The pages in this document were taken from the “Millers Creek Watershed Improvement Plan” published in April 2004. The entire document can be found at http://www.aamillerscreek.org/Findings.htm.

Millers Creek Watershed Improvement Plan

Excerpt Showing an Example of Existing Management Strategies

April 2004

2.2 Existing Area Plans

2.2.1 Northeast Area Plan

The City of Ann Arbor's Planning Department is currently updating the master plan for the Northeast Area. The Northeast Area Plan (NAP) covers the entire northeast quadrant of Ann Arbor, including the entire Millers Creek watershed. The NAP mission statement aims for a Northeast Area, "…where planning decisions are based, in part, on the interconnectedness of natural, transportation and land use systems. Natural systems, including air and water, natural features, native flora and wildlife habitats, will be improved and protected. It will be a place where the Huron River is a cherished part of the community and a focal point for recreation," (NAP, 2003). The NAP draft contains a series of relevant planning principles related to the Millers Creek Watershed, including:

1. High quality natural systems should be preserved as much as possible as development occurs.
2. Fragile lands should be protected.
3. Development should be clustered to preserve natural systems.
4. Impervious surfaces should be minimized.
5. The scenic integrity of Huron Parkway should be preserved.
6. Landscaping should be improved along major streets.
7. Native landscaping should be encouraged to reduce storm water runoff.
8. Underground, understructure and structured parking should be encouraged to minimize imperviousness.
9. On-site stormwater management systems should be encouraged to reduce storm water runoff.
10. Native landscaping should be encouraged where feasible.
11. Surface water quality should be improved and protected.

These principles align with the goals and objectives of this plan. In addition, the assumptions of watershed build-out conditions for this plan were based on NAP recommendations.

2.2.2 PROS Plan

The 2000-2005 PROS plan is the current five-year vision of the City of Ann Arbor Parks and Recreation Department for planning, development, and property acquisition of current and proposed parks. Recommendations in the plan relevant to the Millers Creek Project include:

1. A need to preserve some of the environmentally sensitive natural resources along Green Road extension, plus along US-23, to enhance and preserve the perimeter image of Ann Arbor.

2. Huron Parkway imagery and right-of-way preservation/enhancement and improvements to the linear bike path are needed. As a portion of the Huron Parkway has been acquired, the development of a trail system must carefully weigh impacts on the golf course, Black Pond Woods access/linkage to parks and bike path opportunities.

3. Examine the use of private open space in research or industrial sites for public use. This could help solve problems caused by a shortage of active recreation area and facilities in the northeast area of the City and provide space for softball, soccer and even tennis. Some additional parking may be necessary.

4. The wetland and hillside along Huron River Drive, across from the South Pond of the Huron River, has been identified as an important natural area related to the Huron River that needs protection.

5. Linkages along watercourses between natural areas, such as Traver Creek in the now undeveloped portions of the northeast area, are essential to allow public access to natural areas and to minimize the impact of development on the natural systems. Specific wetlands and woodland throughout the northeast area will need some sort of protection as they come under development pressure, for example, the northwest corner of Plymouth and Green Road, on the old National Sanitation Foundation site.

6. The North Campus area of the University of Michigan probably has sufficient open space for its residents but should have special attention given to programming of recreational activities for families with young children and lower than average incomes.

7. Enhance Thurston and Clague Schools' active recreation facilities for school and neighborhood use through improved access, visibility and educational programming of the natural area including Thurston Nature Center.

8. Future acquisitions in this area should consider properties along the river and creeks, retirement communities, school properties, greenbelt connections.

9. Renovations of playgrounds should include Windemeer, Greenbrier, Glacier Highlands, Island, Riverside, Plymouth, Gallup and Placid Way.

8.3.3 EXISTING MIDDLE HURON INITIATIVES AND TMDL IMPLEMENTATION ACTIVITIES

Several water quality improvement programs for the Huron River are already in progress. These programs are applicable because they address some of the water quality problems in the Millers Creek watershed, which is a source of phosphorus and *E. coli* to the Huron River. As such, the activities being implemented under those existing programs have been incorporated into the Millers Creek Improvement Plan. The two applicable programs are described below.

Middle Huron Initiative

The Middle Huron phosphorus TMDL was the first TMDL completed in the State of Michigan. The TMDL was completed and approved by EPA for Ford and Belleville Lakes in 1995, and it incorporates the Middle Huron River from Mill Creek to Belleville Dam, including Millers Creek

and other tributaries. Phosphorus loading from Millers Creek must be reduced by 50% to meet the regulatory requirements of the Ford and Belleville Lake phosphorus TMDLs. Many of the Millers Creek improvement opportunities and project implementation alternatives have been designed to reduce phosphorus sources in the watershed.

To implement the TMDLs, the Middle Huron River Initiative was formed. This partnership of state agencies, local units of government, and institutions developed a phosphorus reduction strategy in 1996. The purpose of the partnership is to work together to voluntarily reduce phosphorus by 50% in the Middle Huron River and its tributaries. In general, the initiative involves:

- Improve modeling and monitoring of the basin to better identify sources of phosphorus;
- Support increased research and monitoring in the middle Huron;
- Support watershed education and planning efforts;
- Assist landowners and municipalities to develop and implement BMPs to reduce phosphorus, and other pollutants, to the watershed;
- Upgrade sewage treatment facilities;
- Provide for changes in the operation of wastewater treatment plants; and
- Provide a source of support to test innovative ideas to reduce phosphorus discharge to the middle Huron.

The Middle Huron Initiative, the partnership working to meet the nutrient TMDL, has pursued pollutant reductions for six years. Most of the stakeholders in the phosphorus TMDL are signatories to a five-year agreement to voluntary reduce phosphorus contributions to the middle Huron River, which will be re-evaluated in 2004 to determine whether significant progress has been made toward reducing phosphorus by 50 percent of 1996 levels. Some of the Initiative's partners have participated in MCAT and will continue to be involved in the implementation of the Millers Creek plan under the existing guise of the Middle Huron Initiative.

Geddes Lake, Huron River Pathogen (E. coli) TMDL
The Michigan Department of Environmental Quality (MDEQ) finalized the Geddes Pond/Huron River *E. coli* TMDL in August, 2001. The TMDL was approved by U.S. EPA on September 17, 2001. The listed segment addresses approximately five miles of the Huron River located in the Ann Arbor area, from Geddes Dam at Dixboro Road upstream to Argo Dam. This segment is also the receiving water for Millers Creek, among other tributaries (Allen Creek, Traver Creek, Malletts Creek, and Swift Run Creek). Previous water quality sampling in this area has shown that Michigan Water Quality Standards (WQS) for *Escherichia coli* (*E. coli*) are not consistently being met in the middle Huron River or its tributaries. Water quality sampling was conducted as part of the current Millers Creek Improvement Study. The results of that sampling confirmed that the *E. coli* WQS is being exceeded in Millers Creek (Refer to Chapter 5). All surface tributaries (not enclosed) are required to comply with the WQS of 130 *E. coli* per 100 ml as a monthly average. This requirement applies to Millers Creek, among others (Traver Creek, Malletts Creek, and Swift Run Creek).

Measures to reduce *E. coli* will include activities that, to a large extent, are already required of the National Pollutant Discharge Elimination System (NPDES) municipal storm water Phase I permittees within the watershed and other municipalities within the watershed under Phase II of the municipal storm water permitting program. Currently, the City of Ann Arbor, U-M and the Michigan Department of Transportation hold NPDES Phase I municipal storm water permits,

while Ann Arbor Township has recently obtained a NPDES Phase II permit. Both Phase 1 and Phase II municipal storm water permits provide mechanisms for controlling bacterial loads to Geddes Pond and Millers Creek. Storm water permits require that a plan for effective elimination of illicit discharges and prohibition of illicit discharges be developed, that all catch basins be mapped and regularly cleaned, that effective storm water management in areas of redevelopment and new development occur, and that a public education program regarding storm water management and impacts of storm water pollution be implemented.

There are several specific actions being taken or planned by the regulated storm water communities to reduce *E. coli*. These actions pertain to, and will address, *E. coli* sources in the Millers Creek watershed. For specific information on these activities and there implementation, see the *E. coli* TMDL implementation plan in Appendices.

- Septic System Inspections (Ann Arbor Township, SE part of Millers Creek watershed)
- Illicit Discharge Elimination Plan
- Occupancy Permits, Disallow pending inspection for illicit connections
- Community Partners for Clean Streams
- RV Waste Disposal Education
- Storm Water Marking Project
- Information and Education Mass Media Campaign/Public Education Program (PEP)
- Information and Public Education Through the Internet
- Phase II public education and public involvement/Farmland Education (Agriculture)
- Education on Pet Waste
- Doggie Bags in Parks
- Pooper Scooper Ordinance
- Operation Goose Down
- Native Landscaping Ordinance Development
- *Update Storm Water Management Standards (Pond Landscaping Section)*
- Farmland Protection Program
- Comprehensive Plan
- Wetlands Protection Program
- Rules and Ordinances for Storm Water Management