

# Passive to **POSITIVE**

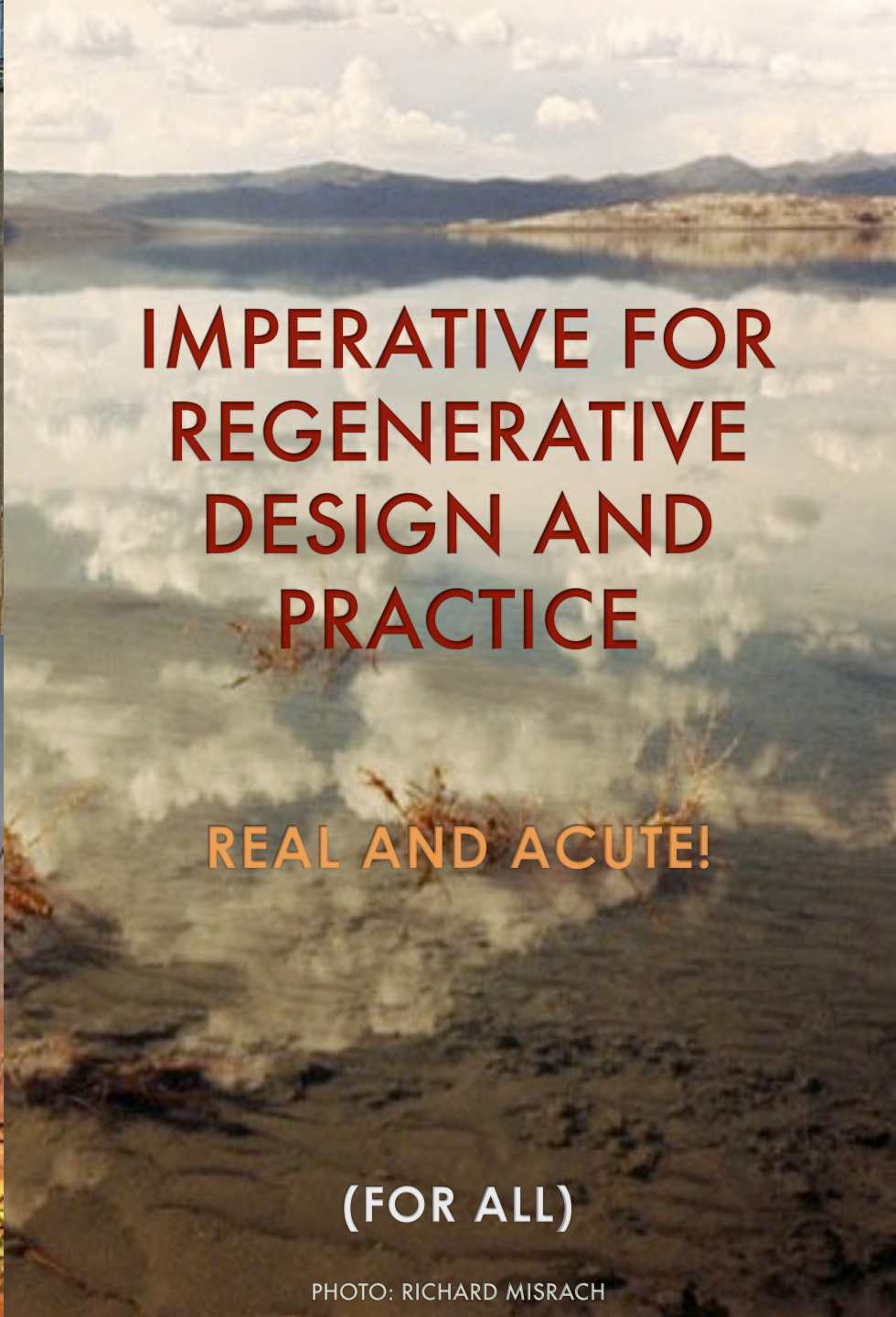


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# IMPERATIVE FOR REGENERATIVE DESIGN AND PRACTICE

REAL AND ACUTE!

(FOR ALL)

PHOTO: RICHARD MISRACH



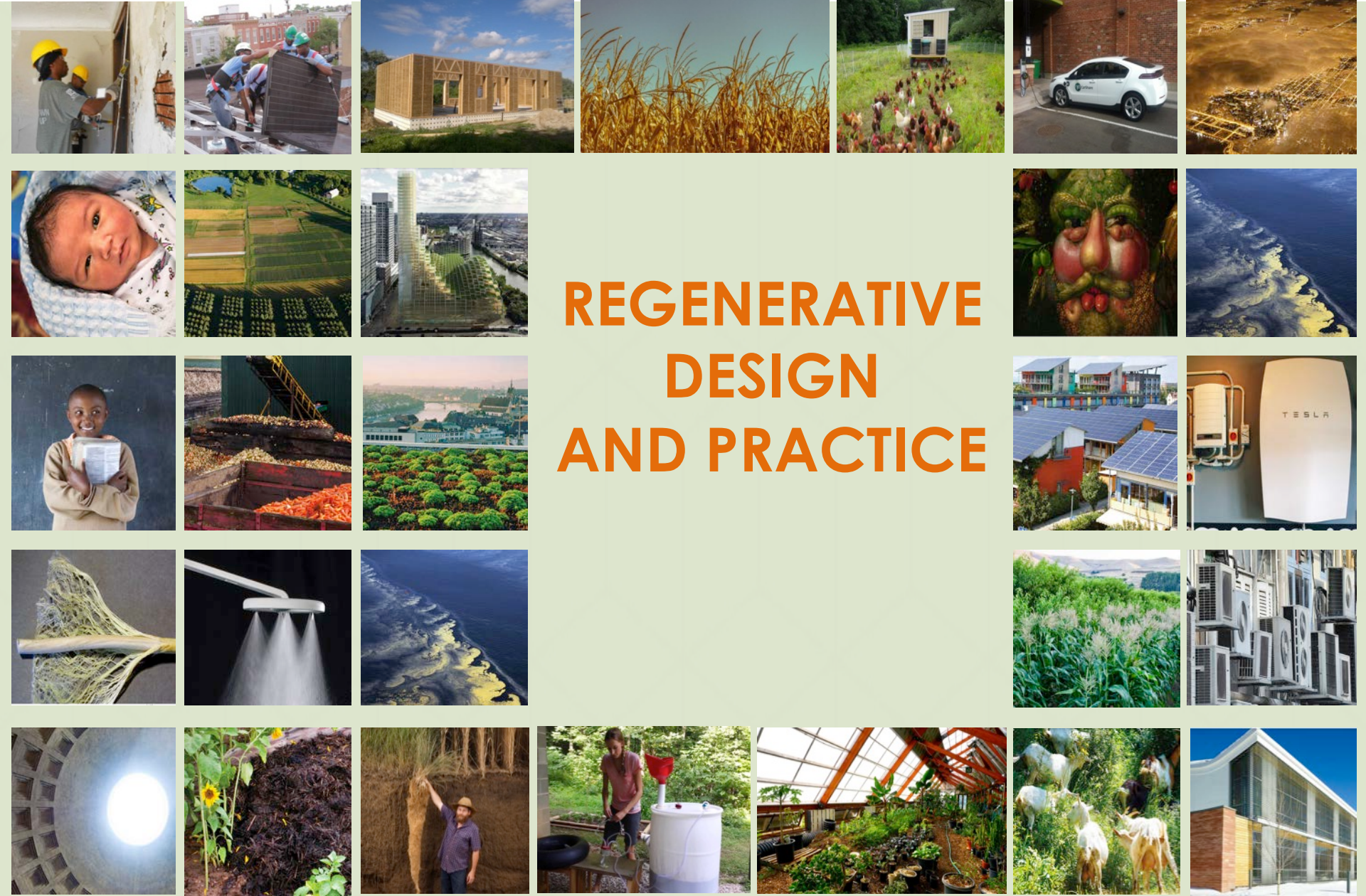
**GLOBAL THREATS:**

**WE ONLY GET ONE**

ONE ATMOSPHERE

ONE BIOSPHERE

ONE LIFE



# REGENERATIVE DESIGN AND PRACTICE

WE HAVE SOLUTIONS TO **ALL** OF OUR PROBLEMS

# EXTRACTIVE LINEAR ECONOMICS

DEplete REOURCES



HUMANS HAVE DIRECTLY ALTERED 50% OF THE ICE-FREE LAND AREA OF THE PLANET AND INDIRECTLY AFFECTED 100% OF PLANETARY SYSTEMS

**GENERATE WASTE**



# DEMINISH FUTURE ASSETS

A photograph of a coastal industrial facility, likely a power plant, with a large smokestack emitting a plume of smoke. The facility is situated near a beach and the ocean. The sky is overcast and grey.

WATER AND SEAFOOD IS TAINTED WITH  
LEAD MERCURY AND ARSENIC BY FOSSIL  
FUEL-POWERED POWER GENERATION

An IPEN/Biodiversity Research Institute study report found heavy metal contamination in hair samples of women from island nations across 3 oceans. 75% had levels sufficient to cause fetal neural damage . . .

**IMMEDIATE-TERM PROFIT-DRIVEN  
AMORAL AND NON-ETHICAL**



**PERFECT RECIPE SYSTEMIC OPPRESSION**



**REST ROOMS**  
WHITE COLORED

**SEGREGATION**

When justice like Redlining, federal housing mortgages, racial covenants and other structural practices, segregation was able to shift after the fall of Jim Crow these middle Negro Struggles to learn skills for powerful resistance. Some other signs like the one below come clear, the systems for promoting segregation of both race and class continued.



**BLOCK BUSTING**

1950 Because having over 75% minority population, or what Redlining maps referred to as "undesirable racial elements," in a neighborhood could mean discrimination, many whites fled cities. Block busting was the practice of real estate operators, who would convince whites to sell at undervalued prices and then sell to blacks coming from the south with unrefused and exploitative or illegal mortgages that were possible under Redlining. The realtors would then contact whites with housing real estate in the suburbs, making money on the "hot" second floor. Racial covenants in these suburbs guaranteed their sales.

**WE WANT WHITE TENANTS IN OUR WHITE COVENANTS**

**RACIAL COVENANTS**

Racially restrictive covenants prohibited all the minorities to move to most suburbs, but white neighborhoods can primarily where they were allowed to move.

**URBAN RENEWAL**

1930-1980

Urban Renewal began with the fundamental assumption that the city was filled with "blame" that needed to be replaced with healthier forms of housing. Slum clearance began in the 1930s and continued through and century. Touted as a solution to neighborhood decline, the developments often didn't house nearly as many as were displaced, and because these neighborhoods were most often minority communities, Urban Renewal gained the nickname "Negro Removal." Its execution was made between the style of these neighborhoods and the practice of Redlining at the time. Today, Urban Renewal projects are largely considered to have been a spectacular failure, despite their intention to improve city life.

**REDLINING**

1934

Redlining is the practice of denying, or charging more for, services such as banking, insurance, access to health care, denying jobs, or even restricting grocery stores within often racially determined areas. The term "redlining" was coined in the late 1960s by John McKnight, a sociologist and community activist. It refers to the practice of marking a red line on a map to delineate the area where banks would not invest. During the heyday of redlining, the areas most frequently discriminated against were black inner city neighborhoods. For example, in Atlanta in the 1960s, a Pulitzer Prize-winning series of articles by investigative reporter Bill Dedmon showed that banks would often lend to lower-income whites but not to middle- or upper-income blacks. The effects of redlining meant that building wealth in these areas was near impossible for generations, and there is still evidence of the practice occurring informally today. Nisida Pulliam refers to the suppressed history of Redlining as a "Rosetta Stone" for understanding the current situation of redlined people.



**CROWD IN CITY CENTER**  
MIDWEST MILLS COACH CLUB

**1935 Home Owners Loan Corporation**

The Home Owners Loan Corporation (HOLC) was created in June 1933 by the US Congress, and created Redlining maps. The purpose was to refinance mortgages in default government loan programs. In 1935, Federal Home Loan Bank Board asked HOLC to look at 224 cities and create "residential security maps" to determine the level of security for real estate investments. In the maps, the lowest score — three consecutive blacks for lending purposes — were redlined and known as "Type A." These were typically African American or the majority of them. "Type B" neighborhoods were considered "less desirable," whereas "Type C" neighborhoods were labeled "redlined" and avoided in general. "Type D" neighborhoods were confined to red and were considered "the most risky for mortgage support."

**REDLINING DISCRIMINATION IN RESIDENTIAL MORTGAGE LENDING**



**DISPLACEMENT**

Waves of urban displacement that began with redlining and blockbusting continued simultaneously with Urban Renewal. Entire non-white communities were obliterated through the process. Highways were also cut through neighborhoods, dividing communities, lowering property values and polluting the air. The fabric of the city was under attack, but that attack was noted in provisions of urban future or in policies that were even aware of it.



**"RENEWAL"**

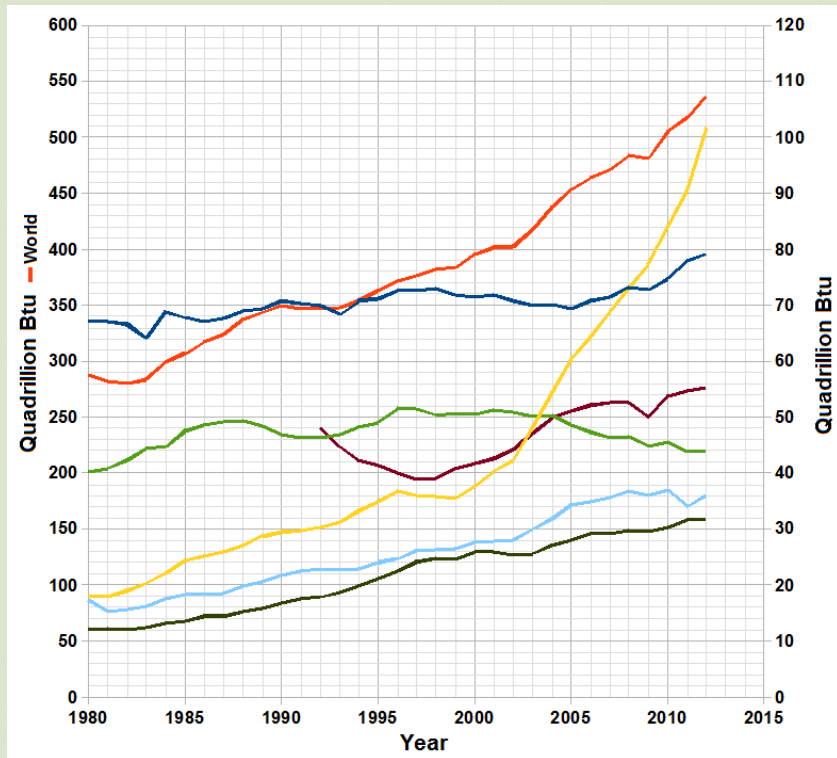
The concept of Urban Renewal, essentially based on a complete total of the urban fabric (or the removal of it), meant that the housing it meant for middle-class people, but the neighborhoods' original non-white communities of it.



EXTRACTIVE ECONOMICS + SYSTEMIC OPPRESSION



# INSATIABLE APPETITE FOR ENERGY HAS REACHED A SCALE THAT ...



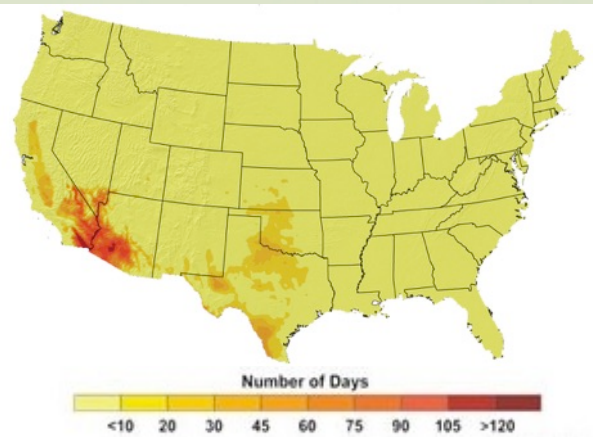
# DISRUPTS NATURAL SYSTEMS!!



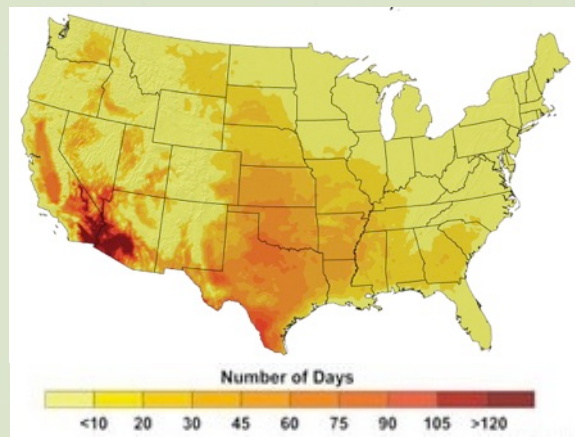
Desertification exacerbates the drought in California's central valley

EVERY 1°F AVERAGE INCREASE IN TEMPERATURES REDUCES CROP YIELDS BY 10% BUT THOSE SHORTAGES CAN BE LOCALLY ACUTE!

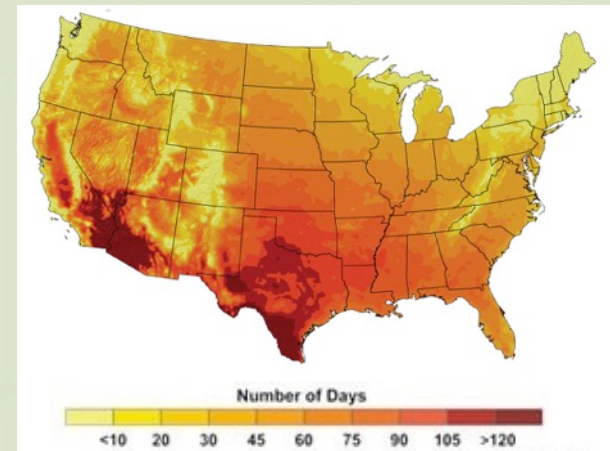
Recent Past, 1961 - 1979



Lower Emissions Scenario, 2080-2099



Higher Emissions Scenario, 2080-2099



temperature map images: U.S. Global Change Research Program

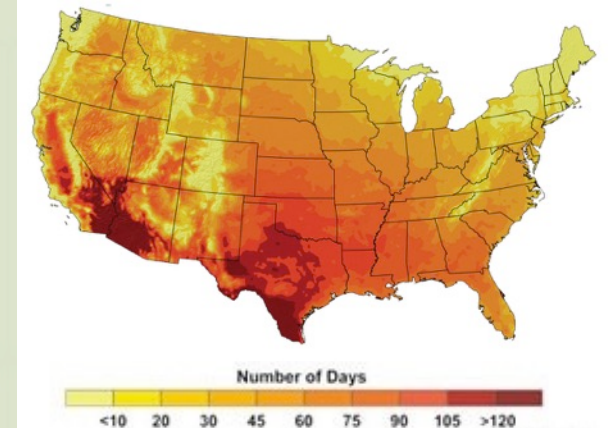
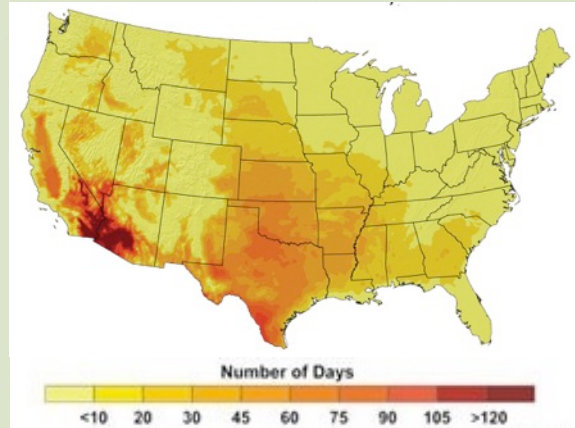
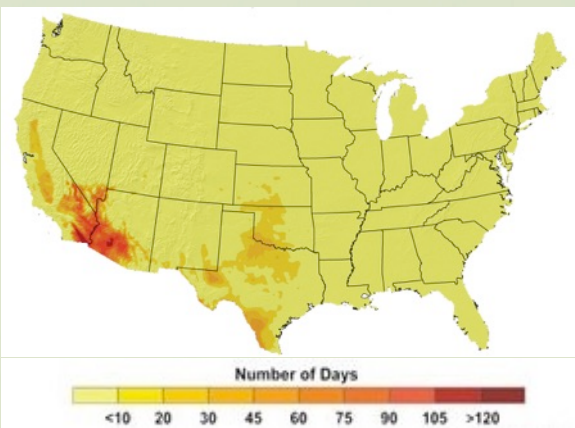
# ACCELERATED AND INTENSIFIED WEATHER RELATED EVENTS



Recent Past, 1961 - 1979

Lower Emissions Scenario, 2080-2099

Higher Emissions Scenario, 2080-2099



temperature map images: U.S. Global Change Research Program

# SINKING IN WASTE



Child Waste picker in Malaysia:JP Getty Images

The west and rich populations export all negative externalities

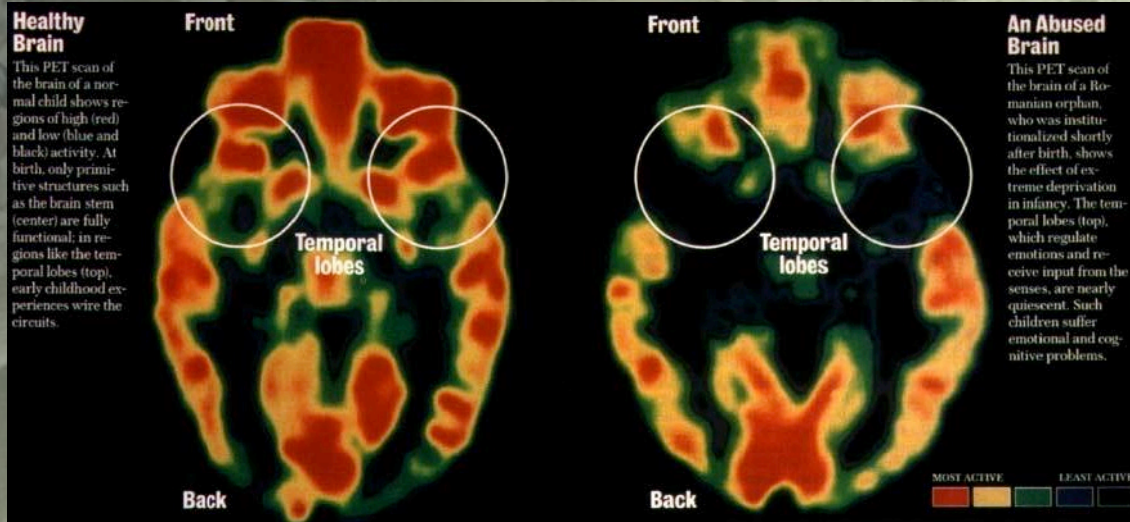
ECONOMIC, ENVIRONMENTAL JUSTICE ARE **SOCIAL JUSTICE**



CLIMATE IMPACTS ARE DISPROPORTIONATELY FELT BY THOSE  
**WHO CAN LEAST AFFORD IT**

# ALL OF THIS CREATES TRAUMA

THAT IMPAIRS CHILDREN'S DEVELOPMENT  
AND SETS THE STAGE FOR A FUTURE OF  
STRUGGLE



## Toxic Stress can impact children in the following ways:

- Causes children to live in **fight, flight or fright** (freeze) mode
- Short attention span
- Struggle learning; fall behind in school
- Respond to world as constant danger
- Distrustful of adults
- Unable to develop healthy peer relationships
- Feel failure, despair, shame and frustration





THERE IS NO **AWAY!!**



*photo by Chris Jordan: "midway: message from the gyre" series <http://www.chrisjordan.com/>*

“Whether we and our politicians know it or not, Nature is party to all our deals and decisions, and she has more votes, a longer memory, and a sterner sense of justice than we do.”

Wendell Berry

WHAT IF WE COULD REDUCE THE IMPACTS  
OF ALL THESE **THREATS** ?!



+ IMPROVE COMMUNITY  
**SELF-RELIANCE + WELL BEING**

# REGENERATIVE DESIGN

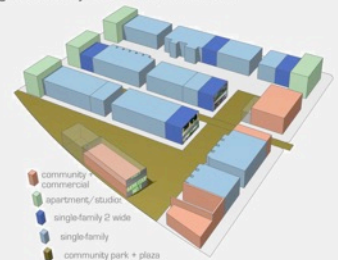


# SYSTEMIC SOLUTIONS FOR SYSTEMIC PROBLEMS

## the bMORE resiliency CO\*OP

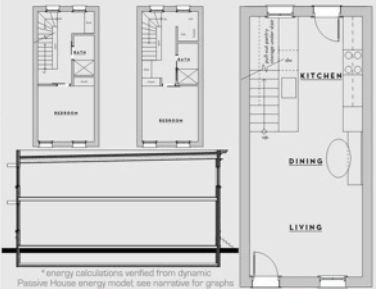
## METRICS

bMORE co\*op fosters resilient **economics** through employment, facilities + training of trades for coop maintenance including construction, air sealing + insulation, solar, HVAC, agriculture husbandry, childcare, sustainable waste + water management, light industry + cultural creatives.



**cooperative intelligence + resource export**

bMORE co\*op fosters a resilient **environment** through low-toxicity, foam-free, zero-energy ready envelope retrofits, cooperative on-site energy production; stormwater harvesting supplies irrigation for year round greenhouses + urban agriculture, waste management; waste + compost facility harvests methane for fuel cell generation to supplement solar production.

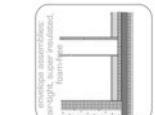


\*energy calculations verified from dynamic Passive House energy model; see narrative for graphs.  
**resource efficiency = resource resiliency**  
 bMORE co\*op fosters **social equity + resilience** through cooperative ownership of resources + building (including coop vehicles, facilities, market, etc.) management of maintenance services, + democratic governance resulting in community engagement + pride. Linking with the local school in cooperative land use + education opportunities will serve the larger community + promote resilience as a positive ethic for the next generation.



cooperative pride + engagement

economics  
environment  
social equity

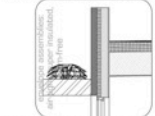


alley wall: stucco, 2" rock wool, exist brick, 2" rock wool, vapor control, 3 1/2" cellulose, slab, vapor control, 4" rock wool, exist slab

existing residential energy demand: 3,618 megawatts/yr

post-retrofit residential energy demand: 659 megawatts/yr  
**82% energy reduction**

In the event of a 5 day power outage in peak cooling season, bMORE co\*op is completely energy independent with 4000kWh surplus energy to support emergency cooling + communication centers for surrounding neighborhoods.



street wall: brick to remain, 2" rock wool, vapor control, 4.5" cellulose, roof: 6" rock wool, 11.25" cellulose



cooperative agriculture via community gardens and greenhouses



neighborhood goods market

proposed food production:  
 bMORE co\*op NO. 1 has 1.7 acres of on-site community food production  
**100% increase**



surface water directed to 'blue alley' bioswales



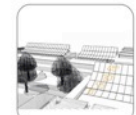
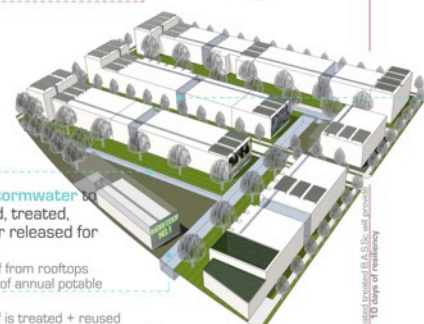
bioswales directed to large biofiltration areas + cisterns which store water for use as irrigation + flushing + treated for emergency potable use

**100% of stormwater** to be captured, treated, infiltrated or released for use on site  
 treated run-off from rooftops supplies 28% of annual potable water  
 44% of run-off is treated + reused  
 56% is infiltrated, slow release



private native lawns no mow | no h2o

existing pervious: 2,500sf  
 proposed pervious: 70,500sf  
 total site area: 138,000sf  
**over 25x more pervious surface area**



PV curve for optimal year round production - 5.6 kW per house, 65% of total roof area



shading devices: overhangs on south, shutters + blinds on east + west, trees + planting reduce heat island = reduced cooling demand



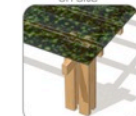
private garden boxes (shade devices) + front gardens



cooperative goat + chicken + beehive barn



B.A.S(S)isterns are located in vacated shells mid-block, roof-top water drains to cistern where it is treated + stored for reuse on-site



the green cloak is a planted, roof-top trellis that helps cool roofs + slow down stormwater runoff



pervious pavers in public spaces



Most Resilient Concept, bMORE Resilient CO\*OP

Michael Hindle, Carri Beer, Adam Ganser, Peter May, Katelin Posthuma, Jack Sullivan

# ETHICS AND PRINCIPLES



# ETHICS AND PRINCIPLES



CARE FOR PEOPLE  
CARE FOR SELF AND COMMUNITY

# ETHICS AND PRINCIPLES



CARE FOR PEOPLE  
CARE FOR SELF AND COMMUNITY

CARE FOR THE EARTH –  
REBUILD NATURAL CAPITAL

# ETHICS AND PRINCIPLES



## CARE FOR PEOPLE

CARE FOR SELF AND COMMUNITY

## CARE FOR THE EARTH –

REBUILD NATURAL CAPITAL

## FAIR SHARE

SET LIMITS AND REDISTRIBUTE SURPLUS



# THIS BOY REPRESENTS WHY EVERYTHING THAT FOLLOWS MATTERS



THIS BOY HAS ASTHMA

THIS BOY'S MOM WORKS  
45 MINUTES AWAY, ON A  
GOOD DAY

SHE MAKES LOW WAGES

HE LIVES WITH HIS  
GRANDMOTHER . . .

IN A FOOD DESERT

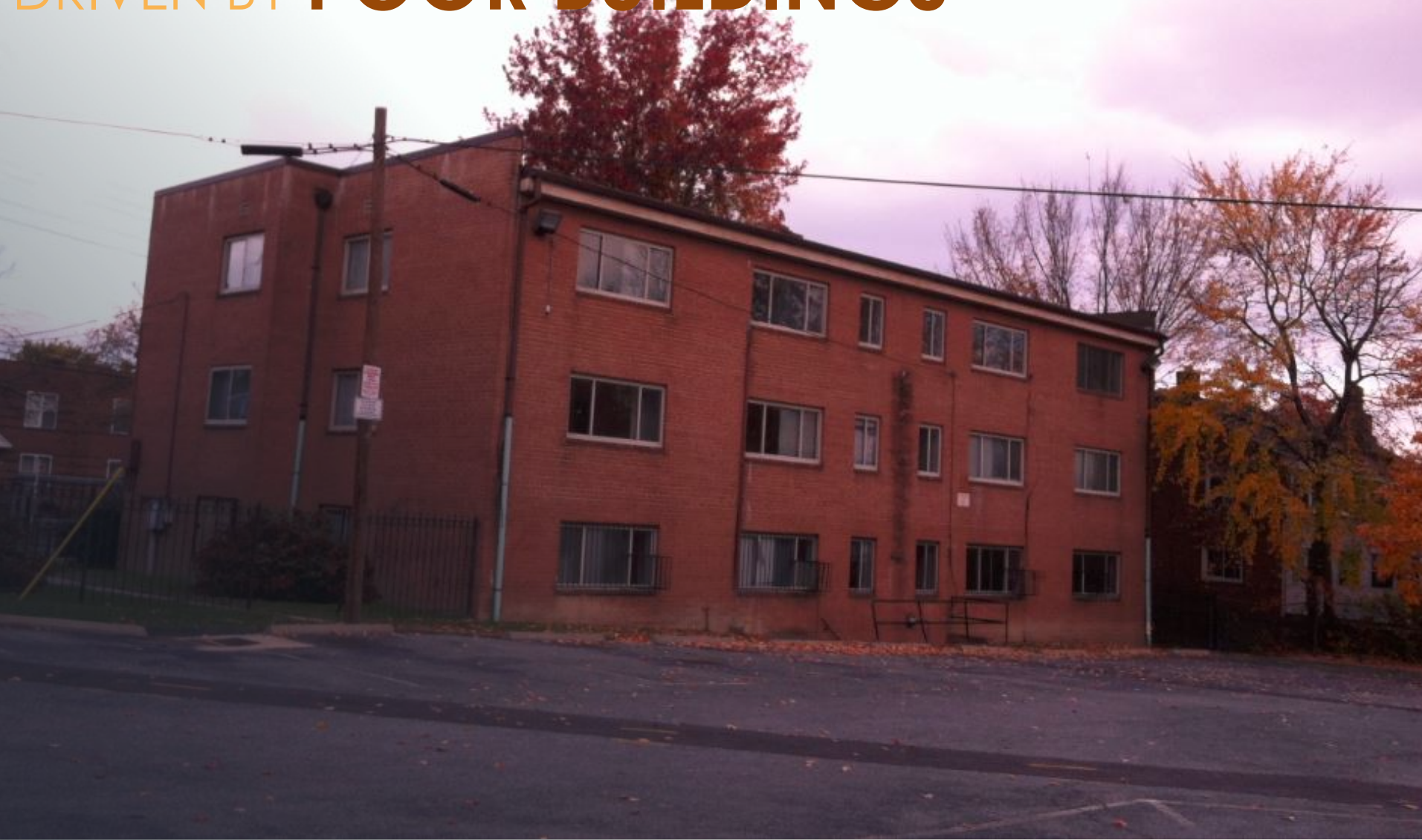
HE HAS EXPERIENCED  
MULTIPLE TRAUMATIC  
EVENTS (ACE's)

Dr. Nadine Burke Harris, expert in systemic trauma and Adverse Childhood events (ACE's) treats a patient at Center for Youth Wellness in San Francisco

INSTEAD OF HIGH ENERGY DEMAND



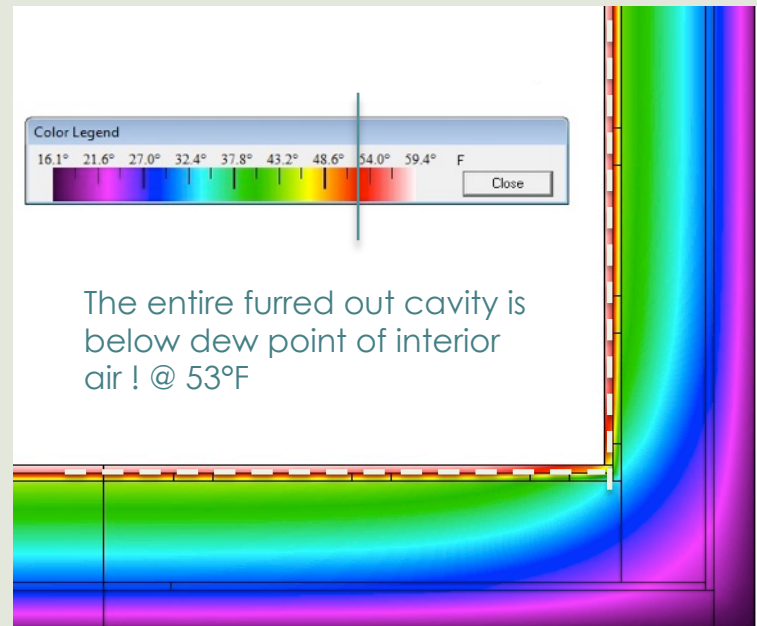
# DRIVEN BY **POOR BUILDINGS**



HIGH ENERGY DEMAND, + COMBUSTION APPLIANCES

# UNINSULTAED, UNCOMFORTABLE + UNHEALTHY BUILDINGS

- CAUSE DISCOMFORT
- ASTHMA
- IMMUNE SUPPRESSION
- LOST INCOME
- POOR EDUCATIONAL OUTCOMES



# WEINBERG COMMON

THE FIRST *RETROFIT* PASSIVE HOUSE IN THE NATION  
THE *PHIUS* AFFORDABLE HOUSING PROJECT OF THE YEAR 2018

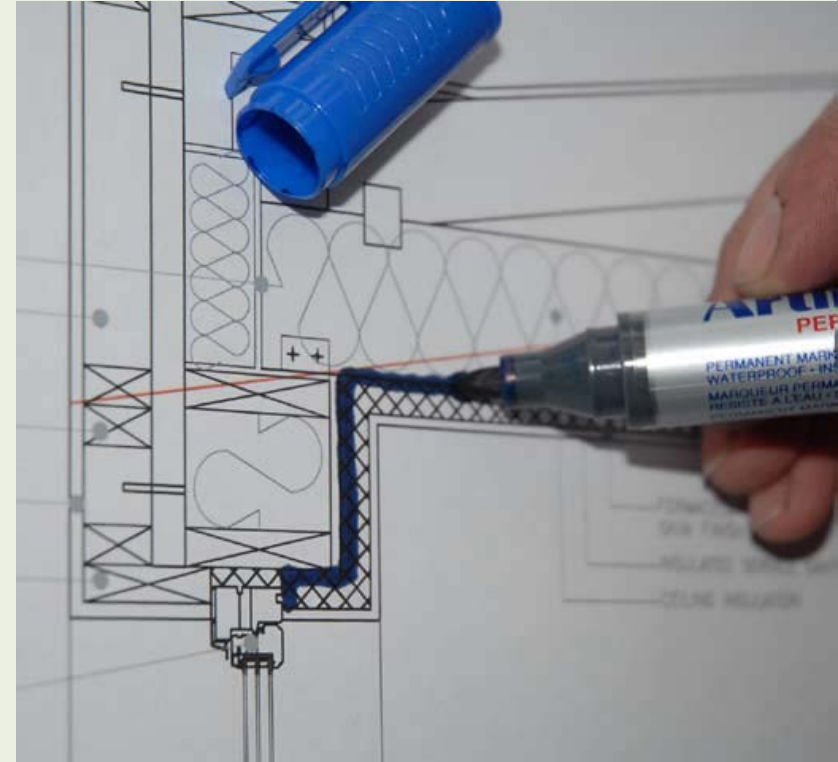
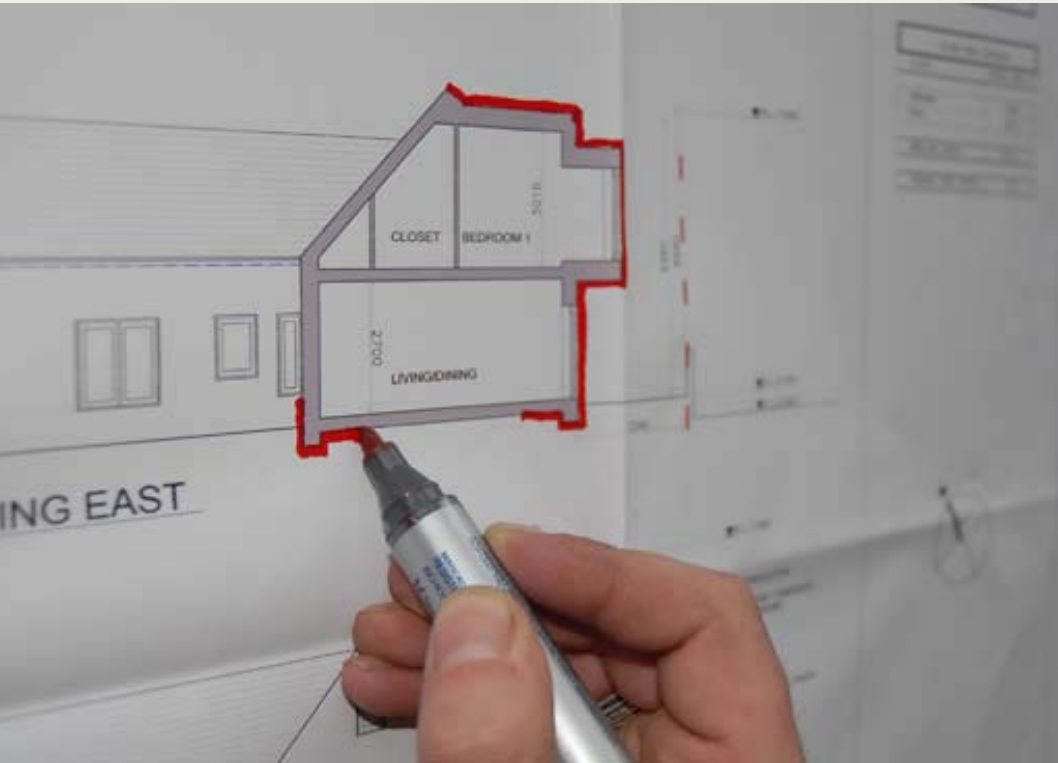
NO ENERGY BILLS, VERY COMFORTABLE + NO MOLD !!

HEALTHY AND EFFICIENT BUILDINGS BEGIN WITH  
**PASSIVE DESIGN + “BUILDING SCIENCE”**



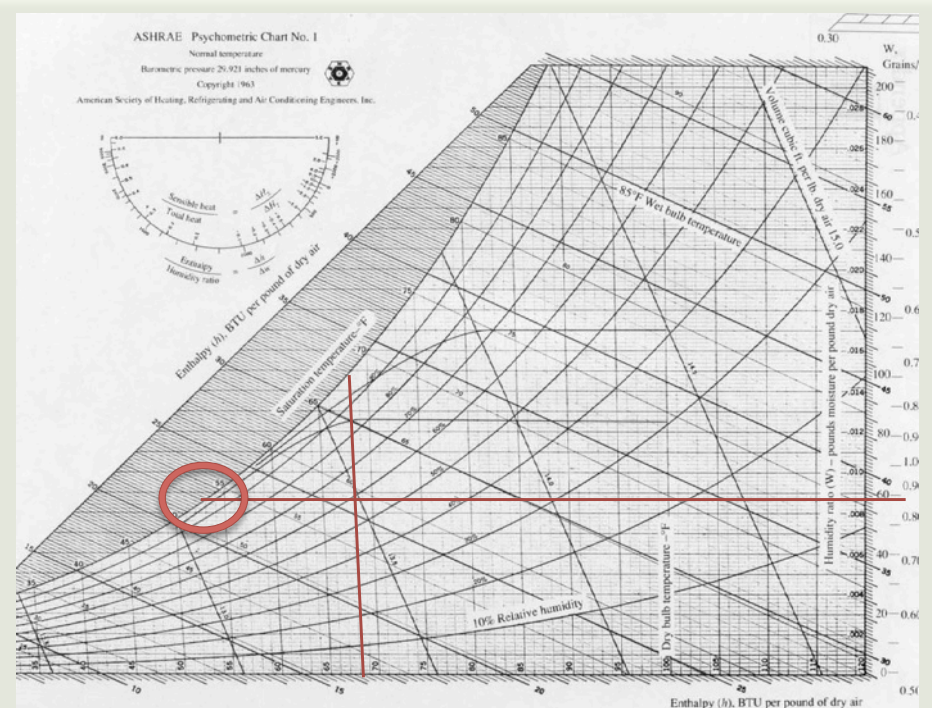
*HARM REDUCTION AT EVERY LEVEL*

# COMFORTABLE, EFFICIENT SHELTER + ENERGY - *begins with the BUILDING ENCLOSURE*



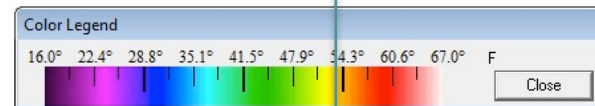
ZERO ADDED COST – JUST A MIND-SET

# COORDINATED ENVELOPE AND SYSTEMS FOR HEALTHIER BUILDINGS

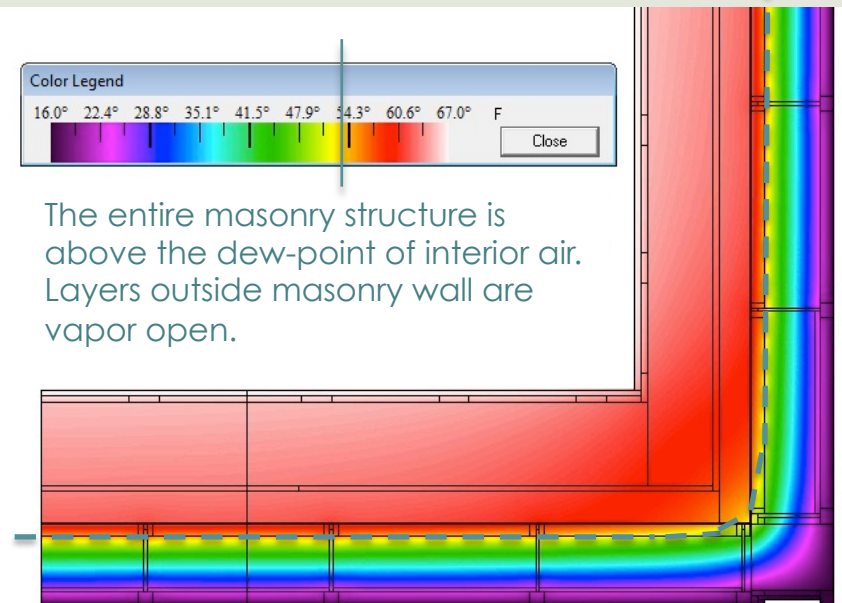


Dew point of interior air = @ 52.5°F

LOWER DEMAND,  
MANAGED  
CONDENSATION PLANE  
TEMPERATURES, VAPOR  
PROFILE + HUMIDITY

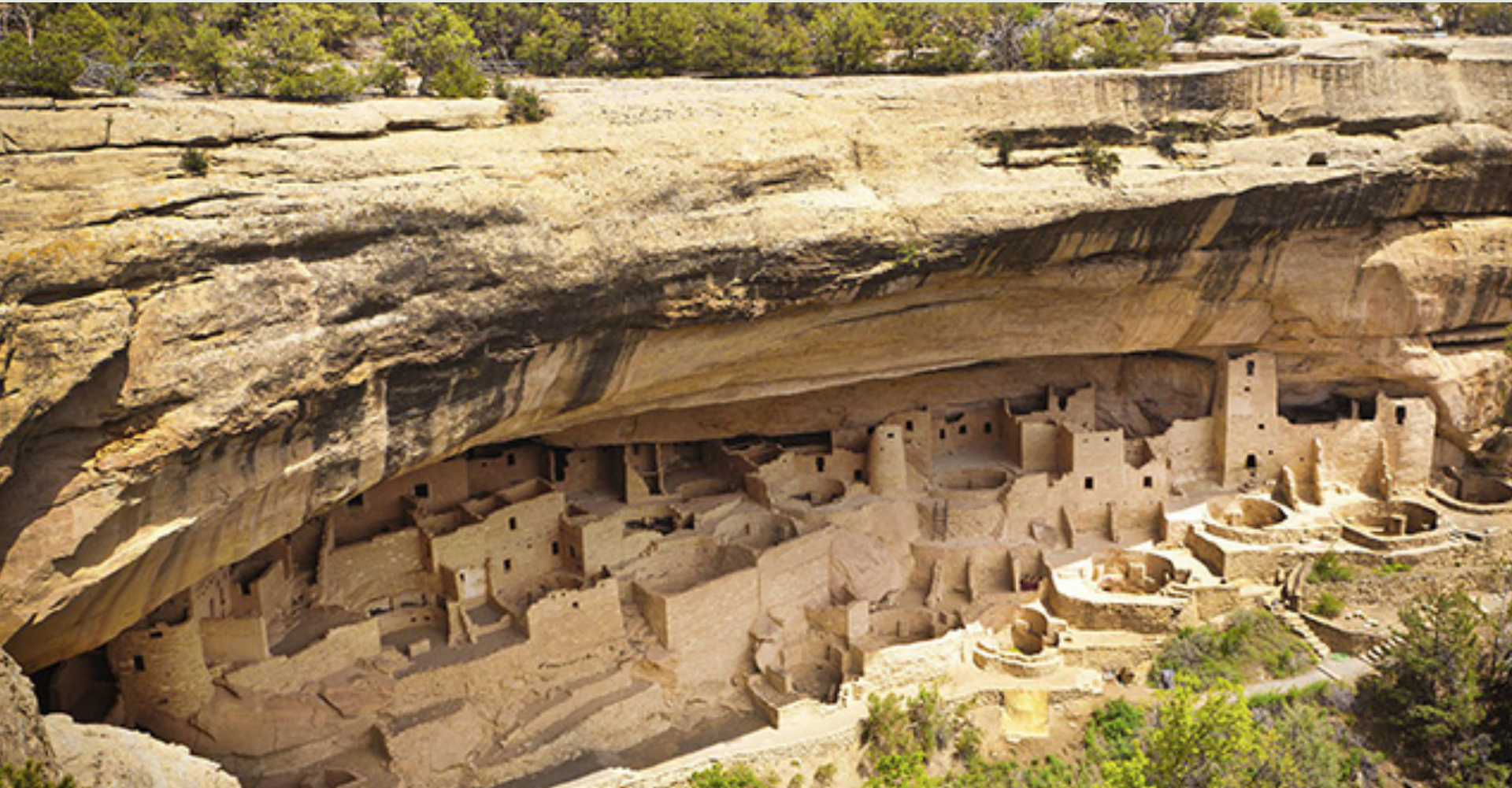


The entire masonry structure is  
above the dew-point of interior air.  
Layers outside masonry wall are  
vapor open.





# ANCIENT KNOWLEDGE AND LOW-TECH!



HOW ABOUT A LITTLE SHADE?

The Anasazi (Hisatsinom) 1100-1300 C.E.

# COMBINED WITH LIVING SYSTEMS?



PLANT GREEN CLOAKS AND TREES TO  
SHADE THE BUILDING AND . . .

Edouard Francois: Architect

# WE CAN CLEAN OUR OWN AIR



REDUCE ENERGY DEMAND

REDUCED COMBUSTION

PLANT GREEN CLOAKS AND TREES

1 MATURE TREE HAS 10 ACRES OF SURFACE, WHICH FILTERS AIR

