Drainage Records Modernization And Multipurpose Drainage Management Grants

Minnesota Public Drainage Manual Broad User Outreach Workshops

Moorhead / St. Cloud / New Ulm
May 22, 23, and 25, 2017

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Drainage Records Modernization & GIS Database Project
Phase 1

Background and Context

- Drainage records modernization and preservation
  - Drainage Work Group recommendations – 2007
  - BWSR Drainage Records Modernization Guidelines – 2008
  - BWSR DRM Cost-Share – 2009 and 2011 (24 of 44 apps.)

- Learn from prior drainage records modernization experience
  - Rice Creek Watershed District database work (by HEI)
  - DrainageDB – Houston Engineering, Inc.

- LCCMR project (BWSR first applied 2012, successful 2014)
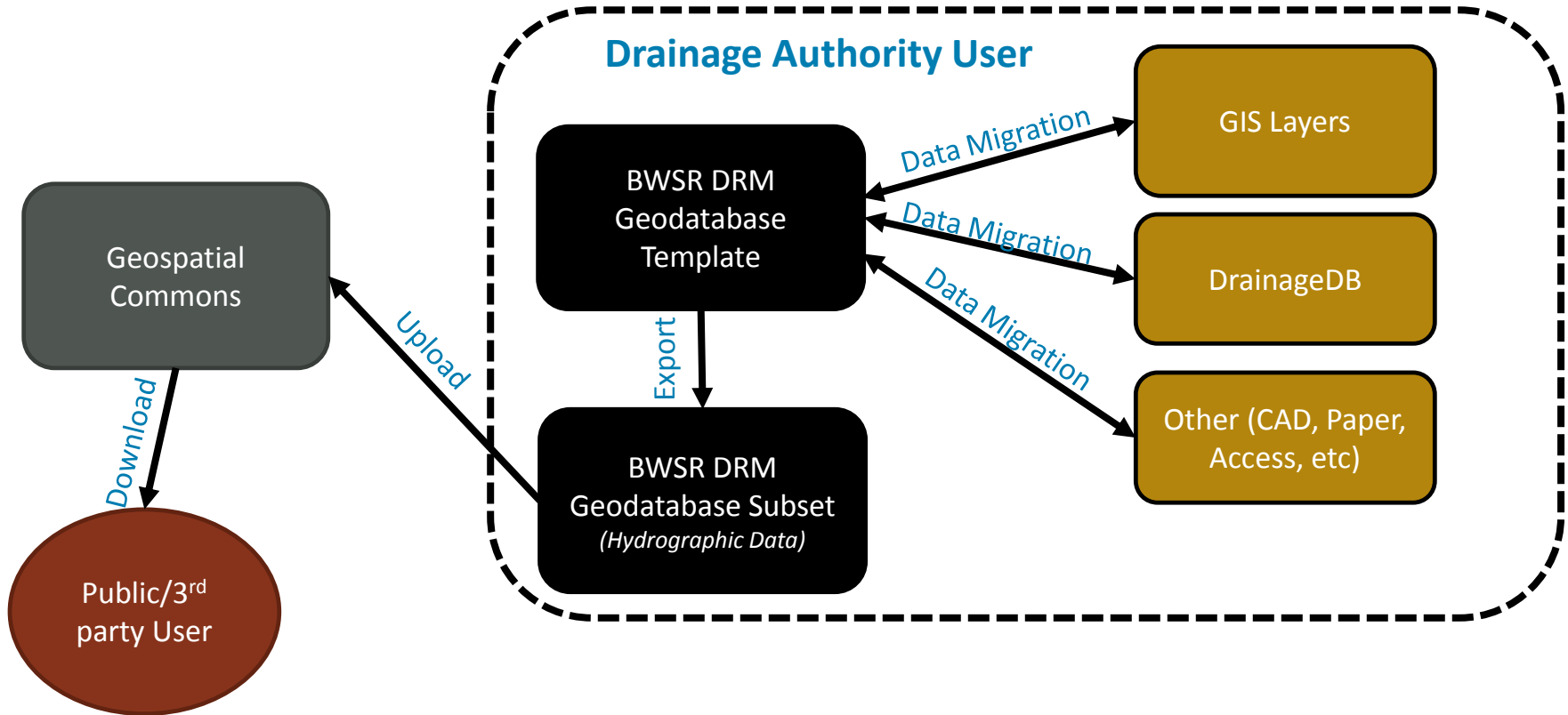

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Drainage Records Database Project Process

- Contractors (MnGeo and Houston Engrg., Inc.)

- 3 Focus Group Meetings (outstate and metro)

- Project Advisory Committee (drainage inspectors, auditors, GIS staff, drainage authority)

- Make GIS Template compatible with DrainageDB

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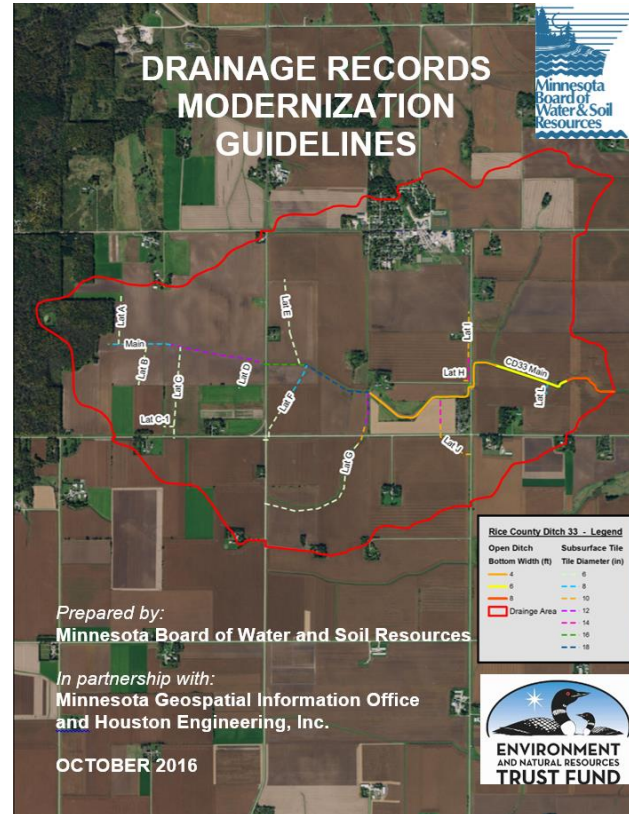
Conceptual Diagram

Drainage Records Database Products

1) **Drainage Records GIS Database Template** – free to Chapter 103E drainage authorities – one string: hydrographic data

2) **Updated Drainage Records Modernization Guidelines**

3) **Portal and central database for Chapter 103E drainage system hydrographic data**, primarily for watershed modelers

4) **Webinar** about the database template and DRM Guidelines

- Go to: **BWSR, Conservation Implementation, Drainage** page, or **MnGeo GeoCommons** (and search for "**DRM template**")

- BWSR Request Form for registration, hydrographic data agreement, and database template package

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Drainage Records Modernization Guidelines
October 2016

available via BWSR website and MnGeo GeoCommons

Drainage Records Modernization & GIS Database Project Phase 2

- FY 2017 LCCMR approved $500K to BWSR for Drainage Records Modernization cost-share
- If Legislature approves, available FY 2018
- Competitive, will require minimum 1:1 match
- Applicants must agree to use the Database Template and provide drainage system hydrographic data to the GeoCommons annually

CWF Multipurpose Drainage Management Program

MDM Program Key Characteristics

- Supports drainage authority use of Section 103E.015 Considerations Before Drainage Work is Done, and 103E.011, Subd. 5 Use of External Sources of Funding
  - integrate public and private funding for multipurpose drainage management
- Requires a partnership of a drainage authority and SWCD for:
  - on-field, on-farm, and on-drainage system practices
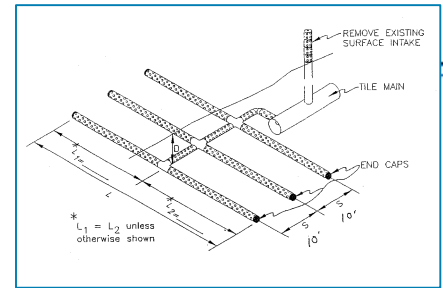- Improve water quality, reduce drainage system maintenance, and protect or improve drainage system capacity

Priority Chapter 103E Drainage System

- A drainage system that has <u>documented</u> priority sediment and/or water quality concerns.

- Documented = in an analysis, study, strategy, plan, engineer's repair report, or engineer's preliminary survey report for a drainage system improvement
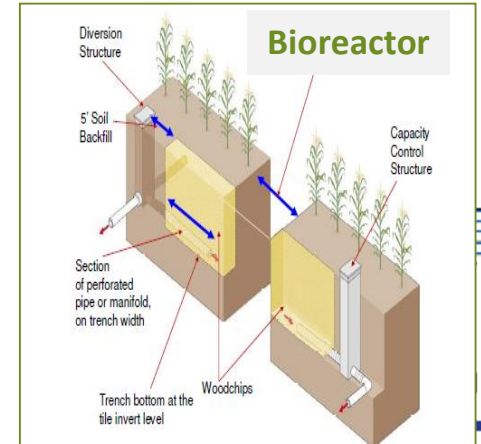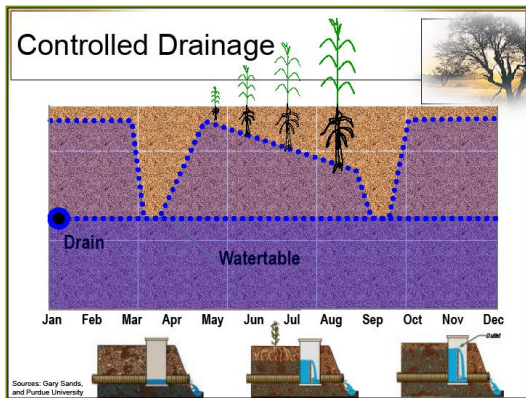
Eligible Practices / Activities

1. Grade Stabilization Structure (including Side Inlets to a Chapter 103E drainage ditch, and in-field structures)
2. Grassed Waterway
3. Water and Sediment Control Basin
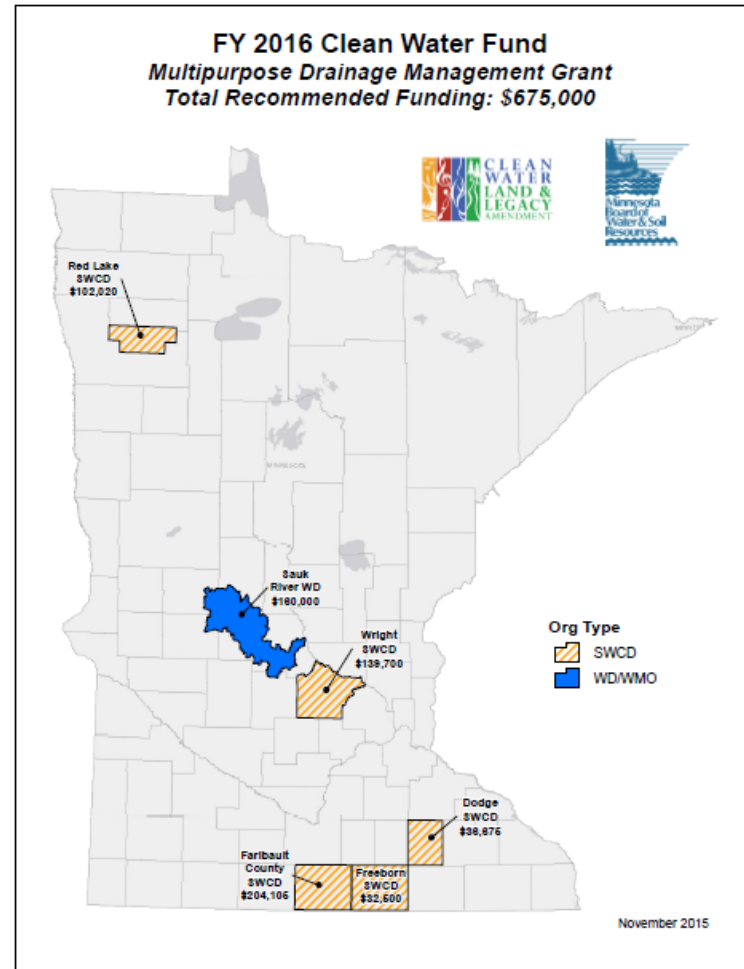4. Open tile inlet replacement

Eligible Practices / Activities

5. Storage and Treatment Wetland Restoration
6.- 8. DWM – Controlled Subsurface Drainage
9. Saturated Buffer
10. Denitrifying Bioreactor

Controlled Drainage

Drain

Watertable

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Sources: Gary Sands, and Purdue University

Saturated Buffer

Bioreactor

Diversion Structure

5' Soil Backfill

Capacity Control Structure

Section of perforated pipe or manifold, on trench width

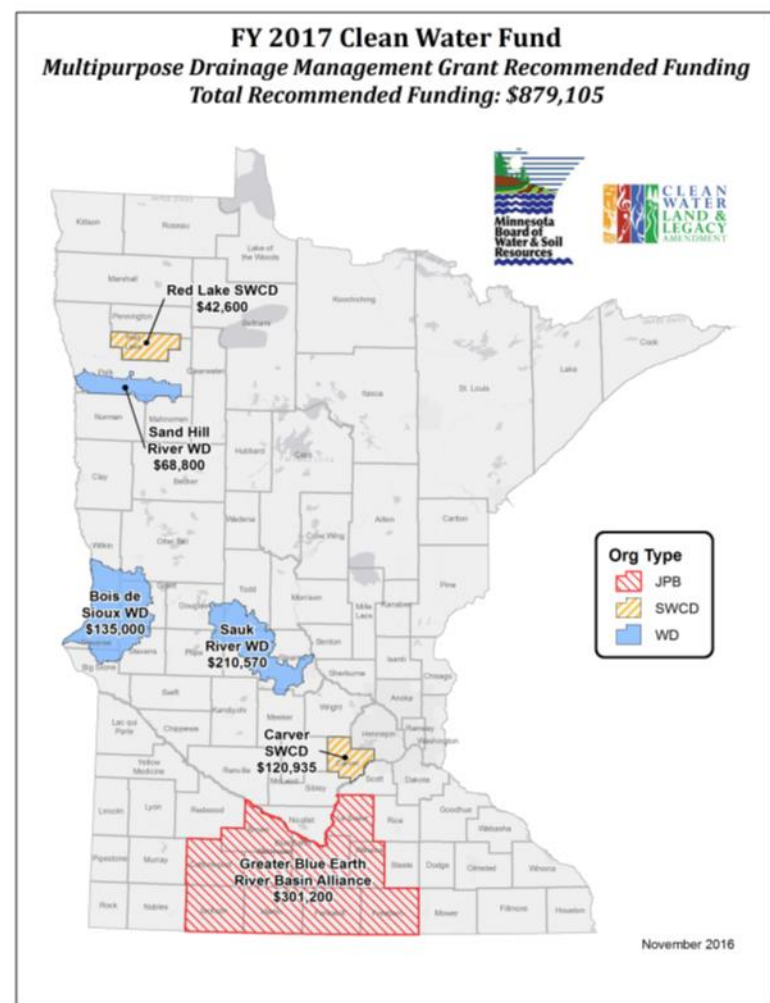Trench bottom at the tile invert level

Woodchips

FY 16 MDM Grant Recipients

Note: Faribault project found to be ineligible. Total funding allocated = $470,895

FY 17 MDM Grant Recipients

Note: Includes $204,105 carryover from FY16

FY 2017 Clean Water Fund
Multipurpose Drainage Management Grant Recommended Funding
Total Recommended Funding: $879,105

Red Lake SWCD $42,600

Sand Hill River WD $68,800

Bois de Sioux WD $135,000

Sauk River WD $210,570

Carver SWCD $120,935

Greater Blue Earth River Basin Alliance $301,200

Org Type
- JPB
- SWCD
- WD

November 2016

Remaining Questions?