

# State Efforts in Carbon Sequestration



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To: Legislative  
Energy Commission  
Carbon  
Sequestration Forum

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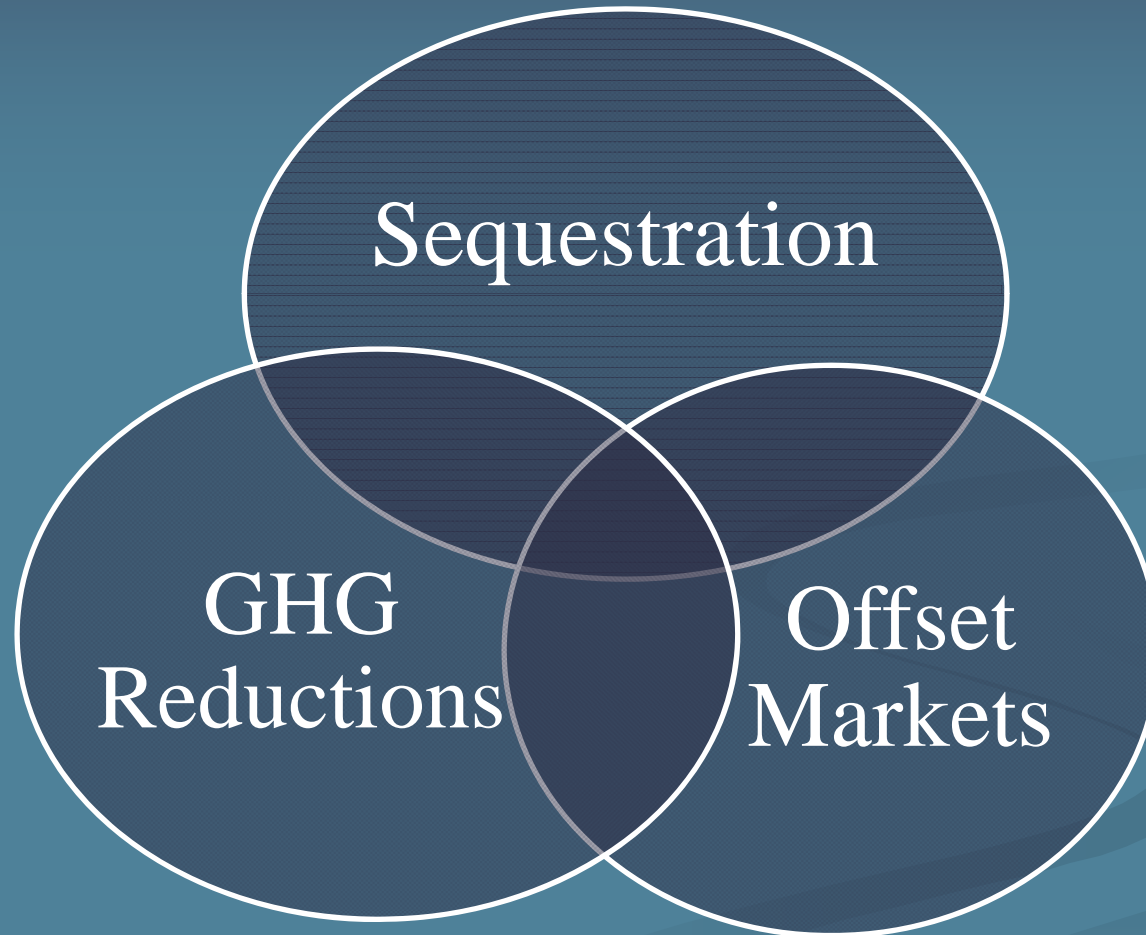


# DNR Mission

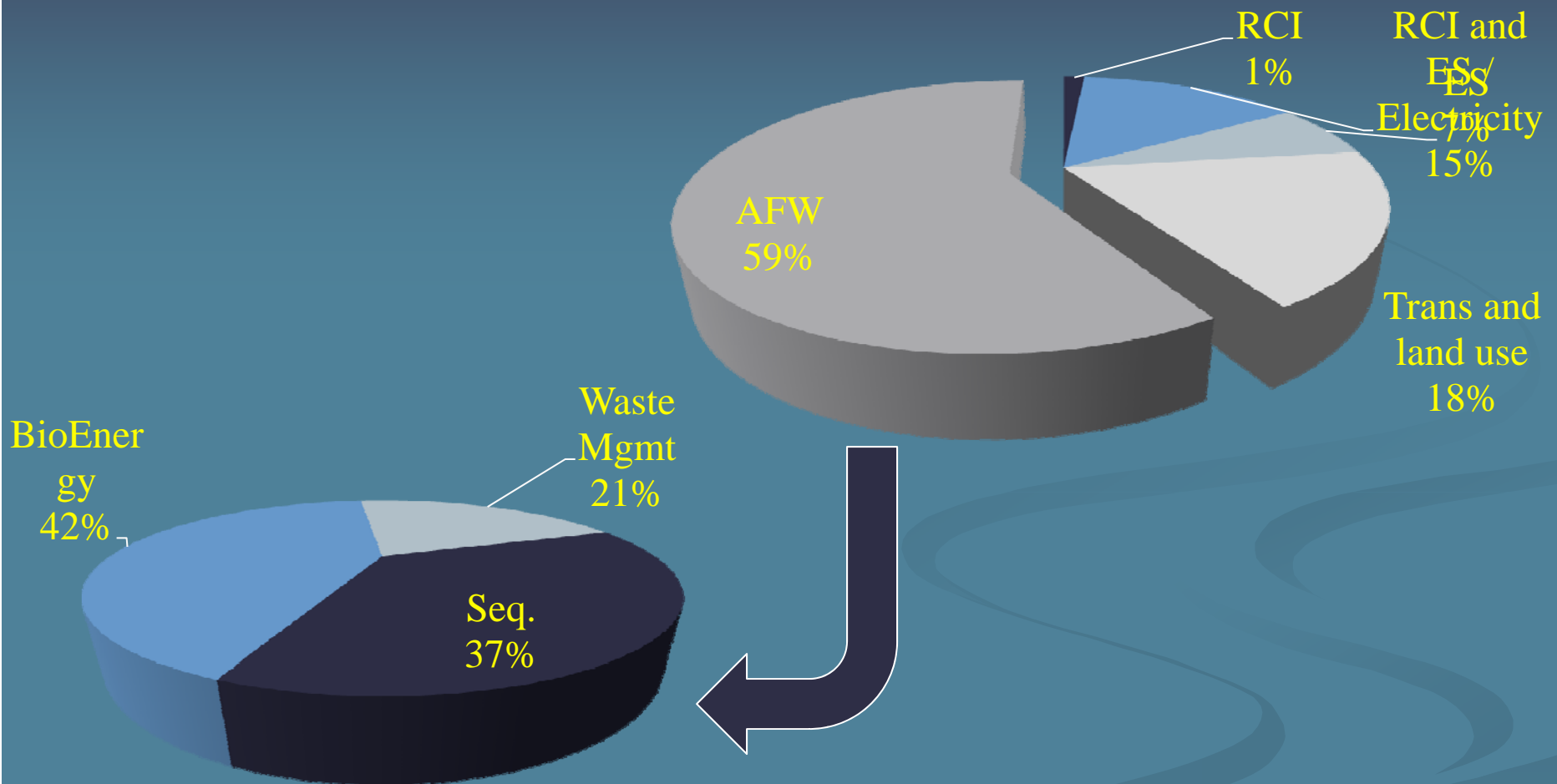
- Work with citizens to conserve/manage state's natural resources
- Provide outdoor recreation opportunities
- Provide for commercial uses of natural resources to create sustainable quality of life



# Sequestration and Offset Markets



# MCCAG Rec. Contributions



# Size of the Sequestration Wedge

- MCAG analysis
  - 19 million metric tons CO<sub>2</sub>e (~40%)
- 2008 U of MN report
  - 4.5 million metric tons CO<sub>2</sub>e (~10%)
- Need for better understanding of physical and economic potential
- Address protection of existing stocks as well as growing stocks



# Protecting Existing Carbon Stocks

- Peat lands

  - 5.7 million acres

  - 4.2 billion tons C

- Forest lands

  - 16.2 million acres

  - 1.6 billion tons C



# Emerging Land Management Issue

- Initial excitement

  - High expectations

- Capacity building

  - Understanding of complexity

  - Identifying alternative courses of action

  - Forming mechanisms to act

- Implementation Phase

  - Commitment of resources

  - Adaptive management



# Emerging Land Management Issue

- Sequestration has not been a goal
  - Limited data on current status and trends
  - Limited measurement tools
- Limited technical guidance on management
- Current efforts are “directionally correct”





# Multiple Challenges

Sequestration must be accomplished while:

- Meeting traditional management goals
  - Avoiding unintended consequences
- Adapting to climate change
  - Linkage to interagency adaptation team
- Increasing sustainable supply of biomass



# Carbon Specific Efforts

- DNR

  - Carbon Metrics Team

    - Carbon protocol analysis CA and AFPA

  - Oversight of U of MN / MN Geological Survey

    - Carbon Sequestration Studies

  - Mine land reclamation evaluation

- MFRC - Million acre reforestation study

- BWSR





  - Carbon calculator

  - Estimate of BWSR program impacts

# Interagency Carbon Sequestration Team

- Natural Resources
- Pollution Control
- Agricultural
- Transportation
- Board of Water and Soil Resources
- Office of Energy Security



# Interagency Carbon Sequestration Team

- Builds on MTCSI efforts
- Interagency platform
  - Project coordination
  - Information sharing
  - Development of research questions
  - Engagement with stakeholders and researchers



# Public Sector Land Management Mechanisms

- Management of public lands
- Regulation of private lands
- Technical and financial assistance to private / LGU land owners



# Agency Roles in Land Mgmt

Land Managers	Regulators	Assistance
DNR	DNR	DNR
	BWSR	BWSR
DOT		DOT
	MDA	MDA
PCA	PCA	PCA



# Land Management Strategies

- DOT Road Rights of Way 175,000 acres

Use of native prairie grasses in ROW

US DOT Demonstration Program



- DNR - 5.5 million acres

Forest Management

Acquisition and restoration of natural habitats

Shallow lakes / wetlands management

Wildfire prevention and suppression



PCA

100+ closed landfills



# Regulatory (Indirect)

- DNR

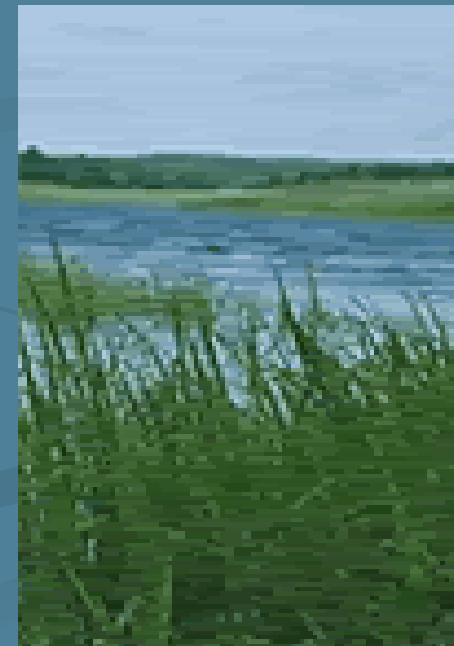
  - Peatland and public waters

  - Shoreland, floodplain, Wild and Scenic

- BWSR

  - Wetland Conservation Act –

  - Wetland Credit Banking





# Regulatory

- MDA

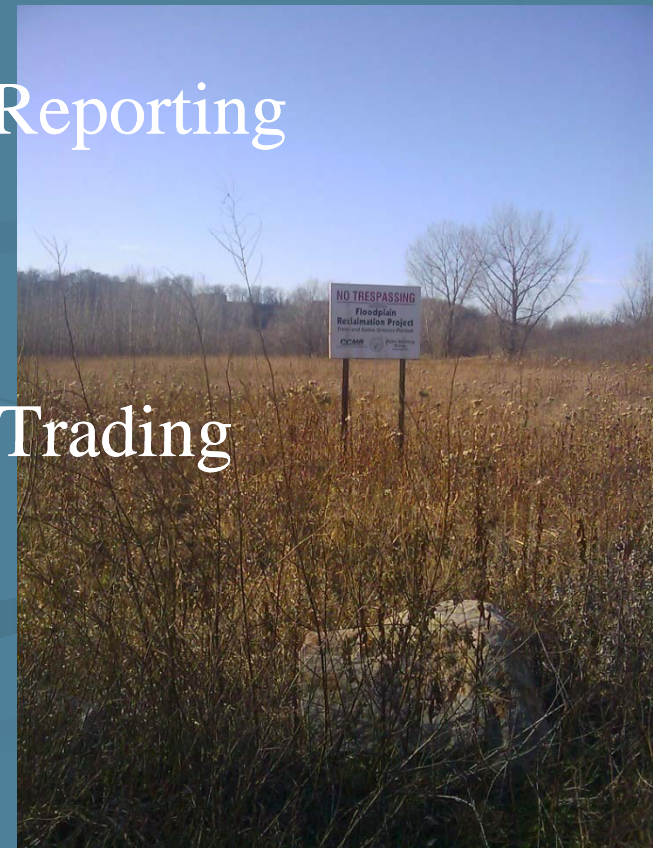
Invasive species, including forest pests

- PCA

Annual Greenhouse Gas Emission Reporting

Incorporates forest and  
farmed peatland data

TMDLs and Water Quality Credit Trading



# Technical and Financial Assistance

- DNR



Forest Legacy/ MN Future Forest

Private Forest Mgmt / Stewardship Plans

DNR –BWSR Working Lands Initiative

Prairie Bank Easements

Assistance to LGUs: FireWise/Parks/ReLeaf

- Revenue

Sustainable Forest Incentive Act Program



# Financial and Technical Assistance

- BWSR

  - RIM Easements – federal leverage

    - RIM-Clean Energy

  - Cost Share Programs

    - Clean Water Legacy

  - County Water Planning - other similar plans



# Financial and Technical Assistance

- DOT

  - County State Aid program

  - Township roads

  - Living Snow Fence

- PCA

  - Basin Planning and Management Program

  - Water Quality Non-Point Source Programs

  - 319 grants / Clean Water Partnership

  - Climate Change Program



# Technical and Financial Assistance



MDA

Methane Digester Low  
Interest Loans

Next Gen Energy Board  
Digester Grants  
Energy Crops Grants



# Financial and Technical Assistance



## MDA

Cover Crop Research and  
Demonstration



Managed Grazing Plan  
Development



# Technical and Financial Assistance

## Constitutionally Dedicated Funds

- LCCMR
- Sams-Lessard Outdoor Heritage Council
- Clean Water Heritage Funds
- Parks and Trails Heritage Funds



# Next Steps

- Continue interagency coordination
- Continue to implement land management programs and incorporate explicit carbon management as appropriate
- Seek to develop demonstration projects as resources allow
- Monitor and adjust





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