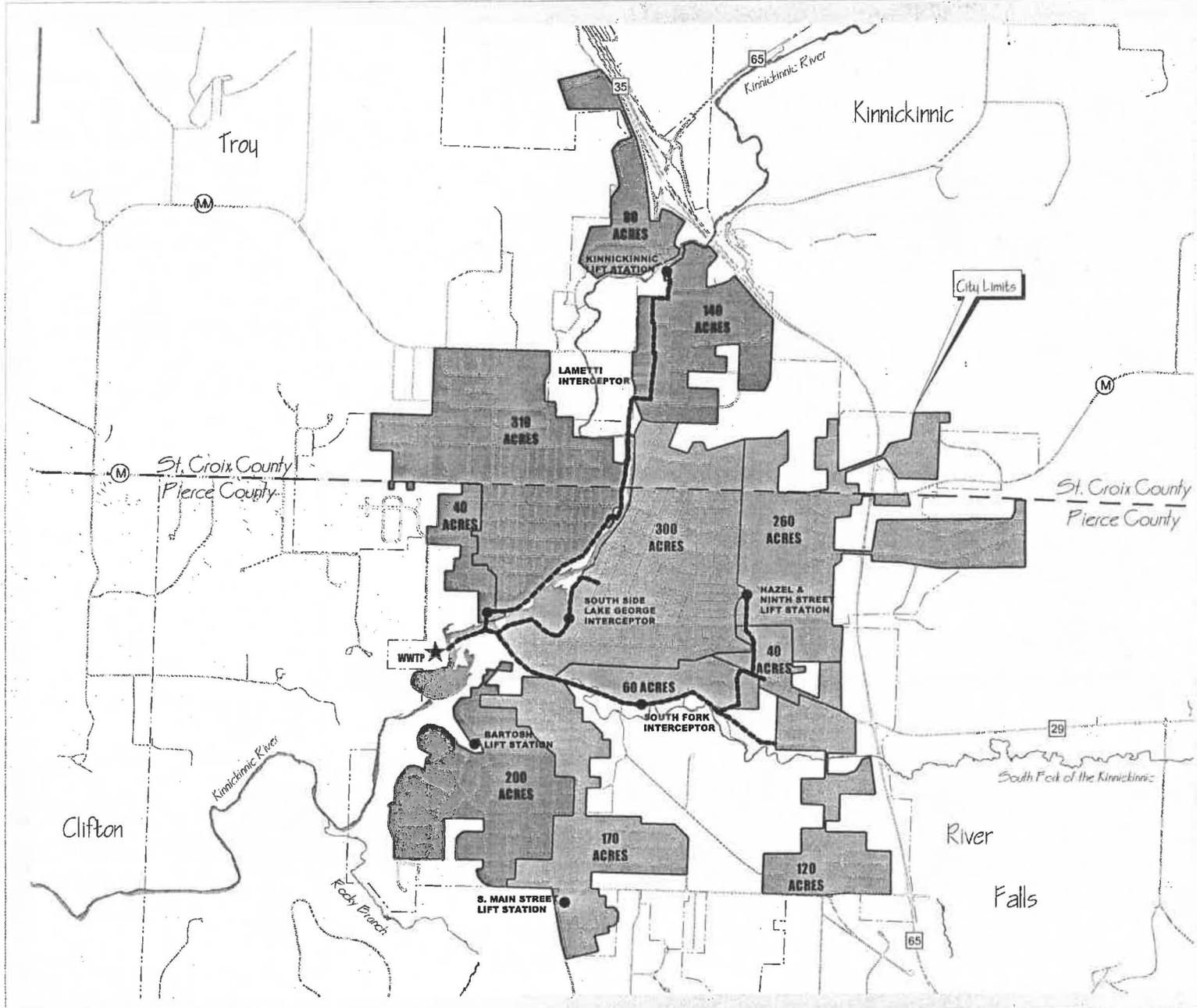


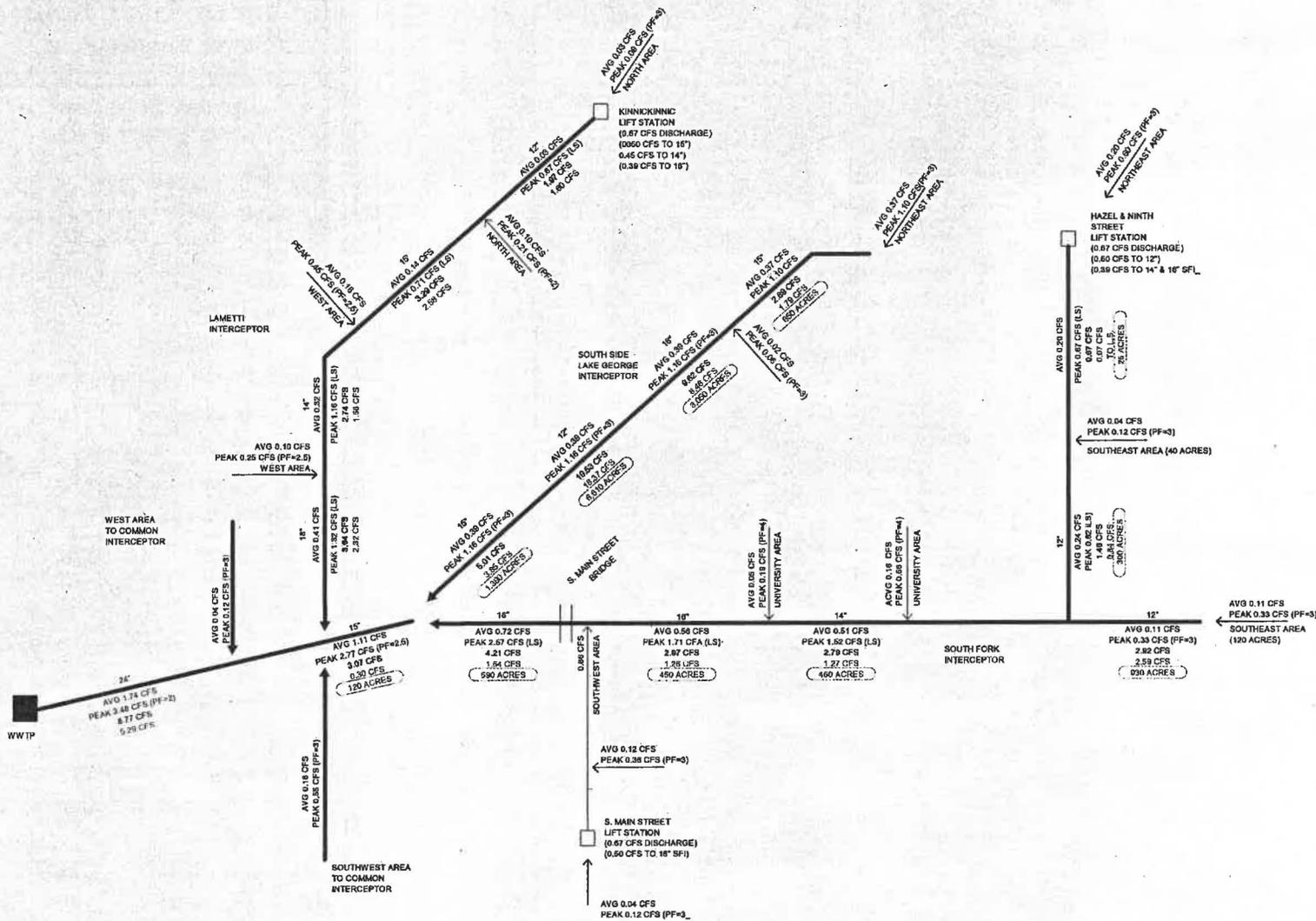
Figure 3-3

Chapter 3 Infrastructure and Services

City of River Falls Sewer Service Plan

Current Sanitary Sewer Flow Diagram

- 0.11 CFS Current Flow
- 2.92 CFS Pipe Capacity
- 930 ACRES Potential Future Service Area Based on Excess Capacity
- 1.52 CFS Monitored Flow
- (PF=3) Peak Factor = 3
- (LS) Peak Influences by Lift Station



Data extracted from River Falls Comprehensive Sanitary Sewer Study October 1998

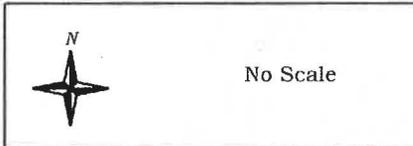


Figure 3-4

Sewer Service Plan

They are as follows:

- **Northeast.** The Walnut Street interceptor services the downtown portion of the city and the immediate adjoining areas east of the Kinnickinnic River. Discharge flow at the Hazel Street lift station was rerouted into another collection route to improve peak daily flow periods. Future plans call for the elimination of the Hazel Street lift station by gravity piping from Lake George to the station.
- **Southeast.** The South Fork interceptor serves the southern and eastern areas. New improvements to the system have been made. The lift station that services the southwestern portion of the city was replaced in 1991.
- **West.** The northwest interceptor, commonly known as the Mann Valley sewer, collects wastewater generated west of the Kinnickinnic River.
- **North.** The northeast interceptor, commonly known as the Lametti sewer, collects wastewater generated north of the Kinnickinnic River.

Several lift stations that are operated and maintained by the Municipal Utility are used because of topographical constraints. The City of River Falls Wastewater Treatment Plant was upgraded in 1980 to treat an average-day flow of 1.8 million gallons per day (mgd) and biochemical oxygen demand (BOD) loading of 3,150 lbs. BOD/day. Projected flows and BOD loading are summarized as follows:

Table 3.4
WASTEWATER TREATMENT PLANT
PROJECTED FLOWS AND BOD LOADINGS

Year	Flow (mgd)	BOD (lbs/day)
Design	1.8	3,150
2020	1.5–1.9	2,200–2,900
2050	2.4–3.4	3,600–5,300
2100	3.6–10.4	5,700–16,700

Source: *Comprehensive Sanitary Sewer Study* (1998)

3.2.2 Septic Systems

The adjacent towns and St. Croix and Pierce Counties are all working to protect groundwater through proper siting, design, and maintenance of all septic systems. Development in these rural areas will only be allowed where testing indicates that soils are suitable for on-site treatment systems over the long term. Septic tank sites and their design shall meet state requirements. A site proven suitable for a back up (replacement leaching field) for all septic systems will be required. A policy is being considered that will require septic systems to meet minimum standards when property is sold or

transferred by mortgage, contract for deed, or other device. The counties are presently working on an on-site system ordinance which would require an application and review procedure and requirements for the issuance of an on-site system permit. The counties intent is to have all applications include subsurface testing. Preliminary plats will be approved only upon a determination that the soils in the platted area generally are suitable for the installation of on-site systems consistent with the ordinance requirements. The ordinance will contain installation, inspection, and acceptance procedures. The ordinance will also include inspection and maintenance requirements. The program is intended to provide for record keeping, remedial action, enforcement, public education, and the bonding and licensing of installers and pumpers. It should be noted that septic systems are not allowed within the City of River Falls. The Towns of Kinnickinnic and Clifton do not have town land use plans. River Falls Town and Troy Town land use plans state the following in regard to septic systems:

Town of River Falls Septic Systems

The 1982 *Town of River Falls Land Use Plan* provides the following statement regarding soil suitability for septic systems: The soil suitability for on-site septic systems is very limiting in River Falls. Only 11% of the land area of the town has soils that are suitable for the installation of private septic systems as determined by the Soil Conservation Service (presently National Resource Conservation Service). Seventy-six percent (76%) of the town soils are classified as having severe or very severe limitations for septic systems. The remaining 13% of the soils have a moderate limitation that means a septic system can be installed with sufficient design modifications.

Town of Troy Septic Systems

The 1992 *Town of Troy Growth Management Plan* provides a map that delineates the limitation of soils to support septic systems. The map provides information regarding areas for good percolation that support septic systems; areas of moderate percolation that are slow and where drainage fields would need to be enlarged to ensure proper septic functions; and areas of severe percolation for septic systems. Areas near the St. Croix River are underlain by out-wash gravel that would pose very rapid percolation rates with minimal filtration of septic tank effluence. This can result in groundwater contamination. Areas in the eastern part of the town are underlain by clayey soils that provide a very slow percolation rate. Septic effluence simply could not move through the soil fast enough to allow effective septic tank function.

3.3 SOLID WASTE

Burning refuse has been the only disposal method employed for much of the century in the community. Although waste incineration has been practiced in the community, this practice was brought to an end within the city limits. In the last 10 years, the community has modified collection methods and made efforts to reduce the volume of solid waste; however, landfilling remains the form of disposal.

3.3.1 Disposal

The 16-acre community landfill located southwest of the city, which had been operating, is no longer operational. Solid waste and curbside recycling services in the city are now provided by Superior Services. Presently, the community delivers recyclable materials to Pierce County. The solid waste is transferred to the BFI owned Sarena Landfill and the St. Croix County incinerator. These facilities were designed for residential and most small commercial refuse.

The 1992 *Town of Troy Growth Management Plan* states that the solid waste is managed through the town's household waste disposal and recycling center. The center is located next to the town garage at the intersection of Townsvalley Road and Chinnock Lane. Residents pay an annual fee that allows them to drop off their household waste and recyclables. Household waste and recyclables are in turn transported and disposed of by a private hauler. Other adjacent towns also provide such services for their residents.

Rive Falls Landfill Closure

The River Falls Landfill was closed in 1998 in accordance with federal and state requirements and conditions contained in the closure plan. Landscaping and land use consistent with this plan have been implemented for this site.

3.3.2 Waste Volume Reduction Program

Several initiatives are being pursued towards reducing the volumes of waste generated in the community service area. These initiatives include recycling of waste materials, reduction of waste at the source, waste exchange, backyard composting, community composting sites, green waste processing and utilization, and construction and demolition waste reprocessing.

3.3.3 Looking Ahead

The community's approach to solid waste collection and disposal—collection, burn, and bury—has remained relatively unchanged through the majority of the twentieth century. It has been reactive to the waste disposal needs of the area. However, at the beginning of the century, the community finds itself confronted with a much more complicated and expensive network of waste management issues—transfer and transport, reduction, expanding service areas, and heavily regulated disposal requirements. Because of this, comprehensive efforts are needed to deal with the financial and operational demands of changing regulations, technology and service demands, and expectations regarding solid waste collection and disposal. Detailed efforts and a comprehensive plan will be needed to look at the community and region. A waste management plan should be developed and updated every five years.

3.4 STORM WATER

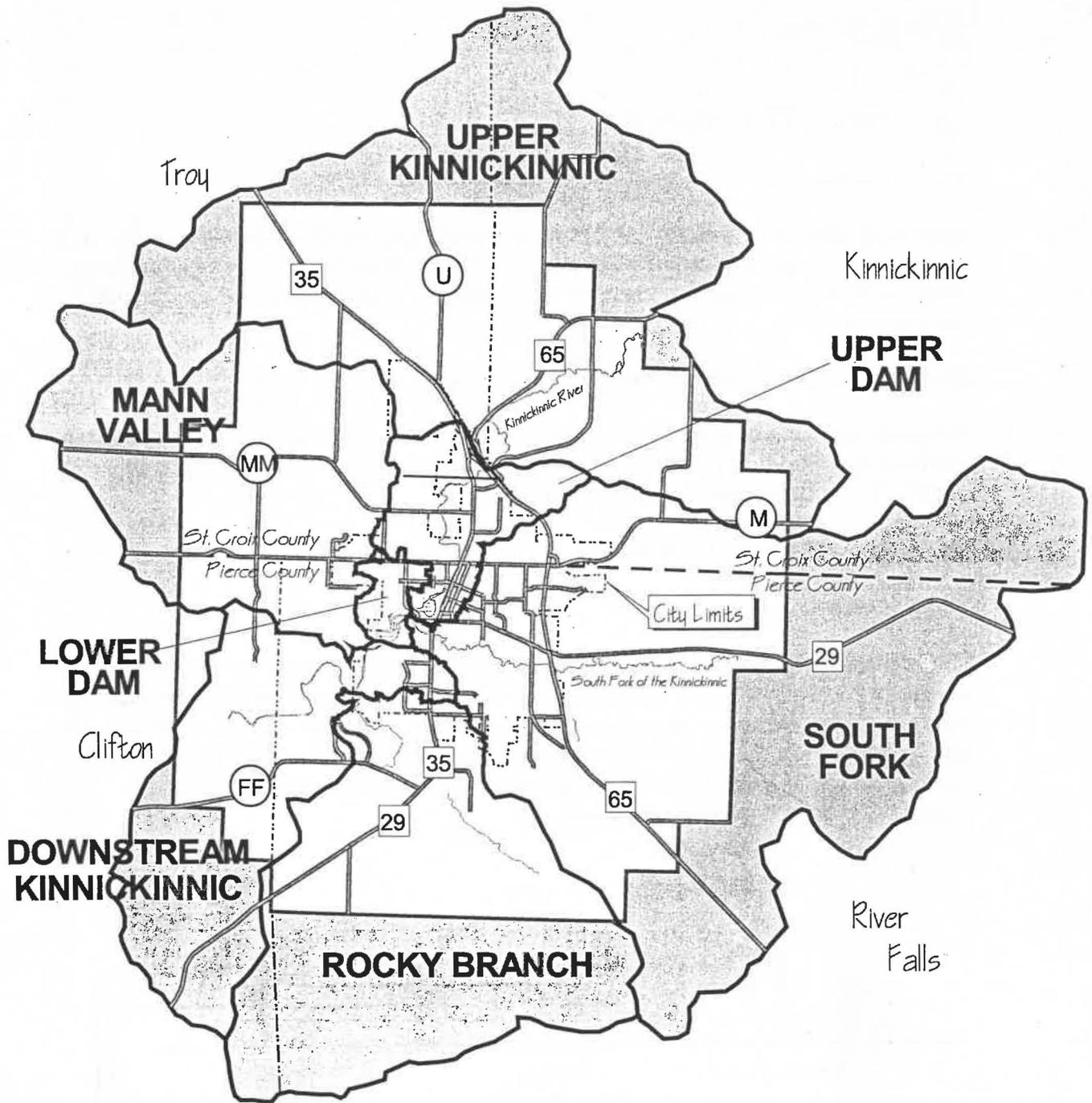
As stated in this plan, the community of River Falls is located in the southern St. Croix County and northern Pierce County in western Wisconsin. The Kinnickinnic River bisects the community from the northeast to the southwest. The South Fork of the Kinnickinnic River splits the UWRF campus, which is located in the southeastern part of the city. The Kinnickinnic and its tributaries are valuable trout streams, representing a major natural resource of the community. There are also numerous watersheds that surround the community as is shown in Figure 3-5; however, ever-increasing development within the community area drainage system has prompted the need for a comprehensive water management plan.

In the spring of 1995, a *Water Management Plan* for the Kinnickinnic River and its tributaries was prepared by the City of River Falls. The intent of this plan was to focus all basic information and planning data into a single document that described existing conditions, specific policies and standards, and recommended actions for the future enhancement of the community's water resources. This plan was prepared in accordance with the WDNR administrative 205 J grant program, with input from the UWRF, Trout Unlimited, and the adjacent towns. Implementation of this plan will require the cooperation of neighboring towns, as well as counties, state and federal agencies, and the WDNR.

This plan indicates that storm drainage control structures in the community area are not considered adequate for the existing conditions. Without appropriate modifications to the system, further development will increase the potential for flooding and property damage. This plan, which should be updated, identifies improvements and establishes an implementation schedule. The city's storm water utility and storm water ordinance will assist in the implementation of this plan. There are also other documents, like the Priority Water Plan and Trout Unlimited Newsletters, that provide guidance in improving area water management.

Increasing impervious surfaces because of development has resulted in increased runoff and decreased water recharge. The *Water Management Plan* policies focus on minimizing runoff, especially during peak flood periods; insuring adequate drainage; and locating development to minimize drainage from flooding. Strategies to address increased runoff include small-scale water retention facilities, water harvesting, and detention ponds. The intent is for quality storm water runoff to the Kinnickinnic River at acceptable rates and volumes that will reduce sediment loading and streambed/stream bank degradation and maintain a suitable river temperature to support a cold-water fishery.

With planning, decisions can be made that provide for the enhancement of water quality, prevent groundwater degradation, reduce local flooding, and improve development patterns relative to the environment.



Minor Watershed Boundary Map

- | | | | |
|--|---------------------|--|-------------------|
| | Watershed Boundary | | Major Roadways |
| | Lakes & Rivers | | Town Boundaries |
| | City of River Falls | | County Boundaries |
| | Study Area | | |

Chapter 3 Infrastructure and Services

City of River Falls Sewer Service Plan



Figure 3-5

3.5 PRIVATE UTILITIES

3.5.1 Gas Services

Natural gas service for the community area is provided by the St. Croix Valley Natural Gas Company, a private company based in the City of River Falls. A majority of the St. Croix Valley Natural Gas customers are residential with the remaining being commercial and public authority.

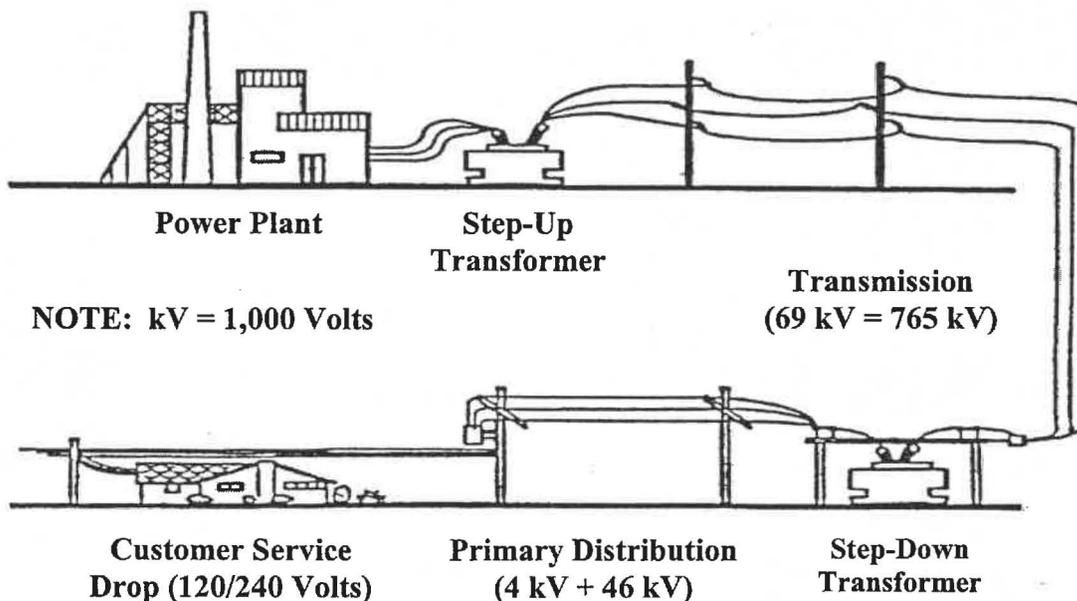
3.5.2 Telephone, Cable, and Telecommunications

Telephone service is provided by Wisconsin Bell (Ameritech) with easy links to the Twin Cities fiber optic network. The city maintains a city cable access television station: RFCC-TV, Public Access Television, Channel 12.

3.6 ELECTRIC SERVICE

3.6.1 Electric

The existing electric production and delivery system consists of three basic components: generation, transmission, and distribution. Traditionally electricity has been produced by large generating stations or power plants that are fueled by nuclear energy, fossil fuels, or hydro-power. From these central generating stations, electricity is transmitted by major power lines and “stepped down” at substations several times before it is finally distributed to the end users or customers.



The electric system serving the River Falls area is linked to other systems to form regional multistate grids designed to balance supply with demand and to assure reliability. The size and complexity of the system serving a particular area is directly related to the area's population and economic base, the sources of generating fuel, and the specific mix of residential, commercial, industrial, and institutional activities of the community and surrounding area.

The City of River Falls has owned and operated its' own electric utility since 1900. In 1900, the utility's installed generation consisted of one hydroelectric unit rated at 250 kW. Today the Municipal Utility operates 375 kW of hydroelectric generation and 15,890 kW of dual fueled engine generation. The municipal power plant is located along the Kinnickinnic River in southwestern River Falls. During the last 100 years, the city has purchased power and energy from Pierce-Pepin Electric Cooperative, Dairyland Power Cooperative, and Northern States Power Company. In 1989, the city entered into a 35-year power supply contract with Wisconsin Public Power Incorporated (WPPI). The City of River Falls is one of 30 municipal owner/members of WPPI. The River Falls Municipal Utility is funded entirely by retail rates that are reviewed and authorized by the Wisconsin Public Service Commission. As of January 2000, approximately 4,750 consumers receive electric service from the City of River Falls.

3.6.2 Undergrounding

Undergrounding is the placement of electric or other utility lines (such as telephone, cable, etc.), structures, and equipment below ground. The benefits of and desire for undergrounding includes improved aesthetics through a reduction of visual clutter, improved road safety, the potential for greater reliability because equipment is less vulnerable to damage, and in some cases, reduced wear and maintenance costs.

Figure 3-6 shows an example of shared space for utilities. Municipal Utility has details of existing practice outside the road right-of-way. The disadvantages are significantly increased costs associated with undergrounding, especially for undergrounding existing lines, and increased repair time following an outage of an underground line.

New corridors or line locations, whether in the city, the county, or both, must balance the desire to protect open space and to mitigate negative impacts on view sheds. There is an equally important need to protect sensitive natural resource areas and to provide design solutions that weigh the benefits of protection against factors of economy and cost.

3.6.3 Electric and Magnetic Fields

National and international research on the possible relation of electric and magnetic fields (ELF-EMF) to health has been ongoing for over 20 years. In the Energy Policy Act of 1992 the United States Congress authorized the Electric and Magnetic Field Research and Public Information Dissemination Program, also known as the EMF-RAPID Program. Three government agencies, the National Institute of Environmental Health Science (NIEHS), the National Institutes of Health, and the Department of Energy were directed

to manage a program to research, analyze, and provide scientific evidence of possible health risks related to exposure to low frequency electric and magnetic fields. The NIEHS was charged with oversight of the health effects portion of the program and directed to provide a report at the conclusion of the study. The report was released in June of 1999. Briefly stated, the program looked to two kinds of analysis for possible human health risks associated with exposure to ELF-EMF. Epidemiological studies, which identify statistical correlations between disease and select factors that may be related to the human population, provided the strongest evidence for an association to two forms of cancer: childhood leukemia and chronic lymphocytic leukemia in occupationally exposed adults. Laboratory studies, however, failed to find any relationship between EMF exposure for changes in biological functions or disease status. The report concludes that while the evidence was influenced to warrant aggressive regulatory action, passive regulatory action was warranted because of the "fairly consistent patterns of a small, increased risk of increasing exposure that in somewhat weaker for chronic lymphocytic leukemia than for childhood leukemia."

The report noted that the lack of connection between the human data and the laboratory data "severely complicate the interpretation" of the results. It added, "given the weak magnitude of the increased the risk," some other factors or common source of error could explain these findings. However, no consistent explanation other than exposure to ELF-EMF has been identified."

3.7 ALTERNATIVE ENERGY AND CONSERVATION

In the nineties, there was a growing interest in using energy resources more wisely than in the past. With concern about America's dependence on foreign oil or the pollution caused by using fossil fuels, the idea of living within our means—sustainable energy use—continues to gain in popularity. In a larger context, the use of renewable resources promotes greater self-reliance, energy stability, and a cleaner environment for future generations. There are many examples of alternative energy and conservation; the following are just two examples.

3.7.1 Solar Energy

Solar energy has the potential to help meet current and future energy demands. Solar collectors covering less than 1% of U.S. territory—one-tenth the area devoted to agriculture—could make more energy available than the United States consumes in a year. There is an interest in passive solar heating and cooling systems because they simplify rather than complicate life. Passive systems are simple in concept and use, have few moving parts, and require little or no maintenance. Also, these systems do not generate thermal pollution, since they require no external energy input and produce no physical by-products or waste. Since solar energy is conveniently distributed to all parts of the globe, expensive transportation and distribution networks for energy are also eliminated.

3.7.2 Wind Energy

Wind turbines are a good example of the growing competitiveness of renewable energy technologies. The cost of electricity produced by modern wind turbines has declined from over 25 cents per kilowatt hour in 1981 to 7 to 9 cents per kilowatt hour today, and industry estimates suggest it could fall as low as 4 to 6 cents per kilowatt hour in 5 years. At the current price, wind power is competitive, or nearly so, with electricity generated by new fossil-fired power plants, and in the 2000s, it should be one of the least expensive sources of electricity, fossil or renewable.

Reliability problems affecting early wind-turbine designs have been largely resolved, and mature and well-maintained systems are available 95 to 98% of the time. Other renewable sources of electricity, such as solar-thermal electric power plants and photovoltaic cells, also promise to become competitive within a decade, particularly if market demand grows to allow greater production of systems.

3.8 STREETS

3.8.1 Streets and Highways

The automobile continues to be the primary mode of transportation. Streets and highways are experiencing more use within, through, and around the community (Figure 3-7). The community has a transportation system with city and county roads that lead into the state and national system—State Highways 35, 29, 65, and Interstate 94 (I 94). The city has experienced an approximately 20% growth rate during the 1990s, while the State grew at a rate of approximately 3%. Due to the rapid growth to the north, State Highway 35 was rebuilt as a four-lane connector to the I 94 system in 2000. There is presently discussion with the Wisconsin Department of Transportation to extend the four-lane bypass (beltline) from Highway 35/65, along the eastern side of the City of River Falls. This bypass would be south of Quarry Road to just south of the southeastern corner of the city limits. These road improvements are required due to the rapid growth and development from I 94 to State Highway 65. These improvements to the roads are and will be designed to ease congestion and provide quicker access and reduce commuting time.

3.8.2 Street Network

The community street network is primarily made up of two-lane streets (47.9 miles). Main Street and the surrounding neighborhoods are characterized by wide tree-lined streets. Many newer streets tend to be loops or cul-de-sacs. Newer developments are built with fewer through streets and intersections, and some tend to have wider local streets and, as stated, a greater portion of cul-de-sacs. There is a need for more through streets. The lack of a continuous street system and growth have resulted in congestion along our major arterials, such as Main Street, Division Street, and Cascade Avenue. As of 2000, there are approximately 48 miles of streets serviced by the City of River Falls Public Works.

Chapter 3
Infrastructure and Services

City of River Falls
Sewer Service Plan

Street Network

-  Principal Arterial
-  Minor Arterial
-  Collector
-  Minor Roadways
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers
-  City of River Falls



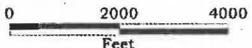
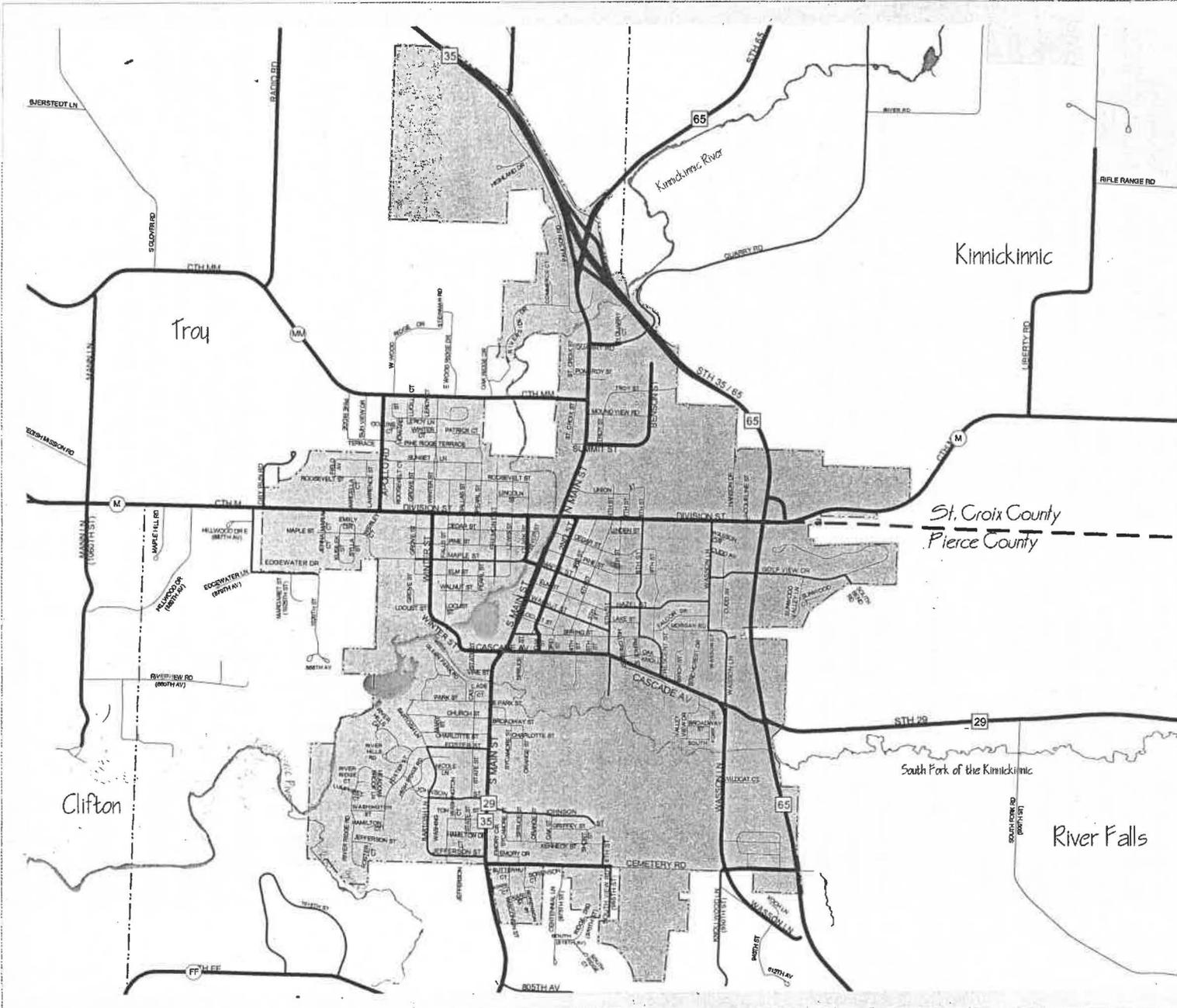



Figure 3-7



Transportation accessibility has been enhanced by the construction of major infrastructure improvements during the early 1990s. In 1994, a new bridge over the Kinnickinnic River was constructed on Division Street and forms an improved link between the eastern and western side of the city. Division Street, which turns into County Road M, is the boundary between the Counties of St. Croix and Pierce. The bridge reconstruction was achieved through a joint project between the Wisconsin Department of Transportation and the city. The new bridge replaced the Cedar Street Bridge. The widening of Main Street at Cascade has improved the intersection to ease congestion and provided increased safety. Cemetery Road from Main Street east to Wasson Lane has been reconstructed. This street has been redeveloped from an existing two-lane to an urbanized three-lane arterial. The city is attempting to reduce the vehicular access points to Main Street to optimize and provide additional traffic signals at major intersections. The reduction of vehicular access points will assist in providing the needed signalization to ease traffic congestion and offer increased safety throughout the Main Street corridor.

3.8.3 Street Classifications and Standards

The system of state routes and major and local roads is described below. The primary distinguishing features between the different classifications are access control routes and the width of the street. Definitions of the different classifications are as follows:

- **Freeways** serve regional and intercity travel and should not become the optimum route for intracity trips. Access is controlled, crossings are separated either above or below grade, lanes move in opposite directions, and directions are separated by medians. Typical free-flow speeds exceed 55 miles per hour.
- **Principal Arterials** serve major centers of activity within the sewer service area boundary and carry the highest traffic volume. They carry the major proportion of trips entering and leaving the city and should carry a high proportion of the total city area travel with a minimum of mileage.
- **Minor Arterial Streets** interconnect with the principal arterial system and provide service to small activity centers. Trips are of a short length on this system, and there is more emphasis on access than in the principal arterial system.
- **Collector Streets** provide access to and circulation within residential, commercial, and industrial areas. They distribute trips from the arterial system to local designations, and trips are generally short in length. The city's collector system could augment the arterial system to correct deficiencies.

In addition to these designated streets, the community street system includes an extensive network of local and rural streets, both paved and gravel. Although most streets in the community are two lanes, the cross-sectional width can vary dramatically. Wider streets built over the last several decades in the community have resulted from the development standards governed by safety concerns and the need to provide adequate access to underground utilities.

Streets should be designed to serve the needs of the neighborhoods. Overdesigned roads are unnecessarily wide, costly, and unsafe for residents. Streets are among the most costly of development improvements, and excessive requirements are a contributing element to rising housing prices. Overdesign may result in undesirable environmental defects: more cuts and fills, more runoff, diminished groundwater supply, and the high potential for erosion. Overdesigned and excessively wide streets tend to move traffic rather than control it, encouraging speeding and creating hazards. Narrow, curved streets discourage speeding. Planning and design of residential streets should clearly indicate the functions. The arrangement of arterials and collectors in the community should conform to an official street map that is approved by the community.

Town Roads

All town roads are considered local roads within the community's functional classification. Certain roads, such as state highways, and set county roads, such as CTY MM, FF, and so on, are considered collector roads for the towns surrounding the City of River Falls. The towns maintain a town road policy that any new roads will be installed and inspected at the developer's expense. Each of the towns provides road standards that are consistent with the county road standards. There is also a need for more road connections for through traffic.

3.8.4 Bicycle and Pedestrian Circulation

Through the years, bicycling and walking as primary modes of transportation have undergone varied levels of popularity. While walking has always been a significant means of getting around, contemporary America has evolved with the increased use of the automobile. This has created opportunities for people to live farther and farther from various urban destinations. As a result, trips traditionally made by walking or bicycling have become less desirable and have been replaced by the need for more automobiles and infrastructure.

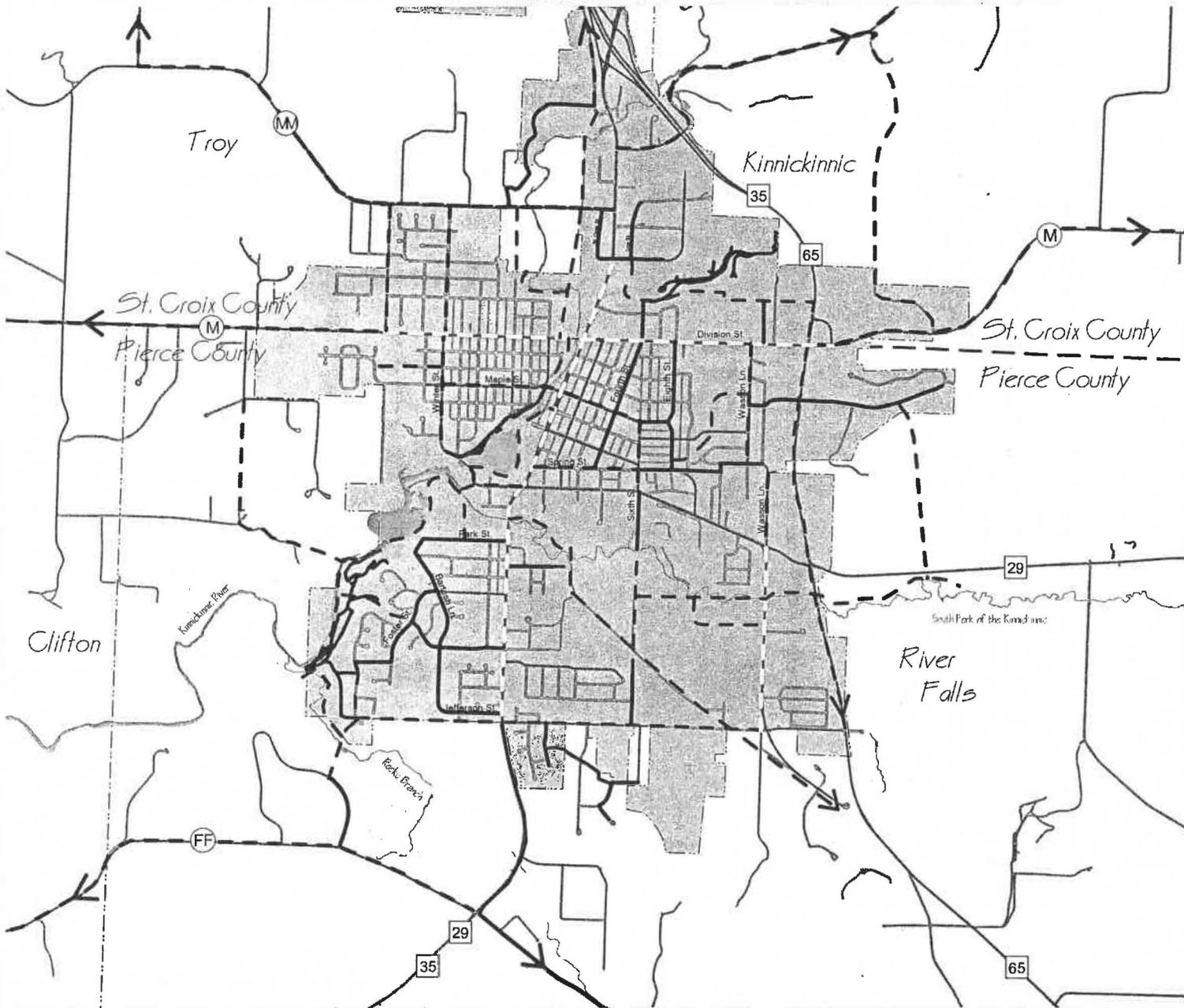
A *Bicycle and Pedestrian Plan* was developed by the City of River Falls in 1995 (Figure 3-8). The overall goal of this plan was to recommend facilities and policies that would encourage increased levels of bicycling and walking while creating a safe, comfortable environment for existing users. Sidewalks and other pedestrian accommodations are largely provided in the older commercial and residential areas of River Falls, while pedestrian facilities are not consistently provided in many newer regions of the community. Furthermore, some critical streets in older areas of the community lack sidewalks and other pedestrian accommodations. This is also evident in many of the residential developments that are adjacent to and outside of the city limits.

The city plans to retrofit streets with needed pedestrian accommodations through the CIP. Currently, only a minimum amount of funds are provided for the program which will slow the process of retrofitting streets with sidewalks, ramps, and street crossings throughout the city. There will need to be strong support from property owners to build these sidewalks. Presently the towns do not require sidewalks for those subdivisions

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City of River Falls
Sewer Service Plan

Bicycle Facilities - 1995
Bicycles and Pedestrian Plan



- Proposed Alternate or Future Bikeway
- Proposed Bicycle Lanes
- Proposed Bicycle Paths
- Proposed Wide Curb Lanes or Paved Shoulder
- Shared Roadway
- Suitable Existing Bicycle Paths
- Trails
- Major Roadways
- Minor Roadways
- City or Town Boundary
- County Boundary
- Lakes & Rivers
- City of River Falls

BRW
A DAMAS & MOORE GROUP COMPANY

City of RIVER FALLS

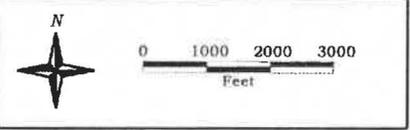
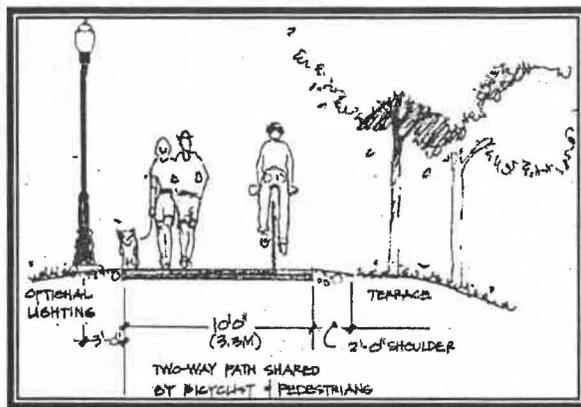
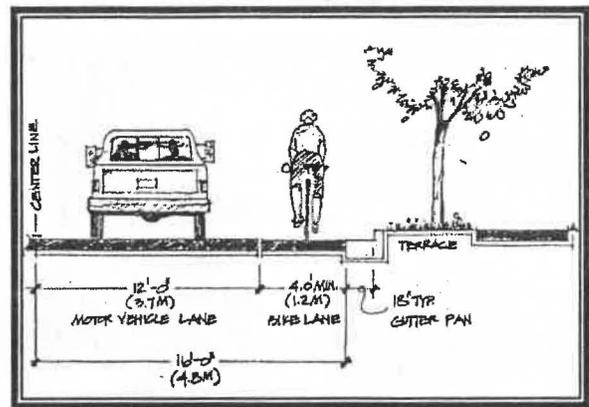


Figure 3-8



Typical Section of Bicycle Path



Typical Section of Bicycle Lane

within the ETZ. This is an issue that should be reviewed for all potential subdivisions that may be annexed into the city.

The first designated bicycle facility in River Falls was the White Kinnickinnic Trail. An offset path along Cemetery Road provides an internal bicycle/pedestrian path system. Furthermore, several designated bicycle routes exist in the towns and counties surrounding the city. In the Town of River Falls, there is a developed asphalt bicycle and walking trail parallel to State Highway 29 south of the city, and St. Croix County is now planning new bicycle routes on Quarry Road, Radio Road, CTH "M" and CTH "MM."

The River Falls *Bicycle and Pedestrian Plan* has integrated existing bicycle and pedestrian facilities into the plan along with reevaluation of these facilities to determine whether additional improvements are necessary. The 1995 plan should be updated, and planning and design considerations should be explored to identify and recommend additional corridors for bicycles and pedestrian ways.

3.9 PARKS, RECREATION, AND CONSERVANCY

Park and recreation facilities serve an important role in maintaining the quality of life. Some parks provide opportunities for a broad range of activities such as hiking, mountain biking, and nature study, while others are gathering places where neighborhood residents can relax, contemplate, and take in the beautiful views. Recreation facilities can range from athletic fields for soccer and baseball, tennis courts, and golf courses to tot-lots.

Whatever the level of services, facilities need to be accessible. In addition to the city facilities, residents have access to county, state, federal, and town parks and trails, which provide plentiful opportunities for active recreation. Many traditional trails are being lost due to the lack of planning and development.



Within the study area surrounding the city, there are limited trails and developed parks. As a result, residents are forced to rely on the city's already limited park resources. At current and past community meetings, residents frequently commented on the need for more neighborhood parks as well as recreational facilities, such as ice skating rinks, bicycle and pedestrian paths, swimming pools, soccer fields, and even skateboard ramps. The existing county plans outline county, state, and federal parks within the adjacent St. Croix and Pierce Counties. The existing *Town of Troy Growth Management Plan* also outlines the need for neighborhood parks and playgrounds. The Pierce County plan states that pressure is being placed on towns and/or the county to building their own athletic fields, hockey rinks, etc. rather than relying on the city's. The

villages and cities, especially River Falls and Prescott, operate a variety of public athletic fields, trails, campgrounds, and small natural areas for the benefit of their residents.

The City of River Falls has drafted numerous plans regarding parks and recreation, such as the *Outdoor Recreation Plan* of 1971, the *Comprehensive Parks and Recreation Plan* of 1989–1994, and the most recent *Comprehensive Parks and Recreation Plan* of 1995–2000. The 1995–2000 *Comprehensive Parks and Recreation Plan* seeks to identify the needs of the present community but also seeks to estimate the needs of the community into the next five years. The document was intended to be used also as a basis for federal/state funding and as a basis for local capital budgeting. The plan suggests and promotes ways and means to provide recreation for all the citizen groups of the community. It states, “Our public lands express loudly and clearly the community goals and values.” The city Municipal Code requires parkland dedication fees or parcels of land equal to 10% of the gross area for annexation, subdivision, and development of land within its city limits. The city categorizes its existing parks and recreational spaces as community parks, linear parks that are trail systems, neighborhood parks, special use parks such as Veteran’s Park, and quasipublic parks that are school and university park or recreational facilities. In 1995, there were approximately 152.25 acres of parkland in River Falls. Figure 3–9 presents the existing park, recreation, and conservancy lands within the city limits and the 1.5-mile study area.

Chapter 3 Infrastructure and Services

City of River Falls Sewer Service Plan

Existing Park, Recreation, and Conservancy Lands

- Agricultural
- Conservancy
- City Parks
- Town Parks
- Area Schools
- Univ. of Wisconsin at River Falls
- Minor Roadways
- City and Town Boundary
- County Boundary
- Lakes & Rivers
- City of River Falls

Figure 3-9

SCHOOLS

1. Good Shepherd Christian Academy
2. St. Bridget's Elementary
3. Westside Elementary
4. Meyer Middle School
5. Greenwood Elementary
6. River Falls High School
7. Chippewa Valley Technical College
8. University of Wisconsin - River Falls
9. Rocky Branch Elementary
10. River Falls High School (2002)
11. Hearland Community School

PARKS

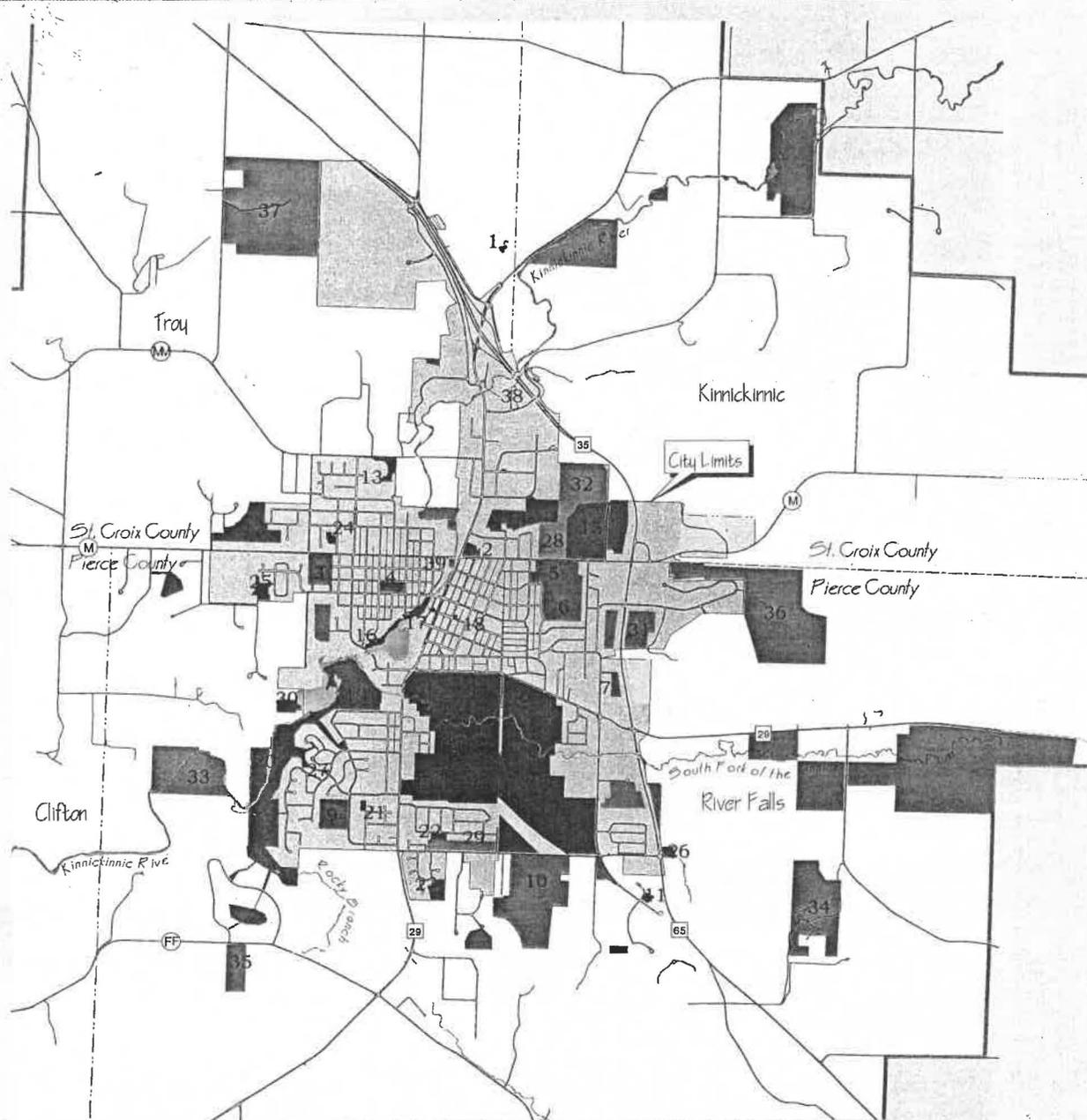
12. Ryan Desactis
13. Collins
14. Mound
15. Hoffman
16. Heritage
17. Veteran's
18. Ostness
19. Glen
20. River Hills
21. Hamilton
22. Wells
23. Larson
24. Westdale
25. Rolling Hills
26. Halverson
27. Brandon

CONSERVANCY

28. Greenwood Cemetery
29. St. Bridget's Cemetery
30. Foster Cemetery
31. Cernohous Detention Basin
32. Boy Scout's Conservancy Area
33. River Falls School District Forest Lands
34. Morrow Pit Conservancy Area
35. Closed Landfill

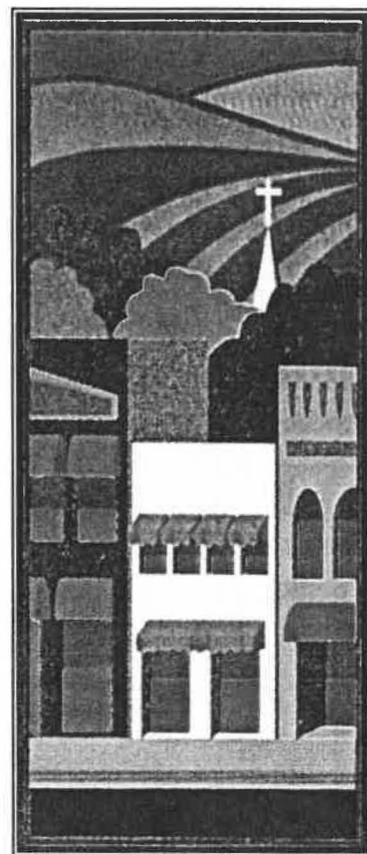
RECREATION

36. River Falls Golf Course
37. Kilkarney Hills Golf Course
38. Kinnickinnic River Access (Wisconsin DNR)
39. Ingram Center



4

**SEWER SERVICE AREA
WATER QUALITY
MANAGEMENT**



November 2000

4. SEWER SERVICE AREA WATER QUALITY MANAGEMENT

Growth that is sustainable in terms of resources and services is a major theme of *The River Falls Sewer Service Area Water Quality Management Plan (SSAP)*. For public facilities and services, sustainability means ensuring that new development does not create demands that cannot be met without diminishing the quality of available services and resources. This chapter specifically establishes:

- Policies and standards for public facilities, utilities, and services that will maintain or enhance the quality of life;
- Procedures to ensure that growth is approved only upon availability of water and sewer service;
- Thresholds and performance criteria for use and development review to gauge the ability of public service to sustain growth;
- Policies to ensure that infrastructure and public facilities are designed in an environmentally sensitive manner and promote conservation, recharge, and waste volume reduction; and
- An equitable method of paying for facilities and service needed to accommodate new development.

The following themes and guiding policies apply to this chapter.

THEMES

- ❑ **Quality of Life** - Enhance the quality of life of the community and ensure provision of community services for residents.
- ❑ **Sustainable Growth** - Ensure that development is sustainable and that growth, conservation, redevelopment, and natural resource protection are balanced.
- ❑ **Character** - Maintain and respect River Falls' unique personality, sense of place, and character.
- ❑ **Urban Form** - Promote a compact urban form that encourages sensitive/compatible infill development.
- ❑ **Community-Oriented Development** - Direct new development to the community, foster public life, vitality, and community spirit.
- ❑ **Water Quality** - Meet the requirements of the Federal Clean Water Act and WDNR Chapter NR 121, Wisconsin Administrative Code.
- ❑ **Regional Perspective** - Maintain a regional growth management perspective and work with other private and governmental entities towards that goal.
- ❑ **Housing** - Actively participate in the creation of housing.

GUIDING POLICIES

4-1 HERITAGE RESOURCES

- 4-1-G-1 Foster community awareness, positive appreciation, and support for archeological, cultural, agricultural, and historic resources.

Sewer Service Plan

4-1-G-2 Identify and assess archeological and heritage resources (manmade) for the aesthetic, educational, economic, and scientific contributions they make to the community's quality of life.

4-1-G-3 Respect and sensitively manage architectural, archeological, cultural, agricultural, and historic patterns, resources, and symbols.

Acknowledge and preserve the contribution these resources make in the community.

4-2 NATURAL RESOURCE MANAGEMENT

4-2-G-1 Protect, enhance, maintain, and restore environmental and biological resources, including the Kinnickinnic River and its tributaries and habitats that are sensitive or declining by restoring and preventing or reducing their loss within the community.

4-2-G-2 Consider riparian and wildlife corridors as a single, interconnected habitat, the numerous limbs of which branch throughout the entire watershed, providing access and habitat to a wide range of plant and animal species and preserving the natural character of the landscape.

The community currently lacks an areawide plan to deal with riparian corridors or connecting corridors to the natural force. The drainages and waterways are managed from a flood control standpoint, but these riparian zones are not considered as an integrated biological community. Consequently, modifications or construction activities may take place in one portion of a drainage without any consideration for the biologic effect on another portion of the drainage.

4-2-G-3 Minimize the direct loss and/or modification of riparian and wildlife habitat corridors and wetlands within the community. This includes:

- Minimizing sedimentation and flooding within the riparian corridor,
- Minimizing entry of hazardous substance into the riparian corridor and wetlands by use of on-site runoff treatment and biofiltration, and
- Designate, protect, and restore habitat for endangered, threatened, or rare species.

4-2-G-4 Ensure appropriate environmentally sensitive design where human access is provided within riparian and wildlife corridors.

4-2-G-5 Retain and enhance significant geologic formations and features as habitat and visual amenities.

4-2-G-6 Protect visual open space, bluffs, and ridgetops.

The community needs to develop a bluff overlay district and natural topography performance standards that would reflect more restrictive policies

Sewer Service Plan

on development on bluffs and ridgetops. To protect bluffs and visual natural resources, factors other than slopes need to be considered, such as habitat and soil conservation.

4-2-G-7 Protect, preserve, and restore natural and cultural landscapes and conservation landmarks.

4-2-G-8 Encourage land use and transportation patterns that promote use of alternatives to the automobile for transportation, including pedestrian walks and pathways, bicycling, bus transit, and carpooling.

Increased use of transit and carpooling coupled with land use and circulation patterns that promote walking and bicycling can lead to a decrease in daily trips, fewer emissions, and improved air quality.

4-2-G-9 Incorporate noise considerations into land use planning decisions and guide the location and design of transportation facilities to minimize the effect of noise on adjacent land uses along highways (State Highways 35, 65, 29) and major roads.

4-3 SEWER SERVICE AREA BOUNDARY ALTERNATIVES

4-3-G-1 Ensure that future growth does not impact the natural resources.

4-3-G-2 Encourage development and redevelopment on developable lands at a density that will provide and maintain infrastructure and services economically.

4-3-G-3 Promote cooperation between the counties, towns, city, and other agencies to ensure a successful sewer service area boundary and SSAP.

4-4 LAND USE

4-4-G-1 Development throughout the community will be at densities that support the construction of affordable housing in a designated mix of land uses that provides an adequate balance of service, retail, and employment opportunities.

4-4-G-2 Concentrate populations at greater densities in developing areas with centrally located neighborhood centers to encourage pedestrian-scale development, reduce auto dependency, and provide infrastructure and services.

4-4-G-3 Monitor annual residential and commercial growth along with increased demand for public service and utilities.

Planning projections should include the demographic characteristics of population growth as well as the employment needs of all segments of that growth.

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- 4-4-G-4 Guide the orderly expansion of development within the sewer service area boundary by prioritizing the construction of infrastructure amenities and other public services.
- 4-4-G-5 Work with the counties and towns to promote a compact form by planning and regulating development in the region, thereby substantially reducing the rate of suburban sprawl throughout the region.
- 4-4-G-6 Work with the counties and towns to regulate land use along major roadways leading into River Falls and within the region, including but not limited to State Highways 35, 65, and 29 and County Road M, to protect visual and aesthetic qualities.
- 4-4-G-7 Promote higher density residential development in the same historic pattern as has traditionally occurred in the city, to make more efficient use of existing infrastructure.

Strategies to achieve residential infill include simple lot splits, construction of accessory units, and even "granny flats." When new development emulates older patterns of development, this will help maintain a traditional community environment.

- 4-4-G-8 Promote a balance between residential and employment based development in order to achieve self-sufficiency within large projects.
- 4-4-G-9 Ensure that specifically verified affordable housing will be a priority in all new developments.
- 4-4-G-10 Annexations and development within the sewer service area boundary shall comply with this plan.
- 4-4-G-11 All annexations shall be for a minimum acre area unless the area is included in and consistent with a detailed master plan and staging plan.

4-5 TRANSPORTATION

- 4-5-G-1 Maintain a functional and jurisdictional classification system to ensure overall road network performance.
- 4-5-G-2 Integrate the county and city road systems with planned federal and state highway improvements for an efficient and safe road network.
- 4-5-G-3 Control access throughout the road system in areas of high traffic volume to ensure the access, mobility, and safety of effected road segments.
- 4-5-G-4 Give people priority over cars.

The emphasis should be on dedicating pedestrian and bike access and shared uses of a roadway.

- 4-5-G-5 Ensure that streets do not become barriers to people crossing. Crossings shall be provided at designated points along major routes and highways.

Planted medians reduce the apparent width of streets and enable safer pedestrian crossings.

- 4-5-G-6 Provide a fair and equitable means of for paying for future street improvements.
- 4-5-G-7 Provide for a comprehensive network of bikeways for safe and efficient transportation.
- 4-5-G-8 Recognize walking and bicycling as viable alternatives to motorized transportation.
- 4-5-G-9 Provide off-road trails as alternatives to on-road travel where natural corridors exist.

4-6 WATER MANAGEMENT

- 4-6-G-1 Develop and implement a comprehensive, integrated water resource plan for water retention and conservation for sites, building uses, landscaping, and plumbing fixtures.

Conservation policies must be enforced. Water conservation and water collection policies must be established and required for existing and new development, especially at commercial and government locations, and the drilling of new wells where municipal water services are available or may be available must be prohibited.

- 4-6-G-2 Develop and use water resources that are reliable and sustainable and that are physically responsible while preserving groundwater resources for drought emergencies.
- 4-6-G-3 Ensure that new development is approved only upon prompt water availability and adequacy of the distribution and treatment system.
- 4-6-G-4 Ensure that through annexations and/or developer agreements that the costs of providing water to future development is borne by future residents and businesses.

There may be opportunities for developers to work with government agencies to reduce the cost of providing infrastructure through grants, agreements, or other programs.

Sewer Service Plan

- 4-6-G-5 Municipal Utility shall maintain and update water transmission, distribution, storage and sources of supply infrastructure.
- 4-6-G-6 Promote measures to protect the rivers and streams and quality of water supply for the city, town, and county residents.
- 4-6-G-7 Ensure that the extension of water services is in accordance with this plan.
- 4-6-G-8 Promote regional water resource planning initiatives and develop sound management policies to protect regional water resources and create water banking mechanisms.
- 4-6-G-9 Promote implementation of a treated effluent management plan which prescribes the optimum use of the treated wastewater effluent as an additional source of water supply.

4-7 WASTEWATER MANAGEMENT

- 4-7-G-1 Maintain environmentally appropriate wastewater management practices.
- 4-7-G-2 Municipal Utility shall maintain and update the existing wastewater treatment system.
- 4-7-G-3 Ensure that adequate system capacity responds to future growth and regulatory demands within the sewer service area boundary.
- 4-7-G-4 Maintain programs that facilitate and improve maintenance and replacement of the wastewater collection system.
- 4-7-G-5 Ensure that extension of wastewater services is in accordance with this plan.
- 4-7-G-6 Develop and ensure a treated effluent management plan that will optimize reusing and recycling treated wastewater for nonpotable uses.

4-8 SOLID WASTE MANAGEMENT

- 4-8-G-1 Protect and preserve public health.
- 4-8-G-2 Reduce solid waste volumes by increased recycling and reuse to increase the life span of landfills, for conservation of natural resources, and to reduce costs associated with solid waste management.
- 4-8-G-3 Locate centers for solid waste and yard waste processing and other facilities in accordance with government management objectives.

4-9 STORM WATER MANAGEMENT

- 4-9-G-1 Protect and preserve human life, private property, and public facilities from severe weather conditions.

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- 4-9-G-2 View the drainage system as a whole entity rather than as a sum of its components.
- 4-9-G-3 Promote natural drainage and recharge of the river and capture of runoff by establishing innovative storm water management practices and standards.
- 4-9-G-4 Develop and maintain a communitywide, user-supported storm water operation, maintenance, and improvement program.

4-10 UTILITIES

- 4-10-G-1 Work with utility providers to ensure adequate service is provided for existing and new development in designated areas.
- 4-10-G-2 Continue to monitor scientific research regarding the effects of exposure to electric and magnetic fields (EMF) on human health. The City of River Falls Municipal Utility will work with electric and telecommunication companies, others that maintain facilities that emit EMF, and the public in developing public policy regarding exposure to EMF.
- 4-10-G-3 Work with utilities, i.e. electric (public and private), cable television, telephone, etc., that own, operate, and maintain overhead wire facilities to develop a program to place underground existing and new overhead facilities, particularly along major arterials.

Locating wires below ground and along arterials will improve the aesthetics of the streetscapes and open up views of the surrounding landscape. Appropriate procedures in accordance with the archeological reviews process should be taken when placing electric wires, cables, or any services below ground to protect archeological resources.

- 4-10-G-4 The city is and will continue to formulate a communitywide energy saving policy and program to cut costs and keep dollar resources in the community.
- 4-10-G-5 Incorporate practical passive and active solar energy, wind generation, and wind protection concepts in the design and siting of new structures when appropriate. Home construction is more effective for energy conservation.

4-11 IMPACT FEES

- 4-11-G-1 Review the need to develop a competitive impact fee for growth and development of capital facilities in the sewer service area boundary and in the towns and counties.

Impact fees should be utilized to finance capital facilities in the sewer service area boundary to assure planned, seamless growth in an agreed-upon growth area, which will not unduly burden existing facilities.

Sewer Service Plan

- 4-11-G-2 Impact fees should be considered and utilized as part of a regional growth management strategy, with higher fees assessed in areas that are not currently serviced by capital facilities and lower fees assessed in areas which already have capital improvements in place.

Impact fees may be structured to implement policies related to growth in the sewer service area boundary and infill areas.

- 4-11-G-3 Impact fees should be considered as an additional source of revenue to pay all or part of the cost of capital facilities for water supply; wastewater; arterial roads; signalization; parks; open space trails; drainage facilities; and fire, police, and emergency services generated by new growth in the community.

Utilization of impact fees should be extended to facilities for which they are not currently being assessed.

4.1 HERITAGE RESOURCES

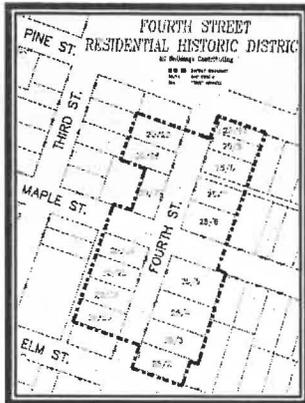
Throughout the public meetings and comment period that lead to the preparation of this plan, River Falls' heritage resources were cited as some of the planning areas major assets. These resources reflect River Falls' archeological, historic, agricultural, and cultural heritage. The physical layout of the city and established neighborhoods was looked at as a critical element in planning for future development. The preservation of River Fall's visual character was identified as essential. It has been stated that a community without a past is a community without a future. Therefore, it is important to have a good understanding of our past so that we may guide our future.

The history of River Falls is reflected in the wealth of archeological, cultural, agricultural, and historic resources that have been identified by the community. River Falls formally initiated a local heritage resource identification program around 1978. At that time a windshield survey was conducted by the State Historical Society of Wisconsin and resulted in the identification of approximately 585 properties in the City of River Falls, of which 24 were identified as historically or architecturally significant. During the intensive survey phase of the project, detailed research on the community's history identified 11 themes that formed the basis of information necessary for the evaluation of historic properties. These 11 themes are:

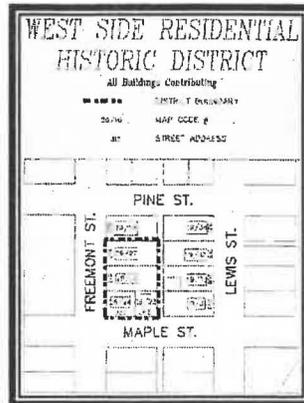
- | | | |
|------------------|-----------------|---|
| 1. Architecture, | 5. Government, | 9. Social and Political Movements, |
| 2. Commerce, | 6. Industry, | 10. Transportation, and |
| 3. Education, | 7. Religion, | 11. Planning and Landscape Architecture |
| 4. Settlement, | 8. Agriculture, | |

For each property identified as historically or architecturally significant in the reconnaissance survey and in the intensive survey, a four-page intensive survey form was completed with photographs, architectural description, and historical information. A 1990 survey lead to the delineation of two residential historic districts and a commercial historic district, as shown below.

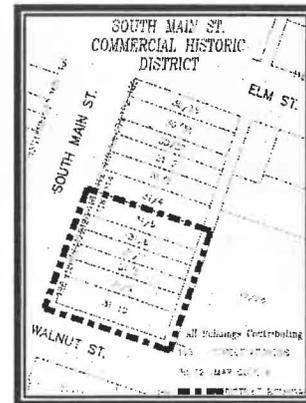
Sewer Service Plan



Fourth Street Historic District



West Side Historic District



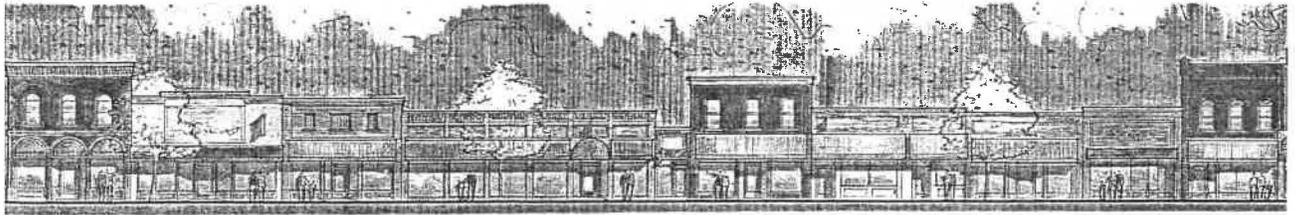
Commercial Historic District

The historic preservation and neighborhood conservation area shall consist of older neighborhoods that were substantially developed prior to 1940 and those areas originally platted for River Falls in the 1800s. This area reflects older development patterns and buildings of historic merit (Figure 4-1).

There is a need for a strong commitment from the community of River Falls for appropriate management and sensitive treatment for architectural, archeological, cultural, agricultural, and historic resources. The community has not accepted the designation as a certified local government in accordance with the National or State Historic Preservation Acts. If certified as a local government, the city would be responsible for integrating historic preservation activities into a function of local government. For the community to achieve this goal the following is needed:

- Maintenance of a system for identifying historic resources,
- Establishment and administration of a qualified preservation commission,
- A vision for public participation in a local historic preservation program; and
- Enforcement of local laws for the designation and sensitive management of such resources.

A certified local government program as administered by the Wisconsin Historic Preservation Division would be a major source of support and guidance to the city and community by providing technical and financial assistance to the city and Community for program development. It would be through this assistance that the community would be able to undertake its historic building resurvey and other archeological, historic, agricultural, cultural heritage research projects.



East Main Street from Elm to Walnut Street with incorporated preservation guidelines (Rendering by Matt Frisbie architect).



Figure 4-1

The original plat of River Falls is tilted (19 degrees) so that Main Street and other streets are oriented to the Kinnickinnic River. The plat conforms to a common midwestern form consisting of square blocks set on a grid of streets intersecting at right angles. Later plats followed survey lines and compass points thereby creating the familiar rectilinear grid.

4.2 NATURAL RESOURCE PROTECTION

Chapter 2, Section 2.5, outlined the need for natural resource areas and conservation and the issues and policies that need to be addressed in protecting our natural resources. It is resource conservation and management policies that help determine development within the sewer service area while protecting and preserving valuable areas from development. Mapping of existing environmental resources to identify conditions and constraints provides the basis for resource conservation and management policies. To do this, RPAs are delineated and growth is prohibited or limited from occurring in these areas. This section discusses in detail two classifications that protect habitats that are sensitive or declining or that represent valuable biological resources in the community. The two classifications are (1) Resource Protection Areas (RPAs), and (2) Sensitive Resource Areas (SRAs).

4.2.1 Resource Protection Areas (RPAs)

RPAs are *environmentally sensitive areas* and valuable habitat areas that require protection. They are located along riparian corridors and in other areas (to be designated) that provide important habitat for plants and animals and movement corridors for wildlife. RPAs include such areas as 100-year flood zones, wetlands, coulees, riparian corridors, landmark areas, slopes 20% or greater, and bluff areas. RPAs are prohibited from development. The only exception for development is for existing parcels/lots that exceed 20% or "pass through work" that includes needed work for public health and safety/utilities. This includes electricity, water, or for a force main or other sewer to pass through. This type of utility work is generally discouraged but sometimes needs to occur due to the need for the use of gravity. The RPAs are shown in Figure 4-2.

4.2.2 Sensitive Resource Areas (SRAs)

SRAs shall be investigated with particular attention to sites that include habitat for sensitive species of plants and animals. SRAs include such areas as the 500-year flood zone, coulees, wetlands, and natural landscapes, landmarks, slopes between 12 and 20%, and ridgetop areas. Development is permitted on sites with SRAs designation, provided certain steps are taken and that development is in accordance with the special standards established for SRAs. Policies shall be designed to ensure that biological resources are considered and incorporated in development design. Both the RPAs and SRAs are intended to be of sufficient size to ensure the long-term viability of the habitats and species located within them and connected to them. SRAs are shown in Figure 4-3.

4.3 SEWER SERVICE AREA BOUNDARY ALTERNATIVES

The City of River Falls Treatment Facility currently serves an area of approximately 1,720 acres. The total future service area, evaluated as part of the 1998 comprehensive study, is 7,320 acres, which is more than four times larger than the current area. However, environmental features and sewer extension economics influence the area the plant can serve. Projected flow from the boundaries discussed below are within the wastewater treatment plant's capacity.

4.3.1 The Role of the Proposed Sewer Service Area Boundary Alternatives

This section presents four alternatives that illustrate developable land. They are:

1. The City,
2. The Extraterritorial Zone,
3. The 1.5-Mile Study Area, and
4. Sewer Service Area Boundary for this plan.

The alternatives have been shaped by comments made at public meetings, adopted plans, and technical analysis conducted through the use of aerial photography and the Geographic Information System (GIS) mapping process. The intent of the four alternatives is to “bracket” the probable range of choices for future growth to the year 2020. This would meet the Wisconsin Department of Natural Resources (WDNR) requirement for a 20-year plan. The boundary in alternative four is to be used for sewer service technical conformance review purposes.

The population growth trend for the City of River Falls has been from 10–25% per decade. In Chapter 2, Table 2.6, population projections are 12,557 for the years 2000 and 17,093 for the year 2020. This is a projected population growth of 4,536 that is approximately 1.5% growth per year or 15% growth per decade. A population growth of 2.5% per year or 25% growth per decade would be 20,576 or a population growth of 8,018.

With a 1990 census average of 2.3 persons per household, this would require approximately 100 units per year at 1.5% or 174 units per year at 2.5% for the next 20 years. With an existing average of 2.8 housing units per acre, there would be a need for approximately 720 acres of land for 1.5% growth or 1,243 acres of land for 2.5% growth for a 20-year buildout.

This plan recommends an average density of four housing units per acre that would require approximately 500 acres at 1.5% or 870 acres at 2.5% for 20 years. These housing projections do not include public facilities or nonresidential land uses. Public facilities and nonresidential land uses may require an additional 50% of land acreage. This would be approximately 1,000 acres at 1.5% and 1,740 acres at 2.5%.

Appendix D illustrates residential prototypes for future land use classification. Appendix E provides an illustration of a future neighborhood center. Figure 4–8 Future Land Use shows potential developable sites that are expected to undergo a use or intensity change. The illustrations are a device to assist informed decision making and are the foundation for the future land use plan that will include the policies related to the full spectrum of physical development and conservation. Cooperation of the counties, towns, city, and other agencies will be required to ensure successful realization.

Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

Resource Protection Areas

-  Hydric Soils
-  Slopes > 20%
-  100 Year Floodplain
-  Wisconsin Wetland Inventory
(Supplied by the Wisconsin DNR)
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers
-  Study Area
-  City of River Falls

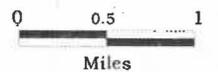
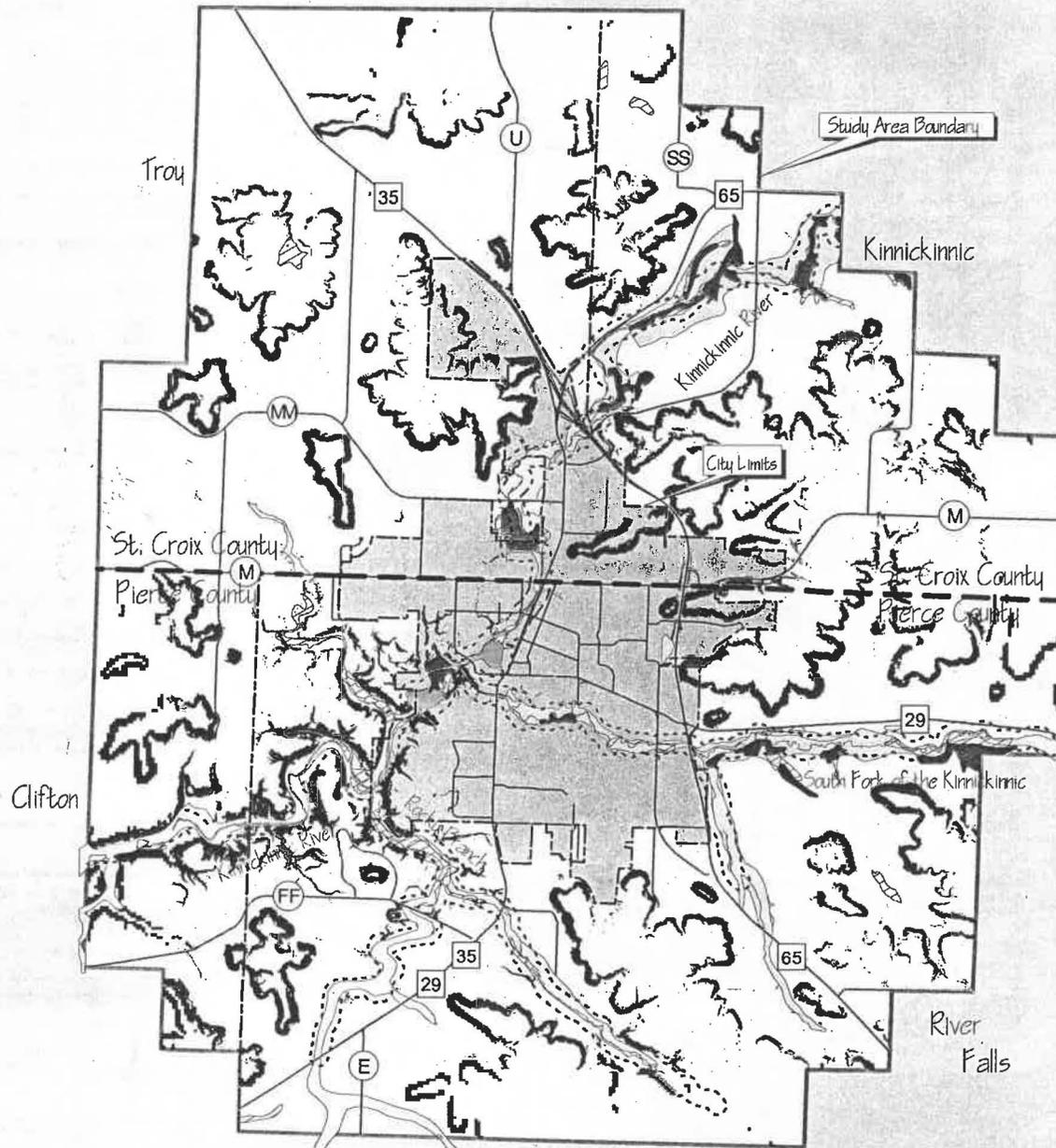


Figure 4-2

Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

Sensitive Resource Areas

-  Slopes 12 - 20%
-  Slopes > 20%
-  Wetland Wetland Inventory
(Supplied by the Wisconsin DNR)
-  100 & 500-Year Floodplain
-  Erodable Soils
-  Potentially Erodable Soils
-  Hydric Soils
-  Inclusion Soils
-  300 foot Shoreline Buffer
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers
-  Study Area
-  City of River Falls

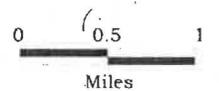
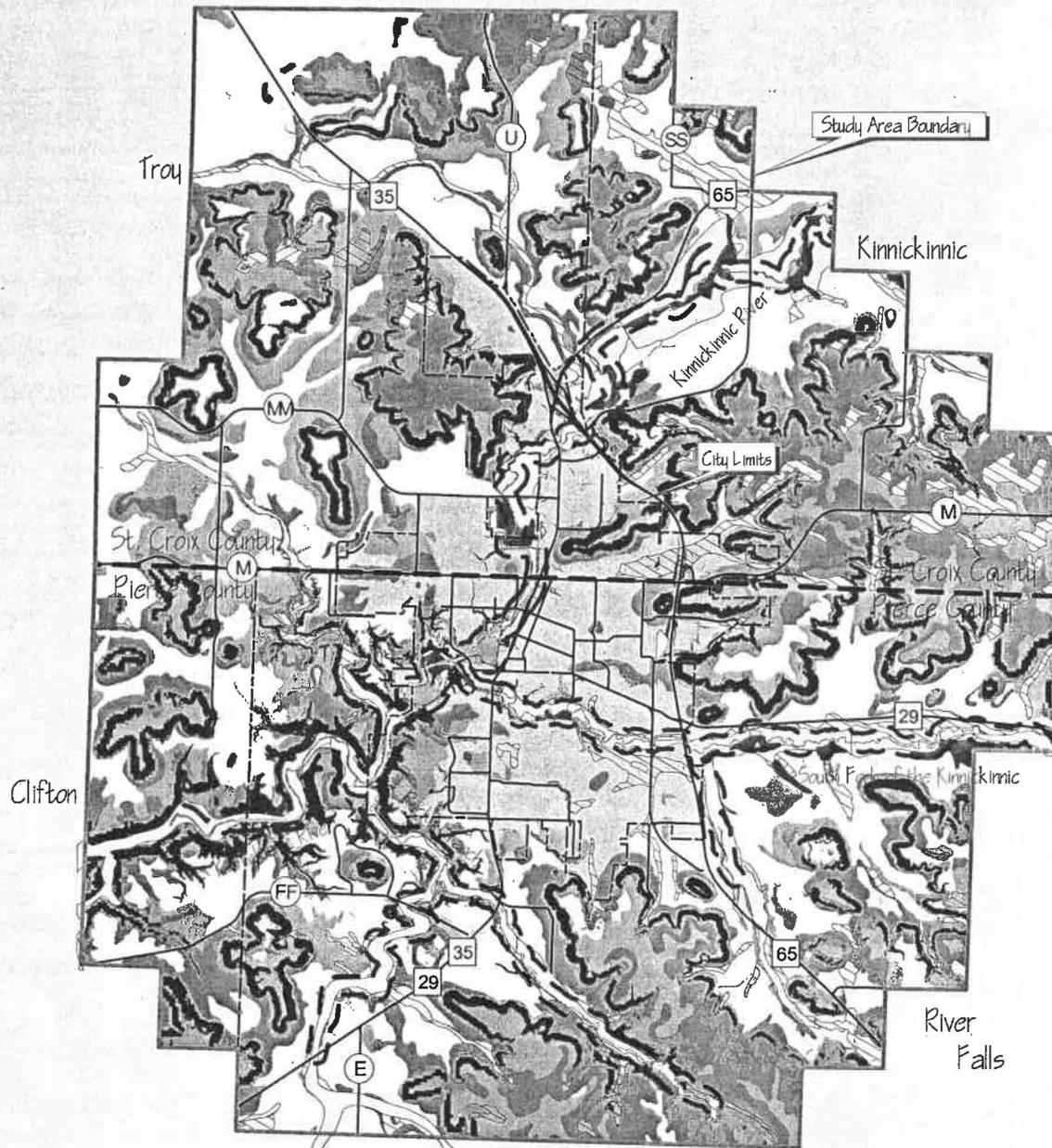


Figure 4-3



4.3.2 Environmental Synthesis

As indicated above, air photos and in-the-field analysis, coupled with GIS measuring techniques, were used to assist in indicating the approximate acres of vacant, developable land within the proposed alternatives. In most of the alternatives vacant and developable means "the lands that are not in the RPAs. This includes land outside the following:

1. Exclusively agricultural zone,
2. Developed land,
3. Conservancy/park land,
4. Road rights-of-way and corridor protection areas,
5. Wetlands, 100- and 500-year floodplains, and
6. Slopes greater than 12%.

As the following figures show, steep slopes, floodplains, and wetlands, are major constraints to future growth surrounding the city. Because of River Falls' original location at the foot of the bluffs, virtually all new growth in the future will have some constraints in regards to the terrain (see Figure 4-2 RPAs). Development is currently taking place at the edge of the city adjacent to these RPAs at fairly low intensities. The City of River Falls overall population densities from land devoted to urban use has declined from the historic district of approximately five to six dwelling units per acre to that of less than three dwelling units per acre over the past 40 years.

4.3.3 Alternative One: City Developable Land

In this process, we looked at developable land that was not only vacant but also had the potential of being developed or redeveloped. The November 1999 *City of River Falls Housing Needs Assessment* provided the information for this section. The process used to identify parcels to develop or redevelop included the following:

1. Reviewing city's maps,
2. Driving and looking at potential sites,
3. Obtaining information and specifications,
4. Surveying local real estate firms,
5. Surveying lenders,
6. Surveying other members of the community, and
7. Telephone interviews with property owners.

There are approximately 330 acres of property within the River Falls city limits that offer the potential for additional residential development. Approximately 140 acres are suitable for single-family housing, approximately 180 acres are suitable for multifamily development, and approximately 14 acres have the potential for either single-family or multifamily development. It should be noted that approximately 33 acres of the 330 acres are vacant and zoned residential. The identified parcels can be categorized as existing platted lots or ones with preliminary plats in process, potential infill or redevelopment sites, or potentially developable subdivision sites with possible amendments to the zoning code and map. A list of the identified properties is located in Appendix F; Figure 4-4 illustrates the locations.

▪ **Existing Platted Lots and Preliminary Plats in Process (91 acres).**

The two largest properties in this category include 120 single-family home sites on 40 acres called Rolling Hills located off West Maple Street and a 20-acre parcel south of Rocky Branch Elementary School, which has an approved preliminary plat for single-family homes. The largest parcel for multifamily houses is a seven-acre parcel on Cemetery Road, which is the future site of apartments, a 100-unit project the city approved in 1999.

▪ **Potential Infill and Redevelopment Sites (50 acres).**

Fourteen properties have been identified as potential infill and redevelopment sites. However, not all of the properties are currently for sale. Most of the properties are zoned for multifamily housing (approximately 40 acres compared to approximately 8 acres for single-family houses). Meyers Middle School is included as a potential redevelopment site should the School District decide to sell the property in the future; however, our understanding is that the District's intention at the present time is to keep the property for administrative or educational purposes. City staff reinforces the School's decision to keep this as a school use.

▪ **Potentially Developable Subdivision Sites (189 acres).**

The largest parcel that offers potential for housing development is 128 acres owned by the City of River Falls. Although the property is currently zoned light industrial, the city could consider allowing the development of single-family and multifamily housing in the future. It should be noted that there are numerous constraints on the site, such as steep slopes, rock outcroppings, lack of infrastructure, including water, sewer, and roads, which may limit the development to one-third (42 acres) of the actual size. Other potential areas for single-family housing are located north and east of the hospital, although one of the property owners has plans to build single-family homes, no plat has been submitted to the city. The property is also presently zoned as agricultural and does have some constraints regarding slopes and infrastructure.

4.3.4 Alternative Two: Extraterritorial Developable Land

Figure 4-5 shows the developable land within the Extraterritorial Zone (ETZ) boundary. 1995 aerial photos and in-the-field analysis, coupled with GIS measurement techniques, were used to assist in indicating the approximate acreage of vacant, developable land within the ETZ boundary. Vacant, developable land for Alternative Two means lands that are not in the RPAs, zoned exclusively agricultural, or developed. These excluded lands are:

1. Zoned exclusively agricultural,
2. Developed land,
3. Conservancy/park land,
4. Road rights-of-way and corridor protection areas,
5. Wetlands, 100- and 500-year floodplains, and
6. Slopes greater than 12%.

Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

Alternative One City Developable Land

-  Existing Platted Lots & Preliminary Plats in Process
-  Potential Infill Sites
-  Potentially Developable Subdivision Sites
-  Major Roads
-  City Boundary
-  Lakes & Rivers

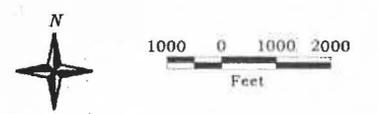



Figure 4-4

EXISTING PLATTED LOTS & PRELIMINARY PLATS IN PROCESS

1. K & S Inc. Property
2. Colins, et. al. Property
3. H. Cudd Property
4. Gustafson/Skarsden Property
5. D. Cudd Property
6. Rocky Branch Lots
7. Kinnic View Property

POTENTIAL INFILL SITES

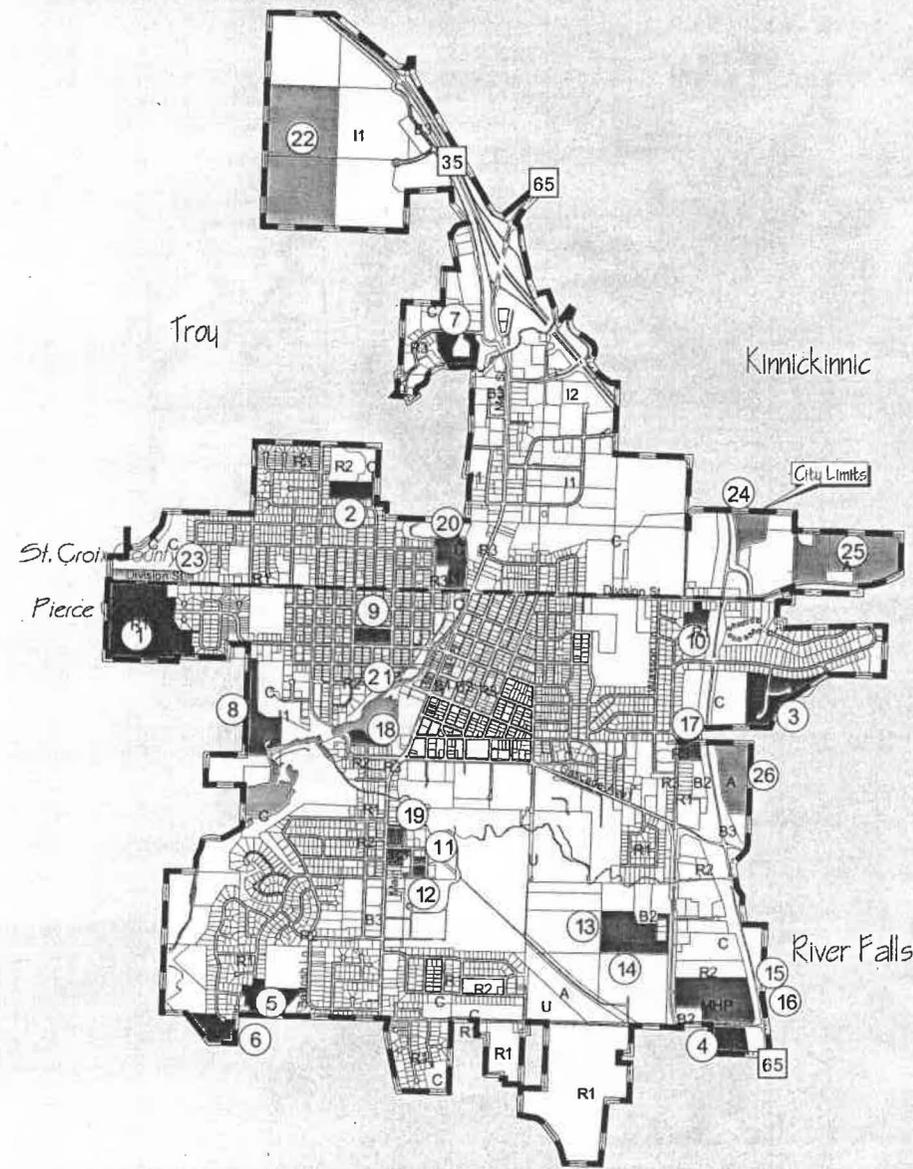
8. City of River Falls Property
9. Meyer Middle School
10. Pechacek Property
11. Old City Garage Property
12. Sycamore/E. Charlotte St. Property
13. Cudd Property
14. Cudd Property
15. Venzina Property
16. Cudd Property
17. Moody Family Property
18. Foster Court Property
19. McEwen Property
20. Hovde Property
21. Cenex Property

POTENTIALLY DEVELOPABLE SUBDIVISION SITES

22. City of River Falls Property
23. Desanctis Family Property
24. J. Hanson Property
25. B. Miller Property
26. Agricultural Property East of STH 35 Bypass & North of STH 29

ZONING DISTRICTS

- R1 Single Family - Low Density
- R2 Multiple Family - Medium Density
- R3 Multiple Family - High Density
- B1 General Commercial
- B2 Limited Commercial
- B3 Highway Commercial
- I1 Light Industrial
- I2 Heavy Industrial
- A Agriculture
- C Conservancy
- U University
- MHP Mobile Home Park



Chapter 4
Sewer Service Area Water
Quality Management

City of River Falls
Sewer Service Plan

Alternative Two
Extraterritorial
Developable Land

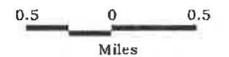
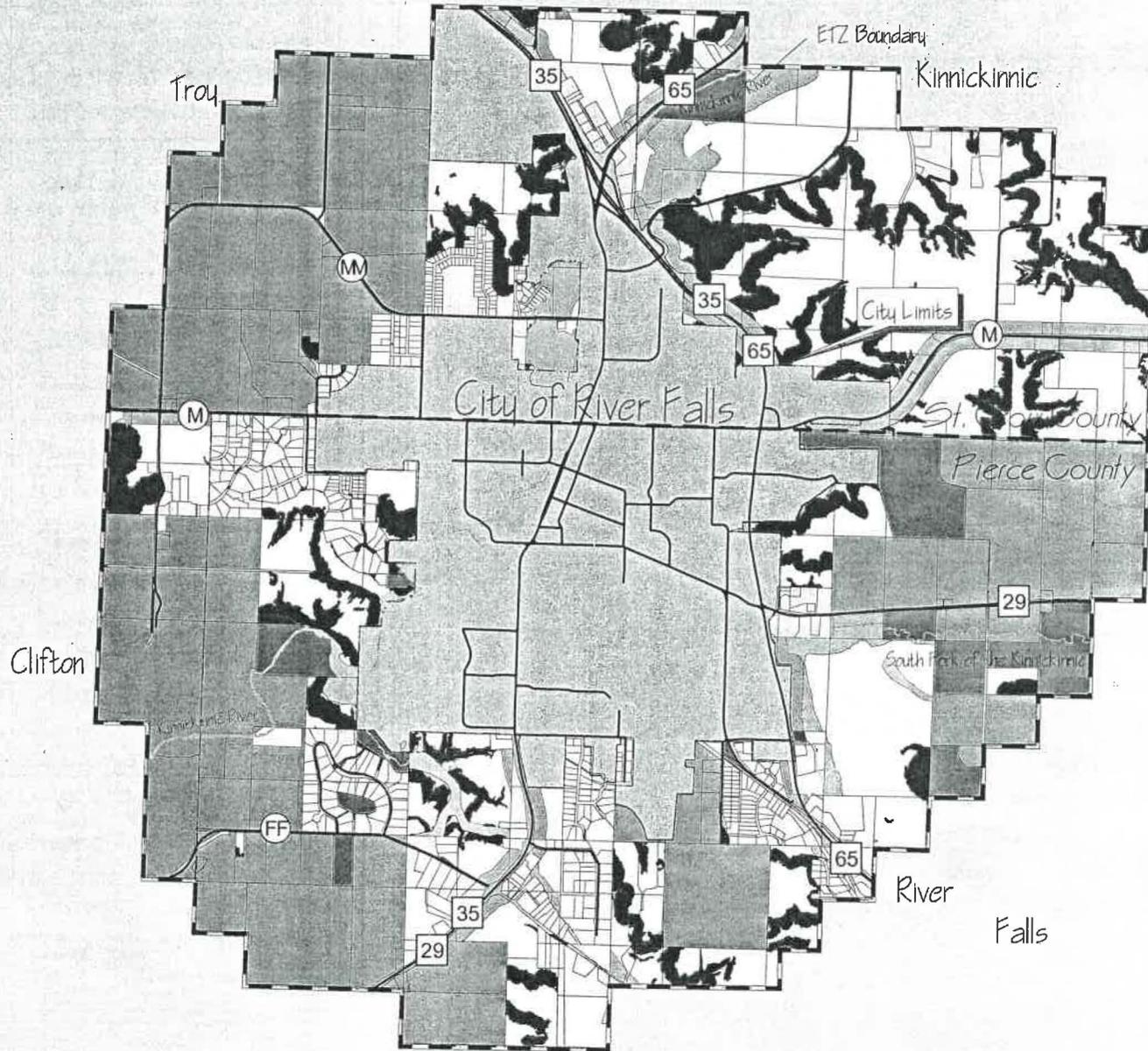
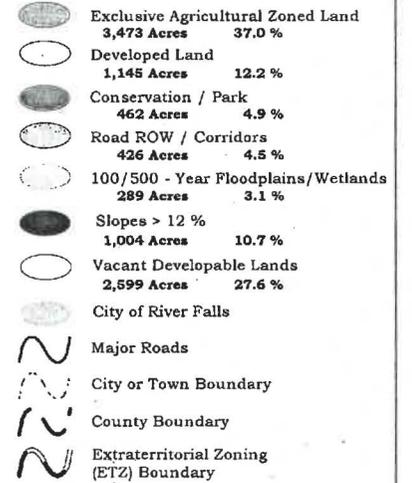


Figure 4-5

It should be noted that a vacant lot infill inventory was not taken; therefore, these lots were not added to the amount of vacant, developable land. These lots are mostly located in built-up areas or near the built environment of the city. Also, redevelopment activity was not taken into consideration, such as conversion of a single-family home to a duplex or higher density development. As noted above, exclusive agricultural zoned land was not included as developable land. Exclusively agricultural zoned land can only become developable land either through rezoning by the county/town or annexation to the city of River Falls (Table 4.1).

**TABLE 4.1
ALTERNATIVE TWO:
EXTRATERRITORIAL DEVELOPABLE LAND PROFILE**

Land Use	Acres	Percent
1. Exclusive Agricultural Zoned Land	3,473	37.0
2. Developed Land	1,145	12.2
3. Conservation/Park Land	462	4.9
4. Road ROW/Corridors	426	4.5
5. 100/500 Floodplains/Wetlands	289	3.1
6. Lands with Slopes Greater Than 12%	1,004	10.7
7. Vacant, Developable Lands	2,599	27.6
Total Land Area	9,398	100.0

4.3.5 Alternative Three: 1.5-Mile Study Area Developable Land

As noted in the introduction of this plan, the purpose is to plan for sewer line extension in an environmentally sound manner that protects surface and groundwater from point and non-point sources of pollution. The plan will also meet requirements of the Federal Clean Water Act and State Administrative Code NR 121.

A study area was created that was approximately 1.5 mile from the existing city limits. Environmental sensitive areas in this 1.5-mile area were identified and mapped. Figure 4-6 shows the approximate acreage of vacant, developable land within the 1.5-mile boundary. Vacant, developable land for Alternative Three means the same as Alternative Two. These are lands that are not in the RPAs, land zoned exclusively agricultural, or developed. These excluded lands are:

- | | |
|-----------------------------------|--|
| 1. Exclusively agricultural zone, | 4. Road rights-of-way and corridor protection areas, |
| 2. Developed land, | 5. Wetlands, 100- and 500-year floodplains, and |
| 3. Conservancy/park land, | 6. Slopes greater than 12%. |

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City of River Falls Sewer Service Plan

Alternative Three 1 1/2 Mile Study Area Developable Land

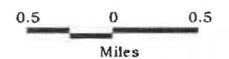
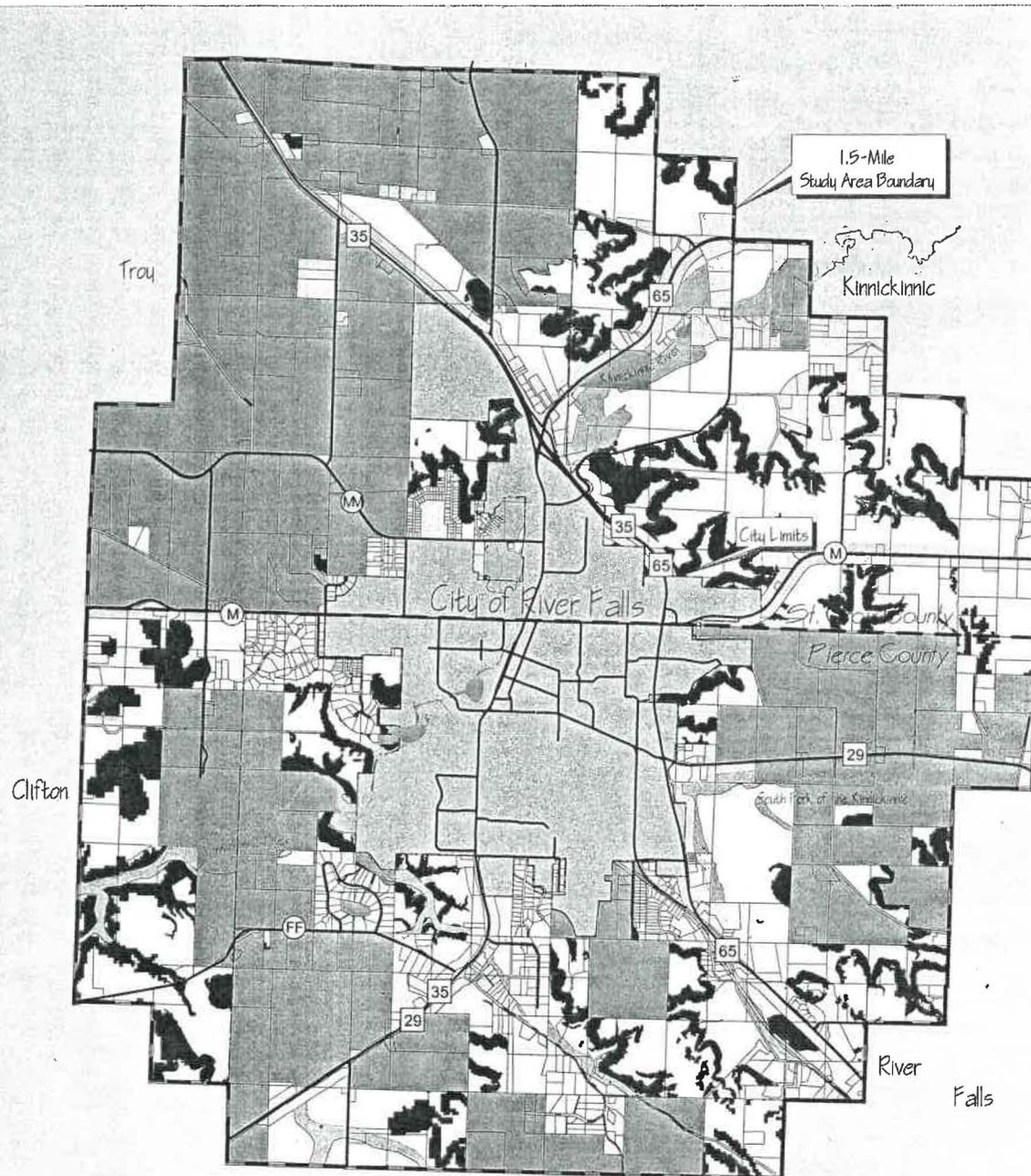
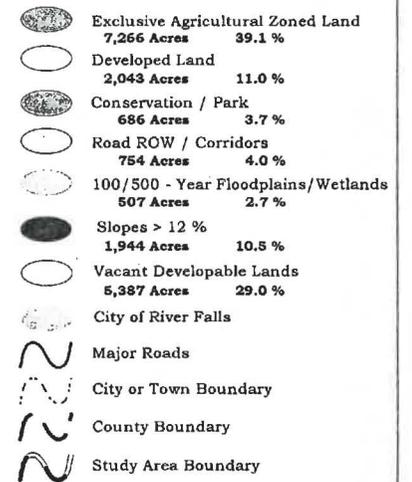


Figure 4-6

TABLE 4.2
ALTERNATIVE THREE:
1.5-MILE STUDY AREA DEVELOPABLE LAND PROFILE

Land Use	Acres	Percent
1. Exclusive Agricultural Zoned Land	7,266	39.1
2. Developed Land	2,043	11.0
3. Conservation/Park Land	686	3.7
4. Road ROW/Corridors	754	4.0
5. 100/500 Floodplains/Wetlands	507	2.7
6. Lands with Slopes Greater Than 12%	1,944	10.5
7. Vacant, Developable Land	5,387	29.0
Total Land Area	18,587	100.0

4.3.6 Alternative Four: Recommended Sewer Service Area Boundary

Figure 4-7 shows the developable land within the recommended sewer service area boundary. As with the above alternatives, the use of the 1995 aerial photos and in-the-field analysis, coupled with GIS measurements and techniques, were used to assist in indicating the approximate acreage of vacant, developable land within the 1.5-mile area boundary. This includes the following:

1. Developed land,
2. Conservancy/park land,
3. Road ROW and corridor protection areas
4. Slopes greater than 12%,
5. Wetlands, 100/500-year floodplains, and
6. Vacant, developable land.

The difference is that some exclusive agricultural land was included as developable land. Some exclusive agricultural lands are located adjacent to or surrounded by town and city developed lands. This sewer service area boundary represents the land that is needed to manage growth for the next 20 years. This includes but is not limited to such uses as roadways; public service areas such as parks, schools, substations for police, fire, neighborhood services; and other uses common to any urban development (Table 4.3).

TABLE 4.3
ALTERNATIVE FOUR:
RECOMMENDED SEWER SERVICE AREA BOUNDARY LAND PROFILE

Land Use	Acres	Percent
1. Developed Land	572	8.3
2. Conservation/Park Land	443	7.0
3. Road ROW/Corridors	715	11.2
4. Lands With Slopes Greater Than 12%	821	12.9
5. 100/500 Floodplains/Wetlands	374	5.9
6. Vacant, Developable Land	3,499	54.8
Total Land Area	6,379	100.0

Sewer Service Plan

As stated in the introduction and required by WDNR, the purpose of this plan is to identify and map environmentally sensitive areas for future growth and development within a 20-year sewer service area boundary. Figure 4-7 Sewer Service Area Boundary and Resource Protection Areas illustrates the recommended boundary in this plan and is to be used for sewer service technical conformance review purposes. This plan provides more than a boundary and mapped environmentally sensitive areas, it provides a Land Use Plan and Figure 4-8 Future Land Use that will help in the management and growth within the boundary and will protect environmentally sensitive areas. The sewer service area boundary establishes an identifiable physical boundary (existing and proposed roads). The existing city limits do not provide such a boundary. The sewer service area boundary follows existing and proposed roads that will separate rural and urban development.

During public meetings for both the city and towns, citizens have repeatedly called for city/town cooperation in addressing growth issues. There has been an increasing demand for a coordinated approach to a boundary line/joint agreement that will replace the existing extraterritorial zone. The sewer service area boundary provides the opportunity for this change.

4.4 LAND USE

In determining a sewer service area boundary, it is important to have an understanding of current and future land uses. The themes, guiding policies, and implementing policies provide a narrative of how land is to be developed. The result of applying these guiding principals and policies to development is presented in Figure 4-8 Future Land Use. The map provides a graphic representation of the land uses in the future and the location and distribution of development. It is not the SSAP. For some areas, additional planning will be needed.

Land use classifications, shown as letter designations, labels, graphic patterns, and/or color on the Figure 4-8 Future Land Use, specify an intended range for housing densities or building intensity for each type of land use. These density/intensity standards allow circulation and public facility needs to be determined. They also reflect the environmental carrying-capacity limitation established throughout this plan. They do not directly correspond to existing zoning categories, nor do they change the underlying zoning. Changes in zoning may be recommended in a more detailed community area plan and subsequently changed by ordinance. Existing zoning classifications may also be changed by ordinance to more closely resemble the plan's classifications. These changes may take place during annexation or through requests.

4.4.1 Future Land Use Framework

Chapter 2 of this plan provided the current land use patterns for the city and land within the study area boundary. The following outlines the principles that shape the future land use for the area within the study area boundary.

Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

Sewer Service Area Boundary and Resource Protection Areas

	Developed Land 527 Acres	8.3%
	Conservancy / Park 443 Acres	7.0%
	Road ROW / Corridors 715 Acres	11.2%
	Slopes > 20 Percent 821 Acres	12.9%
	100/500 - Year Floodplains/Wetlands 374 Acres	5.9%
	Vacant Developable Lands 3,499 Acres	54.8%
	City of River Falls	
	Sewer Service Boundary	
	Major Roads	
	City or Town Boundary	
	County Boundary	
	Future Street	

Note: This is Alternative Four.

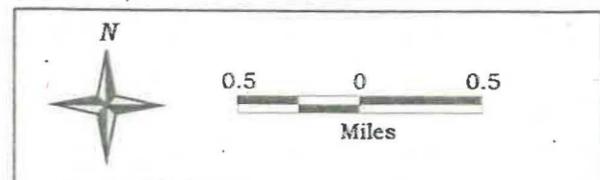
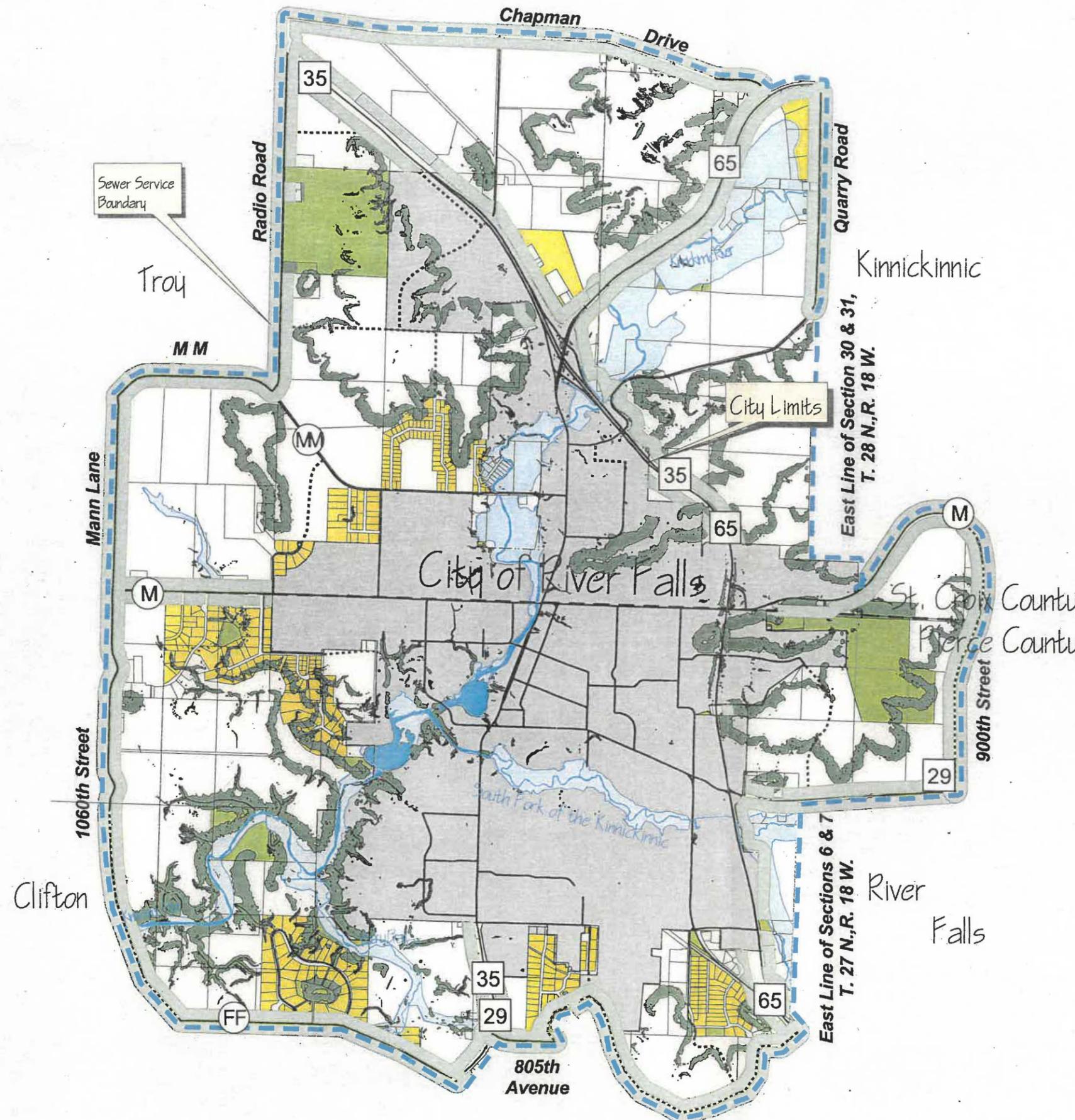


Figure 4-7



Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

Future Land Use

Residential Density

- Corridor 0-1 DU/AC
- Very Low 1-3 DU/AC
- Low 3-6 DU/AC
- Medium 6-9 DU/AC
- High 9-12 DU/AC

Commercial, Institutional & Industrial

- Regional Commercial
- Community Commercial
- Office
- Public / Institutional
- Business Park
- Industrial

Park & Conservancy

- Park
- Conservancy

Land Status

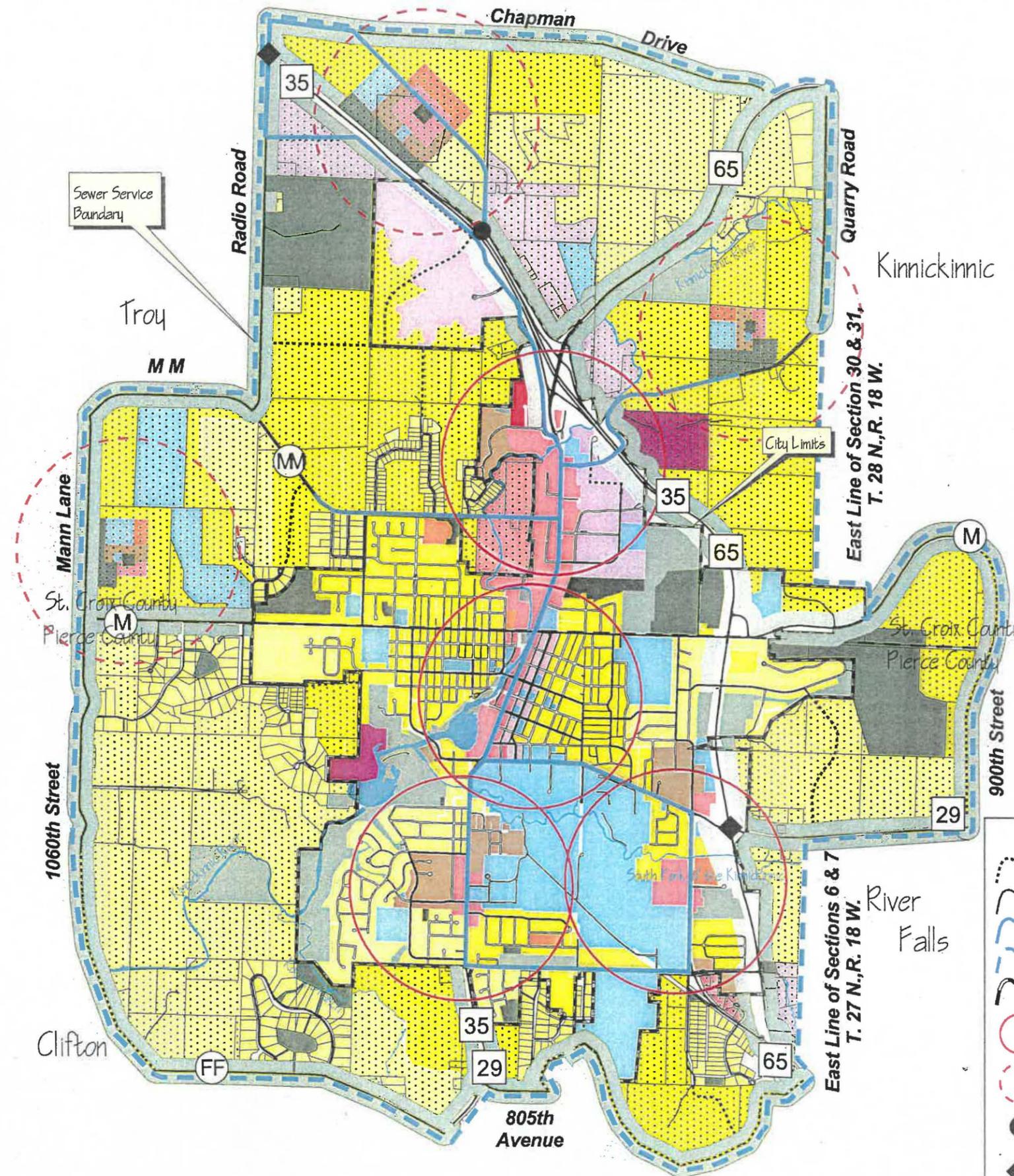
- Land Use Proposed

Key

- Road Proposed
- Road Existing
- Transit Corridor Proposed
- Sewer Service Boundary
- Municipal Boundary
- Commercial Service Area (1/2 Mile Radius)
- Neighborhood Center Proposed (1/2 Mile Radius)
- Proposed Intersection Location
- Proposed Over/Underpass Locations



Figure 4-8



It is the result of many months of work along with review of past plans and studies that were done by the counties, towns, and city. Ideas and principles that have shaped the sewer service area land use framework include:

- **Compact Urban Form.** A majority of growth is contained within the city boundaries, with an ongoing growth within 1.5 mile of the city boundary.
- **Reaffirmation of the Role of Main Street as the Center of the Community.** Figure 4-8 Future Land Use ensures that the Main Street location as the physical heart of the community is enhanced and that no new center rivals the Main Street in size and scale. Unlike development over the past three decades, realization of this plan will result in a decrease in the average distance between residences and Main Street area.
- **Mix of Uses in All New and Existing Neighborhoods.** Most new residences are located within walking distance of a neighborhood commercial center, ensuring that services are located close to where residents live.
- **Mix of Housing Types in All Neighborhoods.** Figure 4-8 Future Land Use illustrates neighborhoods with integrated housing types, designed to locate a large share of residents close to pedestrian and bicycle paths, parks, and neighborhood service centers.
- **Protection of Natural Resources and the Environment.** Development on bluffs, steep slopes, riparian corridors, or floodplains is minimized or prohibited.
- **Protection and Conservation of Neighborhoods.** Figure 4-8 Future Land Use envisions the community as a network of neighborhoods with individual identities but integrated into the overall fabric of the community. Limitations are imposed on the size and scale of development to prevent encroachment of large-scale commercial uses in neighborhoods.
- **Corridor Protection Area Between Urban and Rural Uses.** To prevent sprawl and delineate clearly the boundary between urban and rural areas, Figure 4-8 Future Land Use shows a corridor protection area between urban and rural uses along State Highways 35, 65, and 29/35 and County Road M.
- **Minimal Impact on Congested Streets.** This plan respects the community's desire for narrow streets and locates development to minimize traffic along already congested north, south, east, and west arterials such as Main Street and Division Street. This plan recommends as a priority detailed planning for the land use and road network within the sewer service area boundary.
- **Commercial and High-density Residential Development Located Away from Main Arterials or Highways.** The purpose is two-fold: to avoid strip commercial development along our entryways into the city and to create neighborhoods away from the noise, pollution, and traffic of arterial streets and existing highways.

- **A Network of Conservancy Areas.** Figure 4–8 Future Land Use depicts a network of conservancy areas along the Kinnickinnic River, South Fork, Rocky Branch, bluffs, and other passive parks within the community.
- **Respect for Traditional Communities such as the Surrounding Towns.** This plan affirms the independence of the towns in shaping their destinies; however, in many aspects such as transportation and land use planning, a partnership between the city and the towns is essential. This plan recommends as a priority establishing and maintaining a joint planning effort to develop a more detailed area plan for the surrounding towns and the city.

4.4.2 Future Land Use Classifications

This section describes the land use classifications designated on Figure 4–8 Future Land Use that are to be used and interpreted only in conjunction with the text and other figures contained in this plan. The legend for future land use abbreviates the land use classifications described below, which represent parts of an adopted City of River Falls Zoning Map.

Designation of sites for urban use on Figure 4–8 Future Land Use may not necessarily mean that the site is ready for urban development right away. Policies related to the design, phasing, and timing will regulate the kind of development.

The classifications in this section represent a proposed community-adopted policy. They are meant to be broad enough to give flexibility in implementing policies but clear enough to provide sufficient direction to carry out the SSAP. Future details on development intensities, land use mixes, and design will need to be planned. The land development code will need to be amended and an ordinance adopted to provide more detailed provisions and standards for the land use, maximum and minimum densities, and building intensities that are described in the classifications. More than one zoning district may be consistent with a land use classification.

Residential

The residential land use classifications are based on densities, not on housing types. Thus, single-family homes can be built in an area designated for a medium density, provided the overall density of the development falls within the stipulated density of the classification. The development code may place limitations on the locations of certain housing types, such as mobile-home parks. In order to conserve land and ensure the viability and efficiency of public services, proposed development with densities lower than four units per acre is not permitted in newly annexed areas and in future growth areas.

Maximum densities are per gross acre of developable land, excluding areas subject to physical, environmental, or geological constraints and areas dedicated for riparian corridors, provided that at least one housing unit may be built on each existing legal parcel designated for residential use. Accessory units such as granny flats or guesthouses will be permitted by the zoning regulation and density bonus for provisions of affordable

Sewer Service Plan

housing, if approved as part of the zoning ordinance, will be in addition to the density otherwise permitted. Because residential densities are stipulated in gross acres, no loss of development potential will result for projects that have smaller blocks with more pedestrian, bicycle, and street connections.

The residential classifications are as follows:

- **Bluff/Corridor.** Up to one unit per ten acres depending on slope. For existing parcels with 20% slopes or greater, only one residential unit per existing legal parcel is permitted. If parcels exceed more than 10 acres, clustered development will be required, taking into consideration the natural character of the land.
- **Very Low Density Residential.** One to three units per gross acre, depending on slope. On sites with slopes greater than 12% but less than 20%, development shall be clustered, taking the natural character of the land into consideration will be required. The classification mainly applies to detached single-family dwellings. This classification also takes into consideration existing residential development.
- **Low Density Residential.** Three to six units per gross acre. The classification mainly applies to detached single-family dwellings, but attached single-family units or multifamily units may be permitted, provided each unit has ground-floor living area and private outdoor open space.
- **Medium Density Residential.** Six to nine units per gross acre. The classification mainly applies to attached single-family housing and multifamily units such as duplexes, triplexes, apartments, and condominiums.
- **High Density Residential.** Nine to 12 units per gross acre. Dwelling types may include apartments, condominiums, and other forms of multifamily housing. This classification includes much of the multifamily development built in River Falls in recent years. (See Appendix D for illustrations of residential prototypes for single-family and multifamily dwellings.)

Regional Commercial

This designation is for existing retail shopping areas within and surrounding the City of River Falls that primarily serve residents and tourists. The existing regional commercial centers are those areas located to the north and within the City of River Falls.

Community Commercial

This classification provides sites for retail shopping areas, focuses on Main Street, contains a wide variety of businesses including retail stores, eating and drinking establishments, commercial recreation, service stations, automobile sales and repair services, financial businesses, personal services, grocery stores, and educational and social services.

Neighborhood Center

Figure 4-8 Future Land Use designates areas called neighborhood centers. These neighborhood centers should include a public town square as the focus for a mix of commercial, civic, and religious uses; offices; residential units; and services to meet the needs of neighborhood residents in a pedestrian-oriented, traditional River Falls environment. Maximum store size shall be 20,000 gross square feet. Parking requirements will be established through the land use regulations of the City Code. A market analysis may indicate an appropriate mix of commercial uses. Existing code provisions should be modified to include this revised list of uses, maximum as well as minimum parking requirements, and shared parking standards developed to reduce an automobile-oriented landscape. Development of the center should be in accordance with an architectural review ordinance, streetscape and urban design guidelines, and new guidelines developed expressly for neighborhood centers. Permitted uses will be those contained in the zoning ordinance, with residential densities at a suggested maximum of 12 units per gross acre, subject to height and other development standards as stipulated through amended and developed ordinances. Figure 4-8 Future Land Use shows the approximate locations of existing and future neighborhood centers. (See Appendix E for an illustration of and additional information on neighborhood centers.)

Business Park

Business parks shall provide areas appropriate for moderate to low intensity industrial and business park uses capable of being located next to commercial and residential areas with minimal buffering. Allowable uses include light manufacturing, wholesaling, distribution and storage, limited retail, and small-scale restaurants (as related uses only) and offered in a master plan landscaped setting. No raw or hazardous material processing will be allowed. Whitetail Ridge Corporate Park would be a good example of this type of future business park within the City of River Falls and the region.

Office

This classification provides sites for administrative, financial, business, professional, medical, and public offices and small-scale restaurants (as a related use only), in areas where retail and other community commercial uses are not appropriate. The area along Second Street would be considered an office district.

Industrial

This classification provides and protects industrial lands for the full range of manufacturing, agricultural, and industrial processing; general services; and distribution uses. Unrelated retail and commercial uses that could be more appropriately located elsewhere in the city would not be permitted. Proposed performance standards in the zoning ordinance will minimize potential environmental impacts. This zoning classification may apply to existing industrial parks and future industrial parks.

Public/Institutional

This classification provides for universities, schools, churches, childcare facilities, human service facilities, museums, libraries, fire and police stations, government offices, and other facilities that have a unique public character. Where uses already exist on lands designated "public/institutional" on Figure 4-8 Future Land Use, they are encouraged to remain on the site unless shown as part of a proposed redevelopment district. All other "public/institutional" uses that propose a change in land use that will increase in intensity will require a general plan amendment to the Figure 4-8 Future Land Use prior to any rezoning or development plan consideration.

Park/Conservancy

This classification provides for parks, recreational complexes, public and private golf courses, and other conservancy areas based upon riparian corridors, bluffs, and other areas. Private parks such as golf courses are considered limited special use parks.

Historic Preservation Neighborhood and Conservation

The historic preservation survey shall be updated, and those areas classified as potential historic neighborhood or historic residential and nonresidential structures shall be mapped and documented. This designation is designed to preserve stable residential areas close to Main Street and to prevent the intrusion of business district uses while conserving the developed character of these neighborhood so that permitted densities are consistent with developed densities. A wide range of residential uses, such as apartments, townhouses, and single-family detached houses, is permitted.

Corridor Protection Area and Scenic Corridor

This classification is designed and shall be planned to provide a distinct physical boundary separation to minimize the effects of noise, artificial light, air pollution, etc. It will also provide a visual separation between urban and surrounding rural and highway uses. Residential use shall be limited to existing legal parcels. One residence per ten acres shall be considered within this area. Agricultural operations compatible with the surrounding urban uses, nurseries, parks, recreational open spaces, storm water ponds, campgrounds, and cemeteries would also be appropriate. Policies and design guidelines shall be developed to mitigate development within and adjacent to the corridor protection area, such as screening with topography and transfer of development rights. State Highway 35/65 as it enters into the City of River Falls shall be considered a corridor protection area. A recommended starting point for a scenic and protection corridors could be 300 feet from the edge of the right-of-way on both sides of the highway. The 300 feet was used to be consistent with the shoreline buffer. This distance may change after a study has been completed.

County Road M and State Highway 29/35 as it enters into the City of River Falls shall be considered scenic corridors. Scenic corridors are recognized for their importance as unspoiled entryways into the city. Development standards, including land use, density, and density control, will be developed through a public participation process.

4.5 TRANSPORTATION

Transportation issues need to be addressed from a communitywide to a neighborhood and block level scale. The relationship between the local system and the community system and agencies also needs to be addressed.

This section provides some policies and standards for a multimodal transportation system that encourages alternatives to automobile travel. This is achieved primarily by adopting land use policies that would reduce the need for automobile travel. Primary among these is the establishment of services and jobs closer to residences and fostering pedestrian-friendly environments. Denser settlement patterns are proposed to promote future transit as well as pedestrian activity. Finally, improvements are proposed that would optimize the use of existing facilities and provide a multimodal transportation system that encourages future transit and meets the need of the pedestrian and bicyclist, as well as automobiles. The prevalent sentiment against wider streets and the desire to conserve the character of established neighborhoods are reflected in the policies, fostering the character of traditional River Falls' neighborhoods. These policies have been designed to ensure that:

- A compact urban form provides neighborhood amenities closer to where residents live, fosters a pedestrian-friendly environment, encourages future transit service to serve commercial centers, and encourages alternatives to automobile trips.
- Trip lengths are kept to a minimum by promoting a mix of land uses in different parts of the community, locating residences closer to job centers, and delineating development along future transit service corridors.
- Transit intensive corridors are established where high transit service levels are provided and requirements for minimum residential density in new neighborhoods is established.
- A street network that promotes flexibility of routes and connections between and within neighborhoods is promoted.

4.5.1 Transportation System Management

The term "Transportation System Management" refers to measures designed to reduce peak-period traffic by making more efficient use of existing transportation resources and emphasizing ride sharing and nonauto alternatives. Transportation System Management includes public transit, flexible work hours, car and van pooling, and incentives to increase the use of these alternatives. Transportation demand management that focuses on efforts to reduce peak-hour transportation demand is one component of Transportation System Management. Transportation System Management has become increasingly important in the efforts to enhance mobility through efficient use of alternative modes of transportation and to meet federal and state air quality standards.



A successful Transportation System Management program is an essential and important element in the continuing effort to achieve acceptable levels of traffic service. The specific objectives of Transportation System Management are to:

- Reduce peak-hour congestion by reducing the number of single-occupancy vehicle commuting trips.
- Reduce or delay the need for street improvements by making more efficient use of existing facilities.

4.5.2 Traffic Flow and Congestion

Reducing the number of single-occupancy vehicle commuting trips will result in an increase in the percentage of pedestrian, bicycle, and transit (bus/van) trips. Average trip length and overall vehicle miles traveled will also be reduced. In planning for the future, it is important to promote and reinforce through studies the need for multimodal transit hubs and transit corridors in new development, where high-frequency transit service would be provided in future transit services areas, in addition to promotion of regional transit between Wisconsin and Minnesota.

4.5.3 Regional Park-and-Ride

A majority of residents are employed outside the city limits, with their mode of travel being single-occupancy vehicles. There is a need for a study to find ways to increase the use of high-occupancy vehicles, such as van pools and express bus service operating from a park-and-ride lot, to service commuters traveling to their destinations. There are presently lots located north of River Falls along State Highway 65 that provide the opportunity for a park-and-ride program.

4.5.4 Standards for Traffic Level of Service

Traffic level of service (LOS) is a level for intersections and roadway segments that is characterized by examining peak-period operations. The standard measures of traffic flow are LOS and volume-to-capacity (or demand-to-capacity). LOS is classified by a letter grade that describes the quality of flow, ranging from the best conditions (LOS A) through extreme congestion associated with over-capacity conditions (LOS F) (Table 4.4).

Traffic demand modeling assumes that travel demand is a response to the pattern of land use activity in a city or surrounding region. The modeling process uses existing and forecast land use and demographics as model input. Through daily activity, the people who live, visit, shop, and work in and around River Falls generate the traffic that the

model assigns to the circulation system. The land use intensity also contributes to the magnitude of generated traffic; however, mixed use environments with convenient pedestrian access generate proportionately fewer additional automobile trips than areas devoted exclusively to a single use. Demographic descriptors, such as income, household, and vehicles per household affect traffic generation at the residential or household end.

**Table 4.4
TRAFFIC LEVEL OF SERVICE DEFINITIONS**

Level of Service (LOS)	Traffic Flow Conditions	Maximum Volume to Capacity Ratio
A	Free flow: speed is controlled by driver's desires, stipulated speed limits, or physical roadway conditions.	0.6
B	Stable flow: operating speeds beginning to be restricted; little or no restriction on maneuverability from other vehicles.	0.7
C	Stable flow: speeds and maneuverability more closely restricted; occasional backups behind left-turning vehicles at intersections.	0.8
D	Approaching unstable flow: tolerable speeds can be maintained but temporary restrictions may cause extensive delays; little freedom to maneuver; comfort and convenience low; at intersections motorists, especially those making left turns, may have to wait one or more signal changes.	0.9
E	Approaching capacity: unstable flow with stoppages of momentary duration; maneuverability severely limited.	1.0
F	Forced flows: stoppages for long periods; low operating speeds, and delays at intersections average 60 seconds or more.	>1.0

4.5.5 Street Scale and Design

Local streets should be designed to serve the needs of the neighborhood. Over-designed local streets are unnecessarily wide, costly, and unsafe for residents. Streets are among the most costly of development improvements and excessive requirements are a contributing element in rising housing prices. Over design may result in more cut and fill, more runoff, diminished groundwater supply, and a high potential for erosion. Over design and excessively wide streets tend to move traffic rather than control it, encouraging speeding and creating hazards. Narrow, curved streets discourage speeding. The planning and design of all streets should clearly indicate their functions. Arrangement of arterials and collectors in the community shall conform to an official street map that is approved by the community (Figure 4-9). Table 4.5 outlines street classifications and standards.

Table 4.5
STREET CLASSIFICATIONS AND STANDARDS

Street Type	Function	Access	Additional Street Functions/Amenities (w/in right-of-way) ^{a,b}	Number of Lanes	Parking
Freeway	Provides for regional mobility	Restricted to primary arterials via interchanges	Landscaping of unpaved right-of-way	Varies	None
Principal Arterial	Collects and distributes traffic from freeways to minor arterials and collector streets	Optimum distance between intersections is approximately 0.5 mile.	Bikeways and landscaped median; park strips (for three or more lanes only); sidewalk with planting strip separating it from the street; and transit facilities	2, 3, or 4	None
Minor Arterial	Same as principal arterial	0.5 mile	Bikeways, landscaping, sidewalks, and transit facilities	2	Two-sides One-side None
Proposed Transit Corridor	Provides preferential right-of-way for buses and high-occupancy vehicles	No restriction on spacing of intersecting streets, but signals along the Transit Corridors should be limited and timed for preferential movement. Driveways no closer than 100 feet apart and prohibited in some areas.	Bikeways, landscaping, sidewalks, and transit facilities	2, 3, or 4	Two-sides One-side None
Collector	Serves as connector between local and arterial streets and provides direct access to specific sites	At major intersections, driveways on collector streets should be no closer than 50 feet to the intersection. Nonresidential driveways and/or intersecting streets or collector streets should be no closer than 500 feet apart.	Landscaped park strips, sidewalks, and transit facilities were mapped on the future land use. The goal is to have all local streets bicycle friendly.	2 or 3	Two-sides One-side None
Local Street	Provides access to specific sites	Access is not restricted	Landscaped park strips and sidewalks. All local streets are bicycle friendly	2	Two-sides One-side None
Rural	Same as principal arterial	Same as principal arterial. Used in limited situations where purpose is to limit impact on natural resources and where housing densities served are very low.	Bikeways	2	One side None

Notes:

^a Proposed transit facilities include bus stop signage and furniture and possibly bus pull out lanes.

^b Street lighting and street trees are required for all public and private street improvements in accordance with city standards.

City standards. Street trees along rural streets may not be required where preservation of the natural environment is considered foremost.

Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

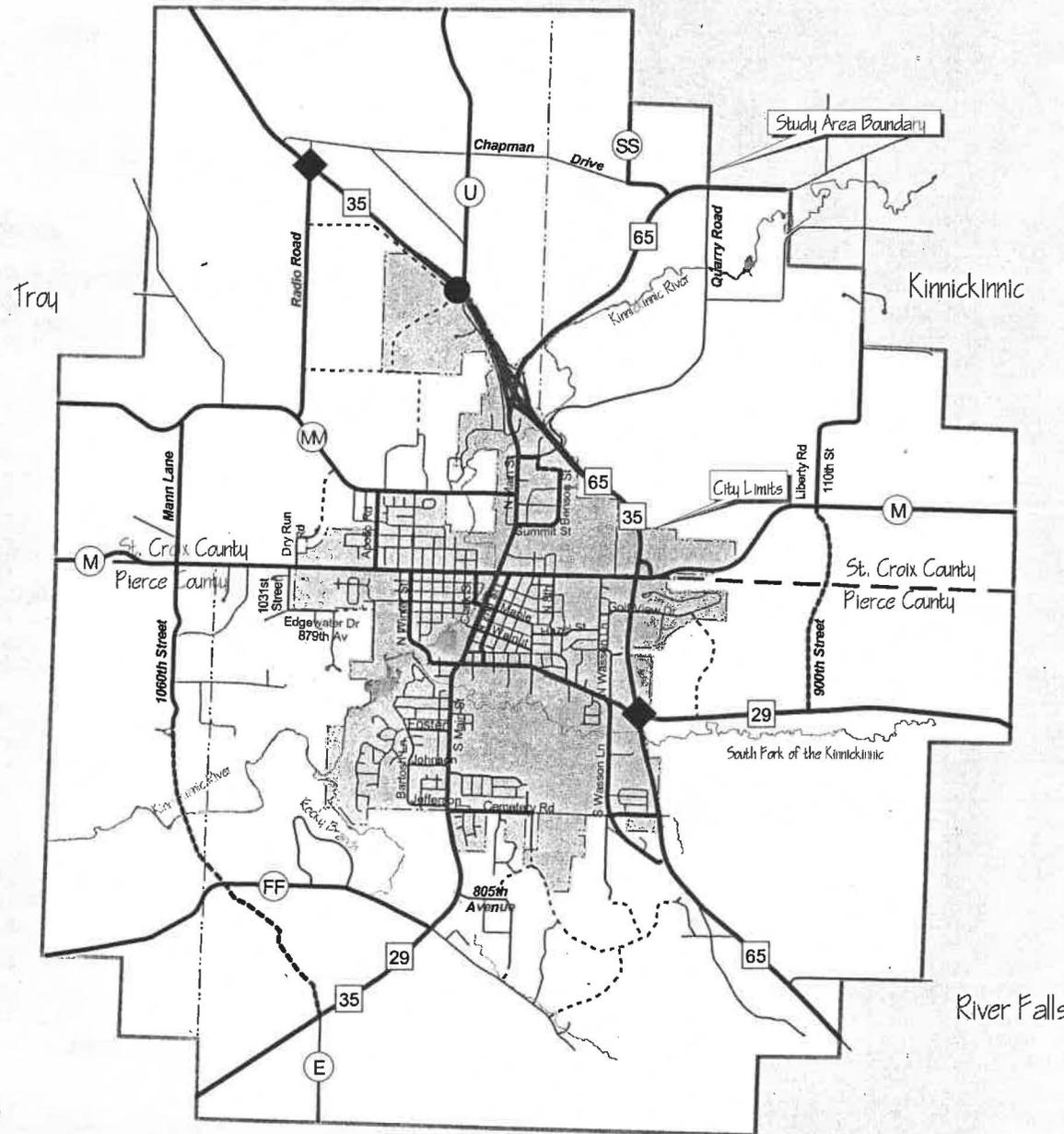
Future Streets

- ◆ Proposed Over/Underpass Locations
- Proposed Intersection Locations
- Proposed Minor Arterial
- - - Proposed Collector
- ▬ Principal Arterial
- ▬ Minor Arterial
- ▬ Collector
- ▬ Minor Roadways
- ▬ City or Town Boundary
- ▬ County Boundary
- Lakes & Rivers
- City of River Falls
- Study Area

Data extracted from the River Falls Official Map
Revised: October 10, 1989 and Future Land
Use Map



Figure 4-9



4.5.6 Bikeway Classifications

This plan designates two types of bikeways: Class I is Bike Paths and Class II is Bike Lanes. Both are defined in Table 4.6. Although these facilities are specifically designated for bicycles, like all other vehicles, bicycles are authorized to use the entire street network.

**Table 4.6
BIKEWAY CLASSIFICATIONS***

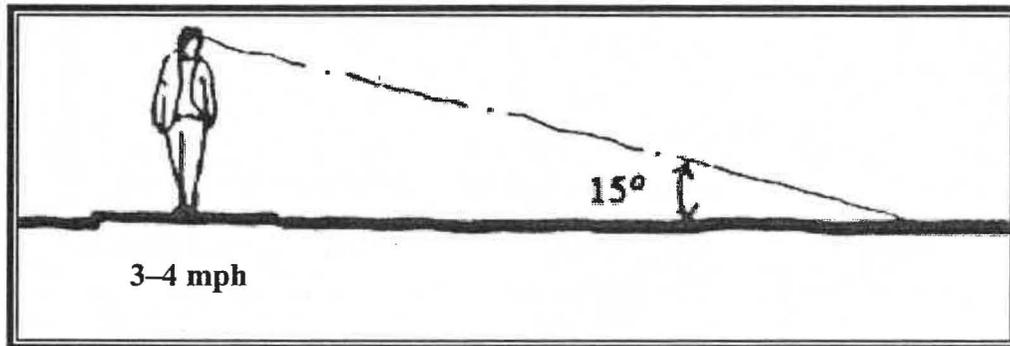
Class	Function	Access Control	Right-of-Way/Standards
Class I Bike Paths	Provide exclusive right-of-way for bicyclists, with cross flows by motorists minimized.	Where crossing or access from the bicycle path is required, the crossing should be grade separated or occur at pedestrian crossings. Midblock crossings should assign right-of-way through signing or signalization.	The minimum paved width for a two-way bike path is eight feet and for a one-way bike path is five feet. Adjacent to the pavement, a graded area at least four feet in width shall be provided. Where pedestrian activity is expected, a minimum of 10 feet for a two-way facility should be provided.
Class II Bike Lanes	Provide preferential use of the paved area of the roadway for bicyclists by establishing specific lines of demarcation between areas reserved for bicycles and motorists.	Access is similar to that recommended for roadways. At intersections where there is a bike lane and an actuated signal, it is desirable to install bicycle-sensitive detectors. Push button detectors force the bicyclists to stop and actuate the push button. Because most accidents for bicyclists occur at intersections, clear bikeway design at intersections should be implemented through the use of signing and striping.	Class II bike lanes are one-way facilities. On roadways with parking, the bike lane is located between the parking area and the traffic lane with four-foot minimums for the bike lane. Where parking is permitted and not marked, minimum width is 12 feet. On roadways where parking is prohibited, a minimum of four feet is required with up to a two-foot gutter.

NOTE: All local streets are intended to be "bicycle friendly." * Wis. DOT min. standards shall be met.

4.5.7 Pedestrian Circulation

While only about 5% of the commuter trips in the city were made on foot in 1990, the actual share of walking trips is probably much higher when trips by noncommuters (such as tourist and students) are taken into account. Many of River Falls' traditional centers (such as Main Street and the University) are hubs for pedestrian activity. Canopies, streets shaded by trees and buildings, continuous sidewalks, and buildings oriented to the street characterize these centers. The overall scale of development in these areas is small blocks and interconnected streets that facilitate pedestrian movement. Many of the recent developments and commercial and residential subdivisions do not foster an environment conducive to walking. Efforts have been made to require additional sidewalks on both sides of streets in new developments and in redevelopment areas. It is important to know

and understand that a pedestrian moves at three to four miles per hour. Perception of the ground is at an approximately 15 degree angle. The treatment of the ground surface is critical to the definition and visual quality of the pedestrian path.



4.6 WATER MANAGEMENT

In the fall of 1999, the City of River Falls Municipal Utility prepared a *Comprehensive Water Plan*. Chapter 3, Section 3.1 (Water Services) of this plan outlines the existing water system and facility. This section will discuss production, storage, maintenance, distribution, and capital improvements for a future water service system. The *Comprehensive Water Plan* states that, “to prepare a water system study that will be useful as a planning document, two basic planning issues must be identified.” The two issues discussed in the report consist of the utility service area and the population projection within the utility service area. The water utility service area was defined by the 1998 *Comprehensive Sanitary Sewer Study*. The population projections for the City of River Falls that were used in this study were based on population projections in the report titled *City of River Falls Master Plan Update, 1995–2020* (1995). Detailed land use assumptions were not available to incorporate into the population projections. The information below provides a guide for potential and proposed improvements to the year 2020. These data have been extracted from the River Falls Municipal Utility *Comprehensive Water Plan* of October 1999.

4.6.1 Production

Production facilities are related to the production or supply of water. In the past, the capacity of existing production facilities has managed to keep pace with growth. The recent upgrade of Well Two and Well Three has given the Municipal Utility a significant amount of new production capacity.

The Municipal Utility should continue periodic upgrades of the existing wells. A future well site should be secured by 2005 to protect the site from development and to determine the best land use for the area around the well. Current usage projections indicate the well will not be needed until 2015. Potential locations for well sites are on the eastern or northwestern side of the city. The potential locations are based on groundwater flow and potential contamination sites.

4.6.2 Storage

Due to increased development pressure, there will be a need to construct a storage tank west of the north industrial area. The reservoir will be valuable for fire protection in the growing north industrial area and will add to the total storage volume available in the system. The reservoir will be sized to store the gallons needed and will have an overflow elevation equal to the Mound Reservoir and the South Sycamore tank. Tank sizes and locations are all subject to actual development requirements in this area and prudent system design.

4.6.3 Maintenance

Wells Two and Three were recently reconstructed. Well Five is scheduled for reconstruction in 2001, and Well Four is scheduled for reconstruction in 2003.

The 300,000-gallon Sycamore water tower was painted on the interior and exterior in 1998. Repainting is expected in approximately 2013. The 250,000-gallon Golf View water tower received new exterior paint in 1999. The interior is scheduled for repainting in 2006. The 750,000-gallon Mound reservoir is constructed of concrete. The reservoir should be monitored for changes in width and length. The three water storage tanks will be inspected and cleaned in 2001 and then inspected at five-year intervals.

4.6.4 Distribution

A calibrated computer model was utilized to analyze projected system projects during the next 20 years. During year 2000 a 12-inch loop is planned along Cemetery Road and an 8-inch loop along Sixth Street. These two improvements will increase the available fire flows on the south side to 2,000+ gpm. The 2,000-gpm available fire flow meets the needs for the residential land use in this area. For the next 20-year period, a development rate of 60 acres/year was determined using population projections and information from the 1998 *Comprehensive Sanitary Sewer Study*. The area included for potential improvements is within the 30 square mile planning area. Potential areas that will probably develop in the next 20 years include the southeast, east (E. Division Street), west (W. Division Street), and northwest (along Highway 35). Potential growth is somewhat limited to the northeast and southwest due to the Kinnickinnic River.

High elevation areas within the planning area that would require a separate pressure zone are delineated in Figures 4-10 and 4-11. The critical elevation contour used to determine the pressure zone was calculated using a typical tower operating level and subtracting 35 psi which is the minimum design static distribution pressure allowed by WDNR. Figure 4-11 shows the available fire flows with the proposed improvements at year 2020.

▪ East Growth

The Golf View pressure zone is expected to grow over the next 20 years. Potential growth may include some of the area above the 1,100-foot contour. Potential improvements in this area should consist of a 12-inch trunk water main with 8-inch mains in residential areas.

▪ **Southeast Growth**

Growth in this area during the next 20 years is limited to the area that can be served by the main pressure zone. This area is confined to elevations below 960 feet USGS. A 12-inch trunk water main loop with 8-inch mains in residential developments will serve this area, including the new high school.

▪ **West Growth**

The west area will also be served from the main pressure zone. There are some small parts of this area that are above the 960 contour. Proposed improvements for this area call for a 12-inch trunk water main extending west on W. Division Street and County Highway MM. Residential development will utilize 8-inch looped water mains.

▪ **Northwest Growth**

The northwest area growth along Highway 35 will mostly be residential, commercial, and industrial growth during the next 20 years. This area is presently served by an existing 14-inch water main that is not looped. The 14-inch line crosses the Kinnickinnic River to serve the north area. Looping, additional line, or work on the existing water line may be needed to serve additional growth.

High elevation areas within the planning area that would require a separate pressure zone are delineated in Figure 4-10. Figure 4-11 shows the available fire flows with the proposed improvements at year 2020

One of the considered alternatives was to provide a second water main connection for a loop to this area. A 12-inch water main could be constructed along Riverside Drive connecting the water main from County Highway MM to Commerce Court. This alternative does provide a second crossing of the Kinnickinnic River but still leaves the northern portion on a long dead end line.

The next alternative evaluated was to construct a water main on County Highway M, Radio Road, and south along State Highway 35 to loop the existing line. This alternative provides a looped water main to the north area. However, much of the area that this line would transverse is outside of the 20-year growth area.

The third alternative evaluated is to construct a 500,000 gallon ground reservoir on the northwest mound area with a 16-inch connecting line to the existing 14-inch main in the north area. The reservoir could be constructed with a dividing wall so that initially 250,000 gallons of water would be stored. When development occurs, the entire 500,000 gallons would be utilized. The reservoir provides higher fire flows for the proposed Industrial Park on the eastside of State Highway 35. To provide system reliability, the Riverside loop will be constructed based on need. As the proposed Industrial Park develops, the reservoir will be constructed when needed.

Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

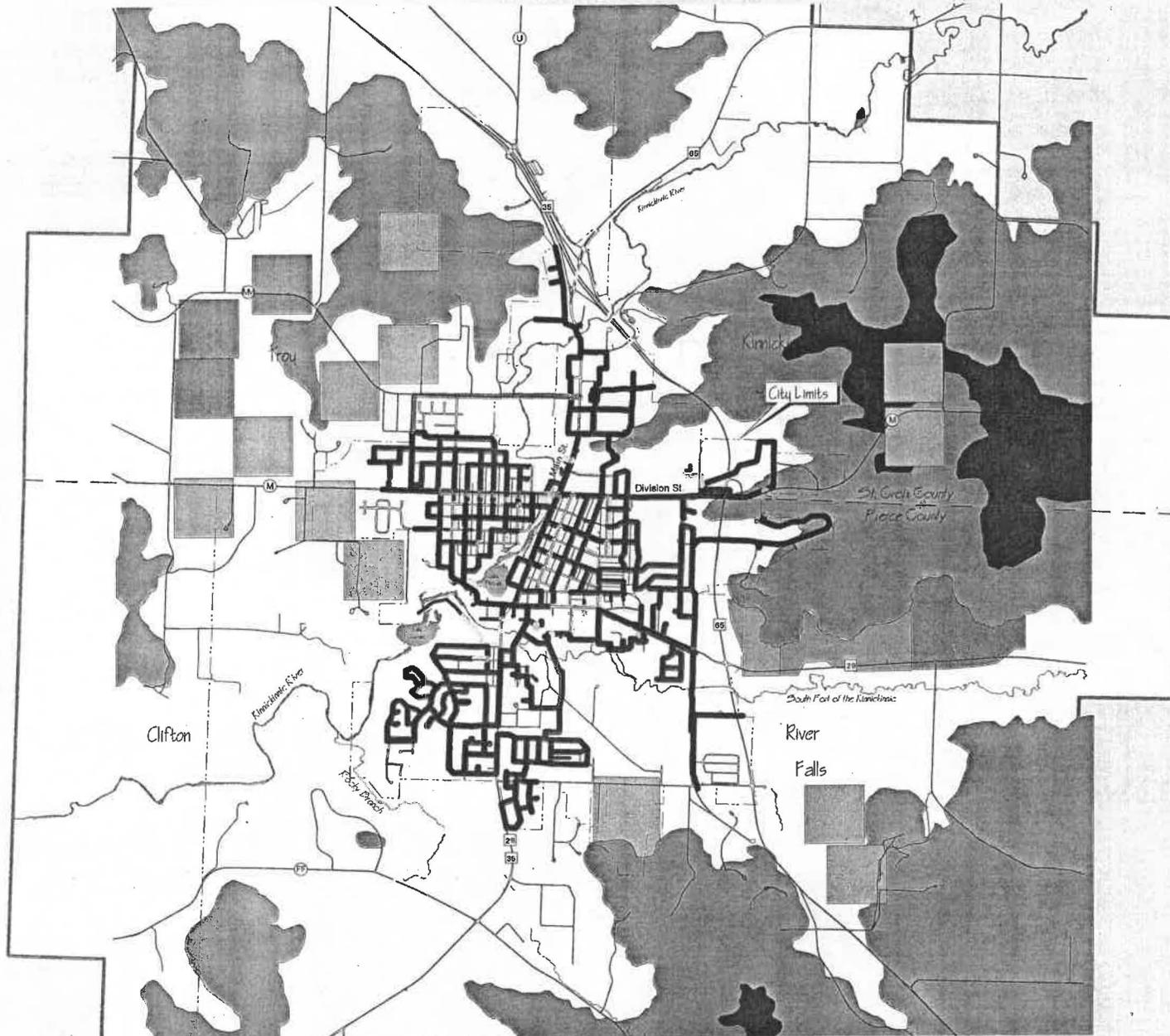
Proposed Water Improvements

-  2000 - 2005
-  2006 - 2010
-  2011 - 2015
-  2016 - 2020
-  1110 Contour
-  960 Contour
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers

Data extracted from River Falls Municipal
Utilities Comprehensive Water Plan
October 1999



Figure 4-10



Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

Improved Fire Flow Contours (GPM)

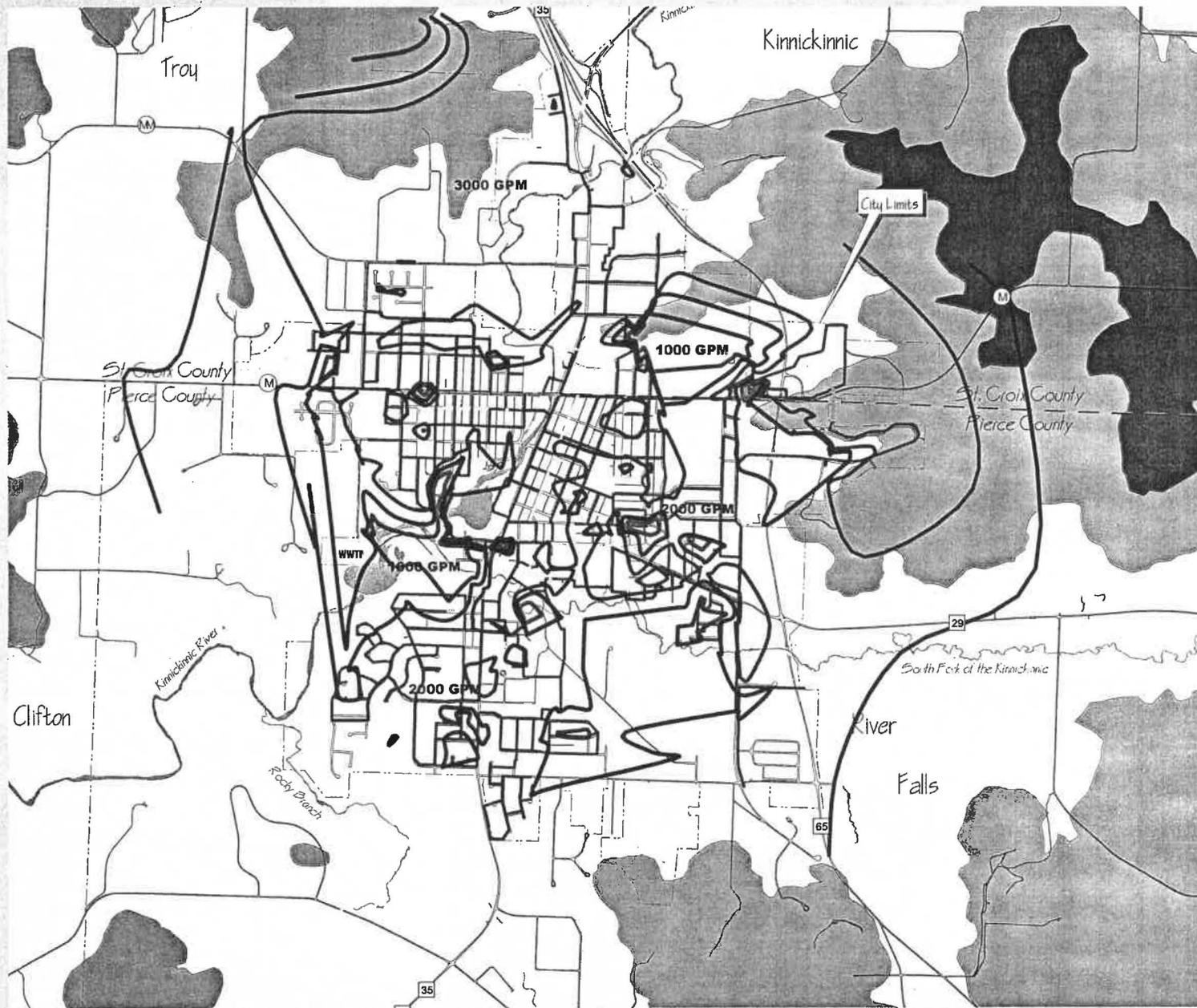
-  1000
-  2000
-  3000
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers

Data extracted from River Falls Municipal
Utilities Comprehensive Water Plan
October 1999



0 1000 2000 3000
Feet

Figure 4-11



The location of a reservoir on the northwest mound will provide water for residential development. This area is above the 960 feet contour so an above ground booster station with VFD pumps, hydropneumatic tank, and an emergency power generator will be needed for a high pressure service area located in the north part of town near the proposed 500,000 gallon storage tank. Booster pumps will be needed to boost pressure with a hydropneumatic tank in this area if residential development occurs on the bluff. Pressure reducing valves may also be needed at connection points depending on the configuration of the high-pressure service boundary. There is a need for a loop from the reservoir to County Highway MM. This loop will allow the three reservoirs (Mound, Sycamore, and Northwest) to operate more evenly.

4.6.5 Capital Improvement Program

One of the objectives of the *Comprehensive Water Plan* was to develop a 10-year Capital Improvement Program (CIP) for water system improvements. The CIP provides information on the anticipated cost and timing of future improvements.

Cost and Timing of Improvements

Table 4.7 lists the estimated utility cost and estimated timing of proposed improvements. The estimated utility cost includes 10% construction contingencies and 30% overhead (i.e., legal, engineering and administrative). Street construction or reconstruction costs, easement costs, and other miscellaneous costs that may be related to the final construction are not included. Table 4.7 lists only those costs that may be paid for with the Water Fund or the Water Reserve Availability Fund.

Table 4.7
SCHEDULE OF IMPROVEMENTS*

Year	Improvement	Estimated Cost
2000	6 th Street	\$23,000
2000	Cemetery Road	\$330,000
2001	W. Division Street Extension	\$150,000
2002	River Side Loop	\$250,000
2004	Emory Drive	\$25,000
**	New Reservoir Planning	\$40,000
**	Future Well Site	\$60,000
**	Reservoir Construction	\$665,500
**	Reservoir Loop to County Hwy MM	\$780,000
**	Future Well Construction	\$550,000

* River Falls Municipal Utility *Comprehensive Water Plan* (1999).

** To be determined upon need.

The timing of future improvements will be influenced by a number of parameters. Items such as the location of the service area boundary, development pressures in specific areas, aging facilities and/or facilities which are undersized, availability of funds, etc., all play a role in the timing of future improvements.

Because of the factors involved, it is difficult to accurately predict the time of future improvements, especially those that may occur far into the future. However, some areas of the planning area are more likely to experience rapid development than others. The estimated time of improvements as listed in Table 4.7 is based on input from Municipal Utility staff as well as knowledge of potential future growth areas.

4.7 WASTEWATER MANAGEMENT

4.7.1 Expansion of Collection System and Treatment Plant Capacity

The City of River Falls Municipal Utility prepared a *Comprehensive Sanitary Sewer Study* in the fall of 1998. This report was intended to be used as a reference document for sanitary sewer system improvements to serve the future development areas by gravity feed. The recommendations in the report were made to provide the most cost-effective means to accommodate future growth around the City of River Falls. The report was divided into sections that represented five distinctive future service areas. The areas of future development surrounding the City of River Falls were defined in a joint effort involving the River Falls Municipal Utility and the River Falls Planning Department. The total future service area evaluated as part of the study is approximately 7,320 acres (11.4 square miles), which is more than four times larger than the current service area. Figure 4-12 Sanitary Sewer Service Area Overview shows the location of the five service areas, and they are listed in Table 4.8.

**Table 4.8
FUTURE SERVICE AREAS**

Future Service Area	Acreage
Northeast	670
Southeast	1,000
Southwest	430
West (Mann Valley)	2,540
North	2,680
Total	7,320

4.7.2 Year 2020

The maximum projected flow (1.9 million gallons per day [mgd]) exceeds the average-day design flow shown in Table 3.4 and at 2,900 lbs/day exceeds 90% of the corresponding biochemical oxygen demand (BOD) average-day design loading. This projected loading suggests that some year 2020 daily flows and loadings will exceed capacity. A facility plan prepared by RUST Environment and Infrastructure (1994) determined that the wastewater treatment plant's capacity would be reached near year 2015. The RUST flow and loading projections included an unspecified flow and BOD loading of 10% of the projected growth (as allowed by Wisconsin Administrative Code NR 110). Together, this report and the RUST report suggest that the wastewater treatment plant will reach its design capacity between years 2015 and 2020.

Chapter 4 Sewer Service Area Water Quality Management

City of River Falls Sewer Service Plan

Sanitary Sewer Service Area Overview

-  North
-  Northeast
-  Southeast
-  Southwest
-  West (Mann Valley)
-  Current
-  Major Roads
-  City or Town Boundary
-  County Boundary
-  Lakes & Rivers
-  Study Area

Data extracted from River Falls Comprehensive Sanitary Sewer Study October 1998



0 1500 3000 4500
Feet

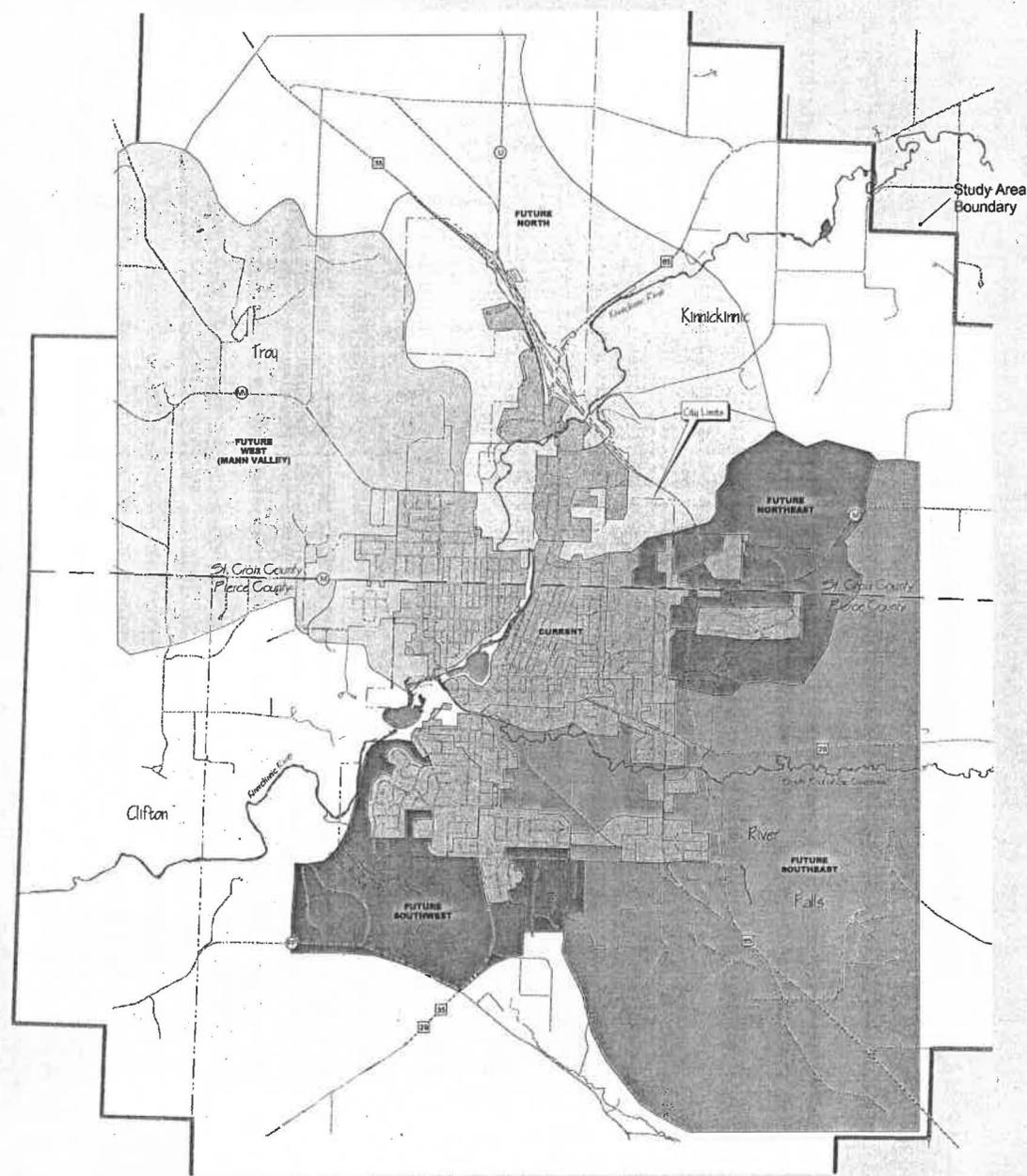


Figure 4-12

4.7.3 Beyond Year 2020

Based on projections in the 1998 *Comprehensive Sanitary Sewer Study* and the RUST report, wastewater flows and loadings will exceed the wastewater treatment plant's capacity near year 2020. The 1998 *Comprehensive Sanitary Sewer Study* recommends expanding the existing facility to provide additional capacity. The current wastewater treatment plant location allows horizontal expansion. Other alternatives to provide additional capacity are expanding the wastewater treatment plant, building a second treatment facility to treat the growth-related flow and loading, or building a treatment facility to replace the existing facility. The relative costs of these alternatives compared to expanding the existing facility will be determined by a comprehensive study that evaluates wastewater transmission and treatment costs. Estimating these costs was beyond the scope of the 1998 *Comprehensive Sanitary Sewer Study*.

4.8 SOLID WASTE MANAGEMENT

The approach to solid waste collection, disposal burn and bury has remained relatively unchanged throughout the majority of the twentieth century. It has been reactive to the waste disposal needs of the area. However, as we enter the new century, the community finds itself confronted with a much more complicated and expensive network of waste management issues: transfer and transport, reduction, expansion of service areas, and heavily regulated disposal requirements, which all add up to additional costs for services. Because of this, comprehensive efforts are needed to deal with the financial and operational demand of changing regulations, technology, service demands, and expectations regarding solid waste collection and disposal. Chapter 3 outlined some of the issues regarding disposal, landfill closure, and waste volume reduction. Detailed efforts will be needed in a comprehensive plan to look at environmental concerns and so that the community will not rely on the high expense of a waste management company.

4.9 STORM WATER MANAGEMENT

The ever-increasing development within the greater River Falls area drainage system has prompted the need for a comprehensive master drainage plan. A drainage management plan will determine the ability of the existing drainage facilities to pass the 100-year flow, size drainage improvements, determine costs, and set priorities for constructing recommended improvements. Some of the community's drainage control structures are not considered adequate for existing conditions. Without appropriate modifications to the system, further development will increase the potential for flooding and property damage. Upgrading a number of crossing structures, a conveyance system, or other improvements are needed. A drainage master plan would identify potential improvements and establish an implementation schedule.

Increases in impervious surfaces because of development have resulted in increased runoff and decreased water recharge. Policies are needed to focus on minimizing runoff, especially during peak-flow periods; ensuring adequate drainage; and locating development to minimize drainage from flooding. Strategies to address increased runoff

include small-scale on-site water retention facilities, water harvesting, and detention ponds. Presently efforts are being made by the city, but with additional planning, decisions can be made which provide for the enhancement of water quality, prevention of groundwater degradation, reduction of local flooding, and improved development patterns relative to the environment. Chapter 3 of this plan, along with the 1995 *Water Management Plan* (205 J) for the city, outlines some of the existing issues and proposed improvements for storm water management.

4.10 UTILITIES

4.10.1 Joint Powers Agreements

There is a need for the city and towns to work jointly to establish an impact fee structure to reduce sprawl and ensure realization of this plan. Consideration of a city and towns joint powers agreement should be discussed for those areas of relevance to impact fees and future services. Areas of cooperation that are relevant to impact fees include:

- **Water Systems.** The city and towns shall plan for areas to be connected to the city water system, in order to promote development within the sewer service area boundary. An agreement would then become the basis for the assessment of impact fees to finance capital facilities for water supply needed to serve the new growth within the sewer service area boundary. Agreements could be drafted between property owners so that they would not resist annexation when the property is serviced by city infrastructure and is adjacent to the city limits. Criteria would need to be developed for such a program.

The city and towns shall collaborate to upgrade or develop new water wells, reservoirs, and water supply lines. The city and towns could agree that the city would undertake this project, with funding provided at least partially by impact fees, if the required nexus between this upgrade and the increased need for water necessitated by growth is made. Impact fees could be assessed by the city both in the city and within the sewer service area boundary to be serviced by this upgraded water supply system, pursuant to the Development Fee Act, if the city and towns entered into a joint powers agreement. A joint powers agreement could also identify areas intended for annexation into the city which are now within the sewer service area boundary and could enable the city to assess and collect impact fees in these areas to extend water service to them

- **Wastewater.** The Municipal Wastewater Treatment Facility and sewage collection system serves a significant need within the sewer service area boundary. The city and the towns should consider developing a means for legal cooperation and enforcement of wastewater service related ordinances in the sewer service area boundary. The towns could include in their codes the same provisions the city has as a basis for sanitary sewer service. A proposed ordinance would provide for services within the sewer service area boundary to be offered on the same basis as they are offered anywhere else in the city.

- **Streets.** A joint powers agreement might also be utilized to enable the city to assess and collect impact fees in the sewer service area boundary for arterial roads, which are both in the city and in the sewer service area boundary and are impacted by growth within the sewer service area boundary.

The city and the towns also have the option of cooperation in other areas, including fire protection, parks, and community services. The city will need to enter into joint powers agreements with the towns or amend the current extraterritorial agreement to enable impact fees to be assessed by the city within the sewer service area boundary.

4.10.2 Electric Service

There is a need for an electric facility plan that promotes the policies adopted in the *City of River Falls Master Plan* and this plan. The facility plan should reflect the goals and determination of these documents, as well as those expressed in public hearings held throughout the development of the above plans. The electric facility plan should also advocate a model of sustainability, including the use of emergent technologies for the implementation of cleaner, more efficient, and more cost-effective electric generation that is connected to the existing power grid.

*Consumer Owned
Community Minded*



Additionally, the plan should anticipate traditional electric facility expansion needs with sufficient capacity and reliability to accommodate future growth. Finally, the facility plan should provide site criteria and design standards for electric generation, transmission, sub-transmission, distribution facilities and should detail the review process, including early neighborhood notification for work related to existing and proposed facilities.

Recognizing the changing regulatory framework as well as the emerging technologies related to the electric industry, the electric facility plan should anticipate how these issues might affect planning for the River Falls area.

The plan could do this through the siting and development standards and by prescribing a review process for both facilities proposals and for changes in the plan. The primary goal of an electric facility plan is to provide a framework for the planning and implementation of an electric facility for the River Falls area. In light of the changing technology resources, the plan should attempt to balance health and environmental concerns with economic considerations and establish a form for public review and input. At the same time, working with the best available models for future growth of the area, the plan should attempt to identify those areas where growth will necessitate electric facility expansion. A facility plan should apply to all service providers within the sewer service area. Through this plan and past documents, the community has expressed an interest in implementing policies for energy efficiency and

renewable energy technology for the purpose of energy conservation and improvement of air quality. Due to concerns about the environmental effects and long term availability, the facility plan should advocate actions at the local level that help reduce reliance on conventionally based power. The increased energy efficiency and use of renewable energy will help lower concerns about the climate change, ozone, acid rain, and other adverse environmental effects. An electric facility plan would serve the best interest of the public and the community, work with the established electric provider network, and at the same time, consider growth and new opportunities in the field. To support the above, the electric facility plan should consider the following objectives:

- Plan for future growth and provide standards for site development and design.
- Provide a form for public input in electric facility planning.
- Promote energy saving and energy efficiency.
- Incorporate reliable energy resources into electric facility planning.
- Initiate the development of a process for undergrounding. Undergrounding is the placement of overhead wires and poles below ground.
- Continue to monitor scientific research regarding electric and magnetic fields.
- Conserve archeological, natural, and cultural resources within state guidelines.

4.11 IMPACT FEES

The purpose of impact fees is to generate funds to pay for the capital cost of growth. New residents and businesses place demands on public roads, water and sewer systems, drainage systems, parks, and police and fire facilities. A development fee act would enable local governments to charge new developments for the costs of capital improvements needed to serve the new developments.

The use of impact fees to cover costs for capital improvement projects is becoming more popular for communities. Although an impact fee can be structured several ways, it is typically a per acre fee which is charged to new development within a particular impact area. The impact area has a boundary and contains a certain number of acres. As these acres are developed, an impact fee is collected from the developer based on the size of the parcel. From an audit standpoint, financial advisors often prefer the use of impact fees to other methods for financing capital improvement projects. Because an impact fee is usually project-specific and links a specific project to a defined benefit area, it can be easier to justify and, therefore, is less likely to be challenged. However, State Statutes contain specific requirements for the use of impact fees, and these must be closely examined prior to implementation.

River Falls Municipal Utility has utilizes the special assessments, which are a type of impact fee in two specific geographic areas. A separate high-pressure water zone was constructed to service the Golf View Development. The second geographic area is the Mann Valley Interceptor service area. Any development within the 800-acre service area will be assessed a per acre charge for the trunk facilities.

Impact fees are not a panacea for all capital needs. They may only be used to pay for the costs of new capital projects that directly serve growth in the area. They can not be used to pay for renovation or for deficiencies in service levels to existing developments. A

project funded by impact fees must serve the area for which the fees were collected, and the projects must be completed within a given period of time from the date the fees are assessed. A more detailed review will be needed to assess the benefits of developing a fee act that would allow local governments to charge new developments for the costs of capital improvements needed to serve the new developments.

IMPLEMENTATION POLICIES

4-1 HERITAGE RESOURCES

- 4-1-I-1 Educate the community about the values of heritage resources through a communitywide resource management document, by including a strong heritage resource component in any management plan, and by organizing workshops and training for community representatives, residents, and special interest groups, including the community's youth, the design and development community, business people, and the media.
- 4-1-I-2 Strengthen and encourage a partnership with noncommunity historic preservation entities, including those at the federal, state, local, and private levels. Through participation in special projects, offering and receiving technical assistance, writing/obtaining grant funds to further programs, and disseminating information about such entities to the public through educational programs.
- 4-1-I-3 Encourage and participate in the preparation of the State Register of Cultural Properties and National Register of Historic Places Nominations for resources that qualifies for such listings. Listing archeological, cultural, and historic resources provides a means by which the community can raise the consciousness of people about resources. Incentives for tax relief and occasional grant monies are available to owners for maintenance and preservation of these resources.
- 4-1-I-4 Continue existing efforts to survey and resurvey resources.

Expansion of existing resource survey efforts shall include recording characteristics or unique physical features and historic development patterns. The character of the community's historic area is defined by more than just buildings. Many other features are recognized as making a collective contribution to the community's distinctive landscape. Such features should be identified and recorded locationally and include rivers, street forms, and physical attributes, bridges, and other manmade cultural landscape elements.

- 4-1-I-5 Preserve structures in neighborhoods that exhibit individual architectural merit and that collectively exhibit the sense of place that the community poses through a review and consideration of amendments to existing land use laws.

The community should review its ordinance standards for preservation of structures to ensure their effectiveness. This review should consider an

appropriate response to the fact that these standards are more specific to the individual building and less specific to the preservation of overall district character. Standards should be considered that strengthen the preservation of overall district character.

- 4-1-I-6 Maintain the community's unique low profile physical character, its characteristic landscape features, and preserve use and vistas within and beyond the City of River Falls for the benefit of the community through a continual examination and revision of land use and development codes.

Land use and development codes should be reviewed and adjusted as appropriate. Changes in the public landscape treatment over the past century have had a great effect on the appearance of the community and have introduced nontraditional treatments and vegetation.

- 4-1-I-7 Update existing historic surveys, and develop standards for redevelopment and development of structures and historic districts.

4-2 NATURAL RESOURCE MANAGEMENT

- 4-2-I-1 Prepare a comprehensive natural and environmental management plan for the area within the sewer service area boundary. Incorporate an analysis of appropriate protections for threatened and endangered animal and plant species and species of concern. Identify habitat areas, riparian corridors, wetlands, floodplains, mountainous and steep terrain, aquifer recharge areas, and natural drainage ways, and conserve topsoil and native vegetation.

- 4-2-I-2 Maintain and update an inventory of sensitive biological resources as part of the city's GIS databases.

- 4-2-I-3 Amend the existing zoning ordinances and subdivision regulations to include overlay of special review districts for RPAs and SRAs .

- 4-2-I-4 Limit development or disturbance of any RPA.

- 4-2-I-5 Establish special standards, procedures, and policies for SRAs to ensure that biological resources are considered and incorporated in develop and design. Include standards to ensure minimal impact on biological habitat, not just individual species, particularly in areas abutting RPAs. Procedures may include requiring a field evaluation as part of any development application and preparation of a biological resource management plan when field evaluation results in the identification of rare, threatened, or endangered species.

The land use regulations and development standards could include provisions for setbacks, buffering, clustering development, waiver of minimum lot width requirements, narrow local street widths where these would enhance

protection of sensitive habitats and resources, and prohibition of grading prior to receipt of necessary approvals.

- 4-2-I-6 Establish sensitive construction practices in the code to be implemented by the project proponent if rare, threatened, or endangered animal species are found to be directly impacted by the project. Such practices could include the following:

- Establish noise standards,
- Limit the amount of earth that can be disturbed at one time,
- Plan construction to minimize removal of necessary cover at critical times of the year, and
- Coordinate with the animal refuge organization for live removal and relocation of animals, with enough time prior to construction.

- 4-2-I-7 Establish resource-sensitive practices as part of the engineering standards. Evaluate all road projects that cut through riparian or other wildlife movement corridors, and ensure corridor continuity by building culverts or safe passageways.

All riparian corridors (designated as RPAs) are wildlife corridors, and more corridors could be defined as part of a field evaluation project required for sites located in whole or in part within an SRA. A new roadway, such as State Highway 35 or proposed improvements to State Highway 65, could cut through wildlife habitat islands that may be too small to support certain species or that block access to water.

In many cases land development and construction projects do not take into consideration corridors for movement of wildlife or human recreational activities. The river systems in the community provide a ready-made network of wildlife corridors. When appropriate, the trail system may pass through these riparian corridors. Development standards could include minimizing paved areas, retaining large areas of undisturbed natural vegetation to allow for water infiltration, and intermixing areas of pavement with naturally vegetated infiltration sites to reduce the concentration and improve the filtration of storm water runoff from pavement and structures.

- 4-2-I-8 Update the city's GIS database of riparian corridors based on information included in field evaluations required as part of any development application when a project is located in an RPA or SRA.

The city's GIS database could serve as a starting point for analyzing a construction or development projects' potential effect on the whole riparian system rather than limiting the analysis to its immediate effect at the construction site.

- 4-2-I-9 Minimize alterations of riparian corridors (designated as RPAs) to preserve their character.

Sewer Service Plan

- 4-2-I-10 Continue to regulate agricultural uses, new gravel mining, or soil disturbance within or adjacent to riparian zones.
- 4-2-I-11 Require slow release of storm water from retention basins into riparian corridors. During the growing season, this slow release can help support wetland vegetation, thereby increasing the wetland habitat within the community while maintaining the existing riparian corridors. In addition, slow release would prevent potentially contaminated sediments from entering the riparian corridor and creates a biofilter at the retention basin site, reducing the contamination of pollutants such as nitrogen and phosphorus.
- 4-2-I-12 Develop standards for new construction adjacent to riparian zones to reduce sediment and flooding.
- Require and maintain low berms or other temporary structures such as protection fences between a construction site and riparian corridors to preclude sheet storm water from entering the corridor during the construction period.
 - Require the installation of storm sewers or other structures before construction occurs to collect storm water runoff during construction as part of construction permit.
- 4-2-I-13 Adopt a tree ordinance to protect existing large trees and stands of trees and require revegetation efforts.
- 4-2-I-14 Establish a tree bank for the reuse of valuable native trees and large shrubs disturbed by developments, and require revegetation of all disturbed natural areas.
- 4-2-I-15 Update, survey, and describe existing historic natural and cultural landscapes and open space landmarks.
- 4-2-I-16 Develop a bluff and ridgetop ordinance to preserve the aesthetic beauty and natural environment surrounding the community.

Development is highly visible on or about the bluff areas and hilltops for great distances and distracts from the overall beauty of the natural environment and adversely impacts the aesthetics of the bluffs and hilltop vistas as seen from the city. Development standards should be drafted that restrict the type, size, location, and color of development and restrict construction of roads on the bluffs and ridgetops.

4-3 SEWER SERVICE AREA BOUNDARY ALTERNATIVES

- 4-3-I-1 The city Planning Department and Municipal Utility will present a biannual *Growth Management Report* (Spring) for the area within the sewer service area boundary. The report shall review and analyze the previous year's growth in residential and commercial building permits, citywide water demands, citywide sewage treatment demands, new road construction, and new park

construction. The report may cover any other issues that are considered important to the community's physical development and the development of developable land within the sewer service area boundary.

The report will analyze to what extent the previous year's development met the needs of population growth and will qualify the projected needs for the next year's population growth. It will also determine the amount of developable land used during this period and if there has been any impact on natural resources.

- 4-3-I-2 Develop a joint powers agreement with the city, counties, and towns for the adoption of an urban area boundary (sewer service area boundary) that may replace the extraterritorial boundary.

The adopted SSAP, future land use plan and map, along with amendments to the zoning code, will guide the growth of this area for the next 20 years. More detailed planning may be needed to implement the plan and to carry out the intent of Figure 4-8 Future Land Use and the zoning code.

- 4-3-I-3 Maintain and prioritize a CIP that supports the infill of development within the sewer service area boundary.

The CIP shall prioritize and stage the construction of public infrastructure (roads, water, sewer, parks, etc.) in a manner that serves as an incentive to promote infill development and affordable housing construction within the sewer service area boundary. New development, whether infill or not, shall pay for the cost of infrastructure necessary to serve it.

- 4-3-I-4 Prepare detailed plans for the future growth areas. These must be coordinated with staging plans that include public and human service facilities, such as schools, libraries, and community senior centers.

4-4 LAND USE

- 4-4-I-1 Educate the community about the benefits of limiting sprawl and increasing residential densities.

- 4-4-I-2 Maintain minimum and maximum development intensities as designated in the land use classifications and on Figure 4-8 Future Land Use.

This implies, for example, that approval of a residential project at a lower density range on a site designated for medium density residential will require an amendment to Figure 4-8 Future Land Use. The transition area within the sewer service area boundary but outside the city limits shall utilize cluster development, ghost platting or platting that strategically places existing and future dwellings to encourage future urban development and to accommodate future utility extensions.

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- 4-4-I-3 Amend existing land use codes to allow for a mix of housing densities and housing types within a single parcel for new subdivision development.
- 4-4-I-4 Require the inclusion of employment opportunities in neighborhood centers in future development/planning areas.

The size of the center must be in proportion to the residential development.

- 4-4-I-5 Update existing codes and zoning maps so that they are consistent with this plan and Figure 4-8 Future Land Use.
- 4-4-I-6 Prepare specific plans for future growth areas to provide greater detail on design, phasing, infrastructure, land disposition, financing, water and sewer, traffic system impacts, and affordable housing.
- 4-4-I-7 Adopt corridor protection and scenic corridor designations and develop standards for sewer service area boundary roads and major entrances into the city.

Conduct a corridor protection study to establish reasonable and effective "limited development" zones along major roadways, including but not limited to:

- | | |
|-----------------------|--------------------|
| ▪ State Highway 35 | ▪ State Highway 65 |
| ▪ State Highway 29/35 | ▪ County Road M |
| ▪ Chapman Drive | ▪ Radio Road |
| ▪ Mann Lane | ▪ County Road FF |

- 4-4-I-8 Use growth projections contained in this plan in assessing infrastructure requirements.

Review the projections annually and compare them to the building permit figures.

- 4-4-I-9 Maintain and balance land use inventory with sufficient land for a wide selection of commercial and industrial sites in appropriate locations throughout the sewer service area boundary.
- 4-4-I-10 Identify specific sites for target industries from among the sites for industrial, commercial, and business park uses shown on Figure 4-8 Future Land Use.

Develop these as ready-to-go sites complete with infrastructure and all the necessary approvals or with built structures sized and configured to target desire tenants, such as those that could help diversify the economy. Develop a study that could identify the best configuration of space, amenities needed, and affordable prices among target industries. The industrial sites in the Whitetail Ridge Corporate Park could be good candidates for this. The city/towns/counties can use the study to identify target industries. Special

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attention could be given to businesses that graduate from the incubator stage or need to be expanded from the owner's home to a larger site.

- 4-4-I-11 Update the city park and recreation plan to include all areas within the sewer service area boundary.

The plan should encompass trails/paths, linear parks, a variety of active and passive parks, bicycle paths, conservation sites, community gardens, and other recreational uses.

- 4-4-I-12 Require, as part of any development application, that new subdivisions provide public access points to trail systems, which would facilitate activities such as hiking, bicycling, and horseback riding.

- 4-4-I-13 Develop a Kinnickinnic River plan that protects and enhances the river throughout the community area. Consider the use of a transit occupancy tax for a portion of park acquisition or maintenance. Encourage and maintain a joint use of school recreational facilities with neighborhood recreational facilities throughout the community. Initiate neighborhood park maintenance programs to create park maintenance districts that are responsible for neighborhood pocket parks and open space pockets.

Residents within these park maintenance districts could be charged a fee for the upkeep of the park(s) or the city could provide funding to the residents for maintaining their parks. If a new park is initiated by a neighborhood or is part of a neighborhood plan, the park maintenance district would have the resources to maintain it.

- 4-4-I-14 Require that all annexation requests be for an area of at least 25 acres unless the area is included in and consistent with a detailed master plan, staging plan, or for public health and welfare.

- 4-4-I-15 Protect solar rights and access from encroachment by adjacent development.

4-5 TRANSPORTATION

- 4-5-I-1 Update Figure 4-9 Future Street Map and locate arterial and collector streets within the general alignment.

Minor variations from the depicted alignments will not require general plan amendments. Minor variations include any change less than 100 feet.

- 4-5-I-2 Develop and adopt street design guidelines for street standards to provide flexibility in design, especially in residential neighborhoods.

- 4-5-I-3 Allow for variations in street cross sections. Minimize street cross sections.

- 4-5-I-4 Incorporate access control requirements in the development codes.

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4-5-I-5 Provide for greater connectivity in new developments with the following measures:

- Require at least one through street (i.e. streets that run through the entire stretch of a development without many jogs) every 1,000 feet or less in any development.
- Incorporate into the subdivision regulations requirements for at least two access points for every ten acres of development.
- Encourage parking that is located behind buildings rather than in front of or between the building and streets, and encourage street designs that incorporate adequate on-street parking.
- Limit the number of loop streets and cul-de-sacs, and require bicycle and pedestrian connections to be provided at the end of such streets.
- Provide for future connections to undeveloped edges and where connections to existing urban development is poor.

These requirements will need to be incorporated in the city's subdivision regulations.

4-5-I-6 Maintain street connectivity in existing development.

4-5-I-7 Strive to establish a transportation system which improves circulation options including transit, bicycling, and walking.

4-5-I-8 Require any development project to demonstrate benefits to the community and to mitigate impacts associated with the project.

4-5-I-9 Establish and implement design standards and cross section specifications for urban area road networks.

4-5-I-10 Continue to collect and analyze traffic volume LOS data on a regular basis, and monitor current intersections on roadway segments.

Use this information to update and refine travel-forecast models so that estimates of future conditions are more strongly based upon local travel behavior and trends.

4-5-I-11 Continue the comprehensive evaluation of the efficiency of the urban street traffic control system, with emphasis on traffic signal timing, phasing, and coordination to optimize traffic flow along arterial corridors.

Use traffic control systems to balance arterial street utilization (e.g., timing and phasing for turn movements and peak-period and off-peak signal timing plans).

4-5-I-12 Make bikeway improvements a priority:

- Continue to consider financing bikeway design and construction as part of the community's annual construction and improvement budget.

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- Incorporate bikeway improvements as part of a CIP.
- Pursue Intermodal Surface Transportation Efficiency Act (TEA-2000) funding and other funding for new bikeways to the extent possible under federal and state laws.
- Require pedestrian access and bikeway connections to the citywide system every 500 feet, where feasible, as a part of subdivision review.
- Adopt standards and/or guidelines for design and construction of bikeways.

This would include, for example, ensuring that drop inlet gates are perpendicular to bicycle flow and not parallel to it.

- 4-5-I-13 Maintain the program to install handicap ramps at all intersections as street improvements are being installed.
- 4-5-I-14 Provide for pedestrian-friendly zones in conjunction with the development, redevelopment, and design of neighborhoods, Main Street, schools, parks, and other highly used areas:
- Construct wide sidewalks, where feasible, to accommodate increased pedestrian use.
 - Provide intersections (like bump-outs) to reduce walking distance across arterial streets, mixed use commercial centers, and other highly used areas.
 - Provide pedestrian facilities at all signalized intersections.
 - Locate and design landscaping along streets to not interfere with pedestrian crossing.
 - Construct adequate lighted and safe access through subdivision sites.
- 4-5-I-15 Ensure that standards for pedestrian facility design conform to the American with Disabilities Act requirements.
- 4-5-I-16 Require new local streets to connect with existing local streets and arterials, and permit cul-de-sacs in urban residential areas only where bicycles and pedestrians have access between cul-de-sacs, adjacent streets, and/or open space areas in a way that integrates with the area wide pedestrian/bicycle system.
- 4-5-I-17 Use and update the City of River Falls *Bicycle and Pedestrian Plan* as a primary tool for detailed policy making in pedestrian and bicycle system planning.

The Pedestrian and Bicycle Plan was last revised in 1995. It will need to be updated and should include the surrounding towns and counties and provide a comprehensive set of policies for pedestrian and bicycle planning.

4-6 WATER MANAGEMENT

- 4-6-I-1 Develop and maintain a hydrologic database for land within the sewer service area boundary.

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- 4-6-I-2 Maintain, preserve and reserve groundwater for peak and prolonged draughts through optimization of sustainable groundwater use.
- 4-6-I-3 Develop and implement groundwater protection and management strategies.
- 4-6-I-4 Install no new wastewater systems nor new domestic wells in areas that can reasonably be served by municipal systems. Work cooperatively with WDNR, counties, and towns to protect existing public and private wells from contamination. Reexamine the city's water conservation policy, and consider a policy that encourages more water conservation.
- 4-6-I-5 Examine alternative methods for reducing water use, and estimate the potential for water savings from each of the methods.

This could include examining the feasibility of use of all surface runoff.

- 4-6-I-6 Determine the most cost-effective way of utilizing the treated water effluent, and develop and implement a treated effluent management plan.
- 4-6-I-7 Develop, adopt, and updating a comprehensive water resource management plan, which would include elements such as conservation programs, reuse of treated wastewater effluence, river and surface source protection; update this plan every five years.
- 4-6-I-8 Work with the counties and towns to protect the aquifer shared by the jurisdictions by restricting drilling of new wells and requiring that all new future development to be hooked up to the city water system, where reasonable.

New wells have resulted in sprawl and further depletion of groundwater resources because the cumulative effects of development are not considered during project approval. Shared wells should be considered in development until they are hooked up to the city. A wellhead protection ordinance will be in place to help protect the aquifer.

- 4-6-I-9 Review and update ordinances regarding the expansion of the water service boundaries.
- 4-6-I-10 Protect water quality and watercourses.

Adopt a comprehensive ordinance related to storm water management. Adopt a comprehensive wellhead protection plan.

- 4-6-I-11 Permanently develop, maintain, and enforce comprehensive water supply protection policies, including watershed, wellhead, and aquifer protection measures.

4-7 WASTEWATER MANAGEMENT

4-7-I-1 Review the requirement of annexation to the city as a condition of extending wastewater service to any area outside the city limits, as long as this is not prohibited by law, ordinance, or joint powers agreements between the city and counties or towns, or preexisting agreements between the city and landowners. Prohibit development that relies on on-site sewage treatment within city limits where a connection to the city system is physically viable. The use of low pressure sewer should be considered only for sites that can not be connected to the public gravity flow system, because of topographic or interceding water flow. Ensure that all capital improvements to the wastewater collection and treatment system are in accordance with this plan.

4-7-I-2 Municipal Utility shall maintain design and construction standards for water and wastewater infrastructure that reflect evolving technology and the community's needs.

Prioritize rehabilitation of sewer lines in need of replacement or reconstruction.

4-7-I-3 Develop an impact fee structure or sewer infrastructure expansion fee for new development (see 4.11 Impact Fees).

4-7-I-4 Reduce or prohibit the installation of sewers within 100-year floodplains. Incorporate programs and practices to improve the maintenance of the wastewater collection system. Plans and programs may include:

- Promote a local grease recycler.
- Develop a "root intrusion program" which may include vapor rooting, high pressure cleaning, and TV verification.
- Control renegade inflow into the sewage collection system, particularly from storm water entering through manhole vents.
- Increase maintenance and replacement of large diameter sewer lines.

4-7-I-5 Review the establishment of impact fees or special assessment districts to fund the construction of large mains.

While the installation of new collector lines should continue to be the responsibility of the land developer, master plan lines, or interceptors should be the Municipal Utility's responsibility. However, developers must be responsible for fronting the cost of such lines (master plan lines) if their installation is required to be made ahead of schedule for the benefit of a given development project. A fee structure needs to be developed and implemented for infrastructures.

4-7-I-6 Ensure that revenue generated from a specific program continues to be used exclusively to support that program.

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An example from other communities is the extra-strength surcharge program, designed to make the contributor of a special waste (grease) responsible for the abatement of problems caused by such a waste in the collection and treatment system.

- 4-7-I-7 Develop and create special funds to cover costs associated with socially responsible development such as affordable housing, midway housing, homeless shelters, or customer-directed waivers, such as indigent utility bills.

The existence of such funds would prevent utility rate increases that are primarily linked to the utilities actual cost of providing waivers and exceptions. The Municipal Utility low interest loan program will help cover costs for some developers.

- 4-7-I-8 Give top priority to proposed development within the existing public utilities service area.

- 4-7-I-9 Prepare an annual report summarizing the water and sewer availability.

- 4-7-I-10 Do not approve any annexation, master plan development, or subdivision unless adequate distribution and treatment systems are available.

- 4-4-I-11 Examine the feasibility of using gray water for irrigation of parks and other public areas.

Incorporate water-harvesting programs for gray water (treated water) and runoff as part of a park design and maintenance program.

- 4-4-I-12 Work with the towns and counties on implementing mandatory septic system inspections to identify failed systems.

4-8 SOLID WASTE MANAGEMENT

- 4-8-I-1 Prepare a comprehensive master plan to formulate the most coherent and efficient approach to waste management.

- 4-8-I-2 Encourage private and public sector initiatives for waste reduction, and through a program of education, reduce volume with efforts such as backyard composting and waste exchange, and by source reduction and reuse.

- 4-8-I-3 Develop recycling programs for building materials, furniture, appliance, etc.

- 4-8-I-4 Ensure that the city regulates businesses using or generating hazardous materials.

4-9 STORM WATER MANAGEMENT

- 4-9-I-1 Adopt and use the wastewater management plan as a vehicle to address system deficiencies, accommodate future growth, and promote recharge and reuse.
- 4-9-I-2 Maintain basinwide recommendations as part of a wastewater management plan.
- 4-9-I-3 Incorporate the use of porous material (e.g. porous asphalt, modular paving, gravel, lattice concrete blocks, and porous bricks) for outdoor spaces, paving, and sidewalks as part of public construction practices and the city's engineering standards.

If resources permit, retrofit of existing areas can also be undertaken. Maintain and incorporate storm water management in development review procedures, and ensure that new development has minimal impact on natural drainage channels, water qualities, and flow capacities.

- 4-9-I-4 Analyze the feasibility of establishing storm water assessment districts, and include incentive programs for decreasing impermeable surfaces on public and private property.
- 4-9-I-5 Incorporate and maintain storm water management practices into the plan for Main Street and within the sewer service area boundary.

4-10 UTILITIES

- 4-10-I-1 Draft an ordinance to underground all new utilities for electric, telephone, cable, etc. Establish a program to place underground replacement utilities for electric, telephone, cable, etc., where feasible.
- 4-10-I-2 Work with utility providers to develop a facility plan for adoption after adoption of the SSAP.
- 4-10-I-3 Amend the city land development code to implement the facility plan.
- 4-10-I-4 Municipal Utility will continue to monitor and research the health effect of electric and magnetic fields, and establish standards for siting high voltage lines.
- 4-10-I-5 Work with the utility companies to encourage them to conserve resources and to find innovative solutions to demand and environmental problems before investing in costly new facilities.
- 4-10-I-6 Develop programs on the conservation of energy, with strategies for building and for the community as a whole, including microclimate analysis, passive solar, natural ventilation, daylighting, shading, and building materials.

- 4-10-I-7 Work with utility providers to establish protected corridors or preferred pathways to provide electrical and other needed utilities for current and future needs.

4-11 IMPACT FEES

- 4-11-I-1 Work with the county and towns to prepare coordinated land use assumptions that meet the policy objective of this SSAP, as well as requirements of a Impact Fee Act.

A single set of land use assumptions will accommodate annexations and enable the city to finance and construct capital facilities, such as roads, which are burdened by growth outside the limits. These assumptions should reflect specific policies for where growth should occur, rather than current population and employment trends.

- 4-11-I-2 Identify additional capital facilities for which the community will assess impact fees.

Drainage, fire, police, and emergency services could be fully or partially funded by impact fees in areas where new development has created a burden on existing facilities.

- 4-11-I-3 Restructure the park dedication program to meet the requirements of the Development Fee Act and policies.

- 4-11-I-4 Prepare a CIP for the area within the sewer service boundary that meets the requirements of the Impact Fee Act for each category of capital improvement for which it will assess impact fees. These plans may become elements of the city's existing CIP or may be separate documents. Reflect the land use assumptions and policies set forth in this plan in implementing ordinances and the land use assumptions prepared pursuant to the Impact Fee Act.

It would be preferable for the city CIP to be a single document with elements that meet the requirements for CIP under the Impact Fee Act. All information concerning financing of public facilities should be contained within the same document. Other Wisconsin communities that have adopted impact fees since the effective date of the Impact Fee Act, also known as the Development Fee Act, have separate CIPs for each category of facilities for which fees are assessed.

- 4-11-I-5 Design service areas with impact fees for specific categories of capital improvement such as water, wastewater, neighborhood parks, parks, and other space pockets; encourage infill with higher fees assessed in service areas that are not already served by these facilities and lower fees assessed in service areas that have improvements in place.

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Impact fees may be utilized as incentives to encourage new development to occur in areas with capital improvements already in place. The service area for facilities such as community parks, community conservation districts, and arterial roads should be citywide or even regional (counties and towns).

- 4-11-I-6 Coordinate within the sewer service area boundary water supply, wastewater, solid waste management, arterial roads, drainage, parks and conservation districts, and bicycle and pedestrian trails. Consider the appropriateness of recognizing service areas for fire, police, and emergency medical services in the future.

A regional (city/towns/counties) effort for capital facilities could build upon the present planning process taking place in the city/towns/counties and could result in a more rational, cost-efficient, utilization of impact fees and other capital financing strategies. CIPs for capital facilities would be based on appropriate service areas rather than political boundaries.

- 4-11-I-7 Enter into joint power agreements with the towns to enable the city to assess and collect impact fees within the sewer service area boundary for upgrading and developing facilities as listed above.

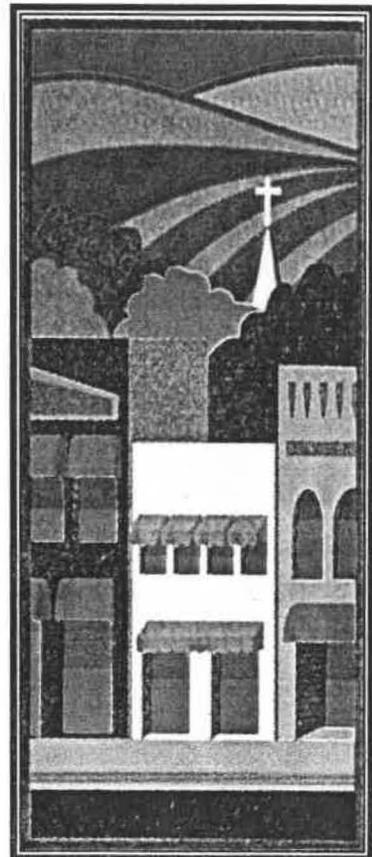
Ensure that the joint power agreements would enable the city to assess impact fees for arterial roads, which are impacted by growth, within the sewer service area boundary.

- 4-11-I-8 Work on joint powers agreements with the city/towns/counties that will streamline agreements for extension of facilities into the sewer service area boundary and will enable the city to access impact fees in the sewer service area for such facilities.

The CIP for facilities should identify a service area that includes designated areas within the sewer service area boundary that will be serviced by the city system during the planning horizon.

Waivers should be provided for all or part of impact fees that would otherwise be assessed on housing which meets the affordable housing criteria. The city shall identify other sources of funding for capital facilities to service affordable housing units. Impact fees collected from market rate housing shall not be used to replace the waived fees. Tax increment financing (TIF) may be used to stimulate new development as well as redevelopment throughout the community.

5
**INSTITUTIONAL
FRAMEWORK**



5. INSTITUTIONAL FRAMEWORK

The current framework of planning regulations has evolved over a long period of time. A comprehensive review and update of the implementing regulations and administrative procedures will therefore require a major effort. However, the current codes which contain the land development laws will need to be updated fairly quickly upon adoption of the *Sewer Service Area Water Quality Management Plan (SSAP)*. The community will be faced with a dilemma of having to review projects based on four or more different sets of regulations: the county, town, city and the extraterritorial regulations.

Specifically, the purpose of this chapter is to:

- Establish criteria and procedures to ensure consistency between this plan and land development laws.
- Prescribe a clear project review and approval process that eliminates redundant overlapping procedures.
- Set resource-based standards and reduce the need for discretionary project review.
- Outline a procedure for sewer extension and hook-up review.
- Provide an orderly process for sewer service amendments.

THEMES

- **Review Process** - Streamline the planning and development review process.
- **Implementation** - Ensure consistency between this plan and implementing ordinances (including zoning and possible impact fees) and a Capital Improvement Program (CIP). To help implement this plan detailed studies, plans, and ordinances will need to be prepared, reviewed and approved. With this plan, the community is committing itself to consistency between existing plans, implementation programs, and regulations, including zoning, subdivision regulations, and the CIP.

GUIDING POLICIES

5-1 CONSISTENCIES

- 5-1-G-1 Ensure consistency between this plan and the land development laws.
- 5-1-G-2 Ensure that there is a mix of housing types, densities, and services within the sewer service area boundary.
- 5-1-G-3 Prepare an orderly procedure for sewer extension and service hook-up review.

5-2 PROCESS FOR AMENDMENTS

- 5-2-G-1 Ensure that this plan is maintained as a living plan reflecting the current community priorities.

5-2-G-2 Ensure that the Wisconsin Department of Natural Resources (WDNR) policies and procedures for sewer service area plans and amendments are followed.

5-2-G-3 Detail the types of amendments that may be made to this plan.

5.1 POLICIES AND REGULATIONS

As a community constitution for development, this plan and the community's *Master Plan*, lie at the apex of decision making. These plans are policy instruments that provide the basis for the implementation of a sewer service area boundary and extension as well as land use regulations, which are contained within this plan and in the extraterritorial and city code. Unlike Master Plans, regulations contained in the federal, state, extraterritorial and city codes, such as zoning and subdivision regulations, are not policy-making instruments, but rather tools to implement policies established in the plans and elsewhere.

5.1.1 Federal and State Regulations

Federal and state requirements call for the areawide water quality management plan to consist of the following four elements:

1. A regional treatment configuration. This is an analysis of the geographic contributing area for the urban area treatment plant.
2. The delineation of a 20-year sewer service area. This is the land area that is projected to be served by public sewer over the next 20 years. This service area is determined using population projections and density standards and is influenced by Resource Protection Areas (RPAs), the environmental sensitive areas such as steep slopes, floodways and wetlands. There are some areas that may not be served due to difficult terrain or other issues such as cost.
3. The establishment or use of an existing policy committee, such as the River Falls Sewer Service Area Committee, to make recommendations, revise, or amend the plan and to establish plan conformance review procedures.
4. A public participation element that will plan the process used for informing and involving the public in an areawide planning process.

Federal and state regulations require this plan to indicate the most cost-effective and environmentally sound wastewater treatment configuration for the planning area. Once this plan is approved by the state, federal and state statutes require that permits for wastewater treatment facilities, facility plans, interceptors, and sewer extensions be in conformance with this plan.

Sections 201, 208, and 209 of the Federal Water Pollution Control Act (Public Law 92-500) as amended by Public Law 95-2171 and the State Administrative Code NR121 are the major regulations that influence sewer service area planning. Section 201 deals with the construction specifications that sewage systems must meet in order to be in

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conformance with clean water act standards and to be eligible for construction grants and loans.

Section 208 requires the preparation of an areawide water quality management plan—208 plans. The governor of each state is to designate areas needing areawide plans to deal with water quality concerns. In Wisconsin, municipalities with a population of 10,000 or more are required to prepare an areawide quality plan. It is this requirement that led to this plan and numerous other plans across the state.

Section 209 of the Water Pollution Control Act calls for the preparation of plans for the nation's river basins that will lead to the reduction of water pollution "point sources" such as piped, ditch, or other specific discharge points and from "non-point sources" such as stream pollution, which cannot be traced back to a pipe or ditch, for example, and storm water run-off.

State Administrative Code NR121 along with State Statute 144.025(1), (2), and 147.25 outline how water quality planning and implementation is to be carried out in Wisconsin in accordance with the federal and state water quality regulations.

5.1.2 City and Extraterritorial Regulations

The extraterritorial and city codes, which contain the land development laws, will be a key tool in implementing the policies of this new plan. The extraterritorial map has not been updated in over 25 years. The codes have not been comprehensively updated in 15 to 20 years, and amendments have been made on a piecemeal basis. It is important to move forward in updating the codes to ensure consistency so that benefits may be derived from this plan. These benefits would consist of protection of our resources, cost-effective methods for providing sewer service, protection of RPAs, and reduction of urban sprawl through planned growth.

5.1.3 Consistency

The purpose of consistency is to ensure that this plan's policies addressing topics such as infrastructure, land use, transportation, and resource conservation are implemented. For this plan's policies to be effective, they need to be translated into parcel-specific regulations in the land development laws and codes. Zoning is one of the most widely used land-use regulations and the best tool for implementing the map-related policies of the plan. While the codes require that in case of a change in policy a plan shall first be "amended," the requirement of consistency needs to be explicitly established in both the plan and the code.

Only full consistency between the plan and land development laws in the code can ensure realization of the community's vision for its future. The protection of neighborhoods and RPAs (sensitive environmental resources) and the creation of new neighborhoods that build on the community's tradition are dependent on consistency between the plan and the code.

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Upon adoption of this plan, the zoning and subdivision regulations in the code's land development laws shall be revised to be consistent with the plan. This will involve adding, removing, and/or modifying zoning districts and revising development standards and other regulations to implement the plan policies. Specific development standards have been provided, where appropriate, throughout this plan.

Support for Consistency

Plan and zoning consistency has been an issue for residents for a long time. At past county, town, and city meetings, concern has been expressed about the planning and code enforcement functions. It has been recognized that successful, long-range planning depends not only on the development of realistic, consistent, and achievable goals and policies, but also upon having ordinances implemented and enforced that are consistent with this plan. There has been complete agreement on ensuring consistency between the plan and land development laws of the existing codes.

Many citizens are adamant that the plan should be used, honored, and enforced and that it should include procedures for its amendment, review, and periodic update. Above all, regulations and ordinances should implement the plan. In response to these concerns, one of the ten plan themes, is to ensure consistency between the plan implementing ordinances and standards (including zoning and engineering standards) and programs (such as the CIP).

5.2 PROCEDURE FOR SEWER EXTENSION REVIEW

Any proposal to extend sanitary sewer in the River Falls area must start with contacting the City of River Falls Municipal Utility. The contact person for this purpose is found in Appendix H. The City of River Falls Municipal Utility presently requires that the land they serve with public services to be within their corporate jurisdiction. The present policy in the city code states that water and sewer utilities shall only be supplied to the property located within the established corporate limits of the city. The code also states that on a case-by-case basis, through negotiation between affected towns and landowners, the city will determine whether an exception for extension of sanitary sewer and other services will be provided beyond the city corporate limits for health and safety reasons.

This plan is a tool to be used in the review of proposals for sewer extension and hook-ups. The City of River Falls Municipal Utility as the Designated Planning Agency (DPA), and in conjunction with the city Planning Department, town, and county in which the project takes place, will advise the WDNR, River Falls Sewer Service Area Committee, city and impacted town and county regarding whether a sewer extension or hook-up is in conformance with the plan. The implementation of this plan will be accomplished through site-specific review, to ensure that sensible decisions are made to protect our natural resources.

Implementation will consist of reviewing proposals for sewer extensions and hook-ups for all lands that are proposed for annexation into the city or developed within the sewer service area boundary. The DPA will be responsible for advising the WDNR, River Falls

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Sewer Service Area Committee, city, and impacted town and county on the consistency with this plan of the proposed projects.

5.2.1 Developments Requiring Technical Review

Prior to any developer submitting any plans to the WDNR for needed state approvals, sewer service technical review approval shall be required for the following types of developments:

- 5.2.1.1 All municipal sewer extensions.
- 5.2.1.2 All commercial and industrial buildings which will discharge to the City of River Falls Wastewater Treatment Facility.
- 5.2.1.3 All residential buildings containing three or more dwelling units that discharge to the City of River Falls Wastewater Treatment Facility.

5.2.2 Technical Review Criteria

Proposed sewer extensions or hook-ups must conform to this plan. RPAs are prohibited from development (see Figure 4-2). The only exceptions for development are for existing parcels/lots that exceeds 20% or "pass through work" that includes needed work for public health and safety. This may include electricity, water, or for a force main or other sewer to pass through. This type of utility work is generally discouraged, but sometimes needs to occur due to the need for the use of gravity. The extension shall not violate development regulations pertaining to any of the following:

- 5.2.2.1 **Wetlands** - It is a violation of Section 404 of the Federal Clean Water Act to physically alter any wetland no matter its size without regulatory approval from the U.S. Army Corps of Engineers. If development is permitted for public health and safety reasons, permits are also required from the local unit of government to alter wetlands within the shoreland zone of a lake or stream.
- 5.2.2.2 **Floodplains** - Most forms of development in floodways are prohibited. If development is permitted for public health and safety reasons, flood-proofing techniques in conjunction with flood insurance are required. The city and counties enforce the provisions of the Wisconsin Statutes for shoreland and floodplain zoning.
- 5.2.2.3 **Slopes** - Erosion and sediment control plans are to be submitted and approved by the city when development is proposed in areas containing slopes of 12% to less than 20%. In the area where sewer service is connected, no land disturbance activity shall occur on slopes of 20% or greater except as noted above. In addition, development on slopes less than 12% may require an erosion and sediment plan and shall conform to regulatory provisions of any local government ordinance.

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- 5.2.2.4 **Service Area** - The proposed development must be within the sewer service area boundary. Crossing of RPAs may require additional governmental agency review.

5.2.3 Precedence of Site Visit Evidence

Flood insurance rate maps, Wisconsin Wetland Inventory Maps, and the maps within this SSAP are to be used as guides in conducting a sewer service technical conformance review. They are not always to be considered the final determining factor on whether a sewer extension will or will not disturb any RPAs or Sensitive Resource Areas (SRAs). If information gained from a site visit shows conclusive evidence that is contrary to the information shown on these maps, the site visit evidence shall take precedence and serve as the determining factor of whether RPAs and SRAs are being disturbed.

5.2.4 Required Information

Applicants for sewer extensions shall submit a letter and a plan map showing the proposed sewer extension and the project service area (with acreages) to the city or River Falls Municipal Utility, with copies to the city Planning Department, town, and county in which the project takes place. This shall be done prior to the submittal of final development plans to avoid delay of the project. Early submittal of the plans will ensure the local review process is completed prior to final submittal of the plans to WDNR. For lateral approvals, the private applicant also sends the plan conformance review letter and plumbing plans and specifications to the Wisconsin Department of Commerce for final review and approval. While the River Falls Municipal Utility is the first step in the process, additional review by the city, impacted town, and county in which the project takes place is also required before final WDNR approval.

- 5.2.4.1 **Cover Letter and Project Description** - The name, address, and telephone number of the applicant, and a general description of the project is to be provided including the type of land use to be serviced and the construction activities needed to be undertaken.
- 5.2.4.2 **Site Map** - A site location map is to be provided indicating the location and length of sewer and the entire area to be serviced. The site map shall provide curb height elevation if the site is within 50 feet of a floodplain. This map should be to scale with a north arrow and explanatory information.
- 5.2.4.3 **Letter of Evidence of Approved Erosion Control Plan and Contour Site Maps** - Development on 12% or greater slopes require a two-foot contour site map and an erosion control plan. A letter of evidence of an approved erosion control plan from the city, town, or county shall also be provided.
- 5.2.4.4 **Permits** - If development is permitted for public health and safety reasons or for sewer extensions that alter a wetland, a Section 44 Clean Water Act permit is required. This permit is administered by the WDNR in accordance with the NR103 of the Wisconsin Administrative Code. Sewer extensions into

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navigable waters also require a permit under Chapter 30 of the Wisconsin Statutes.

- 5.2.4.5 **Sewer Service Area Map** - A copy of the River Falls Sewer Service Area Map is to be provided showing the proposed location of the sewer extension.
- 5.2.4.6 **Fees** - Any required fees to conduct the Sewer Service Technical Conformance Review.
- 5.2.4.7 **Resource Protection Areas** - If there is any doubt as to the proposed extension infringing on RPAs (as delineated on Figure 4-2 Resource Protection Areas and Figure 4-3 Sensitive Resource Areas), the City of River Falls Municipal Utility staff will review the site-specific information from the developer. This information, along with the RPA and SRA criteria from this plan, will be used to make a recommendation on the proposal.
- 5.2.4.8 **Review** - The City of River Falls Municipal Utility, city Planning Department, and town and county staff will review all submissions for conformance with this plan, specifically ensuring the proposed extension does not infringe on an RPA and is within the sewer service area.
- 5.2.4.9 **Conformance Letter** - If the requested sewer extension is in conformance with this plan, a sewer service area conformance letter will be sent by Municipal Utility staff to the applicant approximately 15 days after receipt of the application. The sewer service area conformance letter and other materials must then be submitted by the applicant to the WDNR for final review and approval of the sewer extension. For lateral approvals, the private applicant also sends the plan conformance review letter and plumbing plans and specifications to the Wisconsin Department of Commerce for final review and approval.
- 5.2.4.10 **Letter of Nonconformance** - If the proposed extension is not in conformance with the plan or if there are questions about consistency, a letter of nonconformance will be sent to the applicant in approximately 15 days. The applicant shall then decide within 15 days if they want to pursue the sewer extension further. If not, no further action is necessary.
- 5.2.4.11 **Plan Amendment or Reapplication** - If the applicant decides to pursue the sewer extension beyond the boundary, this plan must be amended for the proposed extension to be in conformance. The amendment procedures can be found in the plan amendment process section below. An applicant can also alter the proposal to pursue conformance and reapply.
- 5.2.4.12 **Plan Amendment** - If the plan is amended, the applicant must notify the city or River Falls Municipal Utility that it wishes to have the proposed extension reevaluated. See Table 5.1 Sewer Service Technical Review Procedure Flow Chart.

Table 5.1
SEWER SERVICE TECHNICAL REVIEW PROCEDURE FLOW CHART



5.2.5 Information Submittal

The above information is to be submitted to the Rive Falls Municipal Utility, 125 East Elm Street, River Falls, Wisconsin 54022.

5.3 PROCESS FOR AMENDMENTS

5.3.1 Process

This plan is intended to be a living plan that reflects changing conditions and community needs. As such, the plan will be subject to amendments over time. To maintain this plan as current, policies that become obsolete or unrealistic due to changing conditions (such as the completion of a task or project, development of a site, or adoption of an ordinance or plan) should be eliminated or modified. The plan amendment process is also the means through which the counties; towns; city, including the Planning Commissions, Boards and Council; private property owners; project proponents; community groups; neighborhood associations; and individual citizens can initiate changes to the plan. Application for plan amendments initiated by the counties, towns, city, or general public will be submitted first to the City of River Falls' Planning Department for staff review. Applications will be accepted on an ongoing basis. On a semiannual schedule, staff will prepare a summary report describing the requested changes and staff's recommendations, including any necessary language and drawings, for review by the River Falls Sewer Service Area Committee. The process is outlined below.

Amendments to this plan take effect only upon adoption by the River Falls Sewer Service Area Committee and final action by the WDNR. Although the plan can only be amended once a year, there will be no limit to the number of changes that can be made at the time of the amendment. The following two exceptions apply to the restrictions on the number of general plan amendments permitted per year.

- To resolve any emergency or a matter of urgent public interest where a critical need has been identified, or
- To comply with a court decision.

The purpose of limiting when amendments can be made to the plan is to maintain the continuity of the plan, to allow for an orderly amendment process, and to focus on long-range planning issues.

5.3.2 Required Information

The applicant requesting the amendment shall prepare the following required information prior to proceeding with an amendment request.

- 5.3.2.1 Narrative description and reasons for the amendment request. If a change of wording to the SSAP is being proposed, the exact wording shall be provided as part of the description.

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- 5.3.2.2 Legal description and exact acreage of land area(s) proposed to add and/or subtract from the sewer service area, if applicable.
- 5.3.2.3 Description of the proposed land uses (i.e., residential, commercial, industrial, open space, parks) and public services (i.e., water, sewer, roads) to be provided to areas identified in 5.3.2.2 above.
- 5.3.2.4 A detailed map showing topography and buildings and the proposed areas being added to and/or subtracted from the sewer service area.
- 5.3.2.5 The net change in the amount of developable land in any areas being proposed to add to and/or subtract from the sewer service area and the net change in the development density (person per acre) of the sewer service area as a result of the proposed amendment.
- 5.3.2.6 To the extent possible, identify any water quality impact from the proposed amendment.
- 5.3.2.7 Verification that there is capacity for the sewer system and treatment facility to serve proposed new areas and their projected flows.

5.3.3 Review and Comments

The required information will be reviewed for compliance with the standards set forth in the SSAP and NR121 of the Wisconsin Administrative Code. The review, comments, and application as outlined in 5.3.2 shall be forwarded to the affected county, town, and city. The review and comments from the county, town, and city would then be forwarded to the River Falls Sewer Service Area Committee for action. If approved by the River Falls Sewer Service Area Committee the request would then be forwarded to the WDNR for final action.

5.3.4 Public Meeting

Within 60 days of receipt of an amendment request, the Chairperson of the River Falls Sewer Service Area Committee shall call and hold a public meeting of the River Falls Sewer Service Area Committee for the applicant to formally present their amendment request, to answer questions, and to hear comments from the members of the River Falls Sewer Service Area Committee and the general public.

5.3.5 Committee Action

After consideration of comments made during the public meetings, the standards and procedures in the River Falls SSAP, and NR121 of the Wisconsin Administrative Code, the River Falls Sewer Service Area Committee shall act on the amendment request by voting.

5.3.6 Written Comments on Actions

Written comments in favor of, objecting to, or providing information on actions taken by the River Falls Sewer Service Area Committee by any person, organization, or government body are to be submitted to the WDNR office within 30 days after the public meeting. A copy shall be forward to the affected county, town, and city.

5.3.7 Public Meeting Documentation

Within 30 days after the public meeting, the recording secretary of the public meeting shall prepare and provide a copy of the unofficial minutes of the public meeting, recording public comments and the results of any votes. The minutes shall be forwarded to the WDNR office and to the River Falls Sewer Service Area Committee.

5.3.8 Final Decision

The WDNR will make the final and official determination on all plan amendments based on consideration of public comments, written comments, official actions taken by the River Falls Sewer Service Area Committee, standards and procedures of the River Falls SSAP, and NR121 of the Wisconsin Administrative Code. The WDNR will inform the River Falls Sewer Service Area Committee of its decision on amendment requests within 60 days of the public meeting.

The WDNR desires to make as informed sewer service amendment decisions as practical and therefore recommends and values the local public input process provided by the River Falls Sewer Service Area Committee as described in the steps above. The WDNR has the authority to affirm, reverse, amend, or refer any amendment vote or action taken by the River Falls Sewer Service Area Committee. The River Falls Sewer Service Area Committee may appeals the WDNR determination.

5.4 AMENDMENT EVALUATION STANDARDS

The following SSAP evaluation standards have been established for analyzing the merits of proposed plan amendments.

- Such sewer service can be provided in a cost-effective manner.
- There will be no significant adverse water quality and/or environmental impacts associated with providing sewer service to the area.
- The proposed amendment is in compliance with the other themes and policies of this plan not under amendment consideration.
- Existing or planned sewer systems have sufficient capacity to treat projected flows.
- Land is needed to accommodate unanticipated population growth and/or a change in densities.

5.5 EXCEPTIONS

As noted above, there are two exceptions that apply to the restrictions for amendments. An applicant may request inclusion for an existing development where an on-site system is failing, outside of the sewer service area. The application may be approved by the Sewer Service Area Committee and WDNR provided that:

- The county Environmental Health Manager monitors the system as it is removed from service.
- Sewer service can be provided in a cost-effective manner compared with alternative solutions, including replacement or upgrading of the existing failing septic systems. The determination shall be made using EPA and WDNR guidelines for cost-effective analysis.
- There will be no significant adverse water quality impacts associated with providing sewer service to the area.
- The property owner will not contest annexation into the city or impact fees.
- Existing or planned facilities have sufficient capacity to treat projected flows.

5.6 ANNUAL REPORT ON AMENDMENTS

A summary of all SSAP amendments adopted during the preceding year shall be included as part of the annual SSAP report, prepared to report on the progress made in implementing the plan. This summary shall include the date of adoption, section of the SSAP to which the amendment applies, and a brief description of the change.

IMPLEMENTATION POLICIES

5-1 PLAN AND ZONING CONSISTENCIES

- 5-1-I-1 Develop a comprehensive step-by-step guide to fees and other levied costs. Consolidate in concise and easily understood written form and make available to the public in a single, central location all information regarding building and development codes, procedures, processes, standards, regulations, and ordinances.
- 5-1-I-2 Analyze and carefully consider the cost impact on development prior to the adoption of any ordinance regarding development review requirements, and identify and evaluate the effect of compound regulations.
- 5-1-I-3 Review and update the internal consistencies of all-new and existing rules and regulations, ordinances, and policies to ensure they meet the guiding policies of this plan and amend the codes to reflect the guiding policies.

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As part of these updates, a continuing educational program will be provided that includes a series of seminars—brown bag lunches—where staff would lead an explanation and discussion about the land development codes.

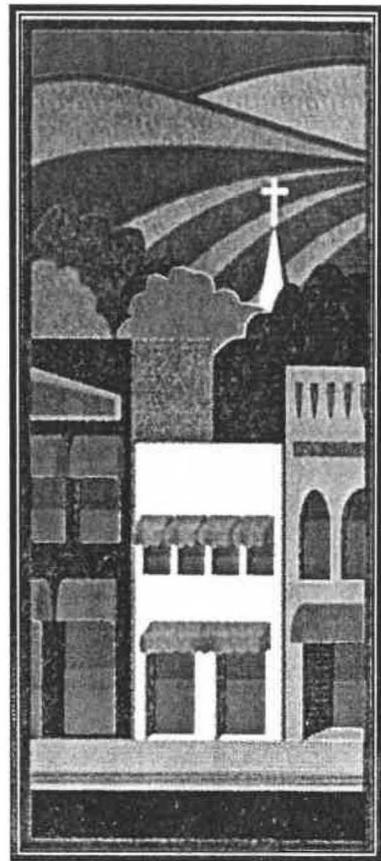
- 5-1-I-4 Prepare detailed community area plans for new growth areas as well as for existing neighborhoods and include a CIP to direct and phase growth to prioritized development areas.
- 5-1-I-5 Ensure that existing and proposed *Master Plan* or development plan approvals be considered valid for no more than three years from the date of approval with one two-year extension allowed by the governing body.

Progress towards implementing a master plan or development plan means submitting a preliminary development plan or subdivision plan or plat within the three-year approval (or within five years with a two-year extension) for the master plan. If these deadlines are not met, the master plan or development plan approval would no longer be valid.

5-2 PROCESS FOR AMENDING THE SEWER SERVICE AREA PLAN

- 5-2-I-1 Develop a process for semiannual amendments to the SSAP.
- 5-2-I-2 Prepare annual and five-year reports on the SSAP.
- 5-2-I-3 Maintain a SSAP implementation program that reflects priorities for public action and is accessible to all residents.

GLOSSARY



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GLOSSARY

Acre, Gross. The area of a site calculated to the centerline of bounding streets and other public rights-of-way.

Acre, Net. The area of a site that can actually be built upon. Not included in the net acreage of a site are public or private road rights-of-way, public open space, and flood ways.

Aquifer. A natural underground formation that is saturated with water, and from which water can be withdrawn.

Army Corps of Engineers (ACOE). A federal agency responsible for the design and implementation of publicly supported engineering projects. Any construction activity that involves filling a watercourse, pond, lake (natural or man-made), or wetlands (including seasonal wetlands and vernal pools), may require an ACOE permit.

Arterial. A vehicular right-of-way whose primary function is to carry through traffic in a continuous route across an urban area while also providing some access to abutting land.

Automobile-oriented Use. Land use designed to accommodate customers who use vehicles to travel to the site, including automobile sales and service, building supplies and materials and drive-up or drive-through services.

Average Daily Traffic. The number of vehicles passing a given point on a road going in a direction during a 24-hour period.

Bike Lane. A corridor on a street or roadway expressly reserved for bicycles by markings, existing in addition to any lanes for use by motorized vehicles.

Bike Path. A paved route not on a street or roadway expressly reserved for bicycles. Bike paths may parallel roads but typically are separated from them by landscaping.

Biotic Diversity. Species diversity, i.e., the number of different species occurring in a location or under some condition.

Buildout. That level of urban development characterized by full occupancy of all developable sites; the maximum probable level of development envisioned under specified assumptions about densities and intensities. Buildout does not assume that each parcel is developed to include all floor area or housing units possible under zoning regulations.

Capital Improvement Program (CIP). The multiyear scheduling of public physical improvements based on studies of fiscal resources available and the selection of specific improvements to be constructed.

- Conductor.** An overhead wire that conducts an electric charge.
- Conservancy.** Any parcel or area of land or water which is essentially unimproved and devoted to a conservancy use as defined in the City Master Plan or designated on a local, regional, or state conservancy plan.
- Conservation.** The management of natural resources to prevent waste, destruction, or neglect.
- Density, Gross.** The number of dwelling units per gross acre of developable residential land designated on a land use map.
- Design Capacity.** The capacity at which a street; water distribution pipe, pump or reservoir; wastewater pipe; or treatment plant is intended to operate.
- Development Fee.** Direct charge or dedication collected on a one-time basis for a service provided or as a condition of approval being granted by the local government.
- Early Neighborhood Notification (ENN).** A policy of notification of neighbors of proposed development projects, during the early phases of the project, in order to encourage a collaborative discussion and inform the applicant of possible neighborhood issues and concerns.
- Easement.** A right given by the owner of land to another party for specific limited use of that land. An easement may be acquired by a government through dedication when the purchase of an entire interest in the property may be too expensive or unnecessary.
- Electromagnetic Field (EMF).** A field produced as a result of generation, transmission, and use of electricity.
- Endangered Species, Federal.** A species that is in danger of extinction throughout all or a significant portion of its range, other than the Class I species that are determined to constitute pests whose protection under the provisions of the 1973 Endangered Species Act, as amended, would present an overwhelming and overriding risk to humans. The status is determined by the U.S. Fish and Wildlife Service and the Department of the Interior.
- Environment.** The physical conditions that exist within an area that will be affected either directly or indirectly by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The "environment" includes, including both natural and man-made conditions.
- Erosion.** The process by which material is removed from the earth's surface (including weathering, dissolution, abrasion, and transportation), most commonly by wind or water.

Extraterritorial Zone (ETZ). By state law, an area outside the city but within 1.5 mile of the city's corporate limits in which the city has some planning, zoning, and subdivision authority.

Extraterritorial Zoning Commission. An appointed body that reviews and votes on land use issues outside a city's corporate limits.

Federal Candidate Species, Category 1 (Candidate 1). Species for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list the species as Endangered or Threatened.

Federal Candidate Species, Category 2 (Candidate 2). Species for which existing information indicates that the species may warrant listing but for which substantial biological information to support a proposed rule is lacking.

Federal Flood Insurance. Affordable flood insurance offered by the federal government to property owners whose communities participate in the National Flood Insurance Program.

Floor Area, Gross. The total horizontal area in square feet of all floors within the exterior walls of a building but not including the area of unroofed inner courts or shaft enclosures.

Floor Area Ratio (FAR). The ratio between gross floor area of structures on a site and gross site area. Thus, a two-story building covering 50% of its site would have a FAR of 1.0.

Generation. The process of producing electric energy by transforming other forms of energy.

Grid. An interconnected network of electric transmission or distribution lines, both regional and local.

Groundwater. Water under the earth's surface, often confined to aquifers capable of supplying wells and springs.

Groundwater Recharge. The natural process of infiltration and percolation of rainwater from land areas or streams through permeable soils into water-holding rocks that provide underground storage (i.e., aquifers).

Guy Wires. Wires that support transmission or distribution structures; they are attached to the structure and anchored in the ground.

Habitat. The natural environment of a plant or animal.

Hazardous Material. A material or form of energy that could cause injury or illness to persons, livestock, or the natural environment.

Hazardous Waste. Waste which requires special handling to avoid illness or injury to persons or damage to property. Includes, but is not limited to, inorganic mineral acids of sulfur, fluorine, chlorine, nitrogen, chromium, phosphorous, selenium, and arsenic and their common salts; lead, nickel, and mercury and their inorganic salts or metallo-organic derivatives; coal, tar acids such as phenol and cresols and their salts; and all radioactive materials.

Household. Person or persons living in one dwelling unit.

Housing Unit, Multifamily. Structures with two or more housing units.

Housing Unit, Single-Family Attached. Single family units that are attached to other units by adjoining walls extending from ground to roof that separate it from the other adjoining units and form a property line. Each unit has its own heating system.

Housing Unit, Single-Family Detached. Single family units that are detached from any other units with open space on all four sides.

Impervious Surface. Any material which reduces or prevents absorption of water by the land.

Indirect Source. Any structure or installation which attracts an activity which creates emissions of pollutants. For example, a major employment center, a shopping center, an airport, or a stadium can all be considered indirect sources.

Infill. The development of new housing or other buildings on scattered vacant lots in a built-up area or on new building parcels created by permitted lot splits.

Infiltration. The introduction of underground water, such as groundwater, into wastewater collection systems. Infiltration results in increased wastewater flow levels.

Infrastructure. Permanent utility installations, including roads, water supply lines, sewage collection pipes, and power and communication lines.

Intersection Capacity. The maximum number of vehicles that has a reasonable expectation of passing through an intersection in one direction during a given time period under prevailing roadway and traffic conditions.

Kilovolt (kV). 1000 volts.

Land Use. The purpose or activity for which a piece of land or its buildings is designed, arranged, or intended or for which it is occupied or maintained.

Level of Service (LOS). The different operating conditions which occur in a lane or roadway when accommodating various traffic volumes. A qualitative measure of the effect of traffic flow factors such as special travel time, interruptions, freedom

to maneuver, driver comfort, and convenience, and indirectly, safety and operating cost. LOS is usually described by a letter rating system of A through F, with LOS A indicating stable traffic flow with little or no delays and LOS F indicating excessive delays and jammed traffic conditions.

Loop Feed. The connection of two transmission or distribution lines to complete a loop; loop feeds allow electric service to be provided from either line in the event of an outage.

Mitigation Measure. Action taken to reduce or eliminate environmental impacts. Mitigation includes: avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance during the life of the action; and compensating for the impact by replacing or providing substitute resources or environments.

Non-point Source. A pollutant source introduced from dispersed points and lacking a single, identifiable origin. Examples include automobile emissions or urban runoff.

100-Year Flood. That flood event, which has a 1% change of occurrence in any one year.

Outage. The period during which a generating unit, transmission line, or other facility is out of service.

Peak Demand. The maximum load during a specific period of time.

Peak Hour Traffic. The number of vehicles passing over a designated section of a street during the busiest one-hour period during a 24-hour period.

Pedestrian-oriented Development. Development designed with an emphasis on sidewalks and pedestrian access to buildings, rather than on auto access and parking areas.

Percent Slope. A common way of expressing the steepness of the slope of terrain; percent slope is derived by dividing the change in elevation by the horizontal distance traversed. An increase of 20 feet in elevation over a 100-foot distance is a 20% slope.

Point Source. A pollutant source that may be traced to a discrete point of emission.

Prudent Avoidance. Siting transmission lines, sub-transmission lines, and substations to avoid "captive populations," such as schools, daycare centers, Alzheimer's and other elderly care residences, incarceration facilities, and hospitals, as well as residential areas, to the greatest extent practical and feasible.

Rare Species. A species or subspecies, although not currently threatened with extinction, that exists in such small numbers throughout its range that it may be endangered if the quality of its environment worsens.

Reliability. The degree of performance of the various elements of the bulk electric system that results in delivery of electricity to customers within accepted standards and desired amounts. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply.

Retention Area. A pond, pool, lagoon, or basin used for the storage of water runoff.

Right-of-way. A strip of land acquired by reservation, dedication, forced dedication, prescription, or condemnation that is intended to be occupied or actually occupied by a road, crosswalk, railroad, electric transmission line, oil or gas pipeline, water line, sanitary storm sewer, or other similar utilization.

Riparian. Pertaining to the bank of a natural course of water, whether seasonal or annual. The surrounding vegetation or presence of known wildlife movement pathways defines riparian habitat; it borders or surrounds a waterway.

Resource Protection Area (RPA). RPAs contain the most sensitive and vulnerable habitats that require protection. They are located along riparian corridors that provide important habitat for plants and animals and movement corridors for wildlife. RPAs are designated as no-build and no-disturbance areas.

Sedimentation. Process of deposition in a body of water of materials that have been carried in cloudy suspension.

Sensitive Resource Area (SRA). SRAs contain areas that could potentially include habitat for sensitive species of plants and animals. Development is permitted on sites with SRA designation, in accordance with established procedures and standards.

Solid Waste. Unwanted or discarded material, including garbage, with insufficient liquid content to be free flowing.

Study Area Boundary. The city and the land outside its boundaries (1.5-mile study area) that bear a relationship to its planning.

Subdivision. The division of a lot, tract, or parcel of land into two or more lots, tracts, parcels, or other divisions of land for sale, development, or lease.

Subsidence. The gradual sinking of land as a result of natural or man-made causes.

Substation. An assemblage of electrical equipment for switching and/or regulating electric voltage.

Switching Station. A type of substation with electrical equipment for tying together two or more electric circuits and arranged to be able to permit a circuit to be disconnected in an emergency or to change electric connections between circuits.

Tap. A limited capacity electric circuit extending from a main line to a substation.

Third Class City. Bureau of the Census designation for cities with a population of 10,000–39,000.

Threatened Species, Federal. A species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Tie. An electric circuit connecting two primary lines.

Transformer. An electrical device for changing the voltage of alternating current.

Trip End. A single vehicle movement. Roundtrips consist of two trip ends.

Trip Generation. The number of vehicle trip ends associated with (i.e., produced by) a particular land use or traffic study site.

Transportation Systems Management. Measures designed to reduce peak-period vehicle traffic by making a more efficient use of existing resources and emphasizing transit, ridesharing, and nonautomobile alternatives.

Upgrade. To increase the capacity of a substation by installing a higher voltage and/or higher capacity transformer or by installing an additional transformer, or to increase the capacity of a transmission or sub-transmission line by rebuilding to a higher voltage.

Vehicle Miles Traveled. A measure of both the volume and extent of motor vehicle operation; the total number of vehicle miles traveled within a specified geographical area (whether the entire country or a smaller area) over a given period of time.

Viewshed. The geographic area from which a site is visible; a collection viewpoints.

Volume-to-Capacity Ratio. In reference to public services or transportation, ratios of peak hour use to capacity.

Waste Stream. All solid, semisolid, and liquid wastes including garbage, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes.

Watt. An electrical unit of power or rate of doing work.

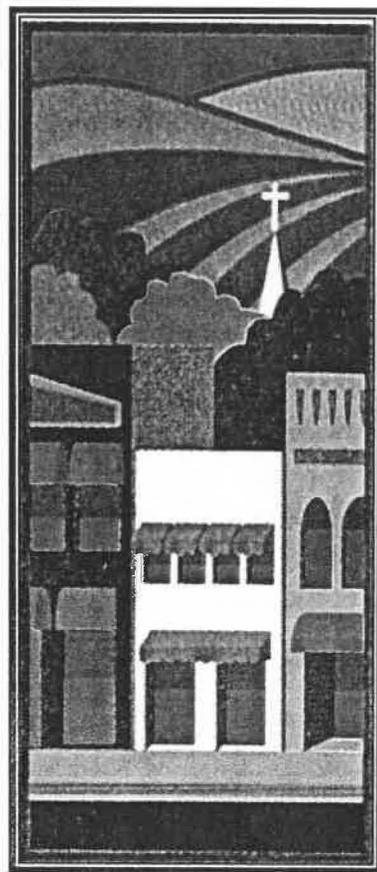
Watt-hour. A measure of electrical energy, or a watt of power consumed over one hour. Electric energy is commonly sold by the kilowatt-hour.

Wetland. An area at least periodically wet or flooded, where the water table stands at or above the land surface (bogs and marshes). Also those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wildlife Corridor. A natural corridor, such as an undeveloped ravine, that is frequently used by wildlife to travel from one area to another.

Zoning District. A specifically delineated area on a zoning map within which regulations and requirements uniformly govern the use, placement, spacing, and size of buildings, open spaces, and other facilities.

APPENDIXES



November 2000

APPENDIX A

PLANS, REPORTS, AND STUDIES

The following plans, reports, and studies assisted in the drafting of the *City of River Falls Sewer Service Area Water Quality Management Plan (SSAP)*.

Year	Name of Plan, Study, or Report
2000	St. Croix County Development Management Plan
1999	River Falls Municipal Utility Comprehensive Water Plan
1999	Town of Troy Subdivision Ordinance
1999	Kinnickinnic River Priority Watershed Project
1999	La Crosse Sewer Service Area Water Quality Management Plan 1999–2000
1999	City of River Falls Housing Needs Assessment
1998	Town of River Falls Master Plan
1998	River Falls Comprehensive Sanitary Sewer Study
1998	River Falls Facility Plan for Permit Compliance
1998	Hudson Area Urban Sewer Service Area Plan
1996	Pierce County Land Management Plan
1996	St. Croix County Development Plan
1996	Labor Market Conditions in Pierce County
1995	City of River Falls Water Management Plan
1995	City of River Falls Bicycle and Pedestrian Plan
1995	River Falls Comprehensive Water Study Plan
1995	City of River Falls Master Plan Update
1995	City of River Falls Master Plan Summary
1995	City of River Falls Comprehensive Parks & Recreation Plan
1995	HDR Electric Long Range Plan Update
1994	River Falls Facility Plan Amendment
1992	Town of Troy Growth Management Plan
1992	HDR Electrical System Analysis & Coordination Review
1991	River Falls Architectural and Historical Survey Report
1990	U.S. Census
1989	City of River Falls Comprehensive Parks & Recreation Plan
1987	City of River Falls Master Plan Report
1983	River Falls Service Availability Charges
1982	FIRM Flood Insurance Rate Maps
1982	River Falls Township Land Use Plan
1979	River Falls Interceptor Sewer Study
1978	River Falls Water Utility System Analysis
1974	Urbanization in St. Croix and Pierce Counties
1971	Outdoor Recreation Plan
1965	City of River Falls Comprehensive Plan
1930–1980	U.S. Census
	Municipal Code of River Falls, Wisconsin
	Wisconsin State Statutes
	USDA, National Resource Conservation Service (formerly Soil Conservation Service)
	Variety of Wisconsin Department of Natural Resources Documents

APPENDIX B

SEWER SERVICE AREA COMMITTEE

- 1. Katie Chaffee, Mayor** **Appointee**
City of River Falls
123 East Elm Street
River Falls, WI 54022
- 2. Tom O’Connell, Council Member** **Appointee**
City of River Falls
123 East Elm Street
River Falls, WI 54022
715-425-5863
- 3. Mariano “Buddy” Lucero, Planning Director** **Appointee**
City of River Falls
123 East Elm Street
River Falls, WI 54022
715-425-0900, ext. 108
- 4. Jim Dieck** **Appointee**
River Falls Utilities Commission
904 Falcon Drive
River Falls, WI 54022
715-425-1144
- 5. Dean Albert, Chairman** **Appointee**
Town of Troy
296 Highway 35 North
River Falls, WI 54022
715-425-7907
- 6. Charles Andrea, Chairman** **Appointee**
Town of Kinnickinnic
332 County Trunk JJ
River Falls, WI 54022
715-425-5970
- 7. Leroy Peterson, Chairman** **Appointee**
Town of Clifton
W10604 County Trunk FF
River Falls, WI 54022
715-425-5837

APPENDIX B: SEWER SERVICE AREA COMMITTEE (Continued)

- | | |
|--|------------------|
| 8. Louis Campbell, Chairman
Town of River Falls
W9255 - 690 th Avenue
River Falls, WI 54022
715-425-6947 | Appointee |
| 9. David Fodroczi, Director
St. Croix County Planning Department
1101 Carmichael Road
Hudson, WI 54016
715-386-4674 | Appointee |
| 10. Mark Schroeder
Pierce County Administrative Coordinator
414 West Main Street
P.O. Box 119
Ellsworth, WI 54011
715-273-3531, ext. 429 | Appointee |
| 11. Dan Simonson
Water Quality Planning Director
Wisconsin Department of Natural Resources
P.O. Box 4001
Eau Claire, WI 54702
715-839-3725 | Appointee |

APPENDIX C

SEWER SERVICE AREA TECHNICAL ADVISORY COMMITTEE

Contact	Area of Expertise
Mariano "Buddy" Lucero Planning Director City of River Falls 123 East Elm Street River Falls, WI 54022 715-425-0900, ext. 108	<i>>Comprehensive Plan</i> <i>>Development Regulations</i>
Tony Steiner Zoning Administrator City of River Falls 123 East Elm Street River Falls, WI 54022 715-425-0900, ext. 111	<i>>Zoning Ordinance</i> <i>>Development Regulations</i>
Reid Wronski, P.E. City Engineer City of River Falls 123 East Elm Street River Falls, WI 54022 715-425-0900, ext. 150	<i>>Engineering</i> <i>>Streets</i>
Victor Marma, General Manager River Falls Municipal Utilities 125 East Elm Street River Falls, WI 54022 715-425-0906, ext. 120	<i>>Utilities</i> <i>>Water</i> <i>>Sewer</i> <i>>Electric</i>
Ellen Denzer, Planner St. Croix County Planning Department 1101 Carmichael Road Hudson, WI 54016 715-386-4673	<i>>Comprehensive and Development Regulations</i>
Mark Schroeder, Administrative Coordinator Pierce County 414 West Main Street P.O. Box 119 Ellsworth, WI 54011 715-273-3531, ext. 429	<i>>Comprehensive and Development Regulations</i>

APPENDIX C: SEWER SERVICE AREA TECHNICAL ADVISORY COMMITTEE (Continued)

Contact	Area of Expertise
<p>Charles Christenson St. Croix County Conservationist Land & Water Conservation Office 1960 8th Avenue Baldwin, WI 54002 715-684-2894</p>	<p>> <i>Groundwater</i> > <i>Soils</i> > <i>Wetlands</i> > <i>Erosion Control</i></p>
<p>Don Siler, District Conservationist, USDA Natural Resources Conservation Service 1960 8th Avenue Baldwin, WI 54002 715-684-2894</p>	<p>> <i>Soils</i> > <i>Wetlands</i></p>
<p>Duane Klein Department of Agriculture, Trade & Consumer Protection 801 West Badger Road Madison, WI 53708-8911 608-224-4519</p>	<p>> <i>Fertilizers and Pesticides</i></p>
<p>Chip Harry L. Brown, III State Historical Society of Wisconsin 816 State Street Madison, WI 53706-1488 608-265-6404</p>	<p>> <i>Historical Resources</i></p>
<p>Leroy Jansky Department of Commerce-Safety and Building Division 13 East Spruce Street Chippewa Falls, WI 54729 715-726-2559</p>	<p>> <i>Septic Systems</i></p>
<p>Kathy Prentice Department of Commerce- Environmental and Regulatory Service Division (ERSD) 1300 State Highway 29 East Chippewa Falls, WI 54729 715-726-2559</p>	<p>> <i>Underground Storage Tanks (retail)</i></p>
<p>Darrell Christy Department of Commerce-ERSD S7840 Balsam Road Eau Claire, WI 54701 715-878-4499</p>	<p>> <i>Underground Storage Tanks (non-retail; commercial and residential)</i></p>

APPENDIX C: SEWER SERVICE AREA TECHNICAL ADVISORY COMMITTEE (Continued)

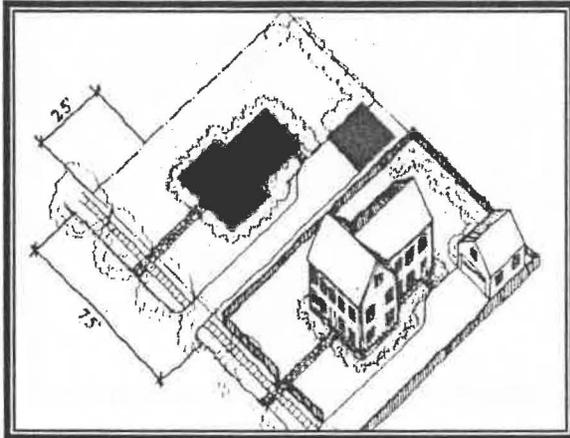
Contact	Area of Expertise
<p>Peter Skorseth, Environmental Engineer Wisconsin Department of Natural Resources 990 Hillcrest Street, Suite 104 Baldwin, WI 54002 715-684-2914</p>	<p>➤ <i>Water Supply</i> ➤ <i>Wastewater</i></p>
<p>Dan Simonson Water Quality Planning Director Wisconsin Department of Natural Resources P.O. Box 4001 Eau Claire, WI 54702 715-839-3725</p>	<p>➤ <i>Surface Water</i> ➤ <i>Storm water Management</i> ➤ <i>Sewer Service Area Plans</i></p>
<p>Dan Koich Water Regulation and Zoning Wisconsin Department of Natural Resources P.O. Box 4001 Eau Claire, WI 54702 715-839-3769</p>	<p>➤ <i>Shoreland</i> ➤ <i>Setbacks</i> ➤ <i>Floodplains</i> ➤ <i>Wetlands</i></p>
<p>Steve Thon Wastewater Engineer Wisconsin Department of Natural Resources P.O. Box 4001 Eau Claire, WI 54702 715-830-3776</p>	<p>➤ <i>Municipal Sewer and Water</i> ➤ <i>Groundwater</i></p>
<p>*Lisa Helmuth Water Quality Planning Wisconsin Department of Natural Resources 101 S. Webster P.O. Box 7921 Madison, WI 53707-7921 608-266-7768 * DNR contact</p>	<p>➤ <i>Sewer Service Area Plans</i></p>

APPENDIX D

ILLUSTRATIVE RESIDENTIAL PROTOTYPES

EXISTING CITY LOT

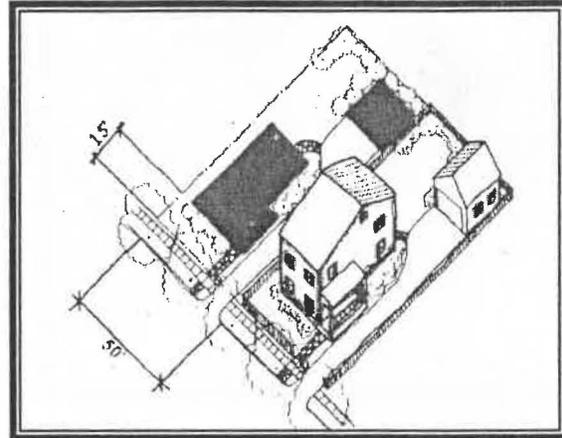
(front loaded)



City lot single family detached dwelling.

SMALL LOT

(front loaded)



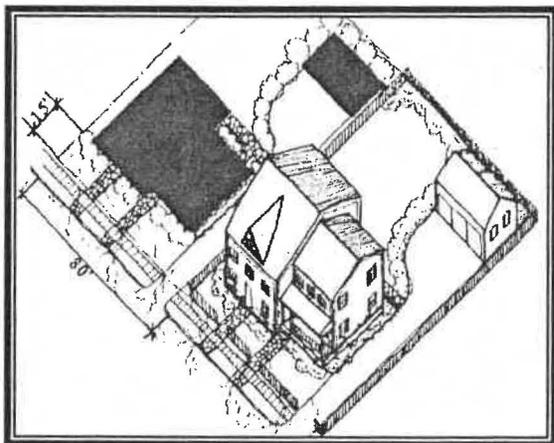
Small lot detached single family dwelling.

Lot Size	7,500 sq. ft.	5,000 sq. ft.
Dwelling Size	1,650 sq. ft.	1,500 sq. ft.
Number of Floors	2 floors	2 floors
Illustrated Density (unit/gross acre)	4 du/ac	6 du/ac
Typical Density Range for Housing Type	3-6 du/ac	3-6 du/ac
Future Land Use Classification	low density	low density

Illustrations from the VISIONS FOR A NEW AMERICAN DREAM by Anton C. Nelessen

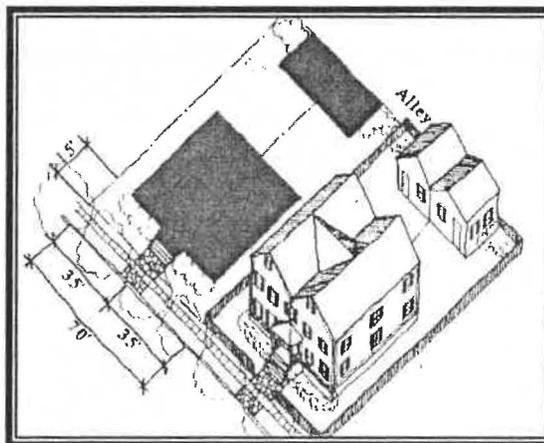
APPENDIX D: ILLUSTRATIVE RESIDENTIAL PROTOTYPES (Continued)

TWO UNIT LOT
(front loaded)



Semi-detached dwelling with second unit.

DUPLEX LOT
(rear loaded)



Duplex dwelling units.

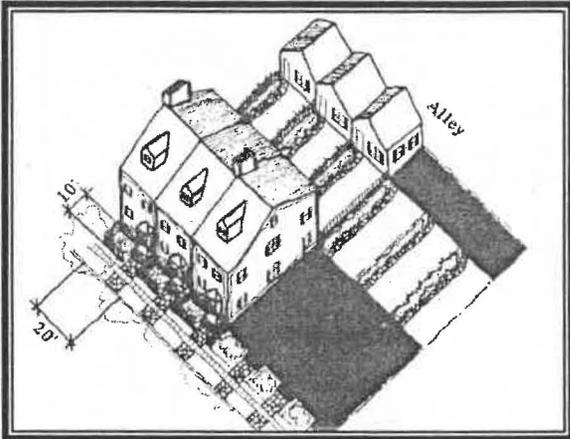
Lot Size	8,000 sq. ft.	3,500 sq. ft.
Dwelling Size	1,500/750 sq. ft.	1,400 sq. ft.
Number of Floors	2 floors	2 floors
Illustrated Density (unit/gross acre)	4 du/ac	8 du/ac
Typical Density Range for Housing Type	3–6 du/ac	6–9 du/ac
Future Land Use Classification	low density	medium density

Illustrations from the VISIONS FOR A NEW AMERICAN DREAM by Anton C. Nelessen

APPENDIX D: ILLUSTRATIVE RESIDENTIAL PROTOTYPES (Continued)

TOWN HOUSE

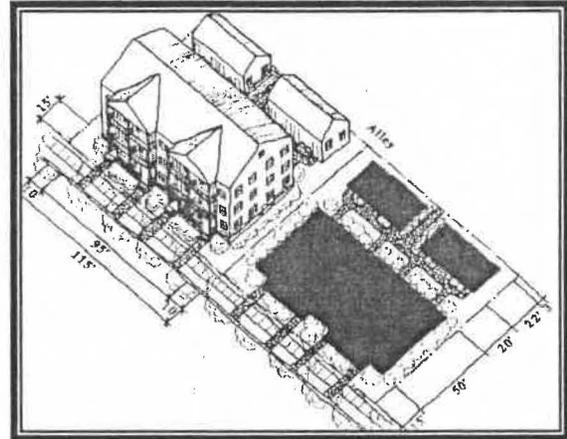
(rear loaded)



Town house dwelling unit.

APARTMENTS

(rear loaded)



Apartment dwelling units.

Lot Size	2,000 sq. ft.	12,650 sq. ft.
Dwelling Size	1,200 sq. ft.	1,200 sq. ft.
Number of Floors	2 floors	2 floors
Illustrated Density (unit/gross acre)	12 du/ac	12 du/ac
Typical Density Range for Housing Type	9-12 du/ac	9-12 du/ac
Future Land Use Classification	high density	high density

Illustrations from the VISIONS FOR A NEW AMERICAN DREAM by Anton C. Nelessen

APPENDIX E

ILLUSTRATION OF A NEIGHBORHOOD CENTER

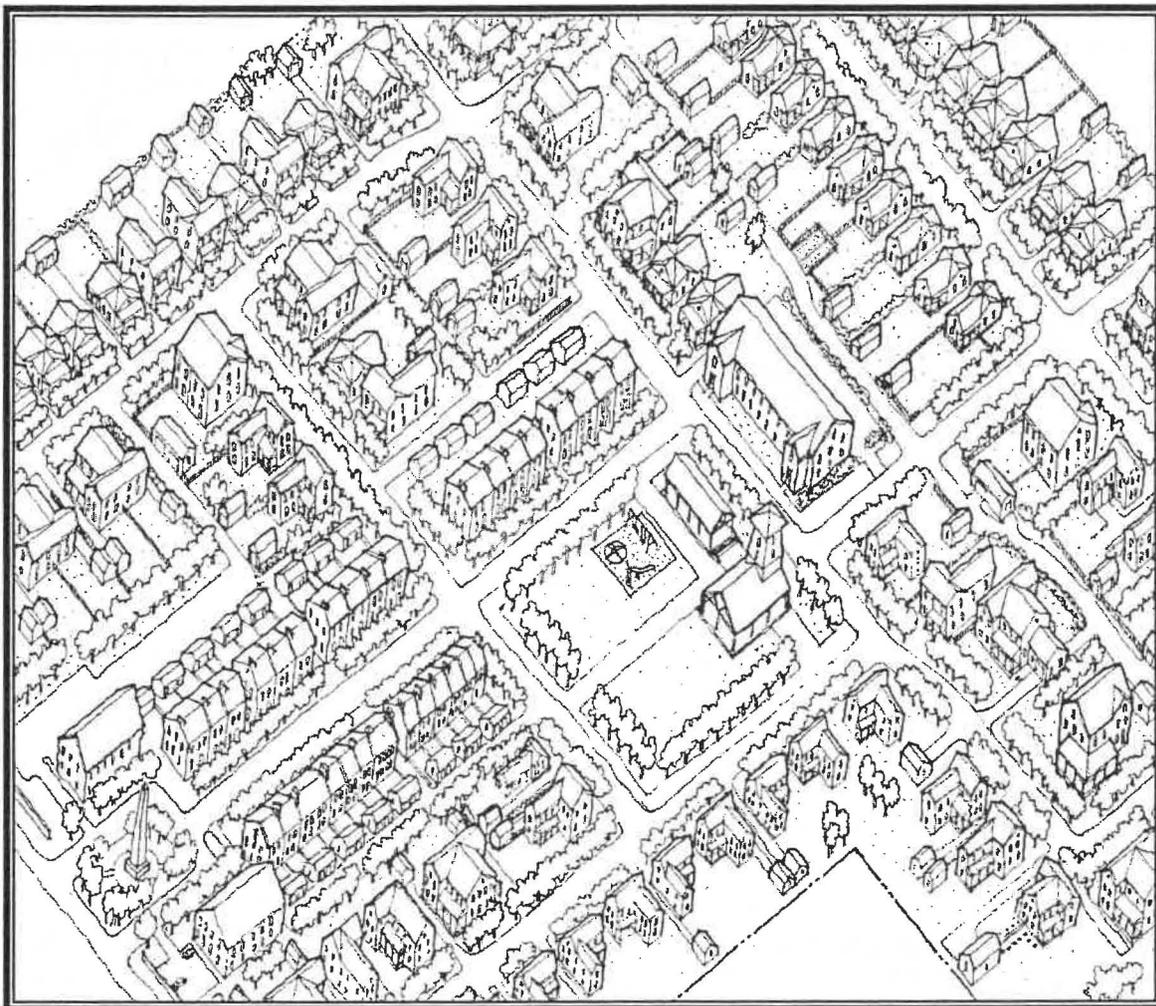


Illustration from the VISIONS FOR A NEW AMERICAN DREAM by Anton C. Nelessen

NEIGHBORHOOD CENTER DEVELOPMENT

The vision for commercial and neighborhood centers is of community-friendly, transit-accessible, sustainable, and livable community areas that offer commercial amenities within walking distance of residences and are scaled and designed for pedestrian interest, comfort, and safety. The City of River Falls Main Street is a fine example of such a development type.

In contrast, most commercial centers built today are isolated from their surroundings, with residential and commercial uses isolated from each other. Many of the centers have been designed without regard for pedestrian, bicycle, or transit accessibility or the unique character of their town and the scale and character of adjoining neighborhoods. Well-designed centers can also decrease the number and length of automobile trips, with resultant benefits of improved air quality, energy savings, and decreased need for land devoted to parking.

APPENDIX E: ILLUSTRATION OF A NEIGHBORHOOD CENTER (Continued)

More importantly, they can strengthen the identity of neighborhoods and provide an environment that enhances everyday working, shopping, and recreation.

The revitalization of this vision will require fundamental changes in the way centers are planned and built as well as coordinated public and private efforts. General design principles proposed to guide both large-scale development and redevelopment as well as smaller-scaled incremental changes in the center are:

- Give priority over the automobile to pedestrians, bicyclists, and transit riders in all centers.
- Knit the center into the urban fabric of the city by extending adjoining streets into developments, building closer to public streets and sidewalks, setting parking behind buildings, and matching the grain, scale, and character of the surroundings.
- Where feasible, overlay or introduce a traditional street grid (private or public) to shorten blocks, divide large parcels into a finer grain, and provide frontage for additional pedestrian-oriented development.
- Concentrate pedestrian activity in the centers, and create a town square or open space as a focus in all centers.
- Recognize the value of streets as public open spaces that form the building blocks of the community and provide pedestrian amenities, lighting, and landscaping.
- Use trees, shrubbery, and other landscape elements to provide identity, delineate edges, and define entrance and movement corridors.
- Respond to the unique character of individual centers by:
 - Preserving historic structures, artifacts, and landscape to add to the character and richness of the environment.
 - Retain views of the bluffs and natural features, such as the rivers and topography by creating viewpoints and view corridors.
- Capitalize on the economic value of storefront merchandizing, by expanding sidewalk oriented commercial uses, specifically:
 - Enhance and develop traditional blocks of storefronts with frequent pedestrian entries, store windows with awnings or canopies, and pedestrian oriented signage;
 - Provide continuity and pedestrian-oriented frontage. Avoid blank walls, parking, parking lots, and sidewalk setbacks; and
 - Design buildings to accommodate smaller businesses catering to nearby neighborhoods. (No big-boxed retail over 50,000 square feet.)
- Fill the gaps (walls and parking lots) with wall graphics, signage, artwork, and landscaping where appropriate.

APPENDIX E: ILLUSTRATION OF A NEIGHBORHOOD CENTER (Continued)

- Create new pedestrian corridors and bikeways through centers; connect them to adjacent neighborhoods; and provide bicycle racks or storage units near transit stops and active centers.

On Figure 4–8 Future Land Use, each center is represented by a circle with a one-quarter mile radius—the distance covered by foot in five or ten minutes by most people. Each center in a new neighborhood would have an 8–12 acre core, which could include a supermarket or drugstore, a variety of other small tenants, such as video stores, bakeries, and restaurants and other neighborhood-serving functions, such as medical, dental, and real estate offices. Community facilities such as an elementary school and neighborhood parks would be nearby. The centers would be located along future transit corridors. Residential uses on upper floors would be permitted and even encouraged in the core. Table E.1 shows uses in the neighborhood center and then Table E.2 shows buildout of a typical neighborhood center.

Table E.1
INTENSITIES AND MIX OF USES IN NEIGHBORHOOD CENTERS

Use	Mixed-Use Core	Center Outside Core ^a
Commercial	Yes	No
Office	Yes	No
Residential	Yes	Yes
	None on the first floor	
Maximum Floor Area Ratio (Nonresidential uses)	0.5	--
Maximum Residential Density (units/gross acre)	12	Varies

a = Area within one-quarter-mile radius of the mixed-use core.

NOTE: Combined maximum floor area ratio and residential density may not be achievable because of height, site coverage, parking, or other requirements. The intent in providing these maximums is to permit a greater level of flexibility for a mix of uses.

The cores are to be accessible from collector or arterial streets, without being split up by the street. They will be centered around a town square or in the form of a pedestrian-oriented spine such as Main Street. Proximity to collector streets would ensure that stores and offices are accessible to those that drive to them, and service trucks can reach the center without impacting local streets. At the same time, residents would not need to walk across a four-lane arterial to reach a supermarket.

APPENDIX E: ILLUSTRATION OF A NEIGHBORHOOD CENTER (Continued)

Table E.2
TYPICAL BUILDOUT OF A ONE-QUARTER-MILE RADIUS
NEIGHBORHOOD CENTER

Use Housing	Land Area (acres)	Units
Low Density	30	150
Medium Density	35	350
High Density	15	300
Total Residential	80	800
Mixed-use Neighborhood Core	12	
Parks and Schools	15	

To minimize trip length and bring a large number of residents closer to the centers so they can bike or walk to shops and offices, the plan designates sites for higher-density residential development in close proximity to each mixed use commercial core in the proposed neighborhood centers. In new neighborhoods, about 35 to 40% of the housing units would be within one-quarter-mile walking distance of the neighborhood core. The centers are intended to contain a variety of housing types at an average density of 9–12 units per gross acre.

APPENDIX F

**RIVER FALLS PARCEL INVENTORY AND ANALYSIS
OF PROPERTIES WITH POTENTIAL FOR RESIDENTIAL
DEVELOPMENT**

Existing Platted Lots and Preliminary Plats in Process

	Owner/ Subdivision	Location	Approx. Acreage/ Lots	Utilities	Suitable Housing Type(s)	Comments
1	K & S, Inc.	South of W. Division St. at end of W. Maple St.	40 ac.	Yes	Single-family, low density	City has approved developer's agreement and preliminary plat for final phase.
2	Collins et al. Collins Subdivision	N. Winter St. and Leroy Ln.	10 ac.	Yes	Single-family, low density	Plans are being drawn for the final phase of Collins Subdivision; however, City has not approved plat.
3	Wahrenbrock	South of Golfview Heights, east of STH 35 bypass	12 ac.	Yes	Single-family, low density	Final plat has been approved.
4	Gustafson & Skarsden	South of Cemetery Rd., west of STH 65	7 ac.	To be extended	Multifamily high density	City recently approved a 76-unit and three 8-unit apartment buildings. Approximately two acres are set aside for future development.
5	D. Cudd	South of Rocky Branch Elementary School	20+ ac.	Yes	Single-family, low density	City has approved preliminary plat and developer's agreement for single-family homes.
6	Kinnic View Property	On Riverside Dr., across from Commerce Ct.	2 parcels	Yes	Multifamily	Two parcels for sale— local developer has option on larger parcel. Zoned B3 for highway commercial or multifamily.
7	Rocky Branch 4th Addition	South end of River Ridge Rd. in southwest area of city	Unknown at this time	Yes	Single-family, low density	

**APPENDIX F: RIVER FALLS PARCEL INVENTORY AND ANALYSIS
OF PROPERTIES WITH POTENTIAL FOR RESIDENTIAL DEVELOPMENT (Continued)**

Potential In-fill and Redevelopment Sites

	Owner/Realtor	Location	Acreage/ Lots/ Buildings	Utilities	Suitable Housing Type(s)	Comments
8	City of River Falls	West of W. Locust, south of W. Elm	4-5 ac.	Yes	Single-family or Multifamily	Currently vacant land, which the city has included in a CDBG grant application to develop as the Apollo Subdivision for affordable housing.
9	River Falls Area School District	Meyer Middle School, W. Maple	1 bldg. 4 ac. (2 blocks)	Yes	Multifamily or Condos	Existing school building has potential for conversion to apartments/condos, although District doesn't have plans to sell.
10	Pechacek Property	South of E. Division St., west of STH 35 bypass	1.7 ac.	Yes	Single-family, low density	Currently vacant property.
11	City of River Falls	Broadway and Sycamore St.	Old City Garage	Yes	Multifamily high density	Potential for high-rise multifamily development
12	Unknown at this time	Sycamore/Orange and E. Charlotte	Approx. 2½ blocks	Yes	Multifamily high density	Would require relocation of families renting single-family homes (incl. 7 mobile homes).
13	Cudd Property	West of S. Wasson and Wildcat Court	6.3 ac.	Yes	Multifamily high density	Zoned B2, including multifamily high density. Possible redevelopment area. Currently not for sale.
14	Cudd Property	West of S. Wasson and Wildcat Court	0.7 ac.	Yes	Multifamily high density	Zoned B2, including multifamily high density. Currently not for sale.
15	Venzina Property	East of S. Wasson next to Cudd's Court	9 ac.	Yes	Multifamily medium density	Currently not for sale.
16	Cudd Property	Along S. Wasson, in front of Cudd's Court	Approx. 6-7 ac.	Yes	Mobile home park	Owner has no plans to expand—could in future, but court doesn't conform to required street width.
17	Moody Family	West of S. Wasson, next to C.V. Tech. School	3 ac.	Yes	Multifamily high density	

**APPENDIX F: RIVER FALLS PARCEL INVENTORY AND ANALYSIS
OF PROPERTIES WITH POTENTIAL FOR RESIDENTIAL DEVELOPMENT (Continued)**

Potential In-fill and Redevelopment Sites (Continued)

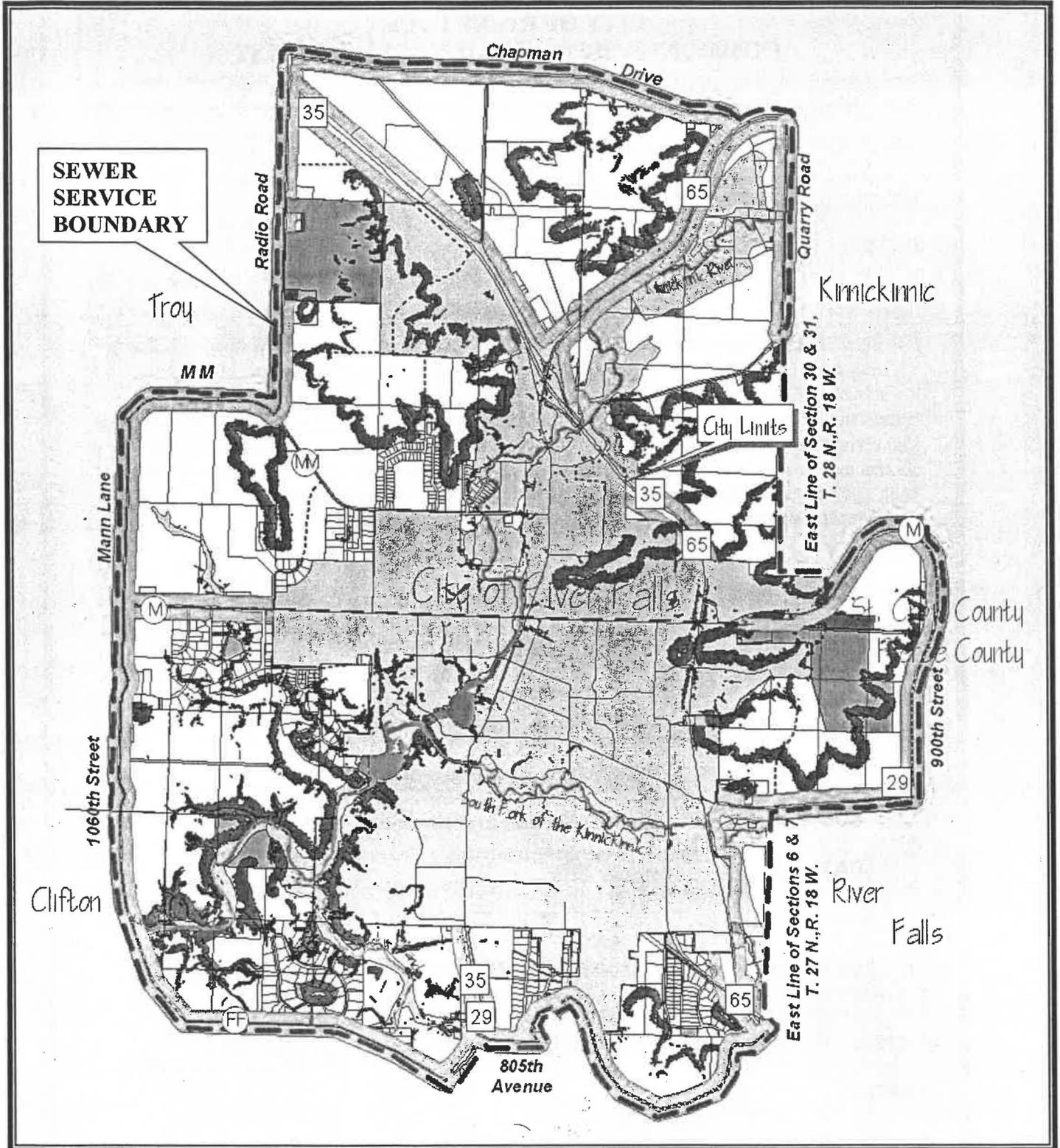
	Owner/Realtor	Location	Acreage/ Lots/ Buildings	Utilities	Suitable Housing Type(s)	Comments
18	Foster Court	S. Winter St. and W. Cascade, along Lake George	1-2 ac.	Yes	Multifamily medium density	Currently the site of 17 older mobile homes.
19	McEwen Property	Broadway St.	1.17 ac.	Yes	Multifamily high density	Wooded rolling land, should accommodate 16-20 units. Currently not for sale.
20	Hovde Property	Roosevelt St. and No. Clark	2 bldgs. 8 ac.	Yes	Multifamily high density	Current location of Moose Lodge and Fashionaire Bldg. Currently not for sale.
21	Cenex Property	End of Fremont Street	.23 ac.	Yes	Multifamily	Location of Cenex tank farm, surrounded by city-owned land, including undeveloped street right-of-way. Property is currently for sale and has future potential to combine with adjoining properties.

Potentially Developable Subdivision Sites

	Owner/ Subdivision	Location	Approx. Acreage	Utilities	Suitable Housing Type(s)	Comments
22	City of River Falls	Top of hill in Industrial Park	128 ac.	No	Single-family or multifamily	Has potential for single- or multifamily housing. Currently zoned light industrial.
23	Desanctis Family	North of W. Division St., east of Dry Run Rd.	7 ac.	No	Single-family, low density	City is currently developing Desanctis Park. The Desanctis family is holding a 200- foot wide strip for future development.
24	J. Hanson	North of hospital, east of STH 35 bypass	10 ac.	No	Single-family, low density	Parcel not accessible at the present time.
25	B. Miller	East of hospital, north of E. Division St.	30+ ac.	Would need to be extended	Single-family, low density	Owner has plans to build single-family homes; however, no plat has been submitted to the City.
26	Unknown at this time.	East of STH 35 bypass, north of STH 29	14 ac.	No	Single family or multifamily	Property is currently for sale. Zoned Agricultural.

APPENDIX G

SEWER SERVICE BOUNDARY
2000-2020



APPENDIX H

**CITY OF RIVER FALLS
COMMUNITY DEVELOPMENT DEPARTMENT
MEMORANDUM**

TO: Victor Marma, Utility General Manager
FROM: Buddy Lucero, Planning Director
DATE: April 3, 2000
RE: Sewer Extension and Hook-ups

It is my understanding that in the Municipal Code of the City of River Falls, Wisconsin, Chapter 13, Municipal Utilities, any proposal for public water and sanitary sewer in the City of River Falls must start with contacting the City of River Falls Municipal Utilities. It is also my understanding that the review of any proposal for public water or sewer extension and hook-up is also reviewed by the City of River Falls Municipal Utilities. What is unclear is who is the contact person or persons for the purpose of reviewing public water and sewer extension and hook-ups? If you could provide me a memo of the contact person or persons that are responsible for reviewing any proposals for public water or sewer extension hook-ups.

.....
**RIVER FALLS MUNICIPAL UTILITY
MEMORANDUM**
.....

TO: Buddy Lucero, Planning Director
FROM: Victor Marma, General Manager *VM*
SUBJECT: Sewer Extension and Hook-ups Response
DATE: April 5, 2000

.....
The Utility General Manager is the Municipal Utility contact person for reviewing any proposals for public water or sewer extension hook-ups.

Please let me know if you need any additional information.

VCM/cef

APPENDIX I



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott McCallum, Governor
Darrell Bazzell, Secretary

101 S. Webster St.
Box 7821
Madison, Wisconsin 53707-7821
Telephone 608-266-2621
FAX 608-267-3579
TTY 608-267-6897

February 12, 2001

Mr. Buddy Lucero, Director
City of River Falls Planning Department
123 East Elm Street
River Falls, WI 54022

SUBJECT: Development of the River Falls SSA Plan

Dear Mr. Lucero:

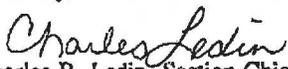
We have completed our review and approve of the Year 2020 River Falls Sewer Service Area Plan which involves identifying 527 acres of developed land, 3,499 acres of vacant developable land, and a comprehensive, enforceable definition of environmentally sensitive areas. Maintenance of the high quality waters of the Kinnickinnic, which runs through the city, will be enhanced by implementation of the procedures and reviews outlined in this plan.

The approval of this revision does not constitute approval of any of the following:

- o private sewage systems pursuant to Chapter ILHR 83, (WI Admin. Code),
- o sewer extension pursuant to Chapter NR 110, (WI Admin. Code),
- o authority to alter the bed or banks of any navigable waterway (Chapter 30, WI Stats.),
- o certification for any wetland alteration (Section 401, Federal Water Pollution Control Act, and NR 103, 299, WI Admin. Code).

Those approvals must be obtained separately from the respective agencies. In addition, storm water management plan development is required for any construction site activity disturbing five or more acres of land pursuant to Chapter NR 216 (WI Admin. Code). Any person aggrieved by this approval has the right to appeal the decision. Wisconsin Statutes and Administrative Code establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to s. 227.52 and 227.53, Wisconsin Statutes, a petition for review must be filed within 30 days after service of the decision. The respondent in an action for judicial review is the Department of Natural Resources. This notice is provided pursuant to s. 227.48(20), Wisconsin Statutes.

Sincerely,


Charles R. Ledin, Section Chief
Great Lakes & Watershed Planning Section
Bureau of Watershed Management

c. Dan Simonson, WCR-Eau Claire

www.dnr.state.wi.us
www.wisconsin.gov

Quality Natural Resources Management
Through Excellent Customer Service



WAPA



Planning Document
Medium Jurisdiction

Sewer Service Area Water Quality Management Plan
2000-2020

Presented to
City of River Falls
2002

Wisconsin Chapter of the American Planning Association

