

Resilient Washtenaw:

Washtenaw County's Climate Action Plan

PRESENTATION TO BOARD OF COMMISSIONERS WORKING SESSION SEPTEMBER 21, 2022

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RESILIENT WASHTENAW: SCOPE OF WORK

WHAT IS IT?



A way to get to net zero emissions and plan for providing service and infrastructure in a changing climate.

Scope:

- Net Zero County Operations by 2030
- Net Zero County by 2035

Will include:

- Climate Information of the County: history, current conditions, evolving trends, future projections
- Greenhouse Gas Inventory: the sources and causes of the emissions from the county, and projections of future emissions based on growth and technology changes
- Vulnerability Assessment: identification of the people and places most at risk from climate change in our county
- Strategies and Actions: the specific things that will be done to reach net zero emissions
- Implementation Recommendations: staffing, financing, reporting, and governance

KEY COMPONENTS



Both the organization and community

- Organization County Government itself: everything it takes to run the organization
- Community who the County serves: everything inside of County borders

Both mitigation and adaptation

- Mitigation taking action to minimize and stop climate change
- Adaptation preparing for the impacts of climate change

Alignment with existing plans, services, and priorities of and within the County

• E.G. – consideration of how climate change impacts public health outcomes

Equity Based: focuses on areas of greatest need and those most likely to be harmed

Collaborative: built through extensive discussion and engagement

RESILIENT WASHTENAW: PROJECT THUS FAR



RESILIENT WASHTENAW: ENVIRONMENTAL COUNCIL MEMBERS

Kris Olsson Chair, Community Groups

Gay MacGregor Vice Chair, Vehicle Emission Reduction Issues

Michelle Deatrick Chair Emeritus, Land Use and Preservation

Anne Brown
Racial Equity & Environmental Issues

Andrew Comai Labor Representative

Hallie Fox Water Protection Representative

Virginia He Youth Representative

Tim Redmond Sustainable Agriculture Representative

STEERING COMMITTEE MEMBERS



Theo Eggermont Public Works Director

Kristen Schweighoefer Environmental Health Director

Katie Snay CMH Director of Recipient Rights

April Avigne Energy Coordinator

Ben Pinette Emergency Operations Manager

Teresa Gillotti
Director of OCED

Cindra James
Health Preparedness Manager

RESILIENT WASHTENAW: PURPOSE OF ENGAGEMENT



Understand Interest and Concerns

Gather Ideas for Action

Build Collaboration

ENGAGEMENT TO DATE



WCEC – Agenda item since formation. Regular input and discussion in public meetings

Local Governments – Regular communications to all. Meetings and presentations to Councils, Boards, and environmental subcommittees

Formal Letters – Formal project updates to local governments, community groups, and climate partners

County Subcommittees – presentations to with BRA, WCRC, WCPARC, Urban County, and others about purpose of plan and opportunity for participation

Media – multiple new stories in local print and audio press, outreach through social media for events and updates

Website – resilientwashtenaw.org established and updated throughout project, county website updated and linked

Steering Committee – Monthly meetings since BOC approved project

County Employees – series of 8 zoom sessions in Spring of 2022 to discuss climate change, county plan, program opportunities, and community need

County Leadership – 2-day climate summit in Summer 2022, regular updates at organizational meetings.

RESILIENT WASHTENAW: OUTCOMES OF ENGAGEMENT



Broad support across County for climate action

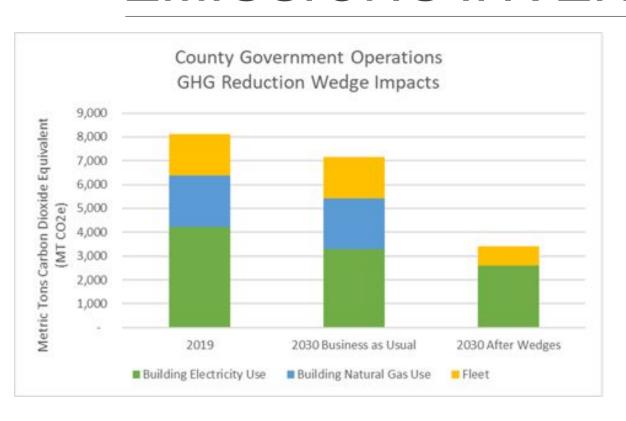
Openness and interest in discussion and involvement in County plan

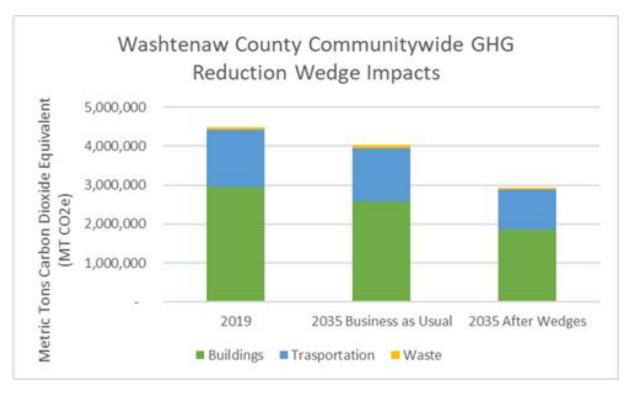
There is need for coordination of actions and plans across sectors and governments

Similar climate concerns countywide, but varying opinions about the actions that best serve different communities

CLIMATE ACTION PLAN: EMISSIONS INVENTORY







VULNERABILITY ASSESSMENT



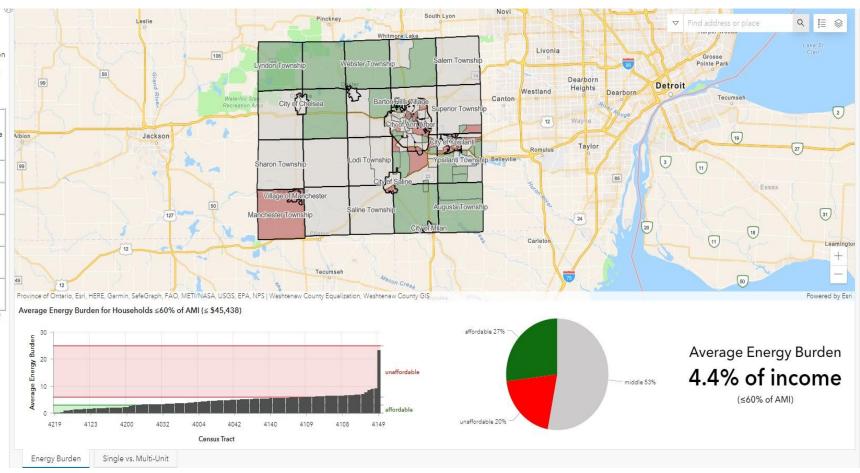
Energy Burden

Energy Burden =

% of a household's gross income spent on gas, propane, and electricity AMI = Area Median Income: midpoint of an area's income distribution (half earn more and half earn less)

% of AMI	Category	Based on 2016- 2020 median household income in Washtenaw County
0-30% AMI	extremely low-income	<\$22, <mark>71</mark> 9
30- 50% AMI	very low- income	\$22,719-\$37,865
50- 80% AMI	low-income	\$37,865-\$60,584
Over 80% AMI	no longer considered low-income	\$60,584-\$75,730
100%+ AMI	above median income	\$75,730+

Sources: Low-Income Community Energy Solutions | Department of Energy; US Census

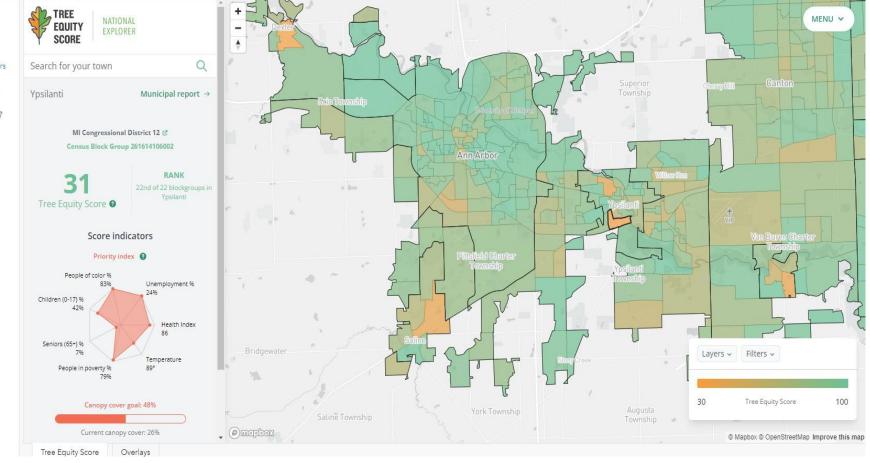


VULNERABILITY ASSESSMENT



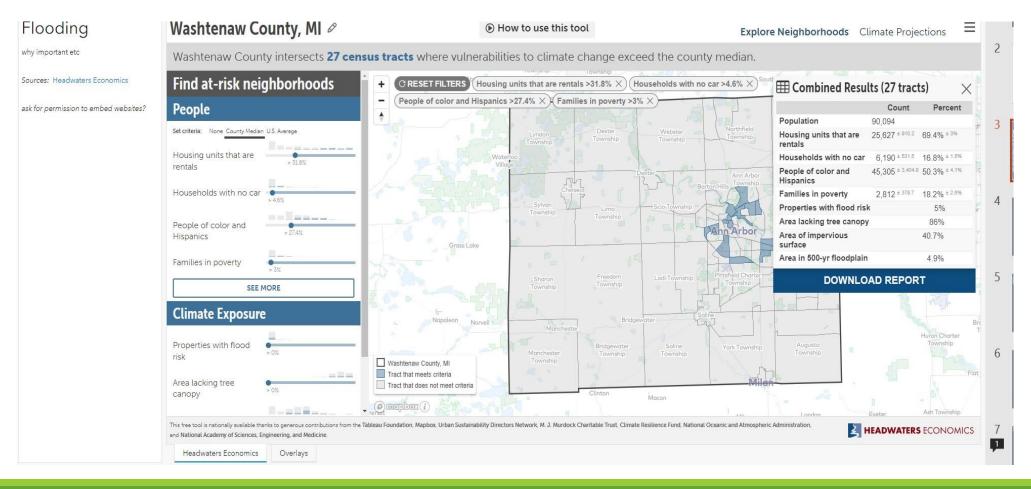


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VULNERABILITY ASSESSMENT





RESILIENT WASHTENAW: PLAN FRAMEWORK

PLAN FRAMEWORK

STRATEGIES:

FOCUS AREAS OF CLIMATE ACTION PLAN

DO IMPACT CARBON LEVELS

HEALTH

ENERGY TRANSITION

INFRASTRUCTURE INVESTMENTS

CIRCULAR ECONOMY

TRANSPORTATION

HOUSING

WORKING FARMS & NATURAL AREAS

PRINCIPLES:

OTHER COUNTY PRIORITIES

DO NOT IMPACT CARBON LEVELS

RACIAL EQUITY AND ENVIRONMENTAL JUSTICE

SUPPORT PUBLIC HEALTH

JUST TRANSITION

RESILIENT ECONOMY

COMMUNITY SUPPORT & PARTNERSHIP

HIGH COMMUNICATION & ENGAGEMENT

ACTIONS: 5-10 per strategy, each of which connect to the plan principles, and which cumulatively would achieve the carbon neutrality goals

RESILIENT WASHTENAW: DRAFT FRAMEWORK



GOALS are the outcomes that the plan is designed to achieve.

The goals of the Washtenaw County Climate Action Plan have been established by the Board of Commissioners through resolution. These goals are that Washtenaw County as an organization will be carbon neutral by 2030, and that the entire county will be carbon neutral by 2035.

PRINCIPLES are other desired priorities beyond carbon neutrality which are important to the County.

Principles are other priorities of Washtenaw County beyond carbon neutrality which can be supported through climate action and the climate action plan. The County is interested in a climate action plan that is complementary to and consistent with other planning happening in the County, and that the climate action plan should support those other priorities when possible and appropriate.

STRATEGIES are the broad categories of actions necessary to achieve the goals of carbon neutrality.

The specific strategies proposed have been developed through public and internal engagement, in consideration of the sources of emissions and opportunities available for emissions reduction and climate adaptation, to be in alignment with other climate action plans, and to be thoughtful of the responsibilities and programs of the County. Strategies are included as a component of the plan framework to bring organization to the plan and its implementation

ACTIONS are the specific projects, programs, or policies needed to achieve goals.

Actions can be defined, assigned, and monitored. Actions will address both mitigation (reducing emissions in order to slow the pace of climate change) and adaptation (investing in systems and changes which will lessen the harmful impacts of climate change on Washtenaw County residents).

CLIMATE ACTION PLAN: DRAFT PRINCIPLES (1 OF 2)



RACIAL EQUITY AND ENVIRONMENTAL JUSTICE

Racial Equity means the development of policies, practices, and strategic investments to reverse racial disparity trends, eliminate institutional racism, impact structural racism, and ensure that outcome and opportunities for all people are no longer predictable by race.

Environmental Justice is the equitable treatment and meaningful involvement of all people, regardless of race, color, national origin, ability, or income in the development and application of laws, regulations, and policies that affect the environment.

The Climate Action Plan should be considerate of past decisions which have worsened racial disparities with regards to vulnerabilities to climate change and should support investments which promote racial equity and focus on minimizing the harm from climate change to the most vulnerable in Washtenaw County. The plan should afford the same degree of protection from environmental and health hazards for everyone, resulting in a healthy environment to live, learn and work.

HEALTH

All residents of Washtenaw County should have the opportunity to achieve optimal health and well being. Climate change will impact this opportunity for the most vulnerable in the community due to the increase in average temperatures and more extreme weather events.

The Climate Action Plan should consider these impacts, and should propose actions which mitigate negative health impacts for the most vulnerable and the least able to adapt to a warming climate.

JUST TRANSITION

Just Transition is the concept that the transition from fossil fuels to clean energy consider impacts to workers.

The Climate Action Plan should consider and try to make whole workers who lose their jobs due to this transition, that workers and communities impacted by the climate crisis should receive targeted support, and that the jobs created carry out this plan should be good jobs with good benefits and which can support a good life in Washtenaw County.

DRAFT PRINCIPLES (2 OF 2)



RESILIENT ECONOMY

Resilient Economy is the idea that the transition will and will provide opportunities for economic development and will impact the operations of existing companies.

The Climate Action Plan should consider impacts to companies engaged in a fossil fuel economy, look to help companies transition their own operations as a means of achieving the goals of this plan, and should attempt to support companies working to address climate change within and beyond Washtenaw County through their products and services.

COMMUNITY PARTNERSHIP

Climate change is a complex, urgent problem requiring attention and action of all sectors and organizations. Climate change is also one of many important issues of concern to society, and day to day responsibilities must be maintained while climate action is pursued.

The Climate Action Plan should be built upon partnership and collaboration with all parts of the Washtenaw County community to take advantage of all resources and opportunities available, to engage many people in this work as a means of developing the best ideas and actions, and to make the deep changes necessary to successfully transition from fossil fuels.

SUSTAINED COMMUNICATIONS

The Climate Action Plan should include frequent, easy to access, and understandable communication.

This is necessary to sustain interest, attention and action to plan and its goals amidst known and future competing priorities.

DRAFT STRATEGIES (1 OF 2)

HEALTH

Provide opportunities to achieve optimal health and well-being and prevent negative public health impacts from changing climate

ENERGY TRANSITION

Increase Renewable Energy, Energy Efficiency, and Electrification in all Buildings

INFRASTRUCTURE INVESTMENTS

Plan for and build public improvements that reduce dependency on fossil fuels and prepare the county for more frequent and intense weather events

CIRCULAR ECONOMY

Build an equitable, low-carbon, and resilient *Circular Economy* that manages materials streams for their highest and best use. A circular economy is one that designs out waste, keeps materials in use, and which regenerates natural systems

DRAFT STRATEGIES (2 OF 2)

MOBILITY

Reduce emissions from transportation

Support mobility modes and infrastructure that eliminate fossil fuel dependency

HOUSING

Encourage higher density development and redevelopment on sites with existent access to infrastructure within urban service boundaries

Consider emissions of materials, infrastructure, transportation, and loss of natural areas in decision making for construction outside of service boundaries

WORKING FARMS AND NATURAL AREAS

Preserve 30% of Washtenaw County as working farms or ecologically significant Natural Areas by 2030

Protect County watersheds, surface water, ground water, and soil health.

RESILIENT WASHTENAW: DRAFTACTIONS

DRAFT ACTION SUMMARY

Action #	Strategy	Action Title
1.01	Implementation	Create a Regional Resilience Authority
1.02	Implementation	Carbon Pricing in Decision Making
1.03	Implementation	Create a County-Based Carbon Offset Program
2.01	Energy Transition	100% Renewable Energy Options for Everyone
2.02	Energy Transition	Create Countywide Energy Concierge
2.03	Energy Transition	Expand Bulk Purchase Programs
2.04	Energy Transition	Expand Weatherization Programs
2.05	Energy Transition	Update Building Codes
2.06	Energy Transition	Create Time of Sale Reporting of Energy Use and Costs
2.07	Energy Transition	100% Renewable Energy and Energy Efficiency Upgrades for All County Operations
2.08	Energy Transition	100% Electric and Renewable Buildings and Fleet Policy
2.09	Energy Transition	Electrify County Fleet
3.01	Housing	Infill Housing and Increased Density
3.02	Housing	Model Zoning
3.03	Housing	Emissions Accounting Mechanism

Action #	Strategy	Action Title	
4.01	Mobility and Access	Improve Transit County-wide	
4.02	Mobility and Access	Build All Season County-wide Non-Motorized Transportation Network	
4.03	Mobility and Access	Support Regional Transportation Options (RTA)	
4.04	Mobility and Access	Reduce VMTs Caused by Road Expansion and Sprawl	
4.05	Mobility and Access	Track and Report VMTs by Sector	
4.06	Mobility and Access	Improve MPG and MPGE throughout Community-wide Fleet	
4.07	Mobility and Access	Expand on Work from Home and Remote Service Access	
4.08	Mobility and Access	Provide Financial Incentives to Employees to Walk, Bike, or Use Transit	
4.09	Mobility and Access	Support More Efficient School Transportation	
5.01	Health	Update the County's Hazard Mitigation Plan	
5.02	Health	Create Resilience Hubs Network	
5.03	Health	Reduce Heat Islands	
5.04	Health	Expand and Maintain County Tree Canopy	
5.05	Health	Expand County Education and Outreach Programs	
5.06	Health	Create Opportunities for Local Food Production on County Properties	
5.07	Health	Prepare Health System for Climate Emergencies	
6.01	Preserve Working Lands and Natural Areas	Natural Area Preservation	
6.02	Preserve Working Lands and Natural Areas	Farmland Preservation	

Action #	Strategy	Action Title	
7.01	Green Infrastructure	Provide Comment on Infrastructure Agency Planning Projects	
7.02	Green Infrastructure	Prioritize Public Projects that Reduce Fossil Fuel Use and Prepare for More Extreme Weather	
7.03	Green Infrastructure	Urbanized Area Storm Vulnerability Assessment and Prioritization	
7.04	Green Infrastructure	County-wide Stormwater Basin Inspection and Retrofit	
7.05	Green Infrastructure	Expand Rain Garden Program	
7.06	Green Infrastructure	Update Stormwater Regulations	
8.01	Circular Economy	Build an Equitable, Low-carbon, and Resilient Circular Economy	
8.02	Circular Economy	Develop a County Wide Organics/Compost Program	
8.03	Circular Economy	Support and Grow the Washtenaw Regional Resource Management Authority (WRRMA)	
8.04	Circular Economy	Build a Multi-dimensional Public Education and Promotion Plan for the Circular Economy	
8.05	Circular Economy	Diversify Funding for Circular Economy Work	
8.06	Circular Economy	Policy Initiatives to Expand Circular Economy Scope and Infrastructure	
8.07	Circular Economy	Incentivize Local Food Production	

Strategy

Priority: Low to High Timeline: Short to Long

Impact: Low to High Difficulty: Easy to Hard

Action Title

Action Description

What am I looking at? These are draft actions. Each action starts with a slide like this that identifies some key information about what the action is, why it's important, and who should be involved in planning, funding, and implementation. If there is a lot more to explain, a second slide is added to capture that information



What is the Return on Investment?



When do we start? For how long?

Implementation/Lead Dept.

Who is leading from the County?

Community Partners

Who from the community should be involved?

Funding

Where could funding come from?

Staffing

Where will staff or contractors be and how many will we need?

Approval(s)

Which governing bodies will need to approve?

Goals and Evaluation Metrics:

- What goals should we have?
- What metrics should we use to evaluate achieving our goals?





What level of GHGs can this reduce?



Does this apply to the County, Community or CVTs?



What mechanism is used to enable this?











Relevant Principles are Highlighted





ACTION SLIDE: EXAMPLE

2.04

ENERGY TRANSITION

Priority: High Timeline: Short Term Impact: High Difficulty: Moderate

Expand Weatherization Program

Washtenaw County will greatly expand the current weatherization program to 1,000 homes per year and raise the income limit for eligibility to 300% of the federal poverty level. This program is designed to meet the needs of both low-income homeowners and renters and to support the County goal of reducing the energy burden among the housed with the most need. The program should also strive to grow the number of local MWBE Contractors delivering weatherization services.

Level



nigi



2023-2035



HIGH



COUNTY, COMMUNITY & CVTs



NONE

Implementation/Lead Dept. OCED

Community Partners

CVTs, Faith-based Organizations, Service Providers, Habitat for Humanity, OSI

Funding

Michigan Energy Office, Federal Funds (ARPA, II)A, IRA, LIHEAP, WAP), General Funds, CVTs, Bonds

Staffing

OCED, Local Contractors, Local MWBE Contractors

Approval(s)

BoC, OCED







Goals and Evaluation Metrics:







RELEVANT PRINCIPLES



Weatherize 1,000 Households per Year, on Average

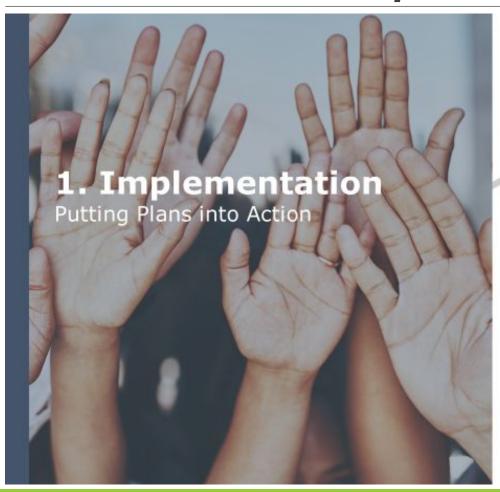
Raise Income Threshold to 300% of Federal Poverty

Include Rental Properties and Multifamily Buildings

12,000 Households Weatherized by 2035

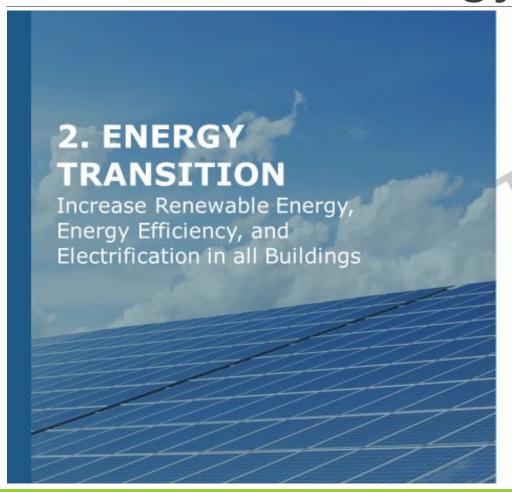
Increase Participation by MWBE Contractors

ACTIONS: Implementation



- Create a Regional Resilience Authority
- 2. Carbon Pricing in Decision Making
- 3. Prioritize Local Carbon Offsets

ACTIONS: Energy Transition



- 100% Renewable Energy Options for Everyone
- 2. County-wide Energy Concierge
- Community Bulk Buy for Solar and Building Electrification
- 4. Expand Weatherization
- Update Building Codes
- Time of Sale and Lease Reporting of Energy Consumption
- 100% Renewable Energy and Energy Efficiency for County Operations
- 100% Electric and Renewable Buildings Policy
- 9. Electrify the County Fleet

ACTIONS: Housing



- Infill Housing and Increased Density
- 2. Model Zoning
- Create Emissions Accounting Mechanism

ACTIONS: Mobility and Access



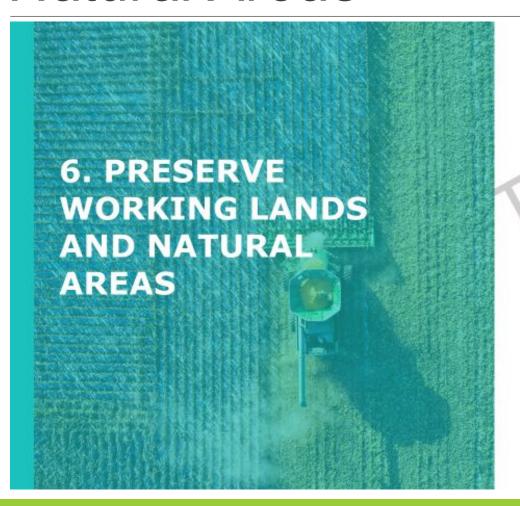
- Improve Transit County-wide
- Build All-Season County-wide Non-Motorized Transportation Network
- Support Regional Transportation Options (RTA)
- Reduce VMTs by Sector
- Track and Report VMTs by Sector
- Improve MPG and MPGE throughout Community-wide Fleet
- Expand on Work from Home and Remote Services Access
- Provide Financial Incentives to Employees to Mode Shift
- Support More Efficient School Transportation

ACTIONS: Health



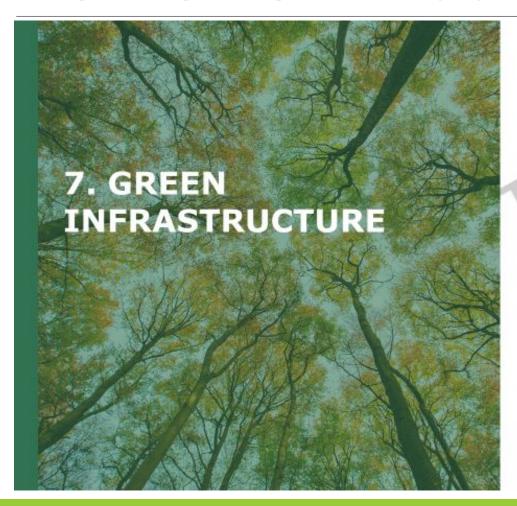
- Update County Hazard Mitigation
 Plan
- Create Resilience Hubs Countywide
- 3. Reduce Heat Island Effect
- Expand And Maintain County Tree Canopy.
- Expand County Education/Outreach Programs
- Create Opportunities For Local Food Production On County Properties
- Prepare Health System For Climate Emergencies

ACTIONS: Preserve Working Lands and Natural Areas



- Natural Area Preservation
- 2. Farmland Preservation

ACTIONS: Infrastructure



- Provide Comment on Infrastructure Agency Planning Projects
- Prioritize Public Projects That Reduce Fossil Fuel Use and Prepare For More Extreme Weather
- Urbanized Area Storm Vulnerability Risk Assessment And Prioritization
- Countywide Stormwater Basin Inspection And Retrofit
- 5. Expand Rain Garden Program
- Develop New Stormwater Regulations

ACTIONS: Circular Economy



- Build an Equitable, Low-carbon, and Resilient Circular Economy
- 2. Develop a County Wide Organics/Compost Program
- Support and Grow the Washtenaw Regional Resource Management Authority (WRRMA)
- Build a Multi-dimensional Public Education and Promotion Plan for the Circular Economy
- Diversify Funding for Circular Economy Work
- Policy Initiatives to Expand Circular Economy Scope and Infrastructure
- Incentivize Local Food Production

^{*}A circular economy is one that designs out waste, keeps materials in use, and which regenerates natural systems (Ellen MacArthur Foundation)

ACTIONS: GHG Impact

RESILIENT WASHTENAW LIST OF ACTIONS		Do Not S	Do Not Sort TableValues Linked to Other Tabs.		
DRAFT GHG Impact (Actions without GHG values in hidden rows)		GHG Impact			
Action #	Strategy	Action Title	2030 County MT CO2e	2035 Community MTCO2e	Assumptions (as of 9/9/2022, may change)—Assumptions are "if this action achieves this scale of impact," not predictions of what will happen. Actions may need significant financial incentives and/or requirements to achieve GHG outcomes.
2.01	Energy Transition	100% Renewable Energy Options for Everyone	2,867	1,231,078	100% uptake for all grid electricity. This is not a savings to be subtracted from total emissions. Grid-connected renewables are tracked separately from the GHG inventory by the GPC GHG accounting protocol. Renewable energy purchases should be noted after GHGs are inventoried using eGRID CO2e per kWh grid average factors for all grid electricity consumption.
2.02	Energy Transition	Create Countywide Energy Concierge		351,617	30% energy efficiency savings in 40% of buildings (excluding 12,000 weatherization buildings)
2.03	Energy Transition	Expand Bulk Purchase Programs		306,616	30% of buildings with natural gas accounts 100% electrify. 20% of countywide electricity use from on-site solar.
2.04	Energy Transition	Expand Weatherization Programs		28,246	30% energy efficiency savings in 12,000 buildings
2.05	Energy Transition	Update Building Codes		44,550	80% of new buildings electrify by 2035 and achieve 40% efficiency savings over BAU.
2.07	Energy Transition	100% Renewable Energy and Energy Efficiency Upgrades for All County Operations	2,812		35% energy savings from efficiency, 100% electrification, 30% of electricity as on-site renewables. Assumptions may be adjusted in cells C12-C15 of Govt Wedges tab.
2.09	Energy Transition	Electrify County Fleet	938		70% of Fleet Miles Electric in 2030remaining fossil fuel fleet is average mpg (not only low mpg large vehicles). Assumptions may be adjusted in cells C27-C31 of Govt Wedges tab, which also allows calculation of some potential savings actions not listed on slide.
4.01	Mobility and Access	Improve Transit County-wide		6,439	1% of VMT replaced with transit ridership, transit service emissions increase 50%could be improved with lower carbon transit.
4.02	Mobility and Access	Build All Season County-wide Non-Motorized Transportation Network		19,002	VMT cut 2%as if 17,151 households avoid 10 miles of driving per day
4.04	Mobility and Access	Reduce VMTs Caused by Road Expansion and Sprawl		76,009	VMT cut 8%as if VMT growth associated with BAU population growth cut from 15% to 7%.
4.06	Mobility and Access	Improve MPG and MPGE throughout Community-wide Fleet		140,933	20% better fuel economy than business as usual. Savings calculated after 10% VMT reduction.
8.01	Circular Economy	Build an Equitable, Low-carbon, and Resilient Circular Economy		22,981	30% of landfilled waste diverted by 2035
8.02	Circular Economy	Develop a County Wide Organics/Compost Program		10,805	15% of MSW w/biological treatment by 2035 Annual MT CO2e Saved by Actions (in 2030 County Government Operations & 2035
		Total	3,751	1,007,198	Countywide Community)
		Additional Action: 40% EV w/20% On-Site Renewable	2 407	307,335	!
		Net GHG Emissions after Actions % Reduction from 2019	3,407	2,709,508	
		% Reduction from 2019 % Reduction from Business as Usual 2030/2035	60% 52%	40%	
		% Reduction From Business as Osdai 2030/2035	52%	33%	
		Grid Electricity GHGs to Address with Renewable Options Remaining Non-Electricity GHG Emissions to Address with		1,231,078	
		Offsets or Otherwise	540	1,478,431	

RESILIENT WASHTENAW: COMMENT, REVISION, AND CONSIDERATION

TIMELINE THROUGH EOY

8/29 – Draft Actions to WCEC and Steering Committee

8/29 to 9/11 – WCEC and Steering Committee Comment Period

9/21 – Draft Actions to BOC Working Session

9/11 to 9/30 – Action Reconsideration and Revision

10/3 to 10/21 – Public Comment Period, ongoing revision

11/16 – Presentation to BOC for Consideration at Board Meeting