



UPPER MISSISSIPPI RIVER SOURCE WATER PROTECTION PROJECT

June 07

UMRSWPP

1

The “W”s of the UMRSWPP

- ◆ **What**
- ◆ **Who**
- ◆ **Why**
- ◆ **Where**
- ◆ **When**



WHAT is the UMRSWPP?

- ◆ A coordinated effort to develop **SOURCE WATER PROTECTION PLANS** that will be integrated with **WELLHEAD PROTECTION PLANNING** on a watershed basis

WHO is the UMRSWPP?

- ◆ **City of St. Cloud**
 - Surface water system

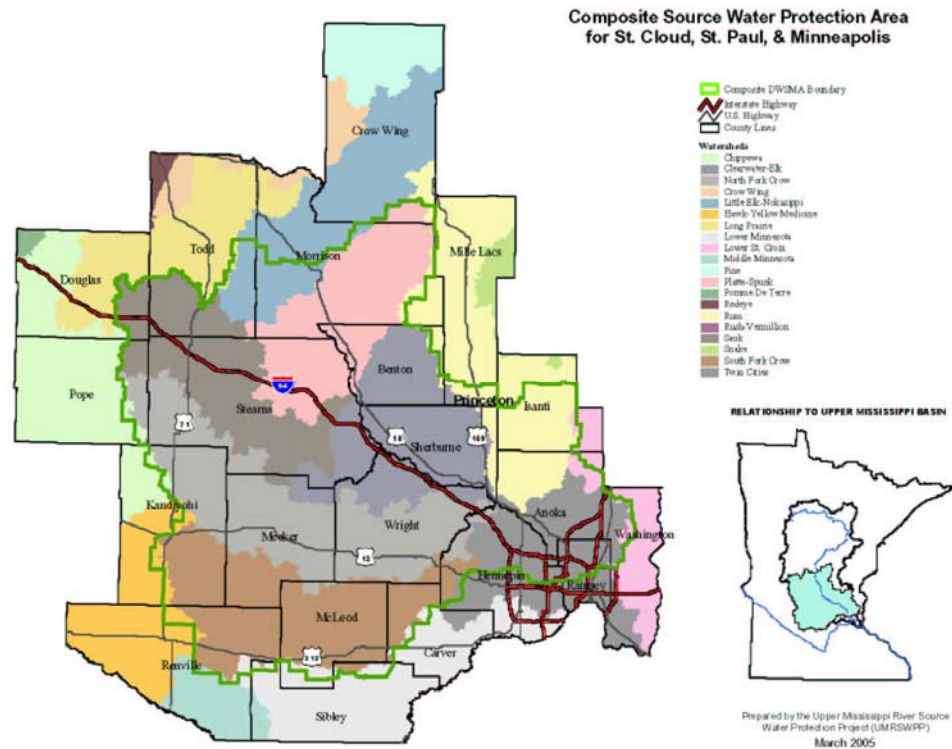
- ◆ **City of Minneapolis**
 - Surface water system

- ◆ **City of St. Paul**
 - Surface water system
 - Wells

WHY the UMRSWPP?

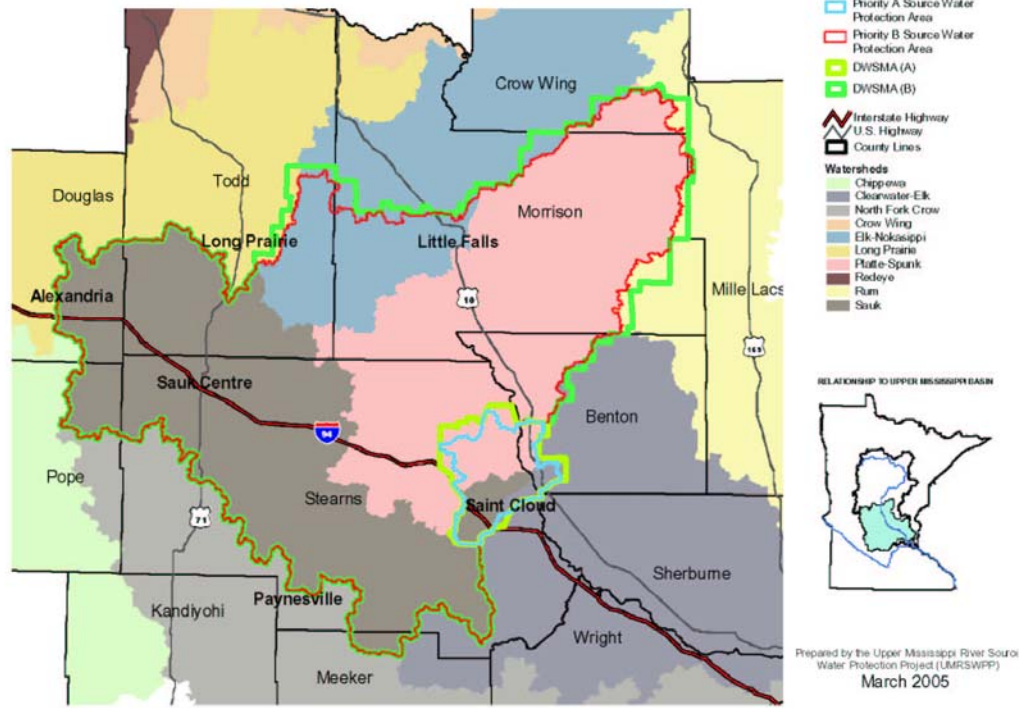
- ◆ Recently completed SOURCE WATER ASSESSMENTS encourage **PROTECTION**
- ◆ Voluntary effort by St. Cloud, Minneapolis & St. Paul
- ◆ CLEAN WATER ACT - Section 319 Grant
- ◆ To prevent contaminants which may have an adverse effect on human health from entering drinking water supplies

WHERE is the UMRSWPP?

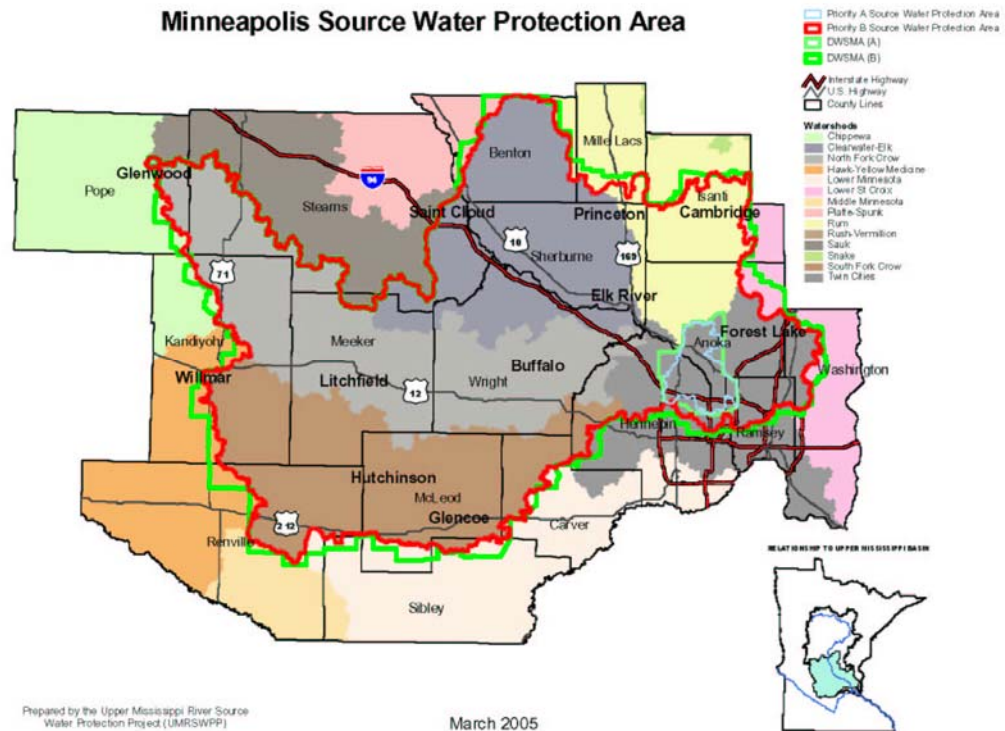


ST. CLOUD IER AREA

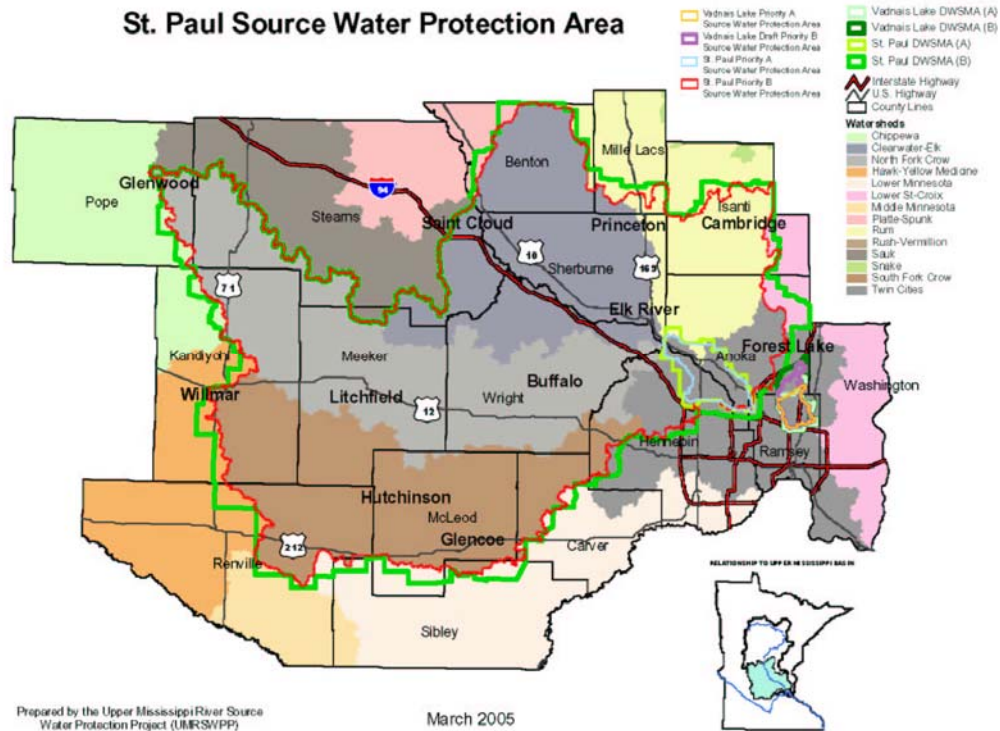
St. Cloud Source Water Protection Area



MINNEAPOLIS IER AREA



ST. PAUL IER AREA



WHEN is the UMRSWPP?

- ◆ SWA's completed, WHP underway for many groundwater systems, money available to assist with finance of protection plans
- ◆ **THE TIME IS NOW**

SECTION 319 GRANT ACTIVITIES

- ◆ 3-year work plan
- ◆ Calculate time of travel for tributaries
- ◆ Comprehensive contaminant source inventories
- ◆ TMDL considerations for Mississippi & tributaries
- ◆ Prioritize PWS wells relative to river/aquifer interaction
- ◆ Recognition of source water protection areas

SECTION 319 GRANT ACTIVITIES

- ◆ Education & Outreach
- ◆ Involve local government
- ◆ Coordinate SWP & WHP in watershed
- ◆ Identify high priority areas where land uses impact water quality

CURRENT STATUS OF SWP PLANNING

- ◆ **SWP Plans being developed for inner emergency response areas**
- ◆ **Expand initial effort to include entire identified watershed for St. Cloud, Minneapolis & St. Paul water supplies**
- ◆ **First program of its kind in nation**

CURRENT SWP EFFORTS

- ◆ Individual SWP Teams:
 - Review Potential Contaminant Source Inventories
 - Correct Inaccurate Data
 - Drafting Management Strategies for identified PCSI issues

- ◆ UMRSWPP Overview Team
 - Developing PCSI Maps
 - Drafting SWP Plan(s) Language



NEXT STEPS

- ◆ Formalize Oversight Entity
- ◆ St. Cloud, Minneapolis & St. Paul complete contaminant source inventory
- ◆ Joint meetings with groundwater systems
- ◆ Meetings with local governmental units
- ◆ Start other groundwater systems in WHP Program
- ◆ Develop education materials
- ◆ Public Informational Meetings
- ◆ Recognition by EQB

SOURCE WATER PROTECTION ISSUES

- ◆ Size of area
- ◆ Number of water suppliers
- ◆ Lack of experience coordinating WHP/SWP
- ◆ Public/Landowner Understanding & Involvement
- ◆ Recognition of SWP Areas
- ◆ Local government support
- ◆ Conflicting implementation measures
- ◆ Funding to implement SWP Plans

POTENTIAL CONTAMINANT SOURCE INVENTORY

Issues

- ◆ 7800 Square Miles of watershed area
- ◆ Several Public Water Suppliers Developing WHP Plans
- ◆ Numerous local governmental units
- ◆ Incomplete and outdated data

PRIORITY CONTAMINANTS

- ◆ **TSS, Sediment, and Suspended organics**, which indicates erosion and are commonly associated with bacteria, organisms, and metals and which are precursors to THM's
- ◆ **Cryptosporidium**, a parasite present in the Mississippi River and is difficult to remove or can pass through water treatment, and other biological and microbiological organisms (Fecal Coli form, Giardia, viruses)
- ◆ **Phosphorus**, which promotes growth of vegetation and can disrupt treatment processes
- ◆ **Nitrates and Ammonia**, which can disrupt disinfection processes

PRIORITY CONTAMINANTS

- ◆ **SDWA Chemicals:** 406 Herbicides; 407 BNA's; 408 Cabamates; 409 Glyphosate; 410 Dalapon (classes of chemicals monitored for but not detected in Vadnais Lake)
- ◆ **Pesticides/Herbicides**
- ◆ **Organic solvents** (VOC's, MTBE, TCE)
- ◆ **Petroleum products**
- ◆ **Endocrine-disrupting chemicals**
- ◆ **Radioactive materials**

COORDINATING SWP

- ◆ Develop SWP & WHP Plans jointly
- ◆ Common Goals
- ◆ Similar problems & issues
- ◆ Local government buy-in
- ◆ Area-wide implementation
- ◆ Oversight Entity

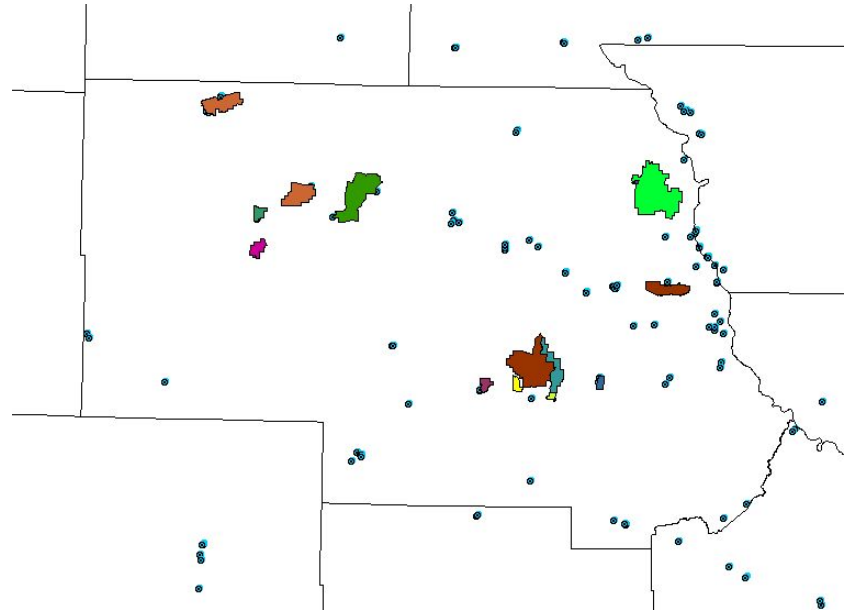
WORKING TOGETHER

◆ WHO is the UMRSWPP?

- **St. Cloud** – Surface water system
- **Minneapolis** – Surface water system
- **St. Paul** – Surface water system with wells
- **ALL community groundwater systems** within the Combined DWSMA
- **All NTNC groundwater systems**
- **State & Federal agencies**
- **Local government entities**
- **Special Interest Groups**
- **Property Owners**

COOPERATION

- ◆ Working together with Public Water Suppliers
- ◆ Build on existing efforts
 - Wellhead Protection Plans
 - Counties
 - Cities
 - Townships
 - SWCD
 - Watershed Districts
 - WMO's



PUBLIC INFORMATION MEETINGS

St. Cloud & Elk River, March 2005

Agenda Items

- ◆ SWP in Minnesota
- ◆ UMRSWPP
- ◆ SWP Area Delineations and Local Co-operation
- ◆ Working Together to Protect Drinking Water

GETTING FAMILIAR WITH WATERSHEDS

- ◆ Sandusky River Watershed, Ohio
 - Tour in 2004
 - Visited with local units of government
 - Met with citizen groups
 - Viewed SWP projects



GETTING FAMILIAR WITH WATERSHEDS

◆ Minnesota Watershed Tour

- October 2005
- Took SWP message to locals
- Characterized Mississippi River watershed area
- Networking with watershed/WMO staff
- SWP Projects visited included:
 - Stormwater Feedlots ISTS Development
 - Agricultural practices



LOCAL CO-OPERATION

- ◆ Develop SWP & WHP Plans jointly
- ◆ Common Goals
- ◆ Similar problems & issues
- ◆ Local government buy-in
- ◆ Area-wide implementation
- ◆ Oversight Entity
- ◆ Avoid Management Conflicts
- ◆ Funding Opportunities

SWP LINKAGES

- ◆ Common Resources
- ◆ Land Uses Interact
- ◆ Groundwater Flow Patterns
- ◆ Common Issues/Problems
- ◆ Common Solutions
- ◆ Cooperation in Implementation
- ◆ Communication

HOW TO DO IT?

- ◆ Communication & Respect
- ◆ Share Planning Responsibilities
- ◆ Share SWP Team Responsibilities
- ◆ Interlink Plans
- ◆ Implement Together
- ◆ Mutual Funding Possibilities
- ◆ Communication

QUESTIONS?

Upper Mississippi River Source Water Protection Project

Dave Brostrom, Project Administrator

651-690-0690

brost004@tc.umn.edu

CONTACTS

- ◆ UMRSWPP
 - Dave Brostrom
- ◆ MDH
 - Art Persons
- ◆ MPCA
 - Jim Hodgson
- ◆ MRWA
 - Dave Neiman



Minnesota Rural Water Association



Dave Neiman

Source Water Protection Specialist

216 12th Avenue SE

Elbow Lake, MN 56531

dave.neiman@mrwa.com

www.mrwa.com

218.820.0595

800.367.6792