APPENDIX H - MMSD CONSERVATION PLAN

Conservation Plan

EXECUTIVE SUMMARY

Submitted to:

Milwaukee Metropolitan Sewerage District

Prepared by:

The Conservation Fund
Chicago, IL

Applied Ecological Services, Inc.
Brodhead, WI and West Dundee, IL

Resource Data, Inc.
Asheville, NC

Heart Lake Conservation Associates, LLC
Monona, WI 53716

Velasco and Associates
Rockford, IL

K. Singh and Associates
Elm Grove, WI

October 31, 2001

EXECUTIVE SUMMARY

Scope of Services

Prepare a Conservation Plan for each watershed (Menomonee River, Oak Creek, Root River) that identifies parcels that need to be protected or restored for conservation purposes as floodplains, riparian habitats, environmental corridors or isolated natural resource areas within the watershed (taken from the RFP for Contract No. W027DC001).

Project Approach

Watercourse studies completed for the Menomonee River, Root River and Oak Creek indicate that demographic and community development trends, as projected over a period of 20 years, will exacerbate existing flood problems within these watersheds. These studies provide recommendations for traditional, engineered strategies to combat flooding, and acknowledge the importance of maintaining existing open space to prevent future flooding.

MMSD retained the services of The Conservation Fund, Applied Ecological Services, Inc., Resource Data, Inc., Heart Lake Conservation Associates, Velasco and Associates, and K. Singh and Associates (Project Team) to develop a Conservation Plan (Plan) for the acquisition (either outright acquisition or easement) and protection of important open space at risk of development.

This study provides the scientific and practical rationale for protecting these parcels from development in perpetuity, and entering into relationships with public, private, and non-profit entities to manage these properties to maximize benefits. Furthermore, this study identifies funding mechanisms and strategies to leverage monies earmarked for land acquisition.

The purpose of the Plan is as follows:

- Identify undeveloped private properties potentially at risk for development that could provide future flood-reduction benefits;
- Assess opportunities for MMSD to partner with public, private, or non-profit entities that would assist with the acquisition, management, and maintenance of identified properties;
- Assess mechanisms and strategies to leverage MMSD funding for this effort;
- Provide recommendations for the acquisition of specific parcels (or easements on those parcels) at risk for development;
- Consider how the ecological restoration of identified parcels could reduce future flooding.

The implementation of this plan will provide a variety of benefits in addition to stated objectives including improved wildlife habitat, improved water quality, and aesthetic and recreational opportunities.

Prevention of Future Flooding Risks through Conservation

The Project Team used Geographic Information System (GIS) based remote sensing techniques (aerial photography, soils maps, wetland maps, etc.) to identify more than 28,000 acres of undeveloped land containing hydric soils that could continue to provide future reduction benefits. A subset of 199 sites greater than or equal to 25 acres (sites smaller than 25 acres were dropped) and totaling 17,146.31 acres was identified for further investigation.

All 199 sites were visited to field-check mapped data, and ranked by watershed in accordance with the potential for each site to contribute to the prevention of future flooding risks. Thirty-four sites totaling 2,417.76 acres were eliminated during field visits because they were developed. Other sites were eliminated or ranked as a low priority for acquisition if they contained a high number of parcels, were aligned in an impractical configuration, or were known to contain environmental hazards.

Forty-two of the 199 sites were identified as high priorities for acquisition as indicated on Figure 2. These sites are summarized in Tables 1 and 2. The 123 sites summarized in Table 3 were identified as low priority for acquisition. Table 4 summarizes the minimum, maximum and average high priority site size for each of the watersheds.

Table 1. Number and area of high priority sites by watershed.

Watershed	No. of Sites	Acres	% by Area
Menomonee	27	5,002.29	.71
Oak Creek	3	277.95	.04
Root	12	1,785.48	.25
Total	**42**	**7,065.72**	**1.00**

Table 2. Minimum, maximum and average high priority site size by watershed.

Watershed	Min. Site Size	Max. Site Size	Avg. Site Size
Menomonee	42 acres	674 acres	185 acres
Oak Creek	65 acres	139 acres	93 acres
Root	30 acres	420 acres	148 acres

Table 3. Number and area of low priority sites by watershed.

Watershed	No. of Sites	Acres	% by Area	Avg. Site Size
Menomonee	38	4,012.91	.52	63.70
Oak Creek	22	1,150.51	.15	52.30
Root	63	2,499.41	.33	65.77
Total	**123**	**7,662.83**	**1.00**	

Table 4. Minimum, maximum and average low priority site size by watershed.

Watershed	Min. Site Size	Max. Site Size	Avg. Site Size
Menomonee	25 acres	347 acres	63.70 acres
Oak Creek	28 acres	128 acres	52.30 acres
Root	13 acres	378 acres	65.77 acres

Partnership Opportunities

The Conservation Fund completed a regional survey of non-profit agencies, local governments, and corporate park and residential developers to assess interest in partnering with MMSD to assist with the acquisition and management of the Conservation Plan sites. Sixteen non-profit organizations were surveyed and evaluated for their ability to provide long-term land stewardship. Two non-profit organizations, Ozaukee-Washington Land Trust and Waukesha Land Conservancy, are best positioned to jointly apply for grants as well as assume long-term management of Conservation Plan sites. Of the 11 local units of government surveyed with Conservation Plan sites within their jurisdiction, eight are interested in working with MMSD to manage the sites long term. There is potential to partner with both non-profits and local government to own and manage the sites.

Conversations with a corporate real estate developer and a residential developer suggest that there is a real interest within the development community as a whole for collaborative work with MMSD to incorporate watershed-sensitive designs into development.

The Conservation Fund defines watershed-sensitive design as designs that result in: 1) significant reductions in impervious coverage; 2) maximization of natural floodwater conveyance and storage; and 3) appropriate construction mitigation measures. The corporate real estate developers are interested in incentive funding for additional floodwater retention above what is required. With good incentive, many corporate sites have land that could remain undeveloped.

The residential developers' biggest challenge is the approval process. Residential developers are interested in a process that certifies that their development has met MMSD watershed-sensitive design guidelines. Both residential and corporate developers need to be convened to discuss an incentive program, and then a test incentive program should be developed.

Funding Strategies: Partnerships and Leverage

There is a high level of interest from public and private agencies and organizations in participating as partners in the implementation of an MMSD Conservation Plan. The Plan is viewed as an innovative and exciting approach with the potential to achieve multiple compatible objectives including water retention, floodwater management, wildlife habitat protection and creation, and the preservation of open space in rapidly urbanizing areas.

The consulting team estimates that funds invested in this initiative by MMSD for acquisition can ultimately be doubled through leveraging. The ratio is significantly higher if partners support restoration activities. Actual dollar amounts are difficult to anticipate. Partnerships are most likely to be developed in the context of individual parcel acquisitions or wetland restoration projects.

The development of successful partnerships will be a time-consuming process. Funds will rarely become available simply because a grant application has been submitted. Funds are far more likely to become available to projects that have enthusiastic supporters within the agencies. Good will, improved public perceptions, and access to information are also likely to provide leverage. The more successfully the Plan is implemented, the more partners and leverage it will attract.

Parcel Acquisition Strategies

The Conservation Plan and accompanying documents provide information that can be used for various land acquisition (easement or purchase) strategies. Each site is ranked in order of projected value for reducing future flooding risks, as are all parcels within all sites. The following is a hierarchical approach for targeting parcels for acquisition.

1. First, target all anchor parcels within each of the 42 high priority sites. An anchor parcel is defined as the parcel with the greatest storage potential within each site.

2. Once the anchor parcel for a site is acquired, highly ranked parcels adjacent to anchor parcels should be targeted.

3. Non-anchor parcels within highly ranked sites in which the anchor parcel has not been acquired might be considered for acquisition if the following conditions apply (this is a sample of conditions that likely can be expanded upon).

    a. It is likely that the anchor parcel will become available in the future.
    b. Acquiring a non-anchor parcel would enhance the likelihood of obtaining the anchor parcel.
    c. The non-anchor parcel would provide localized flood reduction benefits. This would have to be determined on a parcel-by-parcel basis.
    d. The acquisition of a non-anchor parcel would indirectly provide flood reduction benefits. For example. MMSD might chose to acquire a parcel that provides limited flood reduction benefits but provides an important connecting link to a community bike

trail. MMSD might chose to purchase this parcel in exchange for the community providing enhanced flood protection on public property under its control.

4. Parcels within low-priority sites should be considered after exhausting strategies described above. Low priority sites are ranked in order of importance in of the Site Action Plan. Acquisition strategies for parcels within low priority sites are the same as for high priority sites.

Opportunities

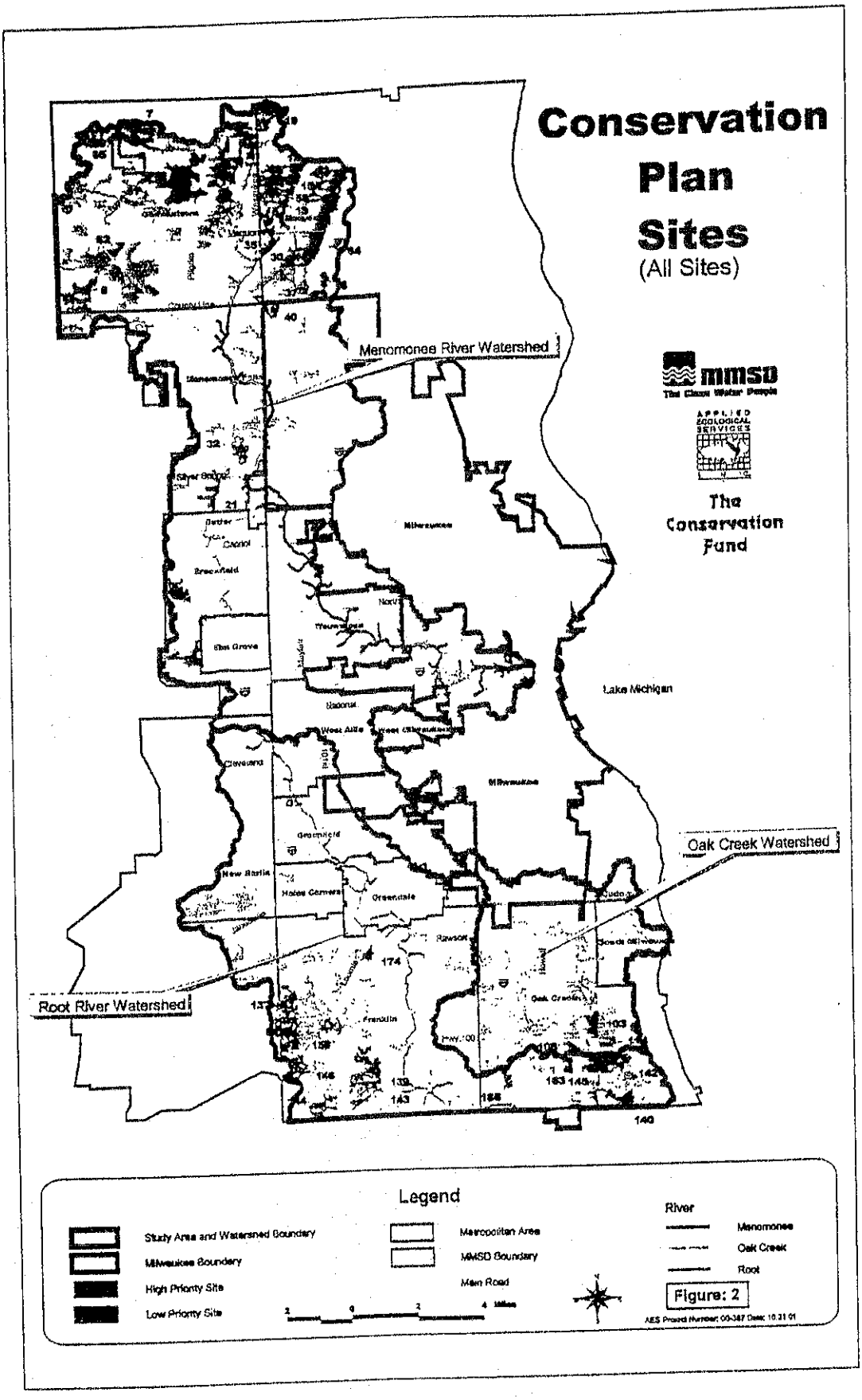
The greatest opportunities for reducing existing and future risks for flooding occur within the Menomonee River watershed. Twenty-seven of the 42 high priority sites are located within the Menomonee River watershed. The reason there are so many opportunities within the Menomonee River watershed is largely a function of the relatively large extent of open space available within the watershed that could be acquired, preserved, or restored for ecological and flood management benefits. Furthermore, these sites are widely distributed throughout the watershed, and are located within the upper watershed reaches where storage will have the largest beneficial impact.

Opportunities within the Oak Creek and Root River watersheds are far more limited. Only three of the 42 high priority sites are located within the Oak Creek watershed. These three sites are at the southern edge of the Oak Creek watershed which provides fewer benefits than if the sites were distributed throughout the watershed. Twelve of the 42 high priority sites are located within the Root River watershed. Sites with the greatest potential benefits within the Root River watershed are located within the southwest and south central areas of the watershed.

Conclusion

- This study initially identified 199 sites totaling 17,146.31 acres for further investigation. Thirty-four sites totaling 2,417.76 acres were eliminated during field visits because they were developed. Forty-two sites totaling 7,065.72 acres were identified as high priority sites. The remaining sites (7,662.83 acres) were identified as low to medium priority for acquisition due to limited flooding benefits, an impractical configuration for acquisition, or an excessive number of parcels.
- Interviews with potential partners (local governments, land trusts, and others) indicate that 61% of the high priority sites have entities that are "definitely" interested in partnering with MMSD.
- Thirty-four high priority sites containing up to 4,835.52 acre-feet of potential storage have been lost or altered since 1995.

- Approximately $15 million is earmarked for project costs. Variable land costs prohibit an accurate estimate of the amount of land that might be purchased with money earmarked for this project.
- The cost per acre-foot of flood storage within restored wetland habitat is much less than the cost per acre-foot using traditional detention facilities.


Conservation Plan Sites
(All Sites)
Menomonee River Watershed
Oak Creek Watershed
Root River Watershed
Lake Michigan
MMSD
The Clean Water People
APPLIED ECOLOGICAL SERVICES
The Conservation Fund
Legend
Study Area and Watershed Boundary
Milwaukee Boundary
High Priority Site
Low Priority Site
Metropolitan Area
MMSD Boundary
Main Road
River
Menomonee
Oak Creek
Root
Figure: 2

Funding Strategies: Partnerships and Leverage

Public and private organizations have shown a high level of interest in the MMSD Conservation Plan and in developing partnerships. Heart Lake Conservation Associates (HLCA) interviewed representatives and reviewed information from 18 agencies and organizations and found that community organizations which administer various conservation and environmental programs share an enthusiastic desire to explore ways to form partnerships and leverage funds. HLCA estimates that funds invested in this initiative by MMSD ultimately can be doubled or tripled through leveraging. Actual dollar amounts are difficult to measure, however, and this estimate includes funds that may be available for restoration as well as for the acquisition of interests in land.

Funding

For purposes of this analysis, it was assumed that funds that might be leveraged fall into two relatively distinct categories. The first is existing grant programs, funded by a public agency or by other sources. These funds are available upon the submission of a qualified application. The Wisconsin Stewardship Fund is an example: an applicant will submit a grant application to the program, and, if the proposed project meets the required criteria and if the funds appropriated have not been exhausted, a grant will be made.

The second category, one that can provide greater leverage, might be called "money to be found." The key to this money is to recognize that any given project may have multiple benefits. MMSD may want to do a specific project to achieve water retention and source reduction. A potential partner may see that the same project will also provide another benefit such as improved water quality, improved wildlife habitat, restored wetlands, protection of drinking water supplies, protection of open space or scenic vistas, protection of natural areas, archaeological features, areas of scientific or educational value, or opportunities for outdoor recreation. It is important to note and explore all of the potential project benefits from the perspective of potential partners and to then engage those partners. Partners may wish to become involved because they believe the project will achieve their objectives, even if they have little interest in the objectives of the Conservation Plan.

It is not uncommon for an exciting and innovative project to attract funds that can be allocated at the discretion of project partners. When representatives of interested organizations gather to talk about a proposed project, they are often willing to commit discretionary funds simply because the proposed project is attractive, is a priority for the agency, or will help the agency achieve its mission. In this way, a new partnership is assembled.

An excellent example of "money to be found" is represented by the funding requirements of the North American Wetlands Conservation Act (NAWCA). Funds can be allocated and spent by any number of partners to achieve goals of a specific project

to protect waterfowl habitat. Protected habitat may also provide source reduction, create recreational opportunities, or simply assure open space and scenic vistas. Those partners can be, and often are, both public and private entities. When partners discuss a proposed project, various partners recognize that they have discretionary resources that can be allocated and accounted for in a manner that will attract and leverage the maximum NAWCA grant of one million dollars.

There is a strong and general consensus in the grant community that a Conservation Plan by MMSD has the potential to attract specially earmarked funds from Congress. Congress has the authority to appropriate funds for specific local projects, and does so frequently. At an appropriate time (perhaps when the Conservation Plan has been formally adopted and implementation has begun), it is recommended that contact be made with members of Wisconsin's Congressional delegation to explore an earmarked appropriation to support the implementation of the Conservation Plan.

Leveraging and Partnerships

It is critically important to recognize that no one program has been identified that will simply match the overall investment of MMSD in implementing the Conservation Plan. Rather, partnerships are most likely to be developed in the context of individual and specific land acquisition or wetland restoration projects that are each a part of the Conservation Plan. Partners attracted to one acquisition may not have an interest in another located elsewhere for jurisdictional, programmatic, or fiscal reasons.

Almost any land or water conservation project ultimately requires the support of those who live nearby if it is to be successful over the long run. Local neighborhood associations, homeowner associations, and similar groups interested in open space, preventing sprawl or protecting wildlife habitat and scenic vistas, may be strong MMSD partners on specific sites. Those organizations ought to be contacted in the context of specific individual projects.

It is equally important to note that the development of partnerships that will leverage funding or goodwill can be, and typically is, a time-consuming process. In many cases, it takes more time and effort to develop partnerships that will leverage support for a project than it does to negotiate with the landowners for the acquisition of the property. Each acquisition or restoration project will be different; each will raise different ecological, political and financial issues, and each will in all likelihood attract different partners. For example, in many jurisdictions the local municipality is likely to be a critical partner that can bring Wisconsin Stewardship Funds to the project when MMSD cannot. However, the preparation and submission of a Stewardship application typically needs to be reviewed and approved by a variety of local boards and commissions before it receives the approval of the county board, city council, or the like. This is a time-consuming process that requires careful and attentive shepherding, as well as the development of appraisals, maps, management plans, budgets, surveys, and narrative descriptions.

It is also likely that the process will not be fully replicable. That is, each jurisdiction or partner will have a different process and different requirements.

In short, a key task in leveraging additional funds is to assign responsibility to specific staff for developing relationships with individual agencies and organizations, recognizing that the funding opportunities might not be readily apparent. With some exceptions, it will not be adequate simply to write a proposal or submit an application; more often, funding will follow a concerted effort to seek out and engage specific partners for specific projects, fitting those projects to the interests of the agencies and organizations. Successful partnerships are almost always the result of one or two enthusiastic individuals who believe that engagement in this process is in the interests of their agency. There is an old adage in private fundraising: people give to other people, not to causes. The same thing is true with partnerships using public funds.

In addition to the programs described in the following pages, one additional source of information is worth monitoring. The relationship between the potential results of the Conservation Plan and the resulting potential benefits to the water quality and natural flow regime of the Great Lakes makes this an attractive project to many funding sources, public and private, with a strong interest in the Great Lakes region. The following website and list serve provides timely information on a wide variety of programs applicable to the Great Lakes and is a good source of information, including announcements of RFP's and funding opportunities:

http:/www.great-lakes.net/lists/public.html

Partnerships are also possible, and probably necessary, that will leverage assets other than money. By entering into partnerships with some agencies, organizations, or even neighborhood groups, MMSD will leverage valuable goodwill, an increased "green" perception of the agency by the media and members of the public, and relationships that have the potential to lead to funds and other support, including political support, from secondary sources.

Advisory Committee

An Advisory Committee for the Conservation Plan, made up of representatives of potential partners and community members, would help create a broader constituency that will support the implementation of the Conservation Plan. Providing potential partners with a forum for providing feedback and an opportunity for promoting their own objectives creates a "buy-in" that is invaluable, and otherwise not replicable. An Advisory Committee will improve MMSD's access to funding programs simply by virtue of engaging agencies and organizations with access to funding in the implementation of the plan. An Advisory Committee will help assure that the plan is well understood and the tactics used in implementation are well received.

An Advisory Committee might include a representative of Ducks Unlimited, the Fish and Wildlife Service, DNR, the Milwaukee Foundation, one or two counties or municipalities,

representatives of conservation and environmental organizations such as Audubon Society or Citizens for a Better Environment, and one or two land trusts. To some extent, perhaps, small equivalents of advisory councils will take the form of coalitions of potential partners for a specific acquisition.

The programs described in the following pages do not include all possible partners. Rather, they are programs deemed most promising and of greatest interest to MMSD. It is highly likely that as the Conservation Plan is developed, publicized, and implemented, many additional partners and programs will be identified.

Many of the sites are targeted in local park and open space plans. Local governments will be critical partners. They get land acquisition money for parks and recreation facilities from only two primary sources: local tax revenues and the Wisconsin Stewardship Fund. Most communities have a strong need for more parks and recreation fields; if MMSD resources can be brought to the table and applied to the acquisition of sites that will help achieve both MMSD and local needs, it will make a significant difference to those communities.

The MMSD Conservation Plan is an exciting, cutting-edge initiative by a large metropolitan sewerage district, and as such it will attract attention from the industry, other sanitary districts, public agencies, the media, conservation and environmental organizations, and private funding sources. When all is said and done, partners want to be able to say to the people and public bodies that fund them that they had a hand in implementing a successful and innovative program. This is the strongest motivator for leveraging additional funds: partners want to be associated with progress and success.

Potential Partner/Leveraging Reports

A list of reports on potential partners and leveraging opportunities is provided below. The complete report is attached as Appendix II.

1. Ducks Unlimited
   MARSH Program

2. Corps of Engineers (US Army)
   Aquatic Ecosystem Restoration program

3. Environmental Protection Agency
   3(a) Great Lakes National Program Office
   3(b) Office of Water

4. Great Lakes Protection Fund

5. Greater Milwaukee Foundation

6. Milwaukee County Parks Department

7. National Fish and Wildlife Foundation

8. National Park Service
   Rivers and Trails Program

9. Natural Resource Conservation Service
   - 9(a) Conservation Reserve Program
   - 9(b) Wetland Reserve Program
   - 9(c) Wildlife Habitat Incentives Program

10. Sustainable Redevelopment of the Menomonee River Valley

11. U.S. Forest Service
    Urban and Community Forestry

12. U.S. Fish and Wildlife Service
    - 12(a) Partners for Fish and Wildlife
    - 12(b) North American Waterfowl Conservation Act (Joint Ventures)
    - 12(c) Waterfowl Production Areas
    - 12(d) Flexible Funds

13. University of Wisconsin-Milwaukee
    Wisconsin Aquatic Technology and Environmental Research Institute

14. Wisconsin Coastal Management Program

15. Wisconsin Department of Commerce
    Wisconsin Brownfields Grants

16. Wisconsin Department of Natural Resources
    - 16(a) Warren Knowles-Gaylord Nelson Stewardship Fund
    - 16(b) Brownfields Green Space Grants
    - 16(c) Municipal Flood Control Grants
    - 16(d) Urban Non-point Abatement and Stormwater Management Program
    - 16(e) Targeted Runoff Management Program
    - 16(f) River Management Grants Program

17. Wisconsin Department of Transportation
    Statewide Multi-Modal Improvement Program (SMIP)

18. Wisconsin Emergency Management/Federal Emergency Management Agency (FEMA)
    Hazard Mitigation Grant program

Site Protection, Restoration and Prioritization

An analysis of available land use/land cover, soils, wetland, floodplain and other data led to the identification of private sites totaling more than 28,000 acres within the project area that potentially provide floodwater storage. Sites less than 25 contiguous acres were then excluded from the initial analysis, leaving a total of 199 potential sites totaling 17,146.31 acres.

All 199 sites were visited to field-verify mapped data, photographed, and ranked by watershed in accordance with the potential for each site to contribute to existing or future risks to flood reduction. Thirty-four sites representing 2,337 acres were eliminated during field visits because they had been developed since 1995, the date of the most current aerial photograph. Other sites were eliminated because they were already in public ownership, or ranked as a low priority for acquisition due to a high number of parcels, an impractical configuration, or known environmental hazards.

A total of 42 sites (Figure 2) totaling 7,065 acres were identified as high priority sites after ranking the remaining sites as low or medium priority for reasons listed above. Tables 1 and 2 summarize high priority sites by watershed and size. Table 3 summarizes the number of parcels per site by watershed.

Table 1. Number and area of high priority sites summarized by watershed.

Watershed	No. of Sites	Acres	% by Area
Menomonee	27	5,002.29	.71
Oak Creek	3	277.95	.04
Root	12	1,785.48	.25
Total	**42**	**7,065.72**	**1.00**

Table 2. Minimum, maximum and average high priority site size summarized by watershed.

Watershed	Min. Site Size	Max. Site Size	Avg. Site Size
Menomonee	42 acres	674 acres	185 acres
Oak Creek	65 acres	139 acres	93 acres
Root	30 acres	420 acres	148 acres

Table 3. Average, minimum, maximum and total number of parcels per high priority site as summarized by watershed.

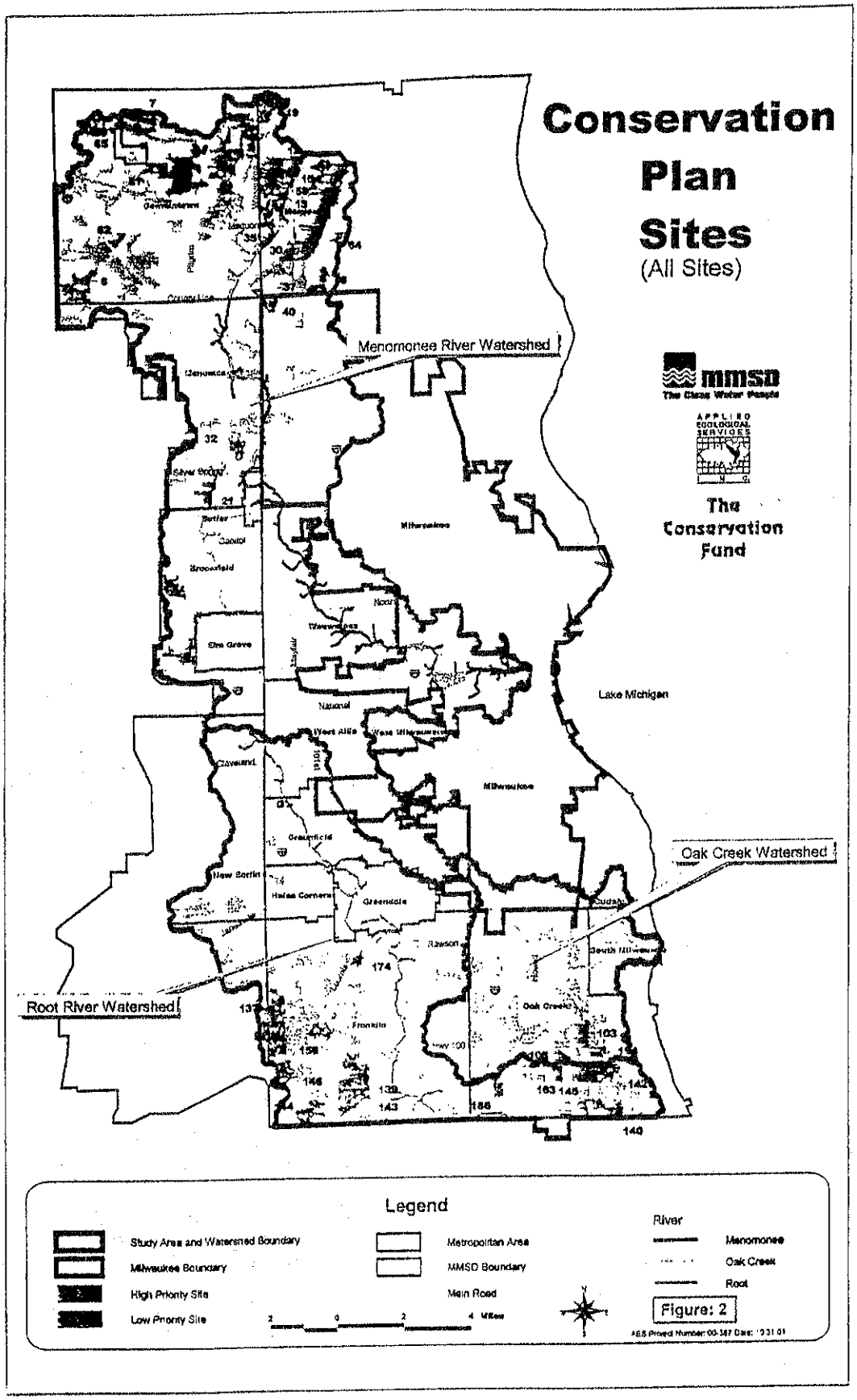
Watershed	Avg. Number of Parcels	Minimum Number of Parcels	Maximum Number of Parcels	Total No. Parcels
Menomonee	23	5	71	724
Oak Creek	20	14	28	59
Root	28	5	52	394

Table 4. Number and area of low priority sites summarized by watershed.

Watershed	No. of Sites	Acres	% by Area
Menomonee	38	4,012.91	.52
Oak Creek	22	1,150.51	.15
Root	63	2,499.41	.33
Total	**123**	**7,662.83**	**1.00**

Table 5. Minimum, maximum and average low priority site size summarized by watershed.

Watershed	Min. Site Size	Max. Site Size	Avg. Site Size
Menomonee	25 acres	347 acres	64 acres
Oak Creek	28 acres	128 acres	52 acres
Root	13 acres	378 acres	66 acres


Conservation Plan Sites
(All Sites)
Menomonee River Watershed
Oak Creek Watershed
Root River Watershed
Lake Michigan
mmsd
The Conservation Fund
Legend
Study Area and Watershed Boundary
Milwaukee Boundary
High Priority Site
Low Priority Site
Metropolitan Area
MMSD Boundary
Main Road
River
Menomonee
Oak Creek
Root
Figure: 2

The acquisition of all high priority sites may provide approximately 14,131.44 acre-feet of storage if we assume that each acre of land will provide an average of two acre-feet of storage (7,065.72 high priority acres x 2 feet of storage per acre = 14,131.44 acre-feet of storage). However, we believe that only 3,000 acres of land may be purchased based on existing land prices with the approximately $15 million earmarked for this project. That estimate may be doubled to 6,000 acres of land if MMSD is able to leverage additional monies for this project as projected. This translates to 6,000 (using MMSD funds alone) to 12,000 (assuming additional monies are available through leveraging) acre-feet of storage at $1,250-$2,500 per acre-foot.

It is important to note that estimated costs for acre-foot of storage do not include construction costs associated with restoring a site to maximize its capacity to store floodwater. In our experience, wetland restoration costs can range from $1,000 to $5,000 per acre with average costs approximately $2,500 per acre. That translates into $2,250 to $7,500 per acre-foot of storage to purchase and restore high priority sites in addition to the cost of land acquisition.

Costs associated with constructing traditional stormwater detention facilities vary considerably as well. The Village of Arlington Heights, Illinois provides one comparison. The Village allows some developers to purchase stormwater storage from a regional stormwater detention facility in lieu of providing stormwater detention on site. The Village charges $1/cubic foot of storage, or $43,560 per acre-foot of storage.

Thirty-four high priority sites totaling up to 4,835.52 acre-feet of potential storage have been altered or lost between 1995 and 2001 as summarized in Table 6 below. The loss or alteration of this potential storage over the last six years and the continued high rate of development within the MMSD planning area suggest that future loss or alteration of existing floodwater storage areas are imminent without protection through acquisition or easements.

Table 6. Sites, area, and potential storage lost or altered due to development since 1995.

Watershed	No. of Sites	Acres	Acre-Feet
Menomonee	13	961.45	1,922.9
Oak Creek	8	358.17	716.34
Root	13	1,098.14	2,196.28
Total	**34**	**2417.76**	**4,835.52**

Conclusion

- This study initially identified 199 sites totaling 17,146.31 acres for further investigation. Thirty-four sites totaling 2,417.76 acres were eliminated during field visits because they were developed. Forty-two sites totaling 7,065.72 acres were identified as high priority sites. Remaining sites (7,662.83 acres) were

identified as low to medium priority for acquisition due to limited flooding benefits, an impractical configuration for acquisition, or an excessive number of parcels.

- Interviews with potential partners (local governments, land trusts, and others) indicate that 28% of the high priority sites have entities that are "definitely" interested in partnering with MMSD.
- Thirty-four high priority sites containing up to 4,835.52 acre-feet of potential storage have been lost or altered between 1995 and 2001.
- Approximately $15 million is earmarked for project costs. Variable land costs prohibit an accurate estimate of the amount of land that might be purchased with money earmarked for this project.
- The cost per acre-foot of flood storage within restored wetland habitat is much less than the cost per acre-foot using traditional detention facilities.

MAPS