



CLIMATE VULNERABILITY ENGAGMENT TRAINING GUIDE

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TRAINING PURPOSE

Based on the C4's prioritization of energy justice, housing, and climate change as well as the City of Grand Rapids' desire to pursue a climate vulnerability assessment, this training with support C4 community ambassadors to:

- Understand what a climate vulnerability assessment is and what equitable engagement best practices are
- Analyze what climate change means for the city of Grand Rapids
- Design a plan that outlines what ambassadors and community members can do to contribute to solutions/the vulnerability assessment

With this, remember that we are building on the skills ambassadors already have and empowering them to use those skills to effect change.



TRAINING PURPOSE

Facilitators and workshop developers aim to:

- Explore 5 Sections of material around community engagement for the Grand Rapids Climate Vulnerability Assessment—including: Establishing Ground Rules of the Training Dialogue; What is a CVA? What Climate Change Means for the City of Grand Rapids; What can we do?; Communication Strategies Opportunities and Limitations for Engagement
- Make the training simple, enjoyable, and impactful for local government practitioners and their technical assistance providers.
- Create a cohort environment where practitioners can work with each other, get to know each other, and support each other throughout their training journey

The learning outcome for this training include:

- Identify the fundamentals of how climate change is affecting Grand Rapids
- Examine how we might inform, involve, and inspire community members within the climate vulnerability assessment process
- Apply communication strategies for climate change vulnerability engagement

Statement of purpose:

By the end of this presentation you should be able to understand and evaluate the ways in which we can engage community on our climate vulnerability assessment



SLIDE CONTENT AND FACILITATION

SLIDES 1-6: INTRODUCTORY SECTION

Slide 1: Welcome Slide

• Start by welcoming everyone to the training with a warm greeting (i.e. we are so happy to have you here to talk about how we might engage our most vulnerable community members on climate change

Slide 2: Introduce Yourself

 Make sure you include your name; pronouns; and anything that could help define your own positionality within the space (who you work with; why you were chosen to give this training; what's your background; etc)

Slide 3: So why are we here?

- Here you can start to have a dialogue with the audience about expectations for the training
- Start by asking: what are expectations about time spent together today?
 - This will open a dialogue about what people hope to get out of the discussion
 - With this, you can gauge what the audience is looking for

Slide 3: Continued

When this slide is presentenced, you can make this discussion an activity that can be done with sticky notes (Or jamboard if the training is virtual)-if there's a smaller group you can use a scribe

For a more in depth conversation:

- Additionally you can ask ask if there are any concerns about coming into this training today
 - With this dialogue we can be sure that we are meeting the needs of the audience
 - Answers might range from:
 - I'm missing work
 - I'm not sure what we are doing here?
 - Are we going to go over time?

As a facilitator, you can help mitigate those fears once they are expressed.

Slide 4: Call to action

 Here you can feel free to just read off of the slide or edit at your own discretion



Slide 5: Session Plan

• Now that you've explained why we are all here, this slide gives an overview of what you as the facilitator will be talking about with the audience. Make sure you include that there will be discussion questions included throughout the training.

Slide 6: Learning Outcomes

 Here you'll explain the learning outcomes for the session. This slides details what the audience can expect to walk away from the session with

SLIDES 7-10: SECTION 1: COMMUNITY AGREEMENTS OF THE TRAINING DIALOGUE

Slide 7: Title Slide

Slide 8: Ground Rules of Training Dialogue

• On this slide I have given you a list of potential ground rules to establish with your audience before facilitating any sort of discussion question. Here it is important to acknowledge that this training acts as a brave space for those to share their honest lived experiences as well as thoughts and feelings—but it is important that we all do so in a responsible and consensual way





Slide 8: Continued

For a deeper discussion:

- Instead of listing off ground rules, the audience can help develop their ground rules as well!
- you can use these the ones I gave you examples if no one speaks up first
- In doing this activity, preferably start from scratch to see what the audience comes up with
- As a prompt you can also ask: What will we expect from one another and not accept?

The purpose of this activity is also to acknowledge positionality and identities

Slide 9: Optional slide

• In this slide I wanted to provide an explanation of the 'oops, ouch" rule in case you would like to use it

Slide 10: Any Questions?



SLIDES 11-18: SECTION 2: WHAT IS A CVA?

Slide 11: Title Slide

Slide 12: Explaining the CVA

• Here is a short script you can read for this slide if you wish. Again, feel free to edit at your discretion:

First, let's dive into what a climate vulnerability assessment (or CVA) looks like. What a CVA can be defined as is a tool that helps cities, counties, etc identify systematic vulnerabilities to climate change on both a geospatial and social level—but often it is instead broken down into an equation (exposure + sensitivity - adaptive capacity = vulnerability).

In other words, the magnitude and frequency of climate change shocks + the degree at which the system is impacted = your potential impact. After you have that data, then you must also subtract how well the system is able to bounce back from catastrophe – which gives you your overall vulnerability. This appeal to adaptive capacity helps us with looking at communities equitably but doesn't get us there completely. With this model, it's also important to name how CVAs can help our municipalities identify the many strengths of the communities they govern.

To further explain the CVA process, I have a short video from the US Climate Resilience toolkit for you all to watch

Slide 13: Watch Video from U.S. Climate Resilience Toolkit

Slide 14: Explain the Traditional CVA

• Optional Script/Facilitator should explain something to this effect: From this video we can see that the traditional CVA is mainly an infrastructure-centric or "asset" centric CVA, rather than people centric or strengths based. Additionally communities have little to no say about how their data is collected or used

For example, let's say in Miami, Florida two neighborhoods are exposed to the same amount of sea level rise – in this case, the potential financial or infrastructural loss of the property determines the amount of climate vulnerability.

To rephrase, this means that two neighborhoods-each with 500 residents one "worth" 500 million dollars and the other worth \$500,000, tho exposed to the same amount of climate risk are not prioritized the same.

This principle works in conjunction with the "potential impact" portion of climate vulnerability assessment methodology which is often measured in dollars. Which begs the question—what if you don't have any traditional assets at all? Or what if your climate vulnerability data can be exploited?—what becomes of you?



Slide 15: What is engagement?

• Here feel free to read off of the slide to illustrate the forms that engagement might take

OR

For a deeper discussion:

• Ask the audience what they think engagement looks like or should look like

Slide 16: Why is engagement beneficial to the CVA

• Read slide and then brainstorm with audience

Slide 17: Engagement to community ownership spectrum

• Here the facilitator should explain that community ownership is what we are aiming for which is why the participation of community ambassadors in the engagement process is important.

SLIDES 18-26: SECTION 3: WHAT CLIMATE CHANGE MEANS FOR THE CITY OF GRAND RAPIDS

Slide 18: Title Slide

Slide 19: Poll Activity

• For this slide, use the software, <u>Mentimeter</u>, to gauge audience members on their familiarity of climate impacts in Grand Rapids



Important: Poll interpretation!!!

- If your audience is very familiar: Feel free to skip slides 21–25 and go straight to the discussion slide 26
- If your audience is somewhat familiar but could stand to learn more slides 21 and 25 are most appropriate
- If your audience is not at all familiar: present the entirety of slides 18-22

Slide 20: Discussion Question

- This will be the first official discussion question of the training. For these questions my suggestion is to have training participants first turn to their neighbor and share and then share with the group to make the question a bit more approachable
 - However this discussion can also be facilitated with sticky notes or a mentimeter word cloud– the choice is yours!
 - Since this question is about climate change- hold space for deniers and be prepared to reinforce how climate change is real and anthropogenic





For the next 4 slides feel free to take from this script or say something to this effect

Slide 21: What Climate Change Means for Grand Rapids

Due to climate impacts:

- The safety, economy, and overall community vitality of Grand Rapids are at overt risk
- Over the last 50-70 years, Grand Rapids has had increased temperatures, precipitation, and frequency and intensity of severe storms.
- Number of billion-dollar disasters per year from weather and climate events in Michigan tripled in the 2010s (15)
- By 2050 we can expect to see even more:
 - Increased temperatures (especially in the winter)
 - # of extreme heat days
 - rain during winter (flooding), heavy precipitation days, and extreme weather events



Slide 22: History of inequality, race, and proximity to environmental stressors in Grand Rapids

- In Defense of Housing by David Madden and Peter Marcuse discusses the myths of housing policy. In this discussion they explain how the following historic urban planning related actions have undermined urban neighborhoods and communities of color:
 - o 1940s Urban Renewal Movement "slum" clearance
 - Redlining policies 1930s-1968 (Fair Housing Act; 1977 Community Reinvestment Act)
 - Mortage lending discrimination (present day)
 - Gentrification displacement (present day)

This horrific legacy of racism in the United states make communities of color more vulnerable to climate change today - see communities of interest map

Slide 23: Adaptive Capacity in Vulnerable Communities

- One of the many definitions of adaptive capacity is: The capacity to respond to environmental changes in order to continue to thrive
 - Communities of color are most often at greater risk of experiencing the negative effects of climate change because of high exposure and low adaptive capacity

CITE: MADDEN, D., & MARCUSE, P. (2016). IN DEFENSE OF HOUSING: THE POLITICS OF CRISIS, VERSO



Slide 23: Continued

Statistics that illustrate this are:

BIPOC communities are on average:

- 10.2% less insured and have less access to health care
- 9.9% more impoverished
- Three times more likely to experience asthma deaths
- 25% more likely to live in a county with extreme exposure to air pollution.

From this, it can be concluded that when BIPOC communities are exposed to pathways such as "extreme heat", "poor air quality", "population displacement", and more—it is much harder for them to adapt.

Slide 24: Ecological and Social Vulnerability

• These maps are taken from the Grand Rapids Storm Water Vulnerability Assessment. They depict the current state of flood zones, tree canopy, and the distributions of race within the city. As you can see here, there is a correlation between where people of color reside with the exposure to flooding and a lack of trees.

Slide 25: Climate Impacts Brainstorming

• Treat this slide as another brainstorming activity if you wish. Ask audience for other things that might not be on these lists (regarding natural and human health aspects of climate change) - maybe shorten the list provided to get more participation

CITE: SEEBERGER, C., ADVISER, S., CUSICK, J., SHEPHERD, M., PARSHALL, J., GORDON, P., TRUSCHEL, L., ALLSBROOK, J. F., MAXWELL, C. NOVOA, C., SPITZER, E., PATHAK, A., & OLINSKY, B. (2018, JULY 9). HEALTH DISPARITIES BY RACE AND ETHNICITY. CENTER FOR AMERICAN PROGRESS. RETRIEVED JULY 18, 2022. FROM HTTPS://WWW.AMERICANPROGRESS. ORG/ARTICLE/HEALTH-DISPARITIES-RACE-ETHNICITY/

Slide 26: Discussion Question

- Again, have training participants first turn to their neighbor and share and then share with the group to make the question a bit more approachable
 - However this discussion can also be facilitated with sticky notes or a mentimeter word cloud– the choice is yours!

SLIDES 27-33: SECTION 4: WHAT CAN WE DO?

Slide 27: Title Slide

Slide 28: What can we do?

• Here the facilitator should start framing the presentation around what ambassadors can do to help their communities adapt to climate change and how the C4 and the city of Grand Rapids might collaborate. To provide a simplified description of their potential role I came of with Inform, Involve, Inspire



Slide 29: Inform

- This slide is all about how we might begin talking to people about climate change
 - Here we should emphasize that "making it personal" requires you to know community members and their lives in order to show them how climate change might impact them personally
 - Additionally, here we are trying to shift the narrative of who can be apart of the solutions for climate change - not just the city or scientists
 - we all have a role in climate change work; informing is all about showing people how they can be apart of the change and shifting people's mindset

Slide 30: Involve

- In the involve stage, we are showing people how they can be apart of a movement towards climate justice specifically, we want their input on how their neighborhood is experiencing climate impacts flooding; heat; asthma
- Here also reinforce how we want to create spaces of respect with vulnerable communities and be clear what you plan to do with peoples testimonials whether that data is being collected through an interview, survey, or other mode of engagement



Slide 31: Involvement example

• This slide is an example of a question you might ask a community member in the engagement process - it shows how you might implement some of the recommendations given in this section

Slide 32: Inspire

 Here the facilitator should emphasize how by doing engagement we can turn ripples into waves in terms of how people become involved with climate justice—so it's important to make good impressions within communities

Slide 33: Discussion Question

 Here please follow the recommendations for the earlier discussion questions

<u>SLIDES 34-39: SECTION 5: COMMUNICATION STRATEGIES - OPPORTUNITIES AND LIMITATIONS FOR ENGAGEMENT</u>

Slide 34: Title Slide

Slide 35: Community Priorities

Possible Script:

- Be mindful of the inherent urgency displayed in climate narratives they are rooted in white supremacy culture
 - Be mindful of your own positionality what identities do you show up as in different spaces (outwardly and inwardly?)

Slide 35: Continued

- Know that climate is an intersectional issue, it can be connected to other forms of opression such as over-policing, housing discrimination, and education disparities
 - You can use the nature of climate change to frame it as a civil rights issue

Slide 36: Discussion Question

• Again, instruct participants to turn to their neighbor and share– and then share with the group.

Slide 37: Final Recommendations

- With this slide, your job a facilitator is to reinforce some key takeaways from the training:
 - The first of which being to remain transparent with people's information
 - Additionally, encourage folks as ambassadors to stay engaged with the communities they're talking to
 - And lastly, listen and honor lived experiences first within the engagement process

Slide 38: Timeline for engagement

• Here the facilitator should insert a timeline or any other useful information for ambassadors to understand when engagement with the community will be conducted.





Slide 38: Thank you for your participation!

Congratulations!! You've made it to the end of the training. Great job.

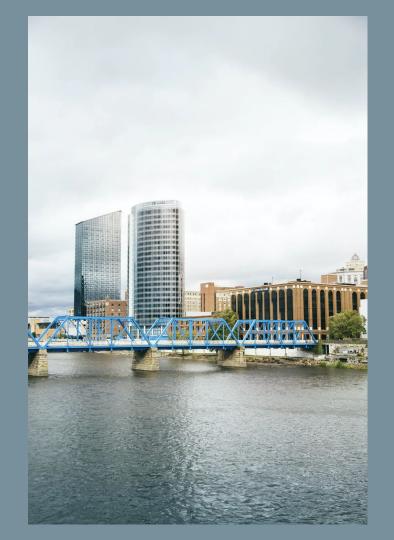
ACKNOWLEDGEMENTS

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Editors: Holly Young, City of Grand Rapids





Welcome to the Grand Rapids Community Leader Training on Climate Vulnerability Engagement



About Our Trainers

Insert photo here

Insert name
(Insert
pronouns)
Insert title

Insert photo here

Insert name
(Insert
pronouns)
Insert title

Insert photo here

Insert name
(Insert
pronouns)
Insert title

About our Speakers



We'd appreciate your help with community engagement on our City's Climate Vulnerability Assessment.

The time to act on climate change is upon us, but we can not do it without the active representation of all communities.

Session Plan: What we're going to talk about...

- 1. Ground rules of dialogue
- 2. What is a CVA?
- 3. What climate change means for the city of Grand Rapids
- 4. What you as ambassadors and community members can do to contribute to the climate vulnerability assessment

Learning Outcomes

Outcome 1:

• Identify the fundamentals of how climate change is affecting Grand Rapids

Outcome 2:

• Examine how we might inform, involve, and inspire community members within the climate vulnerability assessment process

Outcome 3:

Apply communication strategies for climate change vulnerability engagement

By the end of this presentation you should be able to understand and evaluate the ways in which we can engage community on our climate vulnerability assessment

Section 1: Establishing Ground Rules of the Training Dialogue

Community Agreements of the Training Dialogue

Ask yourselves, during this conversation what will we expect from one another and not accept?

Some Ideas:

- Listen respectfully
- Use the "raise hand" function (if virtual)
- One person talks at a time
- Be tough on ideas, not on people -- no personal attacks
- Everyone has an opportunity to speak
- Take space, make space
- "Ouch... oops" methods will be used in discussion.
- Be polite, thank folks for their emotional labor
- Blatant hate speech and derogatory language will not be tolerated.

Making the dialogue successful is the responsibility of all participants

Oops and Ouch

If there is something said during the discussion or presentation that offends you, leave "ouch" in the chat (if virtual) or say it aloud when the speaker is finished (this might feel awkward at first— if more comfortable feel free to raise your hand)

Next Steps:

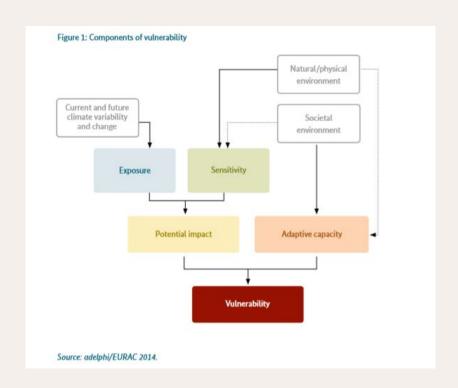
- The offender takes responsibility with "oops"
- Then the issue is addressed with respectful conversation.

Any questions?

Section 2: What is a Climate Vulnerability Assessment?

What is a climate vulnerability assessment?

- A tool that helps cities, counties, etc. identify systematic vulnerabilities to climate change on both a geospatial and social level.
 - Exposure + Sensitivity = Vulnerability
- Also can help identify the strengths and adaptive capacity of a community





The "Traditional" CVA

= The asset centric CVA





What are the benefits of community engagement in a CVA?

- 1. Provides context around harmful/beneficial infrustructures
- 2. Offers a chance to develop more specific insights around exposure, sensitivity, and adaptive capacity
- 3. Captures historically marginalized voices that wouldn't otherwise be heard
- 4. Incorporates real lived human experience into the assessment
- 5. Provides more opportunity for community ownership

What is engagement?

Can take a lot of different modes:

- Surveys
- Focus groups
- Coffee chats
- Community conversations
- Comment pages via website
- Interactive mapping tools



Community ownership



Section 3: What Climate Change Means for the City of Grand Rapids

Poll!!

Using Mentimeter

Question: How familiar are you with our city's climate impacts?



Discussion Question

Where do you see climate change impacts in your community?

What Climate Change Means for Grand Rapids

Due to climate impacts:

- Safety and community vitality in Grand Rapids are at risk
- By 2050 we can expect to see even more:
 - Increased temperatures (especially in the winter)
 - # of extreme heat days
 - rain during winter (flooding), heavy precipitation days, and extreme weather events



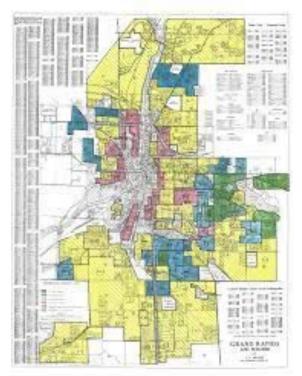
HISTORY OF INEQUALITY, RACE, AND PROXIMITY TO ENVIRONMENTAL STRESSORS IN GRAND RAPIDS

Formation of an Unjust Housing System

Let's talk about the legacy of racism in urban planning and how it impacts community vulnerability

Red lining; Urban Renewal; "Slum"
 Clearance for Highways; Gentrification

This horrific legacy of racism in the United states make communities of color more at risk to the impacts of climate change today

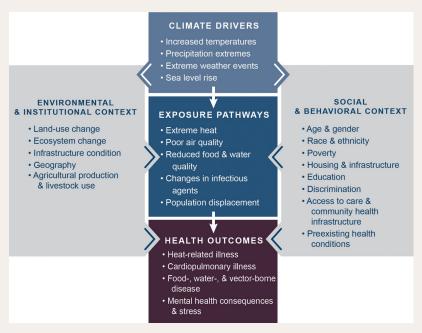


Adaptive Capacity in At Risk Communities

BIPOC (Black, Indigenous, People of Color) communities are on average:

- 10.2% less insured and have less access to health care
- 9.9% more impoverished
- Three times more likely to experience asthma deaths
- 25% more likely to live in a county with extreme exposure to air pollution.

Thus, it is harder for BIPOC communities to adapt to climate drivers



Other At Risk Communities

Other socio-economic groups that are most at risk to climate change include

- People who are of low to middle income
- People with disabilities
- People who indentify as LGBTQ or Gender-nonconforming
- People who lack English Proficiency
- People who are elderly or infants
- People who are single parents

Ecological and Social Vulnerability



Figure 21: Grand Rapids Flood Zone Map

Grand Rapids Wealthy St SE Millennium Park East Grand Rapids 1 Dot = 1 Person Mlive, 2013, Racial White dot map Black Percent Urban Tree Canopy Asian Hispanic Other Race / Native American / Multi-racial Figure 31: Neighborhood breakdown of urban tree canopy percentage of Grand Rapids from Friends of Grand Rapids Parks 2015 Tree Canopy Assessment

GIS public access

2015, Tree canopy assessment

Climate Change Effects

CLIMATE CHANGE EFFECTS - GLOBAL SCALE

Climate change has many observable and non-observable effects:

Environmental

- Droughts
- Heatwaves
- Flooding
- Hurricanes are stronger and more intense
- Sea-level rise
- Wildfire
- Cold waves and winter storms
- Low crop yields



Human Health

- Heat-related illness
- Cardiopulmonary Illness
- Food, water, and vector-borne disease
- Mental health consequences and stress

Discussion Questions

What might be some ways to best connect other justice issues/community priorities to climate change in the vulnerability assessment engagement process?

Section 4: What can we do?

What we as community members can do to contribute to climate change solutions

- We are currently conducting community engagement for our climate vulnerability

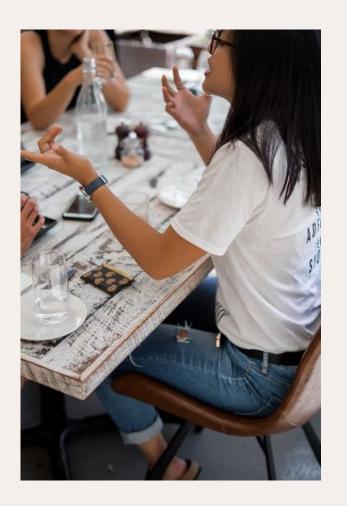
assessment

- We need YOU to help us reach community

Inform, Involve, and Inspire!



- <u>Inform</u> community members about climate justice and climate change impacts
 - Talk about the benefits of climate action
 - Do your homework, get the facts, and educate your community.
 - Meet people where they are.
 - Focus on shifting the narrative from the outset.
 - Help people to make the critical connections and see the big picture.



Inform Example

Here are some talking points to consider:

- If you have climate anxiety about impacts in your neighborhood, did you know the city is conducting a climate vulnerability assessment where you can express your concerns? Then provide resources
- Protecting <u>my neighborhood</u> from climate change impacts is one of my biggest motivators
 - Insert your motivations here!!
 - Make it local

Talking points continued

In the case of climate cautious folks: focus on non-environmental benefits

- Preparing for extreme weather (caused by climate change or not) can save money in the long run - for both Michigan and Grand Rapids
 - Climate Change Disasters costs billions of dollars

Other tips:

- Rephrase to talk about how climate adaptation protects housing; transportation; and other infrastructures

Tip: Meet people where they are at - in your conversations understand them and where they are coming from

- Start a conversation through your lived experience if comfortable

<u>Involve</u> community members in surveys and other data collection opportunities

- Make your purpose and intentions known
- Draw connections between multiple forms of oppression
- Illustrate through what avenues community members can best express themselves
- Ask for specific examples in your engagement tools

For example: where does (insert climate impact here) show up in your life?

- Talk about street names; schools; businesses; homes; routes to work being impacted
- Name specific populations- make it personal
- Ask for testimony can you speak on your personal experiences?
 - Seasonality is also helpful in this regard
 how do you experience ___ in the
 summer
 - How do you adapt to ___ in the winter



Inspire community members to spread awareness

- Show folks how they might get involved with this movement
- Build strong local connections and move with the culture of the community.
- Prioritize the stories of the most impacted people.
- Make connections to make it personal.



Inspire Examples

Here are some local resources/groups folks can look to in order to get involved in the climate justice movement:

- Grand Rapids Climate Coalition
- NAACP Greater Grand Rapids Branch
- Sierra Club Michigan Chapter
- Michigan United
- West Michigan Environmental Action Council
- Urban Core Collective
- Grand Rapids Sunrise Movement

Discussion Question:

with the topic?

Can you give an example of a question you might ask a community member on climate change who has no familiarity

Section 5: Communication Strategies Opportunities and Limitations for Engagement

Community Priorities

When engaging communities:

- Be mindful avoid "we have to solve climate change now!"
- Acknowledge your own positionality
 - What identities do you show up with?
- If and when appropriate, speak to climate change as a civil rights and justice issue—because it is!



Other Communication Strategies

Discussion Question:

Are there any communication strategies you can think of that can help us reach historically disenfranchised communities on climate change vulnerability?

Entering - Engaging - Existing Communities - Final Recommendations

- Remain transparent with your intentions
 - Make folks privy to what will be done with their information
- Make the political, personal
- Stay engaged with your community after the data collection process
- Honor lived experiences
- Listen without prior assumptions

Timeline for engagement

- This tentative timeline outlines engagement for the CVA to go until September 2022
 - This timeline is being modified

Climate Action and Adaptation Plan Engagement Timeline

June - July 2022 Lived Experience & Visioning

Begin initial engagement

- phase. Simple & open-ended. · What is your experience in a changing climate? · How can it be made
- · What should be included in this plan?

August - Oct 2022 Climate Mitigation Actions Engagement

Based on the completed GHG emissions inventory, begin engagement on local actions we could take to mitigate climate change. Topic workgroups begin.

Jan - March 2023 Writing 1st Draft of CAAP

OSPM staff begin writing draft based upon all engagement conducted in 2022. Topic workgroups to act as advisors during drafting.

June 2023 Incorporate Feedback and Create Final Draft

Take all feedback provided during April & May and incorporate it into the final CAAP draft.

July - Sept 2022 Climate Vulnerabilitu Assessment Engagement

Engage with community stakeholders to identify the local community systems most vulnerable to our greatest climate change

Oct - Dec 2022 Climate Adaptation Actions Engagement

Based on the results of the climate vulnerability assessment, begin engagement on local action we can take to adapt to the impacts of climate change.

April - May 2023 Engagement to Gather Feedback on CAAP Draft

Provide draft to public for comment. Present key content and how community input was intertwined. Host engagement events/pop-ups for feedback. Discuss priorities, and implementation.

July 2023 - Finalize & Implementation Begins

Finalize plan and key performance indicators with City officials, and begin implementation efforts.

Thank you for your participation!

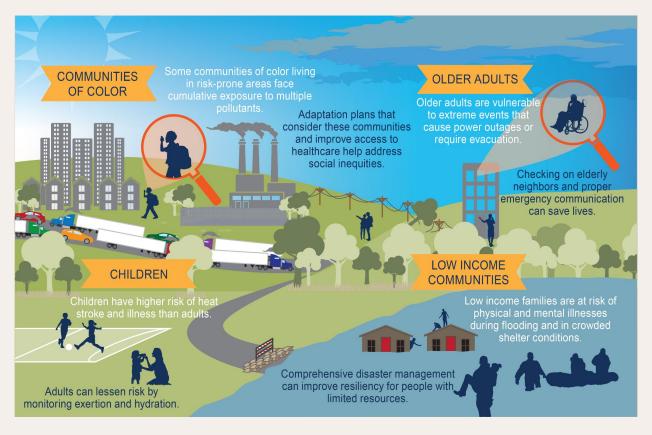
We sincerely appreciate it.



Sources

- Balbus, J., A. Crimmins, J.L. Gamble, D.R. Easterling, K.E. Kunkel, S. Saha, and M.C. Sarofim, 2016: Ch. 1: Introduction: Climate Change and Human Health. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. U.S. Global Change Research Program, Washington, DC, 25–42.
- Madden, D., & Marcuse, P. (2016). In defense of housing: The politics of crisis. Verso.
- Seeberger, C., Adviser, S., Cusick, J., Shepherd, M., Parshall, J., Gordon, P., Truschel, L.,
 Allsbrook, J. F., Maxwell, C., Novoa, C., Spitzer, E., Pathak, A., & Olinsky, B. (2018, July 9).
 Health disparities by race and ethnicity. Center for American Progress. Retrieved July 18,
 2022, from https://www.americanprogress.org/article/health-disparities-race-ethnicity/
- City of Grand Rapids, Climate Change Vulnerability Assessment for Stormwater, 2022

Disproportionate Impacts of Climate Change





Want to be apart of the Climate Justice Movement in Grand Rapids?

Have your voice heard.





SCAN ME





Want to be apart of the Climate Justice Movement in Grand Rapids?



Have your voice heard.

Please carefully answer these questions below. All personal information shall remain anonymous.

-	ome of the key characteristics?	
2. How do 1 _	the people in your nighborhood experience heat, cold, and extreme w	veather?
	es the infrastructure (buildings, schools, parks, roads, ect. in your net heat, cold, and extreme weather?	ighborhoo
;_ ;_	in the blank: Something that would help my neighborhood would be	