




SUSTAINABLE DUBUQUE PRESENTS




Climate Action 101



Climate change refers to long-term shifts in temperatures and weather patterns


The Earth's climate system is being destabilized in response to elevated levels of greenhouse gas emissions in the atmosphere

Since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil, and gas) which produces heat-trapping gases.



What is Climate Change?





Two changes to Iowa's climate are occurring already:

1. Shorter winters with fewer cold extremes
2. Heavier and more extreme precipitation

Climate Change is a global phenomenon that creates local impacts





A Climate Action Plan lays out the foundation with specific mitigation and adaptation strategies and actions of the City's efforts to reduce its GHG emissions and improve resilience to future impacts of climate change on its environment, infrastructure, and people

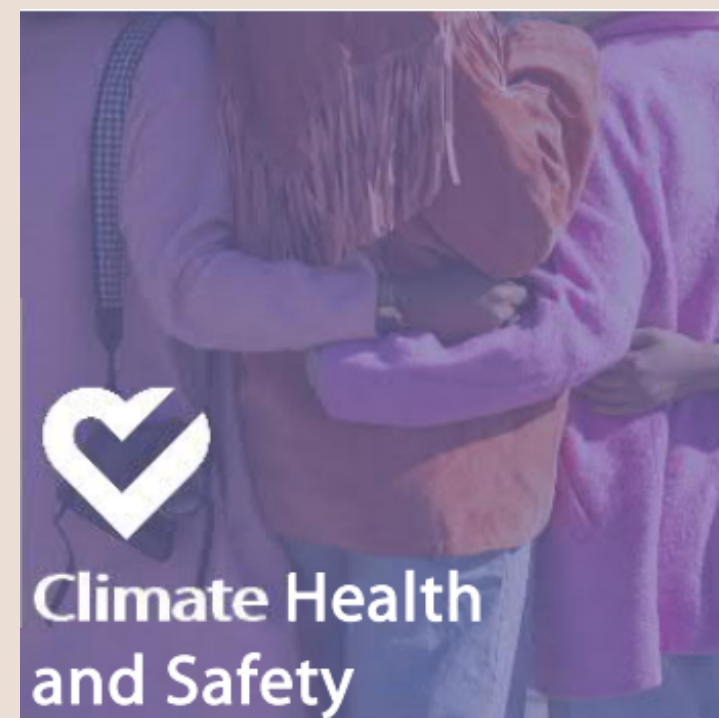
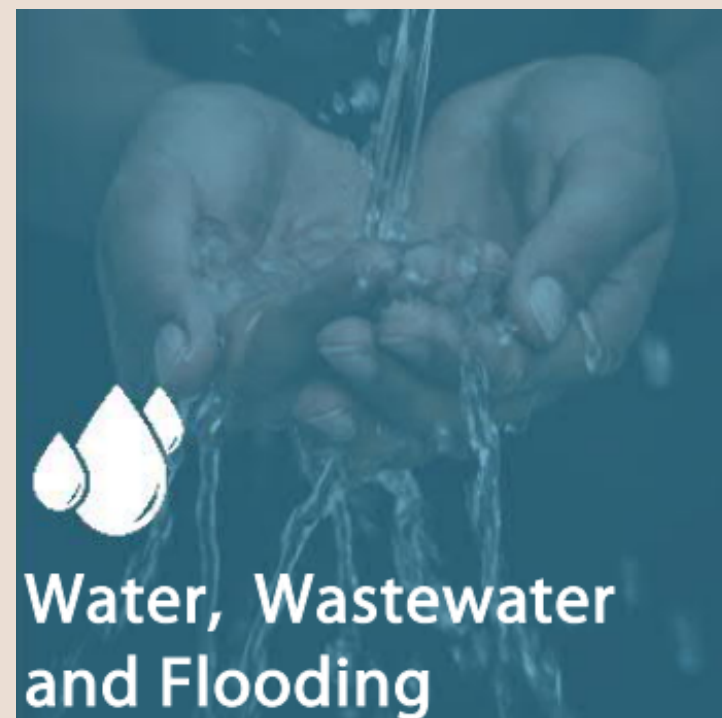
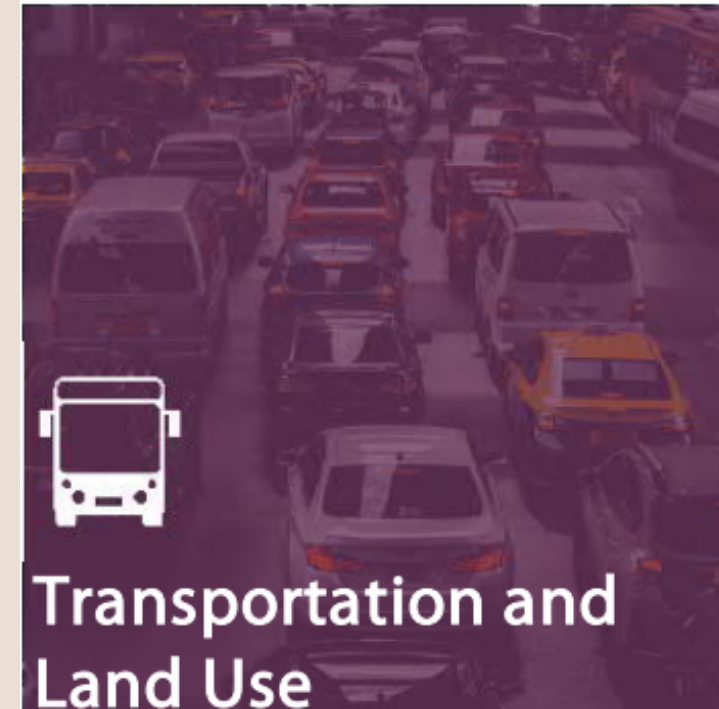
These effects aren't just felt in the air you breathe, but also spark positive public relations, community perceptions and can contribute to a more realistic long-term plan

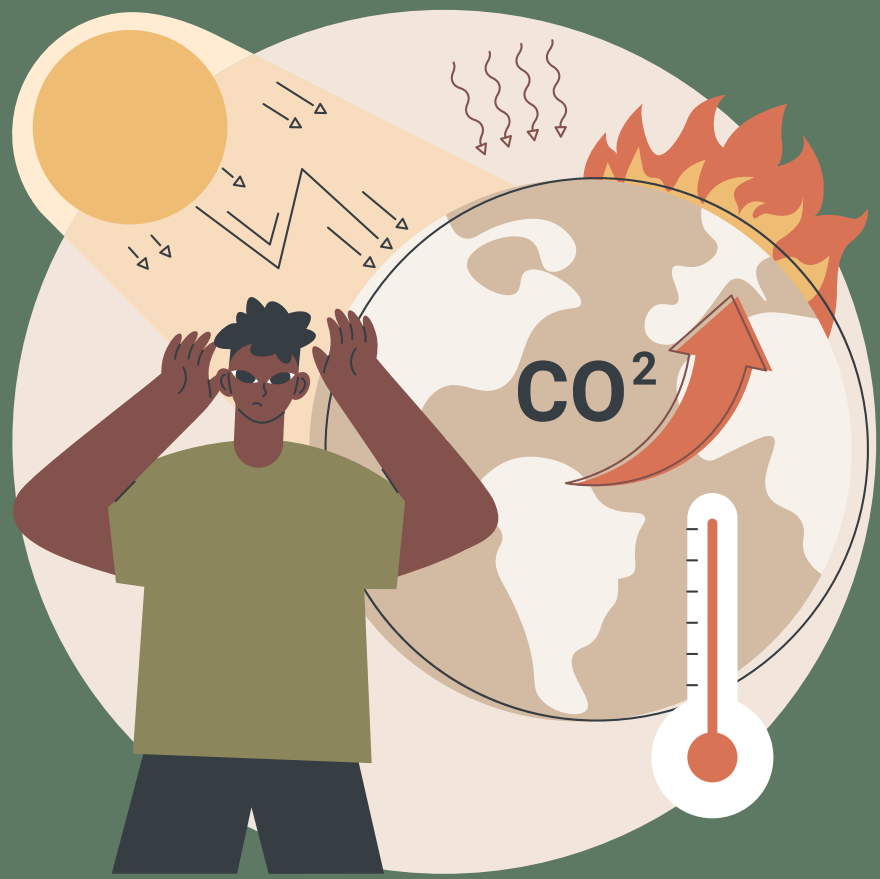


What is a Climate Action Plan?



Sections of DBQ's Climate Action Plan





What are Greenhouse Gases?

Gases that are in the Earth's atmosphere that trap heat

During the day, the sun shines through the atmosphere, warming the earth's surface

At night the earth's surface cools, releasing heat back into the air



What is the Greenhouse Effect?



The greenhouse effect is when greenhouse gases are gases in the atmosphere that trap energy radiating from the Earth and reflect it back, therefore warming the Earth

Carbon dioxide (CO₂), Methane (CH₄), and Nitrous oxide (N₂O) are some of the most common GHG. The more GHGs in our atmosphere, the more warming we will experience.

Where do GHG come from?

Energy - emissions are produced from the combustion of natural gas, coal, and other fossil fuels primarily for heating, cooling, and electricity generation

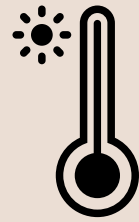
Transportation - emissions come from the combustion of fossil fuels for ground transportation and air travel

Solid Waste - emissions in the inventory estimate the decomposition of biodegradable waste (food/yard waste in the landfill)

Wastewater - emissions from energy uses are calculated and treatment of wastewater



1. Heat Stress



2. Housing



3. Stormwater Management

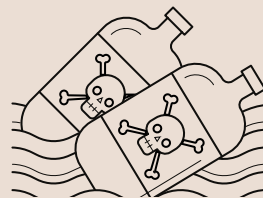


4. Air Quality



5. Mental Health

6. Vector-Borne Disease



7. Surface Water Quality

8. Trees, Greenspace, and
Agriculture

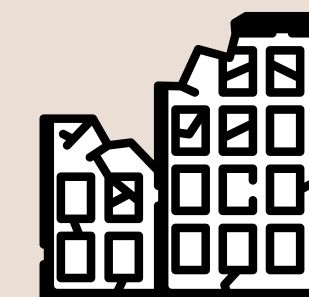
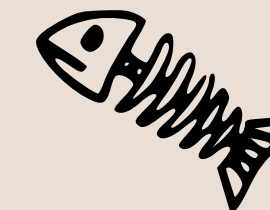
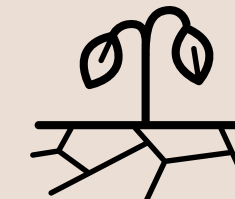


Dubuque's Climate Vulnerabilities

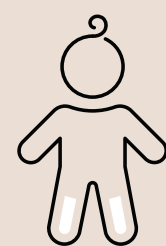


Harms of Climate Change around the World

- Increased extreme weather events
 - Fires, floods, hurricanes, drought, etc.
 - Destruction, disruption, and death
 - Migration
- Sea level rise
- Increased ocean and water body temperatures
 - Species migration and death
- Crop failure
 - Hunger and famine
- Increased pollution and pollen
 - allergies, asthma, health effects
- Decreased biodiversity
- Land degradation
- Infrastructure failure
- Economic downfall



Most Vulnerable to Climate Change:



Children



Elderly



Disabled



Economic Insecure



People of Color




At-Risk Workers



Lack of Transportatio




Food Insecure



A community's ability to meet the environmental, economic, and social equity needs of today without reducing the ability of future generations to meet their needs

Sustainable DBQ has a holistic approach that includes environmental and ecological integrity, economic prosperity, and social and cultural vibrancy.



What is Sustainability?



Why Care?

Unsustainable Societal Behaviors

The United States uses 20 million barrels of oil every single day. This is having a terrible impact on our Earth. If businesses don't adopt sustainable behaviors, then they are going to run into problem down the road.

Positive Feedback Loop

Our climate crisis is dangerously close to too far gone to possibly correct. It takes upwards of 30 years to feel the full effects of the emissions we are putting into the air today. A warming planet leads to the slowing down of ocean currents and this can snowball into a situation where a large percentage of the land on Earth is uninhabitable.

**By the
2050's
Dubuque
Will Likely
See...**

Increase in
Average Annual
Temperature:



Days Above 95°F:



Air Conditioning
Demand:



Average Rainfall:



Heavy
Precipitation
Events:



Growing Season:



(Time for 3 more
generations of
mosquitos)

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