
About This Report

The Minnehaha Creek Watershed District's *Hydrologic/Hydraulic and Pollutant Loading Study (HHPLS)* has been a two-year effort dedicated to compiling existing and new information on the occurrence, movement and character of water within the District. An intense public input process paralleled the collection of technical information so that citizens, public officials and agency staff had a venue for participation.

The material contained within the following five volumes provides information on the water quantity and quality characteristics of watershed lakes, bays, tributary streams and Minnehaha Creek. The report also contains the thoughts of 125 public input volunteers, who dedicated untold hours reviewing technical data, providing local perspective and guiding the development of management recommendations.

The next step for the *HHPLS* is the Minnehaha Creek Watershed District Board, which will now sort through all of the findings and recommendations and integrate them into its actions over the next several years. Some of the recommended actions will be directed to others to implement, such as local and county government, lake associations, state agencies and homeowners.

Members of the Minnehaha Creek Watershed District Board are:

- Lance Fisher, President
- Pamela Blixt, Vice President
- Jim Calkins, Secretary
- Monica Gross, Treasurer
- C. Scott Thomas
- Dick Miller
- Susan Goetz

Robert Schroeder also contributed to the project during his tenure as Board member.

Acknowledgements

An effort as large as the Minnehaha Creek Watershed District's *Hydrologic, Hydraulic and Pollutant Loading Study (HHPLS)* involves many participants. Direction from the District was provided by the Project Manager, Jim Hafner and the MCWD Executive Director, Eric Evenson. Board liaison was provided by Jim Calkins and Scott Thomas. Mike Panzer, District Engineer (Wenck Associates, Inc.) provided technical input and review.

Public input was a key part of the *HHPLS*. The volunteer efforts of the many citizens, public officials and agency members are gratefully acknowledged. The names of the Project Advisory Committee (PAC) and Technical Advisory Committee (TAC) members are contained in *Volume II: Framework and Methodology, E. Public Involvement*. The many Regional Team (RT) members are listed in *Volume III: Public Involvement*, in the respective Regional Team sections.

The Emmons and Olivier Resources, Inc. team that assembled the *HHPLS* consisted of the following individuals, identified by their area of input:

- Christa Bren, water quantity modeling
- Pat Conrad, water quality modeling and GIS tool development
- Tony DeMars, ecological resource assessment, public input, and program management/coordinator
- Stu Grubb, groundwater and geologic resource assessment
- Art Kalmes (Polaris Group), water quantity modeling peer review
- Kristen Larson, GIS
- Diane Lynch (Lynch Associates), public input facilitation
- Steve McComas (Blue Water Science), lake assessment
- Gary Oberts, watershed planning and public input
- Cecilio Olivier, water quantity/quality modeling QA/QC and program management
- Andrea Plevan, water quality and lake assessment, publication
- Jodi Polzin, public input
- Andy Smith, GIS
- Marcey Westrick, ecological resource assessment

Hydrologic, Hydraulic, and Pollutant Loading Study (HHPLS) Outline

I. Summary

II. Framework and Methodology

A. Introduction

1. Purpose of Study
2. Connections to Related Efforts
3. List of Abbreviations

B. Watershed Description

1. Subwatersheds
2. Political Boundaries
3. Land Use
4. Land Cover (MLCCS)

C. Land Use and Land Cover

1. Land Use
2. Minnesota Land Cover Classification System Mapping
3. Future Land Use

D. Groundwater

1. Soils
2. Groundwater Elevations
3. Depth to Groundwater
4. Infiltration Potential
5. Cross-Sections
6. References

E. Public Involvement

1. Regional Teams
2. Project Advisory Committee
3. Technical Advisory Committee

F. Modeling Methodology

1. Water Quantity
2. Water Quality
3. In-Lake Modeling
4. Scour and Erosion-Prone Areas

G. BMP Selection

H. GIS Application

I. Implementation Action Priority Ranking

Appendix

III. Public Involvement

- A. Description of process
- B. RT 1 – Golden Valley, St. Louis Park, Minneapolis, Edina, Richfield; RT 2 – Hopkins and Minnetonka
- C. RT 3 – Plymouth, Wayzata, Woodland, and Deephaven
- D. RT 4 – Medina, Long Lake, Orono
- E. RT 5 – Tonka Bay, Excelsior, Greenwood, Shorewood
- F. RT 6 – Mound, Spring Park, Minnetonka Beach
- G. RT 7 – Victoria, Chanhassen, Laketown Township, Waconia Township
- H. RT 8 – Watertown Township, Minnetrista, St. Bonifacius
- I. RT 9 – Independence, Maple Plain

IV. Watershed Modeling and Discussion

- A. Painter Creek
 - B. Dutch Lake
 - C. Langdon Lake
 - D. Six Mile Creek
 - E. Long Lake Creek
 - F. Gleason Lake Creek
 - G. Schutz Lake
 - H. Lake Virginia
 - I. Christmas Lake
 - J. Lake Minnetonka Direct Drainage
 - K. Minor Watersheds
 - L. Minnehaha Creek
- Appendix

Each watershed discussion contains the following sections:

1. General Description
2. Physical Features
3. Water Quantity
4. Scour and Erosion-Prone Areas
5. Water Quality
6. Recommendations

V. Watershed Issues Integration

- A. District-Wide Recommendations
- B. Groundwater