Agricultural Chemical Reduction Effort (ACRE)

Dakota County Planning Commission

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Environmental Resources
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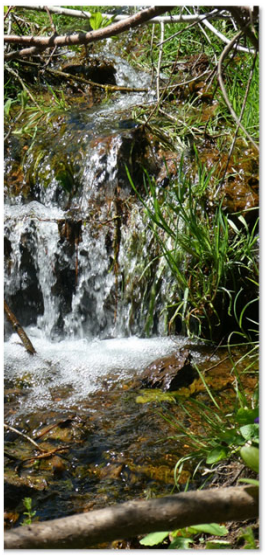
Overview

- Introduction
- Need
- Draft Concept
- Plan Development - Next Steps
  - Technical Research
  - Stakeholder Engagement
- Questions



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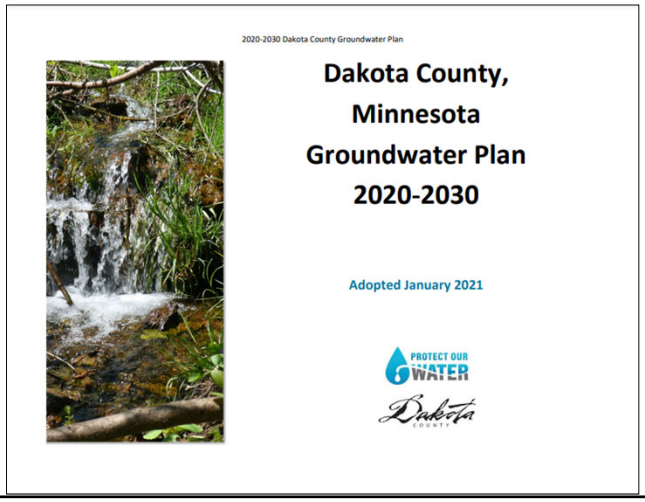
Introduction

Dakota County Groundwater Plan provides 10-year strategic direction to protect groundwater resources



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Introduction

Groundwater Plan Goals, Strategies, and Tactics

Goal 1: Water Quality

Strategy 1B1: Reduce agricultural chemical contamination

HIGH PRIORITY

Tactic 1B1B: Develop, adopt, and implement a Dakota County Groundwater Agricultural Chemical Reduction Effort (ACRE)

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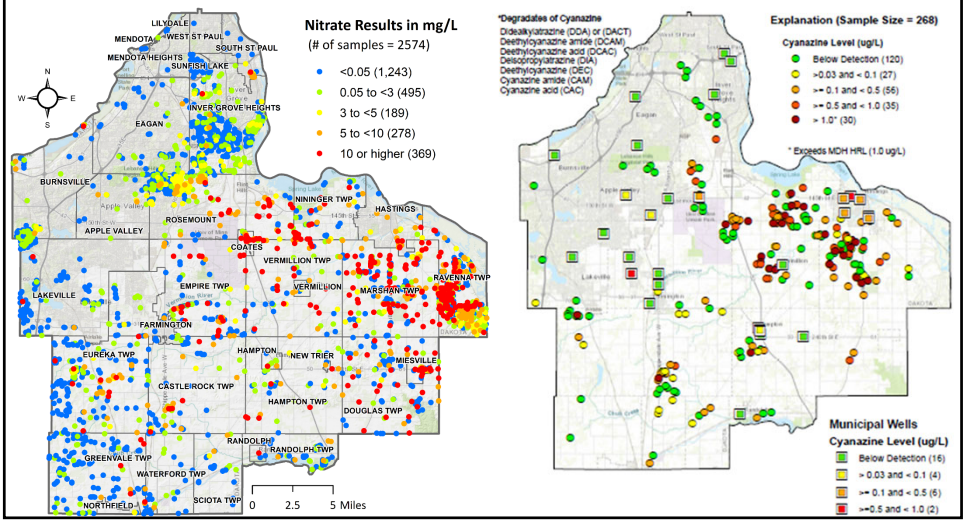
Need

Agricultural chemicals identified as significant concern
(nitrate, pesticides, and chlorides)



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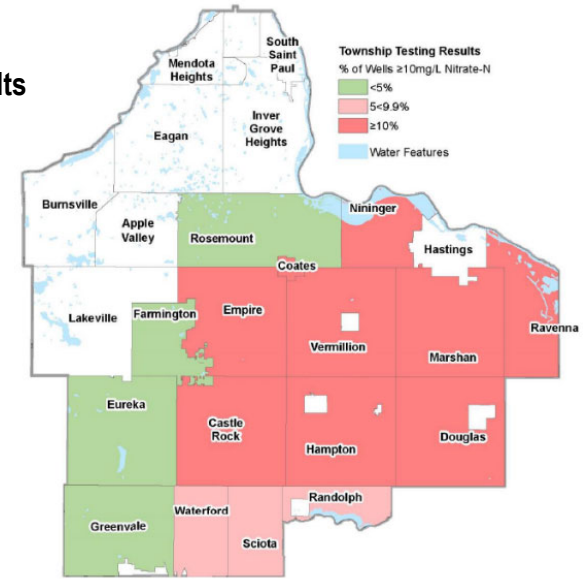
Need

2013-2015 Nitrate Township Testing Results



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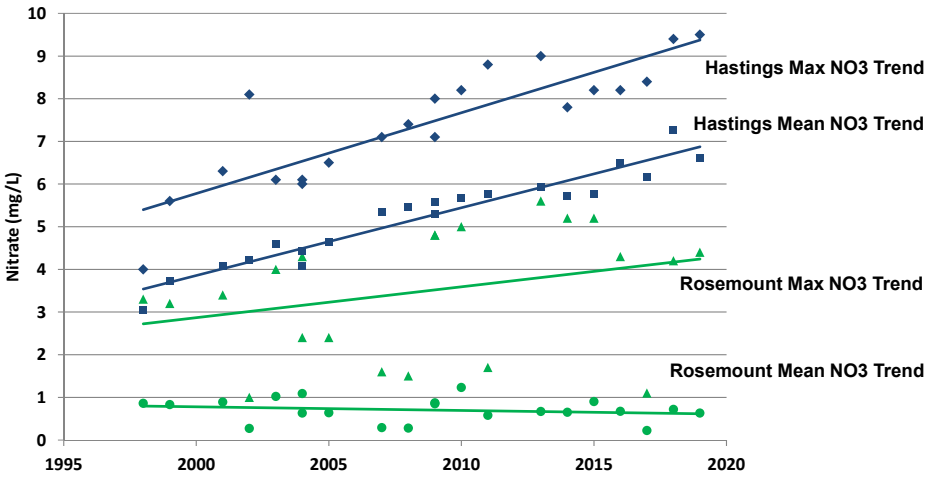
Need

Hastings and Rosemount Municipal Well Nitrate Trends



Hastings and Rosemount Nitrate Trends 1998-2019
(source https://data.web.health.state.mn.us/drinkingwater_query)

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Draft Concept

Purpose:

- Reduce ag. chemicals in groundwater to levels that no longer pose a threat to human or ecological health
- Develop stronger ag. chemical drinking water protection goals (compared to current MDA Plans and Rules)
- Partner with farmers, SWCD, state, regional, and local agencies and non-governmental organizations
- Develop prioritized, targeted, and measurable strategies

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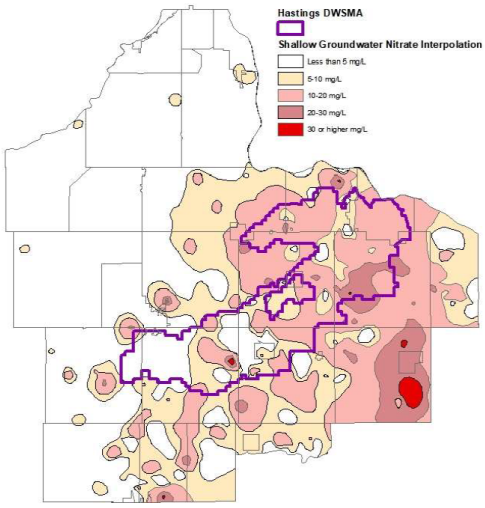
Draft Concept

Primary Focus:

- Ag. contamination only - sources from farming practices
- High nitrate areas
- Outside of Hastings' Drinking Water Supply Management Area (DWSMA)
- Collaborate with MDA within Hastings' DWSMA



MDA addressing nitrate in Hastings' DWSMA as part of Groundwater Protection Rule

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Draft Concept

Current Conditions:	Draft Objectives:
9 communities have >10% of wells exceed 10 mg/L nitrate 3 communities have 5-10% of wells exceed 10 mg/L nitrate	< 5% private drinking water wells within each township exceed 10 mg/L nitrate
Hastings' public water supply approaching 10 mg/L nitrate	No public water supply exceeds or projected to exceed 10 mg/L nitrate
Median nitrate levels exceed 10 mg/L in some townships	Median nitrate levels in shallow groundwater are below 10 mg/L

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Draft Concept

Current Conditions:	Draft Objectives:
30 of 268 wells tested exceed cyanazine guidelines 65 wells tested exceed 50% of cyanazine guidelines	No private drinking water wells have pesticide concentrations that exceed 50% drinking water guidelines
75% of wells show human impact (1033 of 1381 wells)	Contributions of chloride to groundwater from crop fertilizer are decreasing

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Question 1 - Discussion

Does the Planning Commission have any recommendations for the draft plan concepts?

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Plan Development – Next Steps

Task	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3
Technical Research						
Review available data, regs., precedent						
Develop and install monitoring well network						
Conduct baseline well monitoring						
Hire contractor and complete nitrate modelling						
Stakeholder Engagement:						
Award Engagement Contract (Environmental Initiatives)						
Partner with SWCD to establish Ag. Advisory Group						
Finalize Engagement Plan						
Round 1 Stakeholder Engagement						
Round 2 Stakeholder Engagement						
Plan Finalization, Review, Adoption						
Develop Draft Plan						
Update Planning Commission and County Board						
Review/ Refine Plan						
Finalize Plan (includes 60-day public review)						

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Technical Research

Long-Term Monitoring Well Network

- Install 30-40 shallow wells in high nitrate areas
- Sample for nitrate and chloride in spring, summer, fall
- Use data to establish baseline conditions evaluate progress against goals

Nitrate Modelling

- Determine nitrate model losses from cropland
- Use data to set nitrate reduction goals at local level to decrease nitrate below 10 mg/L

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Stakeholder Engagement

Key Engagement Objectives:

- Effectively engage ag. agencies and operators
- Consult MDA, other state agencies, and technical experts
- Ensure plan reflects ag. needs and interests, and is realistic
- Ensure general public is informed and engaged
- Ensure elected officials are aware and engaged
- Include under-represented populations to ensure diverse perspectives

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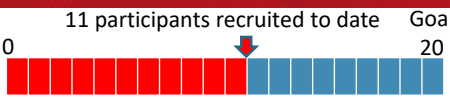
Stakeholder Engagement

Ag. Advisory Group:

- Working with SWCD with outreach
- Obtain a diverse perspectives from farmers and ag. professionals from different backgrounds and organizations



Organizations
Vermillion River Watershed Planning Commission
Cattle and Crop Farmer
Minnesota Agricultural Water Resource Center
Sorg Acres
Farmers Mill and Elevator
Forever Green Initiative
CFS-Central Farm Service
Tomato Grower
River Country Coop
The Nature Conservancy
Farmer

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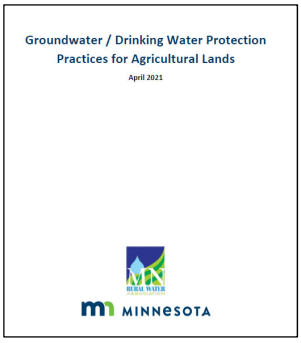
Stakeholder Engagement

Key Discussion Topics :

- **Farming Practices**
  - What practices are currently being implemented?
  - What practices could or should be adopted?
- **Barriers to Implementation**
  - Is education needed to assist with practice implementation?
  - What incentives are needed to assist with implementation?
  - What regulations would be reasonable if voluntary efforts are ineffective?



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Question 2 - Discussion

Based on Attachment B, does the Planning Commission have any suggestions for the Draft Public Engagement Plan?

How would the Planning Commission like to be involved in the stakeholder/public engagement process?

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Questions?

PROTECT OUR WATER

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Thank you!

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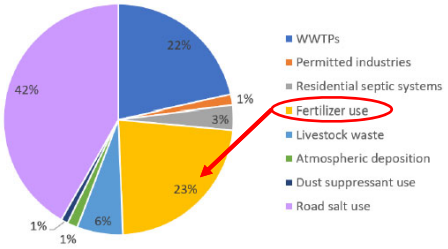
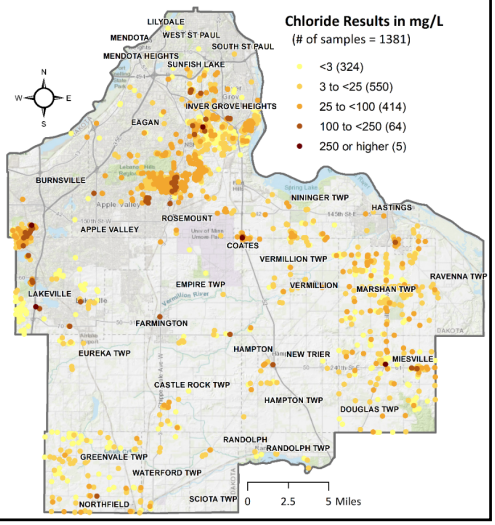
Backup Slides

Sources of Chloride



Source: MN Statewide Chloride Management Plan

Dakota County Chloride Sampling



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