



Minnesota Board of Water and Soil Resources.  
Minutes.

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# ***1998 Public Drainage Forum***

**St. Cloud Civic Center  
November 19-20, 1998**

***including:***

**Acknowledgments  
Agenda  
Executive Summary  
Proceedings  
Attendance**

**Sponsored by:**

**The Minnesota Board of Water  
and Soil Resources  
(BWSR)**





## 1998 Public Drainage Forum

### TABLE OF CONTENTS

|                                                                   |    |
|-------------------------------------------------------------------|----|
| Acknowledgments .....                                             | i  |
| Agenda .....                                                      | 1  |
| Executive Summary .....                                           | 3  |
| Welcome and Introductions .....                                   | 5  |
| Proceedings .....                                                 | 6  |
| Upper Mississippi .....                                           | 6  |
| Metro .....                                                       | 9  |
| Minnesota River .....                                             | 11 |
| Red River Valley .....                                            | 12 |
| Combined Issues from all Breakout Sessions .....                  | 14 |
| Technical Panel Responses .....                                   | 20 |
| McLeod County Basemapping and Drainage Inventory .....            | 24 |
| "Douglas County Drainage Inventory" .....                         | 30 |
| "Drainage Economics" .....                                        | 31 |
| "Potential Flooding and Drainage ... Is there a Connection" ..... | 33 |
| "404 General Permit Guidelines for Drainage" .....                | 34 |
| Attendance List .....                                             | 37 |

## ACKNOWLEDGMENTS

### **Facilitators:**

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Ron Harnack, MN Board of Water and Soil Resources  
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Ron Shelito, BWSR - Brainerd  
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Vicki Erbele, BWSR - Brainerd  
Carla Swanson-Cullen, BWSR - New Ulm

### **Executive Assistance:**

MaryJo Anderson, BWSR



- 2:45 p.m.            **Technical Panel Response** - General Session - *Herberger Suite*  
- Tibor Gallo, Attorney General's Office  
- Kurt Deter, Rinke-Noonan  
- Kent Lokkesmoe, DNR/Division of Waters  
- Ron Ringquist, Minnesota Viewers Association  
- Tom Anderson, Douglas County Drainage Inspector  
- County Commissioner  
- Watershed District  
- Special Interest
- 4:30 p.m.            **Wrap-Up**

**Friday, November 20**

- 8:15 a.m.            **Welcome and Introductions** - Ronald Harnack - *Herberger Suite*
- 8:30 a.m.            **"McLeod County Drainage Inventory"** presentation by  
Dr. Linda Tomaselli
- 9:15 a.m.            **"Douglas County Drainage Inventory"** presentation  
by Marilyn Bayerl and Dave Marshall
- 10:00 a.m.           **Break**
- 10:15 a.m.           **"Drainage Economics"** presentation by Steve Taff, U of M
- 11:00 a.m.           **"Long Term Flow Trends in the Minnesota River"**  
presentation by Dave Mulla, U of M
- 11:45 a.m.           **"404 Permit Guidelines for Drainage"** presentation  
by Ben Wopat, U.S. Army Corps of Engineers
- 12:30 p.m.           **Wrap-Up**

## **DRAINAGE FORUM EXECUTIVE SUMMARY**

**by Ronald D. Harnack, Executive Director, Board of Water and Soil Resources**

The drainage forum held November 19-20, 1998, at the St. Cloud Civic Center, brought together a diverse group of private interests, county commissioners, county staff, watershed district managers and staff, soil and water conservation district supervisors and staff, state agencies, federal agencies, and citizens who had an interest or perspective relating to public drainage in Minnesota. Since the forum was focused on sharing, understanding and awareness of each participant's issues and concerns, individuals felt comfortable in voicing their opinions in the various break-out sessions.

The issues and concerns raised could be segmented in three areas: information, education and training; natural resources; and administrative procedures. Participants voiced considerable support for the enhancement of education and training for drainage authorities, engineers, viewers, attorneys, and inspectors. This training should in some way be institutionalized so that continuing opportunities are provided. Many suggested that a great percentage of the natural resources and administrative procedures, issues and concerns could effectively be addressed with greater understanding and working knowledge of the drainage law.

1. Natural resource issues tended to focus on downstream water quality and quantity, with the major concern being that drainage projects are not effectively addressing downstream flooding impacts or water quality impacts.
2. The two primary issues relating to administrative procedures were ditch abandonment; and benefits and damages determinations. Ditch abandonment was an issue in rapidly urbanizing areas where the purpose for the original ditch was agricultural and now urbanization is creating a storm water management need that is difficult to address under the drainage procedures. Another issue was the difficulty of using existing procedures to provide for the abandonment of old systems that have been allowed to fall into substantial disrepair and ineffectiveness. Participants indicated that early communication with landowners, interests and technical staff would help create greater awareness of issues and concerns on projects, leading to "win-win" solutions.

The brainstorming on strategies to address these issues and concerns resulted in a need to place education and training as a priority for future efforts. There was little disagreement that proper administration of the drainage law could address many, although not all, of the issues raised during the forum. Proper administration requires education and training of drainage authorities, related staff, and citizens and interest groups, so that everyone understands the drainage process and what is possible. Of course, the training and education must be then applied to the appropriate situations. Greater technical assistance to help drainage authorities answer tough legal and technical issues and additional research on drainage related natural resources and assessment techniques and methodologies would be beneficial.

Where do we go from here? Hopefully, the forum laid a foundation for greater communication between the diverse interests. Rather than litigating projects, focusing on finding "win-win" alternatives that can be readily achieved within the scope of the current drainage law. Joint education and training, institutionalized through the counties and watershed districts with support of the agencies, is critical as a first priority.



## WELCOME AND INTRODUCTIONS

by

*Ronald Harnack, Executive Director  
Board of Water and Soil Resources*

*Thursday, November 19, 1998:*

Ron Harnack, Executive Director, Minnesota Board of Water & Soil Resources, welcomed the participants to the public drainage forum endorsed by BWSR. He referred to the agenda and explained that it was developed to provide for broad involvement and participation. He added that during the last few years, drainage issues have been on the upswing which has led many people to consider changes in the drainage law. He noted that the drainage law is a very complex topic and, prior to changing the law, an understanding of the current law is critical. He stated that often when issues are contested, a conflict mode develops which puts people in a win/lose situation. When organizations react without a good understanding of the law, conflict is often the result. He added that he does not believe that changes are needed or warranted to the current drainage law, but rather a better understanding.

Mr. Harnack stated that the purpose of the public forum was not to debate or discuss any specific legislative issues or achieve a consensus but merely to bring drainage individuals together to reach a better understanding of the current drainage law. The drainage forum was developed to create an understanding of what individuals believe can be done to address concerns relative to the drainage law.

Due to the significant interest shown in the drainage forum, regional discussion groups were developed to focus on regional aspects and provide for more deliberate discussions. The issues to be addressed on November 19, 1998, included:

1. What are the key issues/problems relating to the drainage law?
2. How are the priority issues perceived?
3. What are the strategies to address the issues/problems identified?

Mr. Harnack explained that following each discussion group, a reporter from each group would summarize the discussion for the main audience. He stated that the attendees would be divided into four groups (by region):

1. Upper Mississippi
2. Metro
3. Minnesota River
4. Red River Valley

Mr. Harnack read the names of the members of each group, along with the names of the facilitators and recorders for the groups. The main audience dispersed into the regional discussion groups.

## **PROCEEDINGS**

**1998 Drainage Forum  
St. Cloud Civic Center  
November 19-20, 1998**

### **I. UPPER MISSISSIPPI**

#### **Priority Issues**

##### **Interpretation/education/information:**

- Education.
- Interpretation and application of drainage law.
- Better understanding of laws.
- Where do we get help.
- Misunderstanding between levels of government and landowners
- Not following proper procedures.
- No lead agency.
- Lack of understanding of definitions.

##### **Strategies:**

1. Target the education to drainage authority as a whole. Include government agencies.
2. Start with those that have the permitting authority. Need clear message.
3. Identify a lead state agency.
4. Institutionalize training to get the right people to attend.
5. Put together real life examples that authorities can use when they have similar situations.
6. Need a simplified manual that is easy to use, and an outline showing topics and who to go to for different information.
7. Clearinghouse for drainage information, refer landowner to appropriate agency.
8. Make sure people know about existing laws that apply to their project.
9. Training for county boards and watershed district managers on how to instruct viewers.

#### **Environmental considerations**

##### **Priority Issues:**

- Downstream flooding impacts.
- Downstream water quality impacts.
- Impacts on lakes and rivers and recreation.
- Who pays for water quality and quantity issues?
- Hypoxia and water quality and how that will impact farming.

- Managing drainage systems for more than just water quantity
- Build in water quality projects as part of the ditch system (best management practices).
- Lack of incentives to help landowners implement BMPs along ditches.

**Strategies:**

1. All aspects must be taken into account--comprehensive approach.
2. Use good science. Find out where gaps in science are and do research there.
3. When permit is required, figure in up front practices to address environmental concerns. Develop guidance for how to do this. Tell project people which environmental concerns agencies will be looking at so they can address them early on.
4. Develop eng./tech standard to ensure uniformity in how projects are reviewed.
5. Enforce the existing laws.
6. Easily accessible source of funding to address environmental concerns. Applying for grants is too cumbersome.
7. Standards/guiding principles for viewers.
8. Clearer definitions of connected actions.
9. Something like Wetland Conservation Act road replacement program for ditch authorities.
10. Explore more options to fund environmental concerns.

**Administrative Procedures**

**Priority Issues:**

- Abandonment proceedings.
- Abandonment policies for drainage systems.
- Old ditches built for different purposes than today, health and welfare purposes no longer appropriate.
- Condemnation if need be, provides landowner compensation.
- Old ditches have poor records.
- Financial responsibility is not clear when ditches have changed ownership from private to public.
- Urban sprawl land use changes.
- Multi jurisdiction.
- Timely permitting by state agencies and lack of efficient local processes.
- Lack of consistent methodology for determining scope and effect of drainage projects.

**Strategies:**

1. Old ditches
  - a. Keep good records from now on.
  - b. Empower people to make decisions when data is lacking. Develop procedure for this.
2. Get procedural manual out.
3. Follow the law, follow procedures. This will solve many after-the-fact questions/problems.

4. Tech support team to support drainage authorities.
5. Inventory drainage systems.
6. Two phase petition process after the benefits and damages have been determined to allow petitioners to decide if they still want to proceed.

## **II. METRO**

### **Priority Issues:**

- Environmental consideration integrated into ditch proceedings.
- Management and repair of existing systems.
- Change and/or modernization in law needed.
- Education of local government unit officials.
- Abandonment.
- Balancing upstream and downstream issues.
- Financing how and who pays (benefit/cost assessment).

### **Strategies:**

#### **Environmental consideration:**

1. Compensation program needed for loss of landowner's drainage or development rights. Public funds to do this. Pay to pond water on the ditch system. Works especially well for retro-fit projects. Buy out flooded parties.
2. Rewrite ditch laws to encourage the process of M.S. 103E.015. The drainage authority shall not approve projects that will increase flooding or diminish water quality downstream.
3. Set goals and standards through the water management organizations and watershed districts.
4. Supersede the drainage law with metro water plan law. Ditch authority need to have or set better goals for water quality targets, etc. that ditch authorities need to meet. MN Pollution Control Agency water quality standards might be used.
5. Maintain created and restored wetlands, storm water ponds to ensure efficiency. Need to cleaned so as not to impact ditch.
6. Broader environmental functional assessment is needed. Create a ditch Environmental Assessment Worksheet (EAW) that addresses wetland impacts similar to the functional assessment under the Wetland Conservation Act.
7. Environmental consideration currently only happens on new ditch projects. There is a need for better guidance on how to do this. Need to get people to the point of specificity, i.e. scientific norms. Need better follow-through on this item.
8. Set up a system of third-party input to check bias of ditch reports and investigations.
9. County boards are passive decision-makers based on ditch engineers and viewers inputs. Make use of a Technical Evaluation Panel (TEP) for ditches.

#### **Repair and Maintenance:**

1. Clarifying in the law that ditch authority has flexibility to look at alternatives.
2. Develop a comprehensive ditch plan/guidance.
3. Clarify in law how to treat ditches that are not maintained. Set time limits.
4. Determine how ditch easement rights are transferred during/after abandonment to maintain ditch function.

5. Compensation program needed.
6. Currently does not consider whether the ditch has been maintained over time. Needs law change to effect this. Inequities in application of the law.
7. Maintain flowage at a reasonable stage. No history of maintenance. Needs a mechanism to change the status of the drainage system. Hugo example. High culverts need to change. Who's the authority how to handle.

#### **Modernization of the law**

##### **Priority Issues:**

Modernization of the law impacts all the other issue areas.

##### **Strategies:**

1. Rewrite Law to:
  - a. Better address environmental concerns.
  - b. Reduce red tape.
  - c. Address both, agricultural purposes and urban purposes. One size does not fit all. One for metro areas and one law for out-state.
2. Consideration for consequence downstream.
3. Law should allow locals to customize a comprehensive drainage plan at various LGU levels: county, watershed districts, and water management organizations based on who is the ditch authority
4. Rewrite the purpose section of the drainage law. Expand to include current public values.

### III. MINNESOTA RIVER

#### Priority Issues:

- Education about drainage law.
- Pollution and environment.
- Leave law alone.
- Need for more effective repair and maintenance.
- Loss of natural areas.
- Complex permitting procedure.
- Education on science of drainage.
- Inconsistent cost/benefit calculations.
- Research.
- Property rights.

#### Education of the drainage law:

- Who is the target audience for drainage law education?
- Elected and appointed officials:
  - Drainage authority
  - County attorneys
  - County auditors
  - County administrators
- Technical audience:
  - Drainage inspectors
  - Ditch viewers
  - SWCD staff
- Contractors and engineers
- Special interest groups
- Landowners
- "Squeaky Wheel" (those as needed)
- Conservation and environmental groups
- General interest groups
- Voters
- Legislators
- FSA offices
- General public

What are the methods of education?

1. Tailor the level of complexity of the education methods to fit the type of audience.
2. Breakdown the education into three classes: legal, technical, and social.
3. Designate and educate a one-stop authority for everyone to contact for answers or direction (for example, the drainage authority).
4. Use a proactive education process: try to educate to prevent the problems related to drainage instead of focusing on how to fix problems already created.
5. Start with educating the drainage inspector.
6. Create an education strategy with clear outcomes in mind.



#### IV. RED RIVER VALLEY

##### **Priority Issues:**

- Education
- Process

##### **Strategies (Education):**

1. Education of environmental groups.
2. Drainage Clinic/Seminar should be done again and be funded by BWSR/Counties/Watersheds).
3. Information and technology.
4. Petition before money is spent: information meeting should be held regarding costs and benefits.
5. Petitioners should be informed that all costs will be their responsibility.
6. Educate drainage authority. Proper application of law.
7. Educate viewers and problems associated with maintenance and upkeep related to drainage inspectors. Expand groups that will be trained.
8. Research on impacts of agriculture drainage/wetlands on flooding is needed.
9. Need to teach drainage laws before polarization occurs and before petition process.
10. Define repair or improvement versus expansion of a ditch drainage system.
11. Should be more creative with law.
12. Forum brings out good discussion.
13. Lack of information. Check and balances are not always followed.
14. Matter of interpreting the rules correctly. Public needs to be more informed as to where to go for questions on ditch issues.
15. Centralized expertise (BWSR/Attorney Generals Office) where citizens can go to get interpretation of law when conflicts occur.
16. Association of Minnesota Counties should have videos on drainage law available to all counties and watersheds.
17. Seminar for county/watershed attorneys should be held.
18. Voting.
19. Open meetings prior to acceptance/denial of petition.
20. Annual training at the Minnesota Association of Watershed Districts, Association of Minnesota Counties conventions.

##### **Strategies (Process):**

1. What to do about violation of the law? Should the Attorney Generals office or DNR take action?
2. Specialized training in the early stages of any drainage law changes and keep the training ongoing.
3. Coordination of education message. Consistent message for all.
4. Hydrologic/Geographic Information Systems (GIS) information, data gathering needs of how hydrologic system works across jurisdictional boundaries.
5. Have desire to get needed information, need the time and funds.



6. Ottertail County model: pre-action information meetings for all affected landowners.
7. Process needs to be inclusive to bring environmentalists and other special interest groups into process early. Get opponents into process early.

### COMBINED ISSUES LISTED FROM ALL BREAKOUT SESSIONS:

- Easier Abandonment or Conversion
- Maintenance
- Lack of Renovation of Ditches
- Inadequate Balance with Need to Protect Wetlands
- Conflicts with the WCA
- Down Stream Flooding
- Ditch Repair
- Abandonment
- Balance up vs Down-stream Issues
- Education of Drainage Law
- Abandonment
- Lack of Comprehensive Planning up and down Stream Effects
- Environmental consideration
- Conflicts at urban / Rural fringe.
- Retro-fit for water quality, wildlife habitat, in the minds of the landowners and mind set of ditch authorities.
- Assessment structure transition from rural to urban.
- Lack of knowledge of the law 103E by County , other LGU staff.
- Consideration of specific landowner desires.
- Time limit for ditch decisions.
- Downstream Large scale.
- Restructure the regulations.
- Flooding homes.
- Antiquated law.
- Interjurisdictional conflict. Consistent admin between drainage authorities
- Financial issues
- Law removes creative solutions.
- Need training for new and existing government officials.
- How to assess for new ditches.
- Petition process.
- Interaction with other existing law. transfer of authority to WD WMO
- Conflict with roads. Misplacement of culverts.
- Abandonment Proceedings: if built correctly, ditches should last long time and should not be forced to be abandoned after 25 years if not cleaned.
- Lack of understanding, education, public perception, LGU education of public drainage laws. (Public officials). Broad understanding of relationships that exist.
- Determination of benefits with changing land uses.
- Understanding of multi jurisdictional of wetlands.
- Understanding the law (layperson) and following proper procedure in law. Taking responsibility to follow procedures.
- Hypoxia. How drainage laws will get tied into hypoxia issues, affect on farming/production.
- Understanding of law by everyone. Is law bad or is it just lack of understanding.

- Water quality impacts of drainage need more research. How to manage water quality aspects of drainage.
- Need law that allows current land use and flexibility for new land uses.
- Residential development in rural areas and different views of drainage.
- Scope and effect of drainage on wetlands and need for good technical framework/standard.
- New tiling systems into existing ditch systems. How to better manage additional water. How do we manage requests for more water into old systems. How do we not exceed capacity.
- Ditch law does not deal with downstream impacts of drainage, i.e. lakes. Law not set up to deal with this and administration weak.
- Downstream affects and five determining costs.
- Trying to meet multiple objectives, i.e drainage lake quality issues. Who pays? How to find balance.
- Ditches constructed on private land now land in state or county ownership. Cost issues, management issues.
- More education on law, not necessarily change it.
- Water quality issues. Lakeshore value increasing and provide tax to revenue to county.
- Misunderstanding between levels of government and between landowners.
- Timely permitting by agencies shuffle from agency to agency. Need efficient local process and state process.
- Old ditches that have never been cleaned. How to do it right. Need training manual. They (the county) had to figure it out themselves. Everybody asking the county questions and looking for answers.
- Provide filtering for water in ditches. They flow into lakes and rivers and they want to keep them clean.
- Education
- Social value of water quality projects , have good and bad ditches in terms of water quality. Need more incentives for landowners to help manage water quality on their land.
- Abandonment policy. Some old ditches built for reason not appropriate today. These should be abandoned. Some old ditches built for "Health and Welfare" reasons.
- Procedures to use when ditch records don't exist. If you don't know original line and grade, what do you do?
- Use of condemnation provisions if need be. Compensation provisions to help out landowners who disagree with project.
- Laws only address getting rid of water. Doesn't deal well with other water management issues, i.e. water quality.
- Downed trees in the drainage system; creek blockage. Why: Slowing down the flows.
- Water storage on the landscape in the concept of drainage systems and ditch repairs. Why: Sediment retention.
- Sediment pollution.
- Leave the drainage law alone--it works.
- Politics of water.
- Cost-benefit issues.
- Downstream flooding.
- Drainage system mitigation costs.

- Water quality impacts from drainage.
- Surface water issues/drainage issues. comprehensive approach.
- Education.
- Water management research. .
- Economic need for repair and improvement of drainage systems.
- One-stop permitting.
- Erosion of banks.
- Beavers
- Feedlot/septic pollution to ditches.
- Ditch bank erosion.
- Importance of one-acre, small wetlands.
- Lack of understanding of the drainage law.
- Understanding landowner property rights.
- Buffer strips: without the costs of redetermining benefiting of the whole systems which is costly.
- Lack of comprehensive review of the impact on the environment.
- Increased upstream efficiency causing downstream flooding.
- Upland water storage.
- Just "adjustment or enhance" drainage law.
- Newer improvement in ditches: 16.5 foot buffer zone. .
- Informational research on the river as to types of drainage.
- Drainage ditches: general lack of understanding of how they work and the importance of them, both by the landowner and the public.
- Education: too complicated to interpret the drainage law.
- Lack of knowledge of drainage law by some newer county board and county staff.
- Lack of education. Misunderstanding that drainage causes our flooding problems in Minnesota.
- Man-made drainage: are we depleting our aquifers?
- See more impoundment on the end of our drainage systems; need more education. Prevent silt and chemical build up in the water.
- Maintenance and repair of ditch systems is important to farm land.
- Permitting and one-stop shopping for permitting to shorten time frame.
- Lack of working understanding of the statute and the science of drainage at "where the rubber meets the road". Not only understanding drainage but hydrology, soils, geoscience, etc.
- Maintenance
- Redetermination of benefits: some are getting free ride; added a land to system that they are not paying for.
- Sediment load with the eroding ditch banks. Increase in drainage and tiling; being channeled into the system than what it was designed for.
- Maintenance of the drainage system outlet.
- Maintenance of the drainage system: drowned trees.
- Indecisiveness of the state and federal permitting agencies. Get "stonewalled." Have one set of rules to go by--simplify.
- Don't understand the laws and the hydrology of the land.
- Need the ability to make repairs without extensive administrative procedures.

- Education: lack of understanding of who the ditch actually belongs to: the landowner.
- CREP: Creating buffer strip and returning land to its natural state.
- Upstream retention to prevent flood damage. Should be required as a mitigation when repairs increase flow.
- Maintenance
- Buffer strips required for all farmers.
- Education: Old and inadequate ditches cannot receive water being directed to them; downstream effects need to be taken into account. Viewing procedures need to be looked at. Reduce downstream negative effect on the drainage system. Need a system to assess the positive and negative impacts of drainage.
- Maintenance on the county ditches.
- Cannot keep draining and not have some type of flood control. Water quality.
- Education on drainage law: too much interpretation.
- Ditch planning to keep up with the maintenance before maintenance need to be done; helps determine how water quality practices can be done and fit into maintenance. Look for opportunities to address the ditch.
- Education and research: surface inlets, wetland protection, tile spacing and depth; using wetlands for mitigation.
- How can we help farmers and local governments manage the drainage without negatively impacting others.
- Education: the drainage law is workable the way it is.
- Addressing issues through the drainage law or use other channels.
- Education of public officials--appreciate the recent Curt Deter training.
- Drainage is vital to agriculture; consider changes carefully.
- Education
- Water quality and fish and wildlife impacts with regard to drainage and wetlands.
- Drainage systems designed to drain land not retard it; be careful of projects that retard water along drainage systems has maintenance costs related to them.
- Property rights: outside interests commenting on local interests.
- Absentee landowners and their effects on drainage projects.
- Downstream impacts: is faster better. Maybe smarter is better. Hypoxia issue.
- Conservation easements on the land: how does ditch and drainage effect restored wetlands.
- Education: public understanding of the drainage law as it relates to issues. Consistent throughout county.
- Corporate environmental benefits into a drainage project. The question is who pays for it?
- Water quality: deal with pollutants through prevention or treatment. Prevention is much less expensive. Do not bypass the natural treatment of the landscape.
- Current ditch law is fair if it is implemented properly.
- Water quality and erosion control is a priority on a professional level. Some process of dealing with the issues is important on a personal level.
- Water quality issues of urban areas.
- Land taxation structure.
- Keep water on the landscape; look at the natural land structure and think ahead; drain basins already exist.
- Need base-line water quality data to work from in the future.

- Mediation of current drainage issues; absentee landowners, many are women, are removed from the land.
- Lawsuits by environmental groups to define law.
- Taxation without representative
- Abandonment is difficult
- Need to educate flexibility of current law.
- Exacerbates downstream flooding.
- Ditch maintenance.
- Outside agitators, delays projects and increases cost.
- Not all drainage projects benefit land.
- Does not address current technology.
- Unknown to many citizens who may be affected by it.
- Understanding needs, not change.
- Erosion of tax base to maintain ditches, potential problem with change.
- Drainage is vital to economic in the Red River Valley, no change is needed.
- Effects of urbanization, who should pay for drainage?
- Hydrologic impacts - need to study other impacts.
- Ditch law is adequate. Need more up-front education.
- Wetland restoration - how does current law allow for this?
- Current law needs to be followed.
- No effective oversight beyond local level - lack of education.
- Better understanding of restoration/protection of wetlands.
- Ditch abandonment in transition counties.
- Education - authorities don't always understand and take short cuts.
- Education - benefits, urban contributions, clean water, lakes a connection.
- No problems. Education needed in existing law.
- Impoundments since 1990 are difficult.
- Small number of people can get project done, majority may not want.
- Payments of benefits where there are none. Petition process should allow for estimates.
- Lack of criteria/standards to determine drainage benefits.
- Education, agriculture under assault. Current law works.
- Redetermination of benefits. Skewed toward agriculture and doesn't deal with land issues.
- Absentee landowners. May not want to pay for benefits and may not understand history.
- Post-harvest improvement of cropland - how does law regulate impacts to flooding.
- Education needed.
- Education. People don't know the history of drainage.
- New landowners should be educated on ditch taxes.
- Absentee landowners - no connection to land/economic needs of farmers.
- Education - what is downstream water quality impacts.
- Majority of landowners should be required for project - current law allows for.
- Petition allow for storage benefits beyond watershed, flood storage easements.
- Nobody pays assessment without benefits - public roads - no petition - drainage similar for public purpose.
- Conservation landowner rights, some people don't want drainage - lack of flexibility.
- Education - lack of understanding current technology.

- Better documentation of ditch maintenance needed.
- No way to define benefits. No problem with current law.
- Does not address other landuses - wetland restoration, benefits.
- Downstream flooding damages from wetland restorations.
- Water quality/environment impacts not addressed.
- Local control.
- Economic impacts severe for farmers.
- Need to gather information and concerns current systems/downstream impacts.



## Technical Panel Responses

Friday, November 20, 1998

Roger Williams stated that the technical panel was established to discuss how the existing drainage law relates to the problems identified in each group. He introduced the panel participants:

Tibor Gallo - Attorney General's Office  
Loren Harste - Watershed Districts  
Kent Lokkesmoe - DNR/Division of Waters  
Arnie Stone - County Commissioner  
Bill Peterson - Conservation Groups  
Kurt Deter - Rinke-Noonan Law Firm  
Ron Ringquist - Minnesota Viewer's Association  
Tom Anderson - Douglas County

### **Tom Anderson**

Anderson stated that he has been a drainage inspector for 15 years. He commented that a consensus from the participants of the drainage forum is that the current drainage law is a good law. Although minor wording changes may be needed, the context of the law is adequate. He added that education regarding the drainage law is needed and referred to both the public and individuals administering the law. He noted the following points:

- ▶ An organization of Minnesota Association of Drainage Inspectors has been established.
- ▶ Drainage throughout the state has provided the groundwork for the agricultural industry that's in place today.
- ▶ As a drainage inspector, he is a representative of the people he works for.
- ▶ Landowners are concerned with drainage issues, however, no agency seems to be coming forward to assist landowners with their concerns.
- ▶ Landowners are paying for drainage, not storm water, and should agencies be promoting the storm water utility concept? A method for funding should be established.
- ▶ The drainage law does specify that if special interest groups have an issue, they can petition for it. However, they must pay for it and maintain it. He added that should the issue involve a social cost, the state should offer funding assistance due to the benefits received, rather than expecting the landowners to absorb the entire cost.

### **Ron Ringquist**

Ringquist stated that he owns an engineering firm that specializes in assessment work. He commented that the participants of the drainage forum agreed that a need exists for education within the drainage process.

He commented with regard to obtaining viewers for a project, that in the past it was virtually impossible to find consistency from one county to the next. He recognized the need to establish the Minnesota Viewer's Association in order to educate those involved in the assessment of drainage benefits. The association has tried to develop a sound methodology based on the existing statutes. He stated that the current law is a good law if it is followed. He added that differences of opinion will always exist, however, the process is outlined in the law.



**Kurt Deter**

Deter stated that he is an attorney in St. Cloud with the law firm of Rinke-Noonan. He noted that he represents many counties and watershed districts throughout the State of Minnesota. He noted that generally when attorneys speak, they are voicing the opinions of their clients. He added that it is unusual to have the opportunity to discuss his opinion.

He discussed his desire to make the laws more effective and work better. He noted that how well the government works, can be measured by how well the laws are implemented. He stated that he has heard conflicting issues regarding drainage, but does not believe there are problems with 103E. The support of changes in drainage law have been from conflicting interests. He commented that a change in the drainage law would not make it better, but rather polarizes one particular group. The worst outcome of a change in the drainage law would be make attorneys rich. The interpretation of the new law would only create another problem.

He added that typically, the local drainage authority is usually dragging behind the law. He explained that should a change be implemented, a gap would occur and cause the local government unit to fall further behind.

He stated that it is possible to provide for agricultural drainage, while addressing downstream impacts and water quality issues. He commented that he has heard individuals quoting the law that is not part of 103E. Often, individuals quote facts from a case that are totally untrue.

He commented that a need exists to bring conflicting interests together early in the process in order to accomplish their objectives. He noted that mistakes often made by landowners are not getting involved early and not getting legal advice.

He informed the participants that he has scheduled a training session for 2/04/99. He noted that due to the interest shown at the drainage forum, the session would focus on drainage law education.

**Bill Peterson**

Peterson stated that, as an attorney, he started to experience issues and concerns with drainage problems in 1969. He noted that he has been referred to as a special interest attorney. He corrected that statement by saying that he represents the public interests.

He commented that changes in the drainage regulations would be likely in the year 2000. He added that agricultural or rural interests have a strong say in the legislature, but after the year 2000, the equilibrium will change in the legislature and a greater urban influence will be predominant. The changes in the drainage law at that time should involve an increase in statewide supervision. He encouraged the participants to review the aspects of the drainage law. He stated that the drainage law has the authority to deal with certain issues. With regard to upland retention, specific authority is provided for under the law relative to retention. In the future, the legislature may require a greater accountability for the water passed downstream and also regarding the water quality.

He stated that many counties are providing for routine ditch maintenance requirements. He noted that ditch inspectors are instructed to determine whether a ditch is properly maintained and, if they are not being properly maintained, the county may want to take action regarding the ditch system.

He added that once ditches have been petitioned for, there is no turning back. Often when a landowner finds out what the costs of a project are, it is too late and they are responsible for part of the expenses. He suggested a process of easier withdrawal from the petition process regarding the termination of ditch proceedings. There should also be an easier system of abandonment.

#### **Arnie Stone**

Stone commended BWSR on facilitating an excellent forum on drainage concerns. He stated that throughout the forum, he has observed a consensus among the participants regarding the importance of education relative to the current drainage law.

#### **Kent Lokkesmoe**

Lokkesmoe stated that he has participated in the technical review of drainage projects and has also been involved in litigation with drainage projects. He discussed the two roles of the DNR relative to drainage:

1. Technical review – He stated that this is not used to the extent that it should be. He explained that generally when technical advice is given to the ditch authorities, it is largely ignored.
2. Regulatory role – Typically the regulatory functions are intermingled.

He stated that a significant portion of the discussion today has focused on education. He added that a drainage manual prepared by the state would certainly benefit everyone. He noted that he was encouraged when a panelist referred to the current drainage law “as having flexibility”. However, he noted that this is not generally observed in application of the drainage law.

He added that another participant suggested that if the drainage law is followed, the decision would essentially be made for you. He agreed that the law does provide some latitude regarding decision making. However, he noted that he disagreed with most of the previous panel with respect to the need for changes in the current drainage law. He suggested that some changes are needed and added that they could be considered a win/win situation. He stated that he has seen the petition process work against landowners in the past and, it has been blatantly unfair in some cases.

He recommended that a type of review mechanism be incorporated into the law in order to be more equitable to all the individuals involved. He noted that a major area of conflict concerns the repair of ditches. He added that he disagreed with the “once a ditch always a ditch” philosophy. He concluded by stating that he would support changes to the drainage law in order to provide better equity for petitioners and landowners along with a balancing of environmental interests.

**Loren Harste**

Harste stated that he was a member of the Minnesota Association of Watershed Districts board. With respect to the current drainage law he commented that, "if it's not broke, don't fix it." He stated that the current law serves the public well and added that from the comments he has heard at the drainage forum, most of the participants supports this concept.

He agreed that the law might need to be carried a little farther regarding education. He encouraged ditch authorities to bring to the forefront of landowner's minds, issues relative to ditch proceedings in order to avoid any surprises. Once a project has been established, there is no mechanism in place to change things after several years have past. He suggested that a better-informed citizenry and ditch authority would avoid problems in the future.

**Tibor Gallo**

Gallo stated that the panel participants are charged with discussing whether changes are needed in the current drainage law. He added that an issue that needs to be accepted by the group is that environmental considerations are here to stay. He explained that just as individuals believe that drainage is needed, others believe that wetlands must be restored and/or preserved.

He noted that laws passed by the legislature are representative of everyone's view in the state. He referred to 103E.015 which states that, in essence, a repair should give due consideration to the conservation of soil, water, and forest. He discussed a case from 1983 which involved the Supreme Court of Minnesota recognizing that environmental considerations apply in the state. He stated that if environmental consequences are not considered when developing projects, others agencies would come and consider them for you.

He commented on the feeling of individuals involved in drainage as bearing the brunt of environmental concerns in the form of project delays. He stated that these individuals should not feel isolated. He added that environmental concerns are everywhere.

He suggested a more consistent statewide policy for determining benefits. He explained that a benefit is the difference in the value of the land before and after the drainage improvement.

**McLeod County Basemapping and Drainage Inventory  
BWSR Drainage Round Table Forum  
November 20, 1998**

**Presenter:**

Linda Tomaselli - GIS Services Manager, OSM & Associates 612-595-5634

**Contact People:**

Mark Wald - GIS Planner/Coordinator, OSM & Associates 612-595-5638

Rick Kjonaas - County Engineer, McLeod County 320-864-3156

Cindy Schultz - County Auditor, McLeod County 320-864-1210

**Abstract**

**McLeod County Basemapping and Drainage Inventory**

County officials at McLeod County, MN were looking for a solution for managing information about county ditches. County commissioners are responsible for overseeing ditches in their respective districts. The county auditor needed a better way to keep track of ditch maps, manage assessments, and respond to questions from commissioners and individual land owners. With about 70 ditch systems in the county, it is difficult to keep track of the locations of these ditches. Many people request information about ditches and want to see a map. However, it is difficult to quickly respond, because the information is scattered in different places. County officials also needed to preserve paper ditch maps, many of which are one-of-a-kind.

GIS, with its ability to integrate information, was seen as a solution to these ditch management issues. After a consensus among county officials was reached and the County Board gave its approval, county officials needed a way to fund the implementation of a GIS. The BWSR grant program provided partial funding. The local match was provided by an assessment on properties that benefit from the ditch system.

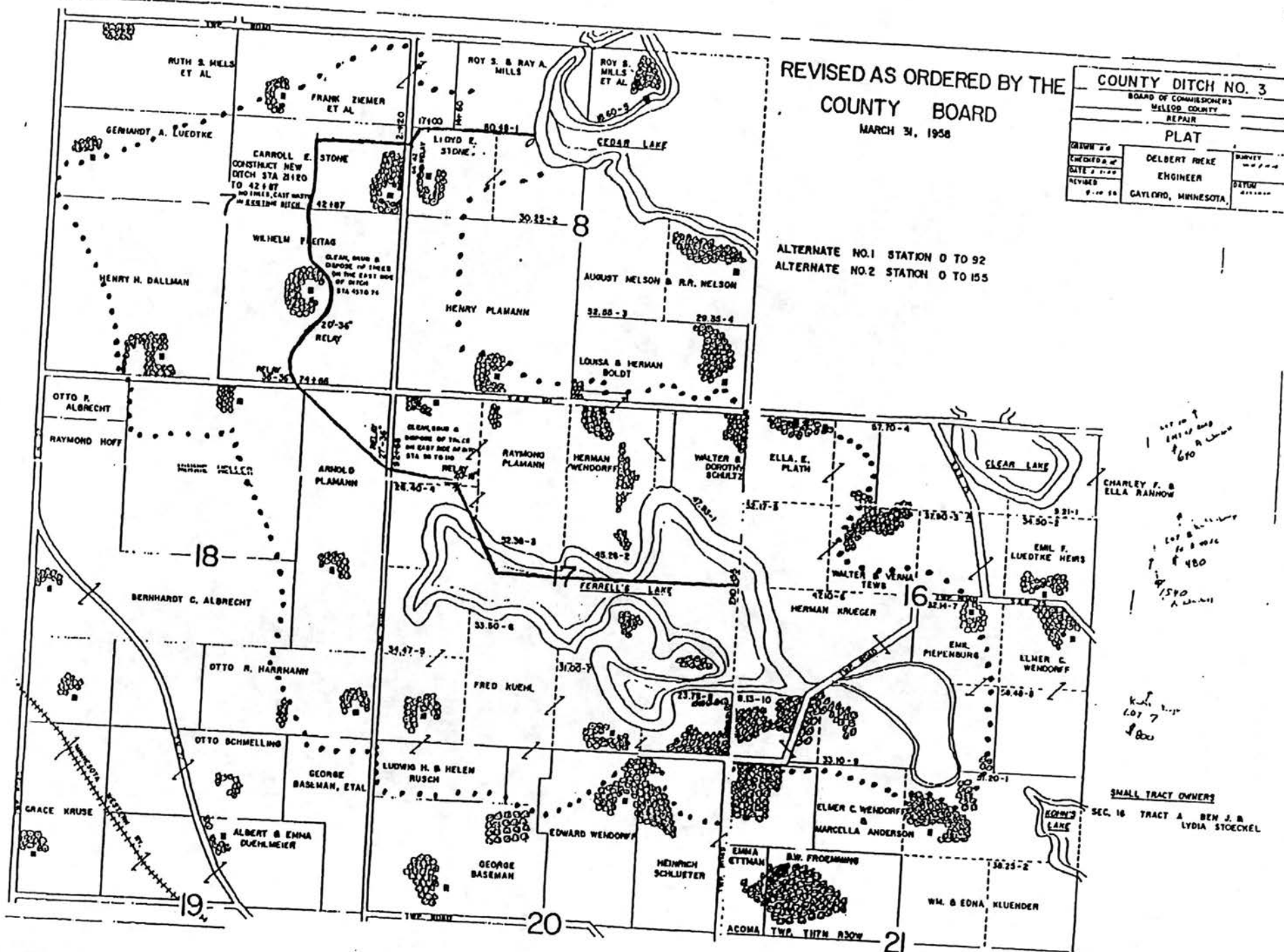
As a result of this project, county officials now have many layers of data to display in their GIS. These include: ditches and other hydrography, ditch watersheds, quarter-quarter sections, historical parcels and wetlands, roads, and digital air photos (DOQs) tiled into smaller pieces. Also, scanned images of the original ditch maps were scaled and positioned to be superimposed on top of the DOQs. Now, the auditor can use the GIS to instantly show a commissioner or land owner locational and maintenance information about any ditch in question.

The project's scope involved the following tasks. Each county ditch map was scanned. The DOQs and scanned ditch map images were then registered to match the map projection of the county's other geographic data. Existing TIGER hydrography and roads data layers were edited, so that they would correctly align with the DOQ basemap. Ditch watershed boundaries were digitized from the scanned ditch maps and assembled into a county-wide ditch watershed coverage. From a lattice of county supplied GPS points and points digitized from the DOQs, a quarter-quarter section line coverage was computed. Using the scanned ditch maps as a reference, the quarter-quarter section coverage was edited to create a historical land ownership coverage.

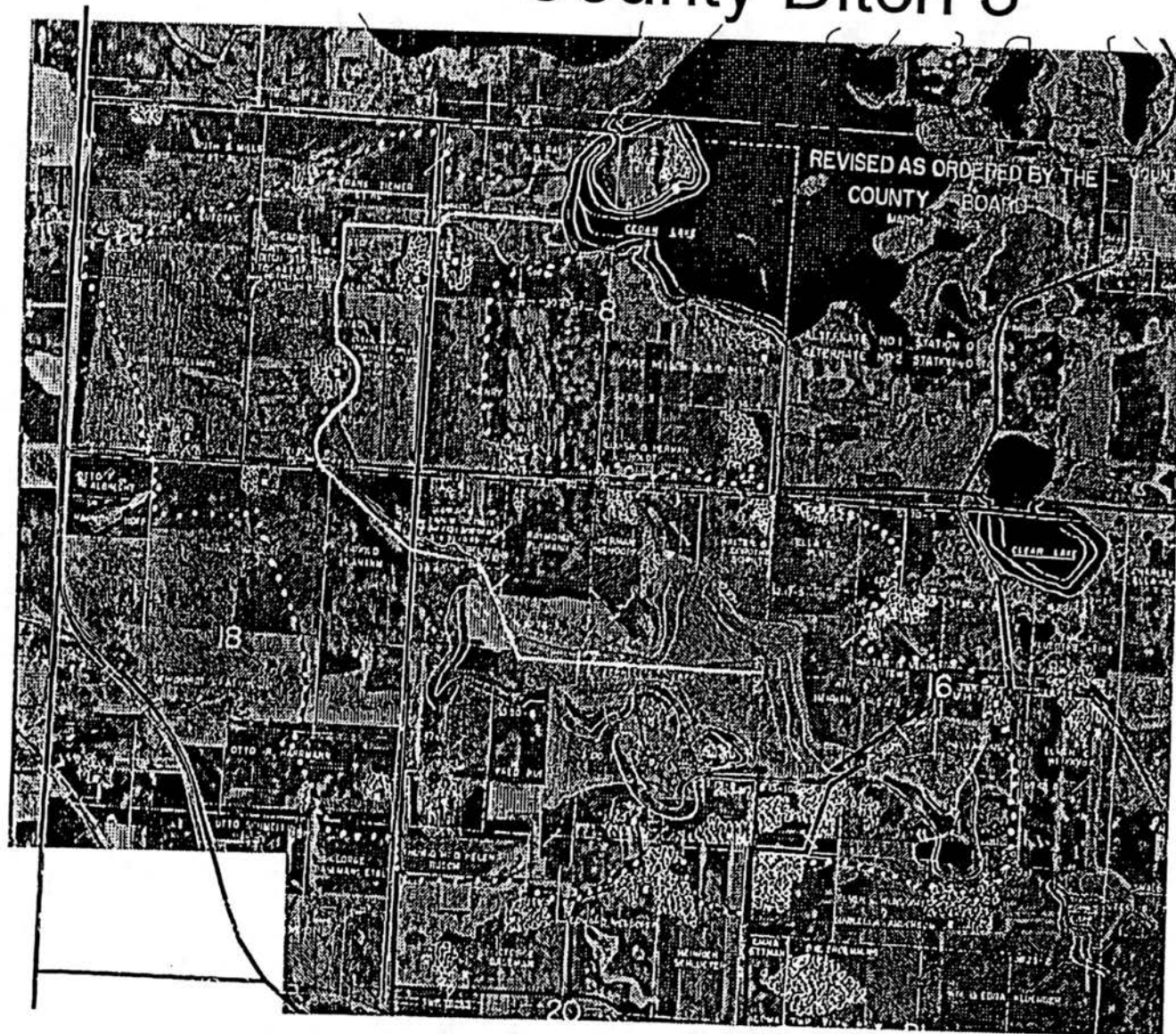
In addition to addressing ditch map issues, this project will have long term benefits for the County. The roads database can be enhanced with rural addressing and used by the County Sheriff for 911. Planners and assessors can use DOQs to determine the locations of structures. The quarter-quarter section line coverage can provide a framework for parcel mapping on an interim basis until more accurate parcel maps are created.

This presentation will explain the process of GIS implementation and the project tasks to create the data layers and will demonstrate how county officials interact with the GIS to show ditches and other pertinent information.





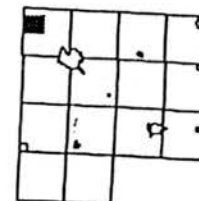
# County Ditch 3



- Watersheds
- Roads
- Parcels
- Hydro
- Wetlands

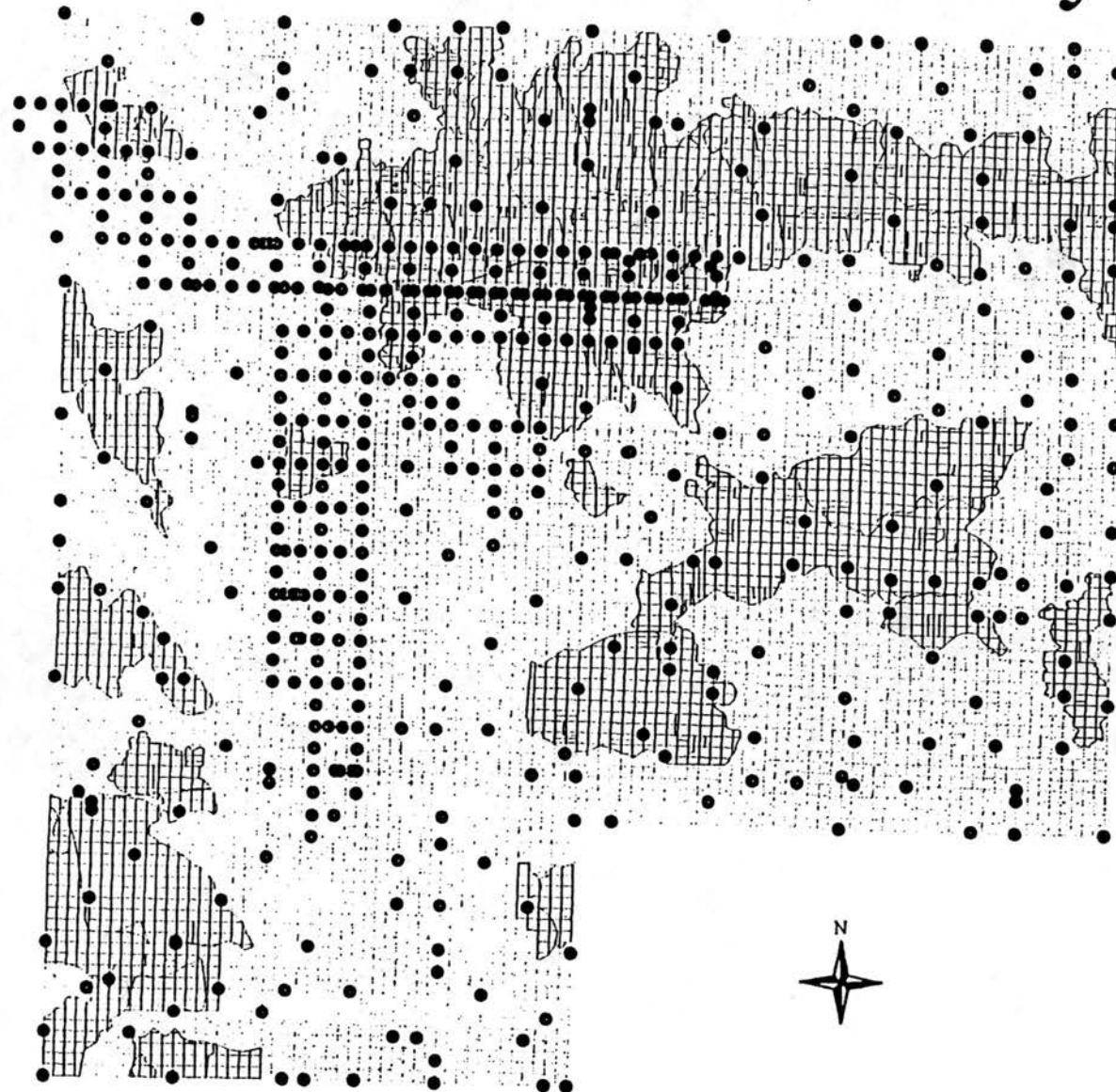


From the office of  
Cindy Schultz, County Auditor  
April 24, 1998 8:42 AM





# McLeod County Basemap



-  Historic Parcels
-  Quarter Quarter Sections
-  GPS Points

Hutchinson







## DOUGLAS COUNTY DRAINAGE INVENTORY

by

*Marilyn Bayerl, Douglas County Water Planner  
and Dave Marshall, GIS Specialist*

Bayerl discussed the background leading up to the decision to conduct the drainage inventory. She explained that Douglas County is comprised of 18 ditches spanning approximately 200 miles. A fly-over was conducted in the spring of 1996, and base maps were utilized which depicted driveways, centerlines, roads, and woods. The maps utilized were proved to be within + or - 6 feet. A task force had been developed to assess the need for a drainage inventory when the grant was applied for to BWSR. The project was funded in part by cost share hours and also money allocated in the budget.

She stated the goals of the drainage inventory included:

1. Take files dispersed throughout the county and consolidate into one network
2. Develop a 911 network.
3. Utilize the information within other departments in the county.

She added that the drainage inventory far exceeded the goals established by the task force. She introduced Dave Marshall who conducted the digitizing of the maps.

Marshall explained that when he started on the project, the county had completed the base map which included a network of the roads, waterways, outlines of lakes, and driveways. The project began by determining which parcels were assessed. Once the parcels were determined they were highlighted and digitized using aerial photos.

When an approximation of parcel boundaries was developed, a database was created that included the parcel ID #. The ID# was linked to the county database which showed the parcels and their attributes. The aerial photos were also used to digitize the ditches.

Watershed boundaries were also designated with each ditch being labeled. The next step involved adding all the information regarding a ditch in the database utilizing a "hot link" in order to access all the information on the ditch. A runoff curve number could also be developed for a watershed by digitizing the soils from the soil sheets. The soil sheets were scanned to semi-automatically traced lines which created a GIS database. The runoff curves were classified by the soil groups and all the information from the soil survey was linked to the database. The land use purchased from LMIC was used to find out what kind of land use existed in 1989 when the maps were made. This information was combined with the National Wetlands Inventory and the SCS method for calculating runoff curve numbers was utilized. Runoff curve numbers were developed for each parcel in order to determine how much water each parcel contributes to the watershed.

The next step was to create a database for each parcel ID# including the number of acres owned. Multiplying the # of acres by the curve number created a product which denoted the curve number for each parcel showing the percentage of runoff for each parcel. This method of calculation would be beneficial in determining a storm water utility fee.

## Drainage Economics

by

Steve Taff, Agricultural Economist  
University of Minnesota  
St. Paul, MN 55108

### SUMMARY

Economics can and should be used in drainage management decisions. The issue is not whether to drain or not. Drainage does pay at the farm level for most farmers. Poorly drained soil does not pay. Farmer's have a strong economic incentive to drain. But instead of discussing the farmer's incentive to drain, the discussion was economics of managing drainage. Once the water leaves the field, what should be done with it? This discussion will focus on decisions made by county commissioners as the drainage authority and also on the elements of current drainage law.

#### Current Drainage Law:

1. Boundaries -- a state oversight in managing the system;
2. County/drainage authority control -- this is done on a county basis which is very significant:
  - a. Physical:
    1. Construction
    2. Repair/improvement
    3. Abandonment
  - b. Financial:
    1. Cost allocation -- determination of benefits.

The economics of benefits is not the same as when viewers examine the particulars of a ditch.

The system of governance includes the following:

1. Physical system - will fail due to huge new loads of tile
2. Institutional system - will fail because of:
  - a. new local preferences
  - b. new downstream demands about land management.

Downstream landowners believe that upstream activities affect them. The effects of drainage are challenging the system of management. The solution involves a Cost Benefit Analysis (CBA). The CBA would be used in decisions that try to balance:

1. Increase capacity
2. Decrease system impacts.

County commissioners would make the determination by conducting a CBA. The CBA provides for the following:

1. A procedure to itemize impacts
2. A dollar volume is assigned to impacts

3. Decisions would be made more "transparent".
4. A comparison among alternatives.

To some extent, the CBA is already being done. The concept is built into the way the drainage systems are currently managed. The CBA should be applied at particular stages in order to avoid system failure. A drainage improvement project should include the following analysis:

1. Economic test
2. Environmental test
3. Final test.

These tests should be conducted at both the drainage and the county levels.

There are problems in making this analysis. Where are the numbers arrived at to determine the area or downstream impacts? And secondly, if the analysis says to close off part of the system, how could the ditch authority do so? We now have a plumbing system with no valves. The current system does not provide for closing off a ditch.

What good is the full CBA?

1. Physical:
  - a. Monitoring - state monitoring of flow structures is not done by installing dams, weirs, or pipes to physically manage the flow of water.
  - b. Control structures.
2. Institutional controls:
  - a. Monitoring
  - b. Change the rules -- regulation, markets.

There is no ability under the current law to implement physical or institutional controls. If there was, systems could be designed to control and manage that would increase the public well being. This could involve a system of regulation or of marketed permits. These permits would essentially be pieces of paper that would allow the right to drain their land and if they want, or sell the permit to someone else to allow them to drain on your property.

The CBA is the best way to:

1. Move from drainage management to water management;
2. Have an open and useable decision making process;
3. Deal with the inevitable collapse of current ditch laws.

This system would allow for the argument of numbers, rather than the typical debates over the ditch law. The numbers agreed on could be "zoomed" in on and a similar approach to water quality standards could be applied. This system provides for the management of water, rather than the management of drainage. It forces individuals to address the real problems.

## Potential Flooding and Drainage ... Is There a Connection?

by

*A. P. Mallawatantri, D. J. Mulla, and M. W. Seeley*

*Dept. Soil, Water, and Climate*

*University of Minnesota*

*St. Paul, MN 55108*

### SUMMARY

This research was undertaken to quantify the long-term climatic and non-climatic effects on increased stream flow in the Minnesota River.

Daily stream flow records from the U.S.G.S. for the Minnesota River at Mankato were analyzed for trends during the months of May through August from 1904-1994. Climatic effects on flow were modeled using linear regression between the log of monthly flow and monthly Palmer Drought Severity Index (PDSI) values.

Only research results for maximum monthly flows from the month of June are described below. This month has larger influences of non-climatic effects than any other month, and so represents the **worst case scenario** for estimating the effects of drainage on flow. The current maximum monthly flow in the Minnesota River for June is approximately 8200 cubic feet per second (cfs).

- The climatic regression model explained about 65% of the annual variation in the log of monthly maximum stream flow.
- The direct effects of climatic change account for annual increases in maximum monthly stream flow of 49 cfs from 1904-1994.
- After removing the effects of climatic change on flow, the annual increases in maximum monthly flow due to non-climatic effects were 35 cfs from 1904-1994.

Thus, strong scientific evidence exists for increases in maximum monthly stream flow (and hence flooding) that are largely driven by an increasingly wetter climate.

Non-climatic effects are responsible for increases in maximum monthly flow that account for less than one-third of the current river flows. The most likely sources for these increases include drainage of wetlands and installation of tile drainage, channelization of streams and loss of floodplains, changes in vegetation and cropping systems, expansion of urban areas, and climatic effects not accounted for by the PDSI model.

It is important to remember that artificial drainage had little or no influence on catastrophic flooding that occurred along the Minnesota River during 1993 and 1997. These catastrophic floods were almost entirely the result of climatic factors. On the other hand, moderate flooding may occur more frequently now than in the past, due to increases in river flow that are the result of changes in both climatic and non-climatic effects.



St. Paul District - Corps of Engineers  
Summary of Proposed GP/LOP-98-MN Alternative to Nationwide Permits

| Permit Type                | GP/LOP/98-MN Section 404 Activities In <u>MINNESOTA</u> (draft rev. 11/18/98)<br>***THIS MATRIX REFLECTS A PROPOSED, NOT A FINAL, ACTION***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Applicable Waters                                                                                               | Maximum Acreage                                                                                                                     | Application Requirement                                                           |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| GP                         | Maintenance, bank protection, utility line, 404 activities for USCG-approved bridges, return water, oil/hazardous substance spill cleanup, structural discharges, completed enforcement actions and minor discharge activities (refer to detailed permit descriptions and conditions) <ul style="list-style-type: none"> <li>non-reporting (no application/notification required) if standard conditions and GP limits are met and project impacts less than 400 sq. ft. of water/wetland area in <u>Special Waters</u>* (defined below). EXCEPTIONS: Maintenance activities for public roads and utilities are not subject to Special Waters restriction except in calcareous fens. Oil/hazardous substance spill cleanup activities are not subject to reporting requirements even in special waters.</li> </ul> | all 404 waters EXCEPT fens, Federal Wild/Scenic Rivers <u>Special Waters</u> * excluded for certain activities. | <ul style="list-style-type: none"> <li>1/3 acre for maintenance activities</li> <li>400 square feet for minor discharges</li> </ul> | no application or reporting to COE required IF all GP/LOP-98 permit terms are met |
| LOP A/B                    | (A) Bank protection and utility line projects that fail to meet GP limits or other GP/LOP-98-MN criteria, listed GP activities in special waters and (B) moist soil management, temporary construction/access/dewatering, toxic waste management, and wetland/stream restoration/creation activities (refer to detailed permit descriptions and conditions) <ul style="list-style-type: none"> <li>application to COE required</li> <li>COE internal review only if no special waters* involved. 15-day public/interagency review (via Internet) if special waters involved AND impact exceeds 400 sq. ft.</li> </ul>                                                                                                                                                                                              | all 404 waters except fens & Federal Wild/Scenic Rivers                                                         | <ul style="list-style-type: none"> <li>none</li> </ul>                                                                              | all                                                                               |
| LOP C                      | Activities that impact more than 400 but less than 10,000 square feet (sq. ft.) of wetland/water area <ul style="list-style-type: none"> <li>application to COE required</li> <li>COE internal review only if no special waters* involved. 15-day public/interagency review (via Internet) if special waters* involved</li> <li>appropriate compensatory mitigation required if threshold exceeded (see **below)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        | all 404 waters except fens & Federal Wild/Scenic Rivers                                                         | <ul style="list-style-type: none"> <li>10,000 square feet</li> </ul>                                                                | all                                                                               |
| LOP D                      | Activities that impact more than 10,000 sq. ft. but less than 2.0 acres <ul style="list-style-type: none"> <li>application to COE required</li> <li>30-day public/interagency review period (via Internet)</li> <li>appropriate compensatory mitigation required</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | all 404 waters except fens & Federal Wild/Scenic Rivers                                                         | <ul style="list-style-type: none"> <li>2 acres</li> </ul>                                                                           | all                                                                               |
| LOP E                      | Activities regulated and approved pursuant to Minnesota Wetland Conservation Act. Can include additional impacts not regulated by MWCA within the 2-acre limit <ul style="list-style-type: none"> <li>applicants must elect to apply for this LOP</li> <li>application to COE and LGU required (using Joint Federal-State form)</li> <li>applicant or LGU must provide COE complete WCA evaluation and permit info.</li> <li>COE internal review if impacts are under 10,000 square feet, otherwise 15-day interagency review period (via Internet)</li> <li>appropriate compensatory mitigation required if threshold exceeded (see ** below)</li> </ul>                                                                                                                                                          | all 404 waters except fens and Federal Wild/Scenic Rivers                                                       | <ul style="list-style-type: none"> <li>2 acres</li> </ul>                                                                           | all                                                                               |
| LOP F                      | Public road projects to improve/upgrade existing roads only (5 acre impact limit) <ul style="list-style-type: none"> <li>application to COE required</li> <li>30-day public/interagency review period (via Internet) if impacts exceed 10,000 sq. ft.</li> <li>appropriate compensatory mitigation required if threshold exceeded (see ** below)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                        | all 404 waters except fens and Federal Wild/Scenic Rivers                                                       | <ul style="list-style-type: none"> <li>5 acres</li> </ul>                                                                           | all                                                                               |
| *Special Waters            | Special waters are state-designated trout waters, state-designated Outstanding Resource Value Waters (including all calcareous fens), state-protected lakes/wetland greater than 10 acres in size as designated by the MDNR, Public Waters/Wetlands Inventory maps, and all water/wetland areas that are adjacent to and within 300 feet of these waterbodies.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |                                                                                                                                     |                                                                                   |
| **Threshold for mitigation | **Threshold for compensatory mitigation requirement: 400 sq. ft. in shoreland area, 2,000 sq. ft. in less than 50% county, 5,000 sq. ft. in 50-80% county, 10,000 sq. ft. in 80%+ county. If the threshold is exceeded, compensatory mitigation is required for TOTAL project wetland impacts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |                                                                                                                                     |                                                                                   |

UP-TO-DATE INFO VIA INTERNET: <http://www.mvp.usace.army.mil> Click on Corps Permits Button

"404 Permit Guidelines for Drainage"  
 by Mick Weburg  
 U.S. Army Corps of Engineers  
 St. Paul District



US Army Corps  
of Engineers  
St Paul District

# Public Notice

ISSUED: October 30, 1998

EXPIRES: November 30, 1998

SECTION: 404-Clean Water Act

REFER TO: HQ-NWP-MMW

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## PUBLIC NOTICE FOR SUPPLEMENTAL FEDERAL REGISTER NOTICE

The Corps published a supplemental notice in the October 14, 1998, *Federal Register* proposing additional restrictions to the NWP program. The Corps has also revised its schedule for developing the new and modified NWPs to provide the opportunity for additional public comment on the NWPs and regional conditions. In the October 14, 1998, *Federal Register* notice, the Corps announced its decision to extend NWP 26 until September 15, 1999, to ensure that this NWP is available until the new and modified NWPs become effective. In addition, the Corps announced its decision to withdraw the proposed NWP B for master planned development.

In the October 14, 1998, *Federal Register* notice, the Corps is proposing to limit the use of certain NWPs in waters of the United States within the 100-year floodplain. Maps published by the Federal Emergency Management Agency will be used to identify the extent of the 100-year floodplain. The Corps is also proposing to limit the use of NWPs in designated critical resource waters and in impaired waters. This will result in a delay in the schedule for issuing the new and modified NWPs.

The October 14, 1998, *Federal Register* notice is available on the Internet at the Corps regulatory home page at: <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/>. The notice is also available at the *Federal Register* home page of the Government Printing Office (GPO) at the Internet address [http://www.access.gpo.gov/su\\_docs/aces/aaces002.html](http://www.access.gpo.gov/su_docs/aces/aaces002.html). The notice will also be available for review at the St. Paul District office

by contacting Mr. Michael Weburg at (651) 290-5367.

Comments on the proposed additional restrictions on the NWPs discussed in the October 14, 1998, *Federal Register* notice should be sent to the Office of the Chief of Engineers, Regulatory Branch (ATTN: CECW-OR), Washington, D.C. 20314-1000. Comments are due by November 30, 1998. For further information on the proposal published in the October 14, 1998, *Federal Register*, please contact Mr. David Olson or Mr. Sam Collinson, at (202) 761-0199.

For the proposed new and modified NWPs, except for NWP B, the Corps is continuing to review the comments received in response to the July 1, 1998, *Federal Register* notice and is preparing the final new and modified NWPs for publication in the *Federal Register* on March 6, 1999. The comments received in response to the October 14, 1998, *Federal Register* notice will be considered and incorporated into final new and modified NWPs.

Please note that the St. Paul District has proposed to suspend all of the Section 404 NWPs in Minnesota and Wisconsin and replace them with Section 404 general permit and letter of permission procedures (the GP/LOP-98 proposal). This proposal remains as indicated in the three public notices for GP/LOP-98 that were issued by the St. Paul District on July 22, 1998. Future St. Paul District public notices will request comments on the final GP/LOP-98 proposal. St. Paul District public notices concerning the GP/LOP-98 proposal may be obtained by contacting Mr. Weburg at (651) 290-5367 or via the Internet at: <http://www.mvp.usace.army.mil>.

  
William J. Breyfogle  
Lieutenant Colonel  
Corps of Engineers  
Acting District Engineer

# ATTENDANCE LIST

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Leonard Moe  
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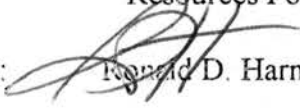
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Representative Finseth, Chair, Agriculture Policy Committee  
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FROM:  Ronald D. Harnack, Executive Director

SUBJECT: 1998 Public Drainage Forum Proceedings

Please find enclosed a copy of the proceedings of the 1998 Public Drainage Forum held November 19-20 at the St. Cloud Civic Center.

As many of you are aware, there is growing conflict and controversy regarding the Public Drainage Law. Each year a bill is introduced to significantly modify the Public Drainage Law. Rather than proceed with what would be a contentious debate over bills, it was believed that open discussion among various interests would help create a greater understanding of the key issues relating to the Public Drainage Law.

I believe the drainage forum did just that. The key issues identified were education, training, water quantity and quality, and administrative procedures. The proceedings suggest that training and education are the most critical component to proper administration of the Public Drainage Law which would result in elimination or significant reduction in the public conflict over the Public Drainage Law.

The pilot efforts over the last two years in training and drainage system inventories should be continued and complemented with technical assistance to drainage authorities. The training and inventories will provide a basis for future public policy debates on the Public Drainage Law. Technical assistance will provide drainage authorities with specialized support to address drainage maintenance, repair and improvements from a comprehensive social-economic-environmental perspective.

I would be happy to put together a panel of forum participants to review highlights from the Public Drainage Forum proceedings for your committees or joint committees.

## 1998 DRAINAGE FORUM

### ST. CLOUD

November 19-20, 1998

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**1998 DRAINAGE FORUM  
ST. CLOUD  
November 19-20, 1998**

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**1998 DRAINAGE FORUM  
ST. CLOUD  
November 19-20, 1998**

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Corn Research & Promotion Council  
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## 1998 DRAINAGE FORUM

### ST. CLOUD

November 19-20, 1998

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Rinke - Noonan  
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Kenk Lokkesmoe, Director  
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U.S. Army Corps of Engineers  
190 East 5<sup>th</sup> Street  
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# Public Drainage Forum

Proceedings

St. Cloud Civic Center

November 19-20, 1998



Sponsored by:

**The Board of Water and Soil Resources  
(BWSR)**

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**Acknowledgments:**

**Facilitators:**

Roger Williams  
Ron Harnack, BWSR  
Beth Carlson, Department of Natural Resources  
Ron Struss, BWSR

2nd page

**Recorders:**

Dale Krystosek, BWSR  
Ron Shelito, BWSR  
Phil Belfiori, BWSR  
Doug Snyder, BWSR  
Robyn Molina, BWSR  
Jeff Nielsen, BWSR  
Vicki Erbele, BWSR  
Carla Swanson-Cullen, BWSR

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**Technical Panel:**

Tibor Gallo, Attorney General's Office  
Kurt Deter, Rinke-Noonan  
Kent Lokkesmoe, DNR - Division of Waters  
Ron Ringquist, MN Viewers Association  
Tom Anderson, Douglas County Drainage Inspector  
Arnie Stone, County Commissioner  
Loren Harste, Watershed Districts  
Bill Peterson, Conservation Groups





September 28, 1998

TO: Public Drainage Interests

FROM: Ronald D. Harnack, Executive Director

*RDH*

SUBJECT: **PUBLIC DRAINAGE FORUM, NOVEMBER 19-20, 1998**

One West Water Street  
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Over the last few years issues and concerns relating to public drainage systems have frequently arisen, sometimes leading to discussion of changing the drainage law. Drainage is a complex topic and even mentioning changes arouses controversy. Organizations may react without understanding the issues and concerns and frequently without a good understanding of the drainage law itself. This leads to conflict that can and should be avoided.

I do not believe that wholesale change to the drainage law is warranted. However, there is a need to better understand the issues and concerns surrounding drainage and how the current law addresses those issues and concerns. Therefore, BWSR has endorsed the concept of a drainage forum that will bring interests together to discuss the topic so that all have a better understanding and awareness of each others' perspective. I have talked with numerous agricultural, local government, conservation, and environmental interests and most overwhelmingly agree that such a forum would be beneficial. The drainage forum will be November 19-20, in St. Cloud.

**PURPOSE:**

- \* to bring drainage interests together to share issues and concerns
- \* to better understand the perspectives of various interests
- \* to create a greater understanding and awareness of differing views
- \* to inform, educate and create a greater understanding of the public drainage law
- \* to create an awareness of strategies that interests believe will address their issues
- \* *is not to form any agreement or consensus*
- \* *is not to debate or discuss any specific legislative proposal(s)*

**PARTICIPATION:**

**General Principles:**

- \* involve key local government, special interests and state and federal agencies with an interest in public drainage
- \* ensure a regional perspective from participants as drainage has unique regional orientation and application - northwest, south, northeast, central and metro. Participating organizations should ensure that they have individuals that can reflect these regional perspectives as part of the discussion.



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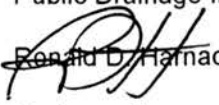
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DATE: November 6, 1998  
TO: Public Drainage Interests  
FROM:  Ronald D. Harnack, Executive Director  
SUBJECT: Drainage Forum, November 19-20, 1998

On behalf of the Board of Water and Soil Resources, I welcome your participation at the "Drainage Forum" on November 19-20, 1998, at the Civic Center, Herberger Suite, in St. Cloud. The "Drainage Forum" will address the following issues on November 19:

- 1) What are the key issues/problems relating to the drainage law?
- 2) How are the priority issues perceived?
- 3) What are the strategies to address the issues/problems identified?

Due to the interest and early registration numbers, we will modify the original draft agenda and break into regional drainage discussion groups. This will help focus on regional aspects and provide for more deliberate discussions.

Attendees will be divided into four groups (by region):

- 1) Red River Valley
- 2) Upper Mississippi
- 3) Minnesota River
- 4) Metro

Participants in each group (approximately 20-30 people) will have a facilitator, recorder, and a reporter (reporter is chosen by the group). The group will actively discuss the key issues, identify priorities, and discuss strategies. The groups will then convene to a general session, at which time each reporter will report the group's findings. A technical panel will respond to the drainage issues and findings.

Attached is the agenda and a listing of attendees. The attendee list was compiled after various groups and individuals responded to my earlier memo inviting participation. There will not be a registration fee to attend the Drainage Forum, however, we do need to know how many people will attend so that logistical arrangements can be made. If you have not registered please call Robyn Molina at 651-296-2840, as soon as possible.

A block of sleeping rooms has been reserved at the Best Western Kelly Inn in St. Cloud for the night of November 19. If you need a sleeping room, please call the Best Western Kelly Inn directly, at 320-253-0606 by November 13, to reserve a room. The room rate is \$67 double or single room. When making your reservation be sure to ask for the "Drainage Forum" to receive this room rate.

I have attached the original notice for the session to again provide a list of background and purpose for the forum. Thanks for your interest and participation.

Attachments

## AGENDA

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:00 a.m.  | <b>Welcome and Introductions</b> - Ron Harnack, Executive Director<br><i>Herberger Suite</i>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 9:10 a.m.  | <b>General Session</b> - Roger Williams, facilitator                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 9:15 a.m.  | <b>Groups Discuss Key Issues and Priorities</b><br><br>✓ <b>Red River Valley - Board Room</b><br>Facilitator: Roger Williams<br>Recorder: Dale Krystosek/Robyn Molina<br><br>✓ <b>Upper Mississippi - Wilson Suite</b><br>Facilitator: Ron Harnack<br>Recorder: Ron Shelito/Vicky Erbele<br><br>✓ <b>Minnesota River - Stockinger 1</b><br>Facilitator: Ron Struss<br>Recorder: Jeff Nielsen/Carla Swanson-Cullen<br><br>✓ <b>Metro - Stockinger 2</b><br>Facilitator: Beth Carlson<br>Recorder: Phil Belfiori/Doug Snyder |
| 10:30 a.m. | <b>Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 10:45 a.m. | <b>Groups Discuss Strategies</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Noon       | <b>Lunch</b> (on your own)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1:15 p.m.  | <b>Reports from each Group</b> - <i>Herberger Suite</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2:30 p.m.  | <b>Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

2:45 p.m.      **Technical Panel Response** - General Session - *Herberger Suite*

- Tibor Gallo, Attorney General's Office
- Kurt Deter, Rinke-Noonan
- Kent Lokkesmoe, DNR/Division of Waters
- Ron Ringquist, Minnesota Viewers Association
- Tom Anderson, Douglas County Drainage Inspector
- County Commissioner, *Arne Stene*
- Watershed District, *Helen Hauke*
- Special Interest, *Conservation Groups, Bill Peterson*

4:30 p.m.      **Wrap-Up**

**Friday, November 20**

8:15 a.m.      **Welcome and Introductions** - Ronald Harnack - *Herberger Suite*

8:30 a.m.      **"McLeod County Drainage Inventory"** presentation by  
Dr. Linda Tomaselli

9:15 a.m.      **"Douglas County Drainage Inventory"** presentation  
by Marilyn Bayerl and Dave Marshall

10:00 a.m.      **Break**

10:15 a.m.      **"Drainage Economics"** presentation by Steve Taff, U of M

11:00 a.m.      **"Long Term Flow Trends in the Minnesota River"**  
presentation by Dave Mulla, U of M

11:45 a.m.      **"404 Permit Guidelines for Drainage"** presentation  
by Ben Wopat, U.S. Army Corps of Engineers

12:30 p.m.      **Wrap-Up**

**1998 Drainage Forum  
November 19-20, 1998  
St. Cloud Civic Center  
St. Cloud, MN**

**Thursday, November 19, 1998**

**Welcome and Introductions** – Ron Harnack, Executive Director, Minnesota Board of Water & Soil Resources

Harnack welcomed the participants to the public drainage forum endorsed by BWSR. He referred to the agenda and explained that it was developed to provide for broad involvement and participation. He added that during the last few years, drainage issues have been on the upswing which has caused people to move towards changes in the drainage law. He noted that the drainage law is a very complex topic and, prior to changing the law, an understanding of the current law is critical. He stated that often when issues are contested, a conflict mode develops which puts people in a win/lose situation. When organizations react without a good understanding of the law itself, conflict is often the result. He added that he does not believe that changes are needed or warranted to the current drainage law, but rather a better understanding.

Harnack stated that the purpose of the public forum is not to debate or discuss any specific legislative issues or achieve a consensus. The purpose of the forum is to bring drainage individuals together for discussion to better understand the current drainage law. The drainage forum was developed to create an understanding of strategies of perspectives of what individuals believe can be done to address concerns relative to the drainage law. Also, the intent of the meeting was to facilitate a greater discussion of diverse interests.

Due to the significant interest shown in the drainage forum, regional discussion groups were developed in to focus on regional aspects and provide for more deliberate discussions. The issues to be addressed on November 19, 1998 include:

1. What are the key issues/problems relating to the drainage law?
2. How are the priority issues perceived?
3. What are the strategies to address the issues/problems identified.

Harnack explained that following each discussion group, a reporter from each group will summarize the discussion with the main audience. He stated that the attendees would be divided in four groups (by region):

1. Red River Valley
2. Upper Mississippi
3. Minnesota River
4. Metro



**1998 Drainage Forum  
St. Cloud Civic Center  
November 19-20, 1998**

**I. UPPER MISSISSIPPI**

**Priority Issues:**

**Interpretation/education/information:**

- Education.
- Interpretation and application of drainage law.
- Better understanding of laws.
- Where do we get help.
- Misunderstanding between levels of government and landowners
- Not following proper procedures.
- No lead agency.
- Lack of understanding of definitions.

**Strategies:**

1. Target the education to drainage authority as a whole. Include government agencies.
2. Start with those that have the permitting authority. Need clear message.
3. Identify a lead state agency.
4. Institutionalize training to get the right people to attend.
5. Put together real life examples that authorities can use when they have similar situations.
6. Need a simplified manual that is easy to use, and an outline showing topics and who to go to.
7. Clearinghouse for drainage information, refer landowner to appropriate agency.
8. Make sure people know about existing laws that apply to their project.
9. Trainers for county boards and watershed district managers on how to instruct viewers.

**Environmental considerations:**

**Priority Issues:**

- Downstream flooding impacts.
- Downstream water quality impacts.
- Impacts on lakes and rivers and recreation.
- Who pays for water quality and quantity issues.
- Hypoxia and water quality and how that will impact farming..
- Managing drainage systems for more than just water quantity
- Build in water quality projects as part of the ditch system (best management practices).
- Lack of incentives to help landowners implement BMPs along ditches.

**Strategies:**

1. All aspects must be taken into account--comprehensive approach.
2. Use good science. Find out where gaps in science are and do research there.
3. When permit is required, figure in up front practices to address environmental concerns. Develop guidance for how to do this. Tell project people which environmental concerns agencies will be looking at so they can address them early on.
4. Develop eng./tech standard to ensure uniformity in how projects are reviewed.
5. Enforce the existing laws.
6. Easily accessible source of funding to address environmental concerns. Applying for grants is too cumbersome.
7. Standards/guiding principles for viewers.
8. Clearer definitions of connected actions.
9. Something like WCA road replacement program for ditch authorities.
10. Explore more options to fund environmental concerns.

**Administrative Procedures:****Priority Issues:**

- Abandonment proceedings.
- Abandonment policies for drainage systems.
- Old ditches built for different purposes than today, health and welfare purposes no longer appropriate.
- Condemnation if need be, provides landowner compensation.
- Old ditches have poor records.
- Financial responsibility is not clear when ditches have changed ownership from private to public.
- Urban sprawl land use changes.
- Multi jurisdiction.
- Timely permitting by state agencies and lack of efficient local processes.
- Lack of consistent methodology for determining scope and effect of drainage projects.

**Strategies:**

1. Old ditches
  - a. Keep good records from now on.
  - b. Empower people to make decisions when data is lacking. Develop procedure for this.
2. Get procedural manual out.
3. Follow the law, follow procedures. This will solve many after-the-fact questions/problems.
4. Tech support team to support drainage authorities.
5. Inventory drainage systems.
6. Two phase petition process after the benefits and damages have been determined to allow petitioners to decide if they still want to proceed.

## **II. METRO:**

### **Priority Issues:**

- Environmental consideration integrated into ditch proceedings.
- Management and repair of existing systems.
- Change and/or modernization in law needed.
- Education of LGU officials.
- Abandonment.
- Balancing upstream and downstream issues.
- Financing how and who pays (benefit/cost assessment).

### **Strategies:**

#### **Environmental consideration:**

1. Compensation program needed for loss of landowner's drainage or development rights. Public funds to do this. Pay to pond water on the ditch system. Works especially well for retro-fit projects. Buy out flooded parties.
2. Rewrite ditch laws to encourage the process of M.S. 103E.015. The drainage authority shall not approve projects that will increase flooding or diminish water quality downstream.
3. Set goals and standards through the WMOs and WDs.
4. Supersede the drainage law with metro water plan law. Ditch Authority need to have or set better goals for water quality targets, etc. that DA need to meet. MPCA water quality standards might be used
5. Maintain created and restored wetlands, storm water ponds to ensure efficiency. Need to cleaned so as not to impact ditch.
6. Broader environmental functional assessment is needed. Create a ditch EAW that addresses wetland impacts similar to the functional assessment under the Wetland Conservation Act.
7. Environmental consideration currently only happens on new ditch projects. There is a need for better guidance on how to do this. Need to get people to the point of specificity, i.e. Scientific Norms. Need better follow through on this item.
8. Set up a system of third-party input to check bias of ditch reports and investigations.
9. County boards are passive decision makers based on ditch engineers and viewers inputs. Make use of a TEP for ditches.

#### **Repair and Maintenance:**

1. Clarifying in the law that DA has flexibility to look at alternatives.
2. Develop a comprehensive ditch plan/guidance.
3. Clarify in law how to treat ditches that are not maintained. Set time limits.
4. Determine how ditch easement rights are transferred during/after abandonment to maintain ditch function.
5. Compensation program needed.
6. Currently does not consider whether the ditch has been maintained over time. Needs law change to effect this. Inequities in application of the law.
7. Maintain flowage at a reasonable stage. No history of maintenance. Needs a mechanism to change the status of the drainage system. Hugo example. High culverts need to change. Who's the authority how to handle.

## **Modernization of the law:**

### **Priority Issues:**

Modernization of the law impacts all the other issue areas.

### **Strategies:**

1. Rewrite Law to:
  - a. Better addresses environmental concerns.
  - b. Reduce red tape.
  - c. Address both, agricultural purposes and urban purposes. One size does not fit all.  
One for metro areas and one law for out-state.
2. Consideration for consequence downstream.
3. Law should allow locals to customize a comprehensive drainage plan at various LGU levels: county, WD, WMO; based on whoever is the DA.
4. Rewrite the purpose section of the drainage law. Expand to include current public values.

## **III. MINNESOTA RIVER:**

### **Priority Issues:**

- Education of drainage law (links to "leave law alone").
- Pollution and environment.
- Leave law alone.
- Need for more effective repair and maintenance.
- Loss of natural areas.
- Complex permitting procedure.
- Education on science of drainage.
- Inconsistent cost/benefit calculations.
- Research.
- Property rights.

### **Education of the drainage law:**

- Who is the target audience for drainage law education?
- Elected and appointed officials:
  - Drainage authority
  - County attorneys
  - County auditors
  - County administrators
- Technical audience:
  - Drainage inspectors
  - Ditch viewers
  - SWCD staff
- Contractors and engineers
- Special Interest Groups
  - Landowners
  - "Squeaky Wheel" (those as needed)
- Conservation and environmental groups

- General Interest Groups
- Voters
- Legislators
- FSA offices
- General public

What are the methods of education:

1. Tailor the level of complexity of the education methods to fit the type of audience.
2. Breakdown the education into three classes: legal, technical, and social.
3. Designate and education a one-stop authority for everyone to contact for answers or direction (for example, the drainage authority)..
4. Use a proactive education process: try to educate to **prevent** the problems related to drainage instead of always on how to fix problems already created.
5. Start with educating the drainage inspector.
6. Create an education strategy with clear outcomes in mind.

#### **IV. RED RIVER VALLEY:**

##### **Priority Issues:**

- Education
- Process

##### **Strategies (Education):**

1. Education of environmental groups.
2. Drainage Clinic/Seminar should be done again and be funded by BWSR/County/Watersheds).
3. Information and technology.
4. Petition before money is spent, information meeting should be held regarding costs and benefits.
5. Petitioners should be informed that all costs will be their responsibility.
6. Educate drainage authority. Proper application of law.
7. Educate viewers and problems associated with maintenance and upkeep related to drainage inspectors. Expand groups that will be trained.
8. Research on impacts of agriculture drainage/wetlands on flooding is needed.
9. Need to teach drainage laws before polarization occurs and before petition process.
10. Define repair or improvement versus expansion of a ditch drainage system.
11. Should be more creative with law.
12. Forum brings out good discussion, better answers of level of understanding.
13. Lack of information. Check and balances are not always followed.
14. Matter of interpreting the rules correctly. Public needs to be more informed as to where to go for questions on ditch issues.
15. Centralized expertise (BWSR/Attorney Generals Office) where citizens can go to get interpretation of law where conflicts occur.
16. AMC should have available videos on drainage law to all counties and watersheds.
17. Seminar for county/watershed attorney's should be held.
18. Voting.

19. Open meetings prior to acceptance/denial of petition.
20. Annual training at MAWD, AMC conventions.

**Strategies (Process):**

1. What to do about violation of the law? Should the Attorney Generals office or DNR take action.
2. Specialized training in the early stages of any drainage law changes and keep the training ongoing.
3. Coordination of education message. Consistent message for all.
4. Hydrologic/GIS information, data gathering needs of how hydrologic system works across jurisdictional boundaries.
5. Have desire to get needed information, need the time and funds.
6. Ottertail County model: pre-action information meetings for all affected landowners.
7. Process needs to be inclusive to bring environmentalists and other special interest groups into process early. Get opponents into process early.



### **COMBINED ISSUES LISTED FROM ALL BREAKOUT SESSIONS:**

- Easier Abandonment or Conversion
- Maintenance
- Lack of Renovation of Ditches
- Inadequate Balance with Need to Protect Wetlands
- Conflicts with the WCA
- Down Stream Flooding
- Ditch Repair
- Abandonment
- Balance up vs Down-stream Issues
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- Lack of Comprehensive Planning up and down Stream Effects
- Environmental consideration
- Conflicts at urban / Rural fringe.
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- Assessment structure transition from rural to urban.
- Lack of knowledge of the law 103E by County , other LGU staff.
- Consideration of specific landowner desires.
- Time limit for ditch decisions.
- Downstream Large scale.
- Restructure the regulations.
- Flooding homes.
- Antiquated law.
- Interjurisdictional conflict. Consistent admin between drainage authorities
- Financial issues
- Law removes creative solutions.
- Need training for new and existing government officials.
- How to assess for new ditches.
- Petition process.
- Interaction with other existing law. transfer of authority to WD WMO
- Conflict with roads. Misplacement of culverts.
- Abandonment Proceedings: if built correctly, ditches should last long time and should not be forced to be abandoned after 25 years if not cleaned.
- Lack of understanding, education, public perception, LGU education of public drainage laws. (Public officials). Broad understanding of relationships that exist.
- Determination of benefits with changing land uses.
- Understanding of multi jurisdictional of wetlands.
- Understanding the law (layperson) and following proper procedure in law. Taking responsibility to follow procedures.
- Hypoxia. How drainage laws will get tied into hypoxia issues, affect on farming/production.
- Understanding of law by everyone. Is law bad or is it just lack of understanding.
- Water quality impacts of drainage need more research. How to manage water quality aspects of drainage.
- Need law that allows current land use and flexibility for new land uses.

- Residential development in rural areas and different views of drainage.
- Scope and effect of drainage on wetlands and need for good technical framework/standard.
- New tiling systems into existing ditch systems. How to better manage additional water. How do we manage requests for more water into old systems. How do we not exceed capacity.
- Ditch law does not deal with downstream impacts of drainage, i.e. lakes. Law not set up to deal with this and administration weak.
- Downstream affects and five determining costs.
- Trying to meet multiple objectives, i.e drainage lake quality issues. Who pays? How to find balance.
- Ditches constructed on private land now land in state or county ownership. Cost issues, management issues.
- More education on law, not necessarily change it.
- Water quality issues. Lakeshore value increasing and provide tax to revenue to county.
- Misunderstanding between levels of government and between landowners.
- Timely permitting by agencies shuffle from agency to agency. Need efficient local process and state process.
- Old ditches that have never been cleaned. How to do it right. Need training manual. They (the county) had to figure it out themselves. Everybody asking the county questions and looking for answers.
- Provide filtering for water in ditches. They flow into lakes and rivers and they want to keep them clean.
- Education
- Social value of water quality projects, have good and bad ditches in terms of water quality. Need more incentives for landowners to help manage water quality on their land.
- Abandonment policy. Some old ditches built for reason not appropriate today. These should be abandoned. Some old ditches built for "Health and Welfare" reasons.
- Procedures to use when ditch records don't exist. If you don't know original line and grade, what do you do?
- Use of condemnation provisions if need be. Compensation provisions to help out landowners who disagree with project.
- Laws only address getting rid of water. Doesn't deal well with other water management issues, i.e. water quality.
- Downed trees in the drainage system; creek blockage. Why: Slowing down the flows.
- Water storage on the landscape in the concept of drainage systems and ditch repairs. Why: Sediment retention.
- Sediment pollution.
- Leave the drainage law alone--it works.
- Politics of water.
- Cost-benefit issues.
- Downstream flooding.
- Drainage system mitigation costs.
- Water quality impacts from drainage.
- Surface water issues/drainage issues. comprehensive approach.
- Education.
- Water management research.

- Economic need for repair and improvement of drainage systems.
- One-stop permitting.
- Erosion of banks.
- Beavers
- Feedlot/septic pollution to ditches.
- Ditch bank erosion.
- Importance of one-acre, small wetlands.
- Lack of understanding of the drainage law.
- Understanding landowner property rights.
- Buffer strips: without the costs of redetermining benefiting of the whole systems which is costly.
- Lack of comprehensive review of the impact on the environment.
- Increased upstream efficiency causing downstream flooding.
- Upland water storage.
- Just "adjustment or enhance" drainage law.
- Newer improvement in ditches: 16.5 foot buffer zone. .
- Informational research on the river as to types of drainage.
- Drainage ditches: general lack of understanding of how they work and the importance of them, both by the landowner and the public.
- Education: too complicated to interpret the drainage law.
- Lack of knowledge of drainage law by some newer county board and county staff.
- Lack of education. Misunderstanding that drainage causes our flooding problems in Minnesota.
- Man-made drainage: are we depleting our aquifers?
- See more impoundment on the end of our drainage systems; need more education. Prevent silt and chemical build up in the water.
- Maintenance and repair of ditch systems is important to farm land.
- Permitting and one-stop shopping for permitting to shorten time frame.
- Lack of working understanding of the statute and the science of drainage at "where the rubber meets the road". Not only understanding drainage but hydrology, soils, geoscience, etc.
- Maintenance
- Redetermination of benefits: some are getting free ride; added a land to system that they are not paying for.
- Sediment load with the eroding ditch banks. Increase in drainage and tiling; being channeled into the system than what it was designed for.
- Maintenance of the drainage system outlet.
- Maintenance of the drainage system: drowned trees.
- Indecisiveness of the state and federal permitting agencies. Get "stonewalled." Have one set of rules to go by--simplify.
- Don't understand the laws and the hydrology of the land.
- Need the ability to make repairs without extensive administrative procedures.
- Education: lack of understanding of who the ditch actually belongs to: the landowner.
- CREP: Creating buffer strip and returning land to it natural state.
- Upstream retention to prevent flood damage. Should be required as a mitigation when repairs increase flow.
- Maintenance

- Buffer strips required for all farmers.
- Education: Old and inadequate ditches cannot receive water being directed to them; downstream effects need to be taken into account. Viewing procedures need to be looked at. Reduce downstream negative effect on the drainage system. Need a system to assess the positive and negative impacts of drainage.
- Maintenance on the county ditches.
- Cannot keep draining and not have some type of flood control. Water quality.
- Education on drainage law: too much interpretation.
- Ditch planning to keep up with the maintenance before maintenance need to be done; helps determine how water quality practices can be done and fit into maintenance. Look for opportunities to address the ditch.
- Education and research: surface inlets, wetland protection, tile spacing and depth; using wetlands for mitigation.
- How can we help farmers and local governments manage the drainage without negatively impacting others.
- Education: the drainage law is workable the way it is.
- Addressing issues through the drainage law or use other channels.
- Education of public officials--appreciate the recent Curt Deter training.
- Drainage is vital to agriculture; consider changes carefully.
- Education
- Water quality and fish and wildlife impacts with regard to drainage and wetlands.
- Drainage systems designed to drain land not retard it; be careful of projects that retard water along drainage systems has maintenance costs related to them.
- Property rights: outside interests commenting on local interests.
- Absentee landowners and their effects on drainage projects.
- Downstream impacts: is faster better. Maybe smarter is better. Hypoxia issue.
- Conservation easements on the land: how does ditch and drainage effect restored wetlands.
- Education: public understanding of the drainage law as it relates to issues. Consistent throughout county.
- Corporate environmental benefits into a drainage project. The question is who pays for it?
- Water quality: deal with pollutants through prevention or treatment. Prevention is much less expensive. Do not bypass the natural treatment of the landscape.
- Current ditch law is fair if it is implemented properly.
- Water quality and erosion control is a priority on a professional level. Some process of dealing with the issues is important on a personal level.
- Water quality issues of urban areas.
- Land taxation structure.
- Keep water on the landscape; look at the natural land structure and think ahead; drain basins already exist.
- Need base-line water quality data to work from in the future.
- Mediation of current drainage issues; absentee landowners, many are women, are removed from the land.
- Lawsuits by environmental groups to define law.
- Taxation without representative
- Abandonment is difficult
- Need to educate flexibility of current law.
- Exacerbates downstream flooding.

- Ditch maintenance.
- Outside agitators, delays projects and increases cost.
- Not all drainage projects benefit land.
- Does not address current technology.
- Unknown to many citizens who may be affected by it.
- Understanding needs, not change.
- Erosion of tax base to maintain ditches, potential problem with change.
- Drainage is vital to economic in the Red River Valley, no change is needed.
- Effects of urbanization, who should pay for drainage?
- Hydrologic impacts - need to study other impacts.
- Ditch law is adequate. Need more up-front education.
- Wetland restoration - how does current law allow for this?
- Current law needs to be followed.
- No effective oversight beyond local level - lack of education.
- Better understanding of restoration/protection of wetlands.
- Ditch abandonment in transition counties.
- Education - authorities don't always understand and take short cuts.
- Education - benefits, urban contributions, clean water, lakes a connection.
- No problems. Education needed in existing law.
- Impoundments since 1990 are difficult.
- Small number of people can get project done, majority may not want.
- Payments of benefits where there are none. Petition process should allow for estimates.
- Lack of criteria/standards to determine drainage benefits.
- Education, agriculture under assault. Current law works.
- Redetermination of benefits. Skewed toward agriculture and doesn't deal with land issues.
- Absentee landowners. May not want to pay for benefits and may not understand history.
- Post-harvest improvement of cropland - how does law regulate impacts to flooding.
- Education needed.
- Education. People don't know the history of drainage.
- New landowners should be educated on ditch taxes.
- Absentee landowners - no connection to land/economic needs of farmers.
- Education - what is downstream water quality impacts.
- Majority of landowners should be required for project - current law allows for.
- Petition allow for storage benefits beyond watershed, flood storage easements.
- Nobody pays assessment without benefits - public roads - no petition - drainage similar for public purpose.
- Conservation landowner rights, some people don't want drainage - lack of flexibility.
- Education - lack of understanding current technology.
- Better documentation of ditch maintenance needed.
- No way to define benefits. No problem with current law.
- Does not address other landuses - wetland restoration, benefits.
- Downstream flooding damages from wetland restorations.
- Water quality/environment impacts not addressed.
- Local control.
- Economic impacts severe for farmers.
- Need to gather information and concerns current systems/downstream impacts.



1998 Drainage Forum  
St. Cloud Civic Center  
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I. UPPER MISSISSIPPI

Priority Issues:

A. Interpretation/education/information:

Education  
Interpretation and application of drainage law.  
Better understanding of laws  
Where do we get help  
Misunderstanding between levels of government and landowners  
Not following proper procedures  
No lead agency  
Lack of understanding of definitions

Strategies:

1. Target the education to drainage authority as a whole. Include government agencies.
2. Start with those that have the permitting authority. Need clear message.
3. Identify a lead state agency.
4. Institutionalize training to get the right people to attend.
5. Put together real life examples that authorities can use when they have similar situations.
6. Need a simplified manual that is easy to use, an outline showing topics and who to go to.
7. Clearinghouse for drainage information, refer landowner to appropriate agency.
8. Make sure people know about existing laws that apply to their project.
9. Trainers for county boards and watershed district managers on how to instruct viewers.

B. Environmental considerations:

Priority Issues:

Downstream flooding impacts  
Downstream water quality impacts  
Impacts on lakes and rivers and recreation  
Who pays for water quality and quantity issues  
Hypoxia and water quality and how that will impact farming  
Managing drainage systems for more than just water quantity  
Build in water quality projects as part of the ditch system (best management practices)  
Lack of incentives to help landowners implement BMPs along ditches



**Strategies:**

1. All aspects must be taken into account--comprehensive approach.
2. Use good science. Find out where gaps in science are and do research there.
3. When permit is required, figure in up front practices to address environmental concerns. Develop guidance for how to do this. Tell project people which environmental concerns agencies will be looking at so they can address them early on.
4. Develop eng./tech standard to ensure uniformity in how projects are reviewed.
5. Enforce the existing laws.
6. Easily accessible source of funding to address environmental concerns.  
Applying for grants is too cumbersome.
7. Standards/guiding principles for viewers.
8. Clearer definitions of connected actions.
9. Something like WCA road replacement program for ditch authorities.
10. Explore more options to fund environmental concerns.

**C. Administrative Procedures:****Priority Issues:**

Abandonment proceedings

Abandonment policies for drainage systems

Old ditches built for different purposes than today, health and welfare purposes no longer appropriate.

Condemnation if need be, provides landowner compensation.

Old ditches have poor records

Financial responsibility is not clear when ditches have changed ownership from private to public

Urban sprawl land use changes

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Timely permitting by state agencies and lack of efficient local processes

Lack of consistent methodology for determining scope and effect of drainage projects.

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2. Get procedural manual out.
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## II. METRO:

### **Priority Issues:**

Environmental consideration integrated into ditch proceedings  
Management and repair of existing systems  
Change and/or modernization in law needed  
Education of LGU officials  
Abandonment  
Balancing upstream and downstream issues  
Financing how and who pays (benefit/cost assessment)

### **Strategies:**

#### **Environmental consideration:**

1. Compensation program needed for loss of landowner's drainage or development rights. Public funds to do this. Pay to pond water on the ditch system. Works especially well for retro-fit projects. Buy out flooded parties.
2. Rewrite ditch laws to encourage 103E.015. The drainage authority shall not approve projects that will increase flooding or diminish water quality downstream.
3. Set goals and standards through the WMOs and WDs.
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5. Maintain created and restored wetlands, storm water ponds to ensure efficiency. Need to cleaned so as not to impact ditch.
6. Broader environmental functional assessment needed. Create a ditch EAW similar to E and V assessment under WCA. *functions & values*
7. Currently only happens on NEW ditch projects. Better guidance on how to do this. Need to get people to the point of specificity, i.e. Scientific Norms. Need better follow through on this item.
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#### **B. Repair and Maintenance**

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**C. Modernization of the law:**

**Priority Issues:**

This area impacts all the other issue areas. ~~The law needs to be written to:~~ 22

**Strategies:**

1. Rewrite Law to:
  - a. Better addresses environmental concerns.
  - b. Reduce red tape.
  - c. ~~Re-Write drainage law for~~ agricultural purposes and urban purposes. One size does not fit all. One for metro areas and one law for out-state.
2. Consideration for consequence downstream.
3. Law should allow locals to customize a comprehensive drainage plan at various LGU levels: county, WD, WMO; based on whoever is the DA.
4. Rewrite the purpose section of the drainage law. Expand to include current public values.

Address both

~~Notes: Current drainage law was written in 1985. Next try did not work because there was not agreement.~~

**III. MINNESOTA RIVER:**

**Priority Issues:**

1. Education of drainage law (~~links to "leave law alone"~~)
2. Pollution and environment
3. Leave law alone
4. Need for more effective repair and maintenance
5. Loss of natural areas ~~to~~ - ~~to help (6) for 2~~
6. Complex permitting procedure
7. Education on science of drainage
8. Inconsistent cost/benefit calculations
9. Research
10. Property rights

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County auditors

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Ditch viewers  
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**Priority Issues:**

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or

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*Change  
charges*



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- Need law that allows current land use and flexibility for new land uses.



- Residential development in rural areas and different views of drainage.
- Scope and effect of drainage on wetlands and need for good technical framework/standard.
- New tiling systems into existing ditch systems. How to better manage additional water. How do we manage requests for more water into old systems. How do we not exceed capacity.
- Ditch law does not deal with downstream impacts of drainage, i.e. lakes. Law not set up to deal with this and administration weak.
- Downstream affects and five determining costs.
- Trying to meet multiple objectives, i.e drainage lake quality issues. Who pays? How to find balance.
- Ditches constructed on private land now land in state or county ownership. Cost issues, management issues.
- More education on law, not necessarily change it.
- Water quality issues. Lakeshore value increasing and provide tax to revenue to county.
- Misunderstanding between levels of government and between landowners.
- Timely permitting by agencies shuffle from agency to agency. Need efficient local process and state process.
- Old ditches that have never been cleaned. How to do it right. Need training manual. They (the county) had to figure it out themselves. Everybody asking the county questions and looking for answers.
- Provide filtering for water in ditches. They flow into lakes and rivers and they want to keep them clean.
- Education
- Social value of water quality projects, have good and bad ditches in terms of water quality. Need more incentives for landowners to help manage water quality on their land.
- Abandonment policy. Some old ditches built for reason not appropriate today. These should be abandoned. Some old ditches built for "Health and Welfare" reasons.
- Procedures to use when ditch records don't exist. If you don't know original line and grade, what do you do?
- Use of condemnation provisions if need be. Compensation provisions to help out landowners who disagree with project.
- Laws only address getting rid of water. Doesn't deal well with other water management issues, i.e. water quality.
- Downed trees in the drainage system; creek blockage. Why: Slowing down the flows.
- Water storage on the landscape in the concept of drainage systems and ditch repairs. Why: Sediment retention.
- Sediment pollution.
- Leave the drainage law alone--it works.
- Politics of water.
- Cost-benefit issues.
- Downstream flooding.
- Drainage system mitigation costs.
- Water quality impacts from drainage.
- Surface water issues/drainage issues. comprehensive approach.
- Education.
- Water management research.



- Economic need for repair and improvement of drainage systems.
- One-stop permitting.
- Erosion of banks.
- Beavers
- Feedlot/septic pollution to ditches.
- Ditch bank erosion.
- Importance of one-acre, small wetlands.
- Lack of understanding of the drainage law.
- Understanding landowner property rights.
- Buffer strips: without the costs of redetermining benefiting of the whole systems which is costly.
- Lack of comprehensive review of the impact on the environment.
- Increased upstream efficiency causing downstream flooding.
- Upland water storage.
- Just "adjustment or enhance" drainage law.
- Newer improvement in ditches: 16.5 foot buffer zone. .
- Informational research on the river as to types of drainage.
- Drainage ditches: general lack of understanding of how they work and the importance of them, both by the landowner and the public.
- Education: too complicated to interpret the drainage law.
- Lack of knowledge of drainage law by some newer county board and county staff.
- Lack of education. Misunderstanding that drainage causes our flooding problems in Minnesota.
- Man-made drainage: are we depleting our aquifers?
- See more impoundment on the end of our drainage systems; need more education. Prevent silt and chemical build up in the water.
- Maintenance and repair of ditch systems is important to farm land.
- Permitting and one-stop shopping for permitting to shorten time frame.
- Lack of working understanding of the statute and the science of drainage at "where the rubber meets the road". Not only understanding drainage but hydrology, soils, geoscience, etc.
- Maintenance
- Redetermination of benefits: some are getting free ride; added a land to system that they are not paying for.
- Sediment load with the eroding ditch banks. Increase in drainage and tiling; being channeled into the system than what it was designed for.
- Maintenance of the drainage system outlet.
- Maintenance of the drainage system: drowned trees.
- Indecisiveness of the state and federal permitting agencies. Get "stonewalled." Have one set of rules to go by--simplify.
- Don't understand the laws and the hydrology of the land.
- Need the ability to make repairs without extensive administrative procedures.
- Education: lack of understanding of who the ditch actually belongs to: the landowner.
- CREP: Creating buffer strip and returning land to its natural state.
- Upstream retention to prevent flood damage. Should be required as a mitigation when repairs increase flow.
- Maintenance



- Buffer strips required for all farmers.
- Education: Old and inadequate ditches cannot receive water being directed to them; downstream effects need to be taken into account. Viewing procedures need to be looked at. Reduce downstream negative effect on the drainage system. Need a system to assess the positive and negative impacts of drainage.
- Maintenance on the county ditches.
- Cannot keep draining and not have some type of flood control. Water quality.
- Education on drainage law: too much interpretation.
- Ditch planning to keep up with the maintenance before maintenance need to be done; helps determine how water quality practices can be done and fit into maintenance. Look for opportunities to address the ditch.
- Education and research: surface inlets, wetland protection, tile spacing and depth; using wetlands for mitigation.
- How can we help farmers and local governments manage the drainage without negatively impacting others.
- Education: the drainage law is workable the way it is.
- Addressing issues through the drainage law or use other channels.
- Education of public officials--appreciate the recent Curt Deter training.
- Drainage is vital to agriculture; consider changes carefully.
- Education
- Water quality and fish and wildlife impacts with regard to drainage and wetlands.
- Drainage systems designed to drain land not retard it; be careful of projects that retard water along drainage systems has maintenance costs related to them.
- Property rights: outside interests commenting on local interests.
- Absentee landowners and their effects on drainage projects.
- Downstream impacts: is faster better. Maybe smarter is better. Hypoxia issue.
- Conservation easements on the land: how does ditch and drainage effect restored wetlands.
- Education: public understanding of the drainage law as it relates to issues. Consistent throughout county.
- Corporate environmental benefits into a drainage project. The question is who pays for it?
- Water quality: deal with pollutants through prevention or treatment. Prevention is much less expensive. Do not bypass the natural treatment of the landscape.
- Current ditch law is fair if it is implemented properly.
- Water quality and erosion control is a priority on a professional level. Some process of dealing with the issues is important on a personal level.
- Water quality issues of urban areas.
- Land taxation structure.
- Keep water on the landscape; look at the natural land structure and think ahead; drain basins already exist.
- Need base-line water quality data to work from in the future.
- Mediation of current drainage issues; absentee landowners, many are women, are removed from the land.
- Lawsuits by environmental groups to define law.
- Taxation without representative
- Abandonment is difficult
- Need to educate flexibility of current law.
- Exacerbates downstream flooding.



- Ditch maintenance.
- Outside agitators, delays projects and increases cost.
- Not all drainage projects benefit land.
- Does not address current technology.
- Unknown to many citizens who may be affected by it.
- Understanding needs, not change.
- Erosion of tax base to maintain ditches, potential problem with change.
- Drainage is vital to economic in the Red River Valley, no change is needed.
- Effects of urbanization, who should pay for drainage?
- Hydrologic impacts - need to study other impacts.
- Ditch law is adequate. Need more up-front education.
- Wetland restoration - how does current law allow for this?
- Current law needs to be followed.
- No effective oversight beyond local level - lack of education.
- Better understanding of restoration/protection of wetlands.
- Ditch abandonment in transition counties.
- Education - authorities don't always understand and take short cuts.
- Education - benefits, urban contributions, clean water, lakes a connection.
- No problems. Education needed in existing law.
- Impoundments since 1990 are difficult.
- Small number of people can get project done, majority may not want.
- Payments of benefits where there are none. Petition process should allow for estimates.
- Lack of criteria/standards to determine drainage benefits.
- Education, agriculture under assault. Current law works.
- Redetermination of benefits. Skewed toward agriculture and doesn't deal with land issues.
- Absentee landowners. May not want to pay for benefits and may not understand history.
- Post-harvest improvement of cropland - how does law regulate impacts to flooding.
- Education needed.
- Education. People don't know the history of drainage.
- New landowners should be educated on ditch taxes.
- Absentee landowners - no connection to land/economic needs of farmers.
- Education - what is downstream water quality impacts.
- Majority of landowners should be required for project - current law allows for.
- Petition allow for storage benefits beyond watershed, flood storage easements.
- Nobody pays assessment without benefits - public roads - no petition - drainage similar for public purpose.
- Conservation landowner rights, some people don't want drainage - lack of flexibility.
- Education - lack of understanding current technology.
- Better documentation of ditch maintenance needed.
- No way to define benefits. No problem with current law.
- Does not address other landuses - wetland restoration, benefits.
- Downstream flooding damages from wetland restorations.
- Water quality/environment impacts not addressed.
- Local control.
- Economic impacts severe for farmers.
- Need to gather information and concerns current systems/downstream impacts.

Harnack reviewed each group along with the facilitators and recorders for the groups. The main audience dispersed into the regional discussion groups.

### **Groups Discuss Key Issues and Priorities**

#### **Reports from each Group**

Williams stated that the intent of the regional discussion groups were not to reach a consensus. He requested the reporters from each group to summarize the primary issues and problems identified by their groups

#### **1. Upper Mississippi**

The recorder reviewed the three categories identified by the group. The categories included: Interpretation/Education/Information, Environmental, and Administrative Concerns.

##### **A) Interpretation/Education/Information**

- 1) Interpretation of the law
- 2) A better understanding of the laws.
- 3) Where can help be obtained.
- 4) A misunderstanding between landowners and authorities.
- 5) Proper procedures are not followed.
- 6) No lead agency.
- 7) Lack of understanding of definitions.

##### **Strategies:**

- a) Target agencies as a whole.
  - ◆ Start with those having permitting authority.
- b) Education for individual and encourage attendance.
- c) Real life examples.
- d) Simplified manuals outlining specific topics.
- e) Clearinghouse for landowner information.
- f) Make sure individuals are aware of existing laws that apply to specific projects.
- g) Training needed for county board and watershed managers regarding instruction for viewers.

##### **B) Environmental**

- 1) Impacts on lakes.
- 2) Downstream impacts.
- 3) Who pays for water quality and quantity issues.
- 4) Hypoxia.
- 5) Managing drainage systems for more than water quantity.
- 6) Water quality as part of the ditch systems.
- 7) Lack of incentives to implement Best Management Practices (BMP's).

Strategies:

- a) All aspects taken into account, any erosion problems
- b) Use good science – find out where gaps are and do research
- c) When a permit required, address environmental concerns, develop guidance
- d) Develop engineering and tech standards to ensure uniformity of how projects are reviewed
- e) Enforce existing laws – may be overlooked or not understood
- f) Easily accessible source of funding to address environmental concerns
- g) Standards/Guiding Principles for viewers – assess how original ditch was dug
- h) Clearer identification of actions – banking program for wetland impacts, something similar for ditch improvement
- i) Explore more options for environmental concerns

C) Administrative Concerns

- 1) Abandonment issues
- 2) Health and welfare issues
- 3) Condemnation if need be provides landowner compensation
- 4) Old ditches have poor records – keep better records from this point on
- 5) Financial Responsibility is not clear when authority changes from public to private
- 6) Urban sprawl – land use changes
- 7) Multi-jurisdiction
- 8) Timely permitting by state agencies
- 9) Lack of understanding of processes
- 10) Lack of consistent methodology for determining scope of drainage projects

Strategies:

- a) Determine what is an “old” ditch.
- b) Keep good ditch records from this point forward.
- c) Empower people to make good decisions when information is lacking.  
Develop a statewide review team.
- d) Develop a procedural manual, similar to a spreadsheet.
- e) Follow the law and established procedures.
- f) Technical support teams to support drainage authorities.
- g) Inventory of drainage systems.
- h) Two-phase petition process after benefits and damages have been determined to determine whether or not to proceed.

2. Metro

The recorder stated that several themes emerged from the discussion of the group. The themes included:

- 1. Abandonment.
- 2. Management and repair of existing ditch systems.
- 3. Change and/or modernization of the drainage law.
- 4. Balancing upstream and downstream issues.



5. Local and governmental issues.
6. Financing and determining which parties are responsible.

The priority issues discussed included environmental, repair and maintenance, and modernization of the law.

1. Environmental

- A) Funding to provide buy-outs.
- B) Changes to the ditch law should not diminish water quality.
- C) Set goals and standards.
- D) Maintenance of created wetlands – water storage or cleaning of sediment.
- E) Broader environmental assessments needed – Ditch EAW similar to functional value assessments.
- F) Better guidance – specificity of scientific issues.
- G) System of third party input – to provide a check of investigations.

2. Repair and Maintenance

- A) Flexibility to look at alternatives.
- B) Develop a comprehensive ditch plan and guidance.
- C) Clarify the law on how to treat unmaintained ditches.
- D) Determined how ditch rights are transferred after abandonment.
- E) Compensation program needed.
- F) Ditch transfer –similar to transportation projects.
- G) Ditch records.

3. Modernization of the law

- A) Amended to address environmental concerns.
- B) Reduce red tape.
- C) Consideration of downstream impacts – To allow for local input to develop a comprehensive drainage plan. This could include a purpose section that should be reviewed.

**3. Red River Valley**

The recorder explained that the issues identified by the group were prioritized.

Primary Priority Items

1. Lawsuits by environmental groups in order to define the law.
2. Taxation without representation.
3. Ditch maintenance.
4. Exacerbating downstream flooding.
5. Understanding needs rather than changing the drainage law.
6. Adequacy of ditch laws.
7. Lack of education.
8. Ditch abandonment.
9. Education.

10. Small number can proceed with a project when, in fact, the majority may not want the project.

Secondary Priority Items

1. Benefits where there are none.
2. Education.
3. The current drainage law is acceptable.
4. Redetermination of benefits.
5. Absentee landowners.
6. Education for new landowners regarding ditch taxes.
7. Education.
8. Downstream water quality impacts.
9. Assisting the flood control situation.
10. Lack of understanding of current technology.
11. Better ditch maintenance.
12. Economic impacts.

Strategies:

- A) Education of environmental groups.
- B) Educate drainage authorities, proper education of the law.
- C) Demonstrate proper application of the drainage law.
- D) Upkeep related to drainage inspectors, continuity of processes.
- E) Education for all those involved in drainage, communicate with stakeholders.
- F) Teach drainage law before polarization and petition process.

Process:

- A) Association of Minnesota Counties (AMC) should have information available to all watershed districts.
- B) Seminar for county attorneys involved with watershed districts.
- C) Open meetings prior to acceptance of project.
- D) Annual training at Minnesota Association of Watershed Districts and AMC conventions.
- E) Violation of law – attorney general could take action, no hierarchy of ditch authority.
- F) Specialized early training.
- G) Coordination of education in order to present a consistent message for all.
- H) Early coordination of environmental groups.

4. **Minnesota River**

The recorder reported that the group listed issues of concern according to priority.

The priority issues included:

1. Education of the drainage law.
2. Pollution/Environment.
3. No changes are needed to the current drainage law.
4. Need for more effective repair and maintenance of ditch systems.

5. Loss of natural areas.
6. Complex permitting procedures.
7. Education of science.
8. Inconsistent calculations.
9. Research property rights.

#### High priority issues of the Minnesota River

1. The target audience should include elected and appointed officials, drainage authorities, and county attorneys.
2. Technical – Include inspectors, staff, contractors, and engineers.
3. Special interests.
4. Conservation/Environmental groups.
5. General – votes, legislators, general public.

#### Method of Education

1. Develop a method of education according the type of audience.
2. Three classes of education: legal, technical, and social.
3. Design and educate a “one-stop” authority to contact for answers.
4. Proactive education process – proactive measures rather than reactive measures.
5. Begin with educating the drainage inspectors.
6. Create an education strategy.

Williams thanked the groups for developing a rich collection of ideas. He stated that the next phase would be assigning the various tasks developed to particular agencies. He observed that some groups determined that current drainage law was not in need of any changes, while other groups determined some modification of the law is necessary. He added that every group agreed that education is needed among individuals involved with drainage. The challenge for BWSR and also for watershed districts will be to determine what current educational opportunities exist, and develop a way to bridge the gaps in the system in order for individuals to become more aware of the effects of drainage.

#### Technical Panel Response

Williams stated that the technical panel was established to discuss how the existing drainage law relates to the problems identified in each group. He introduced the panel participants.

##### Panel:

Tibor Gallo, Attorney General's office  
Loren Harste - Watershed Districts  
Kent Lokkesmoe – DNR/Division of Waters  
Arnie Stone - County Commissioner  
Bill Peterson – Conservation Groups  
Kurt Deter - Rinke-Noonan  
Ron Ringquist – Minnesota Viewer's Association  
Tom Anderson - Douglas County

**Tom Anderson**

Anderson stated that he has been a drainage inspector for 15 years. He commented that a consensus from the participants of the drainage forum is that the current drainage law is a good law. Although minor wording changes may be needed, the context of the law is adequate. He added that education regarding the drainage law is needed and referred to both the public and individuals administering the law. He noted the following points:

- ◆ An organization of Minnesota Association of Drainage Inspectors has been established.
- ◆ Drainage throughout the state has provided the groundwork for the agricultural industry that's in place today.
- ◆ As a drainage inspector, he is a representative of the people he works for.
- ◆ Landowners are concerned with drainage issues, however, no agency seems to be coming forward to assist landowners with their concerns.
- ◆ Landowners are paying for drainage, not storm water, and should agencies be promoting the storm water utility concept, a method for funding should be established.
- ◆ The drainage law does specify that if special interest groups have an issue, they can petition for it. However, they must pay for it and maintain it. He added that should the issue involve a social cost, the state should offer funding assistance due to the benefits received, rather than expecting the landowners to absorb the entire cost.

**Ron Ringquist**

Ringquist stated that he owns an engineering firm that specializes in assessment work. He commented that the participants of the drainage forum agreed that a need exists for education within the drainage process.

He commented with regard to obtaining viewers for a project, that in the past it was virtually impossible to find consistency from one county to the next. He recognized the need to establish the Minnesota Viewer's Association in order to educate those involved in the assessment of drainage benefits. The association has tried to develop a sound methodology based on the existing statutes. He stated that the current law is a good law if it is followed. He added that differences of opinion will always exist, however, the process is outlined in the law.

**Kurt Deter**

Deter stated that he is an attorney in St. Cloud with the law firm of Rinke-Noonan. He noted that he represents many counties and watershed districts throughout the State of Minnesota. He noted that generally when attorneys speak, they are voicing the opinions of their clients. He added that it is unusual to have the opportunity to discuss his opinion.

He discussed his desire to make the laws more effective and work better. He noted that how well the government works, can be measured by how well the laws are implemented. He stated that he has heard conflicting issues regarding drainage, but does not believe there are problems with 103E. The support of changes in drainage law have been from

conflicting interests. He commented that a change in the drainage law would not make it better, but rather polarizes one particular group. He stated that should the law be changed after 100 years, the scenario would be further polarization of interest groups. The worst outcome of a change in the drainage law would be make attorneys rich. The interpretation of the new law would only create another problem.

He added that typically, the local drainage authority is usually dragging behind the law. He explained that should a change be implemented, a gap would occur and cause the local government unit to fall further behind.

He stated that it is possible to provide for agricultural drainage, while addressing downstream impacts and water quality issues. He commented that he has heard individuals quoting the law that is not part of 103E. Often, individuals quote facts from a case that are totally untrue.

He commented that a need exists to bring conflicting interests together in order to accomplish their objectives. He noted that one mistake often made by landowners, it never getting legal advice. He urged members of the audience to have legal counsel available at public hearings in order to avoid future conflicts.

He informed the participants that he has scheduled a training session for 2/04/99. He noted that due to the interest shown at the drainage forum, the session would focus entirely on the drainage law.

#### **Bill Peterson**

Peterson stated that, as an attorney, he started to experience drainage problems in 1969. He noted that he has been referred to as a special interest attorney. He corrected that statement by saying that he represents the public.

He commented that changes in the drainage regulations would be likely in the year 2000. However, currently any changes are in a state of equilibrium. He added that agricultural or rural interests have a strong say in the legislature, but after the year 2000, the equilibrium will change in the legislature and a greater urban influence will be predominant. The changes in the drainage law at that time would involve an increase in statewide supervision. He encouraged the participants to review the aspects of the drainage law. He stated that the drainage law has the authority to deal with certain issues. With regard to upland retention, specific authority is provided for under the law relative to retention. In the future, the legislature may require a greater accountability for the water passed downstream and also regarding what the water contains.

He stated that many counties are providing for routine ditch maintenance requirements. He noted that ditch inspectors are instructed to determine whether a ditch is properly maintained and, if they are not being properly maintained, the county attorney may want



to action taken regarding the ditch system. He added that should ditch systems not be properly maintained, the State of Minnesota would step in and take care of them for you.

He added that once ditches have been petitioned for, there is no turning back. Often when a landowner finds out what the costs of a project are, it is too late and they are responsible for part of the expenses. He suggested a process of easier withdrawal from the petition process regarding the termination of ditch proceedings. This could allow for an easier system of abandonment.

#### **Arnie Stone**

Stone commended BWSR on facilitating an excellent forum on drainage concerns. He stated that throughout the forum, he has observed a consensus among the participants regarding the importance of education relative to the current drainage law.

#### **Kent Lokkesmoe**

Lokkesmoe stated that he has participated in the technical review of drainage projects and has also been involved in litigation with drainage projects. He discussed the two roles of the DNR relative to drainage:

1. Technical review – He stated that this is not used to the extent that it should be. He explained that generally when technical advice is given to the ditch authorities, it is largely ignored.
2. Regulatory role – Typically the regulatory functions are intermingled.

He stated that a significant portion of the discussion today has focused on education. He added that a drainage manual prepared by the state would certainly benefit everyone. He noted that he was encouraged when a panelist referred to the current drainage law has having flexibility. However, he noted that this is not generally observed in application of the drainage law.

He added that another participant suggested that if the drainage law is followed, the decision would essentially be made for you. He agreed that the law does provide some latitude regarding decision making. However, he noted that he disagreed with most of the previous panel with respect to the need for changes in the current drainage law. He suggested that some changes are needed and added that they could be considered a win/win situation. He stated that he has seen the petition process work against landowners in the past and, it has been blatantly unfair in some cases.

He recommended that a type of review mechanism be incorporated into the law in order to be more equitable to all the individuals involved. He noted that a major area of conflict concerns the repair of ditches. He added that he disagreed with the "once a ditch always a ditch" philosophy. He concluded by stating that he would support changes to the drainage law in order to provide better equity for petitioners and landowners along with a balancing of environmental interests.

**Loren Harste**

Harste stated that he was a member of the Minnesota Association of Watershed Districts board. With respect to the current drainage law he commented that, "if it's not broke, don't fix it." He stated that the current law serves the public well and added that from the comments he has heard at the drainage forum, the consensus of the participants supports this concept.

He agreed that the law might need to be carried a little farther regarding education. He encouraged ditch authorities to bring to the forefront of landowner's minds, issues relative to ditch proceedings in order to avoid any surprises. Once a project has been established, there is no mechanism in place to change things after several years have past. He suggested that a better-informed citizenry and ditch authority would avoid problems in the future.

**Tibor Gallo**

Gallo stated that the participants are charged with discussing whether changes are needed in the current drainage law. He added that an issue that needs to be accepted by the group is that environmental considerations are here to stay. He explained that just as individuals believe that drainage is needed, others believe that wetlands must be restored and/or preserved.

He noted that laws passed by the legislature are representative of everyone's view in the state. He referred to 103E.015 which states that, in essence, a repair should give due consideration to the conservation of soil, water, and forest. He discussed a case from 1983 which involved the Supreme Court of Minnesota recognizing that environmental considerations apply in the state. He stated that if environmental consequences are not considered when developing projects, others agencies would come and consider them for you.

He commented on the feeling of individuals involved in drainage as bearing the brunt of environmental concerns in the form of project delays. He stated that these individuals should not feel isolated. He noted that larger cities have had to have overhauls of which all taxpayers pay the price. He added that environmental concerns are everywhere.

He suggested a more consistent statewide policy for determining benefits. He explained that a benefit is the difference in the value of the land before and after the drainage improvement.

**Technical Panel Response**

Williams encouraged responses from the audience regarding the comments made from the panelists.

1. Question: Directed to Tom Anderson. Could you explain what is meant by general maintenance work?

Answer: Should maintenance be requested by landowners, he prefers to bring them in as a group when a major repair is being initiated in order to get input prior to the project.

2. Question: With regard to the concept of education addressed by the group, it would be helpful to have one specific authority within each watershed district that agencies could refer individuals to with questions. A uniform method for issuing permits is needed. It seems as though the process is broken, not the drainage law. Could the panel suggest a method for making the permitting process easier to use for the applicant?

Answer: Deter – He stated that he is often contacted by county commissioners regarding drainage issues. He noted that the drainage authority is designated to act as a neutral bank or referee. Should a landowner want to initiate a project, an informational meeting among the effected landowners should be conducted. He encouraged that information be made available to the landowners prior to the establishment of a petition.

Answer: Ringquist – He suggested the development of a one-day seminar for ditch authorities. He explained that authorities need to be trained so that they can convey uniform information to the public or refer individuals to the appropriate agencies.

Answer: Harste – He commented on the turnover of watershed districts managers. He explained that the education process for a manager is very extensive and once a term is up and a new manager is appointed, the education process starts all over again.

Answer: Peterson – He stated that a resource person for individuals wanting project review would be the Attorney General. The job of the Attorney General is to advise the general public. He noted that when individuals have questions regarding the interpretation of 103E, the Attorney General's office is a resource that is available.

Answer: Deter – He added that if an attorney says it's your decision without providing criteria to adhere to and follow, they must tell you what findings you have to make. He stated that if the law is followed, it's an easy decision to either proceed with the project or not.

3. Question: Directed to attorneys - Relative to the assessment of benefits, if private individuals own property for recreational purposes, what would the law have to say about assessments to such property, for example, a private ditch.

Answer: Deter – He noted that no individual can fill in tile or ditches that are classified a ditch under 103E.

Answer: Tibor – He added that for lands owned by the state, there is a specific statute that requires them to be appraised. He is not sure how this would translate over to privately owned land. He suggested that an appraiser could be contacted.

Answer: Peterson – He added that there is a proposal to extend the immunity from assessments that the state enjoys on its property to land that's been dedicated for preservation.

Answer: Deter – He noted that this type of land should pay less of a benefit. The overflow water from this type of land does go someplace, but it is difficult to assess without a redetermination of benefits.

Answer: Ringquist – Conservation programs are considered regardless of ownership. CRP is a temporary land use, not perpetual. He stated that land use is considered when determining benefits.

4. Question: He heard Gallo explain that assessments should be based on prior determination of benefits. Why should the conservation property not be considered the same thing?

Answer: Ringquist – Management capabilities can be enhanced and are considered an increase in value under a long-term easement.

Answer: Arnosti – A properly trained assessor determines the property value before and after the change with the difference being the assessment amount.

5. Question: Aren't the rates reduced rates only if, and when, there's a redetermination of benefits. For example, if land is purchased in a wildlife area, the landowner still pays the original 1920 assessment.

Answer: Gallo – When a piece of land is purchased that has an assessment, the assessment is assumed by the new landowner.

Statement: Dan Wilkens, Sand Hill River Watershed District – There seems to be confusion regarding the viewing of a project. Projects are viewed when they are constructed. A change would only occur with a redetermination of benefits.

6. Question: Directed to Tibor Gallo – When trying to set standards for viewers, are there any state standards that dictate to viewers?

Answer: Tibor – Yes. There is a section in the drainage law. The statute outlines a certain number of ways to determine assessments. However, the only constitutional way is with the before and after valuation.

7. Question: When land is purchased on a ditch system that has an assessment, could a partial abandonment be requested?

Answer: Peterson – The forces of change versus keeping things the same need to be considered. They are pretty evenly balanced. It could possibly make sense to go one step further by providing for abandonment with the same criteria as abandoning a road.

Answer: Deter – He does not know of a situation where one landowner is stopping abandonment for the entire state.

9. Question: He is under the impression that road authorities provide for maintenance by assessing landowners. Is that correct?

Answer: Peterson – It's done as part of the drainage law.

Answer: Deter – For example, if a ditch was constructed in the 1920's, in order to downsize the culvert, the ditch authority has the responsibility to put the ditch back to it's original condition. He referred to the date of March 25, 1947 as an important date in the drainage law. Certain criteria is specified to be applied before or after this date. He added that some drainage systems pre-dated culverts.

Answer: Ringquist – When discussing road crossings, an appeals case that occurred this year looked at benefits and damages to road authorities as if they were any other individual. He added that if proposed projects causes additional expense to reduce maintenance costs, thereby providing a benefit, these costs are assessed as benefits.

10. Question: Directed to Peterson - He has heard discussion that areas of water retention could be beneficial in the future. As an attorney for the public, would he be in favor of that and, if so, does he feel the public should pay for it.

Answer: Peterson – The downstream impacts would need to be considered. The drainage authority should consider these impacts and build within the project. In the future, downstream impacts will be regulated more than they have been in the past. The balance of inflows and outflows from the system will be reviewed utilizing a "no net loss" kind of approach.

Answer: Deter – He feels that flexibility is needed within agencies. In the past, he has seen that if an issue doesn't exactly fit into an agency program, the agency walks away from the issue. Flexibility is needed in order to make the system work.

Answer: Peterson – It is important to not lose sight of the fact that we are not talking about private property rights. The drainage authority cannot be exercising rights of particular citizens. The projects being discussed are public projects and these projects are required by law to serve the public interests.



11. Question: Directed to Lokkesmoe – When talking about the flood hazard mitigation program, it was designed to develop water retention systems. Are initiatives proposed to be included in next year's budget?

Answer: Lokkesmoe – Historically, the flood hazard mitigation program has been a cost share program. This program includes flood damage reduction projects and acquisition of homes in order to remove them from the flood plain. When looking at alternatives for flood damage reduction techniques, protecting the flood plain through an easement process has been considered. The program is designed to reduce future flood damages and there may be more appropriations in the future.

Statement: Don Arnosti – The program is designed to be a flexible floodwater pilot. Public money is available to support these types of initiatives.

Statement: Lokkesmoe – There are several good projects in need of funding, but when funds are obtained, often specific standards have to be met. Flexibility has not been provided for. Typically these projects are narrowed through the legislative process which limits the flexibility.

12. Question: Can benefits and damages be assessed under a flood damage reduction program according to the raising and lowering of water levels?

Answer: Lokkesmoe – Typically these projects are conducted with the assistance of a local sponsor. The sponsor determines how they will come up with their share and it is usually a locally driven project.

13. Question: To the panel – With regard to environmental concerns, don't all the citizens need to share in the pain?

Answer: Williams – This question seems to be related to water quality and there is no panelist here from the MPCA to address that concern.

### **Wrap-up**

Harnack thanked Roger Williams for facilitating the forum. He also thanked the recorder, reporters, and the panel of experts for their participation as well as the participants for their attendance.

He stated that the next phase would involve where to go from here. The educational concern will be addressed by BWSR. He stated that he observed throughout the forum common ground issues with several similar key issues by various groups.

He concluded by noting that tomorrow's session will include a presentation on preparing a drainage inventory, in particular, how to deal with old ditches and a lack of available information. Also, presentations on drainage economics, long-term flow trends in the Minnesota River, and 404 permit guidelines will be addressed.

**Friday, November 20, 1998**

**Welcome and Introductions**

Harnack welcomed the participants to the final day of the forum. He explained that today's session would differ from yesterdays in that interaction among the presenters and the audience would be encouraged in order to address issues and strategies regarding public drainage in the state.

He explained that funds were secured from the legislature by BWSR in order to develop pilot projects to create drainage inventories within the state. The funds obtained by BWSR were distributed to five local units of government. By establishing the pilot projects, BWSR hopes to obtain a better idea of the costs involved in preparing a statewide inventory.

**"McLeod County Drainage Inventory" – Dr. Linda Tomaselli**

Dr. Tomaselli stated that she is employed with OSM and Associates who assisted in developing the drainage inventory for McLeod County. She stated that in January of 1996, the county engineer requested assistance with ditch maps. At that time, the county had no GIS capabilities or high-tech computers. Some of the ditch maps dated back to the year 1916. Examples of both good and bad ditch maps were distributed to group.

She noted that in McLeod County, the county commissioners are the ditch inspectors. It seemed as though whenever there was an election, the pertinent ditch information was only documented in the commissioner's head, rather than down on paper. The county was in need of a better way of keeping track of their ditch maps. Approximately 70 ditch systems existed in the county. In this particular county, there are many more miles of county ditches compared to county roads. The drainage inventory project was developed as a solution to a problem by utilizing a GIS system. The project required a consensus among the various departments within the county. The funds obtained from BWSR were a source of grant funds, however, a local match was needed as well to complete the inventory. The county determined that an assessment would be added to property owners owning land within the assessment area.

Organization was needed in one central place where it could be stored more securely. The ditch maps were scanned to create an electronic ditch map. Next, Digital Raster Graphics (DRG's) were used to convert the maps into a real world system.

Dr. Tomaselli conducted a computer demonstration of the different steps required in completing an electronic ditch map. She used the County Ditch #5 as an example. She stated that this map included hand written names and acreage's and was, therefore, not very accurate. She also used County Ditch #3 as an example of Digital Ortho Photo Quads (DOQ's) that were used to create ortho photos. She stated that these types of photos are available throughout the State of Minnesota.

She stated that when the ditches have been scanned and referenced to the DOQ's, the next step requires obtaining a Topological Integrated Geographic Encoding and Reference System (TIGER) file from the U.S. Census Bureau. She explained that the TIGER file is utilized rather than maps from MnDOT since they have attributes of municipalities along with coding already included in the file. She added that the TIGER file is a base map produced by the U.S. Census Bureau for all 3,000 counties in the country.

She noted that additional features were linked to the TIGER file which included a text file, which stores information regarding maintenance records. The watershed boundaries were also digitized which defined what areas landowners have within the ditch systems. This boundary is beneficial in determining which landowner contributes to a system and which does not.

County Ditch #54 was reviewed. She referred to the original maps depicting wetlands and noted that wherever these were found they were digitized. The landowner names were also captured for historical reference. Roads were included on the maps to relate the ditches to the public drainage systems.

Next, a quarter by quarter base map was developed for the county. In cases where Global Positioning Systems (GPS) points did not exist, the DOQ's were utilized. She noted that the DOQ's were found to be very desirable. She added that locating the GPS points in McLeod County were found exactly where they were expected to be as noted by the DOQ. She stated that the DOQ seemed to be more accurate than the USGS claimed them to be.

County Ditch #3 was developed using parcel designation in the background. The database captured the last name, first name, and overlaid quarter/quarter sections. She explained that this was a countywide synopsis. She added that when the county auditor wants to search for a particular ditch, searches could be conducted ditch by ditch.

**Question** – McLeod County is such a large county. Due to the number of ditches, are changes made only when modifications occur?

**Response** (Dr. Tomaselli) – As changes are received, they can be added to the map.

**Question** – What does this type of a project cost?

**Response** (Dr. Tomaselli) – This project, that was developed by processing DOQ's, cost approximately \$45,000 to complete. Processing DOQ's requires a considerable amount of time. The DOQ's typically come in 256 levels of gray, which were converted to 16 levels of gray in order to save time. Converting the regular DOQ's to mini DOQ's, changed the time requirement from 30 seconds to 1 second.

**Question** – How has this changed the way of record keeping or scheduled maintenance?

**Response** (Dr. Tomaselli) – Although the maps have only been utilized for a six-month period, the ability to access records has been much easier than in the past. Gradually,

data is being added to the maintenance records which will allow for a more systematic way of keeping track.

**Question** – Could you be more specific about the local cost share needed. Was it a 50/50 match?

**Response** (Dr. Tomaselli) – The cost share was obtained by determining the assessment area. Once the area was determined, the calculated cost was estimated to be approximately \$1.40 per acre. She added that this was a one-time assessment with public hearings conducted.

**Question** – Is photography available to locate tile lines?

**Response** (Dr. Tomaselli) – The outline of the tile line can usually be discerned on the map but not specifically can the tile lines be located.

**Question** – When starting from scratch, can other county administrative functions be added?

**Response** (Dr. Tomaselli) – Although several individuals in the county were well aware of the GIS capabilities, the county commissioners needed to be convinced that the drainage inventory would be a solution to specific problems. Once the inventory was developed, it would serve as a base to build on for other functions.

**Question** – In order to continue the project, would it make sense to follow the preliminary engineer's report back and then continue forward?

**Response** (Dr. Tomaselli) – It's up to the county how to proceed with the inventory, however, it would seem to make sense.

**Question** – If a cut sheet was needed for a particular ditch, could it be located?

**Response** (Dr. Tomaselli) – Yes, it would just involve another step in the process. With several ditch systems located in the county, many overlapped and were tried to merge together.

**Question** – Does the program automatically scale?

**Response** (Dr. Tomaselli) – Yes. The program zooms in to the ditch file and becomes a function of the size of the map. For example, if current parcels were digitized and the current landowners names were known, a search could be conducted by name.

She noted that another function of the drainage inventory is to develop "hot links" which would cross-reference information regarding a particular ditch. If databases were developed for a particular ditch, any piece of the active ditch could be "clicked" on to access information on that particular location. A text file could be developed for maintenance records.

She added that in addition to DOQ's, contours and slopes of most of the ditches were provided on the quad sheets. She stated that McLeod County has also digitized their soils and uses this information in conjunction with the soils map.

In summary, she stated that the McLeod County drainage inventory depicts boundaries, quarter/quarter sections, TIGER file, road networks, watershed boundaries, and wetlands.

**Question** – It the ditch inventory compatible with other governmental units such as the DNR?

**Response** (Dr. Tomaselli) – Yes. The DNR National Wetlands maps are compatible with the ditch inventory maps.

**Question** – With regard to accessibility of information, could this be put on the Internet?

**Response** (Dr. Tomaselli) – It would be technically possible, however, it would be at the county's discretion.

**Question** – What is the cost per square mile of completing this project?

**Response** (Dr. Tomaselli) – In order to calculate a per township cost, the \$45,000 cost of the project could be divided by the 14 townships located in the county. She added that another use of the TIGER file would be to develop a road network for snow removal routing.

**Question** – Could the method for processing the DOQ's be a part of the ditch proceedings?

**Response** (Dr. Tomaselli) – No. It would be too complicated.

**Question** – Can USGS maps be utilized for a ditch inventory?

**Response** (Dr. Tomaselli) – The USGS maps are scanned images, and with the available contours are an excellent reference. However, even though the DOQ's are great pictures, they still need to be digitized in order to be useful.

**Question** – Could you quantify the error factor. It seems that a GPS is usually within + or - 33 feet for the boundary lines.

**Response** (Dr. Tomaselli) – GPS points are captured by satellites and are highly accurate. The drainage inventories are not based on satellites, but rather national map accuracy standards. The county is gradually expanding the points which will take a number of years to complete.

**Question** – Combine yield maps are usually within 3-feet when a GIS is utilized. Why is this system so much further away?

**Response** (Dr. Tomaselli) – The information has been provided by the USGS, but has proved to be more accurate than originally estimated.

#### **"Douglas County Drainage Inventory"** – Marilyn Bayerl and Dave Marshall

Bayerl discussed the background leading up to the decision to conduct the drainage inventory. She explained that Douglas County is comprised of 18 ditches spanning approximately 200 miles. A fly-over was conducted in the spring of 1996, and base maps were utilized which depicted driveways, centerlines, roads, and woods. The maps



utilized were proved to be within + or - 6 feet. A task force had been developed to assess the need for a drainage inventory when the grant was applied for to BWSR. The project was funded in part by cost share hours and also money allocated in the budget.

She stated the goals of the drainage inventory included:

1. Take files dispersed throughout the county and consolidate into one network
2. Develop a 911 network.
3. Utilize the information within other departments in the county.

She added that the drainage inventory far exceeded the goals established by the task force. She introduced Dave Marshall who conducted the digitizing of the maps.

Marshall explained that when he started on the project, the county had completed the base map which included a network of the roads, waterways, outlines of lakes, and driveways. The project began by determining which parcels were assessed. Once the parcels were determined they were highlighted and digitized using aerial photos.

When an approximation of parcel boundaries was developed, a database was created that included the parcel ID #. The ID# was linked to the county database which showed the parcels and their attributes. The aerial photos were also used to digitize the ditches.

Watershed boundaries were also designated with each ditch being labeled. The next step involved adding all the information regarding a ditch in the database utilizing a "hot link" in order to access all the information on the ditch. A runoff curve number could also be developed for a watershed by digitizing the soils from the soil sheets. The soil sheets were scanned to semi-automatically traced lines which created a GIS database. The runoff curves were classified by the soil groups and all the information from the soil survey was linked to the database. The land use purchased from LIMIC was used to find out what kind of land use existed in 1989 when the maps were made. This information was combined with the National Wetlands Inventory and the SCS method for calculating runoff curve numbers was utilized. Runoff curve numbers were developed for each parcel in order to determine how much water each parcel contributes to the watershed.

The next step was to create a database for each parcel ID# including the number of acres owned. Multiplying the # of acres by the curve number created a product which denoted the curve number for each parcel showing the percentage of runoff for each parcel. This method of calculation would be beneficial in determining a storm water utility fee.

**Question** – Does McLeod County have the capability to calculate the runoff curve numbers?

**Response** (Dr. Tomaselli) – No, not as of yet. No existing parcels are included in the drainage inventory, only historical parcels.

Marshall explained that all roads in the county were identified and labeled by the computer. With each road identified in the database, county surveyors developed a rural

addressing system. Other features developed were the first responder zones and fire and ambulance zones.

**Question** – How does the map handle non-contiguous acres? Does it compensate for land elsewhere?

**Response** (Marshall) – All the parcels on the map are based on parcel ID numbers. Some are not connected and others come up with two sets of data in the base map. Some work is still needed to be done in this area.

Marshall explained that in order to determine CRP acreage, information was obtained from the Department of Agriculture's website. He added that all the data received from outside sources was projected into a county system.

**Question** – Did the data on CRP land include the bid information?

**Response** (Marshall) – All the information included on the Department of Agriculture's website was included in the database. A "hot link" could be established in order to link additional data. The bid information could possibly be obtained from each field office and added to the database.

**Question** – Can the information be overlaid on the parcel data?

**Response** (Marshall) – Yes. The parcels of CRP that would expire in certain years could be identified and linked to the county database.

**Question** – What other kind of ditch information is in the file?

**Response** (Marshall) – Line drawings comprised of a database are broken down into each segment of the ditch. Also, watershed boundaries could be designated in order to locate the areas where the water could break out.

**Question** – The upcoming legislative session will introduce legislation regarding the Data Privacy Act. Should the county be concerned regarding the issue of data collection within a county?

**Response** (Marshall) – The information pulled off of the county database has been limited to only the names and addresses of landowners. It is an issue, and each county is determining what information should be made available to the public.

**Question** – Relative to the information available in various county offices, the issue of which information is public and which information is private is a huge concern. Is there a way to protect this information?

**Response** (Marshall) – The information collected for the CRP land was downloaded from the Internet. When the databases were accessed, the parcel ID numbers, types, farm number, tract & field numbers, contract expiration date, number of acres, and a description of where the land was located was all made available.

**Question** – Was the cost the land was bid in at included?

**Response** (Marshall) – He was not sure if that was included. However, the parcel maps could be used to locate the landowner name and parcel ID number and this information could be used to reference the bid price in the county records.

**Question** – When linking to the county database, as the parcels split and new owners develop, are these a concern for the database?

**Response** (Marshall) – The computer is not linked to the county database. The information is downloaded. The information is only updated on the county database and then needs to be relayed into the system so changes can be made on the maps.

**Question** – In Douglas County, the drainage inventories are not working directly with the county database?

**Response** (Marshall) – No. But at some point they may have a direct link to the county database.

**Question** – What was the cost of developing the drainage inventory in Douglas County?

**Response** (Bayerl) – The total cost of the project was approximately \$60,000, of which \$27,360 was the grant obtained through BWSR.

**Question** – Is the Y2K issue a concern for the drainage inventory?

**Response** (Marshall) – He is not aware of any particular concerns, however, the county is conducting research into this issue.

**Question** – When calculating the runoff curves, is it tied to the water holding capacity based on soil maps?

**Response** (Marshall) – Yes. The SCS method of using the hydrologic classification of the soil and land use was utilized.

**Question** – Were maps developed for all the ditch systems?

**Response** (Marshall) – Yes. The original maps in the file were used in conjunction with the aerial photos and digitized to create the ditch maps.

**Question** – What is the application of the runoff curve number?

**Response** (Marshall) – It is linked to the development of a storm water utility fee.

**Question** – Are engineer's maps utilized?

**Response** (Marshall) – They could be used, however, some are so old that they were drawn on by hand.

**Question** – It seems that if engineer's original maps are used, and the county tile, size and cuts are known, this information should be included on the maps.

**Response** (Marshall) – Yes. That would be the next step. The legal descriptions of the ditches could be added to the database.

**Question** – Has a feedlot inventory been developed?

**Response** (Marshall) – No, not yet.

**Question** – With regard to the development of a drainage inventory through the grant process, do you believe a committee should be established to assess the procedures and to develop a standardization of the process?

**Response** (Harnack) – The intent of the pilot project was to determine what could be accomplished for a certain dollar amount. This information could then be gleaned to determine the standards needed to conduct a statewide inventory.

**Question** – How soon would this information be made available?

**Response** (Harnack) – Five pilot projects are currently being conducted. He is not sure if a date of completion has been designated for those five. He stated that an interagency funding initiative should be developed in order to continue a statewide ditch inventory.

**“Drainage Economics”** – Steve Taff, University of Minnesota

Taff stated that economics could be discussed relative to the farming. The issue of whether or not to drain. Drainage does pay at the farm level for most farmers. Poorly drained soil does not pay. He asserted that farmer's have a strong economic incentive to drain. But instead of discussing the farmer's incentive to drain, he noted that he would discuss the economics of managing drainage. Once the water leaves the field, what should be done with it? He added that he would focus on decisions made by county commissioners as the drainage authority and also on the elements of current drainage law.

**Current Drainage Law**

1. Boundaries – A state oversight in managing the system.
2. County /Drainage authority control – This is not on a county basis which is very significant.
  - A) Physical
    1. Construction
    2. Repair/Improvement
    3. Abandonment
  - B) Financial
    1. Cost allocation – Determination of benefits.

The economics of benefits is not the same as when viewer's examine the particulars of a ditch.

The system of governance includes the following:

1. Physical system – Proposed to fail due to huge new loads of tile.
2. Institutional system – Proposed to fail because of:
  - a) New local preference
  - b) New downstream demands

He stated that several landowners living the county are not farmers. And also, downstream landowners believe that upstream activities affect them. The effects of drainage are challenging the system of management.

He explained that the solution involves conducting a Cost Benefit Analysis (CBA). The CBA would:

1. Increase capacity.
2. Decrease system impacts.

County commissioners would make the determination by conducting a CBA. The CBA provides for the following:

1. A procedure to itemize impacts.
2. A dollar volume is assigned to impacts.
3. Decisions would be made more "transparent."
4. A comparison among alternatives.

To some extent, the CBA is already being done. The concept is built into the way the drainage systems are currently managed. The CBA should be applied at particular stages in order to avoid system failure.

The science of economics states that if a concept can be applied to only two items, it can be applied to several. A drainage improvement project should include the following analysis:

1. District economic test
2. District environmental test
3. District final test

The viewers review items "A" and "B" and assign benefits. A cost benefit analysis is conducted at the farm level. Other off-farm effects should be measured as well. The District Economic Test should be conducted. Should the benefits exceed the costs, the project would move forward. For example:

| <u>Farm A</u> | <u>Farm B</u> |           |
|---------------|---------------|-----------|
| +20           | +30           |           |
| <u>- 15</u>   | <u>-5</u>     |           |
| <u>+5</u>     | <u>+25</u>    | Farm Test |

The result of the District Economic Test is +30. This test would show that should the project be implemented, the financial consequences would be positive.

Next the District Environmental Test should be conducted.

|             |           |
|-------------|-----------|
| +10         |           |
| <u>- 30</u> |           |
| <u>- 20</u> | Fails DET |



The results of the two previous tests need to be netted in order to determine the final outcome.  $(+25) + (-20) = +5$ . Passing. The project should proceed.

This analysis does not happen in the real world. The current procedures provide for methods of evaluating on a district by district basis. For example:

| <u>District 1</u> | <u>District 2</u> |            |
|-------------------|-------------------|------------|
| +30               | +20               |            |
| <u>- 20</u>       | <u>+10</u>        |            |
| <u>+10</u>        | <u>+30</u>        | Result +40 |

Next, the area impacts are analyzed.

|             |      |
|-------------|------|
| +20         |      |
| <u>- 70</u> |      |
| <u>- 50</u> | Fail |

The results of the two previous tests are netted to determine the final outcome.  $(+40) + (-50) = -10$ . Fail. The combined projects failed the test and they should not proceed. Even though each district test was passed, the downstream impacts at the district level were not acceptable.

What if only the Project #2 was implemented? If this project were done on its own, it would pass the district test and pass the county test when not combined with Project #1. Why should Project #2 be implemented? Because under the current law, that choice does not exist. This analysis would require that all projects are reviewed together to assess their cumulative impacts. Under the current law, ditch authorities are forced to handle issues as they come in the door.

A full cost benefit cost analysis for the entire county could be conducted. However, there are problems in making this analysis. Where are the numbers arrived at to determine the area or downstream impacts? And secondly, if the analysis says to close off Ditch #1, how could the ditch authority do that? This would create a plumbing system with no valves. The current law does not provide for closing off a ditch.

What good is the full CBA analysis?

1. Physical
  - A) Monitoring – State monitoring of flow structures is not done by installing dams, weirs, or pipes to physically manage the flow of water.
  - B) Control structures.
2. Institutional controls
  - A) Monitoring
  - B) Change the rules
    1. Regulation
    2. Markets

There is no ability under the current law to implement physical or institutional controls. If there was, systems could be designed to control and manage that would increase the public well being. This would involve a system of regulation or of marketed permits. These permits would essentially be pieces of paper that would allow the right to drain their land and if they want, or sell the permit to someone else to allow them to drain on your property.

The CBA is the best way to:

1. Move from drainage management to water management.
2. Have an open and useable decision making process.
3. Deal with the inevitable collapse of current ditch law.

This system would allow for the argument of numbers, rather than the typical debates over the ditch law. The numbers not agreed on could be "zoomed" in on and a similar approach to water quality standards could be applied.

This system provides for the management of water, rather than the management of drainage. It forces individual to address the real problems.

**Question** – Is it assumed the analysis is applicable to building roads to provide for feedlots and analyzing the effects of coming into one main feeder system?

**Response** (Taff) – The analysis is an accounting to identify impacts and determine numbers. It can be applied to any decision.

**Question** – When you refer to "we" are better off when conducting the CBA analysis, who are you referring to?

**Response** (Taff) – Today he is sitting in the seat of the county commissioner acting for the good of the county. He could also sit in the Governor's seat if the drainage boundaries were expanded. Whatever jurisdiction is critical, each situation could be tailored to address the downstream impacts.

**Question** – Who would decide where the boundary is? The county or state?

**Response** (Taff) – The person making the decision determines the boundary. If sitting the seat of county commissioner, you are not paid to worry about other counties. The CBA analysis is a provincial type of analysis.

**Question** – The presentation was very interesting and easily understood. However, once this method is put into practice, could Taff come and chair the meeting?

**Response** (Taff) – He noted that the analysis is easy when only have two farms to analyze. The difficulty comes in not with finding the numbers, but in finding the institutions to implement the outcome.

**Question** – The State gave the drainage authority the power to establish drainage. When talking about turning on and shutting off ditches, who would be responsible for compensating the landowner?

**Response (Taff)** – An agreed upon set of property rights would need to be developed. The CBA analysis is a market system that hands out pieces of paper that have value. Ditch #2 would buy rights from Ditch #1 in order to drain.

**Question** – Taff certainly presents an interesting academic argument. However, he is not convinced you can assign those numbers. The value of the numbers change according to where the boundary is designated. How can an accurate assessment of numbers be developed?

**Response (Taff)** – The question of scope is the underlying concern. It is critical to talk about for whom this number is the right number. This practice is, in effect, already occurring. The number is low to the downstream landowners, but the methods for determining the numbers can be argued.

**Question** – The number changes when talking about county, state, and federal levels. As changes move up the scale, how does this reduce conflict?

**Response (Taff)** – The boundary depends on which level of government you are talking about. The state decision-maker would use a particular number. This is not conflict reduction, but rather conflict management. Conflict is all right if arguing about the right thing. It tends to manage and channel the argument.

**Question** – Would there be a value in drawing a dotted line around the entire planet?

**Response (Taff)** – There would be a value but no structured decision line. In a sense, a decision made in a county would effect the state of Minnesota. The numbers change depending on who the “we” is.

**Question** – You have not convinced me that we shouldn’t change the current drainage law?

**Response (Taff)** – This argument could go either way. To either change the current law, or not to.

**Question** – Could this concept change the typical methods of farming? A “water” farmer could see his water?

**Response (Taff)** – To sell water would, in a sense, fit into his market scheme. In many states, water is not a commodity. To assume that water can’t be taken as a possession is not true.

**Question** – When discussing agricultural drainage and the costs of downstream effects, is the same thing going on in developmental community? Are they being limited?

**Response (Taff)** – In the metro area, water management is a larger cost of suburban development. Water comes off too fast and people want to slow it down. It’s an issue of water management but not of agricultural water management.

**"Long Term Flow Trends in the Minnesota River"** – Dave Mulla, University of Minnesota

Harnack introduced Dave Mulla, University of Minnesota, who would present a perspective on how the flow regimes have been modified in the Minnesota River and why these changes have occurred.

Mulla explained that his presentation would focus on the Minnesota River basin. He stated that this basin is comprised of 12 major watersheds.

He discussed some background information and data. He noted that the water varies across the basin, ranging from 22 in the west to 32 inches in the east. In regard to the relationship between flow and drainage, 40% of the basin is poorly drained with certain areas more prone to drainage problems than others.

He stated that water quality is concern in this basin. Nitrogen is transported through the tile systems, with three sources identified in rural areas:

1. Fertilizers
2. Manures
3. Organic matter

Field measurements were taken in the basin in order to obtain data to study the relationship between tile drainage and flow. The data revealed a strong relationship to each other.

The rate of fertilizer application was also analyzed, in particular, dry versus wet years. When excessive rates of nitrogen fertilizer were applied, over half was lost through the tile systems during the wet years.

The impacts of drain spacing on tile drain flow were also studied. It was determined that as the amount of water transported from the systems decreases, tremendous impacts on crop yields would result. The study revealed that drainage does have a tremendous impact on crop yield.

The impact of drain depth on flow was analyzed. The opportunity to adjust the systems was tested. The analysis determined that the impact on the depth of crop yields was not nearly as significant as impact of drain spacing.

The Le Sueur River watershed was also analyzed for comparative purposes. Nitrogen values were studied when going from small to large scales. The transport mechanism revealed that as nitrogen was transported downstream, it was lost in the system. Taking land out of production was ruled out as a solution to the loss mechanism.

Drainage was analyzed relative to water quality, as well as the relationship between flooding and drainage.

Mulla reviewed the Palmer Drought Severity Index which depicts runoff, soil storage, and drainage. It is an indication of how wet or dry a particular year is.

Climatic factors:

1. Snowfall amount and water content.
2. Precipitation amount and timing.
3. Antecedent and soil moisture.
4. Frost depth and soil permeability.
5. Temperature.
6. Runoff.

Non-Climatic factors:

1. Size and shape of watershed.
2. Watershed slope and stream gradient.
3. Storage of water.

Artificial drainage was studied. The study revealed that 40% of the basin is in its natural state. This poses severe limitations to crop production due to poorly drained soils.

A graph was reviewed depicting the median values for minimum and maximum flows for the months of May, June, and July. The graph showed how the climatic index varied over time. It was up in wet years and down in dry years. The graph also depicted a correlation between the climatic index and the flow. Annual variations of approximately 60-70% were explained by climatic variability. The change in the flow responded to changes in the climate.

The trends in flow were reviewed. An average annual increase occurred during the month of May. The median flows per month were 1/100, and in June an average annual increase in 80 occurred. The months of July and August had an increase as well but not as large as in June. These numbers could be multiplied by nine in order to obtain the numbers for a 90-year period.

Mulla discussed the non-climatic effects. These effects were only significant during the months of May and June. He stated that the increase in flows in the Minnesota River were primarily due to climatic factors. However, there was some increase in flow due to non-climatic factors.

The trend in stream flow over a 10-year moving average was analyzed. The flow was determined to be on the rising end of the trend. The climatic effects were removed in order to separate the two influences to show the effects of each one independently.

Mulla reviewed the cyclic patterns of flooding. He stated that the most severe flood on record occurred in 1880. He commented that this flood proved that severe floods could occur without any significant human alteration to the Minnesota River.



The peak flow history was analyzed. History showed that severe flooding occurred prior to any drainage to the Minnesota River basin. These floods were the result of rapid soil melt with a combination of frozen soils. The less severe flooding was attributed to more non-climatic factors.

The timing of the peak increases were studied from the early 1900's to the present, with the analysis showing that water used to move off at a much quicker rate. Strong evidence was obtained supporting that the monthly stream flow was largely driven by a wetter climate.

The effects of changes in cropping systems and their influence on flows in the Minnesota River were discussed. A graph was reviewed that revealed approximately 76% of the rain that falls is taking out by the grass while 23% runs off.

Catastrophic floods were determined to be the result of climatic factors. Such a significant amount of water was present and it had to go somewhere. This type of flooding could not be reduced by restoring wetlands or constructing storage reservoirs on the landscape. Some local impact may be recognized, but no significant downstream impacts would be recognized. There has been no evidence to support that agricultural drainage has been an influence on catastrophic floods like the one experienced in 1997.

**Question** – What was the highest rate of nitrogen application found?

**Response** (Mulla) – Approximately 220 lbs. per acre. However, not many farmers apply nitrogen at that rate.

**Question** – Have historic floods had a higher peak with a shorter duration than the more recent ones?

**Response** (Mulla) – An article was published by Richard Skags which analyzed sub-surface tile drainage systems. The article explained that as water falls on the landscape and goes through the soil, it removes water and creates a storage base for new water. The sub-surface tile drain systems were shown to delay the onset of water flowing into the streams.

**Question** – Was a conclusion reached that reservoir storage wouldn't effect catastrophic floods?

**Response** (Mulla) – In referring to catastrophic floods, there is so much water present that not enough structures could be built to hold the water on the landscape.

**Question** – Is there a way to do additional research regarding artificial drainage to move water? If this drainage creates poorly drained soils somewhere else, shouldn't downstream impacts be better understand?

**Response** (Mulla) – Yes. The University of Minnesota is conducting research on alternative tile systems. This study will reveal how much water is stored on the landscape when a big storm is recognized when tiling of 6 inches is used as opposed to 8 inches. He referred to a publication on agricultural drainage which summarizes drainage from all over the Midwest.

**Statement** – An article based on a study conducted at Ohio State University was published that addressed the relationship of nitrogen to hypoxia. With regard to the Minnesota River, it was found that with regard to hypoxia (a combination of nitrogen and phosphorus), phosphorus was the largest problem. The study determined that the pig's eye plant could reduce phosphorus from 2.63 down to .65 million lbs. per year. The reduction was considered quite significant.

**"404 Permit Guidelines for Drainage"** – U.S. Army Corps of Engineers

Harnack explained that the next presentation would address how the U.S. Army Corps of Engineers (USACE) perceives the effect of 404 permit guidelines on drainage.

The presenter, Mick \_\_\_\_\_, stated that he would be standing in for Ben Wopat.

**Regulatory Updates**

1. USACE 404 nationwide permits.
2. Tulloch (excavation) rule.
3. CWA Sec. 404 exemption for ditch maintenance projects.

**GP/LOP-98 General Permit(GP) - Letter of Permission(LOP):**

1. Replaced all 404 NWP's in Minnesota.
  - a) GP – Process for minor activities, no application needed.
  - b) LOP – Process for all activities with up to a 2 acre-impact, application required.

**General Rules**

1. No individual permits needed for anything less than 2 acres. There are exceptions for calcareous fens, and federally classified "wild and scenic" rivers.
2. USACE internal review only if impacts are less than 10,000 square feet.

**Wetland Conservation Act(WCA) LOP:**

1. Eligible projects all are partly regulated under WCA, with up to 2 acres of total impact. A USACE decision is determined within 30 days.

**GP/LOP - Two authorization criteria:**

1. Satisfy the federal 404 guidelines.
2. Not contrary to the public interest.

The one feature that would be eliminated would be the 401 certification requirement from the Minnesota Pollution Control Agency (MPCA).

**Compensatory Mitigation**

1. Based on WCA de minimus thresholds.
2. 400 sq. ft. in shoreland area.

3. 2,000 sq. ft. in a less than 50% of the county.
4. 5,000 sq. ft in a 50-80% of the county.
5. 10,000 sq. ft. in a greater than 80% of the county.

A matrix that represented the proposal was reviewed. The final proposal available for public comment would be available in December of 1998 or early January of 1999.

#### Tulloch Rule Update

AKA Excavation Rule of 9/93, required a 404 permit for excavating in water/wetland areas. This rule is not in effect today but the USACE is considering whether or not to appeal this rule.

#### CWA Exemptions for Ditch Maintenance/New information:

1. St. Paul District – Proposed a revised policy for use by the USACE MV division.
2. Summary – An existing drainage ditch that still functions can be returned to a previous condition.
3. If the ditch drained something before it can drain it again, but not for a “new” use.
4. Ditch sides can be made less “steep.”
5. No adjacent land use criteria used.
6. Work cannot drain previously undrained wetlands.

He emphasized that this was only a proposed policy. The policy is controversial since it has been interpreted to imply that “no wetland at all can be drained under the exemption.” He did not agree with that statement since if it were true, there would not be a need for the exemption.

#### Best Sources for up-to-date USACE information:

1. Internet
2. [www.mvp.usace.army.mil](http://www.mvp.usace.army.mil)
  - a) Public notices
  - b) Staff listings by county
  - c) Links to HQ regulatory programs

**Question** – Would a dredge disposal be regulated where it is normally done now?

**Response** – That would be an exemption.

**Question** – What is going to happen to GP 17?

**Response** – The proposal is to revoke it.

**Question** – With drainage records being quite old, how can scope be determined?

**Response** – Scope could be obtained from soil borings if necessary. Also, records and culvert elevations have been used.

**Question** – Does the USACE have jurisdiction over new drainage projects that do not involve wetlands?

**Response** – No. Drainage ditches dug across the upland are not subject to USACE jurisdiction.

**Question** – How are county tiles lines treated?

**Response** – They are treated like any other project. The exemption would only cover ditches. If the tile line were being replaced, it may require a permit in a wetland area.

**Wrap-up**

In closing, Harnack noted his appreciation to the participants for attending the drainage forum. He stated that once the forum discussions have been summarized, copies would be distributed to the participants.

1998 Drainage Forum  
St. Cloud, 18 Nov 1998

Metro Area Issue Identification and Discussion  
Facillitator: Beth Carlson  
Recorders: Phil Belfiori and Doug Snyder

Participants were asked to identify 3 key issues / problems related to the current drainage law?

✓ I1. Easier Abandonment or Conversion

Why? Change of Landuse-urbanization. Ditch Functions Are Not Maintained.

✓ I2. Maintenance

✓ Why? Red Tape. Obstructions in the Waterways

I3. Lack of Renovation of Ditches

Why? Not Maintained. Can Not Get Them Cleaned out.  
Conversion to Wetland, Lack of Maintenance and Not Concerned with Downstream Effects

I4. Inadequat Balance with Need to Protect Wetlands

Why? Biased to Drainage

I5. Conflicts with the Wca

Why?

I6. Down Stream Flooding

Why? Increased Flooding Downstreaan Due to Ditch

I7. Ditch Repair

Why? Urban Rural Mix Makes it Diffucult to Get Done

I8. Abandonment

215-0025



Why? Draining Wetland When Cleaning Ditches. Not Good Reasons to Clean Always

I9. Balance up vs Down-stream Issues

Why? It Always Comes Back to this

I10. Education of Drainage Law

Why? Need to Better Understand Historically Geared to Ag Issues

I11. Abandment

Why? Make Easier to Abandon in the Metro Area Due to Change in Land Use.

I12. Lack of Comprehensive Planning up and down Stream Effects

Why? Not a Wholistic Look Currently Leads to Inconsistent Applications

I13. Environmental consideration

Why? Law does not address this

I14. Conflicts at urban / Rural fringe.

I15. Retro-fit for water quality, wildlife habitat, in the minds of the landowners and mindset of ditch authorities.

Why? Current law limits this. pressure to do more.

I16. Assessment structure transition from rural to urban.

Why? Ag ditches to storm water management consistent with assessment

I17. Lack of knowledge of the law 103E by County , other LGU staff.

Why?

SECOND ROUND

I18. Consideration of specific landowner desires.

Why? Individual rights

I19. Time limit for ditch decisions.

Why? It takes too long to accomplish. cap costs we're spending too much on studies.

I20. Downstream Large scale.

Why? we're the headwaters, downstream issues minor

I21. Restructure the regulations.

Why? need to look at how benefits are assessed; ag, c&i, residential, etc.

I22. Flooding homes.

Why. Recognizing individual/personal needs of folks living in the watershed

I23. Antiquated law.

Why? does not deal with urban. Not flexible. difficult to apply in urban areas.

I24. Interjurisdictional conflict. Consistent admin between drainage authorities

Why?

I25. Financial issues

Why? 3 options assessment, ad valorem, and fees

I26. Law removes creative solutions.

I27. Need training for new and existing government officials.

I28. How to assess for new ditches.

I29. Petition process.

Why? its unfair process. Equity of share determination

I30. Interaction with other existing law. transfer of authority to WD WMO

Why? Does not fit with other programs Metro water planning, WCA, etc.

I31. Conflict with roads. Misplacement of culverts.

Why? Water does not flow uphill.

THEMES issue (# of blue dot votes)

1. Abandonment (1)
2. Management/repair of existing systems(4)
3. Change/modernization in law needed(2)
4. Balancing up- and down-stream issues(1)
5. Education of LGU officials(2)
6. Environmental consideration integrated into ditch proceedings(6)
7. Financing How and who pays (Benefit/Cost assessment) (2)

10:30 Break

General discussion

How to address the priority issues?

Environmental  
Actions

1. Compensation program needed for loss of landowner's drainage or development rights. Public funds to do this. Pay to pond water on the ditch system. Works especially well for retro-fit projects. Buy out flooded parties.

2. Rewrite ditch laws to encourage 103E.015. The drainage authority shall not approve projects that will increase flooding or diminish water quality downstream.

3. Set goals and standadrs through the WMOs and WDs.

Note

Supercede the drainage law with metro water plan law. Ditch Authority need to have or set better goals for water quality targets, etc. that DA need to meet. MPCA water quality standards might be used.

4. Maintain created and restored wetlands, storm water ponds to ensure efficiency. Need to cleaned so as not to impact ditch.

5. Broader environmental functional assessment needed. Create a ditch EAW similar to F and V assesment under WCA.

#### Notes

Currently only happens on NEW ditch projects. Better guidance on how to do this. Need to get people to the point of specificity, i.e. Scientific Norms. Need better follow through on this item.

6. Set up a system of third-party input to check bias of ditch reports and investigations.

#### Notes

County boards are passive decision makers based on ditch engineers and viewers inputs. Make use of a TEP for ditches.

#### Repair and Maintenance

##### Actions:

1. Clarifying in the law that DA has flexibility to look at alternatives.
2. Develop a comprehensive ditch plan/guidance.
3. Clarify in law how to treat unmaintained ditches. Set time limits.
4. Determine how ditch easement rights are transferred during/after abandonment to maintain ditch function.
5. Compensation program needed.

#### Notes

How is this accomplished currently? Do something similar to transportation projects. Transfer of rights may be dealt with under common law. Who holds the easement rights after abandonment?

Currently does not consider whether the ditch has been maintained over time. Needs law change to effect this. Inequities in application of the law.

Maintain flowage at a reasonable stage. No history of maintenance. Needs a mechanism to change the status of the drainage system. Hugo example. High culverts need to change. Who's the authority how to handle.

All this is about the really old unmaintained systems. Need to treat the resurrection of these systems in a different way.

Need a better way of record keeping to expedite decisions. State repository? Why do this? If the ditch is maintained the records are there already. What's the situation TODAY. Let's start from today, historic base elevation no longer apply. The absolutes in the ditch law make this difficult. We need a compensation program associated with this. Action clarify in the law that the DA has flexibility to consider a wider range of alternative actions. Better statutory definition of "repair".

#### MODERNIZATION OF THE LAW

This area impacts all the other issue areas.

The law needs to be written to:

##### Actions

##### 1. Rewrite Law to:

A. Better addresses environmental concerns.

B. Reduce red tape.

C. Re-Write drainage law for ag purposes and urban purposes.

One size does not fit all. One for metro areas and one law for out-state.

D. Consideration for consequence downstream.

E. Law should allow locals to customize a comprehensive drainage plan at various lgu levels: county, WD, WMO; based on whoever is the DA.

F. Rewrite the purpose section of the drainage law. Expand to include current public values.

##### Notes

Current drainage law was written in 1985. Next try did not work because there was not agreement.



1998 Drainage Forum  
Red River Valley  
Facilitator: Roger Williams  
Recorders: Dale Krystosek, Robyn Molina

What do you think are the key issues/problems relating to the current drainage law?

#1 Priorities

1. Lawsuits by environmental groups to define law
2. Taxation without representative
3. Abandonment is difficult
4. Need to education regarding flexibility of current law.
5. Exacerbates downstream flooding
6. Ditch maintenance
7. Outside agitators, delays projects and increases costs.
8. Not all drainage projects benefit land.
9. Doesn't address current technology pumping.
10. Unknown to many citizens who may be affected by it.
11. Understanding needs/not change.
12. Erosion of tax base to maintain ditches - potential problem with change.
13. Drainage is vital to economic in the Red River Valley - no change is needed.
14. Effects of urbanization - who should pay for drainage?
15. Hydrologic impacts - need to study other impacts.
16. Ditch law is adequate - need more up-front education  
- benefits/costs for landowners.
17. Wetland restoration - how does current law allow for this?
18. Current law needs to be followed - already been tested in court.
19. No effective oversight beyond local level - lack of education/will to follow law.
20. Better understanding of restoration/protection - wetland.
21. Ditch abandonment - in transition counties
22. Education - authorities don't always understand - take short cut.
23. Education - benefits, urban contributions - clean water, lakes, connection.
24. None. No problems. Education needed in existing law.
25. Impoundments since 1990, difficult.
26. Small number of people can get project done, majority may not want.

#2 Priorities:

27. Payments of benefits - where there are none. Petition process should allow for estimates.
28. Lack of criteria/standards to determine drainage/benefits.  
Adequacy of outlet.
29. Education - Agriculture under assault, drainage needed  
- current law works.
30. Redetermination of benefits. Skewed toward agriculture  
- doesn't deal with other land issues.

31. Absentee landowners, may not want to pay for benefits - may not understand history.
32. Post-harvest improvement of cropland - how does law regulate impacts to flooding.
33. Education needed.
34. Education - People don't know history of drainage.
35. New landowners should be educated on ditch taxes.
36. Absentee landowners - no connection to land/economic needs of farmers.
37. Education - what is downstream water quality impacts.
38. Majority of landowners - should not be required for project - current law allows for.
39. Petition allow for storage benefits beyond watershed  
flood storage easements - ADD.
40. Nobody pays assessment without benefits - public roads - no petition - drainage similar for public purpose.
41. Conservation landowner rights - some people don't want drainage - lack of flexibility - recognize other uses - primary purpose may be conservation.
42. Education - lack of understanding current technology.
43. Better documentation of ditch maintenance needed.
44. No way to define benefits. No problem with current law.
45. Doesn't address other landuses - wetland restoration, benefits.
46. Downstream flooding damages from wetland restorations.
47. Water quality/environment impacts not addressed.
48. Local control
49. Economic impacts severe for farmers.
50. Need to gather information and concerns current systems/downstream impacts.

#### Strategies:

EDUCATION: What can be done to address this issue:

1. Education of environmental groups.
2. Drainage Clinic/Seminar should be done again. Be re-funded (BWSR/County/Watersheds).
3. Information/Technology
4. Petition before money spent, information meeting should be held regarding costs, benefits.
5. Petitioners should be informed that all costs will be their responsibility
6. Educate drainage authority. Proper application of law.  
Need to demonstrate proper application.
7. Educate viewers and problems associated with that, maintenance and  
upkeep related to drainage inspectors. Expand groups that will be trained
8. Research on impacts of agriculture drainage/wetlands on flooding is needed  
Local flooding versus major flooding.
9. Need to teach drainage laws before polarization occurs and  
before petition process (absentee landowners).

10. Define repair, improvement versus expansion. Educate  
- need to follow law.
11. Count watershed attorneyEs - informational meetings go beyond minimal requirements. Should be more creative.
12. Forum brings out good discussion, better answers of level of understanding
13. Lack of information. Check and balances are not always followed.  
Projects depend/widened under repair - improvement.
14. Matter of interpreting the rules correctly. Public needs to be informed as to where to go for questions on ditch issues.
15. Centralized expertise/BWSR (Attorney Generals Office) where citizens can go to get interpretation of law where conflicts occur.
16. AMC should have available videos on drainage law to all counties and watersheds.
17. Seminar for county watershed AttorneyEs should be held.
18. Vote.
19. Open meetings prior to acceptance/denial of petition.  
Give all affected landowners notice.
20. Annual training at MAWD, AMC conventions.  
Should be available on annual basis.

PROCESS: What can be done to address this issue:

21. What to do about violation of law? Attorney Generals Office/ Department of Natural Resources (DNR) take action.
22. Specialized training in the early interim and should be ongoing.
23. Coordination of education message. Consistent message for all.
24. Hydrologic/GIS information, data gathering needs of how hydrologic system works across jurisdictional boundaries.
25. Have desire to get needed information, need the time and funds.
26. Ottertail County model: pre-action information meetings for all affected landowners.
27. Process needs to be inclusive to bring environmentalists and other special interest groups into process early. Get opponents into process

*early.*

**1998 DRAINAGE FORUM**  
**Minnesota River Drainage Group**

**Group size: approximately 80 people**

**Large interest in the Minnesota River is due to agriculture.**

**Only went through the group once to collect their top priorities; however, did accept other issues that were felt to be priority.**

**Priority drainage issues of the Minnesota River:**

1. Education of drainage law (links to "leave law alone") (18)
2. Pollution and environment (11)
2. Leave law alone (11)
3. Need for more effective repair and maintenance (7)
4. Loss of natural areas (6)
4. Complex permitting procedure (6)
4. Education on science of drainage (6)
5. Inconsistent cost/benefit calculations (4)
6. Research (3)
6. Property rights (3)

**Top priority drainage issue of the Minnesota River: EDUCATION OF THE DRAINAGE LAW**

Who is the target audience for drainage law education?

Elected and appointed officials

Drainage authority

County attorneys

County auditors

County administrators

Technical audience

Drainage inspectors

Ditch viewers

SWCD staff

Contractors and engineers

Special Interest Groups

Landowners

"Squeaky Wheel" (those as needed)

Conservation and environmental groups

General Interest Groups

Voters

Legislators

FSA offices

General public

What are the methods of education:

1. Tailor the level of complexity of the education methods to fit the type of audience.
2. Breakdown the education into three classes: legal, technical, and social.
3. Designate and education a one-stop authority for everyone to contact for answers or direction (for example, the drainage authority)..
4. Use a proactive education process: try to educate to **prevent** the problems related to drainage instead of always on how to fix problems already created.
5. Start with educating the drainage inspector.
6. Create an education strategy with clear outcomes in mind.



**1998 DRAINAGE FORUM  
St. Cloud Civic Center  
November 19-20, 1998**

**Minnesota River Group**

**Question: What do you think are the key issues/problems relating to the current drainage law?**

1.     Downed trees in the drainage system; creek blockage.   Why:   Slowing down the flows.
2.     Water storage on the landscape in the concept of drainage systems and ditch repairs.  
       Why:   Sediment retention.
3.     Sediment pollution.   Why:   MN River cleanup.
4.     Leave the drainage law alone--it works.
5.     Politics of water.   Why:   Clarification of where to go; how to get answers.
6.     Cost-benefit issues.   Why:   Statute clarification.
7.     Downstream flooding.
8.     Drainage system mitigation costs.   Why:   Permit regulatory costs make it too costly.
9.     Water quality impacts from drainage.   Why:   Big Stone Lake
10.    Surface water issues/drainage issues.   Why:   Interrelationship with ground water  
         comprehensive approach.
11.    Education.   Why:   Knowledge of the drainage law by commissioners as well as city council  
         members.
12.    Water management research.   Why:   Need good basic research to make sound decisions.
13.    Economic need for repair and improvement of drainage systems.   Why:   Need to be most  
         efficient producing as possible.
14.    One-stop permitting.   Why:   Reduce costs
15.    Erosion of banks.   Why:

16. Beavers Why:
17. Feedlot/septic pollution to ditches. Why:
18. Ditch bank erosion. Why:
19. Importance of one-acre, small wetlands. Why: Questions their importance.
20. Lack of understanding of the drainage law. Why:
21. Understanding landowner property rights. Why: Work with BMP based on sound science.
22. Buffer strips: without the costs of redetermining benefiting of the whole systems which is costly.
23. Lack of comprehensive review of the impact on the environment. Why: A big cumulative impact when all combined.
24. Increased upstream efficiency causing downstream flooding. Why:
25. Upland water storage. Why: Managing in the rural and urban areas.
26. Just "adjustment or enhance" drainage law. Why: Do not need to change everything; just need better understanding of how to use the law.
27. Newer improvement in ditches: 16.5 foot buffer zone. Why: Hard to enforce.
28. Informational research on the river as to types of drainage.
29. Drainage ditches: general lack of understanding of how they work and the importance of them, both by the landowner and the public.
30. Education: too complicated to interpret the drainage law.
31. Lack of knowledge of drainage law by some newer county board and county staff.
32. Lack of education. Misunderstanding that drainage causes our flooding problems in Minnesota.
33. Man-made drainage: are we depleting our aquifers?
34. See more impoundment on the end of our drainage systems; need more education. Prevent silt and chemical build up in the water.

35. Maintenance and repair of ditch systems is important to farm land.
36. Same as above --
37. Permitting and one-stop shopping for permitting to shorten time frame.
38. Lack of working understanding of the statute and the science of drainage at "where the rubber meets the road". Not only understanding drainage but hydrology, soils, geoscience, etc.
39. Maintenance
40. Redetermination of benefits: some are getting free ride; added a land to system that they are not paying for.
41. Sediment load with the eroding ditch banks. Increase in drainage and tiling; being channeled into the system than what it was designed for.
42. Maintenance of the drainage system outlet.
43. Maintenance of the drainage system: drowned trees.
44. Indecisiveness of the state and federal permitting agencies. Get "stonewalled." Have one set of rules to go by--simplify.
45. Don't understand the laws and the hydrology of the land.
46. Need the ability to make repairs without extensive administrative procedures.
47. Education: lack of understanding of who the ditch actually belongs to: the landowner.
48. CREP: Creating buffer strip and returning land to its natural state.
49. Upstream retention to prevent flood damage. Should be required as a mitigation when repairs increase flow.
50. Maintenance
51. Buffer strips required for all farmers.
52. Education: Old and inadequate ditches cannot receive water being directed to them; downstream effects need to be taken into account. Viewing procedures need to be looked at. Reduce downstream negative effect on the drainage system. Need a system to assess the positive and negative impacts of drainage.

53. Maintenance on the county ditches.
54. Cannot keep draining and not have some type of flood control. Water quality.
55. Education on drainage law: too much interpretation.
56. Ditch planning to keep up with the maintenance before maintenance need to be done; helps determine how water quality practices can be done and fit into maintenance. Look for opportunities to address the ditch.
57. Education and research: surface inlets, wetland protection, tile spacing and depth; using wetlands for mitigation.
58. How can we help farmers and local governments manage the drainage without negatively impacting others.
59. Education: the drainage law is workable the way it is.
60. Addressing issues through the drainage law or use other channels.
61. Education of public officials--appreciate the recent Curt Deter training.
62. Drainage is vital to agriculture; consider changes carefully.
63. Education
64. Water quality and fish and wildlife impacts with regard to drainage and wetlands.
65. Drainage systems designed to drain land not retard it; be careful of projects that retard water along drainage systems has maintenance costs related to them.
66. Property rights: outside interests commenting on local interests.
67. Absentee landowners and their effects on drainage projects.
68. Downstream impacts: is faster better. Maybe smarter is better. Hypoxia issue.
69. Conservation easements on the land: how does ditch and drainage effect restored wetlands.
70. Education: public understanding of the drainage law as it relates to issues. Consistent throughout county.
71. Corporate environmental benefits into a drainage project. The question is who pays for it?

72. Water quality: deal with pollutants through prevention or treatment. Prevention is much less expensive. Do not bypass the natural treatment of the landscape.
73. Current ditch law is fair if it is implemented properly.
74. Water quality and erosion control is a priority on a professional level. Some process of dealing with the issues is important on a personal level.
75. Water quality issues of urban areas.
76. Land taxation structure.
77. Keep water on the landscape; look at the natural land structure and think ahead; drain basins already exist.
78. Need base-line water quality data to work from in the future.
79. Mediation of current drainage issues; absentee landowners, many are women, are removed from the land.



1998 DRAINAGE FORUM  
UPPER MISSISSIPPI  
Facilitator: Ron Harnack  
Recorders: Ron Shelito & Vicky Erbele

**Interpretation/education/information**

**Issues:**

Education

Interpretation and application of drainage law.

Better understanding of laws

Where do we get help

Misunderstanding between levels of government and landowners

Not following proper procedures

No lead agency

Lack of understanding of definitions

**Strategies:**

1. Target the education to drainage authority as a whole. Include government agencies.
2. Start with those that have the permitting authority. Need clear message.
3. ID a lead state agency.
4. Institutionalize training to get the right people to attend.
5. Put together real life examples that authorities can use when they have similar situations.
6. Need a simplified manual that is easy to use, an outline showing topics and who to go to.
7. Clearinghouse for drainage information, refer landowner to appropriate agency.
8. Make sure people know about existing laws that apply to their project.
9. Trainers for county boards and watershed district managers on how to instruct viewers

**Environmental considerations**

**Issues:**

Downstream flooding impacts

Downstream water quality impacts

Impacts on lakes and rivers and recreation

Who pays for water quality and quantity issues

Hypoxia and water quality and how that will impact farming

Managing drainage systems for more than just water quantity

Build in water quality projects as part of the ditch system (best management practices)

Lack of incentives to help landowners implement BMPs along ditches

**Strategies:**

1. All aspects must be taken into account--comprehensive approach.

2. Use good science. Find out where gaps in science are and do research there.
3. When permit is required, figure in up front practices to address environmental concerns. Develop guidance for how to do this. Tell project people which environmental concerns agencies will be looking at so they can address them early on.
4. Develop eng./tech standard to ensure uniformity in how projects are reviewed.
5. Enforce the existing laws.
6. Easily accessible source of funding to address environmental concerns. Applying for grants is too cumbersome.
7. Standards/guiding principles for viewers.
8. Clearer definitions of connected actions.
9. Something like WCA road replacement program for ditch authorities.
10. Explore more options to fund environmental concerns.

## **Administrative Procedures,**

### **Issues:**

Abandonment proceedings  
 Abandonment policies for drainage systems  
 Old ditches built for different purposes than today, health and welfare purposes no longer appropriate.  
 Condemnation if need be, provides landowner compensation.  
 Old ditches have poor records  
 Financial responsibility is not clear when ditches have changed ownership from private to public  
 Urban sprawl land use changes  
 Multi jurisdiction  
 Timely permitting by state agencies and lack of efficient local processes  
 Lack of consistent methodology for determining scope and effect of drainage projects.

### **Strategies:**

1. Old ditches
  - a. Keep good records from now on.
  - b. Empower people to make decisions when data is lacking. Develop procedure for this.
2. Get procedural manual out.
3. Follow the law, follow procedures. This will solve many after-the-fact questions/problems.
4. Tech support team to support drainage authorities.
5. Inventory drainage systems.
6. Two phase petition process after the benefits and damages have been determined to allow petitioners to decide if they still want to proceed..

**Red River Valley Region  
Discussion Report  
Thursday, November 19, 1998  
1998 Drainage Forum  
St. Cloud Civic Center**

Attendees of the Drainage Forum were divided into groups according to region. The groups were established in order to focus on regional aspects and provide for deliberate discussions. The following four groups were established:

- 1) Red River Valley
- 2) Upper Mississippi
- 3) Minnesota River
- 4) Metro

The participants in each group (approximately 20-30 people) had a facilitator, a recorder, and a reporter (the reporter was chosen by the group). The Red River Valley group discussed key issues and priorities with the assistance of the following individuals:

Facilitator: Roger Williams

Recorder: Dale Krystosek/Robyn Molina

Roger Williams, a facilitator with the Minnesota Office of Dispute Resolution, explained that the task of this group is to discuss issues with the current drainage law. He requested the participants to list the key issues and problems relating to the current drainage law.

Williams proceeded to ask the participants to select three priority items of the original issues and problems identified earlier and transfer them to the post-it notes distributed to each participant. He noted that he would request each participant to share his or her highest priority item and identify why it is a problem. He explained that each problem would be recorded, along with each post-it note placed on a board and grouped according to similarity.

**(1)The highest priority items were identified as follows:**

1. Issue: A greater understanding and a clearer process.  
Problem: In some counties, lawsuits pursued by environmental groups get a clearer direction of primary objectives. An expedient process should be developed.
2. Issue: The current process is unfair to landowners.  
Problem: It is basically taxation without representation. Landowners pay for benefits without receiving them.

3. Issue: There is a need for a procedure in the Drainage Law that does not currently exist. Specifically, regarding the process for buying out existing drainage rights.  
Problem: It is an area of concern since it decreases the feasibility of abandonment proceedings.
4. Issue: The current Drainage Law has the flexibility to address issues existing in the current social structure.  
Problem: There is a lack of understanding regarding the flexibility in the current Drainage Law. A greater educational opportunity should be developed.
5. Issue: A lack of responsibility among petitioners regarding downstream impacts of projects.  
Problem: An exacerbation of flooding problems.
6. Issue: The need to establish a monitoring system.  
Problem: The lack of a monitoring system.
7. Issue: The ability to clean and maintain existing ditch systems needs to be improved.  
Problem: The current provision pertaining to these activities is lacking.
8. Issue: Environmental groups intervening in projects causing a delay.  
Problem: Outsider involvement adds to the costs of the project.
9. Issue: The process of assessing benefits needs to fully recognize different land use goals.  
Problem: The goal for a particular property may have negative impacts.
10. Issue: Assessments are not based using the current technology available.  
Problem: Should assessments be based according to original benefits determined, associated costs such as pumping and electrical could exceed the original benefits determined.
11. Issue: Education regarding the current Drainage Law.  
Problem: The drainage laws are simply unknown to the private citizens that might be affected by them.
12. Issue: A misunderstanding of the current drainage law exists.  
Problem: Changes to the current drainage law would not create a greater understanding of the law, but rather increased educational efforts along with better publicity.
13. Issue: The process for ditch authorities to levy taxes in order to maintain ditches.

- Problem: The ditch authority levies taxes based on the original benefits determined. Changes in the current drainage law could involve fewer landowners absorbing the costs for maintaining the ditches.
14. Issue: Drainage designated as the primary cause for flooding.  
Problem: Drainage is a necessity in order for landowners to continue their farming practices. The need for better implementation of the current Drainage Law is necessary in order to enhance the understanding of the current process.
15. Issue: The effect of urbanization regarding water quality relative to lake issues.  
Problem: A method for assigning costs for drainage is needed. A process similar to the storm water utility fee could be established for agricultural producers.
16. Issue: The current Drainage Law should address hydrologic impacts beyond the project itself.  
Problem: Public funds cannot be used to assess private drainage impacts.
17. Issue: The need to share project information at the beginning of the process.  
Problem: Education is needed among landowners in order to understand the relationship between the design of a project and the costs associated with the project.
18. Issue: The ease or difficulty of including a wetland restoration as part of a drainage project or repair.  
Problem: The need to establish viable alternatives has not been pursued.
19. Issue: The existing Drainage Law is well founded.  
Problem: An understanding the social or political changes to the current Drainage Law could have several repercussions.
20. Issue: The implementation of the Drainage Law beyond the current jurisdiction.  
Problem: A lack of knowledge at the local level regarding the implementation of the law. Provisions are needed to protect the rights of people that are often willfully ignored.
21. Issue: The protection of wetlands.  
Problem: A better understanding of measures to protect wetlands are needed.
22. Issue: The implementation of the Wetlands Conservation Act (WCA) regarding ditch abandonment.  
Problem: Many projects are considered ditch repairs when, in fact, they are improvement projects.
23. Issue: The need to understand the drainage code.



- Problem: Education is a key issue. Confusion exists regarding the administration of proper procedures.
24. Issue: Education.  
Problem: An understanding of the difference between benefits and costs is needed.
25. Issue: A better understanding of the current Drainage Law  
Problem: Education of the current Drainage Law is needed.
26. Issue: Water retention is needed in the Red River Valley.  
Problem: Many entities make the development of impoundment structures virtually impossible.
27. Issue: No changes are needed to the current Drainage Law.  
Problem: Educational efforts could be implemented.
28. Issue: No representation with taxation.  
Problem: A fairly small number of people can establish a project. Often a minority of landowners proceed with a project when, in fact, a majority of the landowners are not in favor of the project.

**(2)The second highest priority items were identified as follows:**

1. Issue: The current Drainage Law is unfair to landowners.  
Problem: Benefits are paid where none exist. Landowners often inquire about an estimate of costs for potential ditch activities, but rather than receive an estimate a petition process is established. The process should allow for the preparation of an estimate prior to the establishment of a project.
2. Issue: A general lack of understanding.  
Problem: (In reference to above statement.) Informational meetings are conducted with affected property owners in order to eliminate problems in the future.
3. Issue: A lack of criteria or standards for activities relating to the current Drainage Law.  
Problem: Limited direction is outlined in the current Drainage Law regarding the determination of benefits and damages.
4. Issue: Education opportunities for the current Drainage Law.  
Problem: The current Drainage Law works, but a better understanding of the law is needed.
5. Issue: The re-determination of benefits.

- Problem: The re-determination of benefits seems to be skewed towards agricultural production. The other end of the spectrum regarding land not managed for agricultural purposes should be reviewed.
5. Issue: Absentee landowners that are unwilling to cooperate with projects.  
Problem: Absentee landowners to not want to incur costs of a project, therefore, hindering the progress of projects to improve conditions for the tenants.
6. Issue: The regulation of drainage under the current Drainage Law.  
Problem: Additional water can be added to a system by private draining activities.
7. Issue: Education.  
Problem: Landowners in proposed project areas should be notified of the taxation effects of a project.
8. Issue: Absentee landowners.  
Problem: Ditch improvement projects are difficult to initiate due to the lack of connection to the land.
9. Issue: Education.  
Problem: The concept of downstream impacts is needed. Water quality issues, as well as quantity issues, should be assessed.
10. Issue: The problem of taxation relative to flood damage reduction measures.  
Problem: The primary taxation falls on tenant farmers rather than on landowners.
11. Issue: The ability to view storage capabilities as a method for improved drainage.  
Problem: Additional benefits could be recognized beyond the local watershed. Perpetual and/or flood storage easements could be included in ditching activities.
12. Issue: A better understanding of project benefits and damages.  
Problem: Drainage activities are for the public purpose of land use enhancement.
13. Issue: The conservation of landowner rights.  
Problem: Landowners that own land for purposes other than agricultural production. Flexibility is needed to recognize that landowners may have other purposes for the land. The law needs to recognize that landowners have different interests and a method to achieve these land rights should be developed.
14. Issue: Drainage is a cost of owning the land.  
Problem: With regard to permanent conservation easements, funds are received from the state in order to take cropland out of production. Although private conservation is acceptable, a responsibility should be recognized regarding the public infrastructure.

15. Issue: The need for better, current information.  
Problem: A general lack of understanding regarding the current technology available.
16. Issue: Ditch maintenance documentation.  
Problem: A better understanding of prior activities is needed in order to assist the current landowner and conservationist in decision making.
17. Issue: The determination of benefits under the current Drainage Law.  
Problem: There is no way to determine the valuation of benefits to a particular parcel of land.

**(3)The final highest priority items were identified as follows:**

1. Issue: Lack of direction under the current Drainage Law regarding benefits received by drainage systems such as wetland restorations.  
Problem: Hydrologic benefits that are not necessarily agricultural should be evaluated.
2. Issue: The fairness to the State of Minnesota under the current Drainage Law.  
Problem: There is not enough attention paid to environmental consequences.
3. Issue: The best policy is local control.  
Problem: Local control is an important aspect of the current Drainage Law.
4. Issue: The need to understand economic losses.  
Problem: A comparison was given regarding individuals on a salary basis. An issue was discussed whether if too much rain is received, the salaried individual would not receive their compensation.
5. Issue: Downstream impacts.  
Problem: The lack of information regarding the drainage system in its entirety. More information is needed in order to adequately assess the downstream impacts.

Several categories were developed and placed on a board located along the wall. Williams directed the group members to place a "blue dot" on the board regarding the highest priority items identified earlier.

**The categories identified earlier included:**

1. Education
2. Process
3. Benefits
4. Downstream Impacts/Environmental

Williams inquired of the participants to focus their comments on the four categories listed. He requested the group to discuss various methods for addressing the priority issues identified for each category.

### **Education**

1. A recommendation for environmental groups to be educated on the Drainage Law.
2. A formal drainage seminar should be developed that would require certain qualifications to attend. (i.e. reading the Drainage Law.)
  - a) General information - Broad subject matter.
  - b) Specific information - Technical aspects.
3. Informational meetings prior to initiating a petition for repair or improvement proceedings. Notices should be sent to affected landowners to solicit participation in an attempt to avoid future appeals.
  - a) Clearly stated on the petition that landowners signing the petition would be liable for any costs incurred with the petition process.
4. The need to relate the education of the Drainage Law to it's application.
  - a) Ensure appropriate skills with individuals charged with ditch maintenance responsibility.
    - ♦ Minnesota Viewer's Association
    - ♦ Minnesota Association of Drainage Inspectors
    - ♦ Association of Minnesota Commissioners
5. The need to differentiate between local flooding and urban development.
  - a) Review data provided by various agencies. (i.e. USACE)
6. The need for clarification regarding expansion, repair, or improvements on ditch systems.
  - a) Inform the public.
  - b) Increase flexibility regarding interpretation of the Drainage Law.
    - ♦ Technical and legal advice should be provided to landowners. A central contact should be designated to assist with legal interpretations.
7. Improve the lack of trust regarding regulation among ditch inspectors and ditch authorities.
8. Education to address the lack of local participation regarding ditch concerns.
9. Education regarding the responsibilities of landowners.
  - a) Assertion of property rights.
    - ♦ Civil cases
10. Encourage voter participation.
  - a) Electoral process - presenting views of constituents.
11. Annual or semi-annual opportunity for instruction in the Drainage Law.
  - a) MAWD

12. A common understanding for all associations that represent drainage interests.

Williams requested a volunteer from the participants to present the strategies discussed to the main audience. Lee Coe, Beltrami County Commissioner, volunteered to present the information.

**Process**

1. The need to establish GIS information for all agencies participating in drainage.
2. The presentation of information in a session prior to proceeding with a petition.
  - a) Preliminary reports submitted to the DNR and BWSR for review.

Williams concluded the Red River Valley discussion group and directed the group to reconvene with the main audience.



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DATE: November 6, 1998  
TO: Public Drainage Interests  
FROM: *RDH* Ronald D. Harnack, Executive Director  
SUBJECT: Drainage Forum, November 19-20, 1998

On behalf of the Board of Water and Soil Resources, I welcome your participation at the "Drainage Forum" on November 19-20, 1998, at the Civic Center, Herberger Suite, in St. Cloud. The "Drainage Forum" will address the following issues on November 19:

- 1) What are the key issues/problems relating to the drainage law?
- 2) How are the priority issues perceived? *H-M-L*
- 3) What are the strategies to address the issues/problems identified?

*# why is this  
and issue.*

Due to the interest and early registration numbers, we will modify the original draft agenda and break into regional drainage discussion groups. This will help focus on regional aspects and provide for more deliberate discussions.

Attendees will be divided into four groups (by region):

- 1) Red River Valley
- 2) Upper Mississippi
- 3) Minnesota River
- 4) Metro

Participants in each group (approximately 20-30 people) will have a facilitator, recorder, and a reporter (reporter is chosen by the group). The group will actively discuss the key issues, identify priorities, and discuss strategies. The groups will then convene to a general session, at which time each reporter will report the group's findings. A technical panel will respond to the drainage issues and findings.

Attached is the agenda and a listing of attendees. The attendee list was compiled after various groups and individuals responded to my earlier memo inviting participation. There will not be a registration fee to attend the Drainage Forum, however, we do need to know how many people will attend so that logistical arrangements can be made. If you have not registered please call Robyn Molina at 651-296-2840, as soon as possible.

A block of sleeping rooms has been reserved at the Best Western Kelly Inn in St. Cloud for the night of November 19. If you need a sleeping room, please call the Best Western Kelly Inn directly, at 320-253-0606 by November 13, to reserve a room. The room rate is \$67 double or single room. When making your reservation be sure to ask for the "Drainage Forum" to receive this room rate.

I have attached the original notice for the session to again provide a list of background and purpose for the forum. Thanks for your interest and participation.

Attachments

## St. Cloud, Minnesota

November 19

9:00 a.m.

**Welcome and Introductions - Ron Harnack, Executive Director**  
*Herberger Suite*

9:10 a.m.

**General Session - Roger Williams, facilitator**

9:15 a.m.

## Groups Discuss Key Issues and Priorities

- Big Posted notes 6x7
- tape marking
- butcher paper in sale.
- flip chart posted's
- Sharpie Pens fine pt.
- dots - Blue

- Red River Valley - Board Room

Facilitator: Roger Williams

Recorder: Dale Krystosek/Robyn Molina

- Upper Mississippi - *Wilson Suite*

Facilitator: Ron Harnack

Recorder: Ron Shelito/Vicky Erbele

**- Minnesota River - Stockinger 1**

Facilitator:

Recorder: Jeff Nielsen/Carla Swanson-Cullen

- Metro - Stockinger 2

Facilitator: Beth Carlson

Recorder: Phil Belfiori/Doug Snyder

10:30 a.m.

## Break

10:45 a.m.

### Groups Discuss Strategies

Noon

**Lunch (on your own)**

1:15 p.m.

### Reports from each Group - Herberger Suite

2:30 p.m.

## Break

3 pieces  
Postcard's  
- Valley & Pine  
Cue & Valley  
recalled in flip & Lt

Steve Hanson

- Bob Pattent Agr.

(Meet at  
8:00 P.M.)  
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2:45 p.m.

• 5 minutes

**Technical Panel Response - General Session - Herberger Suite**

- Tibor Gallo, Attorney General's Office
- Kurt Deter, Rinke-Noonan
- Kent Lokkesmoe, DNR/Division of Waters
- Ron Ringquist, Minnesota Viewers Association
- Tom Anderson, Douglas County Drainage Inspector
- County Commissioner
- Watershed District
- Special Interest

4:30 p.m.

**Wrap-Up**

**November 20**

8:15 a.m.

**Welcome and Introductions - Ronald Harnack - Herberger Suite**

8:30 a.m.

**"McLeod County Drainage Inventory"** presentation by  
Dr. Linda Tomaselli

9:15 a.m.

**"Douglas County Drainage Inventory"** presentation  
by Marilyn Bayerl and Dave Marshall

10:00 a.m.

**Break**

10:15 a.m.

**"Drainage Economics"** presentation by Steve Taff, U of M

11:00 a.m.

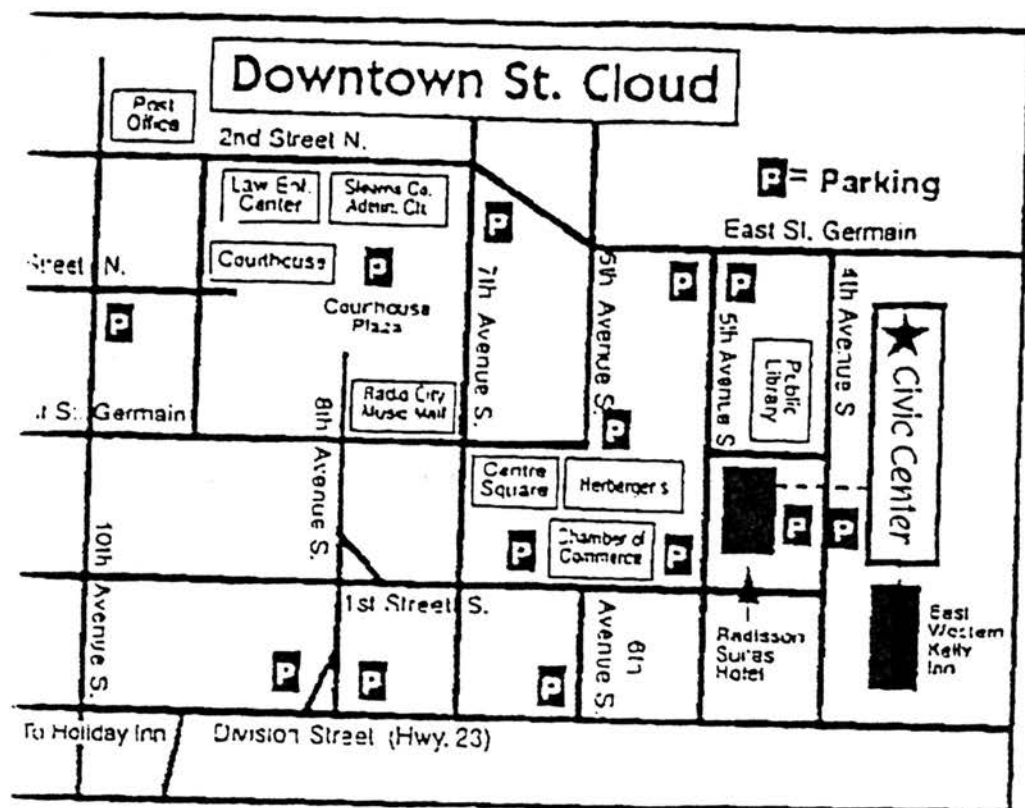
**"Long Term Flow Trends in the Minnesota River"**  
presentation by Dave Mulla, U of M

11:45 a.m.

**"404 Permit Guidelines for Drainage"** presentation  
by Ben Wopat, U.S. Army Corps of Engineers

12:30 p.m.

**Wrap-Up**



## 1998 DRAINAGE FORUM

### ST. CLOUD

November 19-20, 1998

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**1998 DRAINAGE FORUM  
ST. CLOUD  
November 19-20, 1998**

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## 1998 DRAINAGE FORUM

### ST. CLOUD

November 19-20, 1998

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1998 DRAINAGE FORUM  
ST. CLOUD  
November 19-20, 1998

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**DRAINAGE FORUM**  
**St. Cloud Civic Center**  
10 4th Avenue South  
St. Cloud, Minnesota

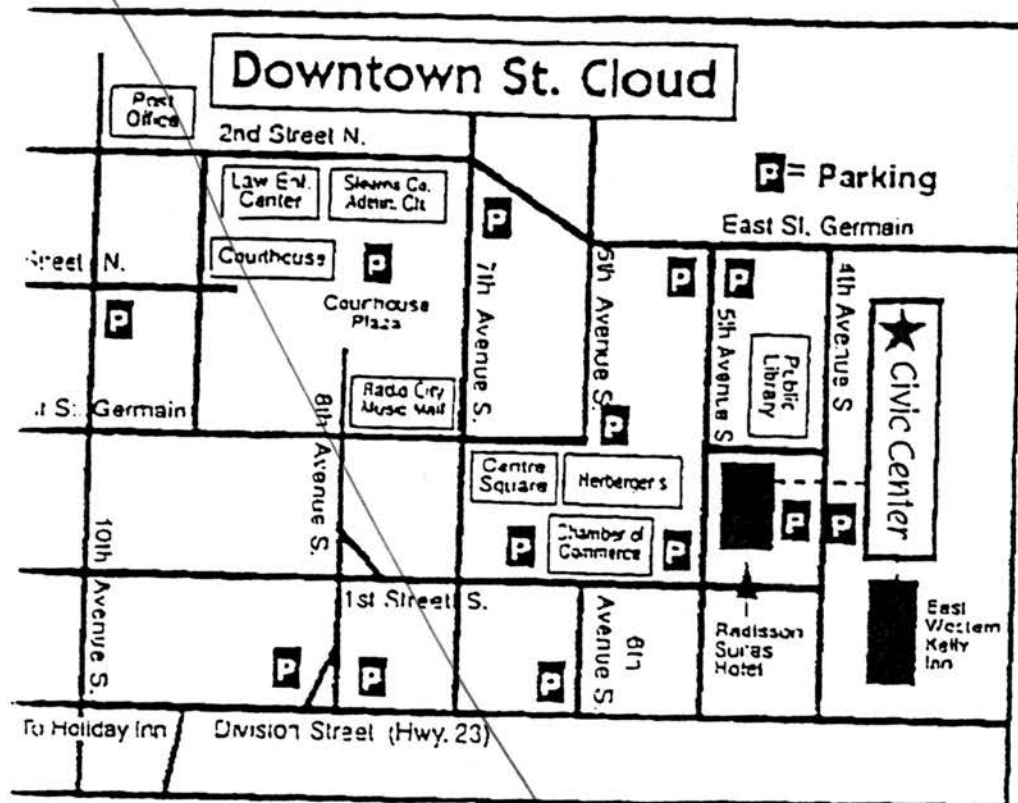
**November 19**

- 9:00 a.m.      **Welcome and Introductions** - Ron Harnack, Executive Director  
*Herberger Suite*
- 9:10 a.m.      **General Session** - Roger Williams, facilitator
- 9:15 a.m.      **Groups Discuss Key Issues and Priorities**
- **Red River Valley** - *Board Room*  
                                 Facilitator: Roger Williams  
                                 Recorder: Dale Krystosek/Robyn Molina
- **Upper Mississippi** - *Wilson Suite*  
                                 Facilitator: Ron Harnack  
                                 Recorder: Ron Shelito/Vicky Erbele
- **Minnesota River** - *Stockinger 1*  
                                 Facilitator:  
                                 Recorder: Jeff Nielsen/Carla Swanson-Cullen
- **Metro** - *Stockinger 2*  
                                 Facilitator: Beth Carlson  
                                 Recorder: Phil Belfiori/Doug Snyder
- 10:30 a.m.      **Break**
- 10:45 a.m.      **Groups Discuss Strategies**
- Noon              **Lunch** (on your own)
- 1:15 p.m.      **Reports from each Group** - *Herberger Suite*
- 2:30 p.m.      **Break**

- 2:45 p.m.      **Technical Panel Response - General Session - Herberger Suite**
- Tibor Gallo, Attorney General's Office
  - Kurt Deter, Rinke-Noonan
  - Kent Lokkesmoe, DNR/Division of Waters
  - Ron Ringquist, Minnesota Viewers Association
  - Tom Anderson, Douglas County Drainage Inspector
  - County Commissioner, *Gene Stone*
  - Watershed District, *Ken Hauke*
  - Special Interest
- 4:30 p.m.      *Conservation Groups, Bill Peterson*  
**Wrap-Up**

## November 20

- 8:15 a.m.      **Welcome and Introductions - Ronald Harnack - Herberger Suite**
- 8:30 a.m.      **"McLeod County Drainage Inventory"** presentation by  
 Dr. Linda Tomaselli
- 9:15 a.m.      **"Douglas County Drainage Inventory"** presentation  
 by Marilyn Bayerl and Dave Marshall
- 10:00 a.m.      **Break**
- 10:15 a.m.      **"Drainage Economics"** presentation by Steve Taff, U of M
- 11:00 a.m.      **"Long Term Flow Trends in the Minnesota River"**  
 presentation by Dave Mulla, U of M
- 11:45 a.m.      **"404 Permit Guidelines for Drainage"** presentation  
 by Ben Wopat, U.S. Army Corps of Engineers
- 12:30 p.m.      **Wrap-Up**



**1998 DRAINAGE FORUM  
ST. CLOUD**

November 19-20, 1998

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ST. CLOUD**

November 19-20, 1998

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**1998 DRAINAGE FORUM**  
**ST. CLOUD**  
November 19-20, 1998

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**1998 DRAINAGE FORUM**  
**ST. CLOUD**  
November 19-20, 1998

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U.S. Army Corps of Engineers  
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Fairmont, MN 56031

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William Kuisle  
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Pat Pariseau  
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1998 PUBLIC DRAINAGE FORUM  
NOVEMBER 19-20, 1998

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| ✓ Robert Ferguson    | Jackson Co Comm                                | 507-793-2480 |
| ✓ Wm. Lovelace Jr.   | Mower Co SWCD                                  | 507-433-4875 |
| ✓ GARY WEHRENBURG    | FARIBAUT COUNTY                                | 507-526-2388 |
| ✓ Dan Weirous        | AMC                                            | 651-224-3344 |
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| ✓ Warren Korman      | High Island Watershed                          | 320-562-2248 |
| ✓ DAVE PETERSON      | BWSR-Rochester                                 | 507-280-2874 |
| ✓ Ken ALBRECHT       | River Council of MN                            | 507 625 0428 |
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| ✓ Harold Neperman    | Redwood County 413 2nd Ave<br>Jamberton 546150 | 507-752-7810 |
| ✓ Glenn Buck         | MASWCD                                         | 651-690-9028 |
| ✓ Mike Findorff      | MPCA - Metro Dist.                             | 651-296-6798 |
| ✓ Robert ST. Maurice | STRWD                                          | 320-845-2480 |
| ✓ Madeline Moebel    | STRWD                                          | 320-845-2319 |
| ✓ Kenneth Puchalla   | Benton Co Audubon officer                      | 320-968-6254 |
| ✓ Ann Larson         | MN Rural Co's Council                          | 612-423-7218 |
| ✓ Don Jensen         | Pennzo NCI42B MRCT                             |              |

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| ✓ Bob Beduhn        | HDR Engineering / Consulting Eng Council                                         | 612-591-5860 |
| ✓ David Benson      | Nobles Co Board, HLW Hydro                                                       | 507-687-2853 |
| ✓ Mike Peil         | Nobles Co. Board HLW                                                             | 507-842-5561 |
| ✓ CLAIR NELSON      | LAKE CO.                                                                         | 218-834-8320 |
| ✓ Char Kahler       | Martin Co                                                                        | 507-238-2244 |
| ✓ Charles Nuggahey  | Brown Co                                                                         | 507-354-5797 |
| ✓ Jim Penfield      | Clearwater Co                                                                    | 218-694-6381 |
| ✓ Leighton Henson   | Martin                                                                           | 507-773-4259 |
| ✓ DELTON D. SCHULZ  | PENNINGTON CO. HWY DEPT.                                                         | 218-683-7017 |
| ✓ Charles Ruge      | St. Cloud STATE UNIVERSITY 204 Hedley Hall<br>St. Cloud State<br>St. Cloud 56301 | 320-255-3129 |
| ✓ Sister Fredmahna  | Renville County                                                                  | 320-523-2071 |
| ✓ John Wolk         | Aitkin County                                                                    | 218-927-3741 |
| ✓ Alois Moore       | Blue Earth Co                                                                    | 507-868-3222 |
| ✓ Craig Austinson   | Blue Earth Co                                                                    | 507-388-8253 |
| ✓ ROLE Dean         | North Fork Crow River Watershed Dist                                             | 326-340-2869 |
| ✓ Bill Thompson     | MPCA.                                                                            | 507-281-7764 |
| ✓ Bill Peterson     | Attorney                                                                         | 612-921-7818 |
| ✓ Rina Holm-Sheldon | Ottentash Co Ditch Ins-Courthouse                                                | 218-739-2271 |
| ✓ Bill Clapp        | Audubon and River Council of MN.                                                 | 651-222-8137 |

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NOVEMBER 19-20, 1998

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| Francis Schweiss    | Pennville Co.                        | 507-426-7690 |
| Thendell Amstutz    | Thosara Co.                          | 507-835-4459 |
| Kate Brum           | Waseca Co                            | 507 835 0650 |
| John Brum           | Pipestone Co / SLUCID                | 507-825-6765 |
| Stan Hanson         | South Two River WD - BWK Engineer    | 320-251-4553 |
| Kevin Nitzke        | areall MW River Basin Projects, Inc. | 507-537-6369 |
| Garrett Stang       | BWSR                                 | 218-426-3330 |
| Greg Berg           | Stearns Co. Env. Services            | 320/656-3613 |
| Joseph Schoggieller | Redwood Co Commissioner              | 507 249 3815 |
| Dein Wilke          | MASWCD                               | 507 451-3655 |
| Dennis Rupp         | Kandiyohi Co.                        | 320-235-3266 |
| James J Wyman       | STRWIN                               | 320-845-4050 |
| Warren Grand        | Hugo                                 | 651-429-9750 |
| Andrew Giffon       | Hugobus                              | 651-426-1289 |
| Char Fleish         | MMPA assoc.                          | 320-594-6586 |
| Carol Norre         | ARC                                  | 651-224-3341 |
| Genny Fuchs         | Pelican River WD   BWSR Board        |              |
| Bob Bloch           | Monroe Co comm.                      | 320 249 2013 |
| Gau Dahlgren        | Pennville Co. Comm                   | 320-765-2781 |
| Kay Cook            | Sank River Watershed District        | 320-597-2794 |



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1998 PUBLIC DRAINAGE FORUM  
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|-----------------------------|----------------------------------------------------|-------------------------|
| ✓ Craig Andresen            | Audubon Soc.                                       | 651-225-1830            |
| ✓ Ray Bohm                  | MAWD                                               | 651-452-8506            |
| ✓ MARK DEUTSCHMAN           | Houston Eng                                        | 612-593-4077            |
| ✓ Leonard Binstock          | MN & ICA MN Landowners + Contractors Assoc         | 507-455-9179            |
| ✓ Dan Laits                 | DNR Waters 4140 Theilman Lane #203, St Cloud 56301 | 320 255-2976            |
| ✓ Larry Krank               | DNR Waters - St Cloud                              | " "                     |
| ✓ Brent Lang                | Redwood County                                     | 507 637 4023            |
| ✓ Jim Birkholz              | BWSR                                               |                         |
| ✓ Jerald Bjorklund          | The Nature Conservancy                             | 612-331-0771            |
| ✓ Bill Sauer                | Murray Co. Com.                                    | 507-425-2232            |
| ✓ Steve Johnson             | Murray Co. Com                                     | 507-274-6478            |
| ✓ Duane W. Carlson          | Murray Co Com                                      | 507-658-3820            |
| ✓ Ron Struss                | UMP-EXT - BWSR                                     | 651-215-1950            |
| ✓ <del>Arvid Both, CT</del> | <del>LOR Com</del>                                 | <del>320 668 2491</del> |
| ✓ <del>Albin</del>          |                                                    |                         |
| ✓ Tom Carbone               | MN. AGRI-GROWTH                                    | 651-905-8900            |
| ✓ Jerald Tom Ford           | Douglas CTY                                        | 320 859 4356            |
| ✓ Harlan Madsen             | Kandiyohi Co                                       | 320 664-4880            |
| ✓ Mark Jemisson             | Douglas Co.                                        |                         |
| ✓ Bud Lundberg              | Wild River                                         | 218-762 3377            |



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1998 PUBLIC DRAINAGE FORUM  
NOVEMBER 19-20, 1998

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|---------------------|----------------------------------------------------------------|--------------|
| ✓ Jean Burkhardt    | ✓ Martin County Commissioner                                   | 507-764-3052 |
| ✓ Bob VanderKamp    | ✓ Chicago Co. Commissioner                                     | 651-583-3121 |
| ✓ Lisa Spaeth       | ✓ Wild Rice Watershed                                          | 935-5372     |
| ✓ Bob M. Smith      | ✓ MUDNR Waters                                                 | 218-847-1580 |
| ✓ Jan Goldman-Cater | National Wildlife Fed                                          | 612-922-2003 |
| ✓ Phil Tennis       | ✓ FREEDOM County                                               | 507-256-4256 |
| ✓ Brent Johnson     | ✓ Hanson Eng. Fargo                                            | 701-432-5065 |
| ✓ Bob Block         | ✓ Live Co Comm                                                 | 507-694-1216 |
| ✓ Bryan Fossum      | ✓ WISSETH Smith Nouring Assoc.                                 | 320-762-8149 |
| ✓ Lowell Kustman    | ✓ U of M Extension <sup>35838-12041 ST</sup><br>Waterway 56093 | 507-835-3620 |
| ✓ MIKE MURPHY       | ✓ MARTIN CTY                                                   | 507-228-7174 |
| ✓ HEAB HA           |                                                                |              |
| ✓ Olin Sand         | ✓ CARVER CO COMM.                                              | 612-466-5851 |
| ✓ Kathleen Rohl     | ✓ BWSR                                                         | 612-475-0789 |
| ✓ Ron Kutzler       | ✓ Mooker Co Comm                                               | 320-257-2157 |
| ✓ Dave Garguile     | ✓ Farm Bureau                                                  | 320-855-2420 |
|                     |                                                                |              |
|                     |                                                                |              |
|                     |                                                                |              |

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NOVEMBER 19-20, 1998**

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NOVEMBER 19-20, 1998**

[illegible]

209 Ag Engineering  
Biostystems & Ag Eng.  
1390 Eckles ave  
St Paul 55108-6005



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(612) 296-3767  
Fax (612) 297-5615

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(218) 755-4235  
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September 28, 1998

TO: Public Drainage Interests

FROM: Ronald D. Harnack, Executive Director

*RDH*

SUBJECT: PUBLIC DRAINAGE FORUM, NOVEMBER 19-20, 1998

Over the last few years issues and concerns relating to public drainage systems have frequently arisen, sometimes leading to discussion of changing the drainage law. Drainage is a complex topic and even mentioning changes arouses controversy. Organizations may react without understanding the issues and concerns and frequently without a good understanding of the drainage law itself. This leads to conflict that can and should be avoided.

I do not believe that wholesale change to the drainage law is warranted. However, there is a need to better understand the issues and concerns surrounding drainage and how the current law addresses those issues and concerns. Therefore, BWSR has endorsed the concept of a drainage forum that will bring interests together to discuss the topic so that all have a better understanding and awareness of each others' perspective. I have talked with numerous agricultural, local government, conservation, and environmental interests and most overwhelmingly agree that such a forum would be beneficial. The drainage forum will be November 19-20, in St. Cloud.

#### PURPOSE:

- \* to bring drainage interests together to share issues and concerns
- \* to better understand the perspectives of various interests
- \* to create a greater understanding and awareness of differing views
- \* to inform, educate and create a greater understanding of the public drainage law
- \* to create an awareness of strategies that interests believe will address their issues
- \* is not to form any agreement or consensus
- \* is not to debate or discuss any specific legislative proposal(s)

#### PARTICIPATION:

##### General Principles:

- \* involve key local government, special interests and state and federal agencies with an interest in public drainage
- \* ensure a regional perspective from participants as drainage has unique regional orientation and application - northwest, south, northeast, central and metro. Participating organizations should ensure that they have individuals that can reflect these regional perspectives as part of the discussion.

*Originally envisioned a more formal small group in a round table approach. However with the number of interested people interested we decided to adjust the format as you see in the final agenda.*

**TECHNICAL PANEL:**

A technical panel will provide the forum with expertise on the proper interpretation of the drainage law so that issues, concerns and strategies can be presented in proper context.

Technical advisors include:

|              |                       |
|--------------|-----------------------|
| Legal:       | Kurt Deter, confirmed |
|              | Others pending        |
| Engineering: | pending               |
| Viewing:     | pending               |

**WHEN:** November 19, 1998 9:00 a.m. - 5:00 p.m.  
November 20, 1998 8:30 a.m. - Noon

**LOCATION:** St. Cloud Civic Center, Stockinger Suite

**FACILITATOR:** Roger Williams, professional facilitator, mediator

I am requesting that each organization identify individuals that would represent their organizations at the forum. You may feel that more than one person is appropriate to represent the diversity of drainage across the state. Although anyone is welcome to come to the forum, I need to have an indication who from your organization will participate so that appropriate arrangements can be made. Please let me know by October 23, 1998. If you have any questions or suggestions, please call me at 651-296-0878.

RDH

cc: BWSR Members  
County Commissioners



## ORGANIZATION INVITATION LIST:

- Association of Minnesota Counties (AMC)
- Minnesota Association of Watershed Districts (MAWD)
- Minnesota Association of Townships (MAT)
- Minnesota League of Cities (MLC)
- Minnesota Association of Soil & Water Conservation Districts (MASWCD)
- Minnesota Lakes Association (MLA)
- Minnesota Farm Bureau (MFB)
- Minnesota Farmers Union (MFU)
- Minnesota Chapter, National Audubon Society
- The Nature Conservancy (TNC)
- Pheasants Forever (PF)
- Minnesota Waterfowl Association (MWA)
- Minnesota Power (MP)
- Minnesota Property Rights Organization
- Minnesota Center for Environmental Advocacy (MCEA)
- Minnesota Viewers Association
- American Society of Farm Managers and Rural Appraisers
- County Auditor representative
- County Assessor representative
- Minnesota Rural Counties Caucus
- Minnesota Metro Counties Association
- Minnesota Ditch Inspectors Association
- Northern Counties Land Use Coordinating Board (NCLUCB)
- State Agencies:
  - Department of Natural Resources (DNR)
  - Pollution Control Agency (PCA)
  - Department of Agriculture (MDA)
  - Minnesota Extension Service (MES)
  - Board of Water and Soil Resources (BWSR)
- Federal Agencies:
  - U.S. Army Corps of Engineers (USCoE)
  - Natural Resources Conservation Service (NRCS)
  - U.S. Fish & Wildlife Service (USF&WS)
  - Farm Services Agency (FSA)
- other conservation or environmental organizations

## DRAFT AGENDA

### November 19

9:00 - 5:00

Discussions of public drainage issues, concerns and strategies

### November 20

8:30 - 9:15

Presentation by Dr. Linda Thomaselli, "McLeod County Drainage Inventory"

9:15 - 10:00

Presentation by Marilyn Bayerl and Dave Marshall, "Douglas County Drainage Inventory"

10:00 - 10:15

Break

10:15 - 10:45

Presentation by Steve Taff, "Drainage Economics"

10:50 - 11:30

Presentation by Dave Mulla, "Long Term Flow Trends in the Minnesota River"

11:35 - 12:15

Presentation by Ben Wopat, "404 Permit Guidelines for Drainage"

**1998 DRAINAGE FORUM**  
**St. Cloud Civic Center**  
November 19 - 20, 1998

**AGENDA**

**Thursday, November 19**

9:00 a.m. **Welcome and Introductions** - Ron Harnack, Executive Director  
Herberger Suite

9:10 a.m. **General Session** - Roger Williams, facilitator

9:15 a.m. **Groups Discuss Key Issues and Priorities**

*Stockington*  
✓ **Red River Valley - Board Room**  
Facilitator: Roger Williams  
Recorder: Dale Krystosek/Robyn Molina

✓ **Upper Mississippi - Wilson Suite**  
Facilitator: Ron Harnack  
Recorder: Ron Shelito/Vicky Erbele

✓ **Minnesota River - Stockinger 1**  
Facilitator: Ron Struss  
Recorder: Jeff Nielsen/Carla Swanson-Cullen

✓ **Metro - Stockinger 2**  
Facilitator: Beth Carlson  
Recorder: Phil Belfiori/Doug Snyder

10:30 a.m. **Break**

10:45 a.m. **Groups Discuss Strategies**

Noon **Lunch** (on your own)

1:15 p.m. **Reports from each Group** - Herberger Suite

2:30 p.m. **Break**

*hosen -*  
• *Assessors don't believe say OK.*  
• *Need to get people involved at beginning rather than the end.*  
• *Continued funding & education.*  
• *There are ways & programs outside the drainage law to address the issues raised.*

*Board Rm*

*- need unique pieces for unmaintained ditches.*  
*- balance one & drainage interests in a report.*

*Kent Hokkamae*

*Ama Stone*  
*- good forecast*

*3) knowl. - DPR's role need change.*  
*1) technical - probably not used very much & quality ground. - unbiased*  
*2) regulatory role is more biased, but focus on the*  
*3) education - yes*  
*4) flexibility is their best not used with much discretion.*  
*Disputed*  
*petition process is unfair.*  
*public mtgs.*  
*Repair - disagree with "once a ditch not used with much altered ditch"*

2:45 p.m.

**Technical Panel Response - General Session - Herberger Suite**

- Tibor Gallo, Attorney General's Office

✓ Kurt Deter, Rinke-Noonan

✓ Kent Lokkesmoe, DNR/Division of Waters

✓ Ron Ringquist, Minnesota Viewers Association

✓ Tom Anderson, Douglas County Drainage Inspector

- County Commissioner - *Ann Stone*

- Watershed District - *Loren Horvath*

- Special Interest

- *Environmental groups*

- *Education who*

- *responsible?*

*5. the day nobody shows up*

*1) Thank Paul*

*records & computer operators, reporters*

*4:30 p.m.*

*presenting Roger and*

*6*

*7*

*8*

*3 Thank-you again*

*2 Thank Paul*

*we will prepare proceedings*

*facilitate continuing discussions among*

*the interests*

*BWSR will be discussing & see what*

*further leadership BWSR should do.*

**Friday, November 20**

*Tomorrow:*

8:15 a.m.

**Welcome and Introductions - Ronald Harnack - Herberger Suite**

8:30 a.m.

**"McLeod County Drainage Inventory" presentation by Dr. Linda Tomaselli**

9:15 a.m.

**"Douglas County Drainage Inventory" presentation by Marilyn Bayerl and Dave Marshall**

10:00 a.m.

**Break**

10:15 a.m.

**"Drainage Economics" presentation by Steve Taff, U of M**

11:00 a.m.

**"Long Term Flow Trends in the Minnesota River" presentation by Dave Mulla, U of M**

*Bull 87*

11:45 a.m.

**"404 Permit Guidelines for Drainage" presentation by Ben Wopat, U.S. Army Corps of Engineers**

*- Mic Webber -*

12:30 p.m.

**Wrap-Up**

- B.I.P. - law does have provisions to ~~protect~~ address*
- and concerns.*
  - 41 2000 re-districting will likely lead to 103E changes to address urban issues*
  - buffer strip enforcement*
  - DA's need to take care of issues - if local DA's don't the leg. will*
  - petition process is not very easy to stop*



1998 DRAINAGE FORUM  
UPPER MISSISSIPPI  
Facilitator: Ron Harnack  
Recorders: Ron Shelito & Vicky Erbele

**Interpretation/education/information**

**Issues:**

Education

Interpretation and application of drainage law.

Better understanding of laws

Where do we get help

Misunderstanding between levels of government and landowners

Not following proper procedures

No lead agency

Lack of understanding of definitions

**Strategies:**

1. Target the education to drainage authority as a whole. Include government agencies.
2. Start with those that have the permitting authority. Need clear message.
3. ID a lead state agency.
4. Institutionalize training to get the right people to attend.
5. Put together real life examples that authorities can use when they have similar situations.
6. Need a simplified manual that is easy to use, an outline showing topics and who to go to.
7. Clearinghouse for drainage information, refer landowner to appropriate agency.
8. Make sure people know about existing laws that apply to their project.
9. Trainers for county boards and watershed district managers on how to instruct viewers.

**Environmental considerations**

**Issues:**

Downstream flooding impacts

Downstream water quality impacts

Impacts on lakes and rivers and recreation

Who pays for water quality and quantity issues

Hypoxia and water quality and how that will impact farming

Managing drainage systems for more than just water quantity

Build in water quality projects as part of the ditch system (best management practices)

Lack of incentives to help landowners implement BMPs along ditches

**Strategies:**

1. All aspects must be taken into account--comprehensive approach.

# Red River

- Education, <sup>ENJOY</sup> (19/31 dots)
- Edchu, DA
- Ed viewers & inspectors

## STRATEGIES

- Amc Viewer King
- Senior Pro Co Attnys
- (pebble) Open mtgs on petition
- Annual King Aenc/Mawo
- " " New Commissioner King

## Procedures

- no local agency
- dispute resolution
- education coord'n
- pre-action mtgs



# Metro

1) abandonment

2) Eno

- 1) Compensation
  - public funds
  - retrofitting

2) ~~Eno~~ w Quantity & Quality

3) set standards by WMO.

3. Stormwater Ponding & wetland restoration

4. Better Eno Assessment - Drainage & A/W

5. Better design

6. Maintenance - clarify that all can be considered

7. Comp. plan

8. Compensation Reg. needed.

9. Transfer criteria

10. Ditch records

## Strategy

- Urban flexibility

- encourage local design plan flexibility

## in River

\* Education of Drainage

#1 priority

Pollution & Environment

#2 priority

heave the low stone

#3

More effective repair & maintenance

#4

Target Audience.

- one stop stopping

2. Use good science. Find out where gaps in science are and do research there.
3. When permit is required, figure in up front practices to address environmental concerns. Develop guidance for how to do this. Tell project people which environmental concerns agencies will be looking at so they can address them early on.
4. Develop eng./tech standard to ensure uniformity in how projects are reviewed.
5. Enforce the existing laws.
6. Easily accessible source of funding to address environmental concerns. Applying for grants is too cumbersome.
7. Standards/guiding principles for viewers.
8. Clearer definitions of connected actions.
9. Something like WCA road replacement program for ditch authorities.
10. Explore more options to fund environmental concerns.

### **Administrative Procedures,**

#### **Issues:**

Abandonment proceedings  
 Abandonment policies for drainage systems  
 Old ditches built for different purposes than today, health and welfare purposes no longer appropriate.  
 Condemnation if need be, provides landowner compensation.  
 Old ditches have poor records  
 Financial responsibility is not clear when ditches have changed ownership from private to public  
 Urban sprawl land use changes  
 Multi jurisdiction  
 Timely permitting by state agencies and lack of efficient local processes  
 Lack of consistent methodology for determining scope and effect of drainage projects.

#### **Strategies:**

1. Old ditches
  - a. Keep good records from now on.
  - b. Empower people to make decisions when data is lacking. Develop procedure for this.
2. Get procedural manual out.
3. Follow the law, follow procedures. This will solve many after-the-fact questions/problems.
4. Tech support team to support drainage authorities.
5. Inventory drainage systems.
6. Two phase petition process after the benefits and damages have been determined to allow petitioners to decide if they still want to proceed..

Tibor Gallo

- 1) new considerations due to stay.
- 2) extremes are not valid.
- 3) Due consideration of conservation - in this - court
- 4) Clearly the drainage law can address the new issues.
- 5) Assessments - this is a lot of historic conservation history -
  - increase in value of land
  - base on benefit of project to the land.

**St. Paul District - Corps of Engineers**  
**Summary of Proposed GP/LOP-98-MN Alternative to Nationwide Permits**

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| GP                         | Maintenance, bank protection, utility line, 404 activities for USCG-approved bridges, return water, oil/hazardous substance spill cleanup, structural discharges, completed enforcement actions and minor discharge activities (refer to detailed permit descriptions and conditions) <ul style="list-style-type: none"> <li>non-reporting (no application/notification required) if standard conditions and GP limits are met and project impacts less than 400 sq. ft. of water/wetland area in <u>Special Waters</u>* (defined below). EXCEPTIONS: Maintenance activities for public roads and utilities are not subject to Special Waters restriction except in calcareous fens. Oil/hazardous substance spill cleanup activities are not subject to reporting requirements even in special waters.</li> </ul> | all 404 waters EXCEPT fens, Federal Wild/Scenic Rivers <u>Special Waters</u> * excluded for certain activities. | <ul style="list-style-type: none"> <li>1/3 acre for maintenance activities</li> <li>400 square feet for minor discharges</li> </ul> | no application or reporting to COE required IF all GP/LOP-98 permit terms are met |
| LOP A/B                    | (A) Bank protection and utility line projects that fail to meet GP limits or other GP/LOP-98-MN criteria, listed GP activities in special waters and (B) moist soil management, temporary construction/access/dewatering, toxic waste management, and wetland/stream restoration/creation activities (refer to detailed permit descriptions and conditions) <ul style="list-style-type: none"> <li>application to COE required</li> <li>COE internal review only if no special waters* involved. 15-day public/interagency review (via Internet) if special waters involved AND impact exceeds 400 sq. ft.</li> </ul>                                                                                                                                                                                              | all 404 waters except fens & Federal Wild/Scenic Rivers                                                         | <ul style="list-style-type: none"> <li>none</li> </ul>                                                                              | all                                                                               |
| LOP C                      | Activities that impact more than 400 but less than 10,000 square feet (sq. ft.) of wetland/water area <ul style="list-style-type: none"> <li>application to COE required</li> <li>COE internal review only if no special waters* involved. 15-day public/interagency review (via Internet) if special waters* involved</li> <li>appropriate compensatory mitigation required if threshold exceeded (see **below)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        | all 404 waters except fens & Federal Wild/Scenic Rivers                                                         | <ul style="list-style-type: none"> <li>10,000 square feet</li> </ul>                                                                | all                                                                               |
| LOP D                      | Activities that impact more than 10,000 sq. ft. but less than 2.0 acres <ul style="list-style-type: none"> <li>application to COE required</li> <li>30-day public/interagency review period (via Internet)</li> <li>appropriate compensatory mitigation required</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | all 404 waters except fens & Federal Wild/Scenic Rivers                                                         | <ul style="list-style-type: none"> <li>2 acres</li> </ul>                                                                           | all                                                                               |
| LOP E                      | Activities regulated and approved pursuant to Minnesota Wetland Conservation Act. Can include additional impacts not regulated by MWCA within the 2-acre limit <ul style="list-style-type: none"> <li>applicants must elect to apply for this LOP</li> <li>application to COE and LGU required (using joint Federal-State form)</li> <li>applicant or LGU must provide COE complete WCA evaluation and permit info.</li> <li>COE internal review if impacts are under 10,000 square feet, otherwise 15-day interagency review period (via Internet)</li> <li>appropriate compensatory mitigation required if threshold exceeded (see ** below)</li> </ul>                                                                                                                                                          | all 404 waters except fens and Federal Wild/Scenic Rivers                                                       | <ul style="list-style-type: none"> <li>2 acres</li> </ul>                                                                           | all                                                                               |
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| **Threshold for mitigation | **Threshold for compensatory mitigation requirement: 400 sq. ft. in shoreland area, 2,000 sq. ft. in less than 50% county, 5,000 sq. ft. in 50-80% county, 10,000 sq. ft. in 80%+ county. If the threshold is exceeded, compensatory mitigation is required for TOTAL project wetland impacts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |                                                                                                                                     |                                                                                   |

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**St. Paul District - Corps of Engineers**  
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One West Water Street  
Suite 200  
St. Paul, MN 55107  
(651) 296-3767  
Fax (651) 297-5615

#### Field Offices

##### Northern Region:

394 S. Lake Avenue  
Room 403  
Duluth, MN 55802  
(218) 723-4752  
Fax (218) 723-4794

3217 Bemidji Avenue N.  
Bemidji, MN 56601  
(218) 755-4235  
Fax (218) 755-4201

217 S. 7th Street  
Suite 202  
Brainerd, MN 56401-3660  
(218) 828-2383  
Fax (218) 828-6036

##### Southern Region:

261 Highway 15 S.  
New Ulm, MN 56073-8915  
(507) 359-6074  
Fax (507) 359-6018

40--16th Street SE  
Suite A  
Rochester, MN 55904  
(507) 285-7458  
Fax (507) 280-2875

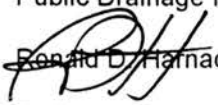
Box 267  
1400 E. Lyon Street  
Marshall, MN 56258  
(507) 537-6060  
Fax (507) 537-6368

##### Metro Region:

One West Water Street  
Suite 250  
St. Paul, MN 55107  
(612) 282-9969  
Fax (612) 297-5615

An equal opportunity employer

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DATE: November 6, 1998  
TO: Public Drainage Interests  
FROM: , Executive Director  
SUBJECT: Drainage Forum, November 19-20, 1998

On behalf of the Board of Water and Soil Resources, I welcome your participation at the "Drainage Forum" on November 19-20, 1998, at the Civic Center, Herberger Suite, in St. Cloud. The "Drainage Forum" will address the following issues on November 19:

- 1) What are the key issues/problems relating to the drainage law?
- 2) How are the priority issues perceived?
- 3) What are the strategies to address the issues/problems identified?

Due to the interest and early registration numbers, we will modify the original draft agenda and break into regional drainage discussion groups. This will help focus on regional aspects and provide for more deliberate discussions.

Attendees will be divided into four groups (by region):

- 1) Red River Valley
- 2) Upper Mississippi
- 3) Minnesota River
- 4) Metro

Participants in each group (approximately 20-30 people) will have a facilitator, recorder, and a reporter (reporter is chosen by the group). The group will actively discuss the key issues, identify priorities, and discuss strategies. The groups will then convene to a general session, at which time each reporter will report the group's findings. A technical panel will respond to the drainage issues and findings.

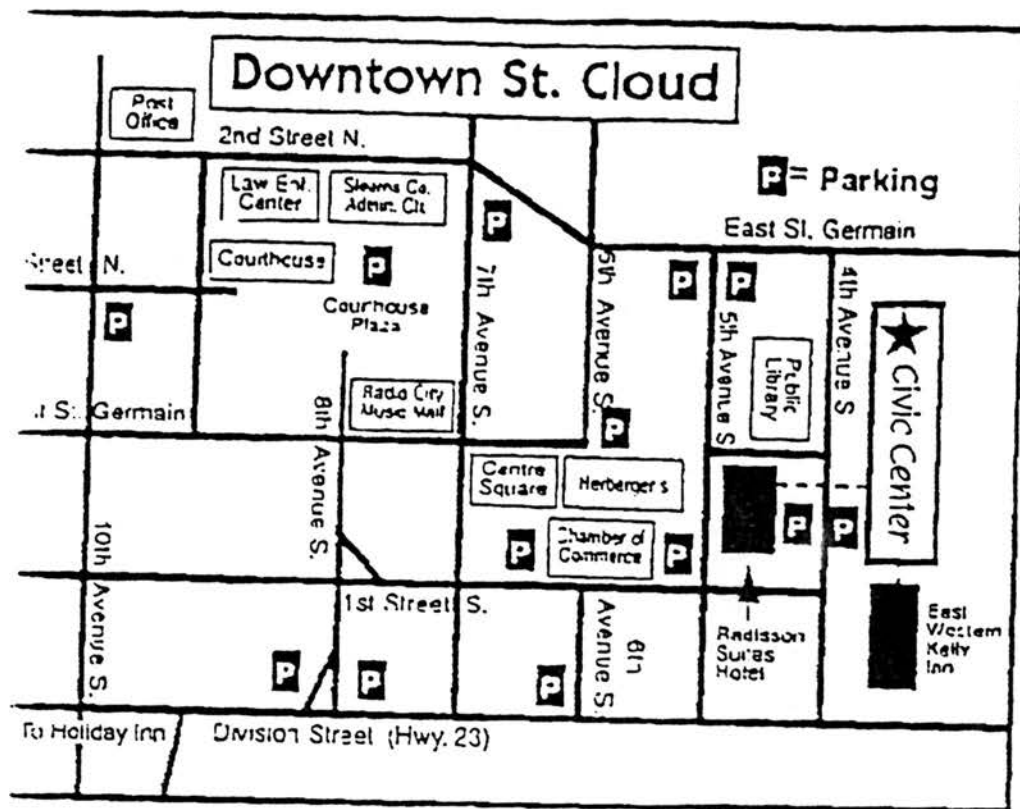
Attached is the agenda and a listing of attendees. The attendee list was compiled after various groups and individuals responded to my earlier memo inviting participation. There will not be a registration fee to attend the Drainage Forum, however, we do need to know how many people will attend so that logistical arrangements can be made. If you have not registered please call Robyn Molina at 651-296-2840, as soon as possible.

A block of sleeping rooms has been reserved at the Best Western Kelly Inn in St. Cloud for the night of November 19. If you need a sleeping room, please call the Best Western Kelly Inn directly, at 320-253-0606 by November 13, to reserve a room. The room rate is \$67 double or single room. When making your reservation be sure to ask for the "Drainage Forum" to receive this room rate.

I have attached the original notice for the session to again provide a list of background and purpose for the forum. Thanks for your interest and participation.

Attachments





## 1998 DRAINAGE FORUM

### ST. CLOUD

November 19-20, 1998

#### MN ASSOC. OF WATERSHED DISTRICTS (MAWD)

George Dailey  
Red Lake Watershed District  
P.O. Box 803  
Thief River Falls, MN 56701  
218-253-4233

Leonard Moe  
Red Lake Watershed District  
RR 1  
Grygla, MN 56727  
218-294-6188

Vernon Johnson  
Red Lake Watershed District  
Route 1  
Clearbrook, MN 56634  
218-776-3530

Tom Ebnet  
Thirty Lakes Watershed District  
1844 Crabtree Lane North  
Nisswa, MN 56468  
218-963-2318

Loren Harste  
Upper Minnesota Watershed District  
Rural Route 2  
Appleton, MN 56208  
320-596-2318

Susan Scribner  
Riley Purgatory Watershed District  
5826 Oakview Circle  
Minnetonka, MN 55345  
612-474-2525

Don Ogaard  
705 - 5<sup>th</sup> Street West  
Ada, MN 56510  
218-784-4156

Dan Wilkins  
Sand Hill River Watershed District  
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Fertile, MN 56540  
218-945-6529

Gary Ewert  
Heron Lake Watershed District  
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Worthington, MN 56187  
507-372-7810

Larry Eike  
Heron Lake Watershed District  
Route 2, Box 32  
Heron Lake, MN 56137  
507-831-2318

Leo Crowley  
Route 2, Box 91  
Fulda, MN 56131  
507-425-3180

Jan Voit  
Heron Lake Watershed District  
P.O. Box 345  
Heron Lake, MN 56137  
507-793-2462

Naomi Jagol  
Sand Hill River Watershed District  
104 Steven Drive, NE  
Fertile, MN 56540

---

#### COUNTY COMMISSIONERS

Ron Kutzke  
Meeker Co. Commissioner  
325 Sibley Avenue North  
Litchfield, MN 55355  
1-800-328-0036 (w)  
320-857-2657 (h)

Kenneth F. Koenen  
Chippewa Co. Commissioner  
629 North 11<sup>th</sup> Street  
Montevideo, MN 56265  
612-269-7447

Orville Meintz  
Chippewa Co. Commissioner  
629 North 11<sup>th</sup> Street  
Montevideo, MN 56265  
612-269-7447

Dennis Fultz  
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ST. CLOUD  
November 19-20, 1998**

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Tim Larson  
Bill Thompson

**DEPT. OF AGRICULTURE**

Mark Dittrich  
Paul Burns  
Perry Aasness  
Sharon Clark

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RESOURCES (DNR)**

**BD. OF WATER AND SOIL  
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Walker, MN 56484

Ken Albrecht  
Executive Director  
P.O. Box 1107  
Walker, MN 56484

**TOM HENRY      320-255-7272**  
**St. Cloud Civic Center**  
**2nd floor**

**November 19**

Registration Table, Coat Rack, Message Board -- outside of Herberger Suite

Herberger Suite - head table, podium, mic, overhead projector, screen  
set in round tables with seven chairs at a table -- set for 200

Board Room (seats 24) flip chart, markers

Wilson Suite -- set for 30 in u-shape - flip chart, markers

Stockinger Suite -- set for 30 in u-shape - flip chart, markers

Stockinger Suite -- set for 30 in u-shape - flip chart, markers

8:30 a.m.      Coffee and rolls set in back of Herberger Suite  
10:15 a.m.      Refresh coffee  
Noon              Lunch (on your own)  
2:15 p.m.      Coffee and soda set in back of Herberger Suite

**November 20**

Herberger Suite - head table, podium, mic, overhead projector, screen, and  
cordless/lapel mic  
set in round tables with seven chairs at a table -- set for 200

7:45 a.m.      Coffee and rolls set in back of Herberger Suite  
9:45 a.m.      Refresh coffee

**DRAINAGE FORUM**  
**St. Cloud Civic Center**  
10 4th Avenue South  
St. Cloud, Minnesota

**November 19**

- 9:00 a.m.      **Welcome and Introductions** - Ron Harnack, Executive Director  
*Herberger Suite*
- 9:10 a.m.      **General Session** - Roger Williams, facilitator
- 9:15 a.m.      **Groups Discuss Key Issues and Priorities**
- **Red River Valley** - *Board Room*  
Facilitator: Roger Williams  
Recorder: Dale Krystosek/Robyn Molina
- **Upper Mississippi** - *Wilson Suite*  
Facilitator: Ron Harnack  
Recorder: Ron Shelito/Vicky Erbele
- **Minnesota River** - *Stockinger 1*  
Facilitator:  
Recorder: Jeff Nielsen/Carla Swanson-Cullen
- **Metro** - *Stockinger 2*  
Facilitator: Beth Carlson  
Recorder: Phil Belfiori/Doug Snyder
- 10:30 a.m.      **Break**
- 10:45 a.m.      **Groups Discuss Strategies**
- Noon            **Lunch** (on your own)
- 1:15 p.m.      **Reports from each Group** - *Herberger Suite*
- 2:30 p.m.      **Break**

- 2:45 p.m.      **Technical Panel Response** - General Session - *Herberger Suite*
- Tibor Gallo, Attorney General's Office
  - Kurt Deter, Rinke-Noonan
  - Kent Lokkesmoe, DNR/Division of Waters
  - Ron Ringquist, Minnesota Viewers Association
  - Tom Anderson, Douglas County Drainage Inspector
  - County Commissioner
  - Watershed District
  - Special Interest
- 4:30 p.m.      **Wrap-Up**

**November 20**

- 8:15 a.m.      **Welcome and Introductions** - Ronald Harnack - *Herberger Suite*
- 8:30 a.m.      **"McLeod County Drainage Inventory"** presentation by  
Dr. Linda Tomaselli
- 9:15 a.m.      **"Douglas County Drainage Inventory"** presentation  
by Marilyn Bayerl and Dave Marshall
- 10:00 a.m.      **Break**
- 10:15 a.m.      **"Drainage Economics"** presentation by Steve Taff, U of M
- 11:00 a.m.      **"Long Term Flow Trends in the Minnesota River"**  
presentation by Dave Mulla, U of M
- 11:45 a.m.      **"404 Permit Guidelines for Drainage"** presentation  
by Ben Wopat, U.S. Army Corps of Engineers
- 12:30 p.m.      **Wrap-Up**





One West Water Street  
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Fax (651) 297-5615

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Fax (218) 723-4794

3217 Bemidji Avenue N.  
Bemidji, MN 56601  
(218) 755-4235  
Fax (218) 755-4201

217 S. 7th Street  
Suite 202  
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Fax (218) 828-6036

**Southern Region:**

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Fax (507) 359-6018

40--16th Street SE  
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Rochester, MN 55904  
(507) 285-7458  
Fax (507) 280-2875

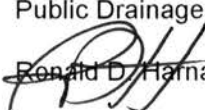
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Fax (507) 537-6368

**Metro Region:**

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(612) 282-9969  
Fax (612) 297-5615

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DATE: November 6, 1998  
TO: Public Drainage Interests  
FROM:  Ronald D. Hammack, Executive Director  
SUBJECT: Drainage Forum, November 19-20, 1998

On behalf of the Board of Water and Soil Resources, I welcome your participation at the "Drainage Forum" on November 19-20, 1998, at the Civic Center, Herberger Suite, in St. Cloud. The "Drainage Forum" will address the following issues on November 19:

- 1) What are the key issues/problems relating to the drainage law?
- 2) How are the priority issues perceived?
- 3) What are the strategies to address the issues/problems identified?

Due to the interest and early registration numbers, we will modify the original draft agenda and break into regional drainage discussion groups. This will help focus on regional aspects and provide for more deliberate discussions.

Attendees will be divided into four groups (by region):

- 1) Red River Valley
- 2) Upper Mississippi
- 3) Minnesota River
- 4) Metro

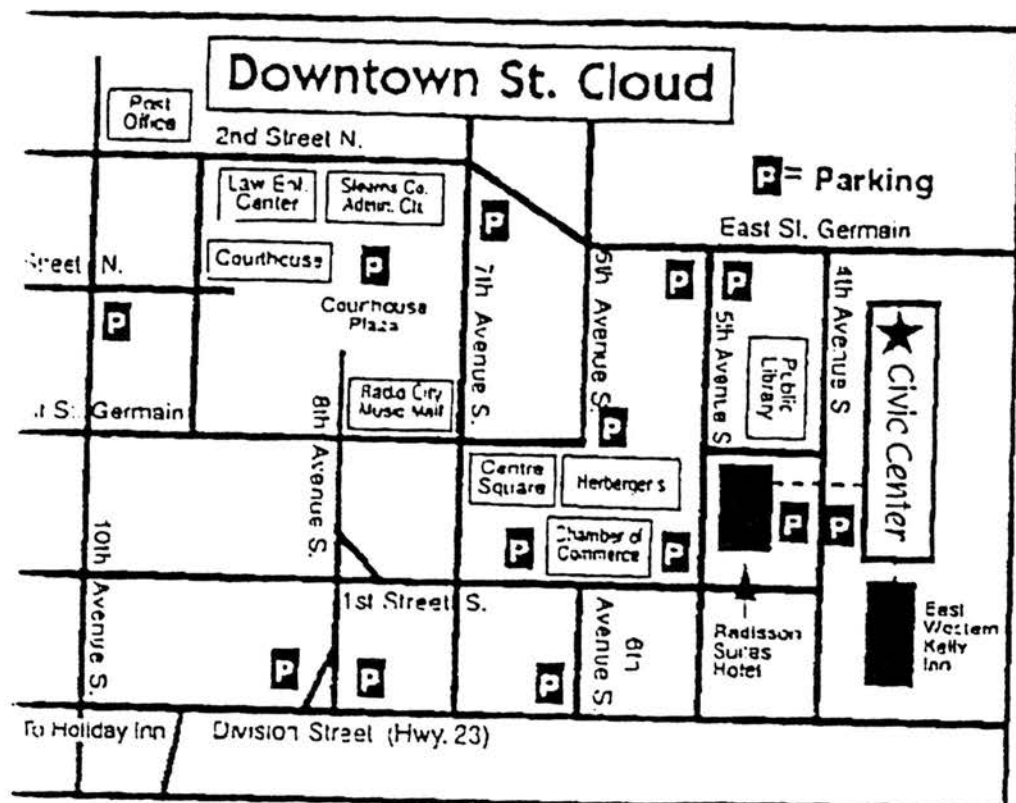
Participants in each group (approximately 20-30 people) will have a facilitator, recorder, and a reporter (reporter is chosen by the group). The group will actively discuss the key issues, identify priorities, and discuss strategies. The groups will then convene to a general session, at which time each reporter will report the group's findings. A technical panel will respond to the drainage issues and findings.

Attached is the agenda and a listing of attendees. The attendee list was compiled after various groups and individuals responded to my earlier memo inviting participation. There will not be a registration fee to attend the Drainage Forum, however, we do need to know how many people will attend so that logistical arrangements can be made. If you have not registered please call Robyn Molina at 651-296-2840, as soon as possible.

A block of sleeping rooms has been reserved at the Best Western Kelly Inn in St. Cloud for the night of November 19. If you need a sleeping room, please call the Best Western Kelly Inn directly, at 320-253-0606 by November 13, to reserve a room. The room rate is \$67 double or single room. When making your reservation be sure to ask for the "Drainage Forum" to receive this room rate.

I have attached the original notice for the session to again provide a list of background and purpose for the forum. Thanks for your interest and participation.

Attachments



## 1998 DRAINAGE FORUM

### ST. CLOUD

November 19-20, 1998

#### MN ASSOC. OF WATERSHED DISTRICTS (MAWD)

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Naomi Jagol  
Sand Hill River Watershed District  
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Mark Dittrich  
Paul Burns  
Perry Aasness  
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## 1998 DRAINAGE FORUM

### ST. CLOUD

November 19-20, 1998

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**1998 DRAINAGE FORUM**  
**ST. CLOUD**  
November 19-20, 1998

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26 East Exchange, Suite 206  
St. Paul, MN 55101

Luci Botzek  
Minnesota Association of County Officers  
26 East Exchange Street, Suite 120  
St. Paul, MN 55101

George Dailey, President  
Minnesota Ditch Inspectors Association  
P.O. Box 803  
Thief River Falls, MN 56701

Don Parmetu  
Northern Counties Land Use Coordinating  
Board (NCLUCB)  
2814 County Road 94  
International Falls, MN 56649

Dan Larson  
Minnesota Rural Counties Caucus  
5077 - 144th Street West  
Apple Valley, MN 55124

Denis Dailey  
American Society of Farm Managers and  
Rural Appraisers  
1540 Branston Street  
St. Paul, MN 55108

Bill Hunt, State Conservationist  
NRCS  
600 Farm Credit Building  
375 Jackson Street  
St. Paul, MN 55101

Bill Hartwig, Regional Director  
U.S. Fish & Wildlife Service  
Bishop Henry Whipple Federal Bldg.  
One Federal Drive, 6th Floor  
Fort Snelling, MN 55111-4056

Wally Sparby, Executive Director  
Farm Services Agency  
400 Agribank Building  
375 Jackson Street  
St. Paul, MN 55101

Ben Wopat, Chief  
Regulatory Branch  
U.S. Army Corps of Engineers  
190 East Fifth Street  
St. Paul, MN 55101-1638

- BWSR Members  
- County Commissioners - *AMC*  
- Steve Taff  
- Dave Mulla  
- Roger Williams  
- M-Team + *field offices*

Leonard Binstock  
Land Improvement Contractors Association  
208 Oak Avenue North  
Owatonna, MN 55060

Kurt Deter  
Rinke-Noonan  
Suite 700 Norwest Center, Box 1497  
St. Cloud, MN 56302

Michael Sheehy  
MN Association of Assessing Officers  
Blue Earth County Assessor  
P.O. Box 8608  
Mankato, MN 56002

Dave Zavoral  
Minnesota Land Rights Association  
Box 137  
Grygla, MN 56727



One West Water Street  
Suite 200  
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(612) 296-3767  
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**Field Offices**

**Northern Region:**

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Room 403  
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(218) 723-4752  
Fax (218) 723-4794

3217 Bemidji Avenue N.  
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Fax (218) 755-4201

217 S. 7th Street  
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**Southern Region:**

261 Highway 15 S.  
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Fax (507) 537-6368

**Metro Region:**

One West Water Street  
Suite 250  
St. Paul, MN 55107  
(612) 282-9969  
Fax (612) 297-5615

November 6, 1998

Mr. Ben Wopat, Chief  
U.S. Army Corps of Engineers  
190 5th Street East  
St. Paul, MN 55101

Dear Ben:

Thank you for agreeing to participate in the "Drainage Forum" which will be held on November 19-20, at the St. Cloud Civic Center.

Your presentation, "404 Permit Guidelines for Drainage" is scheduled at 11:45 a.m. - 12:30 p.m. on November 20.

I look forward to seeing you on November 20! Please feel free to call me at 296-0878 if you have any questions or need additional information.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ronald D. Harnack".

Ronald D. Harnack  
Executive Director

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November 6, 1998

One West Water Street  
Suite 200  
St. Paul, MN 55107  
(612) 296-3767  
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Mr. Dave Mulla  
U of M, Soils/Climate  
439 Borlaug Hall  
1991 Upper Buford Circle  
St. Paul, MN 55108

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**Metro Region:**

One West Water Street  
Suite 250  
St. Paul, MN 55107  
(612) 282-9969  
Fax (612) 297-5615

Dear Dave:

Thank you for agreeing to participate in the "Drainage Forum" which will be held on November 19-20, at the St. Cloud Civic Center.

Your presentation, "Long Term Flow Trends in the Minnesota River" is scheduled at 11:00 a.m. - 11:45 a.m. on November 20.

I look forward to seeing you on November 20! Please feel free to call me at 296-0878 if you have any questions or need additional information.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ronald D. Harnack". The signature is fluid and cursive, with a large, sweeping "H" and "A".

Ronald D. Harnack  
Executive Director

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One West Water Street  
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St. Paul, MN 55107  
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Fax (612) 297-5615

November 6, 1998

Dr. Steve Taff  
U of M/Agricultural Economics  
1994 Buford  
337 C Classroom Office Building  
St. Paul, Minnesota 55108

Dear Steve:

Thank you for agreeing to participate in the "Drainage Forum" which will be held on November 19-20, at the St. Cloud Civic Center.

Your presentation, "Drainage Economics" is scheduled at 10:15 a.m. - 11:00 a.m. on November 20.

I look forward to seeing you on November 20! Please feel free to call me at 296-0878 if you have any questions or need additional information.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ronald D. Harnack". The signature is fluid and cursive, with a large, sweeping "R" and "H".

Ronald D. Harnack  
Executive Director

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November 6, 1998

Dr. Linda Tomaselli  
OSM & Associates  
300 Park Place East  
5775 Wayzata Blvd.  
Minneapolis, MN 55416-5634

Dear Dr. Tomaselli:

Thank you for agreeing to participate in the "Drainage Forum" which will be held on November 19-20, at the St. Cloud Civic Center.

Your presentation, "McLeod County Drainage Inventory" is scheduled from 8:30 a.m. - 9:15 a.m. on November 20.

I look forward to seeing you on November 20! Please feel free to call me at 296-0878 if you have any questions or need additional information.

Sincerely,

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Ronald D. Harnack  
Executive Director

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November 6, 1998

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**Metro Region:**

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Ms. Marilyn Bayerl  
Douglas County Courthouse  
305 8th Avenue West  
Alexandria, MN 56308

Dear Ms. Bayerl:

Thank you for agreeing to participate in the "Drainage Forum" which will be held on November 19-20, at the St. Cloud Civic Center.

Your presentation with Dave Marshall, "Douglas County Drainage Inventory" is scheduled at 9:15 a.m. - 10:00 a.m. on November 20.

I look forward to seeing you on November 20! Please feel free to call me at 296-0878 if you have any questions or need additional information.

Sincerely,

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Ronald D. Harnack  
Executive Director

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November 6, 1998

Mr. Tibor Gallo  
Attorney General's Office  
900 NCL Tower  
445 Minnesota Street  
St. Paul, MN 55101

Dear Tibor:

Thank you for agreeing to participate in the "Drainage Forum" on November 19, 1998, at the Civic Center (Herberger Suite) in St. Cloud.

The "Technical Panel Response" will take place at 2:45 p.m. Each panel participant will have five minutes to reflect on the day's discussion. The technical panel participants are:

Tibor Gallo, Attorney General's Office  
Kurt Deter, Rinke-Noonan  
Kent Lokkesmoe, DNR/Division of Waters  
Ron Ringquist, Minnesota Viewers Association  
Tom Anderson, Douglas County Drainage Inspector  
County Commissioner  
Watershed District  
Special Interest

I anticipate 150-200 people in attendance, which will stimulate good discussion on the drainage law. Attached is the agenda, please feel free to call me at 296-0878 if you have any questions or need additional information.

I look forward to seeing you on the 19th!

Sincerely,

A handwritten signature in dark ink, appearing to read "Ronald D. Harnack".

Ronald D. Harnack  
Executive Director

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November 6, 1998

Mr. Kurt Deter  
Rinke-Noonan  
Suite 700 Norwest Center, Box 1497  
St. Cloud, MN 56302

One West Water Street  
Suite 200  
St. Paul, MN 55107  
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**Metro Region:**

One West Water Street  
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St. Paul, MN 55107  
(612) 282-9969  
Fax (612) 297-5615

Dear Kurt:

Thank you for agreeing to participate in the "Drainage Forum" on November 19, 1998, at the Civic Center (Herberger Suite) in St. Cloud.

The "Technical Panel Response" will take place at 2:45 p.m. Each panel participant will have five minutes to reflect on the day's discussion. The technical panel participants are:

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Kurt Deter, Rinke-Noonan  
Kent Lokkesmoe, DNR/Division of Waters  
Ron Ringquist, Minnesota Viewers Association  
Tom Anderson, Douglas County Drainage Inspector  
County Commissioner  
Watershed District  
Special Interest

I anticipate 150-200 people in attendance, which will stimulate good discussion on the drainage law. Attached is the agenda, please feel free to call me at 296-0878 if you have any questions or need additional information.

I look forward to seeing you on the 19th!

Sincerely,

Ronald D. Harnack  
Executive Director

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November 6, 1998

Mr. Kent Lokkesmoe  
DNR/Division of Waters  
500 Lafayette Road  
St. Paul, MN 55155

One West Water Street  
Suite 200  
St. Paul, MN 55107  
(651) 296-3767  
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**Metro Region:**

One West Water Street  
Suite 250  
St. Paul, MN 55107  
(612) 282-9969  
Fax (612) 297-5615

Dear Kent:

Thank you for agreeing to participate in the "Drainage Forum" on November 19, 1998, at the Civic Center (Herberger Suite) in St. Cloud.

The "Technical Panel Response" will take place at 2:45 p.m. Each panel participant will have five minutes to reflect on the day's discussion. The technical panel participants are:

Tibor Gallo, Attorney General's Office  
Kurt Deter, Rinke-Noonan  
Kent Lokkesmoe, DNR/Division of Waters  
Ron Ringquist, Minnesota Viewers Association  
Tom Anderson, Douglas County Drainage Inspector  
County Commissioner  
Watershed District  
Special Interest

I anticipate 150-200 people in attendance, which will stimulate good discussion on the drainage law. Attached is the agenda, please feel free to call me at 296-0878 if you have any questions or need additional information.

I look forward to seeing you on the 19th!

Sincerely,

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Ronald D. Harnack  
Executive Director

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November 6, 1998

Mr. Ron Ringquist  
Minnesota Viewers Association  
341 Aetna Avenue  
Ruthton, MN 56170

One West Water Street  
Suite 200  
St. Paul, MN 55107  
(651) 296-3767  
Fax (651) 297-5615

**Field Offices**

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**Metro Region:**

One West Water Street  
Suite 250  
St. Paul, MN 55107  
(612) 282-9969  
Fax (612) 297-5615

Dear Mr. Ringquist:

Thank you for agreeing to participate in the "Drainage Forum" on November 19, 1998, at the Civic Center (Herberger Suite) in St. Cloud.

The "Technical Panel Response" will take place at 2:45 p.m. Each panel participant will have five minutes to reflect on the day's discussion. The technical panel participants are:

Tibor Gallo, Attorney General's Office  
Kurt Deter, Rinke-Noonan  
Kent Lokkesmoe, DNR/Division of Waters  
Ron Ringquist, Minnesota Viewers Association  
Tom Anderson, Douglas County Drainage Inspector  
County Commissioner  
Watershed District  
Special Interest

I anticipate 150-200 people in attendance, which will stimulate good discussion on the drainage law. Attached is the agenda, please feel free to call me at 296-0878 if you have any questions or need additional information.

I look forward to seeing you on the 19th!

Sincerely,

Ronald D. Harnack  
Executive Director

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Fax (612) 297-5615

November 6, 1998

Mr. Tom Anderson  
Douglas County Drainage Inspector  
Douglas County Public Works Office  
P.O. Box 398  
Alexandria, MN 56308

Dear Mr. Anderson:

Thank you for agreeing to participate in the "Drainage Forum" on November 19, 1998, at the Civic Center (Herberger Suite) in St. Cloud.

The "Technical Panel Response" will take place at 2:45 p.m. Each panel participant will have five minutes to reflect on the day's discussion. The technical panel participants are:

Tibor Gallo, Attorney General's Office  
Kurt Deter, Rinke-Noonan  
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Ron Ringquist, Minnesota Viewers Association  
Tom Anderson, Douglas County Drainage Inspector  
County Commissioner  
Watershed District  
Special Interest

I anticipate 150-200 people in attendance, which will stimulate good discussion on the drainage law. Attached is the agenda, please feel free to call me at 296-0878 if you have any questions or need additional information.

I look forward to seeing you on the 19th!

Sincerely,

Ronald D. Harnack  
Executive Director

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September 28, 1998

TO: Public Drainage Interests

FROM: Ronald D. Harnack, Executive Director *RDH*

SUBJECT: **PUBLIC DRAINAGE FORUM, NOVEMBER 19-20, 1998**

One West Water Street  
Suite 200  
St. Paul, MN 55107  
(612) 296-3767  
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Over the last few years issues and concerns relating to public drainage systems have frequently arisen, sometimes leading to discussion of changing the drainage law. Drainage is a complex topic and even mentioning changes arouses controversy. Organizations may react without understanding the issues and concerns and frequently without a good understanding of the drainage law itself. This leads to conflict that can and should be avoided.

I do not believe that wholesale change to the drainage law is warranted. However, there is a need to better understand the issues and concerns surrounding drainage and how the current law addresses those issues and concerns. Therefore, BWSR has endorsed the concept of a drainage forum that will bring interests together to discuss the topic so that all have a better understanding and awareness of each others' perspective. I have talked with numerous agricultural, local government, conservation, and environmental interests and most overwhelmingly agree that such a forum would be beneficial. The drainage forum will be November 19-20, in St. Cloud.

**PURPOSE:**

- \* to bring drainage interests together to share issues and concerns
- \* to better understand the perspectives of various interests
- \* to create a greater understanding and awareness of differing views
- \* to inform, educate and create a greater understanding of the public drainage law
- \* to create an awareness of strategies that interests believe will address their issues
- \* *is not to form any agreement or consensus*
- \* *is not to debate or discuss any specific legislative proposal(s)*

**PARTICIPATION:**

**General Principles:**

- \* involve key local government, special interests and state and federal agencies with an interest in public drainage
- \* ensure a regional perspective from participants as drainage has unique regional orientation and application - northwest, south, northeast, central and metro. Participating organizations should ensure that they have individuals that can reflect these regional perspectives as part of the discussion.





September 28, 1998

TO: Public Drainage Interests

FROM: Ronald D. Harnack, Executive Director

*RDH*

SUBJECT: **PUBLIC DRAINAGE FORUM, NOVEMBER 19-20, 1998**

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Bemidji, MN 56601  
(218) 755-4235  
Fax (218) 755-4201

217 S. 7th Street  
Suite 202  
Brainerd, MN 56401-3660  
(218) 828-2383  
Fax (218) 828-6036

**Southern Region:**

261 Highway 15 S.  
New Ulm, MN 56073-8915  
(507) 359-6074  
Fax (507) 359-6018

40--16th Street SE  
Suite A  
Rochester, MN 55904  
(507) 285-7458  
Fax (507) 280-2875

Box 267  
1400 E. Lyon Street  
Marshall, MN 56258  
(507) 537-6060  
Fax (507) 537-6368

**Metro Region:**

One West Water Street  
Suite 250  
St. Paul, MN 55107  
(612) 282-9969  
Fax (612) 297-5615

An equal opportunity employer

Printed on recycled paper

Over the last few years issues and concerns relating to public drainage systems have frequently arisen, sometimes leading to discussion of changing the drainage law. Drainage is a complex topic and even mentioning changes arouses controversy. Organizations may react without understanding the issues and concerns and frequently without a good understanding of the drainage law itself. This leads to conflict that can and should be avoided.

I do not believe that wholesale change to the drainage law is warranted. However, there is a need to better understand the issues and concerns surrounding drainage and how the current law addresses those issues and concerns. Therefore, BWSR has endorsed the concept of a drainage forum that will bring interests together to discuss the topic so that all have a better understanding and awareness of each others' perspective. I have talked with numerous agricultural, local government, conservation, and environmental interests and most overwhelmingly agree that such a forum would be beneficial. The drainage forum will be November 19-20, in St. Cloud.

**PURPOSE:**

- \* to bring drainage interests together to share issues and concerns
- \* to better understand the perspectives of various interests
- \* to create a greater understanding and awareness of differing views
- \* to inform, educate and create a greater understanding of the public drainage law
- \* to create an awareness of strategies that interests believe will address their issues
- \* *is not to form any agreement or consensus*
- \* *is not to debate or discuss any specific legislative proposal(s)*

**PARTICIPATION:**

**General Principles:**

- \* involve key local government, special interests and state and federal agencies with an interest in public drainage
- \* ensure a regional perspective from participants as drainage has unique regional orientation and application - northwest, south, northeast, central and metro. Participating organizations should ensure that they have individuals that can reflect these regional perspectives as part of the discussion.

**TECHNICAL PANEL:**

A technical panel will provide the forum with expertise on the proper interpretation of the drainage law so that issues, concerns and strategies can be presented in proper context.

Technical advisors include:

|              |                       |
|--------------|-----------------------|
| Legal:       | Kurt Deter, confirmed |
|              | Others pending        |
| Engineering: | pending               |
| Viewing:     | pending               |

**WHEN:** November 19, 1998 9:00 a.m. - 5:00 p.m.  
November 20, 1998 8:30 a.m. - Noon

**LOCATION:** St. Cloud Civic Center, Stockinger Suite

**FACILITATOR:** Roger Williams, professional facilitator, mediator

I am requesting that each organization identify individuals that would represent their organizations at the forum. You may feel that more than one person is appropriate to represent the diversity of drainage across the state. Although anyone is welcome to come to the forum, I need to have an indication who from your organization will participate so that appropriate arrangements can be made. Please let me know by October 23, 1998. If you have any questions or suggestions, please call me at 651-296-0878.

RDH

cc: BWSR Members  
County Commissioners

## **ORGANIZATION INVITATION LIST:**

- Association of Minnesota Counties (AMC)
- Minnesota Association of Watershed Districts (MAWD)
- Minnesota Association of Townships (MAT)
- Minnesota League of Cities (MLC)
- Minnesota Association of Soil & Water Conservation Districts (MASWCD)
- Minnesota Lakes Association (MLA)
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- Minnesota Farmers Union (MFU)
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- The Nature Conservancy (TNC)
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- Minnesota Power (MP)
- Minnesota Property Rights Organization
- Minnesota Center for Environmental Advocacy (MCEA)
- Minnesota Viewers Association
- American Society of Farm Managers and Rural Appraisers
- County Auditor representative
- County Assessor representative
- Minnesota Rural Counties Caucus
- Minnesota Metro Counties Association
- Minnesota Ditch Inspectors Association
- Northern Counties Land Use Coordinating Board (NCLUCB)
- State Agencies:
  - Department of Natural Resources (DNR)
  - Pollution Control Agency (PCA)
  - Department of Agriculture (MDA)
  - Minnesota Extension Service (MES)
  - Board of Water and Soil Resources (BWSR)
- Federal Agencies:
  - U.S. Army Corps of Engineers (USCoE)
  - Natural Resources Conservation Service (NRCS)
  - U.S. Fish & Wildlife Service (USF&WS)
  - Farm Services Agency (FSA)
- other conservation or environmental organizations

## **DRAFT AGENDA**

### **November 19**

*9:00 - 5:00*

Discussions of public drainage issues, concerns and strategies

### **November 20**

*8:30 - 9:15*

Presentation by Dr. Linda Thomaselli, "McLeod County Drainage Inventory"

*9:15 - 10:00*

Presentation by Marilyn Bayerl and Dave Marshall, "Douglas County Drainage Inventory"

*10:00 - 10:15*

Break

*10:15 - 10:45*

Presentation by Steve Taff, "Drainage Economics"

*10:50 - 11:30*

Presentation by Dave Mulla, "Long Term Flow Trends in the Minnesota River"

*11:35 - 12:15*

Presentation by Ben Wopat, "404 Permit Guidelines for Drainage"

Herberger Suite

4:00 p.m. Wrap-Up

November 20

8:15 a.m. Welcome - Ronald Harnack - Herberger Suite

8:30 a.m. ✓ "McLeod County Drainage Inventory" presentation by Dr. Linda Tomaselli

DSM + Associates  
300 Park Place E.  
5775 Wayzata Blvd. mpls. 55416-1228  
595-5634

9:15 a.m. ✓ "Douglas County Drainage Inventory" presentation by Marilyn Bayerl and Dave Marshall

10:00 a.m. Break

10:15 a.m. ✓ "Drainage Economics" presentation by Steve Taff, U of M overhead tape mic

11:00 a.m. ✓ "Long Term Flow Trends in the Minnesota River" presentation by Dave Muller, ~~SMC~~ U of M overhead

11:45 a.m. ✓ "404 Permit Guidelines for Drainage" presentation by Ben Wopat, U.S. Army Corps of Engineers

\$30  
\$30  
screen

12:30 p.m. Wrap-Up

Marilyn Bayerl  
Counthouse  
305 8th Ave. W.  
Alexandria 56308  
fax 320-762-2389

- Tibor Gallo, AG
- Curt Deter, Rink-Doonan
- Kent Lakkemo
- Ron Rengquist, Viewers
- Ditch Inspectors

Herberger Suite

4:00 p.m. Wrap-Up

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\$30  
\$30  
screen

12:30 p.m. Wrap-Up

letter to each.

- Tibor Gallo, AG
- Kurt Deter, Rink-noonan
- Kent Lakkemo
- Ron Renquist, Viewers
- Ditch Inspectors



Dr. Steve Toff  
U of M - Ag Economics  
1994 Buford  
337 C Classroom Office Bldg.  
St. Paul 55108

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Ben Wopat, Chief  
USACoE  
190 5th St. E  
St. Paul 55101

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Dave Mulla  
U of M / Soil,  
625-6721  
439 Borlaug Hall  
1991 Upper Buford Circle  
St. P 55108

AV needs  
to presenters

## DRAFT AGENDA

### November 19

9:00 - 5:00

Discussions of public drainage issues, concerns and strategies

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Presentation by Ben Wopat, "404 Permit Guidelines for Drainage"

Block of  
50 rooms  
→ Best Western Kelley Inn  
Nov. 19  
"drainage forum"  
call in by: ~~320-253-0606~~ #67  
release  
Nov. 13  
320-253-0606

## DRAFT AGENDA

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9:00 - 5:00

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1. Key problem issues w/ drainage law - who understands the law - who doesn't  
3. what are the strategies that address their issue  
• create greater understanding of what the law can offer  
2. how are the priorities perceived

Thomaselli



## Minnesota Department of Agriculture

August 26, 1998

MN River Basin Projects, Inc. Area 2  
Ms. Kerry Netzke, Area Coordinator  
1400 E. Lyon St.  
PO Box 267  
Marshall MN 56258

Ms. Netzke:

The Minnesota Department of Agriculture established an ad hoc Agricultural and Rural Water Management discussion group which has met three times this summer. The purpose of the group was to discuss possible responses to the issues and challenges regarding agricultural drainage. We appreciate the participation of the farm and commodity groups, and look forward to convening the group again after fall harvest, in mid-November.

The group (see attached list of invited participants) has had excellent discussions about drainage issues, challenges facing agriculture relating to drainage, and ways to meet those challenges in the near and long-term future. During the last meeting (August 24, 1998) the group discussed the current draft "Principles for Agricultural and Rural Water Management" (enclosed). It was the group's hope that a unified set of principles could be developed and endorsed by agricultural organizations.

Please bring the draft "Principles" before the governing body of your organization for endorsement-in-principle, and inform us of the action taken by your organization, and suggested language changes, if any, by October 26th.

We will compile all the responses and present them to the group at the next meeting in mid-November, with the intent of arriving at a final version of "Principles for Agricultural and Rural Water Management" at that meeting.

Thank you for your participation and attention to this matter. If you have any questions please call Mark Ditrich, (651) 296-1482.

Sincerely,  
Sharon Clark, Deputy Commissioner

A handwritten signature in cursive script, appearing to read "Sharon Clark".

cc:  
Gene Hugoson  
Perry Aasness  
Amy Janke  
Gerald Heil  
Dan Stoddard

**PRINCIPLES**  
for Agricultural and Rural Water Management  
Draft 8/24/98

**1. Working Partnerships**

Agricultural producers, metropolitan, urban, and rural communities, and all other organizations that have drainage discharges should develop working partnerships with agencies and other groups concerned with water management issues. Agencies and groups should involve agricultural producer organizations in discussions concerning agricultural and rural water management issues.

**2. Public and Media Education**

Misperceptions exist among decision-makers, environmental groups, and the general public on the causes of flooding and water pollution as they relate to agricultural drainage. There is a need to better educate public using sound, fact- and science-based information. The public should be made aware that they are the "beneficiaries" of agricultural and rural water management.

*agri. needs to make commitment to agriculture in local water planning.*

**3. Agricultural Industry Education on Land Management/Drainage**

There is a need to better educate agricultural producers, related agricultural industries, and others within watersheds on environmental and economic aspects of watershed-based land management and drainage.

**4. Policy-Maker Dialogue**

Agricultural producers and agricultural producer organizations should proactively discuss agricultural and rural water management issues with present and future federal, state, and local policy-makers.

*Mn. Reim  
R.R. L. M. B.*

*Swad's / Center / 403*

**5. Regional Water Management Research and Education**

Basic and applied research should be conducted and educational curricula should be developed on agricultural and rural water management. Metropolitan, urban, and rural drainage should be considered. Information on the costs and benefits of agricultural and rural drainage should be assembled to better demonstrate economic and environmental benefits.

**6. Funding**

Funding, both immediate and long-term, is needed for research and education on urban and rural water management.

**7. Technical Guidelines for Water Management**

Technical guidelines for drainage discharges (such as amount of flow per unit of time), water management, and nutrient management should be developed based on sound science and with participation from practitioners in the field.

**8. Legal Framework/Solution for Local Water Quantity/Quality Projects**

The legal framework for agricultural and rural water management should better enable projects to be developed which would address water quantity and quality problems in an integrated, economically feasible, environmentally sound, and site-specific manner.

# ORGANIZATIONAL INVITATION LIST:

- ✓ Association of Minnesota Counties (AMC)
- ✓ Minnesota Association of Watershed Districts (MAWD)
- ✓ Minnesota Association of Townships (MAT) *eisele Ave. 55362*
- ✓ Minnesota League of Cities (MLC) *James Miller, 145 Un. 55126-8041*
- ✓ Minnesota Association of Soil & Water Conservation Districts (MASWCD)
- ✓ Minnesota Lakes Association (MLA) *Jim Halleran, President*
- ✓ Minnesota Farm Bureau (MFB)
- ✓ Minnesota Farmers Union (MFU)
- ✓ Minnesota Chapter, National Audubon Society
- ✓ The Nature Conservancy (TNC)
- ✓ Pheasants Forever (PF)
- ✓ Minnesota Waterfowl Association (MWA)
- ✓ Minnesota Power (MP) *30 W. Superior St. Duluth 55802*
- ✓ Minnesota Property Rights Organization *(Paul Zaverat)*
- ✓ Minnesota Center for Environmental Advocacy (MCEA) *Peter Bachman*
- ✓ Minnesota Viewers Association *Ditch (Ron Rengquist)*
- ✓ American Society of Farm Managers and Rural Appraisers *1540 Branston St. 55108*
- ✓ County Auditor representative *Lucy Botzel 293-7295 MACo. officers*
- ✓ County Assessor representative *26 E. Ex #120*
- ✓ Minnesota Rural Counties Caucus *Don Larson, Admin. 433-7218 5077 144+ St. W. App. V 55124*
- ✓ Minnesota Metro Counties Association *430-6111 MAAO*
- ✓ Minnesota Ditch Inspectors Association *433-8173*
- ✓ Northern Counties Land Use Coordinating Board (NCLUCB)
- State Agencies:
  - Department of Natural Resources (DNR)
  - Pollution Control Agency (PCA)
  - Department of Agriculture (MDA)
  - Minnesota Extension Service (MES)
  - Board of Water and Soil Resources (BWSR)
- ✓ Federal Agencies:
  - ✓ U.S. Army Corps of Engineers (USCoE)
  - ✓ Natural Resources Conservation Service (NRCS)
  - ✓ U.S. Fish & Wildlife Service (USF&WS)
  - ✓ Farm Services Agency (FSA)
- other conservation or environmental organizations

Land Improvement Contractors Assoc.  
 - Ex. Director  
 Leonard Binstock  
 208 Oak Ave. N.  
 Owatonna 55060

• MN Assoc. of Assessing Officers  
 Michael Sheehy BWSR member  
 Blue Co. Assessor  
 P.O. Box 8608  
 Mandak 56002

Eleanor  
 6-2810

Denais Dailey  
 277-1657

Q. MLRA

?

?

430-6002  
 Jim Schug



September 24, 1998

TO: Public Drainage Interests

FROM: Ron Harnack, Executive Director  
BWSR

SUBJECT: PUBLIC DRAINAGE FORUM - NOVEMBER 19-20

Over the last few years, and again this year issues and concerns relating to public drainage systems <sup>have frequently arisen, sometimes leading to discussions of changing</sup> are more and more in conversation. In some instances there are growing discussions to <sup>change the drainage law to address these issues and concerns. I acknowledge that drainage is a</sup> ~~change the drainage law to address these issues and concerns. I acknowledge that drainage is a~~ very controversial topic and the very notion that changes are needed <sup>even discuss mentioning</sup> gets numerous organizations <sup>arouses controversy</sup> beginning to stake out ground and draw lines in the sand. <sup>Organizations may react</sup> Frequently this is done without understanding the issues and concerns ~~at hand~~ and frequently without a good understanding of the drainage law itself. This ~~lack of understanding and awareness of various concerns and issues and~~ understanding of the drainage law leads to conflict and controversy that can and should be avoided. I do not believe that whole sale change to the drainage law is warranted. However, there is a need to better understand the issues and concerns <sup>surrounding drainage</sup> and how the current law is ~~crafted to address those issues and concerns. Therefore, BWSR has endorsed the concept of a~~ <sup>es</sup> drainage forum that will bring interests together to discuss ~~thier issues and concerns and~~ <sup>The topic</sup> strategies so that all have a better understanding and awareness of each others' perspective. I have talked with numerous agricultural, local government, conservation, and environmental interests and most overwhelmingly agree that such a forum would be beneficial and ~~have made suggestions~~ <sup>will be</sup> for the forum. Therefore BWSR has scheduled <sup>the</sup> a drainage forum for November 19 & 20 in St. Cloud.

#### PURPOSE:

- \* to bring drainage interests together to share issues & concerns
- \* to better understand the perspectives of various interests
- \* to create a greater understanding and awareness of differing views
- \* to inform, educate & create a greater understanding of the public drainage law
- \* to create an awareness of strategies that interests believe will address thier issues
- \* *is not to form any agreement or consensus*
- \* *is not to debate or discuss any specific legislative proposal(s)*

#### PARTICIPATION:

##### General Principles:

- \* involve key local government, special interests and state and federal agencies with an interest in public drainage
- \* ensure a regional perspective from participants as drainage has unique regional orientation and application - northwest, south, northeast, central and metro. Participating organizations should ensure that they have individuals that can reflect these regional perspectives as part of the discussion.

**Organizational Invitation List:**

list organizations: mj list the organizations from the attachment

**TECHNICAL PANEL:**

A technical panel will provide the forum with expertise on the proper interpretation of the drainage law so that issues, concerns and strategies can be presented in proper context. Technical advisors include:

Legal: Kurt Deter, confirmed  
Others pending

Engineering: pending

Viewing: pending

**WHEN:** November 19 from 9am to 5pm  
November 20 from 8:30am to noon

**LOCATION:** St. Cloud Civic Center

**FACILITATOR:** Roger Williams, professional facilitator, mediator

I am requesting that each organization ~~to~~ identify individuals that would represent thier organizations at the forum. You may feel that more than one person is appropriate to represent the diversity of drainage across the state. Although, anyone is welcome to come the forum I need to have an indication of who your organization will <sup>from</sup> sending so that appropriate arrangements can be made. Please let me know by October 23, 1998. If you have any questions or suggestions please call me at 651-296-0878.

mj keep the draft agenda on a separate sheet.

cc: board members  
: Commissioners

August 19, 1998

DRAFT

## DRAINAGE FORUM

### PURPOSE:

- \* to bring drainage interests together to share issues & concerns;
- \* to better understand the positions of various interests;
- \* to create a greater understanding & awareness of differing views;
- \* to better assess participants understanding of the public drainage law;
- \* to inform and educate interests on the public drainage law;
- \* to create an understanding and awareness of strategies that interests believe will address thier issues and concerns;
- \* *is not to form any agreement or consensus;* and
- \* *is not to debate or discuss any specific legislative proposal.*

### PARTICIPATION:

- \* involve key local government, special interests and state agencies with interest in public drainage; and
- \* ensure a regional perspective as drainage has unique regional orientation, northwest, southern, metro, central, northeast.
- \* suggested groups:
  - Association of Minnesota Counties, AMC
  - Minnesota Association of Watershed Districts, MAWD
  - Minnesota Association of Townships, MAT
  - Minnesota League of Cities, MLC
  - Minnesota Association of Soil & Water Conservation Districts, MASWCD
  - Minnesota Lakes Association, MLA
  - Minnesota Farm Bureau, MFB
  - Minnesota Farmers Union, MFU
  - Minnesota Chapter, National Audobon
  - The Nature Conservancy, TNC
  - Pheasants Forever, PF
  - Minnesota Waterfowl Association, MWA
  - State Agencies: DNR, PCA, AGR, BWSR, EXTENSION
  - Federal Agencies: Corps of Engineers (COE), Natural Resources Conservation Services (NRCS), Fish & Wildlife Service (USF&WS), Farm Services Agency (FSA);
  - Minnesota Property Rights organizations
  - Minnesota Center for Environmental Advoquacy, MCEA
  - Minnesota Viewers Association
  - American Society of Farm Mgrs. & Rural Appraisers
  - County Auditor representative
  - County Assessor representative

- M.P. ~~11~~ - Keith Hannon

Natural Resources Bd. (13) (wirens)

*Mr. Rural Counties Assn*  
*Mr Metro Counties Assn*  
- other conservation or environmental organizations  
*Mr Ditch Inspector Assn*

**DRAFT**

**Technical Panel:**

Technical panel will provide expertise on the interpretation of the public drainage law so that the issues, concerns and strategies can be presented in proper context. Options, not necessarily exclusive.

- \* Legal: Kurt Deter  
Tibor Gallo  
Arvid Wendland
- \* Engineering: DNR - Waters
- \* Viewing: Viewers Association

**Place, time & location:**

- \* November 19 & 20
- \* 9:30am to 4:30pm on the 19th
- \* 8:30 till noon on the 20th, if second day is formalized (see below)
- \* St Cloud Civic Center

**Facilitator:**

- \* Roger Williams, professional facilitator, mediator.

There has been interest in some formal presentations on some activities that may be directly and indirectly related to drainage ie, McLeod County drainage inventory presentation, UofM presentation on hypoxia, U of M's economic perspective on drainage. If people are available this would be scheduled for the second day.

## **DRAFT AGENDA**

### **November 19**

Discussions of public drainage issues, concerns & strategies.

### **November 20**

8:30 - 9:15: Presentation on McLeod County drainage inventory

9:15 - 10:00: Presentation on Douglas County drainage inventory

10:00 - 10:15: Break

10:15 - 10:45: Presentation by Steve Taff on drainage economics

10:50 - 11:30: Presentation by Dave Mulla on drainage and water quality

11:35 - 12:15: Presentation by Ben Wopat on 404 permit guidelines for drainage