



Drainage Records Modernization Database Project



Focus Group Meetings
New Ulm, Shoreview, Barnesville, MN
7-28-15 & 7-29-15

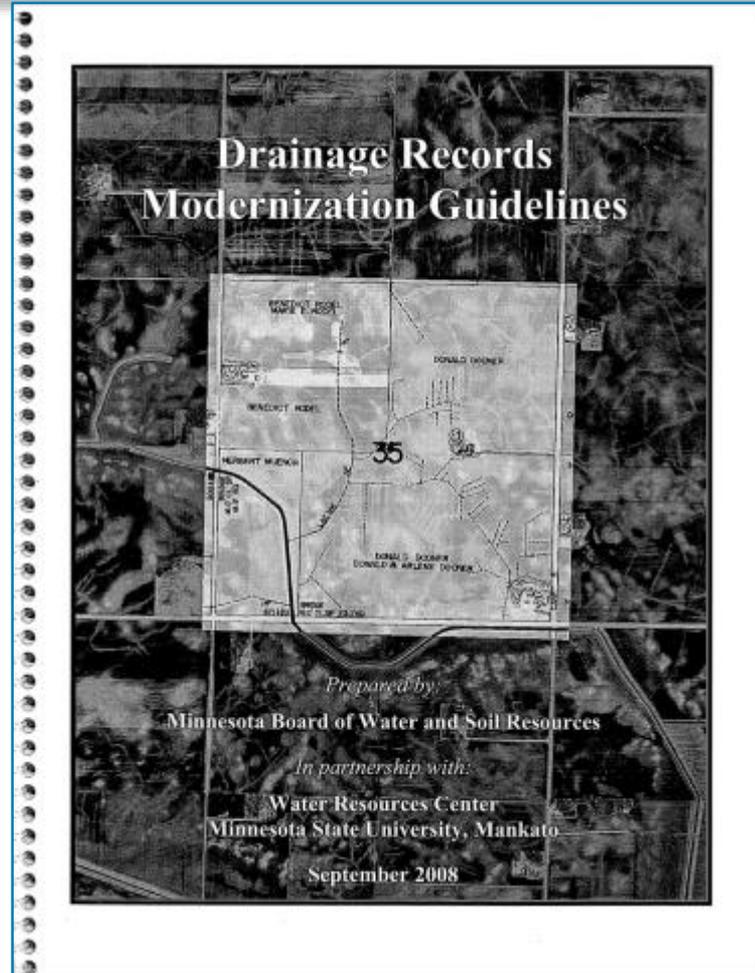


Background Information

- Old Chapter 103E drainage system records – various hard copy files
- Drainage records modernization and preservation
 - Drainage Work Group recommendations – 2007
 - Drainage Records Modernization Guidelines (DRMG) – 2008
 - Drainage records modernization cost-share – 2009 and 2011
- Learn from prior drainage records modernization GIS database(s)
 - Rice Creek Watershed District
 - DrainageDB – Houston Engineering
- LCCMR project grant (BWSR first application for 2012, successful for 2014)



Drainage Records Modernization Guidelines – September, 2008





Purposes of Drainage Records Database Project

- 1) database template for use by County and Watershed District Chapter 103E drainage authorities, their staff, drainage engineers and others;
- 2) enable data accessibility via a statewide GIS database for uses such as water management modeling, planning and implementation, with periodic collection of data from drainage authority users of the database template;
- 3) update the Drainage Records Modernization Guidelines, Sep. 2008; and
- 4) make the database, guidelines and data available via a web-based, public data portal (Minnesota Geospatial Commons).

Focus on hydrographic data for water modeling and planning



BWSR Lead Staff, Contract Team and Project Duration

BWSR Lead Staff:

Project Manager: Al Kean with assistance of Tim Gillette

Contract Team:

MN.IT, MnGeo – *Project Manager:* Jim Krumrie

Houston Engineering – *Project Manager:* Brian Fischer

Project Duration:

Completion by June 2016



Project Advisory Committee

Members: public drainage inspectors / mgr., co. auditor-treasurers, drainage engineer, WD administrators, GIS specialist, SWCD technician

Roles:

- 1) assist interpretation of input from focus group meetings and questionnaire;
- 2) help identify uses of public drainage system information;
- 3) help define user requirements and data standards for database template;
- 4) help define desired updates to the Drainage Records Modernization Guidelines, Sep. 2008; and
- 5) provide review and comment on draft and final database template and updated Drainage Records Modernization Guidelines.



Focus Group Meetings and Questionnaire

Query users of Chapter 103E drainage system records / data

- Who uses drainage system records, how?
- What types records are available?
- What technology is currently being used?
- How are DRM Guidelines being used and what can be improved?
- What type of data should a database template include?
- Other recs for data standards and database characteristics?
- Priorities / Concerns?



Transition





Drainage Modernization Examples

What does this mean?

- Scanning historic documents
- CAD files
- GIS digitization
- GPS
- Website
- Database creation
- Access/Manage information through software solution



Drainage Modernization Examples

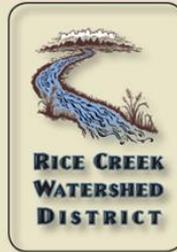
Why might this be important?

- Preserve historic documents
- Easier method to manage the information
- Easier method to access the information
- Sharing information (between departments or organizations)
- Serve land owners more efficiently
- Centralize information and provide consistency

Priorities will vary by organization type.



Rice Creek Watershed District



RCWD Drainage System Information Portal

Background

The Rice Creek Watershed District recently received a grant from the Board of Soil and Water Resource to aid in the completion of a drainage records modernization project. The project involved three primary components. 1) To scan and inventory the available historic records for each drainage system 2) To create GIS layers from the information 3) To make the information accessible through a website. The RCWD is currently in the process of working on this project and has recently completed 13 of their drainage systems. The remainder of the system in the RCWD will be added to this portal and completed throughout the 2010 calendar year.

GIS Data Viewing and Access

Part of this project consisted of developing an interactive mapping application to view the GIS data related to the drainage systems. Click on the link to open the interactive map in a new window. [Start DitchMapper](#)

To download the GIS data for use in ArcGIS software, [click here](#).

Document Summary Listing and Access

- [Anoka-Washington Judicial Ditch 2](#)
- [Anoka-Washington Judicial Ditch 3](#)
- [Judicial Ditch 4](#)
- [Washington Judicial Ditch 5](#)
- [Washington Judicial Ditch 7](#)
- [Anoka County Ditch 10-22-32](#)
- [Anoka County Ditch 15](#)
- [Anoka County Ditch 31](#)
- [Anoka County Ditch 46](#)
- [Anoka County Ditch 47](#)
- [Anoka County Ditch 55](#)
- [Anoka County Ditch 72](#)
- [Ramsey County Ditch 11](#)

Click on a drainage system on the map to open the document summary listing.



Faribault County

- 100+ Public Drainage Systems
- Historic Document Listing & Electronic Archive
- GIS Mapping of Public Drainage System Alignments
- Partial GIS Mapping of Benefitting 40's
- Web GIS Access to Data



Sauk River Watershed District – Benefit Assessment Mapping

- 3 years ago performed a drainage modernization project
- Then develop drainage portal and GIS viewer
- Now performing “Benefit Assessment Mapping” special project
- Needed to update assessments and provide a user friendly format to each County



Legend

- CD 24
- Sections
- Cities
- CD 24 Benefiting Parcels
- Township/Range
- County Boundaries

Sauk River
Watershed District
CD 24
Benefiting Parcels



Date Saved: 11/20/2013 10:47 AM

CD Benefiting Parcels	
CD Parcels	CD Acres
1	1,000
2	2,000
3	3,000
4	4,000
5	5,000
6	6,000
7	7,000
8	8,000
9	9,000
10	10,000
11	11,000
12	12,000
13	13,000
14	14,000
15	15,000
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40	40,000
41	41,000
42	42,000
43	43,000
44	44,000
45	45,000
46	46,000
47	47,000
48	48,000
49	49,000
50	50,000





Sauk River Watershed District

- Process
 - Convert GIS to Excel for final Assessments

TAXPARCEL	OWNER	DEED_AC	Benefits_Parcel	Ben_Per	Pro_Amt	New Prj Costs	Dollar Amount	% by Dollar
18.09857.0000	WESTLAND DAIRY LLP	145.56	\$40.00	100.00%	\$40.00	\$5,000.00	\$52.39	1.05%
18.09861.0000	KEITH J & SHEILA R LANDWEHR	77.49	\$80.00	93.73%	\$74.98	\$5,000.00	\$98.21	1.96%
18.09862.0000	WESTLAND DAIRY LLP	2.51	\$40.00	6.28%	\$2.51	\$5,000.00	\$3.29	0.07%
18.09863.0000	SCOTT V DOLL	80.00	\$230.00	100.00%	\$230.00	\$5,000.00	\$301.25	6.02%
18.09865.0000	ALLEN A & SUSAN R STOMMES	200.00	\$290.00	100.00%	\$290.00	\$5,000.00	\$379.83	7.60%
18.09866.0000	BRIAN & CHRISTI SCHERBER	112.11	\$410.00	80.40%	\$329.64	\$5,000.00	\$431.75	8.64%
18.09866.0001	HOLLY M TUCKER	9.75	\$410.00	19.59%	\$80.32	\$5,000.00	\$105.20	2.10%
18.09867.0000	GERARD WESTRUP	38.74	\$150.00	100.00%	\$150.00	\$5,000.00	\$196.47	3.93%
18.09869.0000	SCOTT V DOLL	40.00	\$300.00	100.00%	\$300.00	\$5,000.00	\$392.93	7.86%
18.09870.0000	RYAN S LUDWIG	20.00	\$580.00	50.00%	\$290.00	\$5,000.00	\$379.83	7.60%
18.09871.0000	KEITH J & SHEILA R LANDWEHR	20.00	\$580.00	50.00%	\$290.00	\$5,000.00	\$379.83	7.60%
18.09923.0000	DUANE R & KELLY J SCHREINER	39.89	\$270.00	50.00%	\$135.00	\$5,000.00	\$176.82	3.54%
18.09923.0500	DUANE R & KELLY J SCHREINER	39.89	\$270.00	50.00%	\$135.00	\$5,000.00	\$176.82	3.54%
18.09929.0000	SCOTT V DOLL	80.00	\$80.00	100.00%	\$80.00	\$5,000.00	\$104.78	2.10%
18.09865.0000	ALLEN A & SUSAN R STOMMES	200.00	\$180.00	100.00%	\$180.00	\$5,000.00	\$235.76	4.72%
18.09865.0000	ALLEN A & SUSAN R STOMMES	200.00	\$200.00	100.00%	\$200.00	\$5,000.00	\$261.96	5.24%
18.09865.0000	ALLEN A & SUSAN R STOMMES	200.00	\$230.00	100.00%	\$230.00	\$5,000.00	\$301.25	6.02%
18.09865.0000	ALLEN A & SUSAN R STOMMES	200.00	\$80.00	100.00%	\$80.00	\$5,000.00	\$104.78	2.10%
None	TOWN OF LUXEMBURG		\$500.00	100.00%	\$500.00	\$5,000.00	\$654.89	13.10%
None	TOWN OF LUXEMBURG		\$200.00	100.00%	\$200.00	\$5,000.00	\$261.96	5.24%
			\$5,120.00				\$5,000.00	100.00%



Watonwan County

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Minnesota

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GIS Incorporation Efforts

New System
We are in the process of incorporating Public Drainage System (PDS) information into a Geographical Information System (GIS) database. Below are links to a few of the drainage system maps. Soon, we should have similar maps for all PDSs in Watonwan County. Our hope is that someday you will be able to download tile alignment information to your computer and/or Global Positioning System (GPS) unit.

- [County Ditch #1](#)
- [Judicial Ditch #1](#)
- [Judicial Ditch #2](#)
- [County Ditch #4](#)
- [Judicial Ditch #5](#)
- [County Ditch #6](#)
- [Judicial Ditch #6](#)
- [Judicial Ditch #7](#)
- [Judicial Ditch #8](#)
- [Judicial Ditch #9](#)
- [Judicial Ditch #15](#)
- [Judicial Ditch #18](#)
- [Judicial Ditch #23](#)
- [Judicial Ditch #26](#)
- [Judicial Ditch #29](#)
- [Judicial Ditch #31](#)
- [Judicial Ditch #35](#)
- [Judicial Ditch #36](#)
- [Judicial Ditch #38](#)
- [Judicial Ditch #52](#)

Blue Earth County

[Home](#) > [Blog](#)



Tools

-  [RSS](#)
-  [Notify Me](#)
-  [View Archived](#)

Blog

- [Blue Earth County DrainageBlog](#)

Jul **Ditch Happenings July 20th - 24th**

24 Posted on July 24, 2015 at 3:21 PM by Acacia Wytaske

Four ditch items were on the agenda at this week's Blue Earth County Commissioner's Board Meeting.

1. For inspection reports, a tile repair and replacement of the surface intake was approved on **JD20** (Lyra Township).
2. A Public Hearing for the Final Improvement and Redetermination of Benefits for **CD28** was set for 9:30am during the September 8th, 2015 Blue Earth County Board of Commissioners Meeting. Notices will be sent to the landowners on **CD28** and also published in the Free Press.
3. A public hearing on the petition for removal of property from



DrainageDB

One-Stop Web Based Drainage Management Portal

- Web Based / Hosted Database
- Store Historic Documents
- Track Activities
 - Redeterminations, Improvements, Repairs, Maintenance, Inspections
- Manage Workflows, Processes and Proceedings
- GIS Integration
- Mobile Inspections



DrainageDB Users

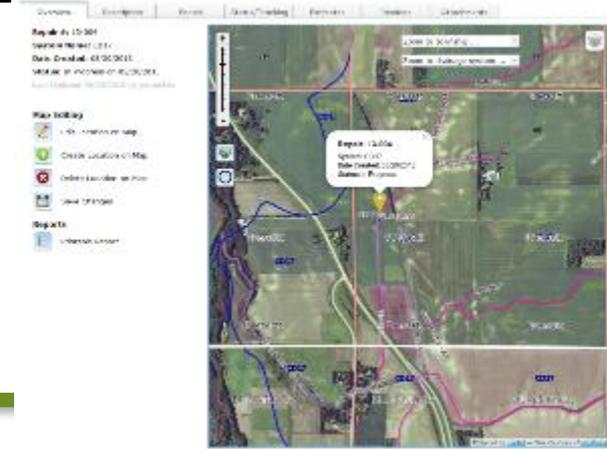
- Designed for multiple users
 - County / Watershed Staff
 - Commissioner's / Board Members
 - Adjacent Counties
 - Public / Land Owners
 - Contractors



DrainageDB Users

- Faribault County went live in July 2013
- 17 Counties and Watershed Districts

DEMO





Transition





DRM Database Template

Input Sought

- Business needs/uses for database template
- What content?
- Intended outcomes
 - Efficiencies
 - Standardization
 - Sharing data (possibility to aggregate in the future)
 - Others



Breakout Session

Divide into Groups of 4-8 by Organization Type

- What are your top 5 uses of Statewide database template
- List examples of content that should be included in a Statewide template
- Take 10 minutes to discuss with your group
- Please have one person be willing to share your group information



Summarize Group Session

Uses



Summarize Group Session

Content



Question and Answers Session





Questionnaire

- https://www.surveymonkey.com/r/public_drainage_db



Closing

- Input from focus group meetings and questionnaire will inform PAC and project team
- Template will be developed and tested over the next 9 months
- Opportunities may exist to provide feedback to draft template and guidelines document
- Guidelines document will be updated spring 2016
- Completion date for project is June 30th, 2016