



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



JULY 16, 2021

EXPR 972, Mediation of Environmental & Public Conflict, Spring Semester
Penn State Law

Executive Summary

The Centre Region Council of Governments (COG) is developing a Climate Action & Adaptation Plan that will identify strategies to reduce the region's greenhouse (GHG) emissions and adapt to a changing climate. Preparing for and managing climate change-related risks goes beyond local government and will require collective action from across our community. Public engagement is a key component to help create a relevant community action plan.

The COG worked with students in Penn State Law's *Mediation of Environmental and Public Conflicts* course during the spring semester 2021 to implement one part of the public participation plan. The goal of the COG and class partnership was to better understand stakeholder's concerns about climate impacts and identify potential opportunities and activities for climate action in this region. In addition to interviewing approximately 30 people, students prepared for and facilitated an online public forum on April 13, 2021 with more than 150 participants. Students compiled their interview and forum notes to create this report, which summarizes what was shared.

During the interviews and forum, stakeholders identified potential groups or sectors who might be interested and/or affected by climate impacts. They also shared broad messages that are listed both here and in the body of the report:

1. How do we shift from reacting to disaster to being proactive in implementing projects? Many current projects are oriented towards responding after a disaster occurs versus proactively planning, which can reduce financial liabilities. This is an area where local governments and the COG could provide leadership.
2. The time to act is now as we are already seeing local impacts. Stakeholders would like to see less planning and more doing; this is an area where local governments can provide leadership through their climate action and implementation efforts.
3. There is a need for both top-down and bottom-up efforts: actions taken by government but also support of community-led efforts, with work to remove barriers to such bottom-up efforts.
4. There should be a range of climate action items implemented by local governments and businesses alike. For example, local governments should integrate the climate action planning efforts in all aspects of development and demonstrate their environmental consideration, and local governments should serve as leaders in meeting the region's sustainable goals. Likewise, unified action by local businesses can also help.
5. Land use, development, transportation, bike routes, public transit, affordable housing, green space, and agricultural lands are also important considerations as this region examines current practices and future decisions related to development and climate impacts/opportunities.
6. Stakeholders identified ways to address local impacts and opportunities (solar, building management, public transportation, other local policy changes) and ways to address global/long term impacts and opportunities (such as joining the Regional Greenhouse Gas Initiative).
7. Equity, affordability, and justice issues are also part of the puzzle and must be considered; for example, access to affordable housing in the Centre Region is also a climate-related issue as people drive further to find more affordable housing.

8. Education is critical. Stakeholders had a lot of ideas on how to approach education, particularly by their local governments. They also recognized that while education is necessary, it is also insufficient by itself. They want to see action and implementation along with educational outreach and engagement.
9. The financial side of reducing greenhouse gas emissions and adapting to potential climate impacts is very real; however, failing to make investments is also problematic. Finding ways to leverage projects for multiple benefits while developing “green jobs” may be important in addressing financial concerns and is something worth exploring at the local government or regional level.
10. The Centre Region has excellent air and water that by and large meet regulatory standards. Continuing to protect such high-quality resources is also important to consider.
11. Stakeholders wanted to know what local government officials will do with the information provided through interviews and the public forum and look forward to additional action steps and the implementation process.

Stakeholders discussed climate impacts they already see or are concerned about for this area. Water-related impacts are a significant area of concern: drought, floods/stormwater, land use and water impacts, ecological concerns, and transportation impacts. Stakeholders are also seeing changes in weather and seasons (hotter, longer summers; less snow), as well as impacts from severe weather (wind, ice, significant precipitation). Such impacts affect the built environment (reliability of electricity, for example) and local ecology (hotter temperatures affect local streams, for example). Stakeholders also identified a variety of issues associated with human health, impacts to local agriculture, financial concerns, equity concerns, and linkages to land use and development. Finally, they identified general sustainability concerns associated with waste management and plastics.

Stakeholders also shared ideas and opportunities to address potential climate impacts, both in general and ideas that could be implemented by local governments in the Centre Region. These included reducing greenhouse gas emissions by increasing usage of renewable energy, particularly solar; creating carbon markets or offsets; reducing energy use in buildings, both existing and new while providing for affordable housing; and finding creative ways to provide alternative transportation modes, including a more interconnected set of bike paths, access to public transportation, and electric vehicles. Stakeholders identified opportunities for adapting to potential climate impacts by implementing more green infrastructure, working with the agricultural community, and managing water. They also identified ideas for waste management.

Finally, stakeholders had several ideas on what local governments could be doing. Education was a key theme, with many ideas on who, what and how such education could be accomplished. In addition, stakeholders see local governments as leading in establishing climate plans and modeling effective implementation, including through municipal energy decisions, purchasing decisions, and other types of greenhouse gas or climate adaptation measures (especially related to water management). Leveraging different topics together is another way that local governments can engage; addressing both climate resilience and water quality concerns, for example. Local coordination could in turn help leverage regional, state, and national changes while leveraging potential funding sources, incentives, and ways to change behavior. Stakeholders want to see local governments continue to engage with Penn State students and faculty on education, research, and implementation of ideas.

In terms of next steps, there is a significant need to reach a broader audience as the COG continues to develop the Climate Action and Adaptation Plan, and as local governments implement the Plan. Potential steps include reaching out to specific sectors: agriculture, business, and developers, for example. One person commented that the online forum should not be the only forum held. Stakeholders also want to know how local governments are implementing action; this may be an opportunity to showcase or highlight local sustainability efforts. They provided a wealth of ideas on broader education, including some potential messaging. Overall, people were interested, engaged, and wanting to see action in this space; tapping into this local community could help accomplish the goals of the Climate Action and Adaptation Plan for each local government and within the COG as a whole.

Members of the public can and are encouraged to learn more about the Climate Action and Adaptation Plan through Centre Sustains: <https://centresustains.com/> . For additional forum outputs, including the C-NET recording and introductory slides, please see <https://www.crcog.net/climate-forum> .

The students appreciated the opportunity to work with the Centre Regional Planning Agency and various stakeholders on this project. To share your comments, suggestions, or questions on this report, please contact Penn State Law Professor Lara B. Fowler at lbf10@psu.edu. For more on the Climate Action and Adaptation Plan, please contact Pam Adams at padams@crcog.net.

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I. Overview of the Class and Methodology for Climate Forum

A. Overview of class

The “Mediation of Environmental and Public Conflicts” Course (EXPR 972) is a Penn State Law course that helps students develop mediation and facilitation skills to address complex multi-party issues. During the Spring 2021 semester, students examined climate and community engagement as a topic to meet course goals. Students 1) learned about different forms of dispute resolution and when they might be appropriate to use; 2) built skills using interest-based negotiation and mediation by working through role plays, scenarios, and real-life situations; and 3) identified potential ethical issues. The course had 30 students with a wide range of disciplines, including 15 law students, 5 graduate students, and 10 international master of laws (LL.M.) students. Students were from 9 countries, including the United States, Colombia, India, Mongolia, China, Panama, Honduras, Sierra Leone, and Tanzania. This course was part of Penn State’s Sustainable Communities Collaborative,¹ which matches courses with community needs.

In class, students learned about the process of facilitating dialogue. A critical first step to do so effectively involves conducting a situation assessment.² This involves identifying potential issues and stakeholders, determining what information is known and what needs to be developed, and identifying potential ways to proceed. It can be conducted by parties involved, or with the help of a facilitator or a mediator. A facilitator or a mediator is a neutral third party whose job is to help the stakeholders move a process forward. A facilitator is often used before there is an actual conflict or dispute to help move things forward productively. A mediator has many of the same skills, but mediation is a more formal conflict resolution process that invokes legal privileges such as those found under Pennsylvania law.³ This legal privilege protects any mediation communications from disclosure. Regardless of the title, the underlying functions are similar: the neutral third party works with stakeholders to establish productive communication; design a strategy; work with data and information; build and maintain linkages within different stakeholder groups; and help set up and maintain a neutral process for conducting discussions.

Using what they learned in class, students prepared for and hosted a public forum entitled “Addressing Climate Impacts in the Centre Region” on April 13, 2021. This report synthesizes what students learned from background research, interviews, and the public forum.

B. Development of the April 13, 2021 Public Forum

Development of the public forum required several sets of concurrent efforts, including (1) consultation with the Centre Region Council of Governments’ Climate Action and Sustainability Committee and Centre Regional Planning Agency staff, (2) background research and a simulated role play, (3) interviewing interested individuals and groups, and (4) planning and conducting the actual forum itself. Professor Lara Fowler from Penn State Law guided the students through this set of processes.

¹ For more, see <http://sustainability.psu.edu/live/staff/sustainable-communities-collaborative>

² See generally Carpenter & Kennedy, *Managing Public Disputes: A Practical Guide for Government, Business, and Citizen’s Groups* (2001).

³ 42 Pa. Cons. Statute § 5949 (Confidential Mediation Communications and Documents), available online at http://www.pde.state.pa.us/portal/server.pt/document/82830/confidentiality_statute_pdf.

1. Consultation with the Council of Governments

Professor Fowler met with COG Sustainability Planner Pam Adams during fall 2020 to discuss what a forum might look like. Starting in January 2021, Prof. Fowler then attended a number of the Council of Government's newly formed Climate Action and Sustainability Committee⁴ (CASC) meetings to discuss the forum. She also met with the Climate Action and Adaptation Technical Advisory Group (TAG). At the same time, these groups were developing a survey to distribute to also gather information. Finally, Ms. Adams identified potential interviewees.

For the forum itself, it was clear that it would have to be remote due to Covid-19, which then raised the question of which platform to use. Ms. Adams and Dr. Fowler investigated three platforms: Zoom, Gather.Town, and Remo.co. After investigating the alternatives, Zoom was chosen because of familiarity, access to Penn State's license for up to 500 people, and Penn State's well-established protocol on how to address potential "zoom bombings." The other platforms had limitations: Gather.town, for example, would support only up to 99 people; while Penn State could provide a license, the license holder could not provide technical support. In addition, it was more difficult for C-NET (Centre County Government and Education Access Television network) to livestream the discussion. Likewise, Penn State has a license for Remo.co, but breakout rooms were limited to 8 people, which seemed too limited for the number of people who might need to be in a breakout room given a limited number of students available to facilitate.

2. Fact-Gathering and Background Research through Simulated Role Plays

To learn more about the issues and challenges facing the Centre region, students learned about climate issues by doing background reading and engaging with guest speakers from Penn State, the Climate Action and Sustainability Committee, and the Technical Advisory Group. In addition, students participated in two sets of role plays. The first focused on climate and health in a fictional town. The second scenario was also fictional but based on expanding the urban growth boundary in the Centre Region Council of Government's territory; this scenario raised a number of climate and growth-related questions. For the second role play, students adopted personas with particular roles such as representing a municipality or an organization; they then had to research this role and how a person in their position might react to the fictional situation. They researched background information related to the urban growth boundary, reports, newspaper articles and other related information. Students then participated in simulated mediation sessions over two class periods. As part of this process, students identified various critical issues, brainstormed possible options and solutions, and identified potential steps on how a mediation might proceed.

3. Interviews with Individuals and Groups

In preparation for the forum, students also interviewed a variety of stakeholders. The students conducted both individual and group interviews with people from a range of interests, including local governments, businesses, the conservation district, non-governmental organizations, advocacy groups, and interested citizens. In total, students interviewed more than 30 people. Perspectives shared during these interviews are included in this report; however, who shared this information is not identified to provide confidentiality to the interviewees.

⁴ <https://www.crcog.net/climateaction>

4. The April 13, 2021 Climate Forum: Outreach and Agenda

During the semester, Penn State Law students planned for and facilitated an open public forum with more than 150 people, which was held online via zoom on April 13, 2021. The forum participants brought a broad range of perspectives which are reflected in this report.

To promote the forum and a related sustainability survey, a variety of outreach methods were used to reach people across the community. The Centre Region Planning Agency (CRPA; part of the Council of Governments) used traditional methods of outreach while increasing social media presence to inform the community about the survey and forum. The collage below highlights some of that outreach, with the table below providing more detail. While these efforts resulted in successful engagement, CRPA staff recognized a need to continue to develop relationships and partnerships with organizations to represent more voices across the region.



Table 1: Forum Outreach

<p>Sent press releases to media outlets on March 22, 2021 Individual emails sent to connect with Centre Daily Times and Centre County Gazette (no response; however, story written by CDT the day after the forum)</p>	<p>Sent 2 newsletter emails to centresustains mailing list 3/19 – 133 subscribers 4/8 – 472 subscribers</p>
<p>(5) CDT Op-Eds written by each Technical Advisory Group AG member, forum info at end</p>	<p>Municipal e-newsletters</p>
<p>PSU Transportation email distribution CATA shared via social media</p>	<p>PSU Sustainability Institute email distribution PSU Institutes of Energy & the Environment Event Guide for April 12 week</p>
<p>Facebook and Instagram posts and sharing by @Borough of State College, @DID, @Ferguson Township, @CRPR, @Envinity,</p>	<p>Facebook and Instagram shares with PSU EcoReps, State College Area School District parents, Happy Valley Moms, ClearWater,</p>

@CRPA on a regular basis	etc. NextDoor post (Patton Township) Ms. Adams posted to LinkedIn
Citizens' Climate Lobby, Sierra Club and Foxdale informed their members	Email sent to those who attended the 5 sessions on subject matter expertise/best practices
Added to WPSU community calendar Added to State College.com calendar	Email sent to University Park Undergraduate Association, State College Young Professionals, American Legion, select SCASD/Delta science and related teachers
COG's Refuse and Recycling Billing Insert informed of survey	

As noted above, the class developed the agenda through regular discussions with the Centre Region Climate Action and Sustainability Committee and the Technical Advisory Group, along with staff. Below is the agenda for the forum, including questions asked of the stakeholders. A full copy of what forum participants received is included in Appendix A.

Agenda:

- 6:30 PM Welcome and Forum Purpose
Lara Fowler, Penn State Law/Penn State Institutes of Energy and the Environment
- 6:35 PM Brief overview: Centre Region Climate Action and Adaptation Plan
Jim May, Director of Planning, Centre Region Council of Governments (COG)
Pam Adams, Sustainability Planner, Centre Region COG
- 6:55 PM Guidance for breakout sessions- Lara Fowler
- 7:00 PM Breakout sessions- all participants
The goal of the breakout session is to create an opportunity for everyone to share their thoughts on the questions raised below.
1. What do you see as existing or potential climate impacts in the Centre region?
 2. What opportunities do you see in addressing or adapting to these impacts?
 3. What actions would you like to see in this region, and what actions do you want to see your local governmental officials take?
 4. What three messages do you want your facilitators to report back to the broader group involved in this forum? (~10 minutes)
- 7:45 PM Report back on messages, discussion/Q&A
Facilitators shared 3 messages identified by each breakout group
Quick discussion, Q&A- facilitated by Lara Fowler
- 8:15 PM Summary of key points, next steps- Lara Fowler, Pam Adams
- 8:30 PM End

We also provided forum participants information about ways to learn or share more:

- Links to the Sustainability Survey (opened until April 30, 2021), available online at <https://centresustains.com/>. This link also included how to sign up for additional updates.
- Reference to the Centre Region Climate Action and Adaptation Plan at <https://www.crcog.net/climateaction> (plan adoption expected by summer 2021).
- Direct contact information for Pam Adams, padams@crcog.net

II. Findings

This section includes findings related to the following: a) categories of potential stakeholders identified through this project interested in climate action and adaptation, b) broad messages stakeholders wanted to convey; c) issues or concerns about climate impacts in the Centre Region; d) potential opportunities for addressing climate impacts by topic; and e) potential actions that could be taken by local governments and/or the Council of Governments. This report represents a summary of what the class heard from stakeholders but does not represent a unanimous view nor consensus on what must be done to move forward.

A. Categories of Potentially Interested Stakeholders

Students identified general stakeholders who may be interested in the Climate Action and Adaptation Plan process and implementation, as well as sectors affected by and interested in climate action.

Table 2: Potential Stakeholders and Interested Sectors

<ul style="list-style-type: none"> ● Residents of this region: homeowners, renters, landlords ● Neighborhoods, homeowners' associations ● Businesses ● Commuters and visitors ● Local and regional governments, including Centre County, COG ● State and federal governments ● Non-governmental organizations (housing, environmental, more) ● Penn State: students, staff, faculty 	<ul style="list-style-type: none"> ● Agriculture: producers, conservation district ● Fishing, recreation, and tourism ● Business and development ● Extraction industries (mining) ● Renewable energy developers ● Transportation ● Utilities: water and sewer, energy, natural gas, waste management ● Public infrastructure personnel ● School district ● Religious institutions ● Press ● Interstate coalitions (Regional Greenhouse Gas Initiative- RGGI)
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This list of potential stakeholders and interested sectors is not exhaustive. More categories of stakeholders will undoubtedly surface throughout the on-going planning process. As addressed below, because the online forum may have led to people self-selecting to engage, the class recommends reaching out to specific sectors as the Climate Action and Adaptation Plan is being developed; for example, outreach specific to agriculture may be helpful.

B. Broad Messages or Themes

We heard several broad messages or themes from interviewees and forum participants (“stakeholders”). These were included in the Executive Summary above and listed below, with more detail provided in the rest of the report.

1. How do we shift from reacting to disaster to being proactive in implementing projects? Many current projects are oriented towards responding after a disaster occurs versus proactively planning, which can reduce financial liabilities. This is an area where local governments and the Council of Governments could provide leadership.
2. The time to act is now as we are already seeing local impacts. Stakeholders would like to see less planning and more doing; this is an area where local governments can provide leadership through their climate action and implementation efforts.
3. There is a need for both top-down and bottom up efforts: actions taken by government but also supportive of community-led efforts, with work to remove barriers to such bottom-up efforts.
4. There should be a range of climate action items implemented by local governments and businesses alike. For example, local governments should integrate the climate action planning efforts in all aspects of development and demonstrate their environmental consideration and local governments should serve as leaders in meeting the region’s sustainable goals. Likewise, unified action by local businesses can also help.
5. Land use, development, transportation, bike routes, public transit, affordable housing, green space, and agricultural lands are also important considerations as this region examines current practices and future decisions related to development and climate impacts/opportunities.
6. Stakeholders identified ways to address local impacts and opportunities (solar, building management, public transportation, other local policy changes) and ways to address global/long term impacts and opportunities (such as joining the Regional Greenhouse Gas Initiative).
7. Equity, affordability, and justice issues are also part of the puzzle and must be considered; for example, access to affordable housing in the Centre region is also a climate-related issue as people drive further to find more affordable housing.
8. Education is critical. Stakeholders had a lot of ideas on how to approach education, particularly by their local governments. They also recognized that while education is necessary, it is also insufficient and want to see action and implementation along with educational outreach and engagement.
9. The financial side of reducing greenhouse gas emissions and adapting to potential climate impacts is very real; however, failing to make investments is also problematic. Finding ways to leverage projects for multiple benefits while developing “green jobs” may be important in addressing financial concerns and is something worth exploring at the local government or regional level.
10. The Centre region has excellent air and water that by and large meet regulatory standards. Continuing to protect such high-quality resources is also important to consider.
11. Stakeholders wanted to know what local government officials will do with the information provided through interviews and the public forum and look forward to additional action steps and the implementation process.

C. Potential Climate Impacts

Stakeholders expressed concerns about existing and potential climate impacts on the Centre region. Such impacts include several categories discussed in more detail below: 1) water- related impacts; 2) changed seasons and weather overall; 3) ecological impacts; 4) human health impacts; 5) agricultural impacts; 6) financial concerns; 7) land use and population concerns; and 8) equity and justice concerns; and 9) other sustainability-related concerns.

1. “Water is the key issue”

Stakeholders raised climate impacts on water resources in this region a number of times and in a number of ways. Existing and potential impacts included drought, flood and stormwater, land use and water, ecological impacts, water quality impacts, and more. Because this topic was the one most often raised, it is discussed first.

Drought

- Impact to wells due to lowered water tables
- Impact to agriculture from lack of rain
- Drought can lead to more impervious surface from hard packed soil and runoff when rain does fall (drought/flood cycle)
- Strains on water systems that haven’t appeared in the past
- We need to prepare for a multi-year drought, because once such a drought hits, we can’t bounce back. Once we lose our connection with our groundwater, we can’t get it back.

Floods/stormwater

- General:
 - Microbursts, change in intensity in storms: more flooding, more stormwater, more drainage issues.
 - Weather is being wetter for longer periods
 - Concern about stormwater, flooding, and water quality impacts. For instance, if rain increases, the Spring Creek watershed drains contaminated water that ultimately seeps into the groundwater and in turn impacts water quality.
- Impacts to infrastructure from stormwater, flooding:
 - Stability/resilience of roads, embankments. For example, flooding in Florida recently impacted embankments protecting roadways; this is also a concern here.
 - Ferguson Township: stormwater retention basins overwhelmed during heavy rainfall events
- Drainage issues, localized flooding impacts.
 - Atherton Street is impacted by stormwater- need to address this stormwater.
 - Another example is flooding around Bald Eagle Creek that has led to property damage in the Howard area.
 - Complaints included washouts, dirty storm drains
 - Citizen lived in home for 10+ years; just now noticing standing water; backyard is eroded; past 3-5 years flooding in intersection during intense storms
- Impact of rainy summers
 - Mold in the schools during the summer of 2018 delayed the start of school.

- Vacant housing over the summer so nobody is present to notice flooding; this can create almost unlivable conditions in student housing.
- Because of local geology, concern about increasing number, severity of sinkholes in this area. There are a lot of limestone and other materials in the topography that can degrade and cause sinkholes. This will get worse with increases in run-off and rain.
- Costs of addressing impacts to infrastructure increasing, including stormwater fees

Land use & water

- Limited groundwater recharge due to increased impervious surface
- Loss of floodplains, wetlands
- Impacts from timbering operations, impervious surfaces, development increasing runoff
- Impact of transportation on water resources (impervious surfaces, more runoff, more hot water, ecological impacts)
- Wellheads projects in Centre County

Water & ecological impacts

- Local designation of high quality and exceptional quality streams requires more best management practices, more permits for “special protection watersheds”
- Chesapeake Bay water requirements
- Impact on trout fishing (a popular recreational activity in this area) due in part to changing oxygen levels in the water
- Runoff from stormwater hotter, impacts stream temperatures- this will in turn affect the ability of projects to meet permit requirements
- Handling water - how should we handle storm water and source water and changing rain patterns locally (native planting, lawn care/grass reduction, native species)

Water and transportation

- Flood/stormwater impacts on embankments, road stability, road deterioration
- Future climate impacts affect culverts, bridge sizing/placement- more information about potential impacts needed
- Alternatives such as pervious surfaces vulnerable to freeze/thaw cycles; don't meet strength requirements; would require more salt
- Freeze/thaw cycle during the winter impacts road conditions

2. Changing temperatures and severe weather

Stakeholders also noted changing temperatures and severe weather outbreaks in the Centre region. One resident indicated that when they moved to Centre County 40 years ago, they barely felt summer. Stakeholders listed the following seasonal and weather-related impacts:

Changing temperatures:

- There are more heat waves and longer summers.
- Rising temperatures will cause increased energy use for air conditioning, etc.
- Some residents expressed that they already have seen impacts on their communities, such as unpredictability in water flow in streams and less snow on average than years prior.
- There is more rain, but more droughts too! Rain comes in heavier events, so there's longer time between the events (most in the winter and fall).

- There is less snow as well due to warmer winters or more changes in temperatures (it may snow, but then warms up and melts).
- These changes in turn cause recreational impacts. Tussey Mountain has had a hard time opening in the winter. Changes in weather impacts what type of recreation can take place at particular times of year due to both changes in precipitation (see above) and ecology (see below).
- This is harmful to the local economy (tourism, trout fishing); of all of the outdoor activities that draw people to Centre County, this is what we need to pay most attention to in terms of climate change. We see other economic impacts too (forests? dairy industry?)

Severe weather:

- There are more severe storms (heavier precipitation, snow, ice, wind) which may continue to be destructive.
 - These impact the power grid and sewage system in Centre County
 - Operational risks associated with extreme weather events are one of the most relevant ones, considering that they can potentially cause customers to have less reliable electricity and experience power outages; for example, ice storms can imperil the power infrastructure
 - Need to think about moving power lines/ utilities underground,
 - Snow and its impact – we must have the right equipment to ensure mobility of people. Adequate resources like trucks or line repair if there is an ice storm.
- Funding for infrastructure repairs will be needed. It may continue to cost more to fix as we see more and more of these weather events.

3. Ecological impacts

In addition to changes in water conditions and changes in seasons/severe weather, stakeholders noted a number of current or predicted ecological impacts. These are as follows:

Changed seasons

- A change in seasons has caused plants to grow or bloom at different times
- Gardeners noticed earlier blooms.
- There is a risk of frost happening after early blooms; unpredictable weather is causing impacts
- Changing seasons impacts native plants and pollinators
- Natural cycles being thrown off - insects and birds no longer having the same cycle and therefore food limitations for certain species.
 - o More egg hatchings of birds
 - o Bugs hatching at different times; may impact ecological cycles
 - o There are potential impacts to migratory species (impacted by unseasonable heat/cold, or not migrating).
- Tick season has lengthened; ticks don't really die off like they used to.
- Our forests are relatively adaptable to climate changes. Some species that are close to the southern extent of their range will be less successful regenerating and possibly more stressed - for example maple trees (no more maple syrup produced here). Eventually, it may get to the point where we have to plant trees that are from areas south of here.

More insects or invasive plants:

- More ticks, other types of insects have been around: this will result in more disease.

- Invasive plants have larger growing range
- Invasives preventing forest regeneration
- Birds are coming back, especially Canada geese, causing problems with ponds. Migratory birds spreading invasive aquatic plants.
- Certain species are being favored by conditions (raccoons, other garbage-foragers, or animals resistant to certain diseases)
- Japanese stiltgrass and other invasives overtaking native primary producers

Hotter temperatures impact water-dependent species

- Warmer stream temperatures impact fisheries, water-based species (this in turn affects recreation as noted above)

4. Climate impacts on human health

Climate-related impacts on human health is another broad category of concern. There are a number of human-health related concerns stakeholders already see or predict for this region:

- Heat stroke (elderly in older brick buildings, outdoor workers, athletes)
- Impacts to health care, as people may not be able to cool/heat their homes.
- Asthma, respiratory (link to air pollution- reduce air pollution, increase health)
- Allergies getting worse earlier in the year
- Tick or Lyme disease or other insect borne diseases (see above)).
- Mold impacts to health, including in homes and schools
- Microplastics in water
- Mental health- stress
- Concern about the future: some stakeholders indicated they did not want to have kids because of fear related to climate change impacts.
- Access to healthcare
- Quality of life issues

5. Climate impacts to agriculture

Stakeholders highlighted several impacts to agriculture that are already occurring, with more predicted. These include but are not limited to:

- Drought: there is impact on plant growth, need for irrigation
- Unpredictable temperatures impact plant growth, viability; a hard freeze or too hot at the wrong time present a danger to certain crops
- The variability in hydrology / precipitation impacts agriculture: extremes of flooding and drought are a challenge for agriculture.
- Because of flooding conditions and wet fields; farmers can't access fields and can't plant; this in turn impacts harvest, manure management, and other issues. What you can farm will be different because of the climate and changed growing seasons
- There is a large amount of farming land in Ferguson Township. Climate changes have caused specific agricultural problems and made farmer lives harder, which resulted in farmers' unwillingness to invest more in protecting the environment. Stakeholders indicated that the government must do something.
- There are concerns related to farm worker health
- There are concerns about heat impacting animals
- Increase stream temperatures, decreased streamflow can impact farmers' ability to irrigate, increase their costs

6. Climate-related financial impacts

A number of people raised concern about existing and potential financial impacts related to climate. These included the following:

- Costs of climate change impacts
 - The community is concerned about the economic cost and the future environmental impacts on the elderly and low-income citizens.
 - Low-income and transient communities have been hit the hardest
 - Actors (government, community) are not moving quickly enough to mitigate repairs
 - Costs of addressing impacts after the fact versus pro-actively planning
- Concerns about the potential cost of addressing climate impacts through utility fees
 - Need to examine taxes and fees - making people pay for the burden they place on the system
 - Taxpayer concerns over stormwater managing cost increases associated with stormwater, including stormwater impact fees.
 - There is concern about the cost of storms for low-income rental housing vs homeowners vs low-income homeowners

7. Land use and population dynamics

Stakeholders raised a number of topics related to land use and population changes. Some are climate impact related and some are broader concerns about community priorities and sustainability concerns.

- Houses and buildings are becoming hotter, necessitating more air conditioning but also impacting energy needs
- Linkage to affordable housing is key; affordable housing is in crisis here
 - Bare minimum requirements for affordable housing
 - If zoning allows you to do something, you can bet it will be done
 - PA zoning law is very much in favor of property owner
 - There is urban sprawl with taller buildings
- Population change- concern that more people will move to Central PA because of coastal erosion, climate impacts elsewhere
- Local government hands are tied by developers - catering to for profit models of development; municipalities are in a way powerless to stop developers because of power imbalances; local government and courts have to deal with impacts
- What ordinances need to be put in place to control development

8. Equity and justice concerns

Equity and justice concerns were raised by several stakeholders. While these topics may not fit neatly into climate impacts per se, climate impacts can be a threat multiplier for underlying dynamics, so are listed here to raise awareness of stakeholders' concerns.

- How do we make sure people who are vulnerable or less represented or generally economically disenfranchised get heard / interests protected? Discussions of power dynamics?
- We need to utilize intersection between poverty and opportunities for efficiency, agriculture, and green infrastructure

9. Other sustainability-related concerns

Stakeholders raised a number of other climate and/or sustainability related impacts; these are listed briefly below.

- Waste collection/disposal impacts on greenhouse gas emissions
- Plastics:
 - o Concerns about plastics raised by several stakeholders.
 - o Concern about plastic and impacts to children.
- Air pollution concerns
 - o Centre County is in compliance with federal air quality standards. It is important to stay in compliance; otherwise, additional steps during construction (i.e., road projects) would be required.
 - o Currently, there are no air quality warning signs
- People are cutting down trees, which leads to erosion issues; trees are dying or being removed by homeowners

D. Potential Climate Opportunities

Stakeholders seemed hopeful and optimistic about opportunities to decrease greenhouse gas emissions, improve the adaptability of the Centre region, and address broader sustainability challenges. As with climate impacts, stakeholders identified a variety of topics that could be addressed. These are loosely batched by actions that could reduce greenhouse gas emissions (mitigation), address climate impacts (adaptation), and broader sustainability actions.

1. Reduce Greenhouse Gas Emissions: Solar and Renewable Energy

Stakeholders raised the opportunity to integrate renewable energy, particularly solar, multiple times. They also identified other potential renewable energy sources including wind and ground source geothermal. The following provides more detailed ideas raised by stakeholders:

Think about scaling up solar-powered energy/availability

- Encourage community and local government receptivity to solar powered energy, through easements or solar collaboratives, etc.
- Identify potential job opportunities in green energy
- Solar power purchase agreements to scale up to larger solar purchases; example: the Solar Power Purchase Agreement within the region presents a great opportunity to cut down on energy costs and emissions. The school district is one of the biggest parties subject to the agreement. It also presents the potential for the area to lease power from their solar grid if there is excess increasing revenue.

Opportunities to create solar programs for different audiences within the community

- More cost effective energy types - particularly solar- could be used for government buildings
- Schools, community based participation programs
- Opt into programs even if don't have solar on own property- buy renewable energy from a local source
- Fixed income: program to install solar for someone who may not pay taxes or be on a fixed income?
- People who rent or don't have good credit: there is no option for them to get solar power. Develop programs to address these needs.
- Leverage Penn State's focus on solar energy; consider a program for Penn State like that accomplished by the University of Utah to help people acquire/afford rooftop solar

Examine ways to create co-benefits from solar or renewables

- Integrate solar such as over parking lots to provide multiple benefits such as increased shade, cooler parking lots, and generation of renewable energy for the community.
- Install solar panels above parking lots to provide shade and add to solar energy generators

Invest in more development of solar and wind power

- Grant money for solar panels
- Lower interest rate loans
- Find ways to take advantage of dropping prices for renewable energy
- Cash rebate for low-income families, those on social security to install solar panels
- Resources for residential solar installation. Including expert advice, networking assistance, monetary (but not necessarily all monetary)
- Set up systems for community solar power if you cannot get/qualify for tax rebate

People also raised a number of questions.

- For example, if solar is installed, is it resilient to climate impacts?
- Is the technology reliable under different conditions?
- A cons of solar panels: reliability on technologies like the solar panel. Solar panels cannot function during extreme weather conditions and this brought up the Texas case.
- Can we regulate solar panel size so there is less waste?

2. Reduce Greenhouse Gas Emissions: Protect Air Quality, Develop Carbon Offsets

The need to protect existing high quality resources is a topic that came up, with an accompanying set of ideas about creating a carbon offset market (see also the section on financial ideas below). More detail on these points:

Protect existing air quality:

- Several stakeholders noted that there is currently good air quality in this region and a need to keep it that way.
- Co-benefits of reducing greenhouse gas emissions = improved air quality
- Need to look at climate impact on agriculture and agriculture's impact on climate (erosion, methane emissions) (see section on agriculture below)

Develop carbon offset/market:

- Develop and enforce carbon offset laws: Carbon offset programs happen on the local level. There are local carbon offset programs in Ithaca, in Western North Carolina,⁵ and in Indiana.⁶ These programs allow people to purchase carbon offsets to offset their own personal carbon emissions.
- Land use. Centre county has a lot of forest/agriculture, getting involved in carbon markets to improve economic incentive surrounding land acquisition
- The CO2 load has to come down—there are choices with energy companies; work needed in this space to provide more local choices.
 - Community choice aggregation. Within a local boundary, a local energy authority is created which is basically a small utility. People can opt out, but they cannot

⁵ “Appalachian Offsets,” accessed June 24, 2021, <https://www.cutmycarbon.org/>.

⁶ “Carbon Neutral Indiana,” accessed June 24, 2021, <https://www.carbonneutralindiana.org/>.

opt in. This gives the local community bargaining power to drive energy costs down and also gives the community the power to decide how much renewable energy they want in the community. The local utility is also able to make a profit and can use those profits to create new renewable energy in the community. California and maybe 9 or 10 other states have programs like this.

3. Reduce Greenhouse Gas Emissions: Transportation

Transportation is another area where stakeholders saw potential to reduce greenhouse gas emissions. Knowing regional transportation impacts on greenhouse gas emissions was identified as a need. In addition, stakeholders identified several ideas on how to improve regional transportation infrastructure.

Improve regional bike and walking pathways:

There were calls to improve bike routes in terms of increased connectivity, accessibility, and safety, particularly as e-bikes become more widely used. Suggestions included the following:

- More bikeable routes, more bike friendly area-- safer, more accessible
- Create more cohesive bike paths that no longer require using busy roads
- More comprehensive, linked across townships
 - The community wants an overall connected set of paths
 - We should think of how we can close these gaps. More trails could lead to more walking and biking- improve health, decrease greenhouse gas emissions. Already seeing high use of these facilities and would like to see them more interconnected.
 - Please continue the efforts to improve biking: integrated/interconnected bike trails for the entire region; adapted for all ages and physical abilities
 - Learn from the Netherlands. Bikes are considered serious transportation there. And they build separate lanes for cars, bikes, and pedestrians.
 - More accessible- especially for kids, older people
 - Look at the Circleville bike trail
- Repair existing paths with high traffic
- Opportunities for electric bikes for better accessibility. Need to maintain bike paths too!
- Need for bike/vehicle safety education (issue of inexperienced drivers)
- State College Borough has already increased its rating in some sort of urban biking ranking; they have been doing a lot (but they can do more!). Appreciative for what has been done regionally.

Ensure Access to and Expand Public Transportation:

In addition, stakeholders wanted to make public transportation more accessible, affordable, and attractive for all residents. To do this they proposed a steadier bus schedule as well as decreased fares (especially for large families and those who are economically disadvantaged). A key message: we need to find ways to get people on public transit versus building more roads.

- Bus routes always run a full-size bus even during lull riding periods. Maybe mini-busses or a van? Size disparity for local ridership. Why do we keep using big busses?
 - More small busses = more drivers (issue of funding/economics)
- Improve public transit system
 - Moving toward electric buses
 - CATA impact to budget- limits on advertising
 - Increase transport services (CATA) (frequency, size) so more are encouraged to utilize it

- Add facilities that allow people to stand and wait at bus stops to make it safer for people to use
- Bus system is working well but want to see more done/encourage different modes of transportation
- Bike racks on busses to help improve biking
- Students need to take a lead on this as they are paying lots of \$\$
- Is there an opportunity for trains in this area?
 - Freiburg, Germany as example of rail travel working really well
 - Opportunity to see Amtrak lines extended?
 - We need rail / light-rail: 2 tiers (first tier: freight; second tier: transport of people. Transport of people currently de-emphasized, but prioritizing people might allow for more consistent travel times).
- Consider other incentive programs:
 - Parking pass vs. bus passes- employee perks that promote more flexibility (something beyond a solid decision for one or the other)
 - Create incentives for getting people out of their cars
 - Ride shares

Work with existing infrastructure to find “co-benefits:”

- Consider existing infrastructure like parking lots (create co-benefits?)
 - Manicured parking lots- plant native plants
 - Use parking lots for solar panels (provide shade, gather energy)
- Think about pervious pavement that can withstand freeze/thaw cycles; meet strength requirements; not need extra salt to keep safe from ice
 - Replacing salt to de-ice roads

Promote electric vehicle use:

Several stakeholders identified a desire to see more electric vehicle use, especially the implementation of electric school busses and possibly other government vehicles. Installing electric vehicle charging stations would also decrease barriers to electric vehicle use. A question that arose is whether there are incentives for local electric companies to build these? Other suggestions include the following:

- Replacing the municipal fleets with hybrid vehicles,
- Think about how to transition to electric vehicles?
 - Fund incentive programs for electric vehicles
 - Convert trucks to hybrid
- Possibilities for incorporating electric cars/electric vans for more rural areas and find a way to build the charging infrastructure
- Electric school buses- gov’t resources to set an example
- Electric buses for CATA (think about sources of energy- beyond GHG heavy sources like coal). Example: In Philadelphia, they realized that the amount of diesel and gasoline powered vehicles is a problem because it is creating pollution and people are getting sick with asthma, so reducing air pollution has multiple benefits.
- Improve electric charging stations needed (stations typically only work by brand, make them more universal)

Address informational needs:

A final key issue and opportunity is to better understand transportation greenhouse gas emissions and potential adaptation needs.

- What are the total GHG emissions for transportation in this region?
- In terms of adaptation, how much rain do we need to prepare for?
- What is the potential impact of projects on the surrounding environment?
- More information about alternatives to impervious surfaces is needed (i.e., how to build pervious pavement and have it withstand freeze/thaw cycles; meet strength requirements, not need extra salt to prevent freezing). Promote more mass transit. Help promote renewable energy in the area. Help promote electric transportation. Promote sustainable practices for the items that the local government has direct control of, then promoting these practices within community members.

We should work with consultants/educators to assess local climate impacts on transportation, how to make the road system more resilient

- Think about design, management of roads/bridges for climate adaptation
- Think about different materials to address potential impacts (e.g., geotextile layers under roads/bridges)
- Study currently underway re: Atherton Street, addressing stormwater/flooding impacts
- Tires themselves are air pollutants- useful to add to the calculations

4. Reduce Greenhouse Gas Emissions, Address Climate Impacts: The Built Environment

Opportunities to address the built environment came up in many different ways. For purposes of this report, we've grouped these into categories: how to reduce energy use in existing buildings, how zoning and development regulations might affect future growth and development, and how the need for affordable housing might be a key driver for innovation. This set of topics includes opportunities to both reduce greenhouse gas emissions and address climate impacts. Stakeholders provided a wealth of ideas summarized below.

General dynamics:

- High housing prices, need for affordable housing (see below)
- Influx of people - plan for more people coming in (housing, jobs)
- Centre County is a high growth region; needs to think about an efficient regional system.
- Shortage of developable land
- Lots of student housing (different dynamics between owners, renters, landlords)
- The Centre Region may be an appealing area for a large number of climate refugees. People may move to the Centre Region to escape harsh climate impacts of other areas. We should make sure there is a plan in place to address this possibility.

Existing buildings:

- Need to establish, promote incentives to retrofit old buildings to be more efficient.
 - Heating/cooling - especially bad in Centre County. Options for updating homes/making programs more accessible.
 - Trying to eliminate electricity for heating purposes and add a community solar arrangement that they could join, pay a monthly rate.
 - Changing from oil heat to heat pump. But there will be a huge finance issue.
 - An increase in regulations related to wall thickness can help sustainability.

- Low-cost weatherization of homes (include student and rental properties as well)
- Focusing on energy efficiency in building codes for new builds and creating incentives for retrofitting old builds to be more efficient and produce less waste.
- Low income homes are most vulnerable: a climate change and a social issue
- Standardizing temperature and energy within housing

- May depend on type of property and who the incentives are focused on
 - Renters: no current incentive for updating homes/units but paying for electricity.
 - Landlords- incentives to upgrade? (currently no power for renters)
 - Disconnect between landlord/tenant incentives for renewable energy. No incentives for landlords to do better; need accountability or incentives
 - Is there a way that the region could incentivize landlords to make buildings more efficient? Tax write-off?
 - Rentals are especially bad at being efficient. Owners don't pay the bills so there isn't an incentive to improve.
 - Homeowners
 - Business owners/ commercial
 - Homeowners' Associations
 - There must be changes to development and use requirements both residential (HOAs) and commercial

- Energy audits, upgrades
 - Learn from other communities who are doing this well
 - Subsidize? Free?
 - American Recovery Plan - opportunity for energy audits?
 - Home energy audits when people buy and sell homes as part of the buying and selling process

- What can we learn from elsewhere?
 - Examples from other states- e.g., energy efficiency certification
 - Building codes
 - Tenant rights: opportunity to know energy consumption?
 - Fayetteville, Arkansas, for example, has environmentally friendly building codes, but in Pennsylvania, the state sets the building codes and communities cannot have stricter building codes. Every new house in Fayetteville has an energy label on it so homebuyers can compare homes and buy homes that use energy more efficiently.

- What information is needed?
 - Providing suggested game plans for home owners/business owners so they don't have to figure it out on their own (limiting factor for community/business involvement because it is time intensive)
 - How homeowner's associations might be able to accommodate more renewable energy in their areas (some prohibit solar or clothes lines, for example).

- Misc.
 - "Building owners should be able to take advantage of the same loans the [Penn State Office of Physical Plant] does to implement energy saving strategies and be

able to pay it back over time.”

- Larger steam plant? No current regulations or incentives for builders to do creative construction

Zoning, land use, and development codes:

- Address municipalities’ planning codes and zoning ordinances
 - Fine tune codes and ordinances to peoples’ needs
 - What are the roles of ordinances and zoning rules that have been barriers to sustainable development?
 - Environmental factors need to be considered in zoning rules
 - Zoning- encouraging “greener” buildings
- Zoning and growth:
 - Maintaining forecasted density
 - Re-think zoning regulations (build up, not out)
 - We should prioritize things that have the most impact - development should be done in a way that have long-term results for the community
 - Framework from different entities, preservation of original ground boundary zone
 - Land use needs to be responsible and buildings need to be built with the environment in mind
 - Sprawl- building within the land development boundaries, ensuring water for all
 - Politically unfavorable but high-density housing definitely has lower footprint
 - Prioritize in-fill development
 - More, better focus on sustainability re: zoning
 - Update the zoning law and promote lands preservation
 - Need to protect ag land
 - Preserving the forested land and agricultural land within the region. Limiting the aggressive development and sprawl within the community.
 - Building up in walkable communities
- Development codes
 - Find ways to incentivize green buildings
 - LEED certified buildings provide incentives for energy efficient buildings. LEED Certification requirements can give incentives but cannot require sustainability in development locally. Implement LEED standards for new developments
 - Programs for construction companies, to implement architectural structures in the next years, to prevent what will comes next
 - More forward-thinking on building codes and what needs to be included in residential infrastructure
 - Integrate climate/environmental considerations into urban planning (all decisions)
 - Green buildings
 - Accessible bike lanes, racks
 - Electric chargers for EVs
 - Work with planning and zoning departments to address issues with energy efficiency and infrastructure requirements when completing new infrastructure/ideas
 - Workforce housing ordinance: can get used and abused

- Think about development and water (more on this below as well)
 - Limit impervious materials used in buildings and roadways
 - Increased setbacks from streams for new construction projects
 - Stormwater ordinances - developers have to deal with their own storm water
- Integrate planning opportunities
 - Incorporating the Spring Creek Watershed Plan into this plan so that the two plans are integrated and can address their goals together.
 - There are “high quality” and “exceptional quality” streams in the Centre Region that require them to implement more “best business practices” (BPMs) in order to get permits in the area. They are referred to as “special protection watersheds.” Find a way to protect already high quality or exceptional areas.
 - Rethink how we build streets. “Complete streets”, means streets are also for pedestrians and bikes. Better connectivity between residential/office/shopping districts to decrease the amount of driving necessary to get around.
 - Public transportation improvements/ closing some streets to cars
- Need to incorporate more voices during ordinance updates
 - Role for other voices to be engaged in these planning measures (prior to the creation of ordinances)
 - Borough is doing comprehensive rezoning; will be soliciting more peoples’ voices
 - Ferguson township just finished zoning rewrite, but they are living documents and changes can be made
 - Reduce minimum parking requirements (cheaper housing options, less impervious surface area)
- Misc. ideas or comments:
 - Use the software for urban planning:
<https://urbanfootprint.com/solutions/environmental-analysts/>
 - Local officials make a ruling saying no use on lawns (very hard to buck the system)
 - The planned residential development does not fit the changing circumstances environmentally or economically, so far nothing happened.
 - Municipalities have fees for property owners to pay into a fund to implement stormwater management plans

Need for affordable housing

- Need for affordable housing in this area
 - Think about affordable housing to decrease commuting: affordable housing is exported outside of the Centre region; thus, workers have to commute 1+ hours each way; huge GHG effect of increased travel.
 - Affordable housing reduces CO2 emissions from commuting. It also reduces CO2 emissions from energy use in the home. It also can reduce the pressure to convert agricultural land to housing so that land can be used to sequester carbon in the soil.
 - Affordable housing: we need more of it. Local affordable housing has the ability to reduce emissions.
 - Long commutes increase tailpipe emissions

- Need for quality student affordable housing (utilities a key factor)
 - Student housing: much of it is old. Need incentives for landlords to motivate them to be climate conscious. 66% of the energy that we are using is an opportunity to do better.
 - Students have been moved from old buildings to the new building but no improvement sadly
 - Student summer housing - often neglected during the summer (air quality, molding in basement are issues)
 - Need for donations of stuff that helps with affordable housing- connect with students?

5. Address Climate Impacts: Incorporate more green infrastructure

Stakeholders were interested in seeing more green infrastructure both as a way to adapt to climate impacts and reach broader sustainability goals. Potential ideas include the following:

Address impervious surfaces, plant more trees, and encourage more “greenspace”:

- More green spaces to address stormwater, runoff from pavement
 - Increase green infrastructure to handle and reduce the amount of runoff
 - Incorporate pervious surfaces to allow water to infiltrate (helps with drought)
 - Way too much space tied up in parking lots (change the design at least so snow melt doesn't run directly into the gutter).
 - Big parking lots = bad
 - Modify codes to make buildings greener during construction process
 - Restore unused urban areas to green space
 - Support rain gardens, urban forests, community gardens-- help municipal areas become “greener”
 - The government should consider more community gardens
- Plant more trees!
 - Plant trees to help soak up water
 - Plant trees on your own property- use trees from the Chesapeake Bay Foundation
 - Plant trees that like wet roots- help deal with stormwater/flooding conditions
 - Planting trees and native plants to help with pest migration and stormwater absorption
 - Measure tree canopies in the region
- Changing lawns to better capture storm drainage:
 - Philly has a green infrastructure system that we could emulate for dealing with storm drainage, as does Portland, Oregon.
- Think about resilient species, native species (avoid invasive species)
 - Backyard meadows- model gardens to share with how to promote sustainability in your backyard?
 - Develop pollinator garden- resource for this
 - Local backyard gardens: homeowners, ways to incentivize on consultants assistants on model yards (raising awareness in native plants, co-benefits)
 - Providing education to the public on native plants that local citizens can plant

- Pass a law for supporting bird population
- Find ways to maintain green space and agricultural lands
 - Possibly through tax incentives and public rebates
 - Encourage private citizens and local farmers to maintain green space on their property

Address limitations or barriers for sustainable practices:

- Encourage local officials to change maintenance standards for undeveloped phases of parks to allow for no-/low-mow and native landscaping
 - Remove lawns for natural/native plants - PSU to lead way
- Homeowners associations holding back green developments for “aesthetic” purposes
 - Barriers for solar, native pollinators
 - Maintenance standards, landscaping (low/no mow lawns)
 - Implementing energy saving structures like solar can be a big issue for HOA’s. For instance, if a homeowner leases the solar system and it falls into disrepair, can the HOA make them maintain it, even though it’s not the homeowner’s property? Can a neighbor plant a tree that shades the solar panels?
- Municipality rules within PA - are there powers that would help that you don’t presently have? Are there structural barriers to local communities' abilities to act?
- The PSU extension office has too many paywalls to be accessible to the average homeowner. They need reliable information that doesn’t cost so much.

6. Reduce Greenhouse Gas Emissions and Address Climate Impacts: Agriculture

Stakeholders raised the ability for agriculture to both reduce greenhouse gas emissions and be a key in reducing climate impacts many times. In addition, there are opportunities to leverage agricultural practices and other societal needs (water quality, local food supply, etc.) that might be helpful in addressing climate impacts as well. Finally, there may be ag-focused financial opportunities or economic considerations. More detail on these areas is below.

Opportunities for reducing greenhouse gas emissions:

- Need to look at climate impact on agriculture and agriculture’s impact on climate (erosion, methane emissions) - potential for biodigesters?
- “Farmers can make more money putting in solar power than selling their crops.”
- The importance of agricultural land for storm water control and carbon sequestration.
- Tap into carbon markets (see financial opportunities below).

Opportunities for addressing climate impacts:

- Protect against sprawl, protect UGB, preserve farmlands, economically support farmers
- Need to maintain greenspaces, plant more trees
- More eco-friendly ways to farm (incentives, education to public on native plants-- stormwater, runoff)
- Farmers can utilize tools such as cover crops and crop rotation practices to increase the health of their soil and retain water for longer periods of time which may help during drought. One counter argument was that “cover crops cost money. How can farmers try to use them? (The disappearance of rural America)”

- Useful to help address flooding in partnership with ag landowners, renters
 - Healthier soil will produce less damage
 - Limit encroachment on agriculture in the region
- Regenerative agriculture
 - Changes to livestock farming to make it more sustainable
 - Rapid movement of animals to different plots to decrease over usage
 - Reduce tillage
- There are many opportunities for agriculture in many forms including extended growing seasons providing double cropping opportunities, a better chance to get cover crops in after harvest, extra grazing time or more hay cuts, a growing specialty crop industry, and chances for reimagining agriculture in this area.

Connect agriculture climate related topics with other needs:

- Farmers are working with Clearwater Conservancy to save Half Moon Creek (runoff, pesticides, and fertilizers are getting into the water)
- Eating locally can improve local sustainability and support the community. Connect local agriculture to local business and consumers to meet demand and benefit farming communities. Support these more sustainable agricultural practices.
- Need for integrated ag
- Agricultural families should be included into these difficult conversations. Many times, the local government may assume they understand the lives and difficulties of our farming families, but they often have an incomplete picture. they should be invited to the table. a lot of overlap in agricultural goals and sustainable goals. Utilizing cover crops was an example she gave of a great way to sequester carbon from the atmosphere while increasing soil fertility.
- Reimagining certain industries like dairy to emphasize “green” practices like marketing for grass fed or organic dairy. Mostly, action is seen as a question of prioritization of factors like economics, politics, time, emission reduction, and noticeable returns

Financial opportunities, incentive programs, economic considerations:

- Tax incentives, rebates?
- Contact state and federal agencies that provide funding for landowners to install streambank fencing, construct cattle crossings, etc.
- Carbon offset or rebate- encourage protection of ag land
 - Keep ag land for carbon sequestration
 - Benefits for farmers who improve their soil conditions
 - Reduce pressure to convert ag land
- Local change may not be enough for some projects since agriculture is a global industry and market competitiveness is important. Larger scales of regulation may be necessary to truly drive change.

7. Addressing Climate Impacts: Water

As identified above, water is a critical issue of concern: too much, not enough, water in the wrong place at the wrong time. Stakeholders raised a number of ideas about how to address the climate impact on water, including the following:

Droughts

- Pulling a lot of water from the ground, watershed in general
- Periodic drought watches/warnings- concern about future increase
- Protect our floodplains and wetlands. The best way to protect our watershed and the water in our region is by protecting our floodplains because they can store a lot of water. Easy to get permits to take wetlands, remove them (replace within the watershed- but not as much functionality, water storage as natural wetlands)-- protect floodplains, wetlands. Good for drought resiliency.
- We need to manage the watershed in a way that makes the watershed as effective as possible. This is especially important when we consider the threat of droughts. One way we could do this and protect the water in our region is by protecting and restoring floodplains/wetlands.

Flood/stormwater

- Need for integrated drainage system, more run-off collection areas
 - Impact from transportation (heat, quantity of water)
 - Need to detain more water for longer- e.g., along I-99
 - Potential need for more land for runoff detention basins
 -
- Looking longer term to put in larger stormwater pipes to deal with flooding. There is more runoff than the current pipes are designed to deal with
- Maintaining stormwater infrastructure now in order to prevent further disintegration from increased rainfall and runoff
- Need to think about an integrated drainage system given the limited number of places to divert water (compare with St. Mary's, which had a similar problem with drainage).

Water quality:

- Protect source water and source water recharge areas
- Increase the amount of stream buffers
- Opportunity to leverage Chesapeake Bay water requirements (NEPA, EPA, MS4, more)- additional funding sources through these programs?

Planning and integrated water use:

- Create a robust water plan/drought resiliency plan that would consider all water sources in our region (wastewater, drinking water, stormwater, groundwater, etc.). This should be led by the municipalities in our region. (Integrated water resources plan).
- Investing in water reuse programs.
- Identifying water reuse programs would help.
- Have a really robust water plan that looks at all water sources (wastewater, drinking water, stormwater, groundwater, etc.).
- More information about PA water law and regulation needed- opportunity for education?

Financial:

- Federal infrastructure bill: how will this impact local action?
 - Local and state legislatures work with the federal government?
 - Communicate local needs to seek funding from state / federal bodies
- Stormwater fees- make people pay

- Pay for impervious property area (stormwater fee like in Ferguson Township)
- More pavement- pay more

8. Sustainability In General

Stakeholders raised a number of general ideas about sustainability, including waste management, recycling, and plastics. Ideas and comments are included below.

Waste management:

- Food waste is an emitter - capture emissions?
 - Anaerobic digester needed in this area
 - Make composting more accessible in the community households
 - Composting program limited in area. These boundaries should be expanded to allow these benefits for the greater community. Expand opportunities within the region in general.
- Recycling.
 - Recycling is the better way of undermining the waste disposal issue, maximizing the recycling, reducing and reusing measures. A proposal is a 100% participation of the homeowners that implicates dividing their wastes and being educated about the climate impact of their actions. Meanwhile, the garbage recollection companies reduce the number of trips that are currently realized per week.
 - Establishment of a main, public, or solely garbage Recollection Company. Right now, there are three or in some cases 4 garbage trucks from different companies passing weekly in just one neighborhood, which obviously causes a fossil fuel impact on the environment.
 - Recycling confuses people; trash bins are complicated (too many options)
 - Desire for “single stream”
 - Corrugated cardboard cannot be recycled; this is annoying people
 - Fight back: single stream reduces the value of recycled materials
 - GHG from waste streams is very small comparatively ex. energy efficiency
- General:
 - What consumption do we engage in? What can we do without? Mindful consumption
 - It is important to have a unified approach from businesses- for example, in reducing waste or promoting sustainability across this region.
 - We should establish incentives for business owners. For example, starting and providing incentives for local businesses to reduce plastic/styrofoam.

Plastics

Stakeholders indicated they are interested in seeing more local actions about the use of plastic. Some ideas in this topic include:

- Start local: what can be done locally given the PA ban on banning bags?
 - Look to other states for examples
 - Regulating plastic bag consumption, price per bag? Outlaw the bags! See <https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/> (discussion of what has been done in NJ)

- Not allowed to regulate plastic bags - why not? Let's sue to get rid of that law (filing amicus brief with city of Philadelphia)
- Selling bags for certain cost (\$.35/bag)- better quality bag, but not for free
- Incentivize bag reuse
- Provide incentives to reduce plastic/styrofoam
 - Seen particularly during COVID- way to help the restaurants be able to afford non-styrofoam takeout boxes? Incentive as a region to support this change
 - Seen also during COVID - incentives to use reusable/paper bags (decrease plastic bag waste) → need to start at home (The Creamery)
 - Bottled water waste, change to reusable instead of single use plastic wastes.
 - Serving food in environmental friendly containers - reexamining purchase policy
- Other comments:
 - Plastic manufacturing plants (there is one in Milesburg)
 - “The role of plastics and climate change? Plastic captures fossil fuel. We need to look at the bigger picture and not just things that bug us individually. What is the largest thing we can tackle? Think heating, cooling, transportation, manufacturing. Plastic is not the biggest one, cement is the biggest one.”

E. Opportunities for Local Government Action

During the forum, stakeholders identified a number of ideas of what local governments or other local actors like Penn State could do. This includes a significant number of ideas related to 1) education and outreach, with additional ideas for 2) local government procurement, 3) development of funding and incentives, and 4) finding ways to continue engaging Penn State.

1. Education/outreach

A lot of stakeholders emphasized the value of education for combating climate change, particularly at the local level: “The conversation can’t start at the global level – we’ve already convinced the people who can be convinced. We need to drive participation on the local level by focusing on the messenger, not just the message.” There are a number of themes related to education; these are detailed below.

Overall dynamics:

- 72% of the country believes in climate change,⁷ now the concern is what to do about it?
 - Our priority big picture: MITIGATION to reduce need for adaption
- More support from both local communities (smaller scale) and larger political scale is needed.
- Opportunity for alignment in federal, state, and local government actions
- From a policy perspective, we may ask ourselves what is happening at the federal level. It is important for people to know

Provide accessible information about Climate Action & Adaptation process, projects

- Some authorities are working on solutions. But nobody knows what they are doing. Put information out, so people can also contribute; people count on that

⁷ Jennifer Marlon et al., “Yale Climate Opinion Maps 2020,” *Yale Program on Climate Change Communication*, Sep. 2, 2020, <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>.

- There is a high bar to entry to getting into the sustainability “stuff”; local governments need to make it more accessible
- Communication from local governments to community members is important; meeting people where they are and providing concrete action steps is critical:
 - Educating people about what the local government is doing and what they can do.
 - Educating the public as to what can be done and by whom is also important. Giving the information to the people so that they can make educated efforts will inspire change rather than yelling into the void.
 - Continue education to the general public: do the forum more than once
 - Share what opportunities exist in the community
- Help people understand, especially those skeptical of these sustainability efforts, that in the short term, the cost may seem more expensive, but really over time the price is very reasonable. This specifically relates to those concerned with finances.

Think about your audience(s) (who are we trying to reach):

- Reach out to more people [need to think about to whom]
 - Get beyond the “usual suspects”- get to others who might not seek out resources
 - Ways to reach people who are not already participating- need to be worked on.
 - Communicate information to local community members who may not specifically seek it out. Local community education for sustainability/ outreach. Government goes to the people.
 - Educating farmers- sustainable practices, grant applications (how to apply)
 - Those affected by climate impacts (renters with mold problems, for example)
 - Hunting/fishing/recreational community
- Getting people engaged, getting them involved in the matters
 - How might this affect them? How will their lives be affected?
 - Deepen people’s knowledge, awareness of issues
 - Sustainability needs to be a communal effort and these forums provide a way for the community at large to get involved.
 - Share information on what they can do: how to compost, live sustainably, purchase local veggies, etc.
- Think about students, educators as an audience
 - Involve students: K-12, college students (paying a lot for housing)
 - Public education around climate change (K-12) needs to be improved.
 - Call and ask what the school districts are doing to become more sustainable. If they would have said nothing, this would have reflected poorly on the board and on the school as a whole. Although this was not explicitly mentioned, implicitly this resembles political influence.
 - Educate schools/educators about the need to move away from fossil fuels; think also about purchasing policies in schools

Use creative methods for education and outreach (how we might reach people)

- Art as a way to show climate impact on environment (or other creative methods)
- Implementation of a state-funded “climate coach” program. This would bring in diverse stakeholders to workshop (providing sustainability information) in their communities. Further, it would build trust relationships with diverse groups, often under-represented, at

places where they may meet including churches, social clubs, and schools. This is a great potential to reach vulnerable people

- Develop pro-environment leaders (skills, knowledge): prioritize actions we need to take now (develop leadership training program?)

Specific ideas for education and outreach (how we “might educate people better.”):

- Tap into “Drawdown”⁸ concept for local government
 - Distributing Project Drawdown solutions- what impacts people are making
 - We should work with larger scale ideas like Project Drawdown to focus on the most effective actions we can do in this area; practical guidance on what is most effective is needed now to see real, concrete actions.
 - Concept of Drawdown (Paul Hawken) → local government
 - Education outreach related to Drawdown -- show citizens which actions are most impactful
- Public service announcements
- Short messaging
- Information that people need
- Climate minute
- Brochures to homeowners
- Providing local resources, such as information resources.
 - How to get solar?
 - Additional information for sustainable practices that are easy to find by the community members.
 - Straightforward information about what 5 steps they can do in their own home or apartment should be provided.
 - People can look at things themselves (insulation in attics; pipe wrapping in basements and crawl spaces). A lot of things people can do themselves.
 - Positive examples are needed, people do not know it unless they have seen it.
 - Providing examples and specific success stories
- Local government website/ social media/ public bulletin boards.
- Direct political action
- Marches
- Set achievable goals for business owners, individuals, and the government
- Think about a United Way monitor
- Progress reminders
- Check out the “How to Save a Planet” Podcast

Potential messages:

- We should see climate curriculum/literacy program for public sector/encouraging discussions about climate change
- We should think about incentives for different audiences such as for landlords to improve energy efficiency or students to promote education about issues like their energy source or to promote sustainable practices such as decreasing takeout food.
- Another message is to work with the community to build important habits such as everyone volunteering regularly or avoiding single use plastics, including plastic bags.
- Infuse the language of the commons (commonality and common goods)

⁸ Project Drawdown: <https://drawdown.org/>

- Environmental educators all coming together try to make the message consistent - environmental message. Sometimes we do have mixed messages - be consistent!
- Approached as a point of community pride
- Some University students were a part of one breakout session group and they requested for the government to educate and create awareness campaigns about climate issues threatening the Centre Region. This is to get students to change their behavior and become more aware about the environment.
- Volunteer day - 1x a month; some stakeholders believe that there is a spirit of volunteerism in State College that can be reinvigorated post-COVID to implement many environmental programs in the community.
- Development decisions are being made, not on a project by project basis, but by taking general concerns for sustainability into account. Communicating these decision-making points to the community where it is easy to find. What prioritizes their decisions?
- Climate change is a polarizing issue. The best way around this is to talk about how economically beneficial it will be to prepare for climate impacts in the long run. When we talk about climate change, we need to emphasize that planning for climate impacts is not a huge expensive undertaking (many people ask who is going to pay for it). We need to consider that this is a plan that is going to happen over a very long period of time. There will be expenditures, but these will be offset over time. We can either pay now to prepare for climate events or pay more later when the damage is done and we need to rebuild. We need to show people how economically beneficial climate opportunities (ex: GHG reduction) can be and how they can save money and time in the long run by being prepared for it.
- How do we choose between the solution portfolio? More transparent, efficient information: is this the best price or program? Why is this the best choice for this group of people? More neutral info [current info sent out looks like sales pitch]
- Economic incentives! Way to encourage people (“make it the cool thing to do”)

2. Local Government as a model

A number of stakeholders commented that local governments can serve as examples; for example, “government facilities need to be a good example in terms of sustainability.” Stakeholders highlighted important actions that could be taken by local governments, including but not limited to:

Serve as a model:

- Establish climate plans and implementation:
 - Set carbon goals (net zero) for 2050.
 - Integrate climate action planning into all aspects of municipal government. Solar exposure taken into account when building houses, implementing electric chargers, and introducing bike racks in communities. Create market level incentives to community members.
 - Mitigation - conscious about the fact that it is beyond individual control- work at a community level to decrease greenhouse gas emissions
 - Some cities have their own climate action plans that would solve the problem; it is fundamental to work together as a team, including the community.
 - Limit carbon emissions in the county, limit pollution. Recycling may help in these efforts.

- More collaboration with different government entities/community groups/climate action advocates. Make sure all intergovernmental units are working together to address climate.
- Need more efforts from municipality, NGO, school districts and so on as a group figure out that things happens (realistic)
- Help reduce municipal greenhouse gas emissions and provide for adaptation to show that it can be done, help build needed infrastructure (e.g., charging stations for electric vehicles).
- Setting un-obtainable goals does more damage than good. By creating unrealistic goals, we are creating a new market for energy credits but not actually changing any behaviors; focus on small, obtainable goals rather than lofty goals.
- Think about connected issues
 - Transportation, climate and land use are connected issues
 - Fix infrastructure to accommodate increased traffic for congested areas
 - See the government more proactively connecting to people - transportation issues
- Get our leaders to see the problem and act
 - Local politicians need to take a meaningful role in promoting local regulation supporting eco-friendly changes
 - Formalize partnerships!
 - Get the official get involved in Fossil Fuel, solar development, etc.
 - Would like to see our leaders forward thinking; they need to be bold, not apologetic
 - Municipal officials need some training on what good governance principles are.
- Develop criteria for sustainable practices
 - There is a lack of considering environmental issues for local decisions. Possible corruption in “development at any costs”. This could be fixed through more transparency in why decisions are made. Also clearly communicating these decisions with the community and making this information easily accessible for community members. Would like to refer these types of decisions to experts. Use objective criteria and scientific data to make decisions on how to adapt to climate impacts. Individuals respond to hard costs of climate better, yet soft costs should be considered.

Thinking about purchasing contracts or financial opportunities (more on financial ideas below)

- SCASD or municipal purchasing contracts
- There is a potential federal grant that would allow for a voucher program whereby citizens could purchase discounted energy efficient products such as LED lights.

Encouraging broader action (regional, state, federal)

- Encouraging participation in the Regional Greenhouse Gas Initiative
- Partnerships with other states (RGGI – Regional Greenhouse Gas Initiative)
- COG attempts to work together to provide these benefits to the general community. Intergovernmental approach to solving problems. Leverage the power of intergovernmental cooperation.
- Connecting dots between state and local actions (example: goals from local gov’t contradicting PA state law; find a way to address this disconnect)

- Work with the federal government: Senator Casey's office is very receptive to discussions re climate change, infrastructure maintenance and development
- While township action is important it results in a discordant approach that may cause confusion and limit impact. Unified action on a larger scale is important to have more meaningful impacts
- A lot we can't do locally. Have local officials think about how they can pressure state/national officials to do more. Get behind efforts at state/national level because those are going to make a huge difference.
- Reach out to legislators to pass laws to accomplish fossil fuel free by 2050.

Think about drivers of behavior change:

- What can be required vs. incentivized?
- Consider enforcement
- Encourage developers vs. mandate
- Angst that hands are tied- lot of regulatory action- keeping action from happening
- Break down of gov't regulations (practical effect?)- why can't change happen overnight? Working but nothing happening quickly enough.
- Equity in any kind of broad sense: the reduction in CATA service is a challenge as well as the rise in utility costs; there should be an incentive or program that would help to reduce the increase in utilities that comes along with energy efficiency.
- "The government should just make the changes and then ask people to modify their behavior. Someone referenced the motion- sensed lights in public restrooms and asked if I (interviewer) ever voted to install those in public buildings. After thoroughly assuring I did not authorize this decision, they asked if I had ever experienced sitting in a public restroom too long that the lights went out. Instead of calling the government to complain the room is dark, most people would instead just wave their hands around to get the lights to turn back on. This example illustrates that citizens did not vote to make this energy efficient change, but once the change occurred, we naturally shifted our behaviors to adapt. Once the change was presented to people, they naturally modified their behaviors to accommodate the new motion sensed lights."

3. Develop funding and incentives

A repeated message raised by stakeholders is how to address potential financial concerns: who bears the costs of reducing greenhouse gas emissions or adapting to potential impacts, who benefits, and how much? This is an area where local or regional governments can help identify creative solutions. Stakeholders offered a number of ideas and concerns:

Share information about potential projects, funding sources:

- Cost charts
- Grant programs

Provide incentives for different audiences to invest in energy efficiency, adaptation measures:

- Grants/funding for individuals
- Incentives, rebates: example: incentives for personal adaptation activities
- Incentives for making the changes happen: <https://urbanfootprint.com/solutions/cities-and-regions/>
- Loans for more sustainable practices? Work with banks?
 - Create programs to invest in these projects

- Lower loans for climate conscious loans?
- Loans that are cheaper because of going sustainable, offer lower interest rates
- Consider programs that are affordable for lower income/fixed income; example: someone on social security- might not qualify for a rebate, but could use a different program
- Students -- help them get the incentives
- Subsidizing people when they are work from home: more people working from home, so redistribute utility costs / expenses
- Long term actions that allow owners and businesses - incentivize sustainability practices

Find creative ways to aggregate action:

- Bellefonte solar power purchase agreement
- Bulk purchase of solar panels- more affordable

Develop funding streams and tap into different funding sources (“How do we increase revenues to help implement necessary changes and infrastructure projects?”)

- Implement revenues: Ferguson Township mandate- fee for violation- used for infrastructure projects
- New federal infrastructure bill
- Possible funding through federal infrastructure bill
- Carbon tax - Where could that be enforced?
- Carbon offsets: a local carbon offset could provide funding to finance carbon sequestration projects on agricultural land and could also be used to finance energy efficiency retrofits for low income housing which will also reduce CO2 emissions.
- Financial benefit for those incentives to be beyond the minimum
- Municipal-level fundraising for climate-change impacts through fees (Ferguson Township used as an example)
- Collect funds through fees (ex. Ferguson Township fund for stormwater management)
- Concerns re: financial implications of climate change: ensure cost reasonable, don't increase taxes or increase fines

4. Find ways to continue engaging Penn State

During both the interviews and the forum, stakeholders indicated the need for local governments to continue engaging with Penn State. They identified a few topics or ways to do so.

Opportunities to integrate student work, outreach, and career development:

- Penn State resources to be used by the county- classes, programs for community involvement run through the university
- Try to get professors from the Sustainability Institute to promote a solar community to have the opportunity to purchase solar power for schools and the rest of the community.
- How can we work with Penn State to connect students looking for job experience related to managing environmental impacts with local businesses, homeowners, etc.? Can we find a way to include students in skill-building activities like helping residents to naturalize stormwater basins and other infrastructure?
- We should include students in achieving a lot of these sustainability initiatives because it would not only be good for the community but provide experience in skills that are going to become even more important in the future.” If we partner students and homeowners in a work experience, it's a win-win for everyone.

Need to work with students on climate and sustainability challenges:

- Students disconnected, but need to be engaged
- Disconnect with Penn State's student community regarding climate change
- Some students don't really care about sustainability, maybe some incentive for students to prevent waste and make them recycle more
- Students life needs to be more energy efficient, less single use plastic
- Students can be role models on what could be done

General:

- More university accountability from Penn State
- The realization that this region is too reliant on Penn State and there is a need to diversify economically

III. Next Steps

Overall, the information captured above surely does not reflect all thoughts or opinions on how climate action and adaptation could be addressed in the Centre region. However, it does provide a view of many challenging and interconnected issues. How to move this discussion forward is already underway with the development of the Climate Action and Adaptation Plan, which this engagement effort is meant to inform.

There are several potential next steps. One is to reach out to broader audiences during preparation of the Climate Action and Adaptation Plan, including but not limited to agricultural interests, the business community, and developers. How to address questions like the disconnect between landlords and renters for energy efficiency is one example of where specific outreach might be helpful. As noted above, education is critical. Finding time to communicate what is already being accomplished, what is planned, and what is implemented over time is critical. Doing so regularly and in a way that reaches different audiences will be key. Hosting periodic updates and/or additional forums might be one method. There are others as well. Overall, the interviews and forum highlighted a passionate and interested community that is ready, willing, and interested in engaging. Finding a way to tap into this energy could also be helpful in ensuring that the Climate Action and Adaption Plan is not only finalized, but implemented.



**OPEN PUBLIC FORUM:
Addressing Climate Impacts in the Central Region
Tuesday, April 13, 6:30-8:30 PM (eastern)**

Logistics:

Virtual forum via zoom (open sessions recorded by C-NET, but not the breakout session)

Details on how to use zoom are included on pages 3-4 of this agenda

More information/registration: <https://centresustains.com/forum>

Agenda:

- 6:30 PM Welcome and Forum Purpose
Lara Fowler, Penn State Law/Penn State Institutes of Energy and the Environment
- 6:35 PM Brief overview: Centre Region Climate Action and Adaptation Plan
Jim May, Director of Planning, Centre Region Council of Governments (COG)
Pam Adams, Sustainability Planner, Centre Region COG
- 6:55 PM Guidance for breakout sessions- Lara Fowler
- 7:00 PM Breakout sessions- all participants
The goal of these facilitated breakout sessions is to allow all participants time to share their thoughts in smaller breakout sessions. More instructions, including the questions to be asked, are on the second page of this agenda.
- 7:45 PM Report back on messages, discussion/Q&A
Recorded on C-NET
Facilitators will share a summary of messages from each breakout group
Any quick discussion, Q&A- facilitated by Lara Fowler
- 8:15 PM Summary of key points, next steps- Lara Fowler, Pam Adams
- 8:30 PM End

Interested in learning more or sharing your thoughts further?

- To share additional thoughts, please fill out the Sustainability Survey (open until April 30), available online at <https://centresustains.com/>. You can also register for email updates.
- To learn more about the Centre Region Climate Action and Adaptation Plan, see <https://www.crcog.net/climateaction>. Plan adoption expected by summer 2021.
- For more information about this plan, contact Pam Adams, padams@crcog.net

Facilitated Breakout Sessions, 7:00-7:45 PM

Goal:

The goal of the breakout session is to create an opportunity for everyone to share their thoughts on the questions raised below; the breakout session will be facilitated by two students with groups of approximately 10-15 people in each group.

Guidance for the breakout session:

- The facilitators are all students in Penn State Law's [Mediation of Environmental and Public Conflicts Course](#).
- In addition to identifying messages to share during the forum, the facilitators will be taking general notes that will inform a report to be shared with the Centre Region COG.
- The breakout session will not be recorded nor shared on C-NET.
- We ask that people speak clearly and keep their comments brief and respectful to allow everyone a chance to share their perspectives. You may also use the chat function to share your thoughts as well.
- In addition, the facilitators may use the chat function or other methods to quickly identify potential issues or opportunities; more instructions on using zoom are on page 3-4.
- We are asking for people to engage with each other respectfully; facilitators have full discretion to remove participants for disruptions or inappropriate behavior, including the breakout session.

Agenda for the breakout session (approximate times for guidance):

Quick introductions (~5 minutes)

Questions:

1. What do you see as existing or potential climate impacts in the Centre County region? (~10 minutes)
2. What opportunities do you see in addressing or adapting to these impacts? (~10 minutes)
3. What actions would you like see in this region, and what actions do you want to see your local governmental officials take? (~10 minutes)
4. What three messages do you want your facilitators to report back to the broader group involved in this forum? (~10 minutes)

After the breakout session ends, we will return everyone to the main room to hear a quick report back from facilitators representing each group, then an update on what will happen next with the information shared and the Climate Action and Adaptation Plan overall.

How To Use Zoom (Instructions provided for the most recent software update)

1. Register for the meeting

You will receive an invitation to the meeting personalized for you.

Once you click on the meeting invitation, you will be put into a waiting room until one of the meeting hosts lets you in.

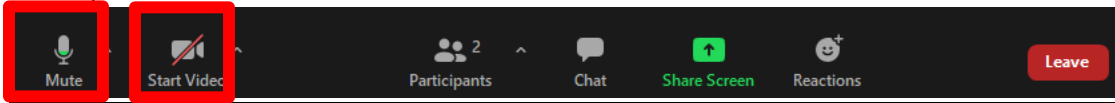
There is also a dial in option; however, if you call into the meeting, you will not be able to see the screen nor participate in the breakout session.

Please make sure you are on mute, with your camera on (particularly during the breakout session).

Feel free to update your name, including your pronouns. However, we ask everyone to be respectful; changing your name to something offensive will result in your removal from the meeting.

2. How to mute/unmute; start/stop video

The Mute Button is located at the bottom of the screen (in the red rectangle in the image below).

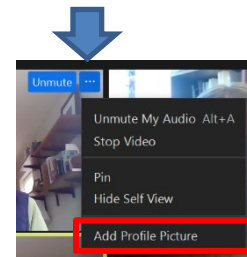


To unmute, press the microphone button **once**.

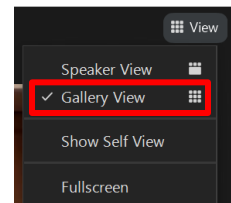
Make sure you press it again when you are done speaking (it should have a red line through it)

We encourage use of your video, particularly during the breakout session. Click on the “start video” icon to remove the red line through it.

You can hide your “self view” by hovering over your video and clicking on the ellipses button (...) in your video to display the menu, then choose “Hide Self View.” While you can’t see yourself, others can see you.

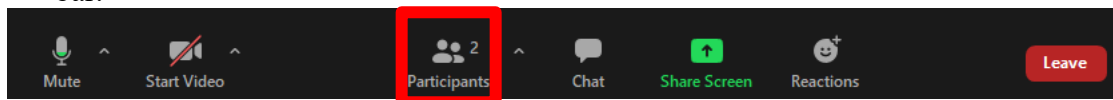


To restore your video, click the View Button in the top-right corner of the video screen and click “Show self view.”

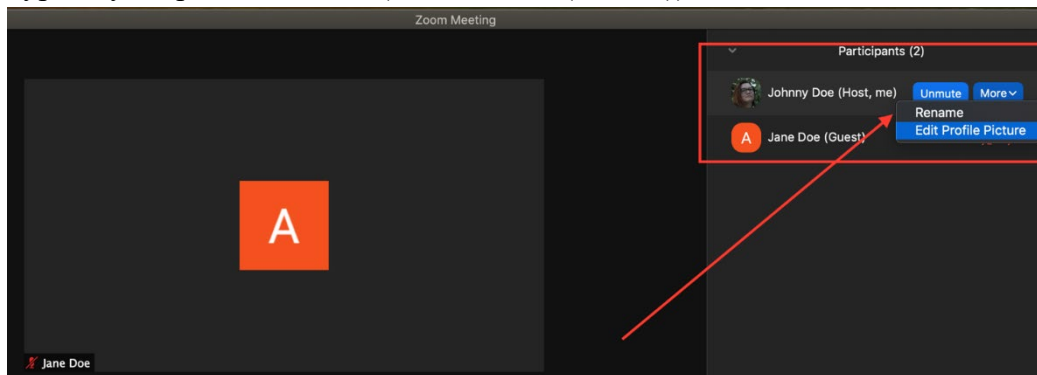


3. How to change your name and set pronouns

Click “Participants” (highlighted with a red rectangle in the below image) to open up the side bar.

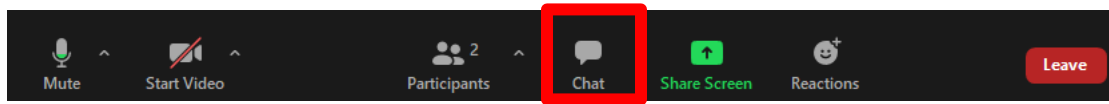


Hover your mouse over your name and click the “MORE” that pops up. Select rename, and type in your preferred name (i.e. Jane Doe (she/her)).



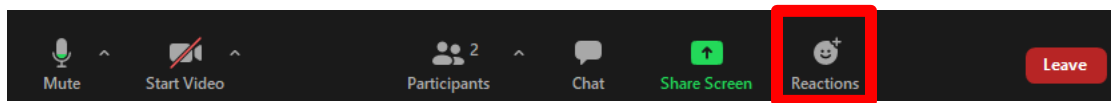
4. How to use chat:

Click on the chat icon. This will open up a new screen or a chat box to the right. The settings are limited to chatting openly (no private chat allowed).

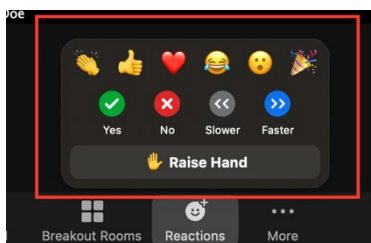


5. How to raise your hand or use reaction emote pictures

Click on the smiley face icon/reaction button (within the red rectangle in the image below). Note: for older versions of zoom, you must open the participant list to find the “raise hand” function.

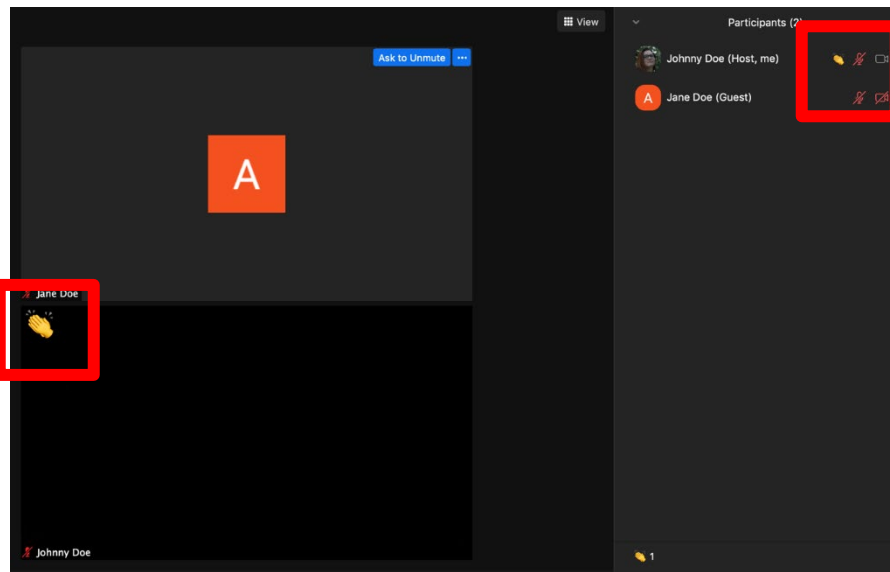


After clicking, you will see the same as in the below image. Select “raise hand” and then wait to be called on. Once you have finished talking, click the “lower hand” button to put your hand down.



To share an “emote” picture, click on the reaction icon (the same as for raising your hand).

Select one of the emotes available (from left to right: clap, thumbs up, heart, laugh, shock, congratulations).



The emote image will appear briefly on your screen and in the participant list, then disappear- no need to turn it off as you must for raising your hand.

6. How to join a breakout room

We will assign you to a breakout room. Once the rooms are opened, you will see a small button asking you to “join the breakout.” Click on this and you will be moved to a small breakout with two student facilitators. Once the breakout session ends, you will automatically be moved back to the main session.

