

ROCK COUNTY, WISCONSIN



Planning, Economic & Community
Development Agency
51 South Main Street
Janesville, WI 53545
Phone: 608-757-5587
Fax: 608-757-5586
Website: www.co.rock.wi.us

April 12, 2013

RECEIVED

APR 15 2013

WT/3 - WY/3 - COI/3

Susan Sylvester, Director
Bureau of Water Quality
WI DNR
101 S Webster St
PO Box 7921
Madison, WI 53707-7921

RE: Grant Funding Request for City of Beloit and Town of Beloit Area-Wide Water Quality Management Plan Update: Phase II (January 1, 2013-December 31, 2013)

Dear Ms. Sylvester:

Please accept the information provided herein as an application for the Wisconsin Department of Natural Resources (DNR) grant funding to update the City of Beloit and Town of Beloit Area-wide Water Quality Management Plan ("Plan"). The application consists of this correspondence, history of planning in the area, discussion of the current Plan, planning progress to date, Phase II objectives, and budget for Phase II.

Rock County is requesting grant funding for Phase II of the Plan update (January 1, 2013 to December 31, 2013) in the amount of \$15,000. We intend to complete the plan by the December of this year.

The following provides a brief overview of the history of Water Quality Planning in the area, the current project to date, and what we will accomplish this year.

Plan Background Information

The original Plan consisted of a 20-year planning horizon and the most recent update was completed in the late 1990s. The current plan is antiquated by today's standards and capabilities. There are a variety of problems with the current plan in and of itself, and because of changes since 1998:

- Comprehensive Plans have been completed by the City of Beloit, the Town of Beloit, the Towns of Rock and Turtle, and Rock County. Sewer Service areas shown on the current Water Quality Plan as Sewer Service Areas (SSA) are not consistent with the areas shown on county and other local government comprehensive plan maps.
- Our mapping ability has been enhanced significantly since 1998, not just in the power of the Geographic Information Systems software but the increase in the quantity and quality of spatial data. We can map our areas much more accurately and can include categories of data and details that were not possible 15 years ago.
- The spatial data, or "data layers" that we have developed and which are available to us reveal that there are areas both within the SSAs and in developed areas adjacent to the SSAs that contain high-densities of Private On-site Waste Treatment Systems (POWTS). Data gathered and presented by the Health Department in Phase I and recently in our first meeting

of Phase II suggest that there are areas of groundwater pollution associated with the areas of high densities of POWTS. Although high densities of POWTS in an urban area is not specifically mentioned in either NR 121 or SPS 383, this may be a significant issue in the Beloit area such that we need to develop a our own local policy that would encourage municipalities to provide public sewer to these areas.

- In the current plan, sewer mains form the SSA boundary in some areas. This has led to situations where an area that is adjacent to a sewer main but not within the SSA is determined to be out of the SSA and therefore eligible for a sanitary permit for a Private On-Site Wastewater Treatment System. Rationally, we should conceive the plan to include within the SSA those areas that are adjacent to the mains, not merely to one side or the other, either by insuring that no sewer main lies on a boundary, or indicate as much in the text to provide determination for sewer lines that inadvertently lie on an SSA boundary.

Other Characteristics of the area that potentially impact water quality planning in this area:

- The Planning area is set among several municipalities, some of whom have drifted beyond merely rivalrous relationships among themselves to relationships characterized by poor communication and lack of trust that have rendered problematic intergovernmental cooperation and decision making on areas of common interest. In the past year, however, progress has been made in fostering more frequent communications and agreement.
- Finally, the area contains two SSAs and two separate sewer systems adjacent to one another, both of which operate at below their operating capacities, while the area also contains neighborhoods of high residential density served only by POWTS.

We have had four meetings of the Beloit Area Water Quality Technical Advisory Committee in 2012 and one meeting in 2013, on March 27, 2013.. At each meeting, we produced maps and data describing the sewer service areas, the municipalities, the location of sanitary permits (POWTS), municipal boundary lines, population data and population trends in the future, and environmentally sensitive areas.

In Phase I (January 1, 2012- December 31,2012) this effort included:

1. Equitably consider all interests that each community located within the Beloit Metropolitan Area has as they relate to the provision of municipal sewer service. This includes the formulation of an Technical Advisory Committee comprised of local leaders, elected officials, and qualified technical personnel from each of the participating communities.
2. Review and update the original Plan goals;
3. Strive for consistency with respect to the each participating community's adopted Comprehensive Plan;
4. Review and inventory the water quality impact of the area treatment facilities existing loadings including industrial and commercial waste; and,
5. Redefine the overall Plan area for each system using the most recent population information from the Department of Administration and housing trends,
6. Analyze the natural resources and environmental conditions and constraints with respect to development suitability within the potential SSA boundaries (i.e. wetlands, flood hazards, steep slopes, soil geology, depth to groundwater and shallow bedrock, etc.);

7. Develop GIS maps showing all the environmentally sensitive areas in the planning area;
8. Inventory existing private on-site treatment systems;
9. Inventory existing private and public wells and wellhead protection zones.

These components of the plan have been completed, although we are going to look more closely at the density of Private On-Site Waste Treatment Systems in the Beloit area.

In Phase II (January 1 through December 31, 2013) this effort will:

1. Identify areas of concern in the Beloit area, either within the existing or future SSAs or outside of them where there are high densities of Private On-Site Waste Treatment Systems within urban residential areas, with recommendations for future public sewer service.
2. Delineate the future SSA boundaries (revision of current boundaries); and,
3. Assure compliance with applicable DNR water quality standards.

In the application for funding for Phase I, we stated that we would "Produce an updated Town of Beloit SSA map depicting the locations of existing sewer mains, manholes, and service lateral hook up to properties located within the SSA." We will encourage the Town of Beloit to do this.

Budget for 2013

The budget projection for the first phase of this two-year effort is estimated to be \$24,885.36 (see attached breakdown of budget items). This cost estimate does not include in-kind contributions of staff time provided by The City of Beloit or The Town of Beloit. The City and Town of Beloit will also provide additional technical resources and pertinent information (i.e. access to staff, plant loadings, plant capacity, and collection system information)

The majority of work tasks will be preformed by the Rock County Planning and Development Agency, along with personnel from the Rock County Health Department. Qualified City of Beloit and Town of Beloit staff representatives will review all technical work tasks. In addition the Advisory Committee will review all project findings and recommendations.

I trust this information satisfies the DNR criteria and appreciate your favorable approval of this request. If you should have any questions do not hesitate to contact me. Thank you very much.

Sincerely,



Paul Benjamin, Director
Rock County Planning and Development Agency

Cc: Lisa Helmuth
Fran Keally

City of Beloit and Town of Beloit Area-wide Water Quality Management Plans Update Request For Funding 2013

Date: April 12, 2013

Proposal Prepared By: Rock County Planning, Economic & Community Development Agency
51 South Main Street
Janesville, Wisconsin 53545
(608) 757-5587 – phone
(608) 757-5586 – fax
planning@co.rock.wi.us
www@co.rock.wi.us

Grant Period: 2013

Amount Requested: \$15,000 During Phase II (from January 1, 2013 to December 31, 2013)

Lead Agency: Rock County Planning, Economic & Community Development Agency
51 South Main Street
Janesville, Wisconsin 53545
(608) 757-5587 – phone
(608) 757-5586 – fax
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Project Description:

1. PLAN OVERVIEW

The original Beloit Metropolitan Sewer Service plan document, covering the City of Beloit and surrounding the urbanized area, was produced in 1986 and subsequently updated in the late 1990s. Significant changes to the area's overall urbanized landscape have rendered those original documents antiquated.

Rock County Planning and Development Agency and the Rock County Health Department have been working cooperatively with both Beloit urbanized area sewer service providers and each of the area's affected units of government in order to produce these plan updates.

2. PLAN AMENDMENT HISTORY

The first Beloit Metropolitan Sewer Service plan amendment was performed in 1996. This amendment adjusted the City of Beloit's Sewer Service Area boundaries by taking into consideration the addition of a residential subdivision development, proposed for the City of Beloit's northwest side. The second plan amendment performed in 2007, made slight

modifications to the actual sewer service provided to a number of Town of Beloit and city residents in a limited geographic area adjacent to the Rock River. Lift station operations within the current plan boundaries were also addressed in the second amendment.

3. PARTICIPATING LOCAL UNITS of GOVERNMENT

The City of Beloit, along with the Town of Beloit, Town of Turtle, and Town of Rock are the local units of government that will be directly affected by the plan updates. Because the Rock County Planning and Review Agency has been Rock County's overall urbanized sewer service area review agency, they have been acting as the coordinating agency in the plan update process. When applicable the local units of government previously mentioned will provide pertinent data and technical assistance throughout the process.

4. WASTEWATER TREATMENT FACILITIES AND SANITARY DISTRICTS

Two sanitary sewer system providers comprise the project area, the City of Beloit and Town of Beloit. This update will address both systems.

The City of Beloit operates its Water Pollution Control Facility at 555 Willowbrook Road, located in the city. According to the city this facility was commissioned in November of 1991 and uses advanced activated sludge technology. The system is capable of processing up to 11 million gallons of wastewater per day. Currently, however, it treats an average of approximately 3.5 million gallons a day. This facility is required to meet several National Pollution Discharge Elimination System (NPDES) permit criteria including:

- Biochemical Oxygen Demand
- Total Suspended Solids
- Phosphorus
- Ammonia
- Chlorine Residual
- Fecal Coliform

The Town of Beloit's Wastewater Treatment Plant Facility is located at 3629 S. Walters Road. This facility was built in 1969 and processes wastewater from the Town of Beloit and portions of the Town of Rock. This facility has operators certified by the State of Wisconsin in wastewater treatment activities.

Initially, this facility had a treatment capacity of 350,000-gallons of wastewater per day. In 1979, the Town more than doubled this facility's processing capability by adding a 650,000-gallon per day unit, making the total facility capacity 1,000,000-gallons per day. In 2003, a 750,000-gallon sludge storage tank along with a radio telemetry alarm system and new pre-treatment equipment were added.

5. GEOGRAPHIC INFORMATION SYSTEM (GIS) PERSONNEL

- a. Matthew Wesson - Rock County Environmental Health Department
- b. Adam Elmer - Rock County Environmental Health Department
- c. Jennifer Borlick - Rock County Planning and Development Agency

6. TECHNICAL ADVISORY COMMITTEE

The Rock County Planning, Economic & Community Development Agency is currently in the process of formulating two committees to oversee the plan updates. An Advisory Committee, predominately comprised of elected/appointed officials from the participating local governmental units will establish the appropriateness of the system service boundaries and any necessary changes to existing service coverage limits. In addition a Technical Committee, comprised of staff from these same local governmental units will coordinate and review all data collection and analytical activities needed to perform the updates. Committee membership is proposed as follows and subject to approval by the participating local units of government:

7. PROJECT TIMELINE (see following page)

As can be seen by examining the preliminary project timeline (attached), this planning effort as proposed will have two separate phases. The first phase concentrated on fact-finding, data collection, and a thorough review of the existing service areas and capabilities. The second phase will consist of determining the need for making any pertinent adjustments to the current sewer system boundaries in order to necessitate water quality protection, public health, and safety and identifying areas with high densities of Private On-site Waste Water Treatment Systems (POWTS).

Budget Projections for Rock County Staff - Through Phase I (August) Phase II						Apr-13			
Update - Beloit Area Water Quality Plan 2013 - 2038									
			P&D Director	E H Director	Engineer	Planner II	GIS Manager	Sanitarian	
Hourly Wage plus Fringe			\$65.13	\$59.41	\$34.82	\$38.12	\$46.72	\$53.88	<u>Projected Cost</u>
Meetings									
Staff	# of meetings		6	6	6	6	3	6	
	Hours		9	9	9	9	4.5	9	
Advisory Comm. (No. of)			6	6	6	6	0	0	
	Hours		12	12	12	12	0	0	
Prep/Follow-up (in hours)			4	4	10	10	20	20	
Cost			\$1,628.25	\$1,485.25	\$1,079.42	\$1,181.72	\$1,144.64	\$1,562.52	\$8,081.8
Analysis & Mapping									
Hours			10	20	75	75	10	10	
Cost			\$651.30	\$1,188.20	\$2,611.50	\$2,859.00	\$467.20	\$538.80	\$8,316.00
Report & Map Production									
Hours			10	10	40	50	10	40	
Cost			\$651.30	\$594.10	\$1,392.80	\$1,906.00	\$467.20	\$2,155.20	\$7,166.60
Presentation to Rock County Board									
Hours			2		2	2			
Cost			\$130.26		\$69.04	\$76.24			\$275.54
Project Expenses									
Mileage	(Estimate of 500 miles at \$0.555/mile)								\$277.50
Copying/Printing									\$300.00
Postage, etc.									\$100.00
Cost									\$677.50
Subtotal									\$22,501.37
Contingency (10%)			\$306.11	\$326.76	\$515.28	\$602.30	\$207.90	\$425.65	<u>\$2,383.99</u>
Total Cost									\$24,885.36

City of Beloit and Town of Beloit Area-wide Water Quality Management Plans Update Request For Funding 2013

Date: April 12, 2013

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From: [Keally, Fran - DNR](#)
To: [CHRISTINE MUNZ-PRITCHARD \(MUNZ@co.rock.wi.us\)](mailto:CHRISTINE.MUNZ-PRITCHARD@co.rock.wi.us)
Cc: [Keally, Fran - DNR](#)
Subject: Request for Payment of WQM 2013 Grant Funds
Date: Wednesday, January 08, 2014 10:57:38 AM
Attachments: [Example of Payment Request.pdf](#)

Chris,

So sorry to give you one more thing to do, but hopefully you can pass this over to Colin. I couldn't find his email on the Rock County web page, otherwise I would have copied him.

We do need Rock County to submit a request for payment for 2013 for the entire \$15,000 grant. I've attached a copy of last year's second payment request. Ideally, this would happen within the next few weeks. A few suggestions:

1. Colin can sign the request (assuming it is OK with the Rock County rules), but should use his title of acting director in the letter.
2. The dates of January 1, 2013 through Dec 30, 2013 must be stated in the cover letter and on the Expense Summary page .
3. There is no need for such a long narrative in the letter. Just a request for the final payment of \$15,000 for the completion of the 2030 Beloit Area WQM Plan.
4. There does need to be a breakdown of expenses. Please follow the same format. It is OK if it totals over \$15,000, but we just pay \$15,000. You can not include any expenses after 12/30/2013.
5. You do not need to do that Grant Expense Reimbursement Allocation Box for us, but if you need to do it for Rock County, the numbers are \$10,885 in federal funds and \$4,115 in state funds.
6. We may need to withhold 10%, but I'm going to propose that we don't because I think the project is complete, whether or not it gets approved.
7. Please have Colin call me if he has any questions. Thanks.

Fran Keally

Bureau of Water Quality - WQ/3

Wisconsin Department of Natural Resources

P.O. Box 7921

Madison, WI 53707-7921

(☎) **phone:** (608) 266-3221

(☎) **fax:** (608) 267-2800

(✉) **e-mail:** Fran.Keally@wisconsin.gov

Quality Customer Service is Important to Us. Tell Us How We Are Doing.

Water Division Customer Service Survey

<https://www.surveymonkey.com/s/WDNRWater>

ROCK COUNTY, WISCONSIN



Planning, Economic & Community
Development Agency
51 South Main Street
Janesville, WI 53545
Phone: 608-757-5587
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Website: www.co.rock.wi.us

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JAN 22 2014

WY
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January 20, 2014

WT/3 - WY/3 - OGL/3

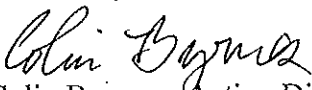
Ryan Raab
Department of Natural Resources
Bureau of Watershed Management - WT/3
P.O. Box 7921
Madison, WI 53707

Rock County is submitting a request for payment for the 2013 Beloit area water quality management plan. Enclosed is material pertaining to the Rock County grant from DNR to provide water quality management planning in the Beloit area. This report is for the period of January 1, 2013, to December 30, 2013 for the total amount of \$15,000.00.


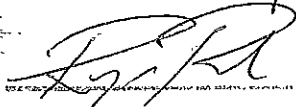
Currently the 2030 Beloit Area Water Quality Management Plan is in the final stages of completion. This includes a final draft sent to Fran Keally at Department of Natural Resources.

Attached to this letter is an expense reimbursement summary sheet. If you have any questions, please do not hesitate to call me at 608-757-5583.

Yours very sincerely,


Colin Byrnes - Acting Director
Rock County Planning, Economic & Community Development Agency

APPROVED:

 1/29/2014 - Final-Closeout
 1/30/14

ROCK COUNTY PLANNING, ECONOMIC, & COMMUNITY DEVELOPMENT AGENCY

CITY OF БЕЛОIT AND TOWN OF БЕЛОIT WATER QUALITY MANAGEMENT PLAN UPDATE: 2013

EXPENSE REIMBURSEMENT SUMMARY

Period: January 1, 2013 through December 31, 2013

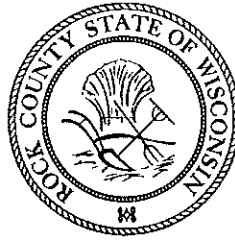
<u>ROCK COUNTY STAFF</u>	<u>Hrly Wage + Fringe</u>	<u>1 Meetings</u>	<u>2 Analysis & Mapping</u>	<u>3 Report & Map Production</u>	<u>4 County Brd Presentation</u>	<u>5 Project Expense</u>	<u>TOTAL EXPENSE</u>
Planning & Dev. Director	\$ 69.02	12.00		40.00		\$ 66.67	\$ 3,655.71
Engineer	\$ 37.36	15.00		32.00		\$ 104.53	\$ 1,860.45
Planner II	\$ 40.04	18.00	15.00	89.00		\$ 106.11	\$ 4,990.99
Consultant / Planner						\$ 5,000.00	\$ 5,000.00
GIS Manager	\$ 49.25		50.00				\$ 2,462.50
							\$ -
							\$ -
							\$ -
							\$ -
TOTAL REIMBURSEMENT REQUEST							\$ 17,969.65

Amount requested for January 1, 2013 through December 31, 2013:

\$ 17,969.65

<u>GRANT EXPENSE REIMBURSEMENT ALLOCATION</u>	
FY13 Federal Funds	\$ 10,885.00
FY13 State Funds	\$ 4,115.00
	<u>\$ 15,000.00</u>

ROCK COUNTY, WISCONSIN
Planning, Economic & Community
Development Agency



51 South Main Street, Janesville, WI 53545
Phone: 608-757-5587
Fax: 608-757-5586
Website: www.co.rock.wi.us

December 30th 2013

RECEIVED

JAN - 3 2014

Fran Keally
Wisconsin Department of Natural Resources
101 South Webster Street
PO Box 7921 WQ/3
Madison, WI 53703

WT/3 - WY/3 - OGL/3

Dear Ms. Keally:

Enclosed with this letter is a copy of the Beloit Area Water Quality Management Plan (draft). The Technical Advisory Committee (TAC) has the following project timeline for completing this Water Quality Management Plan.

A meeting will be held on February 5th at 9:00 AM at the City of Beloit's Engineering and Water Resources Facility. At the meeting we will discuss the following issues:

- All amendments to the 1998 Beloit Area Water Quality Management Plan will be discussed and added to the appendix for the 2030 Beloit Area Water Quality Management Plan.
- Additional BOD numbers will be presented by the Town of Beloit for analysis for the Town of Beloit's Wastewater Treatment Facility.
- An area located in the northern portion of the Town of Beloit Wastewater Treatment Facility Sewer Service Area has been annexed to the City of Janesville (see enclosed map). A meeting on January 8th at 2:00 PM with the City of Janesville and Town of Beloit officials will be held to rectify this service issue.

The Technical Advisory Committee will then establish the next meeting date where it will vote on the 2030 Beloit Area Water Quality Management Plan.

The Plan will then go to Rock County Planning and Development Committee no later than March 27th for consideration for forwarding it to Wisconsin Department of Natural Resources.

If you have any questions please feel free to contact me at (608) 757-5587.

Thank you for your consideration.
Sincerely,

Christine Munz-Pritchard
Planner II
Rock County Planning and Development Agency

**2030
BELOIT AREA
WATER QUALITY
MANAGEMENT
PLAN**



DECEMBER 2013

Prepared by the Rock County Planning,
Economic and Community Development
Agency in cooperation with the City of
Beloit, Town of Beloit, Town of Turtle and
Town of Rock

Beloit Area Water Quality Management Plan

Prepared by:

Rock County Planning, Economic and Community Development Agency
51 S. ~~main~~-Main Street, Janesville, WI 53545
Phone: 608.757.5587 Fax: 608.757.5586

Rock County Planning and Development Committee

Alan Sweeney – Chair
Mary Mawhinney – Vice Chair
Wayne Gustina
Marilynn Jensen
Phillip Owens

Water Quality Management Plan Technical Advisory Committee & Support

City of Beloit

Gregory P. Boysen – Public Works Director
Mike Flesch – City Engineer
Harry Mathos – Director of Water Resources
Bill Frisbee – Storm Water Engineer

Town of Beloit

Brian Wilson – Town Administrator
Howard Hemmer – Director of Public Works
Frank McKearn – Batterman Engineering

Town of Turtle

Roger Anclam – Town Board Chair

Town of Rock

Mark Gunn – Town Board Chair

DNR

Amy Garbe – Basin Engineer
South Central Region, Fitchburg
Fran Keally – Water Resources Specialist,
Madison

Rock County Health Department

Tim Banwell - Environmental Protection
Director
Matt Wesson – Sanitarian II
Adam Elmer – Sanitarian II

Rock County Planning & Development

Colin Byrnes –Acting Director
Adam Pritchard – County Engineer
Chris Munz-Pritchard – Planner II
Jennifer Borlick – Geographic Information
System Manager

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List of Abbreviations

- BOD – Biochemical oxygen demand
- CMAR – Compliance Maintenance Annual Report
- DATCP – Wisconsin Department of Agriculture, Trade & Consumer Protection
- DNR – Wisconsin Department of Natural Resources
- DOA – Wisconsin Department of Administration
- DOT – Wisconsin Department of Transportation
- EO – Element Occurrence
- EPA – United States Environmental Protection Agency
- ESA – Environmentally Sensitive Area
- FEMA – United States Federal Emergency Management Agency
- GIS – Geographic Information System
- HUD – United States Housing and Urban Development Agency
- LWRMP – Rock County Land and Water Resources Management Plan
- NHI – Wisconsin Natural Heritage Inventory
- NRCS – United States Natural Resources Conservation Service
- POWTS – Private Onsite Wastewater Treatment System
- SIU – Significant Industrial Users
- SSA – Sewer Service Area
- TAC – Technical Advisory Committee
- USDA – United States Department of Agriculture
- USFW – United States Fish and Wildlife Service

Chapter 1 Introduction

A comprehensive water quality planning process was established in the Federal Water Pollution Control Act Amendments of 1972 (Section 208 of PL92-500) and the Federal Clean Water Act of 1977. The Sewer Service Area (SSA) Plan is an important part of this process. The State of Wisconsin Administrative Code NR 121 establishes the regulations specifying policies, procedures, and requirements for Wisconsin's area-wide water quality planning process.

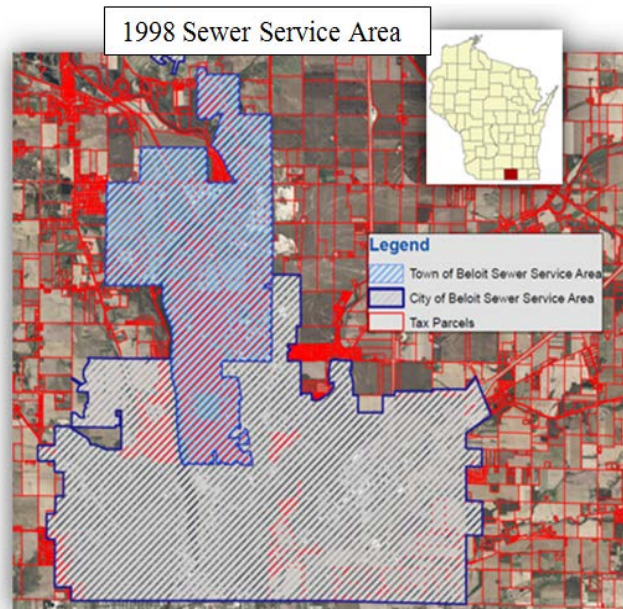
A Sewer Service Area (SSA) Plan, known as the *Beloit Area Point Source Water Quality Management Plan* was originally prepared for the Beloit Area in 1986, updated in January 1998 in the *Beloit-Clinton Area Water Quality Management Plan* and was approved by the Wisconsin Department of Natural Resources on March 3, 1998.

The purpose of the current sewer service area plan update, known as the 2030 Beloit Area Water Quality Management Plan, is to provide a policy framework and set of guidelines to enforce the federal, state and local water quality programs in the City of Beloit and the surrounding area. The SSA plan inventories land use and environmental conditions, projects future land use, and proposes boundaries to guide the development of public sewer facilities. SSA plans are part of the comprehensive long range planning completed by the county, cities, villages and townships. The plan identifies areas that can be developed to provide municipal services to communities in a way that protects public health, environmentally sensitive areas, and the water resources of the state.



Location of Plan

The planning area is located in Rock County on the south central border of Wisconsin and Illinois. The current Sewer Service Area (SSA) boundary incorporates parts of the City of Beloit, Town of Beloit, Town of Rock and Town of Turtle. The Sewer Service Area is divided into two districts which are referred to as the City of Beloit Sewer Service Area and the Town of Beloit Sewer Service Area (1998 map shown on the right). Each district contains one wastewater treatment facility. The proposed 2030 Sewer Service Area will be discussed in Chapter 5 Plan Implementation. This will include a description of how the new SSA boundary is established.



Goals, Objectives and Policies

The planning process establishes goals and objectives to provide a framework for the development of policies. The diversity of the local government interests requires that common goals are established for the Sewer Service Area Plan. Without common goals, the beneficial achievements of one community's action may be offset by the action of another community. The objectives and policies are designed to address the issues and concerns of the local government, county staff, and state agencies that should be met by the Sewer Service Area Plan^[FK1]. Goals, Objectives and Policies are defined as follows:

- **Goals** are broad statements that express general public priorities. Goals are formulated based on the identification of keys issues, opportunities, and problems.
- **Objectives** are more specific than goals and are usually attainable through strategic planning and implementation activities. Implementation of an objective contributes to the fulfillment of a goal.
- **Policies** are rules and courses of action used to ensure plan implementation. Policies often accomplish a number of objectives.

The goals, objectives and policies stated below are based on the respective City and Town Comprehensive Plans. Goals, objectives and policies have been developed for three areas of concern: Health, Environment and Land Use.

Health

Goals

1. Promote the provision of Water Quality services in an efficient, environmentally sound and socially responsible manner.
2. Eliminate health hazards associated with failing private onsite wastewater treatment systems (POWTS) and protect the quality of the water and land resources in the planning area.

Objectives

1. Provide safe and efficient sanitary sewer service throughout the plan area.
2. Correct inadequate sewage collection and treatment facilities which result in potential threats to the health and welfare of the public.

Policies

1. Protect groundwater resources by maximizing infiltration of clean water in known groundwater recharge areas, supporting the clean-up of environmentally contaminated sites, and minimizing potential future sources of contamination, particularly in wellhead protection areas.
2. Eliminate failing on-site sewage systems within the 20-year sewer service boundary.
3. All public and private sewage collection and treatment facilities shall be designed and constructed employing current engineering standards and be consistent with the federal, state and local water quality, public health and environmental criteria.



Photo provided by Rock County

Environmental

Goals

1. Protect natural resource features within the ~~SSA~~Sewer Service Area.
2. Encourage the location of future development in areas suitable for development where environmental impacts can be minimized and sufficiently mitigated.

Objectives

1. Identify and map unique environmental features, areas and corridors within the boundaries and require these features to be depicted on all site plans, certified survey maps and preliminary and final plats.
2. Direct development away from natural areas, drainage ways, critical infiltration areas and floodplains to prevent potential future problems.
3. Encourage patterns and practices of land use and development that do not disrupt the natural hydrologic system, including the balance between ground and surface water.
4. Manage development of areas where environmental ~~Conditions~~conditions indicate that the development should not take place: areas with shorelands, wetlands, flood plain, flood fringe, steep slopes, areas with soil limitations, hydric soils and areas with unique and protected flora and fauna.

Policies

1. Preserve environmental corridors by prohibiting new buildings in wetlands, stream banks, floodplains, and on slopes greater than 20 percent. Also, strongly discourage placement of new buildings on hydric soils outside of wetlands and on slopes between 12 percent and 20 percent where other more appropriate sites are available.
2. Protect the water quality of the Rock River, Turtle Creek, and their tributaries by encouraging low impact development strategies.
3. Sewer extensions to environmental corridors should conform to applicable rules and regulations and should be reviewed on a case by case basis.

Land Use

Goals

1. Manage growth through a process involving all governmental units by guiding development to areas of appropriate physical characteristics and supporting infrastructure.
2. Promote future development by following approved comprehensive plans.

Objectives

1. Promote development within the ~~SSA~~Sewer Service Area.
2. Prepare for future growth opportunities in such a way as to protect farmland, natural resources and open ~~spaces by combating~~ disconnected, “leapfrog” development.
3. Manage growth by clearly designating transition areas where access to cost-effective public sewer service and other public services are available to support future urban development.

Policies

1. Actively promote development and redevelopment where opportunities exist as a means to improve neighborhood conditions, increase local economic and retail opportunities, and make use of existing infrastructure investments.
2. Prioritize development in areas with existing utilities or within current sewer service area boundaries.
3. Maximize the use of existing utilities (such as public water, sanitary sewer, solid waste disposal, and power lines) and facilities within the SSA, and plan for an orderly extension of municipal utilities and facilities within the areas identified for future growth.
4. Ensure that utility systems ~~s~~ have adequate capacity to accommodate projected future growth; avoid overbuilding that would require present residents to carry the costs of underutilized capacity.
5. Ensure the ongoing maintenance of existing on-site wastewater treatment systems in the SSA and continue to work with property owners to connect to sanitary sewer when appropriate.
6. Planned sewer extensions located outside the approved sewer service area will not be approved until the area is amended into the plan.

7. Sewer service should be adequately sized to handle projected sewage and water volumes. Sizing is based on code specifications.

Chapter 2 Existing Facilities

A Sewer Service Area (SSA) Plan incorporates a review of the wastewater treatment facility (WWTF), private onsite wastewater treatment systems (POWTS), public water supply systems and wellhead protection zones within the proposed boundaries.

Wastewater Treatment Facilities

The Beloit Area Water Quality Management Plan is divided into two sewer service areas or districts. Each district has its own wastewater treatment facility, which are referred to as the City of Beloit's Wastewater Treatment Facility and the Town of Beloit's Wastewater Treatment Facility. A centralized wastewater treatment system, according to the U.S. Environmental Protection Agency (EPA), is a managed infrastructure consisting of a collection of sewers and a single treatment facility used to treat wastewater from an entire service area.



Photo provided by the City of Beloit

The City of Beloit Wastewater Treatment Facility

The City of Beloit's current facility opened in 1991. The WWTF accepts waste from customers within the city and also accepts wastes from the surrounding areas. The 2012 Compliance Maintenance Annual Report (CMAR) shows that the facility is operating within its design capacities. Required by the Department of Natural Resources (DNR), a CMAR is a self-evaluation tool that promotes the owner's awareness and responsibility for wastewater collection and treatment needs, measures the performance of wastewater treatment during a calendar year, and assesses its level of compliance with permit requirements. Design capacity is calculated using Biochemical biochemical oxygen demand (BOD) ~~which; this~~ measures the amount of organic carbon that bacteria can oxidize. ~~the~~ The design parameters for the facility includes the following:

<u>Influent</u>	<u>Design Limit</u>	<u>Actual Range (Average)</u>
Monthly Average Flow (MGD)	11.3	3.326
Monthly Average (C)BOD (Pounds per Day)	37,200	19,321

<u>Effluent</u>	<u>Design Limit</u>	<u>Actual Range (Average)</u>
Monthly Average (C)BOD Limit (mg/L)	25	6.7
Monthly Average TSS Limit (mg/L)	30	10.1
Monthly Average Phosphorus (mg/L)	2	1.1

Miles of Sanitary Sewer: 172.81
 Number of Lift Stations: 11

The influent Monthly Average Flow is running at approximately 40% capacity, with the effluent running at about 25% capacity. The overall grade for the 2012 CMAR was “A”, with a grade point average of 3.75. The A grade indicates that the treatment facility is in good standing over all.

City of Beloit Facility Use

Chris – do you want to start the same way as Town of Beloit below? The WWTF serves the City of Beloit and the Town of Turtle???The City of Beloit’s SSA facility use in 2012 is broken down into four categories: Significant Industrial Users (SIU), Residential, Commercial and Growth. The total facility capacity is 42,140 BOD lbs., 10% is kept in reserve for safe facility operation making the allowable 37,926 BOD lbs.

2012 BOD lbs (City of Beloit SSA Capacity)		
Facility Capacity	10% Safety	Allowable
42,140	4,120	37,926

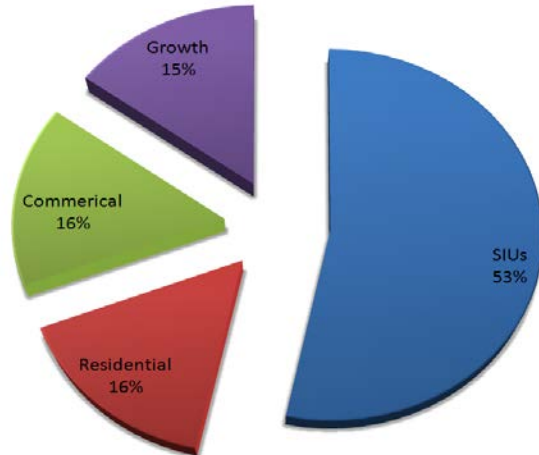
Figure: 2A 2012 BOD Capacity Source: City of Beloit

There are four categories considered for capacity allocation. Allowable capacity represents the full growth potential of the category. As shown in table below (figure 2B) 20,244 BOD lbs are allocated for SIUs. The City of Beloit’s data indicates an average daily use closer to 11,741 BOD lbs for SIUs.

2012 BOD lbs (City of Beloit SSA District)			
SIUs	Residential	Commercial	Growth
20,244	6,000	6,000	5,682

Figure: 2B 2012 BOD District Source: City of Beloit

Different categories use different percentages of the plant allocated capacity. SIUs use the highest percentage at 53%, with Residential at 16%, Commercial at 16% and a reserve of 15% for future Growth. Therefore, the facility has ample room for additional capacity, in addition to categories like commercial and residential having a low impact on overall facility.



The Town of Beloit Wastewater Treatment Facility

Opened in 1969, the facility expanded in 1979 and 2003. The Town’s WWTF is located on the west bank of the Rock River, and accepts waste from customers within the Town of Beloit and the Town of Rock.



Photo provided by the Town of Beloit

The 2011 DNR Compliance Maintenance Annual Report (CMAR) shows that the facility is operating within its designed capacity. The design parameters for the facility include the following:

<u>Influent</u>	<u>Design Limit</u>	<u>Actual Range (Average)</u>
Monthly Average Flow, MGD	1.00	0.447
Monthly Average BOD Pounds per Day	1,677.00	890.58 ^[FK2]

<u>Effluent</u>	<u>Design Limit</u>	<u>Actual Range (Average)</u>
Monthly Average BOD Limit (mg/L)	30	10.91
Monthly Average TSS Limit (mg/L)	30	8.91
Monthly Average Phosphorus (mg/L)	1	.86

Miles of Sanitary Sewer: 25
 Number of Lift Stations: 11

The influent Monthly Average Flow is running at approximately 45% capacity, with the effluent running at about 36% capacity. The overall grade for the 2012 (Chris – is this 2011 as stated above or 2012?) Compliance Maintenance Facility was A-B, with a grade point average of 3.25. The A-B grade indicated that the treatment facility is in good standing over all.

Town of Beloit Facility Use

The Town of Beloit’s SSA facility WWTF services the Town of Beloit and the Town of Rock. The Town of Beloit is broken down into four categories: Residential, Commercial, Institutional and Industrial, while the Town of Rock is broken down into three categories: Residential, Commercial and Institutional.

Town of Beloit		Town of Rock	
Residential	532.742	Residential	232.292
Commercial	36.663	Commercial	3.467
Institutional	50.762	Institutional	46.092
Industrial	2.142		
Total:	622.310	Total:	281.85

Figure: 2C Projections for 2014, BOD Pounds per Day Source: Town of Beloit^[FK3]

Total load for the SSA Facility, Town of Beloit	
Residential	765.034
Commercial	40.130
Institutional	96.853
Industrial	2.142
Total :	904.160

Figure: 2D Projections for 2014, BOD Pounds per Day Source: Town of Beloit

The projected 2014 BOD figures indicates that the Town of Beloit will have a total load of 622.31 pounds per day; with the Town of Rock total 281.85 pounds per day (Figure 2C). The total load for the SSA Facility located in the Town of Beloit is 904.16 pounds

per day (Figure 2D), which is under the 1,677 BOD pounds per day design capacity (2012 CMAR).

Both Towns show the highest BOD usage in Residential, followed by Institutional. The Town of Beloit has a small amount of Industrial at 2.142 pounds per day, where the Town of Rock has no Industrial.

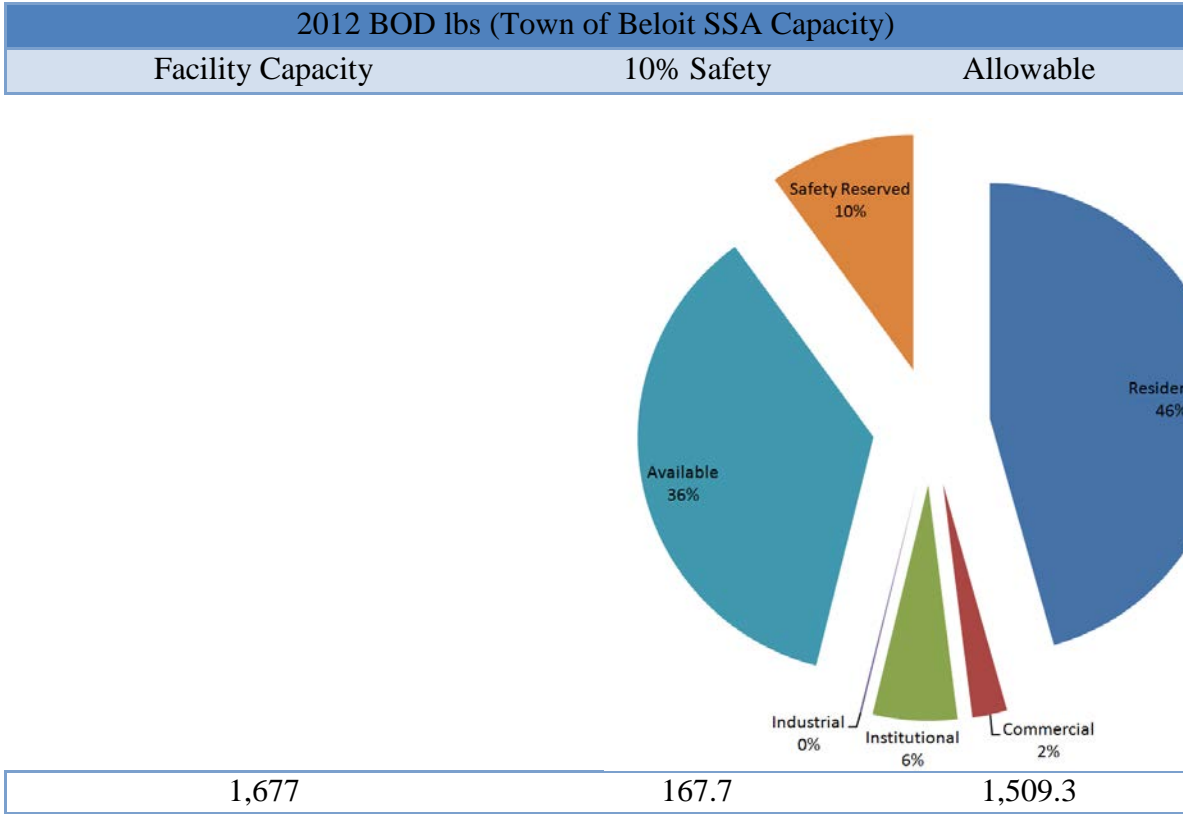


Figure: 2E Town of Beloit Plant Capacity BOD Pounds per Day Source: 2012 CMAR

Different categories use different percentages of the overall projected plant capacity. The overall plant design capacity is 1,677 BOD pounds per day, with 10% of this capacity (167.7 BOD) is kept in reserve for safe facility operation (figure 2E). The projected Plant usage 54% (904.16 BOD) this leaves 36% or 605.14 BOD available for growth.

Residential is showing the highest projected use at 46%, followed by institutional at 6%, commercial at 2% and Industrial under 1%.

Private Onsite Wastewater Treatment System (POWTS)

A Private Onsite Wastewater Treatment System (POWTS) is an onsite treatment system that collects, treats and disposes of wastewater from a single source in the same location. These are used in areas which are not served by a WWTF or centralized sewage system. These are

primarily located in rural areas or areas where the housing density is too low to justify a centralized sewer system. In these areas, residential or commercial development requires the use of a POWTS, also known as septic systems or mound systems. These are required to be inspected every three years and the tank pumped as recommended. POWTS inspection and permits are administered through Rock County Health Department by the septic system program. The goal is to ensure that all private onsite wastewater treatment systems are properly installed, repaired and maintained. All sanitary permits must be obtained in accordance with State of Wisconsin and Rock County regulations.

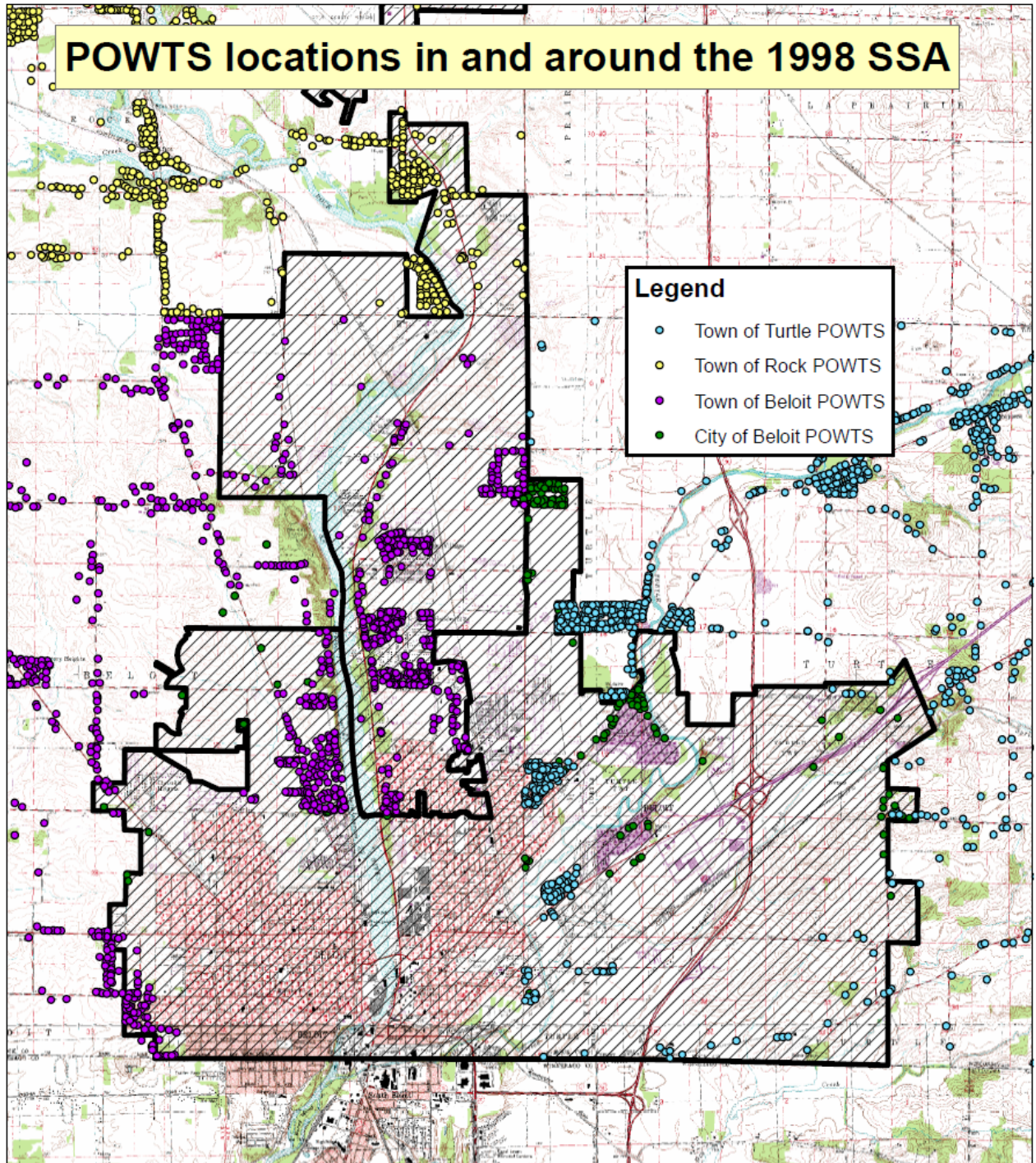


Figure: 2F 1998 SSA POWTS Location Source: Rock County Health Department

Public Water System (Beloit Water Utility)

A public water system provides water for human consumption and domestic use in addition to commercial and industrial use. At Beloit, water is pumped from wells, treated as necessary and distributed through a water main distribution system. In Wisconsin,

public water systems are regulated by the Wisconsin Department of Natural Resources under the delegated authority of the Environmental Protection Agency. The Beloit Water Utility has approximately 200 miles of water distribution and transmission mains. Currently there are eight wells, with four booster stations and four elevated storage tanks. This system serves an estimated 37,110 people inside the municipality and 12,753 people outside of the municipality. There are service area agreements between the City and surrounding areas to provide water.



Photo provided by the City of Beloit

Private Onsite Well Water

In Wisconsin, about 66% of the population drinks water drawn from over 750,000 private wells. Private Wells-wells are safe, dependable sources of water if sited wisely, built correctly and maintained.

Wisconsin DNR and EPA regulations that protect public drinking water systems are not enforceable for privately owned wells. As a result, owners of private wells are responsible for ensuring that their water is safe from contaminants.

The Rock County Health Department conducts programs that protect groundwater for drinking and other uses. The County Health Department offers lab services for private well owners to test their water for nitrates and bacteria. Water specialists distribute well water information, provide testing bottles and explain test results to well owners.

Chapter 3 Population, Land Use and Housing

Projecting the future population within the planning area will help determine the extent of the Sewer Service Area (SSA) boundary. Population size and housing may indicate how much land will be needed for future development. These trends and forecasts provide the basis for recommendations in this plan. Projections are based on data generated by the Wisconsin Department of Administration (DOA) as required by the Wisconsin Department of Natural Resources (DNR).

Population

The population growth rate for the City of Beloit has shown to be slow in the past 30 years. U.S. Census figures show from 1980 to 2010 the City of Beloit experienced an estimated 1.25% population increase every 10 years (Figure 3A).

	Census Population				Number Change	Percent Change
	1980	1990	2000	2010	2010-2030	
City of Beloit	35,207	35,573	35,775	36,966	1,759	5%
Town of Beloit	8,382	6,778	7,038	7,662	-720	-9%
Town of Turtle	2,703	2,458	2,444	2,388	-315	-12%
Town of Rock	3,399	3,172	3,338	3,196	-203	-6%

Figure: 3A Source: Census Population Source U.S. Census 2010

While the City experienced slow population growth, the surrounding townships in the planning area experienced a net decline in population of 1,238 people. The bulk of the population loss in the surrounding townships occurred between 1980 and 1990. This 10-year period shows a drop of 2,076 people. Factors that contributed to this decline are aging of township population, City of Beloit annexations and limited residential development.

After the population drop between 1980 and 1990, the combined Towns' population begins to slowly increase over the next 20 years. However, this increase still does not replace the population lost during the 1980s.

Population Projections

The DOA population projections between 2010 and 2015 show a slight population decline in both the City and Towns (Figure 3B). The only town to increase during this time frame is the Town of Rock. The Town of Rock will increase slightly from the year

2015 to 2025, where it will level off at a population of 3,450. The City of Beloit's population projection beginning in 2020 will continue to increase, only showing a population increase of 2% from 2010 to 2030. The population projections should be revisited every 5 years to insure that the projections are accurate.

	WDOA Population Projections					2010-2030	
	2010*	2015	2020	2025	2030	Number Change	Percent Change
City of Beloit	37,000	36,957	37,355	37,619	37,729	729	2%
Town of Beloit	7,522	7,364	7,386	7,383	7,349	-173	-2%
Town of Turtle	2,444	2,396	2,370	2,333	2,288	-156	-6%
Town of Rock	3,265	3,408	3,436	3,450	3,450	185	6%

Figure: 3B WDOA Population Projections

Source: Wisconsin Department of Administration (DOA) Demographic Service Center: 2012

*2010 is to show the consistency between the Census population number and the DOA projection numbers.

Housing

In addition to population projections, people per household and housing densities are required to determine residential land needs.

	Housing Units				1980-2010	
	1980	1990	2000	2010	Number Change	Percent Change
City of Beloit	13,415	14,033	14,253	15,177	1762	13%
Town of Beloit	3,057	2,613	2,938	3,307	250	8%
Town of Turtle	912	916	1,010	1,002	90	10%
Town of Rock	1,050	1,155	1,360	1,346	296	28%

Figure:3C Housing Source: US Census 2010

The household size represents a typical dwelling unit that can be used in conjunction with population projections for estimating future dwelling units. According to the U.S. Census, a housing unit is defined as a house, apartment, mobile home, group of rooms, or a single room that is occupied as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall.



The housing units increased in both the Towns and the City between 1980 and 2010 (Figure 3C). However, the Rock County Comprehensive Plan predicts the housing market will slow down between 2015 and 2030, except in the Town of Beloit (Figure 3D).

	Housing Projections				2010-2030	
	2015	2020	2025	2030	Number Change	Percent Change
City of Beloit	15,269	15,454	15,601	15,954	827	6%
Town of Beloit	3,451	3,570	3,689	3,792	585	18%
Town of Turtle	1,061	1,066	1,068	1,073	22	2%
Town of Rock	1,508	1,532	1,554	1,580	123	8%

Figure: 3D Housing Projections. Source: Rock County Comprehensive Plan 2035

Current Land use

The current land use data provides a snap shot of existing uses of land in 2013. The SSA boundary incorporates the City of Beloit and parts of the Town of Beloit, Town of Turtle and Town of Rock. The SSA is also divided into two districts containing the Wastewater Treatment Facilities operated by the City of Beloit and the Town of Beloit. Rock County Land Use Inventory categories (Appendix G) were used to classify uses within the boundary and district areas. To create a normalized set of land use terms (City of Beloit terms differed from the Towns), data was constructed using land use maps from the

respective communities and 2011 air photos to complete the process. The existing land use within the SSA includes a mixture of residential, commercial, industrial, and institutional. Each District’s Land Use inventory reflects the 1998 SSA Boundary and the proposed 2030 SSA Boundary (for more information on the 2030 SSA Boundary please see Chapter 5).

City of Beloit Land Use Inventory				
Category	2030 SSA Boundary		1998 SSA Boundary	
	Acres	%	Acres	%
Residential	3,761.32	28.58%	3,499.86	27.66%
Commercial & Industrial	1,450.53	11.02%	1,422.43	11.24%
Transportation & Water	2,492.20	18.94%	2,404.90	19.01%
Communication, Utilities, Institutional & Governmental	307.89	2.34%	306.483	2.42%
Recreational	708.97	5.39%	700.927	5.54%
Agricultural Lands & Usages	2,751.27	20.90%	2,766.77	21.87%
Open Space & Vacant	1,412.56	10.73%	1,276.86	10.09%
Religion & Cemeteries	276.34	2.10%	275.413	2.18%
Total:	13,161.06		12,653.65	

Figure: 3E Land Use Inventory City of Beloit (2030 SSA & 1998 SSA) Map 1
Source: Rock County Planning and Development Department GIS

Town of Beloit Land Use Inventory				
Category	2030 SSA Boundary		1998 SSA Boundary	
	Acres	%	Acres	%
Residential	1,312.86	22.74%	1,171.03	21.50%
Commercial & Industrial	572.21	9.91%	572.645	10.51%
Transportation & Water	864.47	14.97%	826.541	15.17%
Communication, Utilities, Institutional & Governmental	218.43	3.78%	218.291	4.01%
Recreational	268.19	4.64%	266.288	4.89%
Agricultural Lands & Usages	1,442.82	24.99%	1,409.94	25.88%
Open Space & Vacant	1,072.42	18.57%	961.677	17.65%
Religion & Cemeteries	22.90	0.40%	21.057	0.39%
Total:	5,774.29		5,447.48	

Figure: 3F Land Use Inventory Town of Beloit (2030 SSA & 1998 SSA) Map 1
Source: Rock County Planning and Development Department GIS

Land Use Inventory, Map 1

Future Land Use

Future Land Use data is used to guide the physical development of a community. This data is combined with community values that describe how and where to build, rebuild or preserve land. The data below shows those land use projections within the current 1998 Sewer Service Area boundary and the proposed 2030 Sewer Service boundary

The Future Land Use column in Figure 3I below^[FK4] shows potential use changes from current uses in the Sewer Service Area 1998. Figure 3J and 3K show the potential use changes for the proposed 2030 SSA Boundary (1998 area plus proposed additional acreage). This was accomplished by taking the Future Land Use maps from the City and Towns Comprehensive Plans to arrive at the projections. If the land fell within the 1998 SSA district, then Town or City future land use maps from their respective Comprehensive Plan is used to develop the projection data. Additionally, if the land is outside of the 1998 SSA, then said Town's future land use map from their respective Comprehensive Plan is used to develop the data.

Problematically, the land use categories in each plan are not identical. Therefore, it was necessary to combine some categories to create information that could be compared. For example, wetlands are included in the Transportation and Water category since this is a non-developable category.

The greatest shift between the Land Use Inventory column and Future Land Use column in Figure 3I occurs in the Residential, Commercial and Industrial categories, which together increase by approximately 25% to account for 61% of the land use within the 1998 SSA. Agricultural lands and open space uses together decrease by 25% to account for only 10% of land use by 2030.

Sewer Service Area 1998	Land Use Inventory		Future Land Use	
Category	Acres	%	Acres	%
Residential	4,670.894	25.80%	6,543.686	36.17%
Commercial & Industrial	1,995.076	11.02%	4,561.562	25.21%
Transportation & Water	3,231.443	17.85%	3,217.365	17.78%
Communication, Utilities, Institutional & Governmental	524.774	2.90%	754.849	4.17%
Recreational	967.216	5.34%	903.104	4.99%
Agricultural Lands & Usages	4,176.711	23.07%	1,742.870	9.63%
Open Space & Vacant	2,238.536	12.37%	82.555	0.46%
Religion & Cemeteries	296.471	1.64%	285.260	1.58%
Total	18,101.120		18,091.25	

Figure: 3I SSA 2013, Map 2 Source: Rock County Planning and Development Department GIS

The City of Beloit's future land use within the 2030 wastewater treatment facility district is showing the highest potential uses in residential, followed by commercial and industrial category. Projections for the 2030 Town of Beloit Wastewater Treatment Facility shows the majority future land use will be Residential.

City of Beloit District Future Land Use Map using 2030 SSA Boundary		
Category	Acres	%
Residential	4,923.60	37.346%
Commercial & Industrial	2,817.90	21.374%
Transportation & Water	2,402.00	18.220%
Communication, Utilities, Institutional & Governmental	492.10	3.733%
Recreational	787.34	5.972%
Agricultural Lands & Usages	1,394.06	10.574%
Open Space & Vacant	81.29	0.617%
Religion & Cemeteries	285.32	2.164%
Total:	13,183.61	

Figure: 3J City of Beloit Future Land Use Plan 2030 SSA Boundary, Map 2
Source: Rock County Planning and Development Department GIS

Town of Beloit District Future Land Use Map using 2030 Boundary		
Category	Acres	%
Residential	2,696.1700 [FK5]	46.55%
Commercial & Industrial	1,852.2500	31.98%
Transportation & Water	464.0400	8.01%
Communication, Utilities, Institutional & Governmental	272.1920	4.70%
Recreational	355.0580	6.13%
Agricultural Lands & Usages	152.2100	2.63%
Open Space & Vacant	0.5336	0.01%
Religion & Cemeteries	0.0028	0.00%
Total:	5,792.4564	

Figure: 3K Town of Beloit Future Land Use Plan 2030 SSA Boundary, Map 2
Source: Rock County Planning and Development Department GIS

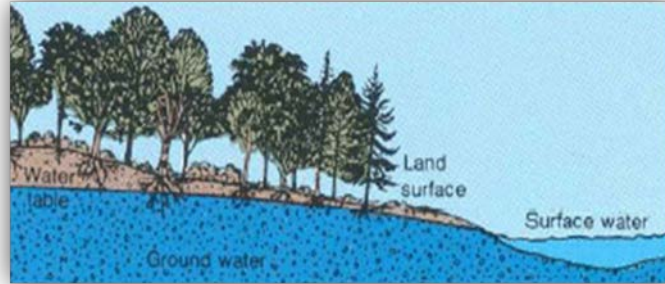
Future Land Use, Map 2

Chapter 4 Environmental Land Characteristic

Examining the existing environmental land characteristics within the planning area will assist in defining future development patterns. The DNR has established minimum criteria that should be evaluated when examining plan areas. The guidelines established are as follows:

Surface and Groundwater

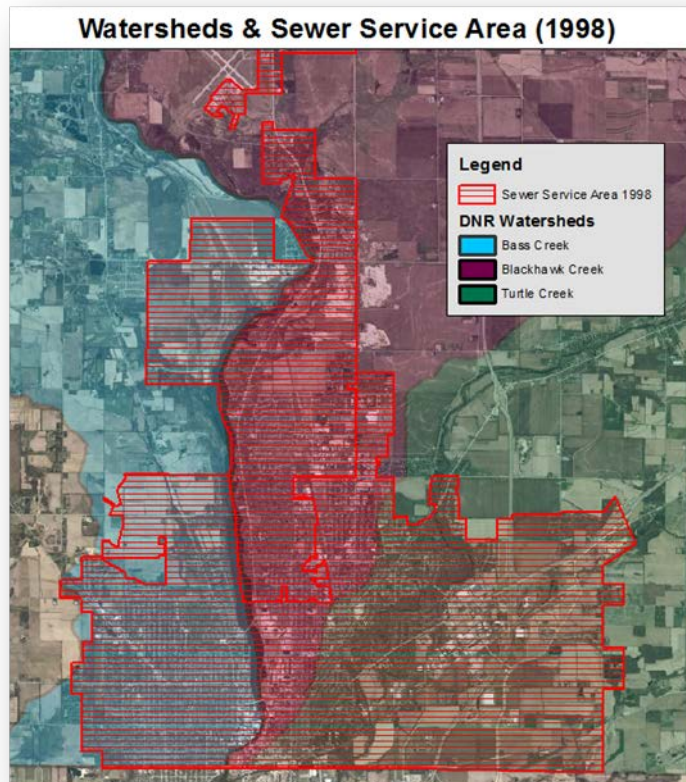
Surface water means all natural and artificial named and unnamed lakes and all naturally flowing streams within the boundaries of the state, not including cooling ponds, farm ponds and facilities constructed for the treatment of wastewater. Groundwater recharge is the process where water moves down from the surface water to ground water. Groundwater is the part of the precipitation that infiltrates the soil to the water table. There are three watersheds within the SSA: Blackhawk Creek, Bass Creek, and Turtle Creek.



Blackhawk Creek watershed drains 106 square miles of Rock County east of the Rock River. It is primarily agricultural, but does have some highly urbanized areas including sections of the Cities of Janesville and Beloit. This watershed has a medium susceptibility for groundwater contamination based on DNR mapping^[FK6].

Bass Creek is a 109-square miles watershed that lies within Rock County west of and adjacent to the Rock River, and stretching from the state line at Beloit to just north of Janesville. While predominately agricultural, there are significant urban areas at the City of Janesville and Beloit.

Turtle Creek watershed is 288 square miles located in eastern Walworth County (62%) and Rock County (38%). Land use is primarily cash crop and dairy agriculture throughout



the headwater tributaries and main stem of Turtle Creek. Turtle Creek flows into the east side of the City of Beloit to join the Rock River just below the Illinois border. Cropland in the headwater areas and urban land use near the City of Beloit contribute the two highest erosion rates in the watershed. Also, stream bank erosion is a concern. A 1982 inventory showed that 10 percent of stream banks in the watershed were eroding (see Rock County Erosion Control Plan). In 1986, this watershed experienced an estimated average soil loss of eight tons/acre/year.

Shoreland and Floodplains

Shorelands represent environmental features that should be given high priority for protection from development, particularly those shorelands that coincide with wetlands, as identified in the Wisconsin Wetlands Inventory Maps. A floodplain commonly called a 100-year flood, is based on historical data and describes a flood that is expected to have a 1% chance of occurring in any given year. Development in shoreland and floodplain areas is strictly regulated, and in some instances, is not permitted. The authority to enact and enforce these types of zoning provision is set forth in Chapter 59.692, Chapter 62.23 and Chapter 87.30 of the Wisconsin Statutes, and Wisconsin Administrative Codes NR 115 and NR 116.

Wetlands

Wetlands are areas where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions. [s. 23.32(1), Wis. Stats.].

Wetlands play an important role since they serve as a filter system of pollutants, and are invaluable in controlling flood waters, recharging groundwater, and retaining water during drought. These also provide valuable habitat for waterfowl and other wildlife, excellent cover and migration corridors for wildlife, and may support spawning and nursery habitat for fish and sanctuaries for rare and endangered species. Wetlands also offer education, recreational, and aesthetic benefits and opportunities.

Wisconsin Administrative Codes NR 115 and NR 117 mandate that wetlands be protected in both the rural and urban areas of the state. In the unincorporated areas, NR 115 protects wetlands or portions of wetlands within the shoreland zone that are designated on Wisconsin Wetland Inventory maps prepared by DNR. To protect wetlands in incorporated areas, NR 117 was enacted in 1983 and requires that all wetlands and portions of five acres or more in size located in the shoreland zone be protected, and outlines minimum shoreland zoning standards for Wisconsin cities and villages. In addition to NR 115 and 117, NR 103 outlines water quality standards for wetlands and requires that all practicable alternatives be considered to avoid and minimize wetland disturbance and to ensure preservation, protection, restoration, and management of wetlands.

Any alterations that are to be made to any wetland, regardless of size, need to be reviewed and approved by the U.S. Army Corps of Engineers and the DNR.

Steep Slopes

Steep slopes, defined as being a grade of 12% or more, have been identified as developmentally limited areas. Construction activities on steep slopes can result in severe erosion and sedimentation issues. This erosion deteriorates the water quality and can result in increased property damage downstream. Elements in the area that may account for steep slopes are kettle or depressions.

Soils

Soils are composed of varying proportions of sand, gravel, silt, clay, voids and organic material. Under the soils layer is bedrock which is the solid rock beneath the loose materials. The compositions of a soil affect the specific properties of that soil in determining the capacity for supporting on-site wastewater treatment facilities.

Natural Heritage Inventory review

The Wisconsin Natural Heritage Inventory (NHI) is a part of the Wisconsin DNR's Bureau of Endangered Resources. This program shares standardized methods for collecting, processing and managing data for rare species and natural communities. The NHI will check for Element Occurrence (EO) in the area. EO is a population of a species or an example of a natural community or feature naturally occurring at a specific, ecologically appropriate location. Labeled Natural Areas on the Environmentally Sensitive Areas Map, NHI are shown in quarter sections for the protection of the endangered resource (Map 3). Projects located in the areas with listed endangered resources may be required to request additional information from the Wisconsin DNR prior to plat approval. Endangered resources data on the township-level for Rock County can be found at: http://dnr.wi.gov/topic/NHI/documents/Rock_County.pdf

Environmental Land Characteristics, Map 3

Chapter 5 Sewer Service Area (2030) and Plan Implementation

Sewer Service Area Boundary Determination (2030)

The SSA boundary will be determined using four factors:

- 1) Wellhead Protection Overlay District
- 2) High Density of Private Onsite Wastewater Treatment Systems (POWTS)
- 3) Future Commercial, Industrial and Residential Growth
- 4) Parcel Lines

Wellhead Protection Overlay District

The wellhead protection overlay district is based on Substitute Amendment No. 2 Ordinance No. 3483 filed on April 1st, 2013 by the City of Beloit (Appendix F). The purpose of the Wellhead Protection Ordinance is to institute land use regulation and restrictions to protect the area water supply and to promote the public health, safety and general welfare of the residents. By limiting the number of onsite systems in these areas, it reduces the risk of contaminants reaching the groundwater.

High Density of Private Onsite Wastewater Treatment Systems (POWTS)

The number of POWTS in a limited area can impact groundwater quality. In this Plan, an effort is made to quantify what is defined as “limited area”. The Wisconsin Department of Safety and Professional Services regulate installation and maintenance of POWTS, and Rock County Health Department issues the permits.

Under Subchapter VII – Department Performance Monitoring SPS 383.71(6a) the initial performance monitoring shall emphasize the monitoring of areas where there is a high density of POWTS. The focus is on subdivisions with lots of 1.5 acres or less. Therefore, the Plan uses this lot size as a “Unit of Analysis” for further calculations for areas of potential inclusion in the SSA boundary.

According to Wisconsin State Statutes s.236.02(12), "Subdivision is a division of a lot, parcel or tract of land by the owner thereof or the owner's agent for the purpose of sale or of building development, where: (a) The act of division creates five or more parcels or building sites of 1.5 acres each or less in area; or (b) Five or more parcels or building sites of 1.5 acres each or less in area are created by successive divisions within a period of five years". Therefore, the new plan boundary will include ~~at~~ subdivisions contiguous or near the existing SSA boundary, which contain a number of onsite systems.

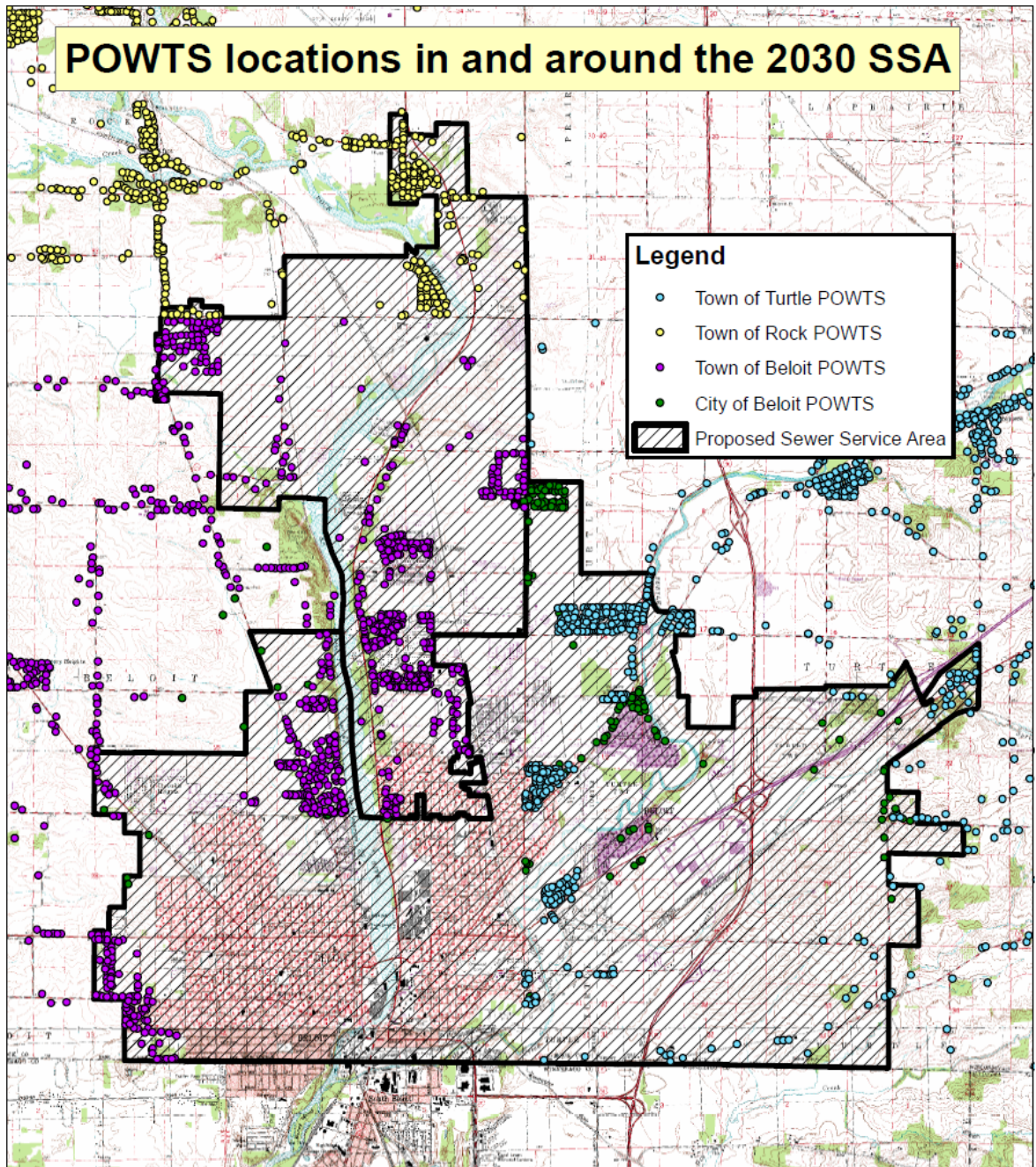


Figure: A5 2030 SSA POWTS Location Source: Rock County Health Department

Future Commercial, Industrial and Residential Growth

City of Beloit

Wastewater treatment capacity data for the City of Beloit SSA District indicates future planned growth in industrial, commercial and residential development can be accommodated. Additionally, it is the City of Beloit’s policy to manage rural edge development and focus on development within the City. “The future land use category defined several areas that may be appropriate for long-term City development beyond the

present 20-year planning period. Premature exurban development and premature utility extension should not be promoted in these areas. Limiting premature rural “edge” development allows a more energy-efficient and sustainable future urban development pattern” (City Beloit Comprehensive Plan, Page 114).

Town of Beloit

The Town of Beloit’s *Comprehensive Plan*’s recommendations for the Town’s future land use decisions encourages community growth that minimizes rural and agricultural fragmentation and concentrates new growth towards areas with existing infrastructure and services. The Town of Beloit’s wastewater facility has been well maintained and updated regularly. The basic system infrastructure, such as trunk sewer mains and lift stations, are in place to serve the Town Utility’s service area. Wastewater treatment capacity data for the Town of Beloit SSA District indicates future planned growth in residential development can be accommodated.

Parcel Lines

The SSA boundary will follow tax parcel lines generated by the Rock County Real Property Lister’s Office. Changes in accuracy of parcel mapping over the years may result in minor changes from the 1998 boundary lines to the 2030 boundary lines.

Sewer Service Area Map (2030)

The 2030 Sewer Service Area (SSA) boundary incorporates all of the City of Beloit and parts of the Town of Beloit, Town of Rock and Town of Turtle. The Sewer Service Area is divided into the two districts which are referred to as the City of Beloit Sewer Service Area and the Town of Beloit Sewer Service Area. Using the Land Use Inventory maps on GIS the 2030 Sewer Service Area is a total of approximately 18,935 acres, of which 1255 acres (Yellow) is being added since the 1998 SSA boundary and 420 acres (Red) have been removed leaving a total of 834 acres. [See Map 4.](#)

	2030 SSA Boundary	1998 SSA Boundary	Proposed Additional Acres
Land Use Inventory	18,935	18,101	834

Figure: 5B 2030 SSA Acres Source: Rock County Planning and Development Department GIS

The majority of additional acreage is residential, however due to changes in the precision of parcel mapping over the years some added acreage is due to the boundary following parcel lines more accurately.

2030 Sewer Service Areas, Map 4

| **2030 Sewer Service Area Districts, Map 5**^[FK7]

Areas added have been broken down into groups and numbered 1 through 10 (figure C5). The daily average Biochemical oxygen demand (BOD) per capita has been calculated to determine the additional acreages impact on the plant capacity. According to NR110.15(4)2: When actual operating data is not available, the design loading shall be based on a contribution of 0.17 pounds of biochemical oxygen demand per capita per day. The quick facts census data from the U.S. Department of Commerce estimates that in the City of Beloit, Wisconsin, there are 2.56 persons per household (2008-2012). Using the existing housing in each area a potential BOD per capita per day has been determined (please see appendix B for more detailed of calculations).

Area	Current Location	Total Acres	Total potential people in each area	BOD per Cap per day (potential)
1	Town of Turtle	416.76	1287.02	218.79
2	Town of Turtle	118.62	169.49	28.81
3	Town of Turtle	98.69	157.90	26.84
4	Town of Beloit	29.84	29.84	5.07
5	Town of Beloit	75.22	112.64	19.15
6	Town of Beloit	43.16	68.62	11.67
7	Town of Beloit	111.17	176.75	30.05
8	Town of Beloit	23.48	37.34	6.35
9	Towns of Rock & Beloit	239.32	369.64	62.84
10	Town of Rock	98.64	224.78	38.21

Figure: C5-5C BOD Acres Source: Rock County Planning and Development Department GIS number.
 Note: numbers have been trunked to the hundredth

Of the areas added for the 2030 SSA, three areas are completely in the Town of Turtle, five are located entirely within the Town of Beloit, one is currently within both the Town of Beloit and Town of Rock and one area is entirely within in the Town of Rock. The majority have been added due to a high density of POWTS. However, Areas 8-7 and 7-8 have been added to follow tax parcel lines. Area 1 has been added for two reasons: First, because of the high density of Residential POWTS, Secondarily and secondarily, due to the location of an existing wastewater sewermain.treatment line.

Of these areas 1 through 7 most likely will be serviced by the City of Beloit’s wastewater treatment facility adding a potential of 340.39 BOD per day to the plant capacity (Figure [D55D](#)).

Area	Current Location	Total Acres	Total potential people in each area (2.56)	BOD per Cap per day (potential)
1	Town of Turtle	416.76	1287.02	218.79
2	Town of Turtle	118.62	169.49	28.81
3	Town of Turtle	98.69	157.90	26.84
4	Town of Beloit	29.84	29.84	5.07
5	Town of Beloit	75.22	112.64	19.15
6	Town of Beloit	43.16	68.62	11.67
7	Town of Beloit	111.17	176.75	30.05
Total :		893.46	2002.27	340.39

Figure: [D5-5D BOD Acres](#) Source: Rock County Planning and Development Department GIS number.
Note: numbers have been trunked to the hundredth

Areas 8 through 10 will most likely be serviced by the Town of Beloit’s wastewater treatment facility adding a potential of 107.40 BOD per day to the plant capacity (Figure [E55E](#)).

Area	Current Location	Total Acres	Total potential people in each area (2.56)	BOD per Cap per day (potential)
8	Town of Beloit	23.48	37.34	6.35
9	Town of Rock & Beloit	239.32	369.64	62.84
10	Town of Rock	98.64	224.78	38.21
Total:		361.44	631.76	107.40

Figure: [E5-5E BOD Acres](#) Source: Rock County Planning and Development Department GIS number.
Note: numbers have been trunked to the hundredth

Technical Advisory Committee (TAC)

Committee Function

Oversee the Plan Updates process (Staff from the Rock County Planning, Economic & Community Development Agency and Environmental Health Department will serve in the role of facilitator and coordinator), including, but not limited to, the following activities:

- Gather, review, and analyze data
- Prepare alternatives and options
- Select desired alternatives/options

- Prepare, approve, and recommend deliverables (Plan updates containing desired alternatives/options) to applicable government units

Major decisions and recommendations shall require Committee action and a vote for approval or denial, in accordance with the parameters outlined in the committee structure section below.

Committee Structure

Comprised of all local units of government affected by the Plan updates, including:

- City of Beloit (Operator)
- Town of Beloit (Operator)
- Town of Turtle (Neighboring municipality)
- Town of Rock (Neighboring municipality)
- Rock County (Advisory)

Procedure for Sewer Extension Review

The municipality or consulting engineer shall submit a letter, plan map of the proposed sewer extension and DNR Form 3400-102_[FK8] “Sanitary Sewer Extension Submittal” to the Rock County Planning and Development Agency.

The Rock County Planning and Development Agency will review the submission and notify the applicant of the findings in writing within 15 working days of receiving the plan map. If the proposed sewer extension is in conformance with the Water Quality Plan, the agent’s notification should be attached to the sewer extension plans that are submitted to the DNR with the application.

Sewer Extension Policies

- Extensions will not be approved beyond the 20-year SSA boundary unless the plan is amended.
- Public sewer services will be extended to a developed area in a cost effective manner.
- Sewer extension will not be approved for development in environmental corridors.

Private Onsite Wastewater Treatment Systems (POWTS) within the SSA

When properly operating, a POWTS safely treats wastewater by storing sludge and solids in a treatment tank and discharging wastewater to a dispersal component. A POWTS may be installed for new structures as well as a replacement system for an existing structure.

A failing system ~~does not properly treat wastewater in the following ways~~ is identified as:

- Discharging sewage to surface water, groundwater, drain tiles, bedrock or zones of seasonally saturated soils.
- Discharging sewage to the surface of the ground.
- ~~By causing~~ Causing the backup of sewage into the structure served.

If a POWTS failure occurs at an existing structure or if a sanitary permit application for a new structure ~~occurs~~ is requested within the SSA, the property will be required to connect to a Wastewater Treatment Facility (WWTF) if the property meets two criteria:

1. If the property is located in a residential cluster with lots of 1.5 acres or less.
2. Is located within reasonable distance to a public sewer.
 - a. A reasonable distance for the purposes of this section shall be deemed to be not greater than 400 feet to a single-family residential property line and not greater than 1000 feet to a multi-family residential (housing with three or more units) or to a nonresidential property line.
 - b. The public sewer will follow a dedicated road Right-of-Way or established sanitary sewer easement.
 - c. The sewer infrastructure will be available for connection within a reasonable time period.
 - i. Reasonable time period for the purposes of this section shall be considered within six months of the initial availability inquiry.
 - ii. The six month time period may be extended if reasonable extenuating circumstances will delay the availability.
 - iii. Additional time may be allowed if acquisition of Right-of-Way and or an easement is needed.

If the property does not meet either of the two criteria, a letter from the SSA District plant operating municipality will need to be provided within 30 days of request to the Rock County Health Department stating that the property may be issued a Sanitary Permit.

Determination of Non-Developable Areas

Within the planning area there are a variety of conditions that act as control mechanisms on development. Conditions range from legal restrictions that direct specific requirements, to minor influences that have little effect. In order to direct community expansion, some of these conditions can also be applied as policies by the governing agencies.

- Growth prohibited areas due to regulation restrictions or physical limitations.
- Areas where growth is controlled through existing local and state laws.
- Areas where growth should be discouraged due to construction difficulties ~~and-or~~ would result in substantial additional costs, or physical problems.

- Areas where growth should be encouraged due to cost effectiveness and present acceptability
- Environmentally Sensitive Areas.

Sewer Service Amendments

Two types of amendments are possible. The first involves no change in the total service area; for every acre added, an acre is taken out of the plan area. The second type involves an increase in the total service area. ~~Criterion~~ The criteria for review of a proposed plan amendment includes the following information:

- Sewer service can be provided in a cost effective manner
- The receiving, collection and treatment Facility can adequately transport and treat the wastewater from the area.
- Amendment is consistent with the policies and goals of this plan
- Conformance with local and county plans and zoning
- No significant adverse water quality and/or environmental impact associated with providing sewer service to the area.

The procedure for amending the plan should be similar for all the above cases. If the request is initiated by a property owner, step 1 below will be necessary. If the request is initiated by the Technical Advisory Committee (TAC), the process will begin with step 2. The steps required for plan amendment are outlined as follows:

1. The property owner(s) may apply to the appropriate agency expected to provide wastewater service to request the plan amendment area and the applicant shall provide information showing that the proposal is consistent with the criteria for review found above.
2. The request is reviewed and approved by the municipality with legal jurisdiction; the application will be forwarded to the Technical Advisory Committee (TAC). The application should be accompanied by:
 - A map of the proposed area to be serviced;
 - Existing and anticipated population and wastewater generation of the area;
 - A description of the type of development that is expected to occur.
3. The Technical Advisory Committee (TAC), shall evaluate the application at a

public meeting within 60 days of submitted application. The TAC will use the Plan criteria and any other relevant factors when determining the recommendation^[FK9].

4. The TAC shall forward its recommendation to the Wisconsin Department of Natural Resources (DNR).
5. If approved by DNR, the requested amendment will be adopted and become part of the existing plan.
6. All involved parties will be notified when the amendment is completed.

Updating Plan

A comprehensive review and update of the sewer service plan should be completed every five years. The plan should be updated whenever there is an obvious change in community needs. Updates to the plan area are intended to address the following components:

1. A revision of the population and demographic projection shall be reviewed by the Department of Administration (DOA).
2. A review of housing starts, population densities, household size changes, and urban development trends within the planning area.
3. An assessment of the impact of major land use changes in the planning area.
4. An examination of the significant environment changes.
5. A review and revision of the goals and objectives of the plan based on present concept and needs.
6. A discussion of any social or economic impacts on the area that may affect the area wide water quality planning efforts.
7. A list and explanation of any interim amendment to the plan that occurred since the last update to the plan.

8. A revised SSA boundary based on 20-year projection.
9. A review of any affective changes in the constitutional or implementation structure of the plan.
10. An update of citizen participation efforts.

The plan update will be controlled and directed by the TAC committee.

Appendix A: TAC Meetings & Agenda

Agenda

September 13, 2011
208 Water Quality Planning Group

1. Conversation with Lisa Helmuth
 - a. Project phases
 - b. Application form
 - c. November application
 - d. January startup
2. Timeline for production of application
3. Strategy of project
4. TAC participants and meetings
5. Other items.
6. Adjourn

208 Group
September 28, 2011 Meeting Agenda

1. Technical Advisory Committee (TAC);
 - a. Wade, further thoughts on staff and policy functions.
 - b. Develop and agree on committee list.
 - c. Identify specific date in last two weeks of October for TAC meeting.
 - i. Week beginning Monday, October 17 through Friday October 21st.
 - ii. Week beginning Monday October 24th through Friday October 28th.
2. New Public Works Director – Harry Mathus; Do we have a meeting with him.
3. Gantt Chart, or some other device to chart our planning progress and monitor our progress; Wade and Rich.
4. Application. We should have a draft by the TAC meeting date.
5. Other items.
6. Set next meeting date.
7. Adjourn



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

March 21, 2012 – 2:00 p.m.

Room N-1, 5th Floor – Rock County Courthouse

51 S. Main Street, Janesville

THIS IS NOT A PUBLIC HEARING

- 1) Introductions
- 2) Plans Update Goals, Timeline, and Deliverables
- 3) Plans Update Processes and Methodologies
- 4) Technical Advisory Committee Structure and Function
- 5) General Comment and Discussion
- 6) Wrap Up and Next Steps

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.

City of Beloit and Town of Beloit
Areawide Water Quality Management Plan Updates
(Meeting Minutes from March 21st, 2012)

The kickoff meeting for the Technical Advisory Committee (TAC) of the City of Beloit and Town of Beloit Area Wide Water Quality Management Plans Update effort was called to order at 2:00 PM on Wednesday March 21st, 2012.

Paul Benjamin made the opening remarks. He asked that all present introduce themselves for the benefit of all in attendance. Introductions were made.

Those present included:

Roger Anclam – Town of Turtle

Tim Kopp – Town of Turtle

Brian Wilson – Town of Beloit

Howard Hemmer – Town of Beloit

Frank McKearn – Batterman Engineering (for Town of Beloit)

Mike Flesch – City of Beloit

Tim Banwell – Rock County Health Department

Matt Wesson – Rock County Health Department

Duane Cherek – City of Janesville

Phil Owens – Rock County Board of Supervisors

Wade Thompson – Rock County Planning

Paul Benjamin – Rock County Planning

Rich Cannon – Rock County Planning

Paul Benjamin discussed the general intent of the plan update effort, the formation of the (TAC), and how certain portions of the existing plan such as many of the maps within the current document are outdated. He mentioned the current State of Wisconsin legislation that sets for the plan update process and said it is the intent of the TAC to develop a plan that recognizes the current situation as well as the planned future land use trends and natural resources found in the Beloit area.

Wade Thompson made a brief slide presentation that touched on the plan update's overall goals, timeline, and expected work products. He stressed that among other important community and natural resources this type of plan must remain focus on (1) maintaining water quality; (2) provision of sewer service; and, (3) regional land use.

This discussion included the project timeline where he presented a two-phase approach. It is envisioned that the majority of the data collection and research activities will take place in Phase I, which will be conducted in 2012. One of the major deliverables in Phase I will be a revised and more "user-friendly" Town of Beloit sewer system service coverage map.

Phase II will extend into mid or possibly late 2013 and is expected to revise current sewer service area boundaries and set future area wide policy.

Wade Thompson mentioned that Rock County together with other TAC members have been working with the Wisconsin Department of Natural Resources (DNR) to secure study funds in the form of a \$15,000 grant made available by the DNR and that a similar effort will be made to secure funds for Phase II.

Frank McKearn asked if TAC members could receive a copy of the grant application materials so each member has an understanding of the things the DNR will require with respect to their funding terms. He also mentioned that the Town of Beloit has certain map electronic data and information that should be examined prior to any mapping effort so it can be made compatible.

Tim Banwell reviewed several slides depicting the nature of the current data the Rock County Health Department has access to that can be incorporated into the research and decision making aspects of this plan update. Data includes but is not limited to well locations and casings, location of on-site septic systems, and a number of pertinent aspects of ground water such as where municipal pumping takes place and where certain contaminants can be found to occur.

Howard Hemmer asked how far back in time does the Rock County data extend. Tim Banwell suggested depending on the specifics, certain data sets date back to the 1980s.

Wade Thompson introduced the make-up of TAC in terms of membership responsibilities and voting interest. Even though the Wisconsin portion of the Beloit Urban Area is made up of the City of Beloit and several surrounding towns, not all surrounding municipalities are directly adjacent to the two metropolitan sewer service area (SSA) boundaries. Therefore it is not practical for each town to have a direct voting interest in both plan updates. More specifically the two surrounding municipalities directly influenced by the City of Beloit's SSA are the Town of Turtle, and the Town of Beloit. Likewise the two municipalities influenced by the Town of Beloit's SSA are The City of Beloit and the Town of Rock.

To gain approval of procedural matters and key decisions throughout the course of the plan update period, optimally it would be advantageous to have all three municipalities of record influenced by the SSA in question to vote similarly. It is unrealistic to expect that in every instance each voting member will vote the same. Therefore the suggested voting interests for making critical decisions during the plan update process is as follows:

- Municipal sewer system owner/operators 50%
- Surrounding adjacent municipality 25% each

Mike Flesch asked what the procedure would be in the event of a 50%-50% tie. In the event of a tie there would be an amount of additional analysis and/or fact finding performed by the study team in an effort to ensure subsequent votes are not tied.

Mike Flesch asked about the DNR's role in the TAC. In previous discussions with the the DNR, Rock County Planning was informed that the DNR would remain neutral throughout the planning process. It is understood they will however provide an amount of project funding (as previously mentioned) and guidance in interpreting state statutes. It was also Rock County Planning's understanding that the DNR would not have a voting share or regular presence at the TAC meetings. Rock County Planning offered to once again contact DNR to ensure this is indeed the intention of the agency.

Tim Kopp asked why the Town and Village of Clinton were not part of this process. Frank McKearn mentioned that in the late 1990s the town and village decided to withdraw from the City of Beloit SSA and have not entertained re-joining the Beloit utility since.

Prior to any "official" action being taken by the TAC, Roger Anclam informed the TAC that it would be necessary for him to present this suggested study format and voting procedure, etc., to the rest of the Turtle Town board. Mike Flesch agreed that he would present this same information to the Beloit city administration.

A motion was made by Mike Flesch to postpone taking any "official" votes, i.e., those that would have a direct bearing on the plan or planning process such as the percent voting framework suggested by Wade Thompson until such time the respective agencies and/or municipalities can examine the procedure and agree to it. Roger Anclam seconded the motion. A vote was taken and passed with no opposition. It was decided that prior to the next TAC meeting each TAC member would present the voting procedure to his or her respective agency and/or municipality in order to get approval (and report back to TAC)

Although no "official" action was taken at this meeting, a meeting chairperson was selected. Roger Anclam made a motion that Paul Benjamin act as the meeting chairperson since Rock County Planning is going to be coordinating both plan updates. Howard Hemmer made a second to the motion. The motion was carried and Paul will serve as the meeting chairperson.

Duane Cherek was asked how the City of Janesville conducted their most recent Water Quality Plan Update, and how they went about adjusting SSA boundaries. Mr. Cherek mentioned that Janesville does not directly share borders with any other municipal treatment plant operators like The City of Beloit and Town of Beloit do, but they still had to deal with all of the surrounding towns in a similar fashion as required in both Beloit area plan updates.

Roger Anclam inquired about the Town of LaPrairie's involvement in the process. Wade Thompson mentioned he had discussions with members of the LaPrairie Town Board and at this time they indicated the town is not going to be an active participant.

Caution was raised by a number of TAC members suggesting that even if LaPrairie is not interested in participating in the plan update process, portions of The Town of LaPrairie could possibly be encroached by future SSA boundary adjustments or even included into an SSA should a thorough examination of all things considered indicate it is prudent to do so. This is the case particularly in the extreme southwest corner of the town adjacent to the Rock County Highway G intersection with Town Line Road.

Paul Benjamin asked that TAC members forward any agenda items that might be pertinent for the next TAC meeting. Paul also announced there would be a discussion relative to a recent City of Beloit SSA Amendment at the next TAC meeting. Mike Flesch will present the details and expects that action be taken on the matter. Rock County Planning will forward a copy of the Amendment document to TAC members for their review prior to the meeting.

The next two TAC meetings were tentatively scheduled. The next meeting will be held on April 25th, 2012 at 2:00 and the following meeting will take place on May 16th, 2012.

Frank McKearn made a motion to adjourn the meeting and Brian Wilson seconded the motion. The motion was passed and the meeting ended at 3:15 PM.

These meeting minutes reflect the discussion and activity that took place at the first Technical Advisory Committee meeting for the City of Beloit and Town of Beloit Area Wide Water Quality Management Plan Updates held on Wednesday March 21st, 2012.

Respectfully submitted by Rich Cannon, Rock County Planning on March 23rd, 2012.



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

April 25, 2012 – 2:00 p.m.

Courthouse Conference Center (Room 250) – Rock County Courthouse
51 S. Main Street, Janesville

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from April 4, 2012 Meeting
- 3) Citizen Participation and Committee Communications and Announcements
- 4) ACTION ITEM: City of Beloit Amendment to Existing Plan
- 5) ACTION ITEM: Approval of Technical Advisory Committee Structure and Function and Goal Statement
- 6) INFORMATION ITEM: Data Inventory
 - a. Growth and Development
 - b. Natural Resources and Water Quality
 - c. Wastewater Treatment
- 7) General Comment and Discussion
- 8) Wrap Up and Next Steps

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

May 23, 2012 – 4:00 p.m.

Room N-1/N-2 (5th Floor) – Rock County Courthouse
51 S. Main Street, Janesville

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from April 25, 2012 Meeting
- 3) Citizen Participation and Committee Communications and Announcements
- 4) INFORMATION ITEM: Data Inventory
 - a. Growth and Development
 - b. Future Land Use
- 5) General Comment and Discussion
- 6) Wrap Up and Next Steps
- 7) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

August 22, 2012 – 2:30 p.m.

Rock County Courthouse – 2nd Floor Conference Center
51 S. Main Street, Janesville

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from May 23, 2012 Meeting
- 3) Citizen Participation and Committee Communications and Announcements
- 4) INFORMATION ITEM: Committee Bylaws and Tasks and Timeline Update
- 5) INFORMATION ITEM: Beloit Area Water Quality Management Plan Wastewater Treatment and Collection Study Update
- 6) DISCUSSION ITEM: Potential Sewer Service Area Amendment Areas – Examination and Discussion of “Homework” Assignment
- 7) General Comment and Discussion
- 8) Wrap Up and Next Steps (Schedule Upcoming Meeting)
- 9) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.

**ROCK COUNTY TECHNICAL COMMITTEE MEETING MINUTES
WEDNESDAY, MARCH 27, 2013
CCC CONFERENCE ROOM
ROCK COUNTY COURTHOUSE
JANESVILLE, WISCONSIN**

Chair Benjamin called the March 27, 2013 meeting to order at 2:29 p.m. in the Courthouse Conference Center, Rock County Courthouse, Janesville, Wisconsin.

Staff in attendance: Chris Munz-Pritchard, Colin Byrnes, and Steve Schraufnagel, Adam Pritchard, (County Planning Department); Matt Wesson, Rick Wietersen, Adam Elmer, (Health Department).

Members in attendance: Amy Schmidt (DNR), Brian Wilson (Town of Beloit Administrator), Frank McKearn – Batterman Engineering (Town of Beloit), Mike Flesch and Harry Mathos (City of Beloit), Mike Birkholz and Tim Kopp (Town of Turtle).

1. **ADOPTION OF AGENDA:** Motion by Mike Flesch and seconded by Harry Mathos to approve the agenda as provided. Motion adopted unanimously.

2. **CITIZEN PARTICIPATION & COMMITTEE COMMUNICATIONS & ANNOUNCEMENTS.** Chair Benjamin handed out CMOM booklet received from DNR to any members who are interested.

Also distributed a news release depicting the status of Rock County's overall healthy compared to other State of Wisconsin counties.

3. **NEW COUNTY ENGINEER INTRODUCTION:**

Chair Benjamin introduced County Engineer Adam Pritchard.

4. **INFORMATION ITEM: DRAFT OUTLINE & SCHEDULE OF БЕЛОIT AREAWIDE WATER QUALITY MANAGEMENT PLAN UPDATE.**

Staff member Chris Munz-Pritchard handed out the draft outline of the 208 Water Quality Plan. Frank McKearn inquired as to the staff's goal of when the plan will be complete. Chair Benjamin stated that the plan should be complete no later than December 2013. Meetings are currently being held between Town of Turtle and City of Beloit leaders concerning the differences between the two communities.

5. **INFORMATION ITEM: DRINKING WATER TEST RESULTS FOR THE БЕЛОIT AREA.**

Rick W



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

June 5th, 2013 – 3:00 p.m.

City of Beloit's Engineering and Water Resources Facility

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from March 27th 2013
- 3) INFORMATION ITEM:
 - a. Wastewater Treatment Plants
 - b. Land Use & Future Land Use
 - c. Plan Implementation
- 4) General Comment and Discussion
- 5) Wrap Up and Next Steps
- 6) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.

**ROCK COUNTY 208 WATER QUALITY PLAN TECHNICAL COMMITTEE
MEETING MINUTES
WEDNESDAY, JUNE 5th, 2013
CITY OF BELOIT ENGINEERING AND WATER RESOURCE FACILITY
BELOIT, WISCONSIN**

Chair Benjamin called the June 5th, 2013 meeting to order at 3:00 p.m. in the City of Beloit's Engineering and Water Conference Facility, Beloit, Wisconsin.

Staff in attendance: Paul Benjamin, Chris Munz-Pritchard, Colin Byrnes, and Adam Pritchard, (County Planning Department); Tim Banwell and Matt Wesson, (Health Department).

Members in attendance: Amy Schmidt (DNR), Brian Wilson (Town of Beloit Administrator), Frank McKearn – Batterman Engineering (Town of Beloit), Howard Hemmer (Town of Beloit), Mike Flesch (City of Beloit) Greg Boysen (City of Beloit) Harry Mathos (City of Beloit), Roger Anclam (Town of Turtle), Mark Gunn (Town of Rock).

1. ADOPTION OF AGENDA: Motion by Mike Flesch and seconded by Harry Mathos to approve the agenda as provided. Motion adopted unanimously.

2. Approval of Minutes from March 27th 2013: Motion by Mark Gunn and seconded by Harry Mathos to approve the agenda as provided. Motion adopted unanimously.

3. ITEMS OF DISCUSSION:

- a. Wastewater Treatment Plants
 - Discussion of the City of Beloit wastewater treatment plant CMAR & Town of Beloit wastewater treatment plan CMAR
 - COD needs to be changed to BOD in 208 Plan
 - Town of Beloit needs to provide data concerning allowable capacity - residential & non-residential
- b. Land Use & Future Land Use
 - Both Land Use & Future Land Use Maps are constructed using the 1998 amended SSA boundary
 - Add text about how water and transportation land uses are not developable.
 - Check into the Recreational Land Use data category in Town of Turtle (light purple)
- c. Plan Implementation
 - Some of this section is verbatim from the 1998 Plan so it is not going to be discussed in depth
 - SSA will be determined by using 3 factors
 1. Well head protection overlay district
 - a. Ordinance No. 3483 City of Beloit

2. High Density of POWTS
 - a. Subdivisions with POWTS (Lots of 1.5 acres or less with 5 or more lots) will be used as an unit of analysis
 - b. Lots contiguous to current SSA Boundary
 3. Future Commercial, Industrial and Residential Growth Data
 - a. Need to add this information for the Town of Beloit
- Procedure for Sewer Extension Review
 1. Committee recommends change 30 Days to 15 working days
 - Evaluation of Cost Benefit Analysis
 1. This will be discussed in a sub-TAC committee meeting that will occur between now (June 5, 2013) and the July TAC meeting. The sub-TAC committee will then present the information at the July TAC meeting

4. General Comment and Discussion: Annexation discussion between the Town of Turtle and the City of Beloit. Currently the two municipalities are holding closed door meetings, which are separate from the 208 Water Quality Plan.

5. Wrap Up and Next Steps: A reoccurring meeting for the TAC Committee is to be held on the 3rd Wednesday of every month at the City of Beloit's Engineering and Water Resources Facility. The next Meeting will be July 17th at 3:00 PM



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

July 17th, 2013 – 3:00 p.m.

City of Beloit's Engineering and Water Resources Facility

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from June 5th 2013
- 3) Items of Discussion:
 - a. Goals, Objectives and Policies
 - b. Sub-TAC meeting discussion
 - c. Changes on Information items from June 5th Meeting
- 4) Wrap Up and Next Steps
- 5) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.

**ROCK COUNTY TECHNICAL COMMITTEE MEETING MINUTES
WEDNESDAY, JULY 17th, 2013
CITY OF БЕЛОIT ENGINEERING AND WATER RESOURCE FACILITY
BELOIT, WISCONSIN**

Colin Byrnes called the July 17th, 2013 meeting to order at 3:00 p.m. in the City of Beloit's Engineering and Water conference facility, Beloit, Wisconsin.

Staff in attendance: Chris Munz-Pritchard, Colin Byrnes, and Adam Pritchard, (Rock County Planning Department); Tim Banwell and Matt Wesson, (Health Department).

Members in attendance: Amy Schmidt (DNR), Brian Wilson (Town of Beloit Administrator), Frank McKearn – Batterman Engineering (Town of Beloit), Howard Hemmer (Town of Beloit), Mike Flesch (City of Beloit) Harry Mathos (City of Beloit), Mark Gunn (Town of Rock).

1. **ADOPTION OF AGENDA:** Motion by Mark Gunn and seconded by Tim Banwell to approve the agenda as provided. Motion adopted unanimously.

2. **Approval of Minutes from June 5th 2013:** Motion by Frank McKearn and second by Tim Banwell to approve the agenda as provided. Motion adopted unanimously.

3. **INFORMATION ITEM:**

- a. Goals, Objectives and Policies were discussed. Small changes will need to be made.
- b. Sub-TAC meeting discussion: Under Failing Private Onsite Wastewater Treatment Systems within the SSA a distance needs to be put in to systematically determine when sewage will be constructed.
 - a. A reasonable distance for the purpose of this section shall be deemed to be not greater than 400 feet to a single-family residential property line and not greater than 1,000 feet to a multi-family residence or to a nonresidential property line.
 - b. In addition “a reasonable time period” is requested by the Health Department. After some discussion, 6 months of the initial availability inquiry is added to the document. If the infrastructure is not available within this time a permit maybe issued.
- c. Changes on Information items from the June 5th Meeting:

- a. COD being changed to BOD and the CMAR in the City of Beloit is being updated to 2012
- b. Under Future Land Use the text: *Water and transportation land is placed in one land use because these are considered no developable areas.* Has been added
- c. Under the Future Commercial Industrial and Residential Growth, (Chapter 4) section a description of the Town of Beloit's ability to service these land uses.
- d. The word Adjacent is replaced with Contiguous throughout the document

4. General Comment and Discussion: The Sub-TAC committee will meet and craft a rough draft of the 2013 SSA boundary. A full text will be prepared and a process for editing was discussed.

5. Wrap Up and Next Steps: A reoccurring meeting for the TAC Committee is to be held on the 3rd Wednesday of every month at the City of Beloit's Engineering and Water Resources Facility. The next Meeting will be August 21st at 3:00 PM at the City of Beloit's Engineering and Water conference facility. The Sub-TAC will meet on August 20th at 9:00 AM in same location as TAC Committee.



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

August 21th – 3:00 p.m.

City of Beloit's Engineering and Water Resources Facility

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from July 7th 2013
- 3) Items of Discussion:
 - a. August 20th Sub-TAC meeting discussion of the 2013 SSA Boundary
- 4) Wrap Up and Next Steps
- 5) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.

**ROCK COUNTY TECHNICAL COMMITTEE MEETING MINUTES
WEDNESDAY, AUGUST 21th, 2013
CITY OF БЕЛОIT ENGINEERING AND WATER RESOURCE FACILITY
BEЛОIT, WISCONSIN**

Adam Pritchard called the August 21st, 2013 meeting to order at 3:00 p.m. in the City of Beloit's Engineering and Water conference facility, Beloit, Wisconsin.

Staff in attendance: Chris Munz-Pritchard and Adam Pritchard, (Rock County Planning Department).

Members in attendance: Brian Wilson (Town of Beloit Administrator), Frank McKearn – Batterman Engineering (Town of Beloit), Howard Hemmer (Town of Beloit), Greg Boysen (City of Beloit) Harry Mathos (City of Beloit), Roger Anclam (Town of Turtle).

1. ADOPTION OF AGENDA: Motion by Frank McKearn and seconded by Harry Mathos to approve the agenda as provided. Motion adopted unanimously.

2. Approval of Minutes from June 5th 2013: Motion by Harry Mathos and second by Frank McKearn to approve the minutes as provided. Motion adopted unanimously.

3. INFORMATION ITEM:

- a. The 208 Water Quality Text is handed out to each member present at the committee. If the member is not present then it will be mailed to the member.
- b. 2013 SSA Boundary is presented to the TAC committee.
 - i. Roger Anclam is concerned with their future land use map.

4. General Comment and Discussion:

- a. Frank McKearn inquired about the calculations that are in the 1998 Beloit-Clinton Area Water Quality Management Plan and not in the new text.
- b. Chris Munz-Pritchard asked that the text be reviewed and returned with comments by September 6th.

5. Wrap Up and Next Steps: Vote to send the Map and Text to the DNR for review and Approval. The next meeting will be September 18th at 3:00 PM.



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

September 18th, 2013 – 3:00 p.m.

City of Beloit's Engineering and Water Resources Facility

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from August 21st 2013
- 3) INFORMATION ITEM:
 - a. Review of Text
 - b. Review of Maps
- 4) Vote to submit text to DNR for Approval
- 5) General Comment and Discussion
- 6) Wrap Up and Next Steps
- 7) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Areawide Water Quality Management Plans Update**

October 16th, 2013 – 3:00 p.m.

City of Beloit's Engineering and Water Resources Facility

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Approval of Minutes from September 18th 2013
- 3) INFORMATION ITEM:
 - a. Review of Text
 - b. Review of Maps
- 4) Vote to submit text to DNR for Approval
- 5) General Comment and Discussion
- 6) Wrap Up and Next Steps
- 7) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.



AGENDA

**Rock County Planning, Economic & Community Development Agency –
Technical Advisory Committee Meeting - City of Beloit and Town of Beloit
Area wide Water Quality Management Plans Update**

April 30th 2014 1:00 p.m.

City of Beloit's Engineering and Water Resources Facility

THIS IS NOT A PUBLIC HEARING

- 1) Approval of Agenda
- 2) Process of Approval
 - a. TAC
 - b. DNR
 - c. P & D County
 - d. County Board
- 3) Vote to submit text to DNR for Approval
 - a. Town of Beloit
 - b. City of Beloit
- 4) General Comments and Discussion
- 5) Adjournment

NOTE: It is possible that members of and possibly a quorum of other governmental bodies of Rock County may be in attendance at the above-stated meeting to gather information: any governmental body at the above-stated meeting will take no formal action.

**ROCK COUNTY TECHNICAL COMMITTEE MEETING MINUTES
WEDNESDAY, April 30th, 2014
CITY OF БЕЛОIT ENGINEERING AND WATER RESOURCE FACILITY
BELOIT, WISCONSIN**

Colin Byrnes called the April 30th, 2014 meeting to order at 1:00 p.m. in the City of Beloit's Engineering and Water Conference Room, Beloit, Wisconsin.

Staff in attendance: Colin Byrnes, Chris Munz-Pritchard and Adam Pritchard (Rock County Planning Department) Tim Banwell and Matt Wesson (Rock County Health Department)

Members in attendance: Roger Anclam (Town of Turtle), Frank McKearn (Town of Beloit), Howard Hemmer (Town of Beloit), Harry Mathos (City of Beloit), Mark Gunn (Town of Rock Chair).

1. **ADOPTION OF AGENDA:** Motion by Harry Mathos and seconded by Mark Gunn to adopt the agenda as presented. Motion adopted unanimously.

2. **PROCESS OF APPROVAL:**

A. Technical Advisory Committee (TAC)

The TAC will vote on the Draft 2030 Water Quality Plan.

B. DNR.

After approval by the TAC, the Draft 2030 Water Quality Plan will then be sent to Fran Keally the Water Resources Specialist at DNR for review. After the DNR review Ms. Munz-Pritchard will make any changes requested by Ms Fran Keally.

C. Rock County Planning and Development Committee.

The Draft 2030 Water Quality Plan will then be presented to the P & D where it will be voted on.

D. Rock County Board of Supervisors.

The Draft 2030 Water Quality Plan will then be presented to the County Board where it will be voted on and adopted.

3. **VOTE TO SUBMIT TEXT TO DNR FOR APPROVAL**

A. Town of Beloit

The Town of Beloit asked to have amendments made to the text in: *Chapter 5 Sewer Service Area (2030) and Plan Implementation: under the Private Onsite*

Wastewater Treatment Systems (POWTS) within the SSA (roughly page 46) starting at number 2. The changes read as follow:

- #2 currently reads: Is located within reasonable distance to a public sewer or in a block through which the systems extend, to be connected with either or both in the manner prescribed. The last part “or in a block through which the systems extend, to be connected with either or both in the manner prescribed” shall be removed.
- The existing b. will be moved to c. The new b. will read “The public sewer will follow a dedicated road Right-of-Way or established sanitary sewer easement”.
- Under the now c. a new iii “Additional time may be allowed if acquisition of Right-of-Way and or an easement is needed” will be added.

Motion by Frank McKearn and seconded by Mark Gunn to adopt new language as presented. The new language is APPROVED: Yes- Town of Beloit, City of Beloit, Town of Rock, No- Town of Turtle.

Motion by Frank McKearn and seconded by Harry Mathos to recommend approval of the Draft 2030 Water Quality Plan, Town of Beloit. The Plan is APPROVED by 100% of the votes: Yes- Town of Beloit 25%, City of Beloit 50%, Town of Rock 25%.

B. City of Beloit

Motion by Howard Hemmer and seconded by Mark Gunn to recommend approval of the Draft 2030 Water Quality Plan, City of Beloit. The Plan is APPROVED by 75% of the votes: Yes- Town of Beloit 25%, City of Beloit 50%, No- Town of Turtle 25%.

4. **GENERAL COMMENTS AND DISCUSSION**

The Town of Turtle will be submitting a letter to document the reasons for the NO vote on the Draft 2030 Water Quality Plan, City of Beloit.

5. **ADJOURNMENT**

Motion by Harry Mathos and seconded by Mark Gunn to adjourn the April 30th, 2014 meeting of the TAC. Motion approved unanimously. Meeting adjourned at 2:05 p.m. in the City of Beloit Engineering and Water Resource Facility.

APPENDIX B, BOD Calculations

Area	Total Acres	Acres w/house	# of houses	Acres per House	undeveloped Acres	Total potential houses	Total potential people in each area (2.56)	BOD (.17) per Cap per day (potential)
1	416.8	169.1	204.0	0.8	247.7	298.7	1287.0	218.8
2	118.6	43.0	24.0	1.8	75.6	42.2	169.5	28.8
3	98.7	48.0	30.0	1.6	50.7	31.7	157.9	26.8
4	29.8	12.8	5.0	2.6	17.0	6.7	29.8	5.1
5	75.2	75.2	44.0	1.7		0.0	112.6	19.1
6	43.2			1.6	43.2	26.8	68.6	11.7
7	111.2			1.6	111.2	69.0	176.8	30.0
8	23.5			1.6	23.5	14.6	37.3	6.3
9	239.3	179.0	108.0	1.7	60.3	36.4	369.6	62.8
10	98.6	66.3	59.0	1.1	32.4	28.8	224.8	38.2
TOTAL:	1254.9	593.4	474.0	1.6			2634.0	447.8

Areas added have been broken down into groups and numbered 1 through 10. According to NR110.15(4)2: When actual operating data is not available, the design loading shall be based on a contribution of 0.17 pounds of biochemical oxygen demand per capita per day. The quick facts census data from the U.S. Department of Commerce estimates that in the City of Beloit, Wisconsin there are 2.56 persons per household (2008-2012). The existing “acres with houses” in each area were used to populated undeveloped acres for the same area.

As an example: Area 1 had 169.1 acres with house, 204 houses and 247.7 Acres without Houses or undeveloped Acres.

$$0.83 \text{ Acres Per House} = \frac{169.1 \text{ Acres}}{204 \text{ Houses}}$$

The number of potential homes is then calculated using the Acres without Houses / undeveloped Acres.

$$298.74 \text{ potential homes} = \frac{247.7 \text{ Undeveloped Acres}}{.83 \text{ Acres Per House}}$$

The number of potential homes is then added to the number of existing homes in the area to give a total of 502.74 potential homes in Area 1.

$$218.79 \text{ BOD} = (502.74 \text{ Potential Homes} * 2.56 \text{ person per household}) * .17 \text{ BOD}$$

In areas with no acres with houses (Area number 6, 7, & 8), an average of 1.61014 was used to determine potential homes per acre. The average has been determined by taking the total Acres with Houses 593.4 / Total number of homes 474.0 = 1.6 acres per house.

APPENDIX C, Technical Advisory Committee

CITY OF БЕЛОIT – TOWN OF БЕЛОIT AREAWIDE WATER QUALITY MANAGEMENT PLAN UPDATES: TECHNICAL ADVISORY COMMITTEE BYLAWS – FUNCTION AND STRUCTURE

COMMITTEE FUNCTION

- Oversee the Plan Updates process (Staff from the Rock County Planning, Economic & Community Development Agency and Environmental Health Department will serve in the role of facilitator and coordinator), including, but not limited to, the following activities:
 - Gather, review, and analyze data
 - Prepare alternatives and options
 - Select desired alternatives/options
 - Prepare, approve, and recommend deliverables (Plan updates containing desired alternatives/options) to applicable government units
- Major decisions/recommendations, etc. shall require Committee action and a vote for approval or denial, in accordance with the parameters outlined in the “COMMITTEE STRUCTURE” section below.

COMMITTEE STRUCTURE

- Comprised of all local units of government affected by the Plan updates, including:
 - City of Beloit (Operator)
 - Town of Beloit (Operator)
 - Town of Turtle (Neighboring municipality)
 - Town of Rock (Neighboring municipality)

 - Rock County (Advisory)
 - City of Janesville (Advisory)

Voting Members (1 government unit = 1 vote):

1. City of Beloit (Both Plan updates)
 - 50% Voting Share for City of Beloit Plan
 - 25% Voting Share for Town of Beloit Plan
 1. Gregory P Boysen – Public Works Director
 2. Mike Flesch – City Engineer
 3. Harry Mathos – Wastewater Treatment Facility Supervisor
2. Town of Beloit (Both Plan updates)
 - 50% Voting Share for Town of Beloit Plan
 - 25% Voting Share for City of Beloit Plan
 1. Brian Wilson – Town Administrator
 2. Howard Hemmer – Public Works Director
 3. Frank McKearn – Technical Consultant

Voting Members (1 government unit = 1 vote):

3. Town of Turtle (City of Beloit Plan update only)

- 25% Voting Share for City of Beloit Plan
- 1. Roger Anclam – Town Board Chair or designee

4. Town of Rock (Town of Beloit Plan update only)

- 25% Voting Share for Town of Beloit Plan
- 1. Mark Gunn – Town Board Chair or designee

Non-voting Members:

1. Rock County (Both Plan updates)

1. Planning, Economic & Community Development Agency

- a. Colin Byrnes – Acting Director
- b. Adam Pritchard - Engineer
- c. Chris Munz-Pritchard- Planner

2. Environmental Health Department

- a. Tim Banwell – Director
- b. Matt Wesson – Sanitarian

2. City of Janesville (Both Plan updates)

- 1. Duane Cherek – Community Development Department staff

3. Wisconsin Department of Natural Resources

- 1. Amy Schmidt

- Greater than 50% voting share (i.e. “Operator” plus one Neighboring Municipality) shall be required for approval of any major decision/recommendation
- Committee chair shall be elected by a majority vote of the aforementioned local government units to coordinate logistical issues (call for actions, votes, etc.)
 - Committee chair – Rock County Planning, Economic & Community Development Agency Director

The Thinking Behind the Structure and Functioning of the Policy and Technical Advisory Committees

Wade Thompson
Tim Banwell
Rich Cannon
Paul Benjamin

Rock County Planning and Development Agency
November 30, 2011

We are beginning to plan for water quality in an area that is divided among three towns and one city, and two sewer service areas, the greater Beloit area in southern Rock County. While we recognize that all participants are people of good will and committed to their communities, we are also aware of the divergent interests, perspectives, and even rivalries among the four municipalities. We are attempting to design the effort from a regional perspective, since water does not recognize political boundaries, but also one that recognizes the individual integrity and interests of each participant. We are trying to find ways where the interests of the individual communities will be served in a structure that attends to the needs of a high standard of regional water quality.

We also recognize there is a history, even a legacy, of county involvement in water quality planning in Rock County. At the outset, we would like to affirm that we view this new process as a collaborative and cooperative venture that depends on each of the municipalities for their participation, and their expert and local knowledge.

Our goals in this effort are as follows:

1. to provide the opportunity for each community to have a voice and be fairly represented in the process.
2. to build a structure that encourages consensus and even unanimity.
3. to plan for water quality for the regional public interest.

The Structure of the Beloit Area Water Quality Planning Committees

The proposed structure of the two committees was largely developed by Wade Thompson but also with input from other Rock County staff, including the Administrator's office, and also from supervisors on the Rock County Board. Please see Attachment "A." The basic idea is that there will be two committees: a technical advisory and a policy committee. The technical advisory committee will be composed of people from each municipality who are involved with the technical and operational details of a sewer system, public works, planning, and health. Staff of the Rock County Planning and Development Agency and the Rock County Health Department will be on the Technical Advisory Committee, along with technical representatives from the towns of Turtle and Rock, the Public Works Directors of the Town of Beloit and the City of Beloit. The policy committee will be composed of elected officials from each municipality as well as two representatives from the Rock County Board of Supervisors.

ROCK COUNTY, WISCONSIN



Planning, Economic & Community
Development Agency

51 South Main Street
Janesville, WI 53545
Phone: 608-757-5587
Fax: 608-757-5586

Website: www.co.rock.wi.us

February 27, 2012

To: Prospective Committee Member

Subject: **Formation of City of Beloit – Town of Beloit Areawide Water Quality Management (208) Plans Update - Technical Advisory Committee**

Wisconsin Administrative Code Chapter NR 121 – Areawide Water Quality Management Plan stipulates municipal sewer systems that serve populations over 10,000 create and adhere to Areawide Water Quality Management Plan (“208 Plans”), with said Plans identifying areas in which municipal sewer service is feasible given existing and potential infrastructure, topography, and other conditions.

The City of Beloit and Town of Beloit municipal sewer systems are both required to have 208 Plans, per NR 121, and the City and Town both desire to update their 208 Plans.

The Rock County Planning, Economic & Community Development Agency (“Agency”) has been in discussions with the various local government units that may be affected by the update to these 208 Plans. In fulfilling our Agency’s mission of promoting inter-governmental communication and cooperation, encouraging a regional land use and community planning and development vision, and enhancing community character, in these discussions the Agency has offered to serve in the role of facilitator in the 208 Plans update process. The aforementioned local government units have been receptive to this offer. As such, Agency and Rock County Environmental Health Department (“Department”) staff have recently convened a City of Beloit – Town of Beloit 208 Plans Update Workgroup, composed of staff from the Agency and Department to serve in the aforementioned facilitator role.

As an initial step in the 208 Plans update process, the Workgroup has proposed formation of a City of Beloit – Town of Beloit Areawide Water Quality Management (208) Plans Update – Technical Advisory Committee (“Committee”), comprised of staff from the City of Beloit, Town of Beloit, Town of Turtle, and Town of Rock, and Rock County and the City of Janesville, to oversee the process of updating the 208 Plans. The proposed Committee structure is enclosed.

As such, this correspondence serves as a request for your, or your relevant staff, participation on the Committee (If applicable, please forward this correspondence onto your relevant staff). The Workgroup is proposing the initial Committee meeting take place during the week of March 19 – 23 at the Rock County Courthouse in Janesville. If you are identified on the enclosed proposed Committee structure document, please respond to me via phone (608.757.5587) or email (benjamin@co.rock.wi.us) by March 8 to confirm your willingness to serve on the Committee and your availability during the week of March 19 - 23. I will then follow-up with you to confirm the Committee meeting time and location.

I thank you for your time and effort and look forward to hearing from you.

Sincerely,

Paul Benjamin, Director
Rock County Planning, Economic & Community Development Agency

Appendix D, DNR

ROCK COUNTY, WISCONSIN
Planning, Economic & Community
Development Agency



51 South Main Street, Janesville, WI 53545
Phone: 608-757-5587
Fax: 608-757-5586
Website: www.co.rock.wi.us

February 1, 2012

Susan Sylvester
Director, Bureau of Water Quality
Wisconsin Department of Natural Resources
101 S. Webster Street
Box 7921
Madison, Wisconsin 53707

RE: Grant Funding Request for City of Beloit and Town of Beloit Area-wide Water Quality Management Plan Update: Phase I (January 1, 2012 – December 31, 2012)

Dear Ms. Sylvester:

Please accept the information provided herein as an application for Wisconsin Department of Natural Resources (DNR) grant funding to update the City of Beloit and Town of Beloit Area-wide Water Quality Management Plan ("Plan"). The application consists of this correspondence, which includes a discussion of the current Plan, Plan update project scope, and Plan update project budget. Additional application information includes a more detailed explanation of all other Plan update project aspects (including project budget and timeline) and a project area basemap.

Rock County is requesting grant funding for Phase I of the Plan update (January 1, 2012 – December 31, 2012) in the amount of \$15,000.00. Because the Plan will include two treatment plants and four local government units, we feel the Plan update is a two-year planning effort and as such we plan to seek an additional \$25,000 in funding for Phase II (January 1, 2013 – December 31, 2013).

The following provides background information on the Plan, Plan update project scope, and Plan update project budget.

Plan Background Information

The original Plan consisted of a 20-year planning horizon and was completed in the late 1980s. In the interim, there has not been an update to the Plan to keep pace with recent planning efforts such as the City of Beloit, Town of Beloit, and Rock County comprehensive plans, completed and adopted in 2008, 2009, and 2009 respectively. Those plans depict an amount of future growth and development which is not consistent with the current Plan. In addition, there are portions of adjacent developed areas not included in the current Plan where several on-site private septic systems have experienced problems. We feel those areas are worthy of study in the Plan update as well.

To date, the current Plan has been amended twice, with a third amendment currently pending. This, together with other significant departures from the original Plan, such as the Village of Clinton's withdrawal from the Sewer Service Area (SSA) and the City of Beloit's Water Pollution Control Facility upgrade, necessitate the need to update the Plan.

Plan Update Project Scope

The Plan update project scope includes a comprehensive review of the current Water Quality Management planning guidelines and requirements for developing a Plan update through the year 2035. The Plan update process will consist of two phases, identified as follows:

Phase I (January 1, 2012 - December 31, 2012) major tasks will include:

1. Equitably consider all interests that each community located within the Beloit Metropolitan Area has as they relate to the provision of municipal sewer service, to include the formation of two Committees, Policy Advisory (tentative) and Technical Advisory, to oversee the Plan update process;
2. Review and update the original Plan goals, ensuring consistency with each participating community's comprehensive plan;
3. Review and inventory the water quality impact of the area treatment facilities existing loadings, including industrial and commercial waste;
4. Inventory and identify (map) environmentally sensitive areas, existing private on-site treatment systems, existing private and public wells, and wellhead protection zones in the planning area;
5. Analyze the natural resources and environmental conditions and constraints with respect to development suitability in the planning area (i.e. wetlands, flood hazards, steep slopes, soil geology, depth to groundwater and shallow bedrock, etc.);
6. Produce a spatial data layer identifying the locations of the Town of Beloit's existing sewer mains, manholes, and service lateral hook up to properties located within the SSA;
7. Redefine the planning area for each system (City of Beloit and Town of Beloit) using the most current population and housing data and information;

Phase II (January 1, 2013 – December 31 2013) major tasks will include:

1. Produce an updated Plan for both the City of Beloit and the Town of Beloit, to include a map delineating future SSA boundaries for each municipality, as well as policy recommendations to assure compliance with required and desired water quality standards;
2. Assure Plan compliance with applicable DNR water quality standards and adoption by required local government units;

Plan Update Project Budget

The budget projection for Phase I of the Plan update project is estimated to be approximately \$15,000.00. This projection does not include in-kind contributions of staff time provided by the City of Beloit or the Town of Beloit. The City and Town will also provide additional technical resources and pertinent information (i.e. access to staff, plant loadings, plant capacity, and collection system information).

The Plan update process will be coordinated by the Rock County Planning, Economic & Community Development Agency, with assistance from the Rock County Environmental Health Department. Qualified City of Beloit and Town of Beloit staff representatives will review all technical work tasks. Additionally, the Policy Advisory (tentative) and Technical Advisory Committees will review all project findings and recommendations.

I trust this information satisfies the DNR criteria for requesting grant funds for the update of the City of Beloit and Town of Beloit Area-wide Water Quality Management Plan. If you should have any questions, do not hesitate to contact me. Thank you very much.

Sincerely,

Richard G. Cannon, P.E.
Rock County Planning, Economic & Community Development Agency

cc: Lisa Helmuth, Wisconsin Department of Natural Resources
Fran Keally, Wisconsin Department of Natural Resources

Enclosure

City of Beloit and Town of Beloit Area-wide Water Quality Management Plan Update: Request For Incremental Funding 2012-2013

Date: February 1, 2012

Proposal Prepared By: Rock County Planning, Economic & Community Development Agency
51 South Main Street
Janesville, Wisconsin 53545
(608) 757-5587 – phone
(608) 757-5586 – fax
planning@co.rock.wi.us
www@co.rock.wi.us

Grant Period: 2012 - 2013

Amount Requested: \$15,000 For Phase I (January 1, 2012 – December 31, 2012)
\$25,000 For Phase II (January 1, 2013 – December 31, 2013)

Lead Agency: Rock County Planning, Economic & Community Development Agency
51 South Main Street
Janesville, Wisconsin 53545
(608) 757-5587 – phone
(608) 757-5586 – fax
planning@co.rock.wi.us
www@co.rock.wi.us

Project Description:

1. PLAN OVERVIEW

The original Beloit Metropolitan Sewer Service Plan, covering the City of Beloit and the surrounding urbanized area, was produced in 1986 and subsequently updated in the late 1990s. Due to a number of significant changes to the area's overall urbanized landscape, the Plan has become outdated. Because the previous Plan update was conducted over a decade ago, the two urban area sewer service providers in the area, the City of Beloit and the Town of Beloit, together with Rock County, have concluded that it is necessary to update the Plan at this time.

It is the intention of the Rock County Planning, Economic & Community Development Agency and the Rock County Environmental Health Department to work cooperatively with both Beloit urbanized area sewer service providers and each of the area's affected units of government in order to produce this Plan update. Therefore this request is made so that Wisconsin Department of Natural Resources (DNR) funds can be made available through their application process.

2. PLAN AMENDMENT HISTORY

The first Beloit Metropolitan Sewer Service Plan amendment was performed in 1996. This amendment adjusted the City of Beloit's Sewer Service Area boundaries by taking into consideration the addition of a residential subdivision development, proposed for the City of Beloit's northwest side. The second Plan amendment performed in 2007, made slight modifications to the actual sewer service provided to a number of Town of Beloit and City residents in a limited geographic area adjacent to the Rock River. Lift station operations within the current Plan boundaries were also addressed in the second amendment.

3. PARTICIPATING LOCAL UNITS of GOVERNMENT

The City of Beloit, along with the Town of Beloit, Town of Turtle, and Town of Rock are the local units of government that will be directly affected by the Plan updates. Because the Rock County Planning, Economic & Community Development Agency has been Rock County's overall urbanized sewer service area review agency, the Agency will coordinate the Plan update process. When applicable, the aforementioned local units of government previously will provide pertinent data and technical assistance throughout the process.

4. WASTEWATER TREATMENT FACILITIES AND SANITARY DISTRICTS

Two sanitary sewer system providers comprise the project area, the City of Beloit and Town of Beloit. This Plan update will address both systems.

The City of Beloit operates its Water Pollution Control Facility at 555 Willowbrook Road, located in the City. According to the City, this facility was commissioned in November of 1991 and uses advanced activated sludge technology. The system is capable of processing up to 11 million gallons of wastewater per day, however it currently treats an average of approximately 3.5 million gallons a day. This facility is required to meet several National Pollution Discharge Elimination System (NPDES) permit criteria including:

- Biochemical Oxygen Demand
- Total Suspended Solids
- Phosphorus
- Ammonia
- Chlorine Residual
- Fecal Coliform

The Town of Beloit's Wastewater Treatment Plant Facility is located at 3629 S. Walters Road. This facility was built in 1969 and processes wastewater from the Town of Beloit and portions of the Town of Rock. This facility has operators certified by the State of Wisconsin in wastewater treatment activities.

Initially, this facility had a treatment capacity of 350,000-gallons of wastewater per day. In 1979, the Town more than doubled this facility's processing capability by adding a 650,000-gallon per day unit, making the total facility capacity 1,000,000-gallons per day. In 2003, a 750,000-gallon sludge storage tank along with a radio telemetry alarm system and new pre-treatment equipment were added.

5. GEOGRAPHIC INFORMATION SYSTEM (GIS) PERSONNEL

- a. Matthew Wesson - Rock County Environmental Health Department
- b. Adam Elmer – Rock County Environmental Health Department
- c. Wade Thompson – Rock County Planning, Economic & Community Development Agency

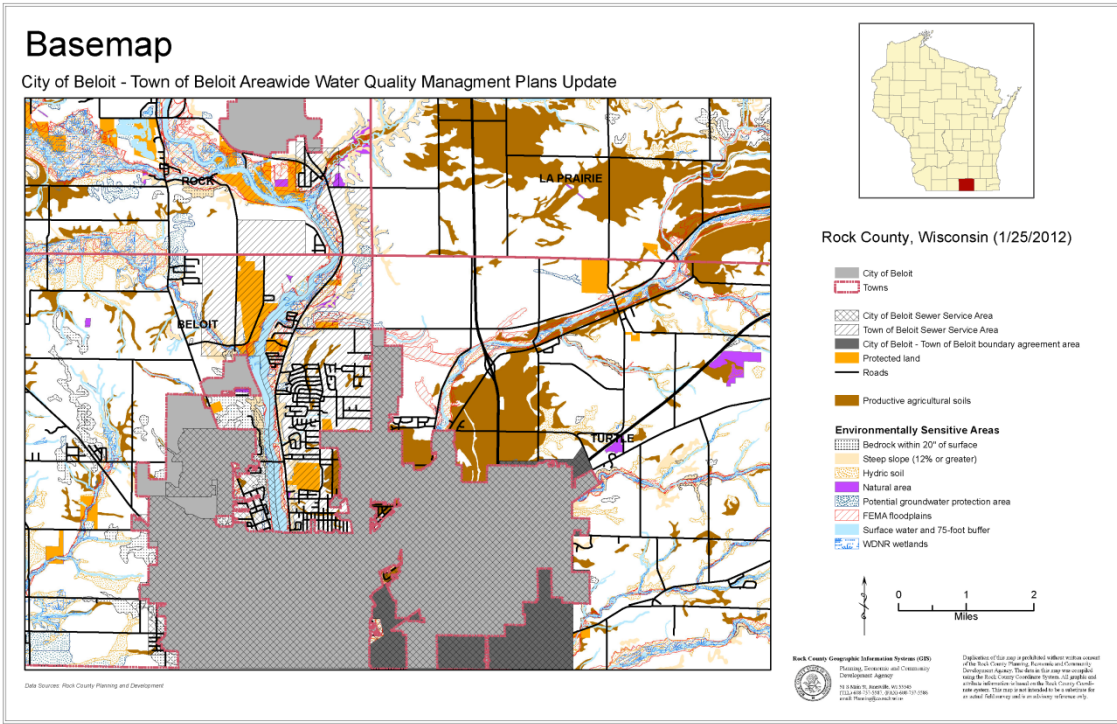
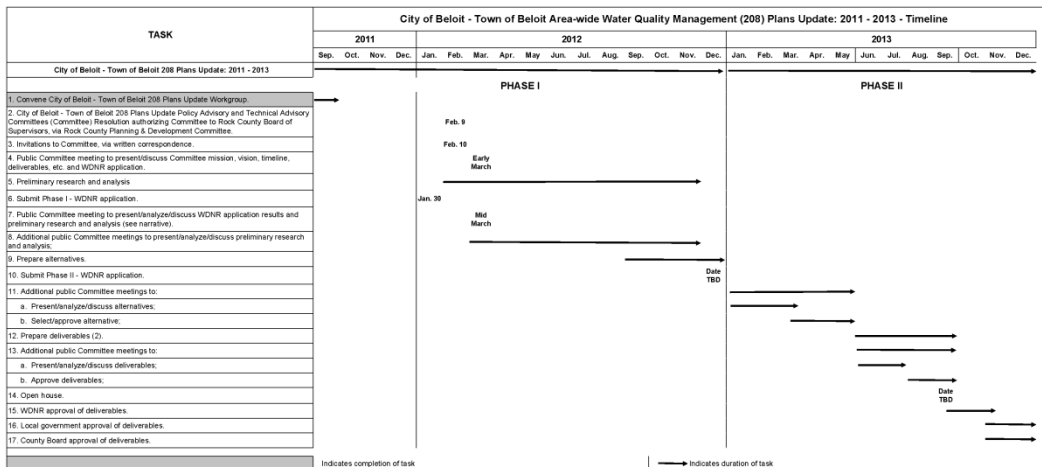
6. PROPOSED PROJECT POLICY ADVISORY AND TECHNICAL ADVISORY COMMITTEE

The Rock County Planning, Economic & Community Development Agency is currently in the process of formulating two committees to oversee the plan updates. A Policy Advisory Committee (tentative), predominately comprised of elected/appointed officials from the participating local governmental units will establish the appropriateness of the system service boundaries and any necessary changes to existing service coverage limits. In addition a Technical Advisory Committee, comprised of staff from these same local governmental units will coordinate and review all data collection and analytical activities needed to perform the updates. Committee membership is proposed as follows and subject to approval by the participating local units of government:

<u>Policy Advisory Committee (tentative)</u>	<u>Technical Advisory Committee</u>
<p><u>City of Beloit (Both Plan Updates)</u></p> <ul style="list-style-type: none">1. City Council President2. City Manager3. Community Development Director4. Public Works Director/City Engineer	<p><u>City of Beloit (Both Plan updates)</u></p> <ul style="list-style-type: none">1. Public Works Director/City Engineer2. Wastewater Treatment Facility Supervisor3. Project Engineer
<p><u>Town of Beloit (Both Plan Updates)</u></p> <ul style="list-style-type: none">1. Board Chair2. Administrator3. Planning Commission Chair4. Public Works Director	<p><u>Town of Beloit (Both Plan updates)</u></p> <ul style="list-style-type: none">1. Public Works Director2. Wastewater Treatment Facility Supervisor3. Project Engineer
<p><u>Town of Turtle (City of Beloit Plan Update only)</u></p> <ul style="list-style-type: none">1. Board Chair2. Planning Commission Chair	<p><u>Town of Turtle (City of Beloit Plan update only)</u></p> <ul style="list-style-type: none">1. Technical Representative
<p><u>Town of Rock (Town of Beloit Plan Update only)</u></p> <ul style="list-style-type: none">1. Board Chair2. Planning Commission Chair	<p><u>Town of Rock (Town of Beloit Plan update only)</u></p> <ul style="list-style-type: none">1. Technical Representative
<p><u>Rock County (Both Plan updates)</u></p> <ul style="list-style-type: none">1. Board Supervisor2. Board Supervisor	<p><u>Rock County (Both Plan updates)</u></p> <ul style="list-style-type: none">1. <u>Planning, Economic & Community Development Agency</u><ul style="list-style-type: none">a. Directorb. Engineerc. Planner2. <u>Environmental Health Department</u><ul style="list-style-type: none">a. Directorb. Sanitarian

7. PROJECT TIMELINE

The Plan update process, as proposed, will have two separate phases, Phase I and Phase II. Phase I will concentrate on fact-finding, data collection, a thorough review of the existing service areas and capabilities, and creation of a data layer for the Town of Beloit Sewer System, detailing sanitary service main, manhole and lateral locations. Phase II will consist of determining the need for making any pertinent adjustments to the current sewer system boundaries in order to necessitate water quality protection, public health, and safety.



APPENDIX E, Chapter NR 121

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DEPARTMENT OF NATURAL RESOURCES

NR 121.03

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Chapter NR 121

AREAWIDE WATER QUALITY MANAGEMENT PLANS

NR 121.01	Purpose.	NR 121.07	Procedures for approval of areawide water quality management plans and plan revisions for designated areas of the state.
NR 121.02	Applicability.	NR 121.08	Procedures for adoption and revision of areawide water quality management plans for nondesignated areas of the state.
NR 121.03	Definitions.	NR 121.09	Statewide water quality advisory committee.
NR 121.04	Structure of the state water quality management plan.		
NR 121.05	Content of areawide water quality management plans.		
NR 121.06	Designation of areawide water quality planning areas and agencies.		

NR 121.01 Purpose. Under the authority of ss. 281.11, 281.12, 281.13, 281.15, 281.17 to 281.20, and 283.83, Stats., this chapter establishes regulations specifying policies, procedures, and requirements for Wisconsin's areawide water quality planning process. This process will result in the preparation throughout the state of areawide plans for managing the quality of waters of the state, ground and surface, public and private, including consideration of the relationship of water quality to land and water resources and uses. Under the above state statutory authority, the department of natural resources has the responsibility for the general supervision of this continuing water pollution control planning process. In areas of the state designated by the governor, the preparation of areawide water quality management plans is the responsibility of designated areawide water quality planning agencies. In the remaining areas of the state, the department will prepare areawide water quality management plans. The purpose of this planning process is to systematically evaluate alternative means of achieving state and federal water quality goals and related standards. This planning process integrates consideration of both the technical measures for water pollution abatement and the management arrangements necessary for implementing abatement measures. Public participation will be provided for throughout plan development.

History: Cr. Register, January, 1979, No. 277, eff. 2-1-78; am. Register, August, 1981, No. 308, eff. 9-1-81; corrections made under s. 13.92 (4) (b) 7., Stats., Register March 2011 No. 663.

NR 121.02 Applicability. This chapter is applicable to areawide water quality management plans as prepared by both the state and designated areawide water quality planning agencies.

History: Cr. Register, January, 1979, No. 277, eff. 2-1-79.

NR 121.03 Definitions. (1) "Areawide water quality management plan" or areawide waste treatment management plan means a plan for managing, protecting and enhancing groundwater and surface water quality which considers the interrelationship of water quality and land and water resources on an areawide basis (hydrologic, political, or other).

(2) "Areawide water quality management plans for designated areas" means areawide water quality management plans prepared by agencies designated by the governor in areas of the state similarly designated.

(3) "Areawide water quality management plans for nondesignated areas" means areawide water quality management plans prepared by the department for all areas of the state not designated by the governor.

(4) "Best management practices" as defined in s. 281.65 (2) (a), Stats., means practices, techniques or measures, identified in areawide water quality management plans, which are determined to be the most effective, practicable means of preventing or reducing pollutants generated from nonpoint sources to a level compatible with water quality goals.

(5) "Cost-effectiveness analysis" means a systematic comparison of alternative means of meeting state water quality standards, effluent limitations or other treatment standards in order to

identify the alternative which will minimize the total resources costs over the planning period. These resources costs include monetary costs and environmental as well as other non-monetary costs.

(6) "Critical water quality conditions" means those ambient water conditions upon which the most stringent water quality effluent requirements are based.

(7) "Department" means the department of natural resources.

(8) "Designated management agency" means any agency designated in an areawide water quality management plan having responsibility for implementing specific plan recommendations. This may be done through direct activities of the designated management agency or through delegation to other agencies or units of government.

(9) "Effluent limitation" as defined in s. 283.01 (6), Stats., means any restriction established by the department, including schedules of compliance, on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into the waters of this state.

(10) "Point source", as defined in s. 283.01 (12), Stats., means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft from which pollutants may be discharged either into the waters of this state or into a publicly owned treatment works. Point source shall not include diffused surface drainage or any ditch or channel which serves only to intermittently drain excess surface water from rain or melting snow and is not used as a means of conveying pollutants into waters of the state. Point source shall not include uncontrolled discharges composed entirely of storm runoff when these discharges are uncontaminated by any industrial or commercial activity, unless the particular storm runoff discharge has been identified by the department as a significant contributor of pollution.

(11) "Priority watershed" means a watershed of manageable size, delineated in the areawide water quality management plan and selected according to the procedures specified in s. NR 121.07.

(12) "Public participation process" means those activities developed for involving individual members of the public, local governmental officials, and interest groups in the areawide water quality management planning process. These activities may include: the dissemination of information to the public including plan documents and summaries in lay terms, outreach activities to identify interested members of the public, the actual involvement of the public in the decision-making process which leads to the preparation and implementation of an areawide water quality management plan, and response to the public on how their input was used. This process normally includes both public meetings and public informational hearings.

(13) "Nonpoint source" as set forth in s. 281.65 (2) (b), Stats., means a land management or use activity contributing to runoff,

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seepage or percolation; and are sources which are not defined as a point source under s. 283.01 (12), Stats.

(14) "Residual wastes" means waste materials resulting from the treatment of wastes or wastewater.

(15) "Sewer service area" means that area presently served and anticipated to be served by a sewage collection system.

(16) "Total maximum daily load" means the amount of pollutants specified as a function of one or more water quality parameters, that can be discharged per day into a water quality limited segment and still insure attainment of the applicable water quality standard. There are 4 components to the total maximum daily load: point source allocation, nonpoint source allocation, reserve capacity and margin of safety.

(17) "Waste load allocation" means the assignment of a portion of the total maximum daily load to each of the discharges to a water quality limited segment, such that the summation of these individual loadings does not exceed the total maximum daily load.

(18) "Water pollution", as defined in s. 283.01 (14), Stats., means man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of water.

(19) "Water quality standards" means standards established by the department pursuant to s. 281.15, Stats., of the physical, chemical or biological characteristics or both of a water which must be maintained to make it suitable for specified uses.

(20) "Water quality limited segment" means any area or portion of a stream which will not meet the established water quality standard with application of only categorical effluent limitations to all point sources.

(21) "Watershed" means a hydrologically related land unit delineated for the purpose of instituting water quality management activities. Generally, the maximum size of a watershed should not exceed 200,000 acres.

History: Cr. Register, January, 1979, No. 277, eff. 2-1-79; am. (1), (19) and (20), r. and recr. (6), r. (10), renum. (11) and (12) to be (10) and (11), renum. (13) to be (12) and am., cr. (13), Register, August, 1981, No. 308, eff. 9-1-81; corrections in (4), (9), (10), (11), (13), (19), (19) made under s. 13.92 (4) (b) 7., Stats., Register March 2011 No. 663.

NR 121.04 Structure of the state water quality management plan. (1) The state continuing process required under s. 283.83, Stats., consists of the development of, and regular review and revision of the state water quality management plan.

(2) The state water quality management plan consists of:

(a) Areawide water quality management plans for areas designated by the governor and prepared by agencies similarly designated.

(b) Areawide water quality management plans for nondesignated areas prepared by the department for the remainder of the state.

(c) A document describing the state's areawide water quality management planning process. This document shall describe the interrelationship among the various elements in the planning process. These elements include:

1. Areawide water quality management plans for designated and nondesignated areas of the state.

2. Topical studies which analyze water quality policies or issues of statewide concern.

3. Procedures for intergovernmental cooperation.

4. Procedures and mechanisms for plan implementation including:

a. Water quality standards and procedures for their revision.

b. Effluent limitations and waste load allocations required to meet water quality standards.

c. An inventory and priority ranking of wastewater treatment plant construction needs for the purpose of distributing state and federal grant funds.

d. Controls for the disposition of residual wastes from wastewater treatment processes.

e. Best management practices for nonpoint sources of water pollution.

5. Procedures for plan revision.

6. Procedures for public participation.

History: Cr. Register, January, 1979, No. 277, eff. 2-1-79; am. (2) (c) 1., Register, August, 1981, No. 308, eff. 9-1-81; correction in (1) made under s. 13.92 (4) (b), Stats., Register March 2011 No. 663.

NR 121.05 Content of areawide water quality management plans. (1) Subject to sub. (2), the following elements shall be included in each areawide water quality management plan prepared or approved by the department.

(a) *Planning area boundaries.* The delineation in map form of the area for which the plan is being prepared.

(b) *Water quality assessment.* An assessment of existing and potential water quality problems within the planning area including a general assessment of both point and nonpoint sources of pollution contributing to the problems.

(c) *Inventories and forecasts.* 1. An inventory of municipal and industrial source of pollutants.

2. Current demographic and economic growth data.

3. Population forecasts for 20 years in 5-year increments developed in the following manner:

a. The state population forecast for the state water quality management plan shall be consistent with that generated by the Wisconsin department of administration (DOA) and with the forecast provided by the U.S. department of commerce, bureau of economic analysis (BEA).

b. Single county forecasts prepared by multi-county regional planning agencies (established in s. 66.0309, Stats.) for the purpose of areawide water quality management planning shall be consistent with the range of the regional forecast generated by DOA. Single county forecasts prepared by single county planning agencies shall be expressed within the range of the county forecast generated by DOA. Single county forecasts inconsistent with the range of DOA regional forecasts and single family [county] forecasts falling outside of the range provided by DOA may be used if special approval is obtained from the natural resources board.

Note: Due to an apparent error, "family" was substituted for "county" in Natural Resources Board Order No. WQ-55-80, which amended subd. 1. b.

c. The population forecasting methodology used by designated regional or county planning agencies to apportion county forecasts to minor civil divisions (MCD) and individual sewer service areas shall be consistent with standards developed by DOA. If these agencies do not prepare MCD forecasts, the department will request that DOA do so. If DOA chooses not to prepare MCD forecasts, the department will do so.

4. Existing and projected land use patterns including the delineation of sewer service areas as described in par. (g).

(d) *Water quality standards.* Applicable state water quality standards and any suggested revision of such water quality standards.

(e) *Total maximum daily loads.* For each water quality limited segment, the total allowable maximum daily load of pollutants during critical water quality conditions for each specific water quality criterion being violated or expected to be violated.

(f) *Waste load allocations.* For each water quality limited segment, the individual load allocation for point sources of pollutants for the 5-year period following plan preparation.

(g) *Nonindustrial wastewater treatment and collection system plan.* 1. The most cost-effective regional wastewater systems for all urban areas shall be identified over a 20-year planning period based upon an analysis of alternative waste treatment system configurations. Wherever possible, applicable recommendations of approved facility plans shall be used to determine the urban area's treatment needs. This analysis shall be consistent with s. NR

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110.09, and shall include a cost-effectiveness analysis of regional versus individual treatment plants for the outlying areas including subsurface waste disposal systems. Water quality and other environmental impacts shall be considered.

2. Sewage collection system needs shall be identified through the delineation of a sewer service area for existing and proposed treatment systems for the 20-year planning period such that:

a. The sewer service area is determined in such a fashion as to promote cost-effective and environmentally sound waste collection and treatment.

b. The sewer service areas are delineated based on a 20-year population forecast approved by the department, and municipally approved population density standards.

c. Major areas unsuitable for the installation of waste treatment systems because of physical or environmental constraints are to be excluded from the service area. Areas to be considered for exclusion from the sewer service area because of the potential for adverse impacts on the quality of the waters of the state from both point and nonpoint sources of pollution include but are not limited to wetlands, shorelands, floodways and floodplains, steep slopes, highly erodible soils and other limiting soil types, ground-water recharge areas, and other such physical constraints.

d. Ten-year service area boundaries may also be included in addition to the 20-year sewer service boundaries.

3. The plan shall include criteria for the construction of future treatment systems within the areawide planning area. These criteria shall be consistent with, but may be more specific or restrictive than those contained in s. NR 110.08 (5), if warranted by regional and local considerations.

4. For nondesignated areas of the state, a detailed identification of the regional waste treatment system, including the delineation of sewer service areas will be carried out for selected urban areas within standard metropolitan statistical areas and for urban areas with a population of over 10,000.

a. The preparation of the plan will be carried out if possible by a local planning agency under contract with the department.

b. A local policy advisory committee made up of representatives of the various local units of government in the planning area shall be established, or an existing body used, to assist the department in the preparation of the plan and to act in an advisory role to the department in matters concerning the implementation of the plan.

(h) *Industrial waste treatment system needs.* The anticipated industrial point source waste load reductions required to attain and maintain applicable water quality standards and effluent limitations for at least a 20-year planning period.

(i) *Nonpoint source control needs.* 1. The best management practices needed to produce a basic level of control of nonpoint source of pollutants throughout the planning area shall be identified and evaluated. Watersheds will be identified in the plan and the general water quality problems for each assessed.

2. Priority watershed plans shall be prepared for [on] a priority basis by the department and applicable designated agencies. The contents of priority watershed plans are described in s. NR 120.08.

Note: Due to an apparent error or "for" was substituted for "on" in Natural Resources Board Order No. WQ-55-80, which amended subd. 2.

(j) *Residual waste control needs.* An identification of the necessary controls to be established over the disposition of residual wastes.

(k) *Land disposal needs.* An identification of the necessary controls to be established for the disposal of pollutants on land or in a subsurface excavation site.

(l) *Target abatement dates.* Target abatement dates or schedules of compliance for all significant dischargers, nonpoint source control measures, residual and land disposal controls and storm-water system needs.

(m) *Recommended regulatory programs.* Recommended regulatory programs needed to implement the state water quality management plan.

(n) *Designated management agencies.* The identification of those agencies recommended for designation to carry out the provisions of the areawide plan.

(o) *Environmental, social, economic impact.* An assessment of the environmental, social and economic impacts of carrying out specific significant recommendations of the plan.

(2) The department may waive inclusion of any of these elements upon a determination by the department that special conditions exist in the planning area which preclude their inclusion or that financial resources are not adequate to allow their inclusion.

History: Cr. Register, January, 1979, No. 271, eff. 2-1-79; am. (1) (intro.) (a), (c) 3.b. and 4., (e), (f), (i) 2., (n) and (2); r. and recr. (1) (g), Register, August, 1981, No. 308, eff. 9-1-81; correction in (1) (c) 3. b. made under s. 13.92 (4) (b) 7., Stats., Register March 2011 No. 663.

NR 121.06 Designation of areawide water quality planning areas and agencies. (1) As the need arises, the department shall recommend that the governor designate areawide planning areas which as a result of urban and industrial concentrations or other factors have substantial and complex water quality control problems.

(2) Within each of these planning areas the department shall recommend to the governor for designation a single agency capable of developing effective areawide water quality management plans. Each recommended planning agency shall:

(a) Be either a regional planning commission established under s. 66.0309, Stats., or be a representative organization whose membership shall include elected officials of local governments or their designees, having jurisdiction in a designated areawide water quality management planning area.

(b) Demonstrate substantial local support for designation through resolutions from local units of government deemed by the department to be critical to the successful preparation and implementation of an areawide water quality management plan.

(c) Demonstrate the technical capability to complete the plan in a timely manner.

(3) The department may recommend that the governor withdraw or modify the designation of a designated agency or designated area or both when a compelling need for such change has been demonstrated. Prior to making such a recommendation to the governor, the department shall, conduct a public participation process, including at a minimum a public hearing in the affected area.

History: Cr. Register, January, 1979, No. 277, eff. 2-1-79; am. (2) (intro.) and (a) and (3), Register, August, 1981, No. 308, eff. 9-1-81; correction in (2) (a) made under s. 13.92 (4) (b) 7., Stats., Register March 2011 No. 663.

NR 121.07 Procedures for approval of areawide water quality management plans and plan revisions for designated areas of the state. (1) Review and approval of areawide water quality management plans for designated areas:

(a) The department shall review and approve or disapprove each areawide water quality management plan and shall make recommendations to the governor as to the certification of all or parts of each plan.

(b) To receive departmental approval areawide water quality management plans for designated areas must have been subject to a public participation process, approved by the department including at a minimum, a public hearing.

(2) Review and approval of 5-year updates to areawide water quality management plans for designated areas:

(a) The department shall reevaluate the approval status of each areawide water quality management plan for designated areas at least every 5 years.

1. The first such reevaluation will be completed no later than December 31, 1987.

Unofficial Text (See Printed Volume). Current through date and Register shown on Title Page.

2. Continued or renewed approval shall be granted only to plans, or portions thereof, upon a determination by the department that the plan continues to meet the requirements of this chapter.

(b) Upon reevaluation of the approval status of the plans as described in par. (a), the department shall approve the plan subject to the approval procedures described in sub. (1) (a) and (b).

(3) Review and approval of revisions to areawide water quality management plans for designated areas:

(a) The department may approve on an annual basis, or where expressed procedures are established between the department and a designated planning agency, revisions which incorporate new information or amendments to an approved areawide water quality management plan.

(b) Approval of plan revisions may be subject to a public participation process.

(4) Disapproval of previously approved areawide water quality management plans or plan elements:

(a) The department may disapprove or otherwise modify any previously approved areawide water quality management plan or plan element if such action is deemed necessary to reflect state law or rules or changes therein, or where the department finds the plan or plan element conflicts with the department's responsibility to protect, maintain, and improve the quality and management of the waters of the state, ground or surface, public and private; or where the plan or plan element is found otherwise not to be in the public interest.

(b) Any disapproval or modification of a previously approved areawide water quality management plan or plan element by the department shall include a public participation process including at minimum a public hearing.

History: Cr. Register, January, 1979, No. 277, eff. 2-1-79; am. (1) and (2), cr. (3) and (4), Register, August, 1981, No. 308, eff. 9-1-81.

NR 121.08 Procedures for adoption and revision of areawide water quality management plans for nondesignated areas of the state. (1) Adoption of areawide water quality management plans for nondesignated areas:

(a) During development and prior to formal adoption, areawide water quality management plans for nondesignated areas or portions thereof shall be subject to a public participation process including, at a minimum public hearing.

(b) Each areawide water quality management plan for a nondesignated area, or portion thereof, shall be submitted to the governor for certification as the adopted areawide water quality management plan for that portion of the state.

(2) Review and approval of 5-year updates to areawide water quality management plans for nondesignated areas:

(a) Areawide water quality management plans for each nondesignated area shall be subject to a major review and update at least every 5 years. The first such review and update of areawide water quality management plans for all nondesignated areas will be completed no later than December 31, 1987.

(b) Five year plan updates shall be subject to the public participation process and adoption procedures as described in sub. (1).

(3) Revisions to areawide water quality management plans for nondesignated areas:

(a) The department may revise, as is necessary, areawide water quality management plans for nondesignated areas.

(b) Plan revisions by the department may be subject to a public participation process.

History: Cr. Register, January, 1979, No. 277, eff. 2-1-79; am. (1) and (2), cr. (3), Register, August, 1981, No. 308, eff. 9-1-81.

NR 121.09 Statewide water quality advisory committee. (1) The department shall form a statewide water quality advisory committee composed of representatives of federal, state and regional organizations, agencies and units of government, public interest groups, groups with a special economic interest and private citizens.

(2) The department shall inform the committee of ongoing and proposed water quality planning and management activities and policy issues of statewide concern.

(3) The committee shall advise the department on water quality management issues of statewide concern.

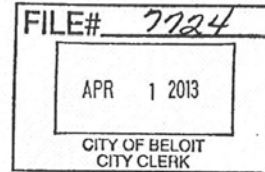
(4) The statewide water quality advisory committee shall include, at a minimum, representatives of the following:

- (a) U.S. environmental protection agency
- (b) U.S. department of agriculture
- (c) U.S. geological survey
- (d) U.S. army corps of engineers
- (e) Wisconsin assembly environmental resources committee
- (f) Wisconsin senate agriculture and natural resources committee
- (g) Wisconsin department of agriculture, trade and consumer protection
- (h) Wisconsin department of transportation
- (i) Wisconsin department of administration
- (j) Wisconsin board of soil and water conservation districts
- (k) University of Wisconsin-extension
- (l) Wisconsin department of natural resources
- (m) Wisconsin department of development
- (n) Wisconsin department of health and social services
- (o) Southeastern Wisconsin regional planning commission
- (p) Dane county regional planning commission
- (q) Fox valley water quality planning agency
- (r) Rock river task force
- (s) Upper Wisconsin river task force
- (t) Lake Michigan policy advisory committee
- (u) Southwest Wisconsin policy advisory committee
- (v) Northwest Wisconsin policy advisory committee
- (w) Public interest groups
- (x) Groups with a special economic interest
- (y) Private citizens
- (z) East central Wisconsin regional planning commission
- (za) Brown county planning commission
- (zb) Wisconsin department of industry, labor and human relations
- (zc) Agricultural producer groups

History: Cr. Register, January, 1979, No. 277, eff. 2-1-79; am. (1) and (4), Register, August, 1981, No. 308, eff. 9-1-81.

APPENDIX F, Wellhead Protection Ordinance ~~No.~~ 3483

Only the first page of the wellhead protection has been attached in addition to a water system map.



SUBSTITUTE AMENDMENT NO. 2

ORDINANCE NO. 3483

AN ORDINANCE CREATING SECTION 5-800 OF THE ZONING ORDINANCE, ARTICLE V, CHAPTER 19 OF THE CODE OF GENERAL ORDINANCES OF THE CITY OF БЕЛОIT, TO BE KNOWN AS THE WELLHEAD PROTECTION ORDINANCE

The City Council of the City of Beloit, Rock County, Wisconsin, do ordain as follows:

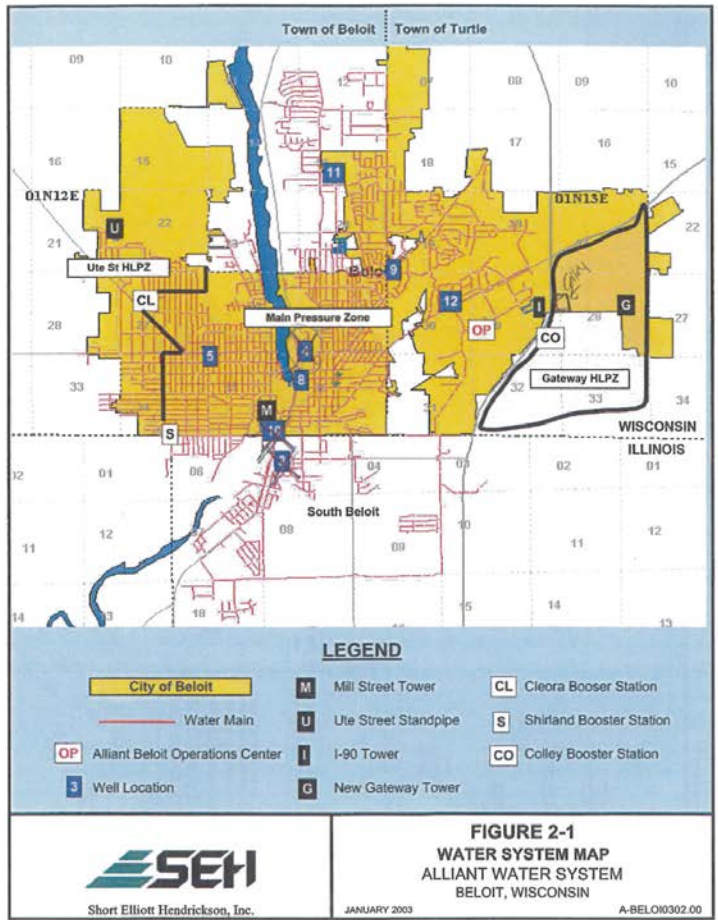
Section 1. Section 5-800 of the Zoning Ordinance, Article V, Chapter 19 of the Code of General Ordinances of the City of Beloit, is hereby created to read as follows:

“5-800 WELLHEAD PROTECTION

5-801 PURPOSE AND AUTHORITY.

- a. Purpose. The residents of the City of Beloit depend on groundwater for a safe drinking water supply. Certain land use practices and activities can seriously threaten or degrade groundwater quality. The purpose of this Wellhead Protection Ordinance is to institute land use regulations and restrictions protecting the municipal water supply of the City of Beloit (“City”) and promote the public health, safety and general welfare of the residents.
- b. Authority. Statutory authority of the City to enact these regulations was established by the Wisconsin legislature in Wis. Stats. 62.23(7)(a) and (c). Under these statutes, the City has the authority to enact this ordinance to encourage the protection of groundwater resources.

5-802 APPLICATION OF REGULATIONS. The regulations specified in this Wellhead Protection Ordinance shall apply to those areas of the City that lie within the Five-Year Time of Travel recharge area for municipal water supply wells as defined in section 5-805, and are in addition to the requirements in the underlying zoning district, if any. If there is a conflict between this ordinance and the underlying zoning ordinance, the more restrictive provision shall apply.



Z:\P\Beloit\Beloit Proposal\Figure 2-1.sxd\Fig 2-1P

Appendix G, Rock County Land Use Classification Categories

Rock County Land Use Inventory 2010 – Classification Categories

1000 PRIVATE – Includes any use on land owned by an individual(s) or non-profit or corporate interest.

- **1100 Residential***

- 1110 Single-Family – Includes structures serving as residences for single households.
- 1120 Multi-Family – Includes structures serving as residences for multiple households.

* All Residential land uses shall also have a “Density” classification, indicating residential land use density, to include:

- High-Density – Any Multi-Family, or any Single-Family each on three contiguous Rock County tax parcels, with each parcel five acres or smaller in size. (Streets shall not interrupt contiguity.)
- Low-Density – Any Single-Family on a layout of Rock County tax parcels differing than that identified in the “High-Density” classification.

- **1200 – 1300 Enterprise**

- 1210 Office and Administration – Includes office and administration structures and facilities, not to include any associated with any other Rock County Land Use Inventory – Classification Category.
- 1220 Education – Includes nursery, primary, and secondary schools, and professional and vocational school, college, and university campuses.
- 1230 Health and Medical – Includes hospitals, clinics, outpatient facilities, sanitariums, convalescent homes, and nursing homes.
- 1240 Dining – Includes restaurants, cafes, and coffee shops.
- 1250 Retail – Includes stores, service shops, gas stations, and implement, building, and lumber yards.
- 1260 Transient Lodging – Includes hotels and motels, not to include any intended for resort or extended lodging.
- 1270 Manufacturing and Processing – Includes general manufacturing, lumber and wood product manufacturing, petroleum refining and related manufacturing, and food processing.
- 1280 Warehousing and Distribution – Includes warehouses, storage units, auto junkyards, and distribution centers.

- 1290 Mining and Logging
 - 1291 Mining – Includes coal mining, crude petroleum and natural gas extraction, stone, sand, or clay quarrying, and slag heaps associated with these uses.
 - 1292 Logging – Includes standard, strip, and patch clearcutting, and selective cutting of woodlands.
- 1300 Agriculture
 - 1301 Cropland – Includes row and/or field crops and those lands normally utilized for said crops left fallow or planted with soil improvement grasses or legumes.
 - 1302 Pasture – Includes grazing of livestock, including cattle, horses, and sheep.
 - 1303 Orchards, Vineyards, and Nurseries – Includes fruits, tree, ornamental plants, sod, seed, and vegetable seedlings production.
 - 1304 Buildings – Includes barns and processing and storage facilities and structures.
- 1310 Utilities and Communication – Includes electricity, natural gas, water, sewage, telephone, telegraph, radio, and television facilities and structures.
- 1320 Recreation – Includes conservation areas, parks, campgrounds, resort lodging, hunting clubs, shooting ranges, golf courses, arenas, convention centers, gymnasiums, ice-skating rinks, and swimming pools.
- 1400 Religion and Cemeteries – Includes places of worship and cemeteries.
- 1500 Transportation
 - 1510 Road – Includes road rights-of-way.
 - 1550 Parking – Includes off-street parking areas not associated with any other Rock County Land Use Inventory – Classification Category.
 - 1560 Rail – Includes rail rights-of-way, tracks, and yards.
 - 1570 Air – Includes airports, airfields, airstrips, tarmacs, passenger and freight terminals, hangars, airport storage and equipment maintenance structures and facilities.
- 1600 Open Space and Vacant* – Includes maintenance and enhancement of ecosystem health or currently devoid of any structures and facilities and intended for a different future land use.
 - 1610 Grasslands – Includes native or turf grass.
 - 1620 Woodlands – Includes contiguous deciduous and/or coniferous vegetation of two acres or greater.
 - 1630 Indeterminate Vegetation – Includes vegetation transitioning from grasslands to woodlands.
 - 1640 Wetlands – Includes soils highly saturated with water.

*All Open Space and Vacant land uses shall also have an "Intended Use" classification indicating the intended future land use, to include:

- Residential
 - Enterprise
 - Religious and Cemeteries
 - Transportation
 - Other
- **1700 Mixed** – Includes any combination of land uses identified in Rock County Land Use Inventory – Classification Categories 1000 – 1640.
 - **1800 Other** – Includes any land use not identified in Rock County Land Use Inventory – Classification Categories 1000 – 1700.

2000 PUBLIC OR QUASI-PUBLIC – Includes any use on land owned by a general or special purpose district, the State of Wisconsin, or the United States of America.

- **2100 Residential**
 - **2110 Single-Family** – Includes structures serving as residences for single households.
 - **2120 Multi-Family** – Includes structures serving as residences for multiple households.

*All Residential land uses shall also have a "Density" classification, indicating residential land use density, to include:

- **High-Density** – Any Multi-Family, or any Single-Family each on three contiguous Rock County tax parcels, with each parcel five acres or smaller in size. (Streets shall not interrupt contiguity.)
 - **Low-Density** – Any Single-Family on a layout of Rock County tax parcels differing than that identified in the aforementioned "High-Density" classification.
- **2200 - 2300 Institutional**
 - **2210 Office and Administration**
 - **2211 General** – Includes executive, legislative, judicial, regulatory, outreach, postal, and military uses, and libraries.
 - **2212 Law Enforcement** – Includes law enforcement stations and headquarters.
 - **2213 Fire Protection** – Includes fire stations.
 - **2214 Corrections** – Includes prisons, jails, and other correctional facilities.
 - **2220 Education** – Includes nursery, primary, and secondary schools, and professional and vocational school, college, and university campuses.
 - **2230 Health and Medical** – Includes hospitals, clinics, outpatient facilities, sanitariums, convalescent homes, and nursing homes.
 - **2240 Landfills and Recycling** – Includes landfills and recycling structures and facilities.

- 2310 Utilities and Communication – Includes electricity, natural gas, water, sewage, telephone, telegraph, radio, and television facilities and structures.
- 2320 Recreation
 - 2321 Conservation – Includes maintenance and enhancement of ecosystem health and passive outdoor recreation uses, including hunting, fishing, and hiking.
 - 2322 Park – Includes active outdoor recreation uses, including playground equipment and ball fields.
 - 2323 Other – Includes campgrounds, resort lodging, hunting clubs, shooting ranges, golf courses, arenas, convention centers, gymnasiums, ice-skating rinks, and swimming pools.
- **2500 Transportation**
 - 2510 U.S. Highway* – Includes road rights-of-way under federal jurisdiction.
 - 2520 State Highway* – Includes road rights-of-way under state jurisdiction.
 - 2530 County Highway* – Includes road rights-of-way under county jurisdiction.
 - 2540 Town Roads* – Includes road rights-of-way under town jurisdiction.
 - 2550 Parking – Includes off-street parking areas not associated with any other Rock County Land Use Inventory – Classification Category.
 - 2560 Rail – Includes rail rights-of-way, tracks, and yards.
 - 2570 Air – Includes airports, airfields, airstrips, tarmacs, passenger and freight terminals, hangars, airport storage and equipment maintenance structures and facilities.

*These Transportation land uses shall also have a “Functional” classification, utilized by the Wisconsin Department of Transportation to identify roads according to their capacity to provide access and/or mobility to users, to include:

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Roads
- **2600 Open Space and Vacant*** – Includes maintenance and enhancement of ecosystem health or currently devoid of any structures and facilities and intended for a different future land use.
 - 2610 Grasslands – Includes native or turf grass.
 - 2620 Woodlands – Includes contiguous deciduous and/or coniferous vegetation of two acres or greater.
 - 2630 Indeterminate Vegetation – Includes vegetation transitioning from grasslands to woodlands.
 - 2640 Wetlands – Includes soils highly saturated with water.

* All Open Space and Vacant land uses shall also have an "Intended Use" classification indicating the intended future land use, to include:

- Residential
 - Institutional
 - Transportation
 - Other
- **2700 Mixed** – Includes any combination of land uses identified in Rock County Land Use Inventory – Classification Categories 2000 – 2440.
 - **2800 Other** – Includes any land use not identified in any Rock County Land Use Inventory – Classification Categories 2000 – 2500.

3000 WATER

- **3100 Water** – Includes rivers, lakes, streams or other surface water features, not to include any Wetlands.