



Centre Region **CLIMATE ACTION & ADAPTATION PLAN**

For State College Borough and Townships of College,
Ferguson, Halfmoon, Harris, and Patton

Local Actions and Policies to reduce our greenhouse gas emissions and increase our climate resilience



<https://www.crcog.net/caap>

To be Approved by the Centre Region Council of Governments
Draft 9/27/21

Produced by Centre Regional Planning Agency
Through partnership with Local Government for Sustainability (ICLEI)



Pamela Adams
Sustainability
Planner

October 4, 2021



ACKNOWLEDGEMENTS

Climate Action and Sustainability Committee (2021) Public Services & Environmental Committee (2019 – 2020)

- **Carla Stilson** College Township, CAS and PSE Committees
- **Prasenjit Mitra** Ferguson Township, CAS and PSE Committees
- **Pam Steckler** Ferguson Township, CAS Committee
- **Danelle DelCorso** Halfmoon Township, CAS and PSE Committees
- **Barbara Spencer** Halfmoon Township, PSE Committee
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A special thanks to all community members who participated in the Sustainability Survey and the Addressing Climate Impacts in the Centre Region Public Forum. Your input helped guide the development of the Climate Action and Adaptation Plan.

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- **State College Borough Sustainability Committee**

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Why ?



NWS State College
@NWSStateCollege

Severe thunderstorm watch has been issued for parts of AL, NY, OH, PA, VT, WV until 8 PM EDT



Storm causes power outages, downed trees and road closures in State College area

BY BRET PALLOTTO
UPDATED MAY 26, 2021 6:47 PM

CENTRE DAILY TIMES



Tree fell across East College Avenue in front of Yallah Taco on Wednesday after a storm rolled through the area. ERIN HOGGE PHOTO PROVIDED

CBS NEWS NEWS SHOWS

A historic heat wave is expected to bring scorching temperatures to the Pacific Northwest over the weekend.

Hurricane Ida's remnants pound Northeast, killing at least 45

BY WENDY GILLETTE, ALEX SUNDBY, SARAH LYNCH BALDWIN, STEPHEN SMITH, BRIAN DAKSS, PETE MARTINEZ
UPDATED ON: SEPTEMBER 3, 2021 / 8:03 AM / CBS NEWS

Centre County declares disaster emergency after heavy rain, flooding hits Penns Valley

BY HALIE KINES

UPDATED SEPTEMBER 24, 2021 8:38 AM

CENTRE DAILY TIMES



Flooding in Tennessee killed at least 8 people on August 8, 2021.

SKY 5/WTVP

Up to 17 inches of rain fell in the county in less than 24 hours Saturday, appearing to shatter the Tennessee record for one-day rainfall by more than 3 inches, the National Weather Service said.



Elk Creek washes across Coburn Road near Front Lane on Thursday, Sept. 23, 2021. ABBY DREY ADREY@CENTREDAILY.COM



Vehicles are under water during flooding in Philadelphia, Thursday, Sept. 2, 2021 in the aftermath of downpours and high winds from the remnants of Hurricane Ida that hit the area. (AP Photo/Matt Rourke) (Matt Rourke | AP)

By Associated Press

Published: Sep. 2, 2021 at 8:04 AM EDT

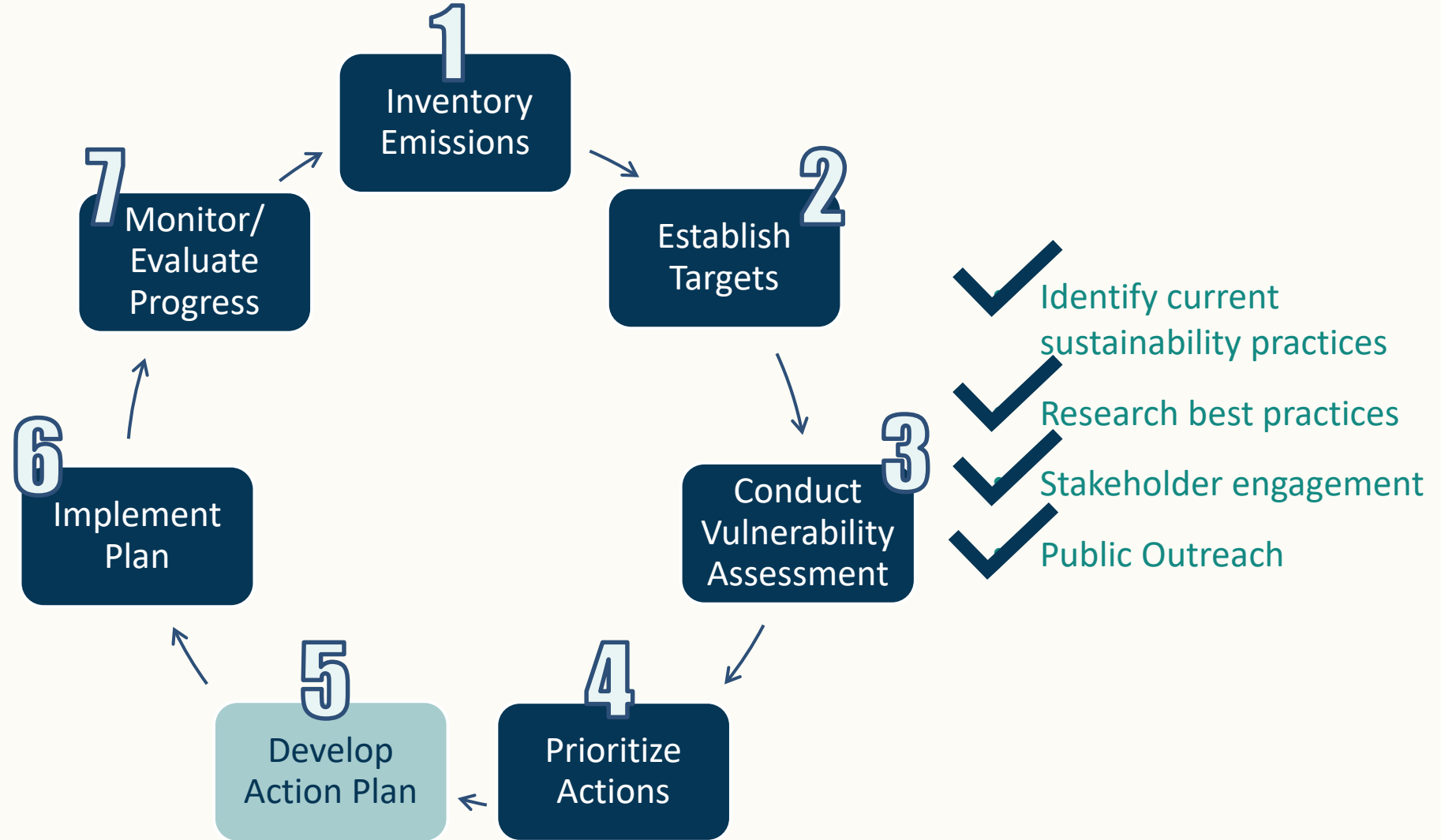
Climate Action & Adaptation Plan Objective

Identify pragmatic, fiscally responsible actions for local municipalities to consider in order to:

- **mitigate** the region's contribution to greenhouse gas (GHG) emissions and
- **adapt** to changing climate conditions.

Climate Action and Adaptation Plan Process

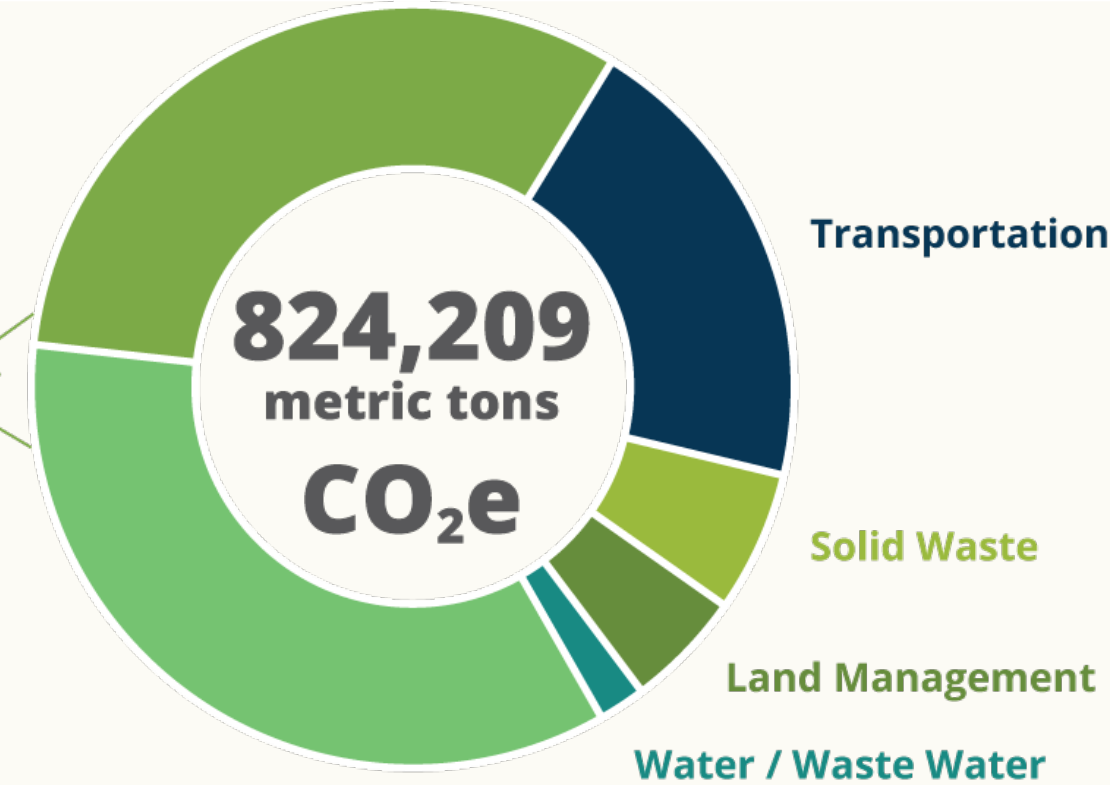
- Collaboration efforts
- Prioritization
- Financial resources
- Local and Regional Action



Centre Region's 2016 Emissions Profile

GHG Emissions Profile by Sector

Buildings / Energy



Buildings / Energy (67%)

Electricity, natural gas & heating fuels

52% residential

48% commercial



Transportation (20%)

79% passenger vehicle

17% trucks (freight & service)

4% transit (buses)



Solid Waste (6%)

Transit of solid waste & recycling, processing & landfill operations



Land Management (5%)

Livestock emissions, fertilizer & park maintenance



Water / Wastewater (2%)

Water treatment plant electricity/ propane & emissions



CENTRE REGION'S GREENHOUSE GAS EMISSIONS

The first milestone, a greenhouse gas (GHG) emissions inventory, was completed in 2019 and identified the GHG emissions for the Centre Region 2016 were 824,209 metric tons of carbon dioxide equivalent (MTCO₂e). The inventory estimates the GHG emissions resulting from activities and sources in 2016 for the Centre Region community, which includes the Borough of State College and Townships of College, Ferguson, Halloworth, Harris, and Pierson Townships. CLEF's U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, version 1.2, was used for the inventory.

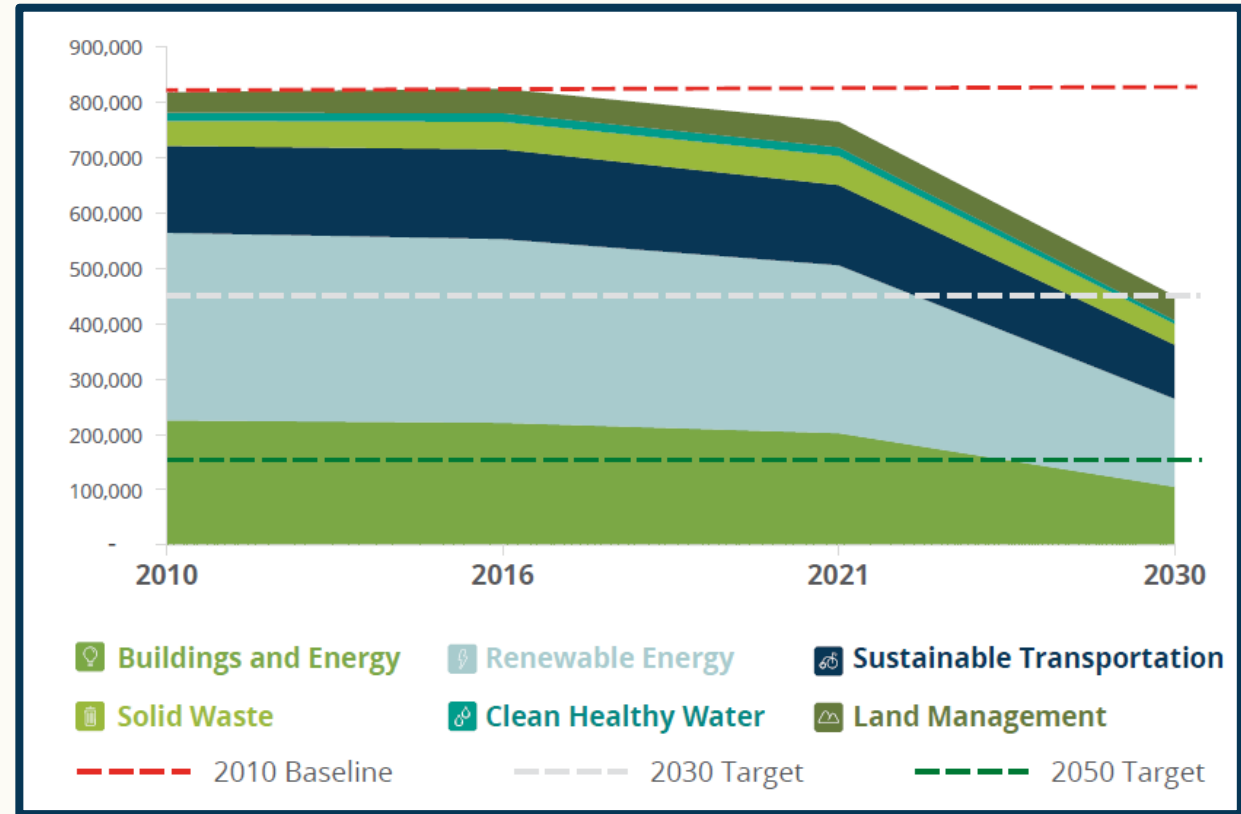
CRCOG has used the GHG emissions inventory to set emissions reduction targets, identify tangible actions aimed at reducing GHG emissions, and will perform future inventories to measure progress toward achieving those targets.



SUSTAINABLE CENTRE REGION

Forecasted Impact of CAAP Actions

Sector	Description	Number of Distinct Actions	Anticipated MTCO2e Reduction by 2030	Percentage of Total Reduction at 2030
Buildings and Energy	Policies and programs to reduce municipal, residential and commercial, energy use.	14	-119,994	32%
Renewable Energy	Policies and programs to promote local small-scale renewables.	12	-179,992	48%
Sustainable Transportation	Policies and programs to reduce on-road vehicle miles traveled and promote electric or low emission vehicles.	16	-59,263	16%
Solid Waste	Policies and programs to reduce solid waste generation.	15	-7,506	2%
Clean Healthy Water	Policies and programs to reduce water and corresponding wastewater treatment energy needs.	14	-7,724	2%
Land Management	Policies and programs to reduce emissions from urban land use, protect natural resources, and bolster resilience	11	N/A	N/A





CLIMATE VULNERABILITIES & ADAPTATION

Gradual Climate Changes

Increased Temperature

Fluctuations in Precipitations

Local Climate Hazards

Extreme Heat Events

Worsened Air Quality

Increased Extreme Rain Events

Increased Tornadoes & Windstorms

Increased Drought

Direct Impacts

Heat-related Illness or Death

Power Outages

Asthma & Respiratory Impacts

Vector-borne Disease & Pathogen Outbreaks

Property Loss & Damage

Crop Loss & Increased Food Prices

Increased Utility Rates

School & Business Disruption

Transportation Impacts

Water Shortages

Septic System Failures

Increasing Vulnerabilities

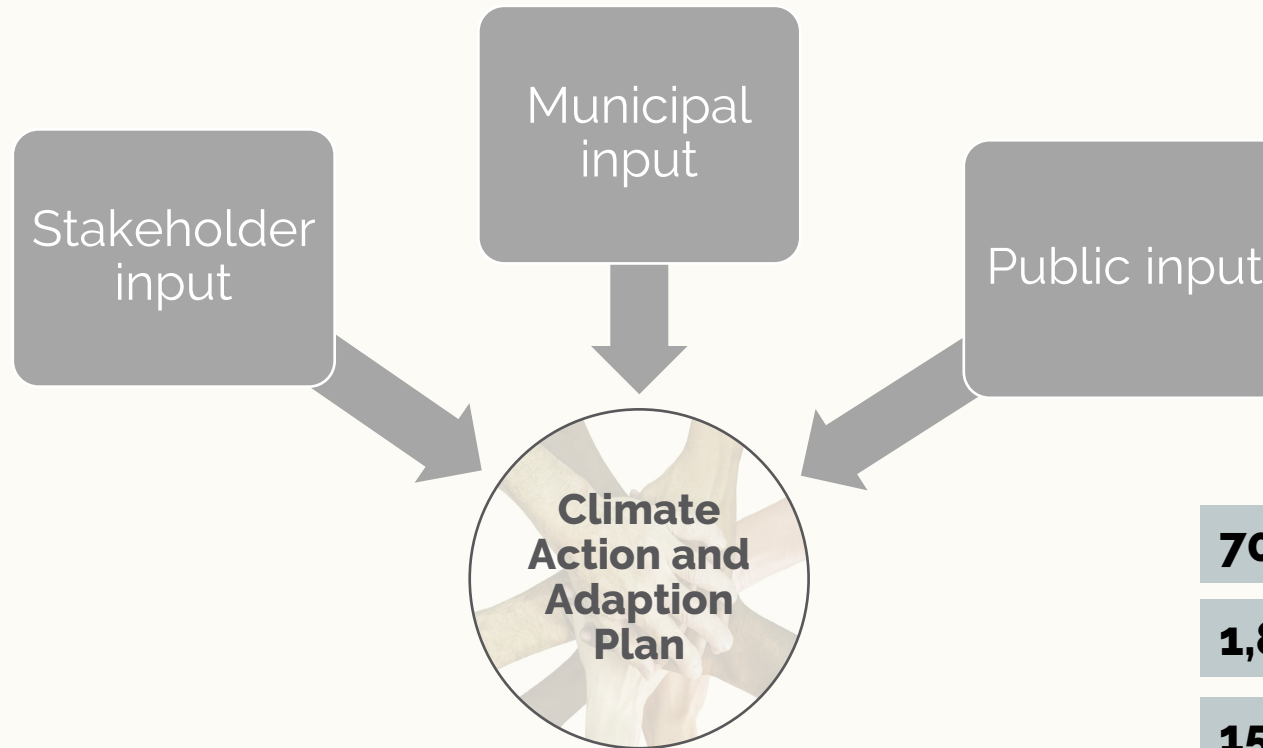


Public Engagement

- Region's authorities
- Utilities
- PennDOT
- Penn State Extension
- Centre Co Farmland Trust
- ClearWater Conservancy
- Trout Unlimited
- PA Fish & Boat
- Keystone Water Resources Center

- Public Works
- CRPC
- SCB Sustainability Committee

- Ferg Climate Action Committee
- SCB Transpo Commission
- Ferg Twp Tree Commission



- Residents
- Businesses
- Centre Sustains
- Survey
- Climate Forum

70 subject matter experts

1,826 survey responses

150 forum attendees

20 unique organizations

RESULTS OF THE CENTRE REGION SUSTAINABILITY SURVEY
 COMPLETED BY THE CENTRE REGIONAL PLANNING AGENCY - JULY 2021
 FOR COLLEGE, FERGUSON, HALFMOON, HARRIS AND PATTON TOWNSHIPS AND THE BOROUGH OF STATE COLLEGE

<https://www.crcog.net/sustain-survey>

Sustainability Survey says...

TOP 10 STRATEGIES THAT RECEIVED THE HIGHEST SUPPORT

1 - NO SUPPORT AND 5- SUPPORT

- Identify high priority conservation lands
- Incentives for new buildings to be more efficient
- Use green infrastructure to better manage impacts of stormwater
- Improve walking conditions
- Expand/initiate organics programs
- Expand/connect bike networks
- Educate/incentivize sustainable landscaping practices
- Education programs for conservation and renewables
- Provide waste audit services to businesses
- Promote energy audits and funding for increased efficiency

What we heard from respondents...

**Includes responses that were neutral, somewhat agreed, and agreed with these statements*

- 75% Climate change is happening
- 83% When making decisions today, policy makers in my community should consider scientific projections about what the climate might be like in 50 years
- 84% Addressing climate change will be good for our local economy

CENTRE REGION SUSTAINABILITY SURVEY RESULTS



CENTRE REGION COUNCIL OF GOVERNMENTS
CENTRE COUNTY, PENNSYLVANIA

Creating Dialogue and Facilitating a Climate Forum:
Understanding Climate Impacts and Opportunities in the Centre Region, Pennsylvania



<https://www.crcog.net/climate-forum>

Forum: Addressing Climate Impacts in the Centre Region

- Shift from reacting to disasters to pro-active
- Time to act is now
- Both top down and bottom-up efforts
- Range of climate actions
- Unified approaches
- Education and outreach is critical
- Equity, affordability and justice



Search



Addressing Climate Impacts In The Centre Region





Community Conversations

- Promote an understanding
- Build broader ownership
- Guide decision making and prioritization
- Enhance community readiness & resilience

Co-Benefits of Climate Action



CO-BENEFITS OF CLIMATE ACTION

The Climate Action and Adaptation Plan (CAAP) was developed to reduce GHG emissions and increase our resiliency. Successful execution of the CAAP will bring several critical benefits to humans and the natural world and we call these co-benefits. These include creating jobs and economic prosperity, advancing social equity, fostering resources security, and improving public health and local environmental quality.

These co-benefits detailed on the following pages are key opportunities to leverage the importance and impact of the CAAP.

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Creating jobs and economic prosperity



Advancing Social Equity



Fostering Resources Security



Improving Public Health & Local Environmental Quality



**SUSTAINABLE
CENTRE REGION**

Co-Benefits of Climate Action



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Creating jobs and economic prosperity



Advancing Social Equity



Fostering Resources Security



Improving Public Health & Local Environmental Quality

1. Improve energy efficiency best practices in existing buildings

Action	Co-Benefits	Potential Impact
<p>1.1 Promote programs, provide tools and encourage commercial building owners to track energy consumption, conduct energy audits, provide preventative maintenance, and commission / retro commission buildings.</p>		



SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER

15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

17 PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

Guiding Principles

1. Local Leadership
2. Partnerships
3. Social Equity
4. Resilience and Climate Preparation



Climate Action and Adaptation Goals and Objectives



ENERGY & BUILDINGS

Achieve building efficiencies to reduce energy consumption 30% for homes and 25% for businesses.

Improve energy efficiency best practices in existing buildings.

Increase the number of new buildings and homes that are net zero energy ready, affordable, and resilient.

Maximize efficiency of municipal facilities, equipment and operations.

Enhance resiliency throughout the community.



RENEWABLE ENERGY

Transition fossil sources to renewables for 10% homes' and 5% businesses' energy usage.

Develop a resilient energy portfolio through diversified sources and local generation.

Improve access to affordable clean energy for residents and small organizations.

Support clean renewable energy policy and growth.



SUSTAINABLE TRANSPORTATION

Increase the trips taken with sustainable options and convert 25% of the communities' vehicles with EVs.

Encourage driving cleaner, more efficient vehicles and traffic operations.

Reduce the trips with one driver.

Align land use and housing with transportation infrastructure to increase access to walking, biking and public transit.

Improve and build resilience into our transportation systems.

Climate Action and Adaptation Goals and Objectives



SOLID WASTE

Reduce the amount of waste sent to the landfill by 25%.

Encourage reducing waste at the source in municipal operations, homes and businesses.

Increase diversion in municipal operations, homes and businesses.

Improve efficiencies of waste management.

Support locally produced products.



LAND MANAGEMENT

Preserve, restore, and responsibly manage the region's diverse and fragile environmental resources.

Educate, encourage, and promote sustainable agricultural, forest and land management practices.

Promote and support rebuilding soil and sustainable practices that sequester carbon.

Reduce reliance on carbon heavy fuel sources.

Support land managers becoming more resilient.



CLEAN HEALTHY WATER

Conserve, protect, enhance, and restore our water resources.

Manage flooding and reduce erosion impacts on infrastructure.

Grow and maintain a healthy tree canopy (urban, suburban, rural, forest).

Increase the region's resiliency by restoring, protecting, and conserving community water resources.

Restore and protect ecosystems and promote ecosystem resilience.

Implementation of CAAP – Phase 1

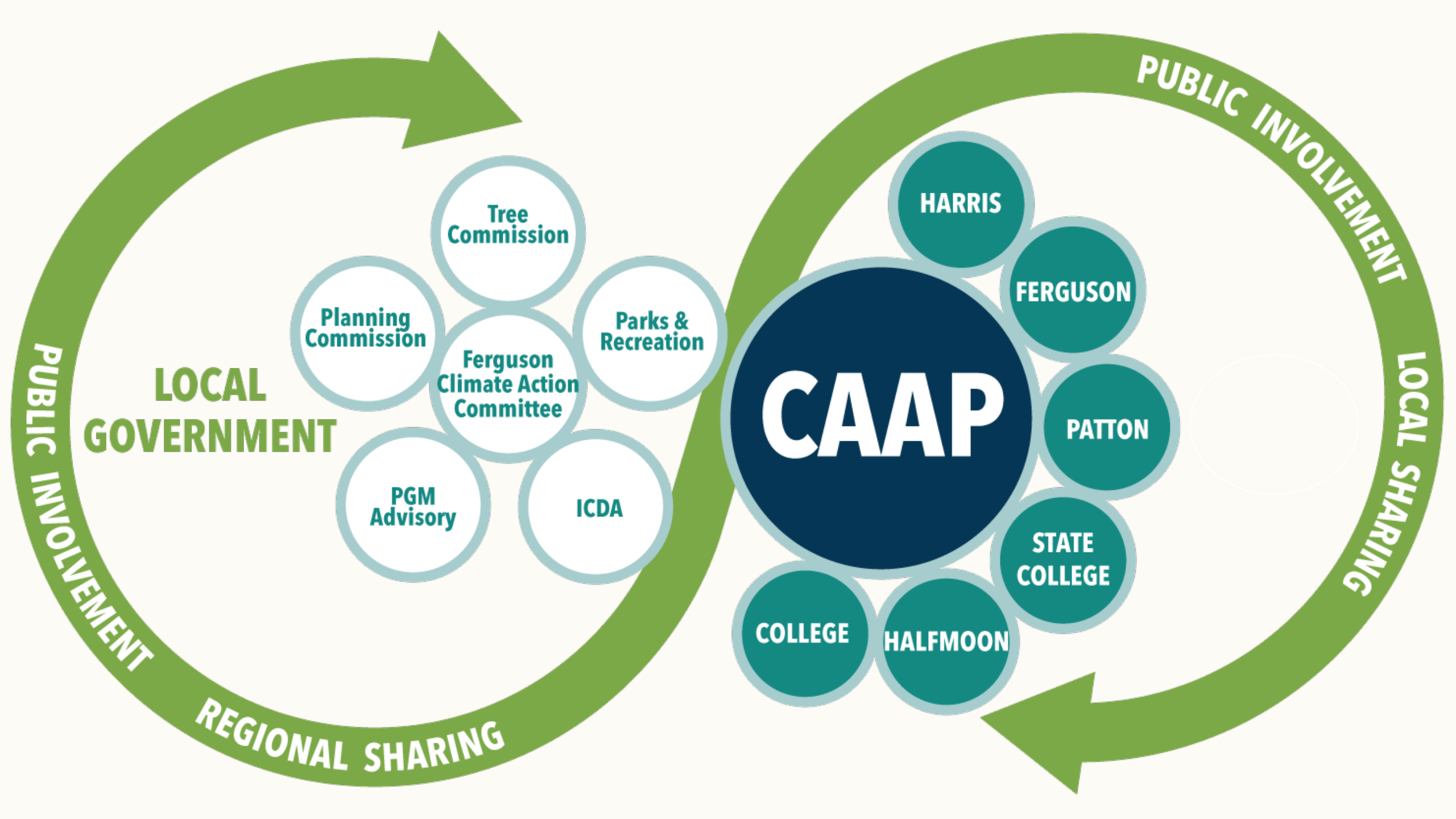
1. Municipal Operations

- Energy Management Plan
- Sustainable landscaping
- New buildings – high performance standard
- Renewable energy goals
- Bicycle friendly business
- Commuting programs
- Emergency preparedness (climate)

2. Education, Incentives – Partnerships

3. Define Priority Actions

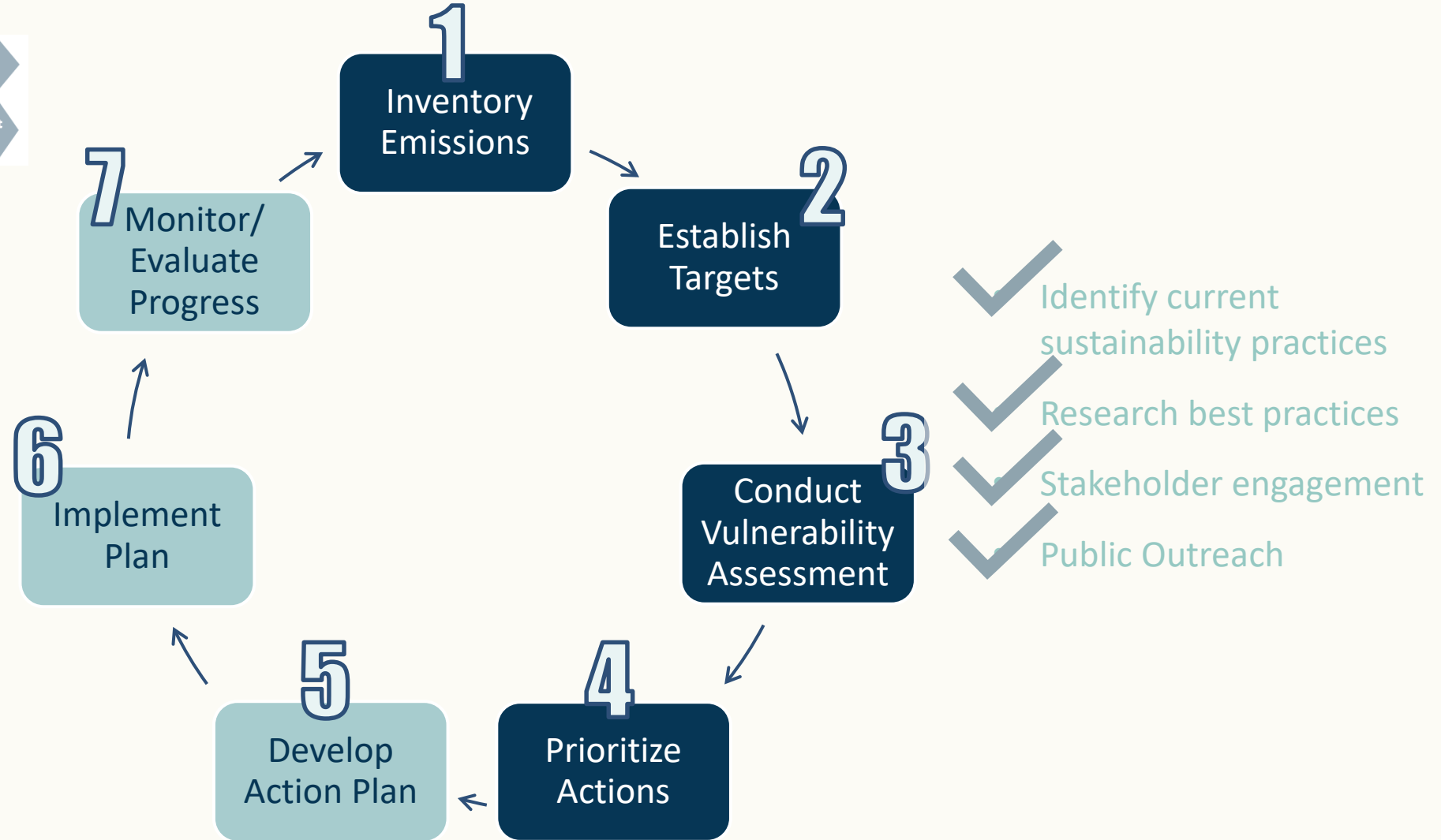




Climate Action and Adaptation Plan Process



- Collaboration efforts
- Public Outreach
- Prioritization
- Financial resources
- Local and Regional Action





Climate Action and Adaptation Plan

The Centre Region Climate Action and Adaptation Plan has been drafted. The CAAP will be presented for municipal review and comments at the following meetings:

- October 4: [Ferguson Township](#)
- October 11: [Harris Township](#)
- October 13: [Patton Township](#)
- October 14: [Halfmoon Township](#)
- October 18: [State College Borough](#)
- October 21: [College Township](#)

We want to hear from you by October 29:

- attend a municipal meeting
- submit comments via the comment form on this page
- contact staff, padams@crcog.net
- stay in the loop - sign up for our [Centre Sustains newsletter](#)

MORE INFORMATION

[CAAP Process and Details](#)

[Centre Sustains](#)

[Centre County Solar and EV Charger Co-op](#)

For optimal viewing of the [CAAP report](#): Download the file to an Adobe pdf and 'Open with system viewer'. The pdf is best viewed in two page view with a cover page.

CAAP Comment Submission

Please use this form to submit your comments regarding the Centre Region Climate Action & Adaptation Plan.

Climate Action and Adaptation Plan

<https://www.crcog.net/caap>

THANK YOU!



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  *centreregionalplanning*

