CITY OF WHITEWATER
COMMON COUNCIL AGENDA
Common Council Meeting
Tuesday, August 16, 2011 – 6:30 p.m.
City of Whitewater Municipal Building Community Room
312 W. Whitewater Street Whitewater, Wisconsin

AMENDED AGENDA AS OF 4:22 P.M. 8/15/2011
ADDITION OF CITY MANAGER STAFF REPORT: Emergency Repairs to Well #6

CALL TO ORDER, ROLL CALL, AND PLEDGE OF ALLEGIANCE.

CONSENT AGENDA:

CA-A	Approval of Council Minutes of 7/11/2011 and 8/2/2011.
CA-B	Approval of Payment of Invoices Processed through 8/11/2011.
CA-C	Acknowledgment of Receipt and Filing of the Following: *Park and Recreation Board Minutes of 7/11/11 *Plan Commission Minutes of June, 2011.
CA-D	Expedited approval of the following items, per city staff recommendation:

REPORTS:

City Manager	1) Attendance at Senior Executive Institute Alumni Conference; 2) Community Waste to Energy Project; 3) Proclamation of August as Children's Vision and Learning Month. 4) Proclamation recognizing Children's Vision and Learning Month; 5) Emergency Repairs to Well #6
Finance Director	1) PSC Water Rate Hearing-----August 23
DPW	1) Update on Construction Projects
Library Director	1) Library Building Project Update

HEARING OF CITIZEN COMMENTS. No formal Common Council Action will be taken during this meeting although issues raised may become a part of a future agenda. Participants are allotted a three minute speaking period. Specific items listed on the agenda may not be discussed at this time; however citizens are invited to speak to those specific issues at the time the Council discusses that particular item.

RESOLUTIONS:

R-1	Approval of Amendment to 2011 Salary Resolution Regarding Neighborhood Services Director Position Reclassification to Neighborhood Services Manager (City Manager Request)
R-2	Adoption of Lake Protection Plan (Park & Recreation Director Request)
R-3	Approval of WE Energies Gas Main Easement on North Street (DPW Director Request)
R-4	Authorizing City to Enter into an Inter-Governmental Agreement with Walworth County Concerning the Elkhorn Road Venture, L.L.C. Special Charges. (City Manager Request)

ORDINANCES: First Reading – None.

ORDINANCES: Second Reading – None.

CONSIDERATIONS:

C-1	Appointment of two citizen members to Landmarks Commission (City Manager Request)
C-2	Approval of Contract with GRAEF for Zoning Code Rewrite Project (City Manager Request)
C-3	Approval of Salary adjustment for Interim Neighborhood Services Manager (City Manager Request)
C-4	Discussion regarding City Council Representatives on Neighborhood Services Manager Search and Screen Committee and Possible Appointment of member(s). (City Manager Request)
C-5	Approval of Contract with Jefferson County for 2011 Street Maintenance Program. (DPW

	Director Request)
C-6	Discussion of policy on Downtown Parking Permits and possible direction regarding amendments to the Policy. (Interim Police Chief Request)
C-7	City Manager Intern Presentation of Financial Trend Analysis (City Manager Request)
C-8	Discussion and Possible Direction regarding 2012 City Budget (City Manager Request)
C-9	Councilmember Requests for Future Agenda Items.
C-10	EXECUTIVE SESSION. Adjourn to Executive Session, NOT TO RECONVENE, per Wisconsin Statutes 19.85(1)(c) "Considering employment, promotion, compensation or performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility" Item to be Discussed: 1) Collective Bargaining Strategies.
C-11	ADJOURNMENT

Anyone requiring special arrangements is asked to call the Office of the City Manager / City Clerk at least 24 hours prior to the meeting.

Items denoted with asterisks will be approved on the Consent Agenda unless any council member requests that it be removed for individual discussion.

CITY OF WHITEWATER

WALWORTH AND JEFFERSON COUNTIES, WISCONSIN.

Joint Meeting between Common Council and Community Development Authority

July 11, 2011

The special joint meeting of the Common Council and the Community Development Authority was called to order at 5:30 p.m. on July 11, 2011. COUNCIL MEMBERS PRESENT: Olsen, Binnie, Singer, Kienbaum, Stewart. COUNCIL MEMBERS ABSENT: Butler, Winship. CDA MEMBERS PRESENT: Stewart, Knight, L. Kachel, Henry, Allen, Singer. MEMBERS ABSENT: Miller.

PRESENTATION ON HISTORY OF TIF 4 AND DISCUSSION REGARDING GENERAL ECONOMIC DEVELOPMENT PROGRAMS FOR THE CITY OF WHITEWATER. City Manager Brunner explained that the purpose of the joint meeting was to discuss the future of the economic development program in the City. Brunner indicated that he recently made a decision to appoint current Community Development Authority ("CDA") Coordinator Mary Nimm to the Interim Neighborhood Services Manager position. The change creates a vacancy in the CDA Coordinator position. Brunner believes this is a good time to review how the CDA can proceed in the future. Brunner explained that he has personally served as Economic Development Director for five years.

Council President Singer indicated that in addition to staffing, funding of the CDA also needs to be discussed. City Manager Brunner explained that over the last 15 years, 50% of the funding for the CDA has come from the City's general fund, and 50% of the funding has come from Tax Incremental Financing ("TIF") District 4 funds. It was noted that TIF 4 will no longer be able to fund the CDA budget. Recently TIF 4 was approved as a "distressed" district per State of Wisconsin Statutes. It is anticipated that TIF 4's existence will be extended by four years. City Manager Brunner indicated that if other TIF districts were to develop, some of those funds could be used to fund CDA operations. With the exception of a small amount of development in TIF 6, the other TIF districts have not seen any type of economic development over the last several years.

CDA member Jeff Knight indicated that in 2005, two large parcels with a total equalized value of $11,000,000 were removed from TIF 4. Knight indicated that as a result, an additional $225,000 was added to the tax rolls going to the City. It was noted that properties were removed from the TIF district to enable the City to meet the requirement that not more than 12% of property value can be in TIF districts. Knight indicated that the CDA is no longer in a position to compete for development with other cities as Whitewater cannot offer incentives. Knight insisted that something has to be done to pay down TIF 4 so the CDA can be in a position to solicit development.

Discussion ensued about the possibility of taking some money from the growth in TIF 6 to fund the CDA, but City Manager Brunner indicated that the amount potentially available would not equal the $75,000 previously funded by TIF 4. Brunner indicated that the City has developed a partnership with UW-Whitewater and the Walworth County Economic Development Authority and these areas could be explored for further participation.

CDA member Donna Henry stated that during hard economic times, businesses advertise more and make more effort to work with clients. Henry believes there should be a full time person marketing Whitewater. She stressed that industries are needed here, as many people are out of work. Henry stated that in the last 10 years, no one has expressed serious interest in developing the former Alpha Cast site on

the north end of Jefferson Street. City Manager Brunner indicated that the Alpha Cast site has been remediated and is in the process of receiving final closure.

Council President Singer expressed concerns about sharing positions between entities, indicating that if this is done, Singer wants to be sure the City receives their money's worth out of the position. Singer did not feel that Whitewater has gained much from the Walworth County Economic Development Authority ("WCEDA").

UW-Whitewater Small Business Development Director Bud Gayhart indicated that he had concerns about the current structure of the CDA. Gayhart believes the CDA should be a separate entity, located away from City Hall. Gayhart indicated that an arms-length relationship is necessary. Gayhart acknowledged that economic development activity will be sporadic, but the ability to respond locally would be advantageous. Gayhart believes a Marketing Plan, specifying where attention needs to be focused, must be developed. Gayhart indicated that Whitewater is becoming recognized by others as a model. CDA member Knight indicated that the CDA is already working with the University. Knight recommended that the former CDA Coordinator map out her duties so that they can be reviewed. Her duties will be continued, even though she has been reassigned to another Department. Gayhart agreed that a specific listing of duties would be a tremendous starting point and would establish a baseline. Councilmember Olsen stated that this could be short-term thinking as Nimm is serving as "Interim Neighborhood Services Director" and may not be appointed permanently. Olsen questioned who is managing the CDA right now.

In response to CDA member Allen's question regarding the market for part-time CDA Directors, City Manager Brunner indicated that prospects are available to fill a permanent part time position. CDA Board member Allen approves of the idea of the CDA being a separate entity.

CDA Board member Knight would like to see a CDA Director hired, and for that individual's focus to be on CDA responsibilities. DPW Director Dean Fischer indicated that the CDA must work closely with the City. He noted previous instances where the CDA Director negotiated a deal, *then* came to inform City officials of needs and expenditures. Fischer indicated that City officials need to know what commitments the CDA is making with regard to City budgets *before* the transaction is completed. CDA Board member Knight agreed that good communication is necessary.

CDA Board member Knight stated that after review of numbers, he has done some research regarding the Fairhaven (Prairie Village) project, and that he would like to see the assumptions that were used when this development was being planned. CDA member Lawrence Kachel questioned whether TIF 4 would be distressed if the property shifts had not occurred. CDA Board member Knight repeated that every day we cannot use TIF funds as incentives to get an industry to Whitewater, it is a huge disadvantage to the community. He indicated that development is going to go to a community that can give the prospect a good deal. Knight still has questions on the overlay of TIF 4 over TIF 7. He would like to complete more research on that.

ADJOURNMENT. It was agreed that further discussion regarding the future of the CDA would be forthcoming. It was moved by Olsen and seconded by Stewart to adjourn the meeting. **COMMON COUNCIL**: AYES: Olsen, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: Butler, Winship. **CDA**: AYES: Stewart, Knight, Kachel, Henry, Allen, Singer. NOES: None. ABSENT: Miller. The meeting adjourned at 6:30 p.m.

Respectfully submitted,

Michele R. Smith, City Clerk

CA - A

ABSTRACT/SYNOPSIS OF THE ESSENTIAL ELEMENTS OF THE OFFICIAL ACTIONS OF THE COMMON COUNCIL OF THE CITY OF WHITEWATER, WALWORTH AND JEFFERSON COUNTIES, WISCONSIN.

August 2, 2011.

The regular meeting of the Common Council was called to order at 6:30 p.m. by Council President Singer. MEMBERS PRESENT: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. MEMBERS ABSENT: None. LEGAL COUNSEL PRESENT: Wallace McDonell.

It was moved by Olsen and seconded by Binnie to approve the Council minutes of July 19, 2011 and to acknowledge receipt and filing of the following: Police Department Consolidated Monthly Report for June, 2011; Park and Recreation Board Minutes of May 2, June 6 and June 20, 2011; Report of Manually-Produced Checks for June, 2011; June, 2011 Financial Reports; and Community Development Authority Minutes of June 21, 2011. AYES: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: None.

APPROVAL OF PAYMENT OF INVOICES. It was moved by Olsen and seconded by Binnie to approve payment of invoices in the total sum of $27,507.56. AYES: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: None.

REPORTS. City Manager Brunner reported on the 2012 budget schedule.

SECOND READING OF ORDINANCE AMENDING ELECTION WARD BOUNDARIES PER 2010 CENSUS.

ORDINANCE NO. 1822A
SECOND READING OF AN ORDINANCE AMENDING CHAPTER 1.08 OF THE CITY OF WHITEWATER MUNICIPAL CODE ENTITLED "WARDS"

The Common Council of the City of Whitewater, Walworth and Jefferson Counties, Wisconsin, does hereby ordain as follows:

Chapter 1.08 of the Whitewater Municipal Code is hereby amended as follows:

SECTION 1
1.08.010 Ward Boundaries. The City of Whitewater shall be divided into twelve wards as follows in this chapter.

SECTION 2.
Section 1.08/020 Ward 1, is amended to read as follows: Commencing at the intersection of Newcomb St. and the Walworth/Jefferson County line; thence south on Newcomb St. to its intersection with E. Main St.; thence east on E. Main St. to its intersection with Whitewater Creek; thence southwesterly along the banks of Cravath Lake to the Spring Brook; thence westerly along the Spring Brook to its intersection with S. Franklin St.; thence south on S. Franklin St. to its intersection with the City of Whitewater Municipal boundary line in effect as of 07/19/2011; thence westerly to the intersection of Hwy. 12 and State Road 89; thence continue

northwesterly along Hwy. 12 to its intersection with Janesville St.; thence southwesterly on Janesville St. to the City of Whitewater Municipal boundary line; thence generally easterly along the City of Whitewater Municipal boundary line to its south eastern most point; thence generally northerly along the City of Whitewater Municipal boundary line to its intersection with the Walworth/Jefferson County boundary line; thence westerly along the Walworth/Jefferson County boundary line (point of beginning).

SECTION 3.

Section 1.080.030 Ward 2, is amended to read as follows: Commencing at the Walworth/Jefferson County line intersection with N. Newcomb St. ; thence west along the Walworth/Jefferson County boundary line to its intersection with N. Fremont St.; thence south along N. Fremont St. to its intersection with W. North St.; thence east along North St. to its intersection with N. Jefferson St.; thence south along N. Jefferson St. to its intersection with E. Main St.; thence east along E. Main St. to its intersection with N. Newcomb St.; thence north along N. Newcomb St. to the point of beginning. (Walworth /Jefferson County boundary line and N. Newcomb Street)

SECTION 4

Section 1.080.040 Ward 3, is amended to read as follows: Commencing at the Walworth/Jefferson County boundary line intersection with N. Fremont St.; thence south on N. Fremont St. to its intersection with W. North St.; thence westerly along W. North St. to its intersection with W. Main St.; thence west on W. Main St. to its intersection with N. Prairie St.; thence north along N. Prairie St. to its intersection with the Walworth/Jefferson County boundary line; thence east on the Walworth/Jefferson County boundary line to the point of beginning (Walworth/Jefferson County boundary line and N. Fremont St.)

SECTION 5.

Section 1.08/050 Ward 4, is amended to read as follows: Commencing at the intersection of W. Main St. and S. Prairie St.; thence south along S. Prairie St. to its intersection with Peck St.; thence southeasterly on Peck St. to its intersection with S. Janesville St.; thence southwesterly on Janesville St. to its intersection with U.S. Hwy 12; thence southeasterly on U.S. Hwy. 12 to its intersection with State Road 89; thence easterly to S. Franklin St.; thence northerly on S. Franklin St. to the Spring Brook; thence easterly and northerly along the west shore line of Cravath Lake to Whitewater Creek; thence easterly on E. Main St. to its intersection with N. Jefferson St.; thence northerly on N. Jefferson St. to its intersection with E. North St.; thence westerly on W. North St. to its intersection with W. Main St.; thence westerly on W. Main St. to its intersection with S. Prairie St.(point of beginning).

SECTION 6.

Section 1.08.060 Ward 5, is amended to read as follows: Commencing at the intersection of S. Prairie St. and W. Main St.; thence south along S. Prairie St. to its intersection with Peck St.; thence southeasterly along Peck St. to its intersection with Janesville St.; thence southwesterly along Janesville St. to its intersection with W. South St. ; thence westerly on W. South St. to its intersection with S. Prince St.; thence northerly along S. Prince St. to its intersection with W. Main St.; thence east on W. Main St. to the point of beginning (S. Prairie St. and W. Main St.)

SECTION 7.

Section 1.080.070 Ward 6, is amended to read as follows: Commencing at the intersection of S. Prince St. and W. Main St.; thence south on S. Prince St. to its intersection with W. South St.; thence east on W. South St. to its intersection with S. Janesville St.; thence southwesterly on S. Janesville St./Hwy. 59 to the City limit boundary in effect as of 7/19/2011; thence northwesterly, southwesterly, northerly, northwesterly, westerly, northwesterly, northerly, and easterly, along the City of Whitewater boundary line, to its intersection with W. Main St.; thence southeasterly and easterly along W. Main St. to its intersection with S. Prince St. (to the point of beginning).

SECTION 8.

Section 1.080.070 Ward 7, is amended to read as follows: Commencing at the intersection of the Walworth/Jefferson County boundary line and its intersection with N. Prairie St.; thence south on N. Prairie St. to its intersection with W. Starin Rd.; thence west along Starin Rd to its intersection with N. Tratt St.; thence northwesterly along N. Tratt St. to the Walworth/Jefferson County boundary line; thence east along the Walworth/Jefferson County boundary line to the intersection of N. Prairie St. and the Walworth/Jefferson County boundary line (point of beginning).

SECTION 9.

Section 1.080.080 Ward 8, is amended to read as follows: Commencing at the intersection of the Walworth/Jefferson County boundary line and N. Tratt St./Hwy. N; thence westerly along the Walworth/Jefferson County boundary line to the City of Whitewater Municipal City limits as of 7/19/2011; thence southerly, easterly, northerly, northeasterly and southeasterly along the City of Whitewater municipal boundary line, to its intersection with Hwy. 12 / W. Main St.; thence southeasterly and easterly along W. Main St. to its intersection with Twelfth Place; thence north along Twelfth Place to its intersection with Salisbury Lane; thence easterly along Salisbury Lane to its intersection with N. Hyer Lane; thence northerly along N. Hyer Lane to its intersection with Florence St.; thence easterly along Florence St. to its intersection with Fraternity Lane; thence northerly along Fraternity Lane to its intersection with Carriage Dr.; thence easterly along Carriage Dr. to its intersection with N. Tratt St.; thence north along N. Tratt St. to its intersection with Starin Road; thence northwesterly along Tratt St. to its intersection with Walworth/Jefferson County boundary line;(point of beginning)

Section 10.

Section 1.080.090 Ward 9, is amended to read as follows: Commencing at the intersection of Starin Rd. and N. Prairie St.; thence southeasterly to the intersection of N. Prairie St. and W. Main St.; thence westerly on W. Main St. to its intersection with N. Twelfth Place; thence northerly on N. Twelfth Place to its intersection with Salisbury Lane; thence east on Salisbury Lane to its intersection with N. Hyer Lane; thence north on N. Hyer Lane to its intersection with W. Florence St.; thence east on W. Florence St. to its intersection with Fraternity Lane; thence north on N. Fraternity Lane to its intersection with W. Carriage Dr.; thence easterly on W. Carriage Dr. to its intersection with N. Tratt St.; thence north on N. Tratt St. to its intersection with W. Starin Rd.; thence east on W. Starin Rd. to its intersection with N. Prairie St. (point of beginning).

SECTION 11.

Section 1.080.100 Ward 10, is amended to read as follows: Commencing at the intersection of N. Tratt St. and Blooming Field Dr.; thence northeasterly along N. Tratt St. to its intersection with the City of Whitewater Municipal boundary line in effect as of 07/19/2011; thence west along the City of Whitewater Municipal boundary line to its western most point; thence south along the City of Whitewater Municipal boundary line to its intersection with the Walworth/Jefferson County line boundary line; thence generally easterly, northerly and southerly along the City of Whitewater Municipal boundary line to its intersection with Walton Dr./Hill Crest Dr.; thence generally northerly to the intersection with Walton Dr. and Blooming Field Dr.; thence southwesterly on Blooming Field Dr. to its intersection with N. Tratt St. (to the point of beginning).

SECTION 12.

Section 1.080.110 Ward 11, is amended to read as follows: Commencing at the intersection of the Walworth/Jefferson County boundary line and N. Tratt St.; thence northwesterly on Tratt St. to its intersection with Walton Dr.; thence generally northerly along Walton Dr. to its intersection with Blooming Field Dr.; thence southwesterly along Blooming Field Dr. to its intersection with N. Tratt St.; thence northerly along the City of Whitewater Municipal boundary line in effect as of 07/19/2011; thence easterly, northerly, easterly and southeasterly along the City of Whitewater Boundary line to its intersection with Fremont Rd.; thence northerly along Fremont Rd. to its intersection with the City of Whitewater Municipal boundary line; thence easterly and northerly along the City of Whitewater Municipal boundary line to its intersection with County Road U; thence easterly along County Road U to its intersection with the City of Whitewater Municipal boundary line; thence northerly and easterly along the City of Whitewater Municipal boundary line to its intersection with County Road D; thence southerly along County Road D to its intersection with the City of Whitewater Municipal boundary line; thence generally southerly along the City of Whitewater Municipal boundary line to its intersection with the Walworth/Jefferson County boundary line.

AND

Commencing at the intersection of the City of Whitewater boundary line and the Walworth/Jefferson County boundary line (slightly east of N. Newcomb St./Hwy. 59); thence generally northerly, easterly, and generally southerly along the City of Whitewater boundary line to its intersection with Howard Rd.; thence westerly along the Walworth/Jefferson County boundary line to the point of beginning.

SECTION 13.

Section 1.080.120 Ward 12, is amended to read as follows: Commencing at the intersection of the Walworth/Jefferson County boundary line and Warhawk Dr.; thence north, crossing Stadium Dr., to the northeastern most tip of the Warhawk Dr. semi-circle; thence directly east to its intersection with Fremont Rd.; thence south along Fremont Rd. to its intersection with the Walworth/Jefferson County boundary line; thence westerly along the Walworth/Jefferson County boundary line to the intersection of Warhawk Dr. and the Walworth/Jefferson County line (point of beginning).

Ordinance introduced by Councilmember Olsen, who moved its adoption. Seconded by Councilmember Binnie. AYES: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: None. ADOPTED: August 2, 2011.

Kevin M. Brunner, City Manager Michele R. Smith, City Clerk

SECOND READING OF ORDINANCE AMENDING ELECTION ALDERMANIC DISTRICT BOUNDARIES PER 2010 CENSUS.

ORDINANCE NO. 1823A
SECOND READING OF AN ORDINANCE AMENDING CHAPTER 1.06 OF THE CITY OF WHITEWATER MUNICIPAL CODE ENTITLED "ALDERMANIC DISTRICTS"

The Common Council of the City of Whitewater, Walworth and Jefferson Counties, Wisconsin, does hereby ordain as follows:

Chapter 1.06 of the Whitewater Municipal Code is amended as follows:

SECTION 1:

Section 1.06.020, First District, shall be amended to read as follows: The First Aldermanic District shall consist of Wards 1 and 2.

SECTION 2:

Section 1.06.030, Second District, shall be amended to read as follows: The Second Aldermanic District shall consist of Wards 7 and 8.

SECTION 3:

Section 1.06.040, Third District, shall be amended to read as follows: The Third Aldermanic District shall consist of Wards 3, 4 and 9.

SECTION 4:

Section 1.06.050, Fourth District, shall be amended to read as follows: The Fourth Aldermanic District shall consist of Wards 5 and 6.

SECTION 5:

Section 1.06.060, Fifth District, shall be amended to read as follows: The Fifth Aldermanic District shall consist of Wards 10, 11 and 12.

CA-A

Ordinance introduced by Councilmember Olsen, who moved its adoption. Seconded by Councilmember Binnie. AYES: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: None. ADOPTED: August 2, 2011.

Kevin M. Brunner, City Manager Michele R. Smith, City Clerk

SECOND READING OF ORDINANCE AMENDING CH. 1.21.010, SCHEDULE OF DEPOSITS, RELATING TO ANIMAL CONTROL VIOLATIONS.

ORDINANCE NO. 1824A
SECOND READING OF AN ORDINANCE AMENDING SECTION 1.21.010 SCHEDULE OF DEPOSITS

The Common Council of the City of Whitewater, Walworth and Jefferson Counties, Wisconsin, does hereby ordain as follows:

SECTION 1: Whitewater Municipal Code Section 1.21.010 is hereby amended to add the following:

CHAPTER OR SECTION NUMBER	OFFENSE	DEPOSITS AND COSTS
Chapter 9.08	Animal control Violations	1st offense - $75.00 plus statutory penalty assessment, jail assessment, court costs and crime lab assessment 2nd offense within 1 year - $150.00 plus statutory penalty assessment, jail assessment, courts costs and crime lab assessment 3rd and subsequent offenses within 1 year - $300.00 plus statutory penalty assessment, jail assessment, court costs and crime lab assessment

SECTION 2: This ordinance shall take effect upon passage and publication as provided by law.

Ordinance introduced by Councilmember Olsen, who moved its adoption. Seconded by Councilmember Binnie. AYES: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: None. ADOPTED: August 2, 2011.

Kevin M. Brunner, City Manager Michele R. Smith, City Clerk

REPORT ON CROSSPOINTE CHURCH COMMUNITY SERVICE PROJECT AND REQUEST FROM MEMBER RICK GILPATRICK FOR CONSIDERATION OF DONATION OF UNCLAIMED BICYCLES TO BE USED FOR THE PROJECT. Lori Sura and Rick Gilpatrick of Crosspointe Church announced their upcoming project, where various volunteers will provide dental, medical, and other services for those in need. Rick is chairing a project where he will repair bicycles for those needing that service, and will provide reconditioned bicycles to those who do not have one. It was moved by Olsen and seconded by Singer to donate 20 unclaimed bicycles in good working condition, as well as 10-15 bicycles for parts. AYES: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: None.

APPROVAL OF PURCHASE OF REPLACEMENT MOWER. It was moved by Olsen and seconded by Winship to approve the purchase of a replacement Toro groundmaster 4000 lawn mower at a price of $43,888. AYES: Olsen, Butler, Winship, Binnie, Singer, Kienbaum, Stewart. NOES: None. ABSENT: None.

CONSIDERATION AND ACTION ON EMINENT DOMAIN RESOLUTION OF NECESSITY AND RELOCATION ORDER FOR THE ACQUISITION OF REAL ESTATE INTERESTS FOR THE NORTH STREET AND NORTH STREET BRIDGE CONSTRUCTION PROJECT. It was moved by Olsen and seconded by Winship to approve an order by the Common Council for the acquisition of a permanent limited easement for public street and bridge purposes, and authorizing negotiation for the acquisition and condemnation, if necessary. AYES: Olsen, Winship, Binnie, Singer, Stewart, Kienbaum. NOES: Butler. ABSENT: None.

COUNCILMEMBER REQUESTS FOR FUTURE AGENDA ITEMS. Councilmember Kienbaum requested that Trippe Lake be cleaned to the point it is safe for swimming.

ADJOURNMENT. It was moved by Olsen and seconded by Winship to adjourn the meeting. AYES: Olsen, Butler, Binnie, Singer, Kienbaum, Winship, Stewart. NOES: None. ABSENT: None. Being no further business, the meeting adjourned at 6:52 p.m.

Respectfully submitted,

Michele R. Smith, City Clerk

CA-B

Report Criteria:
Detail report.
Invoices with totals above $0.00 included.
Paid and unpaid invoices included.

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
ABENDROTH WATER COND						
502	ABENDROTH WATER COND	502-081711	WASTEWATER/LAB SUPPLIES	08/17/2011	17.00	620-62870-340
	Total ABENDROTH WATER COND:				17.00	
ADVANCE PRINTING INC						
1295	ADVANCE PRINTING INC	15664	GEN ADMN/BUSINESS CARDS	08/17/2011	95.00	100-51400-310
	Total ADVANCE PRINTING INC:				95.00	
ADVANTAGE SAFETY PLUS						
4998	ADVANTAGE SAFETY PLUS	3260	LIBRARY/BLDG MAINTENANCE	08/17/2011	53.50	100-55111-355
4998	ADVANTAGE SAFETY PLUS	3260	GEN BLDG/BLDG MAINTENANC	08/17/2011	163.50	100-51600-355
	Total ADVANTAGE SAFETY PLUS:				217.00	
AIRGAS NORTH CENTRAL						
4760	AIRGAS NORTH CENTRAL	105402034	STREET/OPERATING SUPPLIE	08/17/2011	47.38	100-53230-340
	Total AIRGAS NORTH CENTRAL:				47.38	
ALLEN INC, L W						
166	ALLEN INC, L W	090785	WASTEWATER/MILEAGE	08/17/2011	258.50	620-62650-242
166	ALLEN INC, L W	090785	WASTEWATER/TRANSDUCER	08/17/2011	988.00	620-62830-353
	Total ALLEN INC, L W:				1,246.50	
AMERICAN MILLWORK & HARDWARE INC						
1841	AMERICAN MILLWORK & HARD	011175	STREET/VESTS	08/17/2011	720.00	100-53300-354
1841	AMERICAN MILLWORK & HARD	011548	PARKS/GLOVES	08/17/2011	141.00	100-53270-340
	Total AMERICAN MILLWORK & HARDWARE INC:				861.00	
AT&T						
3917	AT&T	3917-081711	GEN BLDG/PHONE	08/17/2011	578.53	100-51600-225
3917	AT&T	3917-081711	SHOP/PHONE	08/17/2011	34.03	100-53230-241
3917	AT&T	3917-081711	LIBRARY/PHONE	08/17/2011	85.08	100-55110-225
3917	AT&T	3917-081711	SENIORS/INTERNET	08/17/2011	31.65	100-55310-340
3917	AT&T	3917-081711	WATER/PHONE	08/17/2011	85.08	610-61921-310
3917	AT&T	3917-081711	WASTEWATER/PHONE	08/17/2011	8.51	620-62820-225
3917	AT&T	3917-081711	WASTEWATER/DIALER	08/17/2011	42.54	620-62830-356
3917	AT&T	3917-081711	CABLE/PHONE	08/17/2011	17.01	200-55110-225
	Total AT&T:				882.43	
AT&T LONG DISTANCE						
4746	AT&T LONG DISTANCE	4746-081711	SAFETY BDLG/PHONE	08/17/2011	20.69	100-51600-225
4746	AT&T LONG DISTANCE	4746-081711	LIBRARY/PHONE	08/17/2011	17.59	100-55110-225
4746	AT&T LONG DISTANCE	4746-081711	STREET/PHONES	08/17/2011	18.38	100-53230-241
4746	AT&T LONG DISTANCE	4746-081711	WASTEWATER/PHONE	08/17/2011	15.45	620-62820-225
4746	AT&T LONG DISTANCE	4746-081711	WATER/PHONE	08/17/2011	5.74	610-61921-310

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
	Total AT&T LONG DISTANCE:				77.85	
AUMANN'S SERVICE INC						
6297	AUMANN'S SERVICE INC	53643	POLICE PATROL/PROFESSION	08/17/2011	95.00	100-52110-219
	Total AUMANN'S SERVICE INC:				95.00	
BATTERIES PLUS						
3069	BATTERIES PLUS	191130-01	WASTEWATER/BLDG LIGHTS	08/17/2011	38.16	620-62660-357
	Total BATTERIES PLUS:				38.16	
BEACON ATHLETICS						
5126	BEACON ATHLETICS	0413356-IN	PARKS/BALL FIELD MATERIAL	08/17/2011	525.00	100-53270-154
5126	BEACON ATHLETICS	0413503-IN	PARKS/BALL FIELD MATERIAL	08/17/2011	99.00	100-53270-154
	Total BEACON ATHLETICS:				624.00	
BEST ALARM CO						
4157	BEST ALARM CO	4157-081711	WASTEWATER/MOTION DETEC	08/17/2011	90.00	620-62660-357
	Total BEST ALARM CO:				90.00	
BLODGETT GARDEN CENTER						
475	BLODGETT GARDEN CENTER	11718	PARKS/CREDIT	08/17/2011	339.78-	100-53270-359
475	BLODGETT GARDEN CENTER	15421	PARKS/FOUNTAIN PUMP	08/17/2011	429.78	100-53270-359
475	BLODGETT GARDEN CENTER	6832	PARKS/FOUNTAIN PUMP	08/17/2011	339.78	100-53270-359
	Total BLODGETT GARDEN CENTER:				429.78	
BRUCE MUNICIPAL EQUIP INC						
742	BRUCE MUNICIPAL EQUIP INC	5112148	STORMWATER/SWEEPER REP	08/17/2011	1,013.02	630-63310-353
	Total BRUCE MUNICIPAL EQUIP INC:				1,013.02	
BUCKINGHAM, TODD						
424	BUCKINGHAM, TODD	ORD-17583-JD	STREET/RECERTIFICATIONS	08/17/2011	126.00	100-53300-154
	Total BUCKINGHAM, TODD:				126.00	
BURRIS EQUIPMENT CO						
5446	BURRIS EQUIPMENT CO	PS62570	PARKS/MOWER REPAIR PARTS	08/17/2011	324.75	100-53270-242
	Total BURRIS EQUIPMENT CO:				324.75	
CAPITAL NEWSPAPERS						
3687	CAPITAL NEWSPAPERS	1012542	NEIGHBORHOOD SVC/MANAG	08/17/2011	233.00	100-52400-310
	Total CAPITAL NEWSPAPERS:				233.00	
CARQUEST AUTO PARTS						
21	CARQUEST AUTO PARTS	21-081711	STREET/REPAIR PARTS	08/17/2011	214.27	100-53230-352
21	CARQUEST AUTO PARTS	21-081711	WASTEWATER/VEHICLE REPAI	08/17/2011	4.80	620-62850-357
21	CARQUEST AUTO PARTS	21-081711	POLICE PATROL/VEHICLE REP	08/17/2011	112.67	100-52110-241
	Total CARQUEST AUTO PARTS:				331.74	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
CHARTER COMMUNICATIONS						
6120	CHARTER COMMUNICATIONS	6120-081711	RESCUE/OPERATING EXPENS	08/17/2011	129.99	100-52300-340
	Total CHARTER COMMUNICATIONS:				129.99	
CLEAN MATS						
1033	CLEAN MATS	25765	WASTEWATER/SHOP TOWELS	08/17/2011	34.40	620-62840-340
	Total CLEAN MATS:				34.40	
COOPERATIVE PLUS INC						
4	COOPERATIVE PLUS INC	90064854	PARKS/CHARGES	08/17/2011	2.23	100-53270-295
	Total COOPERATIVE PLUS INC:				2.23	
CORDIO AUTO BODY						
4740	CORDIO AUTO BODY	4062	POLICE PATROL/VEHICLE REP	08/17/2011	950.00	100-52110-241
	Total CORDIO AUTO BODY:				950.00	
DALEE WATER CONDITIONING						
208	DALEE WATER CONDITIONING	208-081711	CABLE/OPERATING SUPPLIES	08/17/2011	8.95	200-55110-340
208	DALEE WATER CONDITIONING	208-081711	FIRE/OPERATING SUPPLIES	08/17/2011	23.00	100-52200-340
	Total DALEE WATER CONDITIONING:				31.95	
DECKER SUPPLY CO INC						
33	DECKER SUPPLY CO INC	869151	STREET/BRUCE PARKER WAY	08/17/2011	61.77	100-53300-354
33	DECKER SUPPLY CO INC	869271	STREET/SIGN SUPPLIES	08/17/2011	1,501.25	100-53300-354
	Total DECKER SUPPLY CO INC:				1,563.02	
DIVERSIFIED BUILDING MTN						
1809	DIVERSIFIED BUILDING MTN	125803	LIBRARY/JULY SVC	08/17/2011	1,556.00	100-55111-246
1809	DIVERSIFIED BUILDING MTN	125803	CITY HALL/JULY SVC	08/17/2011	3,800.00	100-51600-246
1809	DIVERSIFIED BUILDING MTN	125803	ARMORY/JULY SVC	08/17/2011	931.50	100-51600-246
1809	DIVERSIFIED BUILDING MTN	125803	COMM BLDG/JULY SVC	08/17/2011	1,594.36	100-51600-246
1809	DIVERSIFIED BUILDING MTN	125803	CRAVATH BLDG/JULY SVC	08/17/2011	1,265.00	100-51600-246
1809	DIVERSIFIED BUILDING MTN	125804	INNOVATION CTR/JULY SVC	08/17/2011	756.00	920-56500-246
	Total DIVERSIFIED BUILDING MTN:				9,902.86	
DIVISION OF SAFETY & BUILDINGS						
6295	DIVISION OF SAFETY & BUILDI	REGISTRATIO	TRAIN DEPOT/RESTORATION R	08/17/2011	25.00	459-57500-212
	Total DIVISION OF SAFETY & BUILDINGS:				25.00	
EMERGENCY MEDICAL PRODUCTS INC						
115	EMERGENCY MEDICAL PRODU	1391407	RESCUE/OPERATING SUPPLIE	08/17/2011	435.00	100-52300-340
	Total EMERGENCY MEDICAL PRODUCTS INC:				435.00	
FIRE-RESCUE SUPPLY LLC						
3886	FIRE-RESCUE SUPPLY LLC	3572	FIRE/OPERATAING SUPPLIES	08/17/2011	12.00	100-52200-340
	Total FIRE-RESCUE SUPPLY LLC:				12.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
FIRST CITIZENS STATE BANK						
222	FIRST CITIZENS STATE BANK	JULY-DEC201	FINANCE/ACH SC	08/17/2011	330.00	100-51500-350
	Total FIRST CITIZENS STATE BANK:				330.00	
FLORAL VILLA						
302	FLORAL VILLA	11022	POLICE ADMN/OPERATING SU	08/17/2011	150.00	100-52100-340
	Total FLORAL VILLA:				150.00	
FORT HEALTHCARE						
151	FORT HEALTHCARE	07/04/11	POLICE PATROL/PROFESSION	08/17/2011	49.34	100-52110-219
	Total FORT HEALTHCARE:				49.34	
FRANK BROS INC						
1438	FRANK BROS INC	19656	STORMWATER/STONE	08/17/2011	300.48	630-63440-350
1438	FRANK BROS INC	49683	STORMWATER/STONE	08/17/2011	480.96	630-63440-350
	Total FRANK BROS INC:				781.44	
FULL COMPASS SYSTEMS LTD						
724	FULL COMPASS SYSTEMS LTD	4009162	CABLE/CABLES	08/17/2011	71.25	200-55110-359
	Total FULL COMPASS SYSTEMS LTD:				71.25	
GEMPLER'S						
1599	GEMPLER'S	1017582969	STREET/FLOOR JACK	08/17/2011	72.95	100-53230-340
	Total GEMPLER'S:				72.95	
GRANT SIGNS						
6287	GRANT SIGNS	60917	TECH PARK/SIGN BALANCE	08/17/2011	5,026.00	440-57663-839
	Total GRANT SIGNS:				5,026.00	
GUS PIZZA PALACE LLC						
601	GUS PIZZA PALACE LLC	6087	RESCUE/OPERATING SUPPLIE	08/17/2011	118.00	100-52300-340
	Total GUS PIZZA PALACE LLC:				118.00	
H & H FIRE PROTECTION LLC						
120	H & H FIRE PROTECTION LLC	7427	EM GOV/OPERATING SUPPLIE	08/17/2011	108.00	100-52500-340
	Total H & H FIRE PROTECTION LLC:				108.00	
HARRISON WILLIAMS MCDONNELL						
62	HARRISON WILLIAMS MCDONN	202804	TECH PARK/MORAINE VIEW PA	08/17/2011	30.00	440-57663-844
62	HARRISON WILLIAMS MCDONN	202804	5 POINTS/RECORDING FEE	08/17/2011	90.00	446-57663-840
	Total HARRISON WILLIAMS MCDONNELL:				120.00	
IDC/NETWURX						
242	IDC/NETWURX	485677	WASTEWATER/INTERNET	08/17/2011	147.00	620-62840-342
	Total IDC/NETWURX:				147.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
JOHN DEERE FINANCIAL						
6276	JOHN DEERE FINANCIAL	51861	POLICE PATROL/VEHICLE REP	08/17/2011	25.00	100-52110-241
6276	JOHN DEERE FINANCIAL	51927	RESCUE/#1281 REPAIRS	08/17/2011	207.58	100-52300-241
6276	JOHN DEERE FINANCIAL	52037	STREET/TRUCK 39	08/17/2011	95.00	100-53230-352
Total JOHN DEERE FINANCIAL:					327.58	
JOHNS DISPOSAL SERVICE INC						
42	JOHNS DISPOSAL SERVICE IN	38196	RECYCLE/EXTRA PICK UP	08/17/2011	125.00	230-53600-219
42	JOHNS DISPOSAL SERVICE IN	38207	CITY/REFUSE	08/17/2011	19,071.30	230-53600-219
42	JOHNS DISPOSAL SERVICE IN	38207	CITY/RECYCLING	08/17/2011	5,936.10	230-53600-295
42	JOHNS DISPOSAL SERVICE IN	38207	CITY/BULK	08/17/2011	3,789.00	230-53600-219
Total JOHNS DISPOSAL SERVICE INC:					28,921.40	
KB SHARPENING SERVICES INC						
110	KB SHARPENING SERVICES IN	62353	STORMWATER/CHIPPER KNIVE	08/17/2011	19.20	630-63600-352
110	KB SHARPENING SERVICES IN	62531	STORMWATER/CHIPPER KNIVE	08/17/2011	19.20	630-63600-352
Total KB SHARPENING SERVICES INC:					38.40	
KETTERHAGEN MOTORS INC						
111	KETTERHAGEN MOTORS INC	SC06301	POLICE PATROL/SVC CHARGE	08/17/2011	4.98	100-52110-241
111	KETTERHAGEN MOTORS INC	T652	POLICE PATROL/VEHICLE MTN	08/17/2011	428.23	100-52110-241
111	KETTERHAGEN MOTORS INC	T670	POLICE PATROL/VEHICLE MTN	08/17/2011	145.30	100-52110-241
Total KETTERHAGEN MOTORS INC:					578.51	
KUSTOM SIGNALS INC						
4563	KUSTOM SIGNALS INC	446335	POLICE PATROL/CAPITAL EQUI	08/17/2011	96.00	100-52110-242
Total KUSTOM SIGNALS INC:					96.00	
LARK UNIFORM INC						
605	LARK UNIFORM INC	87954	CSO/UNIFORM	08/17/2011	602.85	100-52140-118
Total LARK UNIFORM INC:					602.85	
LAWSON PRODUCTS INC						
289	LAWSON PRODUCTS INC	0644973	WASTEWATER/SHOP EQUIPME	08/17/2011	89.47	620-62840-340
Total LAWSON PRODUCTS INC:					89.47	
LEXISNEXIS						
3364	LEXISNEXIS	1410201-2011	POLICE INV/PROFESSIONAL S	08/17/2011	91.95	100-52120-219
Total LEXISNEXIS:					91.95	
LINCOLN CONTRACTORS SUPP INC						
165	LINCOLN CONTRACTORS SUP	8373420	PARKS/PAINT	08/17/2011	162.00	100-53270-340
Total LINCOLN CONTRACTORS SUPP INC:					162.00	
M & R SERVICE						
5079	M & R SERVICE	08/02/11	POLICE INV/VEHICLE REPAIRS	08/17/2011	70.00	100-52120-241
Total M & R SERVICE:					70.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
METAL CULVERTS INC						
6300	METAL CULVERTS INC	E-24686	STORMWATER/REPAIR PARTS	08/17/2011	351.60	630-63440-350
	Total METAL CULVERTS INC:				351.60	
MEYER'S AUTO SUPPLY						
176	MEYER'S AUTO SUPPLY	100091	WASTEWATER/MOWER SUPPLI	08/17/2011	109.95	620-62860-357
176	MEYER'S AUTO SUPPLY	99885	WASTEWATER/AUTO CARE	08/17/2011	17.68	620-62840-340
	Total MEYER'S AUTO SUPPLY:				127.63	
MIDSTATE EQUIPMENT-JANESVILLE						
1470	MIDSTATE EQUIPMENT-JANES	I20973	PARKS/EQUIPMENT REPAIR PA	08/17/2011	51.50	100-53270-242
1470	MIDSTATE EQUIPMENT-JANES	I21651	PARKS/EQUIPMENT REPAIR PA	08/17/2011	28.99	100-53270-242
	Total MIDSTATE EQUIPMENT-JANESVILLE:				80.49	
MILLARD FEED MILL INC						
1649	MILLARD FEED MILL INC	195446	PARKS/SLOW RELEASE	08/17/2011	625.00	100-53270-340
1649	MILLARD FEED MILL INC	195520	PARKS/COURSE LIME	08/17/2011	91.20	100-53270-340
	Total MILLARD FEED MILL INC:				716.20	
MILPORT ENTERPRISES INC						
1408	MILPORT ENTERPRISES INC	211395	WASTEWATER/PHOS REMOVA	08/17/2011	5,527.15	620-62840-341
	Total MILPORT ENTERPRISES INC:				5,527.15	
MODULAR PIPING SUPPLY INC						
311	MODULAR PIPING SUPPLY INC	INV000173836	WASTEWATER/LIFT STATION S	08/17/2011	527.83	620-62830-353
	Total MODULAR PIPING SUPPLY INC:				527.83	
MORGAN BIRGE & ASSOCIATES INC						
4591	MORGAN BIRGE & ASSOCIATE	MC0036432	GEN BLDG/PHONE	08/17/2011	345.00	100-51600-225
	Total MORGAN BIRGE & ASSOCIATES INC:				345.00	
MZIS						
5997	MZIS	164	NEIGHBORHOOD SVC/PROFES	08/17/2011	1,846.67	100-52400-219
	Total MZIS:				1,846.67	
NEWVILLE AUTO SALVAGE INC						
6296	NEWVILLE AUTO SALVAGE INC	5249	PARKS/VEHICLE REPAIR PART	08/17/2011	30.00	100-53270-242
	Total NEWVILLE AUTO SALVAGE INC:				30.00	
NORTH WOODS SUPERIOR CHEMICAL						
1947	NORTH WOODS SUPERIOR CH	1016080	GEN ADMN/AEROSOL	08/17/2011	130.81	100-51600-355
	Total NORTH WOODS SUPERIOR CHEMICAL:				130.81	
OFFICE DEPOT						
4146	OFFICE DEPOT	570461169001	POLICE ADMN/OFFICE SUPPLI	08/17/2011	214.21	100-52100-310
4146	OFFICE DEPOT	570461269001	POLICE ADMN/OFFICE SUPPLI	08/17/2011	6.16	100-52100-310
4146	OFFICE DEPOT	571453179001	POLICE ADMN/OFFICE SUPPLI	08/17/2011	41.23	100-52100-310
4146	OFFICE DEPOT	571754742001	POLICE ADMN/OFFICE SUPPLI	08/17/2011	44.90	100-52100-310

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
4146	OFFICE DEPOT	572044046001	FINANCE/OFFICE SUPPLIES	08/17/2011	98.94	100-51500-310
4146	OFFICE DEPOT	572305449001	FINANCE/CALCULATOR	08/17/2011	109.99	100-51500-310
4146	OFFICE DEPOT	572305461001	FINANCE/FILES	08/17/2011	27.22	100-51500-310
	Total OFFICE DEPOT:				542.65	
PAT'S SERVICES INC						
732	PAT'S SERVICES INC	A-69097	PARKS/PORTABLE TOILET	08/17/2011	150.00	100-53270-359
	Total PAT'S SERVICES INC:				150.00	
PETRA INDUSTRIES INC						
455	PETRA INDUSTRIES INC	01A08548877	CABLE/TRANSMITTER EQUIPM	08/17/2011	61.20	200-55110-359
	Total PETRA INDUSTRIES INC:				61.20	
PMI						
5492	PMI	0303064	RESCUE/OPERATING SUPPLIE	08/17/2011	626.14	100-52300-340
5492	PMI	0306217	RESCUE/OPERATING SUPPLIE	08/17/2011	342.46	100-52300-340
	Total PMI:				968.60	
QUARLES & BRADY						
529	QUARLES & BRADY	1681757	BIO GAS PROJECT/633K CLEA	08/17/2011	6,000.00	620-62810-670
	Total QUARLES & BRADY:				6,000.00	
QUILL CORPORATION						
445	QUILL CORPORATION	5560306	GEN ADMN/OFFICE SUPPLIES	08/17/2011	279.90	100-51400-310
	Total QUILL CORPORATION:				279.90	
R & R INSURANCE SERVICES INC						
1492	R & R INSURANCE SERVICES I	1065565	GEN/LIABILITY INSURANCE	08/17/2011	2,628.75	100-51540-513
1492	R & R INSURANCE SERVICES I	1065565	GEN/PUBLIC OFFICE LIABILITY	08/17/2011	1,003.50	100-51540-513
1492	R & R INSURANCE SERVICES I	1065565	GEN/POLICE PROFESSIONAL	08/17/2011	1,310.00	100-51540-514
1492	R & R INSURANCE SERVICES I	1065565	GEN/AUTO LIABILITY	08/17/2011	3,314.50	100-51540-512
1492	R & R INSURANCE SERVICES I	1065565	CABLE/AUTO LIABILITY	08/17/2011	54.00	200-55110-341
1492	R & R INSURANCE SERVICES I	1065565	STORMWATER/GEN LIABILITY	08/17/2011	175.25	630-63300-519
1492	R & R INSURANCE SERVICES I	1065565	STORMWATER/PUBLIC OFFICE	08/17/2011	66.90	630-63300-519
1492	R & R INSURANCE SERVICES I	1065565	STORMWATER/AUTO LIABILITY	08/17/2011	5.00	630-63300-519
1492	R & R INSURANCE SERVICES I	1065565	WATER/AUTO LIABILITY	08/17/2011	105.50	610-61924-510
1492	R & R INSURANCE SERVICES I	1065565	WATER/GENERAL LIABILITY	08/17/2011	350.50	610-61924-510
1492	R & R INSURANCE SERVICES I	1065565	WATER/PUBLIC OFFICE LIABIL	08/17/2011	133.80	610-61924-510
1492	R & R INSURANCE SERVICES I	1065565	WASTEWATER/PUBLIC OFFICE	08/17/2011	133.80	620-62810-519
1492	R & R INSURANCE SERVICES I	1065565	WASTEWATER/GENERAL LIABI	08/17/2011	350.50	620-62810-519
1492	R & R INSURANCE SERVICES I	1065565	WASTEWATER/AUTO LIABILITY	08/17/2011	117.00	620-62810-519
1492	R & R INSURANCE SERVICES I	1065565	WASTEWATER/SEWER BACKU	08/17/2011	1,082.00	620-62810-519
1492	R & R INSURANCE SERVICES I	1065566	WORKERS COMP	08/17/2011	13,039.00	100-21532
	Total R & R INSURANCE SERVICES INC:				23,870.00	
RANDIX CORP						
4411	RANDIX CORP	8782	STREET/SIGN LIGHT	08/17/2011	1,020.00	100-53300-405
	Total RANDIX CORP:				1,020.00	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
RUEKERT & MIELKE INC						
3885	RUEKERT & MIELKE INC	71956	SEWER/IMPACT FEE FEASIBILI	08/17/2011	6,188.17	610-61923-210
	Total RUEKERT & MIELKE INC:				6,188.17	
S & H TRUCK SERVICE						
388	S & H TRUCK SERVICE	10503	FIRE/EMPLOYEE ED & TRNG	08/17/2011	660.38	100-52200-154
	Total S & H TRUCK SERVICE:				660.38	
SENTRY OF WHITEWATER, DANIELS						
2	SENTRY OF WHITEWATER, DA	001000140847	RESCUE/OPERATING SUPPLIE	08/17/2011	62.12	100-52300-340
2	SENTRY OF WHITEWATER, DA	003000230854	RESCUE/OPERATING SUPPLIE	08/17/2011	136.81	100-52300-340
2	SENTRY OF WHITEWATER, DA	007002291739	RESCUE/OPERATING SUPPLIE	08/17/2011	49.59	100-52300-340
	Total SENTRY OF WHITEWATER, DANIELS:				248.52	
SHERWIN INDUSTRIES INC						
471	SHERWIN INDUSTRIES INC	SC025152	STREET/REPAIR MATERIALS	08/17/2011	306.88	100-53230-352
471	SHERWIN INDUSTRIES INC	SS042407	STREET REPAIRS/ROADSAVER	08/17/2011	7,374.03	280-57500-820
471	SHERWIN INDUSTRIES INC	SS042408	STREET REPAIRS/ROADSAVER	08/17/2011	7,374.03	280-57500-820
471	SHERWIN INDUSTRIES INC	SS042598	STREET/REPAIR MATERIALS	08/17/2011	474.00	100-53300-405
	Total SHERWIN INDUSTRIES INC:				15,528.94	
SHERWIN-WILLIAMS CO						
4697	SHERWIN-WILLIAMS CO	05172	STREET/TRAFFIC PAINT	08/17/2011	288.75	100-53300-405
4697	SHERWIN-WILLIAMS CO	1006-5	STREET/TRAFFIC PAINT	08/17/2011	143.92	100-53300-354
4697	SHERWIN-WILLIAMS CO	24828	GEN BLDG/PAINT	08/17/2011	156.95	100-51600-355
4697	SHERWIN-WILLIAMS CO	47250	STREET/PAINT	08/17/2011	686.10	100-53300-354
	Total SHERWIN-WILLIAMS CO:				1,275.72	
SHRED-IT WI						
3612	SHRED-IT WI	081118627	POLICE ADMN/SHRED PAPER	08/17/2011	150.00	100-52100-340
3612	SHRED-IT WI	081118627	NEIGHBORHOOD SVC/SHRED	08/17/2011	5.00	100-52400-340
3612	SHRED-IT WI	081118627	FINANCE/SHRED PAPER	08/17/2011	10.00	100-51500-310
3612	SHRED-IT WI	081118627	GEN ADMN/SHRED PAPER	08/17/2011	25.00	100-51400-340
3612	SHRED-IT WI	081118627	COURT/SHRED PAPER	08/17/2011	20.00	100-51200-340
	Total SHRED-IT WI:				210.00	
SNAP ON TOOLS						
1806	SNAP ON TOOLS	218205	STREET/SHOP SUPPLIES	08/17/2011	938.10	100-53230-352
	Total SNAP ON TOOLS:				938.10	
SOUTHERN LAKES NEWSPAPERS						
1844	SOUTHERN LAKES NEWSPAPE	1844-081711	COUNCIL/MINUTES	08/17/2011	469.00	100-51100-320
1844	SOUTHERN LAKES NEWSPAPE	1844-081711	COUNCIL/AGENDA	08/17/2011	19.04	100-51100-320
1844	SOUTHERN LAKES NEWSPAPE	1844-081711	NEIGHBORHOOD SVC/DIRECT	08/17/2011	200.00	100-52400-340
1844	SOUTHERN LAKES NEWSPAPE	1844-081711	PLANNING/CROSS POINT CUP	08/17/2011	23.85	100-56300-212
1844	SOUTHERN LAKES NEWSPAPE	1844-081711	POLICE ADMN/SUBSCRIPTION	08/17/2011	31.00	100-52100-320
	Total SOUTHERN LAKES NEWSPAPERS:				742.89	
SPRINT						
5963	SPRINT	172835739-01	RESCUE/PHONE	08/17/2011	101.98	100-52300-340

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
	Total SPRINT:				101.98	
SUPERIOR CRANE CORP						
6301	SUPERIOR CRANE CORP	104078	WASTEWATER/HOIST INSPECT	08/17/2011	900.00	620-62850-357
	Total SUPERIOR CRANE CORP:				900.00	
SWEETSPOT, THE						
4353	SWEETSPOT, THE	7/22/11	REC/CONCESSION SUPPLIES	08/17/2011	26.00	100-55300-341
	Total SWEETSPOT, THE:				26.00	
SWITS						
2038	SWITS	16524	POLICE INV/CONTRACTUAL SV	08/17/2011	100.00	100-52120-219
	Total SWITS:				100.00	
TINCHER REALTY INC						
5510	TINCHER REALTY INC	7/8/11	NEIGHBORHOOD SVC/MOWIN	08/17/2011	70.00	100-52400-219
	Total TINCHER REALTY INC:				70.00	
U S POSTAL SERVICE						
234	U S POSTAL SERVICE	234-08/17/11	POLICE ADMN/PO BOX 117	08/17/2011	110.00	100-52100-320
	Total U S POSTAL SERVICE:				110.00	
UNEMPLOYMENT INSURANCE						
274	UNEMPLOYMENT INSURANCE	000002686470	RESCUE/KIERNAN	08/17/2011	530.58	100-52300-158
274	UNEMPLOYMENT INSURANCE	000002686470	CROSS GD/C LUDEMAN	08/17/2011	227.00	100-52130-158
274	UNEMPLOYMENT INSURANCE	000002686470	CROSS GD/R LUDEMAN	08/17/2011	108.00	100-52130-158
274	UNEMPLOYMENT INSURANCE	000002686470	GEN ADMN/JANSEN	08/17/2011	68.83	100-51400-158
	Total UNEMPLOYMENT INSURANCE:				934.41	
V & H INC						
4153	V & H INC	585778	STREET/REPAIR PARTS	08/17/2011	450.50	100-53320-353
	Total V & H INC:				450.50	
VERMEER-WISCONSIN INC						
2503	VERMEER-WISCONSIN INC	20130510	STORMWATER/REPAIRS PART	08/17/2011	472.01	630-63800-352
2503	VERMEER-WISCONSIN INC	20130595	STORMWATER/REPAIRS PART	08/17/2011	335.47	630-63800-352
	Total VERMEER-WISCONSIN INC:				807.48	
WAL CO ECONOMIC DEVELOPMENT						
3939	WAL CO ECONOMIC DEVELOP	212	CDA/BOARD MTG	08/17/2011	5,755.00	900-56500-224
	Total WAL CO ECONOMIC DEVELOPMENT:				5,755.00	
WAUSAU EQUIPMENT CO INC						
367	WAUSAU EQUIPMENT CO INC	145208	STREET/SNOW PLOW REPAIR	08/17/2011	1,166.26	100-53320-353
	Total WAUSAU EQUIPMENT CO INC:				1,166.26	

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number
WEDIGE AUTOMOTIVE						
5789	WEDIGE AUTOMOTIVE	130956	POLICE PATROL/VEHICLE	08/17/2011	190.00	100-52110-241
5789	WEDIGE AUTOMOTIVE	131363	POLICE PATROL/VEHICLE REP	08/17/2011	104.00	100-52110-241
	Total WEDIGE AUTOMOTIVE:				294.00	
WELDERS SUPPLY CO BELOIT INC						
49	WELDERS SUPPLY CO BELOIT	120978	RESCUE/OXYGEN	08/17/2011	62.15	100-52300-340
49	WELDERS SUPPLY CO BELOIT	478435	RESCUE/OXYGEN	08/17/2011	95.27	100-52300-340
	Total WELDERS SUPPLY CO BELOIT INC:				157.42	
WEMSA						
375	WEMSA	8/1/11	RESCUE/HOT SHEET SUBSCRI	08/17/2011	30.00	100-52300-340
	Total WEMSA:				30.00	
WHITEWATER GLASS CO INC						
408	WHITEWATER GLASS CO INC	6-30-11	LIBRARY BLDG/TEMPERED GL	08/17/2011	1,720.00	100-55111-245
	Total WHITEWATER GLASS CO INC:				1,720.00	
WHITEWATER LIMESTONE INC						
20	WHITEWATER LIMESTONE INC	11053	STORMWATER/LIMESTONE	08/17/2011	728.18	630-63440-350
	Total WHITEWATER LIMESTONE INC:				728.18	
WI DEPT OF JUSTICE						
69	WI DEPT OF JUSTICE	L6505T 08/01/	BEV OP/RECORD CHECK	08/17/2011	175.00	100-44122-61
69	WI DEPT OF JUSTICE	L6505T 08/01/	DPW/RECORD CHECK	08/17/2011	7.00	100-53100-310
69	WI DEPT OF JUSTICE	L6505T 08/01/	POLICE/RECORD CHECK	08/17/2011	7.00	100-52100-310
69	WI DEPT OF JUSTICE	L6505T 08/01/	FINANCE/RECORD CHECK	08/17/2011	28.00	100-51500-310
2105	WI DEPT OF JUSTICE	T11853	DISPATCH/MISC CONTRACTUA	08/17/2011	2,262.00	100-52600-295
	Total WI DEPT OF JUSTICE:				2,479.00	
WI DEPT OF TRANSPORTATION						
5097	WI DEPT OF TRANSPORTATIO	162	POLICE PATROL/OPERATING S	08/17/2011	25.00	100-52110-340
	Total WI DEPT OF TRANSPORTATION:				25.00	
WILMAR PUMP & SUPPLY						
1610	WILMAR PUMP & SUPPLY	0107985-IN	PARKS/EQUIPMENT REPAIR PA	08/17/2011	128.56	100-53270-359
1610	WILMAR PUMP & SUPPLY	0108251-IN	PARKS/EQUIPMENT REPAIR PA	08/17/2011	291.00	100-53270-359
1610	WILMAR PUMP & SUPPLY	0108400-IN	PARKS/EQUIPMENT REPAIR PA	08/17/2011	336.00	100-53270-359
1610	WILMAR PUMP & SUPPLY	0108401-CM	PARKS/CREDIT	08/17/2011	43.81-	100-53270-359
	Total WILMAR PUMP & SUPPLY:				713.75	
WISCONSIN RESCUE SUPPLY						
6298	WISCONSIN RESCUE SUPPLY	3017	FIRE/OPERATING SUPPLIES	08/17/2011	48.00	100-52200-340
	Total WISCONSIN RESCUE SUPPLY:				48.00	
	Grand Totals:				142,773.63	

CA-B

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Net Invoice Amount	GL Account Number

Dated: August 11, 2011

Finance Director:

Report Criteria:
Detail report.
Invoices with totals above $0.00 included.
Paid and unpaid invoices included.

CA-C

City of Whitewater
Parks and Recreation Board Agenda
Monday, July 11, 2011 - 4:00pm
Cravath Lakefront Room- 2nd Floor, City Municipal Building
312 W. Whitewater St. Whitewater, WI 53190

Call to Order and Roll Call and Board Introductions
Rick Daniels, Prudence Negley, Brandon Knedler, Ken Kidd. Absent: Javonni Butler, Kim Gosh, Vance Dalzin and Jen Kaina (excused).
Staff: Matt Amundson, Michelle Dujardin, Deb Weberpal, and Katelynn Schmidt (City Management Intern)
Guests: Richard Helmick

Consent Agenda
Approval of Parks and Recreation Board minutes of June 20, 2011 & Approval of request for recreation program refund.
Kidd moved to accept the consent agenda. Second by Negley. Ayes: Daniels, Negley, Knedler, Kidd . Noes: None. Abstain: None. Absent: Kaina, Gosh, Dalzin and Butler. Motion passed.

Vance Dalzin arrives (4:12)

Hearing of Citizen Comments
No formal action will be taken during this meeting, although issues raised may become part of a future agenda. Participants are allotted a 3 minute speaking period. Specific items listed on the agenda may not be discussed at this time; however, citizens are invited to speak to those issues as designated in the agenda.

Prudence Negley expressed thanks to the board for years of great service and contribution to the community. Negley commented on the beauty and significant importance of many attributes Whitewater has to offer. Negley announced that she will be moving out of the area but hopes the board continues to support and help beatify and preserve what Whitewater has to offer.

Staff Reports
Parks & Recreation Director:

- 4th of July Parade. All Whitewater Youth Sports Organizations were invited to be part of the 4th of July parade float and show support by wearing uniforms from the sport of their choice. Approximately 1,200 brochures giving information on all Whitewater sports opportunities were given to parade attendees by the walking participants.
- Bicycle & Pedestrian Master Plan. The plan continues to be a work in progress. A Walworth and Jefferson County Bike Forum, to be held on July 13 at the Cravath Lakefront Community Center in Whitewater from 6:00pm to 8:00pm.
- Youth Baseball & Softball Tournament: Saturday, July 23rd & Sunday, July 24th Whitewater is scheduled to host the 12 & under tournament.

Approval of Whitewater Effigy Mounds Restoration Plan
Item was tabled until August meeting. No action was taken.

Appointment of Parks and Recreation Board member to the Plan Commission
Item was tabled until August meeting. No action was taken

CA-C

Appointment of Parks and Recreation Board member to the Urban Forestry Commission
Negley submitted her resignation to the board as she will be relocating to the Waukesha area. Currently Jen Kaina serves on the Urban Forestry Commission when Negley travels for the winter months. Kaina will continue to serve on this board until reappointment of another board member.

Discussion and possible action related to Waterfowl Hunting Program/ Geese Control
Amundson referred to the memo and minutes from the 8-9-2010 meeting in regards to the program. Amundson indicated the success of the program and asked the board for permission to move forward with obtaining a DNR permit to oil eggs in the Spring of 2012.

Dalzin moved to approve the continuation of the Waterfowl Hunting Program and obtaining a DNR permit to oil eggs in the Spring of 2012. Seconded by Negley. Ayes: Daniels, Negley, Dalzin, Knedler, Kidd . Noes: None. Abstain: None. Absent: Kaina, Gosh, and Butler. Motion passed.

Review and prioritization of Park Improvement Projects.
Amundson presented board with previously discussed projects and funding needed. Projects topping the list included; Effigy Mounds Restoration Project, Cravath Lakefront brick paver correction project, and outdoor fitness stations.
Final list was tabled until September meeting. No action was taken.

Discussion on marketing and branding opportunities
Dujardin presented board with a sample window sticker, mainly targeted for vehicles, used to market Whitewater. The sticker included a clip art bicycle with the marketing phrase; Bikes Spoken Here, Whitewater.

The Board directed Dujardin to create a window sticker contest to release to the public and University students. Contest would be released in Fall with stickers available for purchase in the Spring.

Request for future agenda items
Nothing requested.

Adjourn
5:35pm Motion by Daniels . Second by Knedler. Affirmed by voice vote.

Respectfully submitted,
Michelle Dujardin
Recreation and Community Events Programmer

CITY OF WHITEWATER
PLAN AND ARCHITECTURAL REVIEW COMMISSION
Whitewater Municipal Building Community Room
June 13, 2011

ABSTRACTS/SYNOPSIS OF THE ESSENTIAL ELEMENTS OF THE OFFICIAL ACTIONS OF THE PLAN AND ARCHITECTURAL REVIEW COMMISSION

Chairperson Torres called the meeting of the Plan and Architectural Review Commission to order at 6:00 p.m.

PRESENT: Torres, Binnie, Dalee, Coburn, Meyer, Henry (Alternate). ABSENT: Knedler, Miller. OTHERS: Wallace McDonell/City Attorney, Mark Roffers/City Planner, Bruce Parker/Zoning Administrator.

HEARING OF CITIZEN COMMENTS. This is a time in the agenda where citizens can voice their concerns. They are given three minutes to talk. No formal Plan Commission Action will be taken during this meeting although issues raised may become a part of a future agenda. Items on the agenda may not be discussed at this time.

There were no citizen comments.

MINUTES. Moved by Binnie and Coburn to approve the Plan Commission minutes of May 9, 2011. Motion approved by unanimous voice vote.

REVIEW EXTRA-TERRITORIAL ONE LOT CERTIFIED SURVEY MAP TO CREATE A 3 ACRE LOT WITH AN EXISTING HOUSE LOCATED ON COUNTY HIGHWAY D FOR JAMES REU. Zoning Administrator Bruce Parker explained that this survey is on the border of the 1 ½ mile City of Whitewater Extra-territorial review. The parcel is located outside the City of Whitewater Sewer Service District area.

City Planner Mark Roffers recommended approval.

Moved by Binnie and Dalee to approve the extra-territorial one lot certified survey map to create a 3 acre lot with an existing house located on County Highway D for James Reu. Motion approved by unanimous roll call vote.

REVIEW EXTRA-TERRITORIAL ONE LOT CERTIFIED SURVEY MAP TO CREATE A 2.61 ACRE LOT WITH AN EXISTING HOUSE LOCATED ON ISLAND ROAD FOR LYLA PONTEL. Zoning Administrator Bruce Parker explained that this survey is near the 1 ½ mile City of Whitewater Extra-territorial review area. The parcel is also located outside the City of Whitewater Sewer Service District area. There is an error on the second page description of the parcel, which will be corrected.

City Planner Mark Roffers recommended approval with the correction of the description.

Moved by Meyer and Coburn to approve the extra-territorial one lot certified survey map to create a 2.61 acre lot with an existing house located on Island Road for Lyla Pontel. Motion approved by unanimous roll call vote.

PUBLIC HEARING FOR A CONDITIONAL USE PERMIT FOR AN ENTERTAINMENT ESTABLISHMENT (KARAOKE ENTERTAINMENT) AND A CONDITIONAL USE PERMIT FOR A CLASS B BEER LICENSE FOR MARTIN RUDE, TO SERVE BEER BY THE BOTTLE OR GLASS AT 206 & 210 W. WHITEWATER STREET. Chairperson Torres opened the public hearing for consideration of a conditional use permit for an entertainment establishment (Karaoke Entertainment) and a conditional use permit for a Class B Beer License for Martin Rude, to serve beer by the bottle or glass at 206 and 210 W. Whitewater Street.

Zoning Administrator Bruce Parker explained that the proposed Karaoke operation will be at the former Dan's Meat Market. They are asking to serve beer in the large room, Karaoke Lounge/Bar. This area is closed off from the other areas. No beer would leave the room. There is no charge to go into the karaoke lounge/bar, but you would be charged if you wanted to go up on stage and sing. The karaoke bar is for people 21 years of age or older, and will be policed. There will be five karaoke areas. The developer would also like to re-utilize the existing framework for their proposed projecting sign.

Martin Rude, the applicant, explained that he planned to have a karaoke and gaming center. The two smaller rooms would hold 7 to 10 people and could be used as a home theatre or karaoke. Rooms would be rented at an hourly rate. The gaming center (arcade center) would be open to the public. There would be no alcohol served in any of the rooms except the lounge/bar area. There is security for the gaming center. There is a half wall, where the customers would pay for the rooms.

Plan Commission Member Coburn asked about having alcohol served in any of the other rooms.

Martin Rude explained that if a group rented a room, he would like the option of serving beer to that room. However, if there was anyone under the age of 21, they would not allow beer in the room. The serving of beer would be determined prior to it being rented.

Plan Commission Member Henry asked about a family party or graduation party.

Martin Rude suggested that the group would rent the gaming center. There are two entrance doors to the building. One goes directly into the karaoke lounge/bar area and the other directly into the gaming center. He handed out some noise information. There are areas where there will be double walls with sound proofing sheet rock on the interior walls which is supposed to reduce the noise level by 60 decibels.

Chairperson Torres closed the public hearing.

City Attorney McDonell explained that when the proposal is taken to the City Council, they would need a description of the premises in which alcohol would be served. Generally, the area is either all the way in or all the way out.

City Planner Mark Roffers explained that the Plan Commission is reviewing the proposal in terms of land use. Is this karaoke establishment an appropriate land use for this site? A karaoke establishment is a conditional use in this downtown (B-2 Zoning District) site. It is also a conditional use to serve beer. City Council is responsible for reviewing liquor licenses and license premises which the Police Department monitors. Roffers recommended the Plan Commission allow this business based on the whole establishment and leave it to the City Council to determine where in the building alcohol could be served.

City Attorney suggested that if the Plan Commission gives the conditional use for the entire premises, if the area in which to serve alcohol is changed, they would be able to re-submit the change in the area to be approved to serve alcohol to the City Council and not have to amend the conditional use at the Plan Commission level.

City Planner Mark Roffers recommended the following conditions:

1. The project shall be developed and operated in accordance with all building, operational, sign, and other plans and representations included in and with the 5/13/11 application.

2. The Plan and Architectural Commission's approval of the conditional use permit would allow the sale of alcoholic beverages throughout the establishment, per the "Handling of alcohol and sale of alcohol (Proposal 2)" provisions included with the 5/13/11 application, recognizing that City Council approval of the liquor license may further limit the premises for selling alcohol if the Council chooses.

3. The conditional use permit shall run with the business owner and not the land. Any change in ownership or change in concept from a karaoke entertainment establishment will first require approval of a conditional use permit amendment.

4. The project shall meet the City's noise ordinance at all times, with sound mitigation measures implemented to buffer music noise from upstairs apartments as proposed in the "Sound Proofing details" sheet presented at the June 13, 2011 Plan and Architectural Review Commission meeting.

5. The proposed sign shall not be backlit plastic in design, and any exterior sign lighting shall be directed downward and towards the sign only.

Moved by Binnie and Meyer to approve the conditional use permits for the karaoke entertainment and for a Class B Beer License for Martin Rude to serve beer by the bottle or glass, subject to the City Planner Mark Roffers' conditions. Motion approved by unanimous roll call vote.

PUBLIC HEARING FOR A CONDITIONAL USE PERMIT FOR AN 18-UNIT STUDENT APARTMENT BUILDING, TO BE BUILT ON THE PROPERTIES AT 234 N. PRINCE STREET AND 1006 W. FLORENCE STREET FOR CATCON WHITEWATER LLC.; AND THE REVIEW AND APPROVAL OF THE SITE PLAN AND CERTIFIED SURVEY MAP. THIS IS AN R-3 MULTI-FAMILY ZONING DISTRICT. Chairperson Torres opened the public hearing for consideration of a conditional use permit for a proposed 18-unit student apartment building, to be built on the properties at 234 N. Prince Street and 1006 W. Florence Street for CatCon Whitewater LLC.; and the review and approval of the site plan and certified survey map. This is in an R-3 Multi-family Zoning District.

City Planner Mark Roffers explained that this project has been before the Plan Commission in different configurations over the last 9 months. The current project is for an18-unit student rental housing on N. Prince Street, just north of W. Florence Street. This project is consistent with the R-3 (Multi-family Residence) Zoning. It requires: a conditional use permit because the building has more than 4 units in one building; site plan approval; and the certified survey map which combines two lots into one lot. The project no longer includes the property at 1018 W. Florence St; and no longer includes the church occupying any portion of the building. They have submitted new plans that have been adjusted to accommodate the planning, engineering and Fire Department reviews.

Developer Matt Burow, CatCon Whitewater LLC., stated that they have taken the information from the previous meeting in order to make sure that they have the most marketable and desired property. Matt introduced Tom Schermerhorn from Excel Engineering (building site) and Josh Pudelko, President of Trio Engineering LLC., (stormwater, drainage) who gave information on the project.

Tom Schermerhorn explained that the project has changed from when it first came at 88 units and is now reduced to 18 units (17 4-bedroom and 1 1-bedroom apartments). There are 70 parking spaces with 25 of them being below grade (under the building). The building design has been transformed in order for the project to meet all the R-3 Zoning District requirements.

Josh Pudelko explained that the site layout has all the parking at the back of the building. There will be no parking in the street yard. To the west of the parking is a retaining wall. In order to preserve as many trees as possible, they are setting the wall around the drip line of the trees. There is a patio at the front of the building and service access on both ends of the building. In order to handle the stormwater management, discharge control and water quality, there is an underground detention in the front yard area. He stated that as described in the City Planner report, they are providing landscaping above and beyond the City minimum requirements.

Plan Commission Member Coburn asked about the removal of the two spruce trees in the front yard area; and the canopy trees in the back (black walnut trees).

Pudelko explained that the two spruce trees are in the underground stormwater detention area and where the utilities will run to the building. They are replacing the trees plus more. He explained that they are saving the trees in the northwest corner of the property, but some along the north property line that fall within the construction area will be removed. They are making every effort to keep as many trees as possible.

Don Gregoire, Whitewater Fire Chief, stated that the 2nd story sticks out on the back side of the building with an 8 to 10 foot roof area. He wanted it documented that there would not be a deck area, the windows would be secured with no in and out for the students. Another concern was the hydrant located behind the building must have access at all times (no snow, mopeds, garbage around the hydrant). They would like the FDI C hook up on the south end of the building in front of the H2O room with a Knox box and run a 5" into it. They don't want to compromise the driveway going in. This is a 4 story wood structure building. The Fire Department would take care of the life safety issues first and then the building. Buildings 10 units or larger must have a loop system. Fire Chief Gregoire also requested that the water main improvements in Prince Street be completed before occupancy of the building. The Fire Department would need the water flow. He stated that he had not seen any revised plans.

Jeff Knight, 405 S. Panther Court, voiced his concerns of the project that this proposal is significantly below the trends and standards that the Plan Commission has approved in the past. He feels that the developer is on the right track and getting closer, but is not there yet.

Bill Levy, President of BMOC, which would manage the property, stated that his company manages apartments all over the country. In these apartments, each student has their own room. Traditionally students shared rooms. The type of apartments for students has changed over the years.

Matt Burow clarified that the building is three stories, the first floor is precast concrete, then two stories of wood structure. Life safety is most important. They will do whatever they need to make things work with the Fire Department and City Staff. There is no access to the back roof.

The roof will have cameras and will house mechanical equipment (condensers etc.).

The Plan Commission voiced their concerns of: would like to see a better design for the closet space in the bedrooms (felt there was very little room there); why the foreclosure and vacancy rate graphs were included in the packet; the size of the bedrooms in comparison to Starin Hall.

Jeff Knight stated that the current vacancy rate for Whitewater is 9.2%. A survey on the number of foreclosures or distressed sales was 45%.

City Planner Mark Roffers recommended approval with the following conditions as amended at the meeting. He noted that the certified survey map has three separate conditions of approval as listed below.

1. The applicant shall make building and site improvements and operate the site in accordance with the following plans and other supporting documents, except as any changes to any of these plans and supporting documents are required to meet the remaining conditions of approval:
   a. The following materials dated 6/6/11: Existing Site and Demolition Plan (sheet C1.0); Site Plan (sheet C1.1); Turning Movement Exhibit (sheet C1.1X); Grading and Erosion Control Plan (sheet C1.2); Details and Specifications (sheets C1.4 and C1.4A); Landscape Plan (sheet C1.5); First Floor Plan (sheet A1.1); Second Floor Plan (sheet A1.2); Third Floor Plan (sheet A1.3); Roof Plan (sheet A1.4); Elevations (sheet A2.0); Photometric Plan (sheet PXP1); exterior lighting details (sheet PXP2).
   b. The Utilities Plan (sheet C1.3) dated 6/7/11.
   c. The following materials dated 5/16/11: Stormwater Management Plan (bound document); Agreement to Maintain Stormwater Facilities; Operation Plan for The Element (except management company may change with City staff approval); Parking Information (includes Parking Memorandum, Information and Parking Form, Parking Terms and Rates, and Parking Rules and Regulations).
   d. Other materials with no date: Catalog Page for retaining wall; Sustainable Design Features list

2. Prior to the issuance of a building permit for this project, the applicant shall:
   a. Address requirements of the Fire Code to the satisfaction of the Fire Chief.
   b. Address all outstanding issues related to stormwater management, grading, erosion control, and utilities, as determined by and to the satisfaction the City's engineering consultant.
   c. Pay a park improvement fee and a fee-in-lieu of parkland dedication in accordance with City ordinance standards for the 17 additional housing units being added to this property.
   d. Amend the "Operation Plan for the Element" to specify that maximum occupancy of each apartment unit shall be limited to the number of bedrooms in that unit, and the maximum occupancy of each bedroom shall be one tenant, which shall be a ongoing requirement for this project.
   e. Amend the "Operation Plan for the Element" to include a security plan to restrict and monitor access to all roof sections of the building.
   f. Correct the "Parking Memorandum" to indicate the revised number of parking spots, per the approved site plan.
   g. Amend the "Parking Rules and Regulations" sheet to indicate how indoor versus outdoor spaces will be managed to maximize use of both areas for residents
   h. Amend the "Parking Rules and Regulations" sheet to include clear restrictions against vehicular parking in any location that is not a designated parking space on the approved site plan.

i. Obtain approval of the City Forester of the street terrace tree planting plan and make any associated adjustments to the landscape plan.
j. Address other minor comments from the City Planning Consultant on the landscape plan, primarily related to quantities shown on the map versus in the map legend.
k. Specify a 4 foot height for the fence section in the required front yard area near Prince Street, and to discontinue that fence 15 feet from the northeast corner of the subject lot.
l. Indicate the westerly extension of the privacy fence along the south side of the subject lot, in the area directly adjacent to the lot at 1018 Florence Street.
m. Indicate the installation of undercanopy lights at all building entrances.
n. Confirm that the front canopy extends at least 6 feet from the front entrance and all other canopies extend at least 4 feet from appropriate entrances.
o. Correct the misplaced "stone veneer" label near the building's base on the west building elevation.
p. Update and resubmit for City Planning Consultant approval all plans that are necessary to assure compliance with the above conditions.

3. The applicant shall work with the City to coordinate utility, stormwater, and other proposed improvements within the Prince Street right-of-way with the City's proposed reconstruction project for that street, and the implementation of associated plans may vary to reflect the results of that coordination, as approved by the Director of Public Works.

4. The first floor Game Room and Business Center may not be used for any sort of residential or church use.

5. The applicant shall outfit the proposed front yard patio, as represented on the approved site plan, with outdoor seating and other appropriate outdoor improvements no later than one year from the date of initial building occupancy.

6. No parking space designated on the site plan shall be used at any time for any other purpose than the parking of operable motor vehicles. No snow storage shall be allowed in parking spaces.

7. Parking permits shall be allocated for tenants of the project, per the approved "Parking Rules and Regulations" document. In no case shall the number of permits that are issued for resident parking exceed the number of spaces available in the off-street parking lots, less spaces to accommodate visitors per the approved Parking Memorandum sheet.

8. The applicant shall include with all leases provisions related to the following:
   a. Limits on occupancy to (i) one tenant for each bedroom and (ii) a number of tenants in each apartment unit not exceeding the number of bedrooms in that unit.
   b. Parking rules and regulations in accordance with this conditional use permit approval.

9. In the event that not all site and landscape improvements are completed before occupancy of this building, the applicant shall provide the City with a site improvement deposit in the amount of $2,000.

Approval conditions for CSM*

1. The CSM may not be recorded until after at least one of the existing principal buildings within the CSM area has been demolished.
2. The CSM shall be recorded prior to occupancy of the apartment building that is authorized through City conditional use permit and site plan approval for the same property.

3. Prior to the addition of the City Clerk's signature on the CSM and its recording, the legal description on Sheet 2 of the CSM shall be corrected to accurately reflect the current boundaries of the CSM area and the water main easement shall be adjusted if necessary based on Fire Department comments.

* Because CSM includes a grant of a water main easement to the public, City Council approval is also required.

Plan Commission Member Henry asked what future things needed to be decided.

City Planner Mark Roffers explained that the site plan needed to be tweaked a bit; the fire codes needed to be addressed. It would give a chance to work with the applicants and address the Fire Chief requests, which are not too radical from what would be approved at this meeting.

Bob Freiermuth, a local investor and President of the Landlord Association, voiced his concerns of the vacancy rates and the quality of life of the community at large that is dependent upon the U.W. System. If occupancy cannot be maintained, properties deteriorate. It is not easy to find tenants. It is hard to get and keep tenants. Freiermuth is on the Council of the University of Whitewater which is trying to increase retention. The drop-out rate is pretty much the same as it was 40 years ago. Vacancy rate is important to the community at large as far as quality of life.

Plan Commission Member Binnie asked if the 10 inch water main for N. Prince Street would be done by fall of 2012.

Bob Freiermuth (son) asked if the water main was being updated for this particular project or was it previously planned.

Zoning Administrator Bruce Parker explained that the N. Prince Street water main project will go to the City Council to do the engineering this fall. The N. Prince Street water main project has been planned for the last 3 to 5 years.

Chairperson Torres closed the public hearing.

Plan Commission Member Henry stated that one of the big concerns at a previous meeting was that there needed to be the same playing field for all developers. Are there any special considerations given to this developer that are likely to cause problems later? Henry also had concerns of storage in the bedroom.

City Planner Mark Roffers explained that there is nothing with this project that does not comply with the ordinances.

Matt Burow explained that they are providing all the furniture for the apartments. In the bedrooms, the beds are raised and have dressers underneath. There will be storage in the garage area of the building for bulky items such as bicycles etc. They want a marketable product and will make sure there is plenty of storage.

Moved by Binnie and Coburn to approve the conditional use permit, site plan, and certified survey map for a proposed 18-unit student apartment building at 234 N. Prince Street for CatCon Whitewater LLC. based on the Planning Consultant's recommendation in writing as well as the revisions made at the meeting. Motion approved by unanimous roll call vote.

CA-C

CONCEPTUAL REVIEW OF THE PROPOSED EXPANSION OF THE EXISTING SITE LOCATED AT 804, 808, 818, AND 826 W. WALWORTH AVE. FOR CRAIG POPE. THIS PROPOSAL WOULD INCLUDE; A REZONING OF THE RESIDENTIAL PROPERTIES AT 818 AND 826 W. WALWORTH AVE. FROM R-2 (ONE AND TWO FAMILY) TO B-1 (COMMUNITY BUSINESS) ZONING DISTRICT; THE INSTALLATION OF AN AUTOMATIC CAR WASH; EXPANSION OF THE PARKING/DRIVEWAY AREA; A BUILDING ADDITION TO THE WEST END OF THE BUILDING; THE INSTALLATION OF A 4TH FUEL PUMP ISLAND; AND A NEW ALTERNATIVE FUEL ISLAND AND CANOPY. Chairperson Torres removed himself from this item as he has a conflict of interest in being an employee of Craig Pope. Vice Chairperson Binnie presided over this item.

Zoning Administrator Bruce Parker explained that this is a conceptual review. The BP gas station and convenience store property at 804 W. Walworth Ave. is zoned B-1(Community Business). The B-1 Zoning District goes from this property south along S. Janesville Street. The residential properties next to the BP property to the west, properties to the north and to the east are zoned R-2 (One and Two Family Residence). Craig Pope wants to utilize the two residential properties to the west for the installation of a car wash, an addition to the building and additional fuel pumps. Parker has talked with Craig Pope and suggested that Craig have a neighborhood meeting to inform the neighbors and get their feedback. This would require a rezoning of the two residential properties to the west. A variance would also be required for the building addition. This meeting is to get input from the residents and the Plan Commission for Craig to determine how he wants to proceed.

Vice-Chairperson Binnie explained that this is a conceptual review looking for input from the Plan Commission and the public.

Craig Pope explained that this is a concept plan to get information back from the Plan Commission and the neighbors. He has not had a neighborhood meeting, but has spoken with most of the neighbors over the last couple of years. His intention is to update petroleum/expand petroleum. This is relatively close to the petroleum that was proposed 13 years ago. At that time he left off an island that has been plumbed in already. The addition on the back of the building has footing and was intended to be built out. The access on Walworth Ave. will be moved further to the west to make it a little safer for the intersection. He is moving the pylon sign over to the vacated area and repositioning it there as per Mark Roffers' comments. If they proceed with this project, a new roof system (metal) would be put on the building, the canopy would be removed and the columns would be removed. They would upscale the building to maybe brick and stone, like a bank building would be. There would be energy efficiency measures, inside and outside of the building. The plan does not show parking in front of the building, which they plan to provide. The car wash is positioned about 30 feet from the neighborhood (nearly half the width of the lot) to provide a nice buffer. The west side of the car wash will be masonry. They lengthened the car wash to provide a complete wash and dry within the building which makes the car wash sound proof. Pope feels this project will make a nicer buffer, emitting much less noise than there is now.

John Steuerwald, 920 W. Walworth Ave., appreciates Craig Pope as an entrepreneur, but has concerns about the rezoning of the residential area to B-1 and moving the business further into the existing residential area. He also has concerns of another car wash in Whitewater. We have four of them at this time. He would like to see something other than a carwash. The noise of a car wash is loud and would disrupt families. He is also concerned about the brick home on the other side of Walworth Ave. that has sat there for many years without anything happening there.

Dave Jensen, of Reliable Plus Car Wash Systems, said they build 40 to 50 car washes per year in the Minnesota, Wisconsin and Upper Michigan areas. They do have ways to reduce the decibel levels of car washes. The petroleum and car wash industries go hand in hand. The successful businesses have multiple businesses on a site. There are two ways to address the noise. One is to have a larger building with a drive through air drier inside the building and to operate the car wash with the doors down. The other way is to have a smaller building with the drier on the machine itself. This one would also be operated with the doors closed. The noise would be approximately 50 decibels 45 feet from the door. When asked about comparables, normal road noise is about 70 decibels. Ambient noise (dishwasher in the next room, or a quiet neighborhood) is about 50 decibels.

Chairperson Binnie asked if there were plans for vacuum cleaners on the site. The answer was no.

Zoning Administrator Bruce Parker asked if there were car washes in the area that Reliable Plus Car Wash Systems has installed.

Jensen stated that they have installed 98 to 100 % of the Kwik Trip car washes. In ten years they have installed 190 units for Kwik Trip. They installed the one in Madison "Severson Citgo" which has a 64 unit apartment building behind it. The building is 40 feet from the property line. The car wash is built right to the property line. They have had no complaints in 6 years. When asked if there was a guarantee that the doors would be closed during the process, Jensen stated that it was computer controlled and could be set to have the doors closed during the wash and dry cycles. The entire site would be automated. The majority of the car washes would happen between 9 a.m. and 3 p.m. The business could be closed at night, 11 or 12 p.m.

Deb Grubbe, 429 S. Whiton Street, and also owner of 230 S. Woodland Drive, submitted a petition from the neighborhood asking for Plan Commission to deny Craig Pope to expand his development. The petition had 18 signatures that they were able to get in the time allowed. The residents object to the rezoning. This is a residential area and the change would be incompatible with the Master Plan. The request for this proposal is incomplete. Maintenance of this property has not been complied with. A Master Plan amendment would need to be updated before a change of zoning could happen. This should be denied to comply with the City of Whitewater Comprehensive Plan and to maintain the residential integrity of the neighborhood. Grubbe listed many items that were not shown in the plans, such as lighting, and existing trees (4 " or larger are to be shown). The landscaping was not to scale, so could not determine whether it would meet the approximate 18,000 sq. ft. of landscape surface that is to be provided. The plans are not accurate. A survey from 1995 shows the building to be 5.9 feet from the lot line on the northeast corner of the building and 3.9 feet on the northwest corner of the building. She believes there have been other additions to the building that may have changed those distances. They are now proposing another addition to the west of the building. The existing building is non-conforming. The yard required for a principal building from a residential district is 30 feet. A variance would be needed which could not be done for economic gain, the proposal could not impair neighboring property values, and it would need to be proved a hardship if a variance was not granted. This is a permitted use as it is. The dumpster should be 30 feet from the property line. And there should be a 15 foot vision triangle coming off the alley on the Northeast corner of the property. The northwest corner of the property (staff parking) should be a buffer area for the neighbors.

Vice Chairperson Binnie explained, with respect, that a conceptual review is to provide opportunity for feedback without a lot of detail. The Plan Commission encourages developers to have a conceptual review to get input from the public and the City prior to investing a lot of money into a development.

Craig Stauffer, 437 S. Whiton Street, explained that he bought the house in 2005. The two houses between his house and the gas station were a buffer for him. If the developer puts up a 6 foot fence, cars will be parking less than 5 feet away from his property. The noise would be very annoying. There is supposed to be a fence between the house and the BP gas station now, but it is not.

Plan Commission Member Henry explained that she liked to support the local people, but this is a residential neighborhood. Her grandson and family live on the street and were concerned, when they bought in the area, if it was going to be a residential neighborhood. Henry has been on several committees where the concern is for protecting neighborhoods. The City talks about preserving and protecting neighborhoods and would like young couples to buy single family homes and fix them up. She is afraid that people will not want to buy here if plans are easily changed. She has met a lot of the neighbors and sympathizes with them. Henry suggested that Craig Pope meet with the neighborhood.

Plan Commission Member Coburn understands the concept, but wants to protect the neighborhoods. People will trust the City more if they don't easily convert. She would not support an expansion of this site. It would also create more congestion than is already there.

Vice-Chairperson Binnie personally does not have an issue with the car wash. He has a car wash near his home. The car wash issues could be mitigated.

City Planner Mark Roffers explained that the Comprehensive Plan cannot be changed without the public knowing it. The Comprehensive Plan does not indicate any change being made to the two homes to the west. The next step would be to have further neighborhood meetings. If a plan does come forward, there would be 3 public hearings with much more detailed plans than for a conceptual review.

Craig Pope appreciated the input. He felt this was an opportunity for redevelopment and to make the development look nicer. The redevelopment would not happen without the car wash. The economy is not there. He respects the neighbors, input.

INFORMATION:

Kevin Brunner, City Manager, explained to the Plan Commission per the direction of the City Council, that they will be sending out RFP's for the rewriting of the Zoning Code. The movement is from measurement based (historical) toward form based. They are looking for one Plan Commission member to be on the committee. They expect the process to take approximately 1 ½ years.

Zoning Administrator Bruce Parker announced his retirement as of July 1st. He thanked the Plan Commission for all that they do.

City Manager Kevin Brunner thanked Bruce Parker for all he has done in his 37 years of service to this community. He asked the Plan Commission to mark their calendars for July 12th, as the City will be having a dinner in his honor.

a. **Future agenda items**: Zoning Administrator Bruce Parker stated that there were no submittals at this time for the July meeting.

b. The next regular Plan Commission meeting will be July 11, 2011.

Moved by Meyer and Coburn to adjourn at approximately 8:00 p.m. Motion was approved by unanimous voice vote.

_____

Chairperson Gregory Torres

SR

City of WHITEWATER

PROCLAMATION OF AUGUST AS CHILDREN'S VISION AND LEARNING MONTH

WHEREAS, as children across the State of Wisconsin prepare for the start of another school year, many of them will begin their studies with undiagnosed and untreated vision problems; and

WHEREAS, research shows that vision disorders are the number one handicapping condition of children. In fact, as many as one in four school age children have vision problems, according to the College of Optometrists in Vision Development; and

WHEREAS, all children deserve the opportunity to learn and to achieve their full potential, and

WHEREAS, for the above reasons, public awareness about learning-related vision problems is necessary to ensure that young people receive the prompt vision treatment they need to enhance their lives;

NOW, THEREFORE, I, Kevin Brunner, City Manager of Whitewater, in accord with the Office of the Governor of the State of Wisconsin, and in recognition of the importance of good vision to learning do hereby proclaim August 2011

Children's Vision and Learning Month

And I encourage parents, educators, school nurses and all concerned adults to recognize the critical role good vision plays in the learning process and to work together to help prevent or reduce the impact untreated vision problems can have on our children's ability to read and learn.

Kevin M. Brunner
Kevin M. Brunner, City Manager

Michele R. Smith
Michele R. Smith, City Clerk

R-1

City of WHITEWATER

MEMORANDUM

TO: City Manager & Common Council
FROM: Cameron Clapper
SUBJECT: Proposed 2011 Salary Resolution Amendment #3
DATE: 08/10/2011

The following modifications have been made to Schedule II of the 2011 Salary Resolution. Staff is requesting the approval of these changes as 2011 Salary Resolution Amendment #3. A draft resolution is included with this memo.

1. The Neighborhood Services Director position will be removed from pay grade J to reflect the dissolving of the position upon the retirement of former Neighborhood Services Director Bruce Parker. Effective August 1, 2011.
2. The Neighborhood Services Manager position will be added to pay grade G. Unlike the former Neighborhood Services Director position, the Neighborhood Services Manager will not be responsible for building maintenance issues or the supervision of building maintenance staff. The proposed change in pay grade reflects the reduction in supervisory responsibilities for this position. Effective August 1, 2011.

SCHEDULE II
PROFESSIONAL AND TECHNICAL EMPLOYEE PAY PLAN

Pay Grade	# of Positions	Classification Titles	Pay Grade	# of Positions	Classification Titles
A*	3/4	Senior Coordinator (Part-time)	F	1	City Clerk
	2	Administrative Assistant II - Records Technician	G	1	Neighborhood Services Manager
	2	Administrative Assistant II - General Admin	H		
	0	Administrative Assistant II - Utilities (Part-time)	I	1	Assistant to City Manager
B*	1	Accounting Technician II - Payroll & Accounts Payable		1	Chief Information Officer
	1	Accounting Technician II - Utilities		1	Water Superintendent
	1	Administrative Assistant I - Neighborhood Services	J	1	Streets, Parks & Forestry Superintendent
	1	Clerk of Courts		1	Parks & Recreation Director
C				1	Wastewater Treatment Plant Superintendent
D	1	Finance Support Services Manager	K	1	Lieutenant - Administrative Services
	1	Support Services Manager		1	Lieutenant - Field Services
E	1	Community TV/Media Services Manager	L	1	Finance Director
	1	CDA Coordinator		1	Public Works Director
	1	Recreation & Community Events Programmer			

R-1

CITY OF WHITEWATER
2011 SALARY RESOLUTION
AMENDMENT #3

WHEREAS, the City of Whitewater, Walworth and Jefferson Counties, Wisconsin, sets forth the wage and salary schedule for employees for 2011, in which wages are established.

NOW THEREFORE, BE IT RESOLVED by the Common Council of the City of Whitewater, Walworth and Jefferson Counties, Wisconsin, that the following amendments to the ranges and numbers of employees in Schedule II of the 2011 Wage and Salary Schedule as previously amended on June 7, 2011 are hereby adopted pursuant to Wisconsin Statutes; and

BE IT FURTHER RESOLVED that the contents of this resolution shall supersede such previously adopted schedules where the subject matter between the two shall be in conflict, and the changes contained herein shall be effective beginning August 1, 2011.

SCHEDULE II
PROFESSIONAL AND TECHNICAL EMPLOYEE PAY PLAN

Pay Grade	# of Positions	Classification Titles	Pay Grade	# of Positions	Classification Titles
A*	3/4	Senior Coordinator (Part-time)	F	1	City Clerk
	2	Administrative Assistant II - Records Technician	G	1	Neighborhood Services Manager
	2	Administrative Assistant II - General Admin	H		
	0	Administrative Assistant II - Utilities (Part-time)	I	1	Assistant to City Manager
B*	1	Accounting Technician II - Payroll & Accounts Payable		1	Chief Information Officer
	1	Accounting Technician II - Utilities		1	Water Superintendent
	1	Administrative Assistant I - Neighborhood Services	J	1	Streets, Parks & Forestry Superintendent
	1	Clerk of Courts		1	Parks & Recreation Director
C				1	Wastewater Treatment Plant Superintendent
D	1	Finance Support Services Manager	K	1	Lieutenant - Administrative Services
	1	Support Services Manager		1	Lieutenant - Field Services
E	1	Community TV/Media Services Manager	L	1	Finance Director
	1	CDA Coordinator		1	Public Works Director
	1	Recreation & Community Events Programmer			

Resolution introduced by Councilmember _____, who moved its adoption. Seconded by Councilmember _____.

AYES:
NOES:
ABSENT:
ADOPTED:

_____
Kevin M. Brunner, City Manager

_____
Michele R. Smith, City Clerk

R-2

RESOLUTION ADOPTING A LAKE PROTECTION PLAN FOR CRAVATH AND TRIPPE LAKES, WALWORTH COUNTY, WISCONSIN

WHEREAS, the City of Whitewater arranged to have the Southeastern Wisconsin Regional Planning Commission (SWRPC) complete a report of the lake water quality and other features present within Cravath and Trippe Lakes for City planning purposes, and

WHEREAS, SWRPC has completed said study, and

WHEREAS, said study has been presented to the City of Whitewater Park and Recreation Board and the Plan and Architectural Review Commission, and

WHEREAS, the Lake Protection Plan for Cravath and Trippe Lakes completed by SWRPC is a sound and valuable guide and reference to the City of Whitewater for the purposes of lakes management,

Now, therefore, **BE IT RESOLVED** that the Common Council of the City of Whitewater, Walworth and Jefferson Counties, acknowledges the receipt of the Lake Protection Plan for Cravath and Trippe Lakes prepared by SWRPC and attached hereto, and adopts the plan as a resource and guide for lakes management in the City of Whitewater. The implementation of any of the recommendations in the plan shall require future Common Council action.

Resolution introduced by Councilmember _____, who moved its adoption. Seconded by Councilmember _____.

AYES:

NOES:

ABSENT:

ADOPTED:

_____
Kevin Brunner, City Manager

_____
Michele R. Smith, City Clerk

R-2

Memo

To: Kevin Brunner, City Manager
Common Council

From: Matt Amundson, Parks and Recreation Director

Date: August 11, 2011

Re: Lakes Protection Plan

This summer the Parks and Recreation Board approved the Lakes Protection Plan that was created by the Southeast Wisconsin Regional Planning Commission. I am asking that the Common Council adopt this protection plan. The main recommendations of the plan include:

Limited Cost/Volunteer Work

1. Continue and advocate for implementation of urban stormwater management program
2. Encourage volunteer participation in Citizen Water Quality Monitoring on Cravath Lake – *volunteer has stepped forward*
3. Hold shore land management workshop for property owners on lakes & creeks – *will be working with Walworth County to hold this fall; exploring grant opportunities for city owned shore land*
4. Install proper signage at Cravath Lakefront for boat and trailer parking
5. Maintain signage to alert users of nonnative invasive species - *ongoing*
6. Encourage manual harvesting of EWM around piers and docks, city purchases specialty rakes and makes available to riparian owners and volunteer efforts after holding workshop on identification and removal. Create removal process and include City compost special site – *a demo rake has been purchased, working to identify educator to host workshop*
7. Determine whether to continue use of chemicals to treat EWM or introduce biological controls
8. Apply for grant funding to assist in control of EWM and to conduct engineering study on the possibility of dredging
9. Request that DNR complete fishery analysis and consider stocking efforts
10. Continue work with UW-Whitewater to explore opportunities to utilize student resources and programs
11. Explore partnership with WWUSD to include Project Wet in school curriculum

Budget Implications

1. Increase current treatment to recommended levels of proper EWM treatment (either chemical or biological)
   Cost Estimate: currently budget $6,000, proper chemical management estimated at $12-15,000 annually; Cost of introducing weevils as a biological control measure would be about the same as the cost of chemical treatment—the advantage would be that you are not introducing herbicides into the water, and there will be years when you will not need to inoculate the weevil into the lakes…there will be natural reproduction.
2. In Lake Aquatic plant surveys on 5 year rotation (2015, 2020, 2025, etc)
   Estimated Cost: $3,000 per lake
3. Form a public inland lake protection and rehabilitation district that would provide consistent funding source for lake improvements
4. Limited dredging of navigational lanes to provide for boating lanes of 50 feet in width and five feet in depth. The anticipated cost for both lakes combined would be $200,000 to remove approximately a combined 8,000 cubic yards of sediment

Your consideration of this matter is greatly appreciated.

Thanks!
Matt Amundson

MEMORANDUM REPORT NO. 191

R-2

A LAKE PROTECTION PLAN FOR CRAVATH AND TRIPPE LAKES

WALWORTH COUNTY WISCONSIN

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

KENOSHA COUNTY
Kimberly L. Breunig
Adelene Greene,
Secretary
Robert W. Pitts

RACINE COUNTY
Gilbert B. Bakke
Susan S. Greenfield

MILWAUKEE COUNTY
William R. Drew,
Vice-Chairman
John Rogers
John F. Weishan, Jr.

WALWORTH COUNTY
Gregory L. Holden
Nancy Russell,
Treasurer

OZAUKEE COUNTY
Thomas H. Buestrin
William E. Johnson
Gustav W. Wirth, Jr.

WASHINGTON COUNTY
Daniel S. Schmidt
Daniel W. Stoffel
David L. Stroik,
Chairman

WAUKESHA COUNTY
James T. Dwyer
Paul G. Vrakas

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION STAFF

Kenneth R. Yunker, PE ..... Executive Director

Stephen P. Adams ..... Public Involvement and Outreach Manager

Nancy M. Anderson, AICP..... Chief Community Assistance Planner

Michael G. Hahn, PE, PH..... Chief Environmental Engineer

Christopher T. Hiebert, PE ..... Chief Transportation Engineer

Elizabeth A. Larsen ..... Business Manager

John G. McDougall..... Geographic Information Systems Manager

John R. Meland ..... Chief Economic Development Planner

Dr. Donald M. Reed..... Chief Biologist

Donald P. Simon, RLS..... Chief Planning Illustrator

William J. Stauber ..... Chief Land Use Planner

Special acknowledgment is due to Dr. Jeffrey A. Thornton, CLM, PH, and Dr. Thomas M. Slawski, SEWRPC Principal Planners; Mr. Edward J. Schmidt, SEWRPC GIS Planning Specialist; Mr. Aaron W. Owens, SEWRPC Research Analyst; and, Mr. Michael A. Borst, SEWRPC Research Aide, for their contributions to the conduct of this study and the preparation of this report.

CITY OF WHITEWATER

COMMON COUNCIL

Patrick Singer, President

COUNCIL MEMBERS

Lynn Binnie
Javonni Butler
Jim Olsen
James Winship
Marilyn Kienbaum
Jim Stewart

PARKS & RECREATION BOARD

Javonni Butler, Alderman
Jen Kaina, UW-W Representative
Dr. Vance Dalzin, Public School Representative
Rick Daniels
Dr. Ken Kidd
Brandon Knedler
Prudence Negley
Kim Gosh, Alternate

AD HOC LAKES COMMITTEE

Carol McCormick, Chairperson

Matt Amundson, Parks & Recreation Director
Kevin Brunner, City Manager
Audrey Green, Walworth County
Jim Olsen, Alderman
Baro Bohrke
Jim Coburn
Thayer Coburn
Virginia H. Coburn
George DeVries
Mary Dornacher
Rich Ehrenberg
Bud Gayhart
Brandon Knedler
Prudence Negley
Steve Ridenour
Dr. Dan Sable
David Stone

CITY OF WHITEWATER STAFF

Kevin Brunner, City Manager
Michele Smith, City Clerk
Doug Saubert, Finance Director
Connie DeKemper, Treasurer
Matt Amundson, Parks & Recreation Director
Dean Fischer, Public Works Director
Chuck Nass, Parks & Streets Superintendent/City Forester

MEMORANDUM REPORT
NUMBER 191

A LAKE PROTECTION PLAN FOR CRAVATH AND TRIPPE LAKES

WALWORTH COUNTY, WISCONSIN

Prepared by the

Southeastern Wisconsin Regional Planning Commission
W239 N1812 Rockwood Drive
P.O. Box 1607
Waukesha, Wisconsin 53187-1607
www.sewrpc.org

The preparation of this publication was financed in part through a grant from the Wisconsin Department of Natural Resources Lake Management Planning Grant Program.

April 2011

$10.00

This Page Intentionally Left Blank

TABLE OF CONTENTS

LIST OF APPENDICES

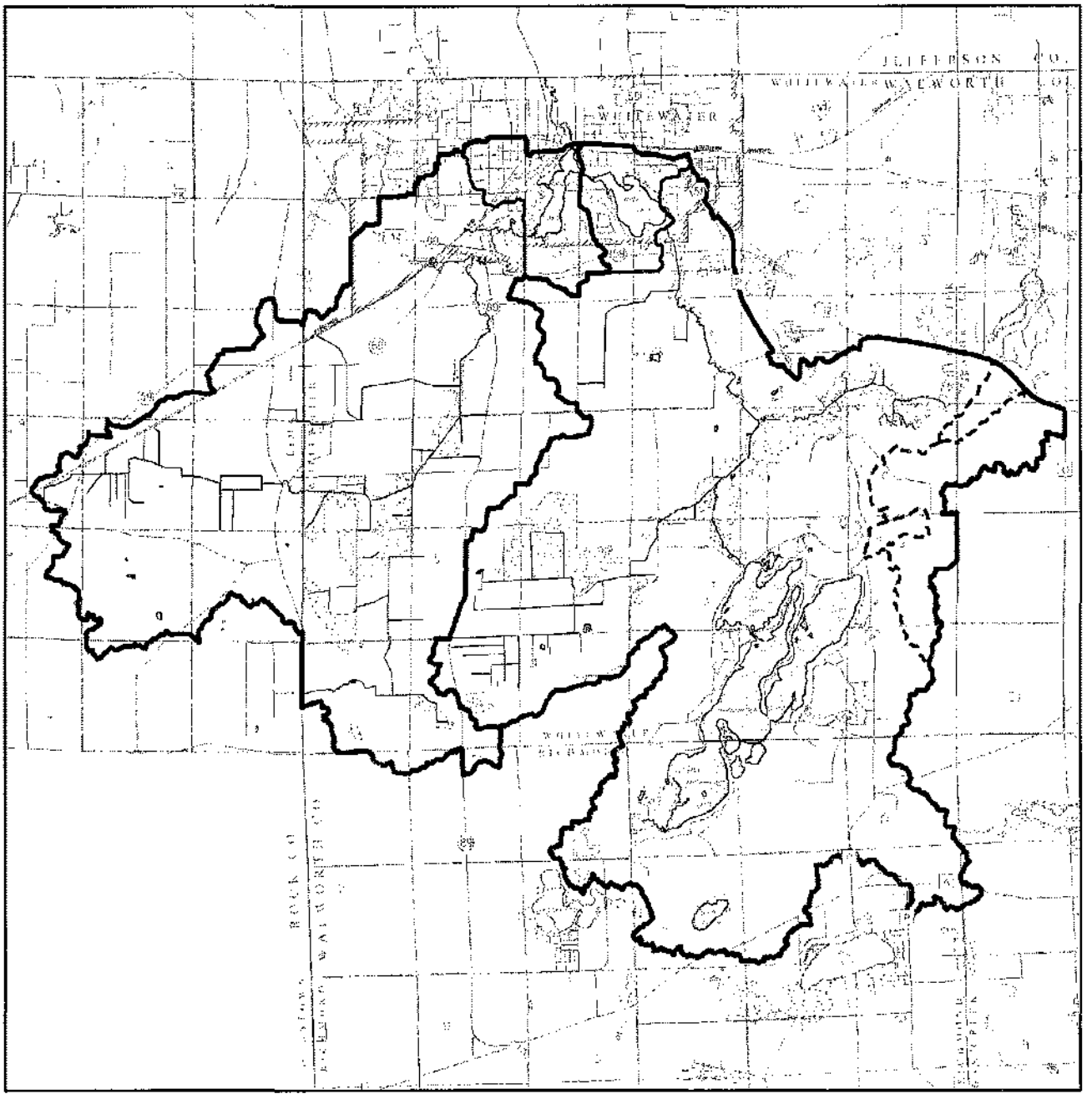
LIST OF TABLES

LIST OF FIGURES

LIST OF MAPS

Map 1

LOCATION OF CRAVATH AND TRIPPE LAKES



Source: Rock County Land Information Office and SEWRPC.

Table 1

HYDROLOGY AND MORPHOMETRY OF CRAVATH AND TRIPPE LAKES

Parameter	Cravath Lake	Trippe Lake
Size		
Surface Area of Lake	68 acres	113 acres
Total Tributary Area	22,464	12,360
Lake Volume	186.5 acre-feet	338 acre-feet
Residence Time[a]	0.25	1.75
Shape		
Length of Lake	0.9 mile	0.9 mile
Width of Lake	0.2 mile	0.4 mile
Length of Shoreline	2.8 miles	2.7 miles
Shoreline Development Factor[b]	2.4	1.8
General Lake Orientation	N-S	SE-NW
Depth		
Mean Depth	3 feet	3 feet
Maximum Depth	10 feet	8 feet
Percentage of Lake Area		
Less than Three Feet	63	--
Greater than 20 Feet	0	0

[a] *Water residence time is the time required for a volume of water equal to the volume of the lake to enter the waterbody.*

[b] *Shoreline development factor is the ratio of the shoreline length to the circumference of a circular lake of the same area.*

Source: Wisconsin Department of Natural Resources, U.S. Geological Survey, and SEWRPC.

more circular in shape than Cravath Lake. In contrast, nearby Pleasant Lake in northeast Walworth County has a development factor of about 1.6, reflecting that Lake's more circular shape, while the Lauderdale Lakes have an overall shoreline development factor of 3.6, reflecting that waterbody's highly irregular shoreline.[1]

Shoreline development factor is often related to the level of biological activity in a lake: the greater a lake's shoreline development factor (due to greater shoreline contour irregularity), the greater is the likelihood that the lake contains shallow, nearshore areas and areas containing habitat suitable for plant and animal life. In other words, lakes with highly irregular shorelines usually provide more shallow-water, nearshore habitat areas (or "littoral zone") suitable for plant and animal life than more circular, deeper lakes.

Biological activity in a lake, in turn, can be influenced by the availability of such shoreline habitat as well as other physical factors, such as lake bottom sediment composition and lake-basin contours. As shown on Maps 2 and 3, both Cravath and Trippe Lakes are lakes with large expanses of shallow water containing areas with relatively flat lake bottom contours. Observations made during the 2008 surveys of the aquatic plant communities in the Lakes indicated that the bottom sediments of both Lakes are mainly comprised of silt and other soft materials. A preponderance of soft bottom sediments and the relative flatness of the lake bottom contours are conditions consistent with high levels of biological activity.

TRIBUTARY AREA AND LAND USE CHARACTERISTICS

The Lakes and their direct tributary areas are situated in the northwestern corner of Walworth County. As shown on Map 4, the areas directly tributary to Cravath and Trippe Lakes are situated mostly within the City of Whitewater, with small portions of the tributary areas being situated in the Town of Whitewater, both in Walworth County. The area which drains directly to Cravath Lake is approximately 641 acres, or about one square mile, in areal extent; the area directly tributary to Trippe Lake is about 506 acres, or about 0.8 square mile.

The total drainage area tributary to the Lakes is significantly greater than their direct drainage areas. In the case of Trippe Lake, the tributary area includes the upstream portion of Whitewater Creek to its headwaters in Whitewater Lake. This approximately 12,524-acre, or 19.6-square-mile tributary area includes portions of the Towns of LaGrange, Richmond, Sugar Creek, and Whitewater, all in Walworth County. The total area tributary to Cravath Lake includes the area tributary to Trippe Lake as well as the upstream area tributary to Spring Brook. This tributary area totals about 22,464 acres, or 35.1 square miles, in areal extent, and encompasses portions of the Town of Whitewater, in Walworth County, and the Town of Lima, in Rock County.

[1] *See SEWRPC Memorandum Report No. 174,* An Aquatic Plant Management Plan for Pleasant Lake, Walworth County, Wisconsin, *December 2009; and, SEWRPC Memorandum Report No. 143,* An Aquatic Plant Management Plan for the Lauderdale Lakes, Walworth County, Wisconsin, *August 2001.*

Map 2

BATHYMETRIC MAP OF CRAVATH LAKE

DATE OF PHOTOGRAPHY: APRIL 2005

Map 3

BATHYMETRIC MAP OF TRIPPE LAKE

DATE OF PHOTOGRAPHY: APRIL 2005

— 4' — WATER DEPTH CONTOUR IN FEET

● MONITORING SITE

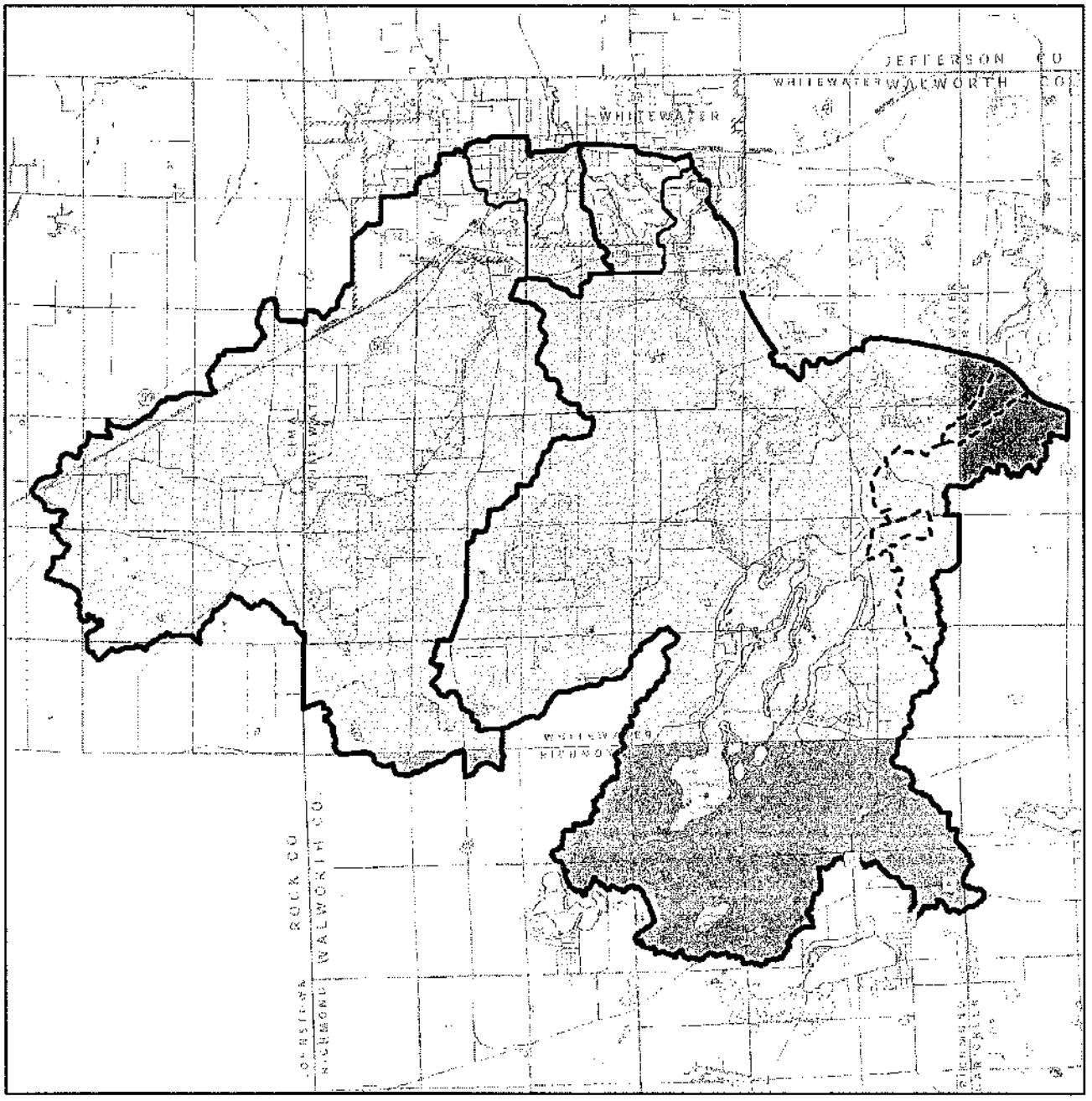
Source: U.S. Geological Survey and SEWRPC.

GRAPHIC SCALE

0 300 600 FEET

Map 4

CIVIL DIVISION BOUNDARIES WITHIN THE CRAVATH AND TRIPPE LAKES TOTAL TRIBUTARY AREA



Source: Rock County Land Information Office and SEWRPC.

Table 2

POPULATION AND HOUSEHOLDS
WITHIN THE AREA DIRECTLY TRIBUTARY
TO CRAVATH LAKE: 1960-2000

Year	Population	Households
1960	2,215	682
1970	2,581	711
1980	2,172	786
1990	2,342	829
2000	2,636	933

Source: U.S. Bureau of the Census and SEWRPC.

Table 3

POPULATION AND HOUSEHOLDS
WITHIN THE AREA DIRECTLY TRIBUTARY
TO TRIPPE LAKE: 1960-2000

Year	Population	Households
1960	819	190
1970	721	234
1980	698	264
1990	722	295
2000	815	318

Source: U.S. Bureau of the Census and SEWRPC.

Population

Both the population and numbers of households within the areas tributary to Cravath and Trippe Lakes have generally increased since 1960. However, this increase has been sporadic and not altogether constant over this period, as shown in Tables 2 and 3. For example, although the numbers of households within the area directly tributary to Cravath Lake have increased fairly steadily between 1960 and 2000, as shown in Table 2, the population of the area actually decreased between 1970 and 1980 before resuming its upward trend. The greatest increase in population occurred between 1960 and 1970 when the numbers of people increased by nearly 17 percent, from 2,215 persons to 2,581 persons; the greatest increase in the numbers of households occurred between 1990 and 2000 when the numbers increased by just over 12 percent, from 829 to 933 households.

In the area directly tributary to Trippe Lake, as shown in Table 3, the changes in population and numbers of households were similar to those for Cravath Lake. However, there are several notable exceptions. First, the population in the area directly tributary to Trippe Lake decreased not only between 1970 and 1980, but also between 1960 and 1970, with the result that it was not until 2000 that the population in the tributary area to Trippe Lake recovered to its 1960 level. Further, while the numbers of households had evidenced a fairly steady increase from 1960 through 2000, similar to those around nearby Cravath Lake, the greatest increase in numbers of households in the tributary area occurred between 1960 and 1970. Subsequently, in contrast to the observations from the tributary area to Cravath Lake, the rate of increase in the numbers of households has steadily diminished from around 23 percent for the decade between 1960 and 1970, to about 13 percent over the decade between 1970 and 1980, to about 12 percent between 1980 and 1990, and to about 8 percent between 1990 and 2000. Thus, while the numbers of households in the area directly tributary to Trippe Lake have been increasing since 1960, the rate of increase has been steadily slowing.

The populations and numbers of households in the combined area tributary to both Cravath and Trippe Lakes are shown in Table 4. The population in this combined area generally increased from 1960 through 2000, although the drop in population between 1970 and 1980 observed in the areas directly tributary to the individual Lakes was also evidenced areawide, as would be expected. The numbers of households in the combined tributary area showed a fairly steady increase from 1960 through 2000, with the largest increase (about 21 percent) occurring from 1960 to 1970.

Land Uses

As shown in Table 5, year 2000 land uses in the area directly tributary to Cravath Lake are about evenly distributed between urban and rural uses, with residential uses being the major urban use and agricultural uses being the chief rural use. In Table 6, year 2000 land uses in the area directly tributary to Trippe Lake remain mostly rural, with over 37 percent of the land in agriculture and only about 15 percent of the land in urban uses.

Table 4

POPULATION AND HOUSEHOLDS WITHIN THE TOTAL AREA TRIBUTARY TO CRAVATH AND TRIPPE LAKES: 1960-2000

Year	Population	Households
1960	4,862	1,338
1970	5,616	1,623
1980	5,210	1,901
1990	5,500	2,061
2000	6,304	2,428

NOTE: All areas approximated by whole U.S. Public Land Survey quarter section. Area in Rock County approximated by census blocks. Data above includes population and households located within internally drained portions of the total tributary area.

Source: U.S. Bureau of the Census and SEWRPC.

The year 2000 land uses within the total area tributary to Cravath and Trippe Lakes are primarily rural, with agricultural uses being the dominant rural land use. Although the majority of the urban lands are located in close proximity to the Lakes—primarily in the City of Whitewater, the shorelines of the Lakes are largely undeveloped, being comprised primarily of wetlands, parklands, and other open lands. This is a contrast to the highly developed residential shorelines common to most lakes in the Region, including the upstream Whitewater and Rice Lakes that form part of the total area tributary to the Cravath-Trippe Lake system. Map 5 shows the existing land uses within the combined tributary area of the Lakes as of 2000; those uses are tabulated in Table 7.

Future changes in land use within the direct and total areas tributary to Cravath and Trippe Lakes are likely to include limited further urban development, infilling of already platted lots, and possible redevelopment of existing properties. Under proposed year 2035 conditions, as shown on Map 6 and summarized in Table 7, urban land uses in the total area tributary to the Lakes are expected to nearly double, from about 5 percent of the land coverage in 2000 to about 10 percent of the land coverage in 2035. These changes are projected to occur largely in the forms of single-family residential, multi-family residential, commercial, and industrial development in the areas near the Lakes, and mostly as the result of the conversion of agricultural and other open and unused lands. Agricultural uses are anticipated to decrease from about 65 percent of the land coverage in the year 2000, to about 56 percent of the land coverage under planned year 2035 conditions. These land use changes have the potential to modify the nature and delivery of nonpoint source contaminants to the Lakes, with concomitant impacts on the aquatic plant communities within the waterbody. In contrast, existing wetlands and woodlands are projected to be largely left intact with only slight loss of acreage from these uses.

SHORELINE PROTECTION STRUCTURES

Erosion of shorelines results in the loss of land, damage to shoreline infrastructure, and interference with lake access and use. Wind-wave erosion, ice movement, and motorized boat traffic usually cause such erosion. A survey of the shoreline protection methods in use on Cravath and Trippe Lakes was conducted by Southeastern Wisconsin Regional Planning Commission (SEWRPC) staff during August of 2008. As shown on Map 7, the great majority of the shoreline of Cravath Lake was in a natural state, with a few short isolated stretches of riprap and bulkhead found primarily along the southern end of the Lake. Trippe Lake, as shown on Map 8, also had a shoreline mostly in a natural state, with a few isolated short stretches of riprap or bulkhead, mostly at the northwestern end of the Lake. In addition, there was one sand beach area present along the Trippe Lake shoreline, located in the City Park at the northwestern end of the Lake.

There were no obvious, serious erosion-related problems observed on either Cravath Lake or Trippe Lake. The majority of the shorelines were in a naturally vegetated state. This is consistent with requirements set forth in Chapter NR 328, shore erosion control structures in navigable waterways, and with the recommendations set forth in the SEWRPC publication, *Managing the Water's Edge: Making Natural Connections.*[2] These "soft" structures provide habitat, shelter, and food resources for a variety of terrestrial and aquatic wildlife as well as having visual amenity value for humans.

[2]*See SEWRPC publication, Managing the Water's Edge: Making Natural Connections, May 2010:* http://www.sewrpc.org/SEWRPCFiles/Environment/RecentPublications/ManagingtheWatersEdge-brochure.pdf.

Table 5

EXISTING AND PLANNED LAND USE WITHIN THE AREA
DIRECTLY TRIBUTARY TO CRAVATH LAKE: 2000 AND 2035

Land Use Categories[a]	2000		2035	
	Acres	Percent of Tributary Area	Acres	Percent of Tributary Area
Urban				
Residential	174	27.1	230	36.0
Commercial	12	1.9	12	1.9
Industrial	10	1.6	29	4.5
Governmental and Institutional	46	7.2	50	7.8
Transportation, Communication, and Utilities	86	13.4	143	22.3
Recreational	3	0.5	6	0.9
Subtotal	331	51.7	470	73.4
Rural				
Agricultural and Other Open Lands	156	24.3	15	2.3
Wetlands	50	7.8	49	7.7
Woodlands	--	--	--	--
Surface Water	76	11.8	76	11.8
Extractive	28	4.4	31	4.8
Landfill	--	--	--	--
Subtotal	310	48.3	171	26.6
Total	641	100.0	641	100.0

[a]*Parking included in associated use.*

Source: SEWRPC.

WATER QUALITY

Water quality data for Trippe Lake have been collected since 2004 under the auspices of the University of Wisconsin-Extension (UWEX) Citizen Lake Monitoring Network (CLMN), formerly known as the WDNR Self-Help Monitoring Program. Water quality data for Cravath Lake either have not been collected or were of such recent nature so as not to be available at the time this report was being prepared. Nevertheless, such water quality data as were available are summarized in Table 8. The sampling site location used for data collection on Trippe Lake is shown on Map 3.

Water Clarity

Water clarity, or transparency, is often used as an indication of water quality. Transparency can be affected by physical factors—such as water color and suspended particles, and by various biological factors—including seasonal variations in planktonic algal populations living in the lake. Water clarity is measured typically with a Secchi disk—a black-and-white, eight-inch-diameter disk—which is lowered into the water to a depth at which the disk is no longer visible. This depth is known as the "Secchi-disk reading." The Secchi-disk reading can be related to the depth of light penetration into the water column of the lake. Light is one important component that sustains the growths of aquatic plants in lakes. Consequently, Secchi-disk measurements comprise an important part of the aforementioned UWEX CLMN program in which citizen volunteers assist in lake water quality monitoring efforts.

Table 6

EXISTING AND PLANNED LAND USE WITHIN THE AREA DIRECTLY TRIBUTARY TO TRIPPE LAKE: 2000 AND 2035

Land Use Categories[a]	2000		2035	
	Acres	Percent of Tributary Area	Acres	Percent of Tributary Area
Urban				
Residential	78	15.4	160	31.6
Commercial	22	4.3	26	5.1
Industrial	7	1.4	7	1.4
Governmental and Institutional	2	0.4	5	1.0
Transportation, Communication, and Utilities	37	7.3	93	18.4
Recreational	6	1.2	51	10.1
Subtotal	152	30.0	342	67.6
Rural				
Agricultural and Other Open Lands	190	37.6	--	--
Wetlands	53	10.5	53	10.5
Woodlands	2	0.4	2	0.4
Surface Water	109	21.5	109	21.5
Extractive	--	--	--	--
Landfill	--	--	--	--
Subtotal	354	70.0	164	32.4
Total	506	100.0	506	100.0

[a]*Parking included in associated use.*

Source: SEWRPC.

Secchi-Disk Measurements

As shown in Table 8, Secchi disk measurements for 2004 and for 2006 through 2009 at the deep hole in Trippe Lake averaged 6.2 feet, indicative of generally fair water quality. The average Secchi-disk transparency reported by the WDNR for the Southeastern Wisconsin Region is 4.9 feet.[3,4] Since the water color at the sampling site was often reported as brown, yellow, or green, the Secchi-disk depths are likely to have been influenced by a combination of turbidity due to suspended solids and/or algae.

Satellite-Derived Water Clarity Estimates

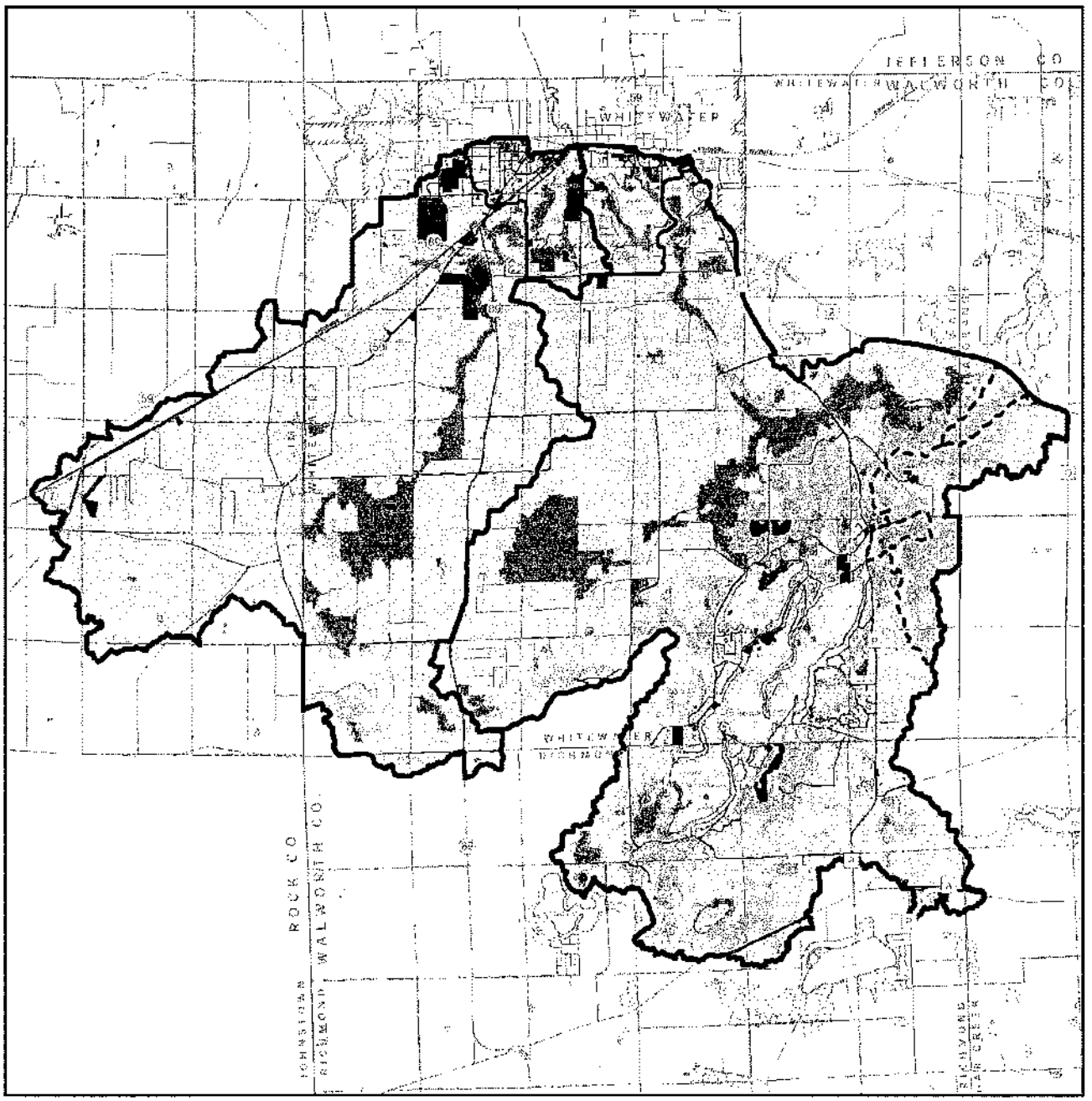
In addition to direct in-lake measurements of water clarity using a Secchi-disk, transparency in many Wisconsin lakes has been measured using remote sensing technology. The Environmental Remote Sensing Center (ERSC), established in 1970 at the University of Wisconsin-Madison, was one of the first remote sensing facilities in the

[3]*R.A. Lillie and J.W. Mason, Wisconsin Department of Natural Resources Technical Bulletin No. 138,* Limnological Characteristics of Wisconsin Lakes, *1983.*

[4]*Secchi-disk transparency was estimated using the relationship between phosphorus concentration and water clarity developed by the Organization for Economic Cooperation and Development,* Eutrophication of Waters: Monitoring, Assessment and Control, *OECD, 1982; using the forecast phosphorus concentration of 33.0 µg/l for Trippe Lake—see Pollutants Loadings and Sources, below—the annual average Secchi-disk transparency should be about 5.2 feet, which is consistent with the observed water clarity in that Lake.*

Map 5

EXISTING LAND USE WITHIN THE CRAVATH AND TRIPPE LAKES TOTAL TRIBUTARY AREA: 2000



- SINGLE-FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- TRANSPORTATION, COMMUNICATIONS AND UTILITIES
- GOVERNMENTAL AND INSTITUTIONAL
- RECREATIONAL
- WETLANDS
- WOODLANDS
- SURFACE WATER
- AGRICULTURAL, UNUSED, AND OTHER OPEN LANDS
- EXTRACTIVE AND LANDFILL
- TOTAL TRIBUTARY AREA BOUNDARY
- DIRECT TRIBUTARY AREA BOUNDARY
- INTERNALLY DRAINED AREA BOUNDARY WHERE NOT COINCIDENT WITH THE WATERSHED OR SUBWATERSHED BOUNDARIES

N

0 4,000 8,000 Feet

Source: Rock County Land Information Office and SEWRPC.

Table 7

EXISTING AND PLANNED LAND USE WITHIN THE TOTAL AREA TRIBUTARY TO CRAVATH AND TRIPPE LAKES: 2000 AND 2035

Land Use Categories[a]	2000		2035	
	Acres	Percent of Tributary Area	Acres	Percent of Tributary Area
Urban				
Residential	1,091	4.9	2,160	9.6
Commercial	72	0.3	262	1.2
Industrial	35	0.2	220	1.0
Governmental and Institutional	166	0.7	175	0.8
Transportation, Communication, and Utilities	790	3.5	1,355	6.0
Recreational	187	0.8	289	1.3
Subtotal	2,341	10.4	4,461	19.9
Rural				
Agricultural and Other Open Lands	14,585	64.9	12,475	55.6
Wetlands	1,901	8.5	1,889	8.4
Woodlands	2,460	11.0	2,445	10.9
Surface Water	1,134	5.0	1,134	5.0
Extractive	35	0.2	54	0.2
Landfill	8	<0.1	6	<0.1
Subtotal	20,123	89.6	18,003	80.1
Total	22,464	100.0	22,464	100.0

NOTE: Data above excludes internally drained portions of the total tributary area.

[a]*Parking included in associated use.*

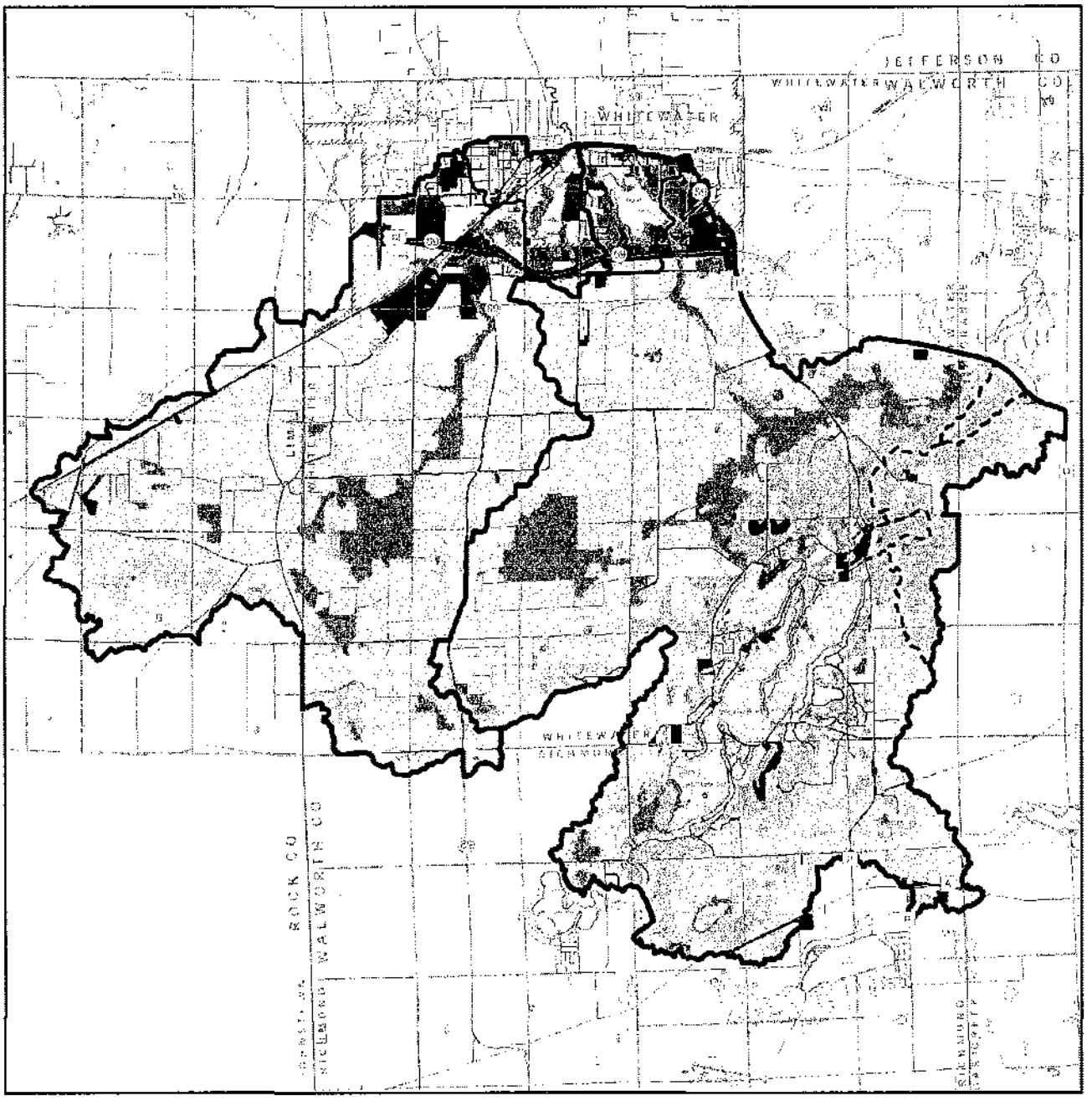
Source: SEWRPC.

United States. Using data gathered by satellite remote sensing over a three-year period, the ERSC generated a map based on a mosaic of satellite images showing the estimated water clarity of the largest 8,000 lakes in Wisconsin. The WDNR, through its volunteer Self-Help Monitoring Program (now the CLMN), was able to gather water clarity measurements from about 800 lakes, or about 10 percent of Wisconsin's largest lakes. Of these, the satellite remote sensing technology utilized by ERSC was able to accurately estimate clarity, providing a basis for extrapolating water clarity estimates to the remaining 90 percent of lakes. Measurements collected through ERSC remote sensing program from 1999 through 2005, estimated the average water clarity of Cravath Lake to be 2.6 feet, a value indicative of generally poor water quality. Trippe Lake was estimated to have average water clarity of 2.5 feet, also indicative of generally poor water quality. Such transparencies are substantially lower than the measured in-lake transparencies reported by the CLMN program. This would suggest that: (a) the water clarity of the lakes has improved in the years since the ERSC study, (b) the occurrence of interferences with the remote sensing instruments resulted in lower than expected water clarity estimates, or (c) observational "errors" such that the signals from Trippe and Cravath Lakes differ from those of the larger population of lakes included in the study, possibly related to the shallow natures of these impoundments.[5]

[5]*The shallow nature of the impoundments could affect transparency estimates in a number of ways, including introduction of interference as a result of: sensors penetrating to the lake bottoms, impacts of wind-induced turbidity not experienced at the times that the volunteer observer recorded transparency readings, or the presence of rooted, emergent, or floating leaved aquatic plants appearing to the sensors as algae.*

Map 6

PLANNED LAND USE WITHIN THE CRAVATH AND TRIPPE LAKES TOTAL TRIBUTARY AREA: 2035



- SINGLE-FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- TRANSPORTATION, COMMUNICATIONS, AND UTILITIES
- GOVERNMENTAL AND INSTITUTIONAL
- RECREATIONAL
- WETLANDS
- WOODLANDS
- SURFACE WATER
- AGRICULTURAL, UNUSED, AND OTHER OPEN LANDS
- EXTRACTIVE AND LANDFILL
- TOTAL TRIBUTARY AREA BOUNDARY
- DIRECT TRIBUTARY AREA BOUNDARY
- INTERNALLY DRAINED AREA BOUNDARY WHERE NOT COINCIDENT WITH THE WATERSHED OR SUBWATERSHED BOUNDARIES

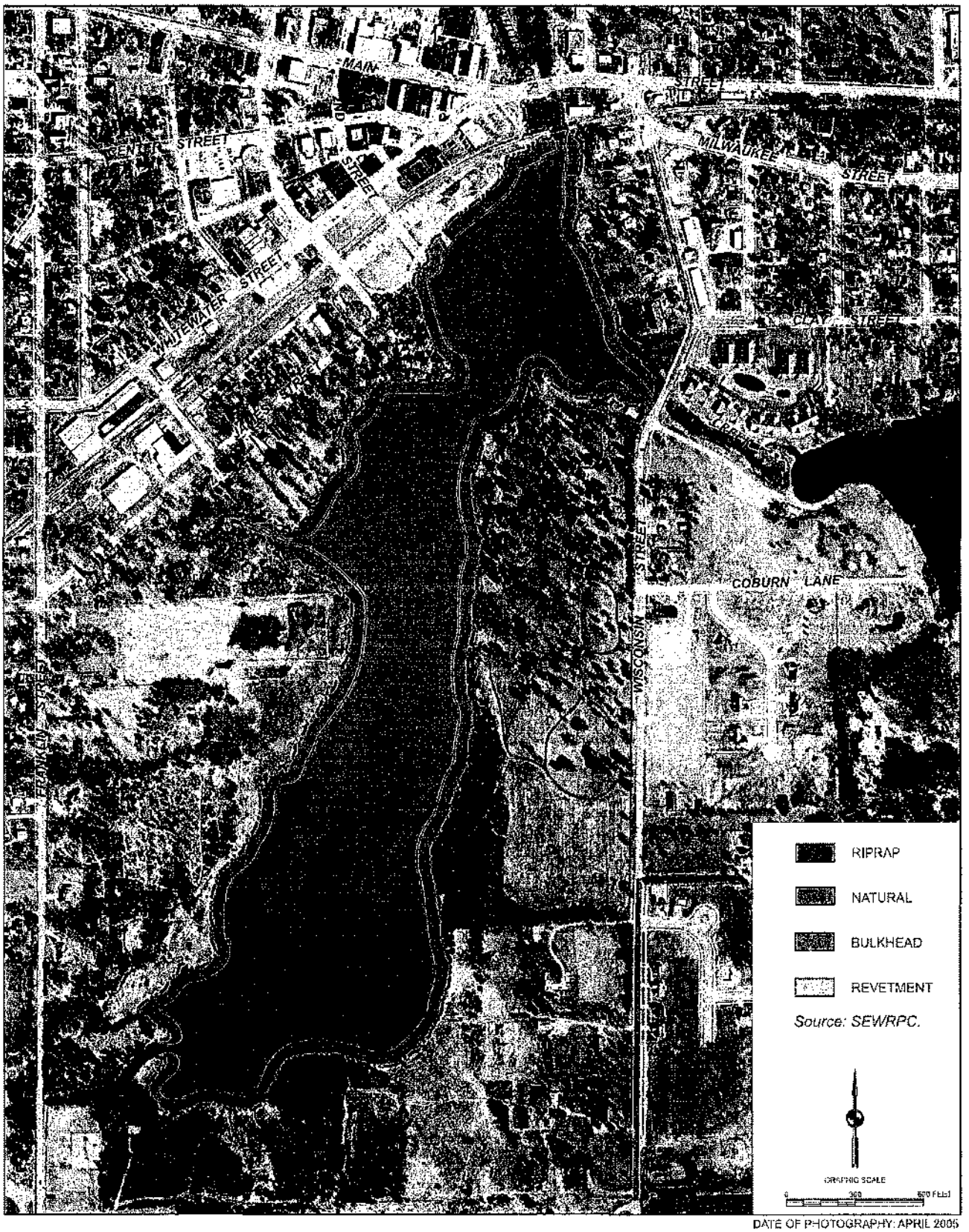
N

0 4,000 8,000 Feet

Source: Rock County Land Information Office and SEWRPC.

Map 7

SHORELINE PROTECTION STRUCTURES ON CRAVATH LAKE: 2008



DATE OF PHOTOGRAPHY: APRIL 2005

Map 8

SHORELINE PROTECTION STRUCTURES ON TRIPPE LAKE: 2008

DATE OF PHOTOGRAPHY: APRIL 2005

RIPRAP

BEACH

NATURAL

BULKHEAD

REVETMENT

GRAPHIC SCALE

0 300 600 FEET

Source: SEWRPC.

Table 8

WATER CLARITY FOR TRIPPE LAKE: 2004-2010

Year	Secchi Mean (feet)	Secchi Range (feet)	Secchi Count
2004	6.6	6.6-6.6	1
2005	--	--	--
2006	6.5	6.5-6.5	1
2007	6.1	5.3-7.3	4
2008	5.7	5.0-6.0	3
2009	6.0	6.0-6.0	1
2010	6.0	3.5-7.5	9

Source: Wisconsin Department of Natural Resources and SEWRPC.

Effects of Zebra Mussels

With respect to changing in-lake conditions, a possible influence on water clarity in lakes in Southeastern Wisconsin is zebra mussels (*Dreissena polymorpha*). Zebra mussels are a nonnative species of shellfish that are having varied impacts on the inland lakes of the Upper Midwest as a result of their filter feeding proclivities. These impacts include the disruption of the food chain by removing significant amounts of bacteria and smaller phytoplankton which serve as food for larval and juvenile fishes and many forms of zooplankton; the resultant improvement of water clarity, in turn, can lead to increased growths of rooted aquatic plants, including Eurasian water milfoil. Zebra mussels also can alter the aquatic plant communities by attaching themselves to the stalks of the Eurasian water milfoil plants, dragging the stems out of the zone of light penetration due to the weight of the zebra mussel shells, interfering with the competitive strategy of the Eurasian water milfoil plants. Such action contributes to improved growths of native aquatic plants or growths of filamentous algae too large to be ingested by the zebra mussels. To date, however, Cravath Lake and Trippe Lake are not listed by the WDNR as having established populations of these animals.[6]

Effects of Wastewater Treatment Plant Upgrades

Another possible influence on changing in-lake conditions would be the upgrading of the City of Whitewater wastewater treatment facility, as recommended in the Regional Water Quality Management Plan.[7] While the relocation, upgrading, or implementation of additional wastewater treatment practices within the drainage area tributary to the Lakes would be likely to have a profound effect on water quality and clarity, the City of Whitewater had commissioned the new plant in response to this recommendation during 1982,[8] and no further changes were indicated as being required of this plant in the then foreseeable future. Consequently, implementation of upgraded wastewater treatment processes is unlikely to account for the differences in water clarity noted between the CLMN measurements and ERSC observations.

By eliminating these factors—zebra mussels and changes in wastewater treatment practices, it is most likely that the differences between the ERSC observations and CLMN measurements are associated with the shallow nature of the impoundments and possible interferences due to the abundant growths of aquatic plants in the Lakes (see Aquatic Plants: Distribution and Management Areas, below).

[6] *Trippe and Cravath Lakes should continue to be monitored periodically for zebra mussel larvae or veligers. Regardless of the seeming beneficial impacts of these animals, the overall effect is that, as zebra mussels and other invasive species spread to inland lakes and rivers, they increase the environmental, aesthetic, and economic costs to water users.*

[7] *See SEWRPC Planning Report 30,* A Regional Water Quality Management Plan for Southeastern Wisconsin-2000, *Volume Three,* Recommended Plan, *June 1979.*

[8] *See SEWRPC Memorandum Report No. 93,* A Regional Water Quality Management Plan for Southeastern Wisconsin: An Update and Status Report, *March 1995.*

Dissolved Oxygen

Dissolved oxygen levels are one of the most critical factors affecting the living organisms of a lake ecosystem. Generally, dissolved oxygen levels are higher at the surface of a lake, where there is an interchange between the water and atmosphere, stirring by wind action, and production of oxygen by plant photosynthesis. Dissolved oxygen levels are usually lowest near the bottom of a lake, where decomposer organisms and chemical oxidation processes utilize oxygen in the decay process.

When a lake becomes stratified—that is, when a thermal gradient (called a "thermocline") or chemical gradient ("chemocline") of sufficient intensity produces a barrier separating upper waters, called the epilimnion, from lower waters, known as the hypolimnion—the surface supply of oxygen to the hypolimnion is cut off. Eventually, if there is not enough dissolved oxygen to meet the demands from the bottom dwelling aquatic life and decaying organic material, the dissolved oxygen levels in the bottom waters may be reduced to zero, a condition known as anoxia or anaerobiasis.

Where oxygen levels are depleted in the hypolimnion, fish tend to move upward, nearer to the surface of the lake, where higher dissolved oxygen concentrations exist. This migration, when combined with temperature, can select against some fish species that prefer the cooler water temperatures that generally prevail in the lower portions of the lakes. When there is insufficient oxygen at these depths, these fish are susceptible to summerkills, or, alternatively, are driven into the warmer water portions of the lake where their condition and competitive success may be severely impaired. Additionally, this condition, common to many shallow lakes in Wisconsin, can lead to winter fish kills if oxygen stores are not sufficient to meet the total demand.

Due to the generally shallow nature of Trippe Lake, as well as the thermal and dissolved oxygen profiles that have been recorded, it seems unlikely that Trippe Lake stratifies; if it stratifies at all, the Lake is likely to be weakly stratified with respect to both temperature and dissolved oxygen concentrations. In the case of Cravath Lake, the shallow nature of that impoundment would suggest that this lake is even less likely to stratify, even weakly. The available dissolved oxygen concentration data for these Lakes, limited to only a few measurements taken in Trippe Lake during 2004, 2008, and 2009, showed adequate dissolved oxygen concentrations near the surface of the Lake to a depth of three feet. Although dissolved oxygen concentrations generally decreased with depth, they did not drop below the 5.0 milligrams per liter (mg/l) level generally considered to be the minimum necessary to support fish and some other forms of aquatic life.

In addition to biological consequences, a lack of dissolved oxygen at depth can enhance the development of chemoclines, or chemical gradients, with an inverse relationship to the dissolved oxygen concentration. For example, the sediment-water exchange of elements, such as phosphorus, iron, and manganese, is increased under anaerobic conditions, resulting in increased hypolimnetic concentrations of these elements. Under anaerobic conditions, changes in iron and manganese oxidation states enable the release of phosphorus from the iron and manganese complexes to which they were bound under aerobic conditions. This "internal loading" can affect water quality significantly if these nutrients and salts are mixed into the epilimnion, especially during early summer, when these nutrients can become available for algal and rooted aquatic plant growth. Internal loading can occur during aerobic conditions, such as those observed in Trippe and Cravath Lakes. While there was fair agreement between predicted (33.0 µg/l) and observed (43.5 µg/l) levels of phosphorus in Trippe Lake,[9] the slightly higher observed concentration would suggest that other pollution sources, including internal, atmospheric, and groundwater, and onsite sewage disposal system sources outside of the City of Whitewater sewerage system, are likely to have contributed to the loading.

---

[9] *Forecast nutrient loads are based upon land uses in the drainage basin, and were predicted as an output from the Wisconsin Lake Model Spreadsheet (WiLMS); John C. Panuska and Jeff C. Kreider, Wisconsin Department of Natural Resources Publication No. PUBL-WR-363-94,* Wisconsin Lake Modeling Suite Program Documentation and User's Manual, Version 3.3 for Windows, *August 2002; phosphorus concentration was calculated using the shallow lakes and reservoir relationship described in Organization for Economic Cooperation and Development,* op. cit.

Chlorophyll-*a*

Chlorophyll-*a* is the major photosynthetic ("green") pigment in algae. The amount of chlorophyll-*a* present in the water is an indication of the biomass or amount of algae in the water. The mean chlorophyll-*a* concentration for lakes in the southeastern Wisconsin region is about 43 micrograms per liter (µg/l), with a median concentration of about 10 µg/l.[10] Chlorophyll-*a* levels above about 10 µg/l generally result in a green coloration of the water that may be severe enough to impair recreational activities, such as swimming or waterskiing.[11]

For Trippe and Cravath Lakes, data on chlorophyll-*a* concentrations are extremely limited: there was one measurement taken from Trippe Lake during June of 2008 and two additional measurements taken during the summer of 2009. These samples indicated low levels of chlorophyll-*a* in the Lakes, that ranged from 3 µg/l to 6 µg/l. These concentrations are significantly less than the regional average, and well below the level of 10 µg/l which, as mentioned, is the level above which some recreational activities may be impaired. These values, however, are consistent with the predicted total phosphorus concentration for Trippe Lake—the predicted total phosphorus concentration of 33.0 µg/l, when used in the phosphorus-chlorophyll concentration relationship developed by the Organization for Economic Cooperation and Development (OECD),[12] yields an annual average chlorophyll-*a* concentration of about 6.6 µg/l. It is possible that the lower observed chlorophyll-*a* concentrations reflect the competition for nutrients between rooted aquatic macrophytes and the free-floating phytoplankton as well as possible shading of the water column by the rooted plants.

Nutrient Characteristics

Aquatic plants and algae require nutrients such as phosphorus and nitrogen for growth. In hard-water alkaline lakes, most of these nutrients are generally found in concentrations that exceed the needs of growing plants. However, in lakes where the supply of one or more of these nutrients is limited, plant growth is limited by the amount of the nutrient that is available in the least quantity relative to the others. The ratio of total nitrogen (N) to total phosphorus (P) in lake water (the N:P ratio) indicates which nutrient is most likely to be limiting aquatic plant growth in a lake.[13] Where the N:P ratio is greater than 14:1, phosphorus is most likely to be the limiting nutrient. If the ratio is less than 10:1, nitrogen is most likely to be the limiting nutrient. Because data for total nitrogen are lacking for the Cravath-Trippe Lake system, it was not possible to evaluate the N:P ratios in these Lakes. However, because of the availability of nitrogen from the atmosphere, most freshwater inland lakes are phosphorus limited, meaning that the addition of phosphorus to these lakes would be likely to result in increased growths of aquatic plants.

Total phosphorus concentrations include phosphorus contained in plant and animal fragments suspended in the lake water, phosphorus bound to sediment particles, and phosphorus dissolved in the water column. Total phosphorus is, therefore, usually considered a good indicator of nutrient status in a lake. For lakes, the guideline value set forth in the adopted regional water quality management plan is 20 µg/l of total phosphorus or less during spring turnover. This is the level considered as necessary to limit algal and aquatic plant growths to levels

---

[10] Ibid.

[11] *J.R. Vallentyne, 1969 "The Process of Eutrophication and Criteria for Trophic State Determination." In* Modeling the Eutrophication Process—Proceedings of a Workshop at St. Petersburg, Florida, *November 19-21, 1969, pp. 57-67.*

[12] *Organization for Economic Cooperation and Development,* op. cit.

[13] *M.O. Allum, R.E. Gessner, and T.H. Gakstatter, U.S. Environmental Protection Agency Working Paper No. 900.* An Evaluation of the National Eutrophication Data, *1976.*

consistent with recreational water use objectives, as well as with water use objectives aimed at maintaining a warmwater fishery and other aquatic life.[14]

During 2008 and 2009, the summer average total phosphorus concentrations in Trippe Lake were 43.5 µg/l. These concentrations exceed both the Regional guideline value and the action level established in the *Wisconsin Administrative Code*, suggesting that Trippe Lake is capable of supporting abundant growths of aquatic plants. Given the similarities in water clarity between the two Lakes, it is likely that Cravath Lake also has phosphorus concentrations that exceed the State and Regional guidelines.

Seasonal gradients of phosphorus concentrations between the epilimnion and hypolimnion of a lake reflect the biogeochemistry of this growth element. When aquatic organisms die, they usually sink to the bottom of the lake, where they are decomposed. Phosphorus from these organisms is then either stored in the bottom sediments or rereleased into the water column. Because phosphorus is not highly soluble in water, it readily forms insoluble precipitates with calcium, iron, and aluminum under aerobic conditions and accumulates, predominantly, in the lake sediments. As noted above, should the bottom waters of a lake become depleted of oxygen during stratification, certain chemical changes occur such that phosphorus becomes soluble and is more readily released from the sediments in a process known as internal loading. However, based upon the few available data for both phosphorus and dissolved oxygen concentrations in Trippe and Cravath Lakes, the output of the modeled total phosphorus concentration in Trippe Lake, and the shallow nature of the two impoundments, it is likely that internal loading, while not a major concern, does contribute some phosphorus to the water columns of the Lakes. This conclusion is substantiated by the fact that the observed phosphorus concentration (43.5 µg/l), while greater than the most likely phosphorus concentration (33.0 µg/l), was less than the highest likely phosphorus concentration (85.0 µg/l) predicted by the WiLMS model.[15]

POLLUTION LOADINGS AND SOURCES

Pollutant loads to a lake are generated by various natural processes and human activities that take place in the area tributary to a lake. These loads are transported to the lake through the atmosphere, across the land surface, and by way of inflowing streams. Pollutants transported by the atmosphere are deposited onto the surface of the lake as dry fallout and direct precipitation. Pollutants transported across the land surface enter the lake directly as surface runoff and, indirectly, as groundwater inflows, including drainage from onsite wastewater treatment systems. Pollutants transported by streams also enter a lake as surface water inflows.

In drainage lakes, such as the Cravath-Trippe Lake system, pollutant loads transported by inflowing streams, by precipitation falling directly onto the Lakes' surfaces, and runoff from the tributary areas immediately surrounding the Lakes, in the absence of identifiable or point source discharges from industries or wastewater treatment facilities, comprise the principal routes by which contaminants enter the waterbodies.[16] Currently, there are no

---

[14] *The Natural Resources Board of the State of Wisconsin, acting at their June 2010 Board Meeting adopted Board Order WT-25-08, which set forth revisions to Chapters NR 102 and NR 217 of the* Wisconsin Administrative Code *related to phosphorus water quality standards criteria and WPDES permit provisions for phosphorus. Pursuant to Section NR 102.06, an action level of 40 µg/l of total phosphorus was adopted for shallow lakes and reservoirs as the level above which water quality concerns are likely to arise.*

[15] *John C. Panuska and Jeff C. Kreider, Wisconsin Department of Natural Resources Publication No. PUBL-WR-363-94,* op. cit.

[16] *Sven-Olof Ryding and Walter Rast,* The Control of Eutrophication of Lakes and Reservoirs, *Unesco Man and the Biosphere Series, Volume 1, Parthenon Press, Carnforth, 1989; Jeffrey A. Thornton, Walter Rast, Marjorie M. Holland, Ceza Jolankai, and Sven-Olof Ryding,* The Assessment and Control of Nonpoint Source Pollution of Aquatic Ecosystems, *Unesco Man and the Biosphere Series, Volume 23, Parthenon Press, Carnforth, 1999.*

significant point source discharges of pollutants into Cravath and Trippe Lakes. For this reason, the discussion that follows is based upon nonpoint source pollutant loadings to the Lakes.

Nonpoint sources of water pollution include urban sources, such as runoff from residential, commercial, transportation, construction, and recreational activities; and rural sources, such as runoff from agricultural lands and onsite sewage disposal systems.

Nonpoint source phosphorus, suspended solids, and urban-derived metals inputs to Cravath and Trippe Lakes were estimated using the WiLMS version 3.0,[17] and the unit area load-based models developed for use within the Southeastern Wisconsin Region.[18] It should be noted that, with respect to the estimated phosphorus loads, the promulgation of Section 94.643 of the *Wisconsin Statutes* during 2009, limiting the use and sale of fertilizers containing phosphorus, should reduce the loads from urban areas below the loads forecast using the WiLMS and unit area load models.

Sediment Loadings

Cravath Lake

The estimated sediment loadings to Cravath Lake from its direct tributary area under existing year 2000 and planned year 2035 conditions and as set forth in the adopted regional land use plan[19] are shown in Table 9. A total annual sediment loading of 71.0 tons was estimated to be contributed to Cravath Lake from its direct tributary area under year 2000 conditions, as shown in Table 9. Of the likely annual sediment load, it was estimated that about 42.3 tons per year, or about 60 percent of the total loading, were contributed by runoff from rural lands, mostly from agricultural sources, and 22.4 tons, or about 31 percent, contributed by urban lands. Approximately 6.3 tons, or about 9 percent of the annual sediment load, were contributed by atmospheric deposition onto the lake surface.

Under 2035 conditions, the annual sediment load to the Lake from its direct tributary area is anticipated to diminish as a result of conversion of agricultural lands to urban land uses. The most likely annual sediment load to the Lake under buildout conditions is estimated to be about 42.1 tons. Of the forecast sediment load anticipated for Cravath Lake, about 3.6 tons of sediment are estimated to be contributed to the Lake from rural sources and 31.4 tons from urban sources. Approximately 7.1 tons of sediment per year are estimated to continue to be contributed by direct precipitation onto the lake surface.

Table 10 shows the estimated sediment loadings to Cravath Lake from its total tributary area under existing year 2000 conditions. A total annual sediment loading of 3,371.0 tons was estimated to be contributed to Cravath Lake from its total tributary area under year 2000 conditions. Of the likely annual sediment load, it was estimated that 3,175.1 tons per year, or about 94 percent of the total loading, were contributed by runoff from rural lands, mostly from agricultural sources, and 105.6 tons, or about 3 percent, contributed by urban lands. Approximately 90.3 tons, or about 3 percent of the annual sediment load, were contributed by atmospheric deposition onto the lake surface. Under 2035 conditions, the annual sediment load to the Lake from its total tributary area is anticipated to diminish.

---

[17] *John C. Panuska and Jeff C. Kreider, Wisconsin Department of Natural Resources Publication No. PUBL-WR-363-94,* op. cit.

[18] *SEWRPC Planning Report No. 30,* A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, *Volume One,* Inventory Findings, *September 1978; Volume Two,* Alternative Plans, *February 1979; and Volume Three,* Recommended Plan, *June 1979.*

[19] *SEWRPC Planning Report No. 48,* A Regional Land Use Plan for Southeastern Wisconsin: 2035, *June 2006.*

Table 9

ESTIMATED ANNUAL POLLUTANT LOADINGS BY LAND USE CATEGORY
WITHIN THE AREA DIRECTLY TRIBUTARY TO CRAVATH LAKE: 2000 AND 2035

Land Use Category	Pollutant Loads: 2000			
	Sediment (tons)	Phosphorus (pounds)	Copper (pounds)	Zinc (pounds)
Urban				
Residential	1.7	34.8	0.0	1.6
Commercial	4.7	14.4	2.6	3.0
Industrial	3.8	11.7	2.2	1.5
Governmental	11.7	62.1	3.2	24.8
Transportation	0.4	9.5	0.0	0.0
Recreational	<0.1	0.8	0.0	0.0
Subtotal	22.4	133.3	8.0	30.9
Rural				
Agricultural	35.1	134.1	--	--
Wetlands	0.1	2.0	--	--
Woodlands	--	--	--	--
Water	7.1	9.9	--	--
Extractive	6.3	24.1	--	--
Subtotal	48.6	170.1	--	--
Total	71.0	303.4	8.0	30.9

Land Use Category	Pollutant Loads: 2035			
	Sediment (tons)	Phosphorus (pounds)	Copper (pounds)	Zinc (pounds)
Urban				
Residential	2.2	46.0	0.0	1.6
Commercial	4.7	14.4	2.6	3.0
Industrial	10.9	33.9	6.4	1.5
Governmental	12.8	67.5	3.5	24.8
Transportation	0.7	15.7	0.0	0.0
Recreational	<0.1	1.6	0.0	0.0
Subtotal	31.4	179.0	12.5	30.9
Rural				
Agricultural	3.4	12.9	--	--
Wetlands	0.1	2.0	--	--
Woodlands	--	--	--	--
Water	7.1	9.9	--	--
Extractive	0.1	3.4	--	--
Subtotal	10.7	28.2	--	--
Total	42.1	207.2	12.5	30.9

Source: SEWRPC.

Trippe Lake

The estimated sediment loadings to Trippe Lake from its direct tributary area under existing year 2000 and planned year 2035 conditions as set forth in the adopted regional land use plan[20] are shown in Table 11. A total annual sediment loading of 65.9 tons was estimated to be contributed to Trippe Lake from its direct tributary area under year 2000 conditions. Of the likely annual sediment load, it was estimated that 43.0 tons per year, or about 65 percent of the total loading, were contributed by runoff from rural lands, mostly from agricultural sources, and

[20]Ibid.

Table 10

ESTIMATED ANNUAL POLLUTANT LOADINGS BY LAND USE CATEGORY WITHIN THE TOTAL AREA TRIBUTARY TO CRAVATH LAKE: 2000

Land Use Category	Pollutant Loads: 2000			
	Sediment (tons)	Phosphorus (pounds)	Copper (pounds)	Zinc (pounds)
Urban				
Residential	8.9	182.0	0.0	1.5
Commercial	8.5	26.0	4.8	3.0
Industrial	20.9	65.0	12.2	1.5
Governmental	38.0	201.2	10.5	24.8
Transportation	27.2	54.5	118.9	0.0
Recreational	2.1	47.4	0.0	0.0
Subtotal	105.6	576.1	146.4	30.8
Rural				
Agricultural	3,165.5	12,100.0	--	--
Wetlands	3.0	64.3	--	--
Woodlands	4.2	90.0	--	--
Water	90.3	124.7	--	--
Extractive	2.4	55.2	--	--
Subtotal	3,265.4	12,434.2	--	--
Total	3,371.0	13,010.3	146.4	30.8

Source: SEWRPC.

12.7 tons, or about 19 percent, contributed by urban lands. Approximately 10.2 tons, or about 16 percent of the annual sediment load, were contributed by atmospheric deposition onto the lake surface.

Under 2035 conditions, the annual sediment load to the Lake from its total tributary area is anticipated to diminish as a result of the conversion of agricultural lands to urban land uses. The most likely annual sediment load to the Lake under buildout conditions is estimated to be 27.0 tons. Of the forecast sediment load anticipated for Trippe Lake, about 0.2 ton of sediment is estimated to be contributed to the Lake from rural sources. Urban sources are expected to contribute the majority of the sediment, estimated at about 16.6 tons per year. Approximately 10.2 tons of sediment per year are estimated to continue to be contributed by direct precipitation onto the lake surface.

Table 12 shows the estimated sediment loadings to Trippe Lake from its total tributary area under existing year 2000 conditions. A total annual sediment loading of about 1,671.9 tons was estimated to be contributed to Trippe Lake from its total tributary area under year 2000 conditions. Of the likely annual sediment load, it was estimated that 1,548.3 tons per year, or about 93 percent of the total loading, were contributed by runoff from rural lands, mostly from agricultural sources, and 33.6 tons, or about 2 percent, contributed by urban lands. Approximately 90.0 tons, or about 5 percent of the annual sediment load, were contributed by atmospheric deposition onto the lake surface. Under 2035 conditions, the annual sediment load to the Lake from its total tributary area is anticipated to diminish.

Phosphorus Loadings

Cravath Lake

As shown in Table 9, existing year 2000 phosphorus loads to Cravath Lake from its direct tributary area were identified and quantified using SEWRPC land use inventory data.[21] It was estimated that, under year 2000

[21] Ibid.

Table 11

ESTIMATED ANNUAL POLLUTANT LOADINGS BY LAND USE CATEGORY WITHIN THE AREA DIRECTLY TRIBUTARY TO TRIPPE LAKE: 2000 AND 2035

Land Use Category	Pollutant Loads: 2000			
	Sediment (tons)	Phosphorus (pounds)	Copper (pounds)	Zinc (pounds)
Urban				
Residential	0.7	15.6	0.0	1.6
Commercial	8.6	26.4	4.8	3.0
Industrial	2.6	8.2	1.5	1.5
Governmental	0.5	2.7	0.1	24.8
Transportation	0.2	4.1	0.0	0.0
Recreational	<0.1	1.6	0.0	0.0
Subtotal	12.7	58.6	6.4	30.9
Rural				
Agricultural	42.8	163.4	--	--
Wetlands	0.1	2.1	--	--
Woodlands	<0.1	0.1	--	--
Water	10.2	14.2	--	--
Extractive	--	--	--	--
Subtotal	53.2	179.8	--	--
Total	65.9	238.4	6.4	30.9

Land Use Category	Pollutant Loads: 2035			
	Sediment (tons)	Phosphorus (pounds)	Copper (pounds)	Zinc (pounds)
Urban				
Residential	1.6	32.0	0.0	1.6
Commercial	10.1	31.2	5.7	3.0
Industrial	2.6	8.2	1.5	1.5
Governmental	1.3	6.7	0.3	24.8
Transportation	0.4	10.2	0.0	0.0
Recreational	0.6	13.8	0.0	0.0
Subtotal	16.6	102.1	7.5	30.9
Rural				
Agricultural	0.0	0.0	--	--
Wetlands	0.1	2.1	--	--
Woodlands	<0.1	0.1	--	--
Water	10.2	14.2	--	--
Extractive	--	--	--	--
Subtotal	10.4	16.4	--	--
Total	27.0	118.5	7.5	30.9

Source: SEWRPC.

conditions, the total phosphorus load to Cravath Lake from its direct tributary area was 303 pounds. Of the annual total phosphorus load, it was estimated that 160 pounds per year, or about 53 percent of the total loading, were contributed by runoff from rural lands, mostly agricultural, and 133 pounds per year, or about 44 percent, were contributed by runoff from urban lands, mostly from residential sources. About 10 pounds, or about 3 percent, were contributed by direct precipitation onto the lake surface.

Table 12

ESTIMATED ANNUAL POLLUTANT LOADINGS BY LAND USE CATEGORY WITHIN THE TOTAL AREA TRIBUTARY TO TRIPPE LAKE: 2000

Land Use Category	Pollutant Loads: 2000			
	Sediment (tons)	Phosphorus (pounds)	Copper (pounds)	Zinc (pounds)
Urban				
Residential	6.8	139.2	0.0	1.5
Commercial	5.1	15.6	2.9	3.0
Industrial	5.2	16.4	3.0	1.5
Governmental	3.5	18.9	1.0	24.8
Transportation	12.0	24.0	52.3	0.0
Recreational	1.0	24.6	0.0	0.0
Subtotal	33.6	238.7	59.2	30.8
Rural				
Agricultural	1,539.2	5,883.2	--	--
Wetlands	1.8	39.4	--	--
Woodlands	3.7	83.0	--	--
Water	90.0	124.5	--	--
Extractive	3.6	50.2	--	--
Subtotal	1,638.3	6,180.3	--	--
Total	1,671.9	6,419.0	59.2	30.8

Source: SEWRPC.

Table 9 also shows the estimated phosphorus loads to Cravath Lake from its direct tributary area under planned year 2035 conditions. Under 2035 conditions, the annual total phosphorus load to the Lake is anticipated to diminish as agricultural activities within the area directly tributary to Cravath Lake are replaced by urban residential land uses. The most likely annual total phosphorus load to the Lake under the planned conditions is estimated to be 207 pounds. Of the total annual forecast phosphorus load of phosphorus to Cravath Lake, 18 pounds per year, or about 9 percent of the total loading, are estimated to be contributed by runoff from rural land, and 179 pounds per year, or about 86 percent, from urban land. About 10 pounds, or about 5 percent, are expected to be contributed by direct precipitation onto the lake surface. Thus, it may be anticipated that not only will the amount of the phosphorus load decrease, but that the distribution of the sources of the phosphorus load to the Lake may change, with the amount of phosphorus being contributed from urban sources increasing, while the amount of phosphorus from rural sources will decrease.

Table 10 shows estimated phosphorus loads to Cravath Lake from its total tributary area under year 2000 conditions. It was estimated that, under year 2000 conditions, the total phosphorus load to Cravath Lake from its total tributary area was about 13,010 pounds. Of the annual total phosphorus load, it was estimated that 12,309 pounds per year, or about 95 percent of the total loading, were contributed by runoff from rural lands, mostly agricultural, and 576 pounds per year, or about 4 percent, were contributed by runoff from urban lands, mostly from residential sources. About 125 pounds, or about 1 percent, were contributed by direct precipitation onto the lake surface.

Trippe Lake

As shown in Table 11, existing year 2000 phosphorus loads to Trippe Lake from its direct tributary area were identified and quantified using SEWRPC land use inventory data.[22] It was estimated that, under year 2000 conditions, the total phosphorus load to Trippe Lake from its direct tributary area was 238 pounds. Of the annual total phosphorus load, it was estimated that 165 pounds per year, or about 69 percent of the total loading, were contributed by runoff from rural lands, mostly agricultural, and 59 pounds per year, or about 25 percent, were contributed by runoff from urban lands, mostly from residential sources. About 14 pounds, or about 6 percent, were contributed by direct precipitation onto the lake surface.

Table 11 also shows the estimated phosphorus loads to Trippe Lake from its direct tributary area under planned year 2035 conditions. Under 2035 conditions, as set forth in the adopted regional land use plan,[23] the annual total phosphorus load to the Lake is anticipated to diminish as agricultural activities within the area directly tributary to Trippe Lake are replaced by urban residential land uses. The most likely annual total phosphorus load to the Lake under the planned conditions is estimated to be 118 pounds. Of the total annual forecast phosphorus load to Trippe Lake, two pounds per year, or about 2 percent of the total loading, are estimated to be contributed by runoff from rural land, and 102 pounds per year, or about 86 percent, from urban land. About 14 pounds, or about 12 percent, are expected to be contributed by direct precipitation onto the lake surface. Thus, it may be anticipated that not only will the amount of the phosphorus load decrease, but that the distribution of the sources of the phosphorus load to the Lake may change, with the amount of phosphorus being contributed from urban sources experiencing an increase, while the amount of phosphorus from rural sources will decrease.

Table 12 shows estimated phosphorus loads to Trippe Lake from its total tributary area under year 2000 conditions. It was estimated that, under year 2000 conditions, the total phosphorus load to Trippe Lake from its total tributary area was 6,419 pounds. Of the annual total phosphorus load, it was estimated that 6,056 pounds per year, or about 94 percent of the total loading, were contributed by runoff from rural lands, mostly agricultural, and 239 pounds per year, or about 4 percent, were contributed by runoff from urban lands, mostly from residential sources. About 124 pounds, or about 2 percent, were contributed by direct precipitation onto the lake surface.

Phosphorus release from the lake bottom sediments, or internal loading, as discussed above, does not appear to have been a contributing factor to the total phosphorus loading to either Cravath or Trippe Lake.

Urban Heavy Metals Loadings

Urbanization brings with it increased use of metals and other materials that contribute pollutants to aquatic systems.[24] The majority of these metals becomes associated with sediment particles,[25] and, consequently, is likely to be encapsulated into the bottom sediments of a lake.

Cravath Lake

The estimated loadings of copper and zinc likely to be contributed to Cravath Lake from its direct tributary area under existing year 2000 and forecast year 2035 land use conditions are shown in Table 9. In 2000, eight pounds of copper and 31 pounds of zinc were estimated to be contributed annually to Cravath Lake from its direct tributary area, all from urban lands. Under planned year 2035 conditions, as set forth in the adopted regional land

---

[22] *SEWRPC Planning Report No. 48,* op. cit.

[23] Ibid.

[24] *Jeffrey A. Thornton, et al.,* op. cit.

[25] *Werner Stumm and James J. Morgan,* Aquatic Chemistry: An Introduction Emphasizing Chemical Equilibria in Natural Waters, *Wiley-Interscience, New York, 1970.*

use plan,[26] the annual zinc load to the Lake is anticipated to remain about the same as estimated under existing year 2000 conditions, but it is estimated that the copper load to the Lake may increase to about 12 pounds per year.

Estimated loadings of copper and zinc to Cravath Lake from its total tributary area under existing year 2000 conditions are shown in Table 10. In 2000, 146 pounds of copper and 31 pounds of zinc were estimated to be contributed annually to Cravath Lake from its total tributary area, all from urban lands.

Trippe Lake

The estimated loadings of copper and zinc likely to be contributed to Trippe Lake from its direct tributary area under existing year 2000 and forecast year 2035 land use conditions as set forth in the adopted regional land use plan,[27]are shown in Table 11. In 2000, six pounds of copper and 31 pounds of zinc were estimated to be contributed annually to Trippe Lake from its direct tributary area, all from urban lands. Under planned year 2035 conditions, the annual heavy metal loads to the Lake are anticipated to remain at about the same as those estimated under existing year 2000 conditions, with a slight increase in copper loading to about seven pounds per year.

Estimated loadings of copper and zinc to Trippe Lake from its total tributary area under existing year 2000 conditions are shown in Table 12. In 2000, 59 pounds of copper and 31 pounds of zinc were estimated to be contributed annually to Trippe Lake from its total tributary area, all from urban lands.

TROPHIC STATUS

Lakes are commonly classified according to their degree of nutrient enrichment, or trophic status. The ability of lakes to support a variety of recreational activities and healthy fish and other aquatic life communities is often correlated to the degree of nutrient enrichment that has occurred. There are three terms generally used to describe the trophic status of a lake: oligotrophic, mesotrophic, and eutrophic.

Oligotrophic lakes are nutrient-poor lakes. These lakes characteristically support relatively few aquatic plants and often do not contain very productive fisheries. Oligotrophic lakes may provide excellent opportunities for swimming, boating, and waterskiing. Because of the naturally fertile soils and the intensive land use activities, there are relatively few oligotrophic lakes in southeastern Wisconsin.

Mesotrophic lakes are moderately fertile lakes which may support abundant aquatic plant growths and productive fisheries. However, nuisance growths of algae and macrophytes are usually not exhibited by mesotrophic lakes. These lakes may provide opportunities for all types of recreational activities, including boating, swimming, fishing, and waterskiing. Many lakes in southeastern Wisconsin are mesotrophic.

Eutrophic lakes are nutrient-rich lakes. These lakes often exhibit excessive aquatic macrophyte growths and/or experience frequent algae blooms. If the lakes are shallow, fish winterkills may be common. While portions of such lakes are not ideal for swimming and boating, eutrophic lakes may support very productive fisheries. Although some eutrophic lakes are present in the Region, severely eutrophic lakes are rare, especially since the regionwide implementation of recommendations put forth in the regional water quality management plan. Severely enriched lakes are sometimes referred to as being hypertrophic.

Several numeric "scales," based on one or more water quality indicators, have been developed to define the trophic condition of a lake. Because trophic state is actually a continuum from very nutrient poor to very nutrient

[26] *SEWRPC Planning Report No. 48*, op. cit.

[27] Ibid.

Table 13

TROPHIC STATE INDICATOR (TSI)
FOR TRIPPE LAKE: 2004-2009

Year	Average TSI Based on Secchi	Average TSI Based on Chlorophyll-*a*	Average TSI Based on Total Phosphorus
2004	55	--	56
2005	--	--	--
2006	49	--	--
2007	54	--	--
2008	55	42	55
2009	55	46	58

Source: Wisconsin Department of Natural Resources and SEWRPC.

rich, a numeric scale is useful for comparing lakes and for evaluating trends in water quality conditions. Care must be taken, however, that the particular scale used is appropriate for the lake to which it is applies. In this case, two indices appropriate for Wisconsin lakes have been used; namely, the Vollenweider-OECD open-boundary trophic classification system,[28] and the Carlson Trophic State Index (TSI),[29] with a variation known as the Wisconsin Trophic State Index value (WTSI).[30] The WTSI is a refinement of the Carlson TSI and is designed to account for the greater humic acid content—brown water color—present in Wisconsin lakes; it has been adopted by the WDNR for use in lake management investigations.

Based upon data gathered during the aforementioned ERSC satellite remote sensing study, Cravath Lake was estimated to have a TSI value of 64; Trippe Lake was estimated to have a value of 64, also. A value above 50 is generally indicative of the enriched conditions associated with eutrophic lakes. As shown in Table 13, Secchi-disk data for the deep hole in Trippe Lake indicate a TSI of about 55 while chlorophyll-*a* data for Trippe Lake indicate a TSI of about 44 and total phosphorus data indicate a TSI of about 56; these values are suggestive of eutrophic conditions. As set forth in the regional water quality management plan,[31] Cravath and Trippe Lakes are classified as eutrophic waterbodies. Such determination is consistent with the aforementioned physical factors of the Lakes—to wit, lake bottom sediment composition and lake bottom contours—and with the available, albeit limited, water quality data obtained from the Lakes.

AQUATIC PLANTS: DISTRIBUTION AND MANAGEMENT AREAS

Aquatic Plant Diversity in Cravath and Trippe Lakes

For the current study, SEWRPC staff conducted aquatic plant surveys on Cravath and Trippe Lakes during August of 2008, the results of which are shown in Tables 14 and 15 and Maps 9 and 10. Overall, Trippe Lake contained a greater diversity of aquatic plant species than did Cravath. Of note is the identification of eight different species of pondweed in Trippe Lake. A critical key to the ability of an ecosystem, such as a lake, to maintain its ecological integrity is through *biological diversity*. Conserving the biological diversity, or biodiversity, of an ecosystem helps not only to sustain the system, but preserves a spectrum of options for future decisions regarding the management of that system. The presence of a diverse community of pondweed is generally considered to be indicative of a healthy lake and good habitat for fishes and aquatic life.

---

[28] *H. Olem and G. Flock, U.S. Environmental Protection Agency Report EPA-440/4-90-006,* The Lake and Reservoir Restoration Guidance Manual, Second Edition, *Walworth, D.C., August 1990.*

[29] *R.E. Carlson, "A Trophic State Index for Lakes,"* Limnology and Oceanography, *Vol. 22, No. 2, 1977.*

[30] *See R.A. Lillie, S. Graham, and P. Rasmussen, "Trophic State Index Equations and Regional Predictive Equations for Wisconsin Lakes,"* Research and Management Findings; *Wisconsin Department of Natural Resources Publication No. PUBL-RS-735 93, May 1993.*

[31] *SEWRPC Memorandum Report No. 93,* A Regional Water Quality Management Plan for Southeastern Wisconsin: An Update and Status Report, *March 1995.*

Table 14

AQUATIC PLANT SPECIES OBSERVED IN CRAVATH LAKE: JULY 2008

Aquatic Plant Species	Number of Sites Found	Frequency of Occurrence[a]	Relative Density[b]	Importance Value[c]
Coratophyllum demersum (coontail)	18	51.4	2.9	148.6
Elodea canadensis (waterweed)	7	20.0	1.4	28.6
Lemna minor (duckweed)	1	2.9	4.0	11.4
Myriophyllum spicatum (Eurasian water milfoil)	18	51.4	2.2	111.4
Nuphar advena (yellow water lily)	1	2.9	4.0	11.4
Nymphaea odorata (white water lily)	4	11.4	1.5	17.1
Potamogeton crispus (curly-leaf pondweed)	12	34.3	1.5	51.4
Potamogeton pectinatus (Sago pondweed)	23	65.7	2.3	151.4
Potamogeton pusillus (small pondweed)	1	2.9	1.0	2.9
Potamogeton zosteriformis (flat-stem pondweed)	1	2.9	1.0	2.9

NOTE: Sampling occurred at 35 sampling sites along 13 transects.

[a]*The percent frequency of occurrence is the number of occurrences of a species divided by the number of samplings with vegetation, expressed as a percentage. It is the percentage of timos a particular species occurred when there was aquatic vegetation present, and is analogous to the Jesson and Lound point system.*

[b]*The average density is the sum of density ratings for a species divided by the number of sampling points with vegetation. The maximum density possible of 4.0 is assigned to plants that occur at all four points sampled at a given depth and is an indication of how abundant a particular plant is throughout a lake.*

[c]*The importance value is the product of the relative frequency of occurrence and the average density, expressed as a percentage. This number provides an indication of the dominance of a species within a community.*

Source: SEWRPC.

During the 2008 survey, 10 different aquatic plant species were observed in Cravath Lake. The dominant species were Sago pondweed (*Potamogeton pectinatus*) and coontail (*Ceratophyllum demersum*), although Eurasian water milfoil (*Myriophyllum spicatum*), was also present in significantly large numbers. A complete list of species observed in Cravath Lake during the 2008 survey is found in Table 14 and shown on Map 9. In Trippe Lake, during the 2008 survey, 14 different species were observed: the dominant species was coontail, although Eurasian water milfoil, waterweed (*Elodea canadensis*), and white water lily (*Nymphaea odorata*), were also present in significant numbers. Table 15 contains the listing for Trippe Lake, with Map 10 depicting the locations of the plant species within Trippe Lake. By comparison, the nearby Lauderdale Lakes, for example, contained an aquatic plant community comprised of 19 different aquatic plant species.[32]

A complete species list of submersed aquatic plant species, compiled from the results of the 2008 SEWRPC aquatic plant survey in Cravath and Trippe Lakes, is set forth in Table 16, along with comments on the ecological significance of each plant on the list. Representative illustrations of these aquatic plants can be found in Appendix A.

[32]*See SEWRPC Memorandum Report No. 143,* An Aquatic Plant Management Plan for the Lauderdale Lakes, Walworth County, Wisconsin, *August 2001.*

Table 15

AQUATIC PLANT SPECIES OBSERVED IN TRIPPE LAKE: JULY 2008

Aquatic Plant Species	Number of Sites Found	Frequency of Occurrence[a]	Relative Density[b]	Importance Value[c]
Ceratophyllum demersum (coontail)	26	100.0	4.0	396.2
Elodea canadensis (waterweed)	15	57.7	2.3	130.8
Lemna minor (duckweed)	3	11.5	3.3	38.5
Myriophyllum spicatum (Eurasian water milfoil)	21	80.8	2.6	211.5
Nelumbo lutea (American lotus)	--[d]	--	--	--
Nymphaea odorata (white water lily)	15	57.7	2.3	130.8
Potamogeton amplifolius (large-leaf pondweed)	5	19.2	1.4	26.9
Potamogeton crispus (curly-leaf pondweed)	5	19.2	1.6	30.8
Potamogeton foliosis (leafy pondweed)	1	3.9	2.0	7.7
Potamogeton illinoensis (Illinois pondweed)	3	11.5	1.3	15.4
Potamogeton natans (floating-leaf pondweed)	3	11.5	1.7	19.2
Potamogeton nodosus (long-leaf pondweed)	1	3.9	1.0	3.9
Potamogeton pectinatus (Sago pondweed)	10	38.5	1.9	73.1
Potamogeton zosteriformis (flat-stem pondweed)	6	23.1	1.0	23.1
Vallisneria americana (wild celery/eel-grass)	6	23.1	2.7	61.5

NOTE: Sampling occurred at 26 sampling sites along nine transects.

[a]*The percent frequency of occurrence is the number of occurrences of a species divided by the number of samplings with vegetation, expressed as a percentage. It is the percentage of times a particular species occurred when there was aquatic vegetation present, and is analogous to the Jesson and Lound point system.*

[b]*The average density is the sum of density ratings for a species divided by the number of sampling points with vegetation. The maximum density possible of 4.0 is assigned to plants that occur at all four points sampled at a given depth and is an indication of how abundant a particular plant is throughout a lake.*

[c]*The importance value is the product of the relative frequency of occurrence and the average density, expressed as a percentage. This number provides an indication of the dominance of a species within a community.*

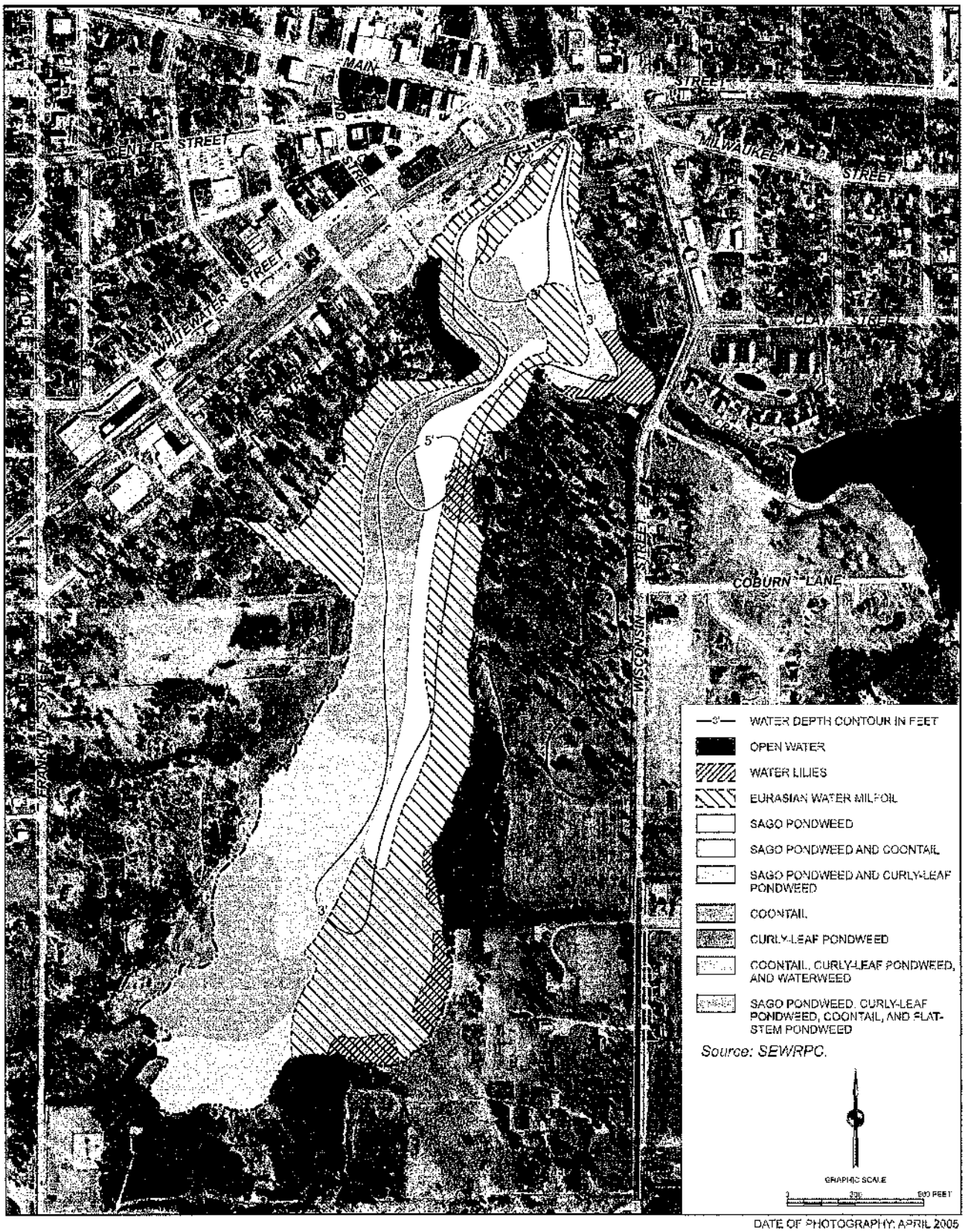
[d]*Ms. Heidi Bunk of the Wisconsin Department of Natural Resources staff has noted the presence of this floating leaved aquatic plant in Trippe Lake.*

Source: SEWRPC.

Aquatic plant communities do undergo cyclical and periodic changes, which reflect, in part, changing climatic conditions on an interannual scale and, also in part, the evolution of the aquatic plant community in response to changing hydroclimate conditions in the Lake; these latter, including factors, such as changes in long-term nutrient loading, sedimentation rates, and recreational use patterns. The former, interannual, changes occur over a period of three to seven years and may be temporary. The latter, evolutionary, occur over a decadal period or longer and are longer-lasting. Also, some species, such as the pondweeds, exhibit distinct seasonality, with individual species having well-defined growing periods that reflect water temperature, insolation, and other factors. In addition, the change in the Eurasian water milfoil population in a lake may reflect the results of aquatic management practices and/or may be a reflection of a periodicity the species naturally experiences. Such periodicity, especially in Eurasian water milfoil populations, has been observed elsewhere in southeastern Wisconsin, and potentially reflects the influences of a combination of stressors. These stressors include biological factors, such as the activities of naturally occurring Eurasian water milfoil weevils, as well as climatic and limnological factors, such as insolation, water temperature, and lake circulation patterns.

Map 9

AQUATIC PLANT COMMUNITY DISTRIBUTION IN CRAVATH LAKE: 2008



DATE OF PHOTOGRAPHY: APRIL 2005

Map 10

AQUATIC PLANT COMMUNITY DISTRIBUTION IN TRIPPE LAKE: 2008

DATE OF PHOTOGRAPHY: APRIL 2005

- WATER DEPTH CONTOUR IN FEET
- OPEN WATER
- AREA THAT COULD NOT BE SURVEYED
- WATER LILIES
- EURASIAN WATER MILFOIL
- COONTAIL AND WATERWEED
- COONTAIL, WATERWEED, CURLY-LEAF PONDWEED, FLAT-STEM PONDWEED, AND LARGE-LEAF PONDWEED
- COONTAIL AND CURLY-LEAF PONDWEED
- COONTAIL, LARGE-LEAF PONDWEED, FLAT-STEM PONDWEED, FLOATING-LEAF PONDWEED, AND ILLINOIS PONDWEED
- COONTAIL, WATERWEED, SAGO PONDWEED, WILD CELERY, FLOATING-LEAF PONDWEED, AND ILLINOIS PONDWEED
- COONTAIL, WATERWEED, SAGO PONDWEED, CURLY-LEAF PONDWEED, FLAT-STEM PONDWEED, AND LARGE-LEAF PONDWEED

DRAWING SCALE
0 300 600 FEET

Source: SEWRPC.

Table 16

POSITIVE ECOLOGICAL SIGNIFICANCE OF AQUATIC PLANT SPECIES PRESENT IN CRAVATH AND TRIPPE LAKES: 2008

Aquatic Plant Species Present	Ecological Significance
Ceratophyllum demersum (coontail)	Provides good shelter for young fish and supports insects valuable as food for fish and ducklings
Elodea canadensis (waterweed)	Provides shelter and support for insects which are valuable as fish food
Lemna spp. (duckweed)	Small duckweed is prized for its nutritional value as food for waterfowl; extensive rafts of duckweed can provide shelter for fish and even inhibit mosquito reproduction
Myriophyllum spicatum (Eurasian water milfoil)	None known; nonnative
Nelumbo lutea (American lotus)	Provides good shade and fair shelter for fishes; waterfowl sometimes eat the seeds, and muskrat eat the roots
Nuphar advena (yellow water lily)	Seeds provide food for waterfowl; leaves, stems, and flowers are food for deer; rhizomes are food source for muskrat and beaver; leaves provide shelter and shade for fish and habitat for invertebrates
Nymphaea odorata (white water lily)	Seeds provide food for waterfowl; leaves, stems, and flowers are food for deer; rhizomes are food source for muskrat and beaver; leaves provide shelter and shade for fish and habitat for invertebrates
Potamogeton amplifolius (large-leaf pondweed)	Offers shade, shelter and foraging for fish; valuable food for waterfowl
Potamogeton crispus (curly-leaf pondweed)	Nonnative
Potamogeton foliosis (leafy pondweed)	Provides food for geese and ducks; food for muskrat, beaver and deer; good surface area for insects and cover for juvenile fish
Potamogeton illinoensis (Illinois pondweed)	Provides shade and shelter for fish; harbor for insects; seeds are eaten by wildfowl
Potamogeton natans (floating-leaf pondweed)	Provides food for waterfowl, muskrat, beaver and deer; good fish habitat
Potamogeton nodosus (long-leaf pondweed)	Fruit is food source for waterfowl, habitat and foraging opportunities for fish
Potamogeton pectinatus (Sago pondweed)	This plant is the most important pondweed for ducks, in addition to providing food and shelter for young fish
Potamogeton pusillus (small pondweed)	Provides food for ducks, geese, muskrat, beaver, and deer, and provides food and shelter for fish
Potamogeton zosteriformis (flat-stem pondweed)	Provides some food for ducks
Vallisneria americana (wild celery/eel-grass)	Provides good shade and shelter, supports insects, and is valuable fish food

NOTE: Information obtained from *A Manual of Aquatic Plants* by Norman C. Fassett, University of Wisconsin Press; *Guide to Wisconsin Aquatic Plants*, Wisconsin Department of Natural Resources; and, *Through the Looking Glass...A Field Guide to Aquatic Plants*, Wisconsin Lakes Partnership, University of Wisconsin-Extension.

Source: SEWRPC.

Lack of aquatic plant survey data prior to 2008 precludes the ability to determine what changes in the aquatic plant community may be occurring in either Cravath Lake or Trippe Lake. Since both of the 2008 surveys were conducted using the modified Jesson and Lound transect method as promulgated by the WDNR, this

methodology, when utilized in successive aquatic plant surveys, will allow the statistical evaluation of changes in the aquatic plant community within the Lakes.[33]

Aquatic Plant Species of Special Significance

Native Aquatic Plants

There was one native plant species observed in the survey of Trippe Lake of exceptionally high ecological value: large-leaf pondweed (*Potamogeton amplifolius*), also known as musky weed or bass weed. This plant, as fishers well know, enjoys a reputation as a highly valuable provider of fish habitat. Additionally, this plant has achieved some measure of success as an introduced aquatic plant in transplanting efforts in Lac La Belle and Okauchee Lake, in Waukesha County, Wisconsin, making it a potentially valuable partner in littoral zone restoration projects.[34]

Nonnative Species

During the 2008 aquatic plant surveys of Cravath and Trippe Lakes, several nonnative aquatic plant species of special significance were observed. Two of these species, Eurasian water milfoil and curly-leaf pondweed (*Potamogeton crispus*), are considered detrimental to the ecological health of the Lakes and are declared nuisance species identified in Chapters NR 40 and NR 109 of the *Wisconsin Administrative Code.*

Eurasian water milfoil is one of eight milfoil species found in Wisconsin and the only one known to be exotic or nonnative. Because of its nonnative nature, Eurasian water milfoil has few natural enemies that can inhibit its growth, which can be explosive under suitable conditions. The plant exhibits this characteristic growth pattern in lakes with organic-rich sediments, or where the lake bottom has been disturbed. It frequently has been reported as a colonizing species following dredging, unless its growth is anticipated and controlled. Eurasian water milfoil populations can displace native plant species and interfere with the aesthetic and recreational use of the waterbodies. This plant has been known to cause severe recreational use problems in lakes within the Southeastern Wisconsin Region.

Eurasian water milfoil reproduces by the rooting of plant fragments. Consequently, some recreational uses of lakes can result in the expansion of Eurasian water milfoil communities, especially when boat propellers fragment Eurasian water milfoil plants. These fragments, as well as fragments that occur for other reasons, such as wind-induced turbulence or fragmentation of the plant by fishes, are able to generate new root systems, allowing the plant to colonize new sites. The fragments also can cling to boats, trailers, motors, and/or bait buckets, and can stay alive for weeks contributing to the transfer of milfoil to other lakes. For this reason, it is very important to remove all vegetation from boats, trailers, and other equipment after removing them from the water and prior to launching in other waterbodies.

Curly-leaf pondweed is a plant that thrives in cool water and exhibits a peculiar split-season growth cycle that helps give it a competitive advantage over native plants and makes management of this species difficult. In late summer, the plant produces specialized over-wintering structures, or "turions." In late summer, the main body of the plant dies off and drops to the bottom where the turions lie dormant until the cooler fall water temperatures trigger the turions to germinate. Over the winter, the turions produce winter foliage that thrives under the ice. In spring, when water temperatures begin to rise again, the plant has a head start on the growth of native plants and

---

[33] *Memo from Stan Nichols, to J. Bode, J. Leverence, S. Borman, S. Engel, D., Helsel, entitled "Analysis of Macrophyte Data for Ambient Lakes-Dutch Hollow and Redstone Lakes example," Wisconsin Geological and Natural History Survey, University of Wisconsin-Extension, February 4, 1994.*

[34] *Wisconsin Lakes Partnership,* Through the Looking Glass…A Field Guide to Aquatic Plants, Wisconsin Lakes Partnership, University of Wisconsin-Extension, *1999.*

quickly grows to full size, producing flowers and fruit earlier than its native competitors. Because it can grow in more turbid waters than many native plants, protecting or improving water quality is an effective method of control of this species; clearer waters in a Lake can help native plants compete more effectively with curly-leaf pondweed.

Past and Present Aquatic Plant Management Practices
An aquatic plant management program has been carried out on Trippe Lake in a documented manner since 1950; Cravath Lake has, only recently, been the subject of documented management efforts. Records of aquatic plant management efforts were first maintained by the WDNR beginning in 1950. Prior to 1950, aquatic plant management interventions were likely, but were not recorded. Currently, all forms of aquatic plant management are subject to permitting by the WDNR pursuant to authorities granted the Department under Chapters NR 107 and NR 109 of the *Wisconsin Administrative Code*.

Since 1950, the aquatic plant management activities in Cravath and Trippe Lakes could be characterized as primarily a chemical control program designed to minimize nuisance growths of aquatic macrophytes. A cumulative summary of chemical applications for Cravath Lake is shown in Table 17; cumulative totals for Trippe Lake are set forth in Table 18. Between 1950 and 1969, as shown in the tables, approximately 4,874 pounds of sodium arsenite were applied to Trippe Lake; none was applied to Cravath Lake.

Sodium arsenite was typically sprayed onto the surface of a lake within an area of up to 200 feet from the shoreline. Treatment typically occurred between mid-June and mid-July. The amount of sodium arsenite used was calculated to result in a concentration of about 10 mg/l sodium arsenite (about five mg/l arsenic) in the treated lake water. The sodium arsenite typically remained in the water column for less than 120 days. Although the arsenic residue was naturally converted from a highly toxic form to a less toxic and less biologically active form, much of the arsenic residue was deposited in the lake sediments.

When it became apparent that arsenic was accumulating in the sediments of treated lakes, the use of sodium arsenite was discontinued in the State in 1969. The applications and accumulations of arsenic were found to present potential health hazards to both humans and aquatic life. In drinking water supplies, arsenic was suspected of being carcinogenic and, under certain conditions, arsenic has leached into and contaminated groundwater, especially in sandy soils that serve as a source of drinking water in some communities. The U.S. Environmental Protection Agency-recommended drinking water standard for arsenic is a maximum level of 0.05 mg/l.

Currently, since 2001, aquatic plant control has been focused on managing nuisance growths of Eurasian water milfoil. This control program utilizes a combination of granular and liquid 2,4-D to target Eurasian water milfoil growths in the Lakes, as documented in Tables 17 and 18.[35]

FISHERIES AND WILDLIFE

The WDNR reports that, in both Cravath Lake and Trippe Lake, panfish are considered to be "common," largemouth bass and northern pike are considered to be "present."[36] Also present are the following State-designated special-concern species: American eel, (*Anguilla rostrata*), in Cravath Lake; lake chubsucker, (*Erimyzon* sucetta), in Trippe Lake; and, least darter, (*Etheostoma microperca*), in Whitewater Creek, upstream of Trippe Lake.

---

[35] *2,4-D will also control desirable species, such as* Nymphaea *sp.; see Wisconsin Department of Natural Resources PUBL-WR-236 90,* Chemical Fact Sheet: 2,4-D, *May 1990.*

[36] *Wisconsin Department of Natural Resources Publication No. PUB-FH-800 2005,* Wisconsin Lakes, *2005.*

Table 17

CHEMICAL CONTROLS ON CRAVATH LAKE: 1950-2009

Year	Total Acres Treated	Algae Control			Macrophyte Control					
		Copper Sulfate (pounds)	Blue Vitriol (pounds)	Cutrine or Cutrine Plus (pounds)	Sodium Arsenite (pounds)	2,4-D (gallons)	2,4-D (pounds)	Diquat (gallons)	Glyphosate (gallons)	Endothall/ Aquathol (gallons)
1950-2008	0.0	--	--	--	--	--	--	--	--	--
2009	9.0	--	--	--	--	27.0	--	--	--	--
2010	--	--	--	--	--	--	--	--	--	--
Total	9.0	--	--	--	--	27.0	--	--	--	--

Source: Wisconsin Department of Natural Resources and SEWRPC.

Table 18

CHEMICAL CONTROLS ON TRIPPE LAKE: 1950-2009

Year	Total Acres Treated	Algae Control			Macrophyte Control					
		Copper Sulfate (pounds)	Blue Vitriol (pounds)	Cutrine or Cutrine Plus (pounds)	Sodium Arsenite (pounds)	2,4-D (gallons)	2,4-D (pounds)	Diquat (gallons)	Glyphosate (gallons)	Endothall/ Aquathol (gallons)
1950-1969	--	--	--	--	4,784	--	--	--	--	--
1970-1996	--	--	--	--	--	--	--	--	--	--
1997	2.0	--	--	--	--	--	200	--	--	--
1998-2000	--	--	--	--	--	--	--	--	--	--
2001	13.0	--	--	--	--	--	1,300	--	--	--
2002	52.3	--	--	--	--	12.0	225	--	--	--
2003	13.3	--	--	--	--	40.0	450	--	--	--
2004	3.5	--	--	--	--	--	350	--	--	--
2005	9.8	--	--	--	--	10.0	650	--	--	--
2006	8.0	--	--	--	--	--	800	--	--	--
2007	8.0	--	--	--	--	--	800	--	--	--
2008	7.0	--	--	--	--	29.0	--	--	--	--
2009	6.5	--	--	--	--	--	650	--	--	--
2010	--	--	--	--	--	--	--	--	--	--
Total	--	--	--	--	4,784	91.0	5,425	--	--	--

Source: Wisconsin Department of Natural Resources and SEWRPC.

Stocking of Cravath Lake with northern pike occurred between 1985 and 2001, as shown in Table 19; intermittent stocking of northern pike occurred from 1982 through 2001 on Trippe Lake, as shown in Table 20.

With respect to wildlife, and given the urbanization of land uses present around the shorelands of the Lakes, most of the wildlife remaining are urban-tolerant species: smaller animals and waterfowl would be expected to inhabit the lakeshore areas; muskrats, beaver, grey and fox squirrels, and cottontail rabbits are likely the most abundant and widely distributed fur-bearing mammals in the immediate riparian areas; and, larger mammals, such as the whitetail deer, are likely to be confined to the larger wooded areas and the open meadows found within the tributary area of the Lakes. The remaining undeveloped areas provide the best-quality cover for many wildlife species.

Table 19

FISH STOCKED INTO CRAVATH LAKE: 1985-2001

Year	Species Stocked	Number	Average Fish Length (inches)
1985	Northern pike	130	8.00
1991	Northern pike	300	8.00
1992	Northern pike	140	8.00
1994	Northern pike	136	7.50
1999	Northern pike	136	7.20
2001	Northern pike	170	7.60

Source: Wisconsin Department of Natural Resources and SEWRPC.

Table 20

FISH STOCKED INTO TRIPPE LAKE: 1982-2001

Year	Species Stocked	Number	Average Fish Length (inches)
1982	Northern pike	230	- -
1985	Northern pike	230	8.00
1991	Northern pike	500	8.00
1992	Northern pike	230	8.00
1994	Northern pike	452	7.75
1999	Northern pike	226	7.20
2001	Northern pike	282	7.60

Source: Wisconsin Department of Natural Resources and SEWRPC.

The Cravath and Trippe Lakes total tributary area supports a significant population of waterfowl, including mallards, wood duck, and blue-winged teal. During the migration seasons a greater variety of waterfowl may be present and in greater numbers.

Amphibians and reptiles are vital components of the Cravath-Trippe Lakes ecosystem, and include frogs, toads, and salamanders, and turtles and snakes, respectively. About 14 species of amphibians and 16 species of reptiles would normally be expected to be present in the Lakes tributary area.

WDNR-Designated Sensitive Areas and SEWRPC-Designated Critical Species Habitat

Within or immediately adjacent to bodies of water, the WDNR identifies sites that have special importance biologically, historically, geologically, ecologically, or even archaeologically. Such areas are defined as "areas of aquatic vegetation identified by the Department as offering critical or unique fish and wildlife habitat, including seasonal or life stage requirements, or offering water quality or erosion control benefits of the body of water" and, after comprehensive examination and study is completed by WDNR staff from many different disciplines and fields of study, are identified as Sensitive Areas pursuant to Chapter NR 107 of the *Wisconsin Administrative Code*. Currently, there are no WDNR-designated Sensitive Areas in Cravath and Trippe Lakes.

SEWRPC also has identified natural areas and critical species habitat areas within the Southeastern Wisconsin Region.[37] In this regard, the following natural areas contain intact native plant and animal communities of local and statewide significance and are shown on Map 11:

1. Bluff Creek Fens: A WDNR- owned, 106-acre excellent-quality springs and associated calcerous fens located at intervals along the headwaters of Bluff Creek;

2. Bluff Creek Woods: A part privately owned and part WDNR-owned, 338-acre extensive dry-mesic woods on rough glacial terrain, dominated by mature red oaks;

3. Clover Valley Fen State Natural Area: A WDNR-owned, 112-acre parcel, containing a series of 11,000-year-old peat mounds that rise eight to 10 feet above the surrounding lowland, formed by accumulations of partially decayed vegetation around slowly flowing springs;

4. Lake No. 10: A privately owned, 40-acre small, undeveloped lake in a kettle depression, containing deep and shallow marsh;

5. Lone Tree Trail Oak Woods: A WDNR-owned, 265-acre, former mosaic of xeric oak forest, open oak woodland, and oak savanna now overgrown with shrubs and containing the State-designated threatened kittentails (*Besseya bullii*);

6. Whitewater Oak Woods: A part WDNR-owned and part privately owned, 240-acre xeric oak woodland has been designated as NA-3 (RSH), indicating it to be an area of local significance that supports rare, threatened, or endangered animal or plant species officially designated by the WDNR;

7. Rice Lake Dry Prairie: A WDNR-owned, one-acre small dry prairie remnant has been designated as NA-3, indicating it to be an area of local significance; and

8. Rock Shrub Fen: A privately owned, 46-acre, good-quality wetland complex.

Of the abovelisted sites, the following have been classified as NA-1, identifying them as sites of statewide or greater significance: Bluff Creek Fens, Clover Valley Fen State Natural Area, and Bluff Creek Woods. All other sites listed above have been classified as NA-3, identifying them as areas of local significance.

Critical aquatic habitat areas located within the Cravath-Trippe Lakes tributary area include:

1. Bluff Creek: 1.9 miles of high-quality fast, hard, cold-water Class I trout stream with a classification of AQ-1, identifying it as a site of statewide or greater significance;

2. Trippe Lake: Classified as AQ-2, identifying it as a site of countywide or regional significance; and

3. Cravath Lake, Whitewater Creek, Whitewater Lake, Rice Lake, and Lake No. 10: All rated as AQ-3, identifying them as sites of local significance.

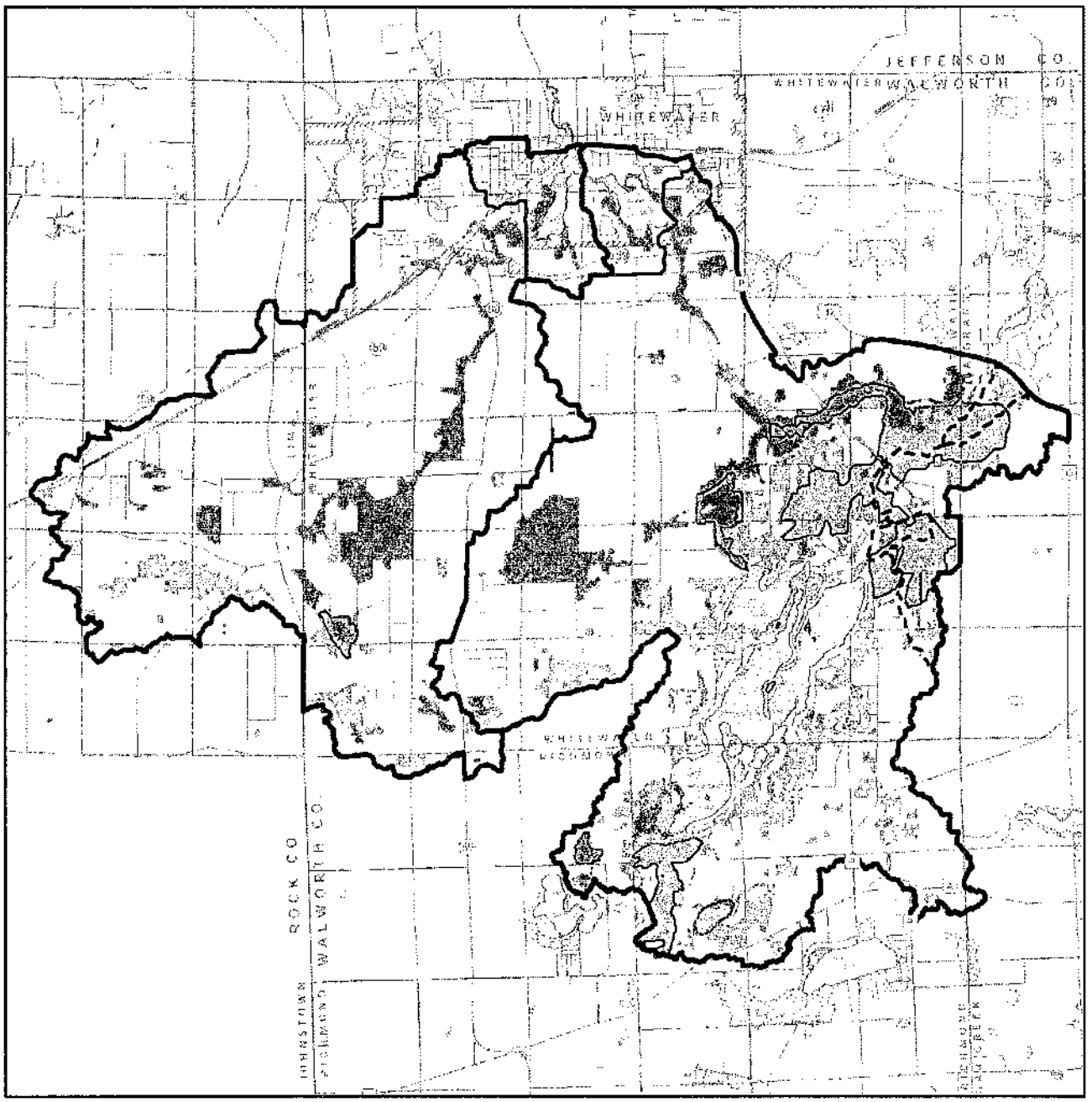
In addition to the abovelisted sites, the Cravath-Trippe Lakes tributary area contains several other sites that, although not located within designated natural areas, provide critical habitat for State-designated threatened plant species of concern, Sullivant's milkweed, *Asclepias sullivantii*; Mills Road Prairie; Anderson Road; and Island Road Prairie.

---

[37] *SEWRPC Planning Report No. 42,* A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, *September 1997.*

Map 11

WETLANDS, WOODLANDS, AND NATURAL AREAS WITHIN
THE CRAVATH AND TRIPPE LAKES TOTAL TRIBUTARY AREA



NOTE: Critical species habitat data not available in Rock County.

Source: Rock County Land Information Office and SEWRPC.

In the Cravath and Trippe Lakes tributary area, the lakeshores located within the environmental corridors, as shown on Map 12, should be candidates for immediate protection through proper zoning or through public ownership. Of the areas not already publicly owned, the remaining areas of natural shoreline and riparian wetland areas are perhaps the most sensitive areas in need of greatest protection.

RECREATIONAL USES AND FACILITIES

As set forth in the regional water quality management plan, Cravath and Trippe Lakes are multi-purpose waterbodies serving a variety of recreational uses and are used year-round as a visual amenity.[38] Active recreational uses include paddleboating, canoeing, kayaking, swimming, and fishing during the summer months, and cross-country skiing, snowmobiling, and ice-fishing during the winter; popular passive recreational uses include walking, bird watching, and picnicking. The Lakes do not experience intense recreational boating use. Public access to the Lakes is provided through two city-owned and operated sites: on Cravath Lake, at the north end of the Lake adjacent to the recreational-concession facility in the city park; on Trippe Lake, located on the northwestern shore of the Lake in the city park. Both Lakes are deemed to have adequate public access as defined in Chapter NR 1 of the *Wisconsin Administrative Code,* which establishes quantitative standards for determining the adequacy of public recreation boating access, setting maximum and minimum standards based upon available parking facilities for car-top and car-trailer units.

Surveys of watercraft docked or moored on the Lakes were conducted by SEWRPC staff in 2008 for the current study. During the current study, a total of 27 watercraft were observed either moored in the water or stored on land in the shoreland areas around the Lakes, as shown in Table 21, 16 around Cravath Lake, and 11 around Trippe Lake.

The types of watercraft docked or moored on a lake, as well as the relative proportion of nonmotorized to motorized watercraft, reflect the attitudes of the primary users of the lake, the lake residents. For example, in a similar survey conducted on nearby Lake Wandawega in 2007, about 15 percent of watercraft were motorized with pontoon boats comprising the single largest category of motorized watercraft. The 2008 survey on nearby Lauderdale Lakes showed motorized watercraft accounted for about 73 percent of all watercraft with powerboats comprising the single largest category of motorized watercraft. This would indicate that recreational high-speed boating is more of a major active recreational use on the Lauderdale Lakes than on Wandawega Lake. On Cravath and Trippe Lakes, only two motorized boats, both fishing boats, were observed; all other watercraft were nonmotorized and comprised of canoes, paddleboats, and rowboats. This observation is consistent with what would be expected in light of the fact that both Lakes are "no wake" waterbodies.

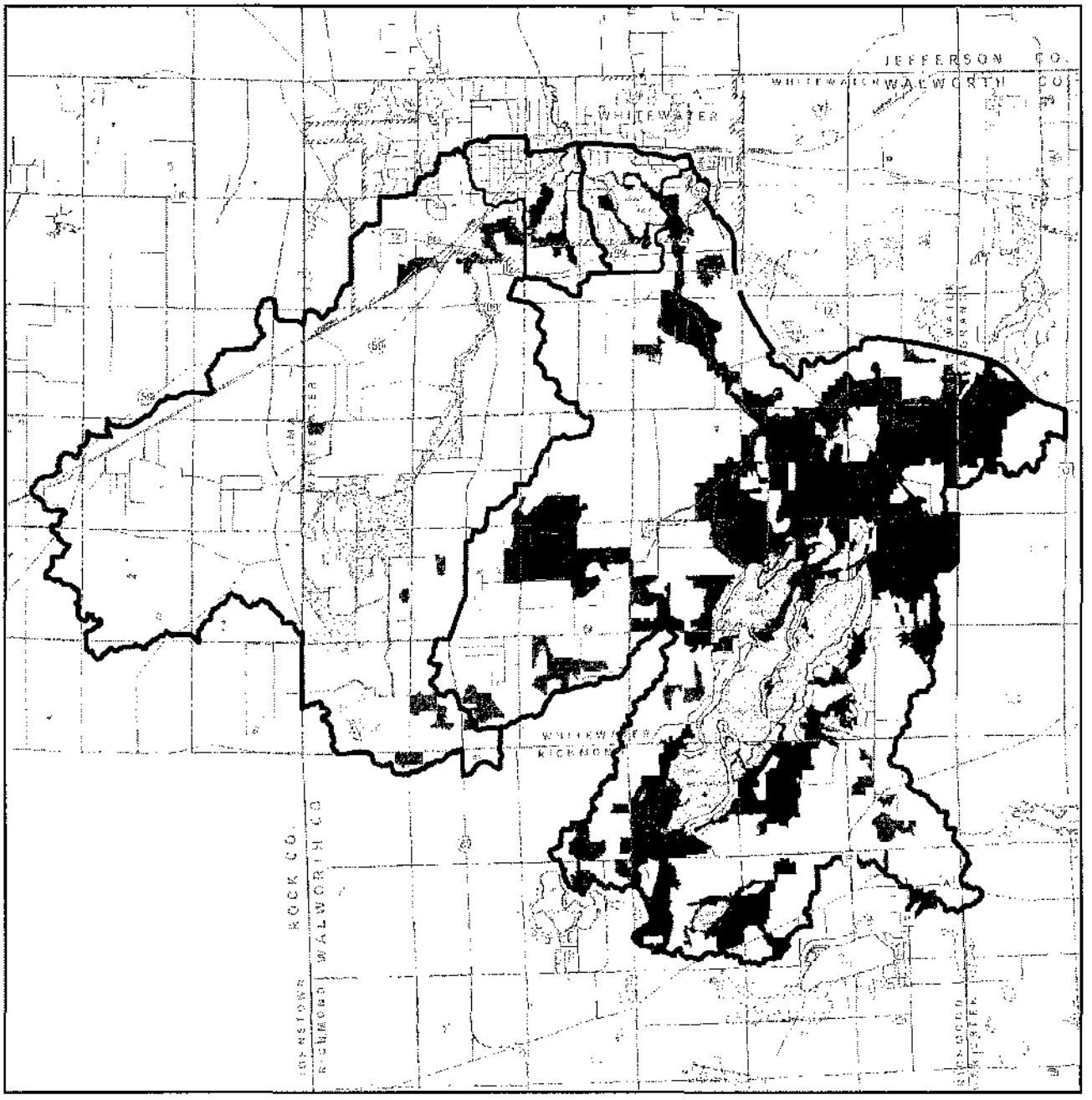
To assess the degree of recreational boat use on a lake, it has been estimated that, in southeastern Wisconsin, the number of watercraft operating on a lake at any given time is between about 2 percent and 5 percent of the total number of watercraft docked and moored. On both Lakes combined, this would amount to only about one or two boats.

There is a range of opinions on the issue of what constitutes optimal boating density, or number of acres of open water available in which to operate a boat on a lake. In this regard, during the mid-1980s, an average area of about 16 acres per powerboat or sailboat was, at that time, considered suitable for the safe and enjoyable use of a boat on a lake. Over time, motorized watercrafts of all kinds have steadily increased in power and speed. For safe waterskiing and fast boating, the regional park and open space plan suggested an area of 40 acres per boat as the

[38] *SEWRPC Planning Report No. 30,* op. cit. *See also SEWRPC Memorandum Report No. 93,* A Regional Water Quality Management Plan for Southeastern Wisconsin: An Update and Status Report, *March 1995.*

Map 12

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS
WITHIN THE CRAVATH AND TRIPPE LAKES TOTAL TRIBUTARY AREA: 2005



Primary Environmental Corridor
Secondary Environmental Corridor
Isolated Natural Resource Area
Surface Water

Total Tributary Area Boundary
Direct Tributary Area Boundary
Internally Drained Area Boundary where not Coincident with the Watershed or Subwatershed Boundaries

N

0 4,000 8,000 Feet

NOTE: This data not available in Rock County.

Source: Rock County Land Information Office and SEWRPC.

Table 21

WATERCRAFT DOCKED OR MOORED ON CRAVATH AND TRIPPE LAKES: 2008[a]

Type of Watercraft—Cravath Lake									
Powerboat	Fishing Boat	Pontoon Boat	Personal Watercraft	Canoe	Sailboat	Kayak	Paddleboat	Rowboat	Total
0	0	0	0	5	0	0	7	4	16

Type of Watercraft—Trippe Lake									
Powerboat	Fishing Boat	Pontoon Boat	Personal Watercraft	Canoe	Sailboat	Kayak	Paddleboat	Rowboat	Total
0	2	0	0	3	0	0	1	5	11

Type of Watercraft—Total for Both Lakes									
Powerboat	Fishing Boat	Pontoon Boat	Personal Watercraft	Canoe	Sailboat	Kayak	Paddleboat	Rowboat	Total
0	2	0	0	8	0	0	8	9	27

[a]*Including trailered watercraft and watercraft on land observable during survey.*

Source: SEWRPC.

minimum area necessary for safe operations.[39] Since both Lakes are "no wake" waterbodies, eliminating high-speed boat use, it is unlikely that densities of any type of watercraft would reach levels as to be considered problematic or a safety issue.

Another way to assess the degree of recreational boat use on a lake is through direct counts of boats actually in use on a lake at a given time. During 2008, surveys to assess the types of watercraft in use on a typical summer weekday and a typical summer weekend day were conducted by SEWRPC staff. The results of these surveys are shown in Table 22. As shown in the table, overall there was very little use of watercraft on either Cravath Lake or Trippe Lake. No watercraft were observed to be in use on Trippe Lake on either a weekday or weekend day. On Cravath Lake, canoes and paddleboats were the most commonly used watercraft, and even then only in fairly small numbers.

Table 23 shows the various types of recreational activities engaged in by people using Cravath and Trippe Lakes during a typical summer weekday and a typical summer weekend in 2008. The most popular weekday and weekend recreational activities on the Lakes, both as a whole and individually, were: fishing from shore, going to the parks, and canoeing/paddleboating. Fishing from boats was also engaged in on Cravath Lake.

Recreational boating activities on Cravath and Trippe Lakes are currently regulated through City of Whitewater ordinances as appended hereto in Appendix B.

[39]*See SEWRPC Planning Report No. 27,* A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, *November 1977.*

Table 22

WATERCRAFT IN USE ON CRAVATH AND TRIPPE LAKES: SUMMER 2008

Cravath Lake									
Date and Time	Powerboat	Pontoon Boat	Fishing Boat	Personal Watercraft	Sailboat	Canoe/ Kayak	Wind Surf Board	Paddleboat	Total
Thursday, July 17									
9:00 a.m. to 10:00 a.m.	0	0	0	0	0	0	0	0	0
1:30 p.m. to 2:30 p.m.	0	0	0	0	0	4	0	3	7
Sunday, July 20									
9:00 a.m. to 10:00 a.m.	0	0	1	0	0	1	0	0	2
1:30 p.m. to 2:30 p.m.	0	0	0	0	0	0	0	0	0

Trippe Lake									
Date and Time	Powerboat	Pontoon Boat	Fishing Boat	Personal Watercraft	Sailboat	Canoe/ Kayak	Wind Surf Board	Paddleboat	Total
Thursday, July 17									
9:00 a.m. to 10:00 a.m.	0	0	0	0	0	0	0	0	0
1:30 p.m. to 2:30 p.m.	0	0	0	0	0	0	0	0	0
Sunday, July 20									
9:00 a.m. to 10:00 a.m.	0	0	0	0	0	0	0	0	0
1:30 p.m. to 2:30 p.m.	0	0	0	0	0	0	0	0	0

Total for Both Lakes									
Date and Time	Powerboat	Pontoon Boat	Fishing Boat	Personal Watercraft	Sailboat	Canoe/ Kayak	Wind Surf Board	Paddleboat	Total
Thursday, July 17									
9:00 a.m. to 10:00 a.m.	0	0	0	0	0	0	0	0	0
1:30 p.m. to 2:30 p.m.	0	0	0	0	0	4	0	3	7
Sunday, July 20									
9:00 a.m. to 10:00 a.m.	0	0	1	0	0	1	0	0	2
1:30 p.m. to 2:30 p.m.	0	0	0	0	0	0	0	0	0

Source: SEWRPC.

LOCAL ORDINANCES

As shown in Table 24, the Towns of LaGrange, Richmond, Sugar Creek, and Whitewater have each adopted the Walworth County ordinances in regard to general zoning, floodland zoning, and shoreland or shoreland-wetland zoning; the Towns of Richmond and Whitewater have adopted the Walworth County ordinances in regards to subdivision control; the Towns of LaGrange and Sugar Creek have adopted both Town and Walworth County ordinances regarding subdivision control; the Towns of Sugar Creek and Whitewater have adopted the Walworth County ordinances regarding construction site erosion control and stormwater management; the Town of LaGrange has adopted its own ordinance regarding construction site erosion control/stormwater management; the Town of Richmond administers one- and two-family erosion control regulations locally, other than within shoreland areas, where the County is responsible for enforcement; and the City of Whitewater has adopted its own ordinances regarding general zoning, floodland zoning, shoreland or shoreland-wetland zoning, subdivision control, and construction site erosion control and stormwater management. The Town of Lima, in Rock County, has adopted Rock County ordinances in regards to floodland, shoreland and shoreland-wetland zoning, as well as construction site erosion control and stormwater management and has adopted the County's and its own ordinances regarding subdivision control. Rock County has no general zoning, hence the Town of Lima has adopted its own general zoning ordinances.

Table 23

PARTICIPANTS ENGAGED IN WATER-BASED RECREATION IN/ON CRAVATH AND TRIPPE LAKES: SUMMER 2008

Cravath Lake										
Date and Time	Fishing from Shoreline	Pleasure Boating	Skiing/ Tubing	Sailing	Operating Personal Watercraft	Swimming	Fishing from Boats	Canoeing/ Paddle Boating	Park Goers	Total
Thursday, July 17										
9:00 a.m. to 10:00 a.m.	8	0	0	0	0	0	0	0	8	16
1:30 p.m. to 2:30 p.m.	3	0	0	0	0	0	0	12	9	24
Total for the Day	11	0	0	0	0	0	0	12	17	40
Percent	28	0	0	0	0	0	0	30	42	100
Sunday, July 20										
9:00 a.m. to 10:00 a.m.	2	0	0	0	0	0	1	1	2	6
1:30 p.m. to 2:30 p.m.	4	0	0	0	0	0	0	0	12	16
Total for the Day	6	0	0	0	0	0	1	1	14	22
Percent	27	0	0	0	0	0	5	5	63	100

Trippe Lake										
Date and Time	Fishing from Shoreline	Pleasure Boating	Skiing/ Tubing	Sailing	Operating Personal Watercraft	Swimming	Fishing from Boats	Canoeing/ Paddle Boating	Park Goers	Total
Thursday, July 17										
9:00 a.m. to 10:00 a.m.	0	0	0	0	0	0	0	0	3	3
1:30 p.m. to 2:30 p.m.	0	0	0	0	0	0	0	0	2	2
Total for the Day	0	0	0	0	0	0	0	0	5	5
Percent	0	0	0	0	0	0	0	0	100	100
Sunday, July 20										
9:00 a.m. to 10:00 a.m.	5	0	0	0	0	0	0	0	3	8
1:30 p.m. to 2:30 p.m.	14	0	0	0	0	0	0	0	4	18
Total for the Day	19	0	0	0	0	0	0	0	7	26
Percent	73	0	0	0	0	0	0	0	27	100

Total for Both Lakes										
Date and Time	Fishing from Shoreline	Pleasure Boating	Skiing/ Tubing	Sailing	Operating Personal Watercraft	Swimming	Fishing from Boats	Canoeing/ Paddle Boating	Park Goers	Total
Thursday, July 17										
9:00 a.m. to 10:00 a.m.	8	0	0	0	0	0	0	0	11	19
1:30 p.m. to 2:30 p.m.	3	0	0	0	0	0	0	12	11	26
Total for the Day	11	0	0	0	0	0	0	12	22	45
Percent	24	0	0	0	0	0	0	27	49	100
Sunday, July 20										
9:00 a.m. to 10:00 a.m.	7	0	0	0	0	0	1	1	5	14
1:30 p.m. to 2:30 p.m.	18	0	0	0	0	0	0	0	16	34
Total for the Day	25	0	0	0	0	0	1	1	21	48
Percent	52	0	0	0	0	0	2	2	44	100

Source: SEWRPC.

Table 24

LAND USE REGULATIONS WITHIN THE AREA TRIBUTARY TO CRAVATH AND TRIPPE LAKES IN WALWORTH COUNTY BY CIVIL DIVISION: 2003

Community	Type of Ordinance				
	General Zoning	Floodland Zoning	Shoreland or Shoreland-Wetland Zoning	Subdivision Control	Construction Site Erosion Control and Stormwater Management
Walworth County	Adopted	Adopted	Adopted and Wisconsin Department of Natural Resources approved	Adopted	Adopted
Town of LaGrange	County ordinance	County	County	County and Town	Adopted
Town of Richmond	County ordinance	County	County	County	-- [a]
Town of Sugar Creek	County ordinance	County	County	County and Town	County
Town of Whitewater	County ordinance	County	County	County	County
City of Whitewater	City ordinance	City ordinance	City ordinance	City ordinance	City ordinance
Rock County	--	Adopted	Adopted	Adopted	Adopted
Town of Lima	Adopted	County	County	County and Town	County

[a] *The Town of Richmond administers one- and two-family erosion control regulations locally, other than within shoreland areas, where the County is responsible for enforcement.*

Source: SEWRPC.

Chapter III

COMMUNITY QUESTIONNAIRE SURVEY

INTRODUCTION

An integral part of the process of lake protection plan formulation was the conduct of a questionnaire-based survey of City of Whitewater residents.[1] The questionnaire was developed jointly by the University of Wisconsin-Whitewater (UWW), the Southeastern Wisconsin Regional Planning Commission (SEWRPC), and the City of Whitewater *Ad Hoc* Lake Committee. Initial framing of the issues of concern to be addressed in the survey commenced during the autumn of 2008, with collaborative scoping meetings held under the auspices of the City of Whitewater *Ad Hoc* Lake Committee, and in which SEWRPC staff and UWW staff participated. These discussions helped to identify the broad thematic areas to be addressed, and the specific types of information to be collected, through a survey of City residents. Detailed survey design commenced during the spring of 2009, with the questionnaire being sent to all residential properties within the City during the summer of 2009.

SURVEY DESIGN

A mail-drop questionnaire survey instrument—the Trippe and Cravath Lakes Community Survey—was developed to collect a broad spectrum of primary information from residents of the City of Whitewater.

The overall purpose of the survey was to assess residents' uses of Trippe and Cravath Lakes, their uses of lakes other than Trippe and Cravath Lakes, their levels of awareness and concern related to various issues affecting the Lakes, and their willingness to pay for conducting programs that would improve Trippe and Cravath Lakes. The initial scoping meetings identified a number of distinct categories of information to be targeted through the survey. Survey design began with the categories of information and questions identified during these meetings, and proceeded through several iterations of refinement and review. The main types of questions included in the survey instrument were designed to gather information and insights from the City of Whitewater residents with regard to the following topic areas:

- Opinions regarding the importance of a range of issues affecting the State of Wisconsin and City of Whitewater—these questions helped to identify the relative importance ascribed by residents to various issues, including enhancement of "the quality of environmental resources such as recreational lakes."

---

[1] *This chapter was prepared by Professor Mark E. Eiswerth, Ms. Paige Peterson, and Ms. Christie Kornhoff, Economics Department, Hyland Hall, College of Business & Economics, University of Wisconsin-Whitewater 53190.*

- Basic information on the resident's dwelling in the City of Whitewater—these questions were designed to gather basic information on where the respondent's property was located in relation to Trippe and Cravath Lakes, and on how often the dwelling was typically occupied. Given that a percentage of the City's residential properties are occupied by students attending UWW, questions were included to ascertain the distance from the respondent's dwelling to the Lakes; the identity of the Lake closest to the dwelling; ownership status; the length of time the respondent has lived in the dwelling; the length of time the respondent has lived in the City of Whitewater; and, the residency status of the respondent—whether full time or part time, including the number of months, by season, that the respondent lives in the City of Whitewater.

- The respondent's use of Cravath and/or Trippe Lakes—these questions asked respondents if they or an immediate family member had visited either Cravath Lake or Trippe Lake within the last 12 months. For those respondents who had visited either Cravath Lake or Trippe Lake, the survey sought to determine the numbers of visits made by the respondent or family members to the Lakes during that period of time. The survey also sought to determine the kinds of recreational activities (boating, fishing, etc.) in which the respondent or their family members typically engaged while at Cravath or Trippe Lakes. These are key questions that help to establish the recreational use patterns of residents. Other questions sought to ascertain the mode of transportation used by residents to access the Lakes (motor vehicle, on foot, etc.) and boat ownership patterns.

- The respondent's activities at lakes other than Trippe and Cravath Lakes - these questions sought to identify whether respondents or their families had visited other lakes within the past 12 months; how many days they spent at other lakes over the past year; and, the favorite lakes that respondents liked to visit. These questions sought to characterize alternate lake sites that are utilized by City of Whitewater residents.

- Respondent awareness and concern about various issues affecting Trippe and Cravath Lakes—these questions were included to identify the level of awareness of issues relevant to Trippe and Cravath Lakes. Respondents also were asked to indicate their levels of concern about various problems associated with the Lakes. Specifically, respondents were asked about their levels of concern regarding the two issues dealt with in the contingent valuation scenarios described below; namely, 1) aquatic plant species present in Trippe and Cravath Lakes, and 2) sediments present in the Lakes, related to loss of depth and changes in water quality. Respondents also were asked to indicate how these problems affected (if at all) the quality of their enjoyment of Trippe and Cravath Lakes.

- Willingness to pay for improvements in lake quality—these questions formed an important centerpiece of the survey. Respondents were presented with three potential programs to improve Trippe and Cravath Lakes, and were asked to indicate their willingness-to-pay (WTP) to support the improvement programs, through payment of additional property taxes, each year for the next 10 years. The three improvement programs included: 1) the conduct of aquatic plant management programs within Trippe and Cravath Lakes, 2) sediment removal from the Lakes, and 3) the conduct of both aquatic plant control and sediment removal. These lake improvement scenarios are described more fully below.

- Respondent demographic characteristics—these questions sought to ascertain characteristics of respondents including annual income, education, and age.

A copy of the Trippe and Cravath Lakes Community Survey instrument is appended to this report as Appendix C. Two versions of the survey instrument were prepared and randomly distributed to potential residential respondents; the two versions included a) scenarios 1 and 3, and b) scenarios 2 and 3, as summarized above.

The Trippe and Cravath Lakes Community Surveys were mailed to all residents of the City of Whitewater during the summer of 2009. The mailing was accompanied by an advanced media release disseminated in area newspapers, including the *Whitewater Register* (June 18, 2009) and *Janesville Gazette* (June 20, 2009).

Returned surveys were carefully tabulated and evaluated by UWW staff. A total of 432 surveys, or 16 percent of the 2,748 surveys mailed, were completed and returned by respondents. The responses to the survey are summarized below, and tabular summaries are presented in Appendix D.

OVERVIEW OF SURVEY RESULTS

Respondent Characteristics

Through map-based analysis of the street addresses used in the mail survey sample, it was determined that a large number of the respondents lived very close to the Lakes. Approximately 51 percent of the respondents lived within one-half mile or less of the closest Lake's shoreline, and 69 percent lived within one mile or less from the shoreline. Approximately 66 percent of the respondents indicated that their dwellings were located closer to Cravath Lake than to Trippe Lake. Only 12 percent of the respondents indicated that they actually lived directly on one of these Lakes.

The majority of the respondents (88 percent) owned their residence in the City of Whitewater while 12 percent rented their homes. The average respondent has lived at their current residence for 14 years, and has lived in the City of Whitewater for 27 years. Almost all of the respondents (94 percent) were year-round residents of the City of Whitewater. Among those who were not year-round residents (6 percent), most lived in the City of Whitewater for between seven and eight months of the year; the average number of months spent in the City during the Fall, Summer, Spring, and Winter was 2.45, 2.25, 1.70, and 0.70 months, respectively.

The survey did not ask respondents to report their exact annual household incomes; rather, respondents were asked to select from an income range listed in the survey that best described their incomes. The resulting survey data indicated that the total annual household incomes of the respondents were diverse. The largest percentage of respondents (13 percent) fell into the $50,000 to $59,999 per year range. The next most common income range was $40,000 to $49,999 per year (12 percent of respondents). Roughly 11 percent of respondents fell into the $30,000 to $39,999 per year range and an equal percentage (11 percent) into the $100,000-$149,000 per year range. About one-half of the respondents reported an annual household income of less than $50,000.

Respondents were also diverse with respect to education, although a large percentage are relatively well educated. The highest percentage of respondents (36 percent) indicated they had completed a graduate degree. This was followed by those who had completed a four-year degree (20 percent of respondents), those who had completed some college or technical school (19 percent). Those with a high school certificate comprised 12 percent of the respondents; those who had completed some graduate classes (8 percent); and, those who had completed a two year degree (4 percent).

The survey did not ask respondents to indicate their exact age, but rather to indicate their age range among the several ranges indicated in the survey. The largest percentage of respondents (24 percent) fell into the 55 to 64 years age range. Approximately 45 percent of the respondents were 54 years of age or younger.

Additional details regarding the characteristics of the respondents are presented in tabular format in Appendix D.

Use of Trippe and Cravath Lakes

The majority of respondents (76 percent) reported that either they or an immediate family member had visited either Trippe Lake or Cravath Lake at least once within the past 12 months. On average, respondents visited the Lakes 32 times within the past year, with the largest number of respondents (46 percent) visiting between one and 10 times. These survey data indicate a relatively high rate of visitation to the Lakes by City of Whitewater residents.

The most popular activities at Trippe and Cravath Lakes, ranked in order of the percentage of respondents that engaged in the activities, were as follows:

- Attending community special events (74 percent of respondents)
- Relaxing/entertaining (66 percent)
- Exercising (47 percent)
- Watching wildlife/birds (45 percent)
- Fishing (not including ice fishing) (32 percent)
- Picnicking (26 percent)

Relatively few respondents indicated that they used the Lakes for canoeing/kayaking (14 percent), ice fishing (7 percent), or swimming or wading (62 percent).

A substantial number of respondents (27 percent) owned a boat, and among boat owners most had either a fishing boat with outboard motor (48 percent) or canoe (45 percent). Despite this, very few respondents used their boats on Trippe and Cravath Lakes, as reported below. Finally, respondents were evenly split on how they typically travelled to the Lakes: 51 percent reported that they travelled there on foot, while the same percentage travelled there by motor vehicle. Only 18 percent of the respondents travelled to the Lakes by bicycle.

Activities at Other Lakes

The majority of the survey respondents (62 percent) had visited lakes other than Trippe and Cravath Lakes during the past 12 months. Among those who had visited other lakes, the average number of days spent at the lakes was 17 days per year, with approximately 62 percent spending between one day and 10 days per year, and 17 percent spending between 11 and 20 days per year at the other lakes.

Respondents' favorite lakes to visit were within driving distance of their homes. These lakes, ranked in order of the percentage of respondents that listed a specific lake as their favorite, were as follows:

- Whitewater Lake (20 percent of respondents)
- Geneva Lake (8 percent)
- ***Cravath Lake*** (6 percent)
- Lake Michigan (7 percent)
- Rice Lake (4 percent)
- Delavan Lake (4 percent)
- Pleasant Lake (4 percent)
- Lauderdale Lakes (3 percent)
- Ottawa Lake (3 percent)
- ***Trippe Lake*** (3 percent)
- Turtle Lake (2 percent)
- Rock Lake (2 percent)

A complete listing of favorite lakes is included in Appendix D.

Survey Respondents' Views on Lake Topics and Other Issues

Opinions on a Range of Issues Affecting the State of Wisconsin and the City of Whitewater

In survey research it often is useful to gauge the relative importance that respondents place on a variety of issues, including and in addition to the primary issue focused on in the survey. This survey asked residents to indicate how important (on a 5 point Likert scale, with 1 = "Not at all important" and 5 = "Extremely important") they felt it would be to undertake various actions in their area. Ranked in order of importance, the results were as follows:

1. Make state and local government more efficient (mean score = 3.98/5)–identified by 37 percent of respondents as "extremely important."

2. Address the economic crisis by stemming the loss of jobs in your area (mean score = 3.96/5)–identified by 36 percent of respondents as "extremely important."

3. Improve schools in your area (mean score = 3.59/5)–identified by 28 percent of respondents as "extremely important."

4. Preserve working agricultural lands in your area (mean score = 3.53/5)–identified by 24 percent of respondents as "extremely important."

5. Enhance the quality of environmental resources such as recreational lakes (mean score = 3.46/5)–identified by 25 percent of respondents as "extremely important."

6. Develop more restaurants and shops in your area (mean score = 3.13/5)–identified by 19 percent of respondents as "extremely important."

7. Create more local hiking and biking trails (mean score = 2.59/5)–identified by 9 percent of respondents as "extremely important."

8. Increase local security against terrorism (mean score = 2.41/5)–identified by 7 percent of respondents as "extremely important."

The results above indicate that City of Whitewater residents do believe it is important to enhance the quality of environmental resources such as recreational lakes. However, residents on average attached greater importance to other issues, including state and local government efficiency, job loss, education, and the preservation of agricultural lands.

Levels of Awareness of Trippe and Cravath Lake Issues

This section of the survey listed seven issues that are relevant for Trippe and Cravath Lakes. Respondents were asked to indicate their level of awareness with each of these issues on a three-point scale (1 = "I am not at all aware of this possible issue"; 2 = "I am somewhat aware of this issue"; and, 3 = "I am very much aware of this issue").

The survey results showed that mean awareness scores for various lake-related issues range from 1.81/3 to 2.53/3. Respondents reported being most aware of the issue that "the Lake's water clarity is poor" (mean awareness score =2.53/3). The complete set of issues and accompanying awareness scores, ranked in order from highest to lowest, are:

1. The Lakes' water clarity is poor (mean awareness score = 2.53/3)

2. Residential development is occurring along Lakes (mean score = 2.44/3)

3. Agricultural runoff may affect Lake water quality (mean score = 2.32/3)

4. The Lakes are shallow (mean score = 2.28/3)

5. Sanding and salting of roads may affect Lake water quality (mean score = 2.24/3)

6. The Lakes have large amounts of aquatic plants (mean score = 2.16/3)

7. Commercial development is occurring near the Lakes (mean score = 1.81/3)

Levels of Concern Regarding Key Problems at Trippe and Cravath Lakes
As described in the following sections, the balance of the survey focused on two issues in particular that were identified by the *Ad Hoc* Committee as being important at Trippe and Cravath Lakes: undesirable aquatic plants, and sedimentation of the Lakes that has caused loss of depth and changes in water quality. In relation to these issues, the results above indicate that residents are relatively quite aware of poor water clarity in the Lakes, while somewhat less aware of shallowness of the Lakes and the presence of large amounts of aquatic plants. A complete presentation of the issue awareness results appears in tabular format in Appendix D.

The survey included the following text to introduce respondents to the two key problems:

> "Resource managers currently are concerned about the quality of Cravath and Trippe Lakes and resulting negative impacts on our ability to enjoy them. Undesirable weed species (for example, Eurasian water milfoil) are present in and around these lakes. Such weeds crowd out native aquatic plants (e.g., lily pads); reduce the quality of habitat for sportfish; and make it difficult to swim or operate boats. Resource managers are concerned about the deposits of sediment into these lakes. Too much sediment makes the lakes too shallow to support recreational uses such as swimming and boating, and increases problems with odor and poor water clarity."

The survey then asked respondents to rate their levels of concern for these problems at the lakes, using a 5-point Likert scale with 1 = "Not at all concerned," 2 = "A little concerned," 3 = "Somewhat concerned," 4 = "Very concerned," and 5 = "Extremely concerned."

The mean responses to this question for the two issues were similar, with a score of 3.52 for aquatic plant species and 3.59 for sedimentation. Approximately 28 percent and 26 percent of residents, respectively, were "extremely concerned" or "very concerned" about aquatic plant species present in the Lakes. In addition, 25 percent were "somewhat concerned" about this problem. Only 9 percent of residents were "not at all concerned" about aquatic plants.

With regard to sediment in the Lakes and associated decreases in depth and changes in water quality, 30 percent and 27 percent of residents were "extremely concerned" and "very concerned," respectively. Approximately 23 percent were "somewhat concerned," while only 9 percent were not at all concerned.

In general, the above results suggest that the average City of Whitewater resident's level of concern about these two key issues is substantial (in both cases, closer to very concerned than somewhat concerned). The results also indicate that residents are roughly equally concerned about these two problems at the Lakes.

Effect of Concerns on Lake Enjoyment
The survey also asked respondents to indicate how these two problems (aquatic plants and sediment in the Lakes) "affect (if at all) the quality of your enjoyment of Cravath and Trippe Lakes." Respondents were asked to circle one number using a 5-point Likert scale with 1 = "Does not at all reduce my enjoyment of these Lakes," 2 = "Reduces my enjoyment of these Lakes a little," 3 = "Somewhat reduces my enjoyment of these Lakes," 4 = "Reduces my enjoyment of these Lakes a lot," and 5 = "Reduces my enjoyment of these Lakes extremely."

The impact of aquatic plants on enjoyment of the Lakes (mean response = 3.28/5) was found to be slightly greater than the impact of sediment and its associated loss of depth and changes in water quality (mean response = 3.19/5). For both impacts, however, the mean response was between "somewhat reduces enjoyment" and "reduces enjoyment a lot." In total, 48 percent of respondents indicated that aquatic plants reduced their enjoyment either

"a lot" (= 4) or "extremely" (= 5). Similarly, 47 percent indicated that sedimentation and its accompanying impacts in the Lakes reduced their enjoyment "a lot" or "extremely." For the majority of respondents (72 percent in the case of aquatic plants and 69 percent for sediment), these lake problems reduced their quality of enjoyment of Trippe and Cravath Lakes at least "somewhat" and more than "a little."

Responses to Willingness to Pay Scenarios for Weed Control and Sediment Removal

The next module of the survey comprised a key component of this research project. It addressed residents' Willingness-to-Pay (WTP) for programs that would improve the Lakes in relation to the two key issues referenced above (aquatic plants and sediments). This section began with the following text:

> "The next several questions ask about your willingness to pay for conducting programs to improve Cravath and Trippe Lakes. In order to conduct the programs, money will need to be raised. This may be done by creating a "special tax district" affecting you and your neighbors living in the City of Whitewater. Money to fund the programs would be raised through increased property taxes, and all money raised would be used only for the lake programs. When answering, please consider your income, other things you spend money on, and the many other possible programs that could be funded by your local government."

Then, the survey included three WTP scenarios and questions related to the following three programs: 1) aquatic plant control, 2) sediment removal, and 3) a program combining both aquatic plant control and sediment removal. The scenarios/questions and corresponding survey results are discussed in turn in the following three sections.

Willingness to Pay for the Aquatic Plant Control Program

The scenario/question for aquatic plant control was as follows:

> PLEASE CONSIDER CAREFULLY THE FOLLOWING PROPOSED SCENARIO FOR WEED CONTROL AT CRAVATH AND TRIPPE LAKES:
>
> As mentioned above, Cravath and Trippe Lakes currently have undesirable weed species. Resource managers are considering a weed removal program. Weed removal may be done by hand pulling and raking or by using approved chemicals that do not affect humans or wildlife. Resource managers would use the method considered to be safest and most cost-effective, and the method would be repeated as necessary to control weeds. The program will:
>
> - Enhance the habitat for fish, including those caught by recreational anglers
> - Reduce unpleasant physical contact with weeds while engaging in water-based recreation such as swimming
> - Result in visual improvements to the lakes
> - Allow native plant species to return
> - Improve the biological functioning of the lake
>
> This weed control program by itself will NOT address the buildup of sediment in the lakes, which is discussed next.
>
> How much would you be willing to pay in additional property taxes each year, for the next 10 years, in order to do the weed control program? (Circle one number.)

$0	$3	$10	$40	$125	$450	$1,500	$5,000
$1	$5	$15	$60	$200	$650	$2,250	More than $5,000
$2	$8	$25	$90	$300	$1,000	$3,300	Don't know

Table 25

SURVEY RESPONDENTS' WILLINGNESS TO PAY FOR A WEED CONTROL PROGRAM FOR TRIPPE AND CRAVATH LAKES THROUGH INCREASED PROPERTY TAXES EACH YEAR

Amount (dollars per year)	Frequency	Percent
$0	98	24.56
$1-$9	29	7.27
$10-$25	97	24.31
$26-$99 (Mean = $67.46)	74	18.55
$100-$300	57	14.29
$301-$999	7	1.75
$1,000-$5,000	3	0.75
More than $5,000	1	0.25
Don't Know	33	8.27
Total	399	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

The results of the aquatic plant control program WTP scenario are shown in Table 25, in which the WTP responses are grouped into different bins (ranges, or categories). The mean WTP was $67/yr. Among those with a nonzero WTP, the largest percentage of residents (24 percent) was willing to pay between $10 per year and $25 per year for aquatic plant control. In the next largest bin, 19 percent of residents were willing to pay between $26 per year and $99 per year. Note, however, that a sizeable percentage of respondents (25 percent) had zero bids; indicating that they would not be willing to pay for the aquatic plant control program.

Willingness to Pay for the Sediment Removal Program

The scenario/question for sediment removal was as follows:

PLEASE CONSIDER CAREFULLY THE FOLLOWING PROPOSED SCENARIO FOR SEDIMENT REMOVAL AT CRAVATH AND TRIPPE LAKES:

As mentioned above, Cravath and Trippe Lakes currently have large deposits of sediment. Resource managers are considering a sediment removal program. Sediment removal is done using precision land-based or water-based equipment, and the extracted sediment would be removed from the area and deposited safely outside of Whitewater. The method would be repeated as necessary to control sediment. The program will:

- Create deeper lakes
- Allow for better swimming and watercraft operation, including creating new areas that currently cannot be used for water-based recreation
- Reduce odor and increase water clarity

This Sediment Removal Program by itself will NOT reduce the undesirable weeds in the lakes, which was discussed previously.

How much would you be willing to pay in additional property taxes each year, for the next 10 years, in order to do the sediment removal program? (Circle one number.)

$0	$3	$10	$40	$125	$450	$1,500	$5,000
$1	$5	$15	$60	$200	$650	$2,250	More than $5,000
$2	$8	$25	$90	$300	$1,000	$3,300	Don't know

The results of the sediment removal program WTP question are shown in Table 26. The mean WTP was $72 per year, very close to, but slightly higher than, the WTP for the aquatic plant control program, which had a WTP of $67 per year. Among those with a nonzero WTP, the largest percentage of residents (22.5 percent) was willing to pay between $10 per year and $25 per year for sediment removal. In the next largest bin, 19.5 percent of residents were willing to pay between $26 per year and $99 per year. Similar to the results for the aquatic plant control program scenario, a substantial percentage of respondents (25.5 percent) had zero bids; that is, they were not willing to pay for a sediment removal program at Trippe and Cravath Lakes.

Table 26

SURVEY RESPONDENTS' WILLINGNESS TO PAY FOR A SEDIMENT REMOVAL PROGRAM FOR TRIPPE AND CRAVATH LAKES THROUGH INCREASED PROPERTY TAXES EACH YEAR

Amount (dollars per year)	Frequency	Percent
$0	102	25.50
$1-$9	23	5.75
$10-$25	90	22.50
$26-$99 (Mean = $72.27)	78	19.50
$100-$300	62	15.50
$301-$999	7	1.75
$1,000-$5,000	4	1.00
More than $5,000	1	0.25
Don't Know	33	8.25
Total	400	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table 27

SURVEY RESPONDENTS' WILLINGNESS TO PAY FOR BOTH WEED CONTROL AND SEDIMENT REMOVAL PROGRAMS FOR TRIPPE AND CRAVATH LAKES THROUGH INCREASED PROPERTY TAXES EACH YEAR

Amount (dollars per year)	Frequency	Percent
$0	93	23.54
$1-$9	15	3.80
$10-$25	62	15.70
$26-$99	78	19.76
$100-$300 (Mean = $113.24)	90	22.78
$301-$999	19	4.81
$1,000-$5,000	7	1.77
More than $5,000	2	0.51
Don't Know	29	7.34
Total	395	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Willingness to Pay for a Combination of Both Programs (Aquatic Plant Control plus Sediment Removal)
Finally, the survey asked respondents to indicate their WTP for a combination program that would involve both aquatic plant control and sediment removal. A motivation for posing this question was to explore whether the average City of Whitewater resident considers the two potential programs to be substitutes or complements. If they are considered to be complementary programs (the perceived benefits yielded from undertaking one of them would enhance the perceived benefits obtained from the other), then one might expect the WTP for the combined program to be greater than the sum of the two WTP values for the individual programs. On the other hand, if the programs are considered by residents to be substitutes for one another, then one would expect the WTP for the combined program to be less than the sum of the two WTP values for the individual programs.

The scenario/question for a combination program including both weed control and sediment removal was as follows:

> FINALLY, PLEASE CONSIDER CAREFULLY A COMBINATION OF BOTH PROGRAMS:
>
> Resource managers are considering BOTH weed control AND sediment removal. This will result in all of the benefits listed above for BOTH of these programs. How much would you be willing to pay in additional property taxes each year, for the next 10 years, in order to do both the weed control program and the sediment removal program? (Circle one number.)

$0	$3	$10	$40	$125	$450	$1,500	$5,000
$1	$5	$15	$60	$200	$650	$2,250	More than $5,000
$2	$8	$25	$90	$300	$1,000	$3,300	Don't know

The results of the WTP question for the combination program (aquatic plant control plus sediment removal) are shown in Table 27. The mean WTP was $113 per year. This is less than the sum of the mean WTP values for the two individual programs ($67.46 + $72.27 = $139.73), perhaps indicating that the average resident considers the aquatic plant control and sediment removal programs to be substitutes rather than complements. Alternatively, it may be the case that there is a limit on the total amount that the average resident is willing to pay for overall improvement of the Lakes, and that this is made manifest by the WTP values elicited when the possibility of a combination program is proposed.

Among those respondents with a nonzero WTP, the largest percentage (23 percent) was willing to pay between $100 per year and $300 per year for a combination program of aquatic control plus sediment removal. In the next largest bin, 20 percent of residents were willing to pay between $26 per year and $99 per year. Similar to the results for the individual programs, a substantial percentage of respondents (24 percent) had zero bids; they were unwilling to pay for a combination program of aquatic plant control plus sediment removal at Trippe and Cravath Lakes.

SUMMARY

There were 432 responses to the approximately 2,803 questionnaires sent out. The numbers of responses (15 percent) were within the expected rate of response for a statistically valid survey. However, not all 432 respondents answered every question.

About one-half of the respondents were determined to live within one-half mile of the Lakes, based upon the mapping analysis associated with the coding of the survey instruments. In contrast, roughly the same percentage of respondents, when asked to estimate the distance to the nearest waterbody, thought that they lived between one-half mile and two miles away from the nearest Lake. About 90 percent of respondents reported that they did not live on either Lake. Somewhat more than twice as many respondents live closer to Cravath Lake (two-thirds of respondents) than the number living close to Trippe Lake (one-quarter of respondents).

The majority (88 percent) of respondents owned the residences in which they lived, with the average length of residence in the home being just under 15 years. The respondents, however, indicated that on average they lived in the City for just over 25 years. Most (94 percent) were year round residents. Of the seasonal residents, the average length of residence was about eight months annually, with summer and fall being the most likely months of residence.

About three-quarters of respondents reported visiting the Lakes during the previous year, with about one-half of those respondents visiting the Lakes between one and 10 times. The average number of visits to the Lakes during a year was reported to be about 30. About one-half of respondents reported visiting the lakes for community events, relaxation, and/or exercise. Boating was the activity in which the fewest numbers of respondents participated. Bird watching, fishing, and picnicking each occupied about 10 percent of the respondents.

The numbers of people visiting the Lakes were equally divided with respect to the mode of travel, with about 40 percent each using motor vehicles or travelling on foot.

One-quarter of respondents owned a boat, with (outboard motorized) fishing boats and canoes being the most common types of boats owned.

Two-thirds of respondents also visited other lakes in the area in the last year, with about two-thirds of these respondents doing so on between one and 10 occasions; the average number of visits to other lakes was about 15. Other lakes visited included a range of lakes across the state, but one-fifth of respondents indicated Whitewater Lake as their typical destination and about one-tenth indicated Geneva Lake as their destination.

A majority of respondents (slightly more than one-half) noted that they felt that enhanced or improved local environmental resources, numbers of shops and restaurants, agricultural lands, and schools were important. More efficient government and job loss were identified as highly important; recreational trails and security from terrorism were noted as being of lesser importance.

There was a moderate level of awareness of lake issues on average; lake issues included shallow depths, weeds, residential and commercial development in their vicinity, poor water clarity, and the role of agricultural runoff and the role of road salts on lake water quality.

There was a somewhat greater level of concern expressed by respondents with aquatic plants and sediment being of moderate concern. These issues also led to some reduction in the level of enjoyment experienced by lake users. About one half of the respondents also noted other problems of concern that affected their enjoyment of these resources.

With regard to the willingness to pay, the respondents were almost equally divided between those who did not want to pay (one-quarter of respondents indicating $0) and those willing to pay $10 to $25, for **either** aquatic plant control **or** sediment removal. Insofar as willingness to pay for both aquatic plant control and sediment removal was concerned, about one-quarter also indicated that they did not want to pay, while an equal number indicated a willingness to pay between $100 and $300 for **both** of these activities (about $115 being the average).

The median income level of respondents was about $50,000 per year. Two-fifths of respondents had a post graduate degree, and one-fifth each had either a four-year degree or technical qualification. Almost all (95 percent) respondents indicated that they were not university students; the median age of respondents being about 55 years.

This Page Intentionally Left Blank

Chapter IV

ISSUES OF CONCERN

INTRODUCTION

Cravath and Trippe Lakes and their associated tributary areas generally are able to support a variety of recreational opportunities—both through the Southern Unit of the Kettle Moraine State Forest, which extends from the City of Whitewater in Walworth County to the Village of Dousman in Waukesha County, and through the City of Whitewater Park and Recreation System as well as some limited lake-oriented activities conducted on Trippe and Cravath Lakes. However, there are a number of existing and potential future problems and issues of concern that should be addressed in this lake protection plan to enhance these recreational opportunities and contribute to the quality of life experiences of the citizens of the City and the State. Based upon the inventory data included in Chapter II, these issues of concern can be determined to include: urban development and stormwater management, public recreational water use, sediment management and water quality, hydrology, aquatic plant management, and institutional development.

In addition to the issues of concern identified through this planning program, the University of Wisconsin-Whitewater conducted a mail drop questionnaire survey of the City of Whitewater households during 2009. This survey was designed to evaluate and assess the legitimate demands of the lake residents for access to water-based recreational opportunities and maintenance of residential ambience within the City. The survey instrument is included herein as Appendix C. The results of the survey have been summarized in Chapter III of this report. Based upon the responses to the questionnaire survey documented in Chapter III, the lake-oriented issues of concern to the City of Whitewater respondents include: public recreational water use, sediment management and water quality, and aquatic plant management.

This chapter utilizes the scientific data and information gathered from Cravath Lake and Trippe Lake to define from a technical base the major land and lake concerns. As stated in Chapter II of this report, this chapter is based on the premise that in-lake concerns are a reflection of land use and management in the drainage areas tributary to the Lakes. While it is true that lakes, as accreting systems, will trap and metabolize nutrients and other contaminants that are generated from the upstream watershed by natural processes, humans can and do accelerate this process of mobilizing contaminants and hastening the process of lake aging, or eutrophication. Further, because impoundments generally have larger watershed than natural lakes, these waterbodies are often subjected to much more rapid enrichment than their natural counterparts. In the cases of Trippe and Cravath Lakes, both of which are impoundments, this process was further accelerated by their urban location and the intensive use of the lakes as hydropower sources—in their early history, by their use as stormwater management systems—in their middle history, and as recreational and aesthetic resources—at the present time.

URBAN DEVELOPMENT AND STORMWATER MANAGEMENT

Human activities upon the land surface result in the generation and mobilization of contaminants that are transported to lakes by rainfall, wind, and runoff. In urban areas, which generally include significant areas of impervious surface in the form of roadways, walkways, rooftops, and related stormwater conveyance systems, this mobilization and transport of contaminants can be enhanced in the absence of mitigating measures. Additionally, where such activities involve the exposure of the soil surface, larger contaminant loads result. Thus, erosion during construction and generation of nonpoint source pollutants associated with new urban development often represent potentially significant threats to water quality. The majority of lands within the total tributary area of Cravath and Trippe Lakes are under agricultural use or are designated as open lands. As these lands are developed, land disturbing activities associated with construction and redevelopment, along with increases in urban land uses and associated impervious surfaces, will increase runoff into the Lakes, subject to Chapter NR 151 guidance on runoff management, and may increase some nonpoint source pollutant loadings that represent a potentially significant threat to the Lake's water quality. Consequently, urban areas, urban development, and associated stormwater management are important issues to be considered.

PUBLIC RECREATIONAL WATER USE

As evident from the results of the recreational surveys conducted by Southeastern Wisconsin Regional Planning Commission (SEWRPC) staff on Cravath and Trippe Lakes in 2008, and presented in Chapter II, the Lakes currently do not appear to be subjected to the same types and intensities of recreational use as many other lakes in Southeastern Wisconsin. These observations by Commission staff were supplemented by a further assessment of the present and forecast future recreational uses of Cravath and Trippe Lakes through a mail drop questionnaire survey, conducted in 2008 by the University of Wisconsin-Whitewater. This latter survey, as noted in Chapter III, was conducted pursuant to UWEX Lakes Partnership guidelines and current Wisconsin Department of Natural Resources (WDNR) protocols.

A majority of respondents (slightly more than one-half) to the survey noted that they felt that enhanced or improved local environmental resources, numbers of shops and restaurants, agricultural lands, and schools were important. More efficient government and job loss were identified as highly important; while recreational trails and security from terrorism were noted as being of lesser importance. There was a moderate level of awareness of lake issues: lake issues identified by respondents included shallow depths, weeds (aquatic plants), residential and commercial development in their vicinity, poor water clarity, and the role of agricultural runoff and the role of road salts on lake water quality. There was a somewhat greater level of concern expressed by respondents with weeds and sediment being of moderate concern. These issues also led to some reduction in the level of enjoyment experienced by lake users. About one half of the respondents also noted other problems of concern that affected their enjoyment of these resources.

Consequently, recreation and recreational use issues are important issues to be considered both from the point of view of the diagnostic analysis as well as from the point of view of the people of the City of Whitewater.

HYDROLOGY

Lake issues of concern identified by respondents included shallow depths. The depths of the two impoundments were recurring themes during public meetings held throughout the process of formulating and executing this planning program. Considerable concern over the sources of the sediments being deposited in the Lakes was noted, both in terms of the loss of recreational use opportunities due to the presence of muck and in terms of the need to identify measures to minimize future inputs of sediment to the impoundments and remediate the sediments currently present in the basins of the Lakes.

The issue of loss of lake depth has several contributing factors, including that related to water as the transport medium for sediments eroded from the land surface within the drainage area and transported to the Lakes. It is also associated with the growth, death, and decay of aquatic plants within the Lake basins, which in turn is related

to the water quality status, presence of abundant quantities of plant nutrients, and shallow nature of the Lakes. In this regard, shallow lakes, of which Trippe and Cravath Lakes are representative, are characterized by abundant growths of aquatic plants. This latter issue of concern is elaborated below.

For the purposes of this plan element, it is the former issue of concern, sediment transported and deposited in the Lakes from their watersheds—and the associated loss of lake depth, that is of interest, especially since it engages stormwater management concerns of the City of Whitewater.[1] Consequently, hydrological issues are important issues to be considered.

SEDIMENT MANAGEMENT AND WATER QUALITY

Lake issues of concern identified by respondents, together with loss of lake depth, included poor water clarity, and the role of agricultural runoff and the role of road salts in degrading lake water quality. Related to the hydrological concerns noted above, the influx of sediments and contaminants, and resultant decline in water quality, are the manifestations of poor quality water identified by the majority of the respondents to the community questionnaire survey. In this regard, turbid water and an abundance of rooted, floating leaved, and emergent aquatic plants in the two lakes are classic characteristics of shallow lakes.

The degree to which these symptoms are related to historical management practices, such as the discharge of wastewaters noted in Chapter II, have relevance for the determination of possible remedial measures, a principle example of which would include dredging the accumulated sediments. While this type of remedial measure entails significant costs and involves potentially costly and time-consuming permitting—required pursuant to Chapter 30 of the *Wisconsin Statutes*—and sediment testing—required pursuant to Chapter NR 347 of the *Wisconsin Administrative Code*, Sediment Sampling and Analysis, Monitoring Protocol and Disposal Criteria for Dredging Projects—sediment management is an important consideration in terms of maintaining water quality conditions in the Lakes that are consistent with the desired uses of the Lakes, as expressed by respondents to the questionnaire survey summarized in Chapter III. Consequently, sediment management and water quality are important issues to be considered.

AQUATIC PLANT MANAGEMENT

Lake issues of concern identified by respondents included weeds (aquatic plants); among these aquatic plants, the presence of Eurasian water milfoil (*Myriophyllum spicatum*) and curly-leaf pondweed (*Potamogeton crispus*) in the basins of Cravath and Trippe Lakes is an important issue of concern. These invasive aquatic plants often outcompete native aquatic plants and, without management, frequently dominates the plant communities in the lakes of southeastern Wisconsin, to the detriment of native plant species and their associated fish and wildlife populations.

There also is increasing evidence that Eurasian water milfoil will hybridize with native or northern water milfoil, increasing the invasive nature of this genus.[2] The recent aquatic plant surveys of Cravath and Trippe Lakes conducted by SEWRPC staff suggest that Eurasian water milfoil has achieved sufficient abundance within the Lakes that it is interfering with human recreational and aesthetic use of the Lakes as natural resources. As discussed in Chapter II and documented in Chapter III, aquatic plants in general and Eurasian water milfoil in particular are widespread in the Lakes and, therefore, aquatic plant management is an issue that should be considered.

---

[1] *The City of Whitewater is not an MS4 municipality designated pursuant to Section NR 216.02(3) of the* Wisconsin Administrative Code.

[2] *Michael L. Moody and Donald H. Les, "Evidence of Hybridity in Invasive Watermilfoil (*Myriophyllum*) Population,"* PNAS, *Volume 99, No. 23, pages 14867-14871, November 2002.*

INSTITUTIONAL DEVELOPMENT

As the Cravath and Trippe Lakes community seeks a more active role in the management of the Lakes, it is essential that an adequate institutional base to support such activities be developed. Currently, the community-based lake management activities are being carried out by the City of Whitewater. To facilitate the conduct of this institutional organization analysis, the City has formed an *Ad Hoc* Lake Committee as an interim organization. Pursuant to Section 62.23(18) of the *Wisconsin Statutes*, cities "may improve lakes and rivers within the city and ... may make improvements therein throughout the county in which such city shall be located in aid of navigation, and for the protection and welfare of public health and wildlife." However, the Wisconsin Legislature also has established other mechanisms for the purpose of lake and stream management. Public lake organizations may be established through the creation of special purpose units of government pursuant to Chapter 33 of the *Wisconsin Statutes*, as public inland lake protection and rehabilitation districts, or, pursuant to Section 66.0827 of the *Wisconsin Statutes*, as utility districts, especially stormwater utilities. Private lake organizations include nonstock, not-for-profit corporations established under Chapter 181 of the *Wisconsin Statutes*. The specific type(s) of organization(s) to be created should be based upon the decision of the community. Consequently, institutional development is an important issue to be considered.

Chapter V

ALTERNATIVE AND RECOMMENDED LAKE PROTECTION AND MANAGEMENT PRACTICES

INTRODUCTION

Cravath and Trippe Lakes generally contain a robust, though not highly diverse, aquatic plant community capable of supporting a warmwater fishery, albeit with some areas that suffer impairment of recreational opportunities and other lake-oriented activities due to an overabundance of aquatic macrophytes. For example, in those areas of the Lakes where Eurasian water milfoil (*Myriophyllum spicatum*) is abundant, certain recreational uses are limited, the aesthetic quality of the Lakes is impaired, and in-lake habitat degraded. The plant primarily interferes with recreational boating activities by encumbering propellers, clogging cooling water intakes, snagging paddles, and slowing sailboats by wrapping around keels and control surfaces. The plant also causes concern among swimmers who can become entangled within the plant stalks. Thus, without control measures, these areas can become problematic to navigation, fishing, and swimming. Native aquatic plants, generally found at slightly deeper depths, pose fewer potential problems for navigation, swimming, and fisheries, and generally have attributes that sustain a healthy fishery. Many native aquatic plants provide fish habitat and food resources and offer shelter for juvenile fishes and young-of-the-year fish.

In this chapter, alternative and recommended actions for addressing the issues of concerns described in Chapter IV are presented. These measures are focused primarily on those measures which can be implemented by the City of Whitewater, with lesser emphasis given to those measures which are applicable to other agencies having jurisdiction within the area tributary to the Lakes.

URBAN DEVELOPMENT AND STORMWATER MANAGEMENT

Background

The City of Whitewater was issued a general permit pursuant to Chapter NR 216 stormwater discharge permitting requirements on November 1, 2006. This designation is based on the Federal decennial census and applicable to the owner or operator of a municipal separate storm sewer system (MS4) serving incorporated areas with a population of 100,000 or more, and requires that owner or operator to implement measures to reduce total suspended solids loads, including the conduct of informational and educational programming, elimination of cross-connections between sanitary and storm sewers, reduction of construction site erosion, and implementing street sweeping and leaf litter collection programs. Chapter II of this report has shown that planned future development within the tributary areas to both Trippe and Cravath Lakes will become increasingly urbanized during the planning period. As this shift in land use occurs, stormwater management will become increasingly important to protecting or rehabilitating the water quality of the Lakes.

The conversion of rural agricultural lands draining to both Trippe and Cravath Lakes to urban land uses and other land uses such as those associated with the Southern Unit of the Kettle Moraine State Forest and other conservancy lands being acquired by private conservation organizations will have the effect of reducing the current sediment and phosphorus loads to the Lakes, as noted in Chapter II. While conversion of agricultural lands to urban land uses can introduce other contaminants to the Lakes, as documented in Chapter II, such conversions will be subject to State stormwater management requirements set forth in Chapter NR 151 of the *Wisconsin Administrative Code*. These requirements limit the change in runoff from urban land development sites, and consequently modify the conveyance of contaminants from the land surface into waterways.

While urbanization brings a decrease in some pollutant loadings, urban runoff adds additional contaminants of concern to the mix of pollutants entering the Lakes, specifically metals as shown in Tables 9 through 12 in Chapter II. These contaminants are generally highly reactive with sediment particles, so the sediment retention requirements of Chapter NR 151 of the *Wisconsin Administrative Code* are likely to retain some of the additional urban contaminants of concern. Thus, stormwater management has been determined to be an important concern facing Cravath and Trippe Lakes.

Water quality is one of the key parameters used to determine the overall health of a waterbody and its ability to support a varied array of aesthetic and recreational uses, and other uses such as navigation, water supply, and hydropower generation—many of Wisconsin's impounded waterbodies began life as working waterways supporting grist or saw mills, as in the case of Trippe and Cravath Lakes. The importance of good water quality can hardly be underestimated, as it impacts nearly every facet of the natural balances and relationships that exist in a lake between the myriad of abiotic and biotic elements present, as well as influencing and determining, to a large extent, the human interactions with the aquatic environment. Because of the importance water quality plays in the functioning of a lake ecosystem and the human uses thereof, careful monitoring of this lake element represents a fundamental management tool. Not only does monitoring allow for an assessment of lake "health," it provides early warning of imbalances in the aquatic ecosystem so that active interventions can be undertaken in a timely (and cost-effective) manner. In the cases of Cravath and Trippe Lakes, water quality data, such as those summarized in Chapter II of this report, form the basis for the identification for the remedial measures set forth herein.

Alternative Management Measures

Urban Stormwater Management

Stormwater management, and the control of nonpoint source pollution from urban and urbanizing areas, has been recognized as an important issue facing the State of Wisconsin. In the case of urban lakes, such as Trippe and Cravath Lakes, urban stormwater management is an essential element in the protection and rehabilitation of water quality. Alternative stormwater management measures, summarized in Appendix E, range from relatively low-cost informational programming, informing citizens of "good housekeeping practices" that can be implemented through small changes in household behavior, to the construction of stormwater treatment systems, which have high construction and operation costs. While these latter practices have been applied in various parts of the world—such as in the case of the Wahnbach Reservoir in Germany,[1] the alternative practices considered for use by the City of Whitewater stop short of these comprehensive treatment systems, focusing instead on subregional stormwater ponds, infiltration, and informational programming.

2009 Wisconsin Acts 9 and 63, enacted by the Wisconsin Legislature have contributed to reducing the discharge of phosphorus containing substances into the environment. 2009 Wisconsin Act 9 has restricted the use and sale of fertilizer containing phosphorus and other turf fertilizers within the State. Under the provisions of this Act, which created Section 94.643 of the *Wisconsin Statutes*, the application of fertilizers on urban lands containing phosphorus is limited to those specific cases where soil tests document a need for such soil amendments. In

[1] *See S.-O. Ryding and W. Rast,* The Control of Eutrophication of Lakes and Reservoirs, *Unesco Man and the Biosphere Series, Volume 1, Parthenon Press, Carnforth, 1989.*

Southeastern Wisconsin, few, if any, soils fall within this category.[2] This has meant that much of the fertilizer applied prior to the adoption of 2009 Wisconsin Act 9 was washed off the land surface and into the Region's waterways.[3] 2009 Wisconsin Act 63 amended Sections 100.28 (2) (a) and (b) and 100.28 (2m) (a) and (b) of the *Wisconsin Statutes* to restrict the amount of phosphorus in certain, nonhousehold cleaning agents. As shown in Appendix E, these measures are likely to reduce nonpoint source phosphorus inputs to the Lakes from urban areas by up to 5 percent.

The use of street sweeping, catch basin cleaning, and seasonal leaf and clipping collection measures are additional measures that are being implemented by the City of Whitewater. These measures have been combined with public informational programming to alert residents to dates and times of collections, recommended yard care practices, and related issues. These practices also can help to reduce nonpoint source phosphorus inputs to the Lakes from urban areas by up to 5 percent, as shown in Appendix E.

As of October 1, 2007, the City of Whitewater, through City of Whitewater Ordinance Chapter 16.10, Stormwater Utility and Management Services, created a Stormwater Utility tasked with the "collection and disposal of stormwater," providing "services to all properties within the City of Whitewater and the surrounding areas, including those properties not currently served by the system." The Ordinance also provided for a system or charges to offset the "cost of operating and maintaining the city stormwater management system and financing necessary repairs, replacements, improvements and extensions thereof should, to the extent practicable, be allocated in relationship to the services received from the system," in order to protect the health, safety and welfare of the public. In support of the implementation of this Ordinance, the City also promulgated guidelines for the implementation of erosion control and stormwater management practices in the City. These measures, as shown in Appendix E, can reduce nonpoint source pollution in runoff by 10 percent or more.[4]

Water Quality Monitoring

The University of Wisconsin-Extension (UWEX) operates the Citizen Lake Monitoring Network (CLMN), formerly the Wisconsin Department of Natural Resources (WDNR) Self-Help Monitoring Program. Volunteers enrolled in this program gather data at regular intervals on water clarity through the use of a Secchi disk. Because pollution tends to reduce water clarity, Secchi-disk water clarity measurements are generally considered one of the key parameters in determining the overall quality of a lake's water, as well as a lake's trophic status. Secchi-disk measurement data are added to the WDNR-sponsored Surface Water Information Management System (SWIMS) data base containing lake water quality information for most of the lakes in Wisconsin and is accessible on-line through the WDNR website. The UWEX also offers an Expanded Self-Help Monitoring Program that involves collecting data on several key physical and chemical parameters in addition to the Secchi-disk measurements. Under this program, samples of lake water are collected by volunteers at regular intervals and analyzed by the State Laboratory of Hygiene (SLOH). Data collection is more extensive and, consequently, places more of a burden on volunteers. Since 2004, a limited amount of data has been collected on an intermittent basis as part of the abovedescribed programs on Trippe Lake; no data have been recorded for Cravath Lake.

---

[2] *SEWRPC Planning Report No. 8,* Soils of Southeastern Wisconsin, *June 1966.*

[3] *See U.S. Geological Survey Water-Resources Investigations Report 02–4130,* Effects of Lawn Fertilizer on Nutrient Concentration in Runoff from Lakeshore Lawns, Lauderdale Lakes, Wisconsin, *July 2002.*

[4] *See SEWRPC Technical Report No. 18,* State of the Art of Water Pollution Control in Southeastern Wisconsin, *Volume 3,* Urban Storm Water Runoff, *July 1977; see also University of Wisconsin-Extension Publication No. G3691-P,* The Wisconsin Storm Water Manual: Technical Design Guidelines for Storm Water Management Practices, *2000; and, Wisconsin Department of Natural Resources,* Wisconsin Construction Site Best Management Practice Handbook, *1994, and associated Storm Water Construction and Post-Construction Technical Standards:* http://dnr.wi.gov/runoff/stormwater/techstds.htm.

In addition to the UWEX volunteer-based CLMN program, the University of Wisconsin-Stevens Point (UWSP) also offers several volunteer-conducted water quality sampling programs. Under these latter programs, volunteers collect water samples and send them to the UWSP Water and Environmental Analysis Laboratory (WEAL) for analysis. The U.S. Geological Survey (USGS) also offers an extensive water quality monitoring program under their Trophic State Index monitoring program. USGS field personnel conduct a series of approximately five monthly samplings beginning with the spring turnover. Samples are analyzed by the SLOH for an extensive array of physical and chemical parameters.

The basic UWEX CLMN program is available at no charge, but does require volunteers to be committed to taking Secchi-disk measurements at regular intervals throughout the spring, summer, and fall. The Expanded Self-Help Program requires additional commitment by volunteers to take a more-extensive array of measurements and samples for analysis, also on a regular basis.[5] As with any volunteer-collected data, despite the implementation of standardized field protocols, individual variations in levels of expertise due to background and experiential differences, can lead to variations in data and measurements from lake-to-lake and from year-to-year for the same lake, especially when volunteer participation changes. The UWSP turnover sampling program requires only a once-a-year sampling, thereby requiring a smaller time commitment by the volunteers, but, there is a modest charge for the laboratory analysis, and, because sampling is performed by volunteers, is subject to those variations identified above. Additionally, since samples need to be taken as closely as possible to the actual turnover period, which occurs only during a relatively short window of time, volunteers need to monitor lake conditions as closely as possible to be able to determine when the turnover period is occurring. The USGS program does not require volunteer sampling. All sampling and analysis is provided by USGS personnel using standardized field techniques and protocols. As a result, a more standardized set of data and measurements may be expected. However, the cost of the USGS program is significantly higher than the UWSP program, even with State cost-share availability.

Recommended Management Measures

Beyond the actions indicated above as ongoing implementation of the City of Whitewater Stormwater Ordinance requirements by the City of Whitewater Stormwater Utility,[6] including implementation of the public awareness activities associated with these Ordinance requirements,[7] it is recommended that the landowners immediately adjacent to the Lakes be encouraged to adopt shoreland landscaping practices designed to maintain the ecological integrity of the shorelands.[8] These practices also can be applied in areas around stormwater management basins elsewhere in the drainage areas tributary to the Lakes.[9] These additional actions could contribute to reducing nonpoint source pollution by a further 10 percent.

---

[5] *The WDNR offers Small Grant cost-share funding within the Chapter NR 190 Lake Management Planning Grant Program that can be applied for to defray the costs of laboratory analysis and sampling equipment.*

[6] *The City ordinance has established the goal of reducing sediment suspended in runoff by 40 percent.*

[7] *Outreach activities relating to stormwater management are being conducted under the auspices of the Rock River Stormwater Group, a consortium of 15 organizations within the Rock River Basin, on the theme of "Clean Waters, Bright Future." See:*
http://www.ci.whitewater.wi.us/index.php?option=com_content&view=category&layout=blog&id=149&Itemid=545.

[8] *SEWRPC riparian buffer guide, "Managing the Water's Edge: Making Natural Connections," May 2010. See* www.sewrpc.org/data and resources.

[9] *University of Wisconsin-Extension Publication No. GWQ045,* Storm Water Basins: Using Natural Landscaping for Water Quality & Esthetics [sic]- A Primer on Planting and Managing Native Landscaping for Storm Water Basins, *2005.*

In order to monitor the responses of the Lakes to improved stormwater management and nonpoint source pollution control practices, it is recommended that the City of Whitewater participate in the CLMN program sponsored by the UWEX for both Cravath and Trippe Lakes. Data gathered as part of this program should be presented annually by the volunteers at meetings of the Whitewater City Council, where the citizen monitors could be given some recognition for their work. The Lake Coordinator of the WDNR, Southeast Region, could assist in enlisting more volunteers in this program. The information gained at first-hand by the public from participation in this program can increase the credibility of the proposed changes in the nature and intensity of use to which the Lakes are subjected.

It is further recommended that the City of Whitewater consider participating in one of the other more comprehensive water quality programs: the UWEX Expanded Self-Help Program on an annual basis or, either the UWSP WEAL lake sampling program or USGS program on a periodic basis every three to five years. The use of either the UWSP or USGS programs would be especially valuable as a means to attain a comprehensive water quality determination on a periodic basis while maintaining yearly CLMN data.

PUBLIC RECREATIONAL WATER USE

Background

As noted in Chapter III of this report, the City of Whitewater community expressed a moderate level of awareness of lake issues in general, including awareness of depth, aquatic plants, urban development, water clarity, and the role of agricultural runoff and road salts on lake water quality. The community had a somewhat greater level of concern with respect to aquatic plants and sediments related to a reduction in the level of enjoyment experienced by lake users. About one half of the respondents also noted other issues of concern that affected their enjoyment and use of these resources.

Public recreational access to the two Lakes is focused on City parklands having lake frontage. These two parks offer the following amenities:[10]

- Trippe Lake Park—"Located along Trippe Lake in the southwest quadrant of the City, activities at this park include volleyball, ice skating, boating, fishing, cross country skiing, and swimming. This park also includes an open shelter, a bath house, a picnic area, a small orchard, play equipment, and restroom facilities."

- Cravath Lake Waterfront Park—"This park is located along the north side of Cravath Lake and near the south side of the downtown. The Lakefront Center community building is located here as well as an outdoor performance stage, boat launch, lakefront promenade, and a rail underpass to Lake Street."

Alternative Management Measures

With respect to recreational boating, current public recreational boating standards as set forth in Sections NR 1.91(4) and NR 1.91(5) of the *Wisconsin Administrative Code*, establish minimum and maximum standards for public boating access development, respectively, to qualify waters for resource enhancement services provided by the WDNR. As noted in Chapter II, both Cravath and Trippe Lakes are deemed to have adequate public access, although the types of watercraft are limited by the lack of water depth and abundant growth of aquatic plants. Chapter NR 1 of the *Wisconsin Administrative Code* sets maximum and minimum standards based upon available parking facilities for car-top and car-trailer units. Although currently considered adequate, the access sites should continue to be periodically monitored to ensure consistency with public recreational boating access standards.

---

[10] *City of Whitewater*, City of Whitewater Comprehensive Plan, 2030, *February 2010.*

In addition to ensuring continued eligibility for State of Wisconsin natural resources enhancement funds, public access points on the Lakes form an initial point of contact between the community and the Lakes. Consequently, placement of signage and related notices regarding issues of concern—such as nonnative species—is recommended. The WDNR has advisory notices regarding species such as Eurasian water milfoil and zebra mussel available upon request, and encourages placement of this signage at appropriate locations around the public recreational boating access sites. These sites also form excellent points of contact for disseminating water quality data, such as the periodic Secchi disc transparency measurements recommended above. Where these sites include public beaches and other amenities through which people may come into full- or partial-body contact with the water, placement of signage relating to coliform bacterial levels is also recommended.

Public access areas can be used to showcase good shoreland management practices and other shorescaping techniques (see below) that are recommended for replication elsewhere on the Lake shores. Given the large length of shoreline of both Trippe and Cravath Lakes that is in public ownership, or under the private ownership of the Hillside Cemetery, installation of shoreland buffers comprised of native vegetation would form not only an attractive border to the City's amenities, but also encourage other property owners to adopt similar shorescaping practices.

Recommended Management Measures
In addition to the existing public recreational boating access, it is recommended that appropriate signage at the public recreational boating access site be provided to alert users of Eurasian water milfoil, zebra mussels, and other nonnative invasive species. Such information should also be included in the City's informational programming, consistent with the aquatic plant management measures set forth in this plan. Should public use of the boat launch facilities at either Cravath Lake or Trippe Lake increase significantly, the City also might consider participating in the University of Wisconsin-Extension (UWEX) Clean Boats-Clean Waters Program.

IN-LAKE SEDIMENT MANAGEMENT AND HYDROLOGY

Background
A recurring theme at the various public meetings convened by the City of Whitewater *Ad Hoc* Lakes Committee meeting was the lack of depth within the Lake basins, and the loss of recreational boating opportunities. This concern also is expressed by the citizens of the City through the community-based questionnaire survey, summarized in Chapter III of this report.

As noted in Chapter III, the issue of sediment in the Lakes was noted to be as a major issue of concern by the respondents to the community survey, scoring 3.59 out of a total of 5.0. Respondents not only indicated that poor water clarity was the most significant issue of concern, ranking 2.53 out of a score of 3.0, but also that agricultural runoff and shallow depths were important issues of concern, ranking 2.32 and 2.28 out of a score of 3.0, respectively. Additionally, sanding and salting of roads was considered a major issue of concern that could contribute particulates to the Lakes, ranking 2.24 out of a score of 3.0. This loss of depth was considered to be an issue that reduced the enjoyment of the Lakes by the respondents "by a lot," ranking 3.19 out of a score of 5.0, although the presence of abundant growths of aquatic plants was noted as a slightly more significant concern with respect to loss of enjoyment, scoring 3.28 out of a total of 5.0. Nevertheless, respondents were slightly more willing to pay for the removal of depth-related limits to navigation than they were for aquatic plant management, indicating that, on average, they would be willing to pay $72 per year to support a remediation program.

Based upon the historical sources documented in Chapter I, it is likely that the Lakes were never deep lakes. However, as accreting systems within what historically was an agricultural landscape, it is equally likely that there has been significant sediment retention in the impoundments since Trippe and Cravath Lakes were formed in the 1800s. As the lands within the Whitewater Creek subwatershed have been incorporated into the State Forest, the contribution of soils from the watershed surrounding the Creek will have declined proportionately, as forested lands are considered to be well-protected from erosion as a consequence of the tree canopy, growth of shrubs, and presence of grasses that are characteristic of woodlands. Consequently, to a significant extent, sources of sediment within the Whitewater Creek subwatershed can be considered to have been controlled to a significant

degree. Such control of sediment sources within the subwatershed is a prerequisite to the implementation of measures to remediate sediment deposition in Trippe Lake. This is not the case within the Spring Brook subwatershed, although it is estimated that land conversion from agricultural land uses to urban land uses is likely to have reduced sediments loading from this subwatershed. In this case, application of the stormwater management and agricultural best management practices noted above are expected to minimize sediment export from these lands.

Alternative Management Measures

Erosion Control and Shoreline Stabilization

Shoreline erosion was not evident around the Lakes, and no serious problems were identified, although a survey of streambanks within the Spring Brook subwatershed did result in the identification of some areas of bank instability. The shorelands of Trippe and Cravath Lakes, themselves, were well vegetated. Consequently, shoreland maintenance activities should focus on the provision of vegetative buffer strips immediately adjacent to the Lakes as the simplest, least costly, and most natural method of reducing shoreline erosion (see Figure 1). This technique employs natural vegetation, rather than maintained lawns, within five to 10 feet of the lakeshore or the establishment of emergent aquatic vegetation from two to six feet lakeward of the eroding shoreline. Aquatic species, such as cattails (*Typha* spp.) and common reed (*Phragmites communis*), may be suitable in the littoral areas, while taller grasses, forbs, and shrubs also should be encouraged on the shoreline. Some transplanting or seeding with carefully chosen indigenous plant types can decrease the time of this succession of plant species. Desirable plant species which may be expected and encouraged to invade the buffer strip, or which could be planted, include arrowhead (*Sagittaria latifolia*), cattail (*Typha* spp.), common reed (*Phragmites communis*), water plantain (*Alisma plantago-aquatica*), bur-reed (*Sparnanium eurvcarvum*), and blue flag (*Iris versicolor*) in the wetter areas; and jewelweed (*Impatiens biflora*), elderberry (*Sambucus canadensis*), giant goldenrod (*Solidago gigantea*), marsh aster (*Aster simplex*), red-stem aster (*Aster vuniceus*), and white cedar (*Thuia occidentalis*) in the drier areas. In addition, trees and shrubs such as silver maple (*Acer saccharinum*), American elm (*Ulmus americana*), black willow (*Salix nigra*), and red-osier dogwood (*Cornus stolonifera*) could become established. These plants will develop a more extensive root system than the lawn grass and the above-ground portion of the plants will protect the soil against the erosive forces of rainfall and wave action. A narrow path to the lake can be maintained as lake access for boating, swimming, fishing, and other activities. A vegetative buffer strip would also serve to trap nutrients and sediments washing into the lake via direct overland flow. This alternative would involve only minimal cost.

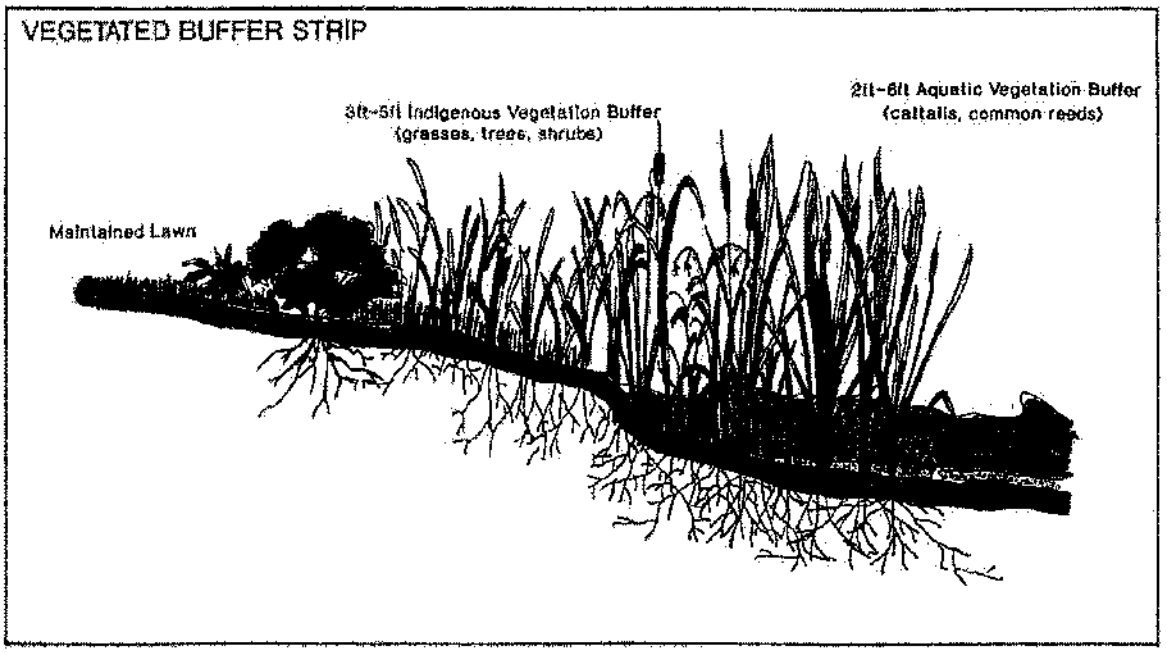
Rock riprap is a highly effective method of shoreline erosion control applicable to many types of erosion problems in areas highly susceptible to wind and wave erosion, especially in areas of low banks and shallow water. Use of this technique, however, is limited to areas with exposure to higher intensity wind waves, ice action, or boat wakes, pursuant to Chapter NR 328 of the *Wisconsin Administrative Code*. Given the relatively short wind fetch on the Lakes and the lack of high speed recreational boating traffic, use of this method is unlikely to be permitted by the WDNR. The advantages of this technique, which involves the shaping of the shoreline slope, the placement of a porous filter material, such as sand, gravel, or pebbles, on the slope and the placement of rocks on top of the filter material, are that the structure is highly flexible and not readily weakened by movements caused by settling or ice expansion, it can be constructed in stages, and it requires little or no maintenance. The disadvantages of a rock revetment are that it limits the use of the immediate shoreline in that the rough, irregular rock surfaces are unsuitable for walking; a relatively large amount of filter material and rocks needs to be transported to the lakeshore; and excavation and shaping of the shore slope may cause temporary disruptions and contribute sediment to the lake. Even if improperly constructed, the revetment may fail because of washout of the filter material. A rock revetment constructed along a 300 foot shoreline by a private contractor would involve a total capital cost of about $7,500, or about $25 per linear foot.

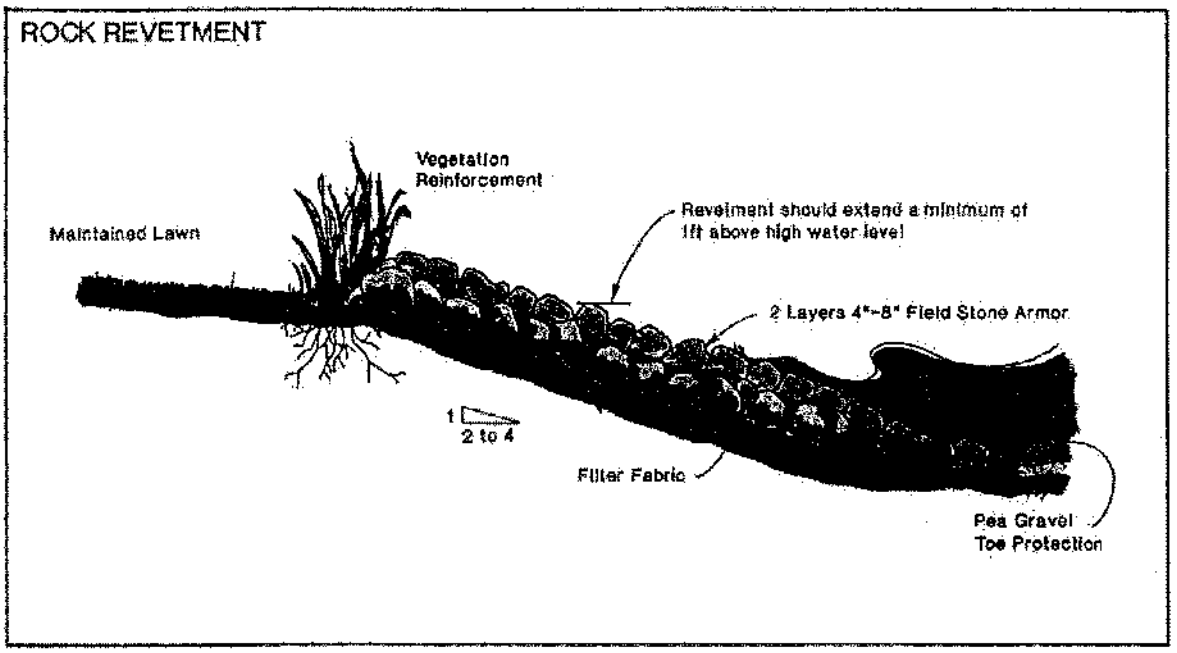
Dredging

Sediment removal is a restoration measure that is carried out using a variety of techniques, both land-based and water-based, depending on the extent and nature of the sediment removal to be carried out. For large-scale applications, a barge mounted hydraulic or cutter head dredge is generally used. For smaller-scale operations a

Figure 1

RECOMMENDED ALTERNATIVES FOR SHORELINE EROSION CONTROL





NOTE: Design specifications shown herein are for typical structures. The detailed design of shoreline protection structures must be based upon analysis of local conditions.

Source: SEWRPC.

shore-based drag-line system is typically employed. Both methods are expensive, especially if a suitable disposal site is not located close to the dredge site. Costs for removal and disposal begin at between $15 and $20 per cubic yard; with the cost of sediment removal alone beginning at about $5.00 per cubic yard. Effectiveness of dredging varies with the effectiveness of watershed controls in reducing or minimizing the sediment sources. Federal and State permits are required for use of this option. A recommended checklist provided by the WDNR is included as Appendix E.

Dredging is the only restoration technique that directly removes the accumulated products of degradation and sediment from a lake system and can return a lake to a younger "age." If carried to the extreme, dredging can be used to, in effect, construct a new lake with a size and depth to suit the management objectives. Dredging has been used in other lakes to increase water depth; remove toxic materials; decrease sediment oxygen demand, preventing fish winterkills and nutrient recycling; and decrease macrophyte growth. The main objective of dredging Trippe and Cravath Lakes would be to increase water depth to permit a greater range of recreational activities and increased public safety.

In part, this increase in depth would marginally reduce the areal extent of macrophyte growth. The theoretical maximum depth of macrophyte colonization in the Lakes, under present conditions of water clarity, is about one and one-half feet.[11] To reduce the extent of macrophyte growth—and enhance the range of recreational uses, sections of the bottom would have to be deepened to greater than this depth by dredging. Dredging may have serious, though generally short term, adverse effects on the Lakes. These adverse effects could include increased turbidity caused by sediment resuspension, toxicity from dissolved constituents released by the dredging, oxygen depletion as organic sediments mix with the overlying water, water temperature alterations, and destruction of benthic habitats. There may also be impacts at upland spoil disposal sites, such as odor problems, restricted use of the site, and disturbances associated with heavy truck traffic. In the longer term, disruption of the lake ecosystem by dredging can encourage the colonization of disturbed portions of the lakebed by less desirable species of aquatic plants and animals, including Eurasian water milfoil, which is present in the Lakes. While dredging results in an immediate increase in lake depth, such increases may be short lived if the sources of sediment being deposited in the Lakes are not controlled within the drainage areas tributary to the Lakes. As noted above, while the sediment loading to Trippe Lake has been largely controlled as a result of the incorporation of large portions of that Lake's watershed into the State Forest, the sediment load reaching Cravath Lake comes primarily from urban and agricultural lands tributary to the Spring Creek. Further sediment is generated from streambank erosion. All of these sources are subject to effective control through the adoption, implementation, and maintenance of recommended control measures within the watershed, which measures should be considered the primary means of limiting sediment accumulation in Cravath Lake prior to consideration being given to dredging. Only after such practices are implemented should major sediment removal projects be considered, and then only in limited areas of the Lake.

Dredging of lakebed material from navigable waters of the State requires a WDNR Chapter 30 permit and a U.S. Army Corps of Engineers Chapter 404 permit. In addition, current solid waste disposal regulations define dredge material as a solid waste. Chapter NR 180 of the *Wisconsin Administrative Code* requires that any dredging project of over 3,000 cubic yards submit preliminary disposal plans to the WDNR for review and potential solid waste licensing of the disposal site. Because sodium arsenite was applied to Trippe Lake in the 1950s and 1960s, as discussed in Chapter II, sediment samples may need to be analyzed to determine the extent and severity of any residual arsenic contamination.

Dredging of both Trippe and Cravath Lakes could be accomplished with several different types of equipment, including a hydraulic cutterhead dredge mounted on a floating barge; or bulldozer and backhoe equipment if part of the Lake were drained; or a clamshell, or bucket, dragline dredge from the shoreline. Hydraulic cutterhead

---

[11] *North American Lake Management Society, Terrene Institute, and U.S. Environmental Protection Agency.* Managing Lakes and Reservoirs, Third Edition, *2001, page 268.*

dredging is the most commonly employed method in the United States. The dredge is typically a rotating auger or cutterhead on the end of a ladder that is lowered to the sediment-water interface. Sediment excavated by the cutterhead is pumped as a slurry of 10 to 20 percent solids by a centrifugal pump to the disposal site. This pumping usually limits the distance between the lake and disposal site to less than a mile, even using intermediate booster pumps. Because of the large volume of slurry produced, a relatively large disposal site is typically required. Water returned from the disposal site, whether returned to the lake or a stream, would have to meet effluent water quality standards of the State and would be subject to State permitting.

Assuming dredging of about one-third of the lake areas in order to increase the depth by about two feet, about 40 acre-feet or about 64,500 cubic yards of material would be dredged from Cravath Lake and a further 75 acre-feet or about 121,000 cubic yards of material from Trippe Lake. At a cost of about $25 per cubic yard,[12] such a project would have costs of approximately $1,612,500 in the case of Cravath Lake and of approximately $3,025,000 in the case of Trippe Lake.[13] More limited dredging of navigational lanes—to provide for boating lanes of 50 feet in width and five feet in depth with 2:1 sloping sides, extending from the five-foot depth contour around the perimeter of the lake basin—would reduce the volume of material to be dredged, and therefore the costs, to about 5,000 cubic yards ($125,000) in the case of Cravath Lake and to about 3,000 cubic yards ($75,000) in the case of Trippe Lake. Provision of navigation lanes would create ovoid circuits within the lake basins which would require buoyage to demarcate the locations of the boating areas.

Draining the lake and removing sediment with conventional earth-moving equipment has some advantages over hydraulic dredging since it would not require a large disposal or dewatering site in the immediate area. Draining is also more advantageous for dragline dredging because it does not require the removal of a large number of trees and would probably involve less disturbance of the shoreline to provide access for trucks and equipment.

Recommended Management Measures

Continued use of vegetative shoreline protection measures around Trippe and Cravath Lakes is recommended. The relatively small surface area of these waterbodies is likely to be such that more intrusive shoreline protection measures would not be allowable under the provisions of Chapter NR 328 of the *Wisconsin Administrative Code*.

While extensive dredging of Trippe and Cravath Lakes is not considered a viable alternative at this time, some limited deepening of navigational lanes to permit the free flow of boating traffic is considered a viable alternative. Limited deepening of the waterbodies would enhance their roles as stormwater/flood management facilities as well as enhance public safety by limiting the volumes of flocculent sediment present in the Lake basins.

AQUATIC PLANT MANAGEMENT MEASURES

Background

As stated in Chapter II, recent aquatic plant management activities in Cravath and Trippe Lakes can be categorized as primarily chemical herbicide treatments to control aquatic plant growths in the Lakes. In addition, individual householders on the Lakes are known to have engaged in manual harvesting in the vicinities of their

---

[12] *The estimated cost of $25 per cubic yard is estimated based upon hydraulic dredging costs of $5 per cubic yard to mobilize the slurry from the lakebeds and about $20 per cubic yard to transport the material to a confined disposal facility off the Lakes.*

[13] *The Wisconsin Department of Natural Resources staff indicate that a dredging project involving approximately one-third of the lake areas would probably be considered a "major ecosystem alteration," subject to a Chapter NR 150 environmental analysis and, potentially, to an environmental impact statement that would have to consider, among other aspects, loss of habitat for reptiles, amphibians, and fishes; loss of aquatic plant diversity, especially in Trippe Lake; loss of refugia for zooplankton and fishes, especially young-of-the-year fishes; loss of wading bird feeding area; and, loss of fish feeding area.*

piers and docks. These measures, and the other shoreland and aquatic macrophyte management measures set forth in this plan, consider alternative measures consistent with the provisions of Chapters NR 40, NR 103, NR 107, and NR 109 of the *Wisconsin Administrative Code*. The alternative aquatic plant management measures also are consistent with the requirements of Chapters NR 7 and NR 198 of the *Wisconsin Administrative Code*, and with the public recreational boating access requirements relating to the eligibility under the State cost-share grant programs, set forth under Chapter NR 1 of the *Wisconsin Administrative Code*.[14]

As noted in Chapter III, the large numbers of aquatic plants in the Lakes were identified as an issue of concern by the respondents to the community survey, with respondents indicating that the large amounts of aquatic plants were an important concern, scoring 3.52 out of a total of 5.0. Respondents indicated that the abundant growths of aquatic plants was the most significant issue of concern facing the Lakes, ranking 2.16 out of a score of 3.0. Respondents indicated a willingness to pay for aquatic plant management in the Lakes at a rate of about $67 per year on average. This was slightly less than the average willingness to pay for sediment management.

Alternative Management Measures

Aquatic plant management measures can be classed into four groups: ***physical measures***, which include lake bottom coverings and water level management; ***biological measures***, which include the use of various organisms, including herbivorous insects and plantings of aquatic plants; ***manual*** and ***mechanical measures***, which include harvesting and removal of aquatic plants; and, ***chemical measures***, which include the use of aquatic herbicides. All control measures are stringently regulated and require a State of Wisconsin permit; chemical controls are regulated under Chapter NR 107 of the *Wisconsin Administrative Code*, and all other aquatic plant management practices are regulated under Chapter NR 109 of the *Wisconsin Administrative Code*. Placement of bottom covers, a physical measure, also requires a WDNR permit under Chapter 30 of the *Wisconsin Statutes*. Costs range from minimal for manual removal of plants using rakes and hand-pulling, to upwards of $75,000 for the purchase of a mechanical plant harvester, for which the operational costs can approach $2,500 to $25,000 per year depending on staffing and operation policies.

Physical Measures

Lake bottom covers and light screens provide limited control of rooted plants by creating a physical barrier which reduces or eliminates the sunlight available to the plants. They have been used to create swimming beaches on muddy shores, to improve the appearance of lakefront property, and to open channels for motorboating. Sand and gravel are usually widely available and relatively inexpensive to use as cover materials, but plants readily recolonize areas so covered in about a year. Synthetic materials, such as polyethylene, polypropylene, fiberglass, and nylon, can provide relief from rooted plants for several years. However, such materials, known as bottom screens or barriers, generally have to be placed and removed annually. Such barriers also are susceptible to disturbance by watercraft propellers or the buildup of gasses from decaying plant biomass trapped under the barriers. In the case of Cravath and Trippe Lakes, the need to encourage native aquatic plant growth, while simultaneously controlling the growth of Eurasian water milfoil, suggests that the placement of lake bottom covers as a method to control aquatic plant growth does not appear to be warranted. Thus, such measures are not considered viable for Cravath and Trippe Lakes.

Biological Measures

Biological controls offer an alternative approach to controlling nuisance plants, particularly purple loosestrife (*Lythrum salicaria*), and invasive shoreland wetland plant, and Eurasian water milfoil. Classical biological control

[14] *The willingness to pay for both aquatic plant and sediment management, as noted in Chapter III, was slightly less than the willingness to pay for each remedial effort individually, averaging $113 per year as opposed to a combined investment of $139 per year for the individual elements.*

techniques have been successfully used to control both nuisance plants with herbivorous insects.[15] Recent evidence shows that *Galerucella pucilla* and *Galerucella calmariensis*, beetle species, and *Hylobius transversovittatus* and *Nanophyes brevis*, weevil species, have potential as biological control agents for purple loosestrife.[16] Extensive field trials conducted by the WDNR in the Southeastern Wisconsin Region since 1999 have indicated that these insects can provide effective management of large infestations of purple loosestrife.

In contrast, the few studies of Eurasian water milfoil control utilizing *Eurhychiopsis lecontei*, an aquatic weevil species, have resulted in variable levels of control, with little control being achieved on those lakes having extensive motorized boating traffic.[17] Given the absence of motorized watercraft on both Cravath and Trippe Lakes, the use of artificially maintained populations of *Eurhychiopsis lecontei* as a means of aquatic plant management and Eurasian water milfoil control, in addition to the use of insects as a means of shoreland wetland plant management, is considered to be viable. However, the use of biological control agents in concert with the use of aquatic herbicides is not considered to be a viable option.

The use of grass carp, *Ctenopharyngodon idella*, an alternative biological control used elsewhere in the United States, is not permitted in Wisconsin. Grass carp are a designated invasive species pursuant to Chapter NR 40 of the *Wisconsin Administrative Code*.

Manual and Mechanical Measures

The physical removal of specific types of vegetation by selective harvesting of plants provides a highly selective means of controlling the growths of nuisance aquatic plant species, including purple loosestrife and Eurasian water milfoil. Pursuant to Chapter NR 109 of the *Wisconsin Administrative Code*, manual harvesting of aquatic plants within a 30-foot-wide corridor along a 100-foot length of shoreline would be allowed without a WDNR permit, provided the plant material is removed from the lake. Any other manual harvesting would require a State permit, unless employed in the control of designated nonnative invasive species, such as Eurasian water milfoil or curly-leaf pondweed.

In the shoreland area, where purple loosestrife may be expected to occur, bagging and cutting loosestrife plants prior to the application of chemical herbicides to the cut ends of the stems, can be an effective control measure for small infestations of this plant. Loosestrife management programs, however, should be followed by an annual monitoring and control program for up to 10 years following the initial control program to manage the regrowth of the plant from seeds. Manual removal of such plants is recommended for isolated stands of purple loosestrife when and where they occur.

---

[15] *B. Moorman, "A Battle with Purple Loosestrife: A Beginner's Experience with Biological Control,"* LakeLine, *Vol. 17, No. 3, September 1997, pp. 20-21, 34-3; see also, C.B. Huffacker, D.L. Dahlsen, D.H. Janzen, and G.G. Kennedy,* Insect Influences in the Regulation of Plant Population and Communities, *1984, pp. 659-696; and C.B. Huffacker and R.L. Rabb, editors,* Ecological Entomology, *John Wiley, New York, New York, USA.*

[16] *Sally P. Sheldon, "The Potential for Biological Control of Eurasian Water Milfoil* (Myriophyllum spicatum) *1990-1995 Final Report," Department of Biology Middlebury College, February 1995.*

[17] *Contrast the experiences reported on Whitewater Lake in SEWRPC Memorandum Report No. 177,* An Aquatic Plant Management Plan for Whitewater and Rice Lakes, Walworth County, Wisconsin, *March 2010, with those reported on Spring Lake in SEWRPC Memorandum Report No. 149,* A Lake Protection Plan for Spring Lake and Willow Spring Lake, Waukesha County, Wisconsin, *August 2004, which yielded widely differing results: Spring Lake, with limited motorized watercraft traffic, achieved a significant level of control as a result of a naturally occurring weevil population, although this control was several years in the making.*

In the nearshore area, specially designed rakes are available to assist in the manual removal of nuisance aquatic plants, such as Eurasian water milfoil. The use of such rakes also provides a safe and convenient method of controlling aquatic plants in deeper nearshore waters around piers and docks. The advantage of the rakes is that they are relatively inexpensive, easy and quick to use, and immediately remove the plant material from the lake, without a waiting period. Removal of the plants from the lake avoids the accumulation of organic matter on the lake bottom, which adds to the nutrient pool that favors further plant growth. State permitting requirements for manual aquatic plant harvesting mandate that the harvested material be removed from the lake. Should the City of Whitewater acquire a number of these specially designed rakes, they could be made available for the riparian owners to use on a trial basis to test their operability before purchasing them.

Hand-pulling of stems, where they occur in isolated stands, provides an alternative means of controlling plants, such as Eurasian water milfoil, in the lake, and purple loosestrife, on the lakeshore. Because this is a more selective measure, the rakes being nonselective in their harvesting, manual removal of Eurasian water milfoil is considered a viable option in the Cravath and Trippe Lakes, where practicable and feasible.

Aquatic macrophytes also may be harvested mechanically with specialized equipment consisting of a cutting apparatus, which cuts up to about five feet below the water surface, and a conveyor system that picks up the cut plants. Mechanical harvesting can be a practical and efficient means of controlling plant growth as it removes the plant biomass and nutrients from a lake. Mechanical harvesting is particularly effective as a measure to control large-scale growths of aquatic plants. Consequently, mechanical harvesting, due to the vast expanses of shallow waters and loose bottom sediments in the Lakes, is not a viable option for much of Cravath and Trippe Lakes.

Chemical Measures

Chemical treatment with herbicides is a short-term method of controlling heavy growths of nuisance aquatic plants. Chemicals are generally applied to the growing plants in either a liquid or granular form. The advantages of using chemical herbicides to control aquatic macrophytes growth are the relatively low-cost and the ease, speed, and convenience of application. The disadvantages associated with chemical control include unknown long-term effects on fish, fish food sources, and humans; a risk of increased algal blooms due to the eradication of macrophyte competitors; an increase in organic matter in the sediments, possibly leading to increased plant growth, as well as anoxic conditions which can cause fish kills; adverse effects on desirable aquatic organisms; loss of desirable fish habitat and food sources; and, finally, a need to repeat the treatment the following summer due to existing seed banks and/or plant fragments. Widespread chemical treatments can also provide an advantage to less desirable, invasive, introduced plant species to the extent that such treatments may produce conditions in which nonnative species can outcompete the more beneficial, native aquatic plant species. Hence, this is seldom a feasible management option to be used on a large scale. Widespread chemical treatment, therefore, is not considered a viable option for Cravath and Trippe Lakes, although limited chemical control is often a viable technique for the control of the relatively small-scale infestations of aquatic plants, such as Eurasian water milfoil, or shoreland plants, such as purple loosestrife.

To minimize the possible impacts of deoxygenation, loss of desirable plant species, and contribution of organic matter to the sediments, early spring or late fall applications should be considered. Such applications also minimize the concentration and amount of chemicals used due to the facts that colder water temperatures enhance the herbicidal effects, while the application of chemical herbicides during periods when most native aquatic plants species are dormant limit the potential for collateral damage. Use of chemical herbicides in aquatic environments is stringently regulated and requires a WDNR permit and WDNR staff oversight during applications.

Use of early spring or late fall chemical controls,[18] targeting growths of Eurasian water milfoil and purple loosestrife in and around the Lake, is considered a viable option for Cravath and Trippe Lakes.

Recommended Management Measures

The most-effective plans for managing aquatic plants rely on a combination of methods and techniques, such as those described above. Therefore, to enhance the recreational uses of Cravath and Trippe Lakes, while maintaining the quality and diversity of the biological communities, the following recommendations are made:

- Manual harvesting around piers and docks is the recommended means of controlling nonnative nuisance species of plants in those areas. In this regard, the City of Whitewater could consider purchasing several specialty rakes designed for the removal of vegetation from shoreline property and make these available to riparian owners. This would allow the riparian owners to use the rakes on a trial basis before purchasing their own. Although the rakes do not require a permit for use along a 30-foot-wide length of shoreline, State requirements for manual aquatic plant harvesting mandate that the harvested material be removed from the lake. Where feasible and practicable, hand-pulling of stems, where they occur in isolated stands, is also recommended as an alternative means of controlling Eurasian water milfoil and purple loosestrife. Manual control should target nonnative species.

- *Alternative*: It is recommended that the use of chemical herbicides be limited to controlling nuisance growths of nonnative species, particularly Eurasian water milfoil and purple loosestrife. It is recommended that chemical applications, if undertaken, be made by licensed applicators in early spring or late fall, subject to State permitting requirements,[19] to maximize their effectiveness on nonnative plant species while minimizing impacts on native plant species and acting as a preventative measure to reduce the development of nuisance conditions. Such use should be evaluated annually and the herbicide applied only on an as-needed basis. Only herbicides that selectively control milfoil, such as 2,4-D and endothall, should be used;[20] for the control of purple loosestrife, the use of glyphosate could be considered for application to the cut stems of the plants after the seed heads have been bagged and cut.[21] Both Eurasian water milfoil and purple loosestrife are "restricted" pursuant to Chapter NR 40, and declared invasive species pursuant to Chapter NR 109, of the *Wisconsin Administrative Code*. This alternative should not be employed should the following alternative of the use of biological control agents be adopted.

---

[18] *It should be noted that, at the time of writing, late fall herbicide treatments are considered to be experimental in Wisconsin and will not typically be permitted by the WDNR at this time, pending further research into the use of such treatments. It also is noted that many aquatic plants become dormant during the late fall and winter, die back, and do not meet the nuisance standards established pursuant to Chapter NR 107 of the* Wisconsin Administrative Code *as the basis for the application of aquatic herbicides. Consequently, late fall applications of herbicides are not recommended.*

[19] Ibid. *Late fall herbicide treatments are considered to be experimental in Wisconsin and will not typically be permitted by the WDNR at this time.*

[20] *2,4-D will also control desirable species, such as* Nymphaea *sp.; see Wisconsin Department of Natural Resources PUBL-WR-236 90,* Chemical Fact Sheet: 2,4-D, *May 1990; see also Wisconsin Department of Natural Resources PUBL-WR 237 90,* Chemical Fact Sheet: Endothall, *May 1990.*

[21] *See Wisconsin Department of Natural Resources PUBL-WR-239 90,* Chemical Fact Sheet: Glyphosate, *May 1990.*

- *Alternative:* It is recommended that the use of biological control agents such as *Eurhychiopsis lecontei* be considered to control the growth of Eurasian water milfoil, and that the use of the beetle species *Galerucella pucilla* and *Galerucella calmariensis*, and of the weevil species *Hylobius transversovittatus* and *Nanophyes brevis*, be considered to control the growth of purple loosestrife, in and around Trippe and Cravath Lakes. In order for this alternative to provide a consistent level of treatment of the designated target invasive species, the control agents would have to be stocked annually by service providers and/or volunteers. Both Eurasian water milfoil and purple loosestrife are "restricted" pursuant to Chapter NR 40, and declared invasive species pursuant to Chapter NR 109, of the *Wisconsin Administrative Code*. This alternative should not be employed should the foregoing alternative of the use of chemical herbicides be adopted.

- The use of algicides, such as Cutrine Plus,[22] is not recommended because there are few significant, recurring filamentous algal or planktonic algal problems in Cravath and Trippe Lakes and valuable macroscopic algae, such as *Chara* and *Nitella*, are killed by this product. Maintenance of shoreland areas around docks and piers remains the responsibility of individual property owners.

- Through informational programming, riparian owners should be encouraged to monitor their shoreline areas, as well as open-water areas of the Lakes, for new growths of nonnative nuisance plants and report such growths immediately to the City of Whitewater so that a timely and effective response can be executed.

- It also is recommended that the City of Whitewater consider the conduct of in-lake aquatic plant surveys at about three- to five-year intervals, depending upon the observed degree of change in the aquatic plant communities. In addition, information on the aquatic plant control program should be recorded and should include descriptions of major areas of nuisance plant growth and areas chemically treated.

- Additional periodic monitoring of the aquatic plant community is recommended for the early detection and control of future-designated nonnative species that may occur. Such control could be effected with the assistance of funds provided under the Chapter NR 198, aquatic invasive species control grant program, and should be undertaken as soon as possible once the presence of a nonnative, invasive species is observed and confirmed, reducing the risk of spread from waters where they are present and restoring native aquatic communities. Control of currently designated invasive species, designated pursuant to Chapter NR 109 of the *Wisconsin Administrative Code*, using appropriate control measures,[23] is recommended throughout the Lakes.

INSTITUTIONAL DEVELOPMENT

Background

The City of Whitewater created the *Ad Hoc* Lakes Committee, in part, as a vehicle to explore organizational options under which the City could implement and sustain lake management activities, the identification of which formed the major charge to this Committee. Consequently, as part of this planning program, the issue of lake management organizations is an issue to be considered.

---

[22] *See Wisconsin Department of Natural Resources PUBL WR 238 90,* Chemical Fact Sheet: Copper Compounds, *May 1990.*

[23] *Appropriate control measures include, but are not limited to, any permitted aquatic plant management measure, placement of signage, and use of buoys to isolate affected areas of the Lake. Such measures as may be appropriate should be determined in consultation with WDNR staff and conducted in accordance with required permits under Chapters NR 107, NR 109, and NR 198, among others, of the* Wisconsin Administrative Code.

Alternative Institutional Measures

The City of Whitewater, defined as a city of the fourth class based upon its population, has specific powers of governance that include the power to collect, treat, and otherwise manage wastewater—pursuant to Section 62.18 of the *Wisconsin Statutes*, and for city planning—pursuant to Section 62.23 of the *Wisconsin Statutes*, this latter including authority over "waterways" that form part of the City's overall surface water drainage plan. As used in this Section, waterways include "rivers, streams, creeks, ditches, drainage channels, watercourses, lakes, bays, ponds, impoundment reservoirs, retention and detention basins, marshes and other surface water areas, regardless of whether the areas are natural or artificial." Additionally, a City may "improve lakes and rivers within the city" and, "where a navigable stream traverses or runs along the border of a city," "make improvements therein throughout the county in which such city shall be located in aid of navigation, and for the protection and welfare of public health and wildlife." Thus, a City has the necessary authority to undertake the major actions recommended in this plan.

Additionally, Cities have authority under Chapter 66 of the *Wisconsin Statutes* to create special purpose utility districts and/or undertake public works projects that would be consistent with the actions necessary to implement the major recommendations set forth herein. Indeed, as noted above, the City of Whitewater has already created a Stormwater Utility to manage stormwater within the City. Certain actions recommended herein could be undertaken by the Utility, especially insofar as those actions are designed to manage stormwater and stormwater-borne contaminants that may currently be entering the aquatic environment.

Beyond the actions of the municipal government, the *Wisconsin Statutes* provide for both special purpose governmental entities and private sector entities that can be created to manage lakes within the State. These include voluntary associations incorporated under Chapter 181 of the *Wisconsin Statutes*, which, despite having a somewhat greater number of restrictions imposed upon them, may be considered to be "qualified associations" for purposes of obtaining State cost-share grants. Because of their voluntary nature, membership levels, and, therefore, income levels, of associations often fluctuate from year-to-year. Thus, when such associations take on specific tasks, such as aquatic plant management, for example, the community often elects to create a public inland lake protection and rehabilitation, or lake management, district.

Lake management districts are special purpose governmental units formed under Chapter 33 of the *Wisconsin Statutes* for the specific purpose of managing and protecting lake water quality. Inclusion in the district, once the district is created, is mandatory; registered voters and persons owning property within the district become the electors of the district for purposes of district governance. When created within Cities, lake districts can be created by action of the City Council, who then become the Board of Commissioners of the District. In this case, it is possible for the electors to petition for self-governance, which would establish a five- or seven-member Board of Commissioners who would conduct the day-to-day affairs of the District. Lake management districts have the capability of raising public funds subject to majority approval of the district budget at the annual meeting of the district. For this reason, lake management districts can provide a more stable financial base from which to undertake lake management activities. Nevertheless, lake associations and lake districts often operate in harmony around lakes throughout Wisconsin.

Considerations relating to the definition of a lake management district boundary include the extent to which the drainage area tributary to a lake is included in a district, and, in the case of a chain of lakes, the numbers of lakes to be included. It is rarely practical to include a lake's total tributary drainage area within a lake management district. However, based upon guidance provided by UWEX, it is recommended that the entire lakeshore, all riparian property, areas directly affecting the lake and/or which are included in planned service areas, and entire parcels be included.[24] In a number of cases in Southeastern Wisconsin, lake districts have been created by

[24] *University of Wisconsin-Extension,* People of the Lakes: A Guide for Wisconsin Lake Organizations, Eleventh Edition, *2006.*

incorporated municipalities that include the entire municipality.[25] In many of these cases, the districts developed and implemented comprehensive lake management plans.[26]

Recommended Institutional Measures

It is recommended that the City of Whitewater consider forming a public inland lake protection and rehabilitation district around Trippe and Cravath Lakes, the boundaries of which should be coincident with those of the City. This area would encompass both Lakes. Creation of a lake management district for the Trippe and Cravath Lakes would enhance the ability of the Whitewater community to manage the Lakes on a sustainable basis, and provide a sound fiscal base from which to conduct lake management activities. This action would be consistent with the level of concern expressed by a majority of the respondents to the citywide questionnaire survey. In addition, the formation of the public inland lake protection and rehabilitation district under Chapter 33 of the *Wisconsin Statutes* would provide the citizens of the City of Whitewater, as electors and property owners within the proposed district, with a dedicated governmental entity focused on Trippe and Cravath Lakes and their management. The lake district would be a forum, through the annual meeting of the district, within which the community could establish priorities, set budgets, and implement lake management actions associated with plan implementation.

PUBLIC INFORMATIONAL AND EDUCATIONAL PROGRAMMING

Background

As part of the overall citizen informational and educational programming to be conducted in the community, residents around and visitors to the Lakes should be made aware of the value of the ecologically significant areas in the overall structure and functioning of the ecosystems of the Lakes. Specifically, informational programming related to the protection of ecologically valuable areas in and around the Lakes should focus on the need to minimize the spread of nuisance aquatic invasive species, such as purple loosestrife and Eurasian water milfoil, and to minimize the introduction of contaminants into the Lakes as a result of household activities. Such an informational program would supplement and enhance the informational programming efforts being undertaken by the City in partnership with the Rock River Stormwater Group outreach activities.

Alternative Information and Education Measures

With respect to aquatic plants, distribution of posters and pamphlets, available from the UWEX and the WDNR, that provide information and illustrations of aquatic plants, their importance in providing habitat and food resources in aquatic environments, and the need to control the spread of undesirable and nuisance plant species, is recommended. Currently, many lake residents seem to view all aquatic plants as "weeds" and residents often

[25] *Examples of such Districts include the Fowler Lake Management District created by the City of Oconomowoc in Waukesha County and the Twin Lakes Lake Management District created by the Village of Twin Lakes in Kenosha County. In each of these cases, the municipal board also serves as the Board of Commissioners of the lake districts, which are independent special purpose units of government even though the persons forming the Board of Commissioners also serve as alderpersons or trustees of the general purpose units of government. It should be noted that a public inland lake protection and rehabilitation district, once formed in this manner, retains the boundary of the municipality as of the date of creation of the district and future changes to the municipal boundary do not change the lake district boundary without action by the lake management district to modify the boundary.*

[26] *See SEWRPC Community Assistance Planning Report No. 187,* A Management Plan for Fowler Lake, Waukesha County, Wisconsin, *March 1994; SEWRPC Community Assistance Planning Report No. 302,* A Lake Management Plan For Elizabeth Lake And Lake Mary, Kenosha County, Wisconsin, *Volume 1,* Inventory Findings, *July 2009; SEWRPC Community Assistance Planning Report No. 302,* A Lake Management Plan For Elizabeth Lake And Lake Mary, Kenosha County, Wisconsin, *Volume 2,* Alternatives and Recommended Plan, *July 2009.*

spend considerable time and money removing desirable plant species from a lake without considering their environmental impact.

Educational and informational brochures and pamphlets, of interest to homeowners and supportive of the lake management program, are available from the UWEX, the WDNR, the Walworth County Offices, and many Federal government agencies. These brochures could be provided to homeowners through local media, direct distribution, or targeted library/civic center displays. Alternately, they could be incorporated into the newsletters produced and distributed by the City of Whitewater. Many of the ideas contained in these publications can be integrated into ongoing, larger-scale activities, such as anti-littering campaigns, recycling drives, and similar pro-environment activities.

Other informational programming offered by the WDNR, Walworth County, and the UWEX Lakes Program, such as the Adopt-A-Lake program and Project WET (Water Education Training) curriculum, can contribute to an informed public, actively involved in the protection of ecologically valuable areas within the area tributary to the Lakes. Citizen monitoring under the auspices of the CLMN program, as recommended above, and community awareness of the positive value of native aquatic plant communities, for example, are important opportunities for public informational programming and participation.

Recommended Management Measures

Inclusion of specific public informational and educational programming within the activities of the City of Whitewater is recommended. These programs should focus on the value and impacts of these plants on water quality, fish, and wildlife, and on alternative methods for controlling existing nuisance plants, including the positive and negative aspects of each method. These programs can be incorporated into the comprehensive informational and educational programs that also would include information on related topics, such as water quality, recreational use, fisheries, and onsite sewage disposal systems.

As part of their ongoing commitment to the effective managing of Cravath and Trippe Lakes, the elected officials, staff, and citizens of the City of Whitewater should avail themselves of opportunities to learn about current developments and issues involving lake management. There are numerous publications, writings, newsletters, seminars, and conventions available through governmental, educational, and other organizations and agencies dealing with the subject of lake management. Walworth County, UWEX, Wisconsin Lakes (WAL), the North American Lake Management Society (NALMS), and WDNR, all produce written materials and conduct meetings and seminars dealing with lake management issues. Publications, such as *LakeTides*, published by the Wisconsin Lakes Partnership and available from UWEX, are also readily available and deal with a wide range of lake-related topics. Additionally, the statewide lakes convention and regional lakes workshop, held annually in Green Bay, Wisconsin, and Waukesha, Wisconsin, respectively, provide valuable opportunities to learn about important and timely developments in lake management and learn about lake issues from experts in their fields. Participation in activities that will further understanding of lake management issues is deemed an important part of the lake management experience.

SUMMARY

This plan documents the findings and recommendations arising from a study of the issues of concern related to Cravath and Trippe Lakes in the City of Whitewater, and examines existing and anticipated conditions, potential lake management and protection problems, and recreational use issues affecting the Lakes. The plan sets forth recommended actions and management measures for the resolution of those problems. The recommended plan is summarized in Table 28 and shown on Maps 13 and 14.

Cravath and Trippe Lakes were found to be eutrophic lakes of somewhat below average water quality. Preservation of environmental corridor lands, especially within the shoreland areas situated immediately adjacent to the Lakes, is recommended. Walworth County and the City of Whitewater should support appropriate land management and stormwater management practices designed to reduce nonpoint source pollutant discharges into

Table 28

RECOMMENDED PROTECTION PLAN ELEMENTS FOR CRAVATH AND TRIPPE LAKES

Plan Element	Subelement	Management Measures	Management Responsibility
Urban Development and Stormwater Management	Stormwater Management	Continue to implement the City of Whitewater Stormwater Ordinance	City of Whitewater, City of Whitewater Stormwater Utility
		Support activities by the City of Whitewater Stormwater Utility, including informational programming	City of Whitewater
		Adopt environmentally-friendly shorescaping practices around Trippe and Cravath Lakes and around stormwater management ponds and facilities	City of Whitewater, private landowners
	Water Quality Monitoring	Participate in UWEX CLMN volunteer monitoring of Trippe and Cravath Lakes: continue participation in the case of Trippe Lake and initiate participation in the case of Cravath Lake	WDNR, UWEX, City of Whitewater, University of Wisconsin-Whitewater
		Consider periodic participation in comprehensive water quality monitoring using either the USGS or UWSP WEAL	USGS/UWSP, City of Whitewater
	Public Recreational Water Use	Maintain recreational boating access from the public access sites pursuant to Chapter NR 7 guidelines	WDNR, City of Whitewater
		Maintain signage at public access sites regarding invasive species and WDNR Clean Boats-Clean Waters Program; provide disposal containers for disposal of plant material removed from watercraft at boat launch sites	WDNR, UWEX, City of Whitewater
Sediment Management and Hydrology	Shoreline Protection Management	Continue to use vegetative buffer strips for shoreline protection in the riparian shoreland areas of the Lakes; reconstruction may require WDNR Chapter 30, *Wisconsin Statutes*, permits	City of Whitewater, private landowners
		Maintain existing shoreline and streambank protection structures and repair as necessary using vegetative means insofar as practicable	Walworth County, Town of Whitewater, City of Whitewater, WDNR, private landowners
	Lake Level and Dam Operations	Maintain dam structures; continue dam operations in accordance with WDNR permit	City of Whitewater
	Dredging	Consider selective dredging to deepen about one-third of the areas of each Lakes by about two feet to enhance public recreational boating access, public safety, flood storage, and ecological integrity of the Lakes—subject to WDNR Chapter 30, *Wisconsin Statutes*, permitting	WDNR, City of Whitewater
Aquatic Plant Management	Manual Harvesting	Manually harvest around piers and docks as necessary[a] and collect floating plant fragments from shoreland areas to minimize rooting of Eurasian water milfoil and deposition of organic materials in the Lakes	Private landowners
		Manually harvest within public beach areas as necessary and collect floating plant fragments from shoreland areas to minimize rooting of Eurasian water milfoil and deposition of organic materials in the Lakes	City of Whitewater, private landowners
		Where they occur, manually remove isolated stands of purple loosestrife through bagging, cutting, herbicide application to cut stems	WDNR, City of Whitewater, private landowners
	Buffer Strips	Encourage growth of native plants in the Lakes through use of vegetated buffer strips and control of Eurasian water milfoil	WDNR, City of Whitewater, private landowners

Table 28 (continued)

Plan Element	Subelement	Management Measures	Management Responsibility
Aquatic Plant Management (continued)	Chemical Controls	Limit the use of aquatic herbicides as an alternative to the control of nuisance nonnative aquatic plant growths where necessary; specifically target Eurasian water milfoil[b]	WDNR, City of Whitewater, private landowners
	Biological Controls	Alternatively, consider the use of biological control agents to minimize the growths of Eurasian water milfoil and purple loosestrife	WDNR, City of Whitewater, private landowners
	Aquatic Plant Monitoring	Monitor shorelines and open water areas for new growths of nonnative invasive species and immediately report any new growths to the City of Whitewater	City of Whitewater, private landowners
		Conduct periodic in-lake reconnaissance surveys of aquatic plant communities and update aquatic plant management plan every three to five years	City of Whitewater
		Conduct additional periodic monitoring of the aquatic plant community for the early detection and control of future-designated nonnative species that may occur	WDNR, City of Whitewater
	Targeted Informational Programming	Continue informational programming focusing on "good housekeeping" practices for landowners	City of Whitewater
Institutional Development	Lake Management District	Consider creation of a public inland lake protection and rehabilitation district within the City of Whitewater, serving both Trippe and Cravath Lakes	City of Whitewater
Public Informational and Educational Programming	Community-based Programming	Participate in informational and educational programming opportunities such as those offered annually by UWEX at the statewide Lakes Convention and/or Southeastern Wisconsin Lakes Workshop	UWEX, City of Whitewater, private landowners
		Continue to provide informational materials and pamphlets on lake-related topics, especially the importance of aquatic plants and the protection of ecologically significant areas	City of Whitewater, WDNR, UWEX
		Consider offering public informational programming on topics of lake-oriented interest and education	City of Whitewater, WDNR, UWEX
		Maintain awareness of current developments in the area of lake management through informative publications such as "Lake Tides" (available free through the Wisconsin Lakes Partnership) and attendance at lake education conventions, workshops, and seminars	City of Whitewater
	School-based Programming	Encourage inclusion of lake studies in environmental curricula (e.g., Pontoon Classroom, Project WET, Adopt-A-Lake)	Area school districts, UWEX, WDNR, Town and City of Whitewater

NOTE: CB,CW = UWEX Clean Boats, Clean Waters Program
CLMN = UWEX Citizen Lake Monitoring Network
UWEX = University of Wisconsin Extension
UWSP = University of Wisconsin-Stevens Point
WDNR = Wisconsin Department of Natural Resources
WEAL = Water and Environmental Analysis Laboratory

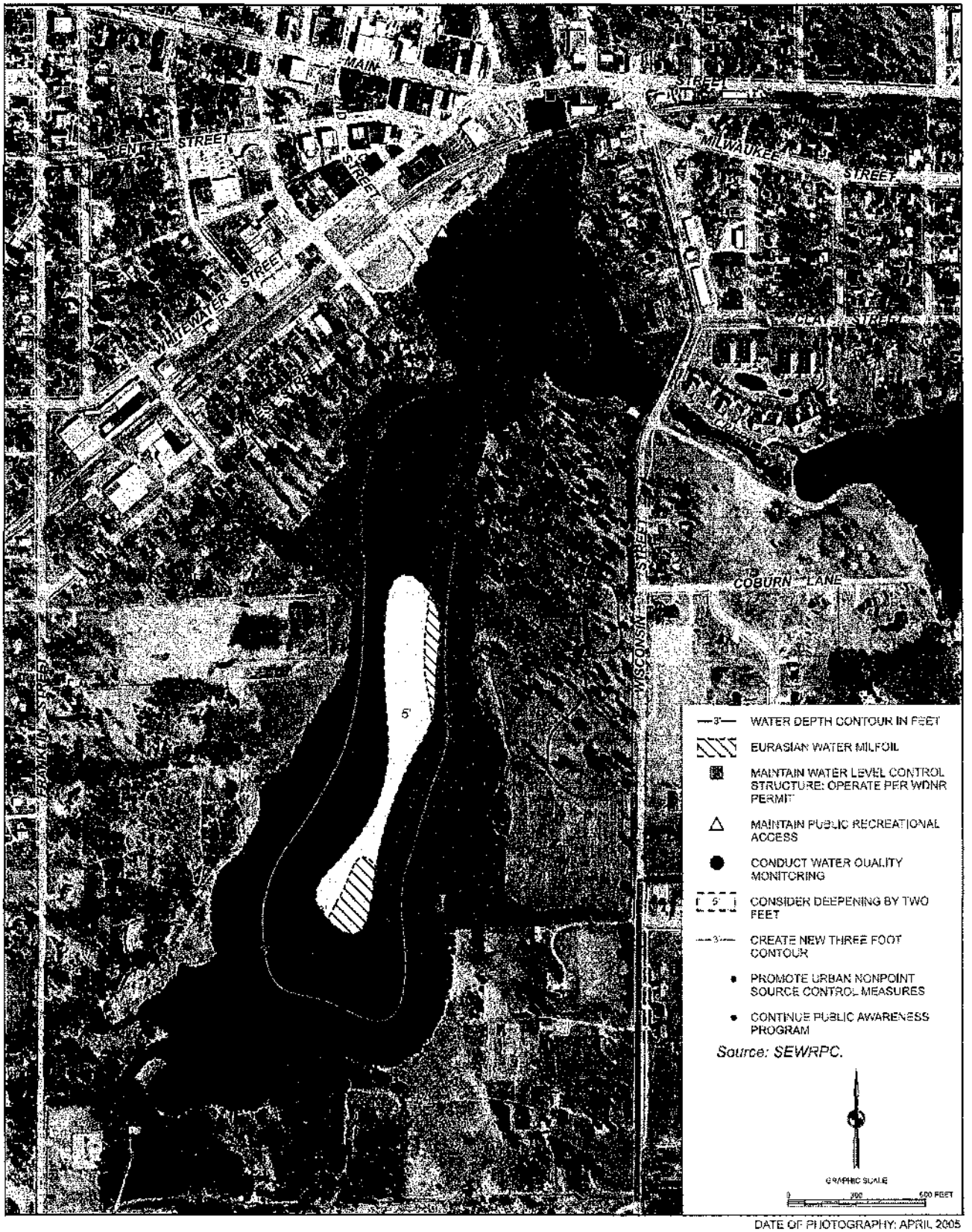
[a] *Manual harvesting beyond a 30-linear-foot width of shoreline is subject to WDNR individual permitting pursuant to Chapter NR 109 of the* Wisconsin Administrative Code.

[b] *Use of aquatic herbicides requires a WDNR permit pursuant to Chapter NR 107 of the* Wisconsin Administrative Code.

Source: SEWRPC.

Map 13

RECOMMENDED PROTECTION PLAN ELEMENTS FOR CRAVATH LAKE



DATE OF PHOTOGRAPHY: APRIL 2005

Map 14

RECOMMENDED PROTECTION PLAN ELEMENTS FOR TRIPPE LAKE

DATE OF PHOTOGRAPHY: APRIL 2005

—4'— WATER DEPTH CONTOUR IN FEET

EURASIAN WATER MILFOIL

MAINTAIN WATER LEVEL CONTROL STRUCTURE: OPERATE PER WDNR PERMIT

△ MAINTAIN PUBLIC RECREATIONAL ACCESS

● CONDUCT WATER QUALITY MONITORING

[6'] CONSIDER DEEPENING BY TWO FEET

—4— CREATE NEW FOUR FOOT CONTOUR

• PROMOTE URBAN AND RURAL NONPOINT SOURCE CONTROL MEASURES

• CONTINUE PUBLIC AWARENESS PROGRAM

GRAPHIC SCALE

0 300 600 FEET

Source: SEWRPC.

the Lakes. Further, the City of Whitewater should promote appropriate shoreline management practices, including the use of vegetative buffer strips, where applicable.

The shoreland protection and aquatic plant management elements of this plan recommend actions be taken that would reduce human impacts on ecologically valuable areas in and adjacent to the Lakes, encourage a biologically diverse community of native aquatic plants, and limit the spread of nonnative invasive plant species. The plan recommends the use of manual harvesting of nuisance plants in those areas where the depth of water and bottom substrate support such activity, with subsequent removal of cut material from the Lakes; limited use of chemical herbicides mainly in areas where nuisance levels of nonnative invasive species are present; and, monitoring for invasive species. The plan further recommends periodic in-lake aquatic plant surveys every three to five years to monitor changes in the aquatic plant community and assess effectiveness of aquatic plant management techniques.

The plan recommends participation in the UWEX CLMN volunteer water quality monitoring program with consideration of participation in the Expanded Self-Help Program, and periodic conduct of USGS, or equivalent, comprehensive water quality surveys.

With regard to recreational uses of the Lakes, the plan recommends maintaining the public access site in a manner consistent with Chapter NR 1 standards and Chapter NR 7 guidelines, as well as maintaining signage regarding aquatic and other invasive species.

From an organizational standpoint, the plan recommends consideration of the formation of a public inland lake protection and rehabilitation district, around both Lakes, by and serving the City of Whitewater as a dedicated governmental entity tasked with the protection and rehabilitation of the two Lakes.

The recommended plan also includes continuation of an ongoing program of public information and education, focusing on providing riparian residents and lake users with an improved understanding of the lake ecosystem. For example, additional options regarding household chemical use, lawn and garden care, onsite sewage disposal system operation and maintenance, shoreland protection and maintenance, and recreational use of the Lakes should be made available to riparian property owners, thereby providing riparian residents with alternatives to traditional activities. Additionally, staff, elected officials, and citizens of the City of Whitewater are encouraged to maintain and broaden their awareness of current developments in the area of lake management through participation in meetings, seminars, conventions and other lake management-related events, and educational opportunities.

Adherence to the recommendations contained in this plan should provide the basis for a set of protection actions that are: aligned with the goals and objectives set forth in Chapter I; reflective of the ongoing commitment by the City of Whitewater, to sound planning with respect to the Lakes; and sensitive to current needs, as well as those in the immediate future.

This Page Intentionally Left Blank

APPENDICES

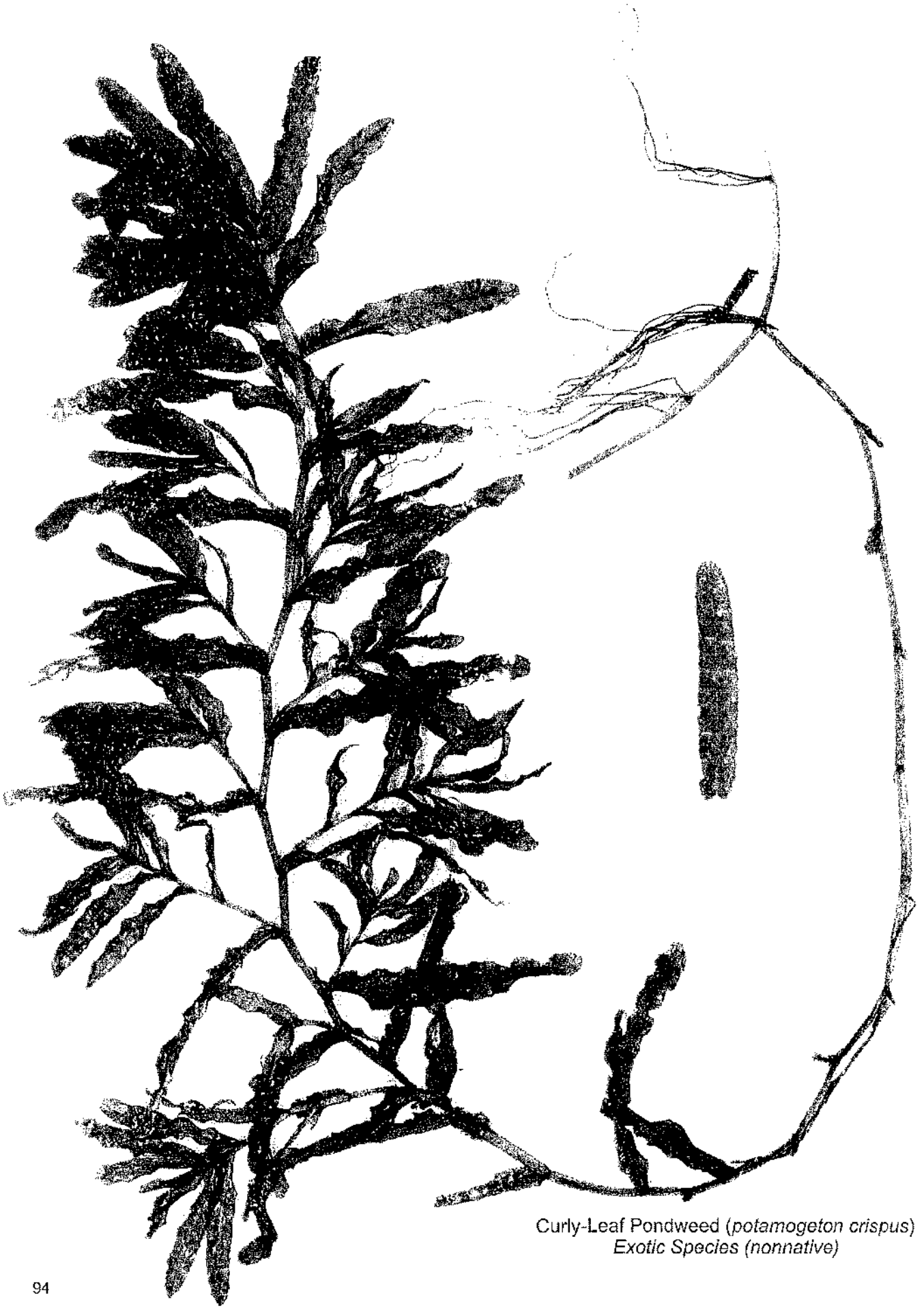
This Page Intentionally Left Blank

Appendix A

ILLUSTRATIONS OF COMMON AQUATIC PLANTS FOUND IN CRAVATH AND TRIPPE LAKES

This Page Intentionally Left Blank

Coontail (*ceratophyllum demersum*)



Curly-Leaf Pondweed (*potamogeton crispus*)
Exotic Species (nonnative)

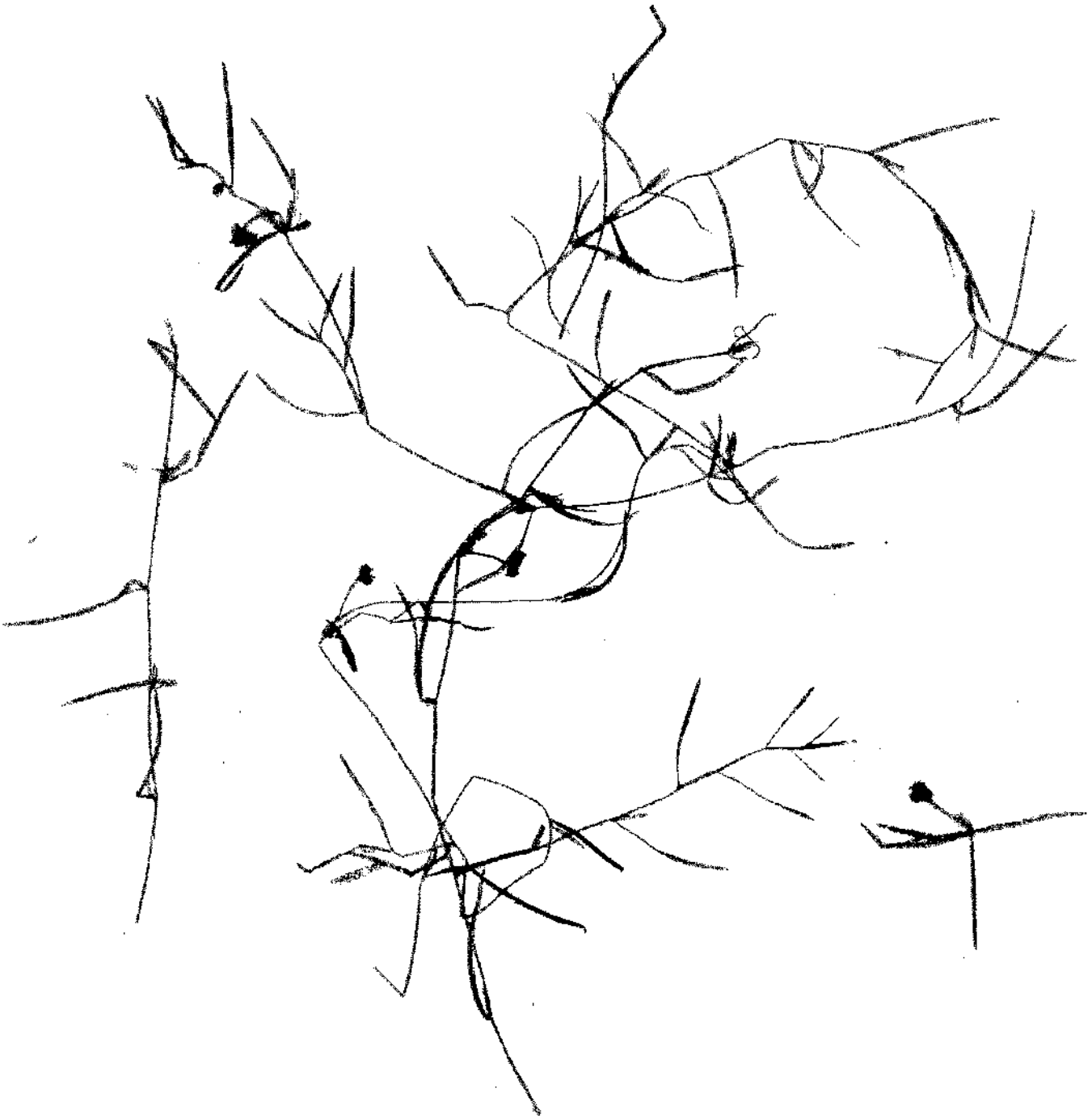
Eurasian Water Milfoil (*myriophyllum spicatum*)
Exotic Species (nonnative)

Flat-Stem Pondweed (*potamogeton zosteriformis*)

Floating-Leaf Pondweed (*potamogeton natans*)

Illinois Pondweed (*potamogeton illinoensis*)

Large-Leaf Pondweed (*potamogeton amplifolius*)



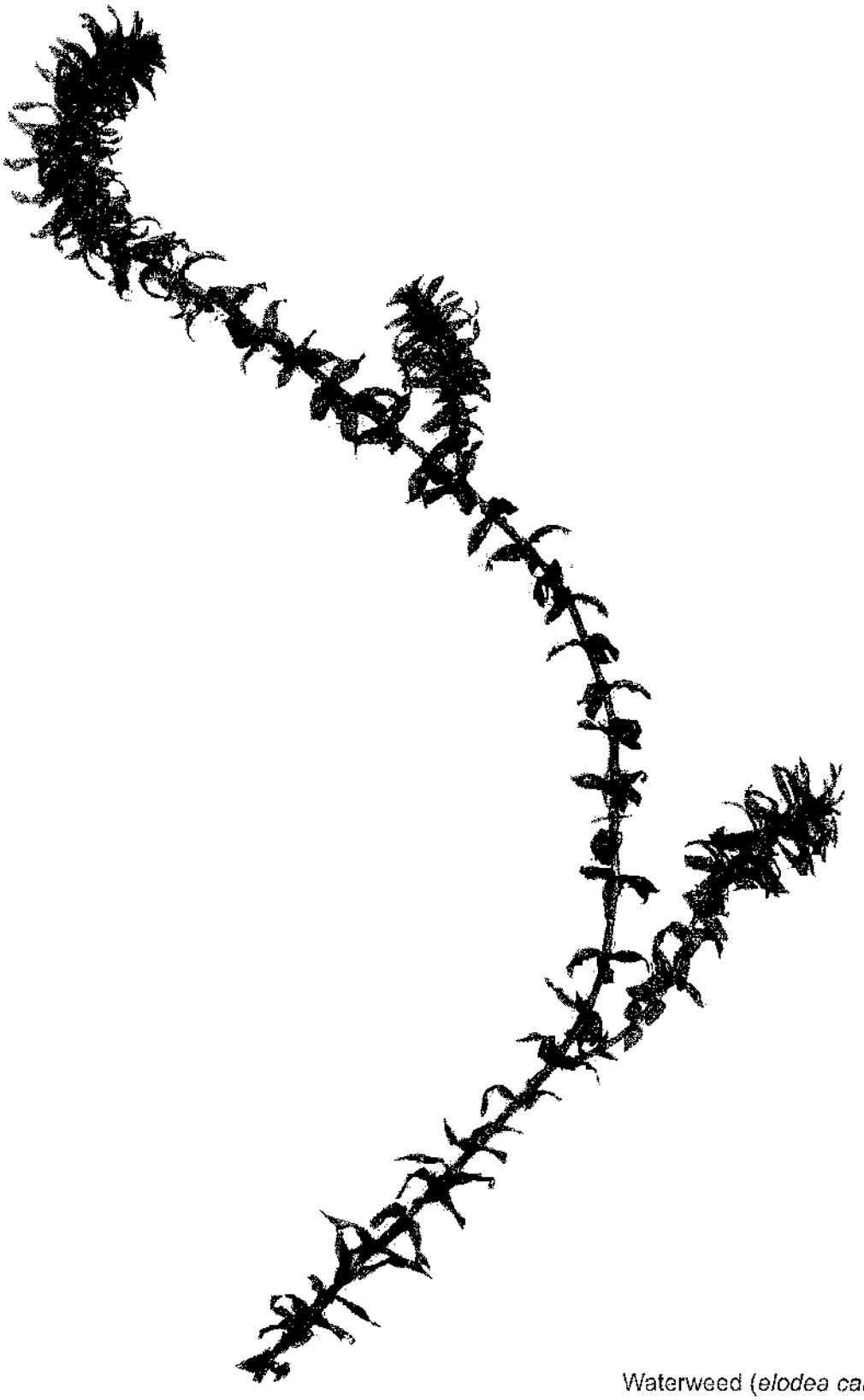
Leafy Pondweed (*potamofeton foliosus*)

Lesser Duckweed (*lemna minor*)

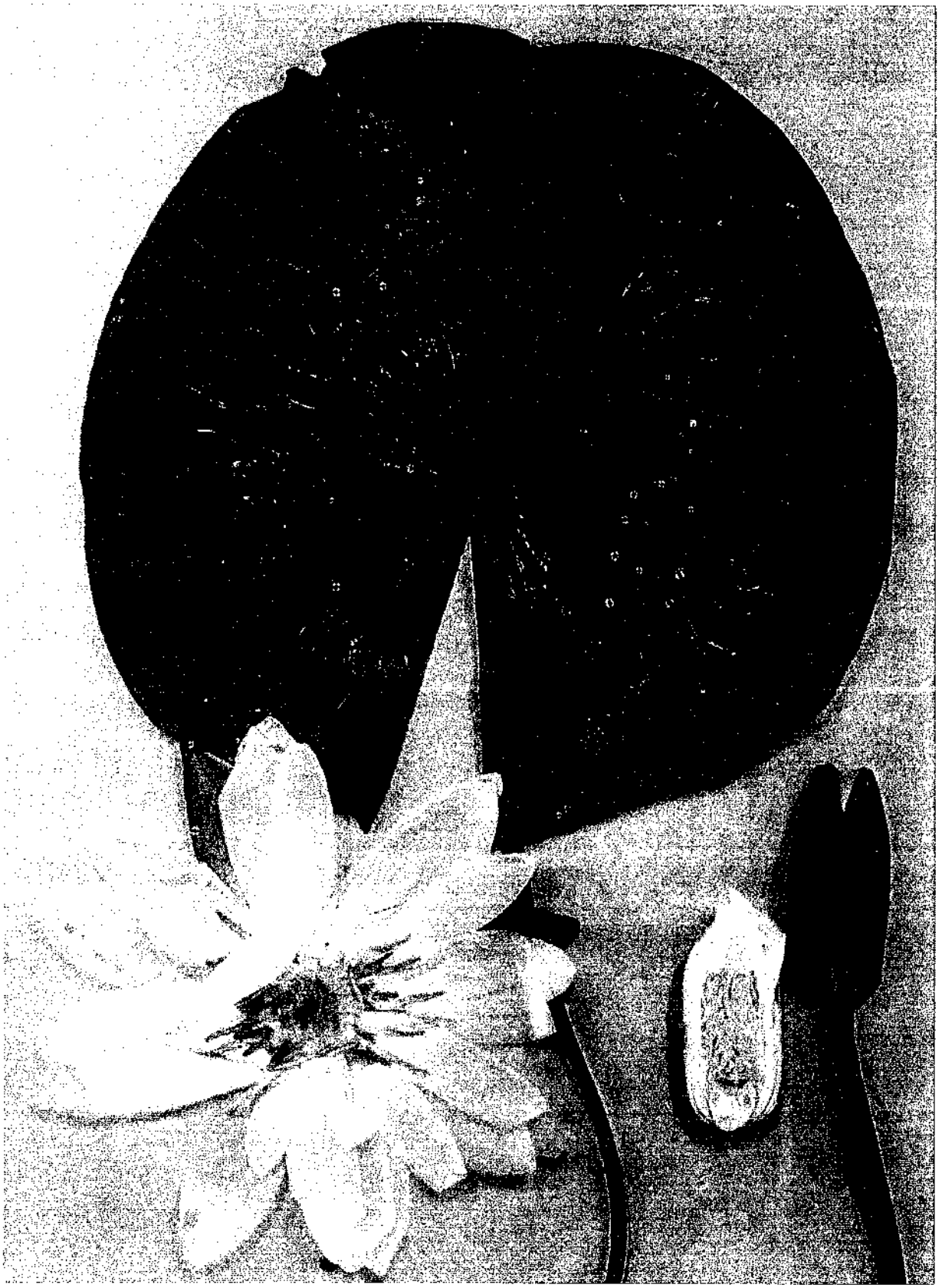
NOTE: Plant species in photograph are not shown proportionate to actual size

Source: Steve D. Eggers and Donald M. Reed, Wetland Plants and Plant Communities of Minnesota & Wisconsin, *2nd Edition, 1997*

Long Leaved Pondweed
(*potamogeton nodosus*)



Waterweed (*elodea canadensis*)



White Water Lily (*nymphaea odorata*)

Eel-Grass / Wild Celery (*valisneria americana*)

Yellow Water Lily (*nuphar variegatum*)

Appendix B

BOATING AND OTHER ORDINANCES APPLICABLE TO CRAVATH AND TRIPPE LAKES

CHAPTER 7.38 REGULATIONS PERTAINING TO CITY PARKS

7.38.010 Closing of parks--Closing of Starin Park roads--Possession of alcoholic beverages.
(a) Closing of Parks. All city parks shall be closed from 12:00 a.m. to 6:00 a.m., except that Brewery Hill Park shall close at dusk. A permit may be issued for use of the city parks at times other than that set forth herein. Said permit may be issued by the city clerk.

(b) Closing of Starin Park Roads. All roadways beyond the gated area in Starin Park shall be closed to vehicular traffic from November 1 to April 1 of each year. This provision shall not apply to city service and city authorized vehicles.

(c) Possession of Alcoholic Beverages. No alcoholic beverage will be permitted in any city park other than Starin Park. A permit may be granted by the common council pertaining to consumption of alcoholic beverages in parks other than Starin Park, Cravath Lake Park and Tripp Lake Park. Also, the city clerk may issue permits allowing the consumption of alcoholic beverages in Cravath Lake Park, Tripp Lake Park, Starin Park Community Building and other municipal buildings as deemed appropriate by the city manager.

(Ord. 1539A § 1, 2003; Ord. 1538A § 1, 2003; Ord. 1504 § 1, 2002; Ord. 1489 § 1, 2001; Ord. 1359 § 1, 1996).
(Ord. No. 1693A, § 1, 8-5-2008)

7.38.025 Slow-no-wake areas.
(a) Definitions. "Slow-no-wake" means that speed at which a boat moves as slowly as possible while still maintaining steerage control.

(b) Applicability and Enforcement.

(1) The provisions of this section shall apply to the waters of Tripp Lake and Cravath Lake.

(2) This section shall be enforced by police officers of the City of Whitewater and the city manager or his designee.

(c) Intent. The intent of this section is to provide safe and healthful conditions for the enjoyment of aquatic recreation consistent with public rights and interests.

(d) Controlled Area. No person shall operate a boat faster than slow-no-wake speed in the waters of Tripp Lake and Cravath Lake at any time.

(e) Posting Requirements. (a) The City of Whitewater shall place and maintain a copy of this section at all public access points within the jurisdiction of the City of Whitewater.

(f) Penalties. Wisconsin state boating penalties as found in § 30.80, Wis. Stats., and any amendments or revisions thereto are adopted by reference.

(g) Severability. The provisions of this section shall be deemed severable and it is expressly declared that the City of Whitewater council would have passed the other provisions of this section irrespective of whether or not one or more provisions may be declared invalid. If any provision of this section or the application to any person or circumstances is held invalid, the remainder of the section and the application of such provisions to other persons or circumstances shall not be affected.

(h) State Boating and Safety Laws Adopted. State boating laws as found in §§ 30.50 to 30.71, Wis. Stats., and any amendments or revision thereto are adopted by reference.
(Ord. 1400 § 1, 1998).

7.38.030 Penalty.

Any person violating the subsections of this chapter relating to possession of alcohol in parks shall be subject to a penalty of not less than $150.00 nor more than $300.00 for the first offense, and for second and subsequent offenses, not less than $200.00 nor more than $340.00, together with the costs of prosecution. Any person violating any other section of this chapter for which a penalty has not been provided shall be subject to a penalty of not less than $50.00 nor more than $150.00, together with the costs of prosecution.

(Ord. 1428 § 9, 1999: Ord. 1341 § 1(part), 1996; Ord. 983 § 22(part), 1982).

CHAPTER 11.48 MISCELLANEOUS PROVISIONS

11.48.020 Driving, littering and fish shacks on ice on Tripp and Cravath Lakes.

(a) It is unlawful for any person to drive a motor vehicle on the ice on Tripp Lake and/or Cravath Lake in the city, until the same have been declared safe for such use by the chief of police of the city. All motor vehicles upon the ice shall be removed within one hour after being so notified by the police department of the city to do so.

(b) The placing or leaving of debris or any kind of trash, beer cans, etc. on the ice or placing same in the lakes or on public property is prohibited.

(c) All fishing shacks shall be removed from the ice on the date specified by state law or order of the conservation commission, and the same shall be removed from public property within twenty-four hours after same have been placed thereon.

(Ord. 585 § 1, 1967: prior code § 12.19(A)).

CHAPTER 16.10 STORMWATER UTILITY AND MANAGEMENT SERVICES

16.10.010 Purpose and necessity--Authorization.

The common council of the City of Whitewater find that the management of stormwater and other surface water discharges within and beyond Whitewater Creek, Tripp Lake, Cravath Lake, and other bodies of water within the city is a matter that affects the health, safety and welfare of the city, its citizens and businesses and others in the surrounding area. All real property in the city, including property owned by public and tax-exempt entities contributes runoff and either uses or benefits from the stormwater system.

Failure to effectively manage stormwater affects the sanitary sewer utility operations of the city by, among other things, increasing the likelihood of infiltration and inflow into the sanitary sewer system. Surface water runoff may cause nonpoint source pollution, erosion of lands, threaten residences and businesses with water damage, and create environmental damage to the rivers, streams and other bodies of water within and adjacent to the city. A system for the collection and disposal of stormwater provides services to all properties within the City of Whitewater and surrounding areas, including those properties not currently served by the system. The cost of operating and maintaining the city stormwater management system and financing necessary repairs, replacements, improvements and extensions thereof should, to the extent practicable, be allocated in relationship to the services received from the system. In order to protect the health, safety and welfare of the public, the common council exercises its authority to establish a stormwater utility and establish the rates for stormwater management services.

In promulgating the regulations contained in this chapter, the city is acting pursuant to authority granted by Chapters 62 and 66 of the *Wisconsin Statutes*, including, but not limited to, Sections 62.04, 62.11, 62.16(2), 62.18, 66.0101, 66.0621, 66.080, 66.0811, 66.0813, 66.0703, and 66.0627.

(Ord. 1672A (part), 2008: Ord. 1647A (part), 2007).

16.16.010 Authority.

This chapter is adopted by the City of Whitewater under the authority granted by Section 62.234, Wis. Stats. This chapter supersedes all provisions of an ordinance previously enacted under Section 62.23, Wis. Stats., that relate to stormwater management regulations. Except as otherwise specified in Section 62.234, Wis. Stats., Section 62.23, Wis. Stats., applies to this chapter and to any amendments to this chapter.

The provisions of this chapter are deemed not to limit any other lawful regulatory powers of the same governing body.

The City of Whitewater hereby designates the director of public works to administer and enforce the provisions of this chapter.

The requirements of this chapter to not pre-empt more stringent stormwater management requirements that may be imposed by any of the following:

(a) Wisconsin Department of Natural Resources administrative rules, permits or approvals including those authorized under Sections 281.16 and 283.33, Wis. Stats.

(b) Targeted non-agricultural performance standards promulgated in rules by the Wisconsin Department of Natural Resources under Section NR 151.004, Wis. Adm. Code.

(Ord. 1559A §1, 2004).

16.16.020 Findings of fact.

The City of Whitewater finds that uncontrolled, post-construction runoff has a significant impact upon water resources and the health, safety and general welfare of the community and diminishes the public enjoyment and use of natural resources. Specifically, uncontrolled post-construction runoff can:

(a) Degrade physical stream habitat by increasing stream bank erosion, increasing streambed scour, diminishing groundwater recharge, diminishing stream base flows and increasing stream temperature;

(b) Diminish the capacity of lakes and streams to support fish, aquatic life, recreational and water supply uses by increasing pollutant loading of sediment, suspended solids, nutrients, heavy metals, bacteria, pathogens and other urban pollutants;

(c) Alter wetland communities by changing wetland hydrology and by increasing pollutant loads;

(d) Reduce the quality of groundwater by increasing pollutant loading;

(e) Threaten public health, safety, property and general welfare by overtaxing storm sewers, drainage ways and other minor drainage facilities;

(f) Threaten public health, safety, property and general welfare by increasing major flood peaks and volumes;

(g) Undermine floodplain management efforts by increasing the incidence and levels of flooding.

(Ord. 1559A §2, 2004).

16.16.030 Purpose and intent.

(a) Purpose. The general purpose of this chapter is to establish long-term, post-construction runoff management requirements that will diminish the threats to public health, safety, welfare and the aquatic environment. Specific purposes are to:

(1) Further the maintenance of safe and healthful conditions;

(2) Prevent and control the adverse effects of stormwater prevent and control soil erosion; prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structures and land uses; preserve ground cover and scenic beauty; and promote sound economic growth;

(3) Control exceedance of the safe capacity of existing drainage facilities and receiving water bodies; prevent undue channel erosion; control increases in the scouring and transportation of particulate matter and prevent conditions that endanger downstream property.

(b) Intent. It is the intent of the City of Whitewater that this chapter regulates post-construction stormwater discharges to waters of the state. This chapter may be applied on a site-by-site basis. The City of Whitewater recognizes, however, that the preferred method of achieving the stormwater performance standards set forth in this chapter is through the preparation and implementation of comprehensive, systems-level stormwater management plans that cover hydrologic units, such as watersheds, on a municipal and regional scale. Such plans may prescribe regional stormwater devices, practices or systems, any of which may be designed to treat runoff from more than one site prior to discharge to waters of the state. Where such plans are in conformance with the performance standards developed under Section 281.16, Wis. Stats., for regional stormwater management measures and have been approved by the City of Whitewater, it is the intent of this chapter that the approved plan be used to identify post-construction management measures acceptable for the community.

(Ord. 1559A §3, 2004).

Appendix C

COMMUNITY QUESTIONNAIRE SURVEY INSTRUMENT

This Page Intentionally Left Blank

Trippe and Cravath Lakes Community Survey

Trippe & Cravath Lakes Improvement Committee
Southeastern Wisconsin Regional Planning Commission
University of Wisconsin – Whitewater, Fiscal and Economic Research Center

---

1) To begin the survey, we would like to get your opinion on a range of issues affecting the State of Wisconsin and City of Whitewater. The table below lists several actions that could be taken in your area. Please circle the number in each row that best indicates how important it would be to you to....

	Not at all important	A little important	Moderately important	Very important	Extremely important
Improve schools in your area	1	2	3	4	5
Make state and local government more efficient	1	2	3	4	5
Address the economic crisis by stemming the loss of jobs in your area	1	2	3	4	5
Increase local security against terrorism	1	2	3	4	5
Create more local hiking and biking trails	1	2	3	4	5
Increase the quality of environmental resources such as recreational lakes	1	2	3	4	5
Preserve working agricultural lands in your area	1	2	3	4	5
Develop more restaurants and shops in your area	1	2	3	4	5

Your Home/Apartment in Whitewater

2) How long have you or your family lived in your current house or apartment? _____ *(Years)*

3) How many years have you lived in Whitewater? _____ *(Years)*

4) Do you live in Whitewater all 12 months of the year?

❑ Yes ❑ No

If not, how many months per year on average do you live in Whitewater during the various seasons? *(Please fill in blanks with best estimates, ranging from 0 to 3 months.)*

I/my family live in Whitewater:

____ months in Summer (June-Aug)
____ months in Fall (Sept-Nov)
____ months in Winter (Dec-Feb)
____ months in Spring (Mar-May)

5a) Do you live on a lake?

❑ Yes ❑ No

5b) **If no, approximately how far do you live from the nearest lake? [Please provide best estimate.]**

(Check only 1 box.)

- ❑ Less than ¼ mile
- ❑ Between ¼ and ½ mile
- ❑ Between ½ and 1 mile
- ❑ Between 1 and 2 miles
- ❑ More than 2 miles: _____ miles (fill in blank)
- ❑ Don't know

6) What lake is located closest to where you live?

- ❑ Cravath Lake
- ❑ Trippe Lake
- ❑ Don't know

Because of funding requirements, local governments cannot address every issue. This survey is about environmental problems that affect lakes near your home. Reduction in quality of lakes is one issue faced by resource managers. Even if you do not use lake resources, your opinions and responses are just as important as those who do.

Your Use of Cravath and Trippe Lakes in Whitewater

7) Did you or an immediate family member visit either Cravath Lake or Trippe Lake within the last 12 months ?

❑ Yes ❑ No **If "yes," please continue. If "no," skip to question 9.**

8a) How many total visits did you or an immediate family member make within the last 12 months to either Cravath Lake or Trippe Lake? _____

8b) When you or your family go to Cravath or Trippe Lakes, what activities do you do there? (*Please ✓ all that apply below)*:

- ❑ Fishing (not including ice fishing)
- ❑ Ice fishing
- ❑ Motor boating
- ❑ Sailing
- ❑ Canoeing/kayaking
- ❑ Swimming or wading
- ❑ Watching wildlife/birds
- ❑ Waterfowl hunting
- ❑ Relaxing/entertaining
- ❑ Picnicking
- ❑ Snowmobiling
- ❑ Exercising
- ❑ Attending community special events
- ❑ Other (please specify: _____)

8c) When you visit these lakes, how do you usually get there? *(Please ✓ ONE below).*

- ❑ By car
- ❑ By bicycle
- ❑ On foot
- ❑ Other (please specify: _____)

9) Do you own a boat? ❑ Yes ❑ No

If so, what type?

- ❑ Canoe
- ❑ Sailboat
- ❑ Paddle boat
- ❑ Fishing (outboard motor)
- ❑ Fishing (inboard motor)
- ❑ Other (please specify: _____)

Your Activities at Lakes other than Cravath/Trippe Lakes

10) Did you or an immediate family member visit any lakes OTHER THAN Cravath or Trippe Lakes within the last 12 months

❑ Yes ❑ No **If "yes," please continue. If "no," skip to question 12.**

11a) How many days did you or an immediate family member spend at lakes within the last 12 months? _____ **days** *(provide best estimate)*

11b) What is your favorite lake to visit within driving distance of your home?

Name of lake: _____, **in** _____ **(City/State)**

11c) Why is this your favorite lake?

_____

_____

_____

Your Level of Awareness Regarding Issues that are Relevant to Cravath and Trippe Lakes in Whitewater

12) The table below shows a list of issues that are relevant for Cravath and Trippe lakes. Please indicate your level of awareness with these issues.

(Please circle one number in each row.)

	I am.....		
Issues	**Not at all aware** of this possible issue	**Somewhat aware** of this issue	**Very much aware** of this issue
a) The lakes are shallow	1	2	3
b) The lakes have large amounts of aquatic weeds	1	2	3
c) Residential development is occurring along the lakes' shores	1	2	3
d) Commercial development is occurring near the lakes	1	2	3
e) Water clarity in the lakes is poor	1	2	3
f) Agricultural runoff may affect local water quality	1	2	3
g) Sanding and salting of roads during winter months may affect local water quality	1	2	3

Your Level of Concern Regarding Issues that may be Relevant to Cravath and Trippe Lakes

Resource managers currently are concerned about the quality of Cravath and Trippe Lakes and resulting negative impacts on our ability to enjoy them. (1) First, undesirable weed species (for example, Eurasian water milfoil) are present in and around these lakes. Such weeds crowd out native aquatic plants (e.g., lily pads); reduce the quality of habitat for sportfish; and make it difficult to swim or operate boats. (2) Second, resource managers are concerned about the influx of sediment into these lakes. Too much sediment makes the lakes too shallow to support recreational uses such as swimming and boating, and increases problems with odor and poor water clarity.

13) Are there other problems related to Cravath and Trippe Lakes about which you are concerned?

14) How concerned are you about various problems at Cravath and Trippe Lakes? Please indicate your levels of concern in the table below.

(Please circle only one number in each row.)

. **I am.....**

Issues	I am **not at all concerned** about this issue	I am **a little concerned** about this issue	I am **somewhat concerned** about this issue	I am **very concerned** about this issue	I am **extremely concerned** about this issue
A) Aquatic weed species are present in Cravath and Trippe Lakes	1	2	3	4	5
B) Sediment in the lakes has caused loss of depth and changed water quality	1	2	3	4	5
C) Other problems (if any) that you mention in Question 13 above	1	2	3	4	5

15) How do various problems affect (if at all) the quality of your enjoyment of Cravath and Trippe Lakes?

(Please circle only one number in each row.)

..... **This issue....**

Issue	**Does not at all reduce** my enjoyment of these lakes	**Reduces** my enjoyment of these lakes a little	**Somewhat reduces** my enjoyment of these lakes	**Reduces** my enjoyment of these lakes a lot	Reduces my enjoyment of these lakes extremely
A) Weed species are present in and around Cravath and Trippe Lakes	1	2	3	4	5
B) Sediment in the lakes has caused loss of depth and changed water quality	1	2	3	4	5
C) Other problems (if any) that you mention in Question 13 above	1	2	3	4	5

The next several questions ask about your willingness to pay for conducting programs to improve Cravath and Trippe Lakes. In order to conduct the programs, money will need to be raised. This may be done by creating a "special tax district" affecting you and your neighbors living in the City of Whitewater. Money to fund the programs would be raised through increased property taxes, and all money raised would be used only for the lake programs. When answering, please consider your income, other things you spend money on, and the many other possible programs that could be funded by your local government.

16) PLEASE CONSIDER CAREFULLY THE FOLLOWING PROPOSED SCENARIO FOR WEED CONTROL AT CRAVATH AND TRIPPE LAKES:

As mentioned above, Cravath and Trippe Lakes currently have undesirable weed species. Resource managers are considering a weed removal program. Weed removal may be done by hand pulling and raking or by using approved chemicals that do not affect humans. Resource managers would use the method considered to be safest and most cost-effective, and the method would be repeated as necessary to control weeds. The program will:

- Enhance the habitat for fish, including those caught by recreational anglers
- Reduce unpleasant physical contact with weeds while engaging in water-based recreation such as swimming
- Result in visual improvements to the lakes
- Allow native plant species to return
- Improve the biological functioning of the lake

This weed control program by itself will NOT address the buildup of sediment in the lakes, which is discussed next.

How much would you be willing to pay in additional property taxes each year, for the next 10 years, in order to achieve the outcomes described above from the Weed Control Program? *(Circle one number.)*

$0	$3	$10	$40	$125	$450	$1,500	$5,000
$1	$5	$15	$60	$200	$650	$2,250	More than $5,000
$2	$8	$25	$90	$300	$1,000	$3,300	Don't know

16a) Please explain why you circled the dollar amount for Weed Control that you did:

17) PLEASE CONSIDER CAREFULLY THE FOLLOWING PROPOSED SCENARIO FOR SEDIMENT REMOVAL AT CRAVATH AND TRIPPE LAKES:

As mentioned above, Cravath and Trippe Lakes currently have large deposits of sediment. Resource managers are considering a sediment removal program. Sediment removal is done using precision land-based or water-based equipment, and the extracted sediment would be removed from the area and deposited safely outside of Whitewater. The method would be repeated as necessary to control sediment. The program will:

- Create deeper lakes
- Allow for better swimming and watercraft operation, including creating new areas that currently cannot be used for water-based recreation
- Reduce odor and increase water clarity

This Sediment Removal Program by itself will NOT reduce the undesirable weeds in the lakes, which was discussed previously

How much would you be willing to pay in additional property taxes each year, for the next 10 years, in order to achieve the outcomes described above from the Sediment Removal Program? *(Circle one number.)*

$0	$3	$10	$40	$125	$450	$1,500	$5,000
$1	$5	$15	$60	$200	$650	$2,250	More than $5,000
$2	$8	$25	$90	$300	$1,000	$3,300	Don't know

17a) Please explain why you circled the dollar amount for Sediment Removal that you did:

18) FINALLY, PLEASE CONSIDER CAREFULLY ONE MORE ALTERNATIVE FOR CRAVATH AND TRIPPE LAKES:

Resource managers are considering a program that would include *BOTH* weed control *AND* sediment removal. This will result in all of the benefits listed above for *BOTH* of these programs.

How much would you be willing to pay in additional property taxes each year, for the next 10 years, in order to achieve the outcomes described for both the Weed Control Program and the Sediment Removal Program? *(Circle one number.)*

$0	**$3**	**$10**	**$40**	**$125**	**$450**	**$1,500**	**$5,000**
$1	**$5**	**$15**	**$60**	**$200**	**$650**	**$2,250**	**More than $5,000**
$2	**$8**	**$25**	**$90**	**$300**	**$1,000**	**$3,300**	**Don't know**

18a) Please explain why you circled the dollar amount for Weed Control AND Sediment Removal that you did:

_____

_____

_____

_____

General Information and Public Opinions

19) What is your household's total annual income from all sources? *(Check one.)*

- ❑ Below $20,000
- ❑ $20,000 - $29,999
- ❑ $30,000 - $39,999
- ❑ $40,000 - $49,999
- ❑ $50,000 - $59,999
- ❑ $60,000 - $69,999
- ❑ $70,000 - $79,999
- ❑ $80,000 - $89,999
- ❑ $90,000 - $99,999
- ❑ $100,000 - $149,999
- ❑ $150,000 - $199,999
- ❑ $200,000 - $299,999
- ❑ Over $300,000

20) What level of education have you completed? *(Check one.)*

- ❑ High school or less
- ❑ Some college or technical school
- ❑ Completed two-year degree
- ❑ Completed four-year degree
- ❑ Completed some graduate classes
- ❑ Completed graduate degree

21) What is your age in years? *(Check one.)*

- ❑ Under 22
- ❑ 23-25
- ❑ 26-29
- ❑ 30-34
- ❑ 35-39
- ❑ 40-44
- ❑ 45-49
- ❑ 50-54
- ❑ 55-64
- ❑ 65-75
- ❑ Over 75 years

22) Are you currently a university student? ❑ Yes ❑ No

Appendix D

SUMMARY STATISTICS FROM THE TRIPPE AND CRAVATH LAKES SURVEY[1]

[1] *This appendix was prepared by Ms. Paige Peterson and Professor Mark E. Eiswerth, Economics Department, Hyland Hall, College of Business & Economics, University of Wisconsin-Whitewater 53190.*

This Page Intentionally Left Blank

SECTION D.1. GENERAL INFORMATION ON RESPONDENT'S RESIDENCE IN WHITEWATER

Table D-1

PROXIMITY OF SURVEY RESPONDENTS TO TRIPPE AND CRAVATH LAKE'S SHORELINE (AS COMPUTED THROUGH MAPPING ANALYSIS)

Distance from House to Shoreline (miles)	Frequency	Percent
Less than 1/4	114	27.40
Between 1/4 and 1/2	100	24.04
Between 1/2 and 3/4	49	11.78
Between 3/4 and 1	22	5.29
Between 1 and 1 1/4	53	12.74
Between 1 1/4 and 1 1/2	21	5.05
Between 1 1/2 and 1 3/4	34	8.17
Between 1 3/4 and 2	10	2.40
Over 2	5	1.20
Out of Town	7	1.68
Total	416	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-2

SURVEY RESPONDENTS' PERCEIVED DISTANCE FROM THE NEAREST LAKE (TRIPPE OR CRAVATH)

Location	Frequency	Percent
Live on Lake	48	11.76
Less than 1/4 Mile	72	17.65
Between 1/4 and 1/2 Mile	55	13.48
Between 1/2 and 1 Mile	78	19.12
Between 1 and 2 Miles	125	30.64
More than 2 Miles	23 (mean = 3.82 miles)	5.64
Don't Know	7	1.72
Total	408	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-3

NUMBER OF SURVEY RESPONDENTS OWNING OR RENTING THEIR RESIDENCE

Status	Frequency	Percent
Own	377	87.67
Rent	53	12.33
Total	430	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-4

LENGTH OF SURVEY RESPONDENTS' RESIDENCE (YEARS)

Location	Frequency	Average (years)
Current Residence	426	14.17
City of Whitewater	429	26.93

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-5

NUMBER OF YEAR ROUND SURVEY RESPONDENTS

Status	Frequency	Percent
Year Round	406	93.98
Seasonal	26	6.02
Total	432	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-6

MONTHS OF RESIDENCE IN WHITEWATER HOME FOR SEASONAL SURVEY RESPONDENTS

Season	Average Months in Residence
Summer (June-August)	2.25
Fall (September-November)	2.45
Winter (December-February)	0.70
Spring (March-May)	1.70
Total	7.75

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-7

SURVEY RESPONDENTS LOCATED ON TRIPPE OR CRAVATH LAKE

Location	Frequency	Percent
On Lake	49	11.53
Not on Lake	376	88.47
Total	425	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-8

LAKE LOCATED NEAREST TO SURVEY RESPONDENT

Location	Frequency	Percent
Cravath	268	65.61
Trippe	108	26.10
Both	24	5.85
Don't Know	10	2.44
Total	410	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

SECTION D.2. RESPONDENTS' USE OF CRAVATH AND TRIPPE LAKES

Table D-9

SURVEY RESPONDENTS VISITING EITHER CRAVATH OR TRIPPE LAKE WITHIN THE PAST 12 MONTHS

Response	Frequency	Percent
Yes	324	76.24
No	101	23.76
Total	425	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-10

SURVEY RESPONDENTS' AVERAGE NUMBER OF VISITS TO CRAVATH OR TRIPPE LAKE DURING THE PAST 12 MONTHS

Visits	Frequency	Percent
0	101	26.17
1-10	177	45.85
11-20	42	10.88
21-30	20	5.18
31-40 (average = 31.61)	9	2.33
41-50	6	1.55
51-60	3	0.78
61-70	0	0.00
71-80	1	0.26
81-90	0	0.00
91-100	9	2.33
101-200	4	1.04
201-300	5	1.30
More than 300	9	2.33
Total	425	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-11

SURVEY RESPONDENTS' ACTIVITIES WHILE VISITING CRAVATH OR TRIPPE LAKE

Type	Frequency	Percent
Attending Community Special Events	252	74.12
Relaxing/Entertaining	224	65.88
Exercising	159	46.76
Watching Wildlife/Birds	152	44.70
Fishing (not including ice fishing)	108	31.76
Picnicking	90	26.47
Canoeing/Kayaking	49	14.41
Other	35	10.29
Ice Fishing	25	7.35
Swimming or Wading	21	6.18
Waterfowl Hunting	8	2.35
Motor Boating	7	2.06
Snowmobiling	2	0.59
Sailing	1	0.29
Total	340	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-12

SURVEY RESPONDENTS' MODE OF TRAVEL TO CRAVATH OR TRIPPE LAKES

Type	Frequency	Percent
Motor Vehicle	176	50.87
Foot	176	50.87
Bicycle	63	18.21
Other	5	1.44
Total	346	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-13

SURVEY RESPONDENTS OWNING A BOAT

Response	Frequency	Percent
Own a Boat	116	26.91
Do Not Own a Boat	315	73.09
Total	431	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-14

TYPE OF BOAT OWNED BY SURVEY RESPONDENTS

Type	Frequency	Percent
Fishing (outboard motor)	56	47.46
Canoe	53	44.92
Other	23	19.49
Fishing (inboard motor)	8	6.78
Paddle Boat	5	4.24
Sailboat	2	1.69
Total	118	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

SECTION D.3. PROPERTY OWNERS' EXPERIENCES WITH OTHER LAKES

Table D-15

SURVEY RESPONDENTS VISITING LAKES OTHER THAN CRAVATH OR TRIPPE LAKES WITHIN THE PAST 12 MONTHS

Response	Frequency	Percent
Yes	261	62.00
No	160	38.00
Total	421	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-16

NUMBER OF DAYS SURVEY RESPONDENTS VISITED OTHER LAKES WITHIN THE PAST 12 MONTHS

Visits	Frequency	Percent
1-10	159	61.87
11-20 (average = 16.76)	44	17.12
21-30	25	9.73
31-40	8	3.11
41-50	9	3.50
51-60	5	1.95
61-70	1	0.39
71-80	1	0.39
81-90	0	0.00
91-100	1	0.39
101-150	1	0.39
151-200	2	0.78
More than 200	1	0.39
Total	425	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-17

FAVORITE LAKES VISITED BY SURVEY RESPONDENTS

Lake	Location	Frequency	Percent
Whitewater Lake	Whitewater, WI	50	19.69
Geneva Lake	Lake Geneva, WI	20	7.87
Cravath Lake	Whitewater, WI	14	5.52
Lake Michigan	Milwaukee, WI	19	7.48
Rice Lake	Whitewater, WI	11	4.33
Delavan Lake	Delavan, WI	10	3.94
Pleasant Lake	LaGrange, WI	9	3.54
Lauderdale Lakes	Elkhorn, WI	7	2.76
Ottawa Lake	Eagle, WI	7	2.76
Trippe Lake	Whitewater, WI	7	2.76
Turtle Lake	Delavan, WI	6	2.36
Rock Lake	Lake Mills, WI	6	2.36
Devil's Lake	Baraboo, WI	5	1.97
Blue Spring Lake	Palmyra, WI	4	1.57
Mendota Lake	Madison, WI	4	1.57
Monona Lake	Madison, WI	3	1.18
Castle Rock Lake	New Lisbon, WI	2	0.79
Chippewa Lake	Hayward, WI	2	0.79
Crystal Lake	Neshkoro, WI	2	0.79
Gilbert Lake	Wild Rose, WI	2	0.79
LaGrange Lake	LaGrange, WI	2	0.79
Nebagamon Lake	Nebagamon, WI	2	0.79
Red Cedar Lake	Cambridge, WI	2	0.79
Sandy Beach Lake	Lake Mills, WI	2	0.79
Lake Superior	Bayfield, WI	2	0.79
Other	WI	54	21.26
Total	- -	254	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

SECTION D.4. SURVEY RESPONDENTS' VIEWS ON LAKE TOPICS AND OTHER ISSUES

Table D-18

SURVEY RESPONDENTS' OPINIONS ON THE IMPORTANCE OF ISSUES AFFECTING THE STATE OF WISCONSIN AND CITY OF WHITEWATER

Survey Respondents' Opinions on the Importance of Certain Issues		Not At All Important 1	2	3	4	Extremely Important 5	Total
Enhance Local Environmental Resources	Issue	33	60	101	107	103	404
	Percent	8.17	14.85	25.00	26.49	25.50	100.00
	Mean	--	--	3.46	--	--	--
Develop More Restaurants and Shops in Local Area	Issue	55	63	124	86	76	404
	Percent	13.61	15.59	30.69	21.29	18.81	100.00
	Mean	--	--	3.13	--	--	--
Preserve Agricultural Land	Issue	26	56	94	132	95	403
	Percent	6.45	13.90	23.33	32.75	23.57	100.00
	Mean	--	--	3.53	--	--	--
More Efficient Governments	Issue	9	19	94	131	150	403
	Percent	2.23	4.71	23.33	32.51	37.22	100.00
	Mean	--	--	--	3.98	--	--
Create More Recreational Trails	Issue	88	116	95	58	37	394
	Percent	22.34	29.44	24.11	14.72	9.39	100.00
	Mean	--	2.59	--	--	--	--
Terrorism Security	Issue	113	108	103	48	26	398
	Percent	28.39	27.14	25.88	12.06	6.53	100.00
	Mean	--	2.41	--	--	--	--
Improve Local Schools	Issue	27	42	109	109	110	397
	Percent	6.80	10.58	27.46	27.46	27.71	100.00
	Mean	--	--	3.59	--	--	--
Job Loss	Issue	14	23	69	144	143	393
	Percent	3.56	5.85	17.56	36.64	36.39	100.00
	Mean	--	--	--	3.96	--	--

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-19

SURVEY RESPONDENTS' LEVEL OF AWARENESS OF CRAVATH AND TRIPPE LAKES ISSUES

Relevant Issues for Trippe and Cravath Lakes		Not At All Aware 1	Somewhat Aware 2	Very Much Aware 3	Total
The Lakes Are Shallow	Issue	86	131	206	423
	Percent	20.33	30.97	48.70	100.00
	Mean	--	2.28	--	--
The Lakes Have Large Amounts of Aquatic Weeds	Issue	36	92	299	427
	Percent	8.43	21.55	70.02	100.00
	Mean	--	2.16	--	--
Residential Development is Occurring along the Lakes	Issue	56	126	245	427
	Percent	13.11	29.51	57.38	100.00
	Mean	--	2.44	--	--
Commercial Development is Occurring near the Lakes	Issue	171	163	93	427
	Percent	40.05	38.17	21.78	100.00
	Mean	1.81	--	--	--
The Lakes' Water Clarity is Poor	Issue	45	111	270	426
	Percent	10.56	26.06	63.38	100.00
	Mean	--	--	2.53	--
Agricultural Runoff May Affect Water Quality	Issue	76	140	211	427
	Percent	17.80	32.79	49.41	100.00
	Mean	--	2.32	--	--
Sanding and Salting of Roads May Affect Water Quality	Issue	75	176	177	428
	Percent	17.52	41.12	41.36	100.00
	Mean	--	2.24	--	--

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-20

SURVEY RESPONDENTS' LEVEL OF CONCERN FOR VARIOUS PROBLEMS AT CRAVATH AND TRIPPE LAKES

Survey Respondents' Concern About Certain Issues		Not At All Concerned 1	A Little Concerned 2	Somewhat Concerned 3	Very Concerned 4	Extremely Concerned 5	Total
Aquatic Weed Species Are Present in Cravath and Trippe Lakes	Issue	40	47	107	109	119	422
	Percent	9.48	11.14	25.36	25.83	28.20	100.00
	Mean	--	--	3.52	--	--	--
Sediment in Cravath and Trippe Lakes Has Caused Loss of Depth and Changed Water Quality	Issue	39	44	97	113	128	421
	Percent	9.26	10.45	23.04	26.84	30.40	100.00
	Mean	--	--	3.59	--	--	--
Other Problems	Issue	38	20	42	44	75	219
	Percent	17.35	9.13	19.18	20.09	34.25	100.00
	Mean	--	--	3.45	--	--	--

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-21

EFFECT OF PROBLEMS ON RESPONDENTS' QUALITY OF ENJOYMENT OF CRAVATH AND TRIPPE LAKES

Survey Respondents' Concern About Certain Issues		Does Not Reduce Enjoyment	Reduces Enjoyment a Little	Somewhat Reduces Enjoyment	Reduces Enjoyment a Lot	Reduces Enjoyment Extremely	Total
Aquatic Weed Species Are Present in Cravath and Trippe Lakes	Issue	76	41	98	84	111	410
	Percent	18.54	10.00	23.90	20.49	27.07	100.00
	Mean	--	--	3.28	--	--	--
Sediment in Cravath and Trippe Lakes Has Caused Loss of Depth and Changed Water Quality	Issue	86	44	88	88	102	408
	Percent	21.08	10.78	21.57	21.57	25.00	100.00
	Mean	--	--	3.19	--	--	--
Other Problems	Issue	55	18	47	33	64	217
	Percent	25.35	8.29	21.66	15.21	29.49	100.00
	Mean	--	--	3.15	--	--	--

Source: University of Wisconsin-Whitewater and SEWRPC.

SECTION D.5. RESPONSES TO WILLINGNESS TO PAY SCENARIOS FOR WEED CONTROL AND SEDIMENT REMOVAL

Table D-22

SURVEY RESPONDENTS' WILLINGNESS TO PAY FOR A WEED CONTROL PROGRAM FOR TRIPPE AND CRAVATH LAKES THROUGH INCREASED PROPERTY TAXES EACH YEAR

Amount (dollars per year)	Frequency	Percent
$0	98	24.56
$1-9	29	7.27
$10-25	97	24.31
$26-99 (mean = $67.46)	74	18.55
$100-300	57	14.29
$301-999	7	1.75
$1,000-5,000	3	0.75
More than $5,000	1	0.25
Don't Know	33	8.27
Total	399	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-23

SURVEY RESPONDENTS' WILLINGNESS TO PAY FOR A SEDIMENT REMOVAL PROGRAM FOR TRIPPE AND CRAVATH LAKES THROUGH INCREASED PROPERTY TAXES EACH YEAR

Amount (dollars per year)	Frequency	Percent
$0	102	25.50
$1-9	23	5.75
$10-25	90	22.50
$26-99 (mean = $72.27)	78	19.50
$100-300	62	15.50
$301-999	7	1.75
$1,000-5,000	4	1.00
More than $5,000	1	0.25
Don't Know	33	8.25
Total	400	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-24

SURVEY RESPONDENTS' WILLINGNESS TO PAY FOR BOTH WEED CONTROL AND SEDIMENT REMOVAL PROGRAMS FOR TRIPPE AND CRAVATH LAKES THROUGH INCREASED PROPERTY TAXES EACH YEAR

Amount (dollars per year)	Frequency	Percent
$0	93	23.54
$1-9	15	3.80
$10-25	62	15.70
$26-99	78	19.76
$100-300 (mean = $113.24)	90	22.78
$301-999	19	4.81
$1,000-5,000	7	1.77
More than $5,000	2	0.51
Don't Know	29	7.34
Total	395	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

SECTION D.6. SURVEY RESPONDENT DEMOGRAPHIC DATA

Table D-25

SURVEY RESPONDENTS' TOTAL ANNUAL HOUSEHOLD INCOME

Income	Frequency	Percent
Below $20,000	32	8.44
$20,000-$29,999	42	11.08
$30,000-$39,999	43	11.35
$40,000-$49,999	45	11.87
$50,000-$59,999	49	12.93
$60,000-$69,999	34	8.97
$70,000-$79,999	29	7.65
$80,000-$89,999	30	7.92
$90,000-$99,999	16	4.22
$100,000-$149,000	43	11.35
$150,000-$199,999	8	2.11
$200,000-$299,999	5	1.32
$300,000 or More	3	0.08
Total	379	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-26

SURVEY RESPONDENTS' HIGHEST LEVEL OF EDUCATION COMPLETED

Level of Education	Frequency	Percentage
High School or Less	48	11.65
Some College or Technical School	78	18.93
Completed Two-Year Degree	18	4.37
Completed Four-Year Degree	84	20.39
Completed Some Graduate Classes	35	8.50
Completed Graduate Degree	149	36.17
Total	412	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-27

SURVEY RESPONDENTS THAT ARE CURRENTLY A UNIVERSITY STUDENT

Response	Frequency	Percent
Yes	21	5.04
No	396	94.96
Total	417	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

Table D-28

SURVEY RESPONDENTS' AGE

Age	Frequency	Percent
Under 22	9	2.17
23-25	8	1.93
26-29	14	3.38
30-34	24	5.80
35-39	26	6.28
40-44	24	5.80
45-49	32	7.73
50-54	47	11.35
55-64	101	24.40
65-75	74	17.87
Over 75	55	13.29
Total	414	100.00

Source: University of Wisconsin-Whitewater and SEWRPC.

This Page Intentionally Left Blank

Appendix E

WISCONSIN DEPARTMENT OF NATURAL RESOURCES CHAPTER 30 DREDGING PERMIT GUIDANCE AND APPLICATION

This Page Intentionally Left Blank

State of Wisconsin
Department of Natural Resources

APPLICATION FOR LAKE DREDGING
Form 3500-53I (R 1/2002)

The Wisconsin Department of Natural Resources helps protect your rights in public waters as well as public safety, by ensuring adequate planning and design of projects affecting fish and wildlife habitat, water quality and natural scenic beauty. This is done through permit and plan approval requirements for individual water projects. Chapters 30 and 31 of the Wisconsin Statutes require written permits for certain activities on or near a waterway: for example, to place any material below the ordinary high water mark (such as rock riprap, fish cribs, culverts, fords, etc.); to construct a bridge, dredge material from a lake or stream; create a pond; or to construct, operate, or maintain a dam. A single pier or wharf can generally be placed without a permit, provided state standards are met; more extensive piers or marinas require a permit.

Before submitting this application for a lake dredging permit, please contact your county, city or village zoning department to find out if your project site is in either a mapped wetland or floodplain and if local zoning restrictions could affect your project. Please see the Wetland Information topic (found in the Waterway and Wetland Permits Web Page) or request Wetland Packet #20 in addition to this packet for details.

A complete application with detailed drawings will help us make a decision about your application for a permit. The following information is necessary for a complete application.

To help us make a decision in the shortest time possible, please submit the following information:

1. **A copy of your deed or similar proof of ownership** (e.g. land contract, current property tax receipt).

2. **Good photographs that clearly show the existing project area.** Remember, too much snow cover or vegetation may obscure important details. If possible, have another person stand near the project area for size reference.

3. **Five (5) copies of a completed application Form 3500-53 including applicant information page and project plans.** When completing your application, **please use a ballpoint pen with black ink.** The site location sketch and plan drawings (see Sample Drawing) should be clear and to scale and have enough detail to find the site and understand the project proposal. **Please follow the sample drawing and information requirements pages attached. Also, make sure your phone number (both business and home) and property address or fire number is on the application. Plans may be submitted on a separate page(s), but please submit five (5) copies.**

4. **Five (5) copies of a narrative description of your proposal,** on a separate blank page. Please state:
   - what the project is,
   - how you intend to carry out the project, including methods, materials and equipment,
   - your proposed construction schedule and sequence of work,
   - what temporary and permanent erosion control measures will be used, and
   - the location of any disposal area for dredged or excavated materials.

5. **Five (5) copies of site maps.** Provide copies of relevant maps (when possible), such as USGS topographic map, Wisconsin Wetland Inventory map, FEMA floodplain maps, soil or zoning maps, with the project location clearly identified.

6. **The appropriate application fee (complete Form 3500-53A).**

If you have questions or problems in filling out or completing the application requirements, please call or contact the Water Management Specialist for the county where your project is located.

When you are finished compiling your application materials, remember to check your application for completeness. Then make copies of all materials so that you can submit **five copies** of the requested information to the Department. We also recommend that you keep a complete copy for your own records. Remember, incomplete applications may cause a delay in processing.

NOTE: Depending upon the type, complexity, and location of your proposed project, **processing can take 60 working days (3 months) or longer to complete a review, public notice and any required environmental analysis if your application is completed in detail.**

Thank you for contacting the Wisconsin Department of Natural Resources.
Enclosed are the project application materials you have requested.

Lake Dredging Information Requirements

All applications to remove material from a lakebed require the following information, on the application form and plan drawing sheet supplied or additional sheets if necessary.

1. In the **"proposed materials"** box, indicate what equipment and method of excavation will be used. The application must contain a description of the sequence of construction events including the installation of temporary and permanent erosion control measures and final landscaping and stabilization measures for the spoil disposal area.

2. In the **"location sketch"** box, sketch or trace a map that clearly indicates the location of the project. Recommended scale is 1" = 2000'. The map should enable the Department investigator to locate the project site.

3. The **top view** should include the following information:

   a. The location of the shoreline and the location of the cross-section.
   b. The proposed dredge area.
   c. The spoil disposal area. NOTE: If spoils are to be hauled from the site for disposal, provide a map showing where disposal will occur.
   d. Floodplain and wetland boundary.
   e. Depth contours up to the limit of the proposed dredging.
   f. The scale of the top view and a north arrow.

Note: Spoil disposal is not allowed in wetlands or floodplains.

4. The **cross-section view** of the project should be selected approximately perpendicular to the lake and include the following:

   a. The normal water level in the lake.
   b. A profile of the existing bottom and the proposed dredged bottom.
   c. The scale or dimensions of the drawing.

5. Proper erosion control measures, including the use of staked hay bales and silt fencing, must be used and maintained during and after the construction of this project. All erodible areas must be immediately seeded and mulched with a fast growing grass mixture. This grass seed mixture must become established and stabilize all erodible areas. These erosion control measures must adequately protect the waterway and wetlands from erosion and run-off.

Please select the scale of the drawing carefully to fit all the necessary information on the application form. If necessary, use additional sheets. Be sure to draw all the plans as accurately as possible. The Department may require additional information to evaluate the project.

Please send the completed application to the Water Management Specialist for the county where your project is located (a complete listing of addresses by county can be found on the Waterway and Wetland Permits web page link below).

http://dnr.wi.gov/waterways

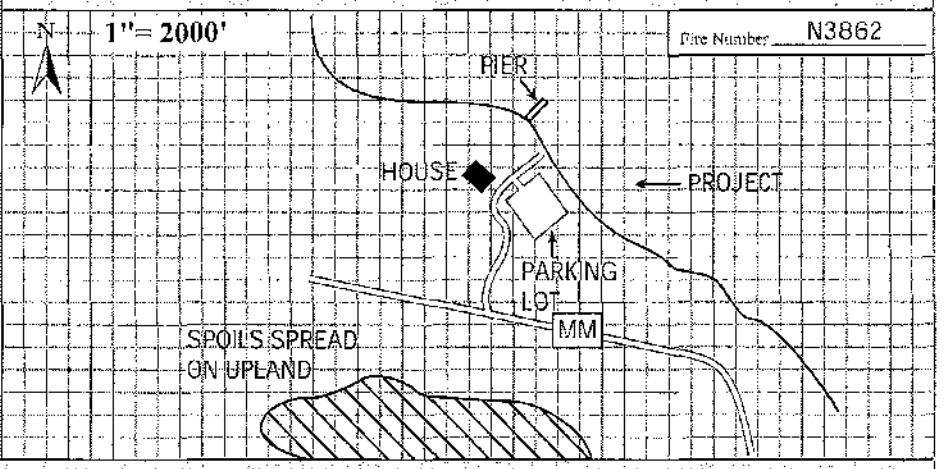
DRAWINGS OF PROPOSED ACTIVITY SHOULD BE PREPARED IN ACCORDANCE WITH SAMPLE DRAWING

Location Sketch (Indicate scale.) Show route to project site: include nearest main road and crossroad.

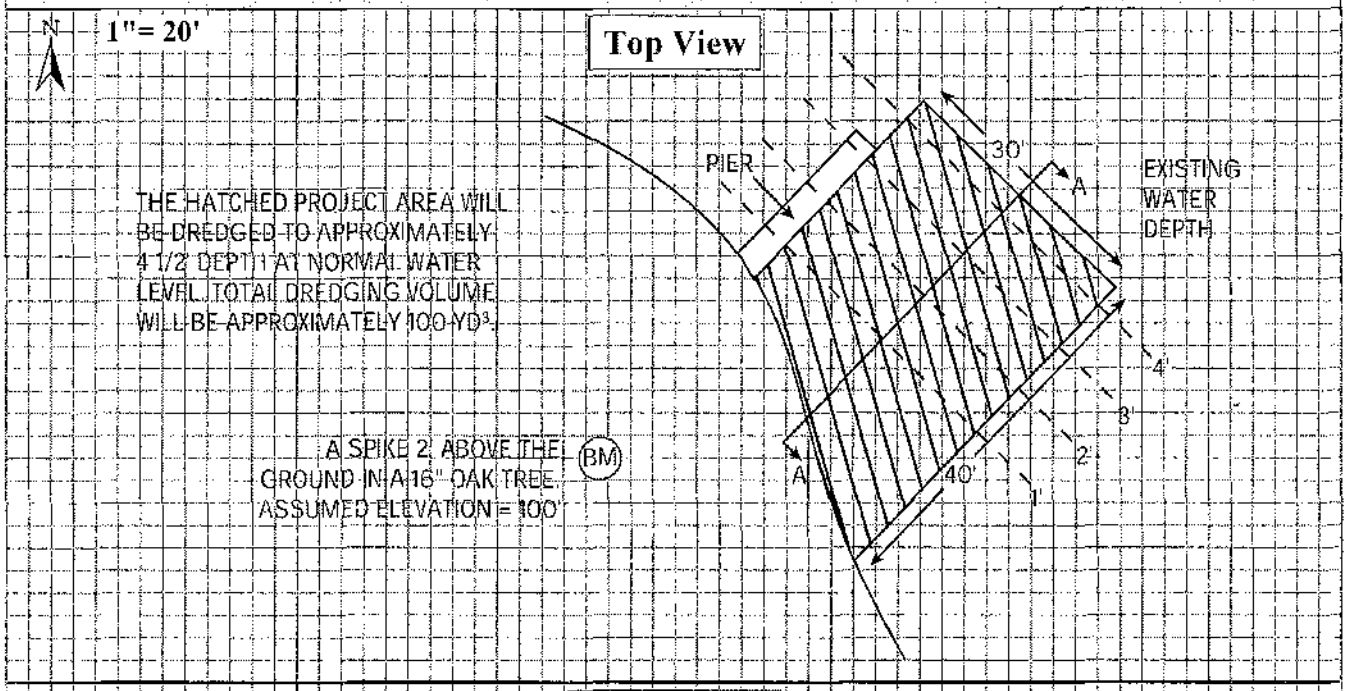
LAKE DREDGING SAMPLE DRAWING

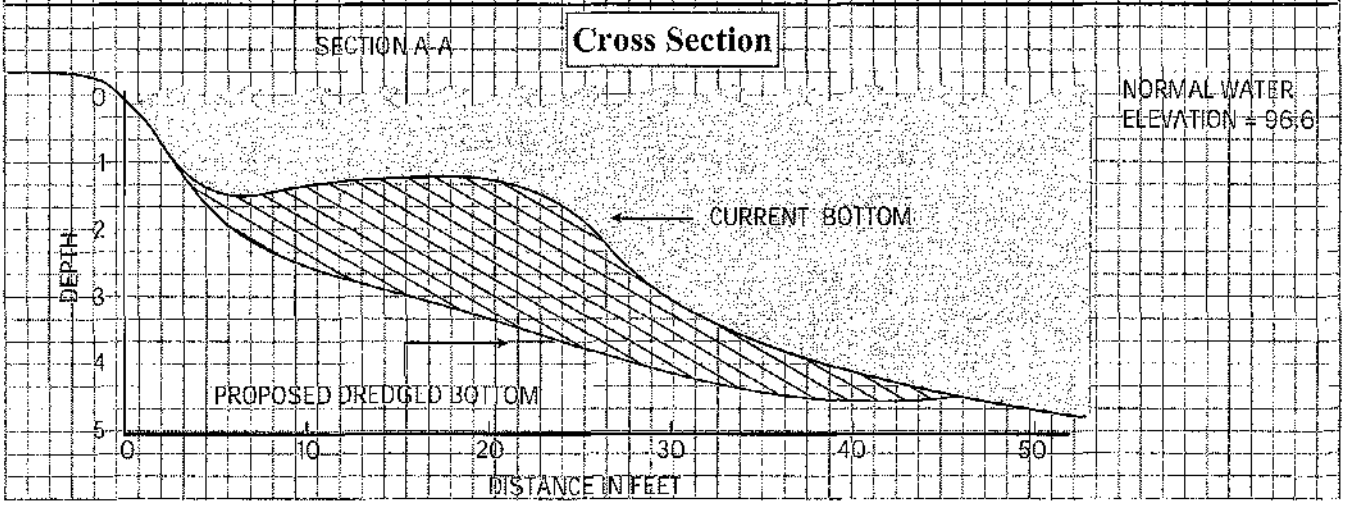
Proposed Materials

Excavation will be by clamshell dredge. Spoils will be hauled off site to an upland location. Totaldredge volume is approximately 100 cubic yards.



Project Plans. (Include top view and typical cross sections. Clearly identify features and dimensions or indicate scale.) Use additional sheets if necessary.





State of Wisconsin
Department of Natural Resources
(Return to appropriate DNR Regional/Service Center Office)

State / Federal Application for Water Regulatory Permits and Approvals

Form 3500-053 (R 4/01)

PLEASE COMPLETE BOTH PAGES 1 & 2 OF THIS APPLICATION. PRINT OR TYPE. The Department requires use of this form for any application filed pursuant to Chapter 30, Wis. Stats. The Department will not consider your application unless you complete and submit this application form. Personally identifiable information on this form will not be used for any other purpose, but it must be made available to requesters under Wisconsin's open records law [s. 19.31-19.39, Wis. Stats.].

1. Applicant (Individual or corporate name)

Address

City, State, Zip Code | Fire Number

Telephone No. (Include area code) | Tax Parcel Number

2. Agent/Contractor (firm name)

Address

City, State, Zip Code

Telephone No. (Include area code)

3. If applicant is not owner of the property where the proposed activity will be conducted, provide name and address of owner and include letter of authorization from owner. Owner must be the applicant or co-applicant for structure, diversion and stream realignment activities.

Owner's Name | Address | City, State, Zip Code

4. Is the applicant a business? ☐ Yes ☐ No

If YES, is the permit or approval you are applying for necessary for you to conduct this business in the State of Wisconsin?

☐ Yes ☐ No

If YES, please explain why (attach additional sheets if necessary):

5. Project Location

Address _____

Village/City/Town _____

Fire Number _____ Tax Parcel Number _____

Waterway _____

County _____

Govt. Lot _____ OR ____1/4, ____1/4, of Section _____,

Township _____North, Range _____ (East) (West)

6. Adjoining Riparian (Neighboring Waterfront Property Owner) Information

Name of Riparian #1 | Address | City, State, Zip Code

Name of Riparian #2 | Address | City, State, Zip Code

7. Project Information (Attach additional sheets if necessary)

(a) Describe proposed activity (include how this project will be constructed)

(b) Purpose, need and intended use of project

(c) I have applied for or received permits from the following agencies: (Check all that apply)

☐ Municipal ☐ County ☐ Wis. DNR ☐ Corps of Engineers

(d) Date activity will begin if permit is issued _____; be completed: _____

(e) Is any portion of the requested project now complete? ☐ Yes ☐ No

If yes, identify the completed portion on the enclosed drawings and indicate here the date activity was completed:

I hereby certify that the information contained herein is true and accurate. I also certify that I am entitled to apply for a permit, or that I am the duly authorized representative or agent of an applicant who is entitled to apply for a permit. Any inaccurate information submitted may result in permit revocation, the imposition of a forfeiture(s) and requirement of restoration.

Signature of Applicant(s) or Duly Authorized Agent | Date Signed

LEAVE BLANK - FOR RECEIVING AGENCY USE ONLY

Corps of Engineers Process No.	Wisconsin DNR File No.	
Received By	Date Received	Date Application Was Complete

Drawings of proposed activity should be prepared in accordance with sample drawing.

Proposed Materials

Location Sketch (Indicate scale)
Show route to project site; include nearest main road and crossroad.

N 1" = ft.

Fire Number

Project Plans (Include top view and typical cross sections. Clearly identify features and dimensions or indicate scale.)
Use additional sheets if necessary.

N 1" = ft.

Top View

Cross Section

R-3

RESOLUTION APPROVING THE GRANT OF AN EASEMENT TO WISCONSIN ELECTRIC POWER COMPANY UPON A PART OF PARCELS WSS 00014 & WSS 00018

WHEREAS, Wisconsin Electric Power Company is upgrading its facilities in the City of Whitewater and requires a gas main easement from the City of Whitewater upon a part of Parcels WSS 00014 & WSS 00018, which are owned by the City of Whitewater, and

WHEREAS, it is in the best interests of the City of Whitewater to grant the easement.

Now, therefore, **BE IT RESOLVED** that the Common Council of the City of Whitewater, Walworth and Jefferson Counties, hereby authorizes the City Manager and the City Clerk to sign the attached Gas Main Easement.

Resolution introduced by Councilmember _____, who moved its adoption. Seconded by Councilmember _____.

AYES:

NOES:

ABSENT:

ADOPTED:

_____
Kevin Brunner, City Manager

_____
Michele R. Smith, City Clerk

R-3

Document Number	**DISTRIBUTION EASEMENT GAS (MAIN)**

WR NO.

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the **CITY OF WHITEWATER, a municipal corporation**, hereinafter referred to as "Grantor", owner of land, hereby grants and warrants to **WISCONSIN ELECTRIC POWER COMPANY, a Wisconsin corporation doing business as We Energies**, hereinafter referred to as "Grantee", a permanent easement upon, within and beneath a part of Grantor's land hereinafter referred to as "easement area".

The easement area is described as the north twelve (12) feet of the south thirty (30) feet of grantor's premises known as **Lots 5 & 6 Block 2 and Lot 1 Block 3, in Wilson's Addition**, being a subdivision of a part of the Southeast 1/4 of the Northwest 1/4 of Section 4, Township 4 North, Range 15 East, City of Whitewater, Walworth County, Wisconsin.

The location of the easement area with respect to Grantor's land is as shown on the attached drawing, marked Exhibit "A", and made a part of this document.

RETURN TO:
We Energies
PROPERTY RIGHTS & INFORMATION GROUP
231 W. MICHIGAN STREET, ROOM A252
PO BOX 2046
MILWAUKEE, WI 53201-2046

WSS 00014 & WSS00018
(Parcel Identification Number)

1. **Purpose:** The purpose of this easement is to install, operate, maintain repair, replace and extend underground utility facilities, pipeline or pipelines with valves, tieovers, main laterals and service laterals, together with all necessary and appurtenant equipment under and above ground, including cathodic protection apparatus used for corrosion control, as deemed necessary by Grantee, for the transmission and distribution of natural gas and all by-products thereof, or any liquids, gases, or substances which can or may be transported or distributed through a pipeline, including the customary growth and replacement thereof. Trees, bushes, branches and roots may be trimmed or removed so as not to interfere with Grantee's use of the easement area.

2. **Access:** Grantee or its agents shall have the right to enter and use Grantor's land with full right of ingress and egress over and across the easement area and adjacent lands of Grantor for the purpose of exercising its rights in the easement area.

3. **Buildings or Other Structures:** Grantor agrees that no structures will be erected in the easement area or in such close proximity to Grantee's facilities as to create a violation of all applicable State of Wisconsin electric and gas codes and any amendments thereto.

4. **Elevation:** Grantor agrees that the elevation of the ground surface existing as of the date of the initial installation of Grantee's facilities within the easement area will not be altered by more than 4 inches without the written consent of Grantee.

5. **Restoration:** Grantee agrees to restore or cause to have restored Grantor's land, as nearly as is reasonably possible, to the condition existing prior to such entry by Grantee or its agents. This restoration, however, does not apply to the initial installation of said facilities or any trees, bushes, branches or roots which may interfere with Grantee's use of the easement area.

6. **Exercise of Rights:** It is agreed that the complete exercise of the rights herein conveyed may be gradual and not fully exercised until some time in the future, and that none of the rights herein granted shall be lost by non-use.

7. **Binding on Future Parties:** This grant of easement shall be binding upon and inure to the benefit of the heirs, successors and assigns of all parties hereto.

R-3

Grantor:

City of Whitewater, a municipal corporation

By _____

(Print name and title): _____

By _____

(Print name and title): _____

Personally came before me in _____ County, Wisconsin on _____, _____,

the above named _____, the _____

and _____, the _____

of the CITY OF WHITEWATER, a municipal corporation, for the municipal corporation, by its authority.

_____

Notary Public Signature, State of Wisconsin

_____

Notary Public Name (Typed or Printed)

(NOTARY STAMP/SEAL)

My commission expires _____

This instrument was drafted by Jeffrey Fowle on behalf of Wisconsin Electric Power Company, PO Box 2046, Milwaukee, Wisconsin 53201-2046.

R-3

July 29, 2011

Dean Fischer-Public Works Director
City of Whitewater
312 W. Whitewater St.
Whitewater, WI 53190

RE: *Easement for North Street Bridge replacement-Natural Gas*

Dear Dean,

In order to install the new natural gas facilities located north of the new North Street Bridge, we will need to obtain easement rights prior to installation. Enclosed, please find the easement to be signed by the appropriate city officials and notarized. Please return one signed copy and retain one copy of the easement for your records. Upon receiving the signed easement, I will have it recorded with the Office of the Register of Deeds.

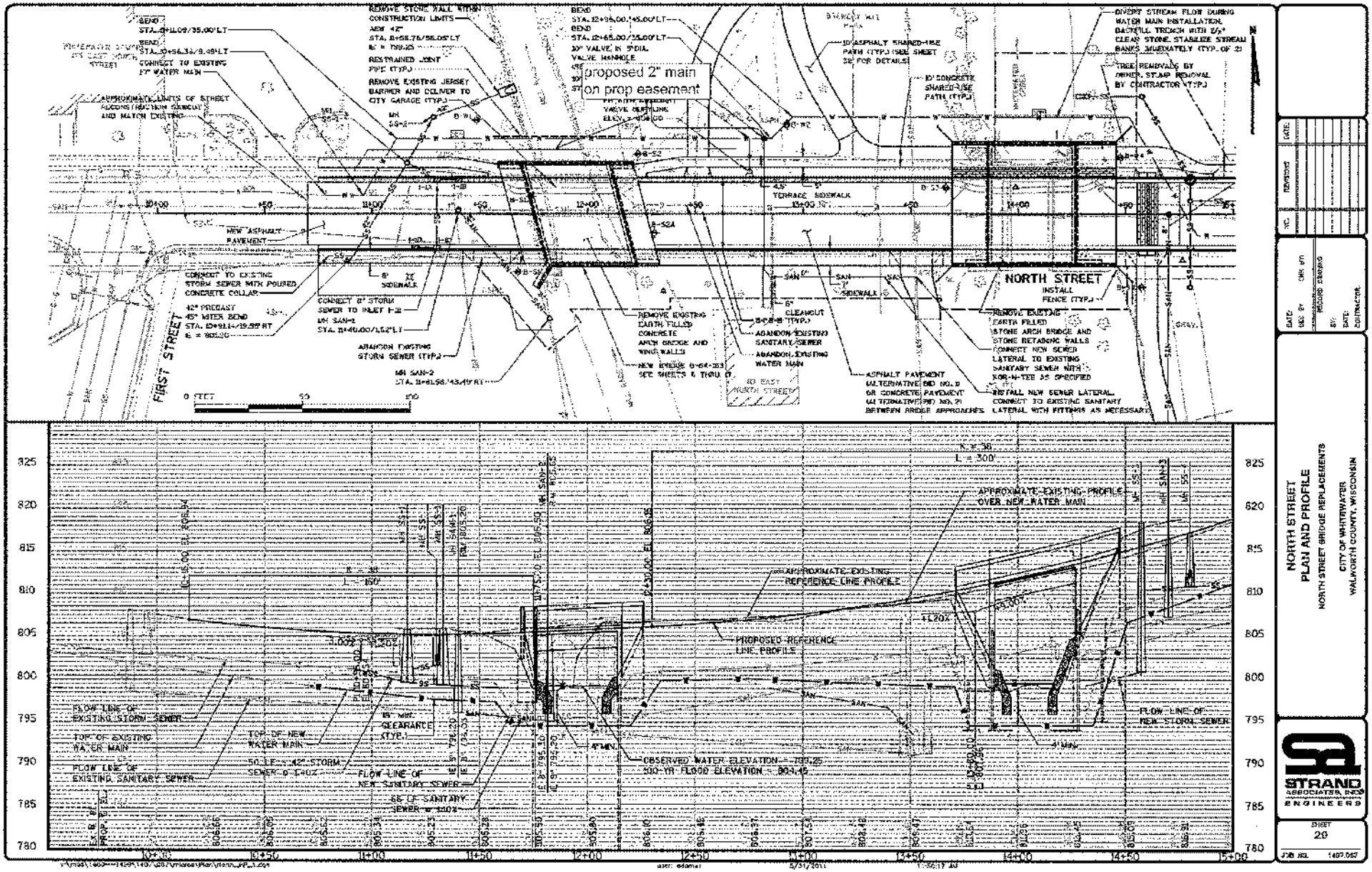
Please note that the Public Service Commission gives you a minimum of five days to examine the materials provided before signing an easement agreement. However, you have the option to waive the five-day review period and sign and return the easement at any time.

For your safety, we will have Diggers Hotline locate underground utilities including natural gas, electric, telephone, cable television, sewer and water. **We also need your help to make sure we don't damage any of your privately maintained facilities**. To avoid damage to your facilities – such as an underground sprinkler system, electric, propane, sewer and sump pump lines, well, septic system, yard lighting, etc. – please notify us of their location. **It is very important that we are aware of these facilities. We Energies and/or its agents are *not* responsible for damage to your facilities that we are *not* aware of before our work begins.**

If you have any questions, please call me at 414-651-4459 and thanks again for your business. We appreciate your prompt attention to this matter.

Sincerely,

Jeff Fowle
Right of Way Agent- Western District
We Energies
315 William Street
Watertown, WI 53094
Email: jeff.fowle@we-energies.com



NORTH STREET
PLAN AND PROFILE
NORTH STREET BRIDGE REPLACEMENTS
CITY OF WHITEWATER
WALWORTH COUNTY, WISCONSIN

STRAND ASSOCIATES, INC.® ENGINEERS

SHEET 20

JOB NO. 1407.067

R-3

R-4

RESOLUTION AUTHORIZING THE CITY OF WHITEWATER TO ENTER INTO AN INTER-GOVERNMENTAL AGREEMENT WITH WALWORTH COUNTY CONCERNING THE ELKHORN ROAD VENTURE, L.L.C. SPECIAL CHARGES

WHEREAS, the City of Whitewater and Elkhorn Road Venture, L.L.C. entered into a Development Agreement that provided that Elkhorn Road Venture, L.L.C. would make pilot payments based on a formula, and if it failed to make the payments when due, the pilot payments would be collected as a special charge and be placed on the tax roll as a special charge, and

WHEREAS, Elkhorn Road Venture, L.L.C. failed to pay its pilot payments when due, and the City of Whitewater placed approximately $123,492.60 on the tax roll as a special charge against the real estate owned by Elkhorn Road Venture, L.L.C., and

WHEREAS, said charges were submitted to Walworth County for its August 2011 settlement payment to the City of Whitewater, and

WHEREAS, the Walworth County Finance Committee recommended the rejection of the payment of said special charges to the City of Whitewater, and

WHEREAS, subsequent to the Walworth County Finance Committee's recommendation, City of Whitewater staff and Walworth County staff met to discuss the issue, and

WHEREAS, the Walworth County representatives and the City of Whitewater representatives entered into a settlement agreement, subject to the approval of the City of Whitewater Common Council and the Walworth County Board, and

WHEREAS, the Walworth County Board of Supervisors at its August 9, 2011 meeting unanimously approved the settlement agreement, and

WHEREAS, said settlement agreement is in the best interests of the City of Whitewater.

Now, therefore, **BE IT RESOLVED** that the City Manager and the City Clerk of the City of Whitewater are authorized to sign the attached Intergovernmental Agreement between Walworth County and the City of Whitewater concerning the settlement payment for the Elkhorn Road Venture, L.L.C. special charges.

Resolution introduced by Councilmember _____, who moved its adoption. Seconded by Councilmember _____.

AYES:

NOES:

_____
Kevin M. Brunner, City Manager

ABSENT:

ADOPTED:

_____
Michele R. Smith, City Clerk

R-4

Kevin M. Brunner, City Manager
312 W. Whitewater Street
Whitewater, WI 53190
kbrunner@ci.whitewater.wi.us

City of Whitewater

Memo

To: Common Council

From: Kevin Brunner

Date: 08/11/2011

Re: Intergovernmental Agreement with Walworth County Regarding Payment for Special Charges (Payments in Lieu of Tax by Elkhorn Road Ventures)

Attached is a resolution and agreement between the City and Walworth County regarding payment for special charges (Payments in Lieu of Taxes) by Elkhorn Road Ventures LLC. We briefed you on this issue last month because the County Finance Committee had recommended to the full County Board that Walworth County not pay for these special charges and we asked the County Board to delay action until we could discuss this dispute with them.

We believe that we have submitted a proper special charge to the County pursuant to Wisconsin State Statute 74.04 (4) for payment by the County when annual tax settlements take place. The County disagrees with this characterization.

City Attorney McDonell, Finance Director Saubert and I met with County officials last week to discuss this issue and we were able to negotiate the agreement that we are recommending that you approve at the August 16th Council meeting. The proposed agreement was subsequently drafted and presented to the County Board at its August 9th meeting and was unanimously approved, subject to City Council approval. I presented the City's position on this issue at the County Board meeting and the Board was very receptive and thought that this was a win-win for both governments.

The City will indemnify the County for special charge payments it will make to the City. We fully expect to collect these special charges in the future and would make the County whole for any the payments made to the City until such time as the property is developed, sold or is foreclosed (the latter is a minimum three year period).

If any of you have any questions, please contact me.

R-4

I MOVE TO AMEND Resolution No. 35 – 07/11 beginning on line 18 as follows:

Resolution No. 35 – 07/11
Directing the Treasurer to Reject Settlement of a Special Assessment in the City of Whitewater Relative to Tax Incremental Financing (TIF) District No. 4

Moved/Sponsored by: Finance

WHEREAS, the City of Whitewater ("City") Tax Incremental Financing (TIF) District No. 4 includes a developer's agreement with a payment in lieu of taxes clause; and,

WHEREAS, the developer notified the City that it is unable to make the payment of $124,000 to the City in lieu of taxes; and,

WHEREAS, the City has included the $124,000 payment in lieu of taxes on its tax roll as a special assessment, to be paid by the county in August when the county annually settles special assessments with its municipalities; and,

WHEREAS, the Wisconsin Department of Revenue – Local Services Division has indicated that the payment in lieu of taxes in Whitewater TIF District No. 4 does not appear to meet the definition of a special assessment; and,

WHEREAS, the finance committee recommends the county reject settlement of this payment in lieu of taxes as a special assessment; and,

~~**NOW, THEREFORE, BE IT RESOLVED** that the Walworth County Board of Supervisors hereby directs the County Treasurer to reject settlement of the amount of $124,000 as a special assessment relative to the payment in lieu of taxes in the City of Whitewater TIF District No. 4.~~

~~**BE IT FURTHER RESOLVED** that the City of Whitewater be notified that the county has rejected settlement of this payment as a special assessment.~~

WHEREAS, subsequent to the Finance Committee's recommendation, County staff met with Whitewater City staff; and,

WHEREAS, a draft agreement was prepared that will hold the County harmless from financial loss as a result of settling with the City for the special assessment.

NOW, THEREFORE, BE IT RESOLVED that the proper County officials be authorized to execute the attached agreement provided the City of Whitewater executes the agreement on or before August 18, 2011.

BE IT FURTHER RESOLVED that if the Agreement is executed by both parties, the County Treasurer be directed to settle the above-stated special assessment with the City of Whitewater.

R-4

BE IT FURTHER RESOLVED that if the Agreement is not executed by both parties in the manner set forth above, the County Treasurer be directed to reject settlement of said special assessment.

Nancy Russell	Kimberly S. Bushey
County Board Chair	County Clerk

County Board Meeting Date: ~~July 12, 2011~~ August 9, 2011

Action Required: Majority Vote X Two-thirds Vote _____ Other _____

Policy and Fiscal Note is attached.
Reviewed and approved pursuant to Section 2-91 of the Walworth County Code of Ordinances:

David A. Bretl Date	Nicole Andersen Date
County Administrator/Corporation Counsel	Deputy County Administrator - Finance

If unsigned, exceptions shall be so noted by the County Administrator.

R-4

Policy and Fiscal Note
Resolution No. 35 - 07/11

I. **Title:** Directing the Treasurer to Reject Settlement of a Special Assessment in the City of Whitewater Relative to Tax Incremental Financing (TIF) District No. 4

II. **Purpose and Policy Impact Statement:** The purpose of this resolution is to direct the County Treasurer to reject settlement of a special assessment submitted by the City of Whitewater in regard to a payment in lieu of taxes in Whitewater TIF District No. 4 in the amount of $124,000 in the event the City of Whitewater fails to execute the attached agreement.

III. **Budget and Fiscal Impact:** Passage of this resolution would cause the City of Whitewater to bear the loss of the failure of this property owner to fulfill its payment in lieu of taxes (PILOT) obligation. Failure to pass this resolution would mean that the County would treat this PILOT as a special assessment and settle with the City of Whitewater for the full amount of the unpaid pilot.

IV. **Referred to the following standing committees for consideration and date of referral:**

Committee: Finance Meeting Date: April 28, 2011

Vote: 4 – 0

County Board Meeting Date: ~~July 12, 2011~~ August 9, 2011

Policy and fiscal note has been reviewed and approved as an accurate statement of the probable policy and fiscal impacts associated with passage of the attached resolution.

David A. Bretl Date
County Administrator/Corporation Counsel

Nicole Andersen Date
Deputy County Administrator - Finance

Draft 08/09/11

R-4

INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN WALWORTH COUNTY AND THE CITY OF WHITEWATER CONCERNING THE TREATMENT OF CERTAIN SPECIAL CHARGES

This Agreement entered into on the date set forth on the signature page by and between Walworth County, a quasi-municipal corporation existing under the laws of the State of Wisconsin ("County") and City of Whitewater, a municipal corporation existing under the laws of the State of Wisconsin ("City").

WITNESSETH THAT:

WHEREAS, on January 26, 2007 the City entered into an agreement ("Redevelopment Agreement") with Elkhorn Road Venture, LLC ("Developer") relative to the redevelopment of certain lands ("Subject Parcels") located in the City of Whitewater; and,

WHEREAS, pursuant to the Redevelopment Agreement, the City made numerous improvements to the public infrastructure serving the Subject Parcels to promote their redevelopment; and,

WHEREAS, in consideration of the improvements made by the City, the Developer guaranteed that the Subject Parcels would attain certain levels of assessed valuation ("Required Valuation") beginning on January 1, 2008 and in each subsequent year; and,

WHEREAS, in the event the Required Valuation was not achieved, the Developer agreed to make a payment in lieu of taxes (PILOT) to the City; and,

WHEREAS, the approximate amount of the PILOT is the City tax rate applied to the difference between the actual valuation of the Subject Parcels and the Required Valuation; and,

WHEREAS, in the event the PILOT was unpaid, the Redevelopment Agreement stipulated that each unpaid PILOT would become special charges; and,

WHEREAS, pursuant to Section 74.24 of the Wisconsin Statutes, the City submitted the unpaid PILOT attributable to the Subject Parcels as special charges ("Special Charges") to the County for settlement; and,

WHEREAS, pursuant to Resolution 94-12/86 the County has settled with its towns and municipalities for unpaid special assessments and has had a long-standing practice of settling for unpaid special charges; and,

WHEREAS, the Special Charges submitted to the County for settlement in August 2011 are in the amount of $123,492.60; and,

WHEREAS, the City asserts that the unpaid PILOT obligation is a special charge as defined in Section 74.01(4) of the Wisconsin Statutes; and,

R-4

WHEREAS, the County disputes said characterization; and,

WHEREAS, the parties agree that it is in the interest of all taxpayers to settle this matter by agreement rather than litigation.

NOW, THEREFORE, it is agreed by and between the parties as follows:

1. The County will settle with the City for the Special Charges pursuant to the procedures set forth in 74.29 of the Wisconsin Statutes and will do so in future years in which the County settles with other similarly-situated municipalities in the County.

2. The City agrees to indemnify the County against any financial loss that the County may incur on account of the settlements made to the City by the County for Special Charges together with applicable penalties and interest as provided by law. This guarantee shall be from the City of Whitewater and shall not be paid by a Tax Incremental District or the Community Development Authority except as provided in paragraph 2A. It is anticipated by the Parties that this guarantee will be enforced at such time as the County acquires and disposes of the Subject Parcels pursuant to procedures set forth in Chapter 75 of the Wisconsin Statutes.

2A. Payments pursuant to the guarantee may be made from the Tax Incremental District but only to the extent of any PILOT payments made to the City by the Developer subsequent to the effective date of this Agreement.

3. The parties agree to cooperate with each other to collect taxes, special charges and associated penalties and interest from the Developer.

4. The County's commitment to settle Special Charges is premised on the Developers Agreement dated January 26, 2007. Any amendments to the Developers Agreement which increases the amount of the special charge will relieve the County of its obligation under paragraph 1; however, such amendment shall not relieve the City of its obligation pursuant to paragraph 2.

5. A notice, demand or other communication under this Agreement by any party to any other party shall be sufficiently given or delivered if it is dispatched by registered or certified mail, postage prepaid, return receipt requested, or delivered personally to:

    a. In the case of Walworth County:
    Kimberly S. Bushey, County Clerk
    P.O. Box 1001
    Elkhorn, WI 53121

    With copy to:
    David A. Bretl, County Administrator
    P.O. Box 1001
    Elkhorn, WI 53121

R-4

b. In the case of the City:
City of Whitewater
Attn: Kevin Brunner, City Manager
P.O. Box 178
Whitewater, WI 53190

With copy to:
Wallace K. McDonell, Esq.
P.O. Box 59
Whitewater, WI 53190

6. All Terms and conditions included in this Agreement are understood as NO CONSTRUCTION AGAINST ANY PARTY. This agreement is the product of informed negotiations between the County, the parties, all of whom are acknowledged to have been represented by competent and informed counsel. If any part of this Agreement is deemed to be unclear or ambiguous, it shall be construed as if it were drafted jointly by the parties.

WALWORTH COUNTY:

BY: _____
Kimberly S. Bushey — Date
County Clerk

BY: _____
Nancy Russell — Date
County Board Chair

CITY OF WHITEWATER:

BY: _____
Kevin Brunner — Date
City Manager

BY: _____
Michele Smith — Date
City Clerk

Landmarks
Marshall
C-1

CITIZEN SERVICE INFORMATION FORM

Name (Print): Marshall (Last) Alan (First) R (Middle) Date: July 15, 2011

Home Address: 1609 Turtle Mound Circle

Business Name:

Business Address:

Telephone (Home): 262-473-3221 (Work): 262-965-2131

E-mail address: alcontoy (at) Charter.com

How long have you lived in the City of Whitewater?: 46 Years

Which Boards, Commissions, and/or Committees interest you?

Land Marks Commission

Please give a brief overview of your background, experience, interest, or concerns in the above areas:

I have always been interested in history. In fact I have a teaches degree in Social Studies. Since living in Whitewater I have become very interested in Whitewater's History. Being the vice president of the Whitewater Historical Society I believe this ~~has~~ this would be a positive link between the Land Marks Commission and the Historical Society, this would provide excellent communication between the two groups

References:

1. Kim Sines — 512 Verona Lane, Whitewater WI 53190 — Phone: 473-4550

2. Robin Fox — 512 Verona Ln, Whitewater, WI 53190 — Phone: 473-7553

Return this form to:
City Clerk
312 W. Whitewater Street
Whitewater, WI 53190
msmith@ci.whitewater.wi.us

Signature

Revised 3/18/05

Landmarks
Wendt
C-1

CITIZEN SERVICE INFORMATION FORM

Name (Print): Wendt, Nancy S. Date: 7-26-11
Last First Middle

Home Address: 622 W. Main St.

Business Name: ~~Same~~ VICTORIA ON MAIN B&B

Business Address: Same

Telephone (Home): 262-473-8400 (Work): same

E-mail address: vicon main @ sbc global.net

How long have you lived in the City of Whitewater?: Since 1984

Which Boards, Commissions, and/or Committees interest you?

Please give a brief overview of your background, experience, interest, or concerns in the above areas:

Own a historical home

References:

1. ALAN Mawshaw Phone: (262) 473-3221
1609 turtle mound circle
white water WI

2. MARIANN SCOTT Phone: (262) 473-4219
421 E. CRAWATH ST
WHITEWATER

Return this form to:
City Clerk
312 W. Whitewater Street
Whitewater, WI 53190
msmith@ci.whitewater.wi.us

Nancy S Wendt
Signature

Revised 3/18/05

C - 2

Kevin M. Brunner, City Manager
312 W. Whitewater Street
Whitewater, WI 53190
kbrunner@ci.whitewater.wi.us

City of Whitewater

Memo

To: Common Council

From: Kevin Brunner

Date: 08/10/2011

Re: Recommendation to Hire GRAEF for Zoning Ordinance Re-Write Project

---

Pursuant to the request of the Common Council in May, a Request for Proposals (RFP) was solicited of qualified firms to perform services related to updating and re-writing the City Zoning Ordinance. The RFP was sent to approximately 15 firms but only two responded with proposals.

Subsequently, the two firms, Teska and Associates (Evanston, Illinois) and GRAEF (Milwaukee), were interviewed by a consultant selection committee composed of Council Members Lynn Binnie and Patrick Singer, Mary Nimm, Cameron Clapper and myself. The two firms were rated based upon the Qualification Based Selection (QBS) system and GRAEF received the highest score and was the unanimous selection of the interview panel. GRAEF also submitted the lowest project cost of $56,100 (not to exceed) with the Teska proposed cost at $65,000 plus.

The interview panel is recommending that GRAEF be awarded the attached contract by the Common Council to perform this work. This work will take place over a projected 18 month period beginning in September of this year with completion in February of 2013. This work would take place over three separate City budget or fiscal years with the following estimated costs to be incurred in each year: 2011-$20,000, 2012-$25,000 and 2013-$11,100.

There are sufficient funds in the 2011 Planning Budget to cover the anticipated 2011 contract costs (this is primarily due to the fact that the need for outside planning services this year has been greatly reduced due to a general lack of building activity that needs Plan and Architectural Review). In 2012 and 2013, there likely will be a need to increase the Planning Budget for outside services somewhat to adequately fund the Zoning Re-Write Project.

If any of you have any questions regarding this recommended contract or the scope of the services to be provided by the consultant, please feel free to contact me.

C-2

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

GRAEF

collaborate / formulate / innovate

DRAFT August 16, 2011

City of Whitewater
312 W. Whitewater Street
Whitewater, WI 53190

Subject: Zoning Code Rewrite

Dear Mr. Brunner:

Per your request, Graef-USA Inc. (GRAEF) is pleased to provide this proposal for services to the City of Whitewater (Client). An executed copy of this proposal will become our Agreement. This proposal is for professional services for the Zoning Code Rewrite (Project). This proposal is subject to GRAEF's Standard Terms and Conditions, a copy of which is attached and incorporated by reference.

For this Project, GRAEF will provide the following Basic Services:

- See Appendix A entitled Work Plan

GRAEF will endeavor to perform the proposed Basic Services per the following schedule:

- See Appendix B entitled Project Schedule

For all Basic Services, Client agrees to compensate GRAEF based on the percentage of work completed for a lump sum not to exceed $56,100. For all Additional Services, Client agrees to compensate GRAEF at an hourly rate as follows:

- Larry Witzling, Principal $135/hr
- Carolyn Esswein, Project Manager $131/hr
- Erin Ruth, Planner $85/hr
- Peter Ferretti (GIS) $110/hr
- Other personnel: standard company rates

The client will only be charged for additional services if agreed to in writing.

To accept this proposal, please sign and date both of the enclosed copies and return one to us. Upon receipt of an executed copy, GRAEF will commence work on the Project.

Graef-USA Inc. looks forward to providing services to the City of Whitewater.

Sincerely,

Graef-USA Inc.

Pat Kressin
Principal

Larry Witzling
Principal

Accepted by: City of Whitewater

_____
(Signature)
(Name Printed)

_____
(Title)

Date: _____

C-2

Graef-USA Inc.'s STANDARD TERMS AND CONDITIONS

These Standard Terms and Conditions are material terms of the Professional Services Agreement proposed on August 16, 2011 (Agreement) by and between Graef-USA Inc. (GRAEF) and the City of Whitewater (Client):

Standard of Care: GRAEF shall exercise ordinary professional care in performing all services under this Agreement, without warranty or guarantee, expressed or implied.

Client Responsibilities: Client shall at all times procure and maintain financing adequate to timely pay for all costs of the PROJECT as incurred; shall timely furnish and provide those services, items and/or information defined in Agreement, as amended, and shall reasonably communicate with and reasonably cooperate with GRAEF in its performance of this Agreement. GRAEF shall be entitled to rely on the accuracy and completeness of any services, items and/or information furnished by Client. These terms are of the essence.

Limitation of Liability: **Client and GRAEF agree that GRAEF's liability for any direct, indirect, incidental or consequential economic losses or damages arising under or in connection with this agreement (including any attorney's fees or claims expenses) shall be limited to the sum of one hundred thousand dollars ($100,000.00).**

Additional Services: Client may request or it may become necessary for GRAEF or its subconsultant(s) to perform Additional Services in respect of this Agreement. Client shall pay for such Additional Services above and beyond charges for Basic Services set forth in this Agreement. GRAEF will notify Client in advance of GRAEF's intention to render Additional Services. Client's failure to instruct GRAEF not to perform the proposed Additional Service shall constitute Client's acceptance of such Additional Service and agreement to pay for such Additional Service in accordance with the Invoicing & Payment terms of this Agreement.

Invoicing & Payment: GRAEF may issue invoices for services rendered and expenses incurred at such times and with such frequency as GRAEF deems necessary or appropriate in GRAEF's discretion. All invoices are due and payable upon receipt and shall be considered past due if not paid within thirty (30) calendar days of the due date. **Prompt and full payment of all periodic invoices or other billings issued by GRAEF pursuant to this Agreement is of the essence of this Agreement.** In the event that Client fails to promptly and fully pay any invoice as and when due, then, and in addition to any other remedies allowed by law, GRAEF, may, in its sole discretion, suspend performance of all services under this Agreement upon seven (7) calendar days' written notice to Client, and immediately invoice Client for all unbilled work-in-progress rendered and other expenses incurred. Upon GRAEF's receipt of full payment, in good funds and without offset, of all sums invoiced in connection with any such declaration of suspension, GRAEF shall resume services, **provided that** the time schedule and compensation under this Agreement shall be equitably adjusted in a manner acceptable to GRAEF to compensate GRAEF for the period of suspension plus any other reasonable and necessary time and expenses GRAEF suffers or incurs to resume services.. No failure by GRAEF to exercise its right to suspend work and accelerate sums due shall in any way waive or abridge Client's obligations to GRAEF or GRAEF's rights to later suspend work and accelerate terms. Client agrees GRAEF shall incur no liability whatsoever to Client, or to any other person, for any loss, cost or expense arising from any such suspension by GRAEF, either directly or indirectly. In addition, simple interest shall accrue at the lower of 1.5% per month (18% per annum), or the maximum interest rate allowable by law, on any invoiced amounts remaining unpaid for more than 60 days from the date of the invoice. Payments made shall be allocated as follows: (1) first to unpaid collection costs; (2) second to unpaid accrued interest; and (3) last to unpaid principal of the oldest invoice.

C-2

Graef-USA Inc.'s STANDARD TERMS AND CONDITIONS (continued)

Insurance: GRAEF shall procure and maintain liability insurance policies, including professional liability, commercial general liability, automobile liability, and workers' compensation insurance for the duration of this Agreement and shall, upon request, produce certificates evidencing the maintenance of such coverages. Should Client desire additional insurance, GRAEF shall endeavor reasonably to procure and maintain such additional insurance, but Client shall reimburse GRAEF for any additional premiums or other related costs that GRAEF incurs.

Contractor Submittals: The scope of any review or other action taken by GRAEF or its subconsultant(s) in respect of any contractor submittal, such as shop drawings, shall be for the limited purpose of determining if the submission generally conforms with the overall intent of the design of the work that is the subject of this Agreement, but not for purposes of determining accuracy, completeness or other details such as dimensioning or quantities, or for substantiating instructions or performance of equipment or systems. GRAEF shall not be liable or responsible for any error, omission, defect or deficiency in any contractor submittal.

Dispute Resolution: GRAEF and Client shall endeavor to resolve all disputes first through direct negotiations between the parties' informed and authorized representatives, then through mediation. If mediation fails to fully resolve all disputes within 120 calendar days of the first written request for mediation, either party may pursue any remedy it deems appropriate to the circumstances.

No Assignment: This Agreement is not subject to assignment, transfer or hypothecation without the written consent of both parties expressly acknowledging such assignment, transfer or hypothecation.

Governing Law: This Agreement, as amended, and any disputes or controversies arising in connection with this Agreement shall be governed and resolved by the laws of the State of Wisconsin, without regard to said state's choice of law rules.

Severance of Clauses: In the event that any term, provision or condition of this Agreement is void or otherwise unenforceable under the law governing this Agreement, then such terms shall be stricken and the balance of this Agreement shall be interpreted and enforced as if such stricken terms never existed.

Integrated Agreement: The parties' final and entire agreement is expressed in the attached proposal letter and these Standard Terms and Conditions. All prior oral agreements or discussions, proposals and/or negotiations between the parties are merged into and superceded by this Agreement. No term of the parties' Agreement may be orally modified, amended or superceded.

C-2

Appendix A: Work Plan

A. PUBLIC PARTICIPATION PLAN

1. Public participation plan

GRAEF will prepare, present, discuss and revise a complete public participation plan to engage all of the critical parties in the process, including:

- Staff
- Elected officials
- Local neighborhood residents
- Property development professionals
- Representatives of major institutions
- Representatives of major groups of stakeholders

This process may include workshops (i.e. charrettes), focus groups, one-on-one interviews, open house presentations, and related materials. The Public Participation Plan will follow the general outline proposed in the schedule including meetings, materials to be presented, formats, and the anticipated primary issues to be discussed.

A key component of the plan will be working with the Zoning Code Rewrite Steering Committee throughout the process. Meetings with the Steering committee are noted throughout this scope, the schedule, and the budget. The following page includes the Public Participation Matrix. This matrix includes moderate revisions to the number and type of meetings proposed in the RFP.

2. Website information

As part of the process, GRAEF will develop a series of materials that are suitable for inclusion on the City's website. This will allow citizens and other interested parties to follow the process on-line, review meeting materials, and download draft reports. The web site will include opportunities for comments and suggestions throughout the project.

B. PROJECT ORIENTATION

1. Staff meeting

GRAEF will meet with City staff to conduct an overall project orientation. GRAEF will prepare an agenda for the meeting in conjunction with the City project manager. Discussion topics will include, but are not limited to:

- Staff roles and responsibilities
- Overall scope and schedule
- Task reviews and, if needed, modifications
- Key issues regarding sustainability
- Key issues regarding other best practice opportunities (including form-based codes and hybrid codes)
- Preliminary discussion of other key issues
- Discussion and revisions of the public participation plan
- Communication channels and responsibilities

2. Steering Committee meeting

A Steering Committee meeting will follow the Staff meeting and will include a similar agenda. In addition, the Steering Committee meeting will include a more focused discussion on the challenges and opportunities of the current Code. If appropriate, the first Steering Committee meeting might also include key members of the Plan Commission or Council.

3. Preparation of materials

GRAEF will prepare materials for the meetings including examples from other Codes, materials regarding Whitewater, and other items as needed. If appropriate, this presentation may be conducted using PowerPoint slides. It is also anticipated that the City will provide some materials regarding past studies, ordinances, and related items.

C-2

Work Plan

C. ISSUE IDENTIFICATION

1. Analysis of key issues

GRAEF will begin the process with a preliminary analysis of key issues in the Code. This analysis will follow the traditional model of a SWOT evaluation – strengths, weaknesses, opportunities, and threats. The analysis will include GRAEF's initial observations as well as examples from comparable communities and codes. Topics may include:

- Maintaining and conserving community character
- Procedures that promote economic development while maintaining quality
- Best practice examples for sustainability, form-based codes, design, and preservation
- Questions of fairness, complexity, and clarity in the review process

2. Written/digital summary of key issues

GRAEF will prepare a summary of the code issues for discussion. Discussion materials will include text, maps, and design/development illustrations that highlight areas of opportunity or conflict. GRAEF's written summary will begin as a discussion draft and will be revised as a final document following the meetings with the Steering Committee, general public, Plan Commission, and Council.

3. Steering Committee meeting

GRAEF will meet with the Steering Committee to discuss the key issues and revise them as needed.

4. Public information meeting with the Plan Commission and Council

GRAEF will present the key issues to the general public, Plan Commission, and Council as a preliminary statement for discussion. The remainder of the meeting will be conducted as a "listening" session, where audience input will guide changes in the list of potential Code updates.

D. ZONING CODE AUDIT AND ANALYSIS

1. Annotated code: issues, options, approaches

GRAEF staff will audit the existing Code and annotate specific questions and options. Typically this is prepared using "track changes" in a numbered line Microsoft Word document. This will show potential deletions, additions, and questions to be discussed. This process will organize the commentary according to key issues such as:

a. Neighborhood conservation
b. Economic development
c. Innovations for sustainability
d. Innovations using form-based or hybrid codes
e. Reducing unnecessary complexity
f. Improving processes for applicants and neighbors
g. Relation to issues from other Whitewater policies and ordinances
h. Definitional issues
i. Low-controversy "clean-up" issues in text

2. Written/digital summary of key issues

Based on the annotated audit, GRAEF will create a summary of key issues to be addressed.

3. Staff and Steering Committee workshop

GRAEF anticipates an in-house workshop (half-day) with staff and the Steering Committee that includes a detailed page-by-page review of the entire code. This process may be organized or prioritized by different types of issues depending on the direction of the staff and/or Steering Committee.

4. Plan Commission/Council joint meeting

GRAEF will present the results of the audit process to a joint meeting of the Plan Commission and City Council. GRAEF will present the audit and proposed changes according to the list of issues developed previously. In addition, GRAEF will summarize the overall strengths and weaknesses of the Code.

E. ANNOTATED ZONING CODE OUTLINE

1. Annotated version of current zoning indicating major issues, options, approaches

GRAEF staff will expand the "audit" draft in track changes format with more specific recommendations for deletions, additions, and options. Again, this will be prepared in Microsoft Word using a numbered line format. This process will focus on the primary concerns raised as part of the prior review and analysis by staff, Steering Committee, Plan Commission, and Council. Special attention will be given to the way in which the Code addresses the specific objectives identified in the RFP.

2. Concepts for maps and illustrations

A major new component of this draft of the Code will be the inclusion of preliminary illustrations (with examples) and revised maps. This draft is intended for discussion purposes. Alternatives may be presented at different levels of complexity and detail.

3. Memorandum explaining outline and approach

GRAEF will prepare a memo describing our approach to the revisions.

4. Staff meeting

GRAEF anticipates a staff meeting to confirm the direction and aporoach that GRAEF has adopted and to determine basic revisions that might be needed.

5. Steering Committee meeting

GRAEF will meet with the Steering Committee to confirm and revise the direction and content of the proposed Code revision.

6. Public Meeting with Council, Plan Commission

GRAEF will present the key issues to the general public, Council and Plan Commission as a preliminary recommendation. This presentation will be conducted as a "concept confirmation" session, in which the direction of the changes should be confirmed and/or revised as needed. Subsequent to this meeting, GRAEF will incorporate the key changes and submit a revised annotated outline.

F. CODE DRAFTING, REVIEW, REVISIONS (2 ITERATIONS)

1. Draft code changes

GRAEF will continue the Code revision process in track changes with two iterations of edits. These drafts, will focus on the specific additions and deletions to text, illustrations, and map changes. Commentaries as to the purpose, rationale, or related arguments will be included in separate "commentary" form in the draft. GRAEF anticipates presenting the Code in modules following the general approach described in the RFP (this may be revised in response to the prior discussion):

a. Definitions
b. General provisions
c. Zoning district regulations and permitted uses
d. Dimensional and development standards
e. Form-based zoning provisions
f. Special development standards
g. Administration and enforcement

2. Draft map changes

GRAEF will work with Whitewater's GIS staff to prepare maps in the appropriate file formats. This process will address questions of unique maps and overlay districts (along with their associated regulations) that may be needed for either from-based or hybrid codes (should that direction be desired by the Whitewater).

3. Design illustrations

GRAEF will include specific design illustrations for guidelines, as well as alternative formats for presenting and discussing the guidelines. GRAEF is sensitive to the need for long-term maintenance of graphics (photographs illustrations, and drawings) and, therefore, will use file formats that are suitable for staff modification.

4. Presentation and workshop materials

GRAEF will prepare materials for workshops and meetings with key focus groups.

5. Public focus groups and "testing" workshops (4)

GRAEF will conduct detailed focus group discussions/workshops. These workshops will also include staff, officials, and other members of the community as observers or participants. The format for these workshops will be based on the idea of a small-group discussion "around the table." GRAEF anticipates four charrette-style meetings with the following key groups:

a. Neighborhoods and residents – especially those impacted by expansion of university-related development
b. Downtown businesses and merchants
c. Property development professionals concerned with both residential and commercial development opportunities
d. Individuals and organizations concerned primarily with community-wide issues related to sustainability, environmental quality, and historic preservation.

These sessions are expected to include potential "test" cases in which attendees (a) review concepts and (b) comment upon the fairness, balance, and appropriateness of the regulations and procedures. Additional workshops can also be added to the scope of work if needed.

6. Staff meetings (2)

GRAEF anticipates a staff meeting to review the results of the workshops and determine the types of modifications to the Code that might be appropriate. GRAEF anticipates conducting this process twice, for each of two iterations of the Code.

7. Steering Committee meetings (2)

GRAEF will meet with the Steering Committee to discuss the workshop results and proposed changes. GRAEF anticipates conducting this process twice, for the two revisions of the Code.

8. Public Meeting with the Plan Commission and Council

GRAEF will present the key issues to the general public, Plan Commission, and Council as a preliminary recommendation. Prior to the meeting, GRAEF anticipates that the proposed Code changes and related materials will be posted on the City's web site along with appropriate mechanisms for receiving comments from citizens and interested parties. GRAEF will present the proposed Code changes at a Public Meeting. This presentation will specifically address the results of the workshops, potential conflicts, and approaches to resolving such conflicts. Subsequent to this meeting GRAEF will incorporate the key changes and submit the revised Code.

G. PUBLIC HEARING - PLAN COMMISSION

1. Prepare draft code, executive summary, and digital version

GRAEF will revise the Code in response to the comments to date. The revised Code will be prepared in a format suitable for hard copy distribution and posting on the City's web site. This version will form the basis for a Public Hearing at the Plan Commission.

2. Memorandum explaining process and rationale

As part of the Public Hearing process GRAEF will prepare a memo describing the rationale for the proposed Code changes. This memo will form the basis for any media distribution of materials prior to the hearing. GRAEF will prepare this material one month prior to the hearing. If appropriate, the schedule can be pushed back to allow for a two-month window for general review.

3. Plan Commission Hearing

GRAEF will present the code revision process and Code revision. This presentation will also include statements from staff and the Steering Committee members. If appropriate this hearing would be a joint meeting with the Council.

4. Plan Commission Consideration
GRAEF anticipates that the plan Commission will vote on the draft within the same month as the Public Hearing. This could be undertaken as a special meeting devoted solely to the Code update. If appropriate, the final recommendation could add a series of changes proposed as amendments by the Plan Commission. GRAEF, in consultation with staff, would make these amendments and then forward the document to the Council. If the Plan Commission wishes to see all changes prior to forwarding the proposed Code, the process could be pushed back to accommodate an additional Plan Commission meeting.

H. REVISION, COUNCIL MEETINGS, ADOPTION

1. Prepare final code, executive summary, and digital version
GRAEF will prepare the final revised Code (with changes as recommended by the Plan Commission) along with an Executive Summary of key issues.

2. Common Council Hearing
GRAEF assumes that the Council will conduct another Public Hearing on the recommendations of the Plan Commission. GRAEF will present the Code and highlight the proposed revisions. GRAEF recommends this presentation include representation from the staff.

3. Common Council Consideration
GRAEF will be present at the meeting when the Council considers adoption of the Code to answer questions. It is not anticipated that this meeting will require a presentation of the Code. If there are modifications, GRAEF will make the revisions and submit the hard copy and digital copy (of text, maps, and illustrations) to the City.

I. IMPLEMENTATION

1. Presentation aids and illustrations
GRAEF will prepare a series of graphics and illustrations that the City can use for ongoing illustration and updates of the Code. These items typically take the form of JPEGs, PDFs, PPTs, and other file formats used in planning reports and ordinances (such as Adobe formats for In Design, Photoshop, and Illustrator).

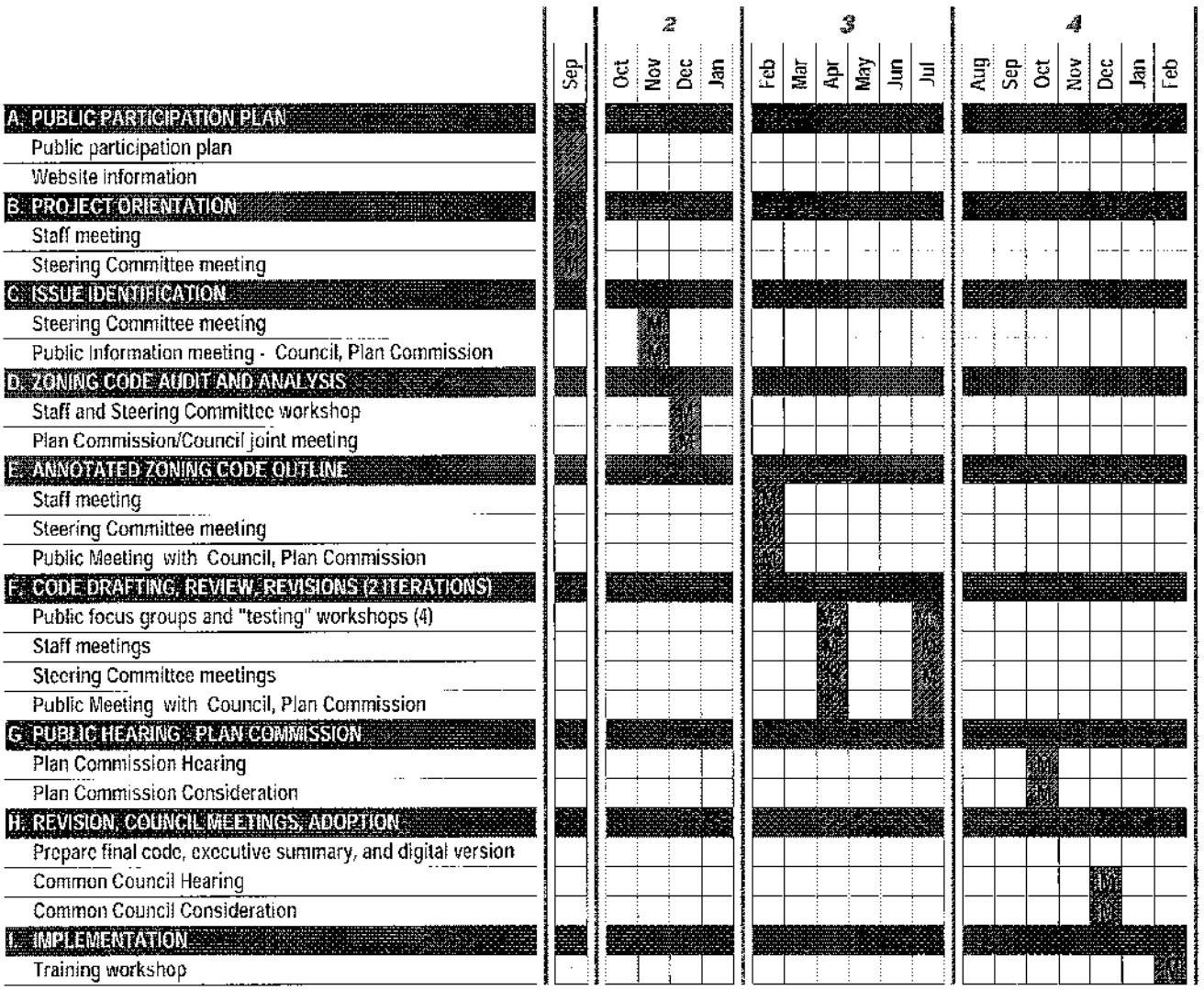
2. Reproducible copies and digital materials
GRAEF will prepare copies and digital materials.

3. Web-based materials
GRAEF will translate the updated Code into files that can be uploaded onto the City's web site.

4. Training workshop
GRAEF will conduct a training workshop with staff and other relevant parties to review the Code. If appropriate, GRAEF will conduct this workshop using computer-based materials that can form the basis for a continuous on-line training program. The purpose of these materials is to create an on-line document that new users can access to learn about the Code and how it might apply to their circumstances. One of the unique and beneficial aspects of this approach is that an on-line education program can accommodate different learning "modules" suited to different types of users (such as neighbors developers, new staff and officials, engineers, designers).

C-2

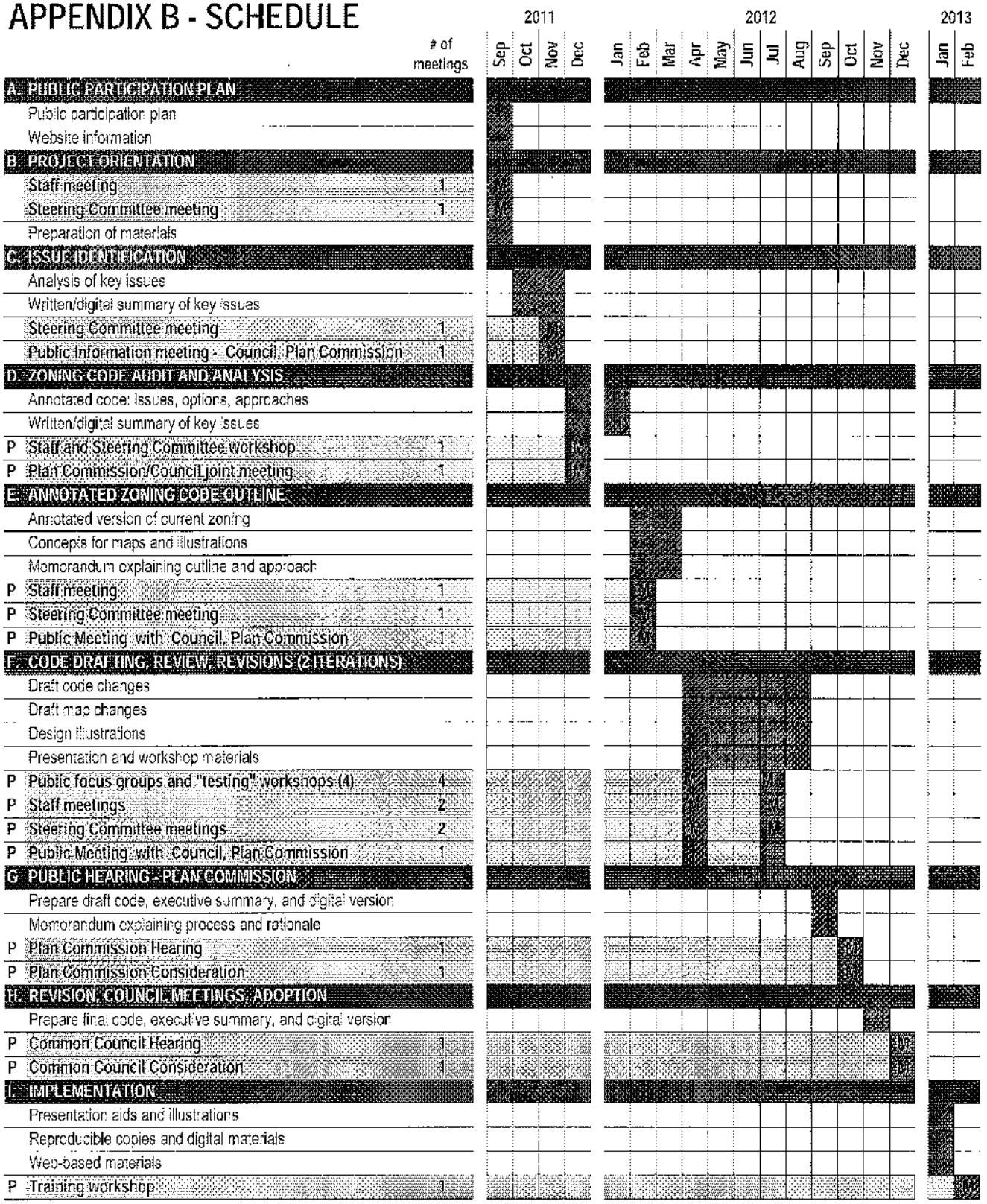
PARTICIPATION MATRIX SCHEDULE



M = scheduled meeting

C-2

APPENDIX B - SCHEDULE



Key:

P Participation components

M Anticipated meeting schedule

C - 3
&
C - 4

Kevin M. Brunner, City Manager
312 W. Whitewater Street
Whitewater, WI 53190
kbrunner@ci.whitewater.wi.us

City of Whitewater

Memo

To: Common Council Members

From: Kevin Brunner

Date: 08/11/2011

Re: Salary Adjustment for Interim Neighborhood Services Manager and Council Members Requested to Serve on Neighborhood Services Search and Screen Committee

---

As you are aware, Mary Nimm has been serving as Interim Neighborhood Services Manager since July 1st when Bruce Parker retired (technically Parker's retirement date was July 30th because of accumulated vacation time). During this period of time, Nimm has been functioning as both CDA Coordinator and Interim Neighborhood Services Manager.

To be consistent with past City practice, I am recommending that Nimm be paid an additional $375 per month for the additional work responsibilities that she has assumed during this interim period. You may recall that Interim Police Chief Otterbacher has been receiving an increase in her monthly salary until a permanent police chief is named by the Police Commission.

Also, I would like to request that two members of the Common Council serve on the Neighborhood Services Search and Screen Committee that will interview candidates for this position in the next few weeks. I anticipate that we will interview candidates on one afternoon/early evening for a 5-6 hour period.

If any of you have any questions, please feel free to contact me.

MEMORANDUM

TO: Dean Fischer, Director of Public Works
Fr: Chuck Nass, Street/Park Superintendent, City Forester
Date: August 11, 2011

Subject: 2011 Seal Coat Projects / Street Repair fund

As you are aware, routing, crack filling and seal coating of our City streets is a very important part of our yearly street maintenance program. These maintenance projects reflect on our numbers that we give to the State every year for our street maintenance costs and also for our PASER ratings. This type of street maintenance raises our PASER rating numbers by 1-2 points depending on our streets.

I have received two quotes for our seal coating maintenance program for our City streets we have planned to complete this year. The quotes are from Scott Construction, Inc. for a price of $1.85 per square yard and from Jefferson County Highway Department for a price of $1.50 per square yard. These quotes are both for all labor, trucking, oil and for boiler slag material for the aggregate. City staff is in the process of milling, wedging, routing and crack filling the streets that will be completed this year.

Streets to be seal coated

N. Harmony Lane
Harmony Lane
S. Harmony Lane
Walworth Ave.
Douglas Ct.
Prince St.
Harriet St.
Wakely St.
North St.
Cherry St.
Cravath St (East and West)
Queen St.
Hazel St.
Chicago St.
Oak St.
Fonda St.

The funding for this project will come from the Street Repair fund.

I would recommend that the City uses Jefferson County to seal coat our City streets again this year.

Please place this on the next City council agenda for their consideration of this street maintenance project. If you or anyone else has any questions or concerns, please advise.

FYI – Post cards are going to be sent to the abutting property owners a week before the seal coat project to alert them to the project.

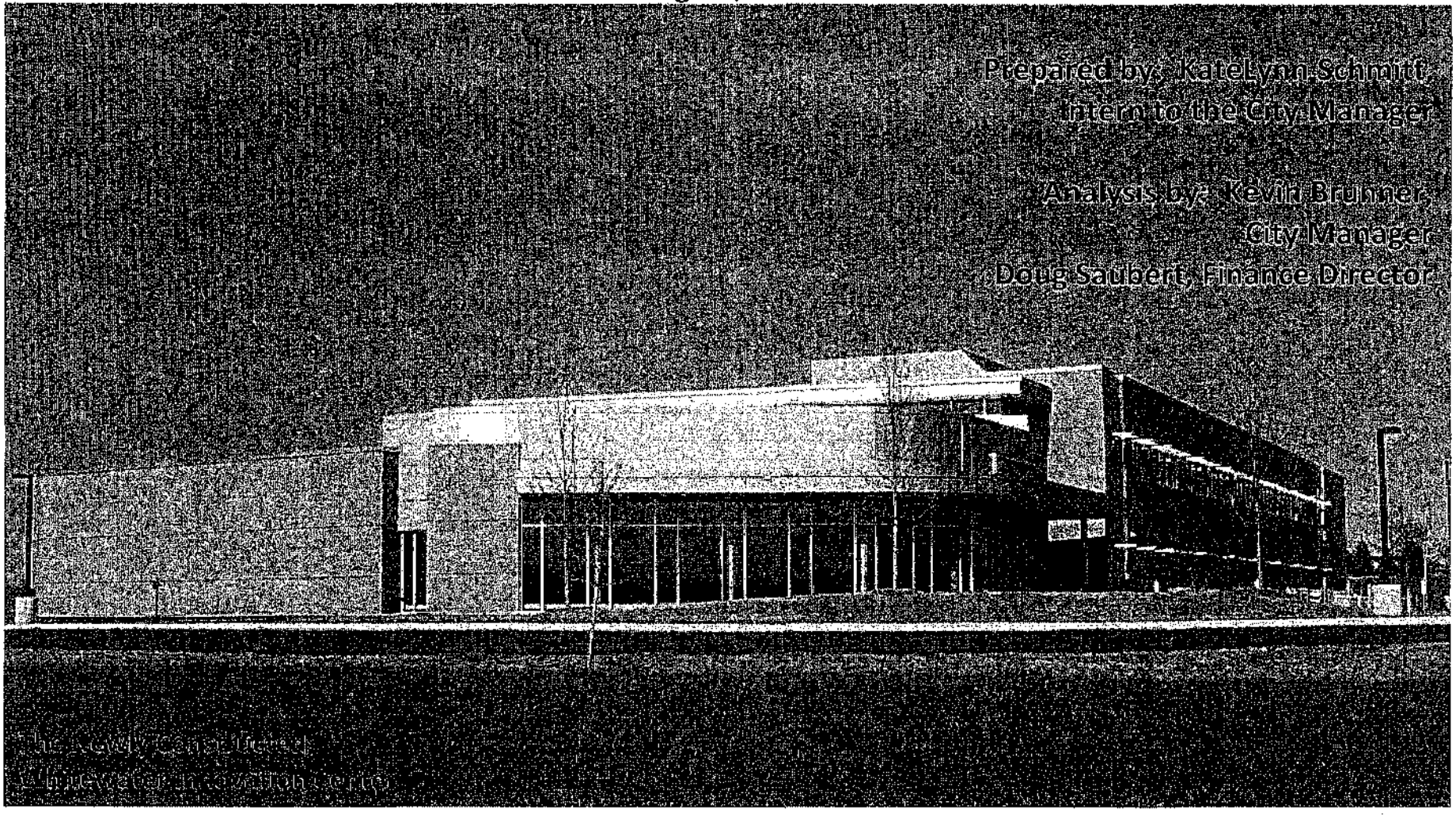
I concur with Chuck's recommendation. 8/11/11

City of Whitewater

Financial Trend Analysis

(1991-2010)

August, 2011



Prepared by: KateLynn Schmitt
Intern to the City Manager

Analysis by: Kevin Brunner
City Manager
Doug Saubert, Finance Director

Table of Contents

Financial Trend Analysis

INTRODUCTION
FINANCIAL INDICATORS FOR WHITEWATER, WISCONSIN
1991 - 2010

There are many meanings when one tries to define the term financial condition when it is applied to public sector entities. In fact, it is made up of any of the following four components:

Cash Solvency: The ability to generate sufficient cash over thirty or sixty days to meet financial obligations (pay the bills, payroll, etc.).

Budgetary Solvency: The ability to generate enough revenues over the budgetary period (calendar year) to meet expenditures and not incur deficits.

Long-Run Solvency: The ability to meet expenditures which do not occur on a yearly basis. Examples are post-employment benefits and pension costs.

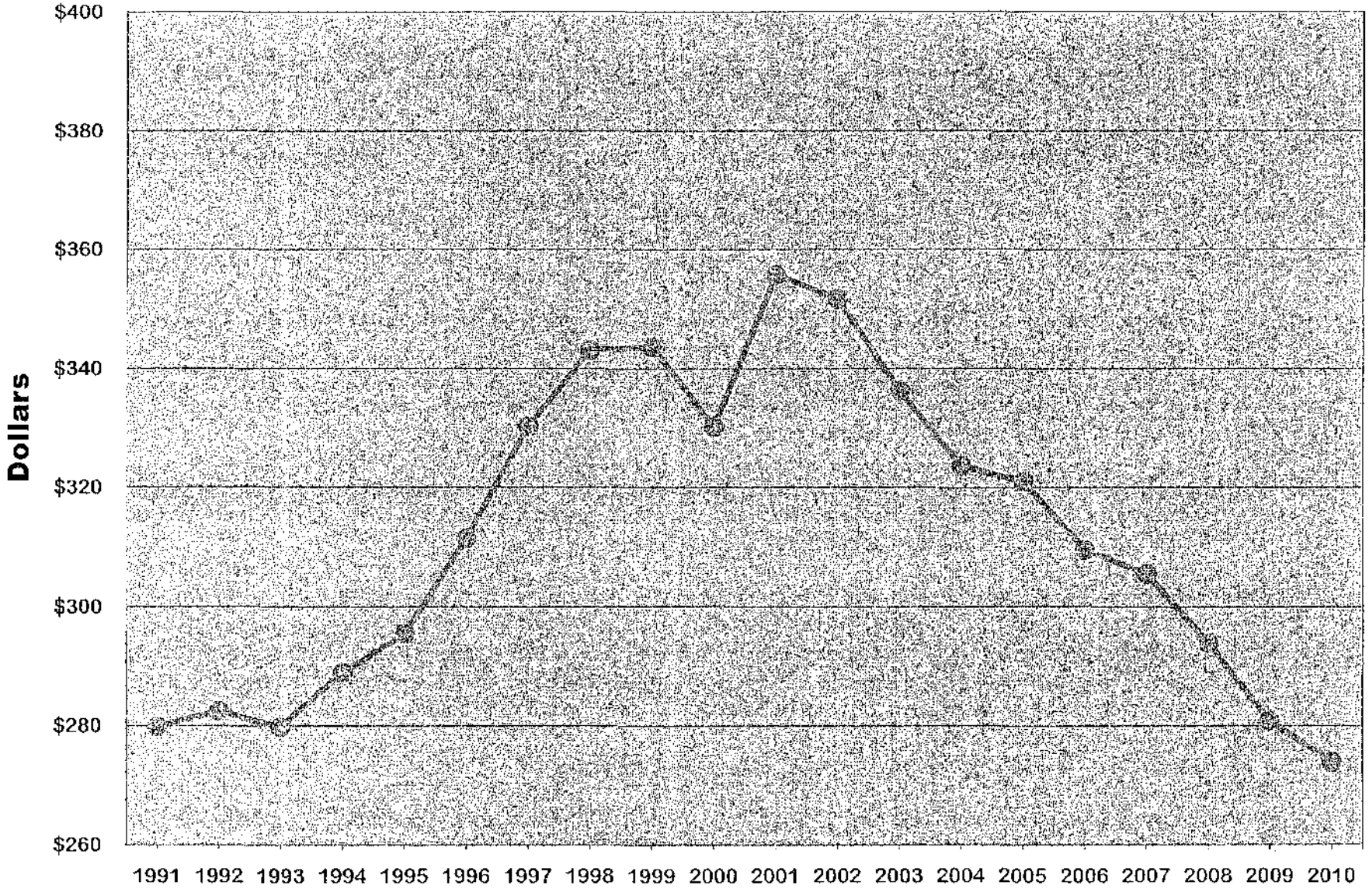
Service-Level Solvency: The community's ability to provide services at the level and quality that is required for the health, safety and welfare of the community and its citizen's desire.

In summary, financial condition can be broadly defined as a local government's ability to finance its services on a continuing basis. Specifically, financial condition refers to a government's ability to 1) maintain existing service levels, 2) withstand local and regional economic disruptions, and 3) meet the demands of natural growth, decline and change.

Through the use of Financial Trend Monitoring System (FTMS) the City of Whitewater can evaluate eleven "factors" which represent the primary forces that influence financial conditions. Associated with these factors are forty-two "indicators" that measure different aspects of nine of the factors. Not all factors or indicators are applicable to the City of Whitewater. Some of the major "factors" are debt structure, revenues, and expenditures, operating positional and intergovernmental constraints. Indicators which influence the factors are growth, population, long-term debt, property value and distribution, attitudes towards taxes and services, and fund balances.

The FTMS shows us 20 years of financial history for the City of Whitewater. The document has been updated yearly for the past 7 years. It is hoped that through the use of the FTMS it will give us an "early" warning of unfavorable trends so they can be dealt with. We should be able to use the FTMS to highlight the positive trends that the City of Whitewater has as well.

Revenues Per Capita



Revenues Per Capita

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Net operating revenues	$4,886,557	$4,964,652	$5,158,815	$5,530,804	$5,881,555	$6,385,340	$6,965,926	$7,330,827	$7,594,450	$7,479,764
2	Consumer price index (CPI) for the	137.1	137.1	142.1	147	151	154.7	157.7	160.3	163.7	168.6
3	CPI in decimal	1.371	1.371	1.421	1.47	1.51	1.547	1.577	1.603	1.637	1.686
4	Net operating revenues (constant	$ 3,563,499	$ 3,621,190	$ 3,630,412	$ 3,762,452	$ 3,895,070	$ 4,127,563	$ 4,417,201	$ 4,573,192	$ 4,639,249	$ 4,436,396
5	Population or other measure	12,738	12,823	12,978	13,023	13,183	13,254	13,374	13,330	13,502	13,437
6	Net operating revenues per capita	$279.75	$282.40	$279.74	$288.91	$295.46	$311.42	$330.28	$343.08	$343.60	$330.16

Revenues Per Capita

Fiscal Year Data

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Net operating revenues	$8,292,271	$8,425,089	$8,304,703	$8,162,831	$8,286,581	$8,198,458	$8,280,534	$8,418,812	$8,149,533	$8,295,780
2	Consumer price index (CPI) for the	171.7	174	177.7	180.2	185.2	189.9	194.1	203	203	209.6
3	CPI in decimal	1.717	1.74	1.777	1.802	1.852	1.899	1.941	2.03	2.03	2.096
4	Net operating revenues (constant	$ 4,829,511	$ 4,842,005	$ 4,673,440	$ 4,529,873	$ 4,474,386	$ 4,317,250	$ 4,266,117	$ 4,147,198	$ 4,014,548	$ 3,957,910
5	Population or other measure	13,579	13,770	13,902	13,998	13,938	13,947	13,967	14,110	14,299	14,454
6	Net operating revenues per capita	$355.66	$351.63	$336.17	$323.61	$321.02	$309.55	$305.44	$293.92	$280.76	$273.83

Revenues Per Capita

Formula: $\frac{\text{Net Operating Revenues (constant dollars)}}{\text{Population}}$

Description: Per capita revenues show changes in revenues relative to changes in population size. As population increases, it might be expected that revenues and the need for services would increase proportionately and therefore that the level of per capita revenues would remain at least constant in real terms. If per capita revenues are decreasing, the government may be unable to maintain existing service levels unless it finds new revenue sources or ways to save money. This reasoning assumes that the cost of services is directly related to population size.

Warning Trend: Decrease in net operating revenues per capita.

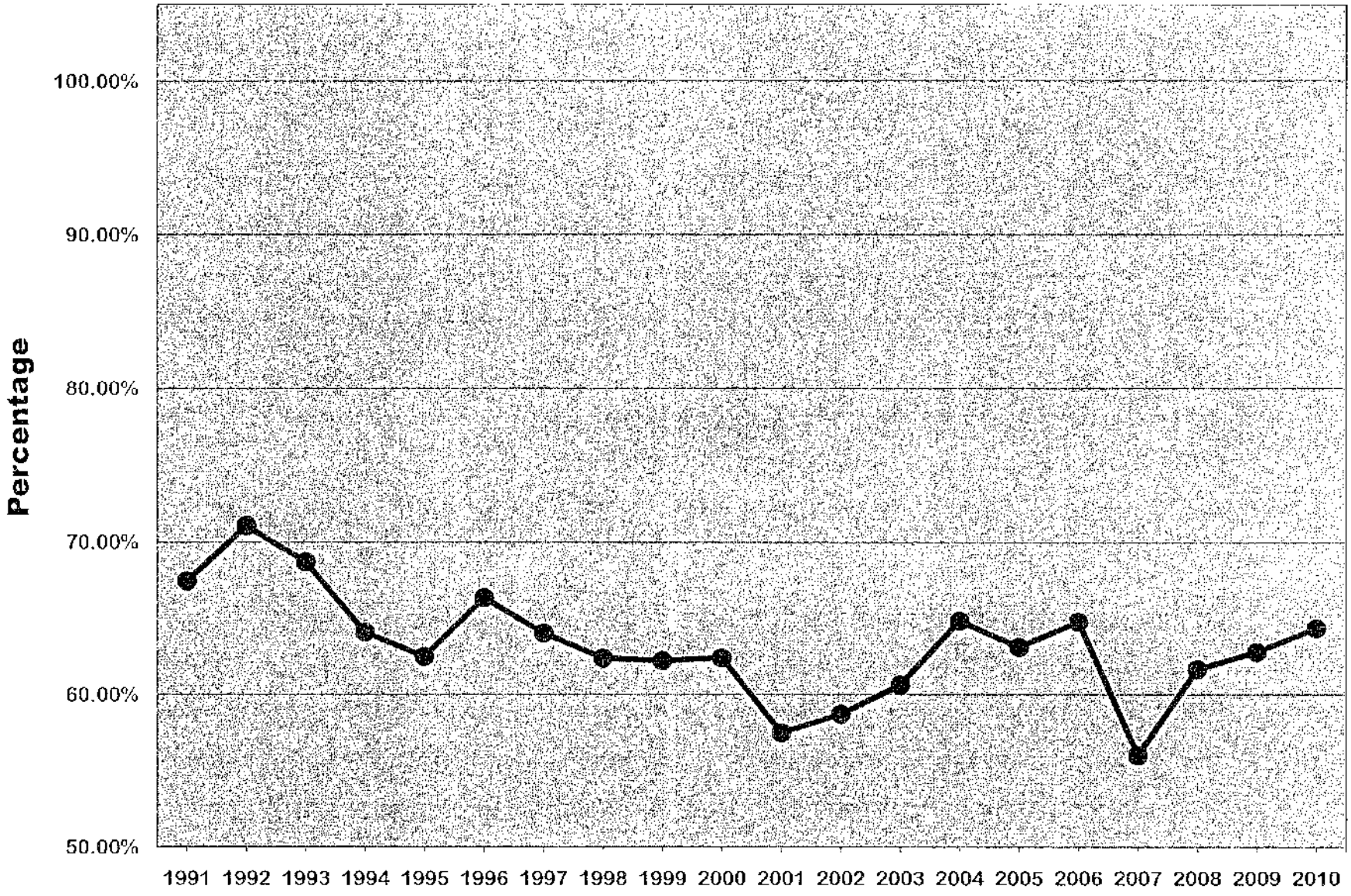
Whitewater Analysis: This financial indicator could also use the number of households, assessed value, or employment base as the denominator rather than population. Population was used because the City's population has shown a steady increase in the last 20 years with a total increase of a little over 2400 people during that time or 20% (approximately 1% per year). The number of total households in the City has probably grown at a faster pace due to the trend in the U.S. of smaller families and greater numbers of single households.

The warning trend is that there is a decrease in net operating revenues per capita occurring in Whitewater. Over the studied 20 year period, adjusting for inflation, revenues per capita has varied from $279.75 (1991) to $355.66 (2001). For 2010, the Net Operating Revenue Per Capita equals $273.83, which is less than the city's Net Operating Revenues per Capita 20 years ago. Today Whitewater is serving more people with less money than it was in 1991. Since 2001, revenues per capita has been steadily declining. This primarily reflects lack of growth in the City's major revenue source State Shared Revenues.

This trend raises two questions or possible concerns: 1) Is it reasonable to assume that the decreased level of revenues will continue? The City must plan for a time when these revenues might no longer be available (i.e. State Shared Revenues), and 2) Do the decreased revenues per capita represent a decrease in the tax burden as measured by comparing changes in this indicator to changes in personal income, business income or other measures of community wealth?-if the tax burden is increasing will residents and business owners be able to pay for local services?

The City is now at the point when we must address these concerns. Facing a 3.8% cut for 2012 in State Shared Revenue, and the unpredictability of this revenue source in the future, the City must consider new revenue sources and/or cut services and programs.

Intergovernmental Revenues



Intergovernmental Revenues

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Intergovernmental operating revenues	$3,295,787	$3,528,261	$3,544,785	$3,544,785	$3,674,512	$4,237,591	$4,459,380	$4,572,792	$4,723,400	$4,665,373
	Shared Revenue										
	Shared Revenue and ERP	$2,617,495	$2,711,160	$2,796,920	$2,901,585	2,995,726*	$3,010,443	$2,990,728	$3,001,271	$3,004,373	$3,076,956
	Shared Revenue - Utility						$275,163.00	$750,513.00	$750,513.00	$750,513	$750,513
	State Aid										
	Road Allotment	$332,292	$361,625	$409,309	$444,896	$457,940	$464,545	$466,414	$490,337	$494,484	$553,753
	University Services	$135,909	$136,877	$191,631	$169,647	$206,838	$311,588	$217,130	$230,180	$419,375	$259,189
2	Net Operating Revenues	$4,885,557	$4,964,652	$5,158,815	$5,530,804	$5,881,555	$6,385,340	$6,965,926	$7,330,827	$7,594,450	$7,479,764
3	Intergovernmental operating revenues	67.46%	71.07%	68.71%	64.09%	62.48%	66.36%	64.02%	62.38%	62.20%	62.39%

Intergovernmental Revenues

Fiscal Year Data

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Intergovernmental operating revenues	$4,768,554	$4,947,404	$5,034,518	$5,293,086	$5,228,851	$5,310,247	$4,641,085	$5,187,720	$5,114,103	$5,338,300
	Shared Revenue										
	Shared Revenue and ERP	$3,160,581	$3,191,484	$3,201,146	$3,009,206	$3,047,778	$3,032,558	$3,046,897	$3,016,859	$3,009,205	$2,952,038
	Shared Revenue - Utility	$750,513	$758,017	$765,597	$750,318	$727,924	$698,318	$668,468	$639,400	$611,378	$583,226
	State Aid										
	Road Allotment	$558,333	$533,676	$645,148	$619,091	$591,775	$567,063	$472,494	$450,435	$508,967	$550,287
	University Services	$260,685	$291,085	$314,345	$293,632	$293,285	$390,536	$334,331	$345,938	$307,746	$323,852
2	Net Operating Revenues	$8,292,271	$8,425,089	$8,304,703	$8,162,831	$8,286,981	$8,198,458	$8,280,534	$8,418,812	$8,149,533	$8,295,780
3	Intergovernmental operating revenues	57.51%	58.72%	60.62%	64.84%	63.10%	64.77%	56.05%	61.62%	62.75%	64.35%

Intergovernmental Revenues

Formula: Intergovernmental Operating Revenues
Gross Operative Revenues

Description: Intergovernmental revenues are important because an overdependence on such revenues can be harmful. The federal and state governments struggle with their own budget problems; as a result, they frequently have withdrawn or reduced payments to local governments. Local governments with budgets largely supported by intergovernmental revenues have been particularly harmed. The reduction of intergovernmental funds leaves the municipal government with the dilemma of cutting programs or funding them from general fund revenues.

Warning Trend: Increasing amount of intergovernmental operating revenues as a percentage of gross operating revenues.

Whitewater Analysis: This is a very important financial indicator for the City of Whitewater because of the community's historical reliance on State Shared Revenues and other state funding. Over the studied 20 year period, the amount of intergovernmental revenue as a percentage of the city's annual operating budget has gone down somewhat but these revenues cannot still represent more than 60% of the city budget.

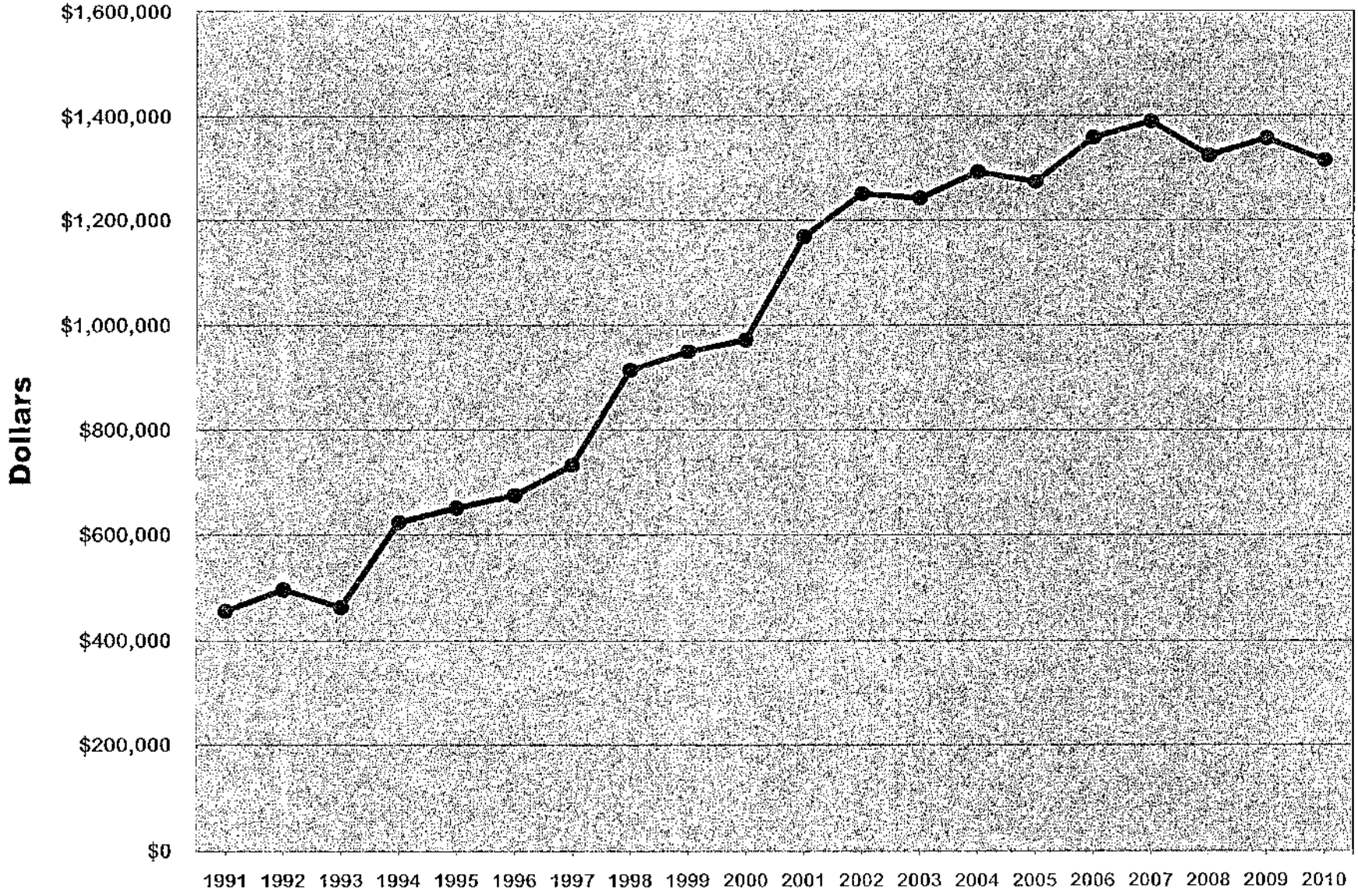
The City received 67.46% of its operating revenues from intergovernmental sources in 1991 and that percentage has decreased to 64.30% in 2010. The City's chief intergovernmental revenue source, Shared Revenue from the State of Wisconsin, reached a peak of $3,201,146 in 2003 and that amount has decreased to $2,952,038 in 2010.

The City's State transportation aids have risen from 1991 through 2003. This increase has been a function of the City's increase in miles of local streets and roads as much as an increase in the amount available from the State for such purposes. Since 2003, the transportation aids have declined from $645,148 to $550,287 in 2010. The decline since 2006 can be partially attributed to the opening of the Whitewater by-pass which took over the State Highway designation and the associated transportation aid from the City. Also the road allocation has been decreased from the state of Wisconsin to local governments.

The City's amount of State assistance for services to the University of Wisconsin Whitewater has also risen over the studied period; however, it dropped from a 20 year high in 1999 of $419,375 to only $323,852 in 2010.

The City must strive to continue to reduce its reliance on intergovernmental revenues. Policies should be considered by the City Council that would limit intergovernmental revenues to a certain percentage (the current 64.30% would be a logical financial threshold to not go above and efforts should continue to reduce the City's dependence on this revenue source) as well as that all potential grants be carefully examined for matching requirements (both dollar and level-of-effort matches). Intergovernmental assistance should also be used to finance only those capital improvements that are consistent with the City's capital improvement long-term Capital Improvement Program.

Tax Revenue


$1,600,000
$1,400,000
$1,200,000
$1,000,000
$800,000
$600,000
$400,000
$200,000
$0
Dollars
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Tax Revenues

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Tax revenues	$603,918	$681,619	$658,769	$917,188	$983,761	$1,044,419	$1,155,102	$1,466,918	$1,556,159	$1,639,553
2	Consumer price index (CPI) for the municipality's area	132.2	137.1	142.1	147	151	154.7	157.7	160.3	163.7	168.6
3	CPI in decimal	1.322	1.371	1.421	1.47	1.51	1.547	1.577	1.603	1.637	1.686
4	Tax revenues (constant dollars)	$ 456,821	$ 497,169	$ 463,595	$ 623,937	$ 651,166	$ 675,125	$ 732,468	$ 915,108	$ 950,616	$ 972,451

Tax Revenues

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Tax revenues	$2,006,033	$2,176,397	$2,207,408	$2,329,553	$2,358,951	$2,579,342	$2,696,586	$2,687,809	$2,754,615	$2,756,361
2	Consumer price index (CPI) for the municipality's area	171.7	174	177.7	180.2	185.2	189.9	194.1	203	203	209.6
3	CPI in decimal	1.717	1.74	1.777	1.802	1.852	1.899	1.941	2.03	2.03	2.096
4	Tax revenues (constant dollars)	$ 1,168,336	$ 1,250,803	$ 1,242,210	$ 1,292,760	$ 1,273,570	$ 1,358,263	$ 1,389,277	$ 1,324,044	$ 1,356,953	$ 1,315,058

Tax Revenues

Formula: Tax Revenues (constant dollars)

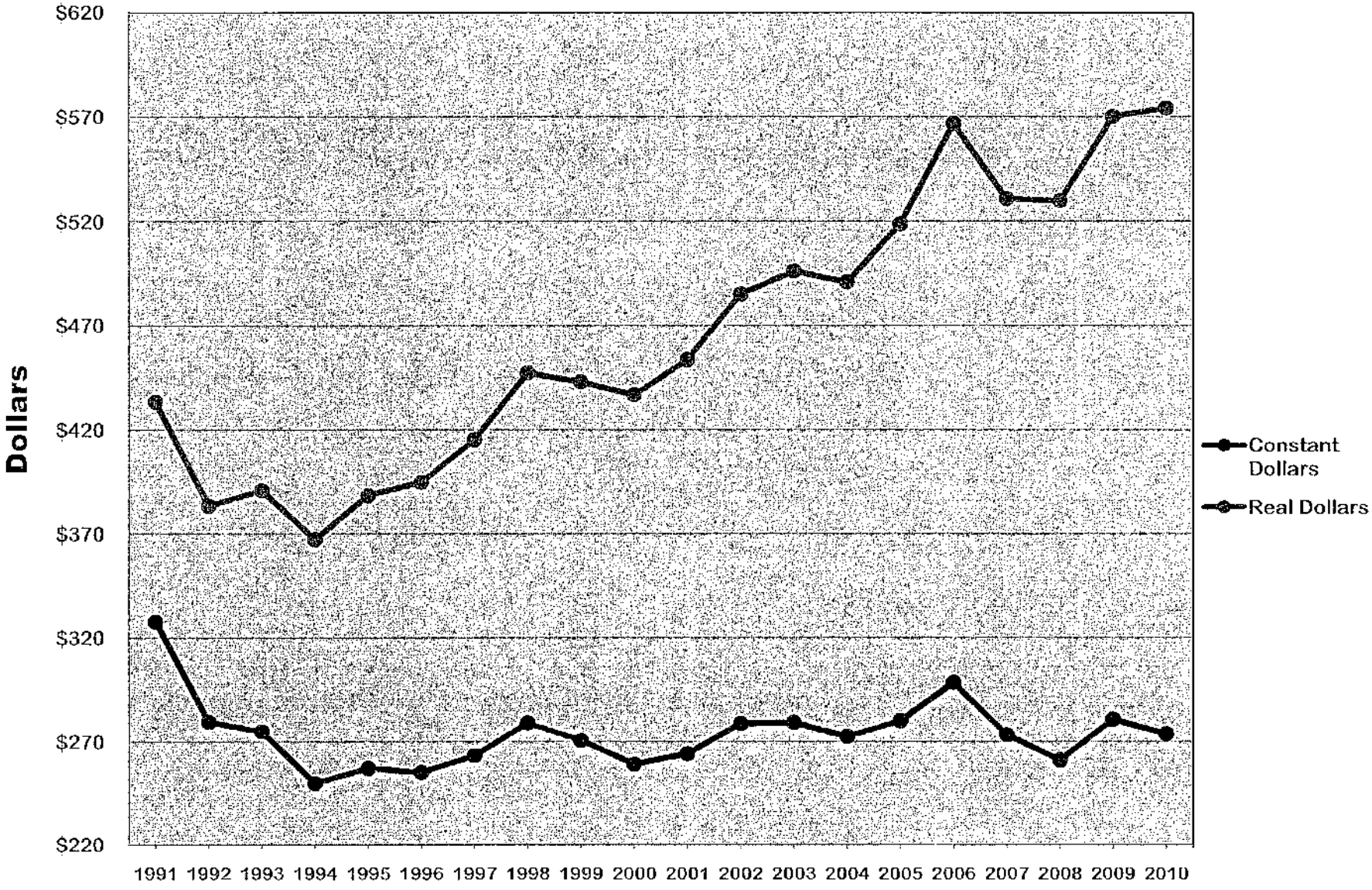
Description: A decline or a diminished growth rate in taxes can have a number of causes. First, it may reflect an overall decline in property values; a decline in national, state, or local economic health; a decline in total number of households; or the movement of retail or industrial operations to other communities. Second, it may result from default on property taxes by property owners or an inefficient assessment of appraisal process for property. Finally, it may result from sales or income tax payers moving their base of operations to other jurisdictions.

Warning Trend: Decline in Tax Revenues (constant dollars).

Whitewater Analysis: Property tax revenues received by the City of Whitewater have risen from $456,821 in 1991 to $1,315,058 in 2010 (actual property tax levied in 2010 was $2,756,361)-an increase of 356.41%. The consumer price index during this same time frame increased 58.5%.

While the City has seen an increase in this source of its revenues, it is primarily a function of the good economic conditions that have affected local, regional and state market property values. The market value of the City's property soared from $151.85 million in 1991 to $620.95 million in 2010. Within the last two years, however, city assessed values have declined . This demonstrates a declining overall property tax base.

Expenditures Per Capita



Expenditures Per Capita

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Net operating expenditures	$5,519,477	$4,913,503	$5,070,190	$4,780,702	$5,117,956	$5,231,425	$5,552,387	$5,963,025	$5,980,834	$5,868,398
2	Consumer price index (CPI) for the municipality's area	132.20	137.10	142.10	147.00	151.00	154.70	157.70	160.30	163.70	168.60
3	CPI in decimal	1.32	1.37	1.42	1.47	1.51	1.55	1.58	1.60	1.64	1.69
4	Net operating expenditures in CPI base-year dollars	$4,175,096	$3,583,883	$3,568,044	$3,252,178	$3,389,375	$3,381,658	$3,520,854	$3,719,916	$3,653,533	$3,480,663
5	Population or other measure	12,738	12,823	12,978	13,023	13,183	13,254	13,374	13,330	13,502	13,437
6	Net operating expenditures per capita (constant dollars)	$328	$279	$275	$250	$257	$255	$263	$279	$271	$259
7	Net operating expenditures per capita	$433	$383	$391	$367	$388	$395	$415	$447	$443	$437

Expenditures Per Capita

Fiscal Year Data

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Net operating expenditures	$6,171,516	$6,641,401	$6,891,299	$6,872,127	$7,229,437	$7,902,652	$7,412,705	$7,475,044	$8,149,533	$8,295,780
2	Consumer price index (CPI) for the municipality's area	171.70	174.00	177.70	180.20	185.20	189.90	194.10	203.00	203.00	209.60
3	CPI in decimal	1.72	1.74	1.78	1.80	1.85	1.90	1.94	2.03	2.03	2.10
4	Net operating expenditures in CPI base-year dollars	$3,594,360	$3,816,897	$3,878,052	$3,813,611	$3,903,584	$4,161,481	$3,819,013	$3,682,288	$4,014,548	$3,957,910
5	Population or other measure	13,608	13,693	13,887	13,998	13,938	13,947	13,967	14,110	14,299	14,454
6	Net operating expenditures per capita (constant dollars)	$264	$279	$279	$272	$280	$298	$273	$261	$281	$274
7	Net operating expenditures per capita	$454	$485	$496	$491	$519	$567	$531	$530	$570	$574

Expenditures per Capita

Formula: $\frac{\text{Net operating expenditures (constant dollars)}}{\text{Population}}$

Description: Changes in per capita expenditures reflect changes in expenditures relative to changes in population. Increasing per capita expenditures can indicate that the cost of providing services is outstripping the community's ability to pay, especially if spending is increasing faster than the residents' collective personal income. From a different perspective, if the increase in spending is greater than can be accounted for by inflation or addition of new services, it may indicate declining productivity—that is, that the government is spending more real dollars to support the same level of services.

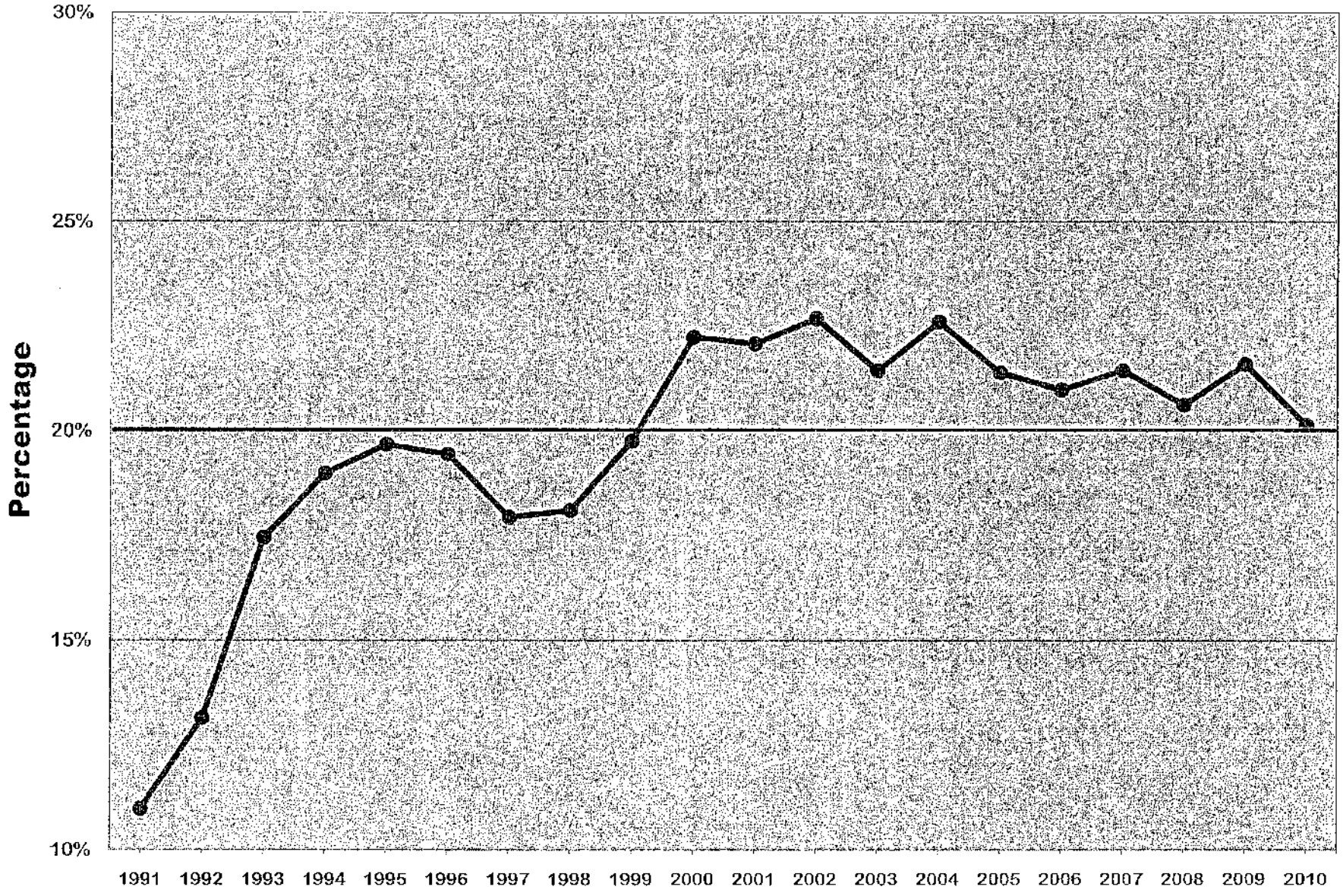
Warning Trend: Increasing number of municipal employees per capita.

Whitewater Analysis: This is a very positive financial trend for the City of Whitewater. Even though in current (actual) dollars the City's spending per capita rose from $433 (1991) to $574 in the period from 1991 to 2010, when taking into account inflation and the increased cost of living, City expenditures per capita were about the same in 2010 as in 1991. Thus, even though the City has grown in population and in size (two prime indicators of demand for city services), its spending has really remained very constant.

Part of the reason for this favorable trend is that the City Council is provided with regular reports comparing actual revenues and expenditures to budgeted amounts. Also, the City has employed a number of cost saving measures such as contracting for services or replacing full-time technical staff with consultants and eliminating programs that are no longer important in order to maintain this trend.

In the future, the City needs to integrate into its annual budget process the use of performance measures and productivity indicators to provide better and improved methods to analyze how it is spending on services and programs.

General Government As a Percentage of Total Expenditures



Expenditures by Function (General Govenrment)

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	General and administrative expenditures	$5,510,657	$4,903,648	$5,019,669	$4,780,702	$5,117,956	$5,231,425	$5,536,810	$5,835,471	$5,965,253	$5,843,099
	Current Expenditures										
	General Government	$605,065	$546,918	$883,978	$907,179	$1,006,942	$1,016,769	$995,320	1,078,721	$1,161,988	$1,304,541
	Public Safety	$2,239,752	$1,981,463	$2,045,357	$2,197,005	$2,354,739	$2,413,767	$2,546,179	$2,727,634	$2,622,899	$2,596,630
	Public Works	$1,555,436	$1,311,955	$1,354,437	$936,610	$946,752	$879,863	$969,291	$969,318	$974,043	$892,044
	Culture and Education	$595,924	$638,596	$681,707	$721,012	$727,941	$742,412	$889,181	$940,090	$1,091,875	$960,955
	Library	$127,917	$185,004	$226,201	$248,098	$272,459	$286,536	$307,470	$316,449	$322,401	$348,979
	Young Library Building	$0	$36,165	$49,338	$31,271	$67,827	$62,269	$182,941	$75,385	$90,872	$80,012
	Conservation and Development	$514,430	$126,016	$54,160	$18,836	$81,582	$178,608	$146,889	$99,728	$94,448	$99,929
2	Total net operating expenditures	$5,519,477	$4,913,503	$5,070,190	$4,780,702	$5,117,956	$5,231,425	$5,552,387	$5,963,025	$5,980,834	$5,866,398
3	General and administrative expenditures as a percentage of total net operating expenditures	19.96236%	19.14577%	17.43481%	18.97585%	19.67469%	19.43579%	17.97568%	18.09018%	19.76793%	22.22993%

Expenditures by Function (General Govenrment)

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	General and administrative expenditures	$6,146,160	$5,594,912	$6,797,582	$6,812,178	$6,858,975	$7,009,467	$7,197,453	$7,689,663	$7,604,335	$7,767,006
	Current Expenditures										
	General Government	$1,362,077	$1,505,429	$1,477,271	$1,552,389	$1,546,404	$1,658,240	$1,589,551	$1,648,165	$1,685,780	$1,597,136
	Public Safety	$2,767,613	$2,779,086	$2,979,398	$2,909,472	$3,119,994	$3,146,977	$3,212,196	$3,677,579	$3,587,158	$3,834,954
	Public Works	$915,363	$1,056,057	$1,060,332	$836,396	$944,426	$1,010,115	$1,103,048	$1,108,765	$1,023,722	$999,651
	Culture and Education	$1,000,489	$1,119,838	$1,100,189	$1,100,142	$1,047,222	$1,023,285	$1,049,477	$1,074,082	$1,079,797	$1,128,761
	Library	$393,413	$418,341	$438,771	$403,512	$424,850	$454,743	$468,280	$480,743	$464,378	$483,637
	Young Library Building	$88,154	$87,290	$126,986	$95,804	$86,609	$118,777	$162,298	$96,783	$116,175	$88,432
	Conservation and Development	$100,018	$134,502	$180,392	$213,779	$200,929	$170,850	$243,181	$181,272	$227,878	$206,502
2	Total net operating expenditures	$6,171,516	$6,641,401	$6,891,299	$6,872,127	$7,229,437	$7,302,652	$7,412,705	$7,931,981	$7,807,626	$7,927,925
3	General and administrative expenditures as a percentage of total net operating expenditures	22.07038%	22.66734%	21.43676%	22.58984%	21.39038%	20.98334%	21.44360%	20.62273%	21.59145%	20.14573%

Expenditures by Function

Formula: $\frac{\text{Operating expenditures for one function}}{\text{Total net operating expenditures}}$

Description: Expenditures by function shows a more detailed breakdown of a local government's general governmental funds expenditures. Expenditures by function will help analyze the cause of the increases in governmental spending over time.

Warning Trend: Increasing operating expenditures for one function as a percentage of total net operating expenditures.

Whitewater Analysis: This is a very interesting financial trend because it shows how much spending has changed over time by the City by function. Also, it is good to track how much the general government costs (essentially the administrative and overhead costs of operating the City) have gone up or down as a percentage of the "line" operations of the municipality.

When looking at the 1991 to 2010 time period, Whitewater's general government costs as a percentage of total net operating expenses dropped to a low of 10.962% in 1991 and then steadily rose to a high of 22.67% in 2002. Since 2001, the percentage has fluctuated between 20.15% (2010) and 22.59% (2004). The 2010 percentage showed a positive decline to 20.15%. This is very close to the city's policy goal of 20%.

It is important for Whitewater city government to monitor this trend and work towards keeping its administrative and overhead costs down as much as possible. A policy goal should be to keep these costs below 20% in the future.

The spending priorities have shifted somewhat in the last 20 years. The percentage of total spending going to support all broad functional categories (Culture and Education, Conservation and Development, General Government, Library, and Public Safety) with the major exception of Public Works has increased during this time frame. Spending for Conservation and Development as well as for the Library has increased seven-fold between 1991 and 2010. Public Safety still commands the highest percentage of city functional spending and now represents 46% of the total operating budget.

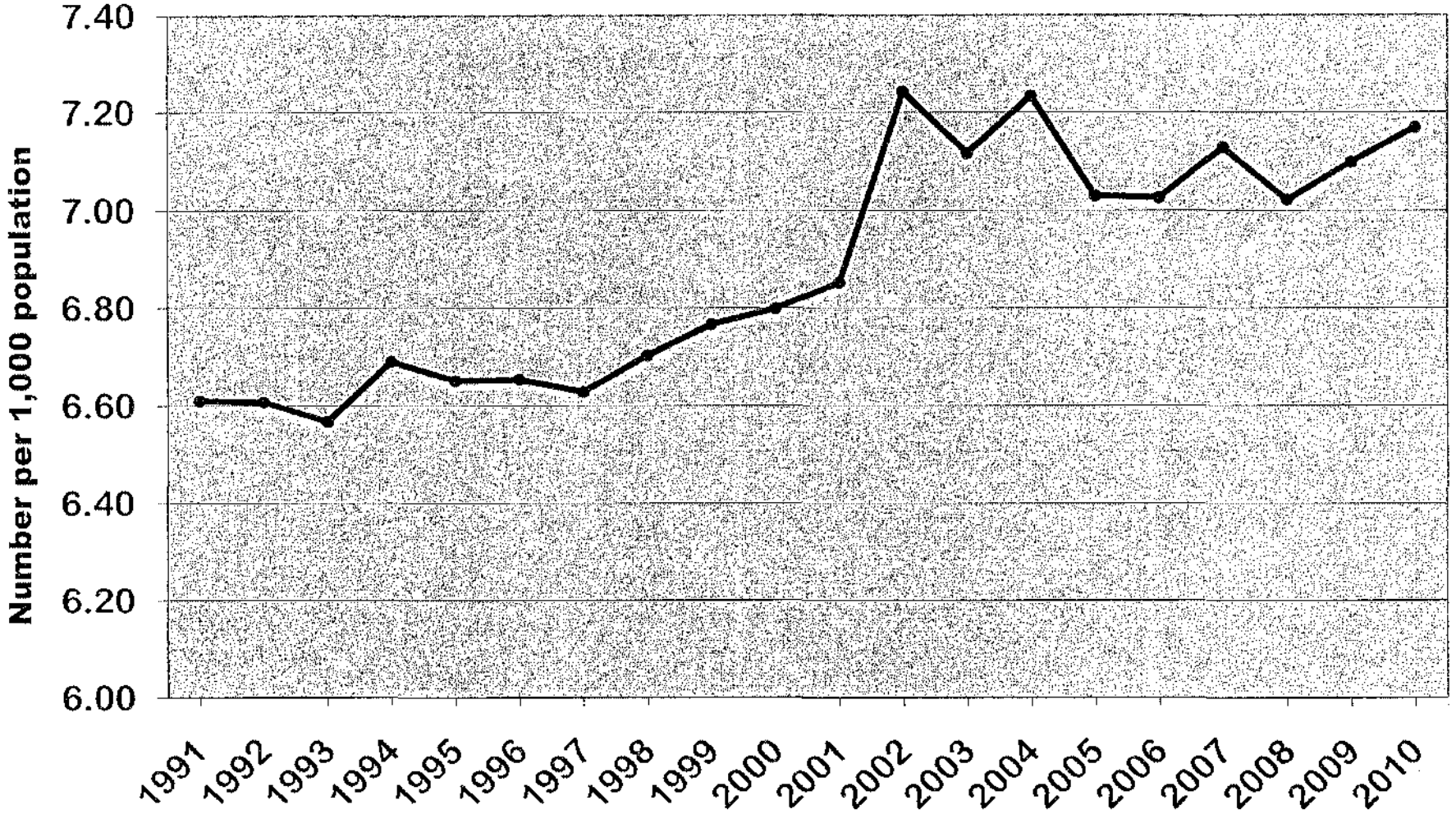
The percentage of spending for public works has dropped precipitously from 28.2% in 1991to 12.6% in 2010. Part of this drop is due to accounting changes for major infrastructure improvement projects, now funded through a Capital Improvement Program (CIP) as well as the financing of major public works equipment purchases through a capital equipment fund. But it also indicative of greater efficiencies in public works operations such as contracting out of some major functions such as refuse and recycling collection/disposal and application of new technologies.

The City took a major step forward in late 2006 by establishing a non-lapsing Street Repair Fund. This is a positive sign of the City's commitment towards adequately maintaining its infrastructure before street reconstruction costs grow exponentially because of deferred repair and maintenance work.

The City needs to be wary of not spending enough on public works maintenance projects because it could lead to substantially higher operating costs in the future if the infrastructure is not kept up to date.

In the fall of 2007, the City established a Stormwater Utility which transferred the General Fund expenditures related to street cleaning and storm water maintenance to the Stormwater Utility.

Employees per 1,000



Employees per 1,000 Population (1991-2010)

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Number of municipal employees	84.2	84.73	85.23	87.13	87.69	88.19	88.65	89.35	91.35	91.35	93.25	99.15	98.82	101.24	97.98	97.99	99.56	99	101.5	103.61
2	Population or other measure	12,738	12,823	12,978	13,023	13,183	13,254	13,374	13,330	13,502	13,437	13,608	13,693	13,687	13,998	13,938	13,947	13,967	14,100	14,299	14,454
3	Number of municipal employees per capita	6.6101	6.6077	6.5673	6.6905	6.6517	6.6538	6.6285	6.7079	6.7657	6.7984	6.8526	7.2409	7.1160	7.2325	7.0297	7.0259	7.1282	7.0213	7.0984	7.1683

Employees per 1,000

Formula: $\frac{\text{Number of municipal employers}}{\text{Population}}$

Description: Because personnel cost are a major portion of a local government's operating budget, plotting changes in the number of employees per capita is a good way to measure changes in expenditures. An increase in employees per capita might indicate that expenditures are rising faster than revenues that the government is becoming more labor intensive, or that personnel productivity is declining.

Warning Trend: Increasing number of municipal employees per capita.

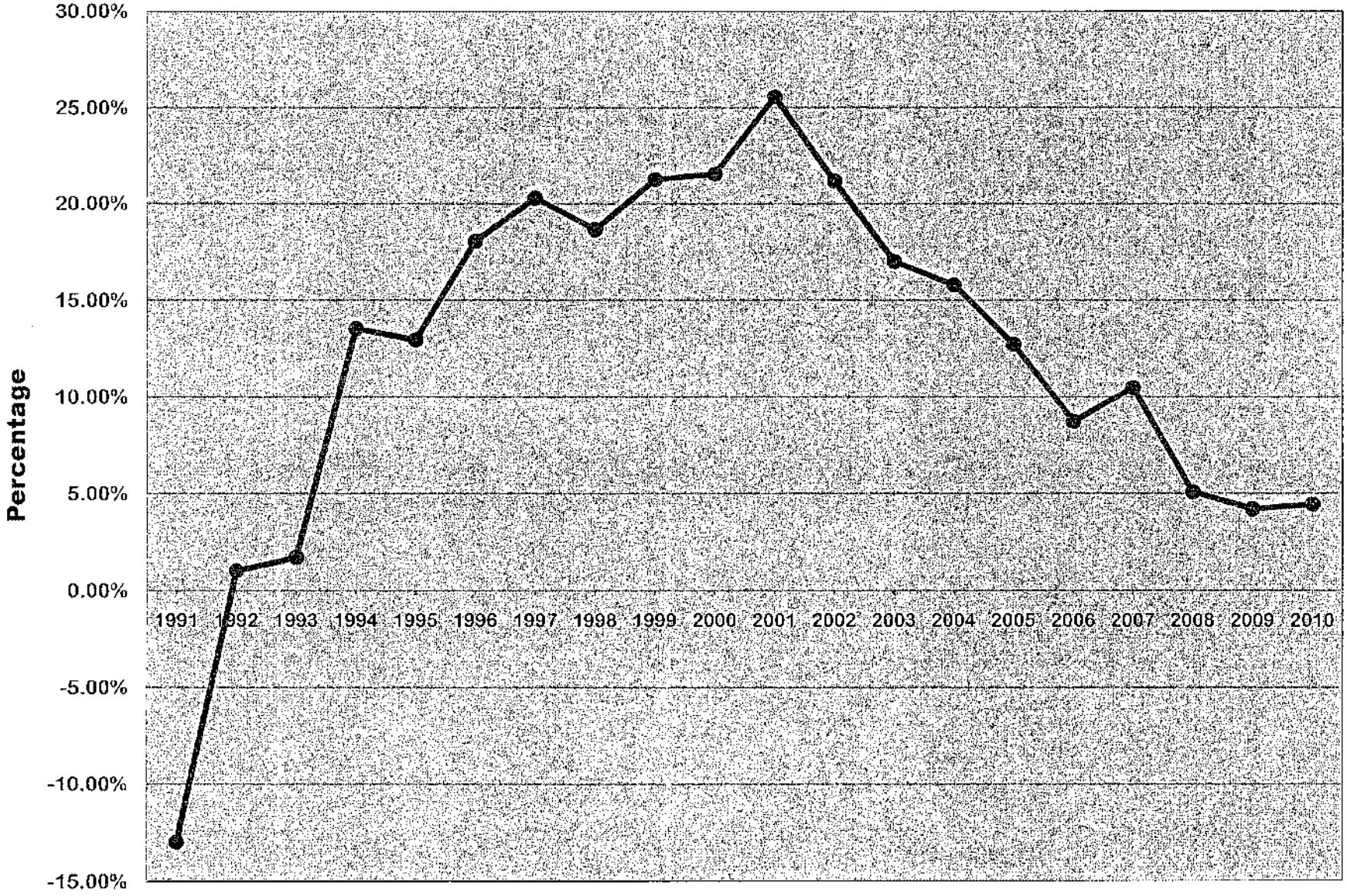
Whitewater Analysis: This is a positive financial trend for the City, particularly over the last several years.

The number of full-time, permanent employees per 1,000 population in 2010 was 7.17, and over the last 9 years has remainined relatively constant. The number of city employees reached a peak of 7.24 per 1,000 residents in 2002, that has fallen to 7.17 in 2010.

This trend may indicate that Whitewater city government is becoming less labor intensive or that personnel productivity is increasing.

In some local governments, population may not be the best denominator for this indicator. For example, households, assessed value or employment base might be a better measure than a per capita measure. However, with Whitewater this seems to be an appropriate measure because our city services tend to be driven more by population, particularly the large student population, than by these other factors. This may change as the Whitewater Business and University Technology Park continue to develop and more single-family homes are constructed in the City.

Operating Deficit or Surplus



Operating Deficit or Surplus

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	General fund operating deficit or surplus	($633,920)	$51,149	$88,625	$750,102	$763,599	$1,153,915	$1,413,539	$1,367,802	$1,613,616	$1,611,366
2	Net operating revenue	$4,885,557	$4,964,652	$5,158,815	$5,530,804	$5,881,555	$6,385,340	$6,965,926	$7,330,827	$7,594,450	$7,479,764
3	General fund operating deficit as a percentage of net operating revenues[1]	-12.98%	1.03%	1.72%	13.56%	12.98%	18.07%	20.29%	18.66%	21.25%	21.54%

Operating Deficit or Surplus

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	General fund operating deficit or surplus	$2,120,755	$1,783,688	$1,413,404	$1,290,704	$1,057,144	$716,251	$867,829	$426,831	$341,907	$367,855
2	Net operating revenue	$8,292,271	$8,425,089	$8,304,703	$8,162,831	$8,286,581	$8,198,458	$8,280,534	$8,414,812	$8,149,533	$8,295,780
3	General fund operating deficit as a percentage of net operating revenues[1]	25.58%	21.17%	17.02%	15.81%	12.76%	8.74%	10.48%	5.07%	4.20%	4.43%

Operating Deficit or Surplus

Formula: $\frac{\text{General Fund Operating Deficit or Surplus}}{\text{Net Operating Revenue}}$

Description: An operating deficit or surplus occurs when current expenditures exceed current revenues or are lower than current revenues. A deficit does not always mean that the budget will be out of balance ("budget deficit"), because reserves ("fund balances") from prior years can be used to cover the difference. It does mean, however, that during the current year, the government is spending more than it is receiving. This may be caused by an emergency (such as a natural catastrophe) requiring a large immediate expenditure. Or the spending pattern may be part of a policy to use accumulated surplus fund balances. An operating deficit in any one year may not be cause for concern, but frequent and increasing deficits can indicate that current revenues are not supporting current expenditures and that serious problems may lie ahead.

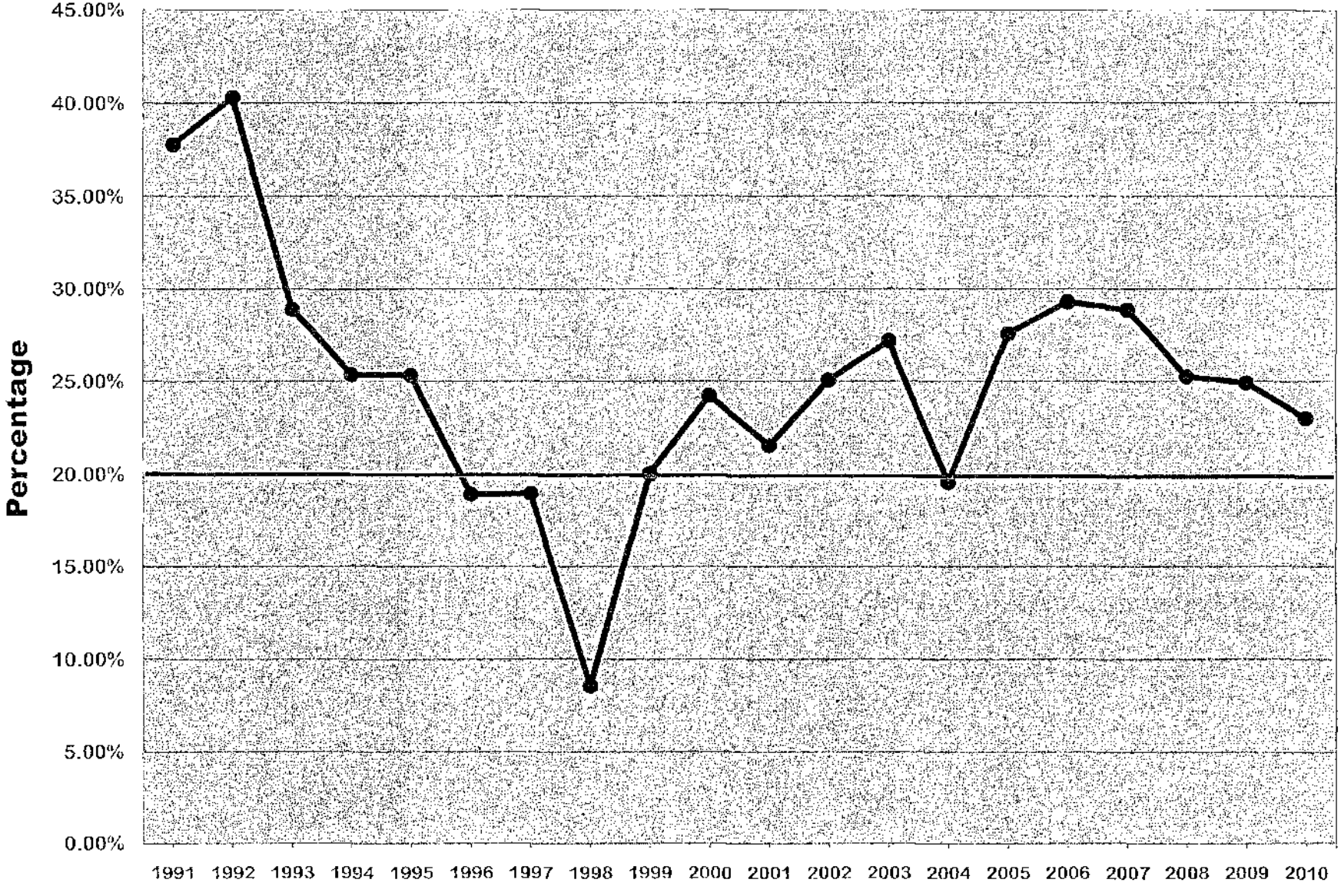
Warning Trend: Increase in general fund operating deficit or surplus as a percentage of net operating revenues.

Whitewater Analysis: This is a positive financial trend for the City.

Whitewater has not had an operating deficit since 1991, and continues to generate more money than what is being spent. In 2001 the operating surplus peaked at 26%. Since 2001 it has gradually decreased to 4%(2010).

Every year is a constant struggle to ensure revenues exceed expenditures, and with future budget cuts to localgovernments throughout Wisconsin it's important to be conscientious of the city's intakes and outakes.

Fund Balance



Fund Balances

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Unreserved fund balances	$1,846,037	$2,000,674	$1,491,029	$1,403,885	$1,490,205	$1,207,772	$1,319,570	$627,857	$1,521,145	$1,813,656
2	Net operating revenues	$4,885,557	$4,964,652	$5,158,815	$5,530,804	$5,881,555	$6,385,340	$6,965,926	$7,330,827	$7,594,450	$7,479,764
3	Unreserved fund balances as a percentage of net operating revenues	37.79%	40.30%	28.90%	25.38%	25.34%	18.91%	18.94%	8.56%	20.03%	24.25%

Fund Balances

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Unreserved fund balances	$1,787,953	$2,113,080	$2,257,910	$1,598,273	$2,284,886	$2,401,276	$2,390,206	$2,127,665	$2,031,393	$1,910,164
2	Net operating revenues	$8,292,271	$8,425,089	$8,304,703	$8,162,831	$8,286,581	$8,198,458	$8,280,534	$8,418,812	$8,149,533	$8,295,780
3	Unreserved fund balances as a percentage of net operating revenues	21.56%	25.08%	27.19%	19.58%	27.57%	29.29%	28.87%	25.27%	24.93%	23.03%

Fund Balances

Formula: $\frac{\text{Unreserved fund balances}}{\text{Net operating revenues}}$

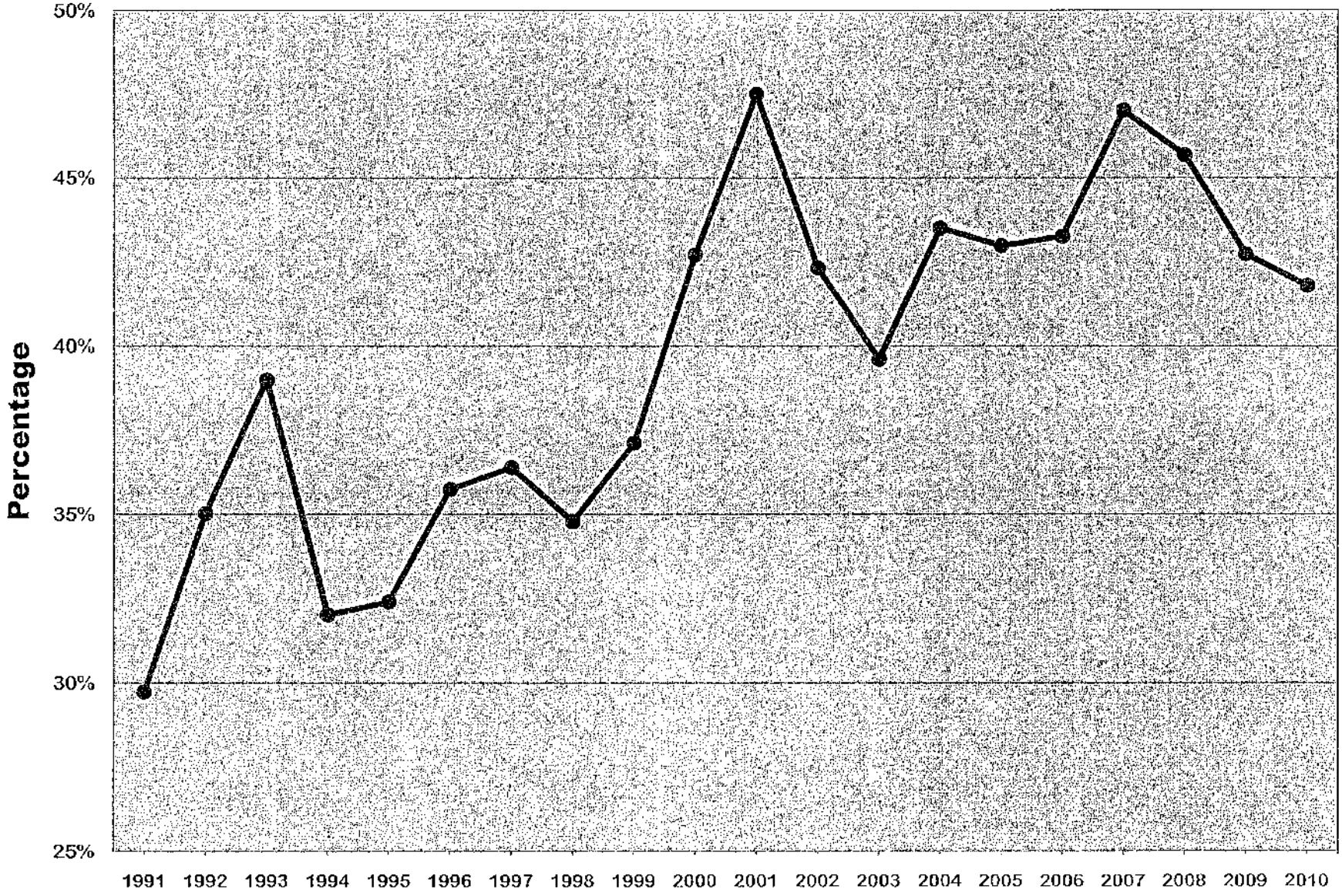
Description: The size of a local government's fund balances can affect its ability to withstand financial emergencies. It can also affect its ability to accumulate funds for capital purchases without having to borrow. Positive fund balances can also be thought of as reserves. An unplanned decline in fund balances may mean that the government will be unable to meet a future need.

Warning Trend: Declining unreserved fund balances as a percentage of net operating revenues.

Whitewater Analysis: While declining unreserved or undesignated fund balances as a percentage of net operating revenues is regarded as a warning trend, the City of Whitewater is regarded as being in good financial shape here because for the last fifteen years or so it has maintained this percentage between 20% and 30% (with the exception of 1991 and 1992 when this rose to approximately 40%).

As stated in the previous indicator analysis, the City has a policy to maintain a minimum of 20% of the annual operating budget in operating reserves (undesignated fund balance). Historically, the City has been conservative in its annual budget revenue projections and has had budgeted funds go unspent, thus providing an annual increase in its operating reserves. This conservative approach to annual budget-making should be maintained as well as rigid adherence to the 20% policy noted above. In 2004, the City dipped below the 20% threshold by approximately .5%. In the last six years, however, the City has bounced back to between 23-29%.

Current Liabilities



Current Liabilities

Fiscal Year Data

		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Current liabilities	$1,452,765	$1,738,812	$2,011,616	$1,771,091	$1,906,183	$2,281,812	$2,534,374	$2,549,718	$2,818,376	$3,194,356
2	Net operating revenues	$4,885,557	$4,964,852	$5,158,815	$5,530,804	$5,881,555	$6,385,340	$6,965,926	$7,330,827	$7,594,450	$7,479,764
3	Current liabilities as a percentage of net operating revenues	30%	35%	39%	32%	32%	36%	36%	35%	37%	43%

Current Liabilities

Fiscal Year Data

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Current liabilities	$3,939,155	$3,564,981	$3,290,093	$3,549,486	$3,560,272	$3,545,195	$3,892,853	$3,846,062	$3,481,293	$3,466,754
2	Net operating revenues	$8,292,271	$8,425,089	$8,304,703	$8,162,831	$8,286,581	$8,196,458	$8,280,534	$8,418,812	$8,149,533	$8,295,780
3	Current liabilities as a percentage of net operating revenues	48%	42%	40%	43%	43%	43%	47%	46%	43%	42%

Current Liabilities

Formula: $\frac{\text{Current liabilities}}{\text{Net operating revenues}}$

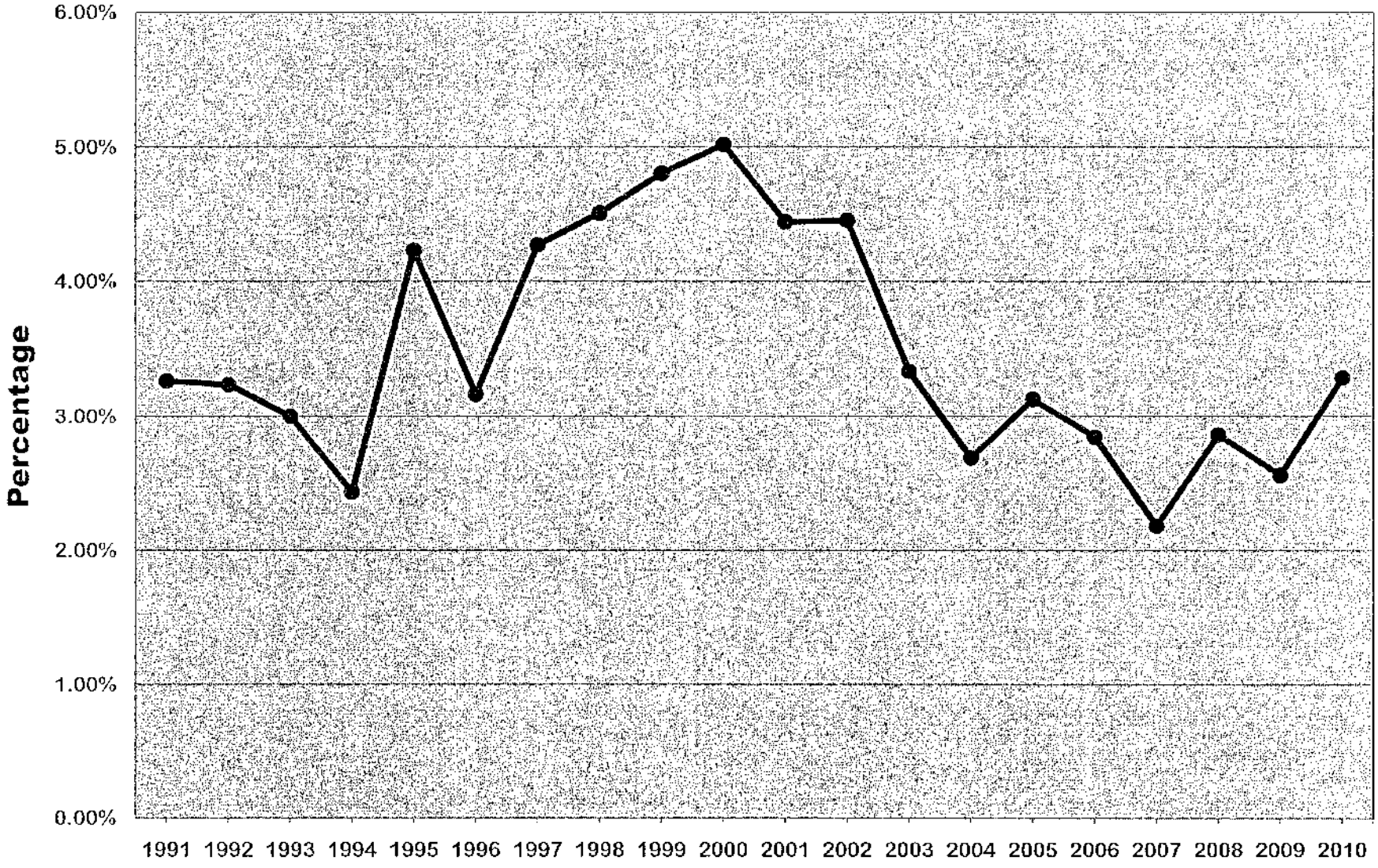
Description: Current liabilities are defined as the sum of all liabilities due at the end of the fiscal year, including short-term debt, current portion of long-term debt, all accounts payable, accrued liabilities, and other current liabilities. Short-term borrowing is an accepted way to deal with uneven cash flow, an increasing amount of short-term debt outstanding at the end of successive years can indicate liquidity problems, deficit spending, or both.

Warning Trend: Increasing current liabilities at the end of the year as a percentage of net operating revenues.

Whitewater Analysis: The municipal credit industry considers the following situations negative factors:1) short-term debt outstanding at the end of each fiscal year should not exceed 5 percent of operating revenues, and 2) a two-year trend of increasing short-term debt outstanding at the end of the fiscal year. The City has not violated either of these factors.

The City of Whitewater has avoided both of these negative factors and since 2001 has seen a steady decline from 48% to 42% in its current liabilities as a percentage of net operating revenues at the end of each fiscal year. The City has conscientiously managed its finances so that short-term debt is not used for cash shortfalls as well as not postponing accounts payable to cope with revenue shortfalls or over expenditures.

Net Direct Bonded Long-Term Debt as a Percentage of Population



Net Direct Bonded Long-Term Debt as a Percentage of Assessed Valuation

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Assessed valuation	$151,849,260	$156,823,900	$161,623,700	$197,772,500	$201,658,300	$246,044,100	$272,845,900	$305,564,616	$328,337,800	$344,801,700
2	Population	12,738	12,823	12,978	13,023	13,183	13,254	13,374	13,330	13,502	13,512
3	Personal income	$1,342,129	$1,452,602	$1,553,581	$1,685,885	$1,790,764	$1,897,935	$2,026,537	$2,026,537	$2,206,355	$2,315,525
4	Net direct bonded long-term debt	$4,953,000	$5,072,416	$4,847,263	$4,812,776	$8,530,533	$7,783,202	$11,552,568	$13,774,842	$15,765,074	$17,302,379
5	Net direct bonded long-term debt as a percentage of assessed valuation	3.26%	3.23%	3.00%	2.43%	4.23%	3.16%	4.27%	4.51%	4.80%	5.02%
6	Net direct bonded long-term debt as an amount per resident	$388.84	$395.57	$373.50	$369.56	$647.09	$587.23	$871.29	$1,033.37	$1,167.61	$1,280.52

Net Direct Bonded Long-Term Debt as a Percentage of Assessed Valuation

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Assessed valuation	$377,658,825	$401,156,875	$433,206,500	$476,636,950	$496,551,900	$542,527,200	$533,007,350	$629,359,650	$632,714,700	$620,952,000
2	Population	13,608	13,693	13,887	13,996	14,311	14,420	14,210	11,260	14,299	14,454
3	Personal income	$2,522,363	$2,546,417	$2,689,137	$2,853,355	$2,941,270	$3,029,508	$3,344,841	$3,414,027	$3,333,254	$3,446,586
4	Net direct bonded long-term debt	$16,773,374	$17,862,096	$14,444,133	$12,803,501	$15,517,051	$15,424,074	$13,808,499	$17,990,880	$16,179,954	$20,410,000
5	Net direct bonded long-term debt as a percentage of assessed valuation	4.44%	4.45%	3.33%	2.69%	3.12%	2.84%	2.18%	2.86%	2.56%	3.29%
6	Net direct bonded long-term debt as an amount per resident	$1,232.51	$1,304.47	$1,040.12	$914.80	$1,084.27	$1,069.63	$1,231.80	$1,597.77	$1,131.54	$1,412.07

Long Term Debt

Formula: $\frac{\text{Net Direct Bonded Long-Term Debt}}{\text{Assessed Valuation}}$

Description: "Direct debt" is bonded debt for which the local government has pledged its full faith and credit. It does not include the debt of overlapping jurisdictions, such as school districts and county governments.

"Self-supporting debt" is bonded debt that the local government has pledged to repay from a source separate from its general tax revenues. Examples would be a water bond that is repaid from the income of the water utility or bonds issued for tax incremental finance districts that will be repaid from the "incremental" increase in the tax base located within the district.

"Net direct debt" is direct debt minus self-supporting debt. An increase in net direct bonded long-term debt as a percentage of assessed valuation (or the city could use population and/or personal income) as the denominator can mean that the government's ability to repay its debt is diminishing-assuming that the city depends on the property tax to pay its debts.

Warning Trend: Increasing net direct bonded long-term debt as a percentage of assessed valuation.

Whitewater Analysis: The City of Whitewater has seen a decrease in its long-term debt as a percentage of its assessed valuation. This percentage reached a peak of 5.02% in 2000 and was reduced to 3.29% in 2010.

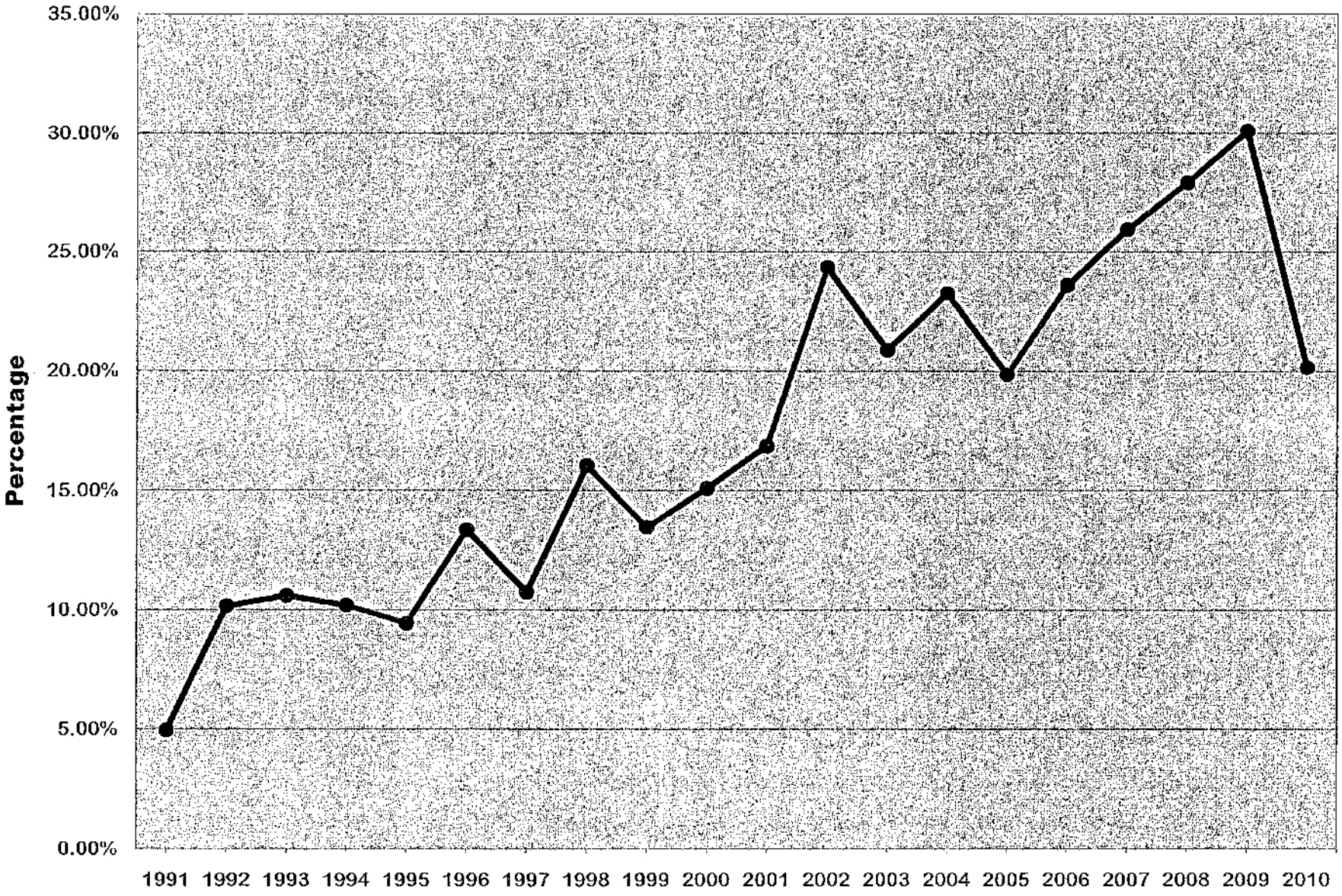
There are two primary reasons for this positive financial trend: 1) the use of annual shared utility revenue as the primary source of the City's Capital Improvements Program (CIP), and 2) the average annual high single-digit increase in the city's assessed valuation over the last ten years. Also, the City has been using tax incremental financing very efficiently to fund some capital improvements that normally would be borrowed for such as the Starin Road extension and University Technology Park infrastructure.

Credit industry benchmarks for assessing long term debt often include the net direct bonded debt of the City, as well as the bonded debt of the Whitewater Unified School District, Gateway Technical School District, Walworth County and Jefferson County. As stated above, net direct bonded debt plus overlapping bonded debt is referred to as overall net debt. Warning signals for overall net debt are as follows:

Overall net debt exceeding 10 percent of assessed valuation
An increase of 20 percent over the previous year in overall net debt as a percentage of market valuation
Overall net debt as a percentage of market valuation increasing 50 percent over the figure for four years earlier
Overall net debt per capita exceeding 15 percent of per capita net income
Net direct debt exceeding 90 percent of the amount authorized by law

The City, while only contributing a portion of this net debt, is well below each of these credit standards.

Net Direct Debt Service



Net Direct Debt Service
Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Net direct debt service	$241,943	$505,020	$546,360	$564,238	$555,112	$852,779	$748,483	$1,174,854	$1,023,071	$1,128,894
2	Net operating revenues	$4,885,557	$4,964,652	$5,158,815	$5,530,804	$5,881,555	$6,385,340	$6,965,926	$7,330,827	$7,594,450	$7,479,764
3	Net direct debt service as a percentage of net operating	4.95%	10.17%	10.59%	10.20%	9.44%	13.36%	10.74%	16.03%	13.47%	15.09%

Net Direct Debt Service
Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Net direct debt service	$1,396,675	$2,051,427	$1,734,562	$1,899,021	$1,644,734	$1,935,771	$2,146,990	$2,347,476	$2,451,288	$1,672,437
2	Net operating revenues	$8,292,271	$8,425,089	$8,304,703	$8,162,831	$8,286,581	$8,198,458	$8,280,534	$8,414,812	$8,149,533	$8,295,780
3	Net direct debt service as a percentage of net operating	16.84%	24.35%	20.89%	23.26%	19.85%	23.61%	25.93%	27.90%	30.08%	20.16%

Net Direct Debt Service

Formula: $\frac{\text{Net Direct Debt Service}}{\text{Net Operating Revenues}}$

Description: Debt service is defined here as the amount of principal and interest that a local government must pay each year on net direct bonded long-term debt plus the interest it must pay on direct short-term debt. Increasing debt service reduces expenditure flexibility by adding to the government's obligations. Debt service can be a major part of a city's fixed costs, and its increase may indicate excessive debt and fiscal strain.

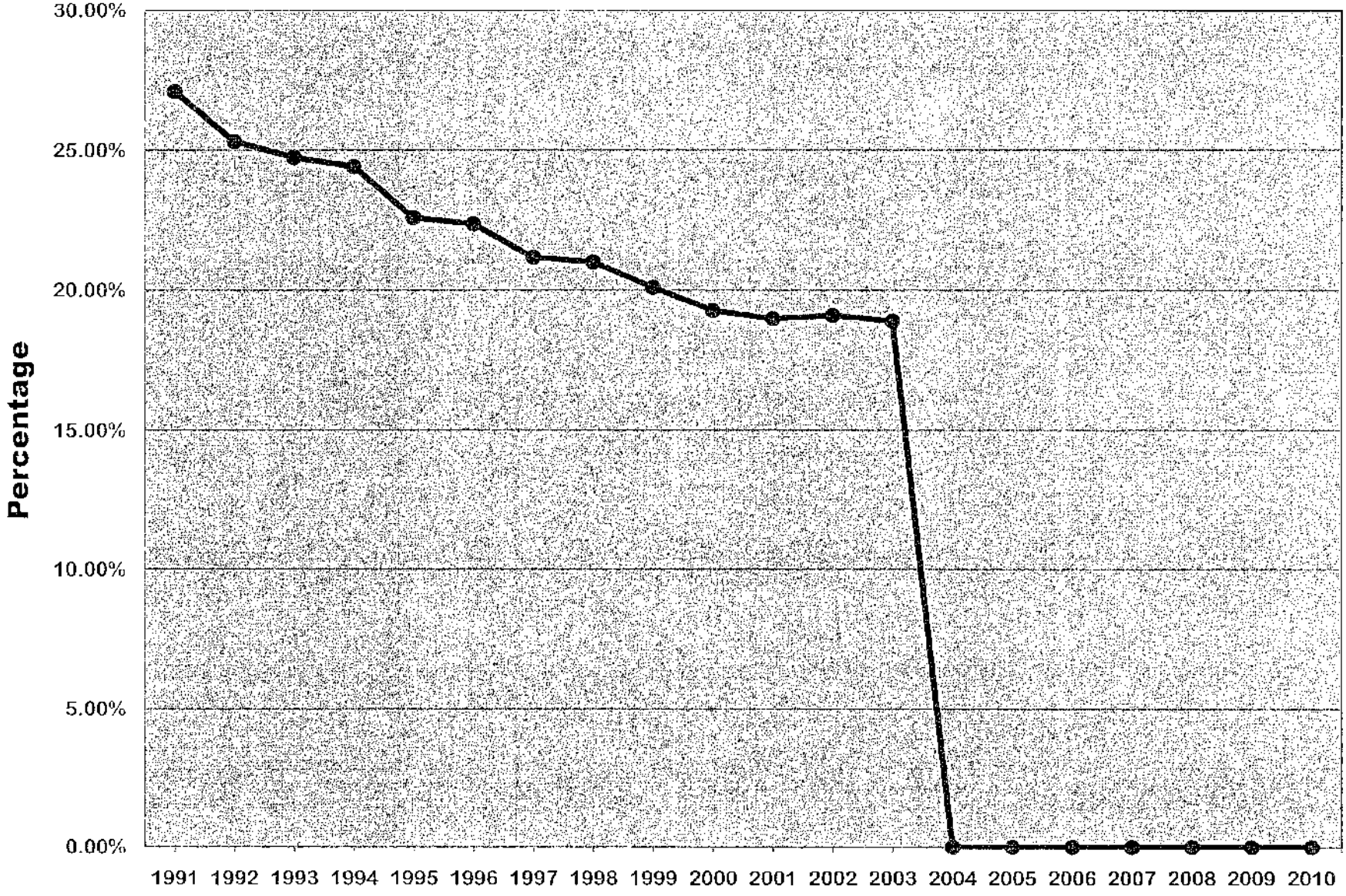
Warning Trend: Increasing net direct debt service as a percentage of net operating revenues.

Whitewater Analysis: According to credit industry standards, debt service on net direct debt exceeding 20 percent of operating revenues is considered a potential problem. Ten percent is considered acceptable.

In analyzing this trend, the City in 2006 had a percentage of 24.35% which is considerably above the credit industry standard. However, because the City has issued $ 3,618,622 in new debt for TID#4 in 2005, $500,000 in 2006, and $5,600,000 in 2008, this percentage will be increasing. The general fund has only a small portion of the total debt service outstanding for the City. 85% of the net direct debt service is due to borrowings for TID #4.The balance of 15% is supported by the shared revenue utility payment from the power plant.

Policy statements should be developed by the City that would indicate desirable levels of debt service as well as procedures for analyzing future debt service. Suggested policies are that 1) total debt service for general obligation debt will not exceed 10 percent of annual operating revenues and 2) before bonded long-term debt is issued, the impact of debt service on total annual fixed costs will be analyzed.

Pension Obligation



Pension Obligation as Percentage of Salaries and Wages

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Unfunded actuarial accrued liability	$636,439	$657,054	$656,279	$674,909	$662,896	$679,866	$695,521	$710,489	$725,436	$739,169
2	Salaries and wages	$2,350,546	$2,597,737	$2,653,833	$2,766,328	$2,936,266	$3,042,086	$3,286,222	$3,382,730	$3,611,398	$3,835,515
3	Unfunded actuarial accrued liability as a percentage of salaries and wages	27.08%	25.29%	24.73%	24.40%	22.58%	22.35%	21.16%	21.00%	20.09%	19.27%

Pension Obligation as Percentage of Salaries and Wages

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Unfunded actuarial accrued liability	$752,614	$762,316	$773,559	$0	$0	$0	$0	$0	$0	$0
2	Salaries and wages	$3,965,356	$3,991,957	$4,092,876	$4,177,560	$4,308,997	$4,473,391	$4,589,258	$4,947,970	$4,994,502	$5,147,815
3	Unfunded actuarial accrued liability as a percentage of salaries and wages	18.98%	19.10%	18.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Pension Obligations

Formula: $\frac{\text{Pension Obligations}}{\text{Salaries and Wages}}$

Description: Pension plans can represent a significant expenditure obligation for local governments. Generally accepted accounting principles (GAAP) require that the cost of defined pension plans be accrued as an expense by employers in their financial statements as benefits are earned by employees, regardless of whether the employer actually funds these amounts.

Warning Trend: Increasing pension obligations as a percentage of salaries and wages.

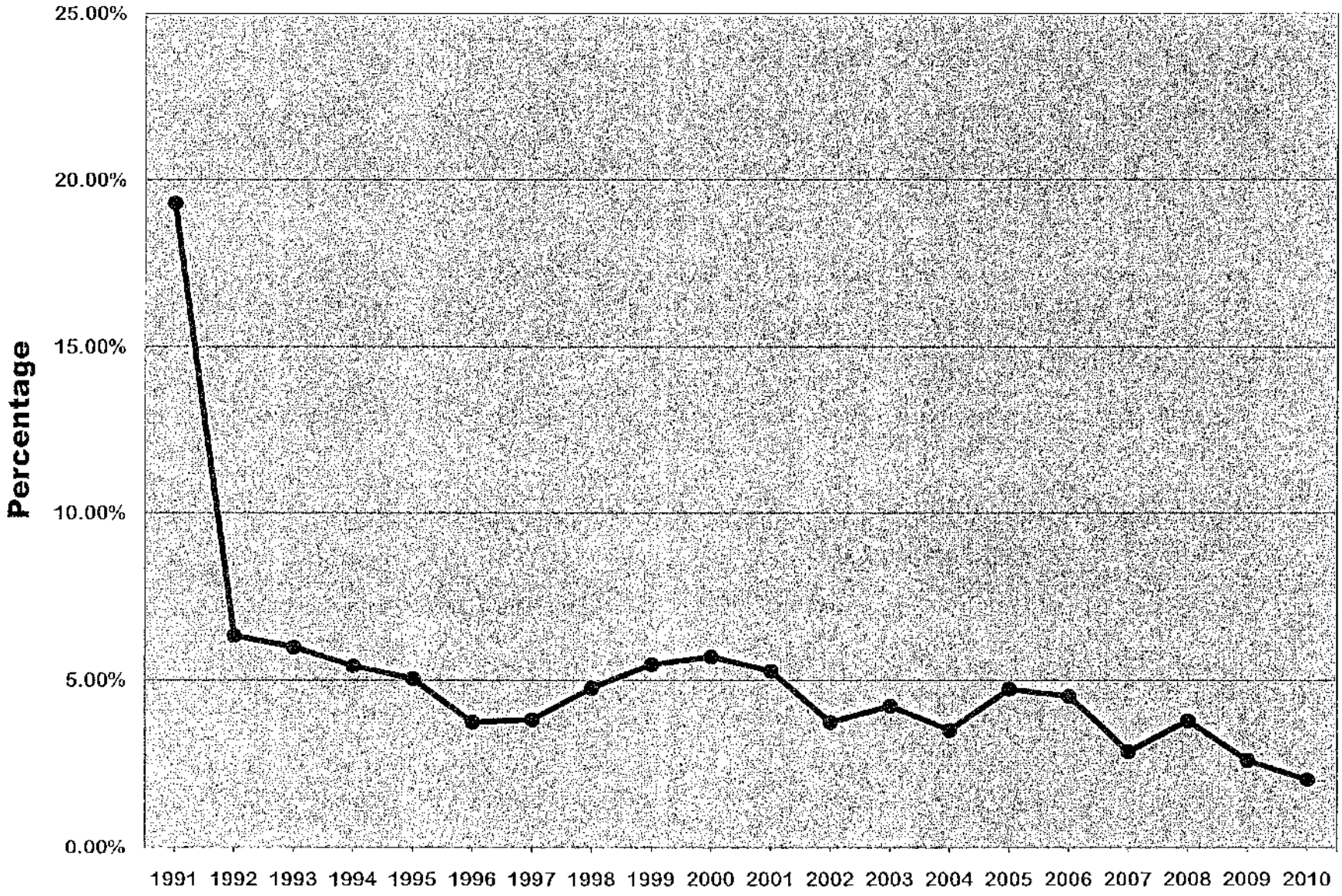
Whitewater Analysis: In a review by members of the Government Finance Officers Association, this indicator was judged important for local governments that manage their own pension funds but less important for those local governments that are part of a state-wide pension program. Whitewater is part of the State of Wisconsin Retirement System so pension fund management is not a function of the City.

The City paid off its unfunded pension liability to the State in 2004 which has reduced its annual retirement payments into the State Retirement Fund by approximately $65,000. This was a prudent financial decision by the City as the City no longer has any accrued pension liability.

The unfunded pension liability to the State of Wisconsin was retired through an internal advance with the sewer equipment replacement fund. The advance was retired in 2010.

This financial trend variable will not be included in future reports since it is no longer applicable to the city's financial condition.

Capital Outlay



Capital Outlay

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Capital outlay	$1,064,812	$311,455	$303,749	$259,551	$258,104	$195,274	$211,606	$284,433	$327,371	$334,813
2	Net operating expenditures	$5,519,477	$4,913,503	$5,070,190	$4,780,702	$5,117,956	$5,231,425	$5,552,387	$5,963,025	$5,980,834	$5,868,398
3	Capital outlay as a percentage of net operating expenditures	19.29%	6.34%	5.99%	5.43%	5.04%	3.73%	3.81%	4.77%	5.47%	5.71%

Capital Outlay

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Capital outlay	$325,931	$247,693	$291,132	$240,185	$342,442	$357,710	$212,252	$302,318	$203,291	$160,919
2	Net operating expenditures	$6,171,516	$6,641,401	$6,891,299	$6,872,127	$7,229,437	$7,902,652	$7,412,705	$7,991,981	$7,807,626	$7,927,925
3	Capital outlay as a percentage of net operating expenditures	5.28%	3.73%	4.22%	3.50%	4.74%	4.53%	2.86%	3.78%	2.60%	2.03%

Capital Outlay

Formula: $\frac{\text{Capital Outlay from Operating Funds}}{\text{Net Operating Expenditures}}$

Description: Expenditures for operating equipment-such as police squad cars and computer equipment-drawn from the operating budget are usually referred to as "capital outlay". Capital outlay items normally include equipment that will last longer than one year and that have an initial cost above a significant initial amount, such as one thousand dollars. Capital outlay does not include capital budget expenditures for construction of infrastructure improvements such as streets, buildings or bridges.

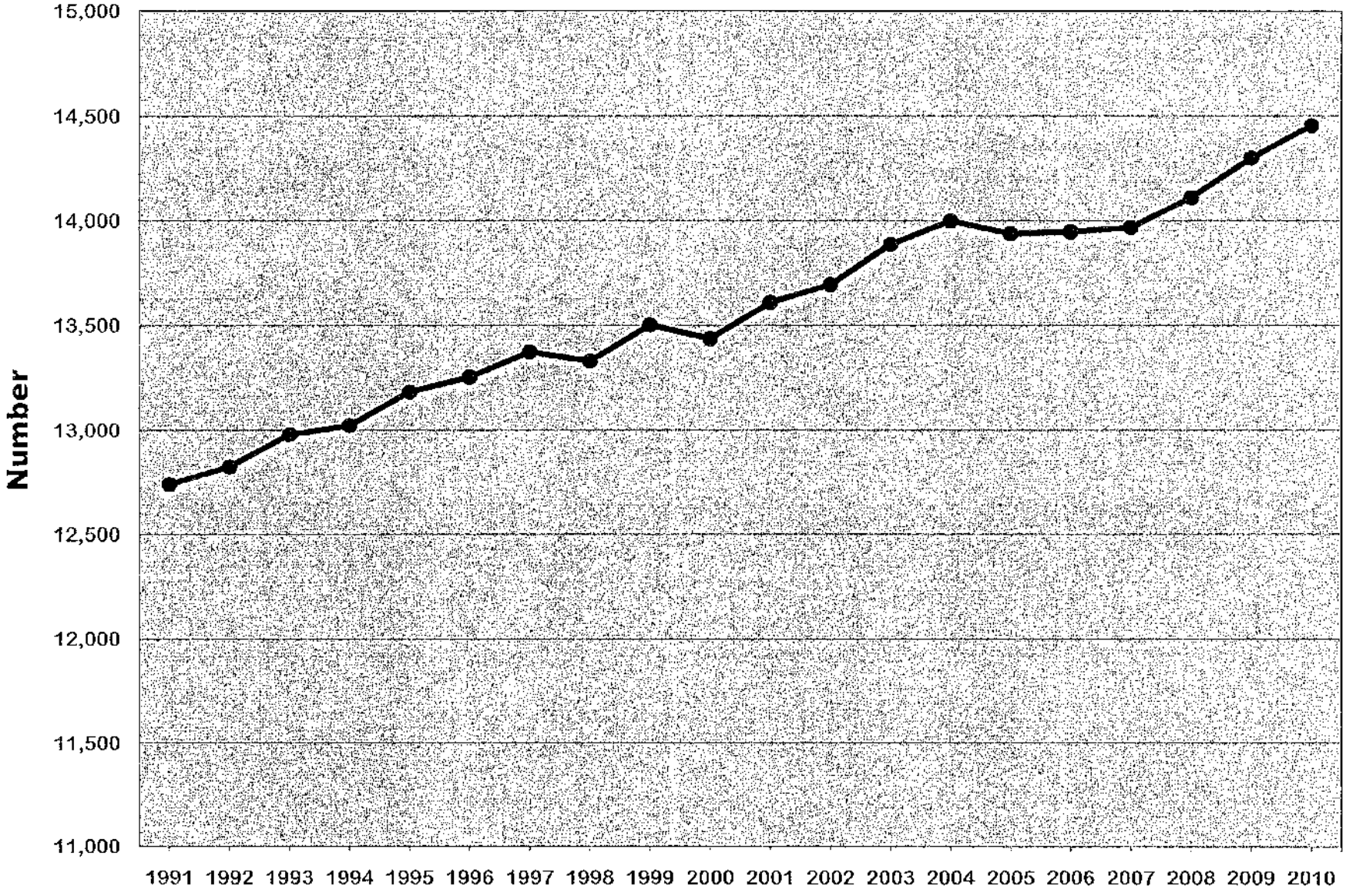
The purpose of capital outlay in the operating budget is to replace worn equipment or to add new equipment. The ratio of capital outlay to net operating expenditures is a rough indicator of whether the stock of equipment is being adequately replaced. Over a number of years, the relationship between capital outlay and operating expenditures should remain about the same. If this ratio declines in the short run (one to three years), it may mean that the City's needs are temporarily satisfied, since most equipment lasts more than a year. A decline persisting over three of more years can indicate that capital outlay needs are being deferred, which can result in the use of inefficient or obsolete equipment.

Warning Trend: A three or more year decline in capital outlay from operating funds as a percentage of net operating expenditures.

Whitewater Analysis: The City of Whitewater has been very diligent in establishing vehicle and equipment replacement funds to replace and update its worn or obsolete equipment. As such, in recent years it has budgeted to place sufficient dollars in these funds for capital replacement based upon life-cycle cost considerations and depreciation schedules. This has evened out the annual appropriations needed to pay for these items, thus avoiding large budgetary variations that can occur when large or expensive vehicles or equipment (i.e. fire aerial trucks, sewer jet rodders, street sweepers, etc.).

Over a number of years, the relationship between capital outlay (not including capital budget expenditures for construction of infrastructure such as streets, buildings or bridges) and operating expenditures should remain about the same. This has been the case in Whitewater the last decade or so and this is a healthy trend as long as adequate funds are allocated to the vehicle and equipment funds on an annual basis.

Population


15,000
14,500
14,000
13,500
13,000
12,500
12,000
11,500
11,000
Number
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Population

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Population	12,738	12,823	12,978	13,023	13,183	13,254	13,374	13,330	13,502	13,437

Population

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Population	13,608	13,693	13,887	13,998	13,938	13,947	13,967	14,110	14,299	14,454

Population

Formula: Population

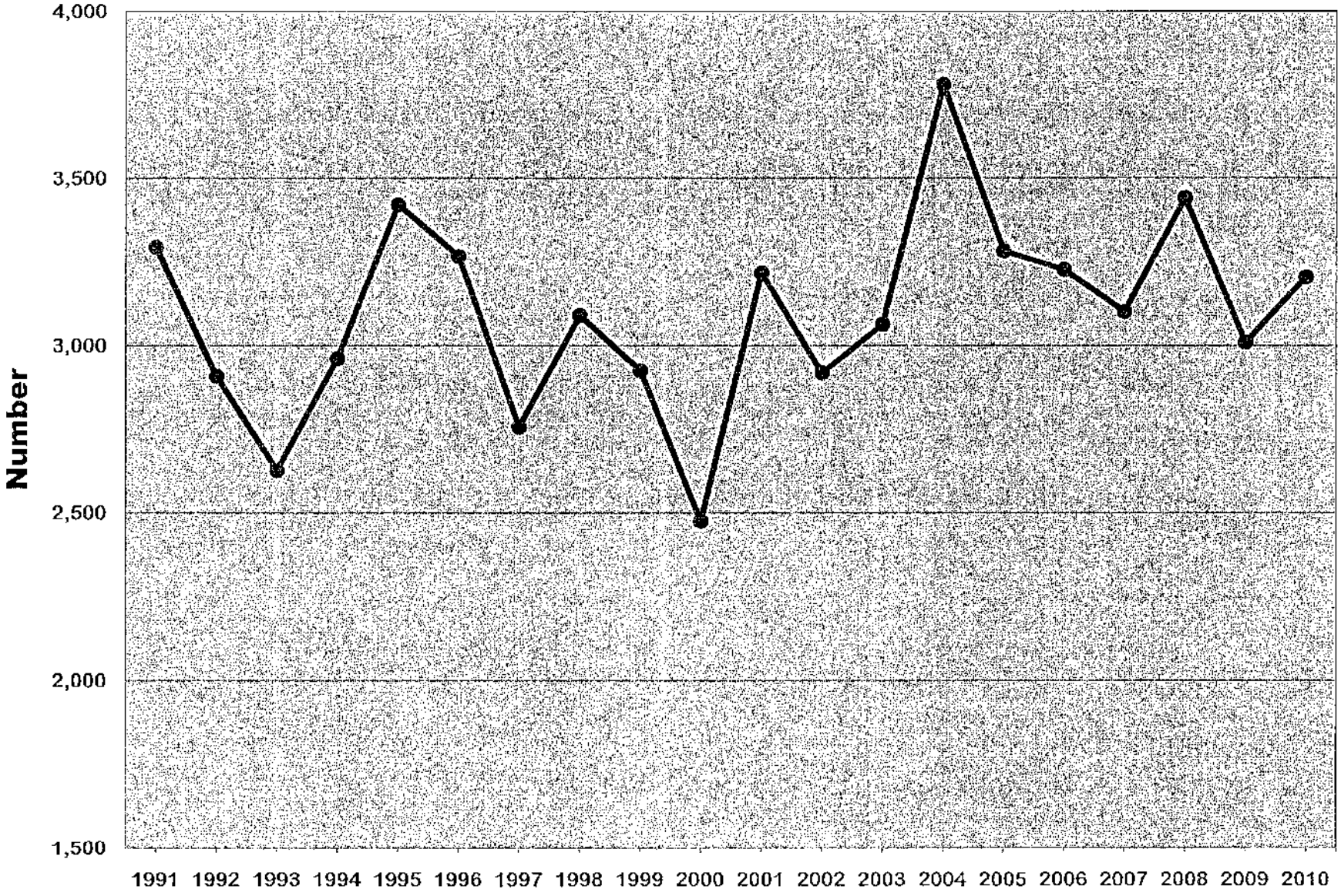
Description: The exact relationship between population change and other economic and demographic factors is uncertain. Population change can, however, directly affect governmental revenues: for example, some taxes are collected on a per capita basis, and many intergovernmental revenues and grants are distributed according to population. A sudden increase in population can create immediate pressures for new capital outlay and higher levels of service. In the case of annexations, where the capital infrastructure is already in place, there may still be a need to expand operating programs.

Warning Trend: Rapid change in population.

Whitewater Analysis: The City of Whitewater has steadily increased over the last 20 years. Since 1991, the city population has grown by just over 1,700 people. the City population has seen an increase of over 500 residents in the last five years period- part of this increase can certainly be attributed to the growing enrollment at UW-Whitewater.

This gradual increase in population is a positive trend for our city, and in recent years our UW comparable cities have experienced similar upshifts.

Arrests By Year



Arrests By Year

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Crime rate	3,293	2,907	2,626	2,961	3,421	3,266	2,756	3,089	2,925	2,475

Arrests By Year

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Crime rate	3,216	2,918	3,063	3,781	3,282	3,226	3,100	3,441	3,009	3,203

Crime Rate

Formula: Crime Rate

Description: Crime rate captures a negative aspect of a community that can affect its present and future economic development potential. The crime rate also measures the demand on public services in the form of public safety expenditures. Information on the crime rate is normally attainable from the local police department, which tracks statistics on crime. It is of value to compare this indicator to the state-wide or regional statistics.

Warning Trend: Increasing crime rate.

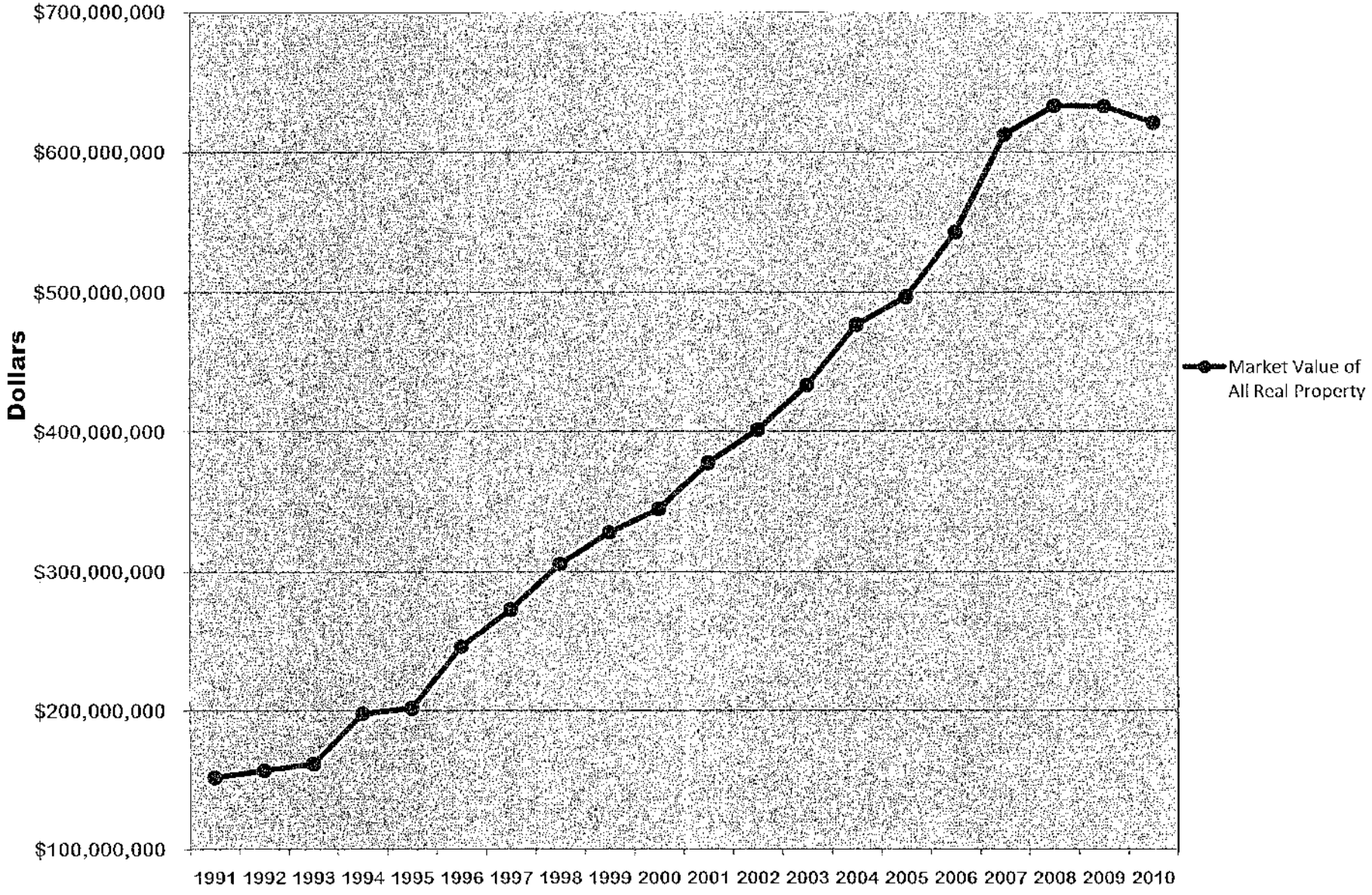
Whitewater Analysis: The Whitewater crime rate has gone up and down varying between a low of 2,437 arrests in 2000 and 3,441 arrests in 2004. In 2010, the number of arrests was lower than the number of arrests the city had in 1991. Since 2000 the number of arrests has been fairly consistent averaging about 2,900 annually.

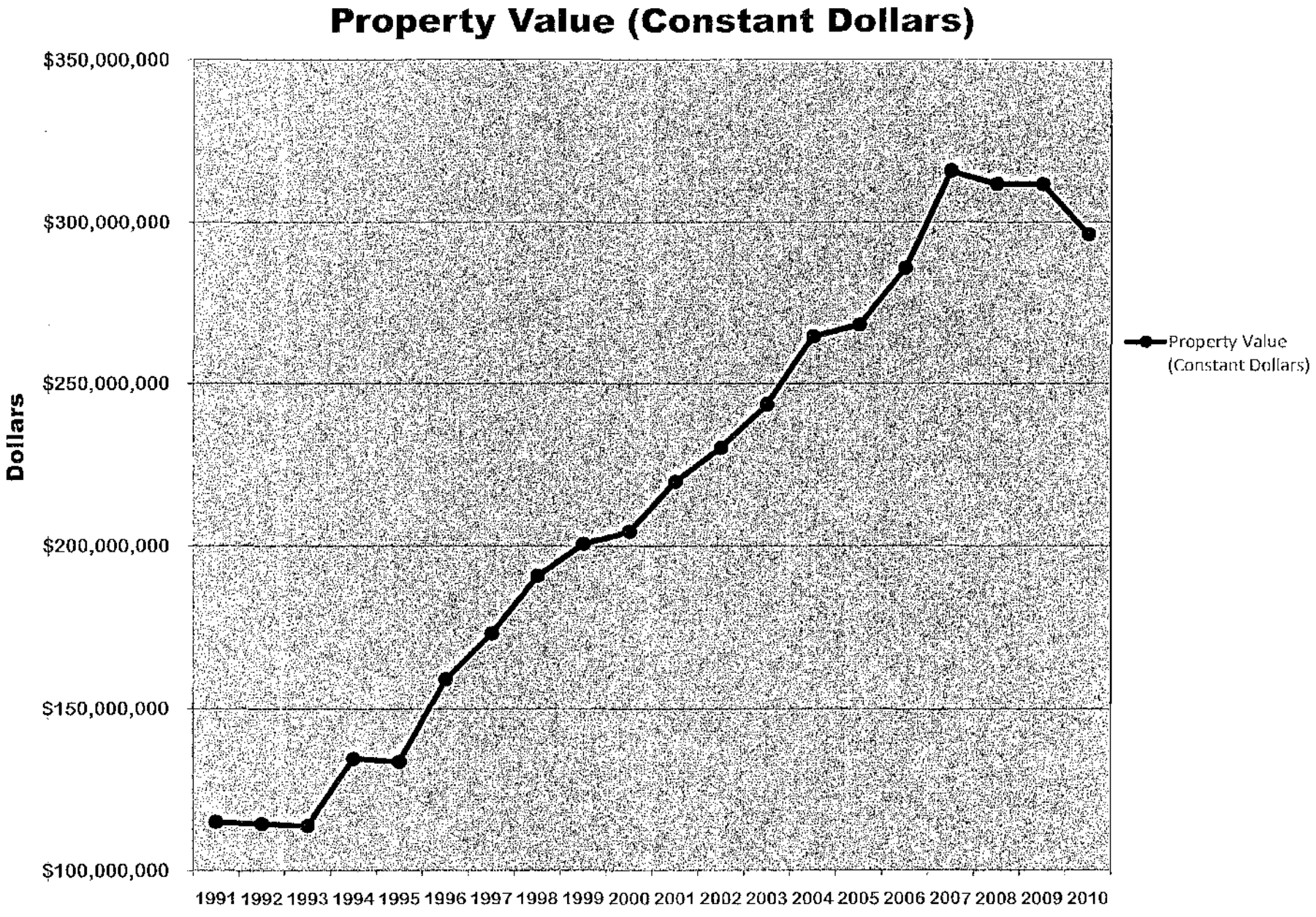
In 2000, the Whitewater Police Department began implementing large scale alcohol abatement programs. In years following there have been a number of large scale house parties that drew in arrests of close to or over 250 people. For this reason Whitewater's arrest number for alcohol related arrests may be slightly higher than some of our comparable municipal police department arrests.

The Police Department also has received a number of different "seatbelt safety" grants in recent years which allowed for more police overtime which resulted in enhanced traffic enforcement efforts.

These two reasons help to explain why the crime rate for the last 10 years is slightly higher than the crime rate numbers between 1991 and 2000.

Market Value of All Real Property




Property Value (Constant Dollars)
$350,000,000
$300,000,000
$250,000,000
$200,000,000
$150,000,000
$100,000,000
Dollars
1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
Property Value (Constant Dollars)

Increase in Property Value

Fiscal Year Data

Line	Description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1	Market Value of property (residential, commercial, industrial)	$151,849,260	$155,823,900	$161,623,700	$197,772,500	$201,668,300	$246,044,100	$272,846,900	$305,564,616	$328,337,800	$344,801,700
2	Consumer price index (CPI) for the municipality's area	132.2	137.1	142.1	147	151	154.7	157.7	160.3	163.7	168.6
3	CPI in decimal	1.322	1.371	1.421	1.47	1.51	1.547	1.577	1.603	1.637	1.686
4	Property value (constant dollars)	$114,863,283	$114,386,506	$113,739,409	$134,539,116	$133,555,166	$159,045,960	$173,016,424	$190,620,472	$200,572,877	$204,508,719
5	Change in property value	$2,760,260	$4,974,640	$4,799,900	$35,148,800	$3,895,900	$44,376,800	$26,802,800	$32,717,716	$22,773,184	$16,463,900
6	Percentage change in property value	2.34%	4.33%	4.20%	31.78%	2.90%	33.23%	16.85%	18.91%	11.95%	8.21%

Increase in Property Value

Fiscal Year Data

Line	Description	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	Market Value of property (residential, commercial, industrial)	$377,858,825	$401,156,875	$433,206,500	$476,636,950	$496,551,900	$542,527,200	$612,645,550	$633,007,350	$632,714,700	$620,952,000
2	Consumer price index (CPI) for the municipality's area	171.7	174	177.7	180.2	185.2	189.9	194.102	203.029	203	209.6
3	CPI in decimal	1.717	1.74	1.777	1.802	1.852	1.899	1.94102	2.03029	2.03	2.096
4	Property value (constant dollars)	$219,952,723	$230,549,928	$243,765,312	$264,504,412	$268,116,577	$285,690,985	$315,631,240	$311,781,741	$311,682,118	$296,256,725
5	Change in property value	$32,857,125	$23,498,050	$32,049,625	$43,430,450	$19,914,950	$45,975,300	$70,119,350	$20,360,800	($292,650)	($11,762,700)
6	Percentage change in property value	16.07%	10.68%	13.90%	17.82%	7.53%	17.15%	24.64%	6.45%	-0.09%	-3.77%

Property Value

Formula: $\frac{\text{Change in property value (constant dollars)}}{\text{Property value in prior year (constant dollars)}}$

Description: Changes in property value are important because most local governments depend on the property tax for a substantial portion of their revenues. Especially in a community with a stable or fixed tax rate, the higher the aggregate property value, the higher the revenues. Communities experiencing population and economic growth are likely to experience short-run, per unit increases in property value. This is because in the short run, the housing supply is fixed and the increase in demand created by growth will force prices up. Declining areas are more likely to see a decrease in the market value of properties.

The effect of declining property value on governmental revenues depends on the government's reliance on property taxes. The extent to which the decline will ripple through the community's economy, affecting other revenues such as those from sales tax, is more difficult to determine. All of the economic and demographic factors are closely related. A decline in property value will most probably not be a cause but a symptom of other, underlying problems.

Warning Trend: Declining growth or drop in the market value of residential, commercial, or industrial property (constant dollars).

Whitewater Analysis: Whitewater's property value has been rising for the last 20 years. With the current state of the entire U.S. economy and the market value of housing going down in the past two years, however, we have seen a decline in Whitewater's overall property value.

The State of Wisconsin's rate of change in property value went down as well between 2009 and 2010. The total equalized value went down by approximately 3% which is slightly better than the decrease in property value for the city of Whitewater. This could be a warning trend for Whitewater, and is important to pay attention to with the current state of our economy.

C-8

Kevin M. Brunner, City Manager
312 W. Whitewater Street
Whitewater, WI 53190
kbrunner@gi.whitewater.wi.us

City of Whitewater

Memo

To: Common Council Members

From: Kevin Brunner

Date: 08/11/2011

Re: 2012 Budget Direction

We have scheduled a work session during next week's Common Council meeting to discuss some general direction regarding the 2012 City Budget that city staff and I would like to receive from the Council before we go forward and develop the proposed Budget that will be submitted for your consideration in early October.

Specifically, I would like to discuss with the Council the following policy questions/issues:

1) **What should be our targeted property tax levy for 2012?** The recently approved State Budget (Act 32) provides municipal levy limits of either 0% or the percentage amount of new construction occurring in the previous year. While we are still awaiting final confirmation from the Wisconsin Department of Revenue what this exact new construction percentage will be, it is likely to be miniscule (less than a quarter of a percent).

   There are also new State rules on how much levy capacity municipalities can carry forward to the following year. Under the old rules, we could have carried forward $68,641 to 2012. The NEW maximum carry forward is .005%(1/2 of 1%) of the actual levy (operating & debt service). For 2010, that would be $14,283—($2,856,656 x .005). Debt Service is exempt from levy limits if issued after 7/2005. All GO City of Whitewater debt has been issued after July, 2005. The only older issue we have is the 1997 CW loan paid by Sewer revenues.

   In essence, should be keep the levy increase at the 2011 level (which was the same as 2010) or should it be increased the allowed carry forward amount of $14,283!

2) **Application of Undesignated Fund Balance.** At the end of 2010, we had an undesignated General Fund Balance of $1,910,164 or 20.62% of the 2011 General Fund Budget of $9,264,199.

   Finance Director Doug Saubert and I are estimating that we will be contributing approximately $175,000 to the General Fund Balance this year (combination of revenues in excess of budget and expenditures less than budget). Since, the 2011 adopted General Fund Operating Budget contained an appropriation of $75,000 from the Fund Balance, the total Undesignated Fund Balance we are projecting at the end of 2011 is $2,010,164. ($1,910,164 + ($175,000-$75,000)).

   Since the 2012 General Fund Operating Budget is expected be several hundred thousand dollars less than 2011, we could potentially apply a designated fund balance in excess of $75,000 in 2012 while still maintaining our policy of keeping 20% of the General Fund Balance as undesignated or in reserve.

3) **Increase in Any User Fees or Charges?** The City could certainly increase existing or establish new fees or charges for certain services. For example, a recycling fee per household could be enacted to cover the reduced recycling grants received from the State. Almost all of the townships surrounding Whitewater have a separate fee over and above the local property tax for refuse collection/recycling services.

   Ambulance fees and charges should be reviewed to reflect third party insurance and Medicare/Medicaid reimbursement policies. Are Municipal Court fine and forfeiture amounts where they should be in comparison to other communities?

4) **Should Resident Park and Recreation Fees Still be Extended to All Whitewater Unified School District Residents?**

5) **Should the City Consider Applying More Special Assessments for Public Works Improvement Projects?** Many communities special assess more costs on directly benefitting property owners for street, sidewalk, sewer, water and storm sewer improvements than we currently do.

6) **City Employee Benefits.** All City employees with the exception of sworn Police personnel (hired before July 1, 2011) will be responsible for paying a portion of their State Retirement contributions as well as health insurance premiums beginning on January 1, 2012 (non-represented city employees begin such payments this month). Should other benefits be modified to save municipal costs? Should new hires receive a lesser fringe benefit package?

   This issue should certainly be discussed in the closed executive session scheduled for next week's meeting but some general discussion on this issue should take place. Discussion of collective bargaining strategies will also take place in the closed session.

   These are some of the major 2012 Budget issues that I would like to discuss with the Common Council before we start crafting the Budget over the next several weeks.

7)