Minnesota Municipal Clerks Institute

SUSTAINABLE PLANNING & ZONING

Phil Carlson, AICP
Senior Planner, Stantec

May 8, 2024
St. Cloud, MN

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Agenda

7:30 Introductions, Sustainability

7:45 **Environment/Planet**

8:15 Breakout 1

8:30 **Economy/Profit**

8:45 **Equity/People**

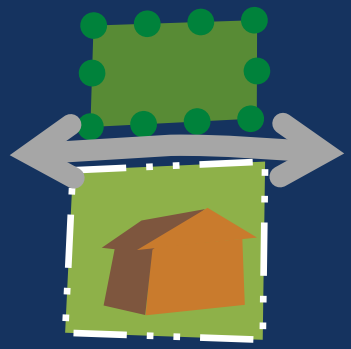
9:15 Break

9:30 Putting It All Together

9:45 Breakout 2

10:00 Q/A

10:15 Adjourn



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"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."

What is Sustainability?

What is Sustainability?

UN World Commission on Environment and Development:

- Sustainable development is development that **meets the needs of the present** without compromising the ability of **future generations** to meet their own needs.

UCLA:

- Sustainability is the balance between the **environment**, **equity**, and **economy**

What is Sustainability?

The National Environmental Policy Act (1970) committed the United States to sustainability, declaring it a national policy

- *"to create and maintain conditions under which **humans** and **nature** can exist in productive harmony, that permit fulfilling the **social, economic** and other requirements of **present** and **future** generations."*

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What is Sustainability ?

World Bank, *Sustainability – Ethical Foundations and Economic Properties* (1994)

- A **requirement** of our generation to manage the resource base such that the **average quality of life** that we ensure ourselves can potentially be shared by all future generations.

- Development is sustainable if it involves a **non-decreasing quality of life**

- Our generation's management of the **resource base** is sustainable if it constitutes the first part of a **feasible sustainable development.**

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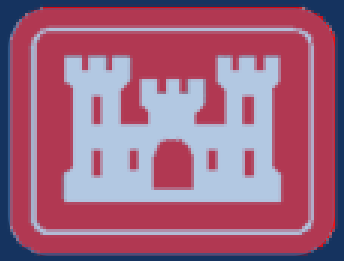
Resilience (Related to Sustainability)

US Army Corps of Engineers

- Ability to **adapt** to changing conditions and withstand and **recover rapidly** from disruptions



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Sustainability – 3 Pillars

The three pillars of Sustainability:

- Environmental
- Economic
- Social

Environment, Economy, Equity
or
Planet, Profit, People

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Sustainability < > Planning & Zoning

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Environment/ Planet

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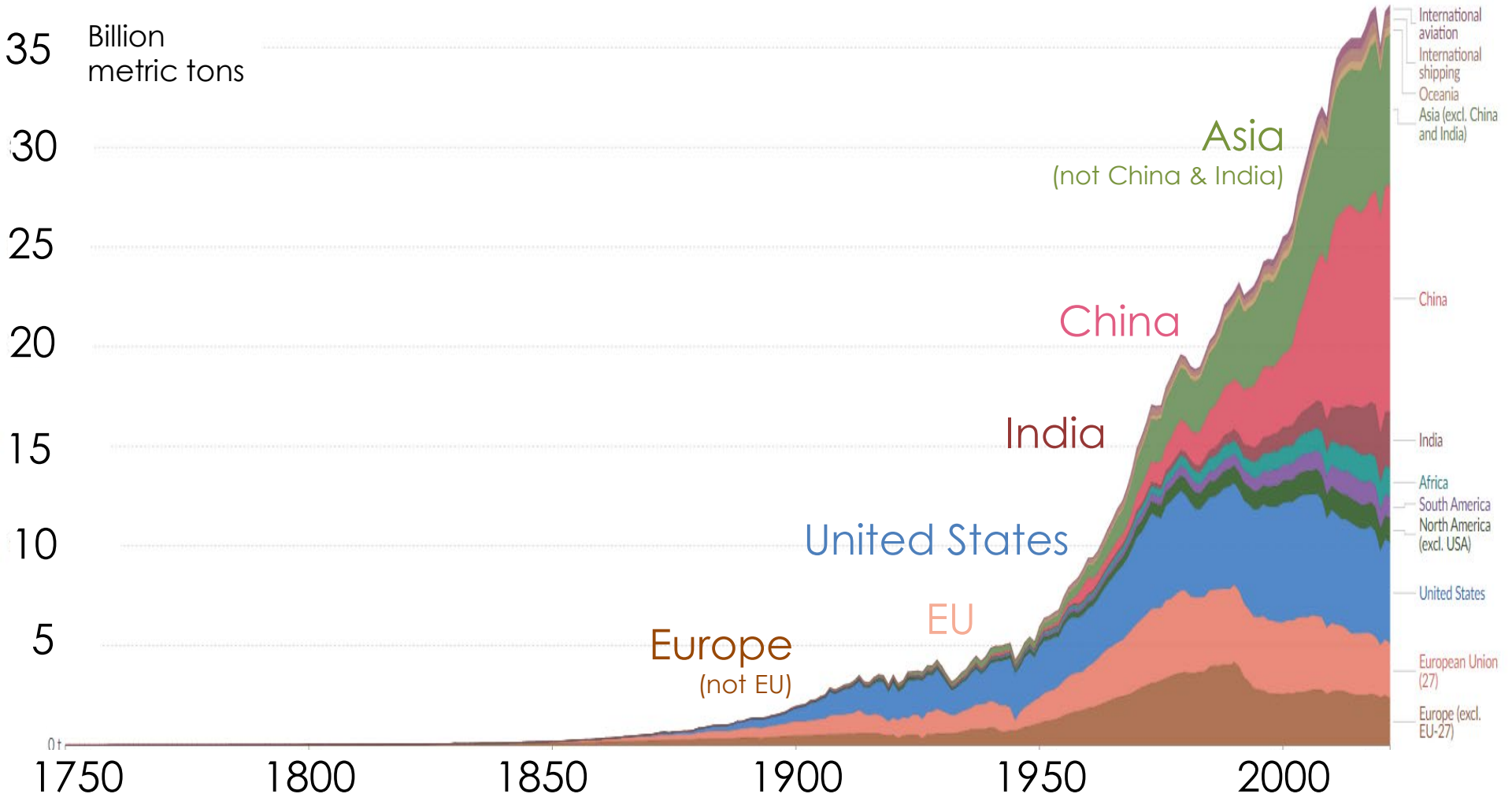
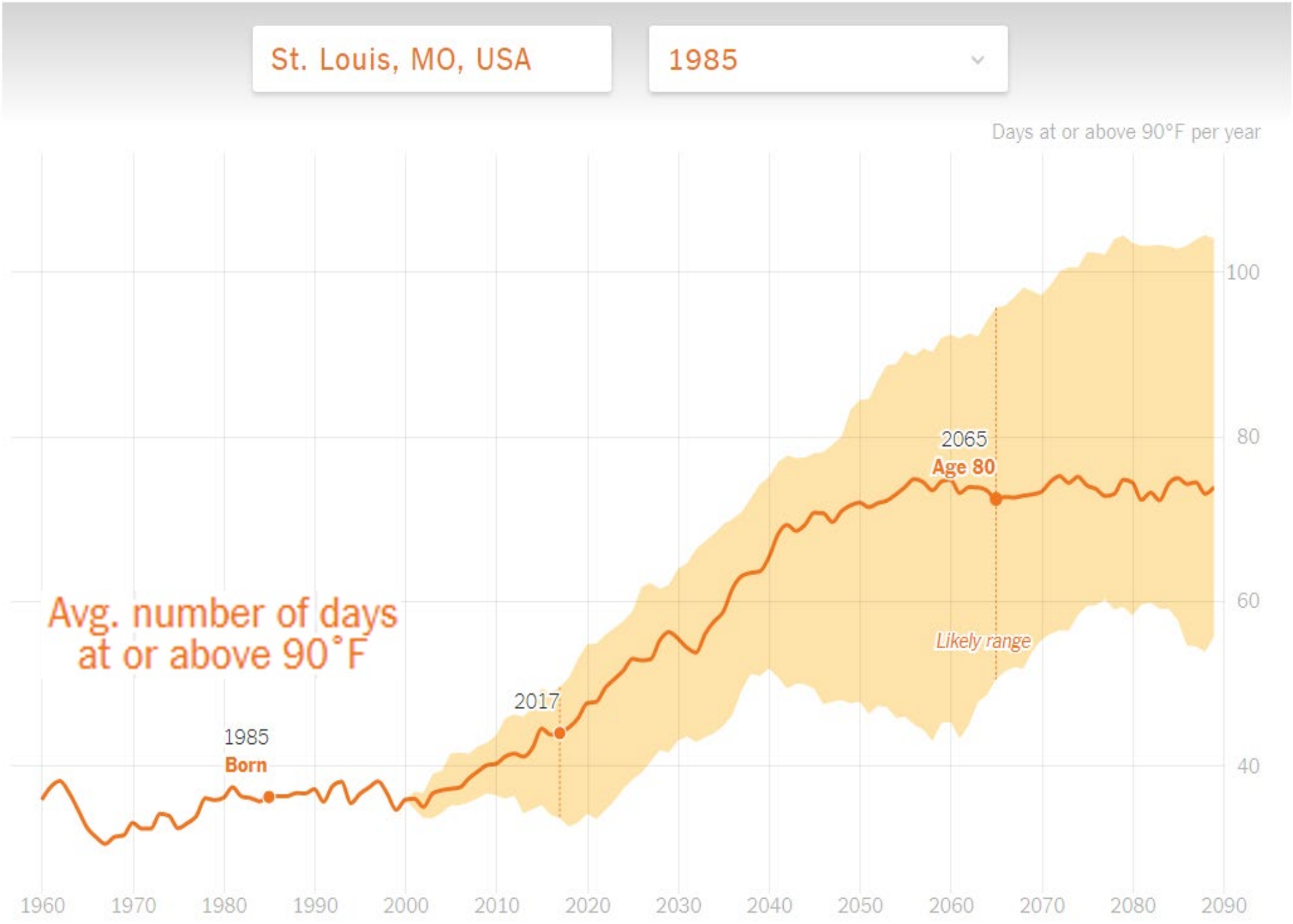
Annual CO2 Emission by World Region 1750-2022

Emission from fossil fuels and industry are included, but not land-use change emissions.
Source: Global Carbon Budget (2023)




St. Louis, MO, USA
1985
Days at or above 90°F per year
100
80
60
40
2065
Age 80
Likely range
Avg. number of days at or above 90°F
2017
1985
Born
1960
1970
1980
1990
2000
2010
2020
2030
2040
2050
2060
2070
2080
2090

NATION

America's new normal: A degree hotter than two decades ago

By SETH BORENSTEIN Associated Press | MAY 4, 2021 — 11:12AM

NOAH BERGER, ASSOCIATED PRESS

FILE - In this Monday, Aug. 17, 2020 file photo, a helicopter drops water while battling the River Fire in Salinas, Calif. Fire crews across the region scrambled to contain dozens of blazes sparked by lightning strikes during a statewide heat wave.

America's new normal temperature is a degree hotter than it was just two decades ago.

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Who believes human activity has contributed to climate change?

The Pentagon

Every insurance company

The Pope

97% of the scientific community

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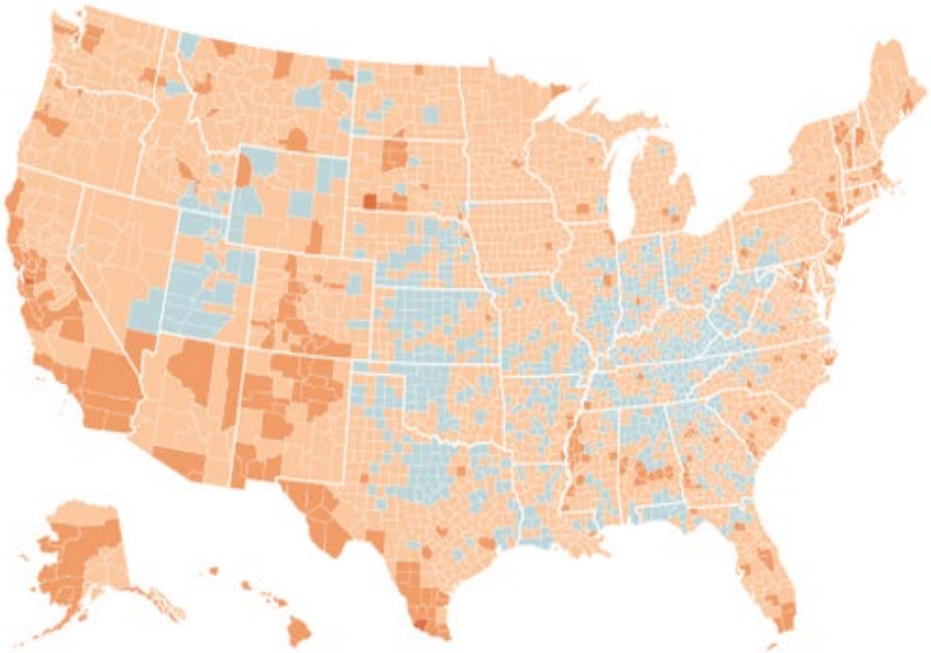
Most people think that climate change will harm Americans, but they don't think it will happen to them.

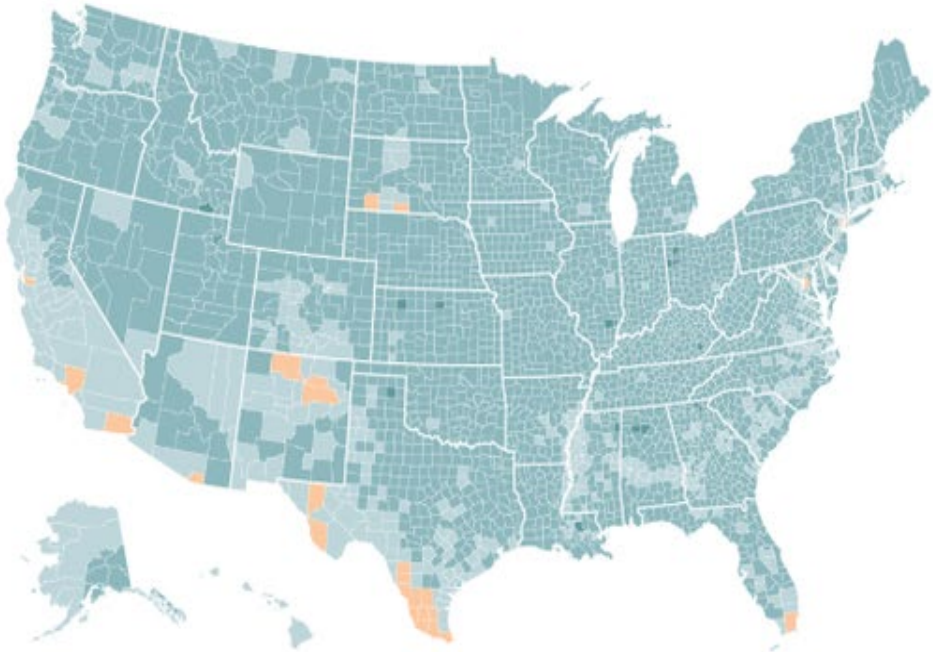
Percentage of adults per county who think . . .

20% 30 40 50 60 70 80

Global warming will harm people in the United States



Global warming will harm me, personally



County and district-level opinion data are estimates based on survey responses from more than 18,000 American adults (age 25 and older) collected between 2008 and 2016. Source: Yale Program on Climate Change Communication

Weather Impacts Worldwide


BE SURE TO WASH YOUR HANDS AND ALL WILL BE WELL
CLIMATE CHANGE
RECESSION
COVID-19

HUD/Rockefeller Team on NDRC

- U.S. HUD partnered with The Rockefeller Foundation to help communities better understand the **innovation**, broad **commitment**, and multi-faceted approach required to build toward a more **resilient** future

- The Rockefeller Foundation provided targeted technical assistance to eligible communities in a **stakeholder-driven** process, informed by the best available **data**, to identify recovery needs and **innovative** solutions

Rockefeller Foundation
Innovation for the Next 100 Years

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National Disaster Resilience Competition

- The NDRC made available $1 billion to communities struck by natural disasters
- Promotes risk assessment and planning, funds implementation of innovative resilience projects
- Prepare communities for future storms and other extreme events.
- Funding from CDBG-DR (disaster recovery) appropriation, 2013.

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Flash Flood Vulnerability & Climate Adaptation Pilot Project

Philip Schaffner
Office of Transportation System Management
Minnesota Department of Transportation

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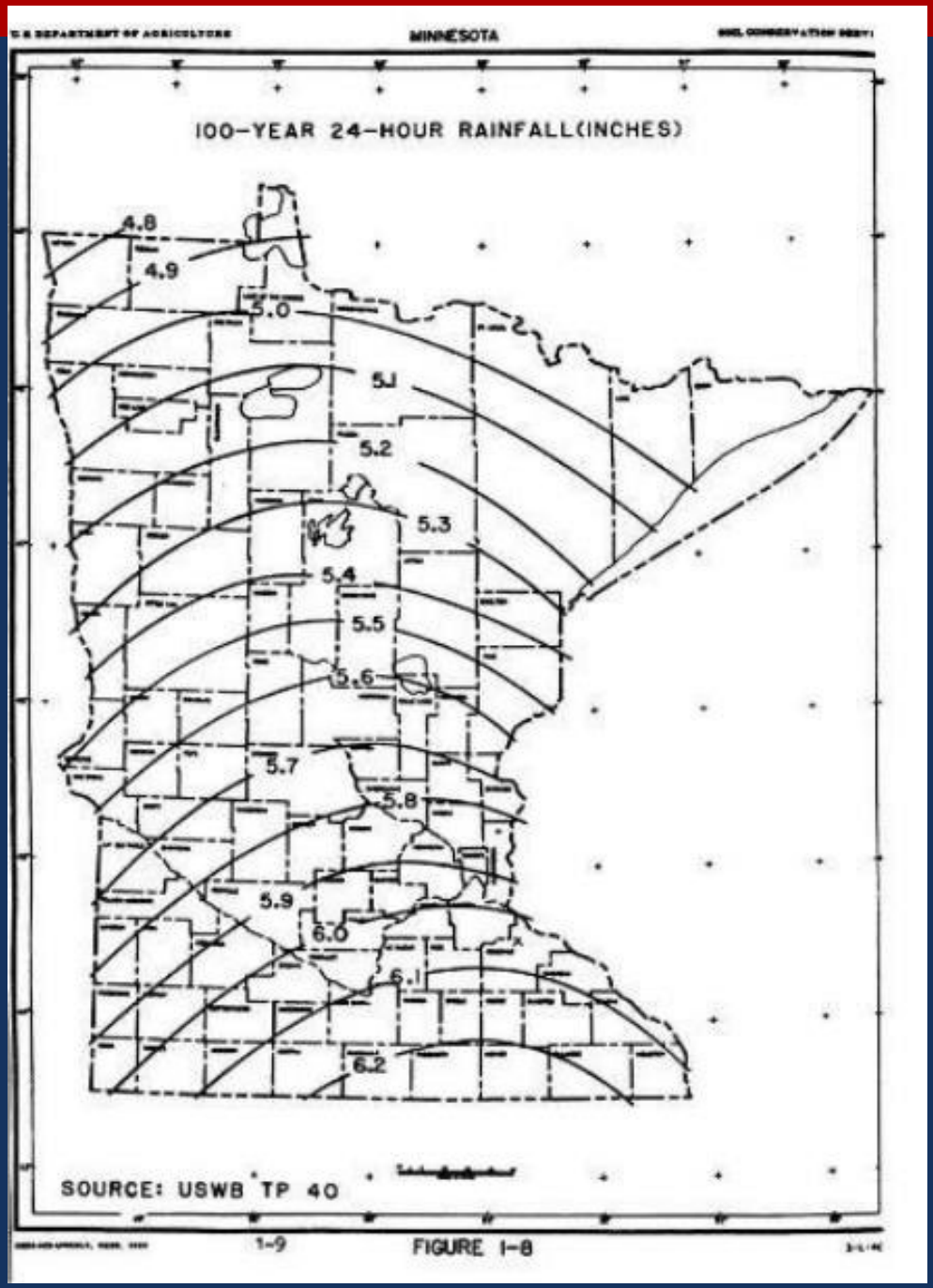
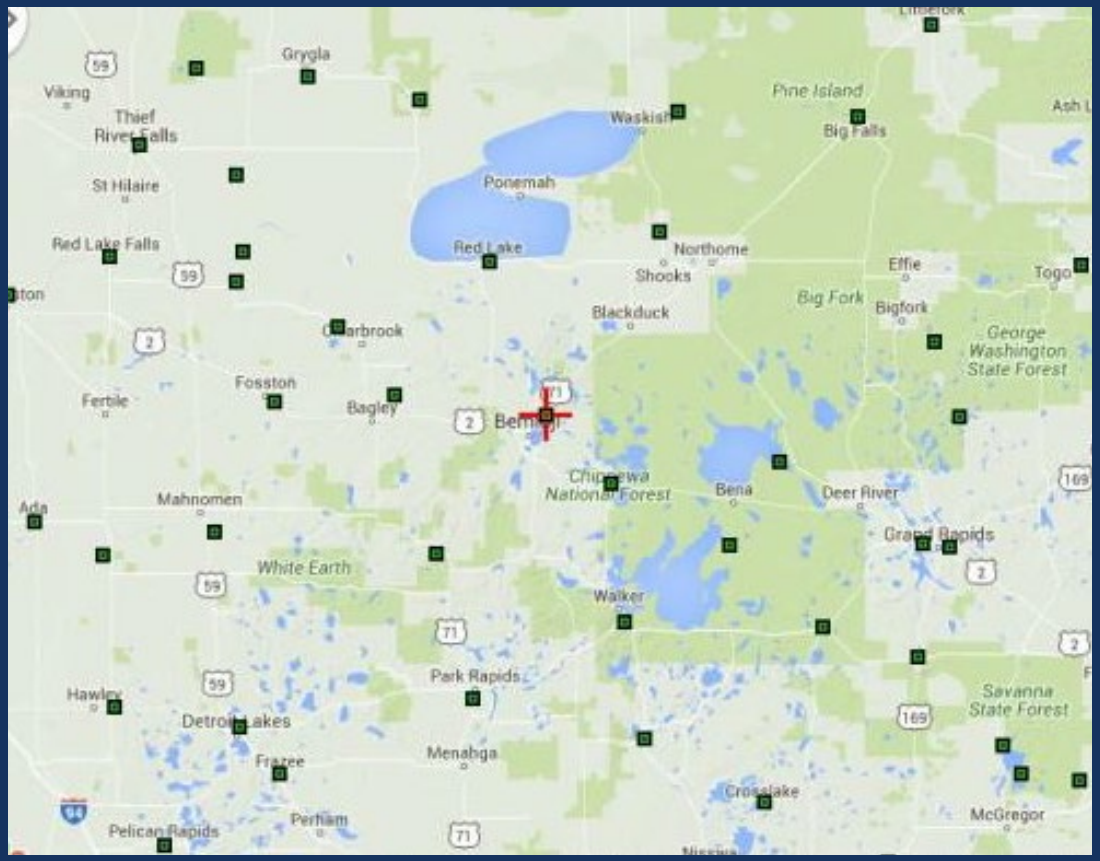
Precipitation Frequencies Technical Paper 40 (TP-40) Federal 1961 100-yr, 24-hr storm



Precipitation Frequencies – Atlas 14
Federal NOAA 2013 100-yr, 24-hr storm



- 320 daily stations – up from 110
- Significant increases 1961-2013
- Current data
- Better statistical analysis
- **Increased storm frequency and size**

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Precipitation Frequencies – Atlas 14 Federal NOAA 2013 100-yr, 24-hr storm

- Current data
- Better statistical analysis
- **Increased storm frequency and size**

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.319 (0.251-0.414)	0.384 (0.302-0.499)	0.492 (0.386-0.640)	0.584 (0.455-0.761)	0.711 (0.535-0.947)	0.811 (0.596-1.09)	0.912 (0.648-1.24)	1.02 (0.692-1.41)	1.16 (0.757-1.63)	1.26 (0.806-1.79)
10-min	0.467 (0.367-0.606)	0.563 (0.442-0.730)	0.721 (0.565-0.937)	0.855 (0.666-1.11)	1.04 (0.784-1.39)	1.19 (0.873-1.59)	1.33 (0.949-1.82)	1.49 (1.01-2.06)	1.69 (1.11-2.38)	1.85 (1.18-2.63)
15-min	0.569 (0.448-0.738)	0.686 (0.539-0.890)	0.879 (0.689-1.14)	1.04 (0.812-1.36)	1.27 (0.956-1.69)	1.45 (1.06-1.94)	1.63 (1.16-2.22)	1.81 (1.24-2.51)	2.06 (1.35-2.91)	2.25 (1.44-3.21)
30-min	0.792 (0.624-1.03)	0.958 (0.753-1.24)	1.23 (0.965-1.60)	1.46 (1.14-1.91)	1.78 (1.34-2.37)	2.03 (1.49-2.72)	2.28 (1.62-3.10)	2.53 (1.73-3.51)	2.88 (1.88-4.05)	3.14 (2.00-4.46)
60-min	1.01 (0.794-1.31)	1.22 (0.958-1.58)	1.57 (1.23-2.04)	1.87 (1.46-2.44)	2.30 (1.74-3.08)	2.65 (1.95-3.56)	3.00 (2.14-4.10)	3.37 (2.30-4.68)	3.88 (2.54-5.47)	4.27 (2.73-6.07)
2-hr	1.23 (0.977-1.57)	1.48 (1.18-1.89)	1.91 (1.51-2.45)	2.29 (1.80-2.94)	2.83 (2.17-3.75)	3.27 (2.44-4.36)	3.73 (2.68-5.05)	4.21 (2.90-5.80)	4.88 (3.23-6.84)	5.40 (3.48-7.63)
3-hr	1.35 (1.08-1.71)	1.62 (1.30-2.06)	2.09 (1.67-2.66)	2.51 (2.00-3.21)	3.13 (2.42-4.14)	3.64 (2.74-4.84)	4.18 (3.04-5.65)	4.76 (3.31-6.54)	5.57 (3.72-7.89)	6.22 (4.03-8.75)
6-hr	1.58 (1.29-1.98)	1.87 (1.52-2.35)	2.40 (1.94-3.01)	2.88 (2.32-3.62)	3.61 (2.83-4.73)	4.22 (3.22-5.56)	4.88 (3.59-6.55)	5.60 (3.94-7.65)	6.62 (4.47-9.22)	7.44 (4.87-10.4)
12-hr	1.84 (1.51-2.27)	2.14 (1.76-2.64)	2.70 (2.22-3.34)	3.22 (2.63-4.00)	4.02 (3.20-5.21)	4.70 (3.63-6.13)	5.43 (4.05-7.22)	6.24 (4.44-8.48)	7.39 (5.05-10.2)	8.33 (5.50-11.6)
24-hr	2.10 (1.76-2.56)	2.43 (2.03-2.95)	3.03 (2.52-3.69)	3.59 (2.96-4.39)	4.45 (3.58-5.69)	5.18 (4.05-6.68)	5.97 (4.50-7.86)	6.85 (4.93-9.20)	8.10 (5.58-11.1)	9.11 (6.08-12.6)
2-day	2.39 (2.02-2.86)	2.75 (2.33-3.30)	3.42 (2.88-4.11)	4.04 (3.38-4.87)	4.98 (4.06-6.29)	5.78 (4.58-7.36)	6.65 (5.07-8.65)	7.60 (5.53-10.1)	8.96 (6.24-12.2)	10.1 (6.78-13.8)
3-day	2.61 (2.22-3.09)	3.00 (2.56-3.56)	3.71 (3.15-4.42)	4.37 (3.69-5.22)	5.37 (4.41-6.71)	6.21 (4.95-7.84)	7.13 (5.47-9.20)	8.12 (5.95-10.7)	9.54 (6.68-12.9)	10.7 (7.24-14.6)
4-day	2.81 (2.41-3.31)	3.23 (2.76-3.80)	3.97 (3.39-4.70)	4.65 (3.94-5.52)	5.88 (4.69-7.06)	6.55 (5.25-8.22)	7.48 (5.76-9.61)	8.49 (6.25-11.2)	9.93 (6.99-13.4)	11.1 (7.55-15.1)
7-day	3.37 (2.92-3.92)	3.83 (3.32-4.46)	4.65 (4.01-5.43)	5.37 (4.61-6.30)	6.44 (5.35-7.88)	7.33 (5.92-9.07)	8.27 (6.42-10.5)	9.27 (6.87-12.1)	10.7 (7.57-14.3)	11.8 (8.10-16.0)
10-day	3.87 (3.38-4.47)	4.38 (3.82-5.07)	5.26 (4.57-6.10)	6.03 (5.20-7.01)	7.13 (5.95-8.63)	8.03 (6.52-9.85)	8.97 (7.00-11.3)	9.96 (7.41-12.9)	11.3 (8.07-15.1)	12.4 (8.56-16.7)
20-day	5.30 (4.70-6.03)	5.96 (5.28-6.79)	7.06 (6.22-8.06)	7.97 (6.98-9.14)	9.24 (7.78-10.9)	10.2 (8.38-12.3)	11.2 (8.83-13.9)	12.2 (9.17-15.6)	13.5 (9.73-17.8)	14.6 (10.2-19.5)
30-day	6.49 (5.80-7.31)	7.30 (6.51-8.23)	8.60 (7.64-9.72)	9.65 (8.52-11.0)	11.1 (9.37-13.0)	12.1 (10.0-14.5)	13.2 (10.4-16.1)	14.2 (10.7-18.0)	15.6 (11.2-20.3)	16.5 (11.6-22.1)
45-day	8.01 (7.21-8.94)	9.01 (8.11-10.1)	10.6 (9.48-11.9)	11.8 (10.5-13.3)	13.4 (11.4-15.6)	14.6 (12.1-17.2)	15.8 (12.6-19.1)	16.8 (12.8-21.1)	18.2 (13.2-23.5)	19.1 (13.5-25.4)
60-day	9.31 (8.44-10.3)	10.5 (9.49-11.6)	12.3 (11.1-13.7)	13.7 (12.3-15.3)	15.5 (13.3-17.8)	16.8 (14.0-19.6)	18.0 (14.4-21.7)	19.1 (14.5-23.8)	20.4 (14.9-26.3)	21.3 (15.1-28.2)

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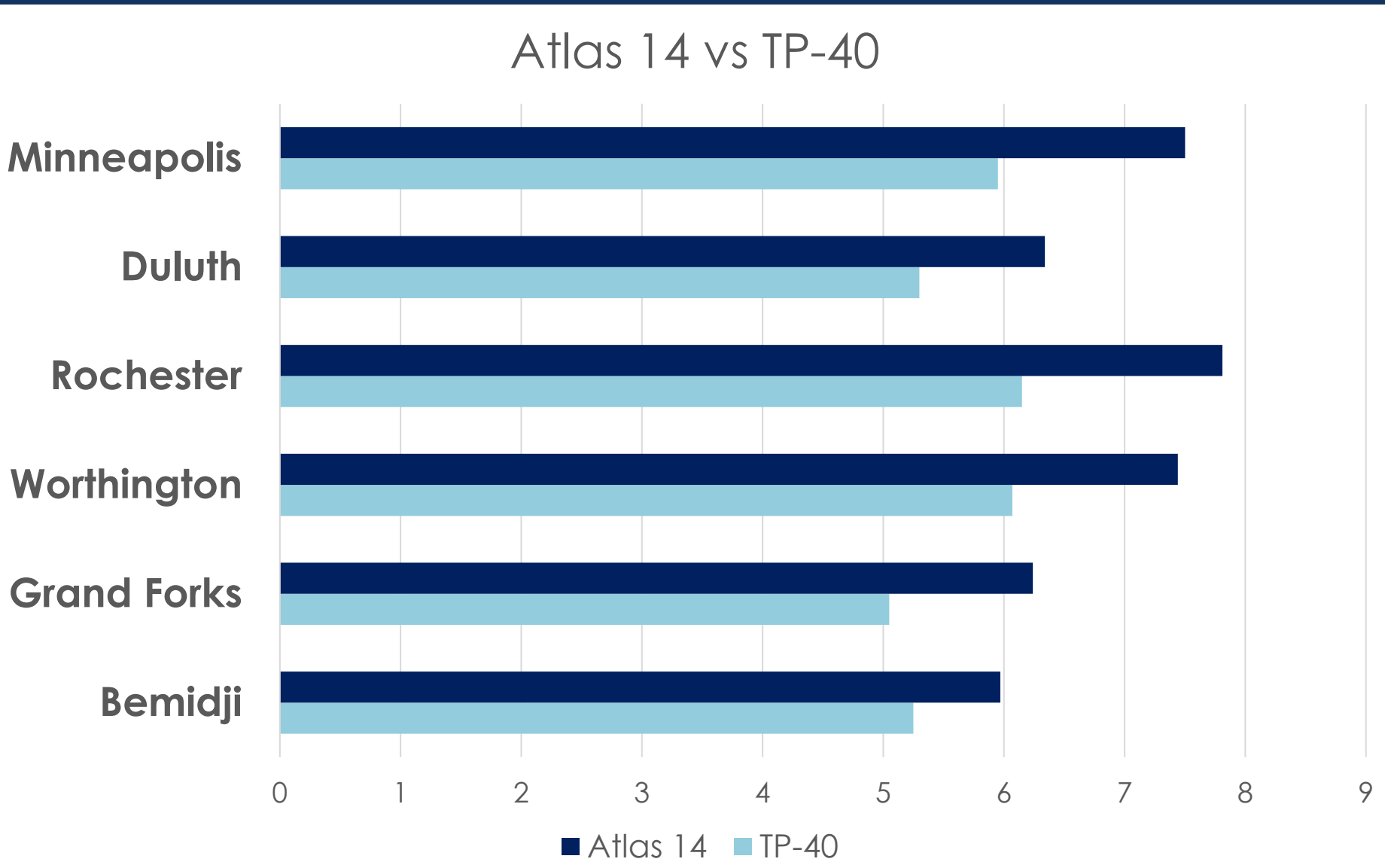
Changes in 100-yr, 24-hr storm (inches)



Pilot Project Objectives

Understand the trunk highway network's **risk** from **flash flooding**

Identify cost-effective options to improve the network's **resiliency**

Support MnDOT's **asset management planning**

Pilot Project Overview

Phase 1: System-wide vulnerability assessment

- High-level screen of trunk highway network in Districts 1 & 6

Phase 2: Facility-level adaptation analysis

- Two high risk facilities (one in each district)

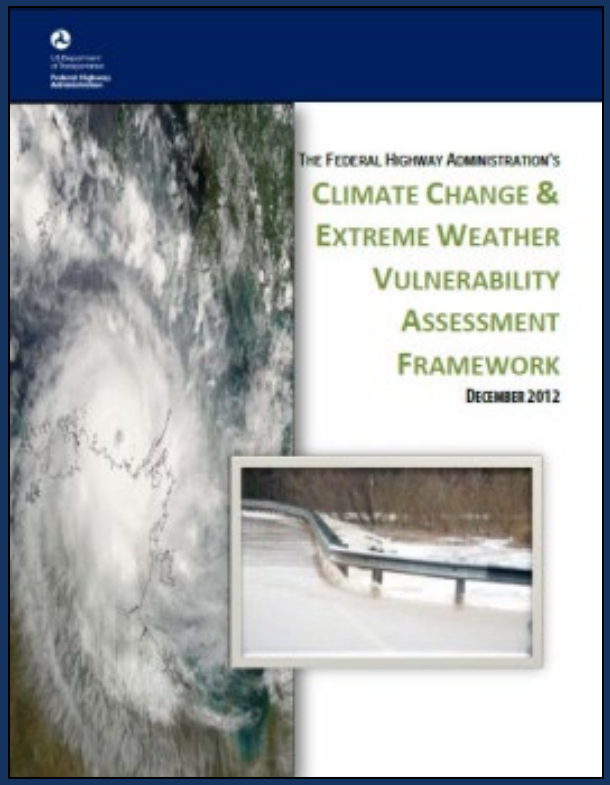
Defining Vulnerability

"Climate change *vulnerability* in the transportation context is a function of a transportation system's *exposure* to climate effects, *sensitivity* to climate effects, and *adaptive capacity*." (Vulnerability Framework)

Exposure – whether the asset or system is located in an area experiencing direct impacts of climate change

Sensitivity – how the asset or system fares when exposed to an impact

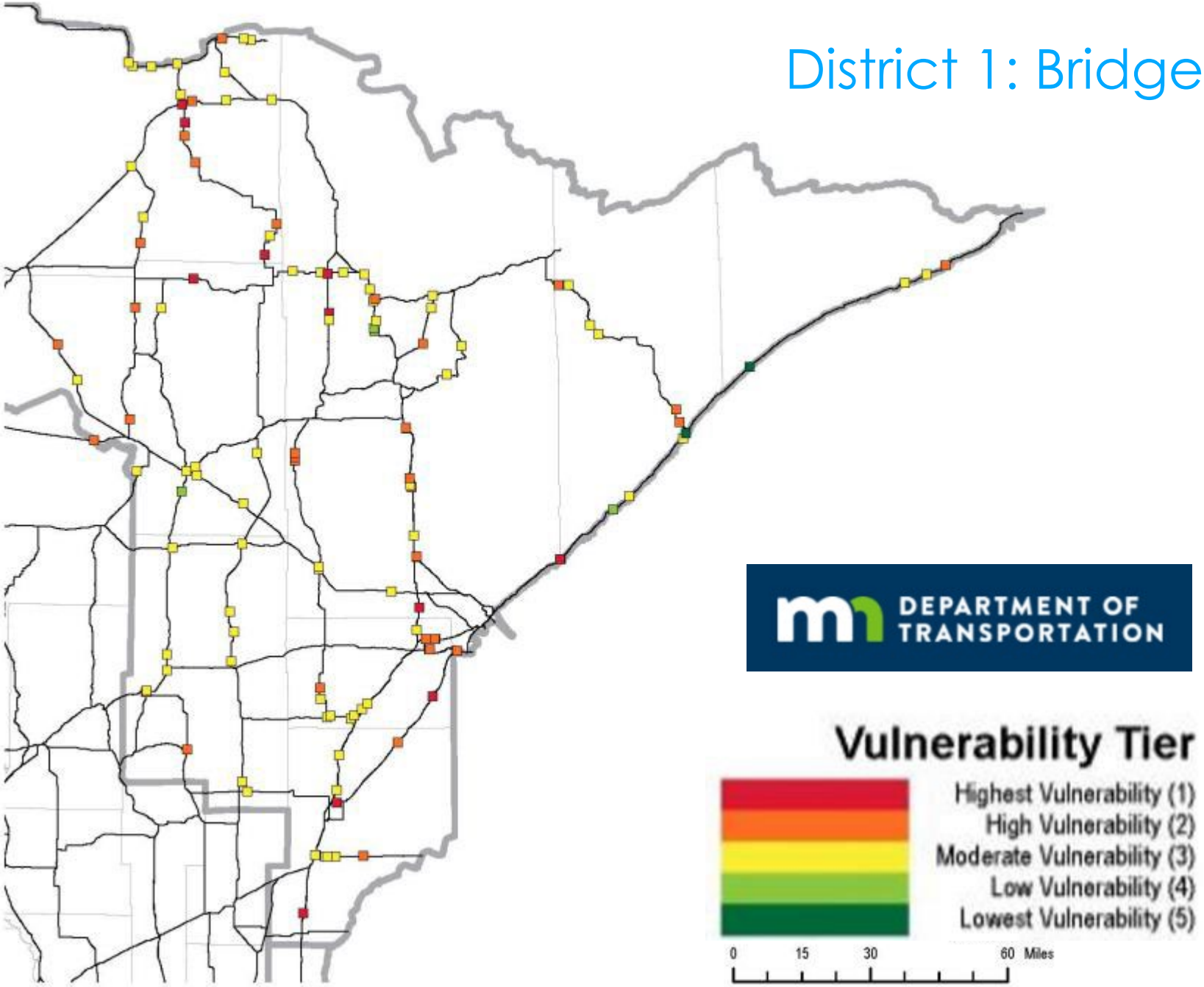
Adaptive capacity – the systems' ability to adjust or cope with existing climate variability or future climate impacts



Number of Assets Scored

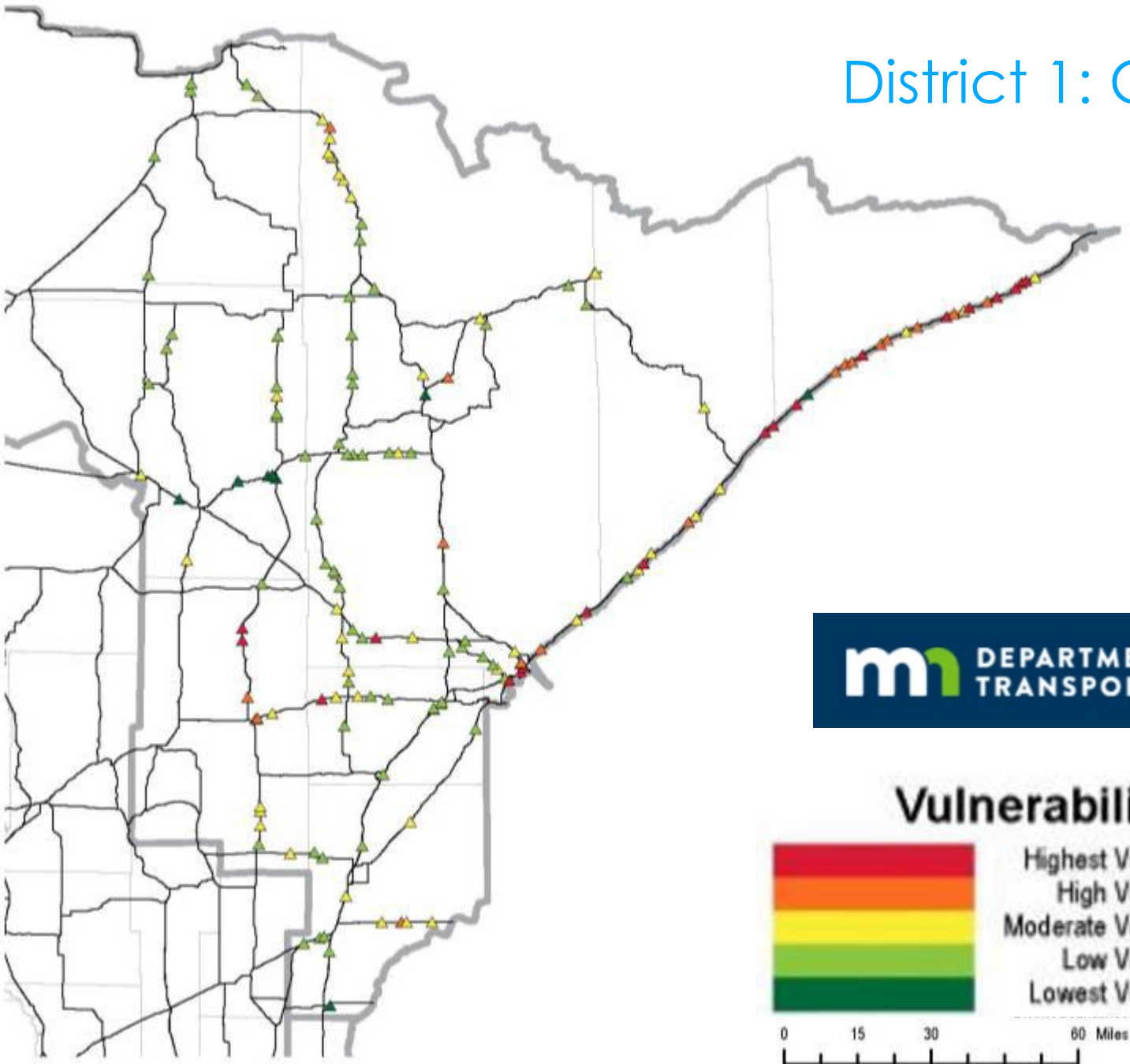
	Bridges	Large Culverts	Pipes	Roads Paralleling Streams (segments)	Total
District 1	140	160	543	18	861
District 6	176	361	377	44	958
Total	316	521	920	62	1,819

District 1: Bridges



Highly vulnerable (Tier 1 and 2) assets are not necessarily in imminent danger of flooding, nor are lower vulnerability assets immune from flooding. Values are indicators of relative vulnerability compared with other assets in the same district.

District 1: Culverts



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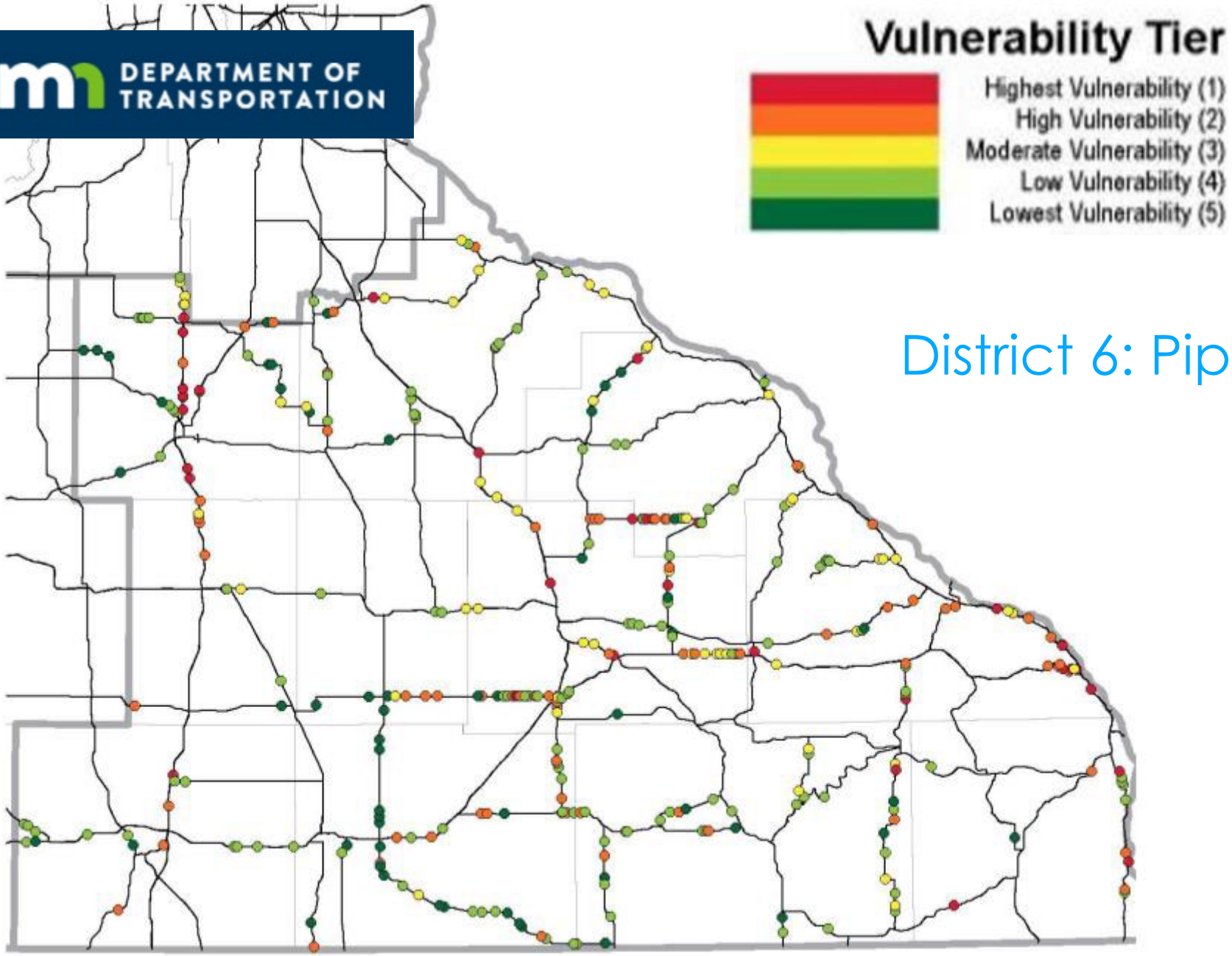
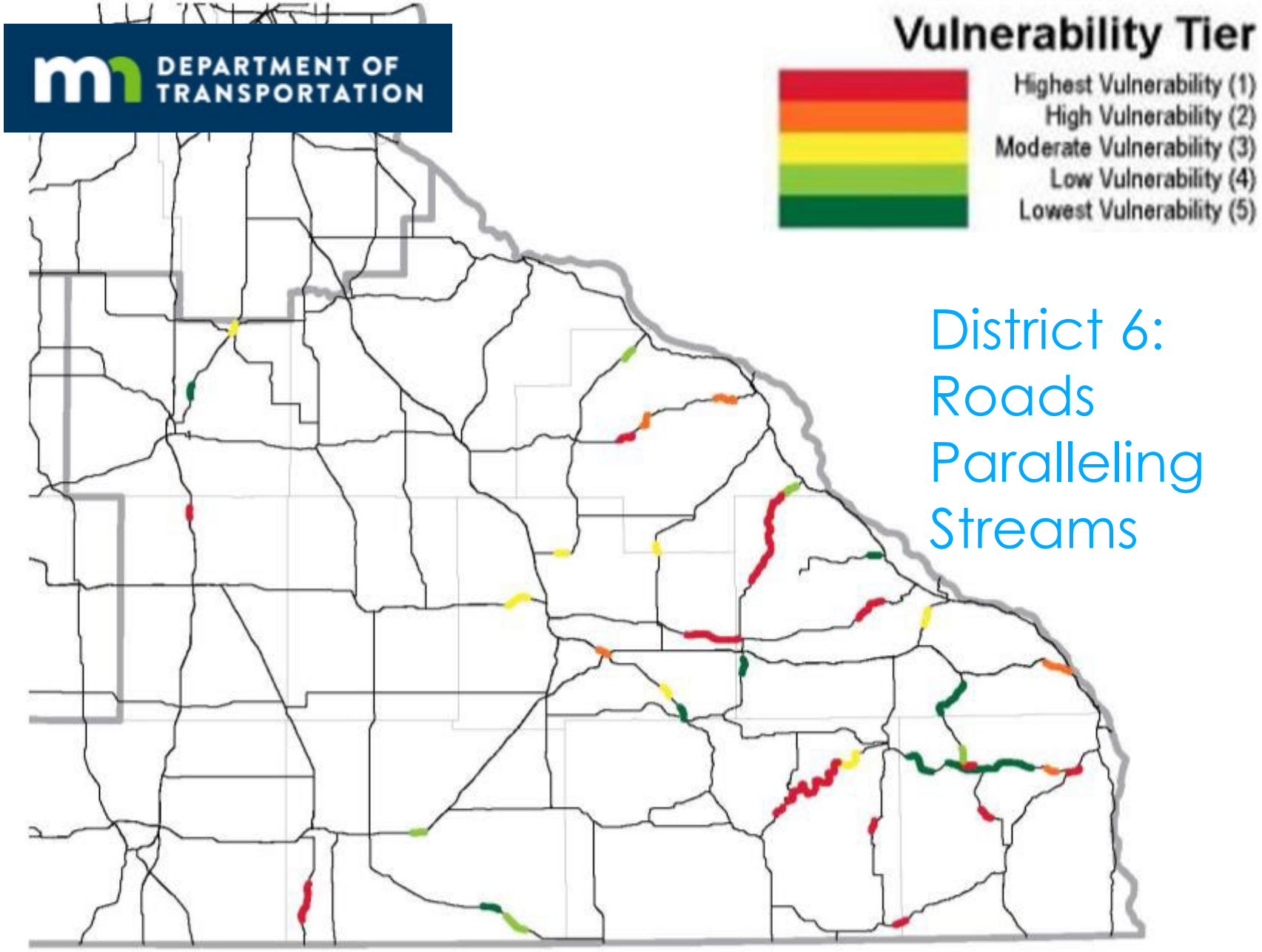
DEPARTMENT OF TRANSPORTATION



District 6: Pipes

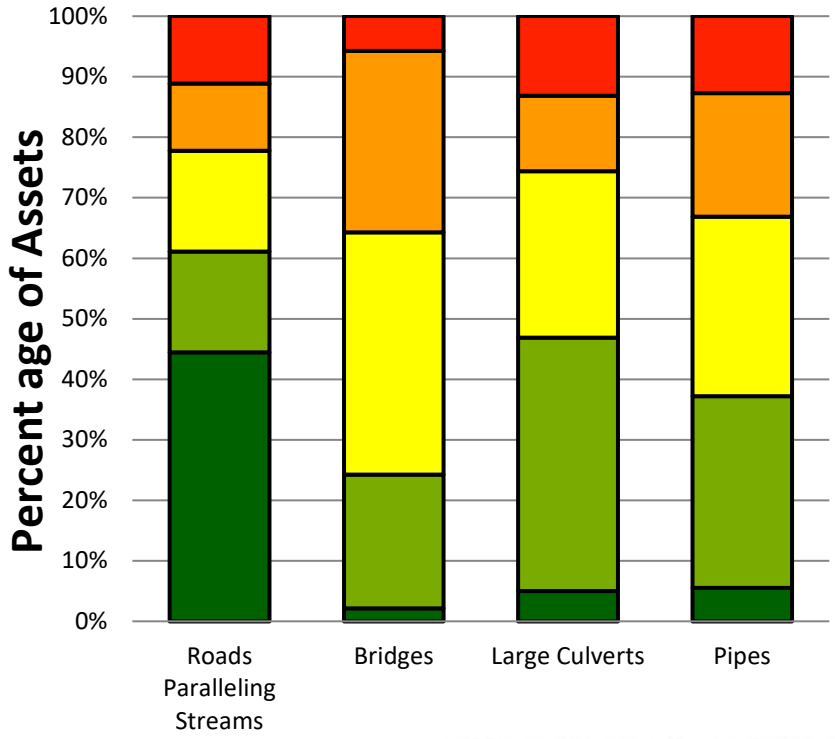
Highly vulnerable (Tier 1 and 2) assets are not necessarily in imminent danger of flooding, nor are lower vulnerability assets immune from flooding. Values are indicators of relative vulnerability compared with other assets in the same district.



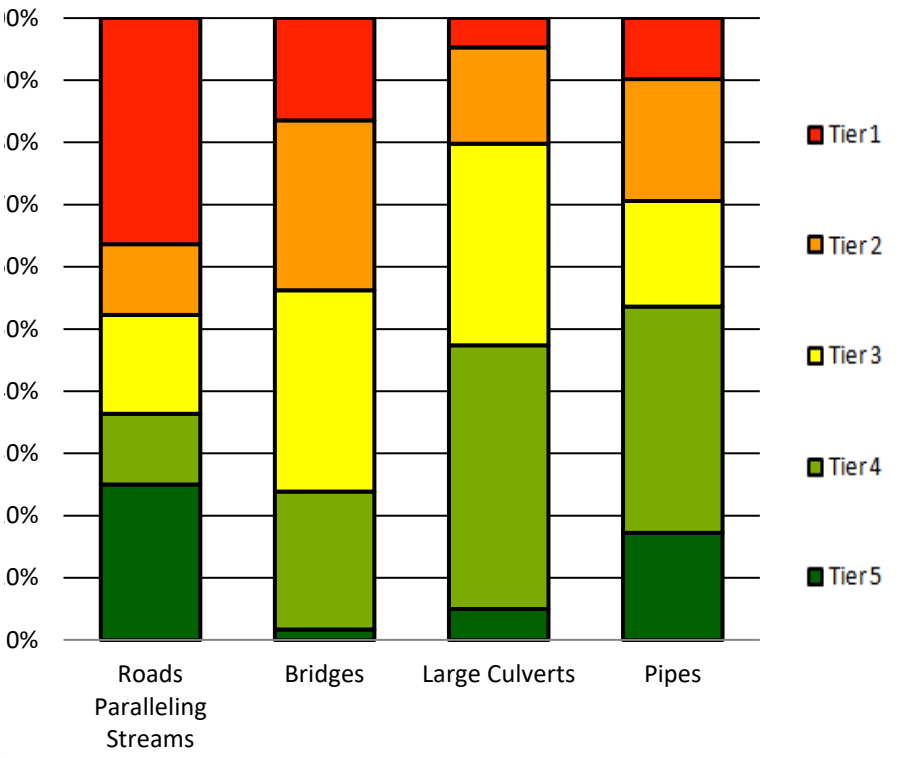
Highly vulnerable (Tier 1 and 2) assets are not necessarily in imminent danger of flooding, nor are lower vulnerability assets immune from flooding. Values are indicators of relative vulnerability compared with other assets in the same district.

Vulnerability By Asset Type

District 1



District 6



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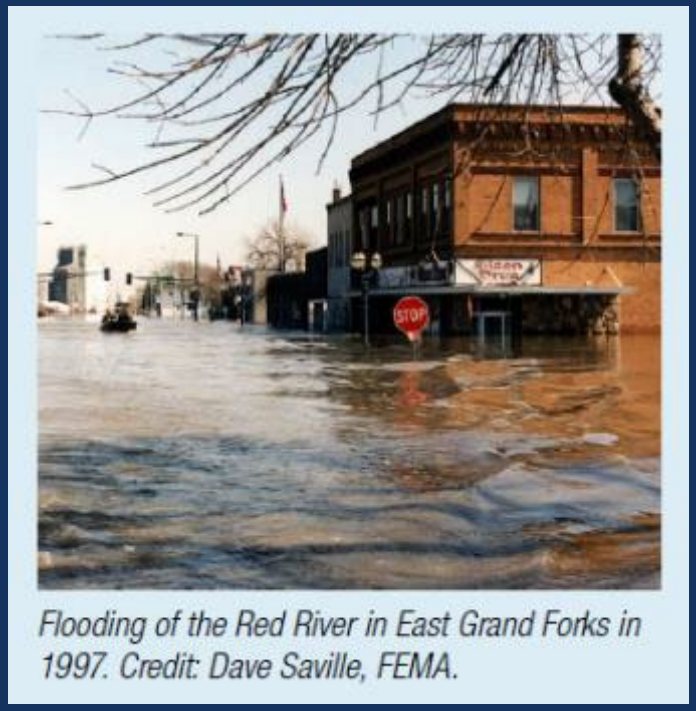
Climate Change & Minnesota

- 2016 EPA Report
- Heavy precipitation & flooding – cities, homes, crops, ports affected
- Water quality may be harmed – algae, pollutants, leaks
- Shorter season for ice fishing, snowmobiling, skiing – local economies impacted
- Rising water temperature: more bass, less trout



Flooding of the Red River in East Grand Forks in 1997. Credit: Dave Saville, FEMA.

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Climate Change & Minnesota

- Birch, aspen, balsam fir, black spruce decline
- Oak, hickory, pine increase
- Ozone levels increase
- More sever pollen season
- Hotter days – heat stroke and dehydration
- Increasingly severe droughts
- Agriculture – pros & cons

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City Trees

Tree roots - infiltration, volume reduction, water quality

Stormwater management

Streetscapes, parking lots redesigned around trees

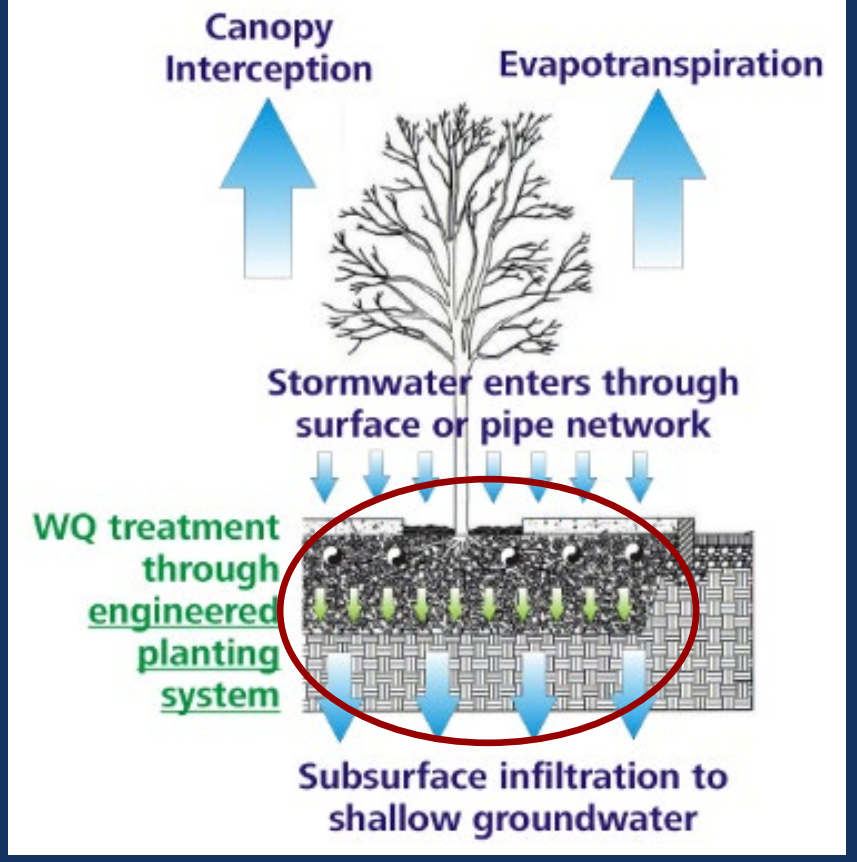
Healthier living environment

Lowers residents' utility costs

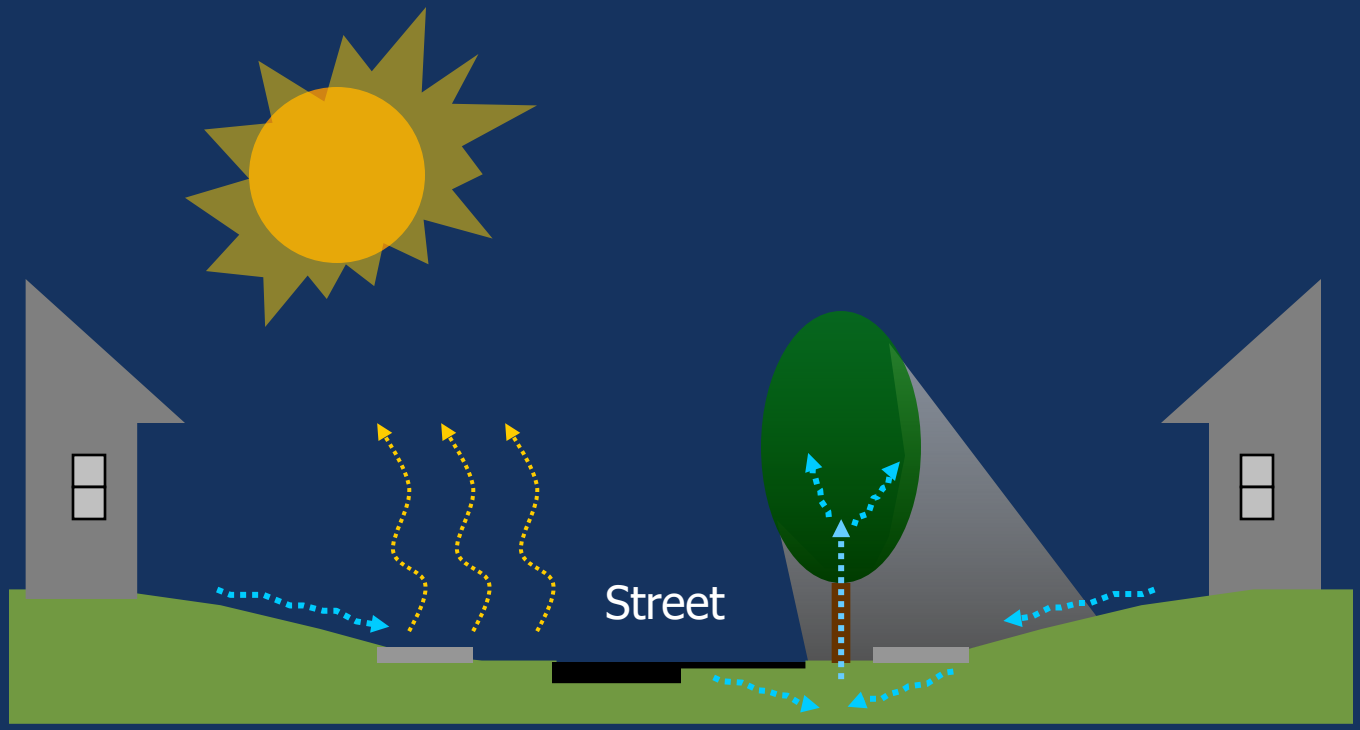
Connect to nature

Protect the environment

Healthier ecosystems



Require Street Trees



No trees: stormwater runs off or evaporates

With trees: Shade cools the ground, trees store water, need engineered minimum underground soil system

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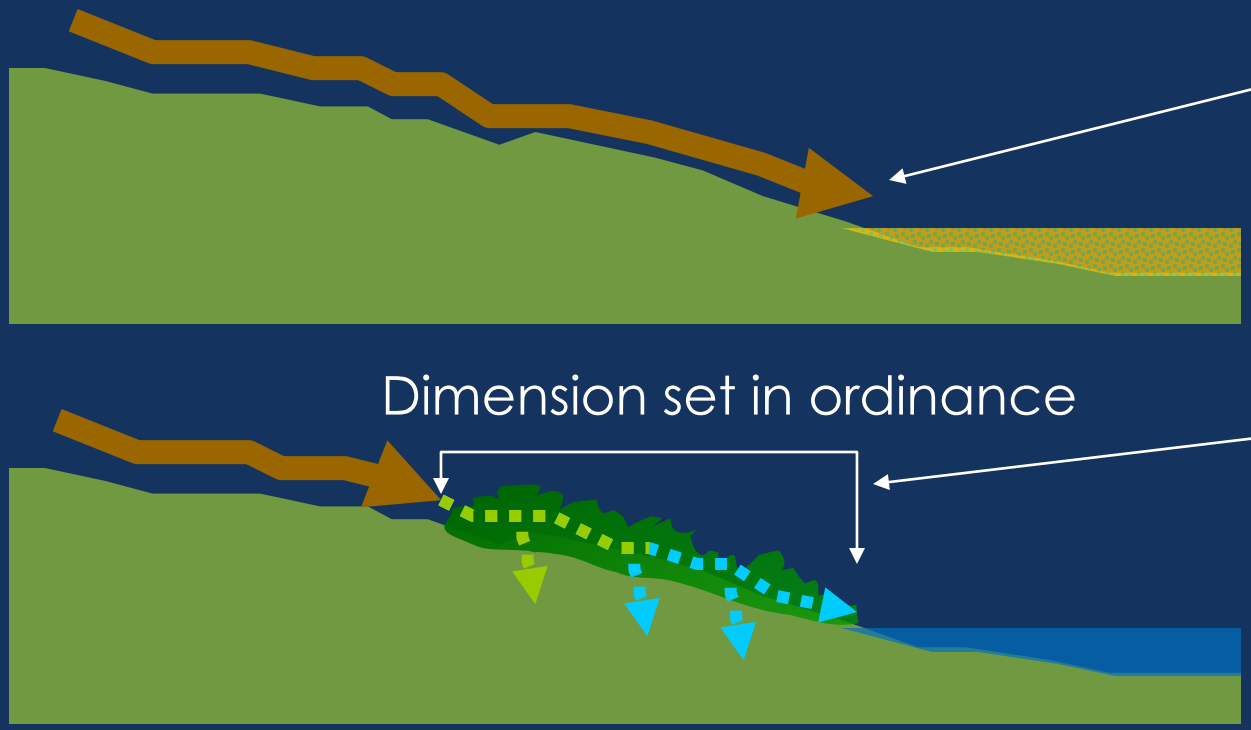
Buffers/setbacks for wetlands, water



No buffer – runoff is relatively unimpeded

Buffer – runoff is slowed, filtered, infiltrated before entering wetland or water body

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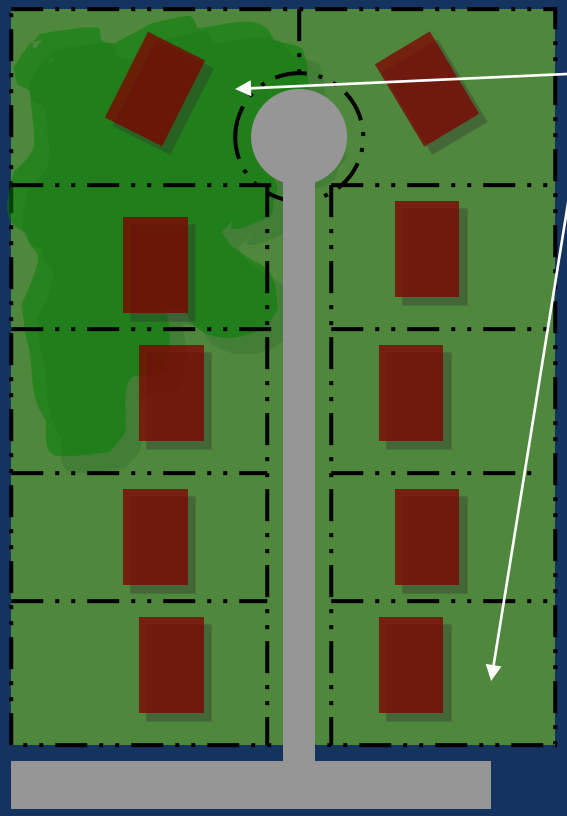
Use PUDs to negotiate infiltration, density transfer, better design

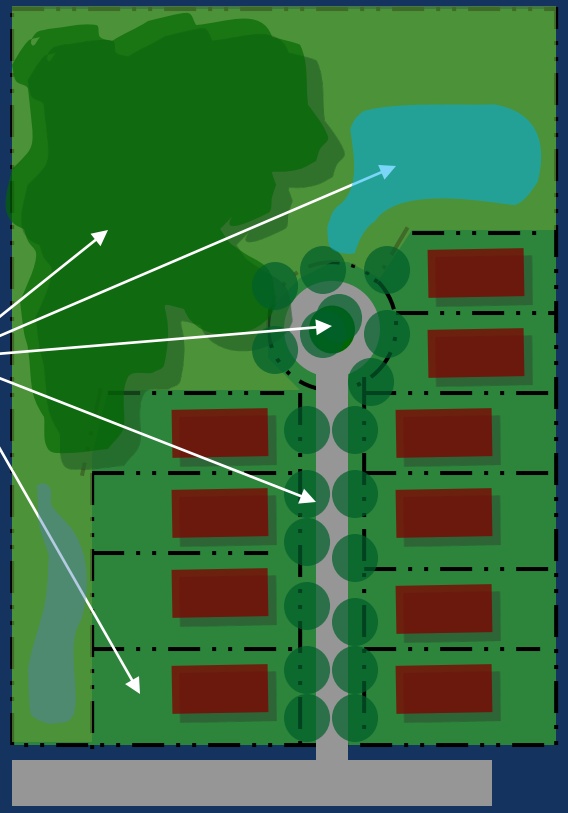


Standard Plat:

Private yards, trees lost, little infiltration

PUD:

Smaller lots, shorter street, more open space, woods saved, street trees added, ponding/ infiltration



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Conservation development: Identify natural features at start of process

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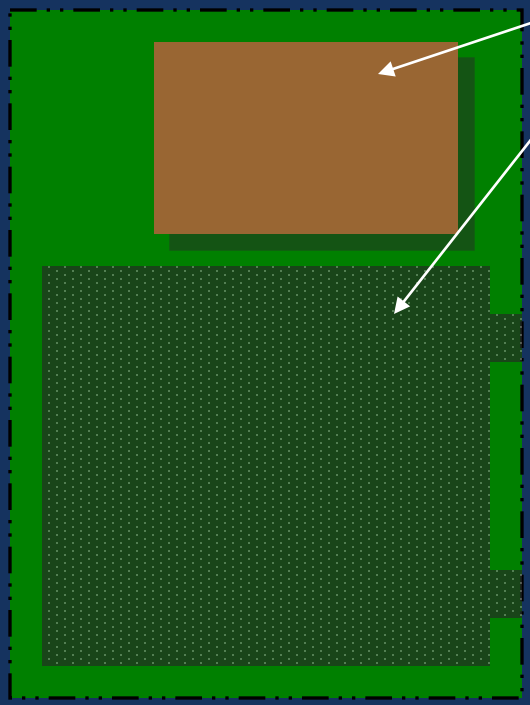
Parking standards – ratios, islands, landscaping, pervious pavement, infiltration



Building

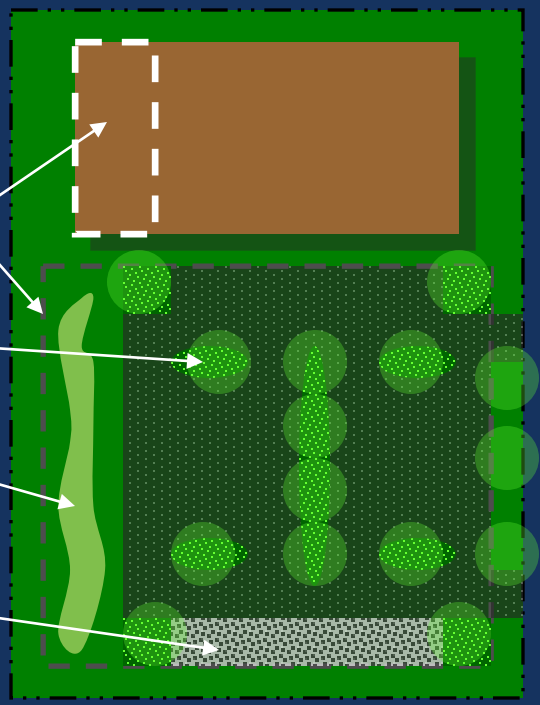
Parking lot

Lower parking ratios = more bldg area

Parking lot islands, landscaping

Require infiltration, rain gardens

Pervious paving for spillover parking



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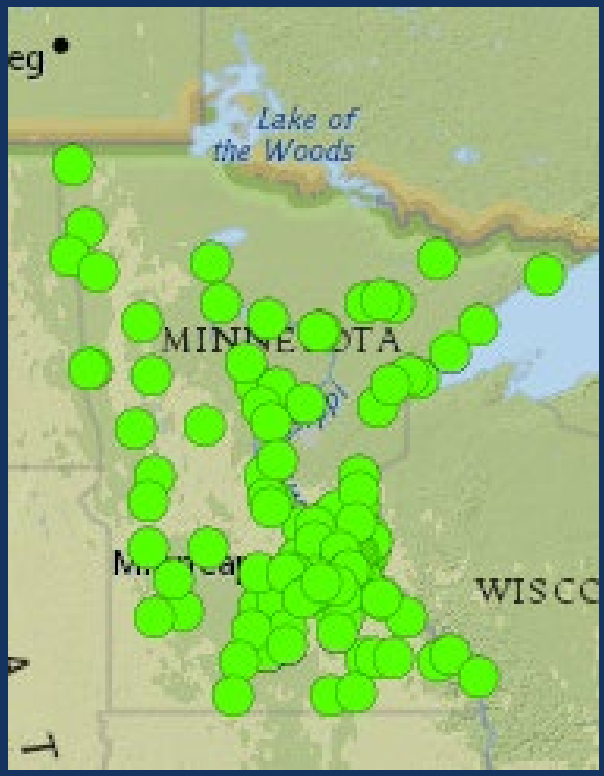
MN GreenStep Cities

Minnesota GreenStep Cities:

- *A voluntary challenge, assistance and recognition program to help cities achieve their sustainability and quality-of-life goals.*

- Metrics: city buildings & lighting, green buildings, city fleets, biking & walking, transportation modes, open space/parks, stormwater, wastewater, surface water, local food, jobs, etc.



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Breakout 1 - Environment

- Brainstorm environmental issues facing your communities – lakes, rivers, streams, wetlands, air pollution, contamination, flooding, etc.
- Select one issue to discuss as a group
- Suggest ways to address it and identify obstacles – political, financial, physical, etc.
- Share a list of specific challenges and possible solutions with the larger group when we reassemble

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Economy/ Profit

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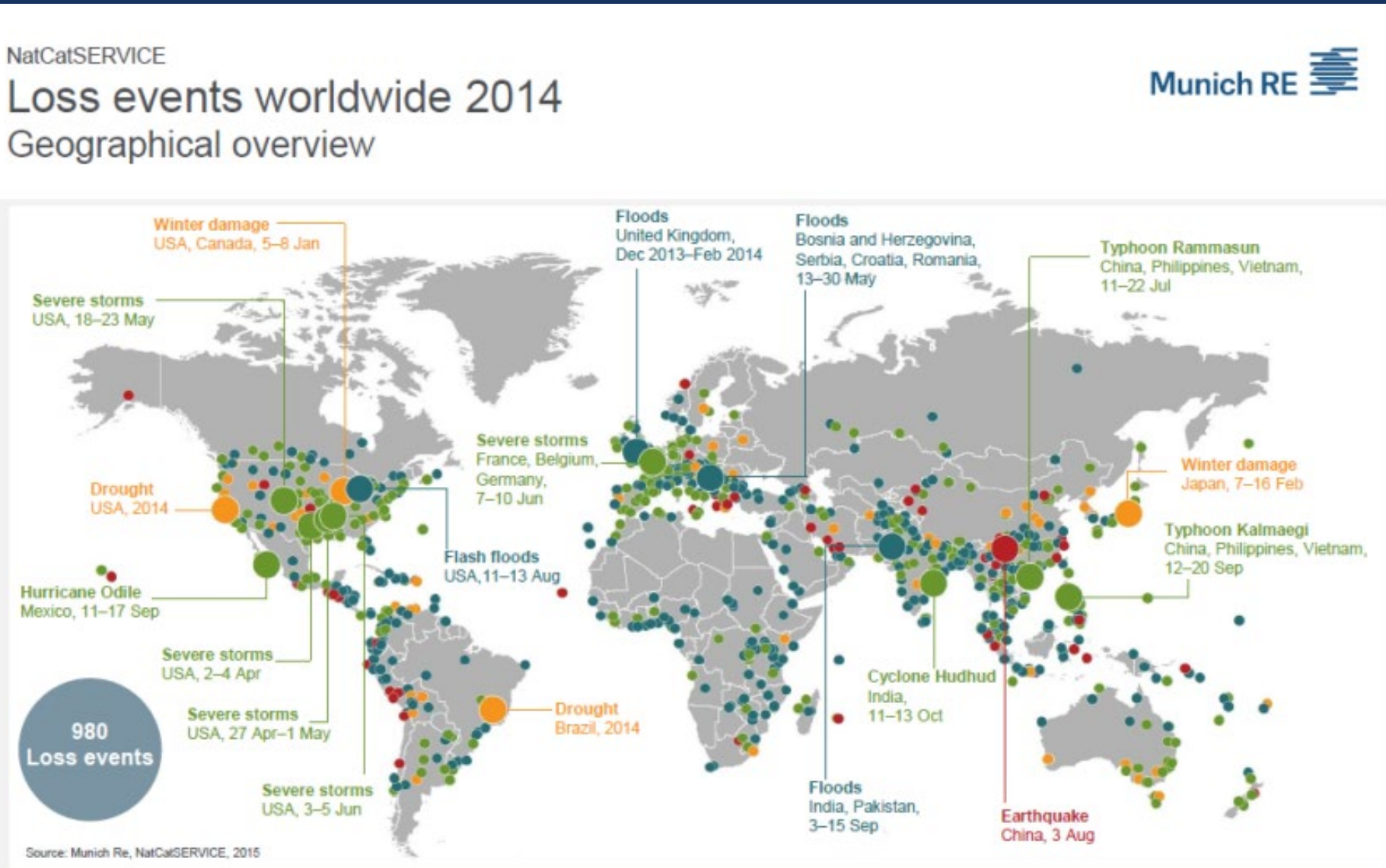
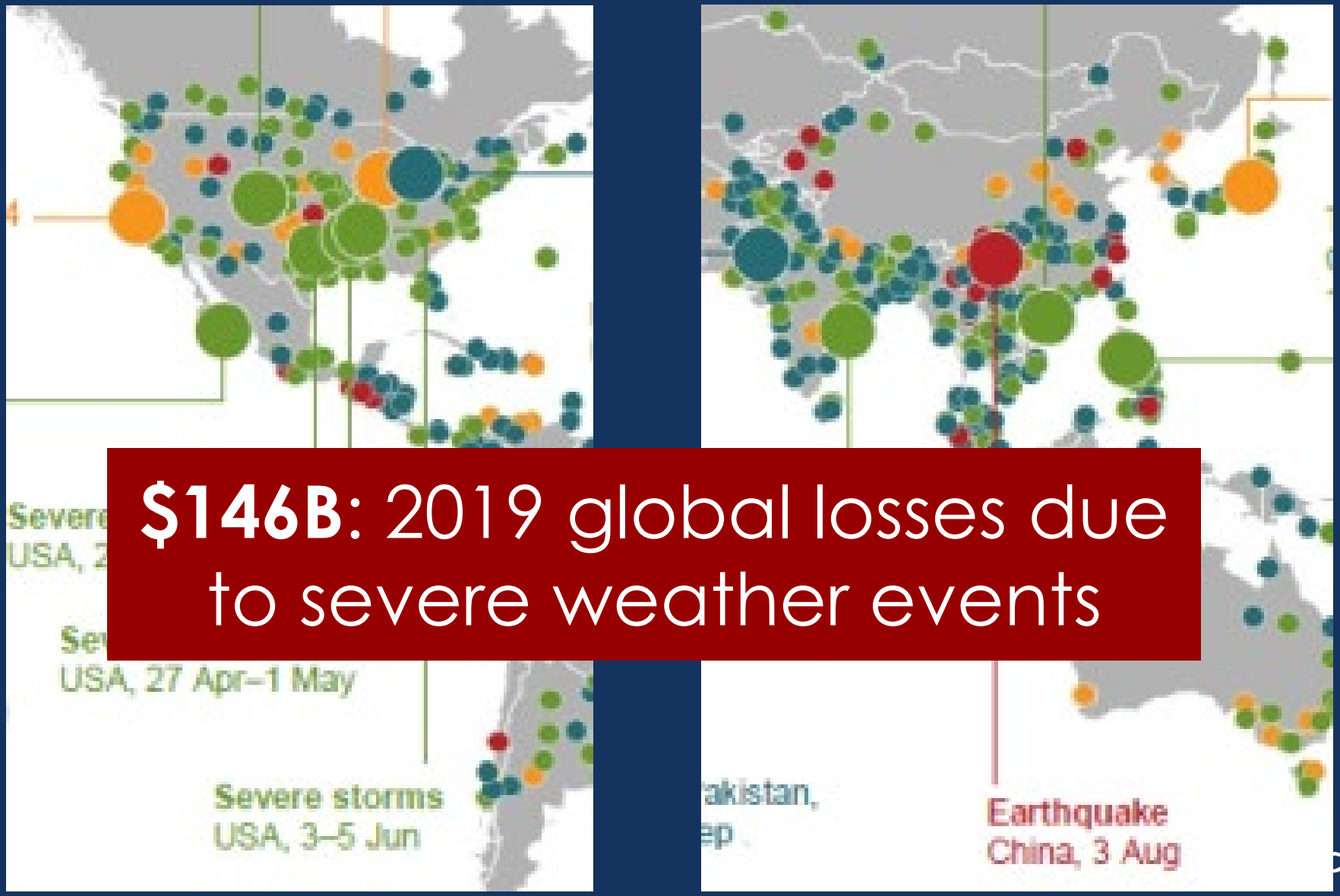
Climate Change & Insurance

- Worldwide catastrophic events
- The industry collects data to improve underwriting efforts
- Carriers look for resilient building methods

Climate Change & Insurance



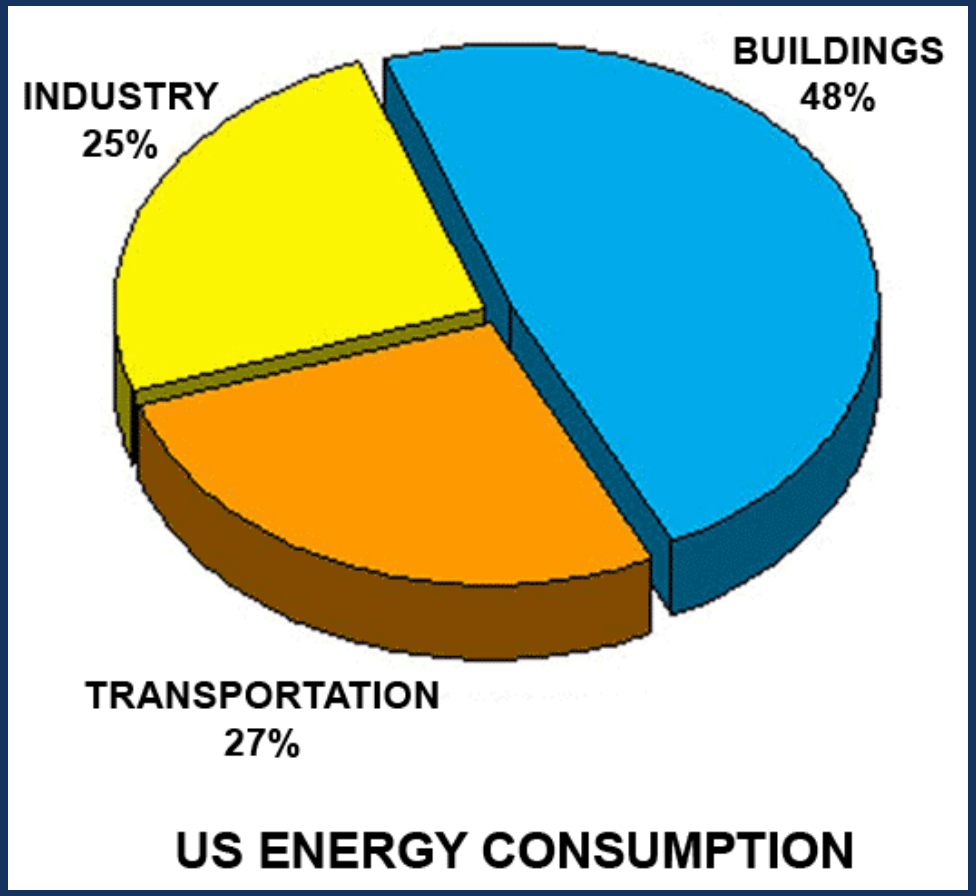
Climate Change & Insurance



$146B: 2019 global losses due to severe weather events

Total U.S. Energy Use

- Buildings ±1/2
- Transportation ± 1/4
- Industry ± 1/4
- Planning and urban design mostly affect transportation, less buildings and industry



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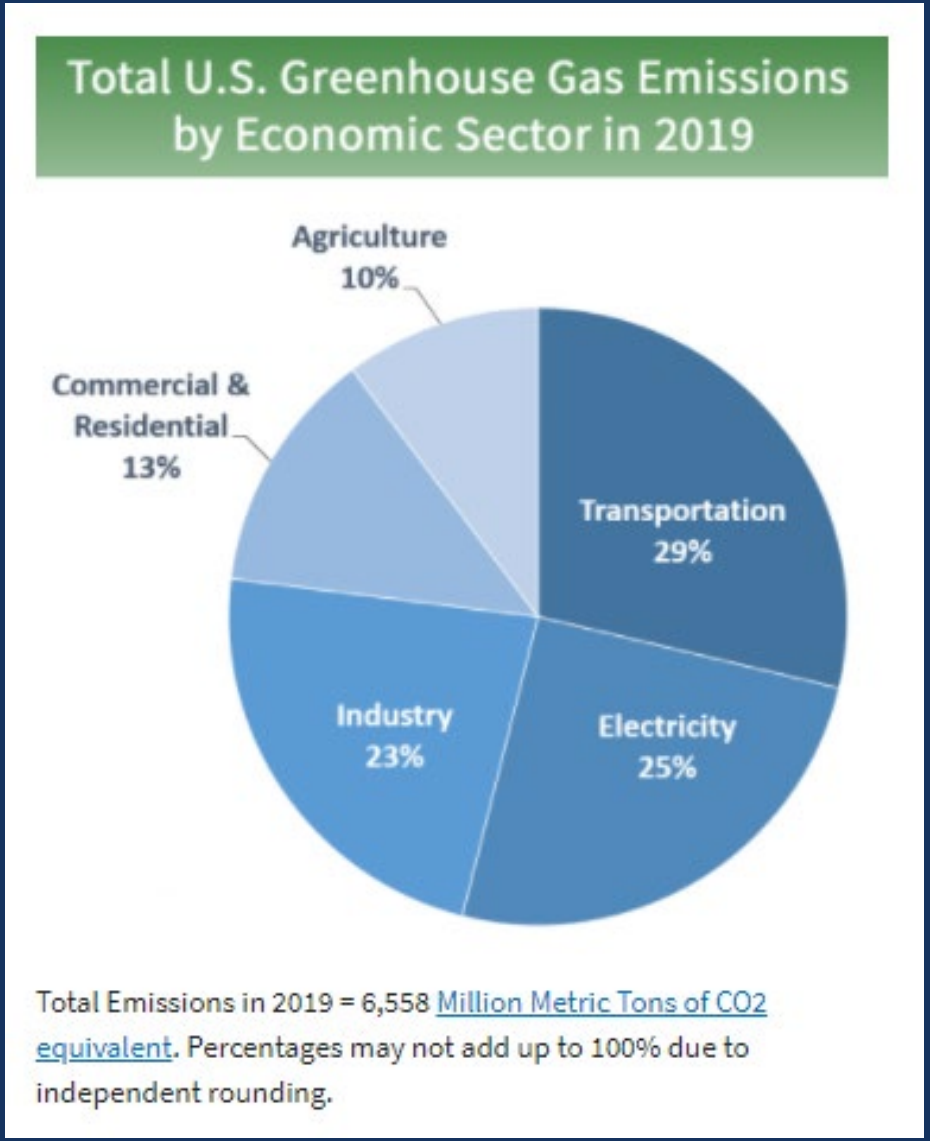
Sources of Greenhouse Gases

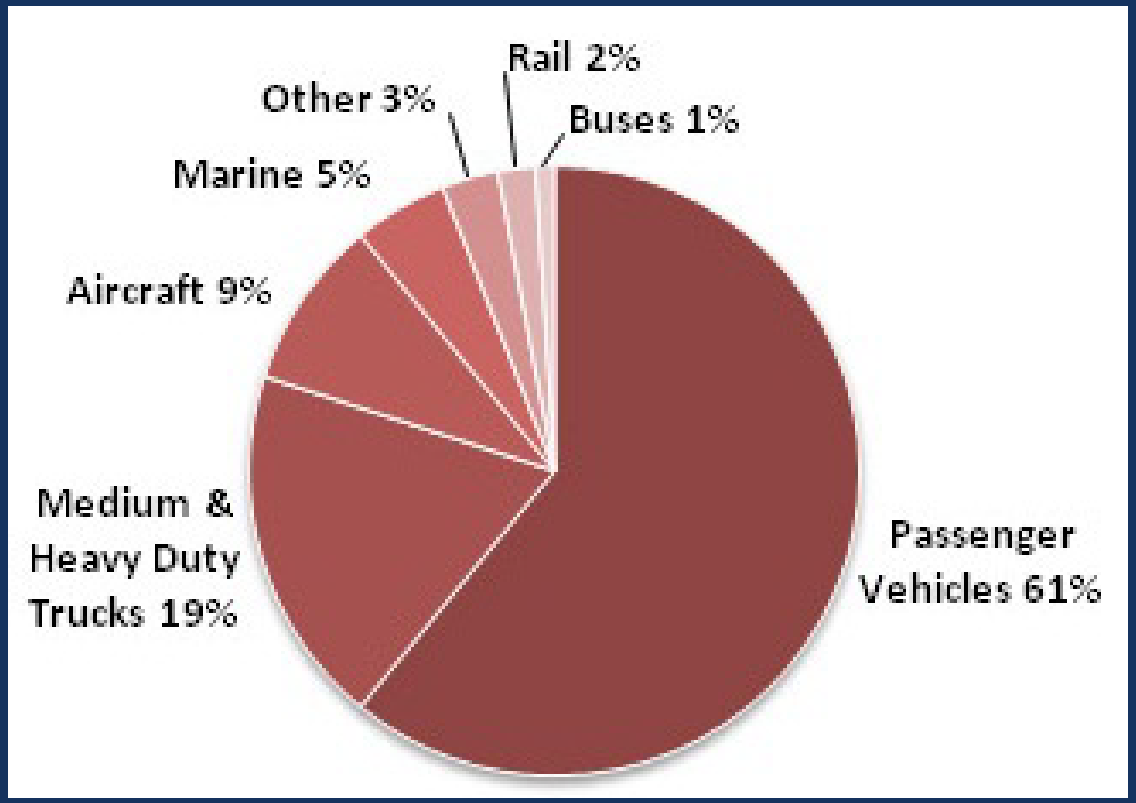
- **Transportation 29%**
- Electricity 25%
- Industry 23%
- Commercial/ Residential 13%
- Agriculture 10%



Transportation Modes

Energy for Transportation:

- Passenger cars: 61%
- Truck distant 2nd: 19%
- Rail and buses: 3%



Reducing car trips is the best way to save energy in transportation

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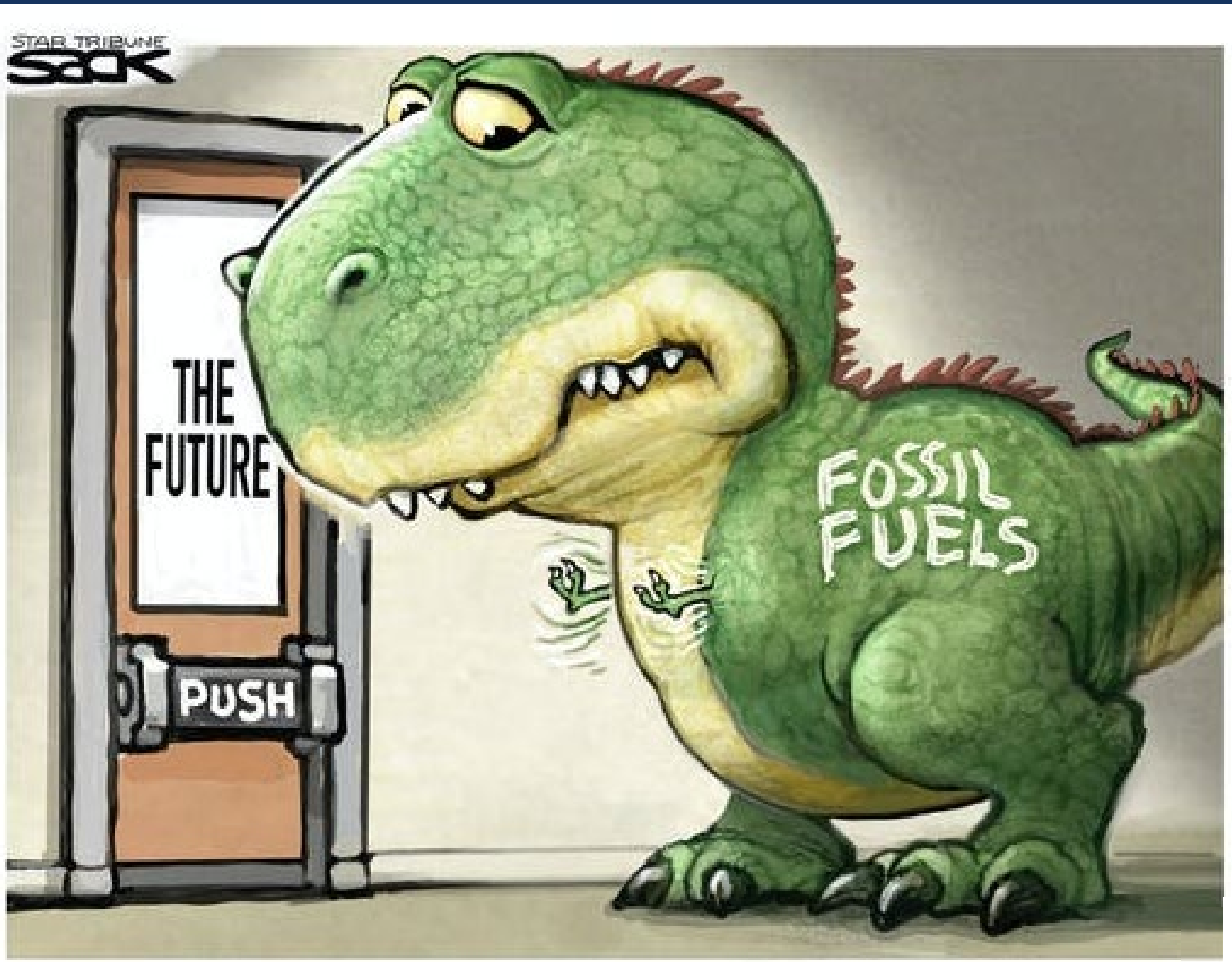
STAR TRIBUNE
SACK
THE FUTURE
PUSH
FOSSIL FUELS

Automobile < > Sedentary Life

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Cost of Unhealthy Living

Obesity

- $480B direct health care cost (2016)
- $1.24T annually, indirect costs: value of lost work due to short-term absences, long-term disability, premature death
- 47% of total cost of chronic disease is due to obesity
- Insurance – higher life insurance premiums, more for workers' compensation
- Wages – lower wages, HH income
- Obese adults:
  3.4% in 1962, 39.8% in 2016

$480 Billion
annually
direct cost

$1.24 Trillion
annually
indirect costs

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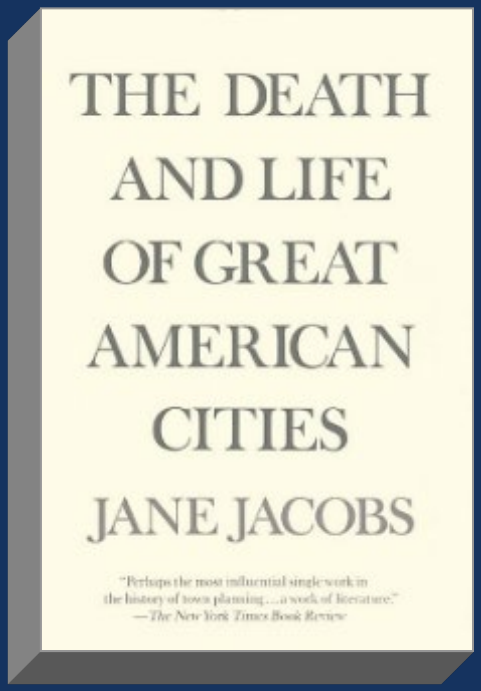
Jane Jacobs, "The Death and Life of Great American Cities", 1961



- Studied American cities, 18th, 19th, 20th Centuries
- Researched where neighborhoods were stable, life most vibrant, people happiest, economy most viable
- Best example: Boston's North End

"Perhaps the most influential single work in the history of town planning."

– NY Times Book Review

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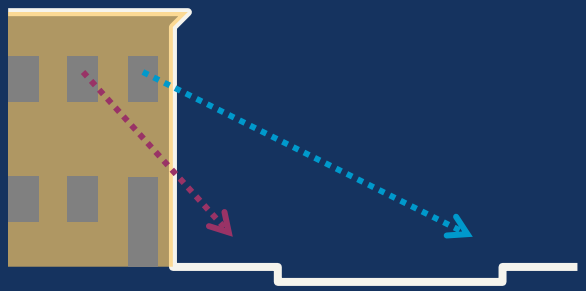
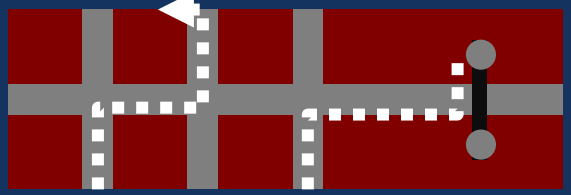
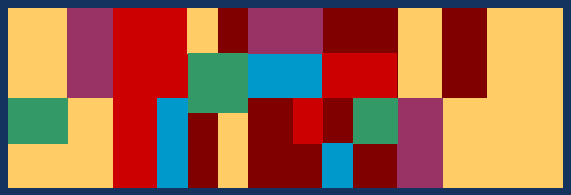
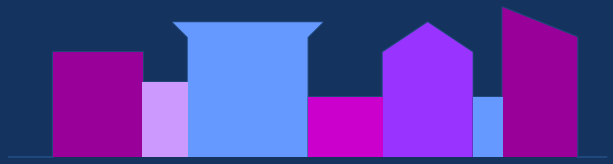
Jane Jacobs, "The Death and Life of Great American Cities", 1961

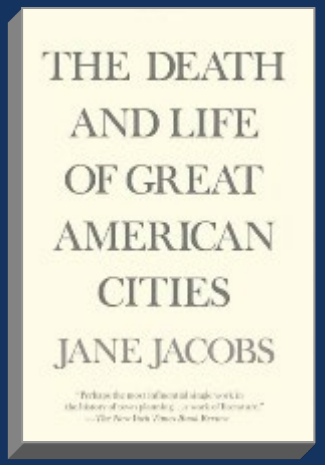
- **Eyes of the street** – safety, health
- **Short blocks** – easy access, shorter trips, more walking
- **Mix of primary uses** –close, vibrant economy
- **Mix of age of buildings** – reuse of older buildings











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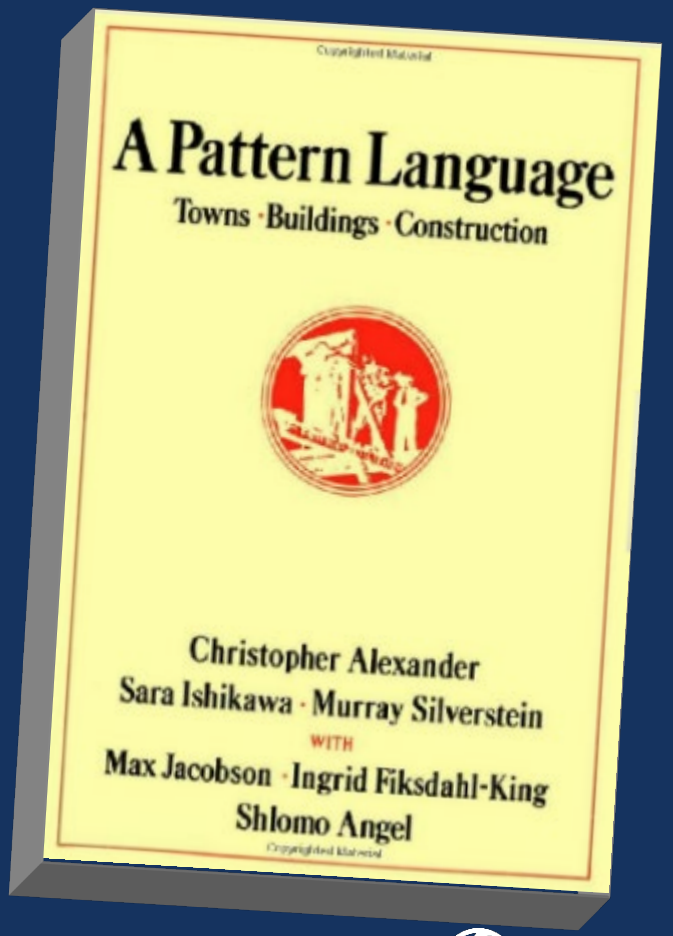
Christopher Alexander, "A Pattern Language", 1977

Studied cities and towns all over the world – modern, ancient & third-world cultures

Developed series of 200+ "patterns" – rules, design ideas – to be applied universally

Organized by Region, Major City, Communities & Small Towns, Neighborhoods, House Clusters, etc.



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Christopher Alexander, "A Pattern Language", 1977

Recognizes need for cities, but with open space, "green corridors"

Continuous sprawling urbanization destroys life, and makes cities unbearable. But the sheer size of cities is also valuable and potent.

People feel comfortable when they have access to the countryside, experience of open fields, and agriculture; access to wild plants and birds and animals. For this access, cities must have boundaries with the countryside near every point. At the same time, a city becomes good for life only when it contains a great density of interactions among people and work, and different ways of life. For the sake of this interaction, the city must be continuous—not broken up. In this pattern we shall try to bring these two facts to balance.

Let us begin with the fact that people living in cities need contact with true rural land to maintain their roots with the

3 CITY COUNTRY FINGERS**

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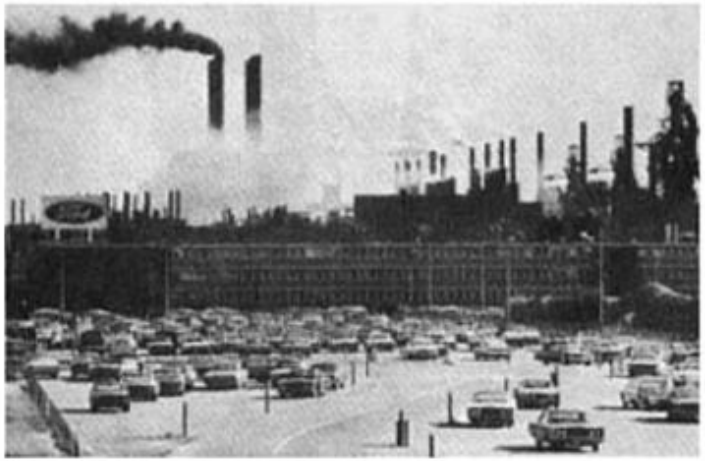
Christopher Alexander, "A Pattern Language", 1977

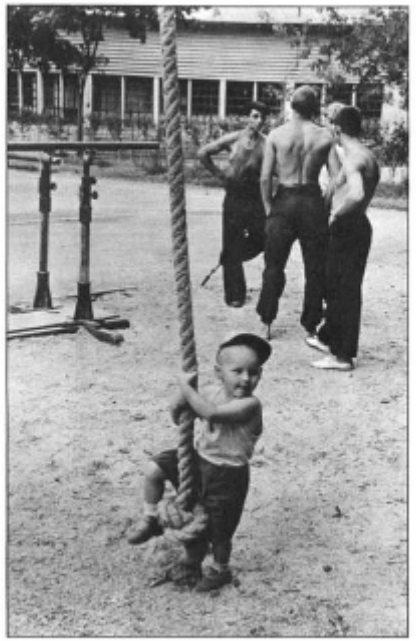
Work closer to home

The artificial separation of houses and work creates intolerable rifts in people's inner lives.

In modern times almost all cities create zones for "work" and other zones for "living" and in most cases enforce the separation by law. Two reasons are given for the separation. First, the work-



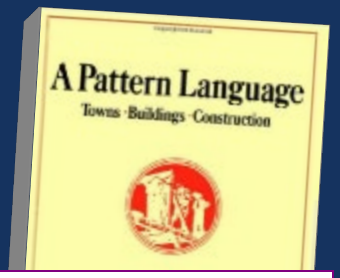
9 SCATTERED WORK**



51

Christopher Alexander, "A Pattern Language", 1977

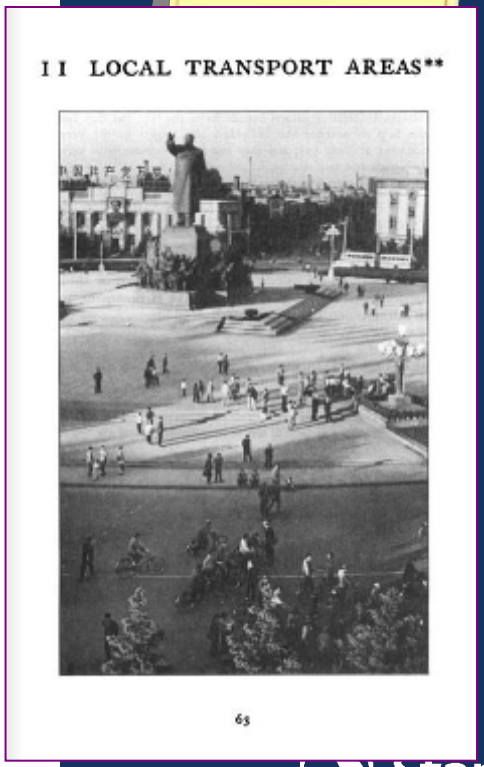
Design cities to avoid car trips



Cars give people wonderful freedom and increase their opportunities. But they also destroy the environment, to an extent so drastic that they kill all social life.

The value and power of the car have proved so great that it seems impossible to imagine a future without some form of private, high-speed vehicle. Who will willingly give up the degree of freedom provided by cars? At the same time, it is undeniably true that cars turn towns to mincemeat. Somehow local areas must be saved from the pressure of cars or their future equivalents.

It is possible to solve the problem as soon as we make a distinction between short trips and long trips. Cars are not very good for short trips inside a town, and it is on these trips that they do their greatest damage. But they are good for fairly long trips, where they cause less damage. The problem will be solved if towns are divided up into areas about one mile across, with the idea that cars may be used for trips which leave these areas, but that other, slower forms of transportation will be used for all trips inside these areas—foot, bike, horse, taxi. All it needs,



II LOCAL TRANSPORT AREAS**

65

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Andres Duany & Elizabeth Plater-Zyberk "The New Urbanism"

"The Lexicon of the New Urbanism", 2000

"Towns and Town-Making Principles", 1991

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"The New Urbanism"

- Historical neighborhood design ideas
- Multi-story required
- Buildings at street
- Public squares
- Design guidelines
- "Form-based" - few land use regulations
- Varied neighborhoods

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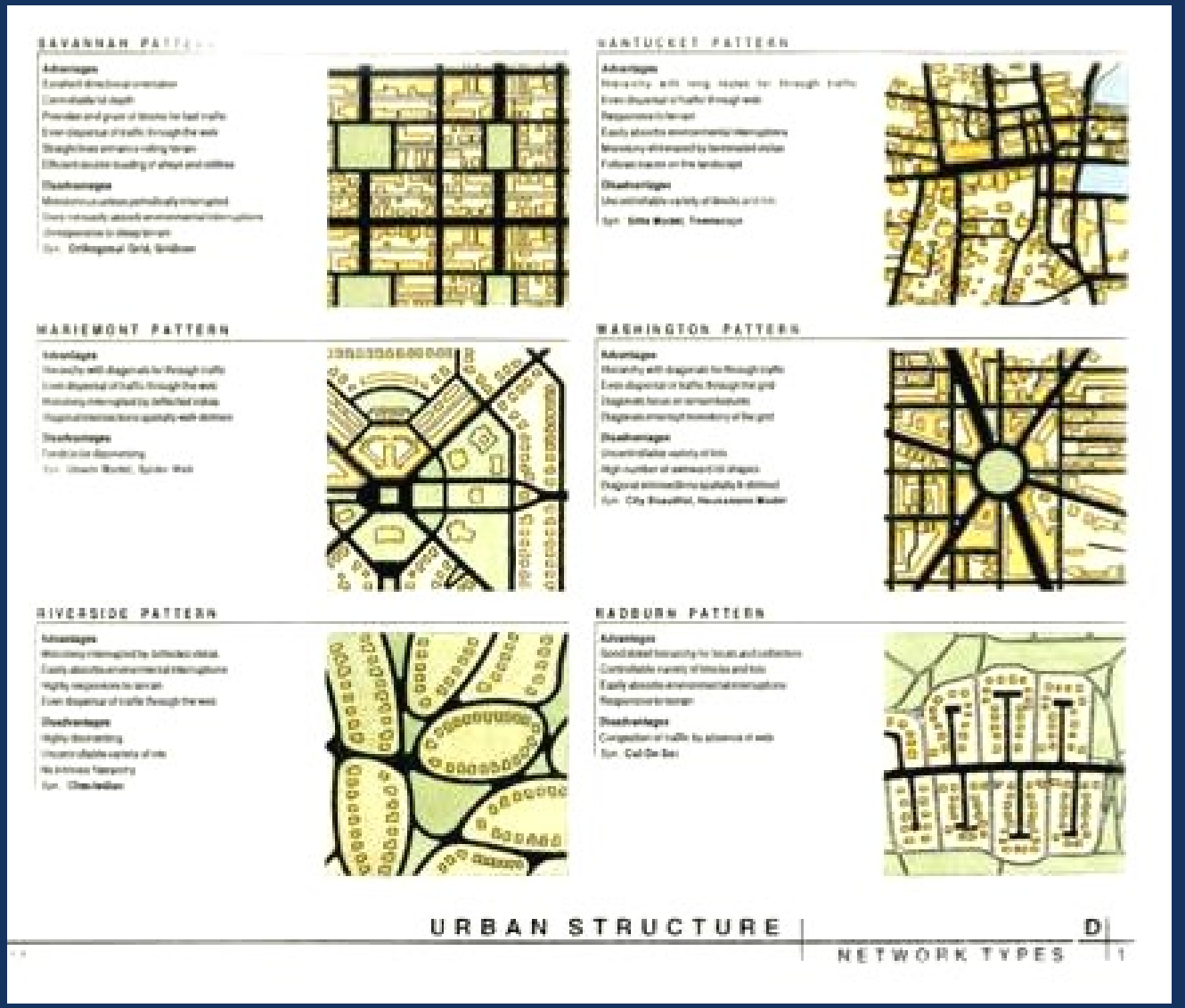
"The New Urbanism"

Neighborhood patterns of historic American cities: Savannah, Nantucket, Washington, Radburn, etc.

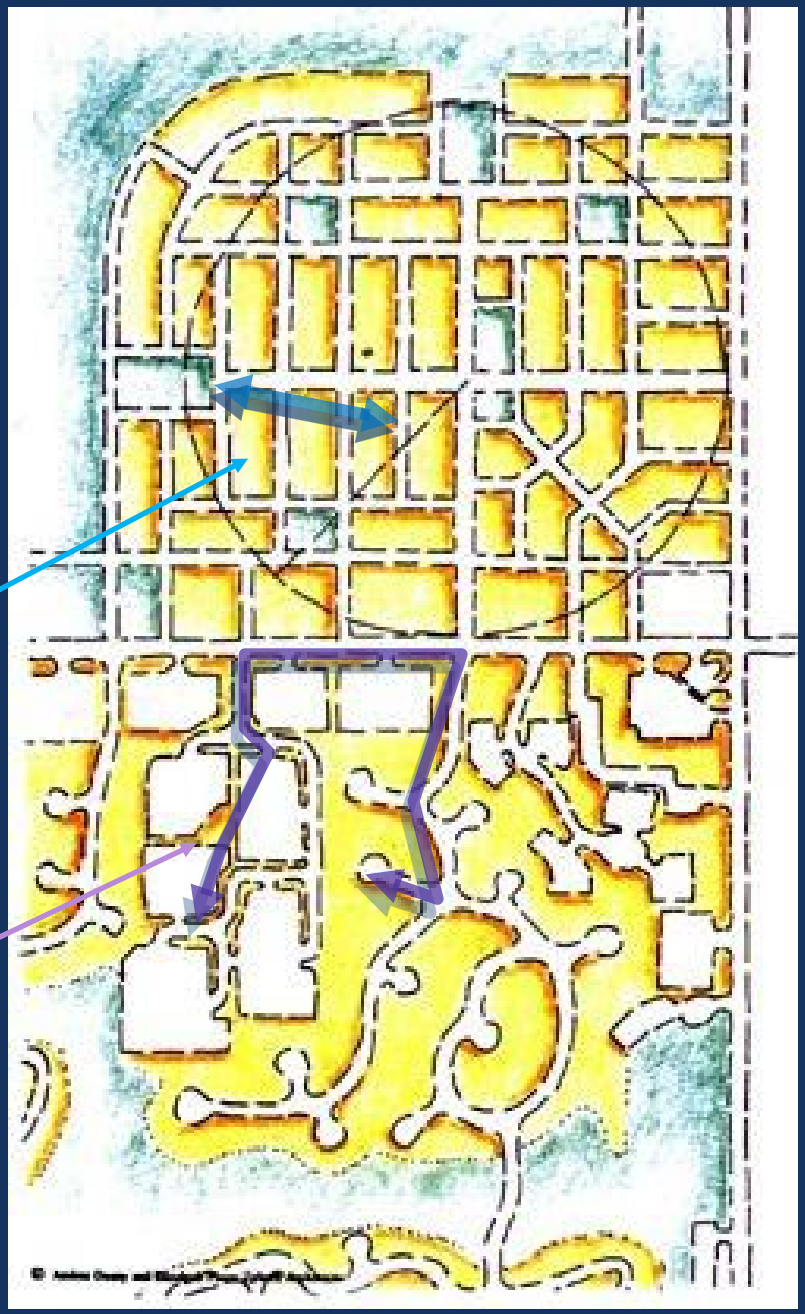


"The New Urbanism"

Compare "traditional" neighborhood with "suburban sprawl" neighborhood

Traditional roadway network makes trips shorter, more convenient

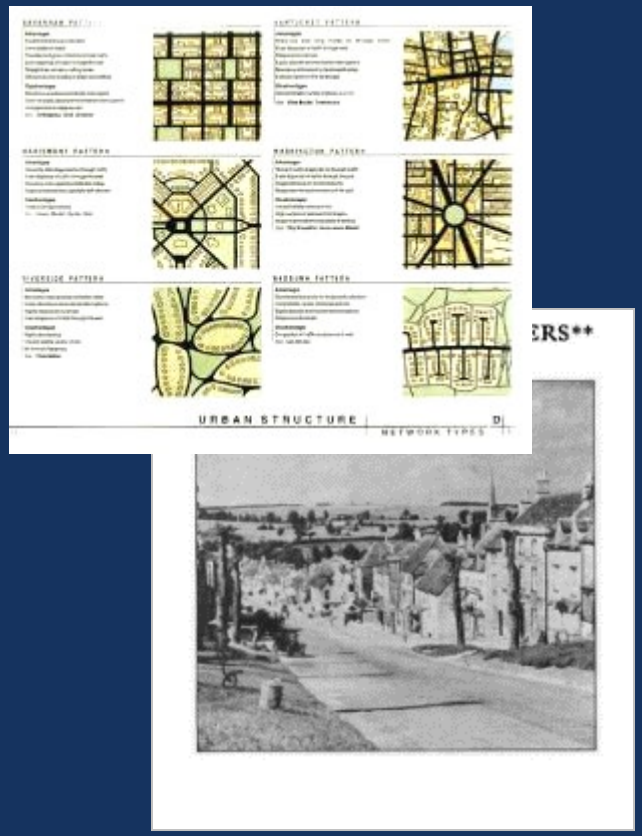
Suburban model favors cars over pedestrians



Sustainable Cities – Historical Context

Many contributors to *current* sustainable cities movement studied *older* cities
Many *traditional* patterns of development serve to:

- Save energy
- Promote healthier living
- Protect the environment
- Create viable economic activity



Sustainable models are emerging, incorporating *old* and *new* ideas and patterns

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Social/ People

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Design, Sustainability, Health

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What is not Sustainable?

Long, individual, gas-powered, stop-and-go car trips
Stress, inactivity
Concrete, asphalt
Air pollution
Water pollution
Hazardous materials
Noise
Isolation

What *is* Sustainable?

Short trips, more transit
Walking, biking, recreation
Green space, vegetation, wildlife
Clean air
Clean water
Clean "cradle-to-cradle" building materials
Quiet
Interaction with people

Inactive Living

Risks of Sedentary Lifestyle

- Obesity
- Heart disease
- High blood pressure
- High cholesterol
- Stroke
- Metabolic syndrome
- Type 2 diabetes
- Cancer (including colon, breast, & uterine cancers)
- Osteoporosis & falls
- Depression & anxiety

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Healthy Communities/Healthy People

- What creates health?
- Blue Zones
- Health In All Policies
- Design Matters
- Food Access Planning Guide

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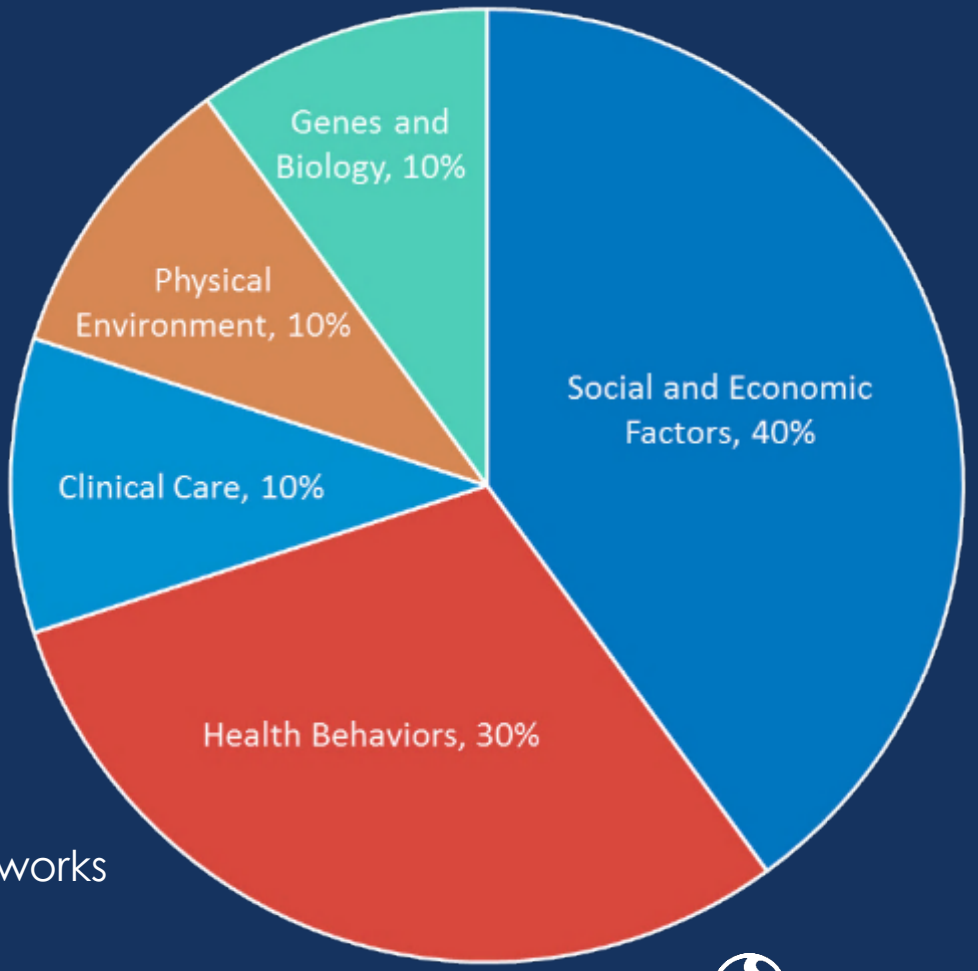
What Creates Health?



Tarlov, A.R. (1999). Public policy frameworks for improving population health.
Source: BRFSS/CDC

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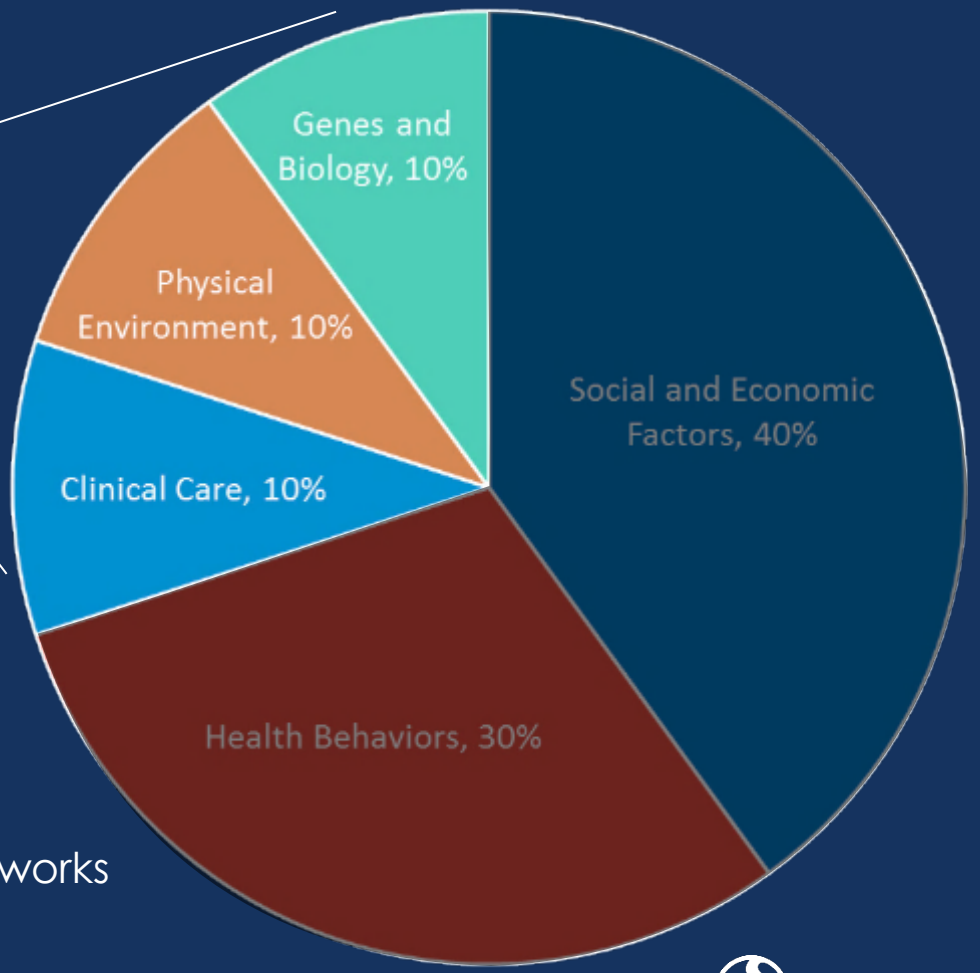
What Creates Health?

- Clinical Care, Physical Environment, Genes & Biology:

30%



Tarlov, A.R. (1999). Public policy frameworks for improving population health.
Source: BRFSS/CDC

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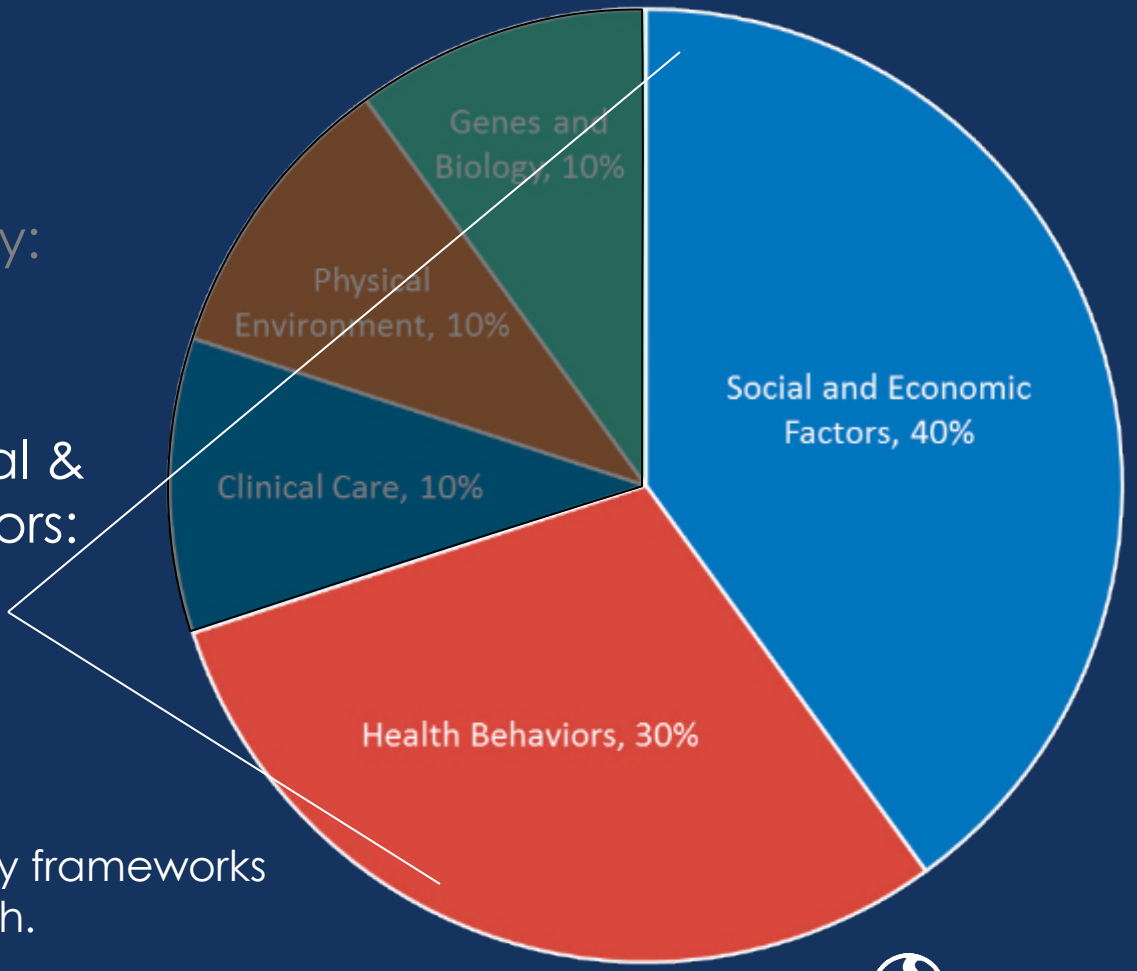
What Creates Health?

- Clinical Care, Physical Environment, Genes & Biology: **30%**
- Behaviors, Social & Economic Factors: **70%**



Tarlov, A.R. (1999). Public policy frameworks for improving population health.
Source: BRFSS/CDC

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Blue Zones

- Began as a National Geographic expedition to find the longest living cultures
- Evolved into a recipe for living longer
- A community well-being initiative designed to make healthy choices through permanent changes to environment, policy, and social networks

BLUE ZONES®
Live Longer, Better®

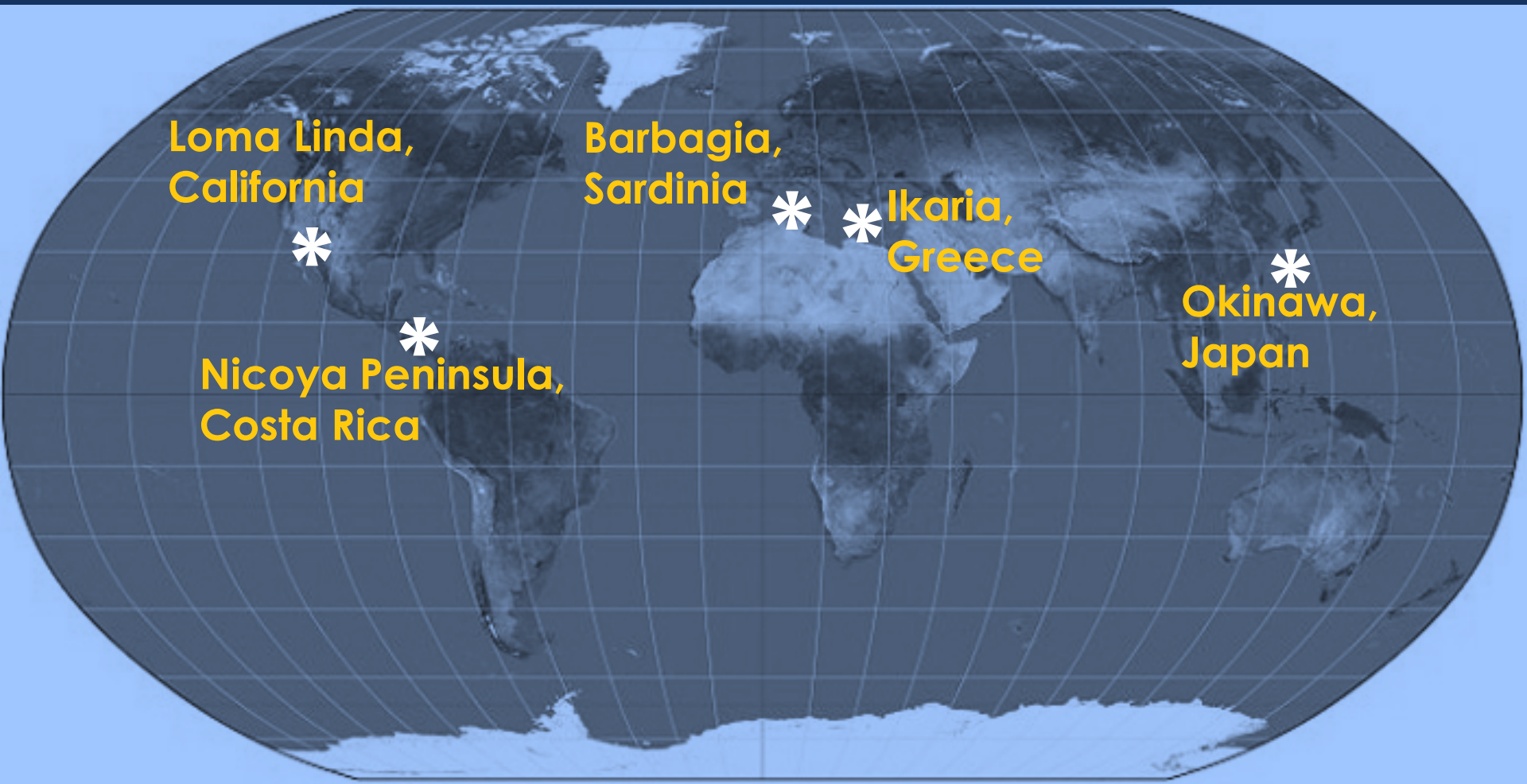
History

What began as a National Geographic expedition to find the longest living cultures evolved into a recipe for living longer that we're taking across the country.

Blue Zones Projects

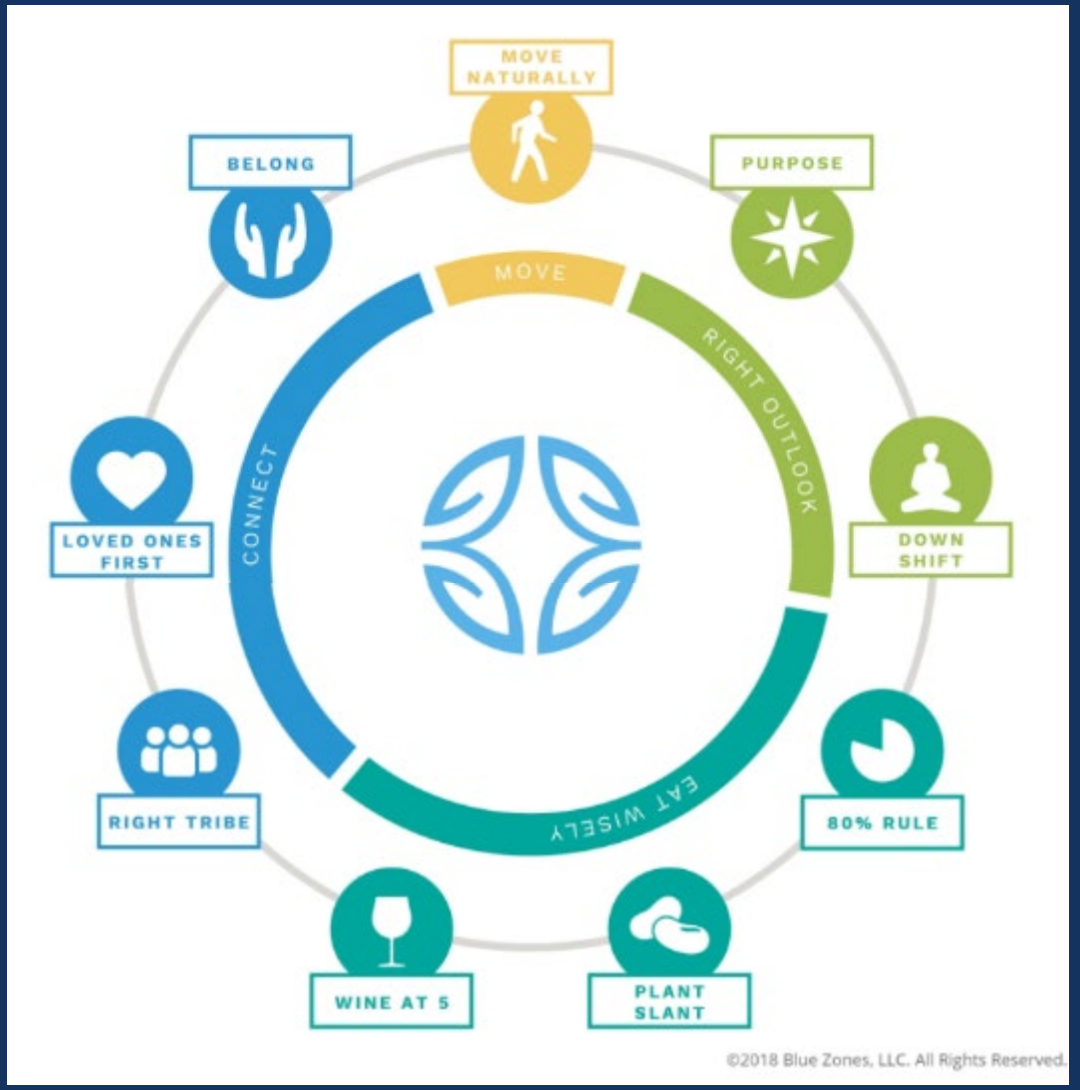
A community well-being improvement initiative designed to make healthy choices easier through permanent changes to environment, policy, and social networks.

Blue Zones


Loma Linda, California
Barbagia, Sardinia
Ikaria, Greece
Okinawa, Japan
Nicoya Peninsula, Costa Rica

Blue Zones

- Move Naturally
- Purpose
- Down Shift
- 80% Rule
- Plant Slant
- Wine @5
- Belong
- Loved Ones First
- Right Tribe



Blue Zones, Albert Lea MN

Albert Lea (starting in 2009):

- Built & rented 46 new community gardens.
- 44% of adults participated in walking groups, logging >75 million steps in a year.
- Nearly 1,000 people attended workshops.
- Schools banned eating in hallways and stopped selling candy for fundraisers.

After one year:

- Participants added an average 2.9 (projected) years to their lifespan.
- City workers healthcare claims dropped 49%.
- Businesses saw 21% decline in absenteeism.

Blue Zones

Albert Lea:

- "The Blue Zones Project helped our community set amazing, aggressive, and achievable strategies that moved the public health agenda further in ten months than I could have expected in ten years."

- Lois Ahern, Director of Freeborn County Health (retired)

Health In All Policies

DEPARTMENT OF HEALTH

- Overall Public Health
- Healthy Eating
- Active Living
- Housing
- Transportation
- Infrastructure & Utilities

Health In All Policies

- Natural & Cultural Resources, Mining, Timber
- Recreation, Open Space, Cultural Arts
- Economic Development
- Intergovernmental Cooperation
- Land Use
- Community Facilities

Food Access Planning Guide

- Diet is a significant health issue
- Access to healthy food is unequal and affects many other issues
- The *Minnesota Food Charter* seeks to put health at the center of policies and systems

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Design Matters

DESIGN MATTERS

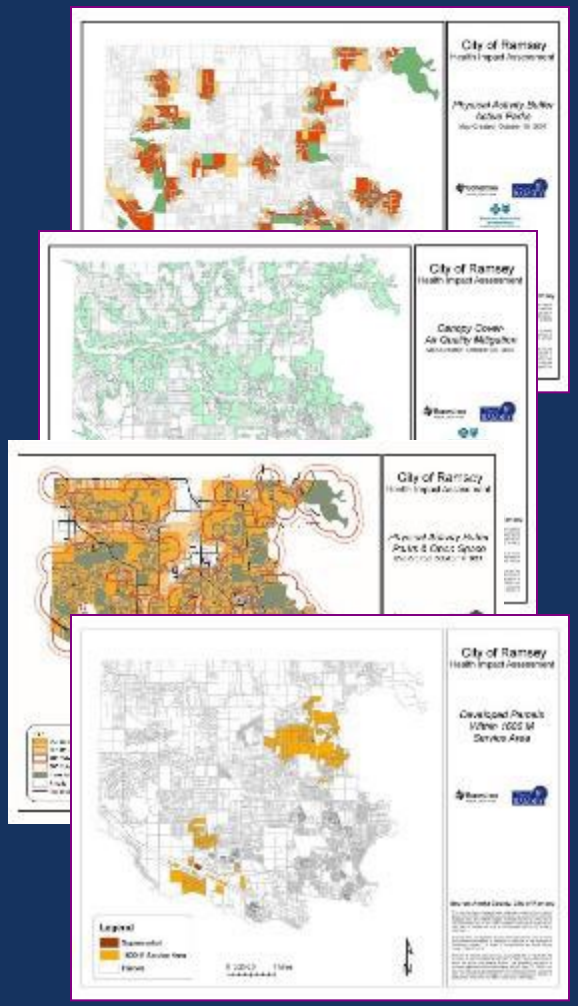
BlueCross BlueShield Minnesota

- Blue Cross Blue Shield is leading the effort to transform our built environment in ways that improve health
- Walkable places, reduced car trips, social interaction, transit, good food, clean air & water – all shown to be healthier places

Health Impact Assessment (HIA), Ramsey, MN

Topics addressed in the HIA, backed by research:

- Accessibility
- Air Quality
- Environment and Housing Quality
- Food
- Mental Health
- Physical Activity
- Safety
- Social Capital
- Water Quality



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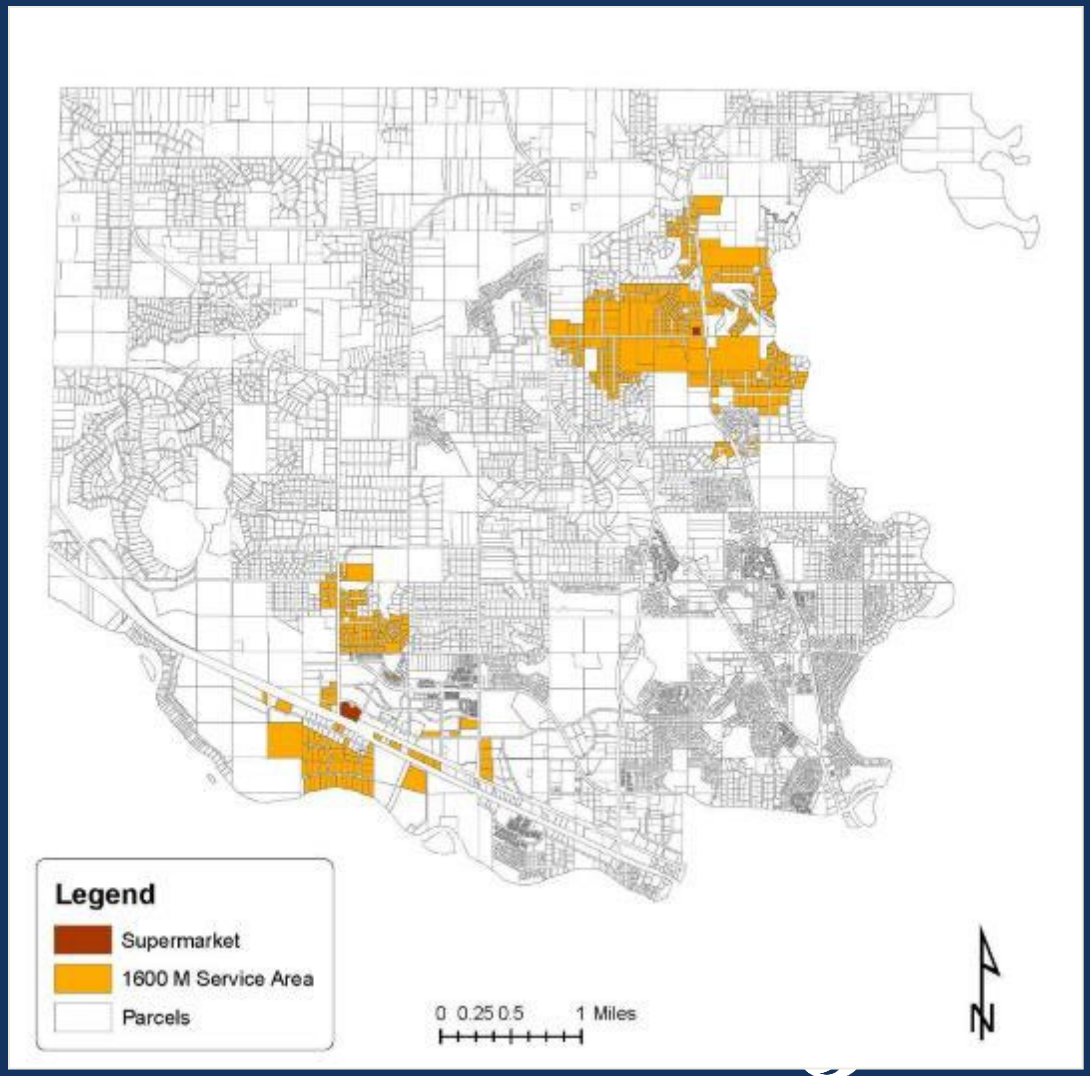
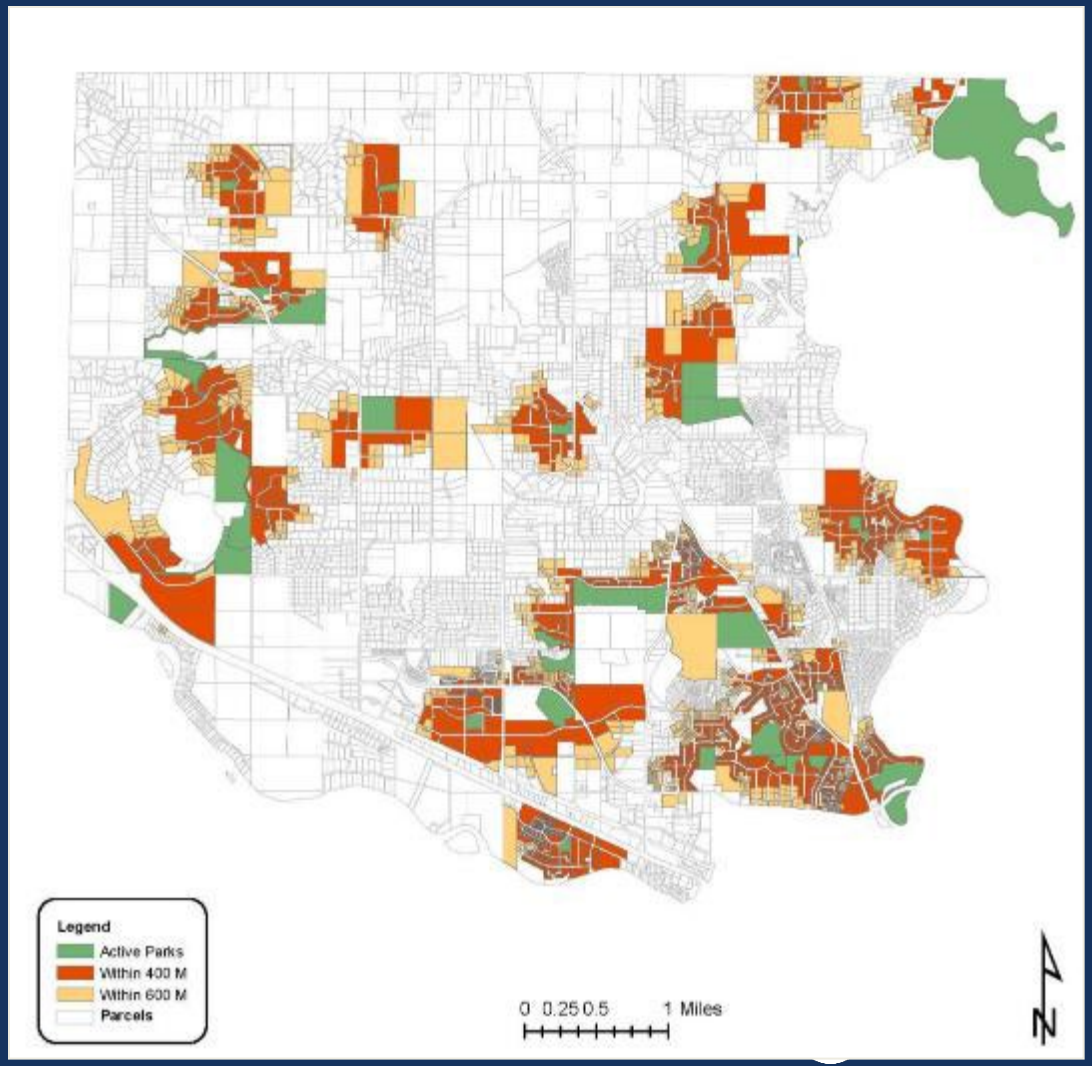
Ramsey, MN Health Impact Assessment (HIA)

- Food: developed parcels within 1 mile of a grocery store selling fresh produce



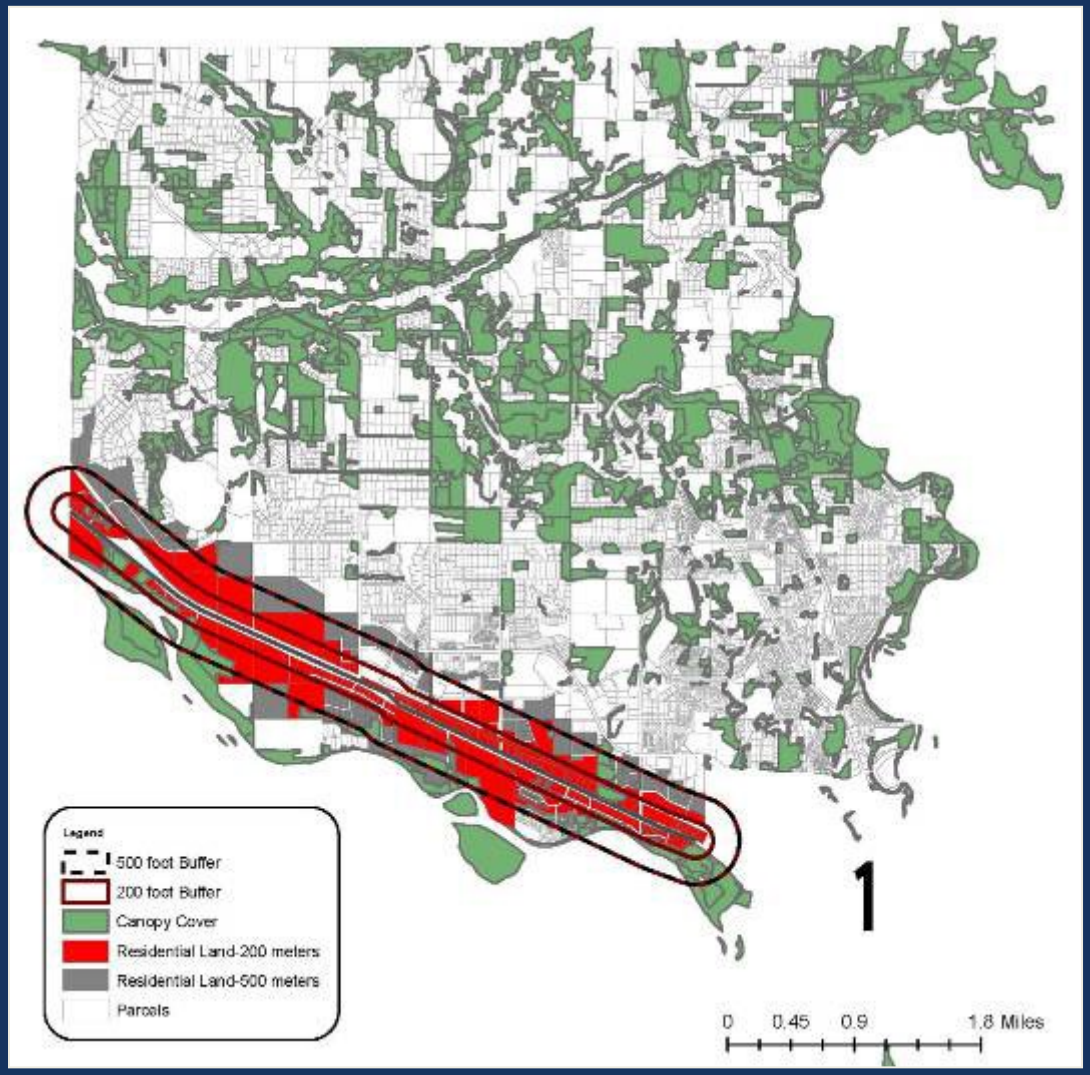
Ramsey, MN Health Impact Assessment (HIA)

- Physical Activity: developed parcels within 1/4 mile and 3/8 mile of an active park

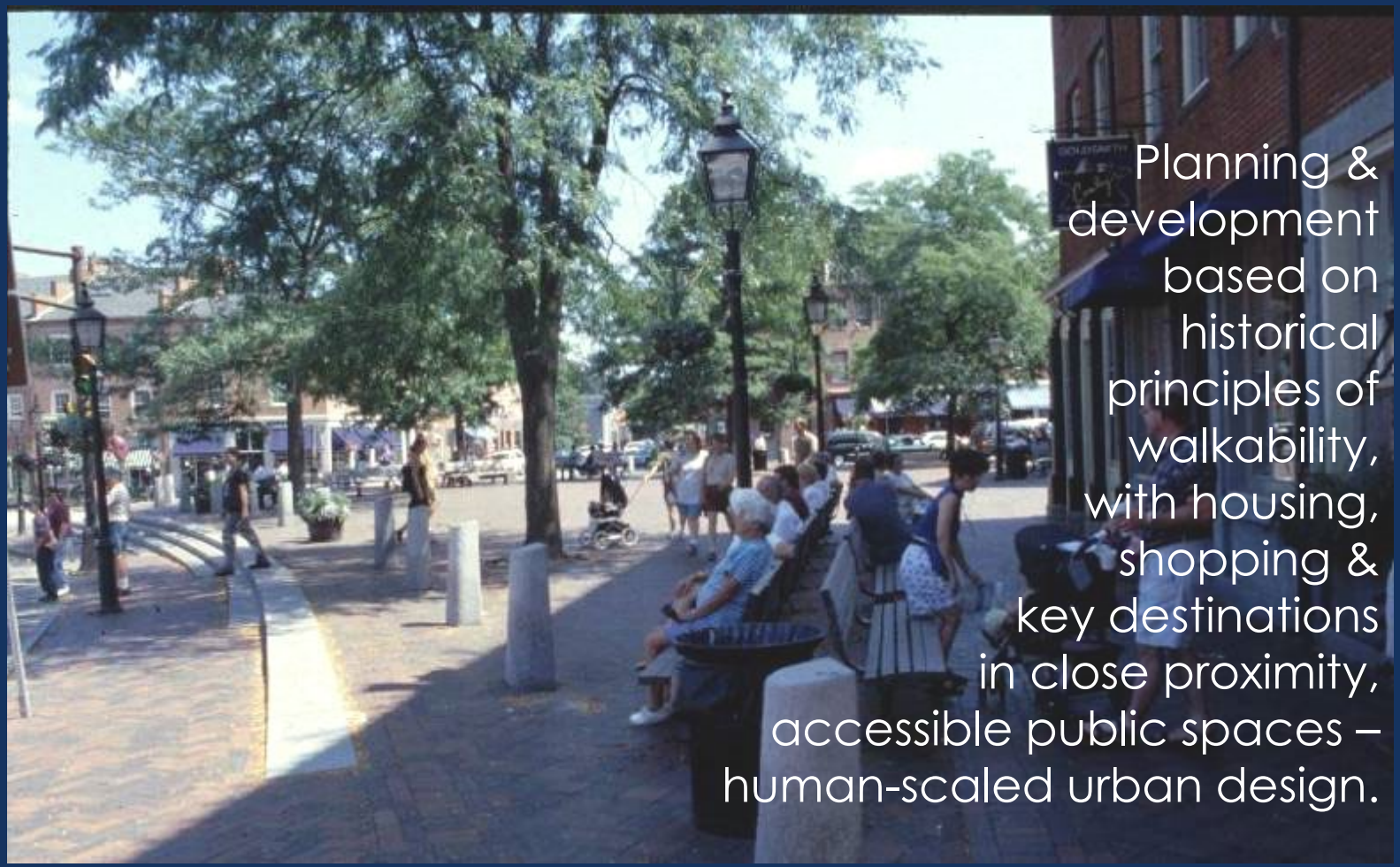


Ramsey, MN Health Impact Assessment (HIA)

- Air Quality: residential land close to a freeway (600-1,600 feet)



Neo-Traditional, New Urbanist



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Burnsville Heart of the City

Nicollet Commons Park
Mixed Use

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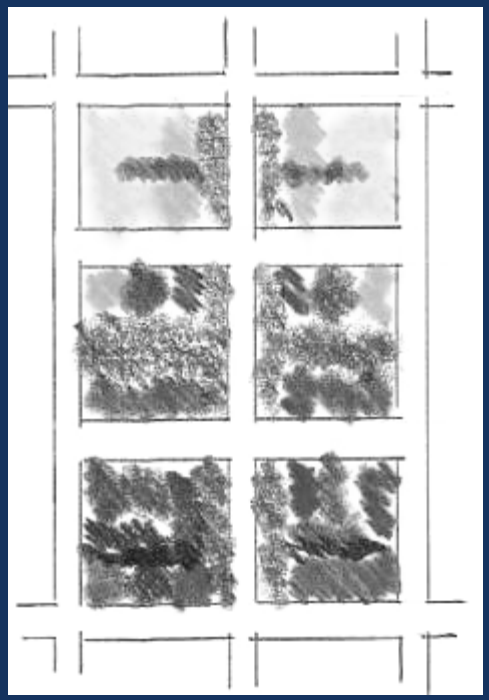
Mixed Uses

Encourage a mixture of uses

Mix uses on each block if possible



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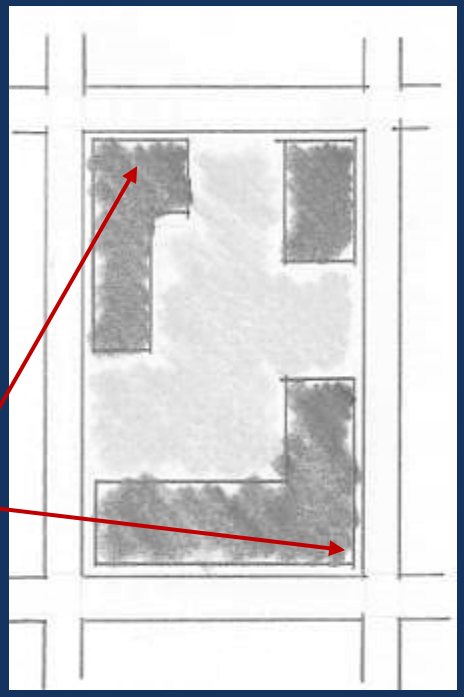
Buildings Close to the Street

Encourage buildings close to the street

Place buildings at the street edge



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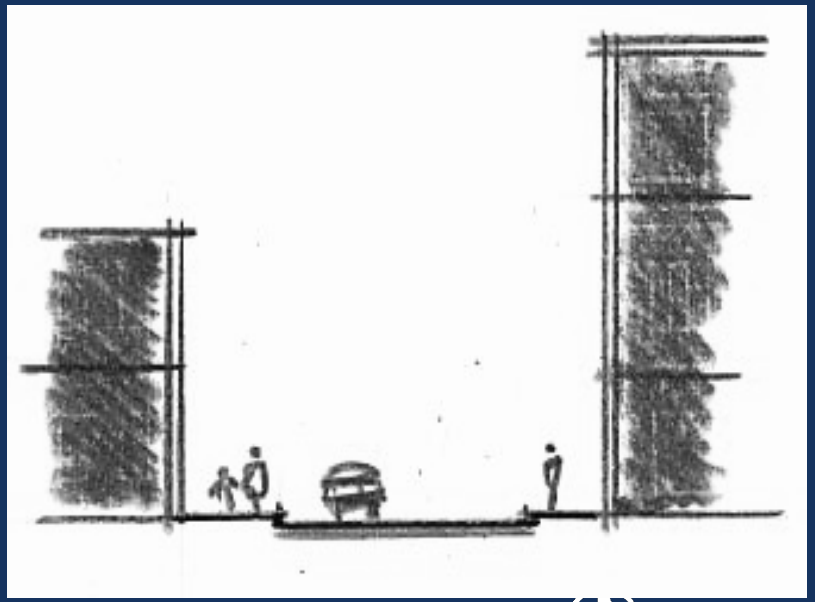
Two-Story Buildings

Encourage two-story buildings close to the street

Two-story buildings define outdoor spaces by framing the street



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Architectural Character

- Pattern of windows, doors
- Façade – offsets vertically, horizontally
- Roof height, roof lines
- Parking: to the side or rear
- Public realm: street, sidewalk, parking, open space
- Building materials – brick, stone, glass
- Windows at street level

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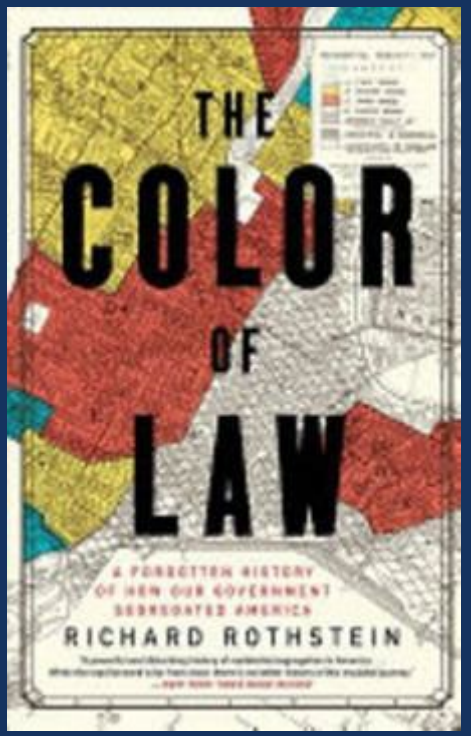
"The Color of Law": Abuse of Zoning

"The Color of Law - A Forgotten History of How Our Government Segregated America" by Richard Rothstein



- Many early zoning codes had a racial element – specifically separating white and black areas; upheld by courts & local governments, into 1950s on.

- Private covenants and restrictions prohibited other than white homeowners or renters – courts enforced these restrictions.

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"The Color of Law"

- Areas zoned for minorities were often located near industrial districts – less desirable over time.
- FHA created in 1934; did appraisals for default risk; enforced "whites-only" standards, set the pattern.
- FHA, VA refused to insure mortgages for minorities in designated white neighborhoods as "too risky".
- 1938 FHA underwriting manual: **"incompatible racial groups should not be permitted to live in the same communities."**

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"The Color of Law"

- "Multi-family" was often code for non-white residents, used to keep neighborhoods homogenous.
- "Red-line" maps created showing risk – separated by race, density, income: "residential security".

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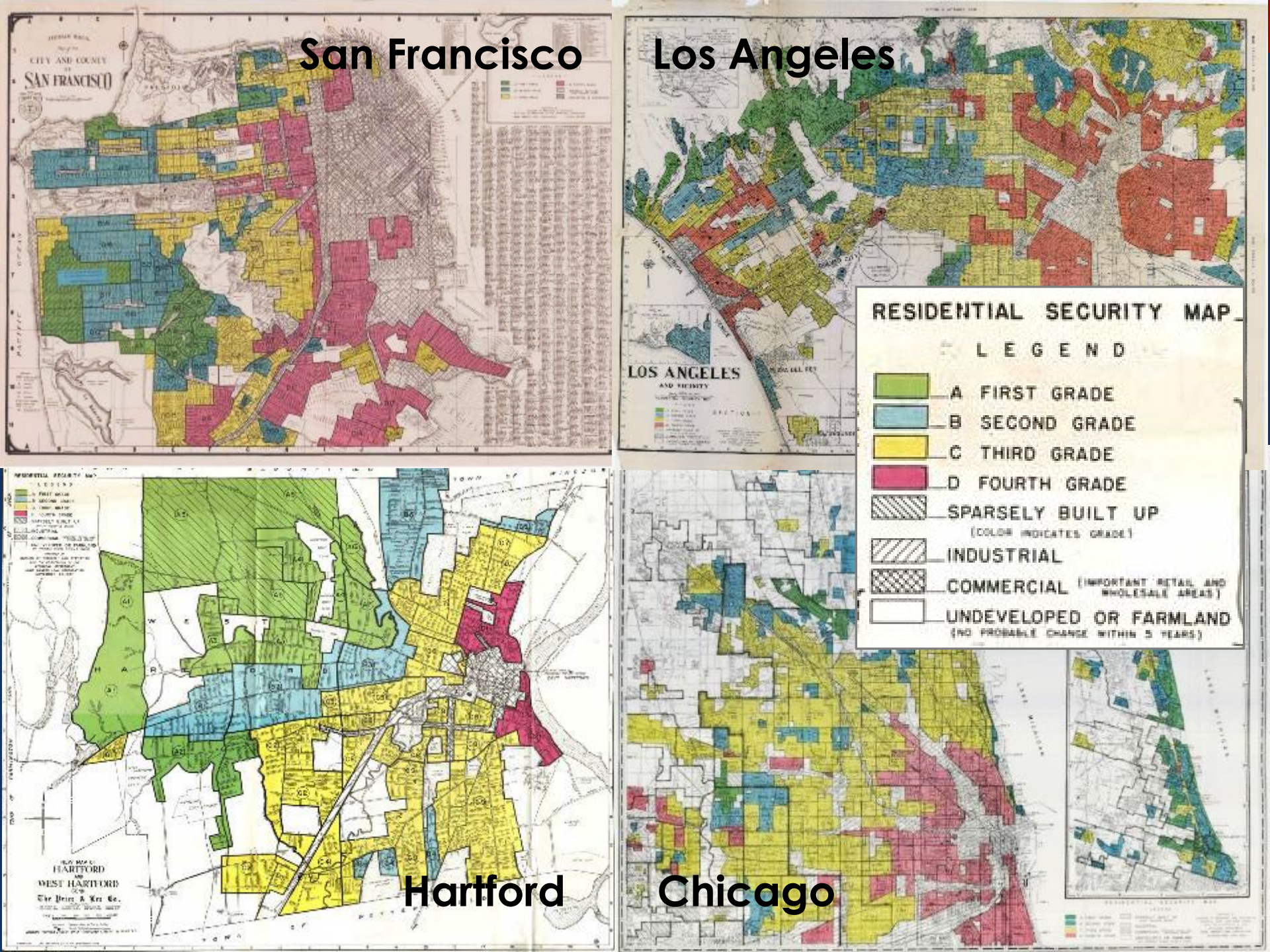
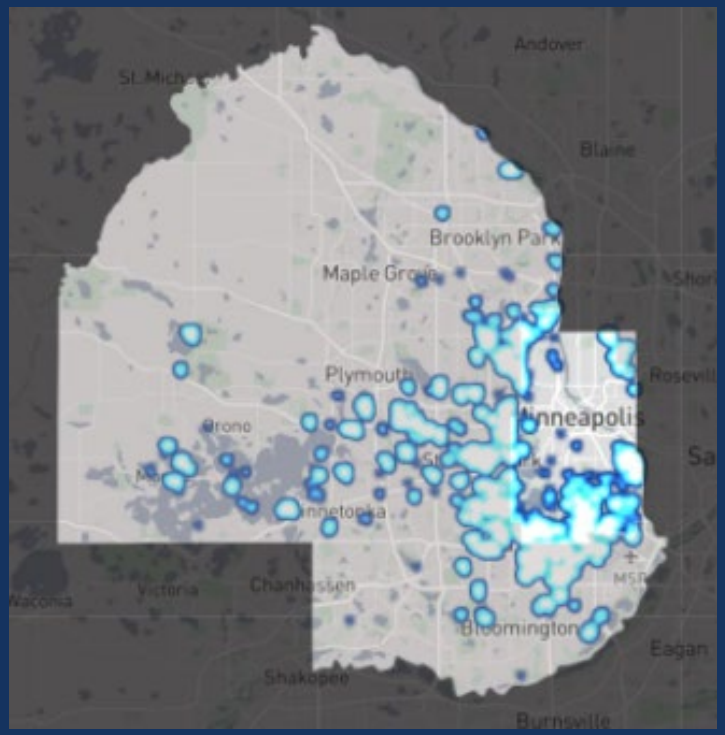

San Francisco
Los Angeles
RESIDENTIAL SECURITY MAP
LEGEND
A FIRST GRADE
B SECOND GRADE
C THIRD GRADE
D FOURTH GRADE
SPARSELY BUILT UP
(COLOR INDICATES GRADE)
INDUSTRIAL
COMMERCIAL (IMPORTANT RETAIL AND WHOLESALE AREAS)
UNDEVELOPED OR FARMLAND
(NO PROBABLE CHANGE WITHIN 5 YEARS)
Hartford
Chicago

Mapping Prejudice - Covenants

- "No lots in this tract shall be sold or leased to colored people"
- "No person of any race other than of the Aryan race shall use or occupy any building or any lot, except . . . domestic servants of a different race domiciled with an owner or tenant"
- "No lot, plot, or parcel shall be sold, leased, mortgaged . . . to any person, other than a member of the Caucasian race . . ."



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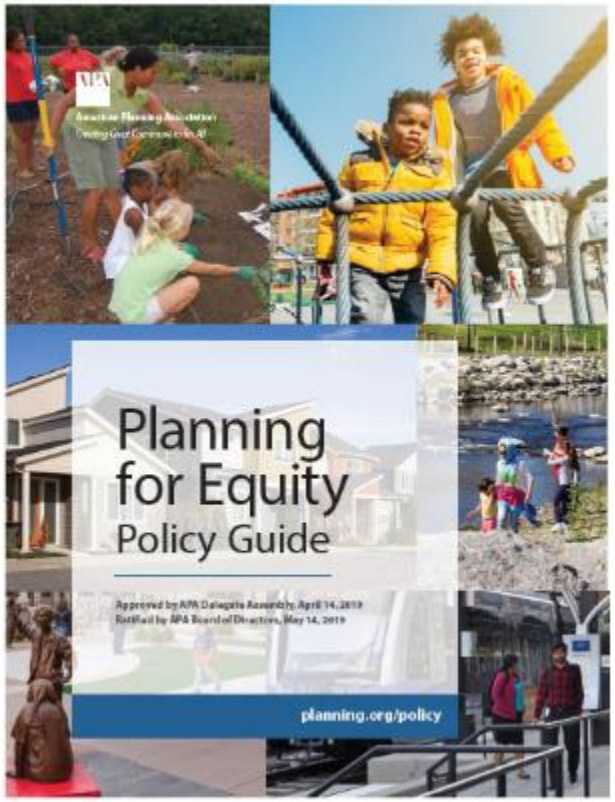
Planning for Equity

American Planning Association (APA)
"Planning for Equity Policy Guide"

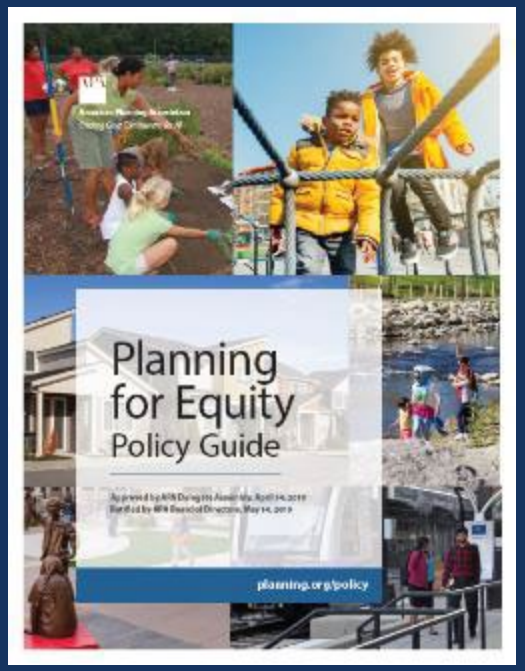
- Commitment to promote equity and remove barriers in policies and regulations that perpetuate inequity in the United States.
- Disparities in health, income, opportunity, mobility and choice are **disproportional** and **institutionalized**
- Urban, suburban and rural settings



Planning for Equity

- Gentrification
- Environmental Justice
- Community Engagement & Empowerment
- Education
- Climate Change & Resilience
- Energy & Resource Consumption
- Health Equity
- Heritage Preservation
- Housing
- Mobility & Transportation
- Public Spaces & Places

APA
American Planning Association
Creating Great Communities for All



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BREAK

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Putting It Together

Sustainability < > Planning & Zoning

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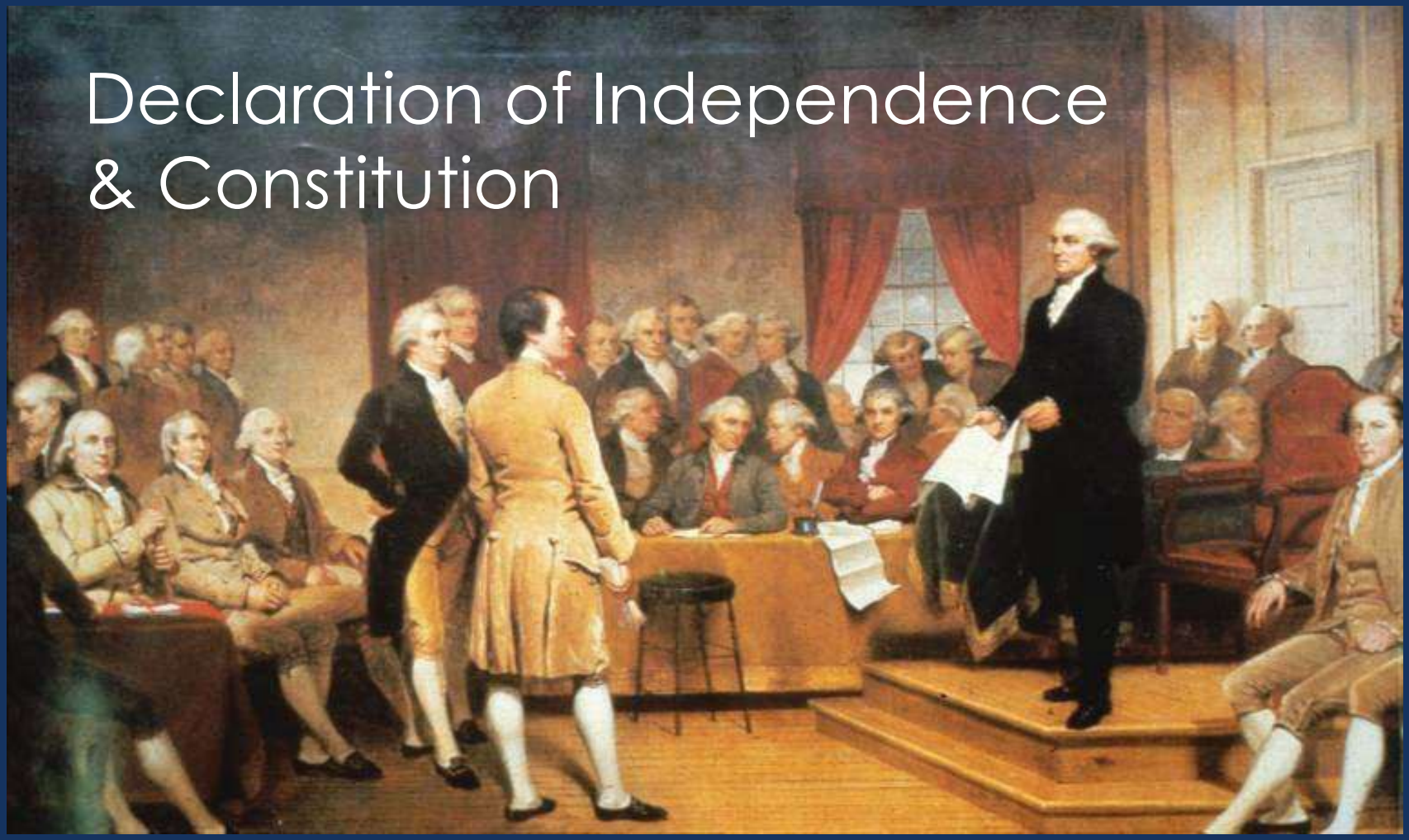
Our Forefathers



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United States Constitution

- Established Federal Government as one of *limited* & *expressly enumerated* powers.
- Grants general *police power* to the States, rather than the Federal Government.
- States delegate the police power to local government units through the State *enabling legislation*.

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Due Process

Procedural Due Process

- *No person may be deprived of life, liberty or property* without a fair hearing, opportunity to be heard, defend against the proposed action

Substantive Due Process

- *No person may be deprived of life, liberty or property* under circumstances that are unreasonable, arbitrary, or capricious
- Major limitation of the use of police power
- "Constitutes a taking", "No relationship to the objectives to be achieved", "Unreasonable"

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Equal Protection – 14th Amendment

- No law may unduly favor one group over another nor impose a hostile discrimination on any particular group
- "*Reasonableness of the classification*" is reviewed – the reasons for treating one use or group differently from another
- "*Rational basis*"- for the standards and restrictions must be found in the comprehensive plan

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Source of Authority

- Local Governments have no inherent authority to regulate the use of private property
- Authority is limited to what is expressly written in legally adopted local ordinances

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A Question of Balance

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Putting It Together

Planet, Profit, People

Environment, Economy, Equity

- Review your comprehensive plan
- Set goals
- Review your zoning districts & standards
- Involve the entire community
- Assess hazards – weather and pollution
- Plan resilient infrastructure
- Manage Stormwater
- Plant trees
- Require buffers on lakes, rivers, & wetlands

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Putting It Together

Planet, Profit, People

Environment, Economy, Equity

- Zone for mixed use & density – encourage walking
- Eyes on the street, short blocks, mix of primary uses, mix of age of buildings
- Buildings close to the street – encourage walking
- Plan parks & trails
- Encourage gardens, food markets, chickens
- Remove barriers for underserved communities
- Allow solar & wind projects

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Practical Advice:

- Start with objective information and present it in as neutral a manner as you can – utilize available resources
  - *Minnesota GreenStep Cities*
  - *Design Matters*
  - *Health In All Policies*
  - *Food Access Guide*
  - *APAMN*
  - *ULI Minnesota Regional Indicators Program*
  - *MnDOT's Pilot Program*

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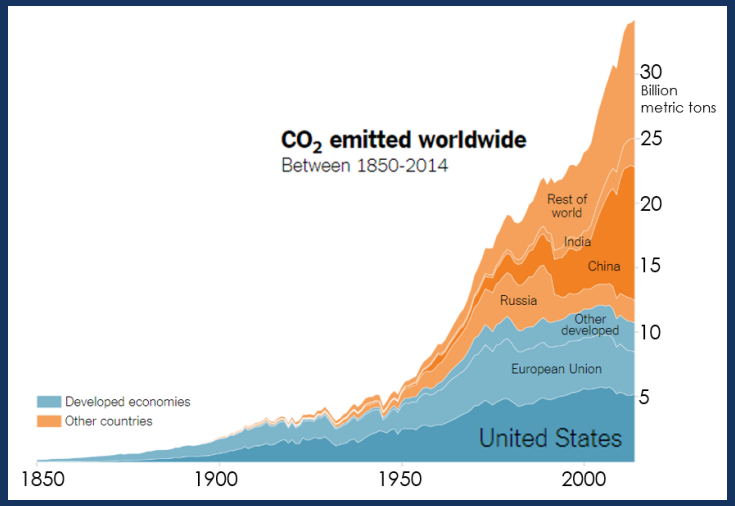
Reality:

- You can't expect to establish and implement a meaningful set of policies and action steps to address resiliency without factoring in the best available projections regarding climate change.



- Do not assume your community leaders or citizens are on the same page regarding climate change.

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The Planner's Role:

- Inform the public about opportunities and constraints and recommend a plan to accomplish the community's goals and vision

- Lead through facilitation – *What are the courageous questions we should be asking?*

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Results:

- Cleaner air – less respiratory illness
- Save money
- Conserve natural resources
- Numerous public health benefits
- Build an economy for the 21st Century

Suggestions:

- If you are updating your Comprehensive Plan, or preparing a CIP, consider sharing information about the age and condition of your infrastructure and the effects of weather events and other unanticipated events that exceeded the capacity of your existing infrastructure

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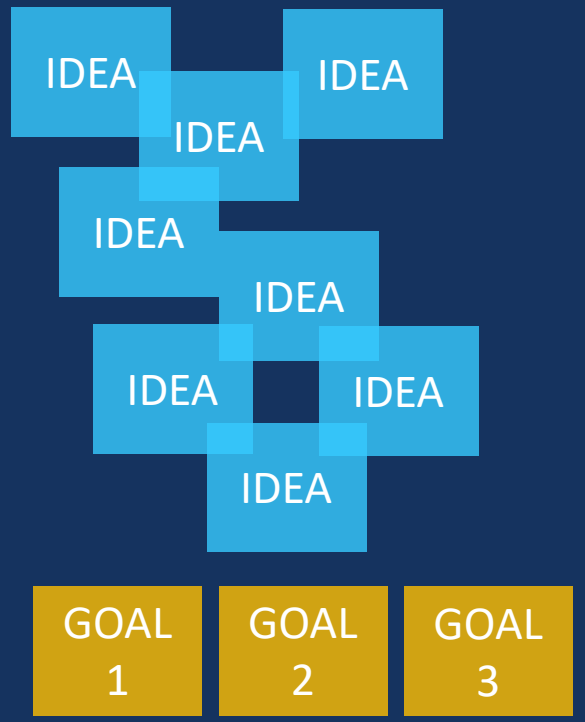
Suggestions:

- Ideally the issues come from the participants after you have planted the seeds
- Issues workshop, SWOT analysis, visioning exercise, community surveys, etc.
- Once the issues have been identified use them to create the goal statements



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Suggestions:

- Make sure you do the work to get full buy-in to the goals and/or Vision Statement and get them adopted by your Council or Board
- Having adopted goals changes the dynamic – now you are leading the way to understanding and overcoming the challenges to meeting their goals

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Bringing this information to your local planning work

- Every community is faced with unique opportunities and problems
- How can we effectively incorporate resiliency and sustainability into our local planning programs?

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Breakout 2 – Car Trips

- What are some ways to reduce car trips in your communities?
- Brainstorm specific ideas from your various communities
- Come up with a list to share with the larger group when we reassemble

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Minnesota Municipal Clerks Institute

SUSTAINABLE PLANNING & ZONING

Questions & Discussion

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