

**Smita Malpani:** a few more people coming in and then we'll get started.

I also wanted to say that the slides that are being shown. Those are thank you slides to all of the people that have helped make this event possible. All of the speakers all of the facilitators the instructional support the planning committee the funders for this event. Thank you so much to everyone.

All right I think there's still people coming in but maybe we can get started if that's okay with everyone. So welcome everyone this is Washtenaw Community College's Third Annual Climate Change Summit. The topic is climate change but the theme this year is environmental justice. We have a pretty ambitious schedule so we'll try to keep to time but I wanted to begin first with the land acknowledgement. The land acknowledgement is a sort of a formal statement on behalf of Washtenaw Community College's Climate Summit. It was developed by Dale Petty and Gabby Gaytan-Aguirre sorry gabby if I'm mispronouncing your name and it will be read by Gabriella Gaytan-Aguirre.

**Gabby Gaytan-Aguirre:** Thank you. As members of the Washtenaw Community College community we humbly acknowledge that the campus occupies the ancestral traditional and contemporary lands of diverse native peoples. The taking of this land was formalized in a process alien to native cultures by the treaty of Detroit in 1807 including the Ottawa the Ojibwa the Potawatomi and with the Wyandot. Many other native peoples lived on this land at different times including the Fox the Sauk the Shawnee the Kickapoo the Miami the Musketoon and the Cherokee.

Since the origin of the college in 1965 we have benefited from the use of this land where we work and study and from its life beauty and spirit. We recognize our responsibility to understand and care for this land and we honor with our deepest gratitude the native people who have steward it for generations. Acknowledgement by itself is a small gesture but let this step be an opening to greater consciousness of native history sovereignty and cultural rights and a step toward equitable relationship and reconciliation.

**Smita Malpani:** Thank you so much Gabby. Thank you for helping to craft that statement and also for reading it. We really appreciate it. So the land statement is really meant to acknowledge the debt that we owe to indigenous people for the land that we are on. So next we're so fortunate to have Washtenaw Community College's President Dr Rose Bellanca here with us. Dr Bellanca if I could I'd like to invite you to say a few words to address the Summit.

**President Dr. Rose Bellanca:** Thank you I would be honored to. Good morning everyone and welcome to Washtenaw Community College's Third Annual Climate Summit. And the theme is so appropriate. Environmental justice. And I'd really like to thank the faculty the staff the students that have put so much effort and passion into this over the years. Thank you. You've raised everyone's awareness you have worked with us to understand more and more of our responsibility and because of that I believe we're a better college. And more than that we're more responsible better people because we realize that what we do today impacts the future. And we know we're only here for a brief

moment of time. So I would like to thank everyone and I must say that I was really struck by the beautifully written land acknowledgement and thank you so much for drawing that up. And yeah we were not here first. Someone else was. The land around our campus the woods Huron River all were home to any people not like us. This was not our land. Yet it's our responsibility to respect that and to go about the critical work of cleaning up our environment so that there's a more sustainable future for our children and our grandchildren because we're just using this land right now. It's really not our land. It's our turn to take care of this land.

At WCC environmental justice needs as individuals and organizations we must all do our part and doing our part can occur in many ways by taking individual and corporate responsibility to reduce our carbon footprint or I'd advocate for change as we've done individually or in a group is very important. But right now I'd like to share some of the initiatives happening at the college to make our campus greener to preserve the our environment today the community we serve and we have the privilege and honor to serve right now and for future generations that will be on this land.

First and foremost our goal at WCC is to be electrically carbon neutral by the year 2030. We are converting more than 1500 fluorescent light fixtures to LED fixtures per year. We've installed occupancy sensors and daylight harvesting sensors in offices and in classrooms. We've upgraded all egress and exit lighting to high efficient LED fixtures. We've installed a geothermal system on campus to reduce natural gas consumption. We are installing more energy efficient HVAC units across the campus and we're installing thermal pane windows to replace single pane windows. We've purchased one hybrid vehicle and three full electric vehicles. We've installed 12 EV charging stations for staff and student use and our energy saving efforts are ongoing and you'll be hearing more about them.

I know you're going to enjoy the Summit today because the effort that you put in and the people that have developed it are outstanding and very passionate about what they do. So thank you and one thing let's all realize you know this is our land right now it's not ours forever. So let's just take good care of it so that the next generation might be talking about us and thanking us for we do. Thank you so much and have a wonderful success. Thank you.

**Smita Malpani:** Thank you so much Dr Bellanca and thank you for telling us about all of the all the things that the college is doing you know to do its part to be responsible stewards for the environment and to be environmentally responsible and sustainable. So now I'd like to turn the floor over to my friend and my colleague my fellow faculty member Bridget Gruber. Bridget is an Environmental Science instructor at Washtenaw Community College and she's also a Climate Change Ambassador for the City of Ann Arbor.

**Bridget Gruber:** thank you Smita all right I'm going to share my screen now. Hi everyone. Thank you for coming today. So I'm going to I'm going to start by talking about ... climate change basics to get us all on the same page. And I'd like to start by

talking about the science how does climate change work. Then I'm going to share some evidence and expectations for what we what the future will look like and we'll touch on a path forward what are some things that we're doing about it what must we do about this. so first the science how does climate change work the basic radiation laws of radiation here.

Radiation is energy that travels by wave or particle. All objects emit radiation. The sun emits radiation and I have here an image showing you different types of radiation and the different wavelengths. And under this yellow bar here is the types of radiation that the sun emits. And most of it is visible light and visible light makes it through our atmosphere and our atmosphere is transparent to that radiation and it hits earth. About 50 of it reaches earth's surface and is absorbed. Earth also emits radiation but Earth emits infrared radiation. So you can see here on this spectrum this green line represents the radiation that Earth emits which is infrared. So that visible light again you can see in this energy animation that visible light goes through our atmosphere Earth absorbs it and then re-radiates it as infrared. But our atmosphere is not transparent to that infrared radiation. And so what happens is these gases in our atmosphere that are not transparent that radiation re-radiate it back toward earth and this is the greenhouse effect and this is a good thing. The greenhouse effect this warming keeps earth habitable. It retains heat so that we can have liquid water and life as we know it exists. If we did not have the greenhouse effect our average surface temperature would be negative 18 C so ..no water no liquid water ...no life as we know it. But as we continue to add more and more of these greenhouse gases very quickly into the atmosphere we are seeing a runaway greenhouse effect. So that is when more and more heat is trapped in the atmosphere. So you can see the difference between these two slides you know we have this expectation of these greenhouse gases holding in some heat to keep Earth warm but now we've really added a lot more of those gases to our atmosphere and more and more heat is getting trapped.

A very familiar example for you probably is your car your windows in your car do the same thing that our atmosphere does. They let in that visible light that visible light warms the interior of your car absorbs that visible light and then re-radiates it as heat the heat doesn't escape through the window and so the car is the inside of the car is warmed. So what are these gases in our atmosphere that sort of act like that glass in the car example. Carbon dioxide is one of them that's a very important one that you probably hear a lot about. Carbon dioxide is mostly coming from fossil fuel combustion so burning of oil natural gas coal. Methane is an important greenhouse gas as well it's not as it's not found in this high concentrations as carbon dioxide but it's extremely potent so it's 25 times more potent than carbon dioxide and nitrous oxide is another one that I'll pull out that's an important greenhouse gas again very potent. Some of the methane nitrous oxide coming from agriculture natural gas systems and complete combustion as well.

So what is the evidence that we have that these that this increase in greenhouse gas concentrations is having an impact on our climate. When we look back at historical data that tells us what we look at ice cores and we can get a sense of what the atmosphere looked like up to 800,000 years ago and sometimes more than that. And so we can look at

these ice cores and we can see what carbon dioxide concentrations looked like in the past and that's this red line here. And we can also get an indication of what temperatures were like and we can see a really clear correlation between carbon dioxide concentration and temperature. And you can see as carbon dioxide concentrations increase temperature increases. The peaks and valleys follow very closely even the little peaks and valleys so there's a really clear correlation. And today's concentration this is a little old we're at 415 ppm today parts per million is much higher than anything earth has seen in the last 800,000 years significantly higher. And so we expect that further warming we're going to see this blue line increase alongside along with this red line. This further warming is going to exceed anything that we as humans have seen and remember humans have only been around for about 200,000 years. And if we take a closer look at some data from just you know the last 50 60 years or so this is real time data this is carbon dioxide concentrations being taken on a volcano in Hawaii daily and temperature concentrations daily we can again the carbon dioxide is red the temperature is in blue. We can see a very steady increase in CO2 concentrations almost perfectly linear. And while there is some variation in temperature very clear trend increasing trend right alongside carbon dioxide. We also see that the concentrations of those major greenhouse gases that I mentioned are increasing very quickly and exponentially. You can see right around the industrial revolution is when all of these greenhouse gases really increased. And that means more of that heat is being trapped. So there's some clear indication that this warming effect is happening. We also have other evidence temperatures have risen about 1 degree C since the period 1880 to 1900. 16 of the warmest years over the last 150 years have been since 1997. So a lot of that warming is happening now in these recent years sea level has risen eight inches. The ocean temperatures are rising the ocean is holding a lot more heat than it was in the past. And I said that on average the global temperature is increasing about 1C but there are some regions on earth where the warming is happening faster and one of those places is the poles. You can see in this image here from 1984 compared to 2016 sea ice is significantly thinner and covering a lot less area than it was about 30 years ago. And this is important because sea ice and snow are very reflective and so that solar radiation that I mentioned earlier on when it hits the sea ice and snow most of it is reflected back out into space and so it's not absorbed by earth and it's not turned into heat. But as we lose that white bright white reflective surface we're getting more of a darker ocean surface and that surface is much more likely to absorb that solar radiation turn it into heat warm melt more ice we have more dark surface area which means more absorption of that radiation more melting. So we have a positive feedback loop and we see that happening.

So what can we expect for the future. We can expect temperatures to rise 2 to 4 degrees C. Where we fall in that range depends on what we do now how we act how we respond to this. We can expect more heat waves increasing sea level more intense storms droughts more flooding. This image here is from the dam that failed on the Tittabawassee River in Midland. We can expect more precipitation here in the Michigan region. We can expect crop failures increased pressure on our water supplies and waves of refugees because those folks that are living in places where sea level is rising where crops are failing they're going to need to move somewhere. So we're going to see more climate migration.

[fixes slide show]

So climate change is incredibly unjust. Who is emitting who is contributing to these greenhouse gases. This map on the top those countries colored in red are the those countries that emit the most that have high emissions in those countries that are lower or have lower emissions. This map on the bottom is showing you in red now those countries that are highly vulnerable to the impacts of climate change and in blue those countries that are have low vulnerability. And you can see that those who contribute the least will be impacted by climate change the most. And so climate change is very unjust in that way. And so since we're going to theme today is environmental justice and you're going to hear more about that from our keynote. I just want to make sure we all know what environmental justice is, and I have the definition here for you from the US EPA but I want to maybe mention what environmental injustice is. Environmental injustice is when low-income people of color developing nations are disproportionately exposed to environmental dis-amenities so things like pollution waste climate change and often what happens is these folks are hit first and worst. And when a solution is developed those folks benefit from that solution last and least. And this can't continue this needs to change. And so you're going to hear more about this. But that's why we're here today to work to move to this environmental justice where there's a fair treatment of all people and there's meaningful involvement.

So how's climate change going to impact Ann Arbor Washtenaw Community College here in Ann Arbor what can we expect to see. Well we can expect to see a 3 to seven Fahrenheit degree increase by 2050. We're going to see a lot more hot days more 90 plus degree days in the summertime and we're going to see more rain. We're going to see about 37 we have seen 37 percent more rain during extreme rain events perhaps you've noticed this but we're going to see more of that. And we're going to see more annual precipitation since the 1950s we've already seen about 44 percent more on average.

So what do we need to do about this. We must mitigate and we must adapt. So mitigating meaning first we need to minimize the impacts we need to get state to that 2C instead of the 4C. A world where the temperature increases 2C is going to be a better world than the world where the temperature increases 4C. So to mitigate we need to end the use of fossil fuels we need to then also build and fund our sustainable energy sources. We need to stop deforestation we need to keep those carbon sinks forests this preserving more land helps us ensure that we have those carbon sinks those plates that are taking carbon dioxide out of the atmosphere. We need to eat less than meat I'll touch on that in a minute but industrial agriculture is incredibly it kind of emits a lot of carbon dioxide contributes a lot to our emissions. And so by supporting more local food systems we can help to minimize those emissions. And then we need to adapt because there's climate change already in the pipeline so we need to be ready for what what's going to happen. So we need to build sea walls and levees because the sea level is expected to continue to rise. We need to plan that crops are going to move northward. I mentioned that here in Ann Arbor we're going to see more flooding and I showed you that picture of the flooding and when the Tittabawassee River the dam on that river failed. We can expect more of that more

precipitation and so our infrastructure is planned and built for storms of yesterday but really we need to plan for storms of tomorrow. And so I'm proud to be an Ann Arborite where they are thinking about these things so rethinking our cities and our infrastructure is going to be really important. And then we need to develop systems to manage these mass migrations of climate refugee refugees because we can expect that that will happen too.

So there is a global effort to mitigate and adapt on a very large scale and you've probably heard of the climate of the Paris climate accord. This is the first global agreement that includes all nations and the goal here is to limit that temperature rise to ideally less than 2 C. This they also so each country has puts together voluntary emissions reduction rules but it must be made publicly visible so there's transparency and accountability.

But climate change can feel like a really big thing right. but that doesn't mean that there's nothing that you can do as an individual there's a lot that you can do and nobody made a greater mistake than she who did nothing because she could only do a little. So you can vote for politicians that support climate change policies and then you can take action to reduce your individual carbon emissions. And I have sort of a scale here of things that you can do but I want to pull out this thing that I think is one of the most impactful things that you can do as an individual in response to climate change. You can reduce your meat and dairy consumption believe it or not industrial meat production permit produces a lot of CO2 emissions. So if you know I'm not saying you need to be vegetarian or vegan but if you reduce your meat and dairy consumption say skip that burger once a week you're going to make an impact. In fact if cattle were a country they would rank third in greenhouse gas emissions after china and the US. So skipping that meal that meet meal once a week will make an impact and I encourage you to try and do that. And then there are these bold big old local initiatives everywhere there's the carbon neutral cities alliance which is an alliance of cities around the world that work together to achieve carbon neutrality within the next 10 to 20 years. Carbon neutrality is those emissions that we're putting out into the atmosphere are equal to emissions that are being pulled out by the permanent sinks. And I'm very proud to be an Ann Arborite because here in Ann Arbor we are taking big bold steps to be carbon neutral by 2030. And I think you'll hear a little bit more about this from our keynote so want to leave you with that. Note that there are things that you can do and there are things that our Ann Arbor community as a Washtenaw Community College community we are part of this big bold initiative that the city of Ann Arbor is taking. And I'm glad to hear from Rose [Bellanca] that the Washtenaw Community College is also taking some really important steps as well. So thank you and thank you Smita and I'll pass it back to you.

**Smita Malpani:** thank you thank you so much Bridget. I just wanted to say you know reducing your meat consumption good for the planet good for you. I sometimes like to tell my students and they make fun of me for this that beans will save the world. but I truly believe that beans and lentils will someday save the world. So thank you so much. I wanted to just mention for students and also faculty and staff if you have questions as they come up as you're listening to speakers talk please throw them in the chat so we can either field them during the question and answer period at the end or address them in in

some other way so please feel free as speakers are speaking to put your questions in the chat. So now it's my great pleasure we are so very fortunate to have with us a representative from the City of Ann Arbor Galen Hardy

Galen is our keynote speaker for today. He is a community engagement specialist with the City of Ann Arbor with the Office of Sustainability and Innovations. He's had over 10 years of experience in community organizing in the city of Detroit as well as Ann Arbor. And he was awarded in 2019 the city of Detroit's ...District 2 Climate Warrior ... Award in recognition for his work to promote recycling across the city while working with Zero Waste Detroit. In 2020 he also received the Spirit of Detroit Award or recognition from Detroit's council member Raquel Casanada Lopez for his work of promoting recycling in Detroit's District Six. In 2020 under Galen's leadership the A20 Ambassadors Program of which Bridget Gruber is a part received the Great Lakes Renewable Energy Association Exemplary Project Award. This program trains volunteers in all sectors at the local community to dive deeply into pathways for advancing local sustainability resilience and carbon neutrality. Galen has a passion for helping frontline communities fighting environmental racism and speaking truth to power. Galen thank you so very much for joining us today. Thank you.

**Galen Hardy:** Oh thank you thank you for that ... wonderful introduction. It's just a pleasure just to be here you know I'm also Eastern Michigan alumnus. So shout out to everybody.

[gets slides ready]

I'm Galen Hardy and I'm a Community Engagement Specialist with the Office of Sustainability. It's a pleasure to be here this morning such a wonderful summit. My topic today is going to be fighting environmental racism by creating a just transition to carbon neutrality.

Okay the purpose of my talk today is going to be to demonstrate how the city of Ann Arbor's carbon neutrality plan is an example of how a municipality can reach carbon neutrality without harming historically neglected frontline communities by placing their needs at the core of the plan. I think Bridget spoke on it before how people of color and black folks we bear the brunt of environmental injustice environmental racism. So if we put those populations at the front instead of the back we can lower that chasm decrease the chasm between the haves and have-nots. So what is environmental racism. It's any policy practice or directive that differentially affects or disadvantages individuals groups or communities based on race. In a nutshell it also refers to minority group populations populated by primarily people of color and members of low socioeconomic backgrounds who are burdened disproportionately by environmental hazards toxic waste facilities garbage dumps odors you name it we bear to brunt of it.

But where did this all come from. You know how did it all start. You know and it was the rise in NIMBYism. You know we think about NIMBY today not in my backyard that can refer to the community's displeasure by placing developmental the

same developmentally disabilities communities like group homes or drug treatment facilities in your communities. But the term appeared in the mid 70s during the campaign to prevent a nuclear power plant from being constructed in Seabrook New Hampshire. And here it was the rise against the placement of highways hazardous facilities in their communities that they said no we don't want this. And you know these are all the things that led after this situation in Seabrook whites wanted clean healthy pollution free neighborhoods. I think every race would like clean pollution free neighborhoods. But these suburban communities were richer and they have more political clout to flex their muscles. And you know the laws and gov and regulations protected them.

NIMBYism gave way to the pathway to least resistance. So if you couldn't place those hazardous waste facilities and refineries and white communities where would you put them. You're going to put them in the communities where folks could be exploited. You know these residents per se they thought had less political clout. You know the government wasn't responsive it still isn't responsive to folks who are going through these burdens. You know they also those polluters also had to believe that those residents were uninvolved in local government and they would choose jobs over healthy outcomes. You know when we think about the Marathon plant and they get their tax abatement with the promise of jobs. It's always the promise of jobs you know. But the jobs never come the tax the tax abatement does though. And there was a thought that regulations like I said aren't responsive to black and minority communities and they still aren't. It's basically profits over people.

This led to poor health outcomes for blacks and people of color. Nationally poor communities have a 35 percent higher burden for particulate matter emissions. Approximately just drill that down a little bit more. Approximately 13.4 four percent of African-American children suffer with asthma. That equates to about 1.3 million children compared to seven point three percent of white children suffering from asthma/ which is totally totally wrong. And I'm not saying that either community shouldn't have but you know I'm saying that neither communities should suffer from those effects. But we're only a 13 percent of the population and 13.4 percent of our children have asthma; that's a problem. People of color also represent 50 56 of the population that live in neighborhoods for toxic release inventory facilities. Blacks are also 75 more likely to live in fence-line communities than the average American. So what's the fence-line community. Those are communities that are next to a company industrial service facility and they're directly impacted by the operation of that facility either through the noises the odors the emissions. So if you picture Marathon right here in southwest Detroit area called 42817 in the neighborhoods that's right by those are fence-line communities. And you know to look at the state of Michigan there's EJ hot spots all over the state and many of them are in our urban cores. You know for this map a high EJ score means that a community has both a high risk of exposure from environmental hazards and high vulnerability due to social factors of the characteristics of course there are large concentrations of minority residents who experience high levels of poverty and unemployment. They have low educational attainment and which means that they have high numbers of people who are over 25 without a high school diploma and they suffer from other social disadvantages. So looking at the state we see Detroit right here all red

the whole city 132 square miles or 122 square miles. We see Flint here and we all know about Flint and what happened with this water. But also Saginaw Lansing Grand Rapids Kalamazoo are all places where there are EJ issues there.

And let me go back a little bit. The University of Michigan School of Public Health estimates that air pollution kills about 650 Detroiters every year. You know if that was the homicide rate people ...it would be on every news station across the state. But it's not. You know those are the people at the bottom of the well who no one cares about. You know it's not news that black folks are dying in the city of Detroit and we have to change that. They also these high EJ cities in our state also share the greatest concentration of environmental burdens. They have high estimated cancer risk: you talking about nasal cancers respiratory issues thyroid cancer throat and lung cancer and high levels of pollution including particulate in that. For example if you look at the three mile radius of the Tri-cities area which includes Ecorse and River Rouge they are inundated with more than four dozen pollutants that are being monitored currently by the EPA. And also one of those is Marathon which emits 29 different types of toxins. That wouldn't happen in Ann Arbor. That wouldn't happen in any other affluent community in our state or America. And the refinery also emits at least eight different chemicals known to cause cancer including benzene dioxin and lead compounds and this is according to the EPA. And those communities have a high COVID risk. We black and brown people bear the brunt of COVID. Many times death was caused because of pre-existing conditions so when you have a community that's placed in these high toxic environments COVID was like a recipe for disaster. From last year when the COVID outbreak first started January 2020 we saw death all across the city and across the nation in black and brown communities from high COVID from COVID. But there's other extenuating factors that you know allowed COVID to take their lives and sometimes it was just where they live.

However so jumping into the city of Ann Arbor we're already experiencing pretty notable shifts in our local planet included like Bridget said a one degree increase in temperatures since the 1900s. And that temperature is expected to rise three to seven degrees between now and 2050. But additionally our annual precipitation has increased by over 44 since the 1950s like Bridget remarked on. The total volume of rain rainfall and doing extreme events has increased 37percent since 1981. And the number of heavy rainfall events have increased over 41 percent since the 1950s. And to top it off since we're not we're in the area that that doesn't experience the extremes of coastal risings and the other issues that the other states you know fires earthquakes you know we can expect migration and that migration you might hear the term of climate refugees. Those are folks who are going to move they're going to move inland off the coastal areas you know they're going to come you know from the southern states the west coast . And there's a whole lot of U of M alumni who are familiar with this area and they might come back home so we have to be prepared for that influx of new residents into the City.

So what is resilience. You know it's the ability in our office we call it the ability to bounce forward. You know we never say we want to bounce back after this occurs. No in our office we want to bounce forward. You know that's and what that means is during a shock or a stressor you know we want our city still to be able to thrive. We don't think

and once we come out of that shock and stressor so we don't ever want to go back to where we were. Because if we go back to where we were we'll still meet those same problems. So we always want to bounce forward come out of any situation better.

So you may have heard the terms of adaptation and mitigation what do they mean. You know we have to prepare and adapt to what's happening today. You know we see that things are happening so we have to adapt and then also we have to mitigate the future impacts because we know the temperatures have changed we know that it's getting hotter. So we have to do things that today that's going to reduce those future impacts from those issues. And while we're doing that we have to keep equity at the center that's going to give us climate resilience in A20.

And we're leading the way in the city of Ann Arbor. The City Council declared a climate emergency in November of 2019. It tasked us it tasked our Office of Sustainability and Innovations with creating a living plan that will achieve carbon neutrality by 2030. This plan had to emphasize front-line communities. Equity had to be at the core and like I said we don't want to leave anybody behind. You know so we have to flip you know change it those two at the bottom are now at the top the top is at the bottom. Because we feel that if we help those at the bottom we have to the bottom pushing them they can reach those at the top and we can get to climate resilience together. And our plan had to be failure positive. Hey we have to learn from all of our mistakes in which we do and those become best practices.

So our vision is you know to create a just transition to carbon neutrality by 2030. And when we say a just transition we transition away from the fossil fuel economy to a new economy which includes those people that were left behind. And because we want to provide them with dignified productive ecologically sustainable livelihoods democratic governments and ecological resilience so that nobody suffers from those mistakes of the past.

And we even take it a step forward further in our Office of Sustainability. We have an equity statement. And you know it's my thought that if many communities adopt our plan they can get the equity statement as well create their own season to their taste to protect and ensure that the mitigation work that they do improves the lives of everyday residents who have been historically underrepresented and under resourced. You know we say that verbally you know it's written in policy and our equity program also works to ensure equity is embedded in all the work that we do. If you want to partner with us you have to understand that if you want to we seek your advice we want to seek advice for someone that deals with equity. Equity is the way that we do in the City of Ann Arbor.

And then we also have a solidarity statement. You know and it's quite long and but I'm going to touch on a few points of it. You know we unequivocally condemn systemic racism that lays the history of our nation and we affirm that black lives matter. We stand in solidarity with our black and brown and indigenous members of our community in the quest for justice and racial equity. We openly acknowledge that because of systemic

racism and we're seeing that part you know the same communities that disproportionately suffer from poor air quality contaminating drinking water like in Flint toxic pollutants and localized flooding and extreme heat are disproportionately impacted by COVID10 police brutality housing and food insecurity our extractive economy and many other legacies of racial inequality. And there's no role for white supremacy in the just resilient and sustainable future. You know that's saying a lot for it to be you know in order to be a liberal white city to say these words and put them into a document for all to see is this groundbreaking. you And it also helps to set that tone for other communities as you move to achieve carbon neutrality you can't do it on the backs of those who can least afford it. You can't put your foot on their neck and say get up on your own. No no no. You have to be there you know to help them include them in the process. The pillars are A20 are sustainable it's equitable and transformative and you see equities are at the center. To break it down a little bit better equity in our definition ensures that everyone gets what they need to succeed based on where they are and where they need to go. It's transparent it's community-led inclusive and like I said it prioritizes frontline populations. It's sustainable meaning that it's enduring it can stand in perpetuity meaning that we're going to meet the needs of today without jeopardizing the ability of future generations to meet their own needs. And that's what the youth are crying about every you know they're not crying they're yelling they're screaming. They're telling us that we're messing it up. You know that it won't be a planet for them so we want to make sure that we're not jeopardizing their future. Anything that we do today and definitely we do our best to include youth in all of our work and a lot of it. And it has to be transformative causing a major change in something or someone for the better. It's failure positive like we're not scared to make mistakes because the mistakes that we make today and correct them when the City comes and wants to mimic our plan we've already made those mistakes for them and fixed them. So they're going to receive best practices. The plan is diversified meaning that you know everybody's included and it's not on one sector of like oh it's just not electrification. You know it's many other things that's included. And it's accessible to all. You know we want to make sure as an affluent community we're not leaving others behind. Those folks who feel like you know like they've been left out historically no you're included in the process.

So our process 82 working days three public surveys 60 public events two large town halls over 80 technical advisors who helped us create this plan. And which included 62 partner organizations right now that number is up to over 76 partner organizations who are participating and share and support us.

And that plan landed us on six core strategies and one catch all strategy powering our electrical grid with 100 percent renewable energy. You know that strategy right there is going to take legislation because it doesn't make well it doesn't make sense to charge a car with dirty energy you know that's coming from a coal plant or whatnot. So we want community choice aggregation. We want micro bridge things of that nature. We want to encourage residents to switch their appliances and vehicles from gasoline diesel you know and natural gas coal and whatnot to electric. And we want to significantly improve the energy efficiency of our homes businesses schools places of worship recreational sites. And how we do that it's going to take incentives. You know we have a

benchmarking program you know that's for businesses to help them monitor their emissions and whatnot. And the big one is reducing the miles we travel by 50 percent by 2030 that's nine years. Pre-COVID about 82 thousands of people travel to Ann Arbor to work play every day. You notice I didn't say live. You know Ann Arbor has been unaffordable for many. So many commuters you know who would normally stay in Ann Arbor because they like to live by their jobs they can't afford. You know we have folks who drive from Toledo Jackson Flint Detroit Grosse Point Waterford traveling down to Ann Arbor every day bringing those emissions with them. So we have to cut that. You know we need mass transit we need more Park and Rides you know but more but most importantly we need density in the city of Ann Arbor. You know there's a big gripe against that. You know no one wants to. They're saying oh it's going to change the character of our neighborhoods. But when we're facing climate change you know we have to make sure that people can afford to live and work and play in Ann Arbor. Changing the way the way we use reuse and dispose of materials that's encouraged in the circular economy. You know our consumption is driving emissions especially in affluent community when something breaks you can go and just buy another one. So we want to encourage tool libraries toy libraries where kids can go pick out a toy play with it and bring it back. We want to see more repair shops in the City of Ann Arbor so when your lawn mower breaks you just don't chuck it and go buy a new one. No you go get it fixed. We need more convenience stores also. Also we want to prop up second-hand stores you know we need our youth to make second-hand stores cool. You know those are items that have been gently used already. So if kids would go out and buy those items for residents as opposed to keep going to the store and keep buying new virgin items that were made from virgin materials if we can reduce that we can cut our consumption. And we want to enhance the resilience of our people and our place which means that we are we're in the process of creating Resilience Hubs in each ward of Ann Arbor. A Resilience Hub is a place that's run you know it has solar medical supplies food. You know it's the rallying place when there's a an emergency that residents go to. Because we've seen in other disasters that are happening across America for two to three days residents are on their own until help comes. That's why we want to create Resilience Centers because this is the rallying point where the seniors are in this community to get them out. If this is an area that's prone to flooding we got the materials that can go out such as rafts and whatnot and get people out of harm's way. And we have other cross-cutting actions such as our Sustain Ann Arbor Together grant. We have an Aging in Place Program you know that's helping residents stay in their homes and also we have we're working on green rentals and Time of Market. Time of Market is applying the energy score to your home when you're selling so that when the buyer comes to buy it they know your energy score and what a home might need to bring it up to par and create an energy efficient home. So I say all this to say if cities could just create a just transition and start declaring a climate emergency and create a plan that prioritizes front-line populations we can reduce the impacts of environmental injustice and environmental racism. And that's my talk today. I'm ready for any questions.

Smita Malpani. Thank you so much Galen. Thank you so very much. We've got to be bouncing forward as you say. One thing that struck me in your comments about 650 Detroiters dying every year it's hard to see that as anything but a complete emergency. So

right now I'd like to invite people to type their questions in the chat and then I'll go ahead and call on you to ask your question if you wouldn't mind unmuting yourself to read your question and ask it. Giovanna you had a question and the questions can be by the way for either Galen or for Bridget. Giovanna would you like to read your question.

**Giovanna:** Oh OK hi. So as I stated and my question is would a neighborhood next to an airplane be an example of a fence line community. Because like as I was listening to the presentation it had me thinking a lot about my own personal experiences with like asthma and noise pollution and I guess what I'm trying to say is like this whole thing has kind of got me thinking about what's happening around my own community.

**Galen Hardy:** Oh I would say yes because if you're by airport you're experiencing traffic volumes emissions from vehicles idling cars. So I would look at the EJ hot spot map and that's from the I think School of Environmental Sciences Sustainability. They have a hot map. And you can go right to it hot spot map and it's by census tract. So I would definitely go on that site and I'll put it in a chat where you can go and look at it you know and look up your own neighborhood okay

**Smita Malpani:** thank you thank you so much Giovanna. Justin had a question. Justin did you want to ask your question.

**Justin:** Yeah hi Galen. Thank you for that wonderful presentation. So my question is about gentrification and how industrial operations and different things that are making these communities dangerous places to live how we may see patterns and those leaving the community when you know kind of you know people want that out and how those might re-establish themselves in other communities and create new fence line communities

**Galen Hardy:** that's a good question because as I look at the incinerator that was open in Detroit. For 30 years black folks complained about that incinerator but as midtown became more gentrified you know and the voices the color of the voices changed miraculously it ended.

Yeah. And that's another thing we have you know keep in mind when as improvements come those folks who have been there for years we need mechanisms to ensure that they can stay there. Because as communities improve through gentrification to when more resources start coming to that community prices go up. You know those costs get passed down and those residents who bear the brunt of the legacies of injustice they can no longer stay there so look in midtown for instance Detroit.

**Smita Malpani:** Thank you. William. William also had a question. And I'm sorry this is going to be our last question. I feel like we could do questions with you all day Galen but this is going to be our last question before we move on to breakout rooms. So Williams.

**William:** okay great Galen wonderful extraordinary wonderful presentation. Thank you so much but I have a question about something that you said. You said equity was at the core of the City of Ann Arbor's plan he also made the statement that nobody should suffer because of the mistakes of the past. Well on the east side of Ann Arbor is where most of Ann Arbor's subsidized housing is located. It was also the location of the City dump for a real long time out there. And the incidents of asthma and other respiratory diseases are higher in that area of Ann Arbor than any place else. And I'm wondering if you would take a moment to talk about how that can be corrected. What can be done to mitigate those cases out on the east side of Ann Arbor because of the fact that a lot of toxic materials buried out there for a number of years.

**Galen Hardy:** Would that be the Forest Hills community near

**William:** University Town Houses Colonial Square Arbor subdivision all subsidized housing.

**Galen Hardy:** What we're doing right now and especially when I was hired is to engage those disadvantaged populations. That's my role you know is to give them information. Knowledge is power and then also we create an equity engagement toolkit you know and the steering committee is going to be comprised of those folks from those disadvantaged communities. So there could be vegetative buffers more I say investigation on how we can mitigate those. But the first thing we need to do is make sure that they're in the loop and at the table. You know because they say sometimes if you're not at the table you're on the plate. So you want to always make sure that those front line communities baseline communities are at the table making decisions that that would impact their own futures. And that's where you get empowering. It's not about empowering anybody. Now I don't use time and power because empower saying I'm giving you something. No we want to awaken the power that's already in those folks to let their questions be heard because that's also one of the first time I've heard that. So Mr Hampton definitely I'll see you later today but you know we can definitely talk more about that and see how we can make sure that they're feeling that they're a part of this process.

**William:** Thank you so much.

**Smita Malpani:** Thanks to you both. Thank you so much such a great question. We could be talking about this for a long time and Galen somehow we're going to have to ask you to come back for a future event. But I think you're seeing some expressions of how much people appreciated the presentation and in the chats. But for now I think you know a lot of students are if you're feeling like me you're kind of asking yourself what can I do. And I think as students sometimes students underestimate their power but students definitely have a lot of different ways to get involved to be active and to make a difference. So what we're hoping to do now is to move to break out rooms. We've got breakout rooms that we're going to set up one with a student from UMich and another with a student from EMU.

They're going to be talking about opportunities to get involved in environmental justice in climate justice sustainability at their universities. You'll be able to choose which room you go to so the University of Michigan student Lunia Oriol will be in breakout room one with a facilitator Julia Taylor. Room 2 will be the EMU student Zachary O'dell with facilitator Bridget Gruber. And to choose a breakout room it's a little tricky so you if you go to your r window where you can see yourself and you choose those three dots you'll be able to choose that breakout room. And if for some reason you're having an issue or you're not able to do it we've got people standing by to help you and get you into a breakout room.

So before we leave though I did want to ask if everyone would do one thing for me and that is to put a one word answer into the chat to this question. And it's only going to be one word just one. And I know it's hard to do that but what do we need to bring about environmental justice one word answer in the chat before you head to your breakout room. And we're going to try and put all those answers together and compile them for you later on so we'll send that back out to you. But so before you head out please drop your answer in the chat. And I don't think we're going to reconvene again in plenary so I just wanted to say to everyone who showed up today thank you so much for joining us. We're all doing the best we can with what we have but every action every intention makes a difference. Thanks so much.