

Green Up The Footprint

Cumberland County
Climate Change
Action Plan . 2022

Adopted January 20, 2022



Cumberland County . PA



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Introduction

Climate change is a pressing environmental challenge of the 21st century that can impact Cumberland County's natural resources, economy, and residents' physical health. Scientists expect that with the current trends in fossil fuel use, Americans may see more intense heat waves, droughts, rainstorms, floods, wildfires, and landslides in the future. These impacts could drag down our economy, stress our natural resources and negatively impact the health of our residents. Action is required at all levels, and local governments have a unique role to play in building communities resilient to climate change impacts. In Pennsylvania, temperatures have increased by more than 1.8°F since the early 20th century and are expected to increase by an additional 5.4°F by 2050. Similarly, annual precipitation in Pennsylvania has increased by approximately 10% since the early 20th century and is expected to increase by another 8% by 2050, with a 14% increase during the winter season¹.

These impacts are caused by the accumulation of greenhouse gases (GHG) such as carbon dioxide (CO₂) and methane (CH₄) in the atmosphere, primarily resulting from burning fossil fuels and land use changes. Although the natural greenhouse effect is needed to keep the earth warm, a human enhanced greenhouse effect with the rapid accumulation of GHG in the atmosphere leads to too much heat and radiation being trapped. Carbon emissions from human activities have continued to rise in recent decades, reaching the highest rates in human history between 2000 and 2020². About half of all CO₂ emitted between 1750 and 2020 occurred in the last 40 years.

In Cumberland County, the sectors responsible for the most GHG emissions are transportation at 39%, residential energy at 22%, and commercial energy at 15%. Emissions are projected to continue to rise given Cumberland County's rapid population growth and its geographic location that makes it a strategic hub in national and international highway transport. Given the challenges presented by climate change, now is the time to act to reduce GHG and address the impacts of climate change.

In addition to national and state efforts to make systemic changes that will reduce global emissions, local governments can play a powerful role in addressing climate change. The design of American communities—how we use our land, how we design our buildings, how we get around—greatly impacts the amount of energy we use and the volume of GHG emissions we produce. It is critical that communities like Cumberland County lead by example by taking steps to reduce GHG emissions within their scope of authority and partner with other local governments, businesses, and residents to take similar steps to reduce GHG emissions. Local action can make important contributions to state and national efforts to limit climate change risks while also producing local co-benefits in the county that include financial cost savings, job creation, cleaner air, improved public health, and energy security. This plan sets forth a simple, voluntary menu of options that local governments, businesses, and residents can take to reduce GHG emissions in Cumberland County from transportation, residential, commercial, and industrial energy use, waste generation and management, and land use. Strategies are included for reducing vehicle miles traveled, switching to alternative fueled vehicles, accelerating energy conservation and energy efficiency improvements, shifting toward greater use of renewable and other zero and low carbon emitting forms of energy, reducing waste generation, improving reuse, and recycling performance, and promoting land use practices that limit emissions and sequester carbon.

Climate Change Background

Basic Definitions: Weather, Climate, Climate Change, and Global Warming

Weather refers to the atmospheric conditions over short periods of time (hours to days) and generally over a more local area. An example is temperature at a given time and location. Climate refers to

¹ Shortle et al. 2015

² IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.

longer-term conditions (decades to centuries) and generally at a regional and/or global scale. An example is average annual temperature at a location over a 30-year period.

Global warming is the long-term heating of Earth’s climate system observed since the pre-industrial era in which human activities, such as fossil fuel burning, increased the amount of heat-trapping greenhouse gasses in the atmosphere (Figure 1). Climate change is the long-term change in the average weather patterns that define local, regional, and global climates. Natural causes such as volcanic activity and changes in the sun’s energy output do influence these climate changes but human activity has greatly accelerated these processes beyond their natural timelines³.

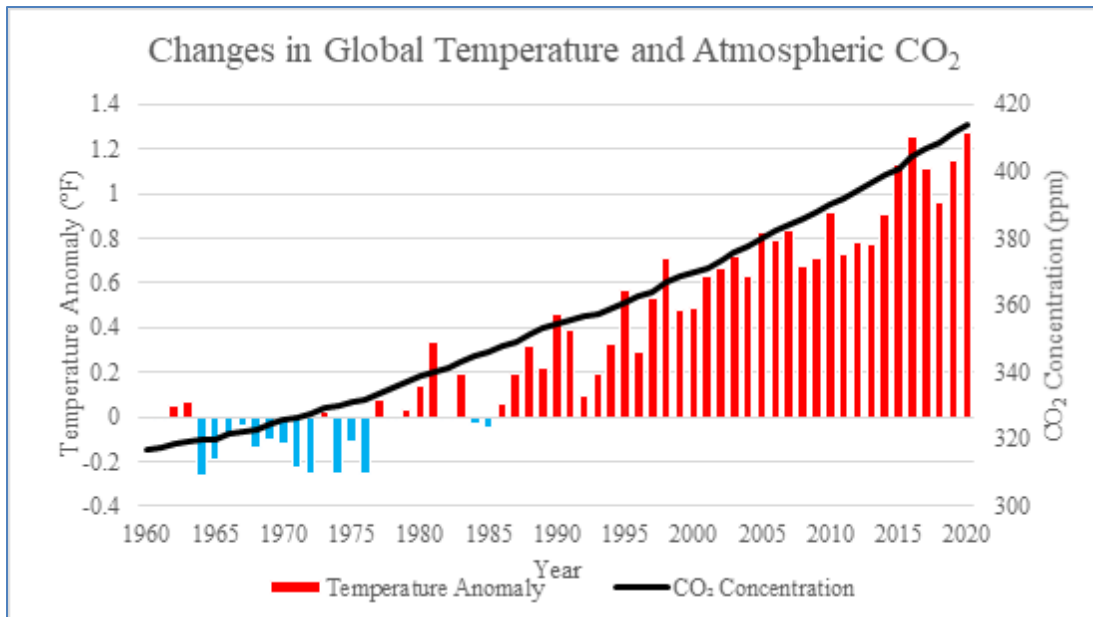


Figure 1 Global temperature and CO₂ changes from 1960-2020. Data source: Morice et al., 2021, NO21, NOAA, 2021.

Climate Change in the United States

Annual average temperature over the contiguous United States has increased by 1.8°F (1.0°C) over the period from 1901-2016. Continuation of this dramatic rise is expected to cause an increase in the intensity and frequency of extreme events such as hurricanes, wildfires, drought, and heat waves.

Monitoring and noting the changes in these events are particularly important for human safety, infrastructure, agriculture, water quality and quantity, and natural habitats and ecosystems. Table 1 highlights some events that are expected to increase and their consequences.

Table 1: Consequences of severe weather events.

Event	Consequence
Coastal Flooding	Threatens coastal cities and infrastructure
Larger Precipitation Events	Increases flooding
Heat Waves	Causes drought and human health stresses
Forest Fires	Threatens habitat, infrastructure, and air quality
Drought	Limits of water for consumption and ecosystems, and causes land subsidence
Hurricanes	Causes inland flooding, infrastructural damage, and threatens human safety

³ Shaftel, H. (n.d.). *Overview: Weather, Global Warming and Climate Change*. Climate Change: Vital Signs of the Planet. Retrieved March 24, 2021, from <https://climate.nasa.gov/resources/global-warming-vs-climate-change>

Climate Change in Pennsylvania

In Pennsylvania, the climate has warmed more than 1.8°F (1°C) over the past 110 years. Accompanying this increase of temperature is a 10% increase in the average amount of precipitation⁴ (Figure 2). By the year 2050, Pennsylvanians are expected to see an additional increase in temperature of 5.4°F and an 8% increase in precipitation⁵. These changes have been related to human activities and GHG emissions in the global atmosphere.

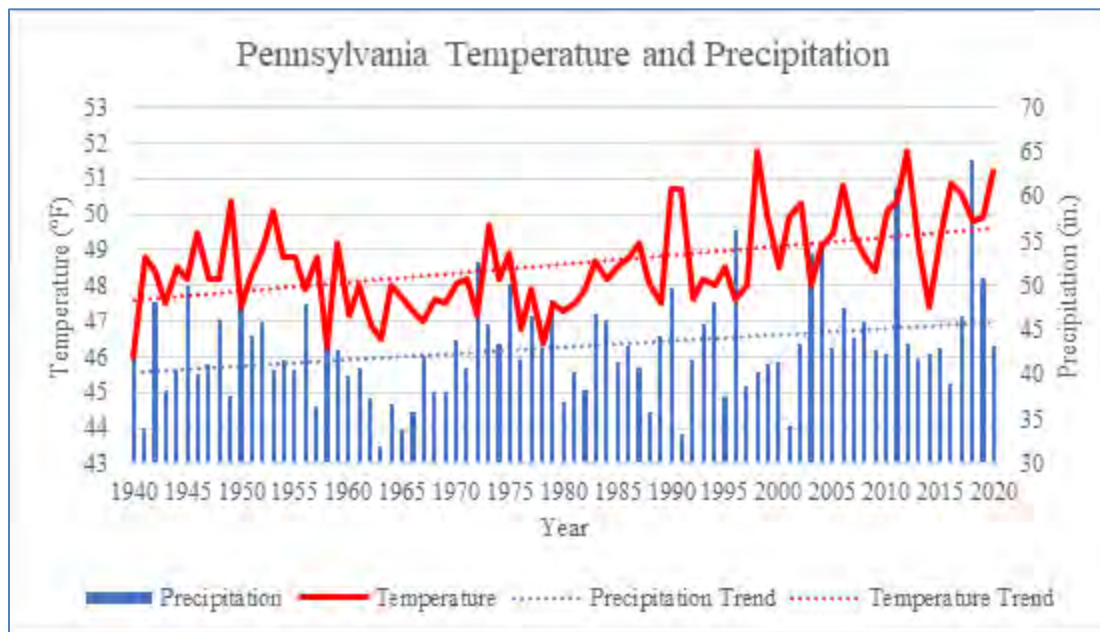


Figure 2 Temperature and precipitation in Pennsylvania from 1940 to 2020. Data source: NOAA, 2021.

From these changes, Pennsylvania has experienced record breaking impacts from floods and landslides that cost \$125.7 million in damages in 2018 alone. Other impacts that Pennsylvania may experience are worsened air quality, agricultural losses, damages to public infrastructure, increase in pests, diseases, and invasive species⁶.

In response to the increasing threat of climate change in Pennsylvania, Governor Wolf issued an executive order in 2019 that established statewide goals of a 26% reduction in greenhouse gas emissions from 2005 levels by 2025 and an 80% reduction by 2050⁷. To reach these goals, the Pennsylvania Climate Action Plan (CAP) was developed to help guide Pennsylvania's actions through the reduction process. The Pennsylvania Climate Action Plan 2021 was released in September of 2021 as the fifth iteration of the CAP, to provide an updated impacts assessment, GHG inventory, and address health, costs and benefits and equity considerations.

⁴Shortle et al. - *Pennsylvania Climate Impacts Assessment Update.pdf*. (n.d.). Retrieved March 24, 2021, from <https://www.pennfuture.org/Files/Admin/Pennsylvania-Climate-Impacts-Assessment-Update---2700-BK-DEP4494.compressed.pdf>

⁵ *Climate Change*. (n.d.). Department of Environmental Protection. Retrieved March 24, 2021, from <https://www.dep.pa.gov/443/Citizens/climate/Pages/default.aspx>

⁶ Newton, L. (2018, October 16). *PennDOT estimates over \$105M in flood, slide damages*. PennDOT Way. <http://www.penndot.gov/PennDOTWay/Pages/Article.aspx?post=165>

⁷ *2020 Climate Change Impacts Assessment Update.pdf*. (n.d.). Retrieved March 24, 2021, from <https://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/ClimateChange/2020ClimateChangeImpactsAssessmentUpdate.pdf>

Climate Change in Cumberland County

In Cumberland County, temperatures and precipitation have also increased as shown in Figure 3. This increase in temperature and precipitation creates ramifications for the future livelihood of the county. Certain aspects of the county ranging from water supplies, agriculture, tourism, infrastructure, and human health will be affected.

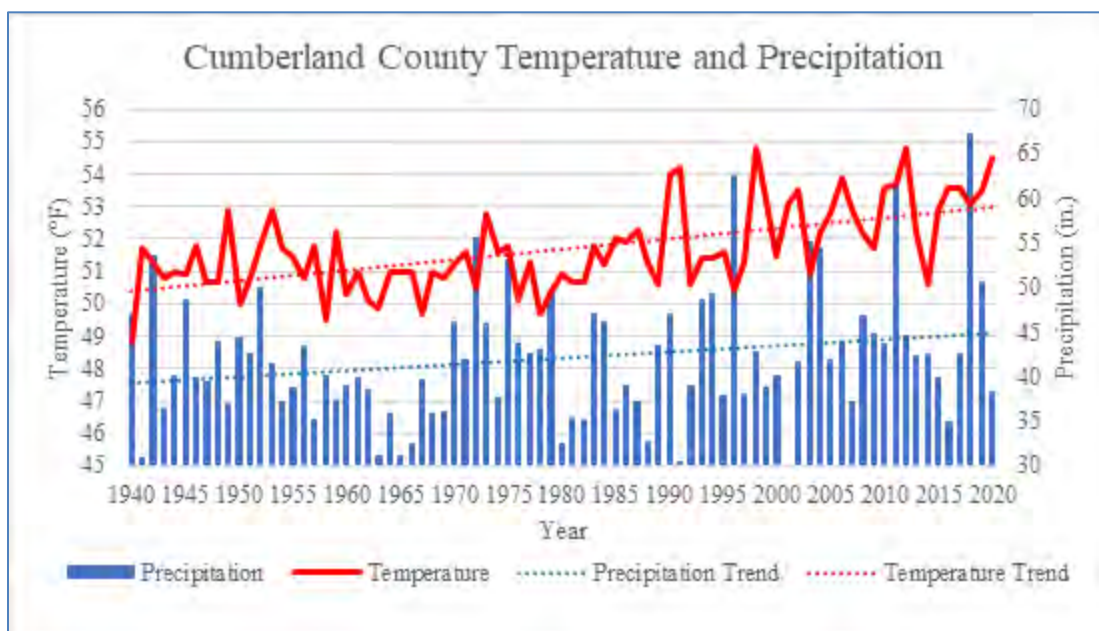


Figure 3 Temperature and precipitation in Cumberland County, PA from 1940 to 2020. Data source: NOAA, 2021.

Agriculture

Farmers are already experiencing consequences of climate change such as crop damage from frequent intense precipitation events. With increased precipitation, crops can become flooded and the soil in fields can wash away. Warming temperatures change the suitable habitat for agricultural species such as sugar maples and certain fruit trees. Additionally, climate change is impacting the timing of critical events such as leaf-out and growing season length. The loss of crops not only produces hardships for farmers and cultivators, but it also puts stress on food security for the surrounding communities.

Increasing temperatures may induce stress on farm animals such as dairy cows which reduces dairy production. Crops that flower in the summer may not even grow at all due to increased heat⁸.

Water Quality Issues

Although an increase in precipitation will not create water scarcity issues, compounded with warmer temperatures, it can create water quality problems such as more stormwater runoff, erosion and sedimentation, and harmful algal blooms.

Stormwater runoff from urbanized areas often contains harmful chemicals, and oils from vehicles can enter nearby waterways and degrade the water quality for both consumption and agricultural uses from surface supplies and groundwater wells. Increases in sedimentation and erosion enhances the ability for phosphorus and nitrogen-rich sediments to enter bodies of water causing eutrophication, which is the

⁸ Shortle et al. - *Pennsylvania Climate Impacts Assessment Update.pdf*. (n.d.). Retrieved March 24, 2021, from <https://www.pennfuture.org/Files/Admin/Pennsylvania-Climate-Impacts-Assessment-Update---2700-BK-DEP4494.compressed.pdf>

significant growth of algae and other aquatic organisms⁹. The algae lower dissolved oxygen levels creating dangerous environments for fish and other aquatic life.

Tourism

Warmer temperatures allow for longer seasons of outdoor recreation such as hiking, fishing, boating, camping, and various other activities. Alternatively, winter outdoor sports may be negatively impacted by warmer temperatures. While an increase in outdoor tourism carries economic and health benefits, it creates a paradoxical effect on the surrounding environment and may create management challenges as recreation providers need to provide seasonal employment for longer periods of time. Cumberland County is home to three popular state parks; Colonel Denning, Pine Grove Furnace, and Kings Gap. The natural habitats present in each of these parks often contain sensitive ecosystems that require times of less human interference to flourish, particularly in the late winter and spring seasons. Increases in human traffic and recreational activities can pose a threat to the balance of the ecosystems within these parks. In addition, warmer temperatures can impact the county's cold water trout fisheries such as the Yellow Breeches Creek and Letort Spring Run, by reducing dissolved oxygen in the water and decreasing available habitat. Ski resorts in nearby counties with an economic impact in Cumberland County may also face shorter seasons with increasing temperatures.

Infrastructure

Much of Cumberland County is underlain by carbonate rocks such as limestone and dolomite. These rocks have a greater susceptibility to weathering from acidic waters such as rainwater. Regions that contain these rocks as bedrock often have formations develop such as sinkholes and depressions which can cause land subsidence beneath homes, apartments, and other building complexes. Increasing the rate of weathering will create a higher risk for homes and businesses to become affected by land subsidence¹⁰.

Higher intensity rainstorms pose the threat of flooding to roads, bridges, and homes. Numerous bridges in the county are not built to withstand high volumes of water washing over them which can create further damage and washouts of the bridge and large stretches of road. Pavement on roads and bridges may become more stressed and deteriorated as increased temperatures make asphalt more pliable and susceptible to buckling in extreme cases.

Increases in temperature also stress the energy infrastructure of the county as residents depend on air conditioning to abate hot weather. As demand for cooling grows, capacity on the electric generation and transmission facilities is depleted and power outages are possible if the system is overloaded. Concurrently, public water supplies may be stressed as drought and extreme head create more demand for water.

Air Quality

Due to agriculture, industry, interstate highways, and surrounding mountains, the Harrisburg-Carlisle metropolitan area has the second worst air quality in the state of Pennsylvania with 114 days when half or more of the monitoring locations reported elevated ozone and/or particulate matter pollution¹¹. Air pollution impacts are most pronounced in children, pregnant women, and the elderly and include

⁹ 2020 Climate Change Impacts Assessment Update.pdf. (n.d.). Retrieved March 24, 2021, from <https://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/ClimateChange/2020ClimateChangeImpactsAssessmentUpdate.pdf>

¹⁰ Shortle et al. - Pennsylvania Climate Impacts Assessment Update.pdf. (n.d.). Retrieved March 24, 2021, from <https://www.pennfuture.org/Files/Admin/Pennsylvania-Climate-Impacts-Assessment-Update---2700-BK-DEP4494.compressed.pdf>

¹¹ Ridlington, E, Weissman, G, Folger, M. (2020). Trouble in the Air: Millions of Americans Breathed Polluted Air in 2018. PennEnvironment Research & Policy Center and PennPIRG Education Fund

respiratory illness, heart attack, stroke, cancer, dementia, mental health problems, and birth complications. Vehicle and power plant pollution were responsible for an estimated 4,800 premature deaths in Pennsylvania in 2018¹². Rising temperatures will increase the formation of ozone resulting in 3-9 more days per year of unhealthy ozone levels in the Harrisburg-Carlisle metropolitan area by 2050¹³. Reduction of greenhouse gas emissions will often result in improved air quality as many of the same processes are associated with both greenhouse gas emissions and air pollution.

Human Health

Temperature increases and extreme heat events exacerbate existing health problems and can cause death. Heat exhaustion, heat rash, heat stroke, and dehydration are all common human health problems associated with increases in temperature and extreme heat events. While the availability of air conditioning mitigates many heat related health concerns, children, the elderly, and those with outdoor employment still have increased risks.

Forests and Wildlife

Forests are the dominant land use in Pennsylvania and represent 35% of the land area in Cumberland County. Climate change is projected to move suitable habitat northward and to higher latitudes for many tree species and the flora and fauna that depend on forest ecosystems. Local species that are likely to experience significant population declines include American beech and eastern hemlock. Species that are likely to migrate into the state from more southern locations include loblolly pine and black hickory. A key impact of changing climate and forest habitat is the potential for invasive species and currently existing pests, such as the woolly adelgid, to thrive and for the timing of migratory patterns and other phenological processes, such as foraging season length, to be disrupted. Larger fauna, such as the marten and lynx will likely migrate from the state while bobcat habitat will likely expand northward into Pennsylvania. Modeling results indicated that 61-79 Pennsylvania bird species will experience a range decline while 38-52 bird species will experience a range increase due to climate change.¹⁴

Plan Authority, Need and Scope

Cumberland County prepares a variety of plans that are required by law and others that are discretionary yet respond to expressed resident needs. The authority to prepare a plan and its associated need and scope of work must be established at the outset of a planning initiative to set expectations of what is included in a plan and how it will be implemented.

Authority

This CAP includes a menu of options that governments, businesses, and residents can consider engaging in to reduce their respective GHG emissions or mitigate the impacts of climate change. While Cumberland County has prepared this plan, it lacks authority to implement recommendations outside of

¹² Goodkind, AL, Tessum, CW, Coggins, JS, Hill, JD, Marshall, JD. (2019). Fine-scale damage estimates of particulate matter air pollution reveal opportunities for location-specific mitigation of emissions. *Proceedings of the National Academy of Sciences*. 116(18): 8775-8780. doi: <https://doi.org/10.1073/pnas.1816102116>

¹³ Shen, L, Mickley LJ, Gilleland, E. (2016). Impact of Increasing Heat Waves on U.S. Ozone Episodes in the 2050s: Results from a Multimodel Analysis Using Extreme Value Theory. *Geophysical Research Letters*, 43:4017-4025. doi:10.1002/2016GL068432, p. 4023.

¹⁴ Shortle et al. - Pennsylvania Climate Impacts Assessment Update.pdf. (n.d.). Retrieved March 24, 2021, from <https://www.pennfuture.org/Files/Admin/Pennsylvania-Climate-Impacts-Assessment-Update---2700-BK-DEP4494.compressed.pdf>

county government administration and operations. Without direct authority, the county can educate and advise other stakeholder groups on climate issues, however, the ultimate authority to take climate related actions lies expressly with the local governments, businesses, and residents located in the county. The county will not assume new authority because of this plan or force other stakeholders into acting on any plan elements. Implementation of this plan is strictly voluntary.

Plan Need

This plan was developed through the Pennsylvania department of Environmental Protection's (DEP) Local Climate Action Planning (LCAP) program (see page 12 for more detail). Since its inception in 2020 Cumberland County has joined the ranks with over 40 other units of local government to proactively plan for climate change. Peer third class counties such as Erie County and Chester County along with York City, Carlisle Borough, and Derry Township are local examples of other local governments addressing climate change along with Cumberland County.

The county, along with these other communities, recognizes the risk that climate change poses to its residents and businesses, and is acting now to reduce the GHG emissions of both its government operations and the community at-large through the strategies and actions laid out in this CAP. Furthermore, Cumberland County recognizes the need to address existing climate risks such as flooding, heat waves, and severe storms and adapt its infrastructure to changing conditions.

Federal and state governments continue to identify climate change as a major policy focus area that warrants programmatic and financial responses. Cumberland County, by having proactively created its own climate change plan, is well-positioned to take advantage of the various resources coming from higher levels of government to implement the actions identified in this plan and enjoy the associated benefits.

Plan Scope

This CAP includes strategies and actions for reducing GHG emissions resulting from local government and community-wide activities within the Cumberland County. It addresses the major sources of emissions in the county and sets forth objectives and actions in the following four sectors that both the county and community members can implement together to reduce greenhouse gas emissions.

- Transportation
- Land use
- Waste management
- Energy production and consumption

In each sector, action recommendations are included for local governments, businesses, and residents. This "menu" style approach to the CAP recognizes that the county cannot implement the plan on its own, but rather requires participation from the broader community at large. Stakeholders in each sector can implement recommended actions at their discretion or pursue other GHG reduction strategies believed to be in their best interest.

Plan Integration

Cumberland County government is required by law to prepare and maintain a variety of planning documents. This CAP, while important, is not a planning document required of county government by statute, regulation, or directive of federal or state agencies. Cumberland County is required to prepare the following planning documents, all of which have a relationship to climate change issues.

Table 2: Relevant planning documents for Cumberland County.

Plan	Authorizing Statute	Climate Change Link
Comprehensive Plan ¹⁵	Municipalities Planning Code, Act 247 of 1968	<ul style="list-style-type: none"> • Policy blueprint for orderly future development of county including transportation, economic development, housing, and natural resource protection • Municipal comprehensive plans must be generally consistent with county plan
Hazard Mitigation Plan ¹⁶	Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C, Section 322 as amended	<ul style="list-style-type: none"> • Natural hazard vulnerability assessment, including impacts of climate change • Monitoring of natural hazard occurrence and impacts • Actions to limit impacts of natural hazards on loss of life and property
Municipal Waste Management Plan ¹⁷	Act 101 of 1988, the Municipal Waste Planning, Recycling, and Waste Reduction Act	<ul style="list-style-type: none"> • Identify waste disposal needs and capacity • Actions for recycling and waste disposal that county and municipal governments undertake

Long term the CAP should be integrated into these required plans and not continue to function as a standalone document. The update cycles of these required plans ensures that climate related issues are monitored on a consistent basis. Likewise, through successful plan integration, climate change becomes a standard element considered in all required planning processes.

Planning Team

The CAP planning team included a project steering committee and a resident advisory group that guided the efforts of the Cumberland County CAP. The steering committee included representatives from the following organizations:

- Cumberland County Planning Department
- Cumberland Area Economic Development Corporation
- Cumberland County Conservation District
- Dickinson College
- Shippensburg University

In addition to the steering committee, a resident advisory group volunteered to assist in the planning effort. This dedicated group of volunteers provided insight to the steering committee, helped to promote the survey with the public, and offered implementation recommendations. The resident advisory group included the following volunteers:

¹⁵ <https://www.ccpa.net/4888/Comprehensive-Plan>

¹⁶ <https://www.ccpa.net/4902/Hazard-Mitigation-Plan>

¹⁷ <https://www.ccpa.net/3830/Municipal-Waste-Management-Plan>

- Jeff Bergsten
- Holly Smith
- Joe Breyemeier
- Kim Hoover
- Morgan Plant
- Tamela Trussell
- Wendy Smith
- Nate Douty

Planning Process

The county’s climate change planning efforts began in 2020 with Cumberland County’s acceptance into DEP’s LCAP program. Funded by the U.S. Department of Energy’s State Energy Program, the LCAP provides consultants and technical assistance from college faculty and students to assist local governments in developing local GHG inventories and CAPs. The county partnered with DEP, Dickinson College and Shippensburg University to complete its CAP.

Cumberland County followed the established LCAP planning process to develop this CAP. The LCAP planning process is a progressive planning process that systematically collects and analyzes data, integrates stakeholder input, develops recommendations, and assesses the impact of those recommendations on GHG emissions. The following graphic illustrates the Cumberland County CAP planning process.

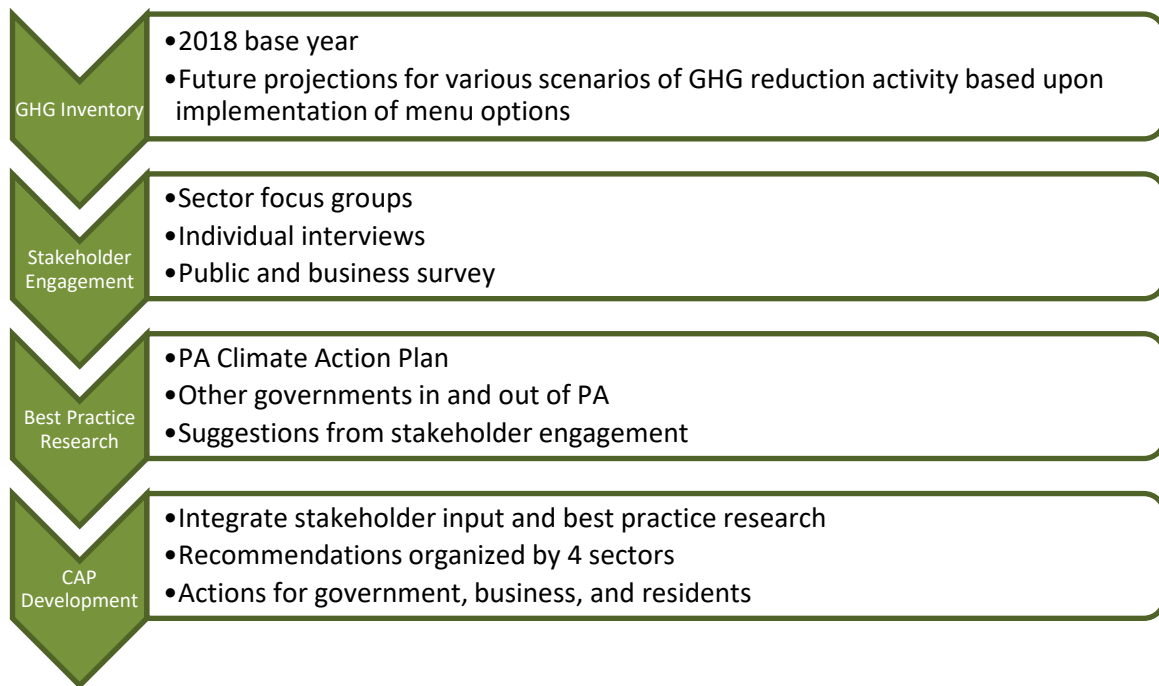


Figure 4: CAP planning process.

Greenhouse Gas Inventory

Cumberland County residents, businesses and institutions contribute to the global emissions of GHG that amplify the Earth’s greenhouse effect and cause the climate to warm and change in other ways. Table 3 outlines the sector-specific activities that contribute to carbon emissions in the county

To identify and quantify the major sources of greenhouse gas emissions in Cumberland County, and to establish a baseline for measuring the effectiveness of future actions to reduce emissions, countywide emissions were estimated for 2018. Data for county activities that emit GHG were collected from multiple sources and input to ClearPath, an online GHG calculator that has been used by many communities to estimate their emissions. ClearPath was developed by ICLEI Local Governments for Sustainability and is consistent with requirements of the U.S. Community Protocol for GHG inventories (ICLEI, 2012 and 2014).^{18,19} National and regional emission factors are applied by ClearPath to the activity data to calculate emissions of the GHG CO₂, CH₄ and nitrous oxide (N₂O). Emissions of each of these gases are then converted into an equivalent weight of CO₂, added together, and reported in metric tons of carbon dioxide equivalent (MTCO₂e).

The calculations yield emission estimates for the seven sectors listed in Table 3. The estimates capture most, but not all, of the county’s GHG emissions. The production, processing and transport of food and other goods and services that originate outside of the county, and air travel by county residents to and from airports that are not located in the county, are particularly significant sources of excluded emissions. While the excluded emissions result from actions by county residents, businesses, and institutions, and are attributable to the county, they are not included in the inventory because data and methods are presently insufficient to estimate the emissions reliably.

Table 3: Sectors, Activities, and Emission Sources and Gases Included in GHG Inventory

Sector	Activities	Emission Sources and Gases
Transportation	<ul style="list-style-type: none"> Road travel in passenger, commercial and public transit vehicles that starts and/or ends in Cumberland County Operation of off-road vehicles Freight train transportation Flights in and out of Carlisle Airport 	<ul style="list-style-type: none"> CO₂, CH₄ and N₂O from combustion of gasoline, diesel and ethanol fuels by motor vehicles, off-road equipment, freight trains and airplanes
Residential Energy	<ul style="list-style-type: none"> Heating and cooling residences Heating water in residences Lighting residences Cooking in residences Other home energy uses 	<ul style="list-style-type: none"> CO₂, CH₄ and N₂O from combustion of natural gas, fuel oil, propane and wood in home furnaces, boilers, and stoves CO₂, CH₄ and N₂O from combustion of fossil energy to generate electric power used by residents

¹⁸ ICLEI, 2012, U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions. ICLEI – Local Governments for Sustainability, Denver, CO. <https://iclei.org/publications/uscommunity-protocol/>.

¹⁹ ICLEI, 2014, ClearPath User Guide, An ICLEI USA Tool. ICLEI – Local Governments for Sustainability, Denver, CO. <https://s3.amazonaws.com/ClearPath-ICLEI/User+Guides/ClearPath+Inventory+Module+User+Guide.pdf>.

Sector	Activities	Emission Sources and Gases
Commercial Energy <i>(Includes commercial businesses, agricultural businesses, private and public organizations, and government agencies)</i>	<ul style="list-style-type: none"> • Heating and cooling buildings • Heating water in buildings • Lighting buildings • Other energy uses by businesses, institutions, and government agencies 	<ul style="list-style-type: none"> • CO₂, CH₄ and N₂O from combustion of natural gas, fuel oil and propane in furnaces, boilers, on site transportation and equipment. • CO₂, CH₄ and N₂O from combustion of fossil energy to generate electric power used by businesses, institutions, and government agencies.
Industrial Energy	<ul style="list-style-type: none"> • Industrial processes to produce manufactured goods 	<ul style="list-style-type: none"> • CO₂, CH₄ and N₂O from combustion of natural gas, fuel oil and other fossil energy in industrial processes • CO₂, CH₄ and N₂O from combustion of fossil energy to generate electric power used by industrial facilities • CO₂, CH₄ and N₂O from combustion of fossil energy to generate heat/cooling for buildings, heat water, power forklifts and light buildings.
Agriculture	<ul style="list-style-type: none"> • Raising livestock • Applying nitrogen fertilizers to grow crops <p><i>Note: Emissions from energy use by agricultural businesses are included in the commercial energy sector.</i></p>	<ul style="list-style-type: none"> • CH₄ released by animals' digestive processes • CH₄ and N₂O released by decomposition of animal manure • N₂O released by nitrogen fertilizers • CO₂ released from till farming
Forests and Land Use	<ul style="list-style-type: none"> • Growth of trees in forests and outside of forests • Converting forest lands to other land uses 	<ul style="list-style-type: none"> • CO₂ absorbed and stored by trees through photosynthesis, which removes CO₂ from the atmosphere and sequesters it in biomass • CO₂ released by converting forests to land use types that store less carbon than forests
Solid Waste, Water and Wastewater	<ul style="list-style-type: none"> • Generating and landfilling biodegradable municipal solid waste (paper, cardboard, food waste, yard waste) • Treating drinking water • Treating wastewater 	<ul style="list-style-type: none"> • CH₄ released from landfills through decomposition of organic solid waste in absence of oxygen • CO₂, CH₄ and N₂O from combustion of fossil energy to generate electric power used to treat drinking water and sewage • N₂O produced by sewage treatment process

Cumberland County's Greenhouse Gas Emissions

Cumberland County's gross GHG emissions in 2018 are estimated to total 2.71 million metric tons of carbon dioxide equivalent (MTCO₂e), or 10.8 MTCO₂e per resident. Transportation is the county's largest source of emissions, accounting for 39% of gross emissions. Residential energy and commercial energy are the next largest sources, accounting for 21% and 15% of gross emissions. Next are agriculture, 11%, industrial energy, 9%, and solid waste, water, and wastewater, 4%. (Figure 10)

The county's gross emissions are partly offset by carbon that is sequestered by trees in and outside of forests. Trees remove carbon from the atmosphere through the process of photosynthesis and they emit and return carbon to the atmosphere when they decompose. Also, clearing and converting forests to urban and agricultural uses releases carbon to the atmosphere while converting lands to forests absorbs and stores carbon. On net, forests, and trees outside of forests remove and sequester an estimated 335,000 MTCO₂e each year from the atmosphere. When carbon sequestration is subtracted from gross emissions, the County's net emissions of greenhouse gas in 2018 are estimated to be 2.38 million MTCO₂e, or 9.5 MTCO₂e per resident.

The results indicate that an effective plan to reduce county GHG emissions would need to give priority to transportation, energy use by residents, businesses and institutions, and energy resources used to generate electric power. Agriculture is also a significant source of emissions that warrants attention, while forests and trees outside of forests present opportunities to increase the sequestration of carbon.

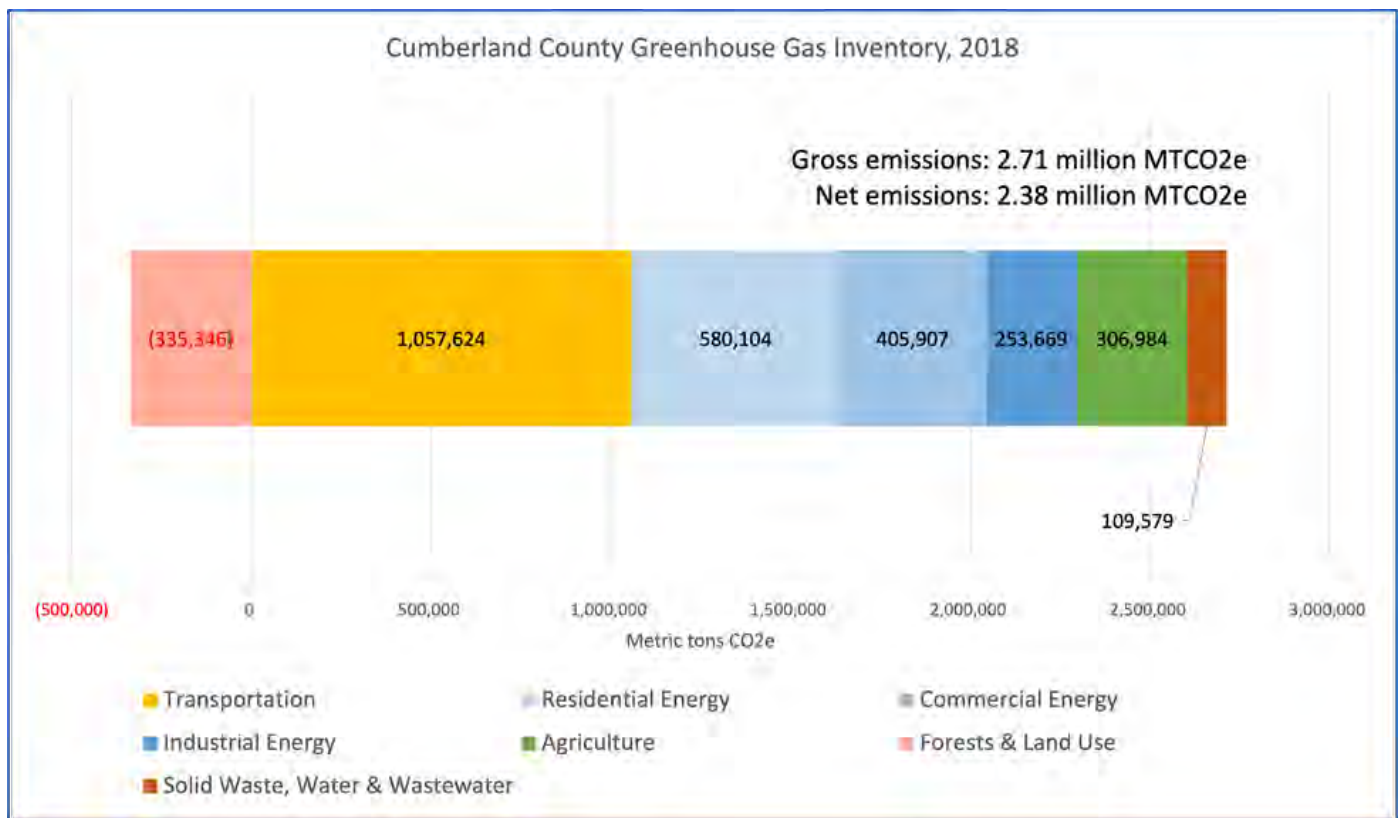


Figure 5 County gross and net greenhouse gas emissions by sector, 2018.

Future Scenarios of Future Greenhouse Gas Emissions

Cumberland County's future GHG emissions will change in response to changes in multiple factors that include, but are not limited to, county population, economic activity, travel, land use patterns, technologies, amounts and types of energy used and energy efficiency. Deliberate actions to reduce GHG emissions taken by residents, businesses, organizations, and local, state, and federal governments can also influence the future trajectory.

Two scenarios of possible future emissions were constructed, one based on the assumption that no new actions or policies are implemented to limit emissions and one based on the assumption that substantial new actions are taken. Neither scenario represents a prediction of the future or a goal for emission reductions in the county. They are illustrative of how future emissions could change through time under two different sets of assumptions. Together, they frame the level of effort required to achieve various levels of GHG reductions. Recommendations for goals, strategies and actions are presented later in this report in a menu style for stakeholders to act on as they deem appropriate for achieving their desired ends.

No Action Scenario

The No Action scenario for the county assumes that no new actions or policies are adopted for the purpose of reducing GHG emissions, that county population grows at an average annual rate of 0.54%, as projected by the Cumberland County Comprehensive Plan 2017²⁰, and that commercial and industrial activity, vehicle miles traveled, energy use by type and energy efficiency in the county follow national trends and patterns as projected by the U.S. Energy Information Agency (USEIA) for their reference case in the 2021 Annual Energy Outlook²¹. Emissions from agriculture and carbon sequestration by forests and trees are assumed to be unchanged from year to year.

Under these assumptions, Cumberland County's net GHG emissions are projected to grow from 2.38 million MTCO₂e in 2018 to 2.71 million MTCO₂e in 2049. This represents an average growth rate of 0.4% per year and a cumulative increase of 13.8%. The shares of emissions by sector remain nearly constant throughout the projection period. While total net emissions grow over time, net emissions per resident are projected to decline from 9.5 to 9.2 MTCO₂e. Reasons for the decline include improvements in energy efficiency and vehicle fuel economy and a trend toward electricity generation with lower carbon emissions per kWh of power that are assumed in the USEIA reference case.

Emission Reduction Scenario

Three broad strategies for reducing GHG emissions were evaluated:

- Accelerating energy efficiency improvements and promoting energy conservation.
- Switching away from fossil fuels to use electricity and other alternative energy sources for transportation, residential, commercial, and industrial energy end uses.
- Reducing carbon emissions from electric power generation by switching away from fossil fuels and replacing them with clean, renewable energy sources.

To illustrate one pathway to achieve deep emission reductions, an emission reduction planning scenario was constructed that incorporates proposed targets for each of the three strategies. The targets, which are summarized in Table 4, are roughly consistent with actions and targets outlined in the 2018 Pennsylvania Climate Action Plan²². The emission reduction scenario does not incorporate strategies for reducing emissions from agriculture or for increasing carbon sequestration. While not included in the

²⁰ Cumberland County Planning Commission, 2017, *Cumberland County Comprehensive Plan*, background chapter, Population and Socioeconomic Profile, Cumberland County, PA. <https://www.ccpa.net/DocumentCenter/View/28891/Population-and-Socioeconomic-Profile?bidId=>.

²¹ U.S. Energy Information Administration, 2020, *Annual Energy Outlook 2020 with Projections to 2050*, U.S. Department of Energy, Washington, DC. https://www.eia.gov/outlooks/aeo/pdf/AEO_Narrative_2021.pdf.

²² Pennsylvania Department of Environmental Protection, 2018, *Pennsylvania Climate Action Plan, Strategies and Actions to Reduce and Adapt to Climate Change*. PA Department of Environmental Protection, Harrisburg, PA. <https://www.dep.pa.gov/Citizens/climate/Pages/PA-Climate-Action-Plan.aspx#:~:text=>

scenario simulation, opportunities exist for reducing agricultural emissions through improved practices and for sequestering carbon through land use management. Examples are included in the Goals, Strategies, and Actions section of the report.

The proposed targets are ambitious but achievable, provided that concerted actions are taken at federal, state, and municipal levels, as well as by county residents, businesses, and organizations. The targets cannot be achieved by Cumberland County acting alone. But the county can enable and facilitate progress toward the targets by creating an environment conducive to local climate action, and the success of state and federal climate action will require active county participation.

Table 4: Strategies and illustrative targets for reducing GHG emissions.

Strategy	Targets
Improve Energy Efficiency and Conservation	Residential <ul style="list-style-type: none"> • Electricity use per household decreases 35% by 2050 relative to 2018 • Natural gas use per household decreases 25% by 2050 relative to 2018
	Commercial <ul style="list-style-type: none"> • Electricity and natural gas use per sq ft commercial floor space decreases 25% by 2050 relative to 2018
	Industrial <ul style="list-style-type: none"> • Electricity use decreases 5.5 million kWh each year, reaching a cumulative reduction of 33% by 2050 relative to 2018 • Natural gas use decreases 8,800 MMBtu each year, reaching a cumulative reduction of 33% by 2050 relative to 2018
	Transportation <ul style="list-style-type: none"> • Vehicle miles traveled by passenger vehicles decreases 10 million miles each year, reaching a cumulative reduction of 22% by 2050 relative to 2018 • Vehicle miles traveled by commercial vehicles decreases 500,000 miles each year, reaching a cumulative reduction of 12% by 2050 relative to 2018
Switch End Uses to Low Carbon Energy	Residential <ul style="list-style-type: none"> • 50% of natural gas use switched to electricity by 2050 • 50% of natural gas supplied from renewable zero carbon sources by 2050
	Commercial <ul style="list-style-type: none"> • 50% of natural gas use switched to electricity • 50% of natural gas supplied from renewable zero carbon sources by 2050
	Transportation <ul style="list-style-type: none"> • 90% of passenger vehicles replaced by electric vehicles by 2050 • 45% of commercial vehicles replaced by electric vehicles by 2050
Generate Electricity with Zero Carbon Energy	Electric Power <ul style="list-style-type: none"> • 85% of electricity is generated using zero carbon energy sources by 2050

If all the strategies identified in Table 4 are implemented and the targets achieved, net emissions would be reduced to an estimated 0.88 million MTCO₂e in 2049, a reduction of roughly two-thirds from 2018 (see Figure 6 and Table 8). Nearly half the reductions are estimated to result from substituting renewable or nuclear energy sources for fossil energy to generate 85% of electric power. 30% of the reductions would result from increasing electric vehicles to 90% of all passenger vehicles on the road and 45% of commercial vehicles. Energy efficiency, energy conservation and reduced vehicle miles traveled contribute 17% to the estimated reductions.

This is but one example pathway for reducing the county’s GHG emissions. It illustrates that deep emission reductions are feasible but achieving them would require use of all three strategies to make substantial changes in energy use by county residents, businesses and institutions, the regional electric grid and infrastructure to support electric or other alternative fueled vehicles.

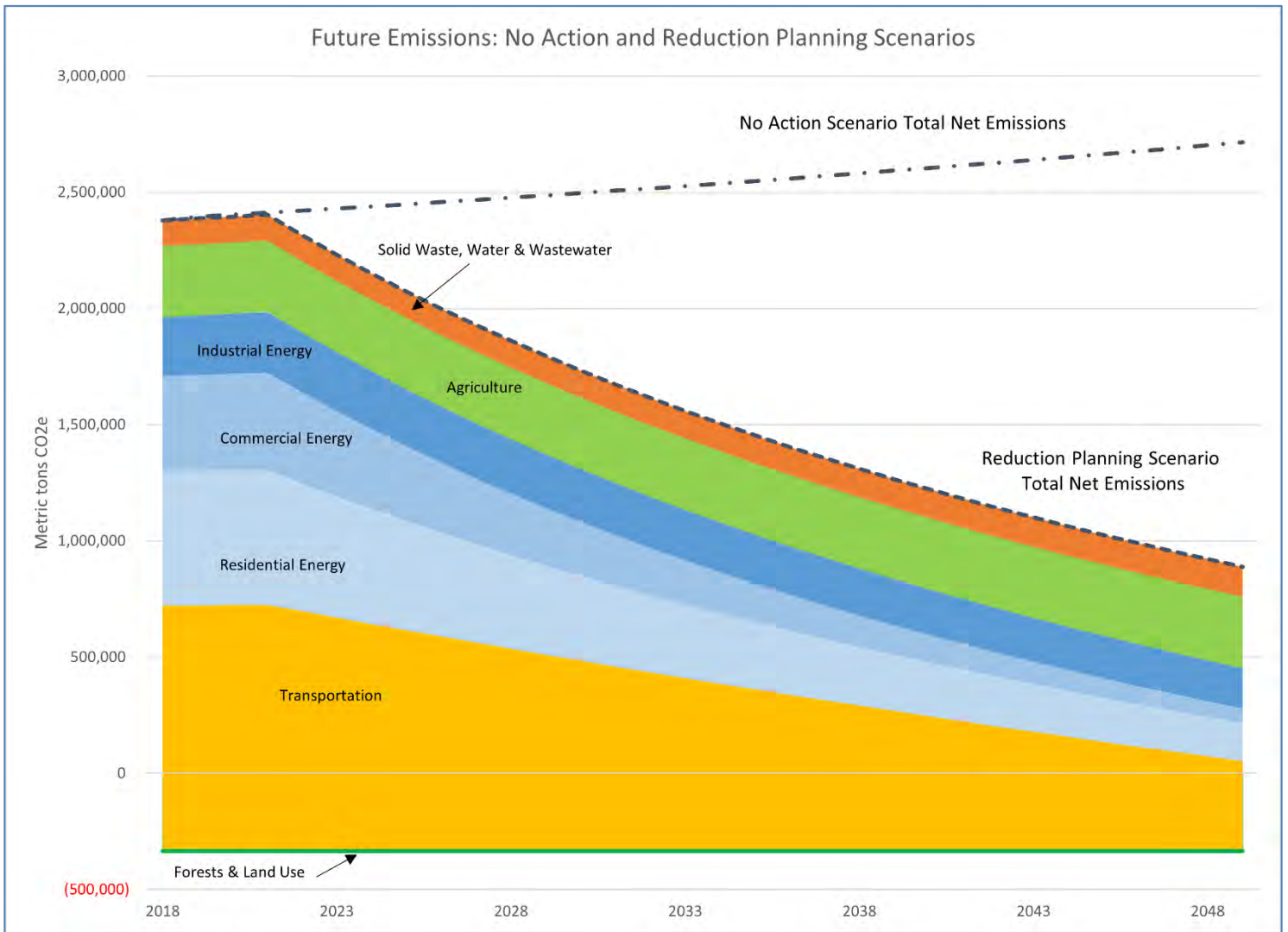


Figure 6: Comparison of no action and reduction planning scenarios.

Table 5: Emission reductions if targets are achieved (metric tons CO₂e).

Strategy	2025	2030	2040	2049
Energy Efficiency & Conservation				
Reduce Residential & Commercial Energy Use	-50,968	-91,928	-130,591	-142,965
Reduce Vehicle Miles Traveled	-75,836	-119,331	-146,248	-159,327
Switch End Uses to Low Carbon Energy				
Switch to Electricity & Renewable Gas	-22,454	-42,779	-65,934	-74,307
Replace Gasoline Vehicles with Electric Vehicles	-38,330	-131,174	-356,571	-548,838
Generate Electricity with Zero Carbon Energy	-178,658	-369,417	-673,513	-890,912
All Strategies	-366,246	-754,629	-1,372,857	-1,816,349
% Change from 2018	-12.8%	-27.1%	-48.6%	-62.6%

Stakeholder Engagement

The CAP was completed during a global pandemic which limited in person interaction and larger group gatherings, thereby challenging the county’s ability to conduct a typical in-person planning process. The planning team emphasized community input through its robust public outreach efforts that included virtual sector focus groups, online key person interviews and a public and business survey that garnered over 2,000 responses.

Sector Focus Groups and Key Person Interviews

The planning team conducted focus groups and key stakeholder interviews with representatives from the major sectors listed in the GHG inventory and others with an interest in climate change. The table below lists the focus group sectors and associated participants in each group. Appendix A includes full summaries for all the focus groups meetings.

Table 6: Focus group participants.

Sector	Participants	
Agriculture	<ul style="list-style-type: none"> • Donna Scherer, Penn State Agricultural Extension • Matt Steiman, Dickinson College Farm • Amy Brickner, Farmer • Kent Strock, Farmer 	<ul style="list-style-type: none"> • Ryan Brown, Farmer • John Schwartzter, PA DCNR • Ann Bashore, Farmer
Utilities	<ul style="list-style-type: none"> • PPL • UGI • First Energy • Adams Electric Cooperative 	
Residential Energy	<ul style="list-style-type: none"> • Kristi Walsh, Homebuilders Association of Metropolitan Harrisburg • Mary Galski, PA Manufactured Housing Association • Jill Pento, PA Builders Association • Sarah Miller, PA Builders Association • Mark McNaughton, Home Builder • Gary Lenker, Tri-County Housing Authority • Steve Fleming, Builder, and realtor • Kenn Tuckey, Tuckey Companies • Doug Nemtuda, Siemens 	<ul style="list-style-type: none"> • Mike Rader, Barton Associates • Scott Pusey, Steven Winter Associates • Lawrence Eighmy, The Stone House Group • Darren Cassell, The Stone House Group Jon Kautz, Energy Smart Home Improvement • Gilbert Freedman, Earth Energy Engineering • Justin McClure, Daflure Heating • Rick Rovegno, Rovegnos of Carlisle
Municipalities	<ul style="list-style-type: none"> • Keith Metts, Hampden Township • Jeremy Miller, Hampden Township • Tom Vernau, Lower Allen Township • Bob Shively, representing Upper Mifflin Township • Cory Adams, South Middleton Township 	<ul style="list-style-type: none"> • Mike Skelly, Carlisle Borough • Owen Snyder, Carlisle Borough • Susan Armstrong, Carlisle Borough • Larry Barrick, Dickinson Township • Meghan McNamee, Upper Allen Township

Sector	Participants	
Municipalities	<ul style="list-style-type: none"> • Sara Gibson, Camp Hill Borough • Steve Oldt, Shippensburg Township • Mark Malarich, Carlisle Borough • John Lopp, Cumberland County Facilities Management 	<ul style="list-style-type: none"> • Katie Daniels, Mt. Holly Springs Borough • John Owen, East Pennsboro Township • Wayne Myers, West Pennsboro Township
School Districts	<ul style="list-style-type: none"> • Rick Kerr, Big Spring School District • Vonda Kelso, Big Spring School District • Tom Horton, Carlisle Area School District • Jenna Kinsler, Carlisle School District • Greg Longwell, Mechanicsburg School District • Nicole Weber South Middleton School District 	
Transportation	<ul style="list-style-type: none"> • Michelle Tarquino, PennDOT District 8 • Steve Deck, Harrisburg Area Transportation Study • Rich Farr, Capital Area Transit • Dick Norford, Harrisburg Bicycle Club • Dan Szekeres, Michael Baker Corporation • Jackie Felion, PennDOT • Jeff Bergsten, Resident Advisory Group, professional engineer • Rudy Husband, Norfolk Southern 	
Waste Management	<ul style="list-style-type: none"> • Mike McIntyre – Manager, Cumberland County Landfill • Scott Perin – Waste Management, Area Director of Disposal Operations – Greater Mid-Atlantic Area • Judy Archibald –Waste Management, Government Affairs Director • Justin Miller, Recycling Coordinator, Cumberland County 	

Perspectives on Climate Change

The Yale Program on Climate Change Communication monitors opinions on climate change in the form of a national survey that has been collected between 2008 and 2020 as part of the Climate Change in the American Mind Project. The survey analyzes beliefs, risk perceptions, policy support and behaviors at the county, metropolitan area, congressional district, state, and national scale and presents the data in a heat map format that depicts the percentage of population that agree or disagree with particular statements. The survey can be found at <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>

When designing the survey for Cumberland County, the planning team took this resource into consideration and developed a county-administered survey that focused on climate change actions rather than perceptions. The Yale Climate Opinion Maps 2020 provides a useful companion to the county survey to interpret which policy actions could be regarded more favorably by residents and constituents.

A summary of key responses for Cumberland County from the Yale survey is as follows:

- 71% of respondents in the county believe global warming is happening (nearly identical to state and national averages)

- 56% of respondents in the county believe global warming is caused by human activities (nearly identical to state and national averages)
- 57% of county respondents believe that global warming will harm people in the US, while only 36% in the county feel it will harm them personally (this is lower than the national averages of 61% and 43%, but reflects a consistent pattern of thought)
- 86% of county respondents favor funding research into renewable energy sources (nearly identical to state and national averages)
- 75% of county respondents feel that CO₂ should be regulated as a pollutant (nearly identical to state and national averages)
- 66% favor requiring fossil fuel companies to pay a carbon tax, and 63% favor requiring utilities to produce 20% of electricity from renewable sources (similar to state and national averages)
- Incentives were more favored than additional regulatory requirements, with 82% of county respondents favoring tax rebates for energy-efficient vehicles or solar panels (nearly identical to state and national averages)

Climate Change Survey

The planning team conducted a public and business survey to supplement input gathered from the sector focus groups and key person interviews. The survey was conducted online and promoted through a variety of media including newspaper, television, radio, municipal newsletters, and social media. Paper copies were made available to residents not able to use the online survey.

An online resident and business survey was conducted to collect insights on perceptions of climate risks and climate change actions individuals have taken or might be willing to take to address climate change. Individuals who reside and/or work in Cumberland County as well as businesses and organizations located in Cumberland County were invited to respond to the survey. Participants could also request paper copies of the survey as needed. Open ended questions provided participants with opportunities to comment on any climate change related issue. Respondents had over a month to participate in the survey.

The survey consisted of 17 questions and took approximately 7 minutes to complete. A total of 2,351 responses were collected including 2,311 residents and 40 businesses. Survey results are summarized below. Full survey information can be found in the Appendix B.

Survey Participant Profile

The survey participant profile mirrored county demographic patterns regarding age, race, gender, and place of residence. Respondents were largely white, well educated, and predominantly live in the municipalities east of Carlisle Borough. Survey respondents had higher educational attainment and income than Cumberland County residents as a whole. Varying number of residents responded to the demographic questions. Many respondents declined answering the demographic questions as indicated in Table 7. Responses listed below reflect the number of responses for each question and incorporate data from the residents who chose not to respond.

Table 7: Survey respondent demographics.

Characteristic	Survey Demographic	County Demographic ²³
Race		
White	86%	84%
Black	1%	4%
Hispanic	1%	4%

²³ 2019 US Census Bureau, American Community Survey 1-year data

Characteristic	Survey Demographic	County Demographic ²³
Multiracial	.1%	3%
Asian	1%	4%
American Indian	.2%	.1%
Other	1%	.2%
Prefer not to answer	9%	N/A
Age		
18-24	3%	<ul style="list-style-type: none"> • 13% (20-29) • 12% (30-39) • 12% (40-49) • 14% (50-59) • 35% (60+)
25-34	11%	
35-44	17%	
45-54	18%	
55-64	19%	
65+	27%	
Prefer not to answer	6%	N/A
Gender		
Male	44%	50%
Female	50%	50%
Prefer not to answer	6%	
Education		
No Degree	1%	8%
High School Graduate	8%	31%
College Graduate	35%	24%
Graduate School	34%	15%
Prefer not to answer	1%	N/A
Housing		
Own	85%	70%
Rent	10%	30%
Prefer not to answer	2%	
Income		
Under \$50K	12%	32%
\$50K-\$100K	27%	34%
\$100K-\$200K	31%	26%
\$200K+	8%	8%
Prefer not to answer	23%	N/A

Table 8: Municipality of residence for survey respondents.

Municipality	% Survey Response	2020 Population ²⁴	% of County Population
Cumberland County	--	255,857	100.0%
Camp Hill Borough	4.57%	7,919	3.1%
Carlisle Borough	12.31%	19,213	7.5%
Cooke Township	0.17%	184	0.1%
Dickinson Township	2.54%	5,385	2.1%
East Pennsboro Township	5.76%	21,504	8.4%

²⁴ 2020 US Census Bureau, Annual population estimates.

Municipality	% Survey Response	2020 Population ²⁴	% of County Population
Hampden Township	13.66%	31,711	12.4%
Hopewell Township	0.28%	2,491	1.0%
Lemoyne Borough	3.44%	4,632	1.8%
Lower Allen Township	6.83%	20,226	7.9%
Lower Frankford Township	0.90%	1,832	0.7%
Lower Mifflin Township	0.40%	1,788	0.7%
Mechanicsburg Borough	5.08%	9,017	3.5%
Middlesex Township	2.09%	7,582	3.0%
Monroe Township	2.71%	6,361	2.5%
Mt. Holly Springs Borough	0.96%	2,052	0.8%
Newburg Borough	2.26%	335	0.1%
New Cumberland Borough	0.11%	7,300	2.9%
Newville Borough	0.51%	1,351	0.5%
North Middleton Township	4.52%	12,035	4.7%
North Newton Township	0.51%	2,542	1.0%
Penn Township	1.30%	3,001	1.2%
Shippensburg Borough	0.51%	4,585	1.8%
Shippensburg Township	0.79%	5,198	2.0%
Shiremanstown Borough	0.40%	1,641	0.6%
Silver Spring Township	6.95%	18,736	7.3%
Southampton Township	6.38%	7,244	2.8%
South Middleton Township	0.40%	15,672	6.1%
South Newton Township	1.02%	1,442	0.6%
Upper Allen Township	8.53%	20,697	8.1%
Upper Frankford Township	0.51%	2,093	0.8%
Upper Mifflin Township	0.23%	1,393	0.5%
West Pennsboro Township	1.75%	5,633	2.2%
Wormleysburg Borough	0.79%	3,062	1.2%

To begin the survey participants were asked “How Important is it for organizations to implement policies and programs that decrease GHG emissions?”

- 75% to 80% of respondents overwhelmingly felt that that it is important or highly important for all levels of government, private businesses, utilities, and private citizens to take action to decrease GHG emissions.

The next set of questions asked participants to respond about their behavior and action towards energy efficiency, transportation, waste management, and land use.

The first question about behavior asked respondents to identify specific actions that they have taken to reduce energy usage. In general, the responses indicate that people are most likely to make choices that cost them little to no money and help to lower their own cost, while other actions such as purchasing energy efficient heating/cooling system or installing solar panels are actions that people would consider doing, but most have not already done. If residents collectively pursue additional, larger scale actions meaningful energy usage reductions could be realized.

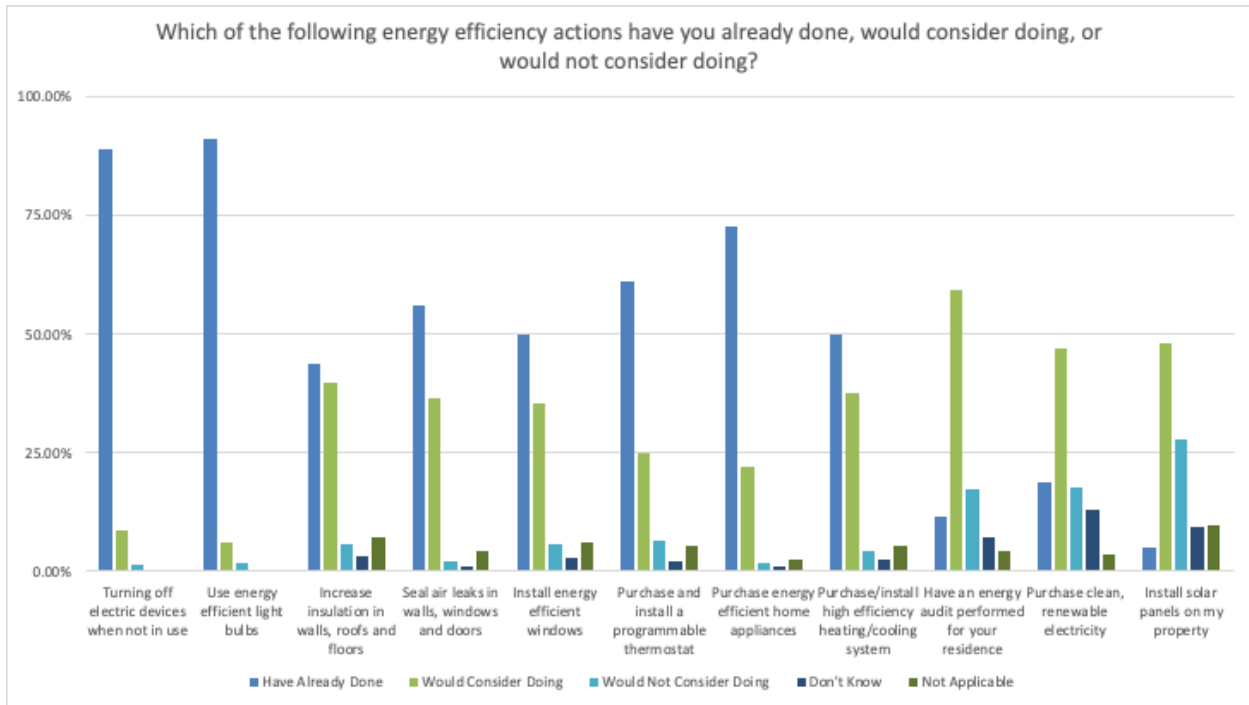


Figure 8: Energy efficient actions response.

The next question asked participants to consider actions related to transportation choices. Respondents indicated that they walk to destinations, work from home or chose to live close to where they work. Some would consider using public transportation, participating in a carpool, or driving an alternative fuel car. 45% of respondents indicated that they would not consider travelling by bicycle. 60% of survey respondents showed an interest in considering alternative fuel vehicles, suggesting an opportunity for more usage of those vehicles in the county assuming product availability and deployment of necessary infrastructure. Working from home and living close to work appear to be current trends, potentially pandemic related, that could continue for county residents and in turn have a positive impact on emissions.

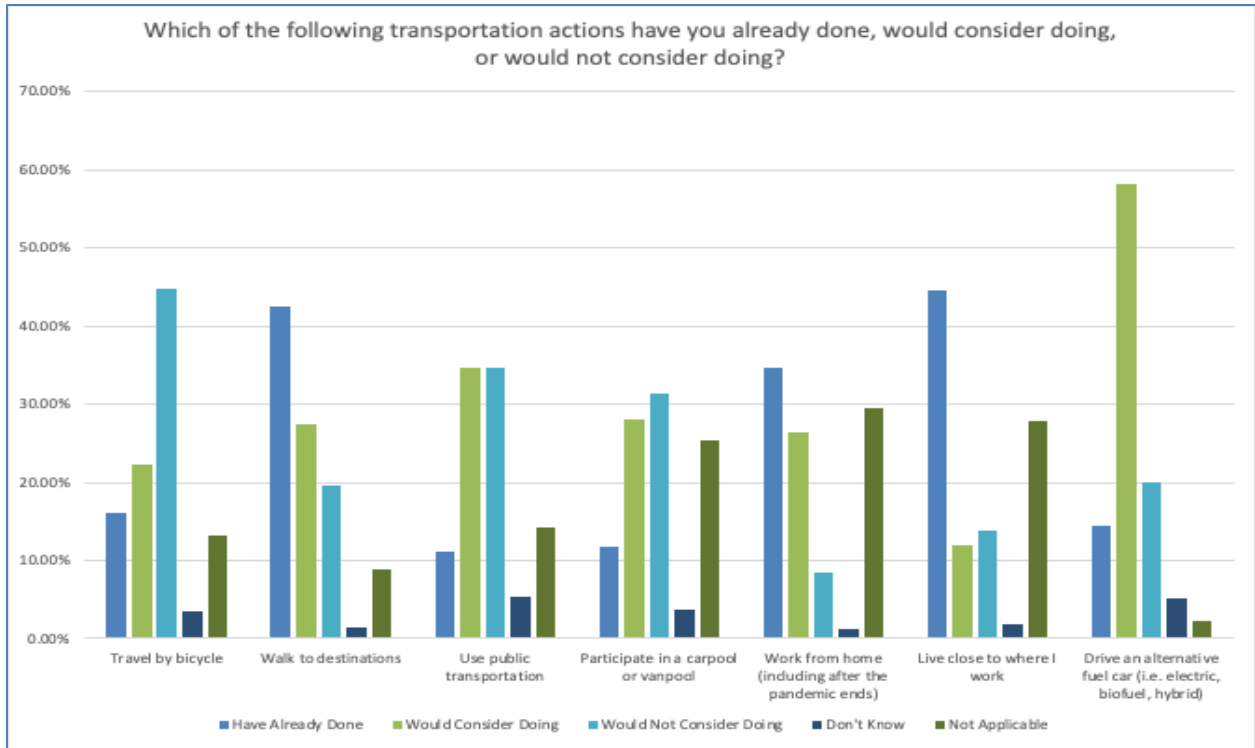


Figure 9: Transportation actions response.

The next question asked respondents about their actions regarding how they manage waste. Most respondents indicated that they already recycle and either already or would consider composting and reducing their use of plastic bags. While waste management participation rates are already high, expansion opportunities may generate even more participation. Opportunities may exist around expanding municipal composting with nearly 50% of respondents indicating they would consider participating in such a program.

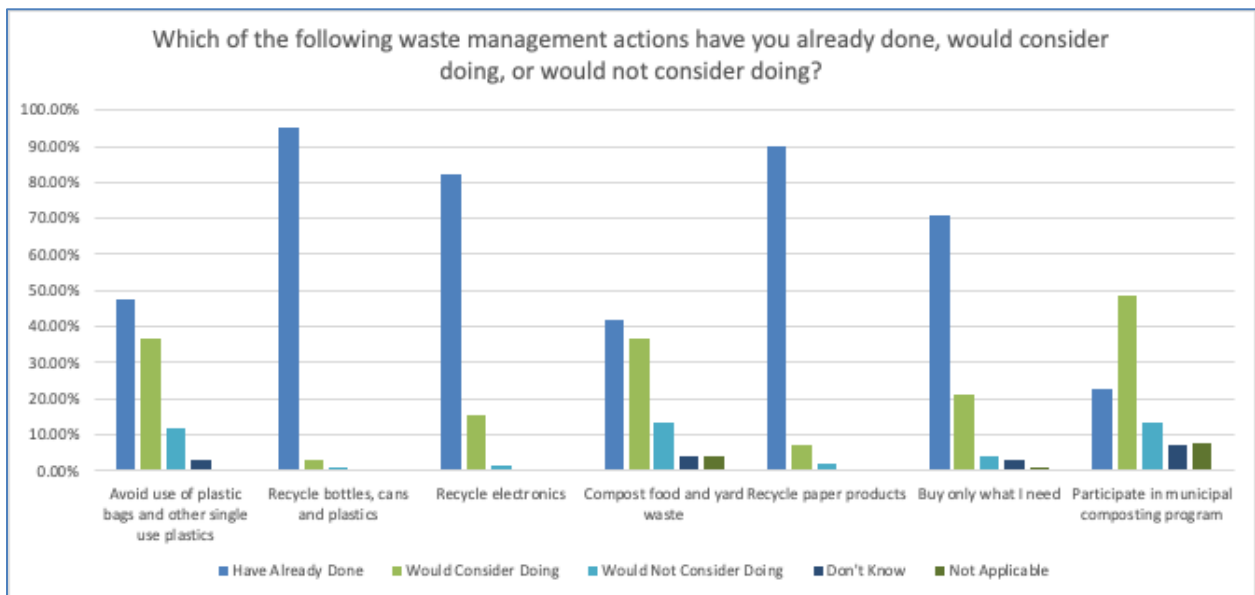


Figure 10: Waste management actions response.

The final question about behavior asked participants about actions related to how they manage and use land. Most respondents indicated that they already take actions to reduce use of fertilizer and herbicide/pesticides. Most also indicated that they purchase locally grown food, grow their own food, and have planted native plants. More than 50% of respondents indicated that they would consider

installing landscaping to capture rainwater. This may present an opportunity for the county to provide training/education to residents and businesses as a how to guide for landscaping practices that will reduce stormwater runoff.

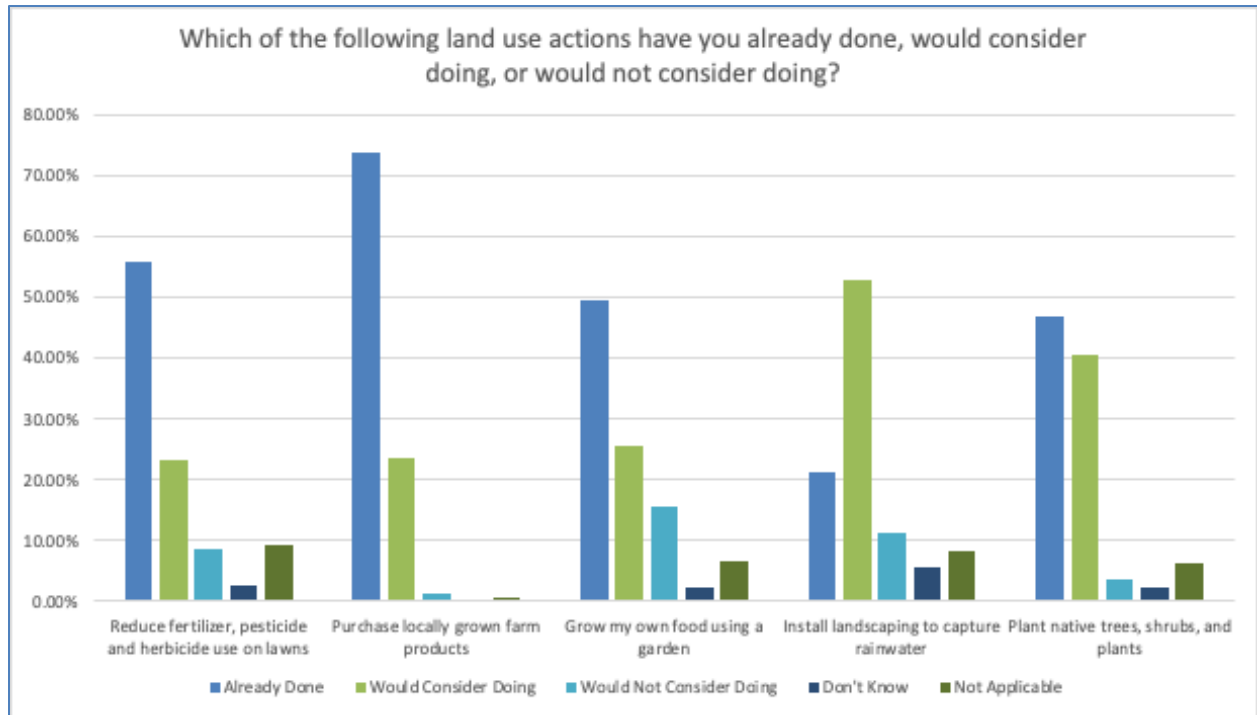


Figure 11: Land use actions response.

Climate Change Motivators and Barriers to Climate Change

The next two questions focused on what motivates survey participants to take climate change actions and what they believe are the barriers to impacting climate change. Respondents were first asked what outcomes motivate them to take climate change actions. Over 70% of responses indicated that “improved air quality” or “improved water quality” as a strong motivator. Similarly, 50%-70% of the participants indicated that saving money, decreasing waste generation, improving personal health, and helping limit climate change as motivators. While 20%-50% of the respondents selected cheaper transportation, more comfortable living, improved safety, and less time traveling as their motivations. Only 5.4% respondents gave a qualitative response and mentioned other motivations, most of which included protecting the environment and ensuring a greener future for the next generation. There were also comments doubting the credibility of climate change and its true threat to the health of the planet.

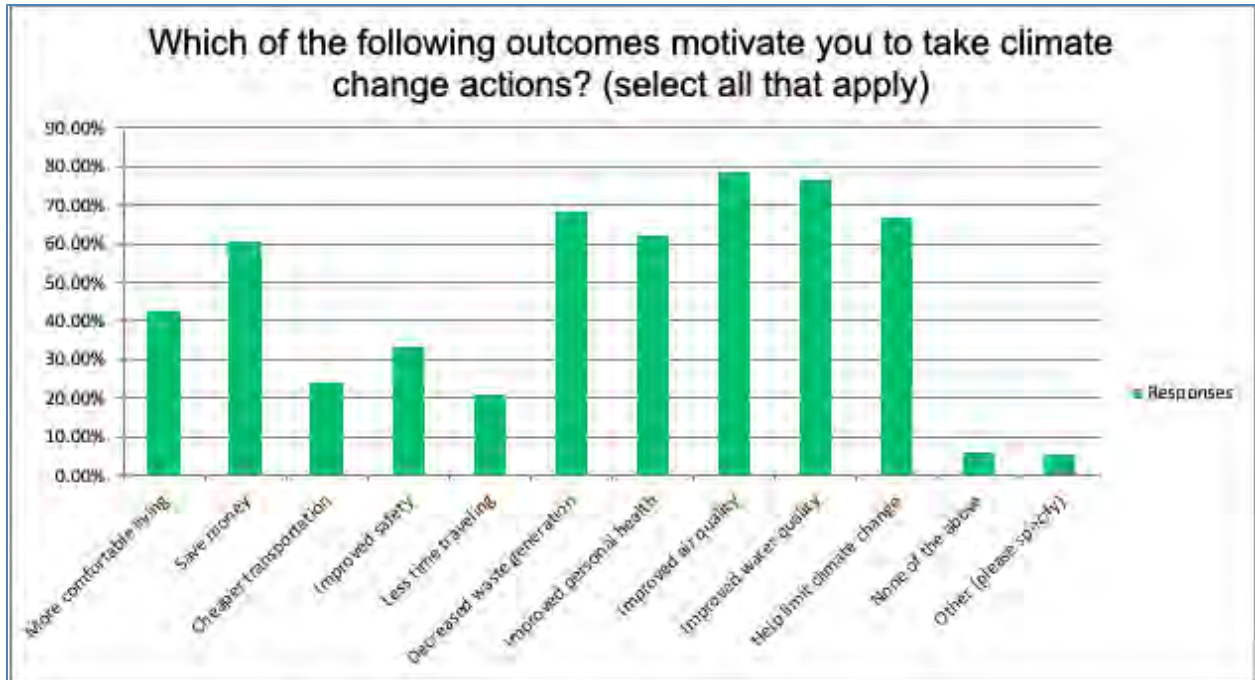


Figure 12: Climate change motivating factors.

The next question asked participants about the barriers that prevent them from taking climate change actions. Out of 1895 responses, a vast majority (72%) selected cost as the biggest barrier. Some other selections included don't know what to do (25%), limited time availability (22%), lack of skills to perform climate change actions (23%), that climate change is not a serious issue (19%), benefits are not great enough (17%), and I don't own the property where I live (11%). A very small percentage of population selected my actions won't make a difference (6%) and it is someone else's responsibility to act on climate change (1%). Thirteen and one half (14%) % of the participants chose their own reasons most of which included laziness, too old to act, or denial about climate change. Some other interesting reasons included homeowner association restrictions and that some roads are not bike or pedestrian friendly. Clearly, these results show that although there is a strong understanding of climate change, education, and training on actions that residents can take to reduce climate change is also needed. Moreover, providing incentives to lower cost of climate change reduction actions could improve participation by residents and businesses in the county.

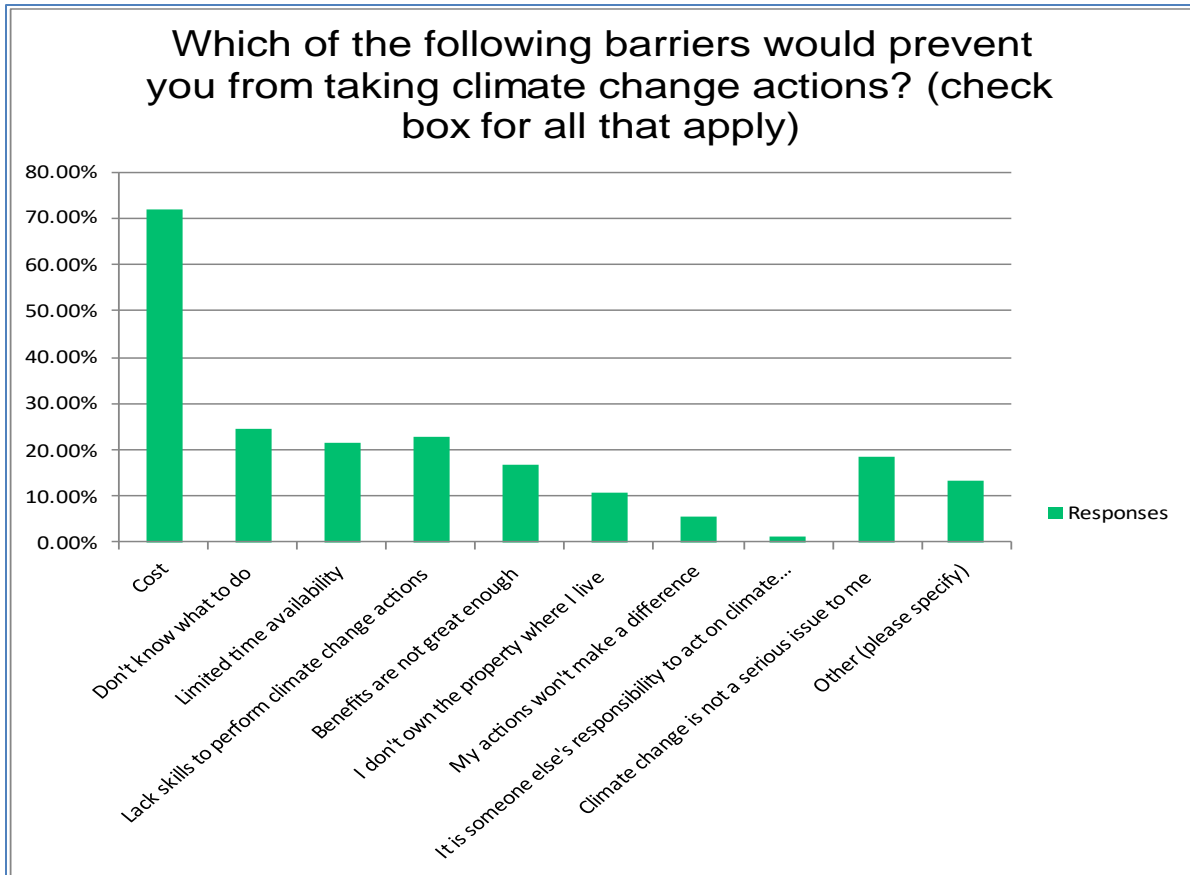


Figure 13: Climate change barriers.

Summary of Business Survey Responses

Forty survey responses were received from a variety of businesses including public administration (5) construction (3), educational services (4), healthcare (3), real estate (3), and more. Respondents largely represented small businesses, 63% of participants having less than 20 employees. 53% of these businesses indicated that their business is already acting on climate change, and 15% shared that their business is likely to act but is waiting for the right opportunity or more information. Moreover, 15% shared that their business is not likely to act currently.

When asked what risks climate change presents to businesses:

- 60% indicated either social instability or severe weather
- 40% indicated air quality
- 55% indicated emerging diseases
- 48% indicated increase flooding
- 38% indicated increases in temperature
- 43% indicated a reduction in water quality

When asked what opportunities does climate change present to these businesses:

- 48% shared that their business sees no opportunity for climate change
- 58% selected improved local community
- 20-30% selected new job creation, new markets, new partnerships, new products, and cost reduction as opportunities.

When asked what businesses have already done to evaluate climate change risks:

- 28% said they developed an energy management plan
- 25% said they are monitoring climate change data
- 15% indicated that they have developed a climate action plan
- 10% trained staff on climate change and mitigation actions or appointed a sustainability officer
- 15% indicated that they are not currently doing anything but are considering taking action
- 12.5% shared they are not currently concerned about climate change.

A majority (78%) of respondents selected cost of implementation as the biggest barrier keeping them from taking climate change actions. Other barriers selected include lack of data on climate change impacts (23%), no interest from owner, board of directors, shareholders (5%), and difficulty determining if mitigation measures make a difference (38%). These results were consistent with question 8 in which 72% public responses selected cost as the biggest barrier.

When asked what government can do to assist businesses in reducing GHG emissions:

- 68% information about best practices
- 60% smarter regulations
- 53% of businesses identified financial assistance
- 43% access to clean, renewable electric
- 20% selected fewer regulations
- 40% improved infrastructure power
- 23% access to renewable pipeline gas.

Open Ended Comments

Participants were asked to share any additional comments on climate change to assist the county to develop a CAP through a final open-ended question. There was a total of 435 open ended responses that generally expressed:

- Appreciation to the county for developing a climate action plan
- Interest in participating in implementation activities
- Suggestions for additional actions or ideas that could be included in the plan
- Opinions on the importance of climate change
- Opinions that climate is not a priority issue that should consume government efforts or funding

The open-ended comments have been reviewed and ideas from those comments have been incorporated into the menu of potential actions presented later in the plan.

Survey Themes

The survey results provided valuable insight into the thoughts, actions and opinions of residents and businesses in Cumberland County. The survey was not a scientific sample of Cumberland County so the results can be used as indicators but should not be relied upon as a true representation of all Cumberland County residents and businesses. Some of the key themes that can be derived from the survey are highlighted in the following bullets:

- Most respondents are implementing actions to reduce energy usage.
- Many respondents would consider implementing solar electric and purchasing/driving alternative energy vehicles if cost were not an issue.
- Most respondents are recycling.

- Respondents would be interested in installing landscaping to capture rainwater and planting native trees/shrubs providing opportunities for training and education on how to effectively achieve those outcomes.
- Most respondents are concerned about the quality of the environment that they live in and want to help limit climate change.
- Cost is the single largest barrier to survey participants implementing climate change actions.
- Most businesses responding are interested in actions they can take that will improve the environment where it will also save the business money or not cost additional money.
- Businesses would like more information/education on best practices regarding how they can reduce GHG emissions.

Goals, Strategies, and Actions

The success of the CAP depends upon the active involvement of the entire community. The following sections include goals, strategies, and actions across 4 key sectors where GHG emission reductions could be achieved. Recommendations are offered in a menu style approach that lists a variety of actions that government, businesses, and residents can take. Recommendation implementation is at the sole, voluntary discretion of the local governments, businesses, and residents in the county. Cumberland County cannot require any group to implement these recommendations. Rather the county seeks to lead by example by implementing recommendations for its own operations while encouraging others to take similar action. In addition to goals, strategies, and actions policy considerations are included for each goal. These issues were raised during the stakeholder engagement process and while not specifically an action item, should be considered to help guide implementation activities.

Goal #1: Reduce transportation related greenhouse gas emissions.

The transportation sector includes GHG emissions from passenger and freight vehicles operating in the county. The county enjoys a strategic location along major northeast travel corridors such as I-81 and I-76 that carry substantial amounts of both commuter and freight traffic. With limited public transportation and dispersed land use patterns, daily travel is done predominantly by automobile. Comprising 39% of GHG emissions in the county, the transportation sector holds considerable opportunity for GHG reductions.

Strategy	Actions		
	Government	Businesses	Residents
Expand public transportation	<ul style="list-style-type: none"> Regionalize public transit to create a new 5-county transit authority Create revised transit routes to places where residents live and work. Implement transit services to serve high demand locations during peak periods and avoid running empty buses during lower ridership periods. 	<ul style="list-style-type: none"> Encourage employee usage of public transit. Participate in route planning efforts. Transition public transit buses to non-fossil fuel sources. 	<ul style="list-style-type: none"> Use public transit for daily transportation needs. Participate in route planning initiatives.
Recognize bicycling and walking as modes of transportation especially for first and last mile transportation	<ul style="list-style-type: none"> Support ongoing implementation of the HATS bicycle/pedestrian transportation network through planning and financial assistance programs. Work with PennDOT to put forward an active transportation plan with proposed priority routes for bicycling and walking. Update the County Comprehensive Plan to incorporate active transportation. 	<ul style="list-style-type: none"> Provide bicycle parking and locker room facilities to support nonmotorized commutes. Integrate sidewalks and bike paths into site design to support nonmotorized transportation. 	<ul style="list-style-type: none"> Walk/bike for daily travel. Advocate for nonmotorized transportation linkages with local government officials.
Support deployment of alternative fuel and autonomous vehicles	<ul style="list-style-type: none"> Consider purchasing alternative fuel fleet vehicles for local government and public transportation. Identify a regional EV charging station network through a working group comprised of HATS, utility providers, local governments, and private businesses Discuss EV infrastructure needs with utility providers to identify necessary upgrades to support EV charging stations. Identify a network of CNG fueling stations in concert with transit providers and other users such as school districts and waste haulers. Investigate the impacts of autonomous vehicles potential for GHG emission reductions. 	<ul style="list-style-type: none"> Purchase electric, flex fuel, hybrid, or CNG fleet vehicles. Provide EV charging stations and parking spaces. Consider onsite solar to feed EV charging stations. Explore use of autonomous vehicles, especially for trucking intensive industries. 	<ul style="list-style-type: none"> Purchase electric, flex fuel, hybrid, or CNG vehicles. Purchase vehicles with varying levels of automation as technology becomes available.
Implement flexible work policies	Offer innovative work policies to employees such as teleworking, flex scheduling, and online meeting applications to conduct work while reducing needs for daily commutes and other business travel.	Participate in flexible work arrangements to reduce daily commutes.	

Strategy	Actions		
	Government	Businesses	Residents
Use carpools and vanpools for commuter travel	Support funding for Commuter Services of Pennsylvania through participation in HATS to increase ridesharing and decrease VMT.	Host informational sessions with Commuter Services of Pennsylvania to educate employees on their ridesharing programs.	Participate in ridesharing programs for travel to work.
Integrate climate change into transportation planning processes	<ul style="list-style-type: none"> Evaluate and track climate change impacts through the HATS transportation planning process. Support transportation funding sources that replace traditional fuel taxes. Prioritize projects that reduce travel demand, decrease congestion, and improve air quality. Evaluate the benefits of constructing roads with concrete instead of asphalt. 	Suggest transportation projects that improve business operations and have the co-benefit of reducing GHG emissions.	Identify locally important transportation needs that promote bicycling/walking and reduce congestion.
Prepare infrastructure for projected increases in the volume and intensity of precipitation	<ul style="list-style-type: none"> Upgrade roads, bridges, water supplies, and stormwater management facilities to respond to projected increases in heat, rainfall, and severe weather events. 	Identify transportation problems created by natural causes.	

Transportation Policy Considerations

- **Sustainable transportation funding sources not tied to fossil fuel consumption are needed.** Gas taxes constitute the major transportation funding sources currently. Thus, new technologies that help address climate issues work in direct opposition to transportation funding needs. As drivers switch to other modes or consume less fossil fuel, less revenue is generated to invest in our transportation system. Future transportation funding solutions must look beyond fossil fuel taxes to other revenue sources such as user fees that will generate more predictable funding that is not in conflict with environmental policies.
- **Transportation investment affects mode choice.** The single occupant vehicle is the primary mode of transportation for residents in the county. If emissions are to be reduced, new technologies must be adopted, or new modes of travel enabled to provide other options to residents. Transportation planning and investment models must change to recognize public transit and nonmotorized modes as legitimate forms of transportation.
- **Land use and transportation policies are inextricably linked.** The way in which we use our land determines how, where, and by what mode we travel. Thus, land use policies must be designed with consideration of associated transportation needs and the desire to decrease vehicle miles traveled (VMT).

Goal #2: Reduce solid waste disposal greenhouse gas emissions.

Landfilling municipal solid waste generates GHG as trash decomposes. Solid waste generation can be addressed by reducing trash generation, recycling appropriate materials, and reusing, instead of disposing certain materials. Likewise, the responsible extraction of landfill gases provides a renewable source of natural gas that can help to fuel vehicles and business needs in the local area.

Strategy	Actions		
	Government	Businesses	Residents
Reduce waste generation	<ul style="list-style-type: none"> Encourage and provide technical assistance to municipalities to adopt single hauler ordinances to decrease number of trucks required to collect waste and provide reliable waste disposal for residents. Procure materials from vendors with demonstrated commitments to decrease waste generation. 	<ul style="list-style-type: none"> Evaluate operational waste generation and identify opportunities for reduction. Procure materials from vendors with demonstrated commitments to decrease waste generation. 	<ul style="list-style-type: none"> Reduce use of single use plastics. Solicit businesses with commitments to reduced waste generation.
Recycle appropriate materials	<ul style="list-style-type: none"> Encourage expansion of curbside recycling in non-mandated municipalities throughout the county. Distribute educational materials encouraging waste reduction, recycling, and reuse best practices. Continue offering countywide recycling initiatives for household hazardous waste and electronics. Encourage proper recycling of yard waste and utilization of existing municipal composting sites. Create community food waste composting programs for residents and food-related businesses such as restaurants, communal living facilities, hospitals etc. Provide composting containers at low or no cost to residents. Evaluate opportunities to utilize excess processed yard waste in stormwater management applications. Evaluate expansion of county recycling services to include paper shredding and appliances. Support policies that require product manufacturers to reduce waste and recycle materials. 	<ul style="list-style-type: none"> Provide recycling options for non-mandated communities in the county. Develop educational materials on proper waste management practices and distribute to customers Evaluate and implement less intensive landscaping practices and composting of leaf litter. Adopt recycling practices. 	<ul style="list-style-type: none"> Participate in curbside recycling or take recycling materials to the Cumberland County Landfill in accordance with trash hauler or municipal guidelines. Participate in county recycling initiatives. Learn about and implement backyard composting and utilize municipal composted yard waste. Implement less intensive landscaping practices and reduce use of fertilizers and yard chemicals. Solicit businesses with recycling commitments.
Leverage byproducts from trash decomposition at landfills	Partner with the Cumberland County Landfill to identify businesses that may be interested in using RNG.	Use the renewable natural gas resources of the Cumberland County Landfill to power landfill operations, pursue resale to power companies and for business attraction purposes.	

Waste Management Policy Considerations

- **“Wishful” recycling is prevalent in the county and hampers responsible recycling efforts.** Residents often place unrecyclable materials in curbside recycling bins. Those materials pollute the waste stream, increase the costs of recycling, and in some cases result in recyclable materials being landfilled. Educational campaigns from trash haulers and local governments are necessary to help residents understand what is recyclable.
- **Landfills need to be viewed as necessary infrastructure.** Landfills will be required well into the future to dispose of solid waste. The industry has made substantial commitments to executing its mission in an environmentally responsible manner. As such, landfills should be viewed as essential infrastructure for the future and not an unwanted land use that is discouraged to expand or excluded from many communities.

Goal #3: Reduce GHG emissions related with energy production and usage.

GHG are emitted through the generation and use of energy necessary to fuel commercial, industrial, and residential purposes. The cost-efficient availability of a variety energy sources is crucial to the health and economic prosperity of the Cumberland County community. Residential energy (22%), commercial energy (15%), and industrial energy (9%) generation and usage comprise 46% of the GHG emissions in the county. Opportunities exist to use cleaner fuels and reduce overall energy demand, thereby decreasing emissions in the county.

Strategy	Actions		
	Government	Businesses	Residents
Implement energy efficiency improvements	<ul style="list-style-type: none"> Conduct and implement building energy audits of publicly owned buildings to identify opportunities for reduced energy usage and increased energy efficiency. Integrate energy efficient lighting, HVAC, and mechanical systems in county, municipal, and school district properties. Promote energy efficiency programs offered by utility providers. 	<ul style="list-style-type: none"> Conduct and implement building energy audits of publicly owned buildings to identify opportunities for reduced energy usage and increased energy efficiency. Coordinate with utilities for recommendations on building energy audits and associated improvements. Upgrade lighting and operational processes to improve energy efficiency. Retrofit existing housing stock to provide energy efficient affordable housing. Secure funding through CAEDC's Cumberland Revolving Energy Loan Program (CRELF) to finance energy efficiency improvements. 	<ul style="list-style-type: none"> Conduct and implement building energy audits of private homes or rental/condominium facilities to identify opportunities for reduced energy usage and increased energy efficiency. Purchase energy efficient lighting and appliances. Use and monitor programmable thermostats. Use electric powered household equipment such as lawn mowers, trimmers, and chainsaws in lieu of gas-powered equipment.
Develop and use clean alternative energy sources	<ul style="list-style-type: none"> Evaluate solar energy opportunities on government owned properties or buildings. Consider geothermal heating/cooling if financially feasible. Advocate for community solar legislation in Pennsylvania. Continue operation of CAEDC's Cumberland Revolving Energy Loan Fund (CRELF) to finance alternative energy improvements. Identify and promote incentive programs for installation of clean energy at varying levels of government. 	<ul style="list-style-type: none"> Evaluate solar energy opportunities on business properties or buildings, especially those facilities with large building footprints. Create community solar installations for residents to buy into when legislation is passed. Secure funding through CAEDC's Cumberland Revolving Energy Loan Program (CRELF) to finance alternative energy improvements. 	<ul style="list-style-type: none"> Evaluate solar energy opportunities on houses and residential properties. Consider geothermal heating/cooling if financially feasible. Use electric powered small equipment (i.e., lawn equipment, chainsaws, etc.) for home needs instead of gas-powered equipment. Choose a clean energy option such as solar or wind, for your home energy provider. Participate in community solar if/when it becomes available.
Promote energy related financial incentives and policy initiatives	<ul style="list-style-type: none"> Support efforts to construct smaller, more efficient homes. Recognize energy efficient improvements as part of a home's assessed value to incentivize customer interest in energy. Communicate regularly with utility providers to discuss energy efficiency opportunities, policies, and incentives in the county. 	<ul style="list-style-type: none"> Leverage utility and public sector incentives to upgrade residential housing with energy efficiency improvements. Leverage incentives that enable construction of smaller, more affordable housing units that use less energy. 	<ul style="list-style-type: none"> Leverage utility providers' incentive programs for customers to invest in energy efficient improvements.

Energy Production and Usage Policy Considerations

- Cumberland County's future energy portfolio needs to include all sources.** A singular type of energy will not be able to meet the county's energy needs in the future. While solar, wind, and geothermal offer opportunity for clean energy, natural gas, propane, oil, nuclear and coal are all required to meet the energy needs of the county in the future. The diverse landscape of the county from rural to intensely developed areas will require differing energy solutions in various parts of the county while still working to achieve climate change goals.
- The desire to reduce energy generation and usage and GHG emissions needs to be balanced with the ability to provide affordable housing.** Full electrification of houses, solar energy, and geothermal heating/air conditioning systems all have demonstrated GHG reduction potential. However, such treatments also increase the price of a home from a construction and maintenance standpoint. Energy generation sources should be considered in the context of providing housing affordability to all potential homebuyers regardless of income.
- Emerging technologies could influence the energy portfolio of the future.** Innovations have already and will continue to expand options and lower costs for reducing GHG emissions. These include innovations in renewable energy, batteries and other energy storage technologies, electric vehicles, nuclear power generation and carbon capture and sequestration.
- Retrofitting existing residential structures holds more energy efficiency potential than improvements to new construction.** Building codes have progressed substantially and now require a "tight" home that requires ventilation to allow basic air flow and is energy efficient as built. In contrast, older homes in the county were not built to such a high standard. Retrofitting those homes with lighting, efficient HVAC systems, and new windows/doors will achieve higher GHG reductions than attempting to make newly constructed homes more efficient.

- **Homeowners Associations (HOAs) can limit residential solar energy projects.** HOAs have the power to prohibit roof and ground mounted solar arrays. While HOAs help to maintain community character, they should also be cognizant of the benefits of renewable energy. Future outreach efforts should educate HOAs on the benefits of alternative energy and the associated compatible designs that preserve community character. Legislation could also be drafted to preclude HOAs from limiting alternative energy use.
- **Community solar holds opportunity to boost clean energy production but is currently not permitted in Pennsylvania.** Community solar includes small, locally developed projects where multiple participants received credit on their energy bills for energy produced from the solar energy facility. Community solar projects are voluntary and may be initiated by third-party providers or larger, investor-owned utilities. Legislation is needed in Pennsylvania to authorize construction of community solar projects that may spur economic development while increasing usage of clean energy. As of the writing of this document, legislation has been introduced to enable community solar, but nothing has passed the General Assembly.

Goal #4: Manage land use to reduce GHG emissions and increase resilience.

The way land is used in the county affects GHG emissions as well the community’s resilience to climate change. Forests sequester atmospheric carbon. Green infrastructure captures and cleans stormwater from more intense and frequent rainfall. Agriculture best management practices can decrease emissions while providing a sustainable food supply into the future. Compact development patterns help to preserve open space while enabling alternative modes of transportation with decreased emissions. Cumberland County will continue its rapid growth into the future. Proactive thinking will enable the county to grow in a responsible and resilient manner.

Strategy	Actions		
	Government	Businesses	Residents
Developing land use policies and ordinances that address energy production, efficiency, and climate change impacts	<ul style="list-style-type: none"> • Develop and adopt land use ordinances that decrease GHG emissions or mitigate climate change impacts. Example model ordinances include green infrastructure, parking reduction, higher density housing, floodplain management regulations, street design, complete streets, EV charging infrastructure, and autonomous vehicle street design. • Provide incentives for green building and design such as LEED or comparable green certification. • Continue implementation of the Cumberland Plans grant program to support municipal efforts to update plans and ordinances. • Develop policies and update model ordinances to guide where alternative energy facilities are best suited and how to compatibly develop those facilities with existing communities. 	<p>Provide input to local elected officials on how regulations can assist in achieving sustainability goals while still being business friendly.</p>	<p>Participate in local government planning sustainability planning processes.</p>
Preserving parks, trails, greenways, and open space	<ul style="list-style-type: none"> • Update the Land Partnerships Plan to coordinate county, municipal, and nonprofit preserved land investments. • Continue implementation of the Land Partnerships Grant program that provides funding for conservation and recreation projects in cooperation with municipal governments, nonprofits, and the private sector. • Work to direct development towards areas with existing infrastructure and away from prime farmland, sensitive natural features, and resources. 	<ul style="list-style-type: none"> • Integrate open space or green infrastructure into the design of private sector buildings and campuses. • Support conservation organizations with financial donations and volunteer efforts. 	<ul style="list-style-type: none"> • Use close to home outdoor recreation and open space resources. • Support conservation organizations with financial donations and volunteer efforts.
Implementing natural native landscaping standards.	<ul style="list-style-type: none"> • Educate public about native plants, include listings from ordinances on municipal websites, and adopt native plant ordinances in local land development ordinances. • Leverage state and nonprofit funding for tree planting, native landscaping installation, and turf grass conversion. • Form Street Tree or Shade Tree Commissions to oversee planning new trees in appropriate locations. • Use native species when planting trees on government owned property. • Create forest management plans for larger tracts of government owned property. • Implement rain gardens, pervious pavement, and other environmentally friendly stormwater management practices on publicly owned properties. 	<ul style="list-style-type: none"> • Evaluate turf grass conversion opportunities on privately owned properties that have the co-benefit of financial savings. • Plant trees on corporate campuses, where applicable. • Implement rain gardens, pervious pavement, and other environmentally friendly stormwater management practices on privately owned properties. 	<ul style="list-style-type: none"> • Convert landscaping from turfgrass to native plantings. • Plant native tree species. • Volunteer in tree planting initiatives with nonprofit organizations. • Implement rain gardens, pervious pavement, and other environmentally friendly stormwater management practices on privately owned properties. • Consult with the Penn State Extension Master Watershed Stewards and Master Gardeners to discuss landscape plans and select appropriate species. • Test soils prior to application of fertilizers or other lawn chemicals. • Increased use of battery powered lawn equipment to reduce emissions.

Strategy	Actions		
	Government	Businesses	Residents
Supporting sustainable agricultural practices	<ul style="list-style-type: none"> • Provide funding for agriculture best management practices that reduce pesticide usage, protect water quality, and sequester GHG. • Preserve 30,000 acres of prime farmland by 2030 through the Cumberland County Agriculture Conservation Easement Program. • Provide incentive programs for renewable energy generation on agricultural operations. • Guide investment in research and development and proof of concept for innovative agricultural practices. 	<ul style="list-style-type: none"> • Provide voluntary donations to the Cumberland County Agriculture Conservation Easement Program. • Where appropriate use or source locally grown agricultural products. • Leverage federal, county, and state funding to construct best management practices on farms. • Participate in carbon sequestration and other incentive programs to support agricultural sustainability. • Reduce use of pesticides and synthetic fertilizers by utilizing sustainable cultural methods. • Explore renewable energy generation on agricultural operations utilizing digester technology for example. • Examine co-location and compatible agricultural practices with solar generation such as agrovoltatics. • Explore opportunities for silvopasture practices and agroforestry to encourage compatible uses of trees and agriculture where appropriate. • Pool resources and work with other farmers to implement annual practices that require customized equipment or training so that these practices can be done more cost-effectively and at larger scales. 	<ul style="list-style-type: none"> • Provide voluntary donations to the Cumberland County Agriculture Conservation Easement Program. • Support businesses that use locally sourced agricultural products. • Support businesses that use sustainably produced agricultural products. • Participate in an agricultural co-operative.

Land Use Policy Considerations

- **Solar installations on large commercial and industrial buildings and accompanying vehicle charging stations should be explored in more detail.** The warehousing and distribution industry in the county includes over 55,000,000 square feet of industrial space under roof. Other largely vacant commercial facilities have several thousand square feet of space under roof. Installation of solar panels on such facilities could provide a source of energy to fuel business needs and provide energy back to the grid. The solar arrays could also fuel electric vehicle charging stations that could help decrease other business transportation costs. In addition, solar panels on these facilities may relieve pressure for solar facilities in the county’s agricultural areas.
- **Utility scale solar needs to be balanced with agriculture preservation.** Utility scale solar projects have been proposed in the county and developers are actively seeking to find new locations. Such installations require large land masses, often in flat, exposed locations characteristic of the county’s agriculture areas. The county and its constituent municipalities need to balance solar energy development with the competing priority of farmland preservation.
- **Climate change benefits need to be clearly explained to local elected officials before action can be expected.** The county and its 33 municipal governments have limited budgets, numerous responsibilities, and emerging priorities. Climate change initiatives and projects must be justified with tangible benefits to garner local government support. Broader, long-term proposals with unclear benefits to a local community may not be seen as a priority with local government officials.

County Implementation Actions

Cumberland County will partner with other local governments to pursue the actions listed under the “government” heading in the goals, strategies, and actions tables. Many of those actions reflect ongoing initiatives of the county that have ancillary benefits for climate change. Other recommendations are new initiatives that will require the county to work in partnership with other stakeholder organizations to achieve success.

In addition to those actions that require collaborative implementation, Cumberland County can independently implement recommendations for its operations and services. Implementation of the CAP must be considered in the context of the other issues facing the county and the resources available for implementation. The following actions are under the direct control of the county and will be pursued for implementation in the next 5 years.

County Operations

- Expand county departments use of telework.
- Participate in the services offered by Commuter Services of Southcentral Pennsylvania.
- Convert turfgrass to native landscaping at county campuses with large tracts of open space.
- Continue ongoing evaluation of operational energy use and take appropriate actions that decrease energy demand and reduce overall energy costs for the county.
- Track and report GHG emission reductions, energy savings, and financial savings resulting from county initiatives.
- Secure the Environmental Protection Agency’s Energy Star Award to showcase the extensive energy efficiency work the county continues to undertake.
- Conduct a feasibility study to transition the county vehicle fleet from gas powered vehicles to electric vehicles, including installation of necessary infrastructure.

County Services

- Continue electronics and household hazardous waste programs.
- Expand county recycling program to include paper shredding.
- Expand the Yard Waste Recycling Program to include other municipalities not currently enrolled in the program.
- Partner with waste haulers and municipalities to explain proper recycling procedures to residents.
- Monitor, learn about, and apply for state and federal funding that could be used to support public and private sector actions to reduce GHG emissions and/or increase climate resilience in Cumberland County.
- Identify, analyze, and advocate for state and federal legislation, such as community solar, that would facilitate reductions in GHG emissions.
- Develop and implement a program of workshops and other educational events to share information about and promote best practices for reducing GHG emissions and increasing climate resilience.
- Recruit and engage businesses, community organizations, educational institutions, and local governments to help support and implement outreach and educational activities.
- Integrate the goals, strategies, and actions of the CAP into the next update of the Comprehensive Plan and Hazard Mitigation Plan.

Visualizing Change

The Goals, Strategies, and Actions section includes a variety of GHG reduction options. The impact of those actions in relation to the GHG reduction scenario presented in this plan can be difficult to visualize and understand. Residents and businesses may be considering action but need further context of how their individual actions can make a difference when multiplied over the Cumberland County community as a whole. Table 9 provides estimates of GHG reductions and financial savings for select implementation actions by residents to show the GHG reduction potentials for households acting alone and under scenarios in which action is scaled up to include many thousands of households. Table 10 provides estimates for actions by businesses acting alone and when scaled up to include many hundreds of businesses. Estimates of financial savings reflect reductions in annual energy costs but do not include upfront costs to implement the actions.

These tables can help residential and business stakeholders better understand their individual and collective roles and benefits in pursuing mitigation actions, recognizing that individual action is insufficient to achieve the deep emission reductions that are needed to prevent severe harm from climate change and that individual action needs to be enabled and complemented by actions by federal, state, and/or local governments.

Table 9: Residential GHG menu of reduction options.

Implementation Action	Impacts of Action by 1 Household		Scaling Up to 1000 Households		Scaling Up to 25,000 Households		Assumptions ²⁵
	Annual Emission Reduction (metric tons CO ₂)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO ₂)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO ₂)	\$ Saved Per Year	
Manage computer energy use	0.05	\$8	50	\$8,000	1,250	\$200,000	Enable sleep mode for desktop computer and monitor; assumes you already turn off computer and monitor at night.
Plant 1 tree	0.07	--	70	--	1,750	--	1 tree absorbs roughly 70 kg of CO ₂ from the atmosphere each year for the life of the tree.
Wash clothes in cold water	0.09	\$15	90	\$15,000	2,250	\$375,000	Wash clothes in cold water; 4 loads of laundry per week
Turn off lights	0.10	\$20	100	\$20,000	2,500	\$500,000	Turn-off 4 60-watt lights so that they are on 3 hours less each day.
Replace refrigerator with Energy Star model	0.15	\$24	150	\$24,000	3,750	\$600,000	Replace old fridge that uses 810 kWh/yr. with new Energy Star fridge that uses 488 kWh/yr.

²⁵ Assumptions taken from Cool Climate Network calculator, <https://coolclimate.org/calculator>, USEPA household carbon footprint calculator, <https://www3.epa.gov/carbon-footprint-calculator/>, Terrapass Carbon Footprint Calculator, <https://www.terrapass.com/carbon-footprint-calculator> and USDOE, Weatherization Assistance Program, National Evaluations: Summary of Results, 2015, https://www.energy.gov/sites/prod/files/2015/08/f25/WAP_NationalEvaluation_WxWorks_v14_blue_8%205%2015.pdf

Implementation Action	Impacts of Action by 1 Household		Scaling Up to 1000 Households		Scaling Up to 25,000 Households		Assumptions ²⁵
	Annual Emission Reduction (metric tons CO ₂)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO ₂)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO ₂)	\$ Saved Per Year	
Dry clothes on clothesline	0.18	\$29	175	\$29,000	4,375	\$725,000	Dry half your laundry on clothesline or drying rack
Install low flow showerheads	0.20	\$65	200	\$65,000	5,000	\$1,625,000	Conventional showerhead w/ 3 gal/min flow replaced with low-flow 2 gal/min showerhead; 3 showers per day, 8 mins each
Reduce air travel, 1 flight per year	0.29	\$250	287	\$250,000	7,175	\$6,250,000	Skip one roundtrip flight each year, 600 miles each way; approximate distance from Harrisburg to Chicago
Increase thermostat setting in summer	0.30	\$41	300	\$41,000	7,500	\$1,025,000	Set thermostat 8 deg F higher during day and 4 deg F higher at night in summer.
Perform regular vehicle maintenance	0.40	\$118	400	\$118,000	10,000	\$2,950,000	Keep tires properly inflated; change air filters regularly; drive 13,930 miles/yr.; 22 mpg vehicle
Reduce waste sent to landfill	0.40	--	400	\$0	10,000	--	Reduce waste sent to landfill 5% by producing less waste, composting, and recycling.
Replace old furnace or boiler with Energy Star unit	0.48	\$78	480	\$78,000	12,000	\$1,950,000	Replace 20-year-old standard 80 AFUE boiler or 78 AFUE furnace with current ENERGY STAR boiler at 87 AFUE or Furnace at 85 AFUE
Drive economically	0.50	\$136	500	\$136,000	12,500	\$3,400,000	Reduce top highway cruising speed from 70 mph to 65 mph and reduce rapid acceleration and braking to improve fuel economy from 22 mpg to 24 mpg.
Reduce car travel 25 miles per week (~10%)	0.53	\$177	530	\$177,000	13,250	\$4,425,000	Reduce VMT 25 miles per week; 22 mpg vehicle
Telecommute to work 1 day per week	0.70	\$436	700	\$436,000	17,500	\$10,900,000	Telecommute 4 days per month; 30 miles roundtrip; 22 mpg vehicle
Reduce thermostat setting in winter	1.00	\$237	1,000	\$237,000	25,000	\$5,925,000	Set thermostat 8 deg F lower during day and 4 deg F lower at night in winter; home is heated with fuel oil.

Implementation Action	Impacts of Action by 1 Household		Scaling Up to 1000 Households		Scaling Up to 25,000 Households		Assumptions ²⁵
	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	
Weatherize home	1.06	\$81	1,060	\$81,000	26,500	\$2,025,000	Seal air leaks, add insulation, perform maintenance on heating and cooling systems, other measures to reduce electricity use 7% and natural gas use 18%. Greater savings can be attained for homes that use fuel oil for heating.
Carpool to work 3 days per week	1.20	\$436	1,200	\$436,000	30,000	\$10,900,000	Carpool with 2 other people 3 days per week; 30 miles roundtrip; 22 mpg vehicle
Replace lights with LED	1.30	\$183	1,300	\$183,000	32,500	\$4,575,000	Replace 33 75-watt incandescent bulbs with 7.5-watt LED bulbs, which are operated 3 hours per day.
Replace windows	1.86	\$150	1,860	\$150,000	46,500	\$3,750,000	Replace single pane windows with low-e Energy STAR windows in 2000 sq ft house with 300 sq ft of windows
More fuel-efficient car	2.66	\$905	2,660	\$905,000	66,500	\$22,625,000	Replace vehicle that gets 22 mpg with 42 mpg vehicle; drive 13,930 miles/yr.
Electric vehicle	4.54	\$1,900	4,540	\$1,900,000	113,500	\$47,500,000	Replace vehicle that gets 22 mpg with electric vehicle that gets equivalent of 115 mpg; drive 13,930 miles/yr.
Purchase green electricity	4.87	--	4,870	--	121,750	--	Elect to purchase 100% renewable electricity through PA Power Switch; can either increase or decrease electricity costs depending on offers available at time of switch.
Install solar pv panels	4.87	\$799	4,870	\$799,000	121,750	\$19,975,000	Install solar pv panels to generate 10,650 kWh of clean electricity per year.

Table 10: Business menu of GHG reduction options.

Implementation Action	Impacts of Action by 1 Business		Scaling Up to 100 Businesses		Scaling Up to 1,000 Businesses		Assumptions ²⁶
	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	
Cool roof	0.2	\$99	20	\$9,900	200	\$99,000	Replace 3300 sq ft roof with high reflectance 'cool roof'
Reduce waste sent to landfill	1.4	\$55	140	\$5,500	1,400	\$55,000	Reduce waste sent to landfill 10% by producing less waste, composting, and recycling.
Perform vehicle maintenance	1.6	\$430	160	\$43,000	1,600	\$430,000	Keep tires inflated and change air filters regularly for 10 fleet vehicles that are driven 5000 miles each per year.
Plant trees	1.8	\$0	175	\$0	1,750	\$0	1 tree absorbs roughly 70 kg of CO2 from the atmosphere each year for the life of the tree.
Encourage employees to rideshare	3.0	\$0	300	\$0	3,000	\$0	9 employees rideshare 3 days per week with 3 people per vehicle to commute 10 miles each way
Manage computer energy use	4.4	\$563	440	\$56,300	4,400	\$563,000	10 desktop computers are put into sleep mode at night and over weekends and monitors are turned off at night and over weekends
Reduce air travel	4.5	\$1,200	450	\$120,000	4,500	\$1,200,000	Reduce employee air travel 10,000 miles per year by teleconferencing.
Encourage employees to commute using public transportation	5.2	\$0	520	\$0	5,200	\$0	10 employees switch from commuting by car alone to riding public transit
Improve fuel economy of vehicle fleet	6.2	\$2,130	620	\$213,000	6,200	\$2,130,000	Replace 10 vehicles that get 22 mpg with vehicles that get 32 mpg
LED lighting retrofit	11.6	\$739	1,160	\$73,900	11,600	\$739,000	Replace 100 incandescent 75-watt lights with 100 LED 7.5-watt lights that are operated 8 hours per day

²⁶ * CoolClimate Network, business calculator, <https://coolclimate.org/business-calculator>

Implementation Action	Impacts of Action by 1 Business		Scaling Up to 100 Businesses		Scaling Up to 1,000 Businesses		Assumptions ²⁶
	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	Annual Emission Reduction (metric tons CO2)	\$ Saved Per Year	
Replace fleet vehicles with electric vehicles	16.3	\$6,800	1,630	\$680,000	16,300	\$6,800,000	Replace 3 vehicles that get 22 mpg with electric vehicles that get the equivalent of 115 mpg.
Retrocommission existing buildings	18.5	\$237	1,850	\$23,700	18,500	\$237,000	Retro commission all building spaces to save 16% of electricity and 16% of natural gas use
Encourage employees to telecommute	19.5	\$0	1,950	\$0	19,500	\$0	10 employees telecommute 1 day per week; avg commute of 20 miles each way
Install solar pv	41.0	\$6,750	4,100	\$675,000	41,000	\$6,750,000	Install solar panels to generate 50% of 180,000 kWh of annual electricity use.
Replace outdoor parking lights with LED	44.6	\$859	4,460	\$85,900	44,600	\$859,000	Replace 10 conventional outdoor parking lights with LED lights with motion sensors
Purchase green electricity	82.0	--	8,200	--	82,000	--	Elect to purchase 100% renewable electricity through PA Power Switch; can either increase or decrease electricity costs depending on offers available at time of switch.

Cross-Cutting Initiatives

Through the planning process, initiatives were identified that do not fit into any sector, but which are crucial to the successful implementation of the plan and supportive of reductions in GHG emissions in each of the sectors. These cross-cutting initiatives hold opportunities to advance the goals and objectives of the plan and improve its implementation when pursued by local governments, businesses, and residents.

Public Education and Outreach

The public survey responses revealed a wide variety of opinions on climate change. While some respondents felt that climate change is the most important issue facing the county, others doubted its existence. Likewise, many residents were eager to act while others needed more information to convince them that such was worthwhile. The following public education and outreach suggestions can improve residents' understanding of climate change and their ability to become actively engaged in taking action.

- Form Environmental Advisory Councils (EACs). Created by municipal governing bodies, EACs enable residents to provide advice to local elected officials on a wide variety of environmental issues, including climate change.
- Communicate with residents using a variety of methods. Diversified communication methods such as surveys, virtual meetings, and articles in existing informational newsletters/emails expand resident participation opportunities while reducing the need to travel and attend longer in person meetings.
- Develop ongoing educational materials focused on plan implementation. Simple educational materials should be developed to encourage interested residents and businesses to take actions that can implement the plan.
- Increase awareness of incentive programs or industry scale initiatives to promote GHG reductions or energy efficiency measures. Information sharing on initiatives and the availability of incentives can assist with planning to act at all levels of engagement.

Legislative Advocacy

The stakeholder engagement process yielded differing input on the need for climate change legislative action. Some respondents indicated that legislation is needed to achieve meaningful GHG reductions. Others desired little regulation and noted that government intervention could increase costs and decrease efficiency. Both perspectives point to the need for legislative activism on climate change issues. Residents also cited a desire to become more engaged in the decision-making process by having their voices heard at all levels of government and by the businesses they solicit. Opportunities for legislative activism include the following:

- Communicate with legislators about the economic impacts of climate change mitigation measures. Climate change, while important, is one of many competing priorities. Legislators need to have balanced input on proposed legislation to make sure environmental, economic, and quality of life goals are achieved.
- Update legislators on climate change issues during regularly scheduled briefings. Residents, the county, and municipal governments often host briefings or interact with the federal and state legislative delegations. Such meetings are excellent opportunities to discuss climate change challenges and opportunities.
- Coordinate with chambers of commerce and CAEDC to establish legislative priorities. Business associations commonly develop legislative platforms that are shared with legislators and could include support or opposition for climate change legislation.

Best Practice Sharing

The stakeholder engagement process noted a willingness of various stakeholders to take actions that address climate change. However, respondents often noted that they did not know what to do or were unsure if the actions they are considering would have meaningful impact. Stakeholders may be more apt to implement mitigation actions if they understand the action they are taking and know the action has been proven successful in other areas. Noted areas of opportunity for best practice sharing include:

- Share the county's successful energy efficiency actions. Cumberland County has received numerous awards for its energy efficiency initiatives. County operational energy efficiency measures for buildings can be replicated by municipalities with the county sharing its successful track record.
- Residents interested in sustainable landscaping but unsure of what to do could leverage the Penn State Master Gardeners and Master Watershed Stewards who can provide technical assistance on the species and applications that will work throughout the various landscapes in the county.
- The Chambers of Commerce and CAEDC can showcase the sustainability practices of their respective membership to encourage others to implement best practices that are good for business and the environment.
- Continue to research and develop best practices guidance for businesses to increase sustainability/climate resiliency initiatives and demonstrate consumer demand for sustainability practices. Ongoing technology improvements will introduce new ways to reduce GHG emissions and mitigate the impacts of climate change.

Equity and Environmental Justice

Equity is when all individuals have access to the opportunities necessary to satisfy their essential needs, advance their well-being and achieve their full potential. Environmental justice addresses fair treatment and meaningful involvement in the development of laws, policies, and regulations and the identification of issues impacting vulnerable communities.

The goals, objectives, and actions of this plan are intended to apply broadly across the Cumberland County community as a whole. The menu style approach of this plan includes recommendations of all scales that allow participation or non-participation of businesses and residents without consideration of other qualifying factors such as race or income. Cumberland County continues to support community driven planning and decision-making processes that value all residents of the county and avoid disproportionately placing the burdens of compliance on certain populations.

Co-Benefits of Climate Action

Successful climate change planning and implementation can help the Cumberland County community at large be more resilient, healthy, and prosperous. GHG reduction and climate resilience are not the only beneficial outcomes of climate action plans. The following outcomes are referred to as "co-benefits," and they illustrate how taking action on climate change results in a more prosperous community.

- **Cost Savings** – Increased energy efficiency results in real savings for family and government budgets. The "Visualizing Change" section of this report outlines a variety of ways that residents and businesses can save hundreds, if not thousands, of dollars every year by implementing simple GHG and climate change mitigation strategies. As resident and business implementation activities scale up, the financial benefits follow likewise. Stakeholders must also recognize that additional costs may be absorbed to realize the longer-term savings from implementation of the recommendations in this plan. Up front capital costs for alternative energy and energy efficiency projects need to be measured along with long term financial and environmental savings.
- **Job Creation** – Increased focus on climate change has led to jobs in sustainable tourism, green construction, and urban agriculture that were not available in the past. Given its extensive

outdoor recreation amenities and agricultural setting, Cumberland County is well-positioned to take advantage of these new opportunities as well as others that can spur business and job growth during the design, manufacture, and installation of energy efficient technologies.

- **Improved Public Health** – Climate change mitigation activities, particularly those related to transportation, the largest GHG contributing sector in the county, help to clean the air by reducing vehicle emissions and therefore improve public health. As air quality improves residents with respiratory issues can breathe easier and enjoy more time outdoors. As extreme heat events become less frequent, the elderly and children are less susceptible to heat related illnesses.
- **Energy Security** – A diverse, homegrown portfolio of energy options enables the county to sustainably source its future energy needs. Abundant local energy choices reduce challenges caused by international geopolitical tensions associated with foreign energy sources that may threaten supply or drive-up demand. Similarly, increased energy options supported by adequate infrastructure capacity insures that even during peak usage periods, residents have access to the energy they need to power homes and businesses.

Plan Monitoring and Update

This CAP will become a recognized component of the Cumberland County Comprehensive Plan as part of the next update process. Cumberland County will track implementation of the CAP along with other comprehensive plan actions on an annual basis. The CCPD presents monthly reports on comprehensive plan implementation to the CCPC. Those reports will include updates on climate change related activities implemented by the county. Monitoring progress on actions outside of county or county-related actions will be the responsibility of the implementing party. The county will include such data as part of its plan monitoring efforts as the data from those stakeholder groups is accessible and available.

The CAP will be updated during regular update cycles of the comprehensive plan once formally included by reference in that document. The GHG inventory is anticipated to be updated on a 5-10 year basis or sooner if local conditions warrant. Similar processes will be used to allow for emission comparisons between this plan and future years.

Appendix A: Stakeholder Engagement Meeting Summaries

Cumberland County Climate Action Plan

Stakeholder Interview Minutes: Adams Electric

Attendees:

- Kirk Stoner, Cumberland County Director of Planning
- Steve Rasmussen, Adams Electric
- Meaghan Blair, Shippensburg University

Major GHG Reduction Efforts:

- Phasing out diesel trucks and sedans with EV's, but no concrete projections
 - Fleet size = about 100 vehicles between bucket trucks, digger trucks, sedans, SUVs
 - Installed solar panels at HQ to offset electric consumption

Energy Portfolio Changes:

- 13 co-ops like Adams in PA and they collectively own Alleghany Electric Cooperative, who is the company that owns transmission and secures generation for all 13 cooperatives. Adams is at their mercy for getting lowest cost power despite renewables, so it is unlikely that their energy portfolio will change much

Successful Customer Practices:

- U-Shift, U-\$ave program where they installed about 8,000 devices on customers' homes so they can switch power on and off to reduce electricity consumption during peak hours
 - Customers were very receptive to this due to rebates and incentives
 - Steve does not believe participation would be as high if there was not financial incentive
- Rebates for EVs
- Adams tends to be more progressive due to the nature of their customers
 - Adams customers push for more clean energy, while other co-op customers push for cheaper energy
- A few commercial customers frequently look into switching to solar

Opportunities for Doing More:

- Hoping that battery technology advances to allow customers to go off the grid temporarily and supply electricity to their homes via battery to reduce consumption during peaks hours

Barriers in Initiatives:

- Cost of EV and solar panels are very high and take a long time to see the financial benefits
- Personal morals and education affect willingness to switch to renewables and EV

How Can the Levels of Government Help?

- Keep an open dialogue between municipalities/local gov with utilities
- Help educate constituents about the operational obligations (like tree clearing) needed for efficient electric supply

Cumberland County Climate Action Plan

Stakeholder Interview Minutes: First Energy

Attendees:

- Michele Somerday, First Energy
- Kristin Susick, First Energy
- Meaghan Blair, Shippensburg University
- Kirk Stoner, Cumberland County Director of Planning

Major GHG Reduction Efforts:

- First Energy has both transmission and distribution services in PA, do not own or operate generation in PA.
- Reach carbon neutrality by 2050 with an interim goal of 30% carbon reduction by 2030
 - Their baseline in 2019 instead of 2005 like most companies due to their change in business strategy
 - Also made reduction goals to include more than just generation efforts, also trying to make reduction efforts in transmission and distribution
 - Moving away from coal generation plant, but have no definite plans for what replacement will be
- Vehicle Fleet Conversion to electric or hybrid and encouragement of customers to switch to EV
 - Will require enhancement of distribution system
 - Do not want to make customers pay for EV chargers, batteries, solar, etc. because customers could then potentially provide a benefit to grid system by contributing electric
- Published “Climate Story” in 2020 as a compilation of climate strategy and GHG reduction goals

Successful Customer Practices:

- Have very well-developed energy efficiency programs
- Help customers find opportunities to utilize EVs
- Installing smart meters so customers can understand their own carbon footprint

Barriers in Initiatives:

- If they were to invest in renewables in PA, they would need legislative assistance for rate recovery
 - Current construct does not allow them to do so
- Investments in infrastructure to modernize the grid and enable acceleration of EV are necessary but need legislative support

How Can the Levels of Government Help?

- Keep an open line of communication and see where overlaps in initiatives are to try to help each other out

Cumberland County Climate Action Plan

Stakeholder Interview Minutes: PPL Electric

Attendees:

- Barbara Sexton, PPL
- James Rouland, PPL
- Kirk Stoner, Cumberland County
- Elizabeth Grant, Cumberland County
- Dr. Claire Jantz, Shippensburg University
- Meaghan Blair, , Shippensburg University

Major GHG Reduction Efforts:

Their reduction targets and efforts incorporate all PPL facilities and subsidiaries, including their Kentucky sister company. A large portion of their reduction target comes from fleet conversion in KY.

In PA there are 2 main efforts, a SF6 insulator in their transmission system, looking to replace them so they replace their transmission and distribution system with something NOT a greenhouse gas. Also plan on replacing sedans with EVs and bucket trucks with hybrids that do not rely on diesel. Per the cost-benefit analysis, fleet is being gradually converted to EV when a vehicle would normally need replaced.

How the Alt Energy Portfolio Impacts PPL:

- State AEP's increase each year, but PPL has met these goals each year.
- Pending legislation may impact PPL's attainment of energy credits
- Many 3d party alt energy providers that offer deals beyond subsidy grants and what utilities can offer

Major GHG Reduction Initiatives:

Distributed Energy Resource Management System (DERMS):

- Should only help customers to have access to more reliable distributed energy resources while preserving network reliability and power quality
- Makes sure renewables can be integrated into the grid reliably
- Grids were meant to be "one-way traffic" for consumption, not for customers to feed power to it. PPL must retrofit dual flow into the grid so that an energy sources like solar can flip from generation to consumption smoothly

First Utility in the state to implement state meters to forecast and manage their grid better

Successful Customer Practices:

- Act 129 Energy Efficiency Programs to educate about energy usage and high efficiency appliances
 - Helped low income customers, all the way up to industry customers to reduce their customer rates and their own rates
 - Consistent participation in these programs
 - First started with “low hanging fruit” like LED lightbulbs, but now need to work towards the more complicated efforts
- Community Roots Program has been successful and PPL plans to continue this community outreach effort
- Energy Efficiency Education has been effective, and customers have seen the benefits

Opportunities for Doing More:

- Each subsidiary is challenged every year to do more
- Implementing solar panels at certain locations to offset energy use
- PPL is constantly monitoring legislation for EV bills, solar expansion, and monitoring what customers want to do

Barriers in Initiatives:

- Possible legislation, paying for new facilities (PPL needs the 3rd parties to pay for the facilities since they are prohibited from doing so), governor’s initiative to reach 0 emission vehicle standard
- If EV takes off, they will need grid updates and reinforcements for charging stations
- Need to educate customers on energy use and effects, and where to find resources for support

How Can the Levels of Government Help?

- Creating a work group from members in utilities to assist municipalities in climate change efforts
- When developing the Plan, make sure to include support and outreach to businesses, not just residents

Cumberland County Climate Action Plan

Stakeholder Interview Minutes: UGI

Attendees:

- Tony Rymar, UGI Sustainability Program Manager
- Elizabeth Grant, Cumberland County
- Dr. Claire Jantz, Shippensburg University
- Meaghan Blair, Shippensburg University

GHG Reduction Goals

- Reduce CO2 emissions to 8.5 million metric tons by 2030 from 2019 levels of 17 million metric tons
- Methane reduction from .99% in 1999 to .05% in 2040

Current GHG Reduction Initiatives

- Infrastructure Upgrade
 - Pipeline replacement program to reduce methane emissions
 - Replace cast iron with plastic
- Save Smart Energy Efficiency Program
 - Higher efficiency appliance rebates
- Customer and UGI CNG fleet conversions
 - In 2020, they had 114 CNG vehicles and are adding 47 in 2021
 - Slight barriers for sourcing CNG
- Solar at facilities, buy renewables for facilities
- Renewable Natural Gas Program
 - Anaerobic digestors from landfills, livestock operations, wastewater treatment plants, etc.,
 - Thermal Gasification
 - Established gas quality standards and processes
 - Conducted study and infrastructure assessment
- UGI has a lot of internal support to develop and implement these initiatives

Future GHG Reduction Initiatives

- Renewable green hydrogen
- Vehicle and fleet technology
- Supply chain evaluation and sourcing ratings
- Create and support coalitions
 - ONE Future, RNG Coalition, Natural Gas Supply Collaborative

Successful Customer Practices:

The most impactful is the Energy Efficiency Programs which offer rebates and incentives to customers who install high efficiency appliances. UGI has focused on growing these programs, but it will take time to communicate these programs to their customers.

Barriers in Initiatives:

No major barriers, but UGI has made major strides and there is a lot of work yet to do.

How Can the Levels of Government Help?

Education and outreach for their Energy Efficiency Programs.

Cumberland County Climate Action Plan Agricultural Focus Group Summary

(Two meetings were held with subgroups including the participants below)

- Donna Scherer, Penn State Agricultural Extension
- Matt Steiman, Dickinson College Farm
- Amy Brickner, Farmer
- Kent Strock, Farmer
- Ryan Brown, Farmer
- John Schwartzner, DCNR
- Ann Bashore, Farmer
- Neil Leary, Dickinson College
- Raph Lee, Dickinson College
- Elizabeth Grant, Cumberland County

What concerns do you have regarding climate change?

- Concerned with how the agriculture sector is portrayed and unpredictable factors when it comes to climate change.
- Concerned that some methods and practices that were reliable in the past are no longer reliable anymore due to the effects of climate change.
- Concerned about how accurate the current model and data represents the agriculture sector. For instance, most farmers are already practicing no till/minimum till: are these being accounted for? He also noted that it will be difficult to persuade the community to adopt costly practices if profits are not guaranteed.
- Concerned of the impacts of weather changes on rainfall patterns, soil erosion, crop damage, pests, and diseases which all increase production related risks. Carbon sequestration is an area of potential. Dickinson is already doing cover cropping and is in need of a public partner to monitor carbon in the soil; currently do soil sampling with PSU. Need more data. Incentive based carbon capture in soil is an opportunity. Some believe digesters are greatly beneficial but unaffordable at small scales – perhaps multi-farm community digesters are suggested. He believes incentives should be offered to encourage the community to practice more carbon capture in soil and digesters.
- Concerned with the effect the policies are having on farmers. Believes the ag community is an easy target because they lack the funding to fight additional regulations compared to other sectors. Policy enforcers must provide concrete data on how required changes such as stormwater and pollution measures made a difference towards mitigating damages. Land is being converted due to development pressure, and the community should value its farmers.

What climate change related impacts, if any, have you seen on the agriculture industry or your own operation?

- Farmers are accustomed to having to adapt to changing conditions on a scale from year to year.
- Noticing longer dry spells, variation in yields and crop losses
- More emphasis on moisture retention than nutrient uptake in seed selection, the increase in tillage radish and practice of carbon credits for purchase of cover crops and specific seed types.
- From a land use perspective, many farmers have been approached by solar development companies about leasing on their land. Typically, companies are seeking a minimum of 15-20 acres on a 15 year lease for solar panels.

What agricultural best management practices would you recommend to help reduce greenhouse gas emissions and/or the impacts of climate change?

No till farming

- Cover crops and no till farming, which help reduce GHG emissions and are good practices for soil conservation. She mentions a farm in Chambersburg that has an efficient digester where he uses his own gas to produce electricity to dry grain – Some wish they had access to that technology. Some will be adding pasture pigs to improve carbon sequestration.
- No till farming for vegetables and manages grazing.
- Not new; most are already doing this or some form of it

Renewable energy generation such as solar, wind, or digesters for methane capture

- Power generation on preserved land is only able to generate power for the operation.. Wishes could produce solar on preserved land. Ag is dependent on soil health. There should be more flexibility for solar generation on farms – maybe 20 acres or 10 percent of land used for power generation
- Grazing sheep on solar farm – concrete, buried wire – could become farmland again and is a compatible use. Giant headquarters – has great forage/grazing capability near solar fields.

Reduced use of pesticides

- Some opportunities within crop seeds/sources to control insects. Herbicide typically used for burn down of cover crops.

More efficient and reduced use of synthetic fertilizers

- Look at non-farm sources as well – pollution from suburbs, residential, airports, cities snow removal and deicing.

New, drought tolerant plant species

- Current focus – drought tolerance, insect pressures, corn to soy – decreases pressure from insects vs. corn to corn

Water quality improvements

- Already doing – Bay requirements, stormwater issues and fees

Silvopasture –

- Advocate of silvopasture, which is underutilized in Cumberland County. With silvopasture, farmers can get two crops' worth with the same pasture. However, silvopasture is a hard sell for the farmers because of the counterintuitive method of planting trees in pasture.
- Some marginal and riparian areas can be used for forest buffer. Hesitancy to let go of productive ground – plant some trees in pasture – grazing practices. Good shade and practices. As development is encroaching, row crop production is used for pasture land – unwilling to give up this land.
- Does rotational grazing and leads demonstration advisory group. Implemented silvopasture with her 80 goats.

Are there opportunities/incentives for doing more to reduce greenhouse gas emissions? Do people need to see how practices are being utilized?

- Farm visits and demonstration sites would help see how practices can work.
- Reporting practices more accurately can help with understanding at what scales practices are being utilized.
- Subsidies and incentives can work to encourage adoption of practices. Short-sightedness can be a challenge as farmers are focused on what needs to be done to just to get through the season.
- More case studies of successful farms would be helpful. Farmers do not need to take on more financial risk for unproven technologies or practices that will be excessively time consuming.

What adaptation measures do you believe the agriculture industry may need to implement in the future to address projected warmer temperatures and increases in rainfall?

- Better management practices should be implemented, especially in using rotational grazing because results are achievable and not costly.
- Remove monocultures and increase diversity. Increased rainfall will increase fungal infection rate in many species, making them less resilient to the effects of climate change and more susceptible to significant losses.
- Wishes there were more “custom operators” with specialized machine services that can reduce time/cost for smaller famers. These could help support multiple farming operations through co-operatives.

How can the various levels of government assist best practices, reduce emissions and adapt/mitigate climate change issues?

- Incentives for R&D are needed to raise awareness and implement practices where data can help reduce stigmas and persuade farmers.
- Concerned that small farms and larger farms are not getting equal treatment with regulatory structures. She believes more data should be available to explain why or how practices should be changed.

- There should be fewer regulations on the agriculture sector; rather, the government should correctly identify the source of the main contributors of emissions, like transportation and residential energy. Incentives are good but make you wonder why the practice isn't viable in the first place.
- Farmers will not change ways just because someone claims it is beneficial because changes bring risk.
- Renewable energies must be more affordable to compete with fossil fuels, which are already subsidized.

How high of a priority is it for the county to have a climate action plan? Other observations?

- Even the best-intentioned recommendations can be perceived negatively as "control".
- How much power can municipalities and local governments have on policy changes to make an impact?
- The agriculture sector should be treated fairly and proportionately to its impacts
- Farms vary in size and it is not right to make everyone abide to the same guidelines. Incentive based approaches may be helpful – not a penalty based approach.
- Development and transportation should be concentrated on less productive soil while allowing farmers to resume practice on prime soil. Land preservation should be increased to save productive land.

Cumberland County Climate Action Plan

Solid Waste Meeting Summary

Participants

- Mike McIntyre – CC Landfill Manager
 - Scott Perin – Area Director of Disposal Operations – Greater Mid-Atlantic Area
 - Judy Archibald – Government Affairs, Waste Management
 - Kirk Stoner, Cumberland County
 - Justin Miller, Cumberland County
-
- Discuss your environmental and sustainability goals.
 - Waste Management updated their environmental goals in 2018 to align with the Paris Agreement to limit planetary warming to well below two degrees Celsius. They aim to reduce, avoid and offset four times the emissions they generate in our operations by 2038.
 - Longstanding commitment to sustainability; annual forums.
 - Leadership commitment into sustainability role. Evaluate processes and opportunities.
 - On-site convert land use gas to renewable energy source. May add another engine to current system. Generating enough electric to power 5000 homes.
 - Focus on reduction of surface emissions to link into gas conversion system. \$2M project to expand well field to feed gas system.
 - Conversion to and use of renewable natural gas can be challenging. Remote area and not a lot of users
 - Converting fleet over to CNG but need infrastructure. May not make sense to RNG today at Cumberland County given location and demand.
 - Working with manufacturers to limit waste generation on front end
 - Education piece on recycling side. Actively involved in making recycling right and not contaminated.
 - Contamination rates need to be reduced and understanding of what should and shouldn't be recycled.
 - On site recycling for residents to drop off recycling is currently offered. May expand that area in the future.
 - Environmental and safety are top 2 priorities of landfill operations.
 - How do you plan on achieving your environmental goals with a focus on implementation at the CC Landfill
 - Purchasing 100% renewable energy at facilities they control
 - Measuring emissions at each site
 - Dedicated research team to track, research and report on sustainability issues.
 - What best practices has your business implemented that address greenhouse gas emissions?
 - Gas to energy production for Cumberland County Landfill

- Energy efficiency improvements to facilities
 - Transition collection fleet from diesel to natural gas
- What climate change regulations are most impactful on your business?
 - Landfill gas remains as a tier 1 Renewable Energy Credit (REC).
 - Conversion process supported by Renewable Energy Credits (RECs) in past. No longer big demand for RECs.
 - RNG facility for Cumberland would cost \$15M-20M.
- Are there any opportunities you see with climate change?
 - Some recognition that landfills will not go away. Right management of facilities need to be discussed.
 - Residual product line of some renewable energy sources will need to be landfilled at some point.
 - Currently receive solar panels at some landfills. Note a lot of volume. Challenges of solar are efficiency rates and solar exposure
 - Landfills are a critical component of waste management.
 - Manufacturing processes to consider recycling and waste generation earlier in process.
 - Have solar farm in Bucks County and NJ
- What barriers do you see that restrict your business or other businesses' ability to respond to climate change by reducing greenhouse gas emissions?
 - See value in sustainability. Appointment of senior staff to focus on sustainability issues.
 - Reasonable coordination between environmental initiatives and industry
 - Need reasonable middle ground that allows for necessary landfill infrastructure while doing so in an environmentally responsible way.
 - Goals for climate change are often unachievable. SMART objectives should be used when making goals.
 - So many different initiatives, hard to prioritize end goals and what is achievable.
- How can the various levels of government assist businesses to reduce GHG emissions and address climate change issues?
 - Legislators are interested in forward thinking initiatives. Need to coordinate with regulatory side of new initiatives.
 - Some missed opportunities for faster projects. Overall project development process now looks at 2-3 years for permitting a project.
 - Need faster solutions to feed the market if we are going to take advantage of investments
- How high of a priority is it for the county to have a climate action plan?
 - Benefits to everyone for doing the plan.
 - Important and want to be involved in the discussion.

Cumberland County Climate Action Plan Residential Energy Focus Group Summary

Participants

- Kristi Walsh, Homebuilders Association of Metropolitan Harrisburg
- Mary Galski, PA Manufactured Homes Association
- Jill Pento, Pennsylvania Builders Association
- Sarah Miller, Pennsylvania Builders Association
- Mark McNaughton, McNaughton Homes and Homebuilders Association of Metropolitan Harrisburg
- Lily Tarwater, Dickinson College
- Neil Leary, Dickinson College
- Gary Lenker, Tri-County Housing Development Corporation
- Steve Fleming, Bilthold
- Elizabeth Grant, Cumberland County
- Kirk Stoner, Cumberland County
- Toby Fauver, Rockland Consulting

Q: What have your customers' attitudes been about energy efficiency when building or purchasing a home?

Low to middle income families rarely they talk about energy efficiency, the conversation is started from sales perspective, not the consumer

There was a condo project built using geothermal energy. It was hard to sell them because consumers did not want to pay for upgrades. After 8 builds with geothermal, they had to switch back to natural gas

Geothermal costs more and gas costs are low. Is there a market perspective that supports geothermal?

With operating costs there are benefits, but the consumer is usually not willing to pay for upfront cost

\$18-2500 higher upfront cost for geothermal— a lot of benefits, but inaccessible for those looking for affordable housing. 56% of population can't afford a house higher than \$260,000

Numbers have to work for private marketplace then consumers will choose it, won't choose unless they have disposable income

We are already building highly efficient homes due to the state codes. Want efficient homes? Build new ones

Q: What best practices can be used in home building industry to improve energy efficiency?

All of our homes are built with best use of resources, minimal waste, thermal efficiency, and everything is used to its maximum efficiency. With energy codes increasing, energy efficiency will continue to improve at a cost to the consumer.

Land-lease communities use less land and their options are limited, which we have to consider when thinking about how these things interact. Alternative energy is not necessarily feasible on older homes, and wind is not feasible on individual homes.

Since we're governed by uniform construction codes with how we build, we have built highly efficient homes for many years. It comes down to affordability and diminishing returns.

Codes are creating a highly efficient product. There are great opportunities for older homes if we can provide a financial incentive for retrofits.

In addition, we should lobby municipalities to work on parking. There is no reason for every apartment to have two parking spaces. We can spend less on infrastructure and use fewer materials in building our infrastructure, and less diesel fuel.

Many changes can be made at the municipal level. Municipalities keep increasing their codes and regulations at a huge expense. It would do a lot better for the environment, save money, and help GHG emissions by doing smaller things.

Already, most of our materials are recycled and we use energy efficient water heaters. Concerned about building tighter houses and lack of insulation.

Q: If there were central changes that may make houses and developments more energy efficient/friendly to GHG improvements and dealt with low costs, do you have ideas? Such as: curbing and stormwater, parking issue, roadways

We have been missing today the affordable component. If codes could recognize that a smaller home uses less energy and that occupants use less resources, and we could reduce parking, we could pollute less and make homes cost less. Energy codes drive up cost of construction, and need to recognize the scale of the project and the greater goal. Homes of different sizes with different energy consumption shouldn't be regulated under same code.

We need to use marketing to drive the narrative, and the consumer needs to truly understand the long term value of energy efficiency. For many, the return on their investment is not in their lifetime. We need education, or consumers won't be interested

If you tell a client that we are increasing the cost by \$4000 to improve efficiency and decrease GHG emissions, few would say yes.

We need federal and state government subsidies, or people won't spend money for efficiency. Consumers need tax benefits, like for solar projects.

Q: What are some codes that as an industry you would be concerned about?

Worried that energy codes will get stringent, as this impedes the ability to build the best home for each customer. Each situation is different. We discuss building the right home for each customer and try to provide most efficient home possible. This involves using gas and propane if they want to. The result is an efficient home. We are still achieving that, but the customer is able to get what they want.

Tighter homes have unintended consequences. Air filtration is needed to be healthy home. Tight homes need mechanical ventilation; this makes a healthy home reliant on an appliance which a homeowner doesn't know how to use. We need ventilation to expel home borne viruses and bacteria.

Consumers need an understanding of how to make the home a safe place. They don't think when ventilation breaks down that it is important to fix. They need education with these changes.

Yes, education is needed. Municipalities can get involved. Most people don't know that they have to change the filter in their furnace. This is important to make the air they breathe clean and safe, as well as make the furnace work better and last longer.

Carbon eating machines and carbon recycling machines can be installed in houses, but it needs to be made cost effective. The real problem is Co₂, which can be addressed in other ways than tightening homes and making them unsafe. Learning how to recycle the product that burns off is the solution.

Q: One solution to climate change is shifting home heating to electricity. Is electricity something your customers are open to for home heating? Is there a higher cost or lower cost? Is there a possibility of moving toward electricity?

There is a huge push at the national level for full electricity. They are trying to change codes so we install gas appliances, but there has to be electricity back up for a

future switchover. Consumers don't want to be told what type of stove to cook on. In addition, whether or not the owner owns an EV, we need to install one electric vehicle charging station in each home.

My parents own large ranch outside of Carlisle. It is a fully electric home, and not affordable. Natural gas is so much less expensive than full electrification. With full electrification, consumers won't be interested.

A \$700 electricity bill is not feasible for entry level home.

If you ignore gas, you're ignoring a great utility. Gas is more efficient, heats better at colder temperatures, and provides heating on demand. Electricity is great if you can afford a geothermal system. Electric car charger is great. If it is a good option, consumers will use them regardless of regulations. If you have an electric car you're going to use more electricity. Education can drive down energy consumption.

Existing communities were built in the 50s/60s/70s. To go total electric, homes would have to be upgraded significantly. We should focus on building new homes. Most electric systems won't let you do one home at a time; it has to be an entire community. Replacing furnaces is a high cost for low-moderate income families.

Q: What barriers to you see in the industry that might challenge GHG reduction efforts?

Cost and affordability. Cost of development is through the roof. There is no such thing as affordable housing anymore unless the government gives grants.

A barrier is lack of support from local municipalities and the DEP. They stuck in what they think is the best way and ignoring innovative solutions, like with stormwater

Review time frames have gotten substantially greater, and rules are constantly changing. The constantly increasing cost just increases costs.

Builders can build whatever the consumer wants, but the consumer is priced out of the market because of extra, unnecessary codes that are constantly changing

Q: How can various levels of government help you address greenhouse gas emissions?

We have an old system, used to it; Europe is 25 years ahead of us. Emissions from residential doesn't have to do with construction.

Storm water offset trading program. Our DEP refuses to get a credit trading program, which fixes problems from 60s/70s/80s. Being able to sell stormwater credits helps efficiency and developers. This provides more flexibility to achieve stormwater results. We should start looking outside the house for efficiency. Consumers can commute in more efficient ways. Zoning regulations and planning can coordinate everything to

make people live, work, and play in same spot. This makes people commute less. We should also look at parking and stormwater development projects.

From a land development perspective, the less government involvement the better. We should shorten the window for reviews and lower cost of housing. Every municipality has separate code and review process, could be state wide to make it quicker.

Q: How high of a priority is it for the county to have a climate action plan? What else should be included? How can the burdens/benefits be spread across all residents?

CAP should be given 0 priority due to lack of affordability

New housing is the solution not the problem to cleaning up waste and GHG emissions

You need input from the Home Owners Association, able to provide that. Want open lines of participation

In the CAP, capture benefits of new housing how community space is doing good while developing land

Consider population growth in the county

Need to look at existing housing and be cautious. With affordability rising even higher, it is a tough balance

Q: Any innovative strategies for energy efficient mortgages?

Worked with PPL for costs of Westbury for geothermal systems to cover geothermal sources; no increase in cost to consumer. No one offers energy efficient mortgages. Appraisers do not give any additional value for geothermal for energy efficient construction techniques. Would support legislative changes for these. Get the value recognized in the appraisal, consumer will pay for it, otherwise it is a luxury good

Supports legislative changes

Cumberland County Climate Action Plan Residential Energy Interview

Participants

- Kara Tucker, Koppy's Propane
- Kirk Stoner, Cumberland County
- Lily Tarwater, Dickinson College

Q: What is your business?

- Family business selling propane, fourth generation
- Four locations, one in Cumberland County
- Involved with the PA Propane Gas Association and the National Propane Board
- Believes propane can be part of solution to climate change instead of the problem

Q: How can propane be part of the solution?

- Doesn't see propane as a fossil fuel because it is a low carbon, clean energy source according to Clean Air Act
- Says there is not a singular path to decarbonization, and that propane can work in conjunction with electricity, solar, wind, etc. to meet net zero goal

Q: Has your business set goals for sustainability?

- They have been working mainly with transportation
 - Moving toward having all company vehicles running on propane rather than gas or diesel
 - Have been converting fleets since 2010
 - Also work with several school districts that use propane buses

Q: How does propane differ from CNG (compressed natural gas)?

- Chemical makeup isn't that different
- However, natural gas requires infrastructure, which is costly- half million dollars at least
- Propane filling station is only \$10-15,000, easily mobile, can bring it anywhere
- Natural gas is the landline, propane is the mobile phone

Q: What barriers to using propane for transportation? Is there competition from EVs?

- Not much competition from EVs
- Major challenge is educating people and raising awareness about the cost award and getting people on board to accept a change
- Another challenge is that not a lot of garages and mechanics are not familiar with working with propane systems

Q: For residential construction—has there been a replacement of heating with propane in rural areas?

- Yes, increased use of propane in homes is how their business has grown exponentially over past 20 years
- Currently rare to put in a new oil boiler
- For hot water heating, using a propane hot water heater is 90% efficient
 - Almost all new builders put them in
 - Only heat water as needed
 - Overall, appliances are more efficient

Q: Are there any barriers to using propane in residential construction?

- Builders are choosing to install heat pumps with a propane backup
- Propane can work in conjunction with other energy sources— need backup source in winter

Q: Is propane cheaper than heating oil? By how much?

- Yes, propane is typically less expensive, but don't always follow the same curve
 - propane fluctuates between 20 cents and two dollars, many different factors
 - Used to get oil overseas, natural gas/propane has always been domestic
 - Their business exports a lot of propane overseas, which has an impact on price per gallon
 - Oil prices fluctuate wildly at times

Q: What is the source of propane? Locally in PA?

- Mostly marcellas shale in Pennsylvania, but less than five years ago
- Propane is a byproduct of processing natural gas and crude oil refining
- Can get propane from both wells and refineries

Q: Do you think propane has a bad image because it is associated with fossil fuels?

- Yes, but propane is a low carbon fuel, as is natural gas
- Doesn't want propane to be grouped in with oil and coal, since it is much cleaner
- However, technically a byproduct of fossil fuel
- Thinks propane can factor into the solution long term
 - Says electrification is great, but electricity is not the energy source— electricity is generated by an energy source
 - Until that grid is 100% clean and renewable, propane and natural gas are a great option to get where we need to be to decrease carbon emissions
 - Other sources have problems, such as batteries for EVs, lithium mining and disposal, disposal of old wind mills, waste of solar panels— all have pros and cons, and there is not one answer and path to zero

Q: What can the government do to help you? Recommendations?

- Awareness and education about propane is needed, because people need to know about propane to take advantage of it
- Dislikes one sided information— thinks it is important to consider all options and champion energy choice
- Consider school curriculum on energy

Q: Anything else to share?

- No, great initiative!

**Cumberland County Climate Action Plan
Energy Conservation and Fuel Switching Focus Group Summary**

Participant Name	Title	Business
Kenn Tuckey	President	The Tucky Companies
Mike S. Rader	President and CEO	Barton Associates
Scott Pusey	Consultant	Steven Winter Associates
Lawrence Eighmy	Managing Principal	The Stone House Group
Jon Kautz	Business Owner	Energy Smart Home Improvement
Gilbert Freedman	President	Earth Energy Engineering
Justin McClure	President	Daflure Heating
Darren Cassel	Principal	The Stone House Group
Rick Rovegno	Owner	Rovegnos of Carlisle
Lily Tarwater		Dickinson College
Burhan Muhammed		Dickinson College
Neil Leary		Dickinson College

Q) How motivated are your customers to reduce their energy use/use cleaner energy? Is this a priority? Behavioral Shifts

Client base is 100% residential, the focus has gotten away from reducing energy use to comfort levels in the home. From 2008 vs 2021, less people have an awareness of their energy use.

Institutional markets seeing infrastructure changes, some movement towards RFO (Renewable fuel oil is a low carbon alternative).

Q) Are others seeing residential customers more interested in comfort than energy efficiency, and institutional markets more interested in reducing their carbon footprints?

Has also seen this perspective. A lot of it has to do with state policy, programs, and leadership during that time (2008). That emphasis from government leadership has ended.

Q) What motivates your client bases towards greener solutions? What are the barriers?

Clients range from college and universities, where energy efficiency is more programmatic than economic, to healthcare facilities, which are more about economic savings.

Work they are doing in DC and NY is largely driven by the CAPs. Effective in getting the attention of developers who are considering large investments in multifamily buildings, so they

are compliant with local laws regarding carbon reductions and energy efficiency. In senior living communities, residents are very concerned about climate change and want to know that the corporations they are investing in are meeting climate action goals.

Q) What kind of programs are there to promote energy efficiency at county/state level?

Utility rebate program hasn't been funded which stops a lot of retrofitted work. Energy efficiency is still a big motivator amongst customers. The lack of rebates is slowing energy efficiency.

Cumberland County doesn't have CPACE program- why not?. He says there should be a CPACE program to fund for projects that can help push greener goals. Would add indoor air quality and resiliency to fundable projects.

Act129 program is a great program and provides incentives for greener solutions. Could be more effective- state needs to put more funding on the program. Also, could benefit the residential customer more.

Money available for COVID is motivation for ventilation so these days schools are using that money to have covid mitigation protocols than energy efficiency ones

Been a move in the past few years by utilities to outsource programs to large corporations. However, these do not have the same knowledge of local communities and their needs. Some are forming a group of energy efficiency contractors who are trying to convince utilities that they would have meaningful results with community connections and knowledge.

Affordable housing in PA- PA housing finance agency incentivized passive housing for low-income housing. Moved market to passive housing (energy efficient from holistic standpoint- good indoor air quality and energy efficient)

Also, should be on local government to lead the transition to clean energy future, not individuals or corporations. Drop in the bucket for individual homeowners. Need wholesale structural changes to our energy distribution to make big impacts.

Q) What is something that local government or county could do? What is the appropriate role?

Must implement CPACE legislation, easy to start with. Start with voluntary benchmarking, look at NY, Philly, California, etc. Establish baseline, and then build financial incentives, reporting incentives, and then see momentum build from businesses. (energy reporting, energy STARS)

These links sent in the chat:

<https://www.imt.org/resources/map-u-s-building-benchmarking-policies/>

<https://www.2030districts.org/>

The more Cumberland County can advocate, the better

Tomkins County in NY, a program where county incentivizes locals to install solar

- Heat Smart, could learn from NY energy efficiency programs in New York state, county.

Q) Can institutions like Carlisle Regional Medical be leaders on climate action and energy efficiency?

Works a lot with medical corporations.

- Works with UPMC- part of the discussion, not necessarily the primary goal
- Absolutely, whole purpose of the facility is to heal, could be looked at holistically.
- Very competitive, fighting for market share, want anything for competitive advantage.
- Most efficient is to fix the issues you have in your building through benchmarking.

Q) How common are retrofits in your work?

The most cost-effective way is to fix issues in existing buildings as opposed to installing solar panels. Can be identified through benchmarking.

We talk with our customers that how can we save you money, and it runs better, so it motivates them.

Q) Can the county encourage benchmarking? Energy Star? Education/ training programs? Is that a useful direction?

Energy Star is low cost, could be incentivized to offset the low initial costs. Huge opportunities for savings just making buildings run as they were intended

Need for technical assistance for those who choose to benchmark, could be part of the incentive packages.

Needs a well-planned and thought-out proposal, probably needs a staff member

When folks are asked to benchmark with no incentive, not effective. County should be leader.

Q) Is there experience with a more regional approach— having a staff person at a multi county level to take on something like this?

Big enough task at the county level, one person probably couldn't do it for five counties. One person would be full time to coordinate this among hundreds of businesses, 33 municipalities, and nine school districts.

Q) Why do so many residential clients do energy audits and not follow up and take action on the recommendations?

Many natural gas customers because it is cheap. Educational campaign could be a good motivation.

Access to funding for installation costs

Informing residences how they compare to their peers is effective for behavior change, doesn't cost anything.

Q) Any last thoughts?

So much new construction in Cumberland County, new building codes have had positive impact. Air infiltration now is 28% less than 2009 codes.

Cumberland County CAP Municipal Government Focus Group Discussion Summary

Participants

- Keith Metts, Hampden Township
 - Jeremy Miller, Hampden Township
 - Tom Vernau, Lower Allen Township
 - Bob Shively, representing Upper Mifflin Township
 - Cory Adams, South Middleton Township
 - Sara Gibson, Camp Hill Borough
 - Steve Oldt, Shippensburg Township
 - Mark Malarich, Carlisle Borough
 - Mike Skelly, Carlisle Borough
 - Owen Snyder, Carlisle Borough
 - Susan Armstrong, Carlisle Borough
 - Larry Barrick, Dickinson Township
 - Meghan McNamee, Upper Allen Township
 - Katie Daniels, Mt. Holly Springs Borough
 - John Owen, East Pennsboro Township
 - Wayne Myers, West Pennsboro Township
 - Kirk Stoner, Cumberland County
 - Toby Fauver, Rockland Consulting
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- Are your residents/constituents concerned about climate change?
 - Residents are concerned, informal survey with residents and businesses; 8.5 out of 10 in importance
 - All concerned about it and how we can deal with it
 - Varies greatly in community with understanding. Need education. Have climate action commission in place now.
 - Subject does not come up that often in LAT. If you prompt a conversation, they have plenty to say. Many believe it is a natural thing and not manmade.
 - Mixed bag of responses from residents.
 - Don't hear much from residents. Residents concerned about solar farms especially neighbors.
 - What climate change related impacts, if any, have you seen in your municipality?
 - Air quality is an impact and concern with I-81; more trucks contribute it. May need electric trucks
 - Need more walkability, commuters and increase in traffic
 - Transportation hub yields air quality concerns; concerned about changes in precipitation patterns and flooding from high intensity storms

- Flash flooding stormwater; higher impact storms and storms of greater strengths
- Flooding is an issue with some residents; stormwater is a growing issue with residents
- Do you believe it is local government's responsibility to address climate change issues?
 - Residents are not looking to local government to solve the problem but government can help residents better understand climate change and its impacts. Stormwater is an example. Connecting actions to consequences.
 - Residents appreciate environmentally geared projects they are doing; open space/green space and trails were an important topic; encouraged developers to bring in best management practices for stormwater
 - Residents want policies in place to keep water clean
 - Can make meaningful impacts at the local level for the environment; air quality and climate change overall is tough for one local municipality can make meaningful impact without state/federal assistance
 - Yes from a public safety perspective and hazard mitigation perspective. Think that larger compliance is state/federal responsibility. Locals don't have staff and resources to enforce. Small things are cumulative.
 - Haven't really done anything, driven by funding.
- How high of a priority is it for the county to have a climate action plan? What should it include? How can the burdens and benefits of the plan be spread across all residents?
 - High priority; need resources and education to be included as part of the actionable recommendations in the plan.
 - Tough to get a major impact at county level; may not be impacting climate change overall; could pursue mitigation actions; we are limited to what we can do that has a meaningful impact
 - Best management practices adopted by everyone you have incremental impact; need more focus on walkability
 - County makes decisions related to transportation, is GHG emissions looked at now? Should be looked at with grant funding. Purchasing criteria could focus on GHG emission reductions.
 - Should be on the radar of the county, up to county to determine priority
- What best practices has your municipality implemented that address greenhouse gas emissions?
 - Buying hybrid vehicles, 2 already purchased but also looking at police cars too; building nonmotorized transportation; new building could have been more green but was not cost effective; wishful recycling by residents increases costs for municipality.
 - Residents thought local gov't should set a good example with vehicle purchases; may need to modify ordinances to allow for stormwater management; education to help people understand what they can and can't recycle
 - Transition police fleet to hybrid and have electric vehicle for parking enforcement; considering solar array for wastewater facility; zoning subcommittee of climate action committee is looking at parking regulations to reduce mandatory parking

requirements; trash program pay by the bag; need education that the more you recycle less goes to landfills; big generator is on transportation related issues, could focus on lesser issues such as building codes (LEED).

- Talked to trash hauler who indicated that charges are \$130 per ton of recyclables; if over 10% contamination, another \$10 per ton charge is assessed. Glass is cheaper to make glass from scratch than it is to reuse it. Need higher levels of government make recycling work financially. Just updated zoning to narrow streets, require native plantings, and allow for alternative energy. Not always directly related to climate change, but still good for community. Concerned about this turning into another MS4 mandate; did an energy audit and installed LED lights but have substantial savings over the years
- Cogeneration in wastewater treatment plan, not enough energy to make it work. Uses off gas from sewer treatment plant. Looking at lighting in building. Have done energy audit; looking at solar at park; looking at MS4 improvements across township that could decrease pavements; reduced parking restrictions in zoning; no burn ordinance; interested in BMPs that could be shared with munis.
- Have not done much, driven by funding. Supervisors will listen but not a priority at the moment.
- Are there opportunities for doing more to reduce greenhouse gas emissions? What would motivate you to pursue those opportunities?
 - County could help to identify grant opportunities; EV charging stations
 - County can help update ordinances; PSU extension can help with rain gardens and stormwater education
 - Motorcycles and lawn mowers create air pollution and add to what is getting released
 - List of BMPs would be helpful; how effective are they, more feel good than effective.
- What barriers exist that challenge local government's ability to respond to greenhouse gas reductions and climate change?
 - Funding
 - Education
 - Opposition from commercial businesses and developers that cite concerns on operating costs and return on investments
 - Enforcement and resources to do it well.
- What other input would you provide...questions that we haven't asked, information that we should know?
 - Tractor trailer parking along ramps should be addressed; need to work with PSP to eliminate needless idling
 - Local climate action plan process should be coordinated with the county and not duplicate efforts
 - Don't let this become another MS4 for air quality

Cumberland County Climate Action Plan School District Focus Group Summary

Attendees

- Vonda Kelso, Big Spring School District
- Rick Kerr, Big Spring School District
- Tom Horton, Carlisle School District
- Jenna Kinsler, Carlisle School District
- Greg Longwell, Mechanicsburg School District
- Nicole Weber South Middleton School District
- Jacob Wacker, Shippensburg University
- Kirk Stoner, Cumberland County

Q. Has your school district implemented and sustainable or best management practices for climate?

- Many school districts have switched over to LED lighting either all at once or as construction projects take place and bulbs are replaced.
- Some districts maintain buildings with Gold or Silver LEED Certifications and utilize solar energy. One school district has been exploring options to upgrade to an automated energy system that tracks usage to see where improvements can be made in the system.
- Most schools districts maintain an environmental center or collaborate with an environmental education partner so the students can interact with and learn more about the environment.
- All the school districts follow the response to demand during different periods of the year.

Q. Are there opportunities to do more in your school district?

- While this could be a worthwhile conversation, schools are restricted by the budgets. Since alternative/greener energy sources have a higher upfront cost, schools cannot afford the payment even if they will save money in the long run.
- Schools do have a plan of what needs to be updated in terms of sustainability and climate change (windows, roof replacements, more efficient water appliances, etc.) but cost is the overlying issue.

Q. Have any of the transportation companies (busses, vans, etc.) reached out about more efficient methods of transportation?

- No open conversations about more efficient vehicles or methods have been discussed.

- Bus routes are reviewed annually to make sure each route is as efficient as possible from a cost standpoint, not sustainable.

Q. Does your district have any curriculum regarding energy and climate change?

- Many of the science classes such as biology have climate change and sustainability integrated within the curriculum but there is not a single program that focuses on climate change.
- There was a full agreement that classes pertaining to energy/climate change should not be given their own courses because adding another curriculum to the educational framework would be too much.
- Integrating climate and energy awareness in younger grades should make the awareness second nature but education can only go so far in changing habits.

Q. Do you believe it is the local government's job to address climate change issues?

- Collectively, it is everyone's responsibility to address climate change issues but to what extent can the government, at each level, regulate changes?
- School districts have a large part in addressing climate change among the local communities, but the financial means prevent much change.

Cumberland County Climate Action Plan Transportation Focus Group Summary

Participants:

- Michelle Tarquino – PennDOT District 8
 - Steve Deck – Harrisburg Area Transportation Study
 - Rich Farr – Capital Area Transit/rabbittransit
 - Dick Norford, Harrisburg Bicycle Club
 - Dan Szekeres, Michael Baker, Inc, air quality modeling specialist
 - Jackie Felion – PennDOT
 - Wayne Myers – West Pennsboro Township
 - Jeff Bergsten – Cumberland County resident and Climate Change Task Force
 - Neil Leary – Dickinson College
 - Sam Lavine – Dickinson College
 - Kirk Stoner – Cumberland County
 - Toby Fauver – Rockland Consulting
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- How are climate change factors considered in the transportation planning and prioritization process?
 - HATS recently update its project pipeline scoring system and it has direct or indirectly relationships to GHG emissions; 80 out of the 100 points related to GHG emissions or climate change factors
 - CO2 is difficult to track and impacts are at a larger scale. Typically done at an analytical level. Difficult to track impact; planning partners could specify it as a goal and then relate it back to other criteria that provide benefit back to the goal. Not many planning agencies include a specific GHG reduction goal
 - Discretionary grants for transit expansion removes SOVs and decreases carbon footprint
 - Sustainability could be a stand alone factor for project prioritization. If 2 projects are similar, then pick one with bigger sustainability
 - Not so much of a standalone, but captured in other categories
 - Need to provide safe places for people to walk/bicycle; need to see bicycle as more transportation and less of recreation
 - Air quality conformity considers impacts of funded projects in the region
 - Best practices
 - Active transportation plans being coordinated at a regional level of for nonmotorized transportation ; Lancaster – walk to work program
 - SRTP ride matching, remote walk policies, van pool, rideshare
 - Teleworking from covid pandemic has had huge impact on GHG and VMT; good example to use as can see impact from covid

- I-81 and I-78 alternative vehicle study; trying to find charging stations throughout the region; find best places for EV charging stations; Colton Brown from DEP as potential contact for EV input
- Park and rides can play a unique role in getting people out of their car and experience switching to another mode.
- Micro transit is only transit service that has met and exceeded its baseline during the pandemic. Specialized work shuttles are working too, not a GHG emission strategy but still gets cars off the road. Where do personal transportation devices (i.e. scooters) fit into the discussion?
- ebikes getting a lot lighter and easier to use; need bike racks to support them
- Parking maximums instead of minimums; maximums are typically lower than minimums; tough to convince munis; shared parking is also needed, potential way to recoup impervious cover fees for SH20.
- Need bicycle infrastructure to support bike usage
- Curbside management needed with AVs coming on board
- Usage of space...bicycles consume less than 1 car and thus need less infrastructure
- Need more EV charging stations and partnerships with private sector; need to fill gaps
- Norway planning on selling all electrics by 2025; GM fleet by 2025; FL 2/3 of commercial operations electric by 2030
- What trends to be aware of?
 - Home delivery of everything; does it have a positive or negative impact on GHG; short term higher truck volumes negative, long term, maybe positive
 - Teleworking likely to continue after pandemic
 - Concern over what streets congestion will look like with individualized transportation; smaller retail stores in needed areas may help demand
- How can gov't help best assist residents to vary travel modes and habits?
 - School buses – convert to alternative fuels and electric or look at different mode to get kids to schools
 - Gov't needs to provide more funding to make changes happen that influence mode choice; change is needed as impacts are being seen on the infrastructure
 - Do we go back to the future with dedicated transportation lines and not spread out transit routes? Need policy changes of contributing factors, especially land use
 - Encourage better land use and live/work/play environment to reduce commutes.
 - Use existing outreach efforts like PennDOT Connects; freight planning efforts; integrate what is already happening into the plan; do we do enough to connect to GHG emissions
- How can gov't help businesses to reduce GHG?
 - If land is in preservation, may need to change the policies for that land to support trails
- How high of a priority should it be for county to have a plan?
 - Help others see the indirect benefits of transportation planning efforts; can be challenges using the term climate change at PennDOT; sell what we are already doing
 - Does climate change maintain a high priority as it moves through implementation or is the primary benefit described as something else as the project moves forward? A lot of "fluff"

about what a project does for the climate, but do the projects actually deliver? The climate part seems to get a lower priority and lost in some cases.

- Other input?
 - Lawn mowers, 11X emissions than cars. Consider education initiative

Cumberland County Climate Action Plan Norfolk Southern Focus Group Meeting Notes

Attendees:

- Rudy Husband, Norfolk Southern
- Kirk Stoner, Cumberland County
- Toby Fauver, Rockland Consulting

What priority is greenhouse gas emissions given in transportation project prioritization/funding?

It is not a high priority. Moving over the highway uses more emissions. Rail is far more efficient because it consumes less fuel, and it reduces traffic congestion. Locomotive has 1/3 the emissions of

What best practices have been implemented in the transportation sector that address greenhouse gas emissions?

Fuel efficiency of locomotives. They have taken old engines out of service, which is making the technology more fuel efficient. LEADER – provides engineer with data on how fuel efficient the locomotives are. The more recent ones are electric.

What future industry trends should we be aware of that will affect greenhouse gas emissions from transportation?

All railroads have been working on non-diesel options for locomotives. This includes electric and CNG (Compressed Natural Gas). Alternative fuel options, continuing to look at locomotive technologies. Change is slow and expensive. There are other priorities that they have over reducing emissions.

How can government best assist NS in reducing greenhouse gas emissions through changes in travel modes and habits?

Use a carrot and not a stick. Figure out a way that the interests of the government align with the interests of the company. Probably not any carrots. Perhaps opportunities about the trucks. What is applicable to trucking folks could be applicable to us.

How can government best assist businesses in reducing greenhouse gas emissions through changes in travel modes and habits?

People want their stuff, make sure the job is still capable of being completed. Don't do something that addresses one safety issue but then brings in another issue.

How high of a priority is it for the county to have a climate action plan? What should it include? How can the burdens and benefits of the plan be spread across all residents?

There should be a plan. There should be a recognition of how much it will cost, and how that will burden the community.

What other input would you provide...questions that we haven't asked, information that we should know?

Interstate commerce cannot be regulated on a local level.

Cumberland County Climate Action Plan

Business Interview Summary

Participants:

- Lily Tarwater, Dickinson College
- Jason Chamberlin, Facilities Maintenance Team Leader & Environmental Coordinator, Purina Mechanicsburg

Q: What best practices has Purina implemented that address greenhouse gas emissions?

At plant in Mechanicsburg 14 years ago, there was an ozone depleting gas refrigerants phase out. We no longer use ozone depleting refrigerants. This was impactful because Purina uses a lot of HVAC equipment. Also, the plant is 100% wind energy supplied. It buys energy from wind farms mostly in Indiana. All energy is 100% wind derived at the Mechanicsburg plant.

The Mechanicsburg plant sets environmental goals every year. This year, goals include water reduction and energy reduction. A lot of energy comes from natural gas used in boilers and dryers, as well as electricity from large horsepower motors. We are implementing energy efficiency through monitoring and daily checks to reduce waste. We haven't installed any new equipment, but have a new training program to make sure employees understand the waste involved with product dryers, which burn natural gas when a product is not on it. At one time, dryer would run all day. Now, if the dryer doesn't sense product on it, it shuts off. Every day have check in meters which investigate when natural gas usage is higher than average. Energy use is tracked daily so abnormal use can be investigated immediately rather than running with poor efficiency.

We have tried electricity recapture systems, but none of them were efficient. We had an energy recapture module to recapture and reuse that energy, which promised a lot on that but didn't pan out. In the last six years, we switched to on demand boilers. We used to have two large boilers that ran 100% always, regardless of production. Some days, we may only need 70%. Now, we have boilers that ramp up and have three levels of operation. Instead of running 100% at all times, boilers are smaller and can ramp up and down to adjust to energy needs. We only run what steam we need to produce product.

I am a maintenance team leader and the environmental coordinator. Being both means not all of my time can be put into energy efficiency. It would be nice to push a lot more projects more through, but I am constrained by time.

Q: Are there opportunities for doing more to reduce greenhouse gas emissions? What would motivate you to pursue those opportunities?

Corporate group is good at helping out for local projects. Our biggest project is reducing waste. Mechanicsburg is going through a plant expansion to produce more pet food, and expanding means more energy is going to be used. Creating new systems and new ways of working have begun to create more waste.

We are producing more waste per unit of energy than we were just a year ago because we are starting up new equipment. Our biggest opportunity is in waste production. A lot of water and energy is put into producing pet food, and if the pet food is unsaleable, it goes to incineration.

We are working on a project to reduce waste going to incinerator by working with a livestock broker that can use their discarded pet food to feed hogs. This limits need to burn food waste and food, goes straight to hog feed. There is an opportunity in next six months to ramp that up and do ten times as much, if we can build some more infrastructure.

Q: What barriers do you see that restrict your business or other Purina's ability to respond to climate change by reducing greenhouse gas emissions?

Some barriers include limited funding and limited space. The Mechanicsburg plant is landlocked and we are expanding the production area, which limits how much space we have for putting in new waste containers.

With funding, there is always some funding for environmental projects, but there are conflicts with who receives this funding. There is no visible profit just in energy production, except in reducing costs. The Nestle-Purina company is pretty good at funding sustainability.

One issue is we are trying to produce more, but all products goes in and out on trucks, which creates a lot more trucks on the road, which has a negative environmental impact.

Q: How can the various levels of government assist businesses to reduce GHG emissions and address climate change issues?

Not sure. At Purina, they are employing a lot more people, but there is not a strong mass transit system locally. Very few Purina employees use the mass transit system. It might be beneficial to improve CAT busses to decrease vehicles on the road.

Local government could also help push solar. At the corporate level, there are solar panels on two of Purina's eight plants, but not in Mechanicsburg because of the large cost. It is not considered viable because of the large cost of implementation and upkeep. There could be local initiatives to help with that. As a very large business, we are looking at not only the cost of putting them in, but also the environmental impact of producing the solar cells. How much energy would the solar panels actually produce? Is it worth the environmental impact?

Purina uses all recyclable packaging, and is trying to get away from plastic packaging. There is a corporate initiative for advancing plant fiber based compostable packaging.

Q: How high of a priority is it for the county to have a climate action plan?

Almost neutral on it. Not 100% sure of what comes out of a climate action plan at a county level. It is great for the country to say they are going to do these things, but it needs to make sure businesses and residents have an input. Sometimes there are government plans that they call a "Climate Action Plans" that are a bunch of words to make them feel good. How much is a true impact versus being able to say you're doing a big impact?

It is an important initiative, but it is important for businesses to be able to expand, employ more people and have capitalistic opportunity. If the CAP limits businesses so they can't expand, they may not be able to expand in the county. This could put people out of work and be detrimental to the community.

We could have a great climate action plan, but we would have to completely shut down how the country is running right now. I am proud to work with an ambitious global company. They are as ambitious as you can possibly be as one of the world's largest food manufacturers. We consider more than just the bottom line, and have a strong environmental consciousness. However, at the county level, if we reduce natural gas usage, that could limit companies from expanding and employing more people.

Q: What should the Climate Action Plan include?

Not sure. From a business side, I hope all businesses are doing what Purina is doing. If they are, then we are where we need to be. All businesses should limit wasted energy. We measure energy use every day. All manufacturers should do that, but not all are right now. There is an opportunity there for "low hanging fruit" emission reductions.

Q: How can the burdens and benefits of the plan be spread across all residents?

Not sure. Some companies may have higher emissions because they are larger, but have better strategies than small companies that are being wasteful. Bigger companies are naturally larger users of energy. Every business/entity should be asked to set individual reduction goals. The efficiency practices should be more important than the overall number.

Cumberland County Climate Action Plan Business Interview Summary

Participants

- Ryan Heishman, President, Allen Distribution
- Toby Fauver, Rockland Consulting
- Kirk Stoner, Cumberland County

- GHG emission and reductions consideration in business practices:
 - Different segments, trucks and warehouse
 - Not overly aggressive in actions.
 - Actions must be dual purpose; example of lighting change to drop energy usage. Must make economic sense and be more efficient
 - Example – how to make equipment lighter to haul more weight; could reduce loads hauled by making equipment changes; takes trucks off the road
 - Look at total benefit, not making sole decisions based upon climate change.
- Best practices?
 - Understanding how your organize your freight to minimize empty miles; better asset utilization
 - Electric lifts instead of propane
 - Investing in lithium ion lifts which reduces the number of batteries needed; cost more but gain efficiencies and safety to avoid lead acid batteries
 - Rooftop solar; can only put on as much as you can use; have evaluated opportunities for solar.
 - Need to change regulations that would allow solar on entire rooftop
- Trends
 - More interest in electric trucks, but challenges include:
 - Weight of battery reduces capacity, which carries less cargo
 - Charging stations
 - Cost must be warranted by payback or customer request
 - Use of robotics in warehouse to be more efficient and depend less on manual labor; may increase use of energy in warehouses while reducing employment trips
- How can government assist?
 - Solar on rooftops
 - Education on cost/benefits of various mitigation measures; best practice sharing
 - Improve traffic safety and congestion to allow for free flow of freight traffic to reduce fuel costs; advocate for transportation improvements
- Priority for climate action plan?
 - Depends on other priorities
 - With trucking/warehousing facilities should be a consideration and county take more active approach on it

- Burdens and benefits spread across all residents
 - Funding is a challenge
 - Easy actions should be done by all. If you choose not to do that, it is counterproductive
 - Needs to be balance of spending new money versus common sense approach to saving energy.
- Final thoughts
 - Education, awareness and measurement should be considered in the plan. Provide how we are tracking these issues
 - Voluntary is better than mandates and requirements
 - Customers are starting to ask more about what they are doing with climate change as more corporate responsibility for the entire supply chain; customer centric organization that will force corporate changes to keep their business

Cumberland County Climate Action Plan Business Interview Summary

Participants:

Douglas Nemtuda, Siemens
Lily Tarwater, Dickinson College
Burhan Muhammed, Dickinson College

QUESTIONS ASKED:

Q) What best practices has Siemens done to reduce emissions?

- Siemens is a global engineering company hundreds of years old, and they are involved with electrical technology. They have been involved with implementing alternative energy, such as wind energy. They also work with mobility, such as the high-speed train industry to get cars off the road. The global company has joined a carbon net zero program and are on track to meet those goals. They have taken fleet vehicles off roads.

However, there are many different divisions of Siemens in different countries. Doug is with Sieman Industry Inc., They seek to reduce energy use within buildings. They use smart building practices, such as efficient HVAC and efficient lighting. They are looking into AI for optimal energy use. While there are many aspects of what the corporation is doing, they are all about energy reduction, carbon neutrality, and climate improvements.

Q) Are there opportunities for doing more to reduce greenhouse gas emissions? Any Barriers?

Yes, always more opportunities. Some of it has to do with people having to learn to live differently, and many don't want to be inconvenienced. For businesses, there is also balancing the cost of renewable energy with the benefits and return. Finding new, sustainable power sources is the key to the future. We can't live off wind alone. The fuel cells have not taken off as much as they could. One cell could power an entire home and be unconnected to the grid.

Do you see any barriers from the consumer side to implementing renewable energy?

From the consumer side, a lot of it has to do with budgets. There needs to be enough money allocated in the budget to spend wisely and make sure the building is as carbon neutral as possible. However, energy efficiency often gets cut out of projects due to budgets. Incentives to do it are useful. Indoor air quality is also important with COVID, which costs more. It is difficult to make indoor air quality at the consumer's standards and make buildings energy efficient.

Q: How can the various levels of government assist businesses to reduce GHG emissions and address climate change issues?

- New York has done a pretty good job with this in some respects. The government introduced programs to reduce electricity costs and consumptions. They provide

rebates to reduce energy from the demand side. A lot of this had to do with electrical grids being overloaded.

- He says just like NY, PA should incentivize energy efficiency programs.
 - o PA did this for a while, but was not as aggressive
 - o Construction efficiency should be incentivized the same way

Q: How high of a priority is it for the county to have a climate action plan?

In Cumberland County, the infrastructure, healthcare and schools are in good shape. These would be higher priorities; however, since these look good, the CAP should be a high priority. On the supply side, along with solar power and wind farms, we should look at what other ways can we generate cleaner energy. If we try to abandon fossil fuels too fast, PA could set be set back financially. We should bridge responsibly, using savings from fossil fuels to create new technology. If we don't have a CAP, we'll never get anywhere, so it is very important.

Q: What are Siemens' goals regarding automation through AI?

- A transition to AI would mean that problems could be efficiently fixed in buildings automatically. The building would signal if something is wrong; this helps fix the problem of not enough mechanics. They wish to achieve autonomous building solutions!

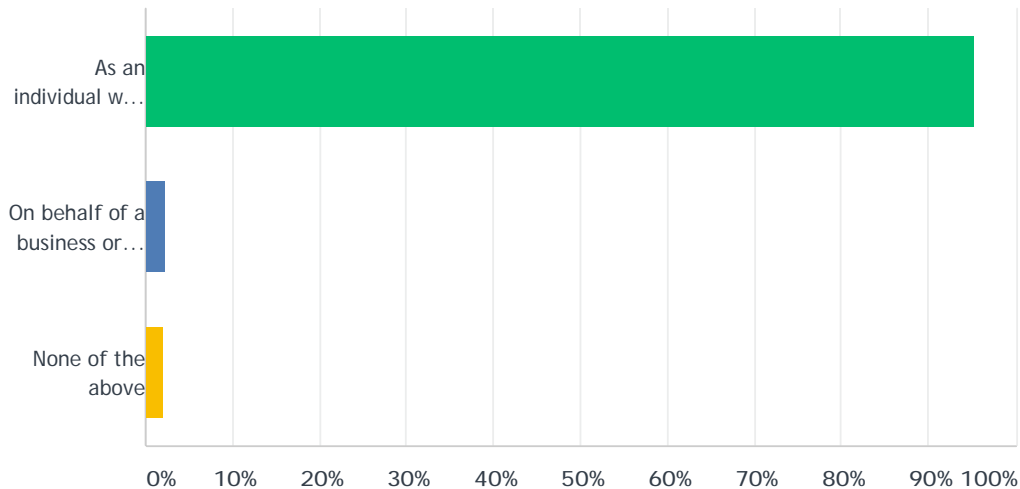
Q: Do you have any other thoughts about the CAP? What should be included? How burdens and benefits can be spread evenly?

The key is generating revenue for these projects without people having to pay too much. In the CAP, don't stretch numbers too far so they become unbelievable to people. Don't try to take money all from one place or source. Maybe tie costs in with utility usage— electricity is already lower here than in other states, so it would be good to have a surcharge on that to fund energy efficiency.

Appendix B: Survey Results

Q1 I am responding:

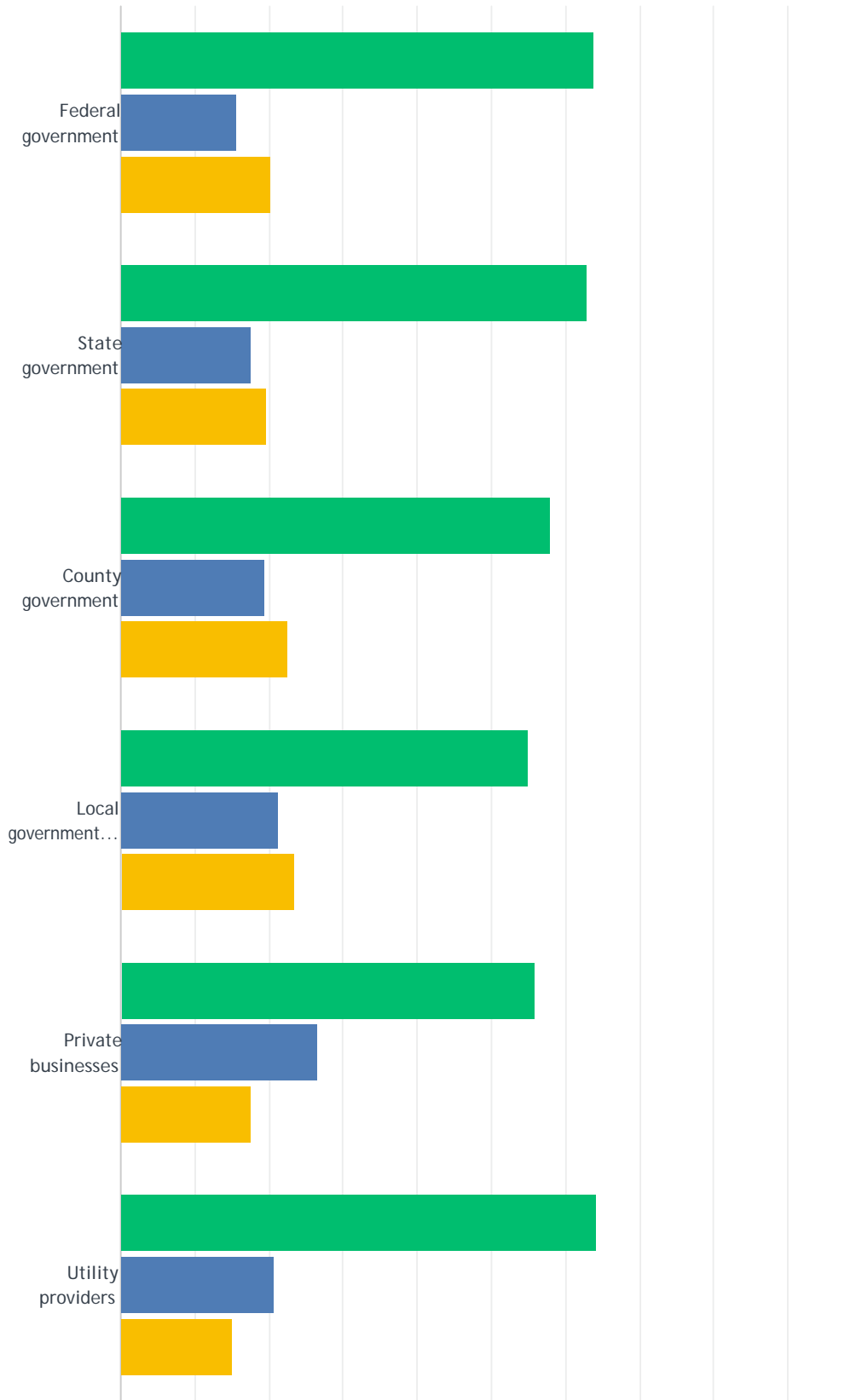
Answered: 2,351 Skipped: 0



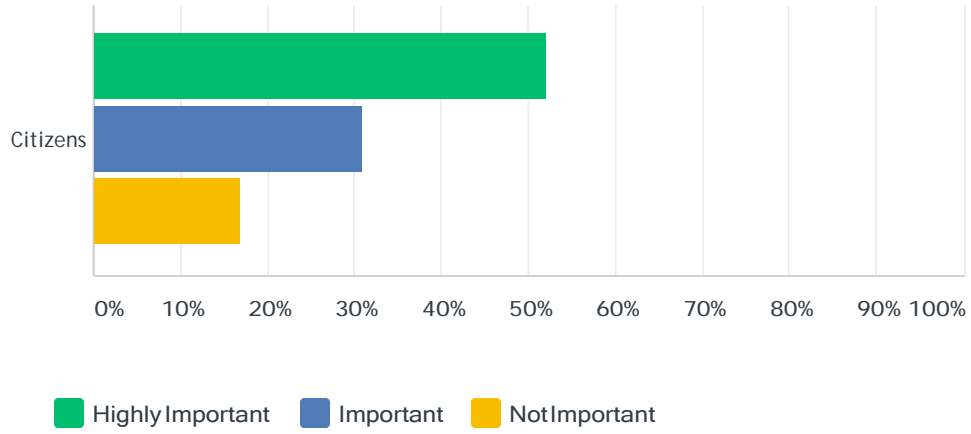
ANSWER CHOICES	RESPONSES	
As an individual who lives and/or works in Cumberland County	95.49%	2,245
On behalf of a business or organization that is located in Cumberland County	2.34%	55
None of the above	2.17%	51
TOTAL		2,351

Q2 How important is it for the following organizations to implement policies and programs that decrease greenhouse gas emissions?

Answered: 1,895 Skipped: 456



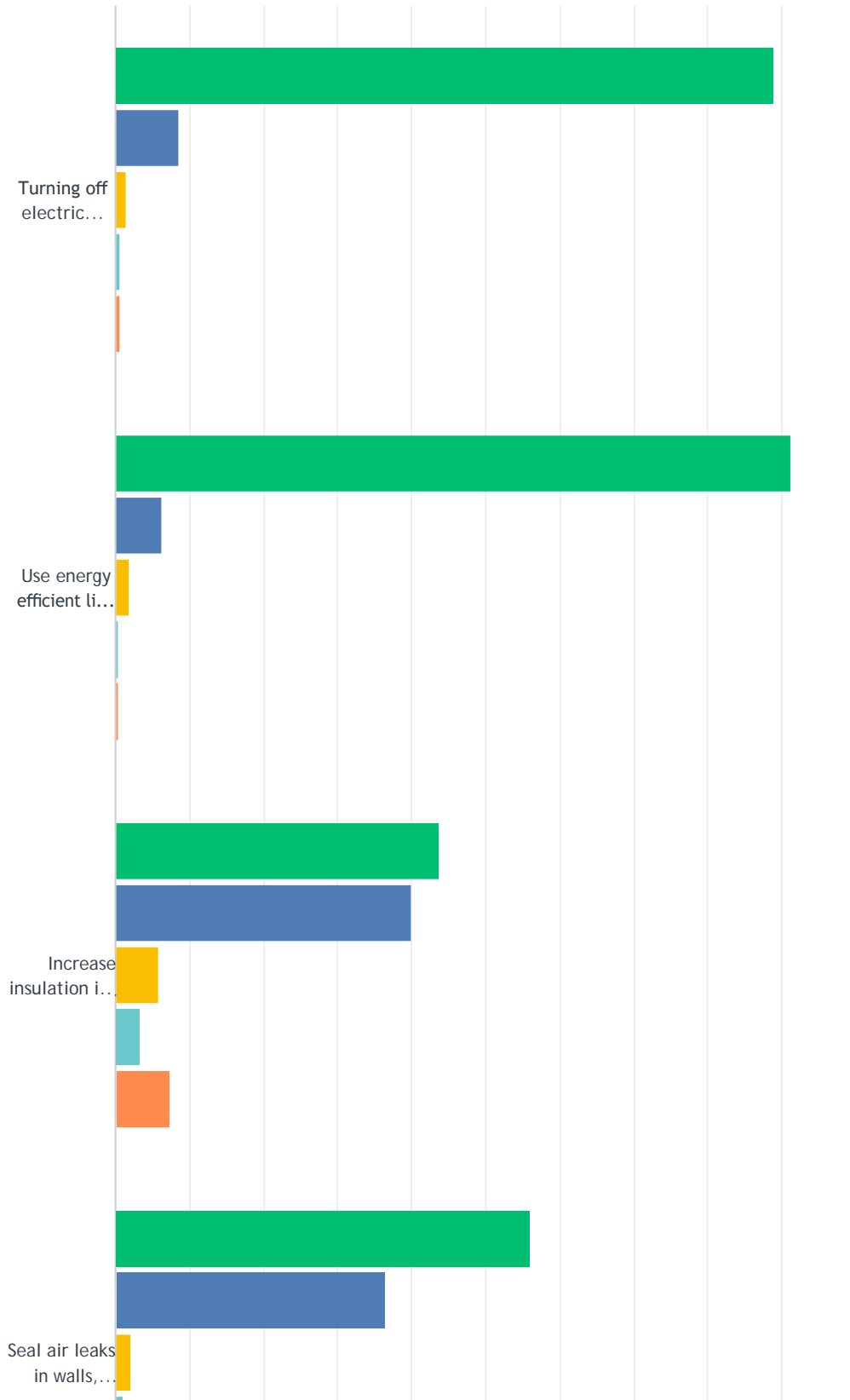
Cumberland County Climate Action Plan Survey



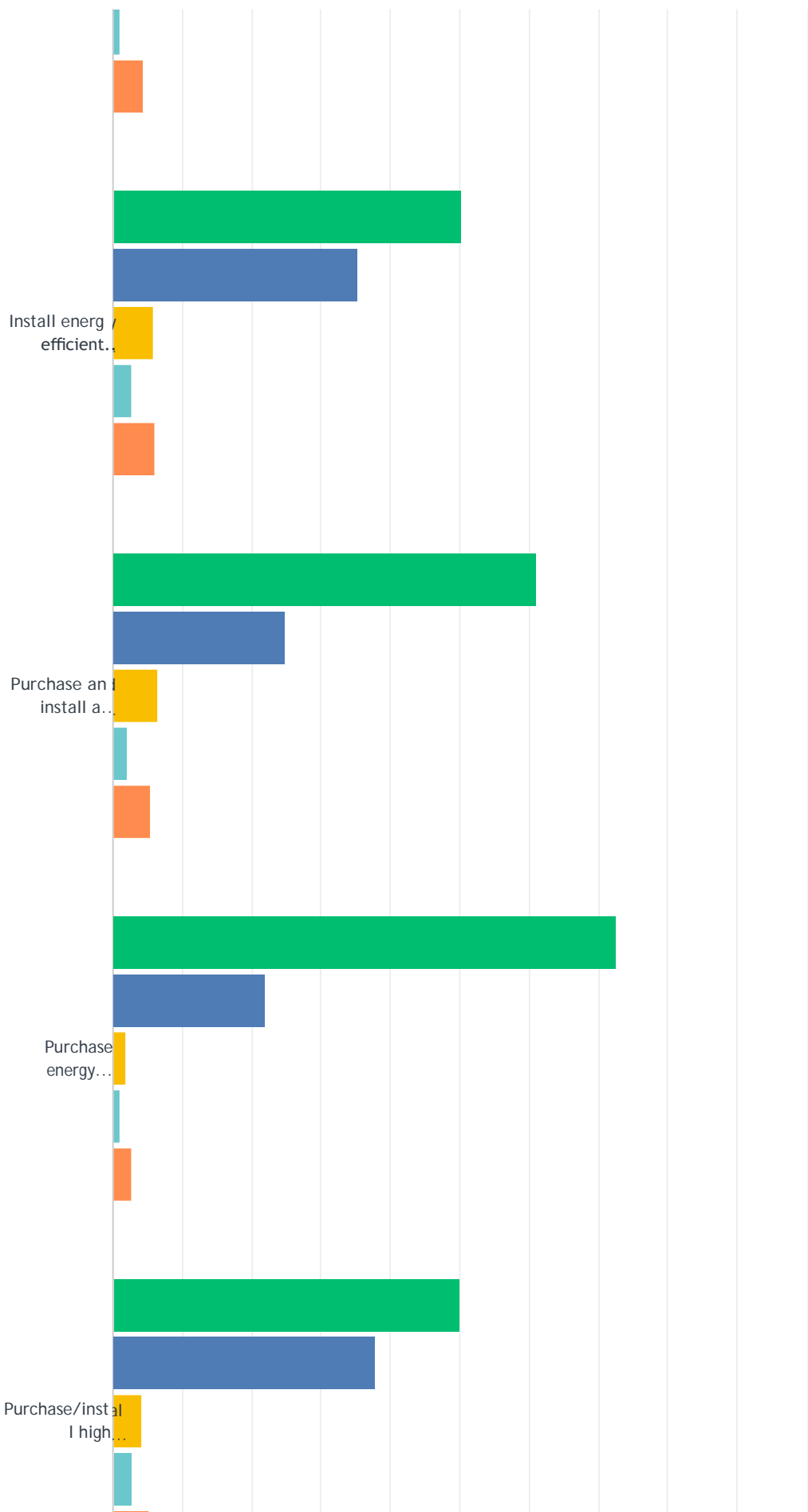
	HIGHLY IMPORTANT	IMPORTANT	NOT IMPORTANT	TOTAL
Federal government	63.90% 1,207	15.78% 298	20.33% 384	1,889
State government	62.88% 1,186	17.50% 330	19.62% 370	1,886
County government	57.89% 1,090	19.49% 367	22.62% 426	1,883
Local government (townships/boroughs)	55.05% 1,035	21.44% 403	23.51% 442	1,880
Private businesses	55.95% 1,053	26.51% 499	17.53% 330	1,882
Utility providers	64.27% 1,214	20.75% 392	14.98% 283	1,889
Citizens	52.12% 982	30.89% 582	16.99% 320	1,884

Q3 Which of the following energy efficiency actions have you already done, would consider doing, or would not consider doing?

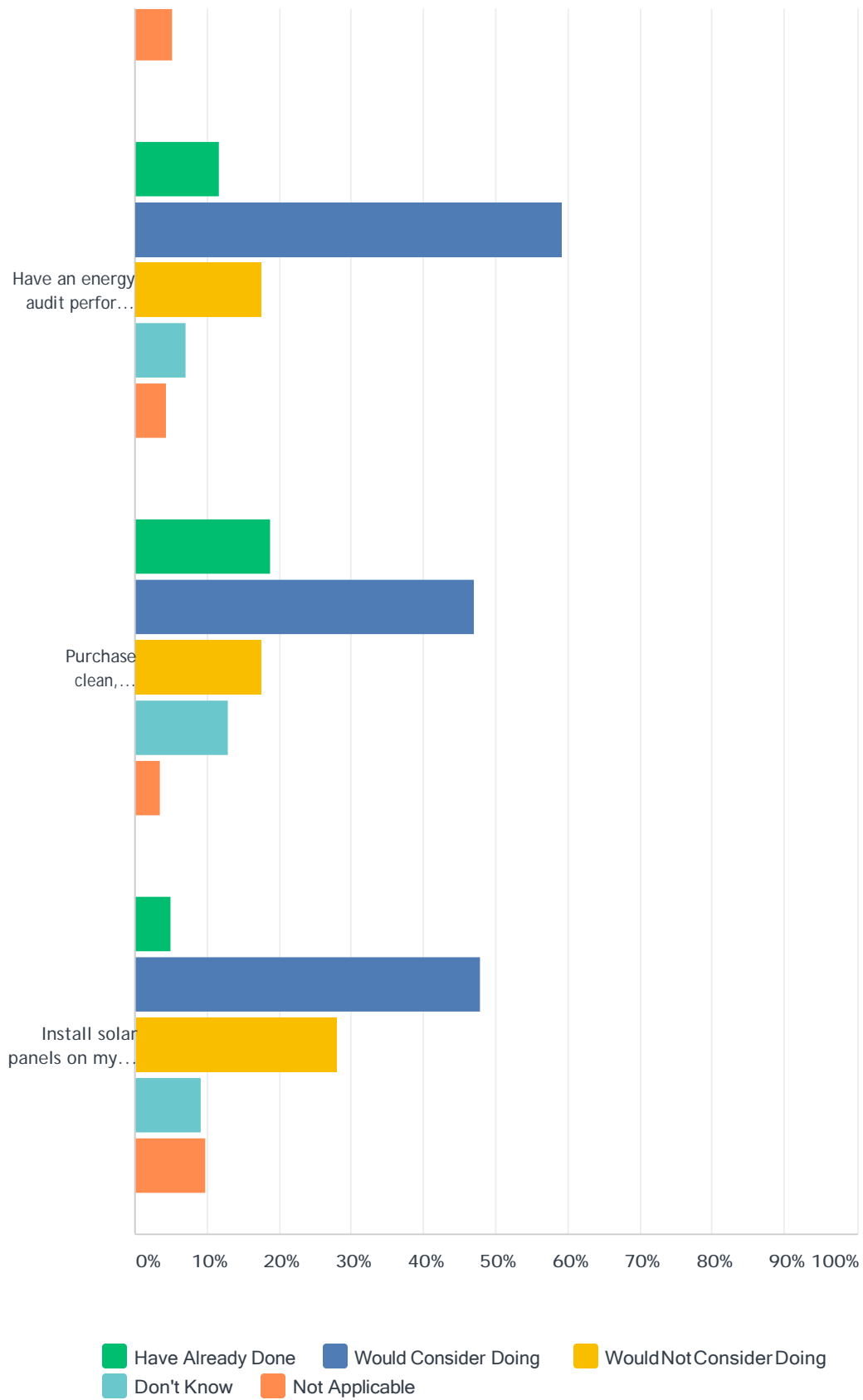
Answered: 1,895 Skipped: 456



Cumberland County Climate Action Plan Survey



Cumberland County Climate Action Plan Survey



Cumberland County Climate Action Plan Survey

	HAVE ALREADY DONE	WOULD CONSIDER DOING	WOULD NOT CONSIDER DOING	DON'T KNOW	NOT APPLICABLE	TOTAL	WEIGHTED AVERAGE
Turning off electric devices when not in use	88.88% 1,679	8.52% 161	1.54% 29	0.53% 10	0.53% 10	1,889	1.00
Use energy efficient light bulbs	91.28% 1,728	6.18% 117	1.80% 34	0.42% 8	0.32% 6	1,893	1.00
Increase insulation in walls, roofs and floors	43.75% 826	39.88% 753	5.77% 109	3.28% 62	7.31% 138	1,888	1.00
Seal air leaks in walls, windows and doors	56.06% 1,059	36.47% 689	2.01% 38	1.06% 20	4.39% 83	1,889	1.00
Install energy efficient windows	50.11% 944	35.30% 665	5.79% 109	2.76% 52	6.05% 114	1,884	1.00
Purchase and install a programmable thermostat	61.16% 1,154	24.96% 471	6.47% 122	2.01% 38	5.41% 102	1,887	1.00
Purchase energy efficient home appliances	72.66% 1,371	21.94% 414	1.80% 34	0.95% 18	2.65% 50	1,887	1.00
Purchase/install high efficiency heating/cooling system	50.00% 944	37.76% 713	4.24% 80	2.70% 51	5.30% 100	1,888	1.00
Have an energy audit performed for your residence	11.73% 221	59.24% 1,116	17.52% 330	7.06% 133	4.46% 84	1,884	1.00
Purchase clean, renewable electricity through PA Power Switch	18.86% 356	47.14% 890	17.64% 333	12.87% 243	3.50% 66	1,888	1.00
Install solar panels on my property	4.99% 94	47.98% 903	27.95% 526	9.30% 175	9.78% 184	1,882	1.00

#	OTHER (PLEASE SPECIFY)	DATE
1	Put on or take off extra layers of clothing on MYSELF and family before altering my heat or AC.	4/14/2021 11:09 AM
2	I would consider strategic landscaping such as tree plantings and home design options	4/11/2021 7:56 PM
3	We collect and reuse cold water that is run off while hot water reaches faucet.	4/8/2021 9:05 PM
4	Solar panels are prohibited by deed restrictions in my development	4/6/2021 11:55 AM
5	Buy from regenerative farms.	4/2/2021 7:22 AM
6	Replaced internal combustion engine car with electric	3/29/2021 9:41 PM
7	Would only consider solar panels based on ROR.	3/29/2021 5:27 PM
8	live in a CCRC cottage where electric energy, appliances are provided residents to save money and that is the priority here	3/27/2021 11:17 AM
9	Just moved to a Bethany village cottage. Through an ecology committee, we are seeking to have solar power pannels installed.	3/23/2021 10:37 PM
10	We do not own our house so it is limited in what we can do.	3/23/2021 12:01 PM
11	Set timers for lights, use energy during off-peak hours	3/22/2021 9:38 PM
12	Cost would be a big consideration in our taking actions that would require a capital outlay.	3/21/2021 12:49 PM
13	Plenty of "NA" responses: I live in a retirement community; many of these potential actions are out of my control.	3/20/2021 4:07 PM

Cumberland County Climate Action Plan Survey

14	I live in a retirement community and lack total control of on housing situation	3/20/2021 12:31 PM
15	Live in community with HOA. They would not allow solar panels. I can certainly bring it up however.	3/20/2021 11:22 AM
16	Support fracking	3/19/2021 12:26 PM
17	Planted more trees on our property. Considering a wind/solar powered generator.	3/18/2021 10:21 PM
18	climate change is a hoax	3/18/2021 8:47 PM
19	Drive less, walk to stores, etc. Next vehicle will be hybrid.	3/18/2021 12:50 PM
20	I live in a town home community	3/18/2021 11:42 AM
21	I am currently renting, some is n/a	3/17/2021 4:09 PM
22	My solar panels are for hot water only. Not enough space for more/other	3/16/2021 8:30 PM
23	Nom profit solar panels are needed.	3/16/2021 4:10 PM
24	Too costly for 1 person of my income to pay for	3/16/2021 12:49 PM
25	Installed renewable energy source for heat and hot water - geo thermal.	3/16/2021 10:32 AM
26	Have already switched to a wind electrical provider	3/15/2021 5:46 PM
27	To old, would never get to see benefits	3/15/2021 2:34 PM
28	plant trees--have done	3/15/2021 8:46 AM
29	Windows and gas efficient furnace are now 34 years old!	3/14/2021 11:42 PM
30	Since I live in a condo, I only own the inside of my place. I cannot do anything about my walls, roof, outside areas, etc.	3/14/2021 10:36 PM
31	Homeowner Association would prohibit solar panels but I feel they are very important	3/14/2021 4:23 PM
32	Bus for rural residents, seniors.	3/14/2021 10:56 AM
33	Use battery powered lawn equipment, such as a battery powered lawn mower	3/14/2021 10:17 AM
34	Make our next car an electric car.	3/14/2021 10:13 AM
35	Have geothermal heat/air	3/13/2021 12:01 PM
36	All considerations would be based on personal financial considerations. Climate change or greenhouse gas would not be part of any decision.	3/12/2021 2:58 PM
37	Home owners association does not allow solar panels unfortunately	3/12/2021 12:00 PM
38	I live in a historic home and would be interested in what more I could do for energy savings without changing my infrastructure.	3/12/2021 10:20 AM
39	Encourage (and possibly demand) my apartment complex to do many of the above items	3/12/2021 10:15 AM
40	I wanted solar panels but EP township changed rules and require 3ft of space on all sides of the roof. Due to limited panels my house didn't qualify for solar.	3/12/2021 7:05 AM
41	Use shades/curtains to control temp.; keep house at 62 in winter, 80 in summer; turn off lights in unoccupied rooms; combine errands; naturalize yard to minimize mowing; plant trees; minimize aerosol purchases.	3/12/2021 12:29 AM
42	look to real changes funded by Joe Biden like community Geo thermal systems centered under local streets	3/11/2021 10:06 PM
43	Would do but Can't due to HOA restrictions	3/11/2021 7:31 PM
44	Rooftop solar be a priority in housing communities for cost reduction and power when the grid is down.	3/11/2021 6:54 PM
45	buy an energy efficient car Prius	3/11/2021 4:29 PM
46	Limited by H0A regulations no	3/11/2021 3:58 PM

Cumberland County Climate Action Plan Survey

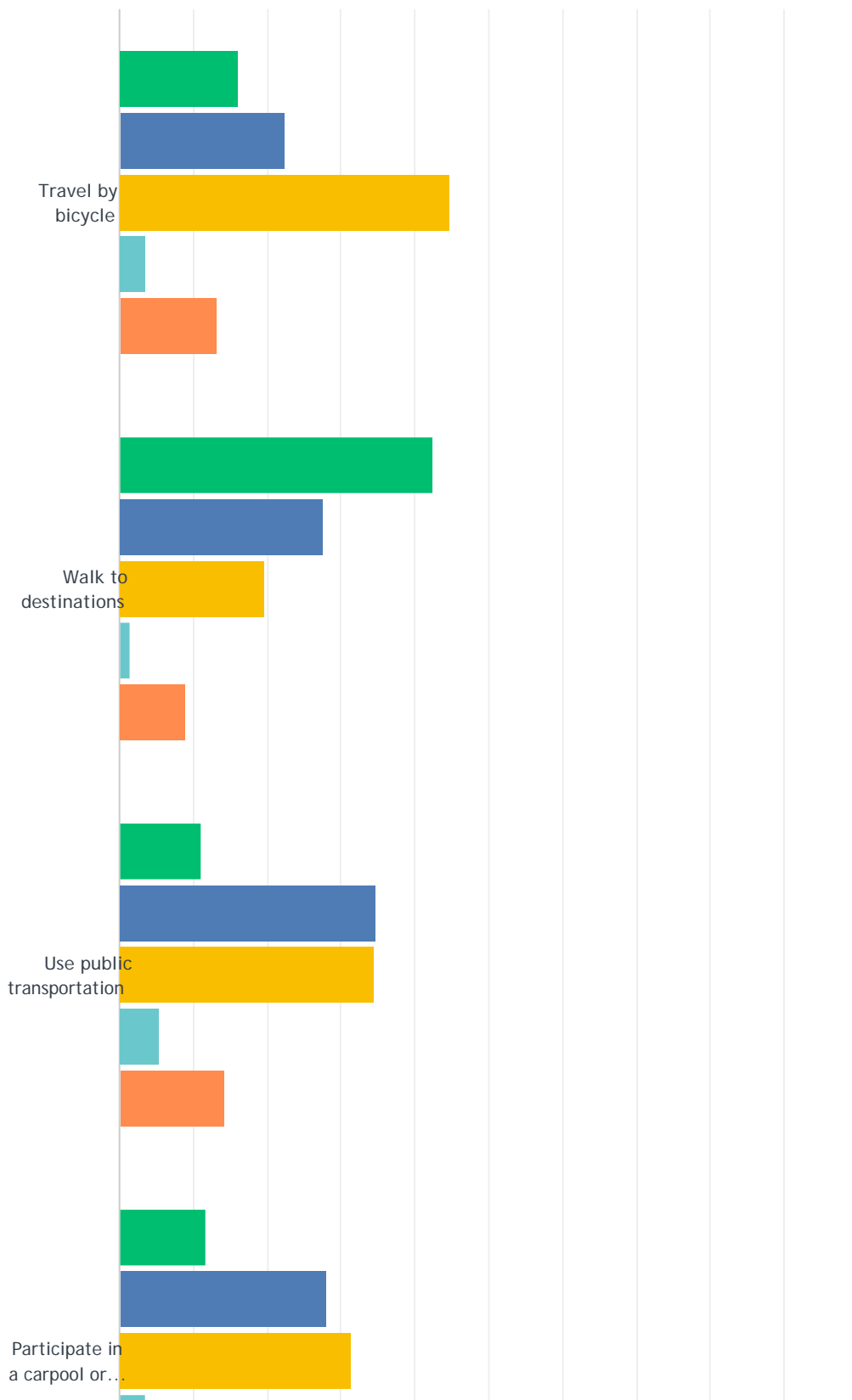
47	Please do something to limit pollution in Cumberland County. Ban wood burning furnances, ban out door fires and limit truck emissions. The pollution in the valley is awful at times and is harmful to those with respiratory issues, asthma and allergies	3/11/2021 3:52 PM
48	I	3/11/2021 12:19 PM
49	PA Power Switch is incredibly difficult to navigate	3/11/2021 11:15 AM
50	I rent, so there is only so much I can do	3/11/2021 10:54 AM
51	Just be responsible, all this extra stuff is not unnecessary and leading to the liberal take over of our country	3/11/2021 9:21 AM
52	n/a	3/11/2021 8:30 AM
53	Want to do, very expensive	3/11/2021 3:19 AM
54	A1	3/11/2021 1:14 AM
55	Restrictions d/t COA	3/10/2021 11:07 PM
56	While I indicate having done most of these things, some are in part. For example, an addition on my home has many energy-efficient features, whereas the original portion of the house has not been retrofitted.	3/10/2021 8:17 PM
57	We need new roof which is 25 years old. Then not damage the new roof with installation of solar panels	3/10/2021 8:11 PM
58	We have geothermal, which is environmentally safe	3/10/2021 7:17 PM
59	disconnect vampire electronics	3/10/2021 7:16 PM
60	Because I live in an existing cottage at Bethany Village there are limitations on what I can do.	3/10/2021 5:59 PM
61	Use renewable forms of energy for new construction, stop using plastics (go back to cartons, reusable bags and paper), support Whole Foods initiatives, and recycle.	3/10/2021 5:44 PM
62	I do believe that all government agencies should lead by example and switch to an all-green electrical system whether it be wind power solar power	3/10/2021 4:11 PM
63	Global warming is fake. Don't do anything!	3/10/2021 2:31 PM
64	Condo, so we can't install solar panels.	3/10/2021 1:15 PM
65	solar panels perhaps if they were inconspicuous	3/10/2021 12:51 PM
66	I rent.	3/10/2021 12:31 PM
67	I always turn off electric devices when not in use otherwise my bill would be higher. Dumb question.	3/10/2021 12:27 PM
68	While I do many of these things at home, I will admit that most of what is listed in this section has very little impact on my energy consumption. While turning off light switches and electronics is easy and will make a homeowner feel like they are making a difference, it is a very small amount of personal energy consumption. We will never make real change if this is what we are concerned about. One of, if not the biggest differences most homeowners improve is to switch from an electric, tanked hot water heater to an instant, natural gas water heater. That alone is probably worth more than everything in the section combined. Turning off LED lights or a television when you are not using it is like trying to become a millionaire by picking up pennies off the ground.	3/10/2021 12:20 PM
69	Get climate change deniers out of public office	3/10/2021 12:19 PM
70	Would like to see Cumberland County Buildings keep their doors & windows closed even when someone is too hot or too cold!	3/10/2021 11:59 AM
71	will not use mercury lined energy efficient light bulbs	3/10/2021 11:45 AM
72	Maybe you should do away with Historical districts crazy requirments, like Carlisle where they require residents to install old more expensive and less efficient windows and doors to LOOK HISTORICAL if you are worried about these things that would be a quick fix.	3/10/2021 11:40 AM

Cumberland County Climate Action Plan Survey

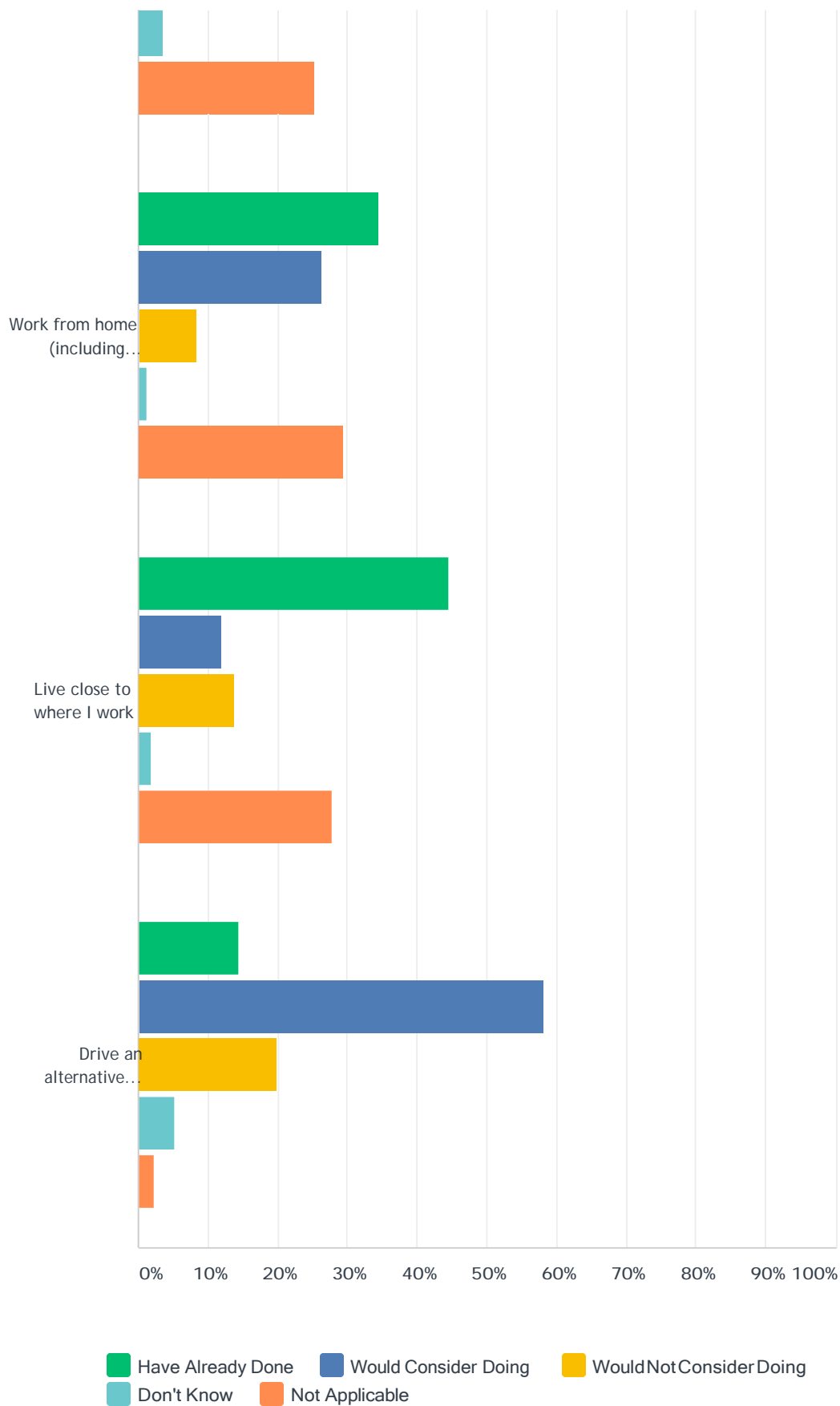
73	For me, any change I made would be a financial descision. Will making this change save or cost me money in the long run?	3/10/2021 11:39 AM
74	If it makes sense and the cost would be low, any actions could be considered if it would be useful to the environment and for fellow citizens.	3/10/2021 11:06 AM
75	Financially compensate for the carbon footprint my hybrid vehicle makes	3/10/2021 10:48 AM
76	Good job on slanting the poll to tilt towards a biased position. Limit the options to limit the responses	3/10/2021 10:29 AM
77	reduce household waste	3/10/2021 10:21 AM
78	Reduced lawn size with landscaping to decrease mowing time/gas.	3/10/2021 10:21 AM
79	I rent so the homeowner would have to make the changes that's why I answered N/A	3/10/2021 9:41 AM
80	I have looked into the possibility of solar but my house is poorly sited for solar.	3/10/2021 9:27 AM
81	purchased carbon credits for our natural gas usage, through our provider. purchased electric car and installed charger. Continue to write our representatives. Belong to Citizens Climate Lobby.	3/10/2021 9:22 AM
82	Combining trips to accomplish errands	3/10/2021 8:16 AM
83	Rainwater runoff, soil health, asphalt heat should also be things considered and encouraged	3/10/2021 7:44 AM
84	Cost is a BIG factor (Senior)	3/10/2021 7:43 AM
85	Can't install solar. Already looked into it. We don't get enough hours of sunlight on our property.	3/10/2021 6:58 AM
86	nothing as CO2 isn't the problem. CO2 is plant food	3/10/2021 6:46 AM
87	We should conserve water too!	3/10/2021 5:48 AM
88	Live in apartment so have no control over what is done re: N/A answers above.	3/9/2021 11:42 PM
89	Use energy efficient lighting with controls and schedules to turn it off at night or when not in use.	3/9/2021 9:54 PM
90	We looked into solar and the number of panels need & location was not feasible	3/9/2021 5:11 PM
91	Ground Source Heat Pump installed 25 years ago.	3/9/2021 11:27 AM

Q4 Which of the following transportation actions have you already done, would consider doing, or would not consider doing?

Answered: 1,895 Skipped: 456



Cumberland County Climate Action Plan Survey



Cumberland County Climate Action Plan Survey

	HAVE ALREADY DONE	WOULD CONSIDER DOING	WOULD NOT CONSIDER DOING	DON'T KNOW	NOT APPLICABLE	TOTAL	WEIGHTED AVERAGE
Travel by bicycle	16.07% 301	22.37% 419	44.74% 838	3.58% 67	13.24% 248	1,873	1.00
Walk to destinations	42.52% 802	27.52% 519	19.62% 370	1.38% 26	8.96% 169	1,886	1.00
Use public transportation	11.12% 209	34.73% 653	34.57% 650	5.43% 102	14.15% 266	1,880	1.00
Participate in a carpool or vanpool	11.71% 220	27.99% 526	31.35% 589	3.62% 68	25.33% 476	1,879	1.00
Work from home (including after the pandemic ends)	34.55% 652	26.34% 497	8.37% 158	1.27% 24	29.46% 556	1,887	1.00
Live close to where I work	44.55% 838	11.91% 224	13.72% 258	1.91% 36	27.91% 525	1,881	1.00
Drive an alternative fuel car (i.e. electric, biofuel, hybrid)	14.47% 273	58.08% 1,096	19.98% 377	5.14% 97	2.33% 44	1,887	1.00

#	OTHER (PLEASE SPECIFY)	DATE
1	Divested from my financial investments in fossil fuel companies; reinvested in alternative energy.	4/14/2021 11:09 AM
2	used to bike to work but it's too dangerous, even with bike lanes. friends have been seriously injured. had to stop.	4/13/2021 9:42 AM
3	advocate for more public transportation, especially trains	4/12/2021 8:10 PM
4	I am especially interested in an improved public transit system	4/11/2021 7:56 PM
5	Combine necessary errands to one trip.	4/8/2021 9:05 PM
6	Almost exclusively bike for any errand in town in any weather	4/1/2021 4:09 PM
7	Would not walk or bike because SS Two has very few places where that can be done safely in traffic.	3/29/2021 7:17 PM
8	I would if I could afford a newer car. However, alternative fuel vehicles are not cheap and not many used are on the market.	3/29/2021 5:03 PM
9	pandemic has made public transportation too risky for me	3/25/2021 8:55 PM
10	Retired	3/22/2021 9:38 PM
11	I am retiring, so my commuting answers are skewed in this regard. And, our next commuter/around town vehicle will be an all electric vehicle. Cannot consider travel by bicycle (other than recreation) because of our age and the location of our home; we live in a very rural area not very close to stores, banks, etc	3/22/2021 8:10 AM
12	We have very little public transportation available in our township.	3/21/2021 12:49 PM
13	I rent, and I also need free help for certain conversions.	3/21/2021 8:00 AM
14	I am physically handicapped	3/20/2021 12:31 PM
15	Increase Amtrack access and routes, instead of air travel	3/19/2021 12:26 PM
16	Climate change a hoax	3/18/2021 8:47 PM
17	Most of these not applicable to where I live- 20 minutes from "town" no public transportation and bicycling is not an option with children	3/18/2021 8:44 AM

Cumberland County Climate Action Plan Survey

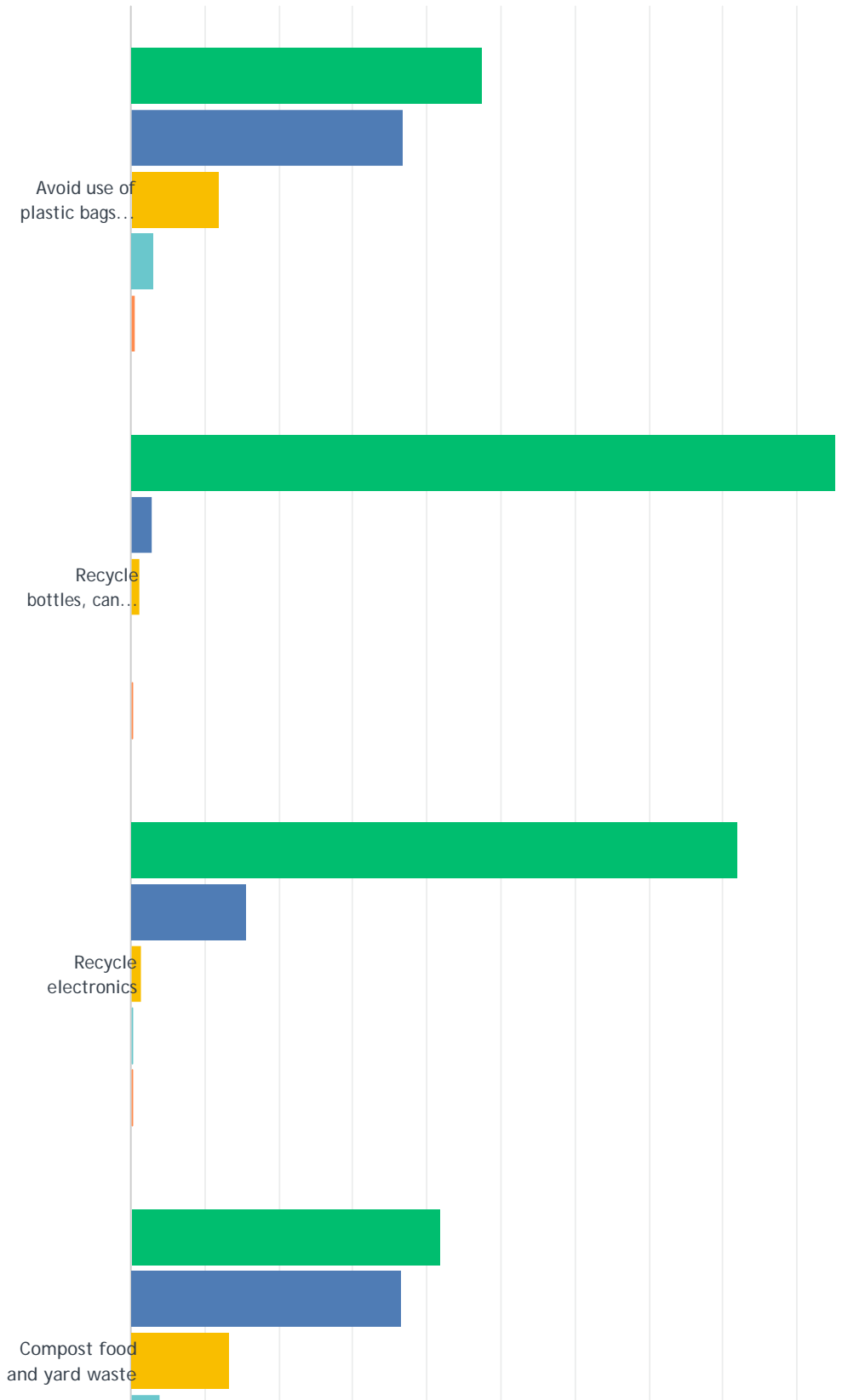
18	As a taxpayer, I would support greater investments in mass transit.	3/17/2021 10:40 AM
19	More walking & bike lanes needed in Cumberland County	3/16/2021 5:08 PM
20	worker controlled co ops. Food for people not for profit. Community organic gardens. Housing for people not for profit. Health care for people not for profit. New values in the institutions: community/solidarity, democracy/freedom, equality/fairness, resource sharing/cooperation, ecological rationally/sustainability, care/love, peace/mutual aid.	3/16/2021 4:10 PM
21	I am retired so do not travel for work, but I do consolidate trips for errands, groceries, appointments.	3/15/2021 3:17 PM
22	I am retired	3/15/2021 2:34 PM
23	batching errands to minimize driving-done	3/15/2021 8:46 AM
24	I would bike, walk and take transit if there were safe pathways and destinations closer to home. When you have to bike on route 15 to get to the grocery store—no.	3/15/2021 8:07 AM
25	I am retired, so I don't drive much.	3/14/2021 10:36 PM
26	Drive a tiny car with very good fuel efficiency.	3/14/2021 6:33 PM
27	LIVE IN A RETIREMENT COMMUNITY, SO MY OPTIONS ARE LIMITED	3/14/2021 4:29 PM
28	pay a carbon tax	3/14/2021 2:24 PM
29	Only would consider this if it was cost effective in the long run. We don't need gov't mandating this. Let the market decide.	3/14/2021 2:17 PM
30	I would like the County to address in a very published c forum, the massive truck population and warehouse building which is ongoing with, it appears, no planning and zoning regulation regarding massive destruction of land for big box construction.	3/12/2021 2:10 PM
31	So called 'electric' cars are actually coal or nuclear powered. Solar and wind are environmentally unsound, outrageously expensive and unreliable (ask Texas and Germany).	3/12/2021 10:53 AM
32	Retired. When resided in cities, I always walked and took public transportation. Cumberland County public transportation is almost non-existent.	3/12/2021 10:33 AM
33	I am currently not able to walk, therefore travel by bicycle and walking to destinations is not possible.	3/12/2021 10:24 AM
34	Public transit would be great, but the infrastructure in this area is extremely poor and often nonexistent	3/12/2021 10:15 AM
35	Drive fuel-efficient cars & combine errands; shut off engine if sitting more than 15 seconds; regular car maintenance; shop locally.	3/12/2021 12:29 AM
36	many are great for the rich how do you do this for the aged poor when you have not rewarded community neighbor to neighbor Christian care?	3/11/2021 10:06 PM
37	Seek out carpool or vanpool opportunities when ever I need to travel.	3/11/2021 7:35 PM
38	take the train as opposed to flying	3/11/2021 5:49 PM
39	Public transit concerns are downstream from a development pattern that privilege's sprawl. These are end user based *solutions* rather than structural solutions.	3/11/2021 4:38 PM
40	Please do something to limit pollution in Cumberland County. Ban wood burning furnances, ban out door fires and limit truck emissions. The pollution in the valley is awful at times and is harmful to those with respiratory issues, asthma and allergies	3/11/2021 3:52 PM
41	Not enough car charging stations to make traveling via electric feasible.	3/11/2021 3:40 PM
42	Everyone should work from home if they can and want to.	3/11/2021 11:02 AM
43	I am old and can't walk far or ride my bike which I miss	3/11/2021 10:49 AM
44	Travel by bike, please stop trying to turn Cumberland County into San Francisco it's embarrassing	3/11/2021 9:21 AM
45	n/a	3/11/2021 8:30 AM

Cumberland County Climate Action Plan Survey

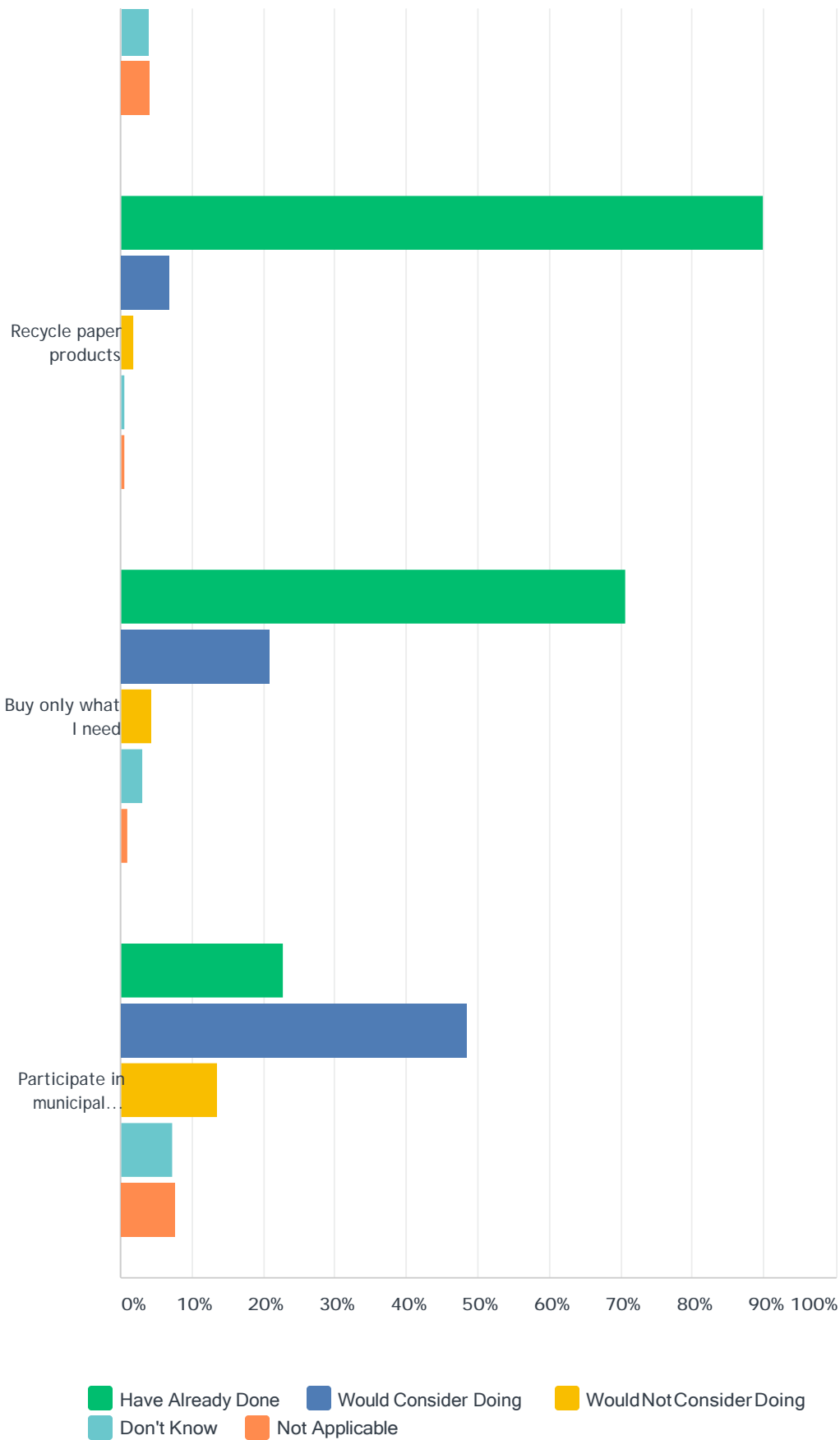
46	We do things because it saves money, not because it's mandated.	3/11/2021 7:58 AM
47	install wood burning stove	3/11/2021 7:57 AM
48	I am disabled.I do not work. I cannot ride a bike	3/11/2021 12:09 AM
49	Switch to 4 cylinder vehicles	3/10/2021 8:07 PM
50	It is not safe to walk or drive our roads. There is too much truck traffic	3/10/2021 7:17 PM
51	I hope to switch to an electric car when i can afford it.	3/10/2021 5:59 PM
52	Hampden Twp has not made the community walkable. Extremely dangerous to walk out of Pinebrook to businesses. But I would prefer to walk if safe.	3/10/2021 2:41 PM
53	Response alternatives do not give any context. Ex: bad hip so can't walk, ride bike, etc. Doesn't mean I would if I could.	3/10/2021 1:46 PM
54	I wish there were better transportation options available.	3/10/2021 12:59 PM
55	Cumberland County needs to have more electric car charging stations. Having these available would be good for promoting electric vehicles and could be added to local businesses parking lots which would entice residents & visitors of Cumberland County to charge their vehicle there and support the business while they wait!	3/10/2021 12:30 PM
56	cost to maintain, purchase, and repair alternative fuel cars is too high	3/10/2021 11:45 AM
57	I would love to keep working from home but I'm sure my boss Cumberland COunty will not allow that even though other departments are allowed.	3/10/2021 11:40 AM
58	Wlth transportation, it boils down to convenience. If I'm going multiple places, I would take my car because it would save me time and I would not have to carry all my things into each location, only what I needed for that stop.	3/10/2021 11:39 AM
59	Would love to bike, but lack of safe trails and bike lanes in the county makes it dangerous	3/10/2021 11:32 AM
60	I live in Harrisburg but work in Carlisle. There are no good public transportation options for me.	3/10/2021 11:32 AM
61	Concerned about the costs to replace power sources in alternatively fueled cars. Plus, according to dealers, it is difficult to recycle the power sources at this time.	3/10/2021 11:06 AM
62	I am retired so some of these do not apply. I live in a location which makes it impossible to walk or take public transportation.	3/10/2021 9:27 AM
63	Our township doesn't provide places to allow us to walk places or bike to destinations. I was so disappointed when Creekview Road was redone that they didn't add a bike/walk trail along side of the road. People still unsafely travel those roads on bike or foot. I support this initiative but does our local government?? Money is spent on township buildings but what about trails and/or more trees to beautify our county. The Pike is full of unwanted, ugly buildings. I will certainly will be looking at the next election for politicians that stop saying yes to new buildings and recycle/reuse what we have.	3/10/2021 8:31 AM
64	More bicycle and walking trails are needed.	3/10/2021 8:16 AM
65	Biking and walking in Cumberland County is NOT safe. There are no bike/walking paths to make this happen!	3/10/2021 8:03 AM
66	Cost is a BIG factor	3/10/2021 7:43 AM
67	Combine trips to save wasting gas .	3/10/2021 5:48 AM
68	I am retired and rarely use my car. Would use Rabbit transit if needed.	3/9/2021 11:42 PM
69	Would bike and walk more if lanes and paths were put in to connect areas	3/9/2021 10:56 PM
70	How would would the electricity be generated and transmitted s	3/9/2021 8:59 PM
71	Plan every car trip for efficiency	3/9/2021 8:37 PM
72	Climate change is not man made	3/9/2021 8:18 PM

Q5 Which of the following waste management actions have you already done, would consider doing, or would not consider doing?

Answered: 1,895 Skipped: 456



Cumberland County Climate Action Plan Survey



Cumberland County Climate Action Plan Survey

	HAVE ALREADY DONE	WOULD CONSIDER DOING	WOULD NOT CONSIDER DOING	DON'T KNOW	NOT APPLICABLE	TOTAL	WEIGHTED AVERAGE
Avoid use of plastic bags and other single use plastics	47.49% 897	36.84% 696	11.91% 225	3.07% 58	0.69% 13	1,889	1.00
Recycle bottles, cans and plastics	95.15% 1,803	3.01% 57	1.16% 22	0.26% 5	0.42% 8	1,895	1.00
Recycle electronics	82.07% 1,552	15.71% 297	1.37% 26	0.42% 8	0.42% 8	1,891	1.00
Compost food and yard waste	41.75% 789	36.56% 691	13.39% 253	4.07% 77	4.23% 80	1,890	1.00
Recycle paper products	89.96% 1,703	6.97% 132	1.85% 35	0.53% 10	0.69% 13	1,893	1.00
Buy only what I need	70.61% 1,331	20.95% 395	4.30% 81	3.13% 59	1.01% 19	1,885	1.00
Participate in municipal composting program	22.72% 429	48.52% 916	13.67% 258	7.26% 137	7.84% 148	1,888	1.00

#	OTHER (PLEASE SPECIFY)	DATE
1	Re-use/Re-purpose as much as possible, buy items at thrift shops, instead of newly-created "stuff". Donate usable items instead of discarding in trash. I am astounded at how many usable items are put out for trash by neighbors! Suggest we have a "reuse pickup" program that takes items to donation sites like Community Aid.	4/14/2021 11:09 AM
2	Participate in municipal composting program (for non-yard waste compostables) - would consider if existed	4/13/2021 12:59 PM
3	the more I learn about recycling the more it looks like a scam to keep me buying plastic items	4/13/2021 9:42 AM
4	We DO NOT burn yard waste and other materials in a firepit as neighbors do and Carlisle Borough permits!	4/8/2021 9:05 PM
5	I eat by myself much of the time. Pre-made salads and other ready to eat would be more "palatable" if they were served in a low/no-waste container. Esp. since Penn Waste allegedly won't take non-bottle plastics, which I guess includes salad bar plastics etc. I'd drive farther to patronize a store/ restaurant that deals with this. I'd pay a premium, for that matter.	4/3/2021 5:31 PM
6	Not available in my area, county residents not allowed to use Carlisle facility, even though our funds are use to purchase equipment.	3/31/2021 11:45 AM
7	maintenance contract will not include glass bottles	3/27/2021 11:17 AM
8	Again, I need assistance and education to accomplish many of these changes, free.	3/21/2021 8:00 AM
9	Ban plastic and styrofoam use by restaurants, ready to eat food sales, and sales to consumers. utensils, plates, carryout boxes.	3/19/2021 12:26 PM
10	Would love more information on community compost!	3/16/2021 9:38 PM
11	What is the meaning of "Buy only what I need"? To what does it pertain: food, clothes, paper products, etc.?	3/16/2021 9:34 AM
12	I would recycle everything I can but understand that my municipal-contracted waste collector limits what they accept (all plastics, paper, paperboard, etc)..	3/15/2021 12:08 PM
13	purchase gently used items or borrowing if not something I need regularly	3/15/2021 8:46 AM
14	We donate a lot of things we don't need and would consider participating in a swap kind of program if we felt safe doing so. Passing things on is a great way to eliminate waste. Donating is not only about tax deductions or giving to those in need. It's earth friendly to use hand me downs!	3/15/2021 8:07 AM

Cumberland County Climate Action Plan Survey

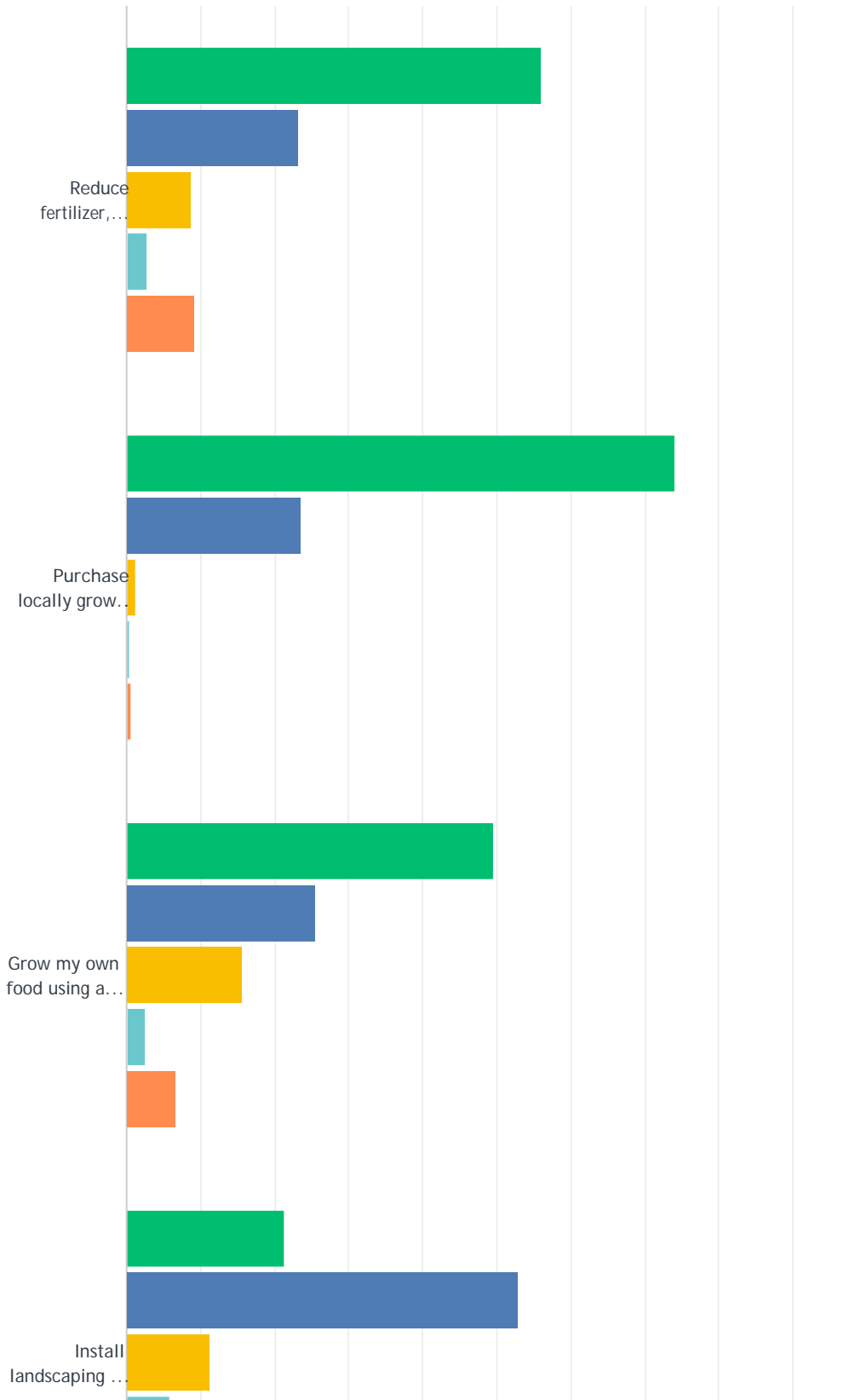
15	Buy secondhand whenever possible; opt out of "junk mail"; reduce our trash output by buying less, and working hard to find "homes" for our unwanted stuff plus reusing, upcycling, etc.	3/14/2021 9:37 PM
16	The municipal composting program is terrific. It is exactly what community working together should be.	3/14/2021 8:44 PM
17	compost at home	3/14/2021 6:43 PM
18	Grocery stores make it hard to not use plastic. They won't bag reusable bags from home	3/14/2021 11:02 AM
19	Support county efforts to eliminate LIGHT POLLUTION by local businesses, require use of security other than all night lights, or at minimum use of motion detectors and lighting height and direction rules (only ground below, NOT upward-outward)	3/14/2021 12:01 AM
20	County should distribute specific instructions describing exactly what can go in recycling bins.	3/12/2021 2:10 PM
21	Penn Waste cancelled paper recycling. Need to create easy replacement.	3/12/2021 10:33 AM
22	Current recycling is a joke. We need better facilities that can actually recycle what we use. Our current provider takes very limited item. You can't even recycle paper anymore. No cereal boxes, no shampoo bottles, etc. Its very disappointing.	3/12/2021 7:05 AM
23	Felt dryer balls instead of softener; buy food in metal or glass when possible; use washable dishes, flatware, napkins at home; don't flush toxic chemicals down the drain; repurpose items; donate, rather than trash; use reusable shopping bags (or request paper, while COVID disallows bringing own bags); extract every bit of product from containers; use shampoo bars (no plastic container); refuse straws eating out, & use own metal straws; minimize fast food purchases; pick up litter.	3/12/2021 12:29 AM
24	do for the least and solve the problems for a wheelchair user in mainstream community and you will find many of your other problem solving a snap!	3/11/2021 10:06 PM
25	County has to make it easier to recycle. Have to drive my paper to Dauphin as our trash company no longer collects paper	3/11/2021 5:49 PM
26	Would recycle Styrofoam	3/11/2021 5:02 PM
27	use craigslist or freecycle to give away or sell items, I no longer need	3/11/2021 12:03 PM
28	In the first one, didn't we switch to plastic bags to save the rain forest and reduce paper use????	3/11/2021 11:44 AM
29	n/a	3/11/2021 8:30 AM
30	Didn't know it existed	3/11/2021 3:19 AM
31	Add more household recycling options and public education to reduce ineligible items in recycling	3/11/2021 1:14 AM
32	Current township doesn't have wastefacility	3/10/2021 9:15 PM
33	I recycle fall leaves in my garden. Borough's compost had candy wrappers	3/10/2021 8:11 PM
34	PLEASE BRING A COMPOSTING PROGRAM TO LEMOYNE!!!	3/10/2021 7:42 PM
35	'	3/10/2021 7:25 PM
36	HOA's need to allow composting! I would compost in a heartbeat if it was allowed in my HOA	3/10/2021 7:22 PM
37	We would like to institute composting here at Bethany Village, and we have a special program to collect plastic. We've also discouraged the use of at least some plastics but need to do more.	3/10/2021 5:59 PM
38	Don't know anything about municipal composing program. Will check into it.	3/10/2021 5:44 PM
39	We need bike and walking to have equal access to towns as cars. On West Coast this is normal. I ride My bike 25 miles round-trip for food, and it's tough, I am dist cyclist for 50 years, Cumberland County is most unsafe area. Yets it's flat, educated and wealthy. We can do it here Equal Access paths walks	3/10/2021 3:28 PM
40	Would consider recycling electronics more, if the township and/or county would help subsidize the cost	3/10/2021 2:10 PM

Cumberland County Climate Action Plan Survey

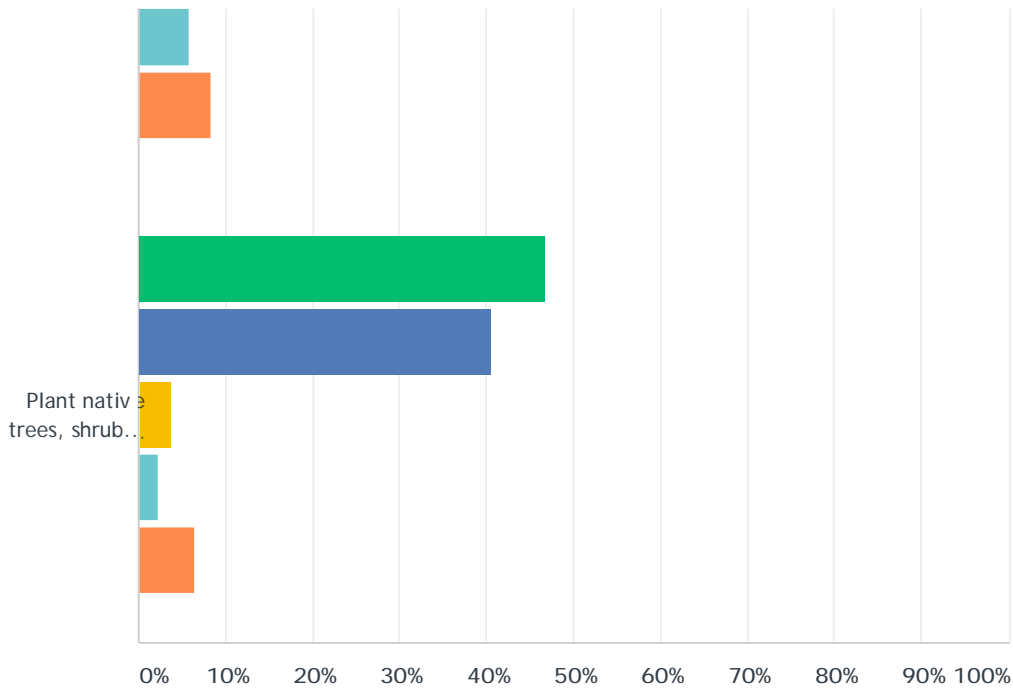
41	As a single parent many of these things take too much money or effort to be possible.	3/10/2021 2:03 PM
42	Again, responses don't provide context: Ex: at my age and physical health I can't do composting, etc.	3/10/2021 1:46 PM
43	Would love to see a food composting program to collect fruit and vegetable waste	3/10/2021 1:43 PM
44	Give old/nwanted bikes to bicycle recyclers (Recycle Bicycle Harrisburg)	3/10/2021 1:38 PM
45	I used to take all of my recycables to West Pennsboro Township, but there is no longer any convenient place to take them.	3/10/2021 12:24 PM
46	Instead of discarding used household items that still have useful purpose, I donate or give away on Facebook Marketplace.	3/10/2021 12:20 PM
47	The Cumberland County building where I work has clearly marked & easy to locate containers to place their items for recycling, but many choose to dump all into the trash can.	3/10/2021 11:59 AM
48	Recycling electronics for a fee in Cumberland County seems ridiculous when it can be done for free so many other places.	3/10/2021 11:57 AM
49	I like getting large plastic bags from stores because I use them as trash bags. This negates me having to buy plastic trash bags. The meaning of the question "Buy only what I need" was unclear to me. In our house, we buy what we need and a backup supply (which came in very handy during the COVID toilet paper runs).	3/10/2021 11:39 AM
50	It would be easier to recycle if they didn't limit what we could recycle so much.	3/10/2021 11:37 AM
51	Get rid of Borough Bags which further pollute the environment and cost a small fortune	3/10/2021 11:22 AM
52	Tried the composting. Not taking the messy containers into my car again! If there were composting locations within every neighborhood in the county, it might be possible then.	3/10/2021 11:06 AM
53	Put my stuff in my garden	3/10/2021 8:41 AM
54	unfortunately plastic bags are good for cleaning up after dogs when walking.	3/10/2021 8:15 AM
55	Vote for governmental regulations requiring companies to use environmentally friendly packaging.	3/10/2021 8:09 AM
56	Recycle plastic bags appropriately in dedicated receptacles	3/10/2021 7:49 AM
57	Allowing people to have backyard poultry, with limits, would help with this also. Encouraging the use of worms can also be a way to use kitchen waste and produce natural fertilizer.	3/10/2021 7:44 AM
58	During pandemic we're forced to use plastic bags rather than reusable	3/10/2021 7:41 AM
59	I compost at home	3/10/2021 7:28 AM
60	Not available where I live.	3/10/2021 7:12 AM
61	Read "Inconvenient Facts, The Science That Al Gore doesn't want you to know". Get the facts.	3/10/2021 6:46 AM
62	Upper Allen doesn't have a municipal compose site	3/10/2021 6:32 AM
63	Don't wash the car in the driveway or yard!	3/10/2021 5:48 AM
64	apt. complex has recycle bins so I use those and have reduced purchase of non recyclable items	3/9/2021 11:42 PM
65	Recycling or proper disposal of hazardous materials	3/9/2021 8:37 PM
66	Don't charge us extra to get rid of certain items and would reconsider	3/9/2021 1:32 PM

Q6 Which of the following land use actions have you already done, would consider doing, or would not consider doing?

Answered: 1,895 Skipped: 456



Cumberland County Climate Action Plan Survey



■ Already Done
 ■ Would Consider Doing
 ■ Would Not Consider Doing
■ Don't Know
 ■ Not Applicable

	ALREADY DONE	WOULD CONSIDER DOING	WOULD NOT CONSIDER DOING	DON'T KNOW	NOT APPLICABLE	TOTAL	WEIGHTED AVERAGE
Reduce fertilizer, pesticide and herbicide use on lawns	56.05% 1,060	23.27% 440	8.78% 166	2.75% 52	9.15% 173	1,891	1.00
Purchase locally grown farm products	74.05% 1,401	23.68% 448	1.16% 22	0.42% 8	0.69% 13	1,892	1.00
Grow my own food using a garden	49.60% 937	25.52% 482	15.67% 296	2.44% 46	6.78% 128	1,889	1.00
Install landscaping to capture rainwater	21.40% 404	53.02% 1,001	11.39% 215	5.77% 109	8.42% 159	1,888	1.00
Plant native trees, shrubs, and plants	46.93% 886	40.68% 768	3.71% 70	2.28% 43	6.41% 121	1,888	1.00

#	OTHER (PLEASE SPECIFY)	DATE
1	Reduce mowing and use of power tools like edgers and leaf blowers	4/14/2021 4:39 PM
2	Use a rain barrel for outside watering purposes.	4/14/2021 4:11 PM
3	Rain barrel for watering plants. Planted plants that provide shelter, habitat, food for wildlife and pollinators.	4/14/2021 11:09 AM
4	Our natural lawn with dandelion and violets is easily recognized amidst our True Green neighbors.	4/8/2021 9:05 PM
5	Live in a condo; landscaping does not apply.	3/29/2021 5:27 PM
6	HOA restrictions	3/29/2021 5:22 PM
7	please distribute more information on native trees, shrubs, and plants easily online	3/25/2021 8:55 PM
8	We are planting endemic species to improve the tree canopy and buffer surrounding a small	3/22/2021 8:10 AM

Cumberland County Climate Action Plan Survey

perennial unnamed trib to the Yellow Breeches on our property, in part due to loss of native ash trees.

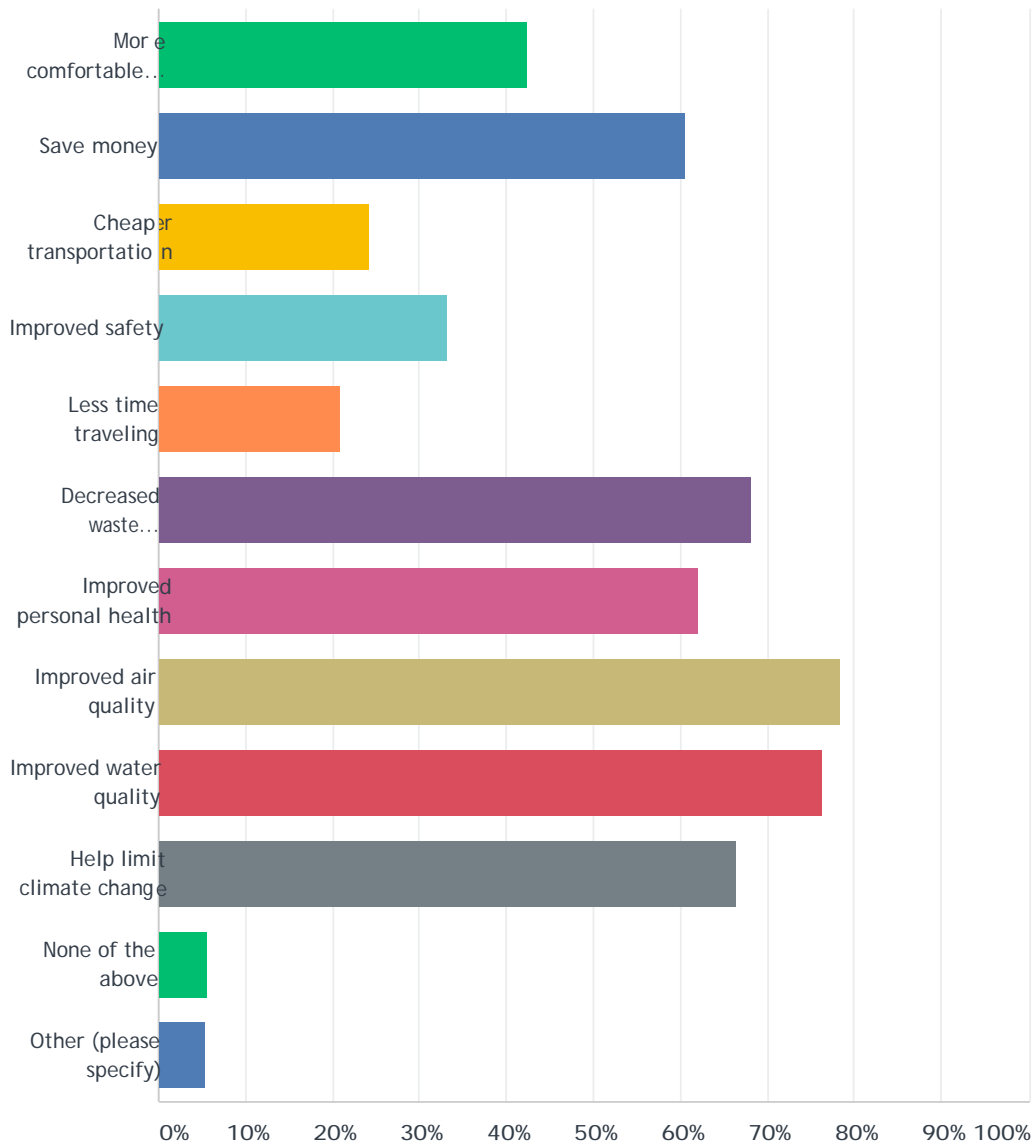
9	Do not forget those of us who are willing yet not financially or physically able.	3/21/2021 8:00 AM
10	Teach others about using native plants	3/20/2021 7:42 PM
11	Small things like encouraging developers and communities to plant native plants could make a big difference.	3/17/2021 10:40 AM
12	I have eliminated grass entirely (which also obviously eliminates mowing).	3/16/2021 8:30 PM
13	We do what we can	3/15/2021 2:34 PM
14	reduce the amount of impervious surface at my home	3/15/2021 8:46 AM
15	Pick up trash in our neighborhood	3/14/2021 9:37 PM
16	installed rain barrels to use less municipal water	3/14/2021 8:44 PM
17	The use of chemicals -pesticides and herbicides should be banned on a global basis	3/14/2021 2:24 PM
18	Occasionally do plant native plants but don't deem it important	3/14/2021 2:17 PM
19	grow tomatoes and peppers in summer	3/14/2021 12:09 PM
20	rain barrels	3/12/2021 5:33 PM
21	County tree sale should distribute native trees for planting -FREE. Also, as previously stated, warehouses should be required to fully replace woodland or replicate fuel grasses surrounding their property. The destruction of these environments is appalling.	3/12/2021 2:10 PM
22	Shade Tree Commission needs to update guidelines to recommend trees that 1) don't cause sideways to heave, 2) are more hay fever friendly (only female trees in town to reduce pollen).	3/12/2021 10:53 AM
23	Live in a community that handles all landscaping issues. Urge them to follow these practices.	3/12/2021 10:33 AM
24	Would encourage (or demand) my apartment complex to do many of the above items	3/12/2021 10:15 AM
25	Collect rain water with rain barrels	3/12/2021 10:13 AM
26	Minimize grass lawn & don't water it; watch for harmful insects & trap, not spray; butterfly garden; use cedar oil on trees to repel ticks; multiple rain barrels; provide wildlife habitat; use bamboo/sugar cane/recycled paper products, only sparingly.	3/12/2021 12:29 AM
27	suortive local vegiivation or plants that have been known to surive the extremes and bring what you sutoexperts want to the problems like the ginko tree?	3/11/2021 10:06 PM
28	If help were available I would try anything that would help with climate and the environment.	3/11/2021 7:35 PM
29	Have a rain barrel installed.	3/11/2021 1:21 PM
30	I live on a farm...	3/11/2021 11:44 AM
31	Plant Monarch butterfly specific plants and milkweed	3/11/2021 9:15 AM
32	Gear plantings towards pollinators.	3/11/2021 8:47 AM
33	n/a	3/11/2021 8:30 AM
34	Restrictions d/t COA	3/10/2021 11:07 PM
35	We have rain barrels to capture water for summer plant watering.	3/10/2021 5:44 PM
36	I use a manual rotary lawn mower. No engine. Just my heart.	3/10/2021 3:28 PM
37	I can't afford this stuff and it's not a priority.	3/10/2021 2:03 PM
38	Response options do not provide context: If I were younger and capable I would start a garden again.	3/10/2021 1:46 PM
39	only have time for a small garden	3/10/2021 12:51 PM
40	Again, my decisions would be based on cost and convenience.	3/10/2021 11:39 AM

Cumberland County Climate Action Plan Survey

41	Reduce water consumption - reduction of shower times, cold water cycles in washer.	3/10/2021 10:29 AM
42	Have too many already	3/10/2021 9:38 AM
43	Vote for township/county land development regulations to stop multifamily and warehouse land developmente.	3/10/2021 8:09 AM
44	Again, having the ability to use backyard poultry can help with waste management and allow people to have fresh eggs, as well as produce natural fertilizer. Also using goats to help maintain wild areas instead of gas powered equipment. Using plants on the sides of roads to reduced storm water runoff and encouraging people to do the same.	3/10/2021 7:44 AM
45	Live in apt. and have no control over N/A answers	3/9/2021 11:42 PM
46	Installed rain barrels	3/9/2021 11:31 PM

Q7 Which of the following outcomes motivate you to take climate change actions? (select all that apply)

Answered: 1,895 Skipped: 456



Cumberland County Climate Action Plan Survey

ANSWER CHOICES	RESPONSES	
More comfortable living	42.43%	804
Save money	60.63%	1,149
Cheaper transportation	24.17%	458
Improved safety	33.35%	632
Less time traveling	20.84%	395
Decreased waste generation	68.13%	1,291
Improved personal health	62.11%	1,177
Improved air quality	78.52%	1,488
Improved water quality	76.31%	1,446
Help limit climate change	66.60%	1,262
None of the above	5.70%	108
Other (please specify)	5.38%	102
Total Respondents: 1,895		

#	OTHER (PLEASE SPECIFY)	DATE
1	I think the meaning of this question is unclear. I responded with what I believe will be gained by addressing climate change.	4/14/2021 11:09 AM
2	Some eco actions are more accessible to me due to income security and privilege; knowing that not everyone can afford to always choose sustainable, it's even more important that those who can, do.	4/13/2021 12:59 PM
3	all of above	4/13/2021 9:51 AM
4	Lessen our heretofore.rotten stewardship of our planet for future generations.	4/13/2021 8:36 AM
5	Saving the planet for future generations	4/12/2021 8:10 PM
6	I really don't believe we have a climate change problem. Climate change programs are nothing more than to distribute wealth among poor nations. The climate has changed in the world for millions of years, ever heard of the ice age. Volcanoes erupte more carbon dioxide into the atmosphere than all human contribution. This a hoax	4/12/2021 4:37 PM
7	Taking care of the only planet we have to sustain life for us and our children.	4/8/2021 9:05 PM
8	RELIABILITY of Product	4/7/2021 12:13 PM
9	To ensure cleaner Earth for now and the future. Limit/stop senseless acts like animal extinction, full land fills and too much use of bottles.	4/5/2021 12:18 PM
10	For my children and their future	3/31/2021 7:52 PM
11	India, China are major poluters. We cannot get them to comply. Our government needs to use common sense.	3/31/2021 11:45 AM
12	will do anything within reason. Higher taxes is not a real solution.	3/30/2021 2:19 PM
13	Be a responsible person for the next generation	3/25/2021 7:47 AM
14	I am already a good steward of the environment and have been all my life. It was my upbringing.	3/23/2021 7:44 PM
15	Virtually nothing from the government	3/23/2021 8:34 AM
16	I feel like I am a part of the whole instead of isolated when I consider my planet, nature, and	3/21/2021 8:00 AM

Cumberland County Climate Action Plan Survey

humanity.

17	Save our planet	3/20/2021 9:38 AM
18	Climate change is a hoax	3/18/2021 8:47 PM
19	Taking good care of what God has given to us.	3/18/2021 8:35 AM
20	It is all about our future.	3/17/2021 10:40 AM
21	There is no greater concern/issue.	3/16/2021 8:30 PM
22	Improved quality of life for others and myself	3/15/2021 7:11 PM
23	culture requires it	3/15/2021 3:46 PM
24	Saving the environment for the future.	3/15/2021 3:17 PM
25	The urgency of climate change is SO SEVERE that I would pay more, live less comfortably, and do with less if it helped to protect the biosphere. We are in the middle of the 6th Great Exinction, and it feels like no one in government is paying attention.	3/14/2021 8:44 PM
26	This is a crises and needs action NOW	3/14/2021 2:24 PM
27	Freedom to decide when and if I will change habits.	3/14/2021 2:17 PM
28	Reduce noise pollution	3/14/2021 10:17 AM
29	Do not believe climate change is a big issue	3/13/2021 12:01 PM
30	Make changes that will benefit my children and future generations	3/13/2021 9:11 AM
31	No such thing as climate change	3/12/2021 4:15 PM
32	If you follow the science (try Tony Heller at RealClimateScience.com and/or get a few copies of Greg Wrightstone's book Inconvenient Facts), then you can refocus the limited time we have here on God's green earth to activities addressing real issues that have a real possibility of doing something constructive and not wasting people's time and money.	3/12/2021 10:53 AM
33	It's the right thing to do	3/12/2021 10:15 AM
34	Survival of the species	3/12/2021 8:30 AM
35	Future for my children	3/12/2021 7:05 AM
36	Make our environment healthier and more sustainable for everyone.	3/12/2021 12:29 AM
37	doing the will of God!!!	3/11/2021 10:06 PM
38	I have asthma because of air pollution in Cumberland County with all the truck traffic and warehouses	3/11/2021 6:54 PM
39	Leave a world that isn't actively trying to destroy all human life for my children	3/11/2021 6:12 PM
40	No comment	3/11/2021 6:06 PM
41	fear	3/11/2021 5:06 PM
42	Improve ouyvomrd for younger generations	3/11/2021 4:29 PM
43	Lmk lol	3/11/2021 3:58 PM
44	Save wildlife, particularly birds and all native habitats and native plants. The growing season in the Cumberland Valley has changed as has migration timing for birds and the severity of weather. And the pollution from traffic and people burning wood in their homes, fire pits, etc is making it hard to breath outside and to even go outside to enjoy the outdoors.	3/11/2021 3:52 PM
45	I will do what I can to reduce waste, save energy, and keep our environment clean. I focus on real actions that have a measurable, observable, real impact, unlike a motivation to impact image climate change.	3/11/2021 2:06 PM
46	Overall lower energy costs- not price fixing or taxes on fossil fuels	3/11/2021 12:19 PM
47	Farmers have always recycled and taken care of the planet. It's just a natural thing to do!	3/11/2021 11:44 AM

Cumberland County Climate Action Plan Survey

48	For my Grandchildren	3/11/2021 10:54 AM
49	not a issue the goiverment should be involved in	3/11/2021 9:30 AM
50	How can you have improved air quality as a selection when Cumberland County has allowed itself to become a trucking warehouse hub????? Our Air Quality has been greatly diminished by poor planning over the years.	3/11/2021 9:21 AM
51	Reduce climate change impacts (floods, disease, invasive species, etc), on my community and society	3/11/2021 7:27 AM
52	Man made climate change is junk science	3/11/2021 5:40 AM
53	Climate change IS NOT fully driven by man but you should still take care of your home. Solutions should be better not worse or just feel good measures. Example for all your EV cars where does the power come from? I will stick with fossil fuel until a true solution comes.	3/11/2021 4:49 AM
54	Future Generations	3/10/2021 9:15 PM
55	Climate change is highly over-rated. A few degrees warmer in the NE is a blessing!	3/10/2021 8:53 PM
56	"Climate change" is not a problem. It is quite natural and has existed for millennia.	3/10/2021 8:41 PM
57	Support wildlife	3/10/2021 8:34 PM
58	Do not believe in man made climate change.	3/10/2021 8:23 PM
59	We have no sound barriers from 11/15. At least 2 people physically drove through our 6 foot fence into our backyard. Apparently it was more peaceful because prior residents built a back yard patio. Pollution is far worse now. We all use cpaps for over 10 years. They were not necessary before we came to Camp Hill. I came here primarily because I could walk every where.	3/10/2021 8:11 PM
60	Not affirmed that climate is changing	3/10/2021 7:25 PM
61	Morally, it's the right thing to do.	3/10/2021 6:31 PM
62	Help restore nature and protect people across the globe from experiencing the harmful weather effects of climate change.	3/10/2021 5:44 PM
63	To provide a planet for future generations to live on	3/10/2021 4:11 PM
64	Support green businesses	3/10/2021 3:57 PM
65	Decrease impact on oceans	3/10/2021 2:41 PM
66	Actions I take are not motivated by the "climate chage" hoax, but sheer practicability and common sense.	3/10/2021 2:33 PM
67	My teacher is making me!	3/10/2021 2:31 PM
68	U.S. efforts probably won't put a dent in reducing something like emissions (China, India) making attempts very discouraging.	3/10/2021 1:46 PM
69	Encourage others to take similar actions	3/10/2021 1:27 PM
70	Human beings are not responsible for climate change	3/10/2021 1:01 PM
71	I'm not worried about global warming...ah climate change. Thanks	3/10/2021 1:00 PM
72	commitment to future generations ... good stewardship	3/10/2021 12:57 PM
73	enhance wildlife habitat	3/10/2021 12:51 PM
74	Everyone has a responsibility to leave the environment in a better condition than they found it in!	3/10/2021 11:59 AM
75	Improve entire Planet Earth!	3/10/2021 10:46 AM
76	You cannot change the climate of a planet. It's the height of arrogance to think mankind is so powerful.	3/10/2021 10:29 AM
77	Lots of air pollution in Cumberland County from I-81 and large trucks at warehouses, I have to	3/10/2021 9:53 AM

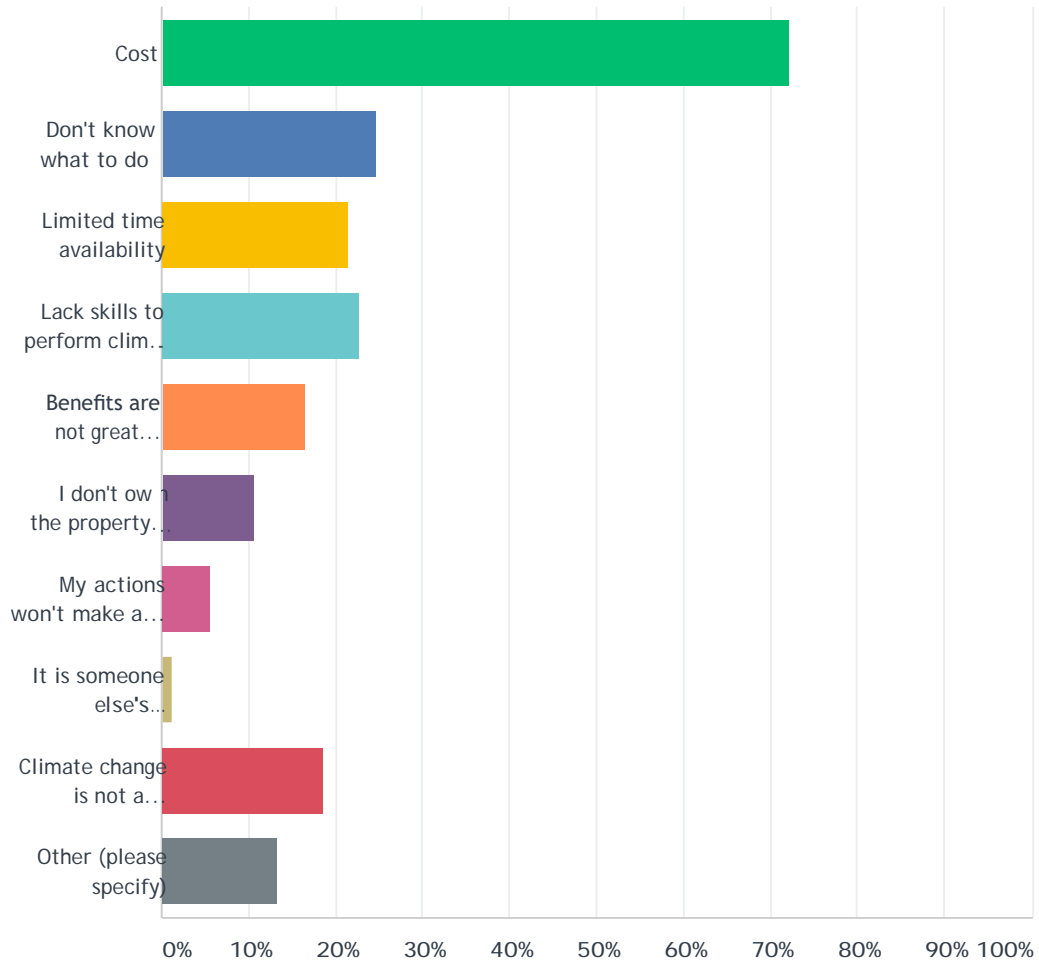
Cumberland County Climate Action Plan Survey

change my air filters every month because of the contaminated air

78	It's hogwash	3/10/2021 9:52 AM
79	No dire predictions have ever come true. Innovate. Dont legislate.	3/10/2021 9:47 AM
80	Provide habitat for wildlife, help to prevent mass extinctions of wildlife	3/10/2021 9:27 AM
81	feel responsible for the world I am leaving our children.	3/10/2021 9:22 AM
82	The earth has been changing since the day it was born	3/10/2021 8:41 AM
83	Protect future generations	3/10/2021 8:40 AM
84	Stop wasting our money on this bullshit	3/10/2021 8:20 AM
85	It's a global crisis and it will cause the end of the world and we have to do something right now. As long as I don't have to sacrifice anything.	3/10/2021 8:03 AM
86	Save the world	3/10/2021 7:59 AM
87	#1 item is "improved personal health"	3/10/2021 7:57 AM
88	Having a healthy planet for my kids!	3/10/2021 7:44 AM
89	I'm more interested in improving air and water quality. Climate change will happen naturally but maybe we can slow it down.	3/10/2021 7:12 AM
90	I do not believe in climate change. I believe our climate is cyclical in nature....what happened to global warming? It is a scam.	3/10/2021 7:05 AM
91	Future generations	3/10/2021 7:04 AM
92	man is not responsible(just a teeny bit)forwarming temps. Get the facts	3/10/2021 6:46 AM
93	Being a good steward of the environment for the sake of future generations and out of respect for God	3/10/2021 5:53 AM
94	I don't believe in man made climate change	3/10/2021 5:39 AM
95	I dont see climate change as an issue	3/10/2021 5:13 AM
96	I do what I do because I think it is good for the environment and future generations. I don't do it because of climate change!	3/10/2021 12:32 AM
97	Protect animals and native species	3/9/2021 11:31 PM
98	Leaving a livable planet for future generations. It is not all about us and the present.	3/9/2021 8:37 PM
99	O	3/9/2021 8:36 PM
100	Climate change is NOT man made	3/9/2021 8:18 PM
101	Global sea rise	3/9/2021 4:54 PM
102	too general of a question to give an answer.	3/9/2021 2:46 PM

Q8 Which of the following barriers would prevent you from taking climate change actions? (check box for all that apply)

Answered: 1,895 Skipped: 456



Cumberland County Climate Action Plan Survey

ANSWER CHOICES	RESPONSES	
Cost	72.08%	1,366
Don't know what to do	24.59%	466
Limited time availability	21.64%	410
Lack skills to perform climate change actions	22.85%	433
Benefits are not great enough	16.62%	315
I don't own the property where I live	10.77%	204
My actions won't make a difference	5.65%	107
It is someone else's responsibility to act on climate change	1.16%	22
Climate change is not a serious issue to me	18.63%	353
Other (please specify)	13.46%	255
Total Respondents: 1,895		

#	OTHER (PLEASE SPECIFY)	DATE
1	None	4/15/2021 7:03 PM
2	Inconvenience	4/15/2021 10:15 AM
3	I do take personal action but I can't even get my own grown children to recycle their cans! Are people in general just too lazy or do they need more persuasive reminders of the responsibility of EVERYONE to help with climate action? I've been setting a responsible environmental example all my life, but I don't see young people actually taking individual action to help. Also I think Climate change is seen by some as a political issue. I get defeated by people saying there's no need to change and the climate change we see is just part of natural cycles. We don't even have Climate Change education in schools, but we should! Even if it was just an informed speaker once in a while, it would plant awareness and seeds of change that could be carried home to parents.	4/14/2021 11:09 AM
4	Climate change is driven by industry, not individuals	4/14/2021 9:15 AM
5	Current appliances are still functioning. The most sustainable choice is to use what you have as long as you can. Will purchase more energy efficient options as appliances/roof/HVAC need replacing	4/13/2021 12:59 PM
6	it is not easy to simply move somewhere closer to work, etc. (Note: your questions should reflect the systematic nature of climate change. Not all about individual choices.)	4/13/2021 9:51 AM
7	I am 85 with leukemia living on Social Security.	4/13/2021 8:36 AM
8	not ready to cut down trees to install solar	4/13/2021 7:52 AM
9	Difficult to do some remediation measures in a very very old house.....	4/13/2021 7:34 AM
10	Public apathy	4/13/2021 12:56 AM
11	Difficulty--i.e. we would like to eliminate single use plastics but it's actually pretty difficult once one examines all aspects of one's life. Important to stay motivated that these actions make a difference.	4/12/2021 8:10 PM
12	Old house in historic district may limit changes permitted to the house, e.g. energy-efficient windows, solar panels.	4/12/2021 7:01 PM
13	Impossibility (ie lack of public transportation)	4/12/2021 6:57 PM
14	I do what I can to influence decision making of governmental leadership	4/12/2021 6:01 PM
15	Fear of being "green washed" and led into a bad deal - especially interested in home solar, but	4/11/2021 7:56 PM

Cumberland County Climate Action Plan Survey

nervous to commit.

16	Nothing should prohibit any of us from taking whatever changes we can affect no how matter how great or small. We can all so something!	4/8/2021 9:05 PM
17	DON'T SUBSIDIZE	4/7/2021 12:13 PM
18	Already paying a tax/service fee to Township related to water falling from the sky	4/4/2021 9:27 PM
19	mainstream methods of fighting "climate change" do nothing to prevent the spoiling of the environment. The use of solar panels and unsustainable building materials like steel, glass and concrete. Local measures of promoting local building materials and time tested methods of farming and architecture and city planning would do far more for the environment than mainstream environmental policies.	4/4/2021 12:30 PM
20	I take a lot of personal actions (see above.) But to make an impact there needs to be policy and legislation at the federal and state levels, supported by planning and action at county/ municipal levels. We will likely need to put a price on carbon, for a start. The fee and dividend approach makes sense and would have general appeal.	4/3/2021 5:31 PM
21	Running out of ideas	4/1/2021 4:09 PM
22	Alternatives are not feasible	3/31/2021 9:17 PM
23	HOA red tape	3/31/2021 9:15 PM
24	Living 25 minutes up a mountain from everything cars	3/31/2021 8:14 AM
25	Reasonable actions. Not political or money driven.	3/30/2021 2:19 PM
26	Nothing prevents me	3/30/2021 8:43 AM
27	The terms here are too broad. I care deeply about the environment, but I don't agree that everything on this list will bring about positive change.	3/29/2021 7:17 PM
28	Doing what I am currently able	3/29/2021 5:22 PM
29	not fit enough to do some of the mentioned things such as home garden	3/27/2021 1:01 PM
30	na	3/25/2021 8:41 AM
31	I cannot bike or walk to work as I live to far from my place of employment.	3/24/2021 9:32 AM
32	age and physical limitations	3/23/2021 10:37 PM
33	I am already a good steward of the environment and have been all my life. It was my upbringing.	3/23/2021 7:44 PM
34	Laziness	3/23/2021 12:26 PM
35	Location of home can prevent solar panels, due to lack of sun, such as living in the mountains.	3/22/2021 9:38 PM
36	None of the above	3/22/2021 9:11 AM
37	I have to list comfort since (during day) we keep house at 70 degrees winter and 75 degrees summer AC (even though we dress for the season)	3/21/2021 4:40 PM
38	Climate change is paramount to me. Thank you for this work.	3/21/2021 8:00 AM
39	Employer and municipality needs to incentivize	3/21/2021 7:30 AM
40	Pa Politicians are preventing positive actions. (Example banning Plastic Bags.)	3/20/2021 8:51 PM
41	HOA regulations	3/20/2021 7:42 PM
42	We own our home but the HOA owns land, so we do not have the ability to plant what we want outside our condo.	3/20/2021 11:22 AM
43	No barriers to climate action.	3/20/2021 10:56 AM
44	We live modestly, consuming what we need and limiting waste. The climate is warming, human activities can accelerate or decelerate that fact but it is foolish to believe we control it. We all want cleaner air, water, and land.	3/20/2021 10:16 AM

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45	HOA will not approve solar panels as houses are duplexes	3/20/2021 9:56 AM
46	I have health and mobility problems	3/19/2021 12:57 PM
47	One airline trip from NY to LA negates a life time of me driving a Tesla.	3/19/2021 12:26 PM
48	Unless government changes my action will not make much of a difference. We need to limit warehousing, make use of vacant buildings instead of removing them	3/19/2021 9:18 AM
49	Limited locational availability	3/18/2021 11:28 PM
50	Handicapped	3/18/2021 8:59 PM
51	Any action I take is for my benefit. No activity of man can change the direction of the wind or the effect the sun has on the earth. The temperature rises and falls and the actions of man are aimed at the enslavement and control of other men.	3/18/2021 7:42 PM
52	I believe I can make climate change choices without government dictates.	3/17/2021 8:24 PM
53	fsilure to have unified efforts	3/17/2021 7:43 PM
54	Elderly and handicapped	3/17/2021 6:33 PM
55	Nothing will prevent me from taking action	3/17/2021 2:57 PM
56	This has to become a priority for all of us.	3/17/2021 10:40 AM
57	I believe climate change is a real problem that must be addressed. However, I do not support actions that hurt the US economy while providing limited emissions reductions. Also we must ensure that other global emitters (china, india, et al) are taking steps to reduce emissions before we commit to major reductions	3/16/2021 10:36 PM
58	Individual action is largely ineffective in terms of climate change. Instead, appropriately-regulated free markets -- without coercive government regulations and wasteful, winner-choosing incentives - will more sensibly address the affects of climate change than individuals.	3/16/2021 9:34 AM
59	none	3/15/2021 7:30 PM
60	I	3/15/2021 5:44 PM
61	Distance from work and lack of mass transit infrastructure	3/15/2021 5:07 PM
62	Not everyone will participate to make a big impact, meaning just me and not my neighbors	3/15/2021 5:05 PM
63	Would like solar roof but it wouldn't look good on this house in this neighborhood.	3/15/2021 4:58 PM
64	Everyone has to do it, or your just spinning you wheels. That is what the government does. All talk no action.	3/15/2021 2:34 PM
65	I am doing all that I can.	3/15/2021 12:18 PM
66	Road network in my area is not bike or walking friendly.	3/15/2021 12:06 PM
67	Live in a rural area far from work; commuting options are limited.	3/15/2021 10:57 AM
68	I cannot think of any.	3/15/2021 10:10 AM
69	Nothing preventing me--working towards total green	3/15/2021 8:46 AM
70	Someone else's responsibility is related to building communities where walking and biking abs community gardens and farmers markets are realistically possible and safe. I can't make that happen as a citizen. Social norms—new is better mentality, compost is stinky, etc	3/15/2021 8:07 AM
71	Since I don't own the exterior of my condo, I cannot do anything about those areas.	3/14/2021 10:36 PM
72	Climate change is an utterly bogus "problem" -- climate changes, it always has and always will. And I am a scientist.	3/14/2021 9:53 PM
73	We need collective action of govt and businesses that make it much easier to make good environmental choices. Example: ban single use plastic bags or require paper alternative at no additional cost.	3/14/2021 9:22 PM

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74	Other than my own individual choices, I'm not sure what I can do. I have scientists in my family, so I know we are in serious trouble, but I feel like so few are paying attention. Too many still buy fast-food hamburgers without thinking of the Amazon being cut down to run cattle ranches to supply our consumption of McDonalds and Burger King. Are we going to change our habits in time? And of course, there are so many interconnected problems--we have an economy where too many are so underpaid they need the cheap food sources.	3/14/2021 8:44 PM
75	We try to work around all barriers connected to tackling climate change actions.	3/14/2021 8:08 PM
76	Everyone can do something without encountering barriers	3/14/2021 7:07 PM
77	Personal willpower to make a change to routine and habits.	3/14/2021 6:33 PM
78	None	3/14/2021 6:19 PM
79	Restricted by Homeowners Assn re: some housing changes and land use	3/14/2021 4:23 PM
80	Nothing will disuade us from supporting measures to limit climate change.	3/14/2021 4:19 PM
81	Let the market dictate changes to life not gov't dictates	3/14/2021 2:17 PM
82	Easier accessibility to facilities that recycle electronics, and other hard to dispose of materials	3/14/2021 1:21 PM
83	Limited by living in forested area	3/14/2021 1:07 PM
84	I believe the climate is changing, but not driven by mankind. Volcanos alone have more impact.	3/14/2021 12:40 PM
85	Recycling programs in our area have been reduced, not expanded	3/14/2021 10:17 AM
86	I feel the weather is cyclical. People are doing a lot on their own, don't need Government	3/14/2021 9:26 AM
87	Believe climate change is cyclical natural occurrence not entirely man made	3/13/2021 3:16 PM
88	none of these are barriers	3/13/2021 1:18 PM
89	Deed and Zoning restrictions for solar panels	3/13/2021 12:24 PM
90	Retired and unable to afford replacing heating and aie conditioning systems.	3/13/2021 10:21 AM
91	None	3/12/2021 10:52 PM
92	None of these apply to me	3/12/2021 7:17 PM
93	inability, example when carpooling is not available	3/12/2021 3:59 PM
94	Physical limitations.	3/12/2021 2:41 PM
95	My barrier is that I expected the County where I pay taxes to regulate and ensure pollution and safety controls are discussed and regulated. Also, would like to see County communicate with citizens thru newsletter.	3/12/2021 2:10 PM
96	lack of large scale leadership from government and businesses makes personal action feel pointless	3/12/2021 11:31 AM
97	People's time and money are being squandered by sincerely caring people working on non-problems that may make them feel good while distracting them from real issues that they could have real impact on if their energies were applied to them.	3/12/2021 10:53 AM
98	Nothing. This is one of the most important things that we can do to show that we care about our fellow man, other species and the survival of life on earth.	3/12/2021 10:13 AM
99	I want to get rid of plastic but can't always find alternatives to certain products.	3/12/2021 8:24 AM
100	I do not support the Green New Deal nor do I want any of these suggested actions mandated. Why don't you submit this survey to China and India? They are the countries abusing the planet.	3/12/2021 8:17 AM
101	Actual climate change will only be possible through forcing corporations to change what they do. I recycle bottles and cans because it's been shown to reduce waste, not because it's going to prevent violent hurricanes.	3/12/2021 7:55 AM
102	No excuses. Get it done	3/12/2021 7:26 AM

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103	Resources. Our area does not have the necessary facilities or citizen education programs in place to make this common practice.	3/12/2021 7:05 AM
104	The focus on individuals is misguided. I'd like to see our county enact innovative mitigation strategies at the local level. Become a model county. If this just turns into more PR trying to convince individuals to recycle and change lightbulbs, then we're 30 behind schedule.	3/12/2021 12:33 AM
105	Legislators who put corporate profits and personal gain above public health.	3/12/2021 12:29 AM
106	cogent people need to have the conversations not greedy idiot's.period	3/11/2021 10:06 PM
107	Nothing. This is an existential threat	3/11/2021 8:01 PM
108	NA	3/11/2021 7:55 PM
109	Business is the biggest waste producer.	3/11/2021 7:48 PM
110	None of the above	3/11/2021 7:31 PM
111	Large businesses need to bear more responsibility to combat climate change. Individuals doing minor things help but not on a large scale like a big business would. Locally I can think of trucking companies, coal plants, waste management. Let's stop green washing local recycling programs and tell the truth about how little of what goes into those blue and yellow bins actually gets recycled. Reduce plastic. And can we bring back glass bottle returns for \$	3/11/2021 6:08 PM
112	Would bike more if there were more trails and safer roads	3/11/2021 5:49 PM
113	I already do many of the things suggested.	3/11/2021 5:42 PM
114	Having enough time	3/11/2021 5:06 PM
115	This is dumb! People make choices in conditions not of their choosing. You need to focus on structural changes, not just creating incentives to consumer activities.	3/11/2021 4:38 PM
116	I don't own my own property since I live in a retirement village. We do work to improve climate outcomes	3/11/2021 4:29 PM
117	Can do a lot, but clearly a family can't know everything as far as what to do or is not always able to afford the best solution.	3/11/2021 3:52 PM
118	I live in a condo so some of the items you suggest do not apply, or I am restricted from doing.	3/11/2021 3:50 PM
119	r	3/11/2021 3:46 PM
120	Programs need to be pushed to the public to motivate, teach, and improve bad habits for all to follow. Lead by example.	3/11/2021 3:40 PM
121	None of the above	3/11/2021 3:01 PM
122	Nothing is stopping me except needing a plan and guidance.	3/11/2021 12:13 PM
123	Being aware of wasting resources is important but killing the economy w outlandisg policy requirements makes no sense.	3/11/2021 12:05 PM
124	The Climate Change Scare is overinflated to get \$\$\$ out of everyone. CO2 is NOT a pollutant, it is essential to life on the planet.	3/11/2021 11:44 AM
125	We saw in Texas they didn't have power due to renewable energy not for them causing way more people to be without power for longer than needed.	3/11/2021 11:02 AM
126	We do our best not to create waste. I drive a hybrid. I use plastic bags as little as possible and save some for personal use. We have 2 composters and compost all our unused vegetables	3/11/2021 10:49 AM
127	I don't believe climate change issues as portrayed by the left and MSM. Scientists DO disagree on these issues.	3/11/2021 10:44 AM
128	Too old	3/11/2021 10:43 AM
129	nc	3/11/2021 9:44 AM
130	Live in a townhome association where dont have total control over use of the property. Limited by the homeowner association rules which are not always acceptable for environmental practices.	3/11/2021 9:34 AM

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131	governmental and industrial refusal to change	3/11/2021 9:21 AM
132	What's the point; a warehouse pops up every other 6 months to cancel out any action a private residence would take in this County.	3/11/2021 9:21 AM
133	Want to do solar, still not cost effective, will buy EV or hybrid next time we purchase a car	3/11/2021 9:15 AM
134	nothing will prevent me from making changes	3/11/2021 8:36 AM
135	Still convincing husband that we need solar panels for more than Christmas lights!	3/11/2021 8:12 AM
136	Anthropogenic "climate change" is an asinine myth.	3/11/2021 7:57 AM
137	None of the above	3/11/2021 6:42 AM
138	Will do things that are truly worth it by my own choice.	3/11/2021 4:49 AM
139	Homeowners association restrictions	3/11/2021 1:14 AM
140	Have to follow neighborhood association rules.. Limited space . Very senior citizen and do small things to contribute.	3/10/2021 10:02 PM
141	Again, the results of 'climate change' are not as bad as depicted.	3/10/2021 8:53 PM
142	I will not take steps to change something that is not a problem. I do believe in being a good steward of my resources as well as natural resources.	3/10/2021 8:41 PM
143	Do not believe in man made climate change	3/10/2021 8:23 PM
144	None of the above	3/10/2021 8:20 PM
145	11/15 will be widened and strip out more residents from their homes.	3/10/2021 8:11 PM
146	Walking not ideal in suburban areas, HOA fines if we don't maintain lawn by using fertilizer, pesticides, etc. Also will continue pesticides until tick and mosquito populations are under control	3/10/2021 7:46 PM
147	Man made climate change is a way to tax and control citizens. Climate does change, but we can not control the climate!.	3/10/2021 6:53 PM
148	Businesses and militaries are the biggest contributors and without their buying, our efforts will have little to no impact	3/10/2021 6:34 PM
149	As explained below, some of us residents have established an Ecology Team that is working to make what changes we can individually and as a community to more environmentally sustainable, but we have a long way to go. We have begun investigating the use of solar energy for instance.	3/10/2021 5:59 PM
150	We are already doing what we can in our house. We eat vegetarian also.	3/10/2021 5:44 PM
151	Many so-called "green energy" products require fossil fuels to manufacture and/or to maintain them, e.g. solar panels, batteries, wind mills, etc., Also, the hypocrite climate change people like Kerry all flying around in private jets. They want to impose requirements and restrictions on average Americans that they themselves won't adhere to.	3/10/2021 5:39 PM
152	Already doing many of the actions at a household level. I reside in a development and don't have land space for a garden. Would like to see the county take a stand against farmland being developed!	3/10/2021 5:09 PM
153	Not physically able.	3/10/2021 4:25 PM
154	Other countries need to participate to make climate change effective	3/10/2021 4:24 PM
155	None of them	3/10/2021 4:15 PM
156	Some roads are not pedestrian friendly near where I live	3/10/2021 3:57 PM
157	PA is way behind in incentivizing/subsidizing everything. Very little state help on anything. PA needs to offer MORE help!!!	3/10/2021 3:51 PM
158	Climate change is a conspiracy theory pushed by the left to waste taxpayers money, while pretending to care about the environment.	3/10/2021 3:32 PM

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159	Tenant	3/10/2021 3:28 PM
160	I HATED the energy-efficient clothes washer that I purchased a few years ago --and it only lasted 2 years before failing! Then I purchased a refurbished old used one. I will use it for as long as it lasts and repair it to keep it going for as long as I can.	3/10/2021 2:59 PM
161	My actions make little difference as others do not abide	3/10/2021 2:51 PM
162	HOA limits thing I can do to my property like composting, rain water capture and expanded gardening.	3/10/2021 2:51 PM
163	Limited availability of local options, like no footpath to walk from Orr's Bridge Road to Carlisle pike (Giant, CVS, restaurants, Barnes and Noble would all be walkable if we had a safe route)	3/10/2021 2:41 PM
164	The "climate change" hoax is a cover for socialism/communism, and it is deplorable that so many gullible people have perpetuated it.	3/10/2021 2:33 PM
165	Current apartment building's recycling bins are always full and hard to get to (squeezed between dumpster and fence)	3/10/2021 1:54 PM
166	Climate change is a natural cycle of the Earth that is not controllable by humans	3/10/2021 1:46 PM
167	Age and health limit what is realistic for me to do more	3/10/2021 1:46 PM
168	Lack of public transportation and amenities within walking distance in my area (Hampden Township)	3/10/2021 1:27 PM
169	High cost would make me consider whether or not to act, but would not necessarily prevent it.	3/10/2021 1:27 PM
170	Your charging for a tax on rain water run off.	3/10/2021 1:18 PM
171	"Climate Change" can't be stopped by man. The climate has ALWAYS been evolving. If you want to stop pollution, then that is different. Clean air and water can be accomplished.	3/10/2021 1:03 PM
172	local laws, space limitations	3/10/2021 12:51 PM
173	Sometimes it is necessary for me to do harmful things to the environment e.g. drive to work every day, because I do not have access to public transportation or a carpool to work	3/10/2021 12:28 PM
174	I am concerned about the climate and the future of our planet. However, my opinions on how to solve the problem do not align with many Climate Change activists. For example, I believe nuclear energy would be a better step towards solving our energy problems and that solar or wind is not the solution. I do not believe having wind farms on top of our mountains will ever harness enough energy to make a difference. I do not want solar panels on any houses in my neighborhood, not just because it is unattractive, but because it will not actually solve the issue. Many Climate Change activists attack capitalists and capitalism, casting capitalists as villains who do not care about the environment. This is simply untrue, and I will provide you an example. There is a question on this survey that asked if we would be willing to only buy what we need. How does that help solve climate change? Buying only exactly what you need will destroy our businesses, both big and small. You may not need a new painting for your house, but we should be supporting our local artists. You may not need any new clothing, but shouldn't we support shopping in downtown Carlisle? This behavior is what makes many people turn their backs on climate change. This is an important mission, but activists cannot turn their backs on conservatives in this county and expect anyone to change.	3/10/2021 12:20 PM
175	Decisions made by industry are out of the control of citizens	3/10/2021 12:09 PM
176	Self sustainability is important however the technology available for renewable energy still cannot produce enough energy to replace carbon technology	3/10/2021 12:02 PM
177	Biggest change I could make today is to drive less. Unfortunately, bus service in Cumberland County is inefficient and would add considerable time to my commute.	3/10/2021 11:59 AM
178	Not permitted to have a garden, electric cars take too much energy to make and produce too much toxic byproducts in production, charging electric car takes energy that will be expensive and produces toxic waste, disposal of energy efficient products is difficult and they create more pollution (mercury)	3/10/2021 11:55 AM
179	My age. Changes to home are too costly for limited years left.	3/10/2021 11:51 AM
180	Nothing would prevent me. We need to address climate change seriously.	3/10/2021 11:45 AM

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181	I don't think I have any barriers at this time. I try to do what I can to limit my foot print.	3/10/2021 11:45 AM
182	It's a collective commitment. Do I stop buyibg products that are one use packaged? Even if I do, it's still being sold thay way. Maybe the manufacturer could use a biodegradable plastic or matetial instead? We use what is available to a large extent.	3/10/2021 11:40 AM
183	Lack of available municipal programs, such as composting	3/10/2021 11:32 AM
184	Under most circumstances I do everything I can to combat climate change. A better recycling system in the Carlisle area would help.	3/10/2021 11:32 AM
185	Safety concerns (carpooling for example)	3/10/2021 11:30 AM
186	None of the above	3/10/2021 11:22 AM
187	Over regulation by government. Help people know how to be eco friendly. Don't legislate	3/10/2021 11:21 AM
188	Live in a shared community and these decisions are not solely mine, even though I own my house.	3/10/2021 11:06 AM
189	Solar still remains rather costly to install; given the period of time to recover the investment.	3/10/2021 11:03 AM
190	Single use plastics are hard to avoid in this area. There are fewer bulk options.	3/10/2021 10:42 AM
191	Climate change is a scheme to bilk taxpayer moneys	3/10/2021 10:28 AM
192	Some actions are not available in the area.	3/10/2021 10:19 AM
193	Climate Change is exaggerated!!! And nothing more than political weapon from Democrats	3/10/2021 10:12 AM
194	Live in a condo community	3/10/2021 9:58 AM
195	I do not see barriers with a strategic plan implemented by the County in participation with State and Federal authorities as we are all in this together for ourselves and future generations	3/10/2021 9:53 AM
196	The community in Cumberland County does not appear to take this seriously, therefore collective, impactful action seems to have many barriers.	3/10/2021 9:51 AM
197	I'm fine to help	3/10/2021 9:38 AM
198	Inertia. Some things are on my to-do list but I haven't gotten to them yet.	3/10/2021 9:27 AM
199	Currently don't have the capital to invest in climate friendly tech--like solar panels--for my house.	3/10/2021 9:26 AM
200	State Legislature bought and paid for by fossil fuel industry. They continue to write laws to block any positive action to prevent greenhouse gas emissions.	3/10/2021 9:22 AM
201	The infrastructure in Cumberland County is not bike/walk friendly	3/10/2021 9:13 AM
202	Climate change is mother nature, I think we have to figure out how to live with it comfortably.	3/10/2021 8:54 AM
203	While climate does change, us emissions are not currently a driver, even if co2 is as significant as they say. I hate pollution though, and will continue to support reducing pollution and improving efficiency.	3/10/2021 8:42 AM
204	Our leadership; I sometimes feel overwhelmed because I don't see the change at the top of our leadership	3/10/2021 8:31 AM
205	Climate change is primarily caused by large corporations and they should bear the burden of correcting the harm they have caused.	3/10/2021 8:25 AM
206	Any actions the county takes are negated by the traffic and air quality problems delivered to us by greedy farmland holders who sold us out years ago...sad to say.	3/10/2021 8:22 AM
207	Stop wasting our money on this bullshit	3/10/2021 8:20 AM
208	Any further reductions by the USA in the next decade will be obliterated by China's increasing pollution—many times over.	3/10/2021 8:16 AM
209	It's a world issue, USA cannot by itself make lasting climate changes, IMHO.	3/10/2021 8:09 AM
210	I own my property, but have an HOA. I cannot independently make some of these decisions.	3/10/2021 8:07 AM

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211	None of these would prevent me.	3/10/2021 8:04 AM
212	.	3/10/2021 8:03 AM
213	Taking action whether mandated or not.	3/10/2021 7:54 AM
214	Historical society restrictions to home	3/10/2021 7:53 AM
215	None of these	3/10/2021 7:48 AM
216	Facts to prove a threat and proof of effectiveness of a proposed remedy.	3/10/2021 7:29 AM
217	Cumberland county and Harrisburg are not very walkable. Consider install of light rail stops.	3/10/2021 7:28 AM
218	Small steps can make a big difference if ALL decide to do their small part, but not mandated by government	3/10/2021 7:28 AM
219	retired. not much more that I can do.	3/10/2021 7:21 AM
220	Limits to recycling - product, costs, does it really get recycled	3/10/2021 7:19 AM
221	John Kerry's Private Jet	3/10/2021 7:18 AM
222	Big corporations are more responsible for pollution than the average person, but that doesn't absolve all responsibility from the individual. The earth is an investment worth the cost.	3/10/2021 7:07 AM
223	Home not oriented/situated well for solar panels	3/10/2021 7:04 AM
224	I don't accept the premise that humans have control over the planet's climate.	3/10/2021 6:48 AM
225	Neighbors are not supportive of healthier landscaping..	3/10/2021 6:23 AM
226	aesthetics, like for solar panels	3/10/2021 6:09 AM
227	I'd like to know more about heat pumps and whether they're a viable choice for our northern climate	3/10/2021 6:06 AM
228	Infrastructure like not bike or walking paths to safely walk or ride to destination. Should build bike/walk trails between developments and to shopping	3/10/2021 5:54 AM
229	I live in an HOA community who dictates what I can and cannot do outside my property.	3/10/2021 5:38 AM
230	What we does not impact climate. We are making drastic changes based on faulty "science."	3/10/2021 5:13 AM
231	Climate change is a natural occurring action	3/10/2021 2:17 AM
232	Fear of being scammed by disreputable company such as solar panel installer	3/9/2021 11:11 PM
233	Actions have to make sense and have a good return for effort. Can't be biased.	3/9/2021 9:54 PM
234	physical/aging	3/9/2021 9:42 PM
235	I always try to have a positive impact	3/9/2021 9:41 PM
236	What exactly does climate "change" mean?	3/9/2021 8:59 PM
237	L	3/9/2021 8:51 PM
238	Political disincentives	3/9/2021 8:37 PM
239	solar panels expensive	3/9/2021 6:14 PM
240	Many actions are difficult when alternatives don't exist - reducing packaging waste when retail/manufacturers don't offer alternatives, using public transportation when routes are not available for where I need to go	3/9/2021 6:12 PM
241	Some are not feasible for my house without major construction	3/9/2021 5:43 PM
242	The highly-political leanings to more spending for climate change is a power grab and a waste of money, time, resources, and other opportunities. Let's have some truth about the what is really going on: money grabbing. People are fed up with the waste and lies around this issue.	3/9/2021 5:01 PM
243	lack of enthusiasm from others is depressing	3/9/2021 4:52 PM
244	Climate has continually chnaged since the earth was formed. 10,000 years ago we had	3/9/2021 3:53 PM

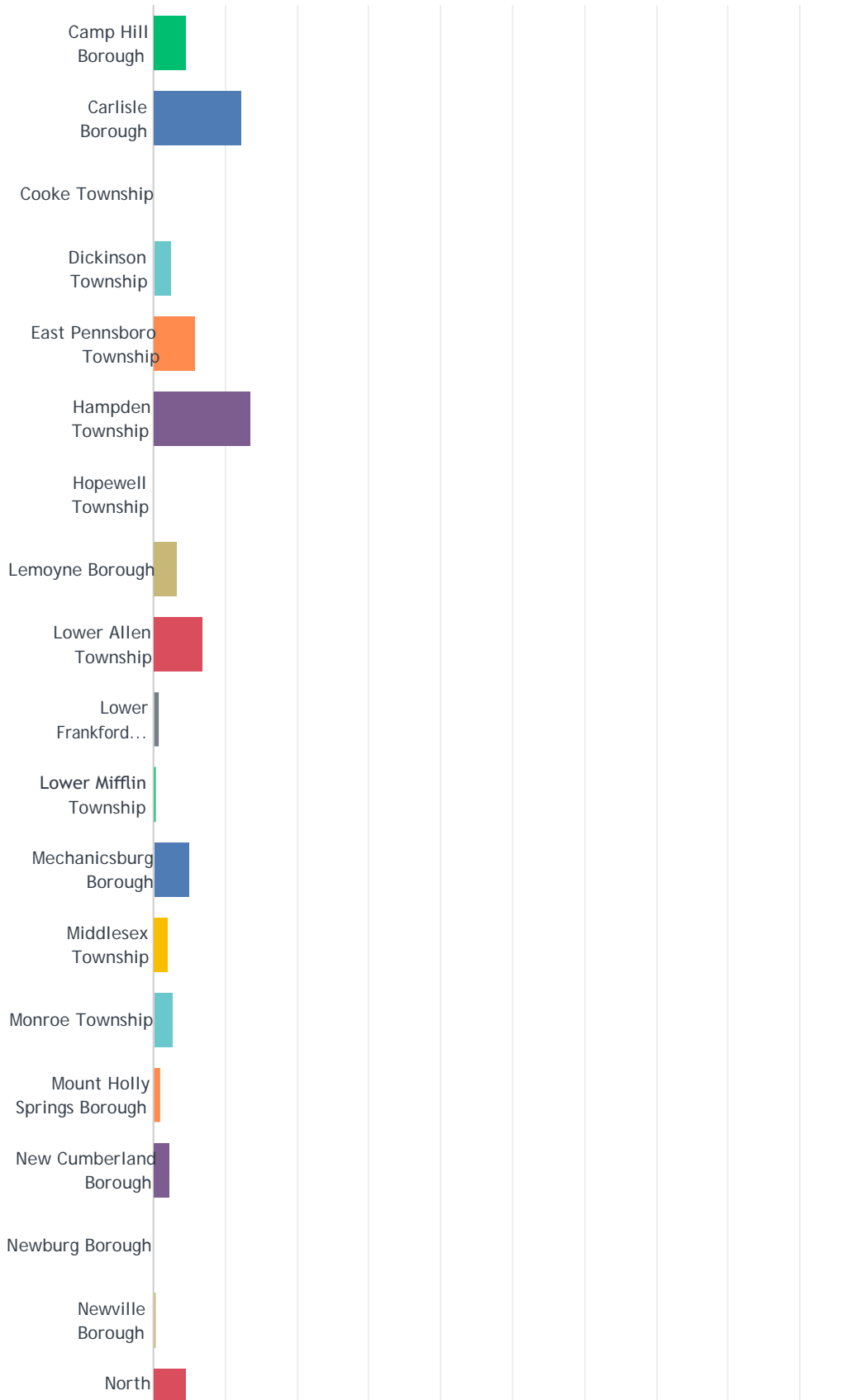
Cumberland County Climate Action Plan Survey

glaciers throughout North America and I don't think anyone is longing for a return to that climate. Government should give best practices and suggestions but shouldn't mandate action on residents.

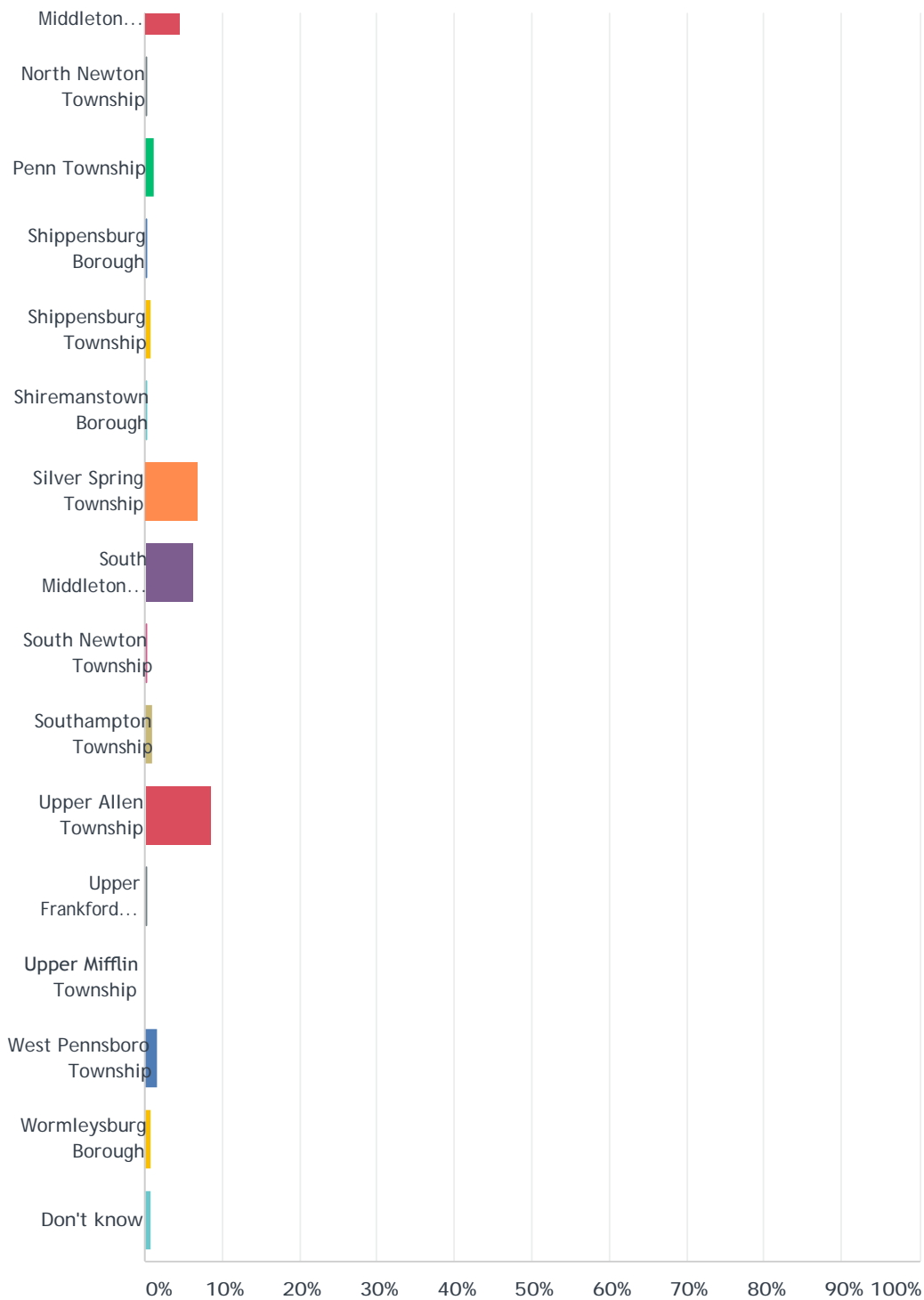
245	Options are not available (municipal composting)	3/9/2021 3:27 PM
246	I think we have overblown the problem particularly as it relates to other countries.	3/9/2021 2:46 PM
247	I don't want the government telling me what to do	3/9/2021 2:41 PM
248	Disability	3/9/2021 1:22 PM
249	None i will and have taken action	3/9/2021 1:21 PM
250	Personal health stuff that prevents me from doing things like riding a bike and walking long distances.	3/9/2021 1:18 PM
251	We spend all this money and other countries do not folow suit.	3/9/2021 1:01 PM
252	Large distances to limit use of walking or cycling, electric vehicles need 300 mile range for me to visit family and 2nd home, California has stringent rules but limited success with getting clean air and water	3/9/2021 12:11 PM
253	HOA and muncipal restrictions	3/9/2021 11:24 AM
254	Would like to participate in community solar -- needs state sanction and municipal organiztion	3/9/2021 10:21 AM
255	lack of time to research and coordinate projects and initiatives	3/7/2021 10:47 PM

Q9 What township/borough do you live in?

Answered: 1,771 Skipped: 580



Cumberland County Climate Action Plan Survey



Cumberland County Climate Action Plan Survey

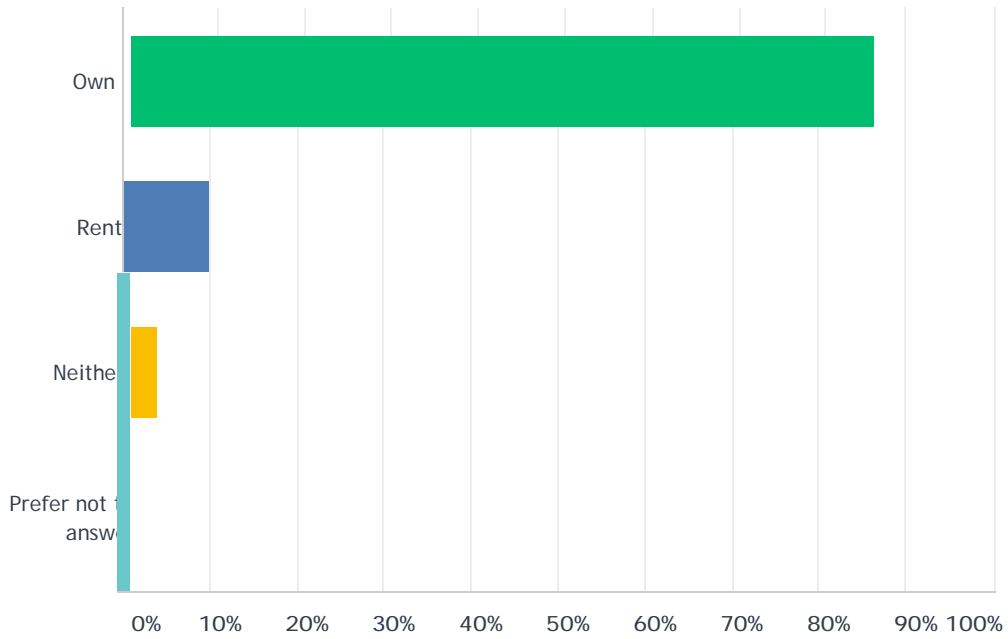
ANSWER CHOICES	RESPONSES	
Camp Hill Borough	4.57%	81
Carlisle Borough	12.31%	218
Cooke Township	0.17%	3
Dickinson Township	2.54%	45
East Pennsboro Township	5.76%	102
Hampden Township	13.66%	242
Hopewell Township	0.28%	5
Lemoyne Borough	3.44%	61
Lower Allen Township	6.83%	121
Lower Frankford Township	0.90%	16
Lower Mifflin Township	0.40%	7
Mechanicsburg Borough	5.08%	90
Middlesex Township	2.09%	37
Monroe Township	2.71%	48
Mount Holly Springs Borough	0.96%	17
New Cumberland Borough	2.26%	40
Newburg Borough	0.11%	2
Newville Borough	0.51%	9
North Middleton Township	4.52%	80
North Newton Township	0.51%	9
Penn Township	1.30%	23
Shippensburg Borough	0.51%	9
Shippensburg Township	0.79%	14
Shiremanstown Borough	0.40%	7
Silver Spring Township	6.95%	123
South Middleton Township	6.38%	113
South Newton Township	0.40%	7
Southampton Township	1.02%	18
Upper Allen Township	8.53%	151
Upper Frankford Township	0.51%	9
Upper Mifflin Township	0.23%	4

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West Pennsboro Township	1.75%	31
Wormleysburg Borough	0.79%	14
Don't Know	0.85%	15
TOTAL		1,771

Q10 Do you own or rent the place where you live?

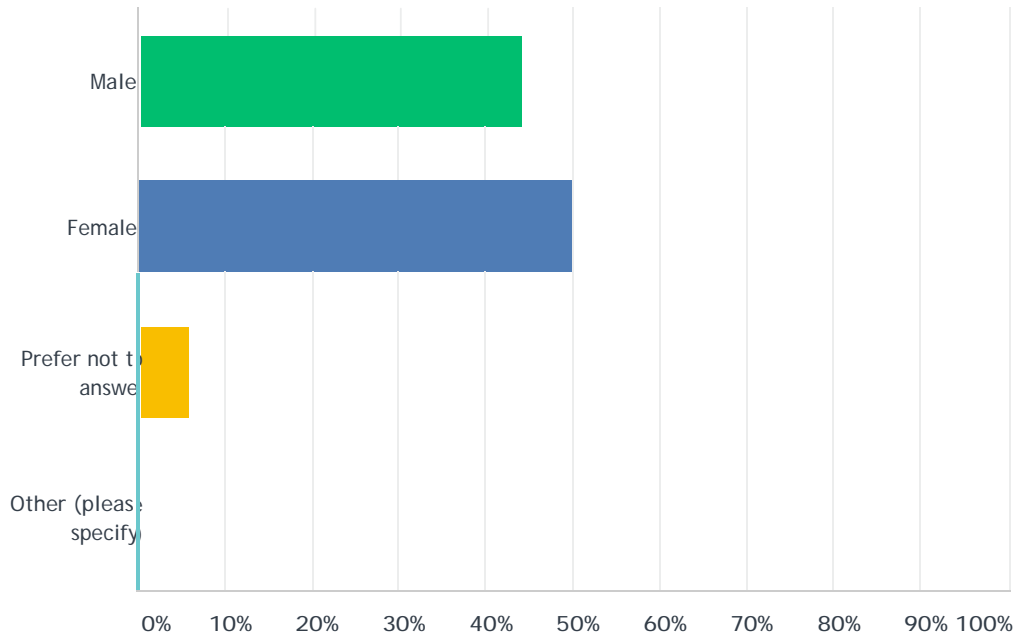
Answered: 1,860 Skipped: 491



ANSWER CHOICES	RESPONSES	
Own	85.48%	1,590
Rent	9.62%	179
Neither	3.17%	59
Prefer not to answer	1.72%	32
TOTAL		1,860

Q11 What is your gender?

Answered: 1,856 Skipped: 495

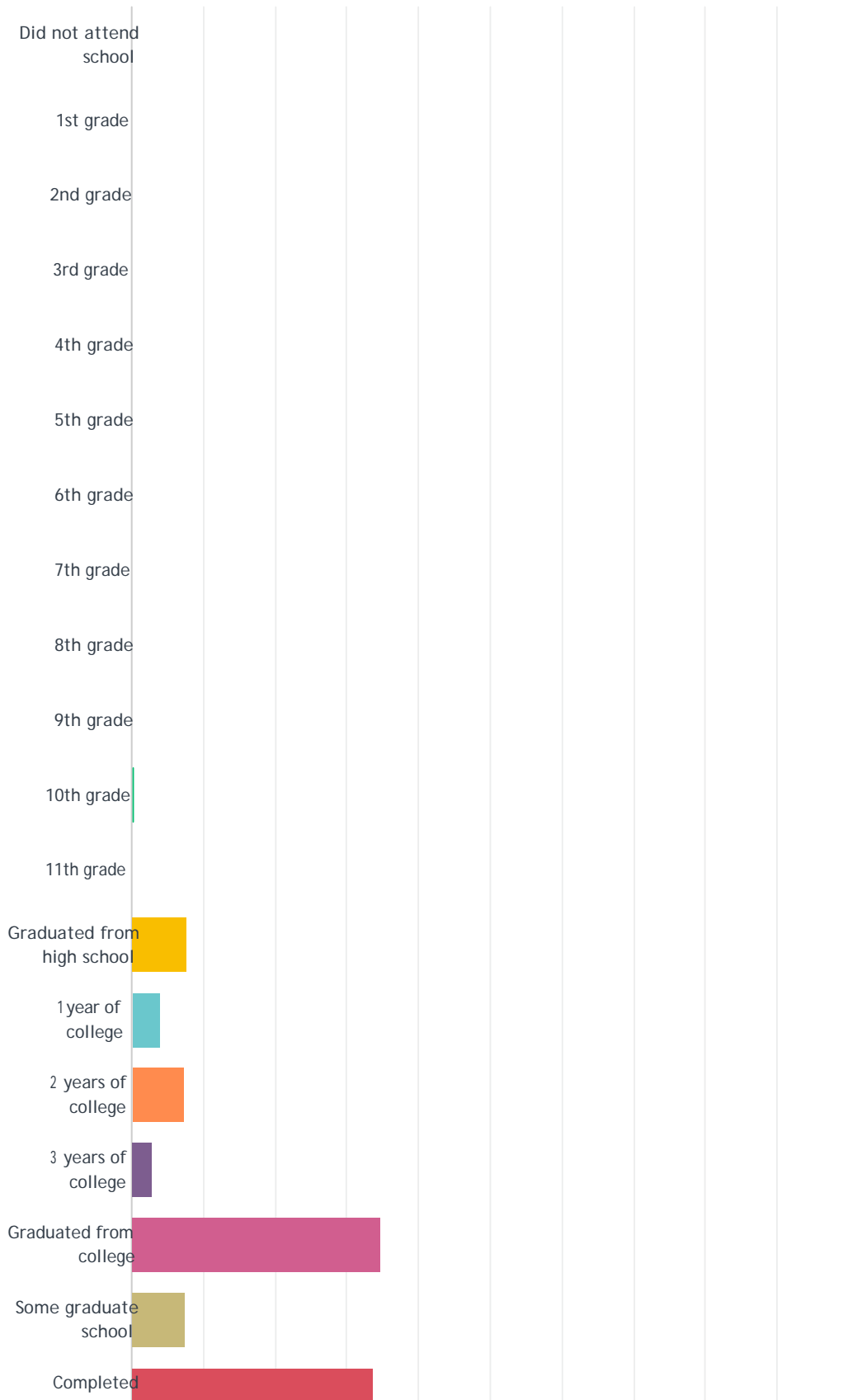


ANSWER CHOICES	RESPONSES	
Male	44.02%	817
Female	49.68%	922
Prefer not to answer	5.66%	105
Other (please specify)	0.65%	12
TOTAL		1,856

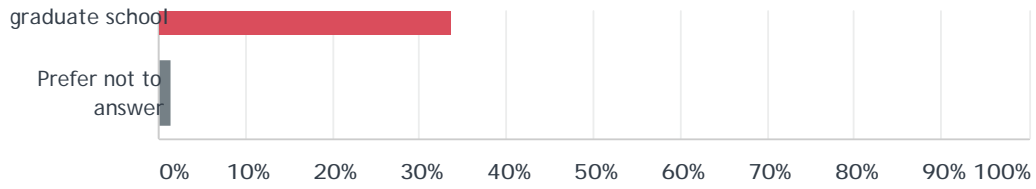
#	OTHER (PLEASE SPECIFY)	DATE
1	My sex is male	3/16/2021 10:36 PM
2	poli	3/16/2021 4:49 PM
3	Irrelevant	3/16/2021 9:34 AM
4	Pink	3/12/2021 10:06 AM
5	Competed two graduate schools	3/11/2021 4:29 PM
6	Why does this matter stop putting Americans in your boxes	3/11/2021 4:49 AM
7	My "sex" is male.	3/10/2021 2:33 PM
8	Genderqueer	3/10/2021 12:38 PM
9	This option is completely unnecessary, im male	3/10/2021 12:02 PM
10	66 big block Chevella... You are a bigot for asking my gender.	3/10/2021 10:29 AM
11	I identify as a mushroom	3/10/2021 9:52 AM
12	Trans	3/10/2021 9:18 AM

Q12 What is the highest level of education you have completed?

Answered: 1,823 Skipped: 528



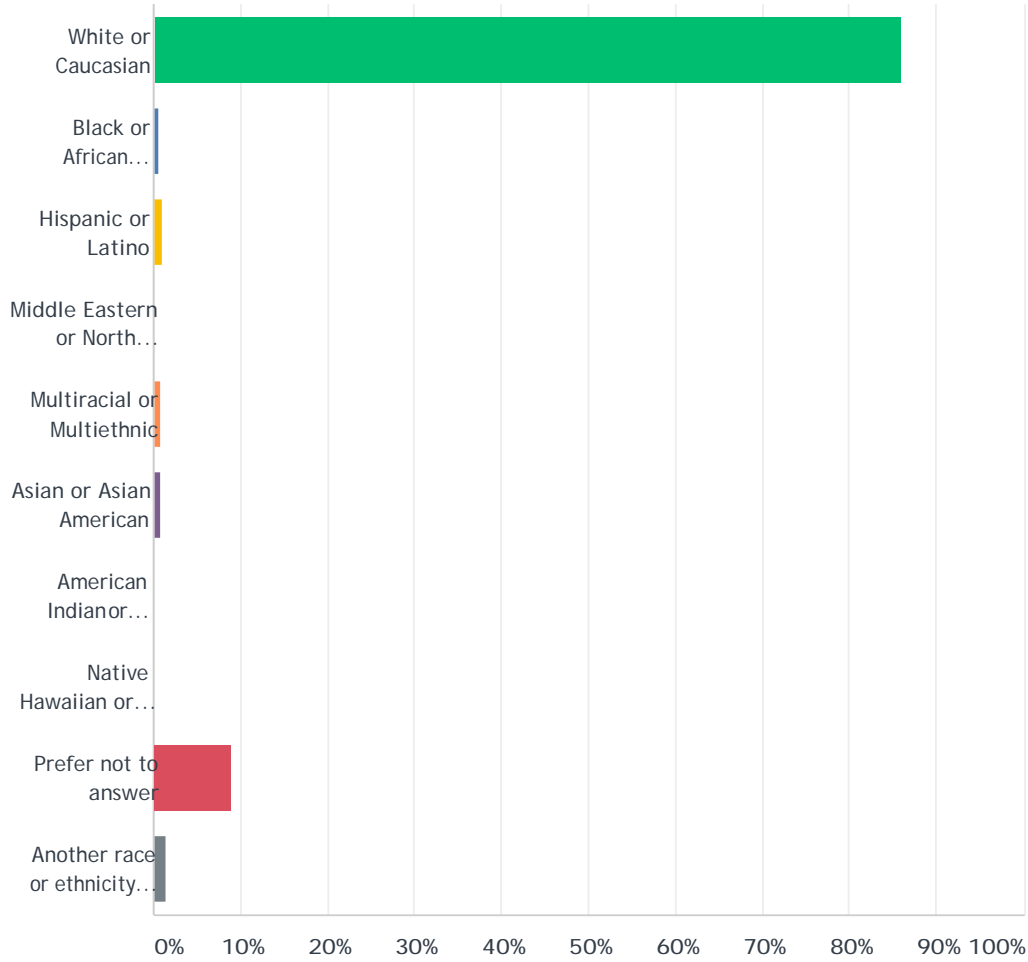
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ANSWER CHOICES	RESPONSES	
Did not attend school	0.00%	0
1st grade	0.05%	1
2nd grade	0.05%	1
3rd grade	0.00%	0
4th grade	0.00%	0
5th grade	0.00%	0
6th grade	0.00%	0
7th grade	0.00%	0
8th grade	0.00%	0
9th grade	0.00%	0
10th grade	0.33%	6
11th grade	0.22%	4
Graduated from high school	7.73%	141
1 year of college	4.00%	73
2 years of college	7.30%	133
3 years of college	2.96%	54
Graduated from college	34.67%	632
Some graduate school	7.57%	138
Completed graduate school	33.63%	613
Prefer not to answer	1.48%	27
TOTAL		1,823

Q13 What is your race or ethnicity?

Answered: 1,841 Skipped: 510



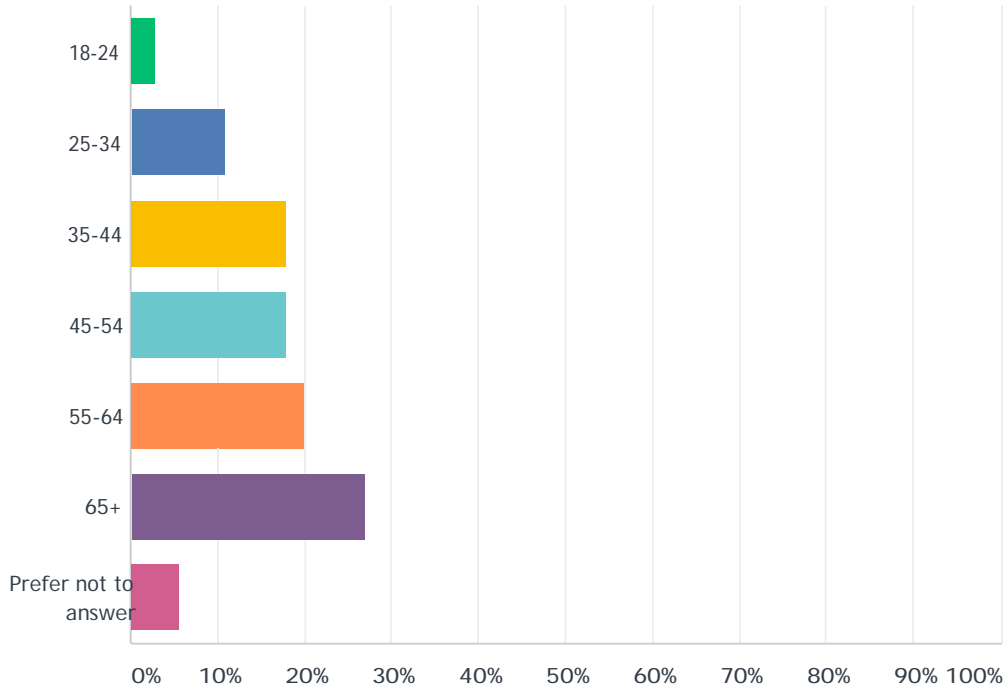
ANSWER CHOICES	RESPONSES	
White or Caucasian	85.99%	1,583
Black or African American	0.54%	10
Hispanic or Latino	1.09%	20
Middle Eastern or North African	0.16%	3
Multiracial or Multiethnic	0.87%	16
Asian or Asian American	0.81%	15
American Indian or Alaska Native	0.16%	3
Native Hawaiian or other Pacific Islander	0.00%	0
Prefer not to answer	8.96%	165
Another race or ethnicity, please describe.	1.41%	26
TOTAL		1,841

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#	ANOTHER RACE OR ETHNICITY, PLEASE DESCRIBE.	DATE
1	This is not applicable.	4/8/2021 9:05 PM
2	Italian	3/16/2021 4:49 PM
3	Irrelevant	3/16/2021 9:34 AM
4	I assume you are a racist? Why ask?	3/15/2021 5:44 PM
5	American	3/15/2021 4:52 PM
6	Euro-American	3/15/2021 12:06 PM
7	Human	3/14/2021 1:20 PM
8	Human race, any other description would be racist	3/12/2021 10:53 AM
9	American	3/12/2021 10:06 AM
10	Will not answer	3/12/2021 12:17 AM
11	earthling	3/11/2021 10:06 PM
12	Human	3/11/2021 3:27 PM
13	born in America of German heritage	3/11/2021 9:44 AM
14	Italian	3/11/2021 7:57 AM
15	Refer to last. I am an American	3/11/2021 4:49 AM
16	Will not answer bc of cancel culture	3/10/2021 4:50 PM
17	white	3/10/2021 2:42 PM
18	Mix American indian and white	3/10/2021 12:02 PM
19	Human	3/10/2021 10:29 AM
20	Fluid	3/10/2021 9:52 AM
21	Human race	3/10/2021 8:46 AM
22	White and Asian	3/10/2021 8:25 AM
23	It doesn't matter	3/10/2021 8:03 AM
24	Why is race or ethnicity of any significance in a survey about "climate change"?	3/10/2021 6:48 AM
25	Italian/Jewish	3/10/2021 6:45 AM
26	German American	3/9/2021 7:54 PM

Q14 What is your age?

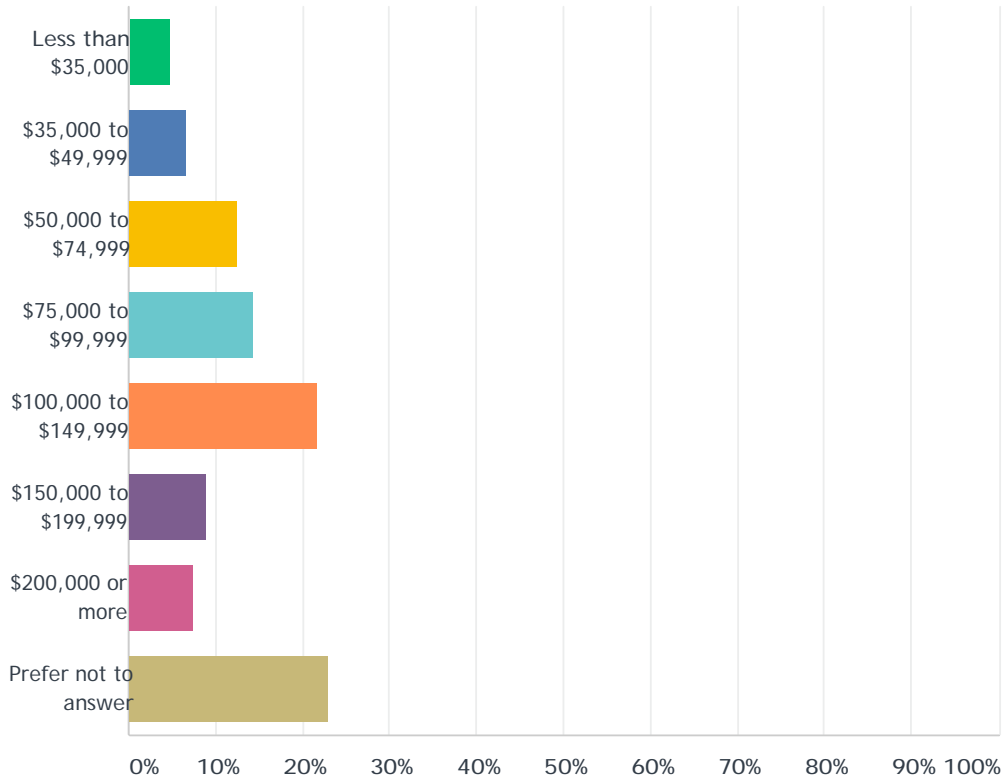
Answered: 1,855 Skipped: 496



ANSWER CHOICES	RESPONSES	
18-24	2.86%	53
25-34	10.78%	200
35-44	17.41%	323
45-54	17.79%	330
55-64	18.54%	344
65+	26.90%	499
Prefer not to answer	5.71%	106
TOTAL		1,855

Q15 What is your total household income?

Answered: 1,836 Skipped: 515



ANSWER CHOICES	RESPONSES	
Less than \$35,000	4.90%	90
\$35,000 to \$49,999	6.70%	123
\$50,000 to \$74,999	12.47%	229
\$75,000 to \$99,999	14.49%	266
\$100,000 to \$149,999	21.79%	400
\$150,000 to \$199,999	9.04%	166
\$200,000 or more	7.63%	140
Prefer not to answer	22.98%	422
TOTAL		1,836

Q17 Any additional comments regarding the Cumberland County Climate Action Plan?

Answered: 435 Skipped: 1,916

#	RESPONSES	DATE
1	We must do something now.	4/15/2021 7:03 PM
2	Thank you for providing this survey of Cumberland County.	4/15/2021 10:15 AM
3	There is nothing any government can do that will make any meaningful difference in the climate. If the climate is changing, then we need to adapt since we cannot control the change.	4/15/2021 8:33 AM
4	If our county would offer information sessions on what individuals can do to help with climate action, I would attend and encourage others. One specific issue that is within the county's control is this: Leaving green space is important and I see so much of our farmland being surrendered to steel buildings and truck-transported products, which pollutes and degrades the environment and public health in many ways. I feel this type of growth in our county needs to be slowed-down for many reasons - especially if we truly seek to take responsible climate action. We should encourage and support sustainable land practices, and seek out solutions that benefit our county. For example, invite people who will engage in organic farming to provide local produce to our citizens. Instead of being known as the trucking center of the east, it would be smarter and healthier to move in a more environmentally-responsible direction - before it is too late. Thank you for seeking public input. This is the most important issue of our time for so many reasons. If you need volunteers to help with your future endeavors, I will volunteer. 717-580-8063 text or call. Thank you for your leadership.	4/14/2021 11:09 AM
5	Many of these actions are controlled by government regulations which I don't have much of a say. All I have is my vote. I have come to the conclusion that most petitions don't do anything. Really putting pressure on corporations that fund politics would be the route to go in today's political world. I think you should break up your targets of what the every day person can do (which helps but statistically is not going to significantly move the needle.) Really sit down and think about what makes the most climate change impact based on numbers and not the focus on very small impact of eating food from your garden- the majority of regular people do not have time or even the time to think about growing their own food. However state regulatory laws and green infrastructure that will make bigger impacts. It is privileged thinking that the average person struggling would do anything to their house that you listed above. Most people financially secure won't buy an electric car because there are no power stations for long distance travel. The problem is the infrastructure and tax rebates/incentives is not sufficient to support the regular person green buying decisions. Things the county could work on is updating the recycling process. Again this is tied to a corporation, PennWaste decided not to collect paper and other categories so these are not recycled by the average person. A carbon tax for out of state trucks and carbon tax for warehouses would help fund green infrastructure programs in PA. I think alot of people would like to see a out of state carbon tax or in state carbon warehouse tax in the Cumberland County 81 corridor to then fund the programs like more recycling, tax breaks for efficient cars, solar panels etc. Another need is better mass transit because unless you live in East Pennsboro, Hampton or Camp Hill it is mediocre and in Carlisle it is not the best. Also biking is nice but that is very low on the list of fixing green infrastructure. For carpooling their is a program already (pacommuterservices) established but many people do not know about the benefits like they will give you up to 6 occasions taxi fair in a large mile radius of Harrisburg for an emergency ride home if you take the bus or carpool. Again focus on what is really going to move the need needle and maybe pick 1 "PR" project like planting riparian buffers (which actually would serve both climate change and the Countywide Action plan / WIP3 goals forthe Chesapeake Bay Program.	4/13/2021 1:52 PM
6	Would be great to encourage people to install more beneficial/native plants and trees and remove their lawns.	4/13/2021 10:42 AM
7	thanks for your work on this.	4/13/2021 9:42 AM
8	Your efforts are highly commendable and I hope will resonate with the younger generation, but	4/13/2021 8:36 AM

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the time remaining to reverse the damage we and our ancestors have done has almost elapsed. Observing in so many the ignorance, denial and unwillingness to fact-find and act appropriately, I fear the only way the planet can survive and heal is if it does to humanity what it did to the dinosaurs and mastodons.

9	If climate change is a real concern convince the public to change do not mandate it through laws and regulation. The climate has always changed and always will - that is science. The degree to which man has made an impact is debatable not determined like most would want us to believe. It is being used for more government control and income.	4/13/2021 8:04 AM
10	Thank you for doing this!	4/13/2021 7:38 AM
11	We gave hot to do something about the poor air quality.	4/12/2021 7:29 PM
12	Where Does Carbon Dioxide Come From? Someone should send this to everyone idiot in Washington DC. All 535 of them plus Biden, Harris and Kerry. I have seen this information before. Ian Rutherford Plimer is an Australian geologist, professor emeritus of earth sciences at the University of Melbourne, professor of mining geology at the University of Adelaide, and the director of multiple mineral exploration and mining companies. He has published 130 scientific papers, six books and edited the Encyclopedia of Geology. Born 12 February 1946. Residence Australia, Nationality Australian, Fields, Earth Science , Geology, Mining Engineering Institutions: University of New England,University of Newcastle,University of Melbourne,University of Adelaide Alma mater: University of New South Wales ,Macquarie University Thesis: The pipe deposits of tungsten-molybdenum-bismuth in eastern Australia(1976) Notable awards: Eureka Prize (1995, 2002),Centenary Medal(2003), Clarke Medal (2004) Source. Wikipedia Where Does the Carbon Dioxide Really Come From? Professor Ian Plimer could not have said it better! If you've read his book, you will agree this is a good summary. PLIMER: "Okay, here's the bombshell. The volcanic eruption in Iceland. Since its first spewing of volcanic ash has, in just FOUR DAYS, NEGATED EVERY SINGLE EFFORT you have made in the past five years to control CO2 emissions on our planet - all of you. Of course, you know about this evil carbon dioxide that we are trying to suppress - its that vital chemical compound that every plant requires to live and grow, and to synthesize into oxygen for us humans and all animal life. I know.... it's very disheartening to realize that all of the carbon emission savings you have accomplished while suffering the inconvenience and expense of driving Prius hybrids, buying fabric grocery bags, sitting up till midnight to finish your kids "The Green Revolution" science project, throwing out all of your non-green cleaning supplies, using only two squares of toilet paper, putting a brick in your toilet tank reservoir, selling your SUV and speedboat, vacationing at home instead of abroad, nearly getting hit every day on your bicycle, replacing all of your 50 cent light bulbs with \$10.00 light bulbs..... well, all of those things you have done have all gone down the tubes in just four days. The volcanic ash emitted into the Earth's atmosphere in just four days - yes, FOUR DAYS - by that volcano in Iceland has totally erased every single effort you have made to reduce the evil beast, carbon. And there are around 200 active volcanoes on the planet spewing out this crud at any one time - EVERY DAY. I don't really want to rain on your parade too much, but I should mention that when the volcano Mt. Pinatubo erupted in the Philippines in 1991, it spewed out more greenhouse gases into the atmosphere than the entire human race had emitted in all its years on earth. Yes, folks, Mt. Pinatubo was active for over one year - think about it. Of course, I shouldn't spoil this 'touchy-feely tree-hugging' moment and mention the effect of solar and cosmic activity and the well-recognized 800-year global heating and cooling cycle, which keeps happening despite our completely insignificant efforts to affect climate change. And I do wish I had a silver lining to this volcanic ash cloud, but the fact of the matter is that the bush fire season across the western USA and Australia this year alone will negate your efforts to reduce carbon in our world for the next two to three years. And it happens every year. Just remember that your government just tried to impose a whopping carbon tax on you, on the basis of the bogus 'human-caused' climate-change scenario. Hey, isn't it interesting how they don't mention 'Global Warming' anymore, but just "Climate Change" - you know why? It's because the planet has COOLED by 0.7 degrees in the past century, and these global warming bull**** artists got caught with their pants down. And, just keep in mind that you might yet be stuck with an Emissions Trading Scheme - that whopping new tax - imposed on you that will achieve absolutely nothing except make you poorer. It won't stop any volcanoes from erupting, that's for sure. But, hey, relax...give the world a hug, and have a nice day!"	4/12/2021 4:37 PM
13	I would like to be a part of local actions and discussions to benefit community climate action if opportunities for involvement were available.	4/11/2021 7:56 PM
14	Implement one!	4/11/2021 10:11 AM

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15	I feel that more citizens, from all income levels, would participate from their local, state and federal government recognizing their joint efforts to reduce or provide taxing credit/incentives. People do care about their environment, but most feel forced with no say or lack of support from the political officials' empty promises. It's my feeling that both the climate and our local, state and federal government needs help from the people and the people need more proof to gain back trust in the system. I love my country, but I am embarrassed with how we forgot about our four-fathers' efforts to protect and preserve our country, home, and freedom from greed, control, and self-entitlement.	4/11/2021 6:23 AM
16	Improve electronic and tv recycling availability Extend light rail to Mechanicsburg	4/9/2021 8:32 AM
17	We need to eliminate these unnecessary firepits that pollute our air and permeate our homes.	4/8/2021 9:05 PM
18	Implement working from home requirement on going, even post COVID-19, and actually mandate it and not leave it up to individual apartment heads. The benefits are great to the environment, your employees and constituents.	4/8/2021 11:57 AM
19	This is another scam in my opinion. however, I have no issues supporting a product/service if it is affordable and RELIABLE. I do not want the government at any level subsidizing a product/service as that is a manipulation of the free market.	4/7/2021 12:13 PM
20	We are starting a Bible Study on Environmentalism at our Church. We had a Green Committee that stopped we hope to restart.	4/5/2021 12:18 PM
21	No new taxes or fees. What ever you do, use your brain and think how it will affect retired citizens of CC	4/4/2021 9:27 PM
22	I am very glad to hear Cumberland County is undertaking a plan.	4/3/2021 5:31 PM
23	It is not the role of county government charter to do any work under the title of climate change. It is not in the county charter but it is an action of a political party narrative. The State can't predict the weather but yet they believe in their ignorance they understand the changes of climate change and ask the counties to work with universities on items that will not make any difference. The survey does not explain what is a greenhouse gas? CO2, the gas we need for plants to grow? We need plants to eat or we starve. The problem is I'll-define and makes 2nd grade suggestions on how to remediate the fake problem. This effort seems to be creating make-work jobs. Cease and desist this activity and do the work of the county the tax payers want and not work for a political ideology	4/2/2021 10:57 AM
24	I fully support all actions that the County decides upon to address climate change!	4/2/2021 10:10 AM
25	This whole issue should be around education, not forced government intervention. Everyone cares for the environment if you phrase it correctly. The climate change phrasing has become a political football and all about money and power. If you want to have real impact, focus on education, not regulation.	4/2/2021 7:22 AM
26	As a resident of Cumberland County my opinion is that the county, and government in general, should have very little to do with addressing climate change. This climate catastrophe agenda is being pushed down everyone's throats. We all want clean air and clean waters but I hope you're all doing your home work on "climate change" because to me 90% of this about government control over peoples' lives and that is unacceptable.	4/1/2021 5:30 PM
27	Some effects of climate change are difficult/impossible to see/feel - species migration/extinction, micro plastics, ... However, we are seeing the impact of climate change with almost every weather event - more wind, more rain, more drought, ... These things that we see are not enumerated, marketed, ... enough to help the unknowing understand that efforts to mitigate can make everyday more liveable.	4/1/2021 4:09 PM
28	Thanks for reaching out! I guess bicycles and walking are difficult in many parts of the county but e-bikes would be helpful. Also requiring businesses or providing incentives to add charging stations would help with e-vehicle use?	3/31/2021 9:15 PM
29	This is extremely important to me, my husband and our family. I want Cumberland County to be for more proactive in protecting our natural resources and curbing single-use plastic products.	3/31/2021 7:52 PM
30	Support police and fire companies. Keep taxes low. Be transparent to the voters. Keep Cumberland County the place people want to live.	3/31/2021 11:45 AM

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31	Why are school TVs and lights on all summer with empty lots? Rain tax is unfair to newer developments in compliance. Punishing all financially for older properties polluting waterways is not a solution. Plant more trees. Offer water collection systems. Exempt fees for car registration if low miles. Offer soil testing to reduce over fertilization. Require lawn businesses to do test before applications.	3/30/2021 2:19 PM
32	How can you call it a plan when you're still in the survey phase?	3/30/2021 12:49 PM
33	Please take climate change seriously. Prevention and mitigation is critical to managing infrastructure and creating a long term environment for businesses to succeed and adapt as the climate changes.	3/29/2021 8:42 PM
34	I would like it to be easier to recycle more things more effectively.	3/29/2021 7:17 PM
35	Recycling doesn't help all that much because only about 9% of all plastic sent to recycling centers are actually recycled. Maybe start with encouraging local municipalities to implement plastic bag bans.	3/29/2021 5:03 PM
36	This is much needed! We need to take action on multiple levels NOW!	3/28/2021 2:33 PM
37	I am disturbed by the County's Planning Commission to be considering changes along Rt. 11 from agriculture to commercial use, probably for warehousing which takes down trees and adds to runoff or catch basins that encourage mosquito and other insect breeding grounds.	3/27/2021 11:17 AM
38	Please public tips on your county Facebook page and on your website! :-)	3/25/2021 8:55 PM
39	Anything other than informing people and giving them options I believe the government should not subsidize climate change action. It should be up to the tax payer to decide when and what they spend there income on.	3/25/2021 4:43 PM
40	I believe analysis of climate change is based upon manipulated data in order for those studying it to keep getting grants to fund their research. Conclusions arrived by the analysis of the data is bupkis.	3/25/2021 11:24 AM
41	Some local efforts can improve water and air quality. But, global climate change is cyclical, a function of natural causes and beyond the ability of humans to affect.	3/25/2021 10:27 AM
42	Thank you for the surve4y and preparing a report and recommendations. Such work is important!	3/23/2021 10:37 PM
43	Solar panel lease/partnership programs and composting programs are extremely interesting.	3/23/2021 8:26 PM
44	All who care about our world should respect it and take good care of it. BUT, current climate change proposals would do little to affect temperatures AND Americans would pay in exorbitant costs, as other countries are the big offenders, like China.	3/23/2021 7:44 PM
45	Ban plastic bags & clean up litter along the roads.	3/23/2021 11:20 AM
46	add sidewalks that connect neighborhoods to Carlisle Pike and add sidewalks along Carlisle Pike so people can walk to stores.	3/23/2021 10:59 AM
47	Everyone wants a non-polluted environment. If regulations that are currently on the books were enforced, we will be there. A lot of " climate change" only equates to people getting rich with minimal change. Example..Al Gore is worth \$ 330 million dollars. He didn't make that from public service, speeches and a movie. Until an accurate accounting can be given showing where the dollars go (and what were the results) client change is money pit...even though (as you can see) I do my part to help with real end results.	3/23/2021 8:34 AM
48	A Climate Action Plan should be developed for Mt. Holly Springs ASAP. We also have many trucks who travel through this small town who also are affecting our climate.	3/22/2021 9:38 PM
49	We live in a condo so options are limited to what we can do. If there would be affordable solar energy panels available I would ask the HOA to consider installing.	3/22/2021 11:11 AM
50	I am glad the County is conducting a plan. I hope the county will consider taking reasonable steps to combat global warming and climate change.	3/22/2021 8:10 AM
51	We consider the water of such poor quality for drinking that we installed a reverse osmosis in-home water purifying system many years ago. One of the best investments we've made for our health.	3/21/2021 12:49 PM

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52	I want to do more. I have been waiting 50 years for this!	3/21/2021 8:00 AM
53	Grants for more connectivity and mobility for residents; sidewalks , bike paths, etc..	3/21/2021 7:30 AM
54	Keep up the good work.	3/20/2021 8:51 PM
55	Personal opinion: the greatest sourced of pollution leading to climate change and personal health problems in this entire valley is the trucking industry. Drive on I81 on a Monday / Friday, and simply look and smell.	3/20/2021 4:07 PM
56	I would like to be considered for participation and collaboration with the task force.	3/20/2021 1:11 PM
57	Interested in add'l information, and appreciate County's efforts to address climate.	3/20/2021 10:56 AM
58	Stop issuing building permits for new commercial property when there are so many empty sites around the county that could be refurbished. This would eliminate millions of additional square feet of paving that contribute to global warming, rain run off and the loss of viable land. I don't make these decisions, but I am expected to pay an extra fee for water runoff due to the continual approval of these building permits by those in charge.	3/20/2021 9:55 AM
59	Let's take action!	3/19/2021 9:43 PM
60	Change the name to Good Stewardship Action Plan. Everyone can relate to being a good steward of the Earth. Many know Earth's climate has never stopped changing and consider it arrogant of govt to fix it.	3/19/2021 12:26 PM
61	Make the call for changes and tell me how I can best help.	3/19/2021 10:15 AM
62	As long as there is no change in all government levels, in out of control warehousing and other developments, continued use and sales of invasive plants we are losing the fight.	3/19/2021 9:18 AM
63	While individual action is important, participation from corporations and government is essential. Thanks for putting this together.	3/19/2021 9:17 AM
64	Recycling program needs improved. Businesses should manufacture more biodegradable products. Plastic shopping bags should be banned. There should be more community composting options.	3/18/2021 10:21 PM
65	Stop wasting tax dollars on bullshit items. there are more important issue	3/18/2021 8:47 PM
66	The Action Plan only controls the actions of people. It will never change the climate.	3/18/2021 7:42 PM
67	Great idea if it's a serious initiative and not just fluff.	3/18/2021 4:57 PM
68	please stop any further development in silver spring twp...the animals and environment are suffering.	3/18/2021 3:53 PM
69	Please don't spend any of my tax dollars on mitigating so-called climate change.	3/18/2021 9:13 AM
70	I would be in favor of incentives for reducing waste and pollution, but no mandates for individuals.	3/18/2021 8:35 AM
71	So glad you are doing this!! People need to become more aware that individual actions DO make a difference, and, actually, that many of these actions will save them money. (Example - composting will greatly reduce their trash bill.)	3/17/2021 6:33 PM
72	Small steps lead to vast distances. The sooner we start, the sooner we get there, and, we're running out of time.	3/17/2021 6:33 PM
73	Climate change should be a high priority for our local governments as well as state and federal. We will soon be overwhelmed by climate related problems and should delay no longer implementing policy to abate. There is a critical need to educate residents about the many ways we are being affected, this survey is a start.	3/17/2021 2:57 PM
74	More needs to be done to reduce commercial packaging and use of plastic bags.	3/17/2021 10:40 AM
75	I am glad to know that there is such a plan.	3/17/2021 10:15 AM
76	More needs to be done. Cleaning up trash along roadways is also needed.	3/17/2021 9:19 AM
77	I'm glad you are doing this. This is an extremely important issue.	3/17/2021 9:04 AM

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78	Please ensure that costs associated with any climate change initiatives will yield measurable benefits that justify those costs. Do not engage in symbolic projects that "look green" but provide no meaningful emission reductions.	3/16/2021 10:36 PM
79	I don't want to spend more money for climate change. Don't force this on everyone. USA is already doing a lot in this area and other countries do nothing and it is too costly and wind and solar are not cost effective.	3/16/2021 8:31 PM
80	I hope the county will engage with other counties to make real progress.	3/16/2021 8:30 PM
81	Infrastructure in Hampden Twp as well as Cumberland County must be planned now for the future. Developing and redeveloping of land needs to also include updated plans for increase in traffic. Walking & bike lanes need to be incorporated. Additional lanes should be added to RT. 81 to handle increase in traffic.	3/16/2021 5:08 PM
82	We have already seen the dangerous effects of climate change on our weather. All levels of government need to take combating this seriously.	3/16/2021 4:00 PM
83	I work in Carlisle. The answers to these questions were my personal perspective and not that of my employer.	3/16/2021 3:47 PM
84	Get this out to more people! More on social media! Send it to the schools for help.	3/16/2021 10:32 AM
85	I would like to be considered for any technical subcommittee or panel positions. I have all the necessary background as a retired earth scientist.	3/15/2021 10:11 PM
86	As long as population keeps growing we will never get ahead of climate change....we can try to make a difference but will slowly loose ground...	3/15/2021 9:21 PM
87	I would be proud to be a resident of a county that is leading by example in the fight against climate change. These important steps begin locally and everyone can play a part in making our planet safer and healthier for generations to come.	3/15/2021 9:12 PM
88	The most dramatic climate change was the Ice Age.?definitely not man made. Climate change is a natural phenomenon not man made as proven by the Ice Age	3/15/2021 6:53 PM
89	I agree with all actions to forestall climate change impacts. Just so the government is not involved.	3/15/2021 5:44 PM
90	More people would bike if we had bike lanes so it was safer. I wish there were bike lanes in Camp Hill along 11/15 and Market St. Also wish we had sidewalks on all streets on at least one side of the road so folks could walk safely.	3/15/2021 5:36 PM
91	Do it and do it great. Make it so it incentives can be had by all that participate, and let everyone know they are making a difference.	3/15/2021 5:05 PM
92	I am very pleased Cumberland County is creating this plan. I hope when it is completed it will be used.	3/15/2021 3:46 PM
93	Climate change isn't real.	3/15/2021 3:43 PM
94	I agree with taking care of the environment, but some actions are counter productive. For example, the intensive mining involved in securing the minerals necessary to manufacture batteries and solar panels is more intrusive then mining for coal or fracking for natural gas. Additionally, no one ever seems to consider the life span the materials that will be dumped in landfills at the end of the useful lives of wind turbines, solar panels, and batteries. Government needs to guide, not control the process of moving toward energy efficient technological breakthroughs.	3/15/2021 3:28 PM
95	It is great that Cumberland County is taking action on climate change.	3/15/2021 2:09 PM
96	Look forward to hearing from you.	3/15/2021 1:22 PM
97	If you wish for us to install rain gardens on our property, some DEP regulations might need to change.	3/15/2021 12:06 PM
98	Appreciate that you are taking this step!	3/15/2021 8:46 AM
99	Include actual actions for municipalities, business, and individuals rather than vague suggestions like "reduce waste"	3/15/2021 8:07 AM

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100	Thank you for this survey. It definitely got me thinking of more things I can do on a personal level.	3/15/2021 1:12 AM
101	Drop the Cumberland County Climate Action Plan and concentrate on issues that will actually impact county residents and their quality of life. This has to be one of the most idiotic things I've ever heard for local government. Stay in your lane!	3/14/2021 9:53 PM
102	Reuse the buildings lying dormant in the township instead of building on green areas.	3/14/2021 9:32 PM
103	Thank you for doing this. I feel the most urgent thing you can do is to educate people. Can we use PSA's, public forums, teach-ins working with Dickinson College, etc.? We terrify our children in school with talk of species extinction when it is us adults who have to step up and look at our own possible extinction in the face. The pandemic should have taught us that unless we learn what is at stake, and make major changes in how and what we consume, things can get very bad, very quickly. The Gulf Stream has been slowing down, for example, because of the increased cold freshwater from glacial melt. If the Gulf Stream slows too much, Northern Europe will no longer be warmed, and one projection is that we could be looking at not 100 days, but 100 years of continual snow in North America. This is something we would not survive, but how many people even know that the Gulf Stream has been slowing? We have no time anymore for the climate change deniers, any more than we had time for the pandemic-deniers. We have serious work to do.	3/14/2021 8:44 PM
104	Pleased that there may be an action plan. We must leave a hospitable behind.	3/14/2021 7:07 PM
105	I think it is important for government agencies and departments to be role models for the rest of us. They can do an incredible amount of good in normalizing the proper, climate-friendly behaviors that we, the public, should follow. It should start with them.	3/14/2021 6:57 PM
106	I think it's really critical for businesses and manufacturers to reduce the amount of plastic used in everyday items. I take reusable bags to the store, but there are still so many items pre wrapped in plastic, including produce. Education on waste reduction and recycling is critical.	3/14/2021 6:43 PM
107	We are already taxed to death. What's the point of pushing climate change issues if we can't even afford to live? We recycle and take care of our property. We do not buy things we don't need and I was taught to conserve. God created the earth and we are to take care of it. I do not litter and I don't want to pay because someone else does. Please take the average taxpayer into consideration before you tax us to death or make up new fees to cover expenses that there is no tax base for. I am not at all convinced that climate change is a thing. Reduce, reuse and recycle. Be responsible.	3/14/2021 4:41 PM
108	I'm glad that the county has taken this initiative.	3/14/2021 4:19 PM
109	Need to promote Federal and Global Action NOW	3/14/2021 2:24 PM
110	Adopt RGGI for Pennsylvania	3/14/2021 2:21 PM
111	We don't need any forced mandates coming from the county.	3/14/2021 2:17 PM
112	Don't waste time and money on activities that won't make a difference and only make you look "following the crowd."	3/14/2021 12:40 PM
113	Thanks for taking climate change seriously.	3/14/2021 12:12 PM
114	I am very interested in getting involved in helping to reduce climate change. Are there volunteer opportunities available?	3/14/2021 10:17 AM
115	I am heartened that our county is taking this issue seriously. I hope we aren't too late.	3/14/2021 10:13 AM
116	The climate is always changing. Stop wasting tax money on an issue that very little impact on the day to day. The "science" and predictions made by experts has been wrong over the past 30 years regarding the impact of "climate change", now no longer could "global warming". The county should focus on crime reduction, providing tax relief/rebates to property owners as a result of the third stimulus windfall provided to local governments as it is the people's money	3/14/2021 9:58 AM
117	This is unfocused. How do the waste management topics impact climate? What difference does fertilizer use make regarding climate? How does landscaping to capture rainwater impact climate change?	3/14/2021 9:54 AM
118	We need to increase recycling and find solutions for lack of recycling now that China has decided not to take our waste.	3/14/2021 9:16 AM

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119	I also have a rental house in the borough. The Historical Society limits me on what I can do for efficiency.	3/13/2021 6:41 AM
120	we need to conserve green space and put solar panels on all those warehouses!	3/12/2021 5:33 PM
121	Weather patterns have been normal my entire life but Cumberland county rocks, love living here	3/12/2021 4:15 PM
122	I am a retired geologist. I see the climate numbers and I understand the dynamics of our changing climate. My concern is those who do not take climate change seriously, especially those who think it will cost them money. If they can't see it their own backyard... This is a global problem. The oceans, 75% of our planet are warming faster than the land surface. The oceans drive our changing weather and changing climate. The science is clear in that anthropologic activities are exacerbating the already accelerating heat retention of the ocean and atmosphere. It's not just in Cumberland County, it's the planet.	3/12/2021 4:05 PM
123	I hope the plan can curb some of the atmospheric deposition impairment to the upper section of the Yellow Breeches. That section of the creek is acidic due to the deposition.	3/12/2021 3:44 PM
124	Do something about the trucking on, near and surrounding our County. The roads are not adequate!! Who is responsible for Planning and Zoning failure to ensure the safety of residents?	3/12/2021 2:10 PM
125	Dissolve and focus on real issues that you can have real impact on, such as pollution, zoning/land use, corruption and waste in local/state government for starters.	3/12/2021 10:53 AM
126	Listen to podcast -- How to Save a Planet. Great implementation actions.	3/12/2021 10:33 AM
127	I'd love to see a Climate Action Plan that includes mandates for townships and especially rental property owners to take action where citizens cannot (i.e. installing greenways, stormwater catchment basins, improving infrastructure for public transit, home/property improvements that would reduce energy usage, etc.)	3/12/2021 10:15 AM
128	Please listen to the scientists and not people's personal opinions. Facts should guide you in making these decisions that affect the survival of future generations and many species.	3/12/2021 10:13 AM
129	Corporations can do much more than individuals. Consumers are forced to buy items that they don't particularly want (single use plastics, for example). A massive public relations campaign pushed the burden of responsibility on to the consumer and away from the real culprits producing all the waste. Tax breaks using public funds subsidize harmful industries. I'd use a car/airplane less if high speed rail was widely available in this country.	3/12/2021 9:48 AM
130	Thank you for taking this issue seriously! The survival of the species depends on it and there is not much time left. It's a personal responsibility of all residents of planet earth, but your responsibility to act increases with the amount of power, money, and influence you have. Governments at all levels need to act to support citizens as we work towards a carbon neutral future, whether that be subsidies for home energy improvements, or job relocation or long term unemployment benefits for industries that need to close. Economists estimate that global costs for achieving a carbon neutral society are significantly less than we've spend on the pandemic. It is possible! Thank you again for this survey!	3/12/2021 8:30 AM
131	I'm proud, as a 50+-yr resident of the county, to see action taken. I hope we are as courageous as possible in fighting the opposition of people who don't accept the science.	3/12/2021 8:24 AM
132	I do not support a Climate Action Plan.	3/12/2021 8:17 AM
133	Would love to see local government (Silver Spring Twp especially) start limiting construction of car dealerships, warehouses & huge home neighborhoods. All of our green space is disappearing and it is quite disheartening. I understand the need for growth, but car dealerships don't add to quality of living here in Cumberland County. We already have too many warehouses, most of which struggle to find enough employees. Why build more? I wish for them to stop being greedy (our taxes aren't decreasing, so what's the benefit for us!?) and prioritize quality of life for residents.	3/12/2021 8:10 AM
134	Need to look at the larger picture on this stuff....Solar panels take more energy to manufacture than they ever produce...electric cars still need power generation from a power plant. Don't do stuff just to say your doing stuff to achieve "perception"	3/12/2021 7:56 AM
135	I don't believe that climate change is areal problem and we can not make a difference if we all	3/12/2021 7:14 AM

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did everything that they want. There are country what won't be anything a d people that don't have money to do it.

136	Happy to see this is being looked into. There are great opportunities this county could take advantage of.	3/12/2021 7:05 AM
137	We have more important issues to address: pandemic vaccines and research, homelessness in Cumberland County, Available food supply to our children and our elderly.	3/12/2021 6:11 AM
138	I wish there was a municipal compost process. When I lived in Camp Hill, there was Yard Waste and mulch, but nothing for Shiremanstown.	3/12/2021 12:33 AM
139	We've seen our air and water quality decrease in just five years, due to additional warehouses and related truck traffic. Large freight facilities should be located to make greater use of existing rail lines. In addition, developers of such facilities should be required to install solar panels and better wastewater treatment techniques, and pay higher fees/taxes in the municipalities where they are located. Truck manufacturers and freight companies should be required to reduce vehicle and plant emissions.	3/12/2021 12:29 AM
140	Please do not tax water run off on residential or agricultural zoned lots. Farmers have done so much to mitigate the water run off that is caused from commercial buildings and infrastructure projects and most townships and counties base the tax off of acreage when in reality it should be off of the coverage on a lot that prevents absorption. Also, climate change has always been a thing, sometimes the best action is no action. It should be personal responsibility, not the government that prevents climate change. There is a cost associated with it and I don't feel that I should handle that burden when I already do my part for the county.	3/12/2021 12:17 AM
141	This seems like a waste of taxpayer dollars	3/11/2021 11:55 PM
142	Planting more trees, limiting vehicle traffic and parking, and limiting developer driven suburban sprawl. Poor land development by residential developers is a huge problem in central Pennsylvania.	3/11/2021 11:08 PM
143	I do not believe man has a measurable impact on climate. Nonetheless, we are to be good stewards of what God has created. Global warming (now climate change) are tools being used to frighten, control and manipulate a gullible nation. What a disgrace.	3/11/2021 10:59 PM
144	you may want input however you still are going to need people that can help who can adiquidly solve the problems.	3/11/2021 10:06 PM
145	Individual voluntary response is important, but global climate change demands the attention of all levels of govt. Pleasd help save our planet for our children and our grandchildren	3/11/2021 8:01 PM
146	Mandate paper bags in the county. Offer incentives for energy effecency. Have schools and businesses turn off their lights when they are not open. CV stadium is brighter than the damn sun, the only thing brighter are the car dealerships on the pike.	3/11/2021 7:48 PM
147	Thanks for taking this issue seriously.	3/11/2021 7:31 PM
148	you should abolish inspection and emissions requirements on cars in the county. along with lower the tax on gas in order to bring down the prices.	3/11/2021 7:04 PM
149	Add rooftop solar to existing low-income housing like Shepherds Crossing in Mechanicsburg	3/11/2021 6:54 PM
150	I would like to see safer and bike paths around cumberland county, camp hill/lower Allen/lemoyne area.	3/11/2021 6:08 PM
151	I think the state needs to do more to restore streams and rivers and protect air quality. i also would like government to find ways to encourage less plastic use - both bags and bottles and food packaging.	3/11/2021 5:50 PM
152	Glad this is happening	3/11/2021 5:49 PM
153	Thank you for taking this step.	3/11/2021 5:42 PM
154	I hope that Cumberland County will share the data from this survey	3/11/2021 5:06 PM
155	This is moronic. It is as bad as the carlisle one. You aren't focusing on the problem but rather what you feel can be reasonably done about it. Climate change is an imperative that requires we revisit what is reasonable. None of you are going to do that because *smart* growth is still	3/11/2021 4:38 PM

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the underlying goal. The economic future of the county is at odds with sustained action in favor of climate change. No one seems willing to confront this.

156	Hurray to YOU for raising these issues. I am appalled at plastic waste. THAT should be addressed by local governments as well as at the federal level.	3/11/2021 4:29 PM
157	I am willing to volunteer on a county wide committee. I am also a Cumberland Co Master Gardener	3/11/2021 3:58 PM
158	Cumberland County needs to preserve native habitat and limit pollution. All the trucking companies and warehouses and highways create a visible haze in the valley at times making it hard to breathe. And on top of that municipalities apparently allow outdoor wood burning (and it's not all wood, they are burning trash in town) and allow residents to heat their homes with wood burning furnaces. The smoke from these wood fires is horrendous, to the point you cannot go outside at times in any season. The smoke was so thick from one house's wood burning furnace that the fire department was called, you couldn't see to drive through it. This type of pollution must be regulated. People think they are saving money doing this, but they make the area around them unlivable. And this is in Lemoyne and Camp Hill. The wood burning pollution started getting worse sometime in the 2000's. People's houses always had fireplaces or barbecues but they did not previously have fire pits where they burn wood and trash and lawn debris and whole house heating wood boilers. One house gets huge trucks of wood delivered and puts out huge plumes of smoke. The smoke is so bad it permeates neighbors houses. This type of over the top smoke pollution needs to be regulated along with vehicle and business air borne pollutants.	3/11/2021 3:52 PM
159	Climate change knows no boundary, so it is essential all levels of government and private businesses work together to roll back the problems we have created and prevent additional ones.	3/11/2021 3:50 PM
160	Good luck. People dont like change.	3/11/2021 3:40 PM
161	Improve public transportation	3/11/2021 3:37 PM
162	Green energy has its limitations with regard to batteries and how the electricity is generated. I would like to see innovative uses of food waste to energy programs in Cumberland County and energy production through wastewater treatment in combination with solar usage in the area.	3/11/2021 3:04 PM
163	The greatest factors in climate change are the sun, the earth's magnetic field, and ocean forces such as La Nina and El Nino, none of which are able to be controlled by human beings. Cumberland County should focus on sustainability, including the latest techniques for waste management and encouraging the reduction of plastic bottles and the use of plastic grocery bags.	3/11/2021 2:37 PM
164	I have been trying to find a resource to help me plan and build landscape to manage poor drainage/rainwater on our property, including help building a rain garden. If resources and contractors are easier to find, I think more people would consider doing things things like this.	3/11/2021 2:06 PM
165	I am a newly certified Master Watershed Steward through penn state extension. I have been participating in your public webinars with Carlisle and Dickinson College. Great initiative!	3/11/2021 1:21 PM
166	Energy efficient actions can help the county and local governments save money and should be encouraged. For example, less trash in landfills through recycling brings municipal waste costs down. Energy efficient light bulbs in local government buildings reduces electricity bills.	3/11/2021 12:44 PM
167	Recycling and waste collection is currently a joke- work on that first.	3/11/2021 12:19 PM
168	It's very important for everyone (personal, business, govt) to work on this. I developed asthma when I moved here due to the truck particulates. Climate change/pollution is making it worse for everyone now, and perhaps unlivable for future generations.	3/11/2021 12:13 PM
169	Why are you needing to do this? Is it a fed mandate?	3/11/2021 12:05 PM
170	Please do not pass any laws or regulations that increase costs or taxes. Already negatively affected by the ordinance in Upper Allen Twsp, that outlaws washing your car in your driveway! Where are you supposed to wash your car?	3/11/2021 12:03 PM
171	It really needs to have requirements set for the townships. For instance, builders should be required to use permeable driveway surfaces. Builders must be monitored for environmental requirements - are they fulfilling responsibilities.	3/11/2021 11:56 AM

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172	Just stay basic. Come up with a catchy slogan, do some education on recycling and taking care of Mother Earth...If anything, come up with smart growth plans for new development like no less than X amount of houses per square mile, an X amount of trees must be on business properties...	3/11/2021 11:44 AM
173	Education and resident input is needed before any plans are proposed or implemented.	3/11/2021 11:24 AM
174	Can we make our county more walkable with sidewalks?	3/11/2021 11:20 AM
175	Open space and farmland are so important to Cumberland County. Rampant development without regard to protecting waterways, air quality, recreational opportunities and quality of life must be stopped before we are one big, ugly gridlocked piece of land. Instead of warehouses, highways and housing developments, Cumberland County should invest in trails, parks, natural resources and historic preservation.	3/11/2021 11:15 AM
176	Government-mandated climate change mitigation is a very bad idea. Complete elimination of emissions today in the entire country would make only an undetectable (literally) difference in projected global temperatures by 2100, according to the exaggerated projections IPCC models. What we need, most of all, to address any climate related harms are resources for adaptation, which we would undermine by economy-destroying mitigation efforts. The best course of action for Cumberland County governments is no compulsory mitigation efforts at all. Grow the economy and let the market sort out the adaptation, however severe or mild the impacts turn out to be. Central planners have no clue what adaptations will be needed decades from now.	3/11/2021 11:10 AM
177	Please make the electronics recycling free to Cumberland County residents. While everyone may not use it, we all benefit from electronics being properly recycled.	3/11/2021 11:09 AM
178	Any taxation of private citizens would be out of line and unjust. The government and large companies are the ones that need to reduce.	3/11/2021 11:02 AM
179	Create a funding source to support individual households who plant native trees, plants and shrubs to mitigate storm water drainage, attract pollinators and wildlife. Ban use of toxic herbicides and pesticides.	3/11/2021 10:56 AM
180	Plant more trees. Enforce trucks to be turned off when not in use. Provide programs for students to clean up areas around our water tables. Have some kind of public information program to not use toxic pesticides.	3/11/2021 10:49 AM
181	Great for CC to look into this. There are plenty of energy savings the county could adopt. Despite the energy award they received years ago, how about installing motion sensor lights EVERYWHERE in the county, including bathrooms. What a waste of energy just in our buildings.	3/11/2021 10:44 AM
182	Please don't confuse pollution with long-term climate change. Cyclical climate change is unavoidable. A cleaner environment is within our power.	3/11/2021 10:14 AM
183	we all need to do more. Air pollution in this area is a particular problem. also suggest a plastic bag ban. The Carlisle borough composting and county electronics and haz waste initiatives are excellent. Better public transportation, use of electric or hybrid vehicles by government desirable.	3/11/2021 9:38 AM
184	If you are serious about pollution and the climate in Cumberland County, STOP BUILDING WAREHOUSES AND TRUCKING TERMINALS!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!	3/11/2021 9:38 AM
185	keep this issue on the forefront of the actions for the county. Not always sure this is an issue of major concern to the the republican led leadership (at least it is not presented on the national republican level).	3/11/2021 9:34 AM
186	I'm pleased to see my county is doing something like this!	3/11/2021 9:33 AM
187	get out of this issue	3/11/2021 9:30 AM
188	reduction of particulate in our air can only happen through legislation limiting the trucking and warehouse industry's impact	3/11/2021 9:21 AM
189	Cumberland County has already made it clear where it's priorities lay and that's with the logistics industry not the environment.	3/11/2021 9:21 AM
190	We MUST preserve forested lands for cohesive balance - particularly regarding air and water quality - and support family farms practicing environmental stewardship. Thank you.	3/11/2021 8:47 AM

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191	Are there any requirements for green building practices for future commercial development being considered?	3/11/2021 8:28 AM
192	MD BGE has a solar program installing new roofs and solar panels to solar eligible costumers-please consider.	3/11/2021 8:18 AM
193	Thank you for doing this. It is important work and trying to show how everyone can do their part, no matter their income, will be important for future planning. Some lifestyle changes are easier to make and doing it gradually/incrementally will make it easier to make things stick. The more affluent in our community do often generate more emissions so it is also important to guide people of means to the ways their choices have a larger effect on our climate.	3/11/2021 8:13 AM
194	We all need to do something...yesterday! Thanks for asking!!	3/11/2021 8:12 AM
195	I don't think government mandates work. People will do things to save money in the long run, if they can. This includes more efficient appliances and homes. When the government steps in and mandates things, the cost to implement these things can be to high for the average person.	3/11/2021 7:58 AM
196	I love Cumberland County, and absolutely detest the idea of us being dragged into this climate cult.	3/11/2021 7:57 AM
197	I hope this gets more people thinking about this.	3/11/2021 7:55 AM
198	Climate change is more about control and politics than the environment.	3/11/2021 7:36 AM
199	Before moving to Mechanicsburg I lived in Middlesex. It was amazing to me the temperature difference at my house vs in town in the summer. I attributed it to the lack of trees and the amount of pavement in town. Why can't parking lots, streets, etc. be painted white to reflect heat vs absorb it? Why can't all parking lots be required to have islands/borders of trees/shrubs? There has to be small things we can do at reasonable cost to make some difference and set a good example for our kids.	3/11/2021 7:27 AM
200	Thank you for doing this important work!	3/11/2021 7:27 AM
201	Glad this is happening!	3/11/2021 6:42 AM
202	This is great, thank you for doing this!	3/11/2021 6:18 AM
203	Quit wasting taxpayer money on progressive hogwash!	3/11/2021 5:40 AM
204	No laws or mandates needed. Give people opportunity to be good stewards of there home is fine.	3/11/2021 4:49 AM
205	Cumberland county, not the United States, are the source or problem child of "global warming". If humanity has a hand in the change, it's from unregulated foreign industrial countries such as: China, India, and Mexico. However, the United States' hard working, tax paying citizens will foot the bill for the rest of the world as usual.	3/11/2021 4:40 AM
206	With all due respect, 'climate change' is simply used by leftwing politicians to push big govt programs and more govt control over our lives. Cumberland County should focus on real problems and ignore this imaginary crisis. For years the UN, Al Gore and leftwing politicians have told us the world will end in X years if we don't act. Please don't waste my tax dollars on nonsense like this.	3/11/2021 2:38 AM
207	Please no new taxes	3/10/2021 10:31 PM
208	We used to be able to recycle plastic, metal, newspaper, etc. in Cumberland county. We always participated in the program. That was stopped at least ten years ago because it cost too much money. I can't imagine would it would cost today. Why would you even think of implementing climate control regulations on residents of Cumberland County with all of the traffic on Rt 81 traveling through the county? Why should we be punished for others traveling through our area?	3/10/2021 10:08 PM
209	Why is it we have to pay extra \$ for recycling,which is why my household doesn't, when it should be free to help improve the climate.	3/10/2021 10:01 PM
210	think global, act local	3/10/2021 9:57 PM
211	It is not appropriate for the county to take significant actions in this area—we have far too	3/10/2021 9:52 PM

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much arbitrary government micromanagement as it is.

212	More action is desperately needed. More education and advertisement of resources would greatly help.	3/10/2021 9:21 PM
213	Please make initiative to reuse old vacant stores/lots before breaking new ground.	3/10/2021 9:15 PM
214	I recently moved back to Carlisle, my hometown, after living 10 years in Seattle. I was disappointed to see how far behind this area is regarding the use of single use plastics, such as plastic bags in grocery stores. They are illegal in Seattle grocery stores . As well, composting options here are minimal. I would love to see this area begin to take climate change more seriously in our systems, processes and individual actions.	3/10/2021 9:13 PM
215	Again, please don't waste taxpayer money on schemes based on climate hype. The sea level is not rising like they said it would, storms and hurricanes will always continue.	3/10/2021 8:53 PM
216	Why make cars pay for emissions tests when trucks are the problem? Half the people I work with in Cumberland county are from Perry county, they have NOT emissions tests.	3/10/2021 8:44 PM
217	Please stop wasting taxpayers' money by funding things like this.	3/10/2021 8:41 PM
218	What a waste of taxpayer resources	3/10/2021 8:23 PM
219	Seriously consider if the results are worth the time and effort and cost. How will you measure what is gained?	3/10/2021 8:19 PM
220	What is this costing CC residents?	3/10/2021 8:16 PM
221	I would walk more to shopping which is close to my house, but there are no sidewalks. I don't think South Middleton is a very walkable township, except for Boiling Springs.	3/10/2021 8:12 PM
222	Balance funds fairly. Really evaluate if it is necessary for a national chain is good for the people.	3/10/2021 8:11 PM
223	Making a max limit that can be charged and giving prices for longer than 1 year on electricity or setting electricity prices. This would make people want to choose providers.	3/10/2021 8:07 PM
224	Would love to see more solar power and electric vehicle charging stations.	3/10/2021 7:57 PM
225	Yes. Why hasn't Cumberland County set up or coordinated a Covid-19 vaccination site? You can't start a green plan without healthy citizens.	3/10/2021 7:53 PM
226	No more truck terminals	3/10/2021 7:43 PM
227	Hey guys! I run a little project called Kitchens Helping Climates which is aimed at reducing commercial kitchen waste by offering "trash" back into the community VIA people who would repurpose or reuse items. Its a small operation run by just me, but PLEASE let me know if I can do anything to help CCCAP. I love this!!	3/10/2021 7:42 PM
228	Survey is skewed to imply that global warming, global cooling, climate change is fact. Since the 80s it has been stated that we have 10 years ... hasn't happened. Climate change is nothing more than the redistribution of wealth from rich to poor countries. The Paris accord ..is a joke is consider particularly since China is considered a developing country ... hence cash from America.	3/10/2021 7:25 PM
229	There needs to be more land preservation! Most new neighborhoods are unnecessary. The lot sizes are too small and are packing too many people into our small towns. This increases traffic and emissions from transportation. This kills our trees and homes for animals. The school system will soon be overwhelmed and schools like CV will end up splitting an no longer be able to maintain the gold standard people move to the area for. There needs to be a housing freeze and to leave all unused land as wild space.	3/10/2021 7:22 PM
230	Man made climate change is a hoax and another way the government can control the citizens!	3/10/2021 6:53 PM
231	I think this is a good idea. Glad we're doing something about it	3/10/2021 6:44 PM
232	Why do we have to pay for emissions when people from different counties can come work here and not have emmissions on their cars.	3/10/2021 6:43 PM
233	Climate change is a joke and not a county level issue. Please stop wasting my tax money on liberal policies.	3/10/2021 6:38 PM

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234	Being proper stewards of the earth is what God Almighty expects. I am tired of the U.S.A. being bombarded about it when so many other countries don't do what they say will do. Sadly, they all our governments tax the citizenry to death about it. Also, I'm tired of our school systems indoctrinating our children about "saving Mother Earth". They've been touting this bilge since I was in school in the early 1960's. Proper management and taking responsibility is the key. Sadly, big corporations don't care if all they have to do is pay fines, no matter how heavy the cost.	3/10/2021 6:13 PM
235	Electronics recycling needs to be more affordable and convenient.	3/10/2021 6:05 PM
236	I'm very excited this is being done. There is a new Ecology Team of residents here at Bethany Village that cares deeply about environment issues and is concerned about the climate crisis. We believe that all of us are responsible and need to be active participants in the changes to be made.	3/10/2021 5:59 PM
237	Go bank to recycling all we can.	3/10/2021 5:44 PM
238	Give us a safe way to get from Cumberland County to the Harvey Taylor Bridge and Market St Bridge so we can commute by bicycle or e-bike. There is no non-lethal way to get to the bridges.	3/10/2021 5:39 PM
239	Cumberland county is rapidly adding warehouses and housing developments which do provide jobs and housing ... But sacrifice green space, farmland, and increase truck traffic. The impact of truck traffic on our air and water impacts the health of our region. As the county reviews development plans for the future I strongly hope they seek out policies that preserve green space and limit the impact of traffic pollution.	3/10/2021 5:32 PM
240	We all need to do our part.	3/10/2021 5:29 PM
241	Need to clearly communicate climate impacts to this region. Need to financially incentivize climate positive behavior and actions to both individuals and businesses. Air pollution is becoming a significant problem in this region as is Lyme disease which is driving us to consider moving to another area. The impact of public health and costs to public health is significant.	3/10/2021 5:19 PM
242	Awesome that our feedback has been solicited! Thank You!	3/10/2021 5:09 PM
243	Demonstrate to public that electrical vehicles are better for the environment or are we just exchanging vehicle emissions for power plant emissions?	3/10/2021 4:54 PM
244	I sincerely hope that something comes of this. Climate change is a very serious issue.	3/10/2021 4:51 PM
245	Stop all warehouse construction in county!!!!	3/10/2021 4:50 PM
246	Thanks for taking up this initiative!	3/10/2021 4:48 PM
247	I don't have enough space	3/10/2021 4:47 PM
248	Cumber County has done well with infrastructure, but needs to do BETTER! Shippensburg walmart is a pedestrian HAZARD. Every time I drive there people are dodging cars due to no sidewalks or crosswalks! Facilitate walking or biking properly. Also, consideration should be made for E-car charging around the area. Especially parks etc. partner with Electrify America etc. for paid DC fast charging. Doesn't need to be *free* charging. That should actually bring income to the county as well!	3/10/2021 3:51 PM
249	Climate change is not a state issue	3/10/2021 3:39 PM
250	Don't waste any more of taxpayer's money. Biden already put us back into the toxic Paris accord. Disgusting. Keep your climate change conspiracies out of my community.	3/10/2021 3:32 PM
251	I'm really happy this is happening. Thanks for stepping up.	3/10/2021 3:30 PM
252	Thank you for organizing this, it is a fantastic idea. I am a meteorologist and would love to volunteer my time to help in any way possible.	3/10/2021 3:28 PM
253	I happy to see this survey and discussions are happening!	3/10/2021 3:27 PM
254	Please recognize that bulk/refillable options are limited here. Also that manufacturers make it the consumer's responsibility to clean the waste stream by stamping "don't throw me away. I'm recyclable!" on products which clearly cannot/will not be recycled, instead of packaging in	3/10/2021 2:41 PM

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sustainable materials. We need better, cleaner, sustainable options if we are going to have any true choice.

255	we have been working on climate control from as far back as the 60's when I was a kid. Government needs to work locally but don't punish people for what other Countries are NOT doing.	3/10/2021 2:40 PM
256	If you want to promote "conservation," I'm for it. Otherwise, stopping spreading the falsehood.	3/10/2021 2:33 PM
257	Does the county have a program for planting trees? Developers cut down too many trees.	3/10/2021 2:31 PM
258	Limiting the use of lawn pesticides would be helpful	3/10/2021 2:15 PM
259	Please no more costly mandates. Leave me and my very small income alone.	3/10/2021 2:03 PM
260	Please continue to make climate change a priority, and improve our county! Thank you!	3/10/2021 1:47 PM
261	I am thrilled my county government is thinking about a Climate Action Plan. It would be wonderful for CC and PA in general to be a leader in this action.	3/10/2021 1:43 PM
262	You should NOT link contact information and receiving info on the CCCAP. I intend to remain anonymous, but would want to be updated on CCCAP. You obviously didn't think it through when you designed this survey. You should learn about Institutional Review Boards and the protection of human subjects in research. This thing would not have been approved by any IRB as "exempt" from review.	3/10/2021 1:38 PM
263	We need to take climate change this seriously and quickly.	3/10/2021 1:29 PM
264	Growth is both good and inevitable; heavily built-up areas aren't turning back into farmland. But we have to take action before it's too late to preserve greenspace and grow in a *sustainable* way. No new building should be allowed without the developer without addressing climate impact and footing the bill to build appropriate infrastructure.	3/10/2021 1:27 PM
265	I am far more concerned about the flood of illegals and drug/child traffickers coming in that destroy the children and jobs and overwhelm social services, schools and hospitals while they often contribute very little to the community that they take from. This survey was mostly about what I already do as a responsible American citizen living within my budget, but it's a great way to sneak in climate change and make people think it's just about being responsible without educating them on the real 2030 agenda behind all of it.	3/10/2021 1:23 PM
266	Thank you for seeking this input.	3/10/2021 1:10 PM
267	Great opportunity to see local government take initiative to encourage local population involvement.	3/10/2021 1:08 PM
268	Human beings are not responsible for climate change. It's a political tool to control the citizens	3/10/2021 1:01 PM
269	Please don't bring this United Nations fraud into our county. Please do your own research.	3/10/2021 1:00 PM
270	I am pleased that activity is occurring in the area of climate change.	3/10/2021 12:57 PM
271	I applaud Cumberland County for doing this. Minimizing climate change is important to sustain clean air, land and water.	3/10/2021 12:55 PM
272	I feel a lot of climate change is related to the fact we've put farm land under asphalt, concrete and steel	3/10/2021 12:48 PM
273	Glad you're finally doing something!	3/10/2021 12:38 PM
274	thank you for studying this important area!	3/10/2021 12:33 PM
275	I'm happy to see this. I hope we can start changing things.	3/10/2021 12:33 PM
276	Don't spend my tax dollars on stuff that has no effect.	3/10/2021 12:31 PM
277	I definitely think something needs to be done about I-81. There are too many trucks and vehicles on that road. It needs to be 6 lanes total and we need to consider having a commuter lane or lane for hybrid/electric vehicles. I also believe the Federal/State/Local government need to promote solar and wind energy more as well as hybrid and electric vehicles and provide tax incentives.	3/10/2021 12:30 PM
278	Congratulations for even considering taking action.	3/10/2021 12:29 PM

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279	I am so disappointed that Cumberland County has made it very difficult to recycle and recycling electronics is very expensive.	3/10/2021 12:24 PM
280	In my humble opinion, the role of government is to provide services that make it easier to take action; not to require action. I would like to see more emphasis on bike paths/lanes to enable use of alternative transportation.	3/10/2021 12:13 PM
281	The CC planning staff is awesome :)	3/10/2021 12:08 PM
282	The three things individuals can do to make a real impact are drive less, fly less, and eat less meat. Policies to help make these easier for people would be a big help. Thanks for asking!	3/10/2021 11:59 AM
283	All levels of government need to do this.	3/10/2021 11:56 AM
284	We have bad air due to I76 and I81. Until there is less traffic, we'll continue to have bad air. Nothing else will help. Put in light rail from Shippensburg to Harrisburg. Stop putting in warehouses. Get rid of trucking industry around here. Encourage more farming and natural living.	3/10/2021 11:55 AM
285	My opinion is that most actions to reduce environmental impact such as replacing your windows and insulation are not really practical or doable for most people. If I am in a situation where that needs done in my house I'd pick the most environmentally friendly option but I think some of these suggestions are not reasonable.	3/10/2021 11:54 AM
286	We should base these decisions based on science and proven fact, not opinion. It bothers me that a survey is going to affect these decisions and not proven scientific fact.	3/10/2021 11:45 AM
287	I think it's important to keep our environment clean. Pollution is real and I believe in recycling as well as other cleanliness related practices. However, the science doesn't support that "climate change" is detrimental to Earth. It shows the climate changes, yes, but not that human interaction will end the planet. The science actually shows that over thousands of years the temperature fluctuates every couple hundred of years to go up and then down. Hence, why in the 1950's scientists told us we'd be in an ice age by now and then in the 1980s to early 2000's it was global warming. I wanted to explain this to explain my answers. I support doing things for the environment, but I don't believe "climate change" is what the media says it is.	3/10/2021 11:44 AM
288	I believe that action to counteract climate change needs to come from business and individuals. I do not believe that the government should dictate this.	3/10/2021 11:39 AM
289	A number, many in fact, of the action items are items that address items that are already required. The survey is loaded with responses that require the following of these actions, which will result in someone not believing in climate change providing responses that indicate that they do. The survey should be more even handed. I find it useless and skewed.	3/10/2021 11:36 AM
290	Someone should look into the air quality/smell near the West side of town (Beginning of 641, W. Louthier St., W. North St) every single morning for some time it smells of terrible rubber or plastic burning. What is this coming from, is it the Carlisle Tire and Wheel Industrial Area? If someone were to measure the air quality in this area it cannot possibly be good to be breathing this terrible smell in.	3/10/2021 11:33 AM
291	More waste of taxpayer \$\$, the Chesapeake bay non sense is already costing us money and will never be fixed. More gov't programs keep costing us money and are unfunded by them. Hell the county doesn't even recycle in ALL of its buildings. Start at YOUR home first before trying to change the rest of the county and world!	3/10/2021 11:32 AM
292	I especially value the ability to buy local produce from Farmer's on the Square. It is higher-quality than the produce available in Carlisle grocery stores (produce quality is very poor in our local grocery stores), and it is great to be able to support local farmers who are focusing on environmentally friendly agriculture practices.	3/10/2021 11:29 AM
293	Data shows that big corporations are producing the vast majority of greenhouse gases. While individuals should still work to reduce their carbon output, business and government need to make significant changes to effect real improvement in combatting climate change.	3/10/2021 11:26 AM
294	To get better answers in this survey you may want to clarify to what extent things have "have already been done"	3/10/2021 11:24 AM
295	Decisions should not be made by people who think scientists are liars. Science is not opinion. Facts are not based on majority rules surveys.	3/10/2021 11:23 AM

Cumberland County Climate Action Plan Survey

296	Please do not recommend that the Borough Council start charging residents some sort of "climate tax/fee".	3/10/2021 11:22 AM
297	Question about only buying what you need lacks specificity. "Need" is a subjective term open to a wide range of interpretations.	3/10/2021 11:13 AM
298	I'm so glad that you are doing this. Climate change is a major issue that the world has to deal with and we are running out of time to get things turned around. Hopefully the survey responses drive the County to become a leader within PA in fighting climate change.	3/10/2021 11:12 AM
299	Personally I think this is a most important issue that demands forward thinking and action - spend the money now to save in the long run !! Thanks .	3/10/2021 11:03 AM
300	I'm very happy to hear that you are addressing the problem.	3/10/2021 10:53 AM
301	Thank you for sending out this survey. Positive incentives will always work better than mandates. Forcing people to do anything will usually backfire. Encouraging behavior that combats climate change with positive reinforcement and incentives will more likely lead to success. That's something to keep in mind.	3/10/2021 10:52 AM
302	Thank you for your interest. Hopefully you will take actions to improve climate and environmental issues.	3/10/2021 10:48 AM
303	Do not do it.	3/10/2021 10:47 AM
304	Just glad you're addressing the problem!	3/10/2021 10:46 AM
305	The existence of climate change isn't a matter of opinion. It's here and it's factually proven by any scientist worth their salt. We need to do something about it.	3/10/2021 10:44 AM
306	Enact local ordinances to ban merchandise/food plastic bags and single use plastic ASAP— paper only!	3/10/2021 10:42 AM
307	I don't believe there is man made climate change that is of a material amount that will impact our lives.	3/10/2021 10:31 AM
308	Is there a Facebook page or Instagram account linked to this Plan? If actions, events and programs could be publicized in that manner, I believe it would reach a larger audience and would be easily accessible to many who check their social media daily.	3/10/2021 10:29 AM
309	Stop wasting taxpayer's money. Your commission is stupid.	3/10/2021 10:29 AM
310	How much taxpayer money are you spending On this when there are so many other high priority needs	3/10/2021 10:28 AM
311	Kudos to you for acknowledging the problem!	3/10/2021 10:28 AM
312	Must preserve existing farmland and woodland.	3/10/2021 10:21 AM
313	Notice how most of the things you suggest cost significant amounts of money. We are not all as privileged as those who sit on the Borough's Climate Action Commission.	3/10/2021 10:20 AM
314	I am interested in seeing what the plan is. Cost is a major factor especially for those living in older homes. Education and incentive is the other hurdle, especially with so many people getting information from various competing sources online.	3/10/2021 10:17 AM
315	Cumberland County is seriously lacking in its , limited effort regarding climate and health issues. It push to be the center of warehousing to the determine of all residents: air quality, traffic and accidents.	3/10/2021 10:16 AM
316	Let's do it!	3/10/2021 10:15 AM
317	I see wasteful spending on the horizon in regards to grant money that we will all be told is free but it's Not free . Nothing is FREE. Grant money comes from hard working tax payers .And the Borough of Carlisle every single time a Democrat is in the White House does the most projects with the Grants . Examples the bike lanes & narrowing of streets to accommodate & All new traffic lights & street lights that were just replaced three years prior. I suggest bike trails . Try connecting Carlisle 2 Mechanicsburg & Camphill & Harrisburg. Bike trails & parks should be top priority. I would also like 2 join committee if possible 2. I'm sick & tired of wasteful spending & want to do make a difference this time around !!!!!	3/10/2021 10:12 AM

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318	We do not think we will be living at our residence in 10 years so it is hard thinking about investing in solar energy because of that.	3/10/2021 9:59 AM
319	Encourage businesses to offer incentives for consumers who utilize reusable bags, particularly Giant and Karns (additional reward points, percentage off grocery bill, etc.) whose headquarters are located in Cumberland County. I feel there is way too much plastic bags leaving these stores. Perhaps small businesses could pay for customer parking if they are located in municipalities with metered parking. It would be a small gesture, yet it may not put a huge dent into the businesses bottom line and show how they are working to make a difference.	3/10/2021 9:59 AM
320	Save Our Planet!	3/10/2021 9:58 AM
321	I appreciate that Cumberland County is doing this study - County Impacts on the Chesapeake Bay are important too	3/10/2021 9:57 AM
322	First I'm curious where you get the 2 degree increase number from when temps in US increased .14/Decade. Second, we are coming out of an Ice Age or period of glaciation. It should be expected that temps will increase - no surprise. Finally, CO2 is one factor out of dozens that impact climate. I'm all for options. I'm not for govt regulation the govt can't solve anything (I'm a 41 year govt employee)	3/10/2021 9:55 AM
323	Glad that the County is taking climate change seriously and looking at how to seriously plan and implement short and long term measures to mitigate air and water pollution concerns because both are critical issues.	3/10/2021 9:53 AM
324	There are more important local infrastructure issues that can be addressed with taxpayer money (Bridges, Roads, Stormwater). The County should take a comprehensive approach to stormwater. Some local communities have enacted stormwater fees, while neighboring communities have not. Lemoyne Borough used to have a community compost facility, until the County stopped bringing the "mulcher" machine around. Now our yard waste is sent with Penn Waste.	3/10/2021 9:52 AM
325	Thank you for taking this first step. We desperately need to take action on climate change and needed to do so many years ago. I worry that the communities in Cumberland County are told by conservative politicians that this is a non-issue and therefore they do not believe action is necessary. I implore you as a lifelong resident of Cumberland County to push through any attempts to curb what you are doing. Future generations of Cumberland County residents, Pennsylvanians, Americans, and people on our planet in general depend on us today to get a handle on this issue. The consequences of caving to special interest groups and conservative politicians are beyond our comprehension. Thank you for doing the right thing. Please keep doing it.	3/10/2021 9:51 AM
326	Education as to the applicability and direct positive affects of a clean environment relative to that individual s interests will be essential for changing the perspectives of those on the selfish end of the spectrum. A climate change denying fisherman, may be concerned about what polutes the local streams and makes the fish dangerous to eat, and may want to make those changes.	3/10/2021 9:50 AM
327	Please do not spend taxpayer \$. Not one dire climate prediction has come true. If wrong, which one? Lol. Again let the free market innovate. Not government legislate.	3/10/2021 9:47 AM
328	Note: "energy efficient windows" does not equate "new replacement windows". Vinyl replacement windows are not efficient, create needless waste, are not repairable or adaptable, have a lifespan of 10-20 years, and are not manufactured using environmentally unsustainable processes. Original wood windows are made of environmentally sustainable materials, repairable and adaptable to become more energy efficient (reglazing and storms is often all that is needed), can last, with routine care, 100+ years, and maintain valuable (\$) character of historic homes and communities. Please do not keep perpetuating the myth that vinyl replacement windows are "green" and efficient. Thanks!	3/10/2021 9:45 AM
329	This is a wonderful step, climate change is real and needs to be forefront in everyone's minds.	3/10/2021 9:40 AM
330	I'm so glad to see Cumberland County taking action against climate change. I believe that climate change is the single most serious problem that the planet faces. If we, and I mean the entire world, don't take immediate, concrete action, none of the other problems we face will matter. The solutions are all there, we just need the will to adopt them. Making the public aware of the dangers and the solutions is a much-needed first step.	3/10/2021 9:27 AM

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331	Thank you for taking the time to reach out to county residents and businesses.	3/10/2021 9:26 AM
332	Good first steps. Please follow through.	3/10/2021 9:22 AM
333	Yes, please make it so all can access energy efficient appliances and solar and save money and help decrease our impact!	3/10/2021 9:21 AM
334	It's imperative that humanity move away from fossil fuels and towards clean energy alternatives and sustainable living, and we should do whatever we can on a local level to accelerate that transition. It no longer makes economic sense to stick with the old ways, and that's to say nothing of our personal health, well-being and safety. In particular to our area, our air quality in the valley has never been great and it's only getting worse. We can do better!	3/10/2021 9:21 AM
335	Real and financially damaging fines for environmental infractions (ex. pipeline spills) may help incentivize companies to do their work the right way. It seems like targeting the idling trucks at the truck stops in Middlesex would be an easy place to start. Additionally, banning trucks from the small towns like Mechanicsburg and Carlisle would acutely improve the area. Trucks have very easy access to multiple highways without spewing diesel emissions in the towns. Additionally, "rolling coal" pick up trucks need to be ticketed. Following a passenger vehicle with black emissions is unfair to residents. Finally, expansion of smart lights seems like a wise option for Harrisburg/ Carlisle Pike. This would expedite getting trucks in and out quicker.	3/10/2021 9:18 AM
336	It's time to put some county money into climate change mitigation measures. The storms are worse and worse each summer and cost the county more and more money. That alone should be a motivation. But Cumberland County can't do it alone--other counties in PA and across the country need to take the issue seriously.	3/10/2021 9:04 AM
337	What a waste of money. Climate change is a natural occurrence.	3/10/2021 9:04 AM
338	Climate change is a natural occurrence and we need to adapt.	3/10/2021 8:54 AM
339	I am very interested in this plan and would like to participate however I can in its development. Please contact me at your earliest convenience concerning an opportunity to contribute to this action plan.	3/10/2021 8:53 AM
340	Glad you are doing this!	3/10/2021 8:50 AM
341	I would be more likely to carry out proactive actions if funding or financial support for these endeavors is available.	3/10/2021 8:49 AM
342	Not necessary or appropriate to set rules or provide incentives using county's resources because state and county should no issue unfounded mandates	3/10/2021 8:48 AM
343	Where you can reduce emissions without decreasing standard of living or increasing cost it is worth doing. Otherwise it is not worth doing, as the real drivers of current emissions are overseas.	3/10/2021 8:42 AM
344	Please follow the science to ensure that Cumberland County remains a safe, great place to live even in the face of extreme weather caused by climate change.	3/10/2021 8:40 AM
345	Pennsylvania needs to recognize that fossil fuels and their production must be better managed to reduce pollution. Jobs should not be the deciding factor when making decisions about where to spend money and holding accountable the companies that produce and distribute energy!!!!	3/10/2021 8:33 AM
346	Please look into making Community Solar happen!	3/10/2021 8:30 AM
347	Stop wasting our money on this bullshit	3/10/2021 8:20 AM
348	Please encourage townships to create more bicycle trails to provide the safety needed. I would gladly pay more taxes to have nice bicycle trails installed in my township.	3/10/2021 8:16 AM
349	There are serious questions about the human input to "climate change"—and we know the climate has changed throughout recorded history. The entire theory is based largely on models, models that don't always comport with reality. Moreover, there are some scientists in Europe who believe the sun plays a far larger role than humans in "climate change" and that we may, based on sun cycles and sunspot activity, be about to enter another significant cooling period similar to the Maunder Minimum experienced in the 17th and early 18th centuries, although volcanic activity may also have played a part in the cooling of the era. Taking steps to reduce energy consumption and pollution make good sense on their own, for in the long run they will also save money. The hope that agreements like the Paris Climate Accord—really a treaty that	3/10/2021 8:16 AM

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should be submitted to the Senate—will have a major impact is misplaced because China, and to some degree India, will go on INCREASING their pollution until 2030 under the agreement. Meanwhile, the US already has sharply cut emissions, and the Paris Accord will cost the US billions to achieve reductions that will be meaningless as China increases its pollution. As you probably have surmised, I am a bit of a skeptic on the issue of anthropogenic global warming, at least as far as its being the primary causal factor for changes in the climate.

350	If there will be any kind of citizen steering committee or board for this, let me know and perhaps I would be able to participate. Thank you for building this survey!	3/10/2021 8:15 AM
351	Climate change and environmental issues are everyone's responsibility.	3/10/2021 8:15 AM
352	Thank you!	3/10/2021 8:11 AM
353	Biggest problem: too many damn trucks in Cumberland County! Rt 81, Turnpike, secondary roads...huge trucking terminals and massive warehouses, etc. Terrible air quality and pollution. This causes health problems, and is contributing to climate change. Trucks often idle for hours, emitting harmful gases. Green spaces and farm land is destroyed for trucking terminals. Consider limiting truck facilities, or hold the trucking industry responsible for the harm they cause to our climate. THIS is the worst problem in Cumberland County.....especially Carlisle, Mechanicsburg, Camp Hill areas. We have considered moving because of the trucking industry here. No only is it causing air issues, it is a danger on our roads. Thank you.	3/10/2021 8:11 AM
354	Surveys may be popular but effective enforced governmental regulations are what will be needed to curb climate change.....and we all know that development corporations and businesses hold more sway of governmental officials than the voting public. Again IMHO.	3/10/2021 8:09 AM
355	Government should stay out of it. Climate change is going to happen. Don't spend taxpayer money on it.	3/10/2021 8:05 AM
356	Thank you for our township recycling program and thank you for initiating the conversation on this important issue	3/10/2021 8:05 AM
357	Climate change must always be considered when planning to improve or grow our communities. We must think about the future.	3/10/2021 8:04 AM
358	Thank you for putting this survey together.	3/10/2021 8:04 AM
359	Taking surveys at a time of global crisis. That's splendid. Good to know that leadership is on top of this.	3/10/2021 8:03 AM
360	Thank you for your action on this. I want my children to have the same quality of life or better as we all enjoyed.	3/10/2021 7:59 AM
361	Don't waste my tax money on Climate change initiatives!	3/10/2021 7:59 AM
362	I love this survey and what you are trying to do! Thank you for your work and I hope we all come together to make our world safer and more sustainable for all!	3/10/2021 7:59 AM
363	It would be nice to know which of the "outcomes motivate" are the most important.	3/10/2021 7:57 AM
364	The county needs to organize more things on a community level... electronic recycling events, compost stations, etc	3/10/2021 7:55 AM
365	Climate change is real whether Trumpistan believes it or not. We live in a bottle.	3/10/2021 7:54 AM
366	How do you expect to stop the geological cycles of the earth as documented by hard data over the last 2.6 million years during which time there were 33 glacial periods and interglacial periods cycling on 18,000 year intervals with changes in sea level of 300 feet?	3/10/2021 7:54 AM
367	Would love to see more public transit options such as a rail (e.g., Amtrak) extension from Harrisburg into the area.	3/10/2021 7:49 AM
368	I'd love to help in any way I can. I believe this is a huge problem.	3/10/2021 7:44 AM
369	I think it is admirable that we are taking steps on the local level. I would rather see that than the feds trying to make change because local officials have a better sense of what the community needs. I think starting at a local level and getting other counties to try and do the same would be more effective than the federal government outright banning or mandating certain activities. I recognize that climate change is a real phenomenon -- however I do not	3/10/2021 7:35 AM

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agree with plans like the Green New Deal. I'm looking forward to seeing how this initiative plays out. Thank you for allowing residents to participate!

370	Proponents of climate change have said the world was going to 10 years ago. Many of the climate change ideas are not substantiated truths. Fossil fuels are a God given resource and save money and the climate when used properly. We need to be careful with recycling and research where those items end up.	3/10/2021 7:29 AM
371	Survey appears a set of assumptions seeking validating responses.	3/10/2021 7:29 AM
372	Climate change is the single greatest threat to the future of the country and of the world. The leaders in Washington cast doubt on it to woo wealthy interest donors, but the fact of the matter is the military and intelligence agencies realize that this poses very serious issues. Climate change will destabilize society in a number of ways from droughts, disasters, disease, and human conflict. It may not be at our doorstep now, but if we wait until it is to take action, it will be too late. Please trust the science.	3/10/2021 7:28 AM
373	Only implement what we can afford!	3/10/2021 7:28 AM
374	Please send relevant info, but no spam-like correspondence.	3/10/2021 7:27 AM
375	Unless you control population growth there is not much to do here.	3/10/2021 7:26 AM
376	Both public transit and bike/pedestrian options suffer from the Field of Dreams problem: they aren't built, so people don't use them. Protected bike lanes, crossing municipal boundaries, dedicated bike paths, and more robust and available public transit with known stops and regular buses would all help on the transportation front and cut down on air pollution (with improved health outcomes).	3/10/2021 7:25 AM
377	I would buy a hydrogen powered car when they come out, but not an electric or hybrid car. Ethanol fuels are a scam.	3/10/2021 7:23 AM
378	Recycling needs to improve. The hours and limited product collection is ridiculous. This includes the county and local levels. Arrange pick ups, allow longer hours for working families, have various drop off locations. People let stuff on the curb in-part due to the difficulty using the county recycling. Are the things we ask to be recycled, actually being recycled? Education on lawn products and mowing needs to increase. The emission law does not cover enough older vehicles. Make older cars follow some regulations. Offer tax and grant benefits for solar panel and compost equipment. People would get involved if they can afford to. There is no public transportation in my my town.	3/10/2021 7:19 AM
379	Send flyers or something like that as much as you can. It will motivate some people	3/10/2021 7:14 AM
380	Climate has always been changing, man can't change that!	3/10/2021 7:13 AM
381	Stay out of climate change. You spend enough already.	3/10/2021 7:13 AM
382	I'm interested in learning more about the plan.	3/10/2021 7:12 AM
383	Work in Mechanicsburg. Live in Lewisberry (York County).	3/10/2021 7:11 AM
384	Unless the county is going to have rebate and reward type programs for people updating their windows, etc. (Maybe not for the windows because there's an inherent reward for lower utility bills, but a program to reward residents to invest in the environment would be good. Otherwise I think the county should focus on planning public transportation as a big issue, especially considering the unpopular toll issue on 83. Also focus on regional stormwater planning.	3/10/2021 7:07 AM
385	Individual climate actions are laudable and should be encouraged. However, system change is needed to combat climate change. The County must to more than encourage individual actions. The County should enact policies/take action that can help create change at scale (e.g. county renewable energy/EV purchases, energy efficiency programs, electrification of county facilities), and how it can advocate for much more aggressive state/Federal policies.	3/10/2021 7:04 AM
386	The commercial side needs to be regulated more instead of burdening the people. I realize there is a trickle down effect but there are very little restrictions on the warehouses energy usage.	3/10/2021 6:59 AM
387	Cumberland County has no business wasting our tax dollars on "climate change". It would be a complete and insulting squandering of monies that could be put to better use elsewhere.	3/10/2021 6:48 AM

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388	I will send each commissioner a copy of Inconvenient Facts	3/10/2021 6:46 AM
389	Climate change is a naturally occurring event that has been impacting the earth since the beginning of time. We can not impact climate change. We can smartly, reasonably mitigate some of its affects on our quality of life.	3/10/2021 6:45 AM
390	Thanks for making this a priority!	3/10/2021 6:40 AM
391	Save the farms. Otherwise you're already doing enough.	3/10/2021 6:34 AM
392	Climate change is something that cannot be controlled by man. We do need to be good stewards by not purposefully causing harm... such as pouring oil on the ground and dumping untreated waste. So please stop trying to mandate actions that will have limited benefits like electric cars... battery production has an enormous negative impact on the environment.	3/10/2021 6:20 AM
393	Any actions that will add costs to residents will be untenable.	3/10/2021 6:12 AM
394	I am pleased that the county is taking this initiative.	3/10/2021 6:09 AM
395	This is vital, especially for our kids. Let's get moving in the right direction now.	3/10/2021 6:06 AM
396	We are the stewards of this planet, we need to take care of it for our children.	3/10/2021 6:02 AM
397	I'm grateful that the county is looking into this and gathering community input- thank you!	3/10/2021 5:53 AM
398	Keep Cumberland County green! Add more natural spaces, stop building housing developments and roads in the precious farmland that we have. Clean up the old before adding new!	3/10/2021 5:48 AM
399	Did you actually pay someone to create this. What would our county planners hope to achieve by using this survey.	3/10/2021 5:19 AM
400	I live in York County, work in Cumberland, and spend time there. Please do not ruin your community.	3/10/2021 5:13 AM
401	Go for it.	3/10/2021 5:04 AM
402	Climate change occurs as a natural action and has been occurring since creation	3/10/2021 2:17 AM
403	Stop developing all the farm land.	3/10/2021 1:55 AM
404	We need to stop being forced to pay for emission inspections when we as Cumberland County residents are not the sole producers of emissions in this county.	3/10/2021 1:14 AM
405	Don't waste tax payer money on programs that only fulfill a social agenda.	3/10/2021 1:11 AM
406	The earth's climate is in the hands of God our creator. Government has brain-washed us into thinking climate change is real at the expense of taxpayers. All this bull about climate change is just another way for Fed State County and Local govts to control us and use it as an excuse to grab more money out of our wallets. Fed State COUNTY and Local governments need to get their spending under control instead of looking to the taxpayers wallets. Amazing how you take a piece of farmland, divide it up, levy more tax revenue from it and counties never have enough money. You should fix the roads instead of wasting money on surveys and climate change. When it was in the teens this Winter across the midwest and Texas did you hear anything about global freezing? Hell no, its all a hoax. It is no wonder people stormed the US Capitol in January. People are tired of emptying their pockets. If politicians did the correct thing they wouldn't need capitol police or police protection.	3/10/2021 12:32 AM
407	Anything done related to The Green New Deal or Agenda 21/30 is not REALLY about 'climate change'. Instead, it is Facism. Carbon Dioxide is GOOD for the planet.	3/10/2021 12:30 AM
408	Let's get going!	3/9/2021 11:12 PM
409	PLEASE, PLEASE, PLEASE...even if people are not supportive, listen to the science and make science-based decisions. This is the most important issue facing all countries. The US needs to make it easier for those of lower income to purchase electric/hybrid cars and we have to invest in more reliable mass transportation.	3/9/2021 11:11 PM
410	Thanks for seeking our feedback. Let's see some results!	3/9/2021 10:57 PM
411	Thank you for seeking community input. I look forward to finding out more about ways we can all work together to keep Cumberland County such a nice place to live and work.	3/9/2021 10:56 PM

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412	Please put in bike paths to connect neighborhoods with one another, with schools, and with downtown Mechanicsburg and shopping areas. Would love to safely bike to places and have my kids do so as well.	3/9/2021 10:56 PM
413	I love that you're doing this!	3/9/2021 10:29 PM
414	I'm a handicap retiree having limited abilities and resources. Most recommended/required actions would require me to contract workers which I can't afford due to the cost of our medications and health care	3/9/2021 10:20 PM
415	Would not like any actions that increase cost or taxes. Thank you.	3/9/2021 10:12 PM
416	Outdoor lighting, especially commercial, institutional, and road lighting wastes 1/3 or more of the energy used in lighting. Efficient lighting such as LEDs can still waste just as much energy as older technology if the devices are not designed and used properly - which is sadly the case. The light pollution problem, a symptom of energy waste, is widespread in Cumberland County. Each year it gets worse. You can't address climate change, greenhouse gas, and responsible energy use until you include light pollution in the conversation.	3/9/2021 9:54 PM
417	need for the county/local governments to do more planning to control development Upper Allen Twp. is a major growth area shows up in flooding with stormwater runoff	3/9/2021 9:42 PM
418	Thank you for doing this!	3/9/2021 9:38 PM
419	We strongly support this.	3/9/2021 8:44 PM
420	I would be happy to support this in any way possible. We must take climate change as a threat to all future life on this planet. It is not a hoax, it is legitimate science and real. Thank you for doing this.	3/9/2021 8:37 PM
421	Climatrr	3/9/2021 8:32 PM
422	Why cant you just provide education and let people take responsibility for themselves; government doesnt have to solve every issue especially when countries that are bigger offenders dont care enough do do any thing. This is just virtue singling STOP IT	3/9/2021 8:21 PM
423	Obviously the County is now drinking the Climate change kool-aid I thought we only had to worry about the Federal Government pushing the climate change farce on us	3/9/2021 8:18 PM
424	Rather than implementing "policies and programs" -- how about education and giving everyone the freedom to choose? Globally, the issue is mostly caused by China, India and other developing nations. The US and Europe have done an incredible amount of environmental improvements since over the last 50 years. It's time for the rest of the world to do their part.	3/9/2021 8:02 PM
425	This is an urgently needed conversation! Thank you	3/9/2021 6:14 PM
426	Let the free market work to bring better solar panels and more energy efficient appliances to consumers. The government has no business and should spend no money on this intrusion by compelling people to buy products before they are ready to be used in a massive market. Don't fall for the malarkey that is terrifying our grandchildren, who are told they won't have clean air in 10 years. This is another horrible abuse of the political process. Be brave and put an end to it in Cumberland County. Thank you.	3/9/2021 5:01 PM
427	I am glad to hear about this!	3/9/2021 4:38 PM
428	This is a good thing for our community and we need this.	3/9/2021 4:18 PM
429	The county should not waste time and energy on this.	3/9/2021 12:22 PM
430	Unsure how much success given truck traffic from around the country on 81 and our warehouses. Non-urban areas cannot fit transportation models from urban areas. Also stream banks, controlled by the state are a concern for streamjms and creeks, but what happens to our native animals living in those waters if we "improve the banks"	3/9/2021 12:11 PM
431	none	3/9/2021 11:29 AM
432	I hope simple cost effective solutions are implemented.	3/9/2021 11:27 AM
433	Good that it is now in focus	3/9/2021 11:24 AM
434	I'm excited that the County is taking this on!	3/9/2021 10:21 AM

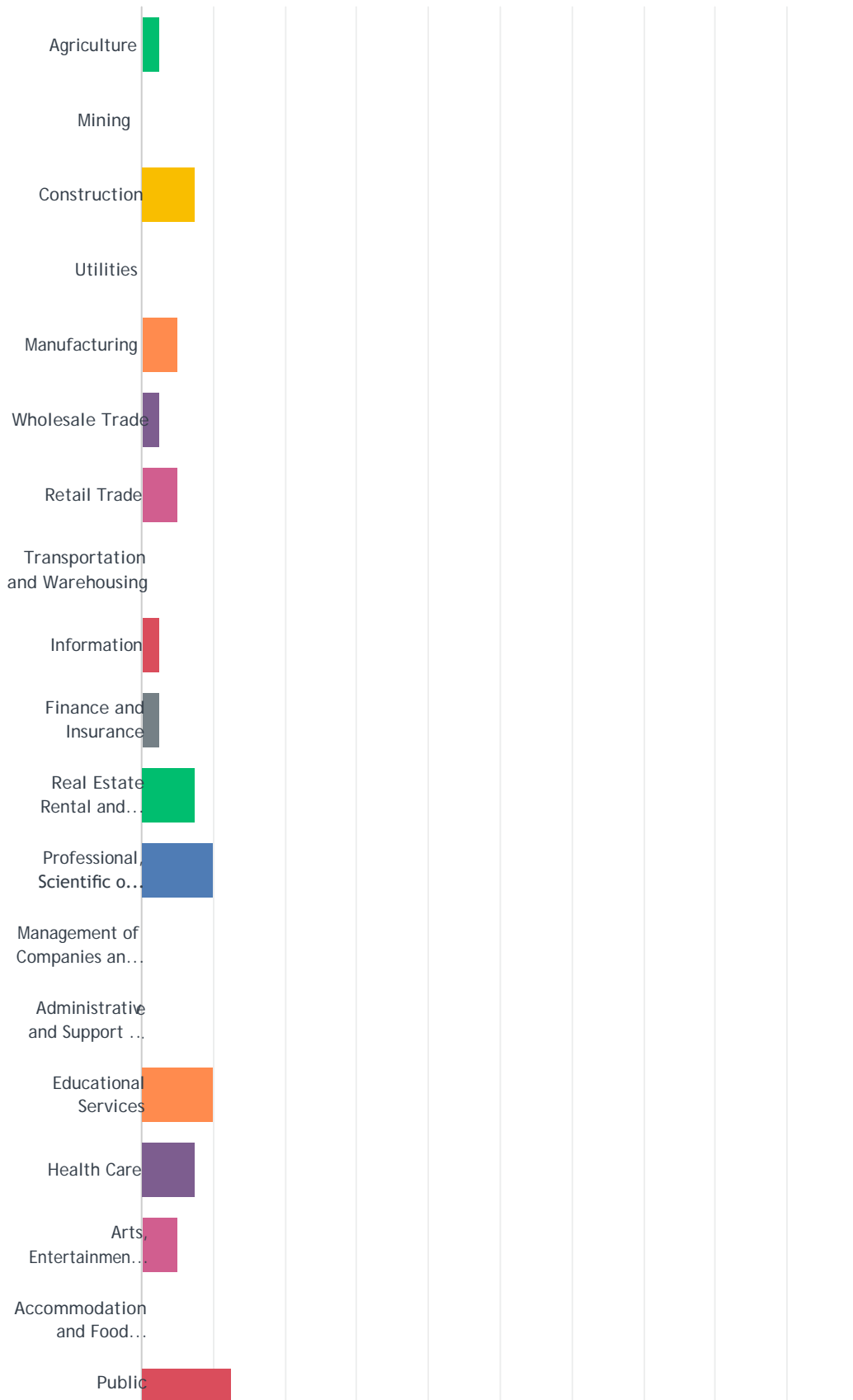
435

just do it!

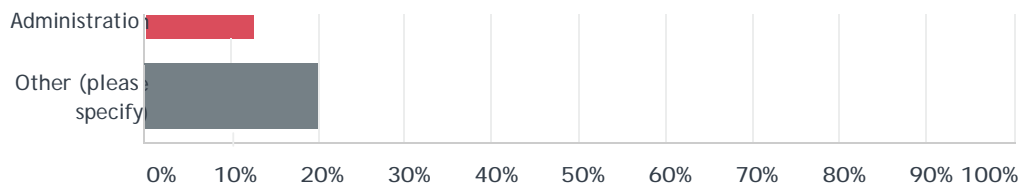
3/9/2021 8:49 AM

Q18 What type of business do you own or operate?

Answered: 40 Skipped: 2,311



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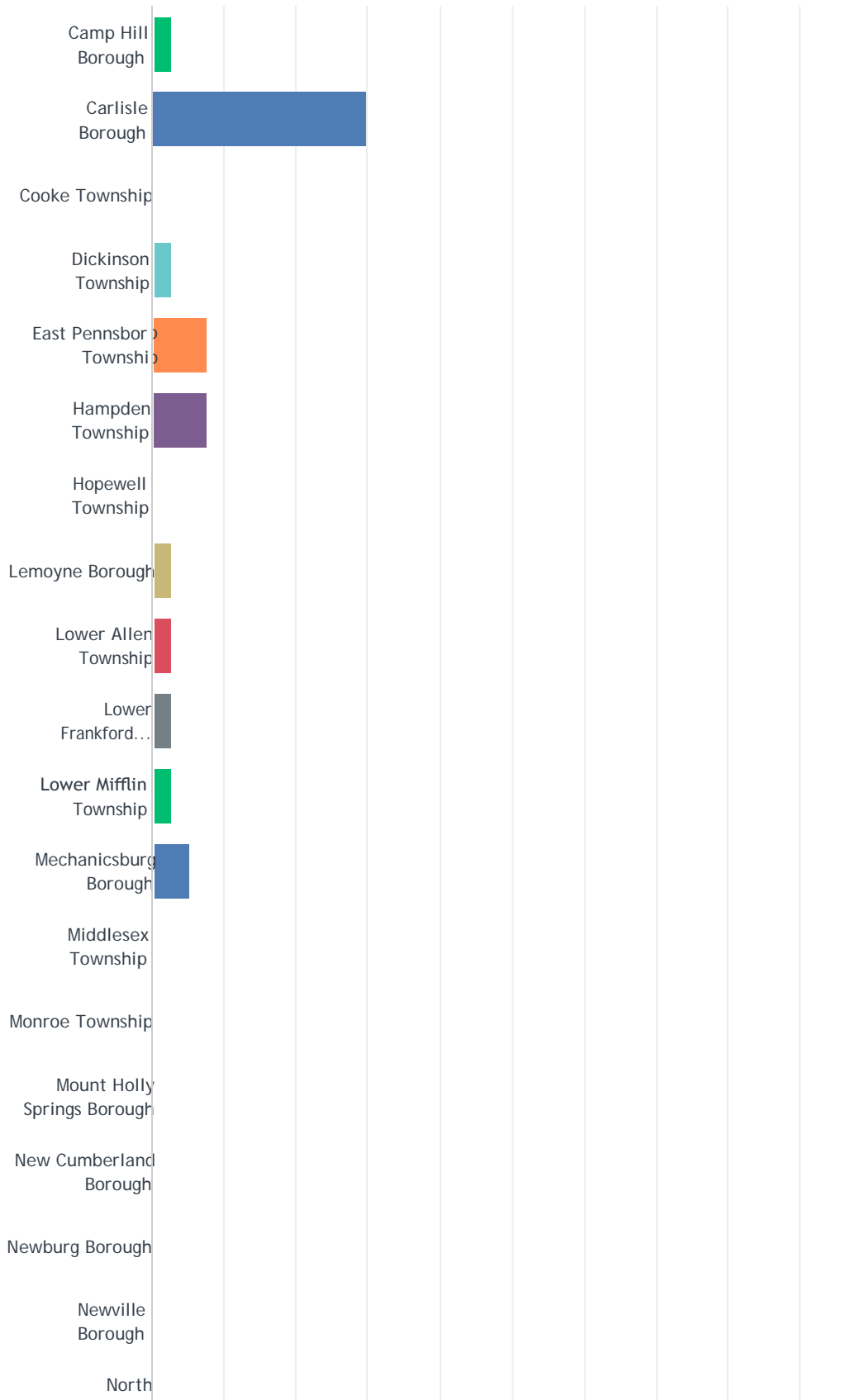


ANSWER CHOICES	RESPONSES	
Agriculture	2.50%	1
Mining	0.00%	0
Construction	7.50%	3
Utilities	0.00%	0
Manufacturing	5.00%	2
Wholesale Trade	2.50%	1
Retail Trade	5.00%	2
Transportation and Warehousing	0.00%	0
Information	2.50%	1
Finance and Insurance	2.50%	1
Real Estate Rental and Leasing	7.50%	3
Professional, Scientific or Technical Services	10.00%	4
Management of Companies and Enterprises	0.00%	0
Administrative and Support and Waste Management	0.00%	0
Educational Services	10.00%	4
Health Care	7.50%	3
Arts, Entertainment and Recreation	5.00%	2
Accommodation and Food Services	0.00%	0
Public Administration	12.50%	5
Other (please specify)	20.00%	8
TOTAL		40

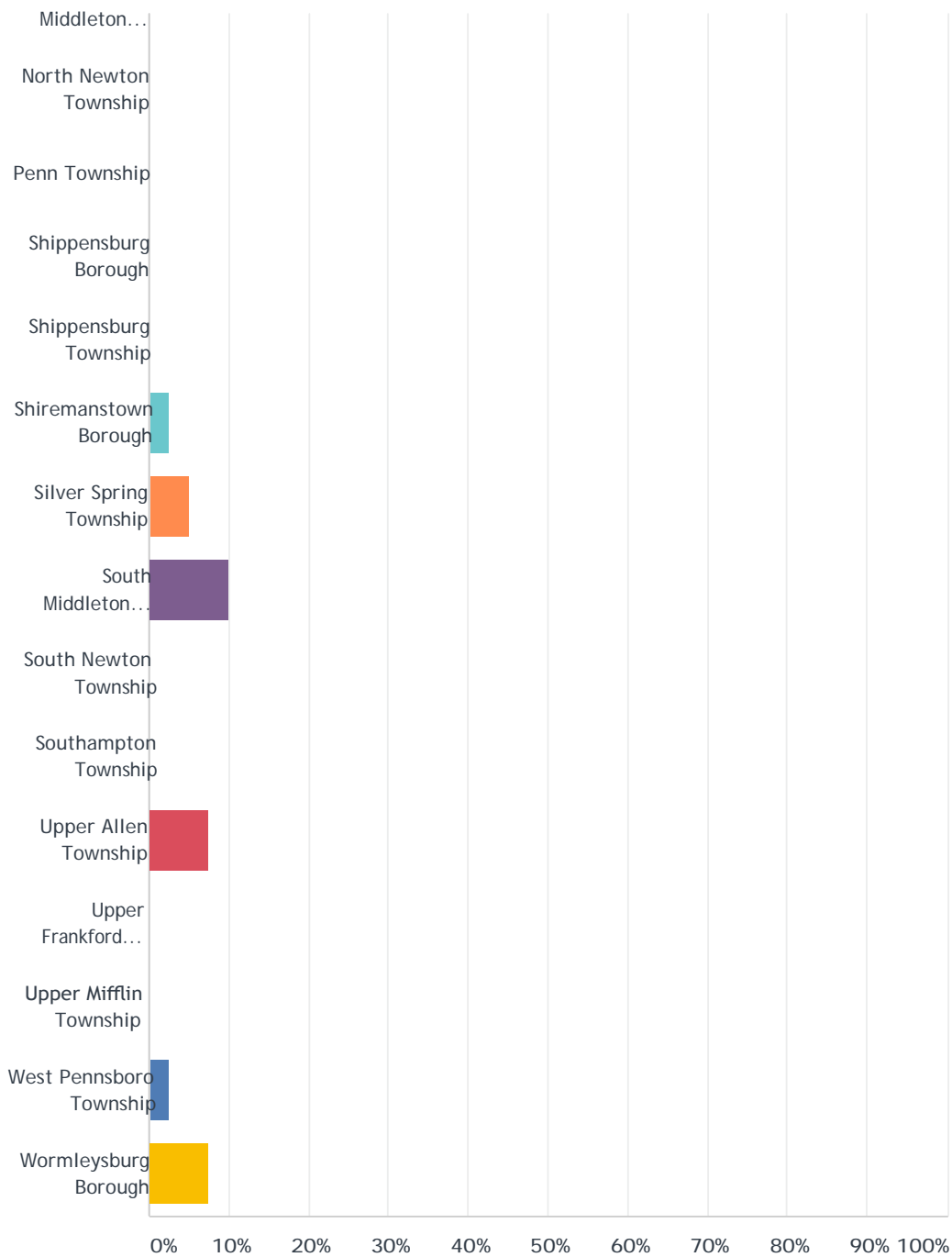
#	OTHER (PLEASE SPECIFY)	DATE
1	Community Organization	4/1/2021 10:18 AM
2	Energy - Propane Distribution	3/17/2021 9:31 AM
3	jeweler	3/15/2021 4:03 PM
4	Commercial Real Estate & Literacy Council	3/14/2021 7:48 AM
5	Cumberland County Historical Society	3/13/2021 3:53 PM
6	Travel	3/11/2021 4:49 PM
7	Fitness	3/10/2021 7:08 AM

Q19 What township/borough is your business located in?

Answered: 40 Skipped: 2,311



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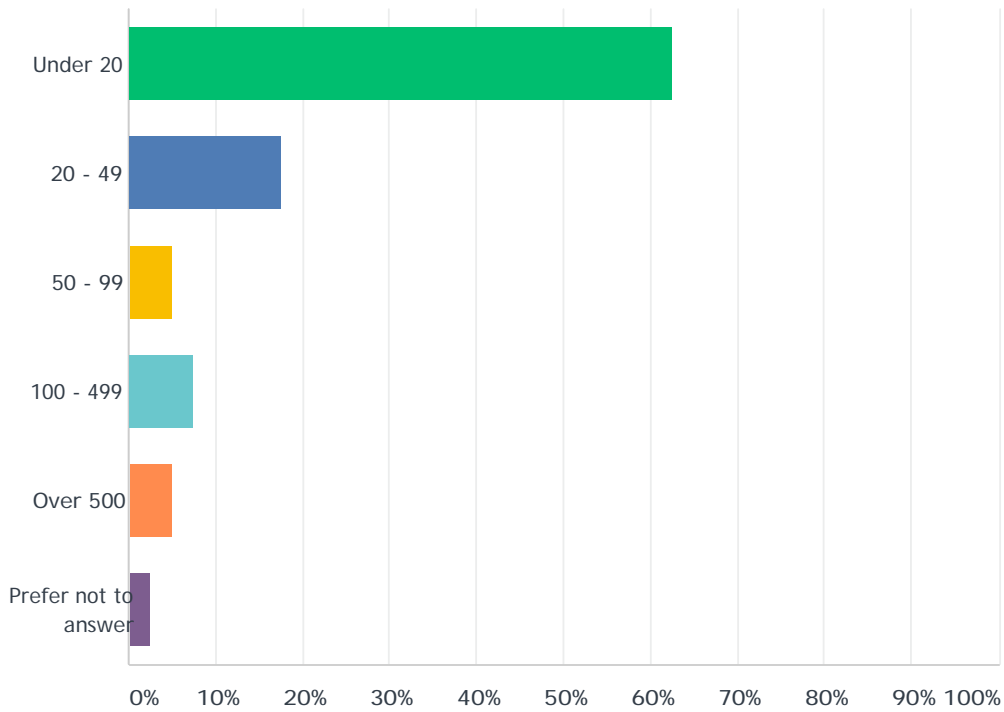
ANSWER CHOICES	RESPONSES	
Camp Hill Borough	2.50%	1
Carlisle Borough	30.00%	12
Cooke Township	0.00%	0
Dickinson Township	2.50%	1
East Pennsboro Township	7.50%	3
Hampden Township	7.50%	3
Hopewell Township	0.00%	0
Lemoyne Borough	2.50%	1
Lower Allen Township	2.50%	1
Lower Frankford Township	2.50%	1
Lower Mifflin Township	2.50%	1
Mechanicsburg Borough	5.00%	2
Middlesex Township	0.00%	0
Monroe Township	0.00%	0
Mount Holly Springs Borough	0.00%	0
New Cumberland Borough	0.00%	0
Newburg Borough	0.00%	0
Newville Borough	0.00%	0
North Middleton Township	0.00%	0
North Newton Township	0.00%	0
Penn Township	0.00%	0
Shippensburg Borough	0.00%	0
Shippensburg Township	0.00%	0
Shiremanstown Borough	2.50%	1
Silver Spring Township	5.00%	2
South Middleton Township	10.00%	4
South Newton Township	0.00%	0
Southampton Township	0.00%	0
Upper Allen Township	7.50%	3
Upper Frankford Township	0.00%	0
Upper Mifflin Township	0.00%	0
West Pennsboro Township	2.50%	1

Cumberland County Climate Action Plan Survey

Wormleysburg Borough	7.50%	3
TOTAL		40

Q20 How many employees does your business have in its Cumberland County location(s)?

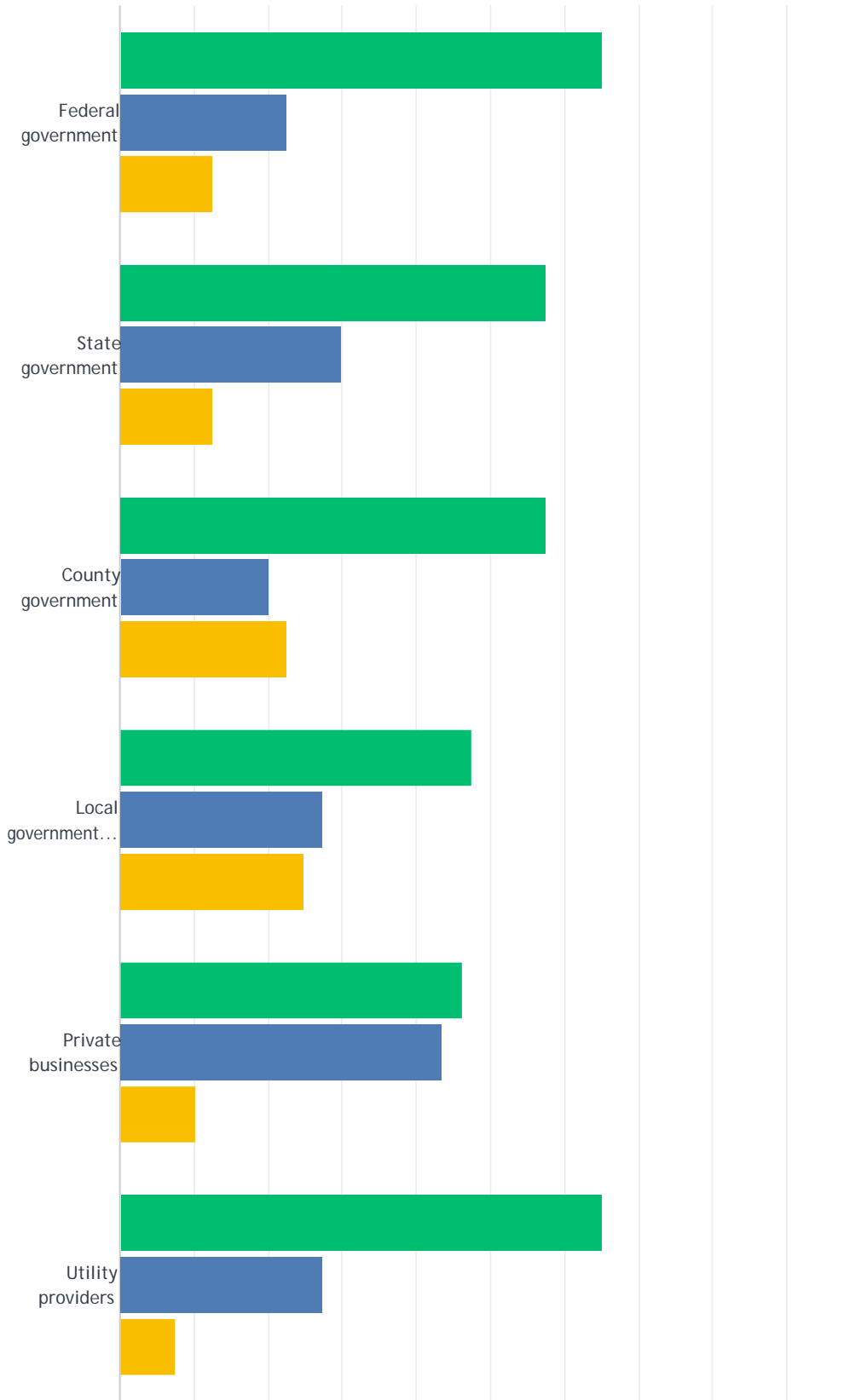
Answered: 40 Skipped: 2,311



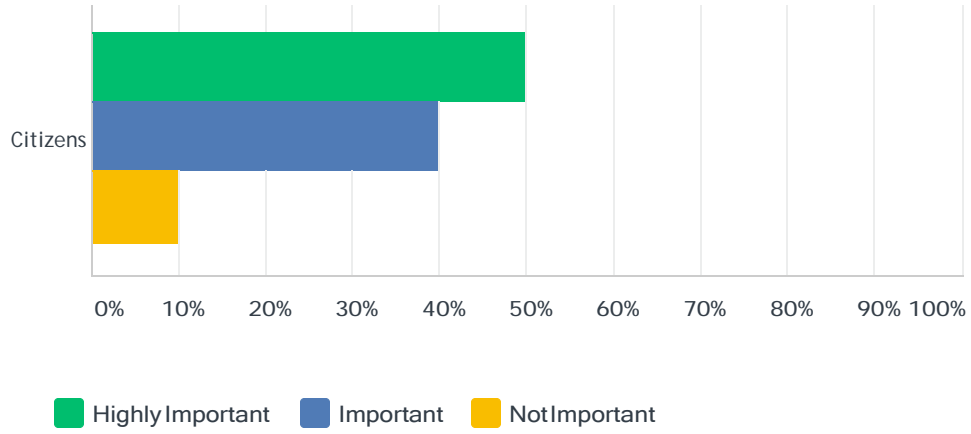
ANSWER CHOICES	RESPONSES	
Under 20	62.50%	25
20 - 49	17.50%	7
50 - 99	5.00%	2
100 - 499	7.50%	3
Over 500	5.00%	2
Prefer not to answer	2.50%	1
TOTAL		40

Q21 How important is it for the following organizations to implement policies and programs that decrease greenhouse gas emissions?

Answered: 40 Skipped: 2,311



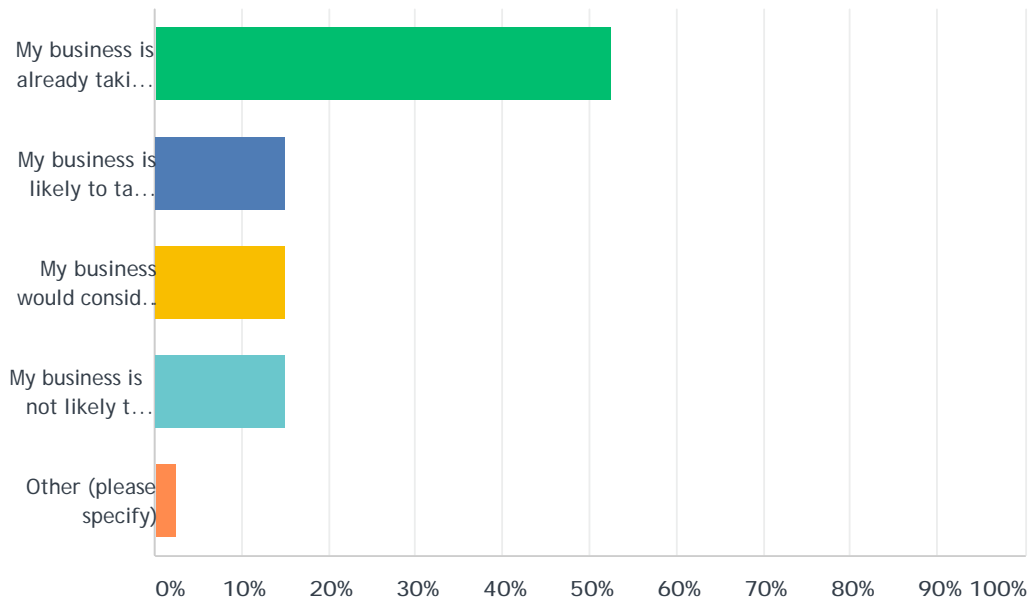
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	HIGHLY IMPORTANT	IMPORTANT	NOT IMPORTANT	TOTAL
Federal government	65.00% 26	22.50% 9	12.50% 5	40
State government	57.50% 23	30.00% 12	12.50% 5	40
County government	57.50% 23	20.00% 8	22.50% 9	40
Local government (townships/boroughs)	47.50% 19	27.50% 11	25.00% 10	40
Private businesses	46.15% 18	43.59% 17	10.26% 4	39
Utility providers	65.00% 26	27.50% 11	7.50% 3	40
Citizens	50.00% 20	40.00% 16	10.00% 4	40

Q22 Which of the following statements most accurately characterizes how your business is responding to climate change?

Answered: 40 Skipped: 2,311

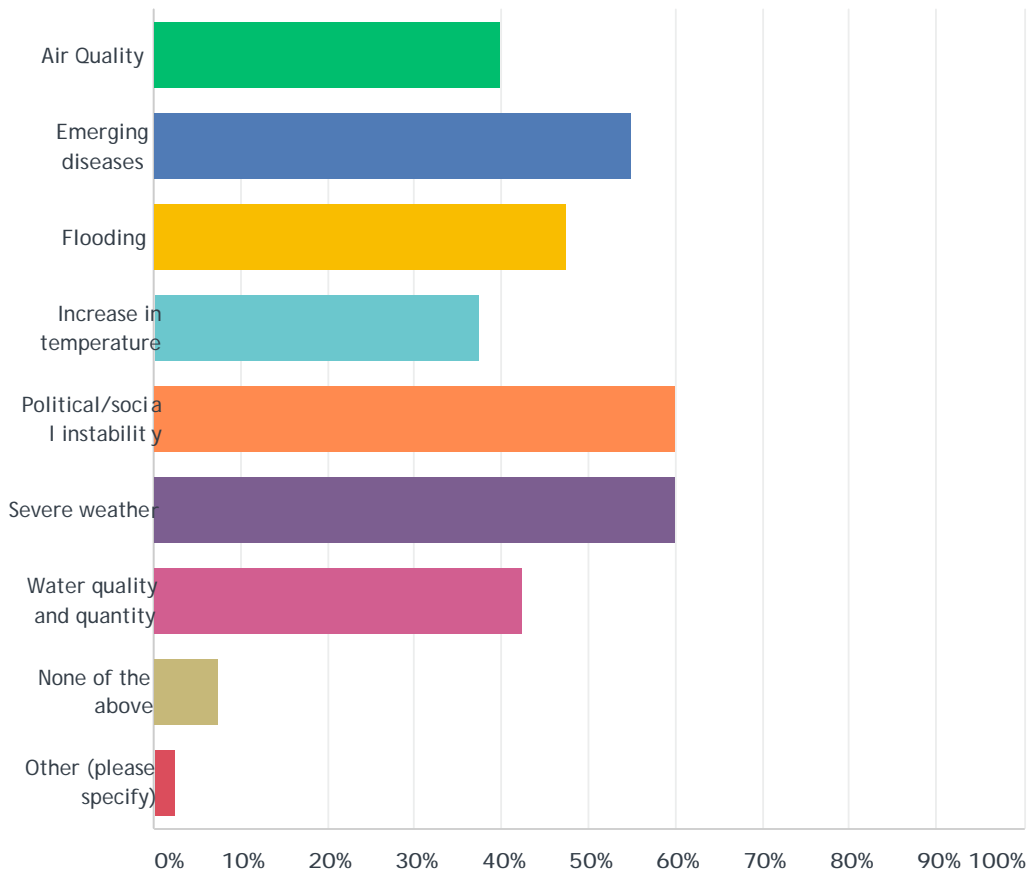


ANSWER CHOICES	RESPONSES	
My business is already taking action on climate change	52.50%	21
My business is likely to take action on climate change but is waiting for the right opportunity	15.00%	6
My business would consider taking action on climate change but is waiting for more information	15.00%	6
My business is not likely to take action on climate change at this time	15.00%	6
Other (please specify)	2.50%	1
TOTAL		40

#	OTHER (PLEASE SPECIFY)	DATE
1	Taking action on climate changes need to make sense from many angles	3/10/2021 10:00 AM

Q23 Which of the following present a risk to your business? (select all that apply)

Answered: 40 Skipped: 2,311



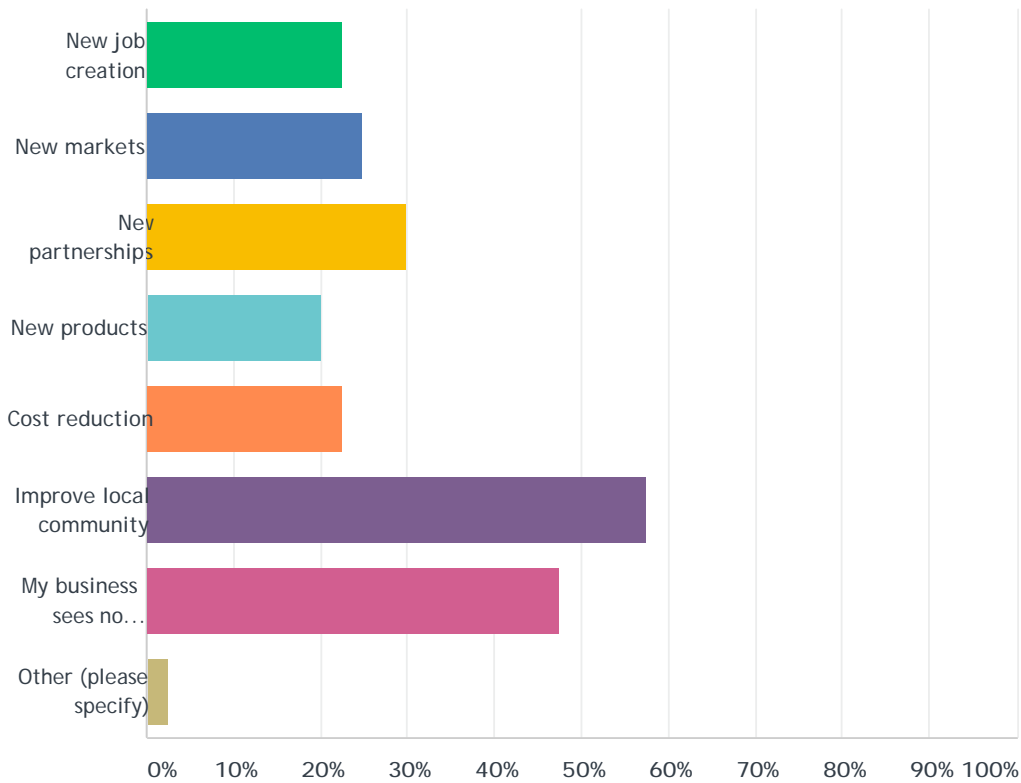
ANSWER CHOICES	RESPONSES
Air Quality	40.00% 16
Emerging diseases	55.00% 22
Flooding	47.50% 19
Increase in temperature	37.50% 15
Political/social instability	60.00% 24
Severe weather	60.00% 24
Water quality and quantity	42.50% 17
None of the above	7.50% 3
Other (please specify)	2.50% 1
Total Respondents: 40	

#	OTHER (PLEASE SPECIFY)	DATE
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1 on the plus side, we are becoming the Carolinas weather wise so in another 10+ years no need to go south. Some of the tipping points have happened and our world needs to act now. 3/14/2021 7:48 AM

Q24 What opportunities does climate change present to your business? (select all that apply)

Answered: 40 Skipped: 2,311

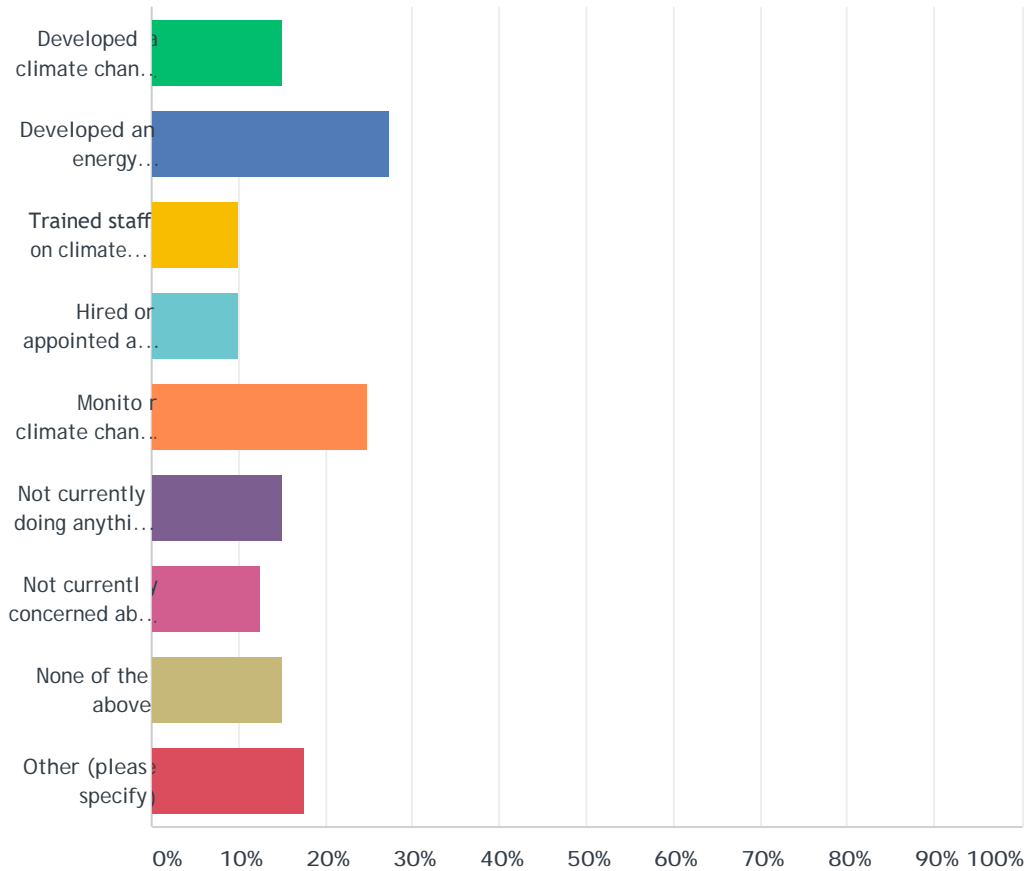


ANSWER CHOICES	RESPONSES
New job creation	22.50% 9
New markets	25.00% 10
New partnerships	30.00% 12
New products	20.00% 8
Cost reduction	22.50% 9
Improve local community	57.50% 23
My business sees no opportunities related to climate change	47.50% 19
Other (please specify)	2.50% 1
Total Respondents: 40	

#	OTHER (PLEASE SPECIFY)	DATE
1	Address water quality concerns re: the Chesapeake	3/23/2021 1:21 PM

Q25 Which of the following has your business done to evaluate its climate change risks? (select all that apply)

Answered: 40 Skipped: 2,311



ANSWER CHOICES	RESPONSES	
Developed a climate change action plan	15.00%	6
Developed an energy management plan	27.50%	11
Trained staff on climate change and mitigation actions	10.00%	4
Hired or appointed a sustainability officer	10.00%	4
Monitor climate change data	25.00%	10
Not currently doing anything, but considering taking action	15.00%	6
Not currently concerned about climate change	12.50%	5
None of the above	15.00%	6
Other (please specify)	17.50%	7
Total Respondents: 40		

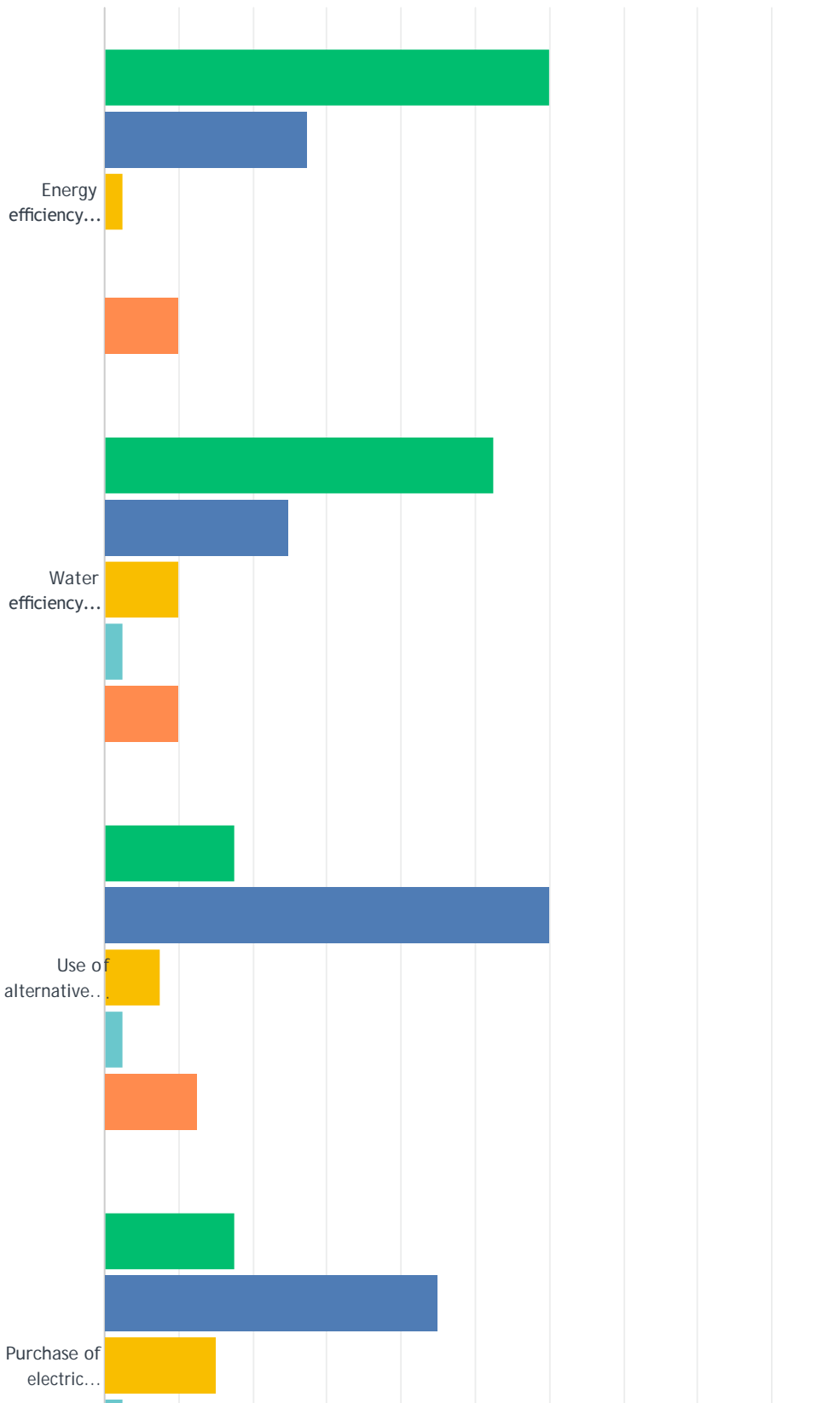
#	OTHER (PLEASE SPECIFY)	DATE
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Cumberland County Climate Action Plan Survey

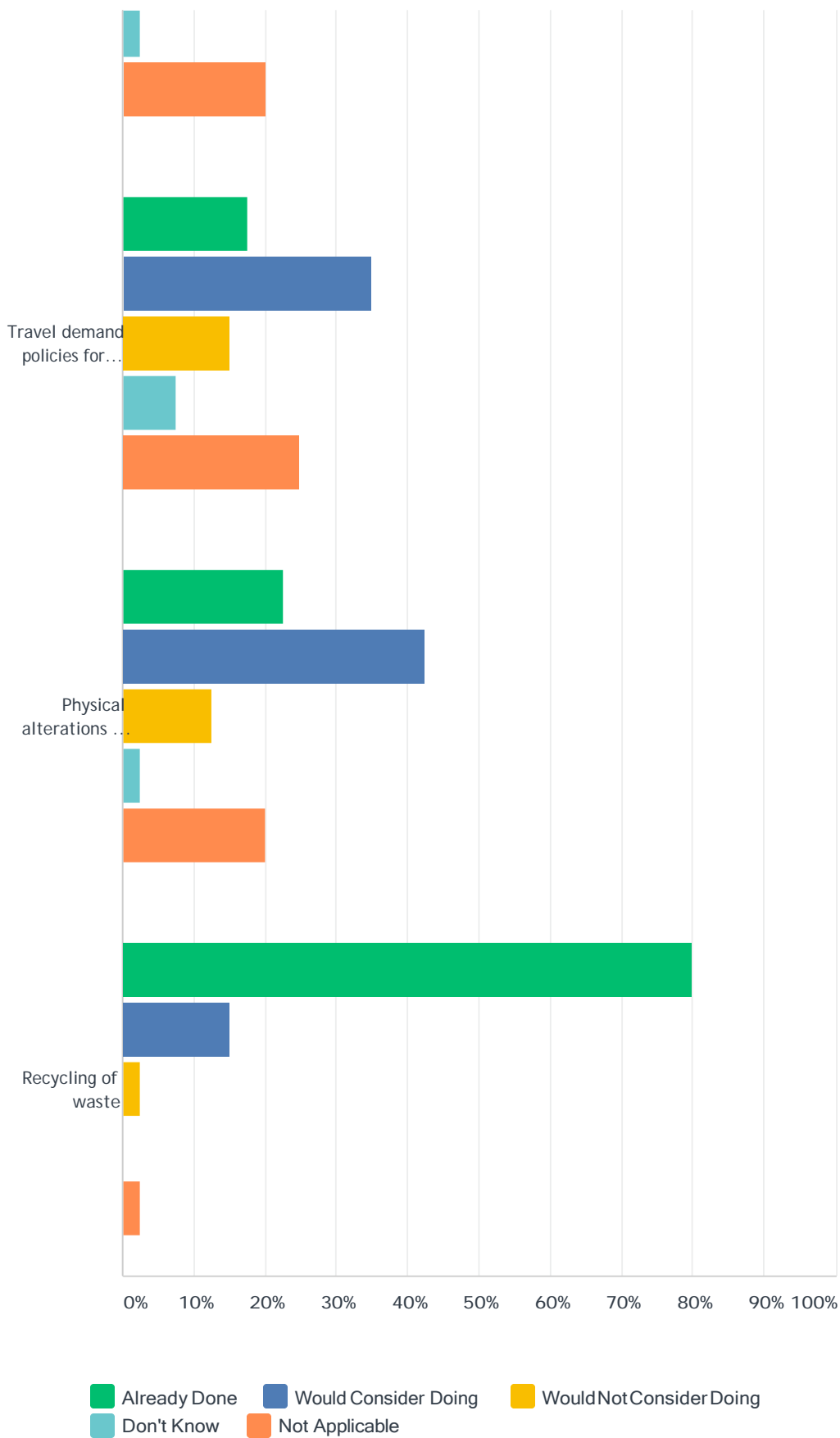
1	Working on a plan for our organization	4/1/2021 10:18 AM
2	We promote our product - a clean, affordable, low carbon fuel that can accelerate decarbonization and complement other energy sources on the path to zero emissions	3/17/2021 9:31 AM
3	Plant trees	3/15/2021 8:50 AM
4	I am an independent contractor.	3/14/2021 7:48 AM
5	Fairly new to understanding my own role. In the past six months my view has changed.	3/12/2021 7:46 AM
6	Member of Stream Tream ALLARM, also Riparian Buffer practices	3/11/2021 7:49 PM
7	Taken steps to engage in plan development	3/9/2021 10:46 PM

Q26 Which of the following practices has your business already done, would consider doing, or would not consider doing?

Answered: 40 Skipped: 2,311



Cumberland County Climate Action Plan Survey



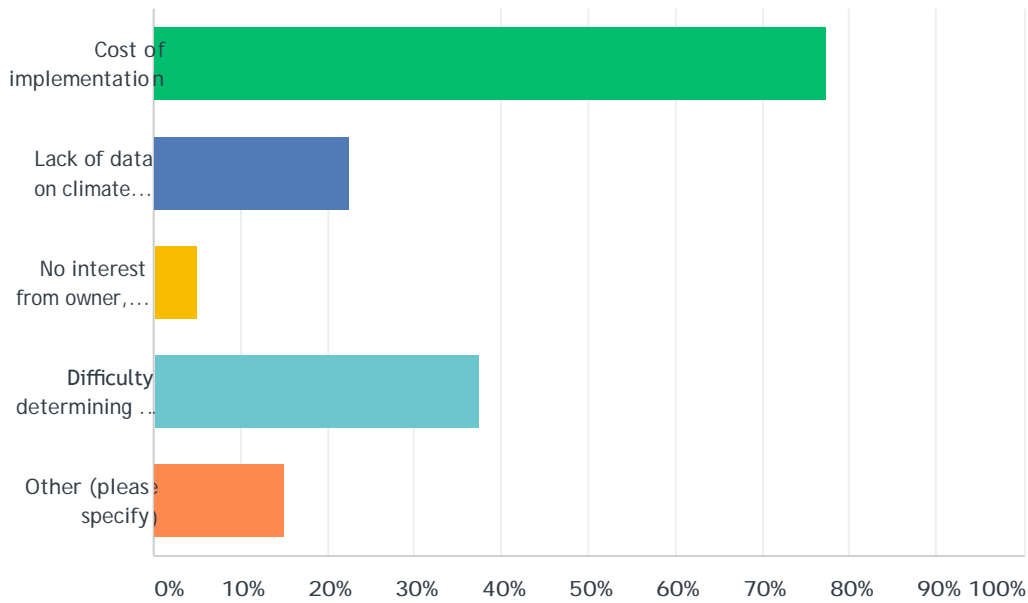
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	ALREADY DONE	WOULD CONSIDER DOING	WOULD NOT CONSIDER DOING	DON'T KNOW	NOT APPLICABLE	TOTAL	WEIGHTED AVERAGE
Energy efficiency improvements to facilities	60.00% 24	27.50% 11	2.50% 1	0.00% 0	10.00% 4	40	1.20
Water efficiency improvements to facilities	52.50% 21	25.00% 10	10.00% 4	2.50% 1	10.00% 4	40	1.23
Use of alternative energy sources (i.e. wind, solar, etc.)	17.50% 7	60.00% 24	7.50% 3	2.50% 1	12.50% 5	40	1.27
Purchase of electric vehicles	17.50% 7	45.00% 18	15.00% 6	2.50% 1	20.00% 8	40	1.43
Travel demand policies for employees (i.e. carpooling, transit, telework)	17.50% 7	35.00% 14	15.00% 6	7.50% 3	25.00% 10	40	1.57
Physical alterations to your site (i.e. reduced parking, tree planting)	22.50% 9	42.50% 17	12.50% 5	2.50% 1	20.00% 8	40	1.43
Recycling of waste	80.00% 32	15.00% 6	2.50% 1	0.00% 0	2.50% 1	40	1.05

#	OTHER (PLEASE SPECIFY)	DATE
1	Converting fleet vehicles to low carbon fuel	3/17/2021 9:31 AM
2	Updated ordinances to lower road width minimums in developments, updated to ordinances to comply with anti-idling laws.	3/10/2021 7:32 AM

Q27 What barriers does your business face when considering energy and transportation management options that could reduce their environmental impacts? (select all that apply)

Answered: 40 Skipped: 2,311

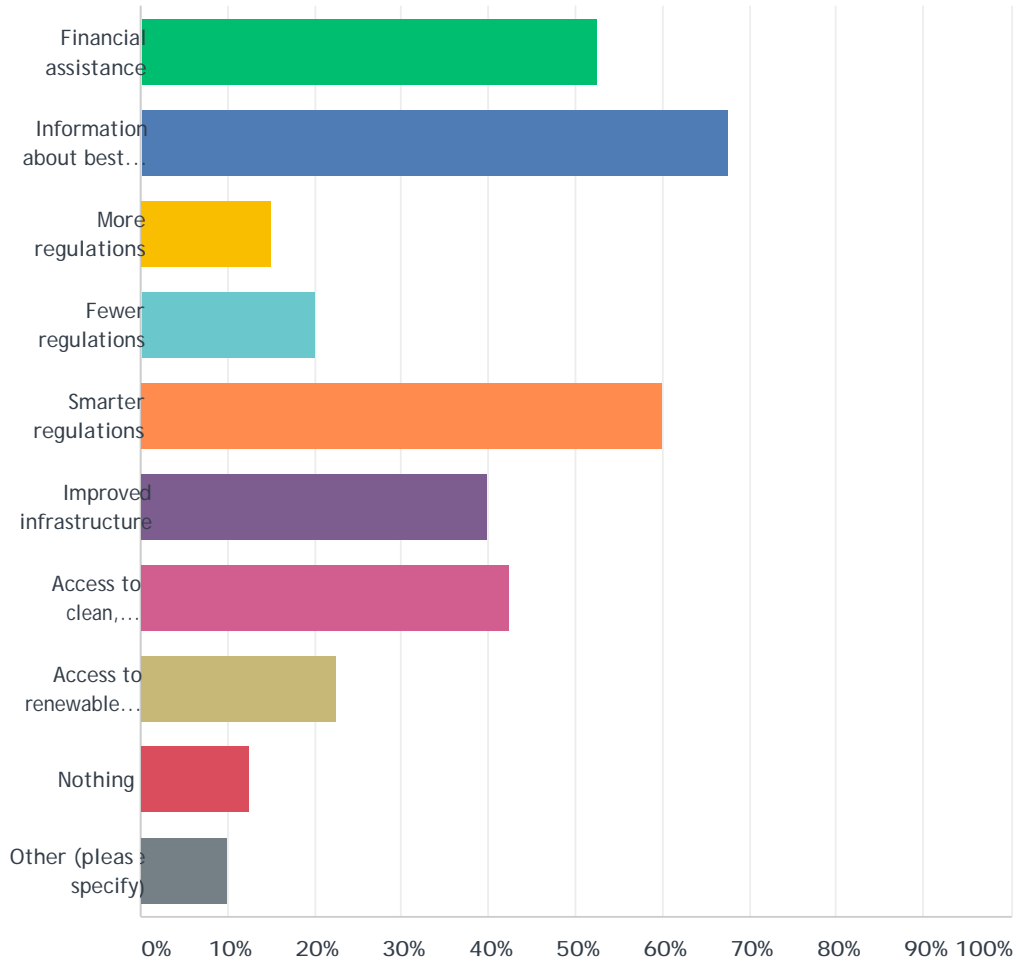


ANSWER CHOICES	RESPONSES	
Cost of implementation	77.50%	31
Lack of data on climate change impacts	22.50%	9
No interest from owner, board of directors, shareholders	5.00%	2
Difficulty determining if mitigation measures make a difference	37.50%	15
Other (please specify)	15.00%	6
Total Respondents: 40		

#	OTHER (PLEASE SPECIFY)	DATE
1	resistance to change, lack of knowledge about propane as a clean, renewable, affordable energy source	3/17/2021 9:31 AM
2	Don't own our facility.	3/15/2021 8:50 AM
3	Due to the nature of our business reducing or changing transportation could be detrimental to our business	3/12/2021 10:52 PM
4	Lack of interest from Landlord	3/12/2021 5:35 PM
5	WE are not a business.	3/11/2021 7:49 PM
6	No barriers	3/10/2021 7:08 AM

Q28 What can government do to assist your business in reducing greenhouse gas emissions and climate change impacts? (select all that apply)

Answered: 40 Skipped: 2,311



Cumberland County Climate Action Plan Survey

ANSWER CHOICES	RESPONSES	
Financial assistance	52.50%	21
Information about best practices	67.50%	27
More regulations	15.00%	6
Fewer regulations	20.00%	8
Smarter regulations	60.00%	24
Improved infrastructure	40.00%	16
Access to clean, renewable electric power	42.50%	17
Access to renewable pipeline gas	22.50%	9
Nothing	12.50%	5
Other (please specify)	10.00%	4
Total Respondents: 40		

#	OTHER (PLEASE SPECIFY)	DATE
1	NUCLEAR!!	3/15/2021 4:03 PM
2	Don't own. Would implement more policies if don't own.	3/15/2021 8:50 AM
3	Get charging stations easily available so electric cars can do longer travel; get bike/walking trails so workers can commute in eco ways	3/10/2021 7:39 PM
4	Provide incentives for best practice implementation	3/10/2021 3:42 PM

Q29 Any additional comments regarding the Cumberland County Climate Action Plan?

Answered: 8 Skipped: 2,343

#	RESPONSES	DATE
1	More information tying individual behavior to climate change	3/23/2021 1:21 PM
2	I think there are bigger problems that demand more attention than climate change.	3/15/2021 4:03 PM
3	The world has to act quickly or continued temperature rise, Blue Arctic, sea rise, hurricanes, adverse weather patterns, refugees, property damage, disease, poverty, rebellion and other challenges we don't yet understand.	3/14/2021 7:48 AM
4	I was a "this is just a natural event" regarding climate change. I had heard about a book that I listened to last fall that forced me to look inward at what role I have. Both as a consumer and business owner. That book was "All we can save". It put the humanity into perspective of it all. The biggest challenge I see is the local environment where we live in Central PA may not see the drastic effects of climate change. So we may not recognize the impact in other places based on the choices we make that unintentionally affect the climate.	3/12/2021 7:46 AM
5	no	3/10/2021 2:24 PM
6	Thanks for taking this on!	3/10/2021 10:42 AM
7	Additional government controls and regulations have historical increased the cost of doing business and the cost of construction making both commercial properties and residential properties more expensive to build and maintain.	3/10/2021 10:00 AM
8	I believe this should be done only at the state and federal level through regulations and enforcement and direct funding sources to avoid the quagmire of the local government system in Pennsylvania.	3/9/2021 11:00 AM

Appendix C: Acronyms

Climate Action Plan Acronyms

- °C – degrees Celsius
- AFUE – Annualized Fuel Utilization Efficiency
- CAEDC – Cumberland Area Economic Development Corporation
- CAP— Climate action plan
- CH₄ – methane
- CO₂ – carbon dioxide
- CRELF – Cumberland Revolving Energy Fund Loan
- DEP – Pennsylvania Department of Environmental Protection
- EAC – Environmental Advisory Committee
- EV – Electric Vehicle
- °F – degrees Fahrenheit
- GHG – greenhouse gas
- HOA – Homeowners Association
- HVAC – Heating, ventilation, and air conditioning
- ICLEI – International Council for Local Environmental Initiatives
- Kg – kilograms
- kWh – kilowatt hours
- LCAP – Local Climate Action Program
- LEED – Leadership in Energy and Environmental Design
- MTCO₂e – metric tons of carbon dioxide equivalent ()
- MMBtu – Metric Million British Thermal Uni
- N₂O – nitrous oxide
- PA DCNR – Pennsylvania Department of Conservation and Natural Resources
- PV – photovoltaic
- sq ft – square feet
- U.S. Community Protocol
- USEIA – United States Energy Information Agency
- VMT – vehicle miles traveled