Citizen Forums

Rochester, Bloomington, Duluth, Worthington, St. Cloud, and Moorhead

November 27th through December 14th, 2012

- Citizen Forums kick-off the Environmental Congress

- Input will be gathered and presented to Dayton Administration, legislators, and Minnesota citizens

- Statewide Environmental Congress will be held in March 2013

- Create a vision for the future of Minnesota's environmental and economic prosperity
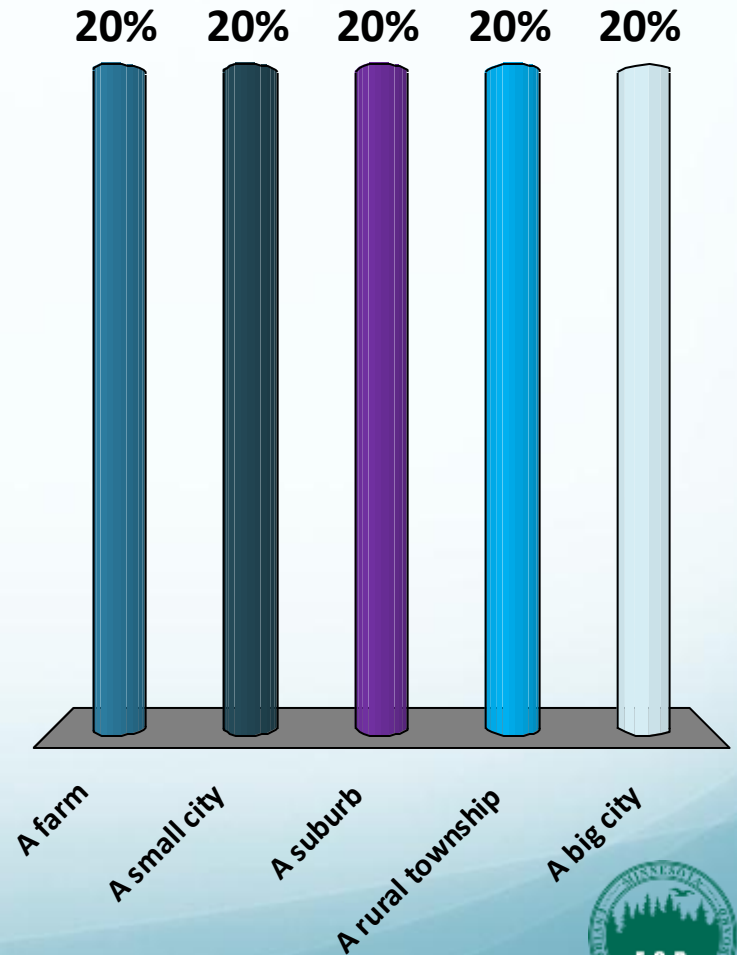
How to use the Clickers

- Records only your last response

- Multiple choice and ranking questions

- Timer

- If you think we missed something, write it down!

- We want your initial reaction, don't worry about being "right"
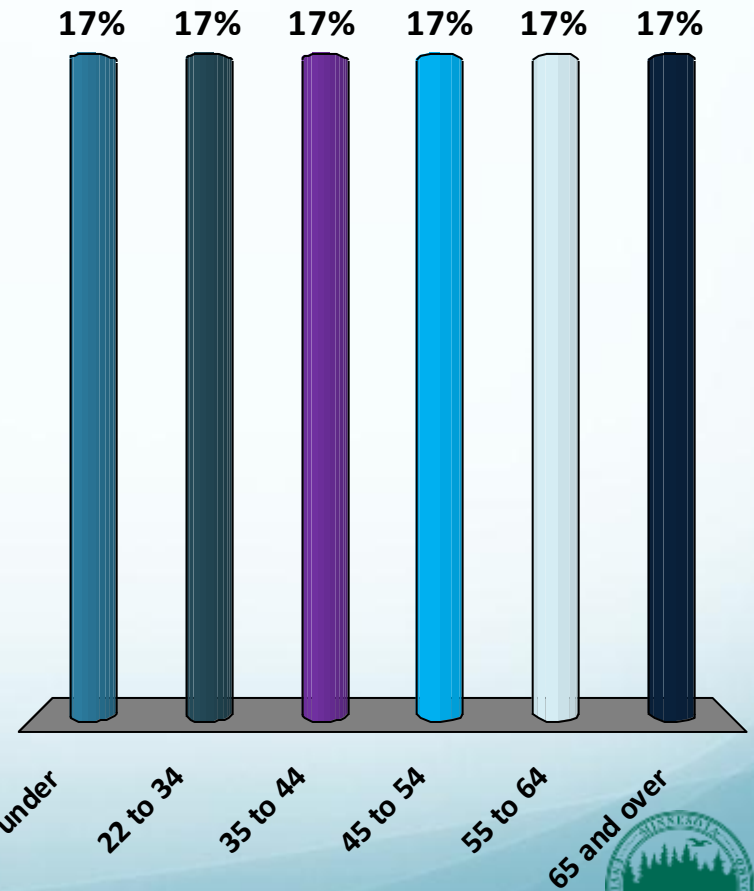
Where do you call home?

a) A farm
b) A small city
c) A suburb
d) A rural township
e) A big city

20% 20% 20% 20% 20%
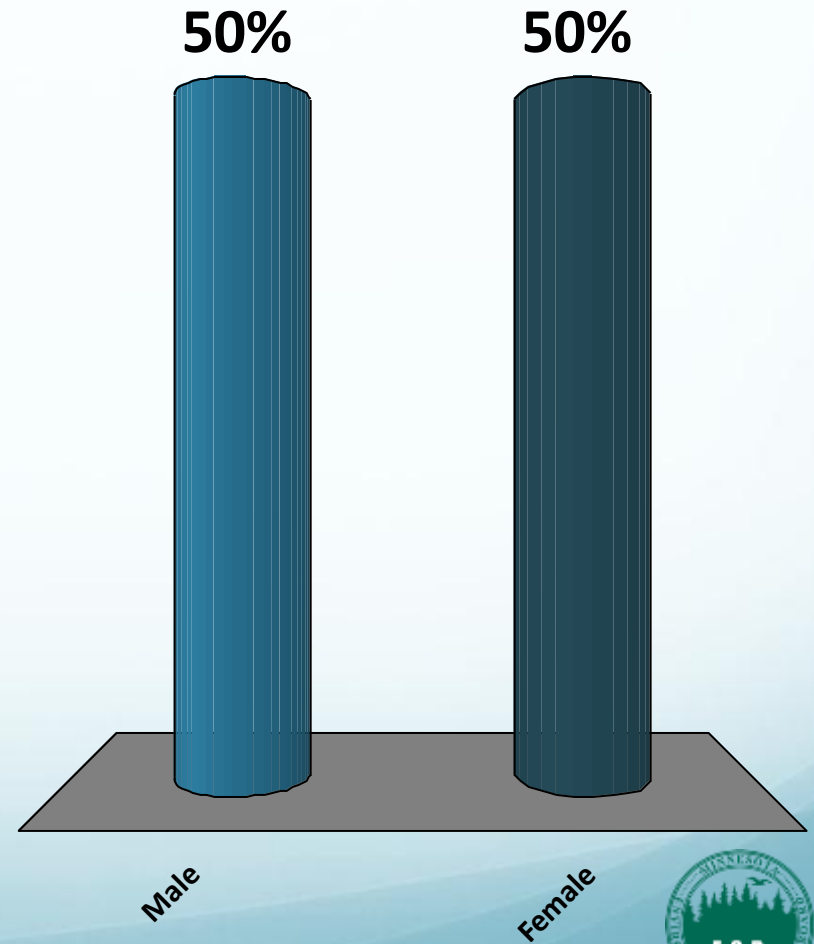
A farm | A small city | A suburb | A rural township | A big city

10

What is your age?

Please choose one.

a) 21 and under

b) 22 to 34

c) 35 to 44

d) 45 to 54

e) 55 to 64

f) 65 and over

17% **17%** **17%** **17%** **17%** **17%**

21 and under 22 to 34 35 to 44 45 to 54 55 to 64 65 and over

10

E·Q·B

What is your gender?
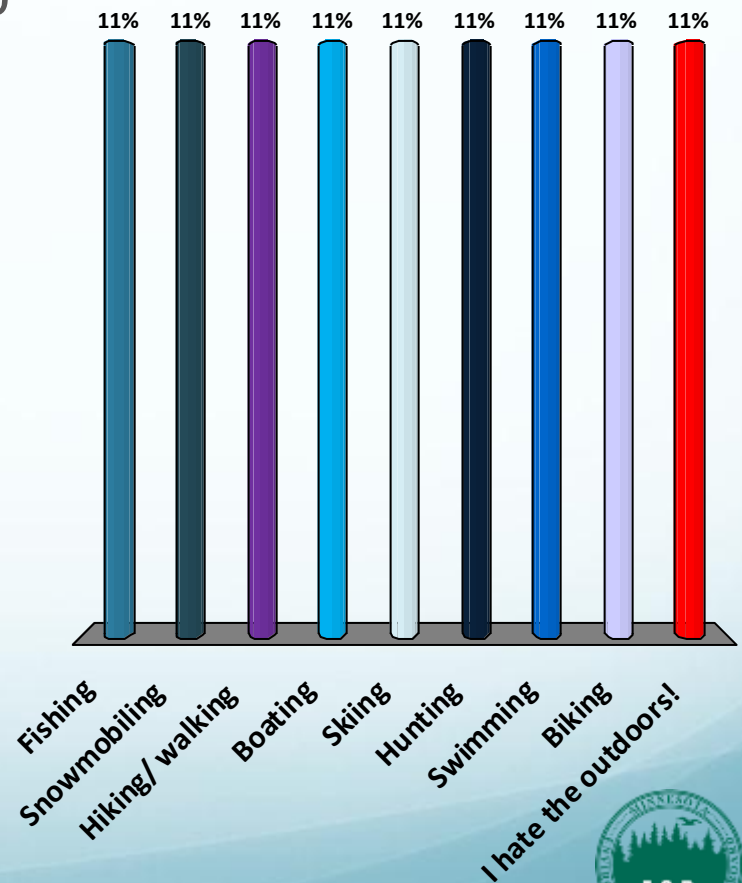
a) Male

b) Female

50% **50%**

Male

Female

10

What's your favorite recreational outdoor activity?

Ranking question! (Please rank your top 3, your number one entry being your favorite).

a) Fishing
b) Snowmobiling
c) Hiking/ walking
d) Boating
e) Skiing
f) Hunting
g) Swimming
h) Biking
i) I hate the outdoors!

15

Fishing 11% | Snowmobiling 11% | Hiking/ walking 11% | Boating 11% | Skiing 11% | Hunting 11% | Swimming 11% | Biking 11% | I hate the outdoors! 11%

Minnesota Environment and Energy Report Card

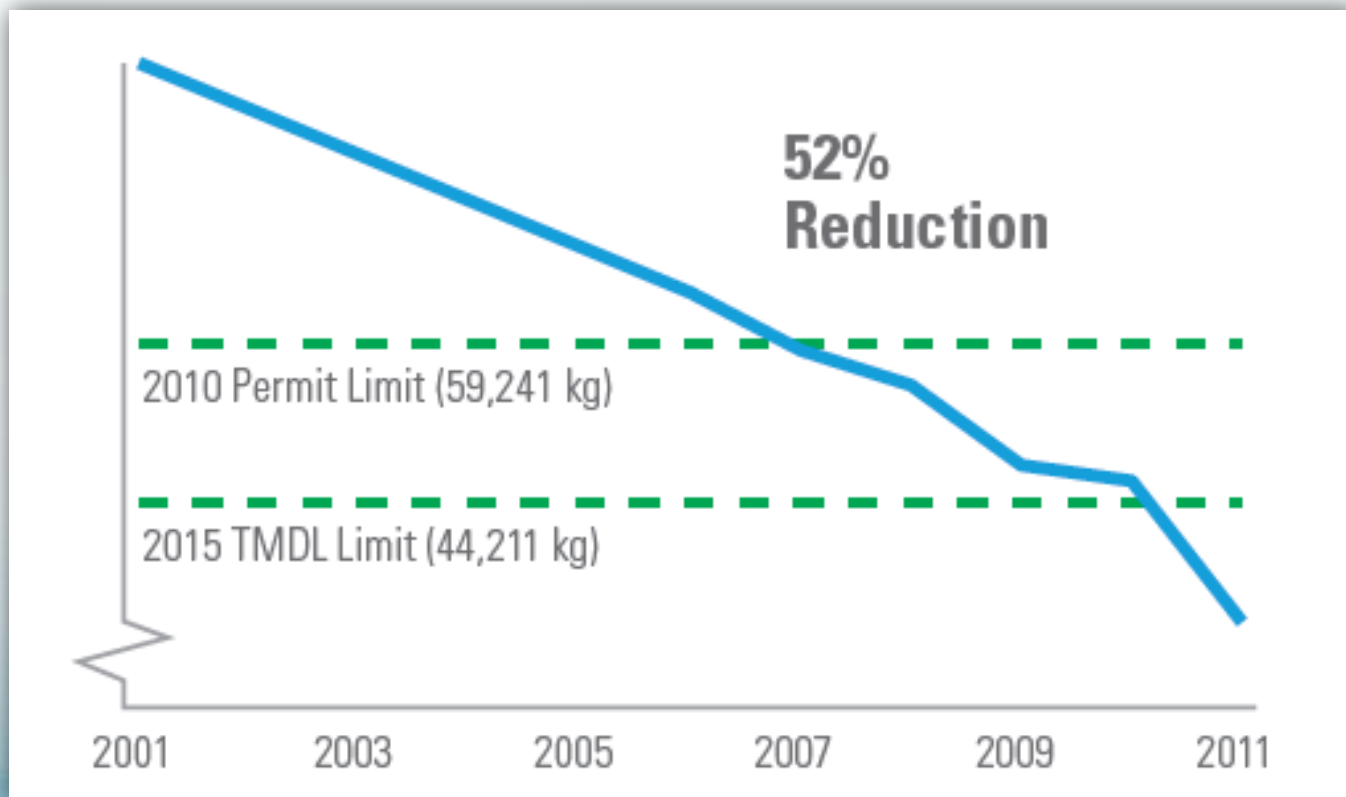AIR   WATER   LAND   ENERGY   CLIMATE

Environmental and Energy Measures
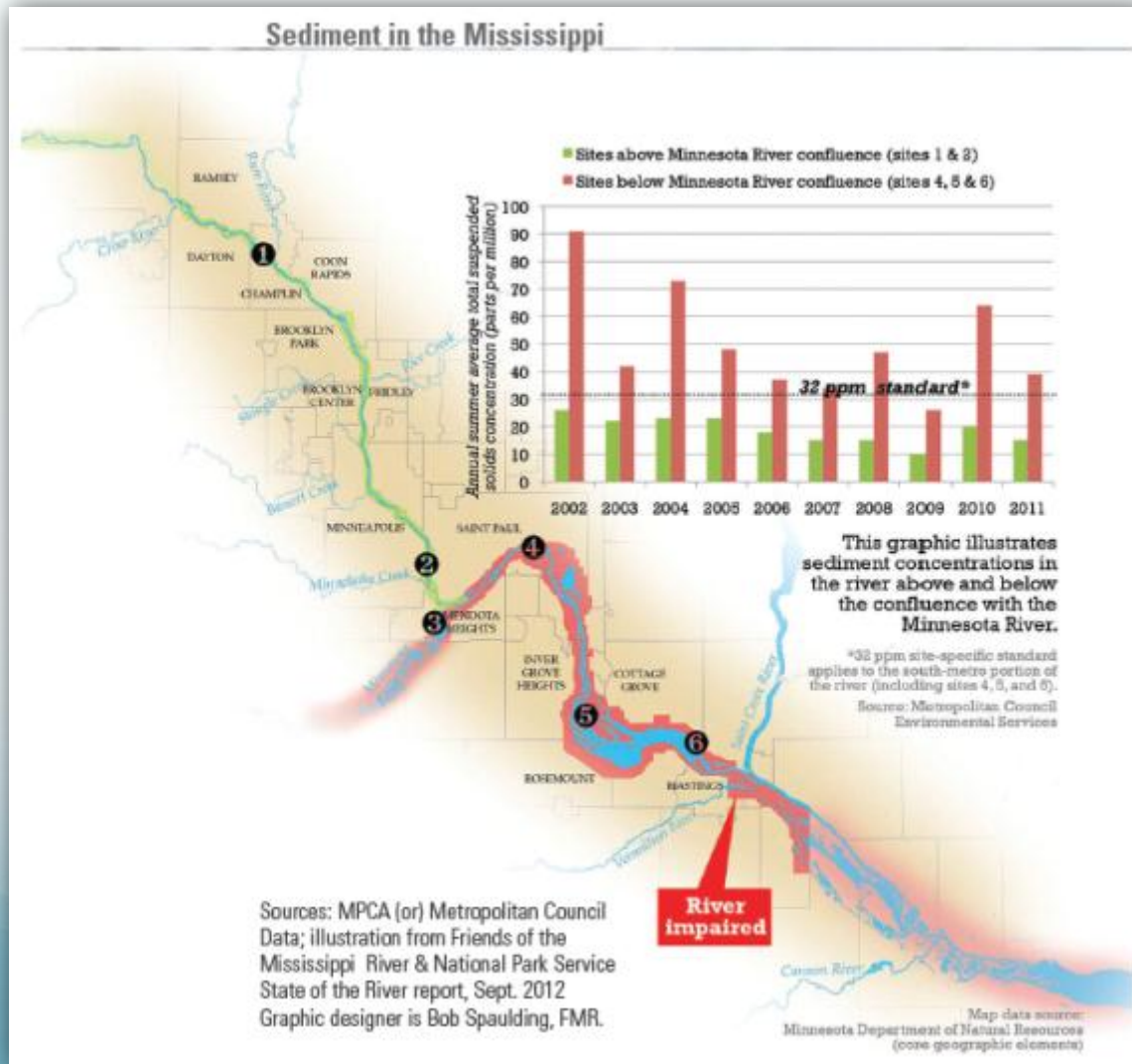Critical for our Quality of Life

WATER for drinking, fishing and swimming

Success story: reduction of phosphorous in the Minnesota river

WATER for drinking, fishing and swimming

Sediment in the Mississippi

- Sites above Minnesota River confluence (sites 1 & 3)
- Sites below Minnesota River confluence (sites 4, 5 & 6)

32 ppm standard*

This graphic illustrates sediment concentrations in the river above and below the confluence with the Minnesota River.

*32 ppm site-specific standard applies to the south-metro portion of the river (including sites 4, 5, and 6).

Source: Metropolitan Council Environmental Services

River impaired

Sources: MPCA (or) Metropolitan Council Data; illustration from Friends of the Mississippi River & National Park Service State of the River report, Sept. 2012 Graphic designer is Bob Spaulding, FMR.

Map data source: Minnesota Department of Natural Resources (core geographic elements)

Our challenge: Nonpoint source pollution, demonstrated at the confluence of the Minnesota and the Mississippi River

WATER for drinking, fishing and swimming

Generally speaking, do you agree or disagree with each of the following statements about water quality in Minnesota?

- The lakes and rivers around the state are clean.
- The lakes and rivers near where I live are becoming cleaner.

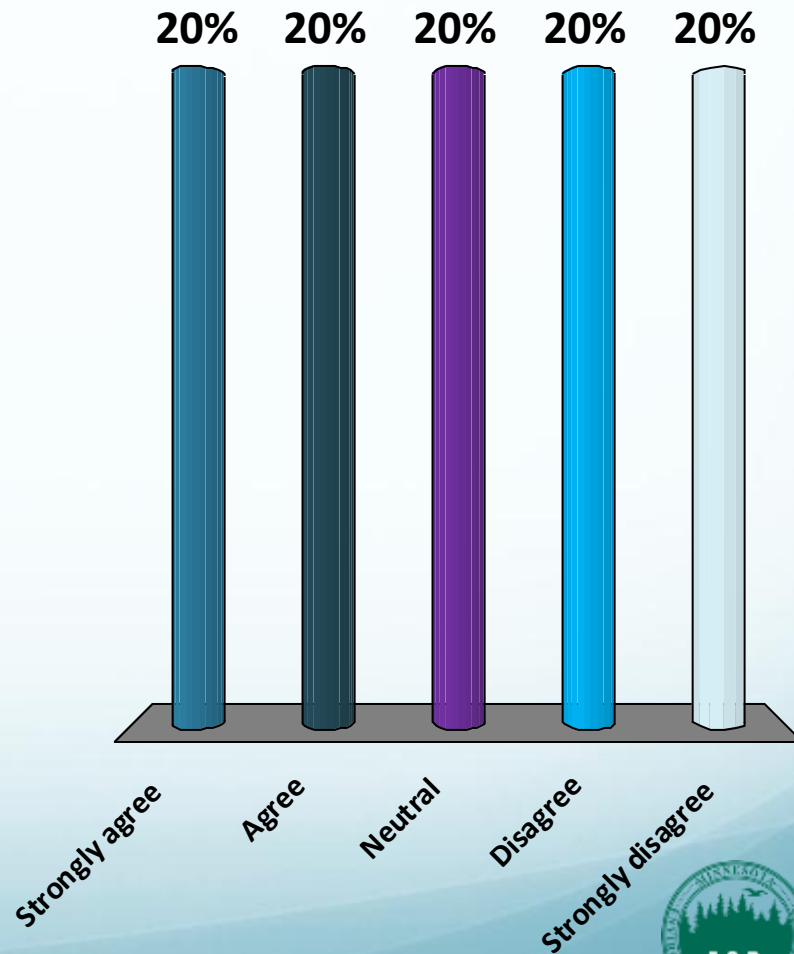| Options	1 Strongly agree	2 Agree	3 Neutral	4 Disagree	5 Strongly disagree

WATER for drinking, fishing and swimming

1. The lakes and rivers **around the state** are clean.

   1) Strongly agree
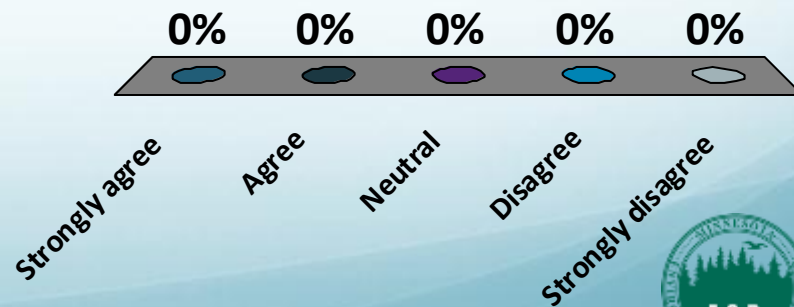   2) Agree
   3) Neutral
   4) Disagree
   5) Strongly disagree

20% 20% 20% 20% 20%

Strongly agree Agree Neutral Disagree Strongly disagree

10

2. The lakes and rivers **near where I live** are becoming cleaner.

1) Strongly agree
2) Agree
3) Neutral
4) Disagree
5) Strongly disagree

0%   0%   0%   0%   0%

Strongly agree   Agree   Neutral   Disagree   Strongly disagree
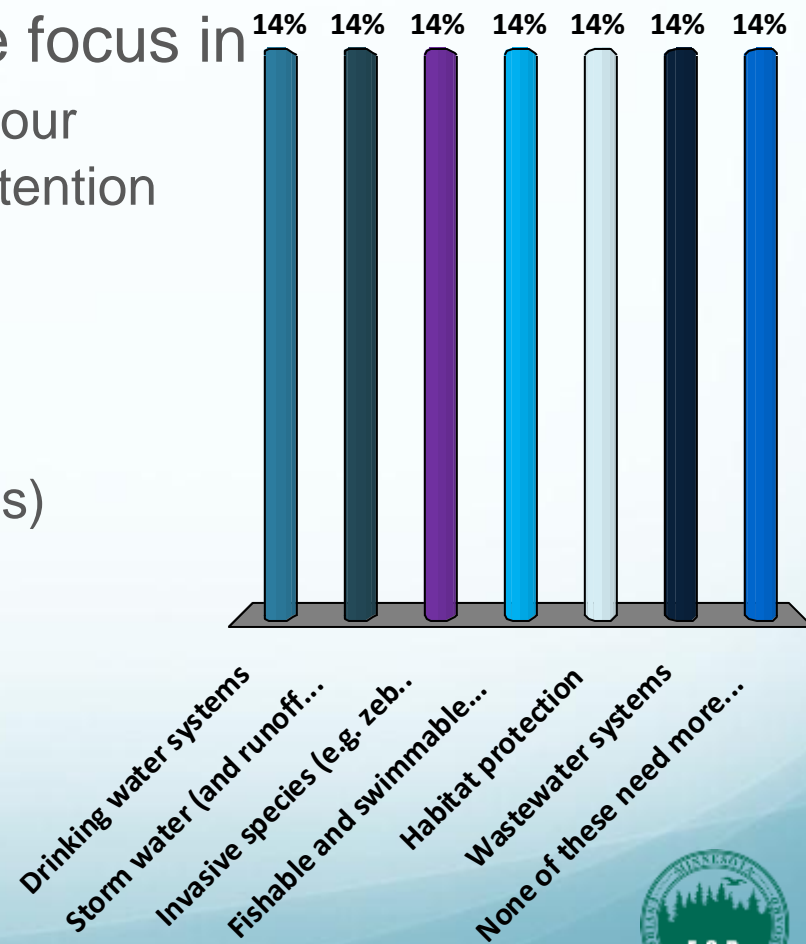
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WATER for drinking, fishing and swimming

3. Which of the following water-related issues do you believe needs more focus in Minnesota? (Rank your top 3, where your number 1 ranked item needs the most attention and action)

   a) Drinking water systems
   b) Storm water (and runoff) pollution
   c) Invasive species (e.g. zebra mussels)
   d) Fishable and swimmable waters (lakes, rivers, and streams)
   e) Habitat protection
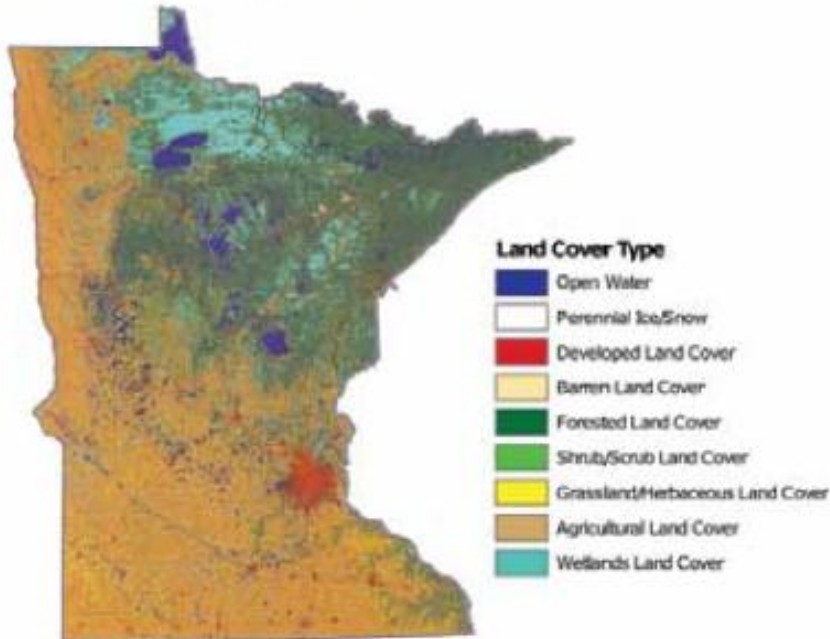   f) Wastewater systems
   g) None of these need more focus

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14% | 14% | 14% | 14% | 14% | 14% | 14%

Drinking water systems | Storm water (and runoff... | Invasive species (e.g. zeb.. | Fishable and swimmable... | Habitat protection | Wastewater systems | None of these need more...

LAND for farming, wildlife and recreation
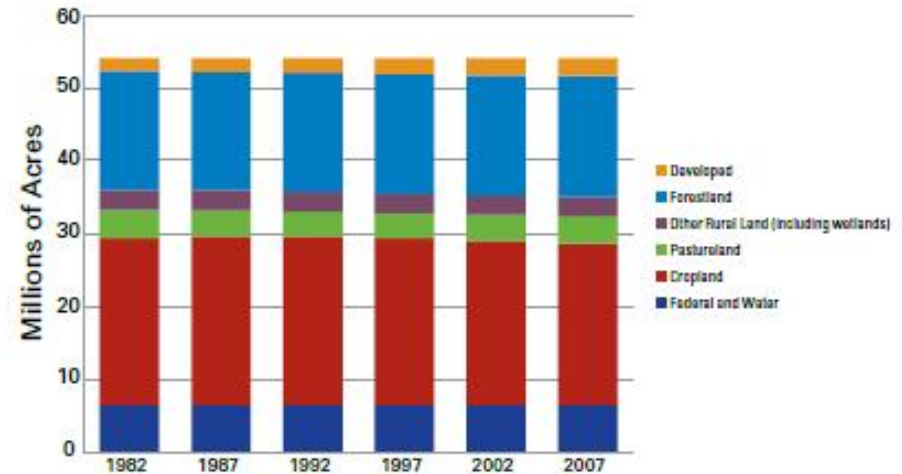
As Minnesota's population grows, there will be a greater demand for land to be used for commercial, industrial, residential and institutional development.
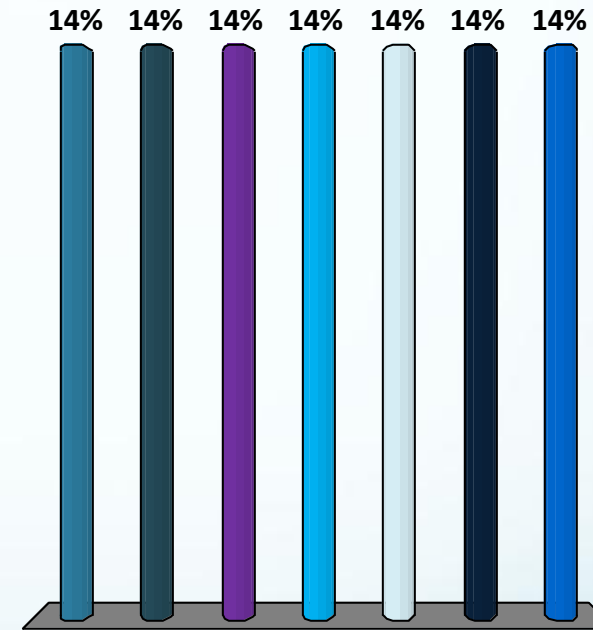
LAND for farming, wildlife and recreation

4. By 2035, Minnesota's population is expected to grow by nearly a million people. In the face of development pressures, which would be your highest priority? (Choose two.) (Source: Office of Geographic and Demographic Analysis/MnGEO)

a) Protection of critical habitat areas
b) Protection of agricultural lands
c) Protection of forests
d) Protection of parks and other recreational natural areas
e) Encourage people to live in already developed areas
f) Encourage business growth in already developed areas
g) Other

14% 14% 14% 14% 14% 14% 14%

Protection of critical hab...
Protection of agricultural...
Protection of forests
Protection of parks and...
Encourage people to live ..
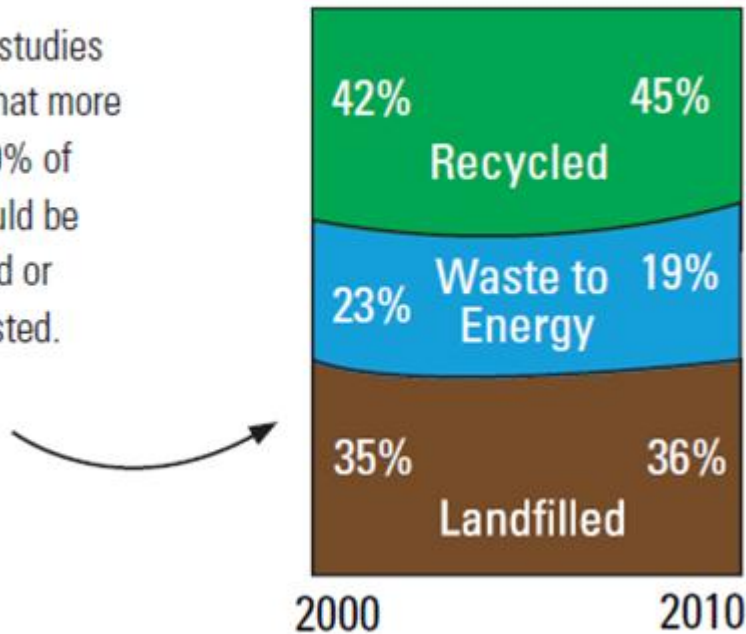Encourage business grow...
Other

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LAND for farming, wildlife and recreation

How do we manage our solid waste?

Waste studies show that more than 70% of this could be recycled or composted.

Recycled: 42% (2000), 45% (2010)

Waste to Energy: 23% (2000), 19% (2010)

Landfilled: 35% (2000), 36% (2010)

The recycling rate hasn't changed much since 2000.

70% of landfilled waste could be recycled or composted.

5. Which of the following would make you likely to recycle more? (Rank your top three, number one having the most potential.)

a) More recycling bins on sidewalks and streets

b) No sorting recyclables – all goes in one bin

c) Increased fees for garbage pick-up

d) A deposit-refund system for containers and bottles

e) Curbside pick-up for compost
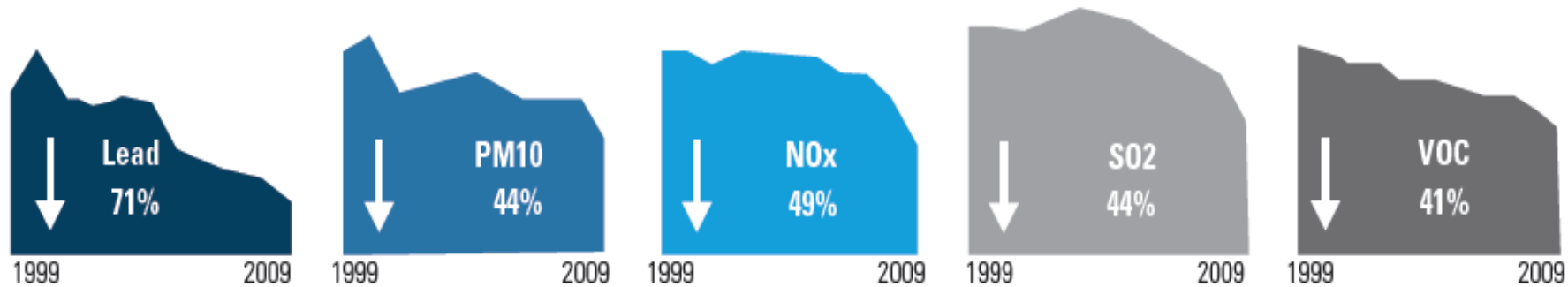
f) We don't need to be recycling

17% 17% 17% 17% 17% 17%

More recycling bins on s…
No sorting recyclables – a…
Increased fees for garbag…
A deposit-refund system f…
Curbside pick-up for co…
We don't need to be recy…

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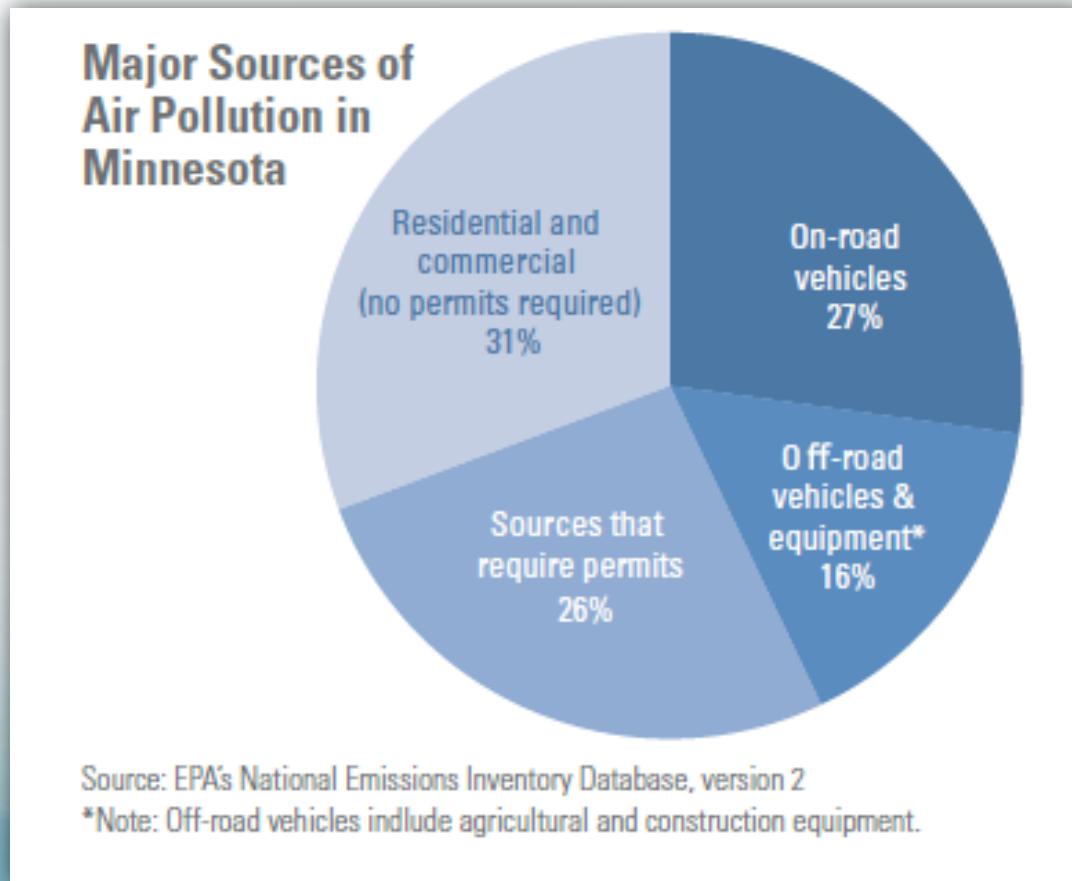# AIR for people, animals and plants

Minnesota's success story: smokestack "point" sources of air pollution are declining.

Point Source Emissions Graph last decade

AIR for people, animals and plants

Our challenge: "nonpoint" air emissions from the vehicles and machines we use and from heating our buildings.

Major Sources of Air Pollution in Minnesota

- Residential and commercial (no permits required) 31%
- On-road vehicles 27%
- Off-road vehicles & equipment* 16%
- Sources that require permits 26%

Source: EPA's National Emissions Inventory Database, version 2
*Note: Off-road vehicles indlude agricultural and construction equipment.
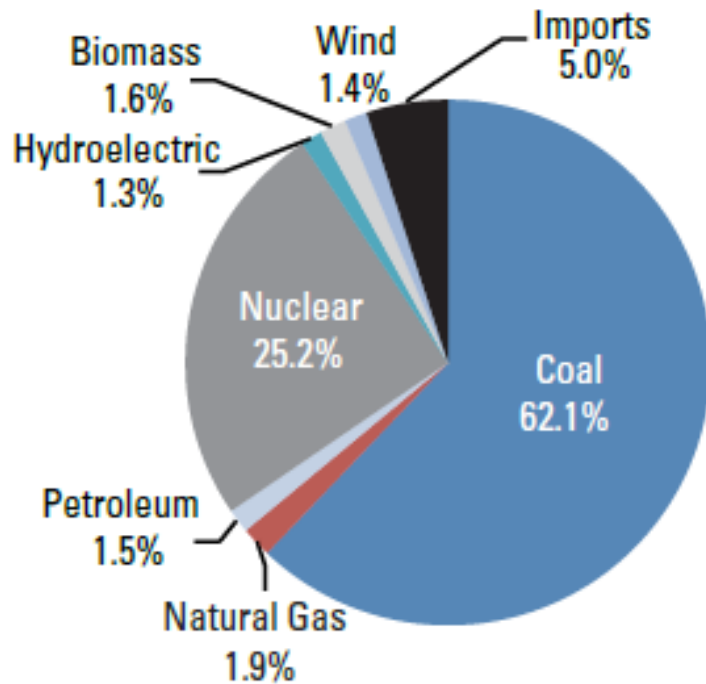
AIR for people, animals and plants

6. Which of the following do you believe will have the most positive impact on air quality in the years to come? (Rank your top 3, where your number 1 ranked choice is the one with the most impact.)

a) Increased vehicle efficiency

b) Increased use of trains and other forms of transit

c) More regulations of nonpoint sources (ex: landfills, burning fires, etc.)

d) Reductions in home energy usage

e) Development/growth in already urbanized areas
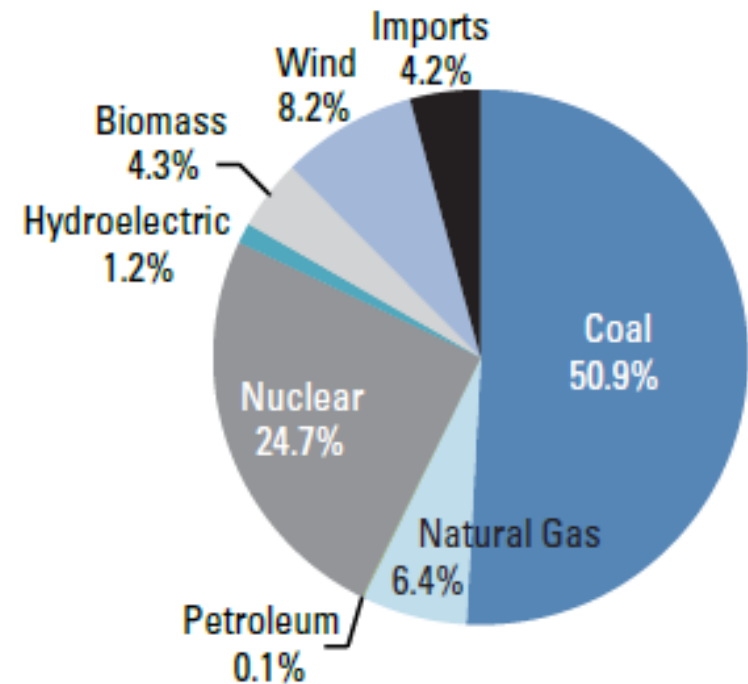
f) None of these

g) I don't know

h) Other

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ENERGY for our homes, farms and businesses

Electricity Consumption by Source, 2000

Biomass 1.6%
Wind 1.4%
Imports 5.0%
Hydroelectric 1.3%
Nuclear 25.2%
Coal 62.1%
Petroleum 1.5%
Natural Gas 1.9%

Electricity Consumption by Source, 2010

Imports 4.2%
Wind 8.2%
Biomass 4.3%
Hydroelectric 1.2%
Coal 50.9%
Nuclear 24.7%
Natural Gas 6.4%
Petroleum 0.1%

Source: State Energy Data System, Energy Information Administration, U.S. Dept of Energy.
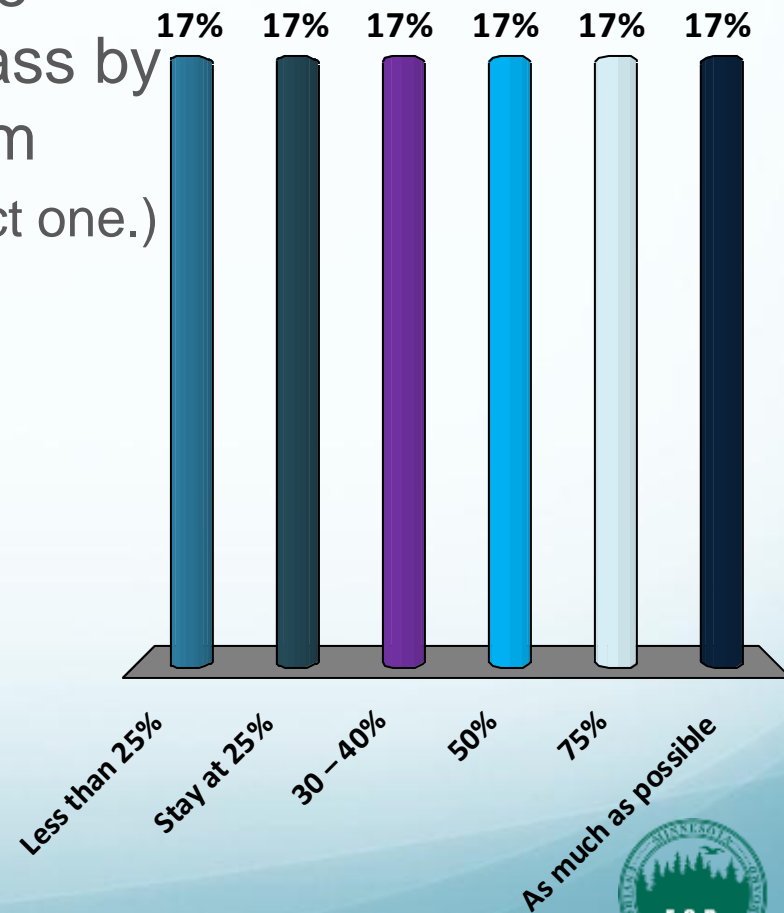
ENERGY for our homes, farms and businesses

7. Minnesota law requires that at least 25% of our electricity come from renewable sources like wind, solar, and biomass by 2025. What percent should be from renewable sources by 2050? (Select one.)
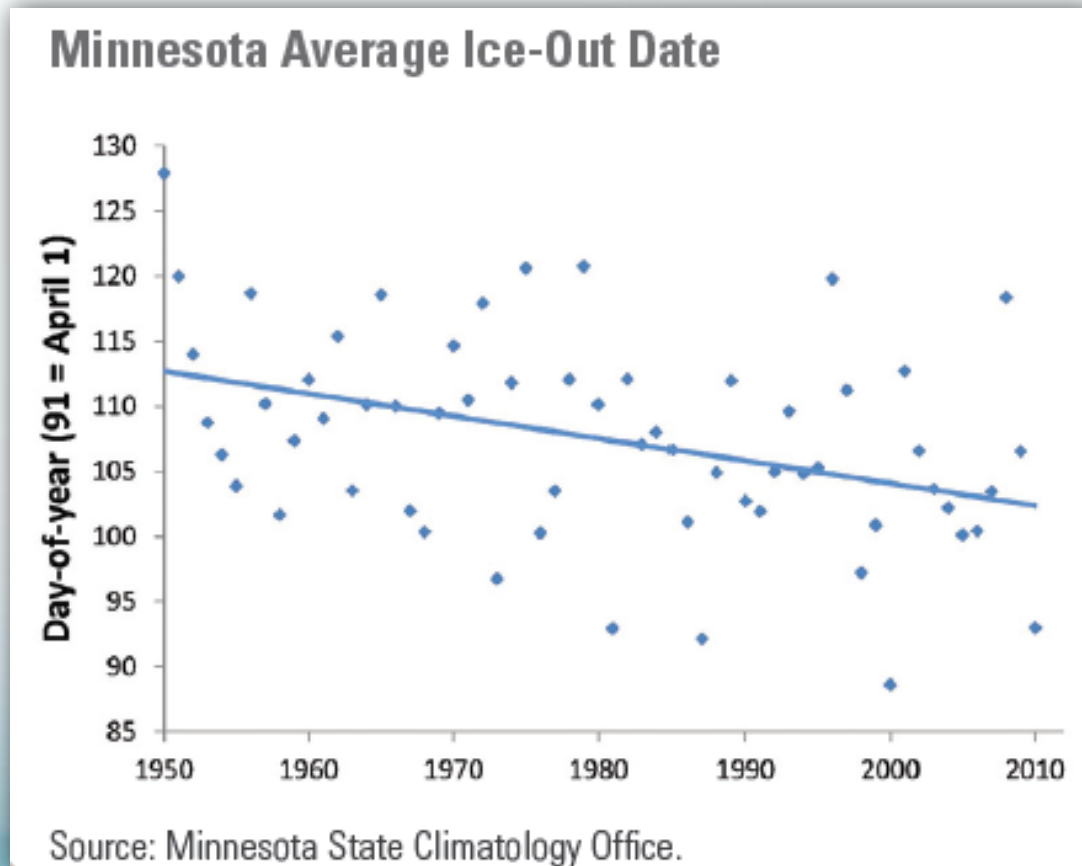
a) Less than 25%
b) Stay at 25%
c) 30 – 40%
d) 50%
e) 75%
f) As much as possible

17% 17% 17% 17% 17% 17%

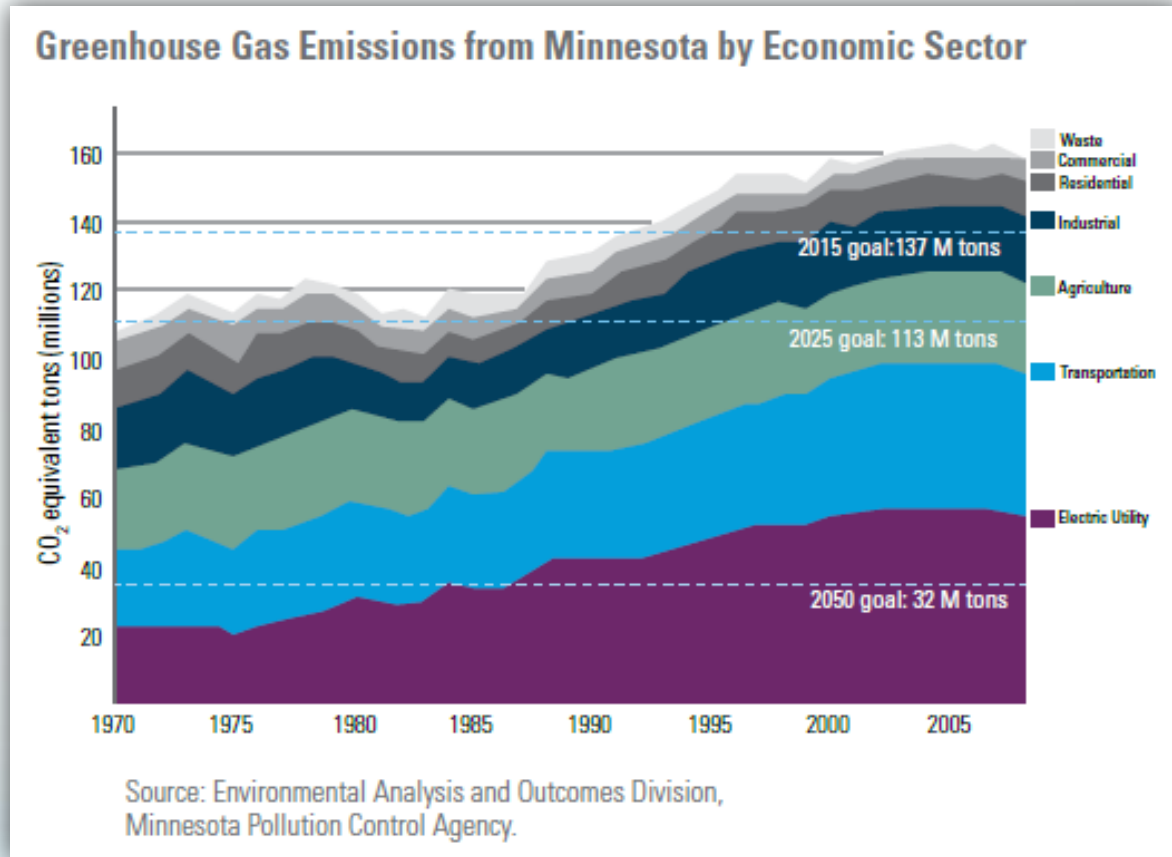Less than 25% Stay at 25% 30 – 40% 50% 75% As much as possible

15

CLIMATE long-term changes in Minnesota weather trends

There are early signs that climate change has had an impact on Minnesota.

Minnesota Average Ice-Out Date

Source: Minnesota State Climatology Office.

CLIMATE long-term changes in Minnesota weather trends

Greenhouse Gas Emissions from Minnesota by Economic Sector

Source: Environmental Analysis and Outcomes Division, Minnesota Pollution Control Agency.

Greenhouse gases keep heat in our atmosphere. Minnesota's state law currently sets goals for reducing greenhouse gas emissions.

8. Which of the following statements best represents your feelings about how Minnesota should achieve these emissions goals? (Choose up to three.)

a) Promote alternatives to driving like buses, trains, walking, biking

b) Invest in technology to save energy in houses, cars, and buildings

c) More renewable energy, as long as it's not more expensive

d) More renewable energy, even if it is more expensive

e) Prioritize energy use from sources that produce less carbon (e.g. natural gas instead of coal)

f) I don't support these goals.

g) Other

Bar chart with values: 14%, 14%, 14%, 14%, 14%, 14%, 14%

Categories: Promote alternatives to ..., Invest in technology to s..., More renewable energy, .., More renewable energy,..., Prioritize energy use fro..., I don't support these goals., Other

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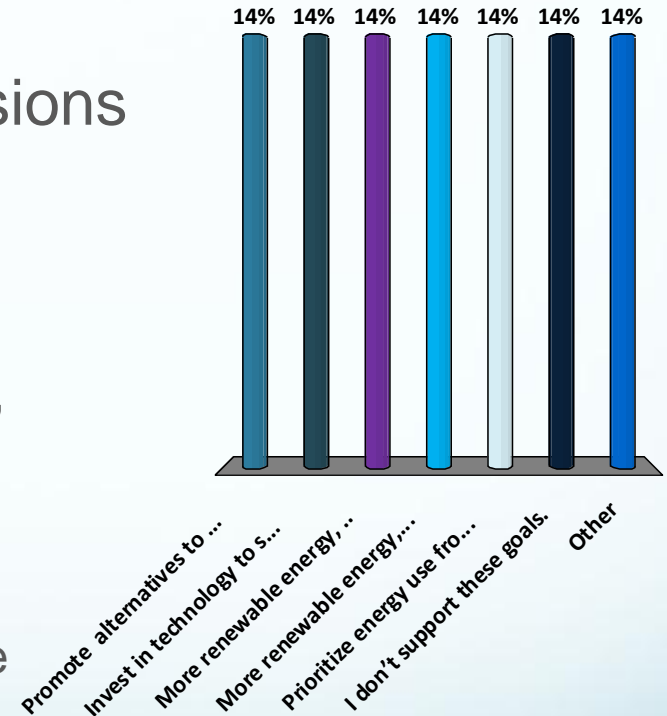
Small Group Discussion

For the topics of water, land, air, energy, and climate please answer the following questions:

1. What **concerns** do you have related to quality of life now and in the years to come? (Think in terms of your children and grandchildren.)

2. Given these concerns about the next generation's quality of life, can you envision a **better scenario**? What does your vision for an ideal future quality of life look like?

3. What **actions** do you propose we take (as individual citizens or as a state) to address these issues in the years to come?