

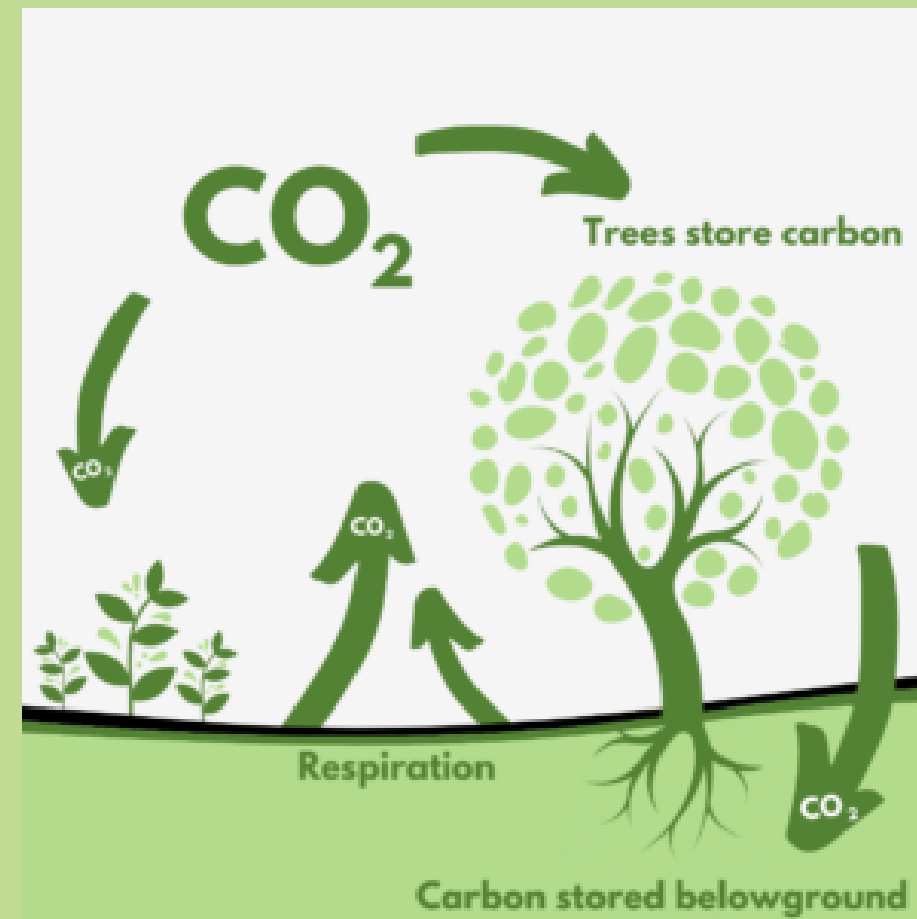
# AGRICULTURE, NATURAL & WORKING LANDS AND CLIMATE POLLUTION

## WHAT IS THE PROBLEM?

- Agriculture industry was responsible for **10% of U.S. GHG emissions** in 2021 (EPA)
- Certain **soil management**: Applying synthetic & organic fertilizers causes nitrous oxide emissions
- **Livestock** (i.e. cattle): Release methane as part of their normal digestion process (their burps and manure!)

## NATURAL LANDS CAN HELP SEQUESTER CARBON!

Massachusetts natural and working lands currently store at least 0.6 gigatons of carbon, **equivalent to the past 25 years of CO<sub>2</sub> emissions!**



Graphic: NJ DEP

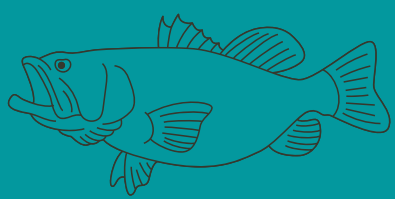
## WHAT ARE COMMON IMPACTS?

### ECONOMY IMPACTS



- Climate pollution can create sudden changes in rainfall and temperature
  - Risk of crop loss from extreme rain, frosts, droughts
  - Dependency on fertilizers leads to higher food costs for producers and consumers

### WATER POLLUTION & HABITAT DISRUPTION



- Polluted runoff and increased temperatures can cause **hypoxia**
  - Aquatic fish populations are increasing risk of dying off
  - **Algal blooms** can contaminate water sources and cause illness for animals & humans
  - Habitat disruption impacts

### NWL Carbon Sequestration in MRPC Region

Town	Carbon Dioxide Equivalent (CO <sub>2</sub> e) Captured (tn)
Ashburnham	36,440
Ashby	24,828
Athol	30,400
Ayer	7,666
Clinton	4,728
Fitchburg	22,051
Gardner	20,569
Groton	33,363
Harvard	23,941
Hubbardston	40,923
Lancaster	25,859
Leominster	25,024
Lunenburg	23,215
Petersham	55,861
Phillipston	25,048
Royalston	41,650
Shirley	16,261
Sterling	31,676
Templeton	29,913
Townsend	34,427
Westminster	30,912
Winchendon	40,569
<b>Total</b>	<b>625,324</b>

## GENERAL GOALS TO CONSIDER FOR THE AGRICULTURE/NATURAL AND WORKING LANDS SECTOR

**1**  
INCREASE CARBON SEQUESTRATION CAPACITY

**2**  
REDUCE/  
DISINCENTIVIZE  
LAND CLEARING &  
PERMANENTLY  
PROTECT LAND  
AND WATER

**3**  
SCALE UP  
SUSTAINABLE LAND  
USE PRACTICES

**4**  
IMPROVE  
LIVESTOCK AND  
MANURE  
MANAGEMENT