



# Building Climate Resilience in Your Community

Session 3.10

April 20, 2018

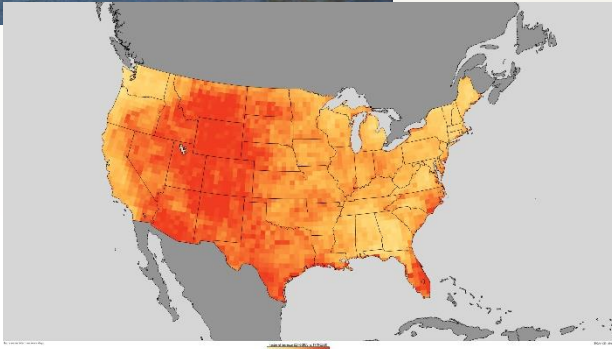
Tonya Graham  
Executive Director



# Geos Institute: Working to keep human and natural communities whole in the face of climate change



# What have you noticed?



# Weather and Climate

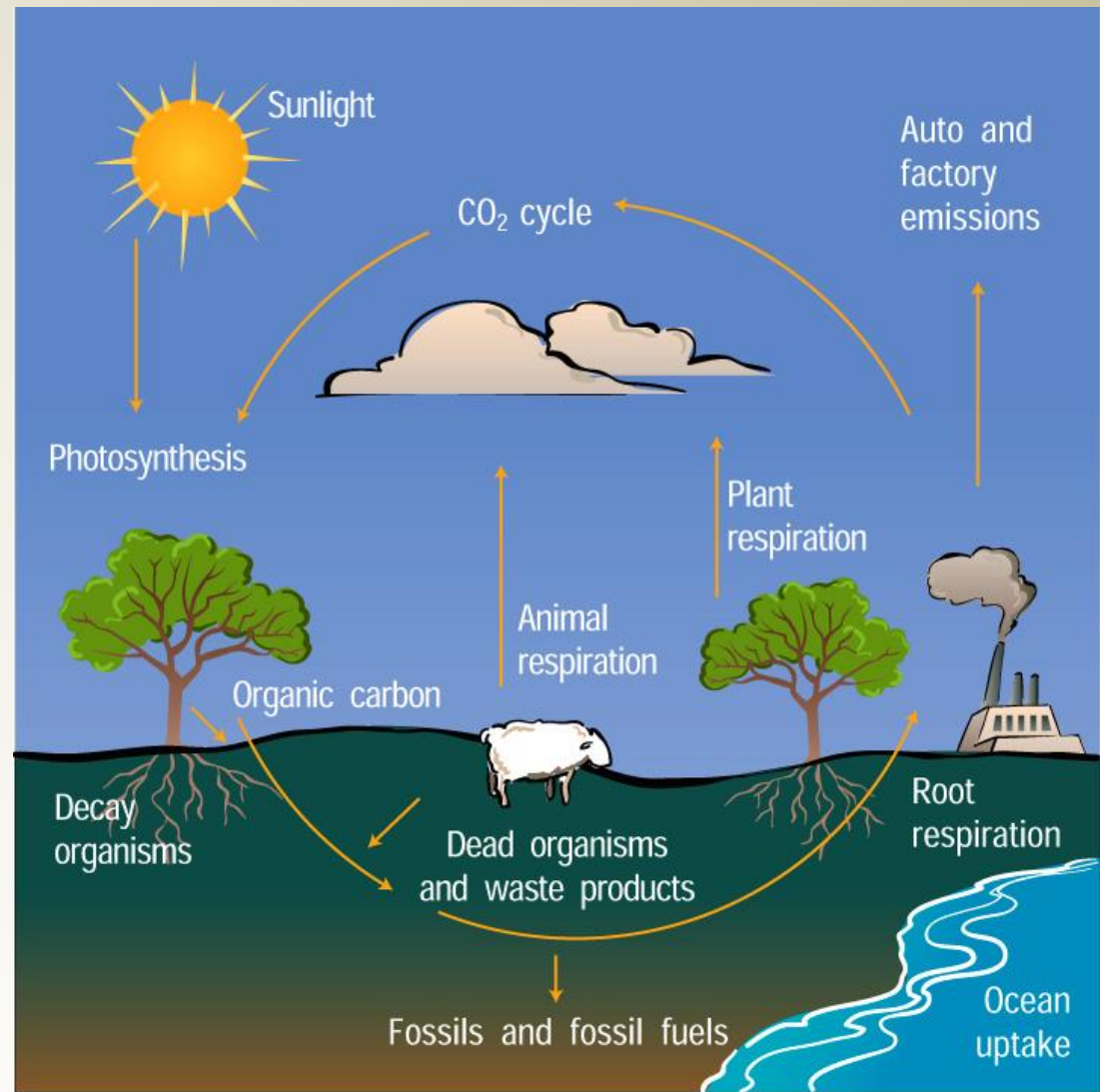


**Trivia Question:** 16 of the 17 warmest years on record have occurred since what year?

**Answer:** 2001



# Greenhouse gases - why we love them



University Corporation for Atmospheric Research

Trivia Question: How many parts per million of carbon dioxide did we have on average in the atmosphere for the last 2,000 years?

Answer: 280

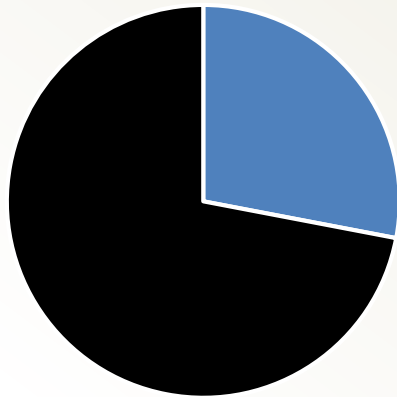
Trivia Question: How many parts  
per million of carbon dioxide do we  
have now?

Answer: 410

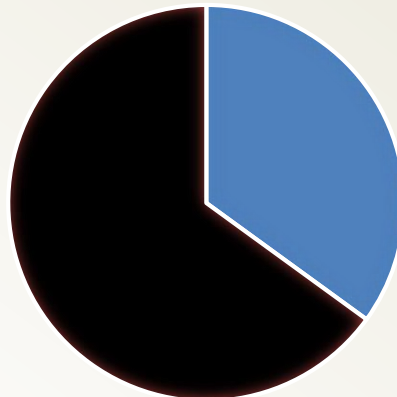


Trivia Question: How many parts per million of carbon dioxide can we have if we are ensure a safe climate?

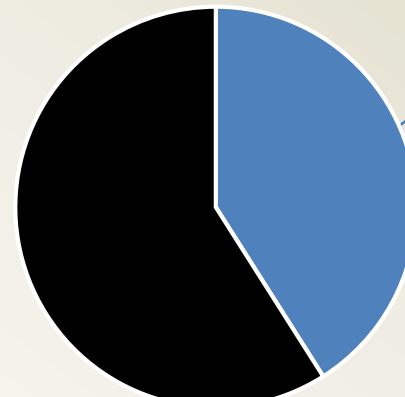
Answer: 350



Historic – 280 ppm



Safe – 350 ppm



Current – 410 ppm

**Black:** Other Gases **Blue:** Carbon Dioxide

# Why does a few degrees matter?



# Is 410 really all that bad?



# Responses to Climate Change

Mitigation: brakes

Adaptation/Resilience: airbag



# The GOOD News!

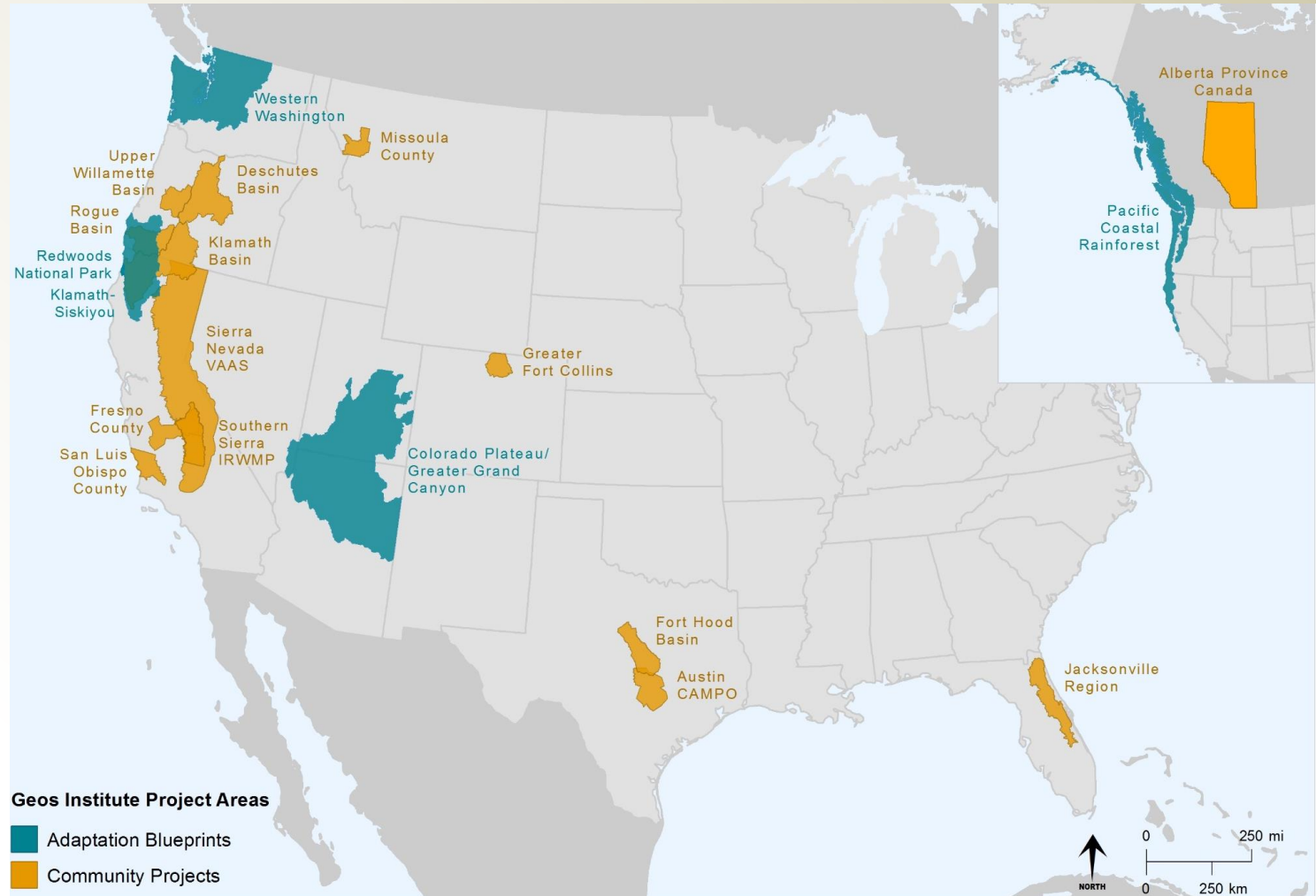
We already know what we need to know to address climate change.

# ClimateWise® Initiative



**Long-term Vision:** Communities across the country are responding to the threat of climate change by reducing emissions and adapting in ways that are effective and beneficial over the long-term for people and nature.

# ClimateWise® Initiative









# Cleveland Climate Action

## Building Thriving and Healthy Neighborhoods

April 20, 2018

NFBPA, Track/Session: 3.10

Session Title: Building Climate Resilience in Your Community



Matt Gray  
Chief of Sustainability  
City of Cleveland



# 1969





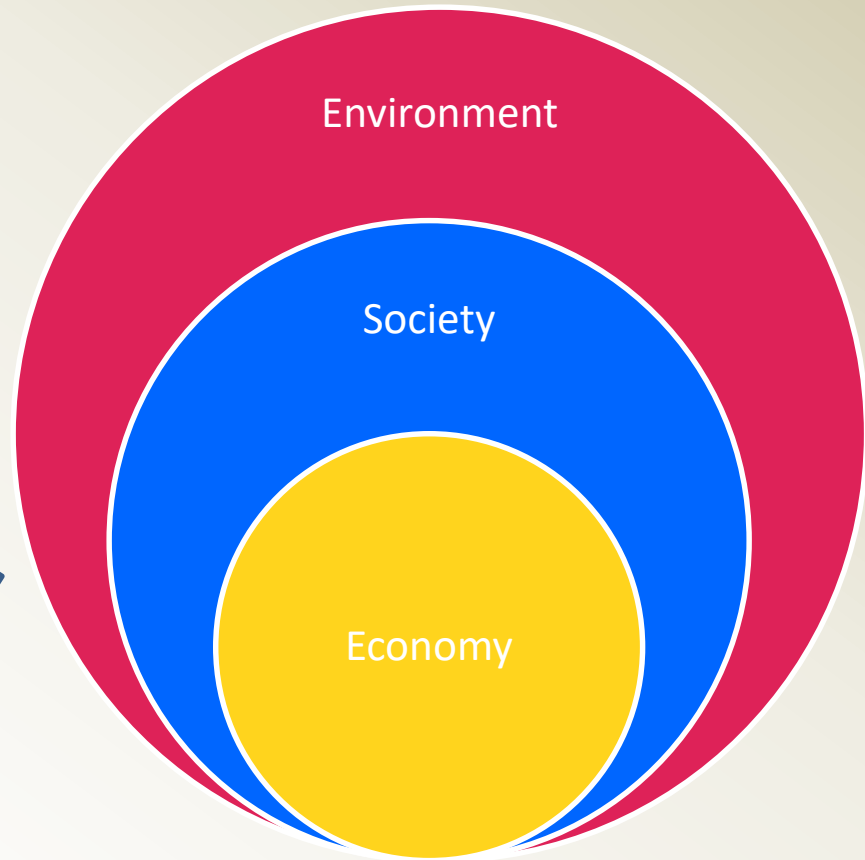
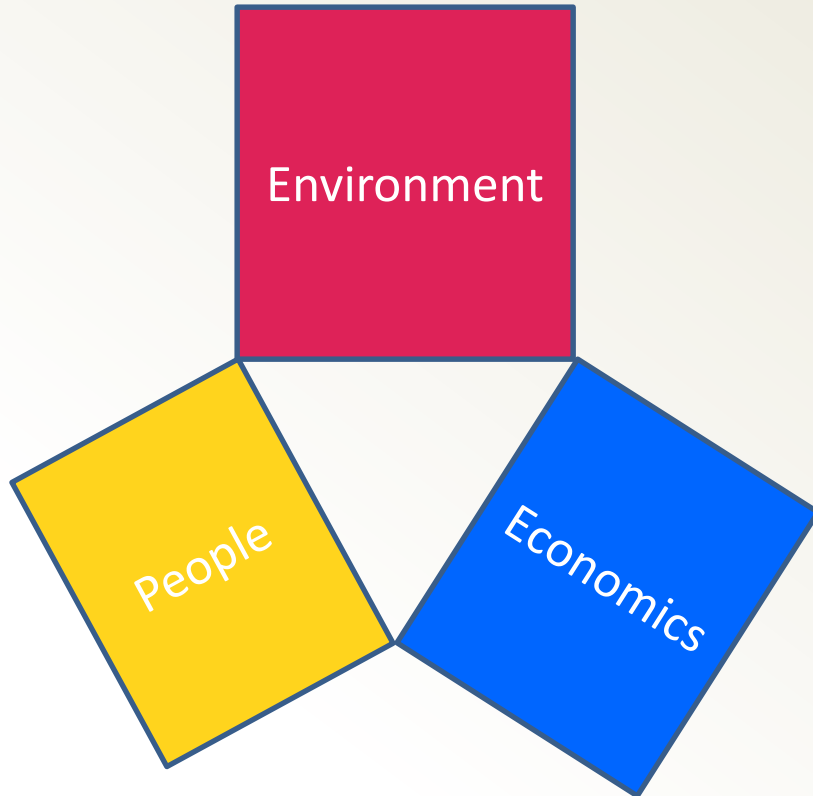
# 2019: Surprise and Amaze with our Transformation





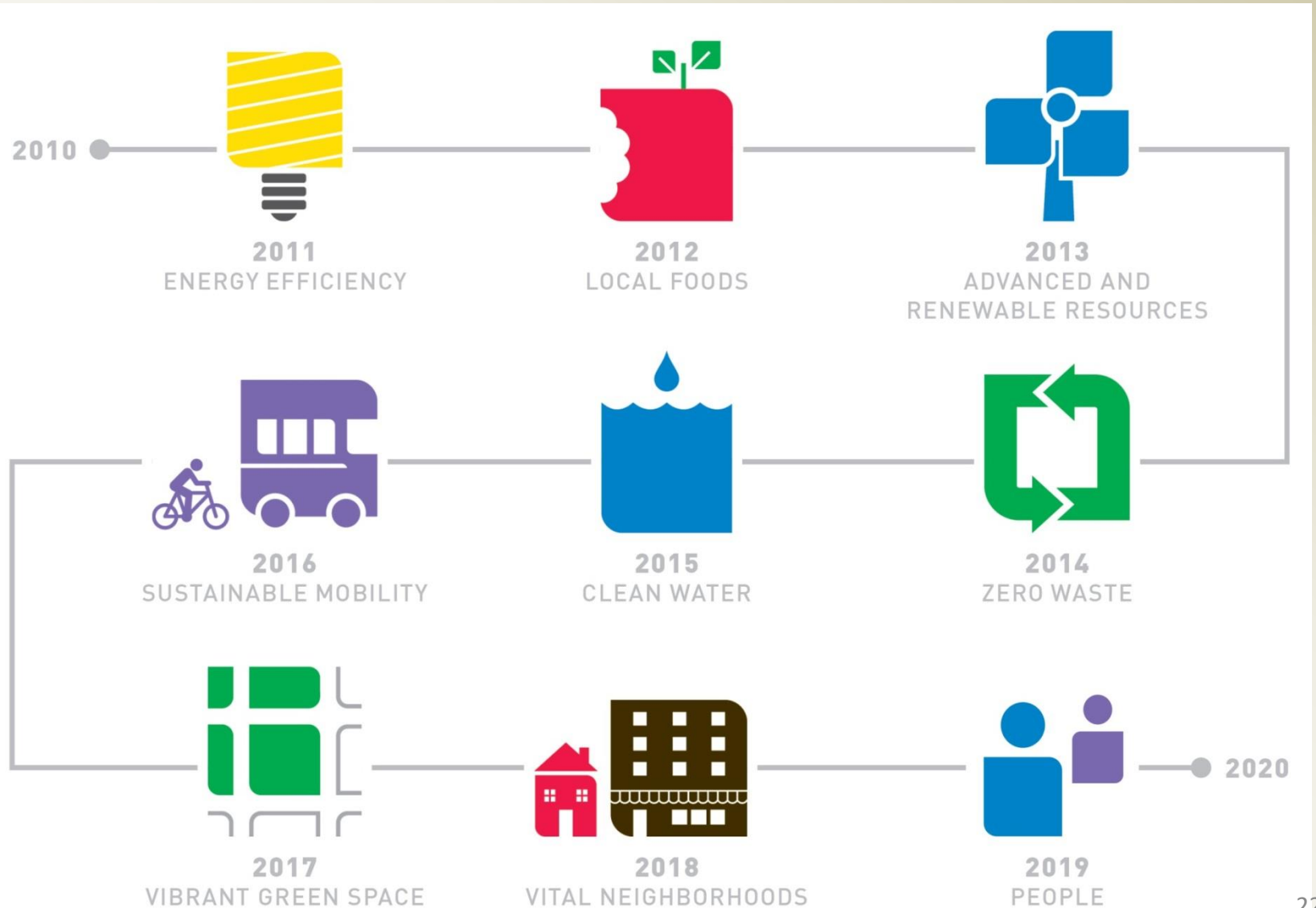


# Triple Bottom Line Thinking



A sustainable economy integrates the goals of economic prosperity, environmental health and social vitality.

# Celebration Years



# SustainableCleveland.org Performance Indicators

[ABOUT ▾](#)[YEAR OF SUSTAINABLE TRANSPORTATION](#)[LEARN MORE ▾](#)[DO MORE ▾](#)[STAY UPDATED ▾](#)

## 1 CHOOSE AN ENVIRONMENT

[Business](#)[Personal/  
Social](#)[Built](#)[Natural](#)[Sustainable Cleveland Engagement](#)[Summit Participants](#)[Working Groups](#)[Education](#)[Population](#)[Health](#)[Cost Of Living](#)[Local/National Recognition](#)

## Health

When we create a sustainable community, we create a place where people can be healthier. For this reason, many of the actions in the [Cleveland Climate Action Plan](#) were prioritized for improving health outcomes. This indicator tracks life expectancy, adults reporting poor/fair health, obesity, population in food deserts, and asthma.

Source: Compiled by Cuyahoga County – more info at [www.healthdatamatters.org/health-overview](http://www.healthdatamatters.org/health-overview)

	U.S.	Cuyahoga	Cleveland
Life expectancy, years	79	78	74
Adults reporting poor/fair health, %	15	15	27
Obese adults, %	38	26	35
Population in food deserts, %	10	25	56
Asthma, %	9	10	14

(All data from 2009, 2010)

■ Worse than the U.S.  
■ Better or same as the U.S.



33  
Actions

25  
Actions

## SUSTAINABLE CLEVELAND MUNICIPAL ACTION PLAN

### EXECUTIVE SUMMARY

October 2013



**CITY OF CLEVELAND**  
Mayor Frank G. Jackson



SUSTAINABLE  
CLEVELAND 2019



# Cleveland Climate Action Plan Update

- **Title:** Equitable Climate Action in Cleveland: Building Thriving, Healthy, and Resilient Neighborhoods
- **Project Goal:** Improve outcomes in health, access to green jobs, resiliency, and engagement through equitable climate action.
- **Context:** Paris Agreement, Growing Inequality, Local Progress & Challenges
- **Cross-Cutting Priorities:**
  - Equity and Neighborhood Engagement
  - Climate & Social Vulnerability
  - Green Jobs and Workforce Development
  - Corporate Environmental and Social Governance
  - Data & Indicators



# 28 CAP Objectives



at HOME



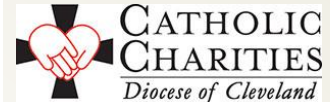
at WORK



in your COMMUNITY

Focus Area	# of Obj.
Energy Efficiency & Green Building	4
Advanced & Renewable Energy	6
Sustainable Mobility	5
More Local Food, Less Waste	3
Green Space & Clean Water	6
Cross-Cutting Objectives	4

# CLIMATE ACTION ADVISORY COMMITTEE



# Observed changes in Northeast Ohio

2.4

Rising average temps

26

More rain

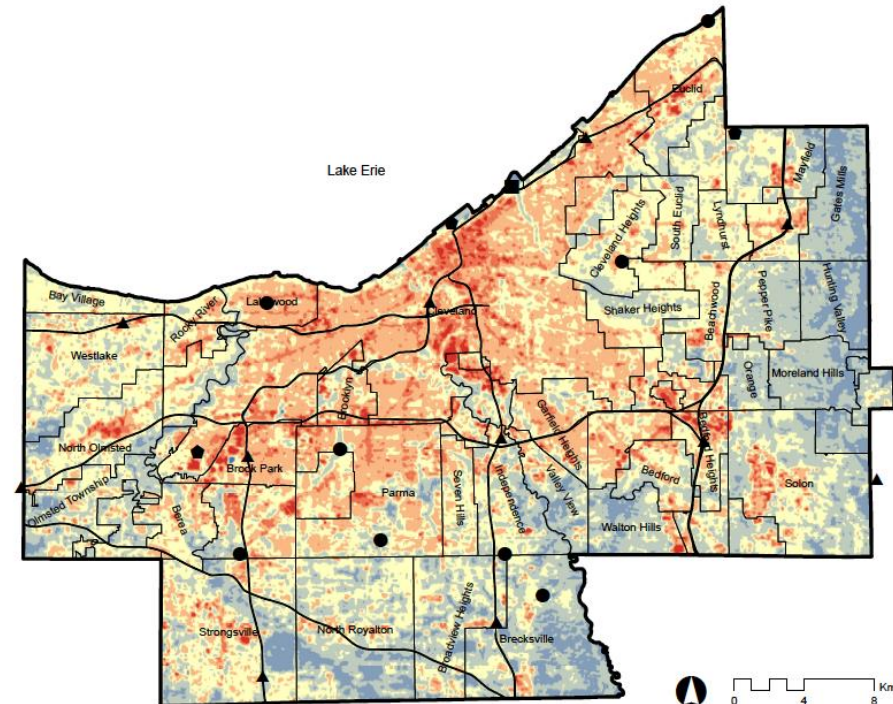
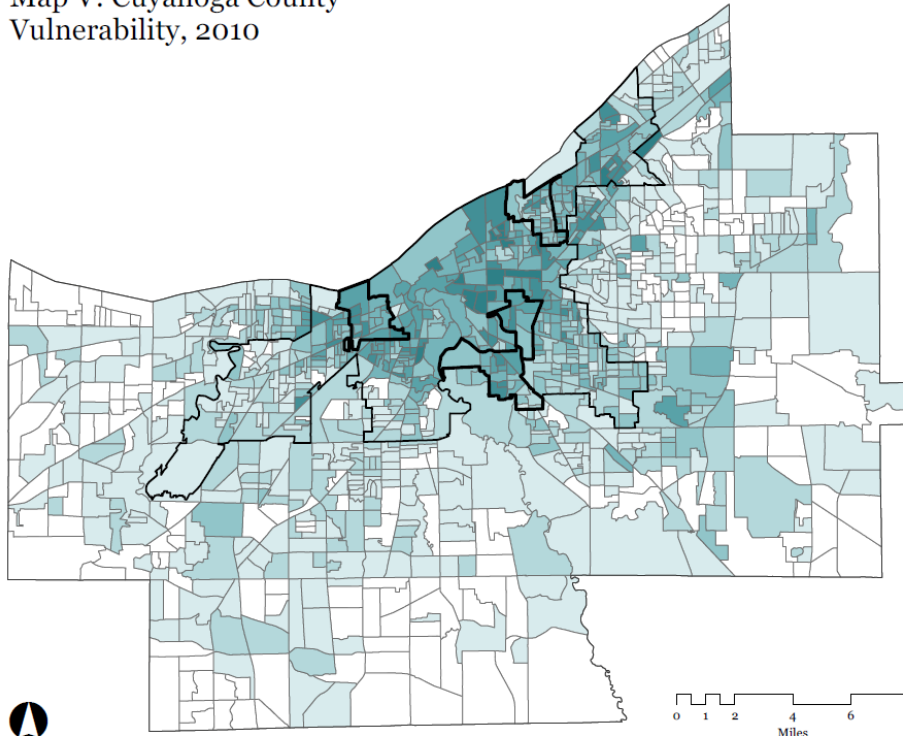
20

Longer freeze-free season

22

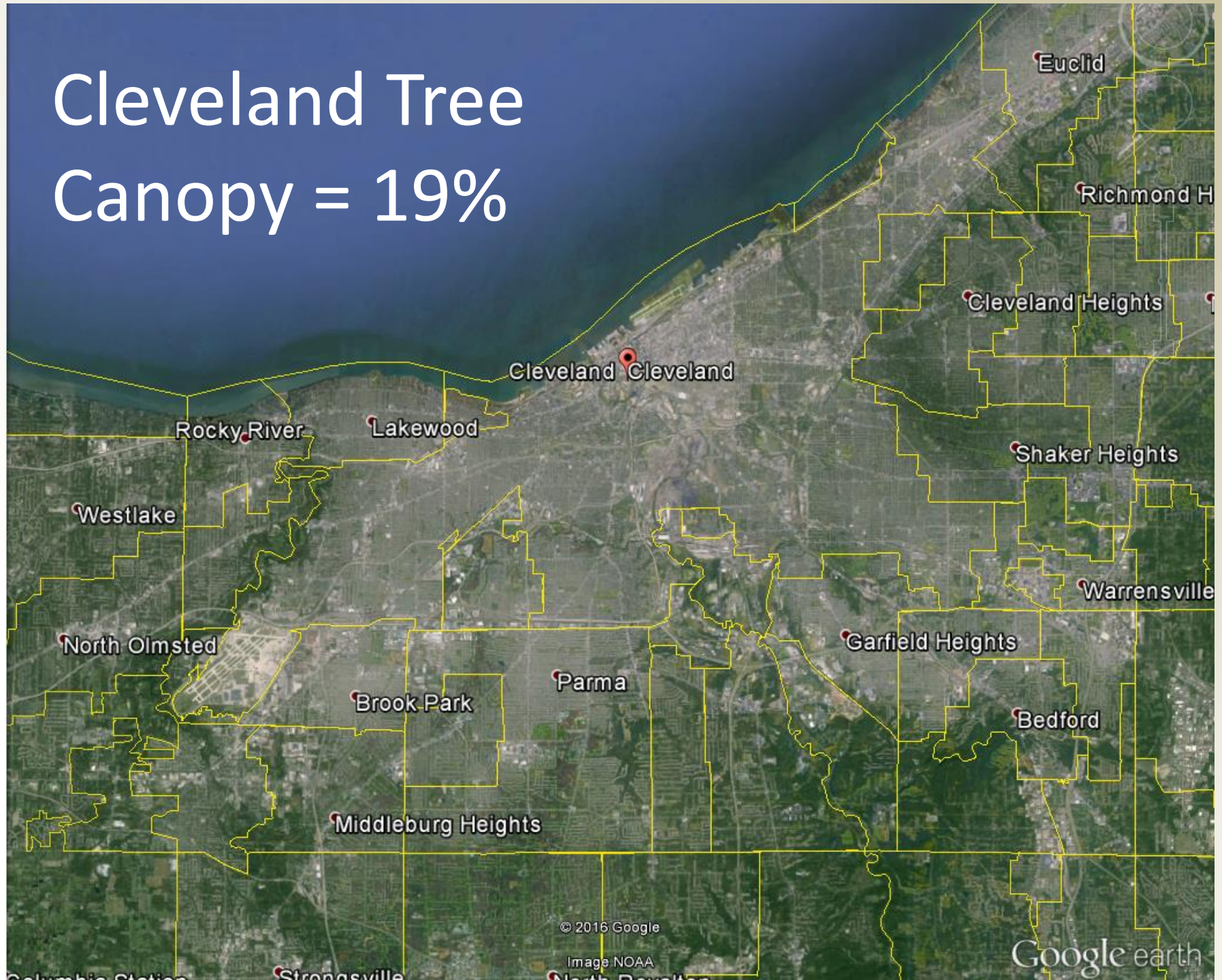
More heavy rain

Map V: Cuyahoga County  
Vulnerability, 2010





# Cleveland Tree Canopy = 19%



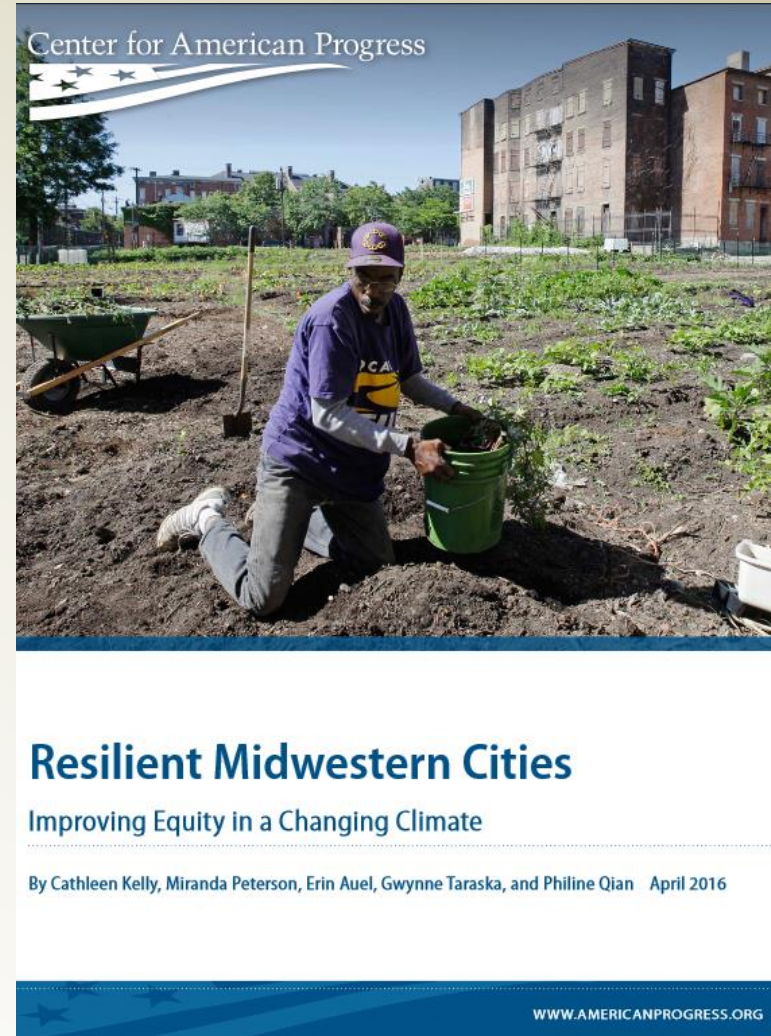
# Planting with a Purpose

	HIGH NEED	MEDIUM NEED	LOW NEED												
Neighborhoods	Canopy Cover	Relative Canopy Cover	Socio-Economic Factors				Risk of Stormwater Runoff Ranking	Energy Savings	Urban Heat Island Ranking	Human Health			Increases in Property Value from Canopy	Median Household Income	
			Population Density (pp per sq mi)	% of Workforce Unemployed	Child Poverty Rate	Combined Needs/Equity Ranking				Value of Air Quality Benefits from Trees	Population with Asthma	% Elderly Population			
Bellaire-Puritas	15%	21%	1,242	16%	33%	9	21	\$114,537	6	\$49,269	11%	21%	\$168,371	\$32,861	
Broadway-Slavic Village	18%	25%	921	29%	35%	20	24	\$205,774	15	\$79,590	11%	16%	\$252,807	\$23,332	
Brooklyn Centre	24%	32%	4,476	19%	39%	24	22	\$78,192	18	\$33,720	13%	14%	\$89,266	\$27,152	
Buckeye-Shaker Square	25%	35%	9,052	13%	26%	13	3	\$70,632	34	\$28,101	14%	23%	\$108,067	\$31,191	
Buckeye-Woodhill	24%	33%	5,036	41%	47%	34	5	\$46,395	24	\$28,333	14%	21%	\$96,566	\$15,013	
Central	13%	18%	2,036	41%	50%	32	7	\$13,683	8	\$28,981	14%	12%	\$66,759	\$10,258	
Clark-Fulton	20%	29%	8,630	26%	36%	26	9	\$71,804	19	\$17,893	13%	15%	\$57,919	\$26,456	
Collinwood-Nottingham	14%	19%	1,197	22%	34%	12	19	\$76,410	5	\$42,312	11%	19%	\$149,325	\$27,168	
Cudell	16%	24%	7,625	23%	37%	27	14	\$46,520	7	\$16,572	15%	11%	\$58,637	\$24,082	
Cuyahoga Valley	5%	7%	354	17%	36%	7	33	\$3,908	2	\$17,831	15%	9%	\$18,802	\$19,811	
Detroit Shoreway	19%	27%	4,295	18%	29%	16	16	\$67,157	22	\$26,864	15%	17%	\$80,934	\$24,430	
Downtown	4%	8%	1,257	13%	10%	3	32	\$353	3	\$10,891	14%	9%	\$12,613	\$37,393	
Edgewater	30%	40%	8,850	10%	21%	8	25	\$43,748	30	\$23,429	15%	14%	\$76,371	\$32,405	
Euclid-Green	39%	50%	4,125	18%	33%	11	31	\$75,405	23	\$42,556	11%	18	\$197,542	\$41,660	
Fairfax	18%	25%	2,210	28%	44%	22	10	\$42,307	14	\$27,195	14%	32%	\$95,162	\$19,934	
Glenville	26%	35%	1,800	26%	39%	29	18	\$323,668	28	\$94,394	11%	28%	\$321,309	\$20,998	
Goodrich-Kirtland Park	8%	15%	1,381	14%	28%	4	27	\$9,224	4	\$13,696	14%	23%	\$25,930	\$24,092	
Airport (Hopkins)	9%	17%	165	18%	49%	14	34	\$10,701	1	\$33,850	11%	22%	\$39,735	\$33,310	
Hough	24%	33%	4,631	28%	43%	33	8	\$97,169	31	\$39,018	14%	26%	\$157,976	\$22,223	
Jefferson	17%	24%	2,346	12%	38%	18	4	\$171,045	11	\$42,664	11%	18%	\$142,677	\$40,560	
Kamm's	34%	44%	1,027	10%	26%	5	28	\$403,185	29	\$160,761	11%	20%	\$459,043	\$49,377	
Kinsman	22%	29%	2,871	32%	45%	30	1	\$49,363	16	\$34,805	14%	23%	\$111,817	\$13,899	
Lee-Harvard	20%	26%	3,605	20%	37%	21	2	\$134,957	32	\$31,222	11%	41%	\$109,730	\$39,142	
Lee-Seville	21%	26%	2,421	30%	33%	17	26	\$67,533	10	\$28,020	11%	35%	\$102,304	\$35,563	
Mount Pleasant	22%	31%	3,348	25%	35%	23	6	\$162,431	33	\$46,822	11%	26%	\$192,622	\$23,772	
North Shore Collinwood	22%	31%	2,977	17%	30%	15	20	\$123,889	26	\$48,065	11%	22%	\$177,095	\$36,293	
Ohio City	22%	34%	5,180	14%	32%	10	13	\$42,323	21	\$23,657	15%	13%	\$63,575	\$20,655	
Old Brooklyn	22%	29%	961	12%	31%	6	23	\$358,912	17	\$126,266	13%	20%	\$350,141	\$40,890	
St. Clair-Superior	19%	27%	2,519	28%	34%	19	29	\$57,261	12	\$29,723	14%	18%	\$84,734	\$21,434	
Stockyards	16%	22%	3,755	27%	37%	25	12	\$64,264	13	\$25,501	13%	17%	\$75,968	\$22,896	
Tremont	17%	24%	1,987	9%	26%	1	15	\$33,937	9	\$26,154	15%	14%	\$68,706	\$25,994	
Union-Miles	22%	29%	1,849	30%	40%	31	17	\$255,206	25	\$66,627	11%	30%	\$263,988	\$25,973	
University	26%	38%	2,675	10%	6%	2	30	\$16,822	20	\$37,833	14%	22%	\$61,769	\$10,609	
West Boulevard	20%	29%	5,287	18%	38%	28	11	\$145,758	27	\$36,801	13%	14%	\$131,073	\$33,659	



# Some Next Steps on Climate and Equity

- Make bike share more equitable
- DOE Better Buildings - Clean Energy in Low Income Communities Accelerator; 100% for 100%
- Complete update of Cleveland Climate Action Plan in 2017; begin implementation
  - Racial Equity tool
  - Workforce development
- Implement Climate Resilience and Urban Opportunity Plan (2016-2018), determine path forward



# Thank You!

Matt Gray  
Chief of Sustainability  
City of Cleveland  
[mgray@city.cleveland.oh.us](mailto:mgray@city.cleveland.oh.us)

Join us at :  
[www.SustainableCleveland.org](http://www.SustainableCleveland.org)







# Climate Ready Communities

**Technical services for  
small to mid-sized  
communities and  
those with few  
resources**

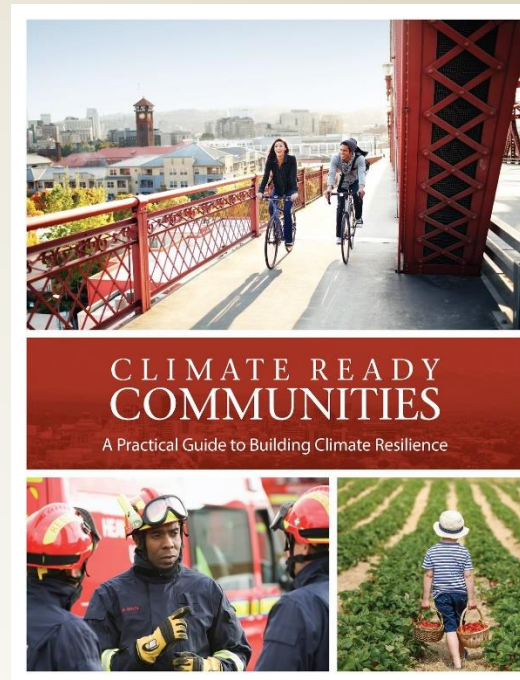


# Climate Ready Communities

Free, downloadable guide

## Subscription Service

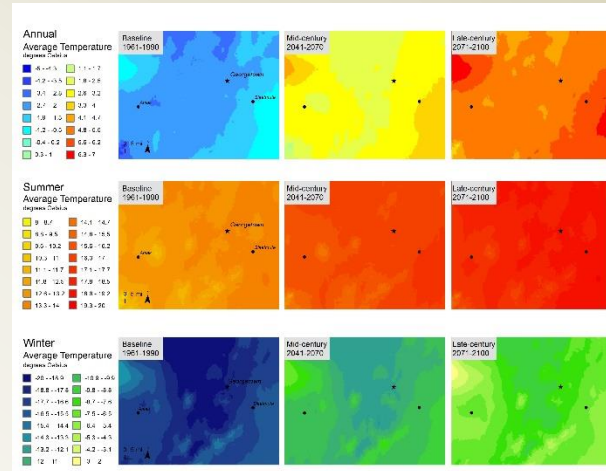
- *Tutorials and templates*
- *One-on-one consulting hours*
- *Monthly, live, call-in forum*
- *On-line forum*
- *Technical support*
- *Subscriber portal*
- *Annual cost: \$2,499/\$1,499*



# Climate Ready Communities

## Additional Services

- *Blocks of additional consulting time*
- *Local climate change projections*
- *Workshop facilitation*
- *Final report writing*
- *Webinars on resilience-related topics*





# Climate Ready Communities

## Subscription Service Pilot Program

- Final pilot slots are being filled
- Pilot begins May, 2018
- Full release fall, 2018



# Climate Ready Communities

**Tonya Graham: [tonya@geosinstitute.org](mailto:tonya@geosinstitute.org)  
541.482.4459 x301**

**Thank You**