29th Annual Water Resources Conference
Tuesday, November 12, 1996

8:00 a.m. Welcome and Introductions
Pat Foley

8:10 Engineering Licensure - What are the State Requirements and What is the Role of the University of Minnesota
Geri Malandra, Director
Professional Development and Conference Services
University College, University of Minnesota
(Lori G.)

8:30 Liability for Construction of Ponds and other Stormwater Management Structures
Louis N. Smith, Attorney, Smith Parker, Minneapolis

Speaker will discuss potential liability for ponds and other stormwater management structures and strategies for both eliminating liability and constructing safer improvements.
(Steve W.)

9:15 Evaluation of Commercially Available Catch Basin Inserts
Bill leaf, P.E., Water Quality Engineer, Snohomish County, Everett, Washington

Information on inserted or small on-site treatment systems to improve water quality.
(Rocky K.)

10:00 Break

Moderator: Steve Woods

10:30 Internet - Uses and Abuses
Greg Spoden, Department of Natural Resources
Mike Amidon, University of Minnesota
(Dave F. and Lori G)

11:00 Whitewater Canoe
Dick Jones
(John B.)

11:30 How are Rivers Wrecked or Fixed? Geomorphology and River Mechanics
Gary Parker, St. Anthony Hydraulic Laboratory, University of Minnesota
(Sonja J. and Ken B.)

12:00 Luncheon
"Henry Bosse: A Photographic History of the Upper Mississippi River"
John Anfinson, U.S. Army Corps of Engineers

1:15 p.m. Concurrent Sessions

Session A
Moderator: Pat Foley

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1:15 p.m. Bioengineering: Streambank Stabilization by Vegetative and Structural Measures
Shelly Pederson, City of Bloomington
Carolyn Dindorf, Hennepin Conservation District

This session will discuss the construction and success of three bank stabilization repair sites along Nine Mile Creek, using several applications: coconut fiber rolls, willow wattles, live stakes, bare root shurbs, willow posts, Ajax's, riprap, and a fish lunker. Information will be provided on construction costs, equipment and labor needed, types and mortality of vegetation. Slide and/or video format will be used to show before, during, and after conditions on project sites.
(Shelly P.)

2:00 Overview of Processes and Issues Related to Sediment Yield in a Watershed
Norm Senjum, Minnesota Pollution Control Agency and/or Tim Koller, Natural Resources Conservation Service

An overview of the issues related to sediment yield in a watershed. Specific issues related to the Minnesota River, one of the worst in the country, will be cited, identifying major areas of concern.

2:30 Break

2:45	Adequacy of Existing Databases and Models for Erosion and Sedimentation (Nonpoint Source Pollution) in the Minnesota River Basin Dr. Satish Gupta, Department of Soil, Water, and Climate, University of Minnesota The process of sediment detachment will be explained, along with a discussion of the issues this process raises. The upland portions of a watershed can be the source of sediment that is carried in rivers and streams, but efforts in conservation tillage have affected the traditional mechanism. The relationship between farmland erosion and sediment data from sites in the Minnesota River Valley will be presented.
3:20	The Morphology of River Basins -- Influence on Sediment Yield Dr. Chris Paola, Department of Geology and Geophysics, University of Minnesota The geomorphology of a watershed and stream influence the sediment yield and transport process. (Sonja J. and Ken B.)
3:55	The Relationship Between River Mechanics and Sediment Delivery Dr. Gary Parker, Department of Civil Engineering, University of Minnesota Sediment is eroded from streambanks and conveyed downstream, joining the sediment contributed from upstream sources. The characteristics of a river influence exactly how this process works. The river mechanics of the Minnesota River will be described with relevance to sediment transport and delivery.
4:30	Question and Answer Session
4:45	Social Hour
5:45	Dinner Speaker:

Session B

Moderator: Rocky Keehn

1:15 St. Paul Sewer Project
Roger Puchreiter and Tom Eggum, City of St. Paul
(Steve W.)

This is a 10-year sewer separation retrospective, detailing the coordination among NSP, owners, pavement programs, agencies, plus the unique design hurdles encountered.

2:00 A Unique Approach to Wetland Mitigation and Stormwater Management Using Infiltration as a Stormwater Treatment Device - A Case Study
David E. Nyberg, P.E., Manager, Water Resources Department
MSA Consulting Engineers, St. Paul

The presentation will include the planning and design process for the wetland mitigation area and the infiltration stormwater treatment cells, as well as a general overview of the site and project.

2:30 Break

2:45 Biomonitoring As a Direct Measure of Aquatic Ecosystem Health
Paul Nelson and Charles Johnson, Montgomery Watson
(Steve W)

This will be a discussion of biomonitoring as an early warning system for determining whether an area is degrading. The advantage of biomonitoring is that routine monitoring of biological communities is relatively inexpensive, and the status of biological communities are of direct interest to the public as a measure of a pollution free environment.

3:15 Fish Creek Restoration: A Case Study in Urban ~~Anchorage~~
Daniel Billman, P.E., Director of Water Resources, HDR Alaska, Inc. Anchorage, Alaska

HDR Alaska has been working with the Municipality of Anchorage Department of Public Works for six years on the restoration of an urban creek named Fish Creek. The bioengineering focus has led to the creation of wetland areas and a riparian zone along much of the creek where it does not exist. The project is in an urban setting and therefore it has had to address easement acquisition for creek construction, public and private land owner acceptance of the project, and legal issues associated with public safety. This presentation will detail the successes of this project and explain the techniques used to overcome obstacles.

3:45 Profiles of Public Ditch Systems
Eric Thompson, Montgomery Watson

State ditch law places great emphasis on the "as constructed" profile of public ditches. A number of methods exist to determine the as-built profiles of public ditch systems. This presentation will discuss the use of these methods to determine the legal profile of an Anoka County ditch in the city of Blaine.
(Steve W)

4:15 How to Avoid Unforseen Problems in Wetland Replacement Monitoring
Ronald P. Peterson, Peterson Environmental Consulting Inc., Mendota Heights, Minnesota

The permanent regulatory program of the Minnesota Wetland Conservation Act requires that wetland replacement areas be monitored for a period of five years after construction to ensure that the replacement wetland achieves the goal of replacing lost functions and values. A recommended approach for avoiding common problems with replacement projects is to have the designer of the plan provide on-site guidance to the contractor during the constructions process.

(Steve W)

4:45 Reception

5:45 Dinner
Speaker: White Water Canoe