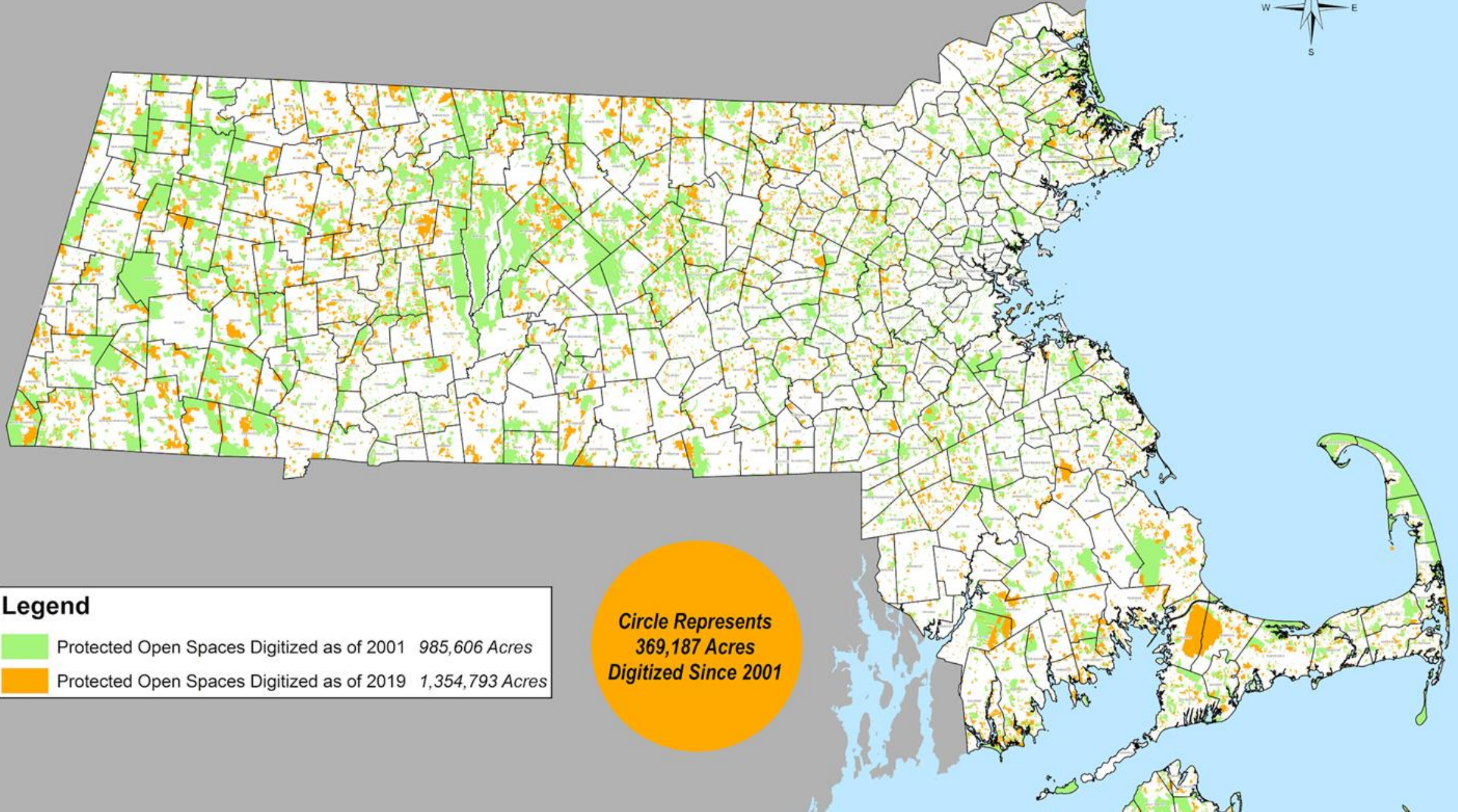


THE RESILIENT LANDS INITIATIVE:  
*EXPANDING NATURE ACROSS THE COMMONWEALTH TO  
HELP PEOPLE*



# Massachusetts Resilient Lands Initiative **DRAFT MAP**

## Protected Open Spaces 2001 - 2019



### Legend

-  Protected Open Spaces Digitized as of 2001 985,606 Acres
-  Protected Open Spaces Digitized as of 2019 1,354,793 Acres

**Circle Represents  
369,187 Acres  
Digitized Since 2001**

# RESILIENT LAND INITIATIVE - INVOLVEMENT

- A steering committee with 40+ active members in 12 monthly meetings focused on 8 “Land Values”:
- Urban parks and public health; Reducing climate impacts to people; Supporting stable economies; Forests; Farms; Habitats; Watersheds and water supply; Outdoor recreation; Cultural Values
- (14 focus groups with grassroots advocates (water, urban greenspace), farmers, foresters (270 people) + two public sessions (60 people)



# RESILIENT LANDS INITIATIVE: GAINING MAXIMUM RESILIENCE FROM NATURE

- A Vision of No Net Loss of Forests and Farms by 2030
- Reduces development footprint by 15,000 acres and creates 29,000 acres of new forest, tree canopy, farms and community gardens in EJ communities and along rivers
- Conserves much of our last remaining intact landscapes, watersheds and habitats – 30X30
- Helps offset about 20% of the 2050 No Net Carbon Emissions needs



# RESILIENT LAND INITIATIVE: POTENTIAL FUNDING SOURCES

- State Capital Funding
- State GWSA Trust Fund
- Private Fundraising
- Federal (LWCF, USDA NRCS and USDA Forest Legacy)
- Legislation (incentives and tax credits in a “Land for People” bill)
- Transportation Climate Initiative



# STRATEGY #1: NO NET LOSS OF FORESTS AND FARMS

Actions	Metric (by 2030)
<ul style="list-style-type: none"><li>Smart Growth: Assistance and greening incentives for 100 communities</li></ul>	<ul style="list-style-type: none"><li>15,000 acres of forest and farm <i>saved</i> from development</li></ul>
"PILOT for Climate"	500 acres restored farm or forest (\$15,000 grants to 100 towns)
Tree planting along rivers	550 miles of river-banks planted (10,400 acres of <i>new</i> forest)



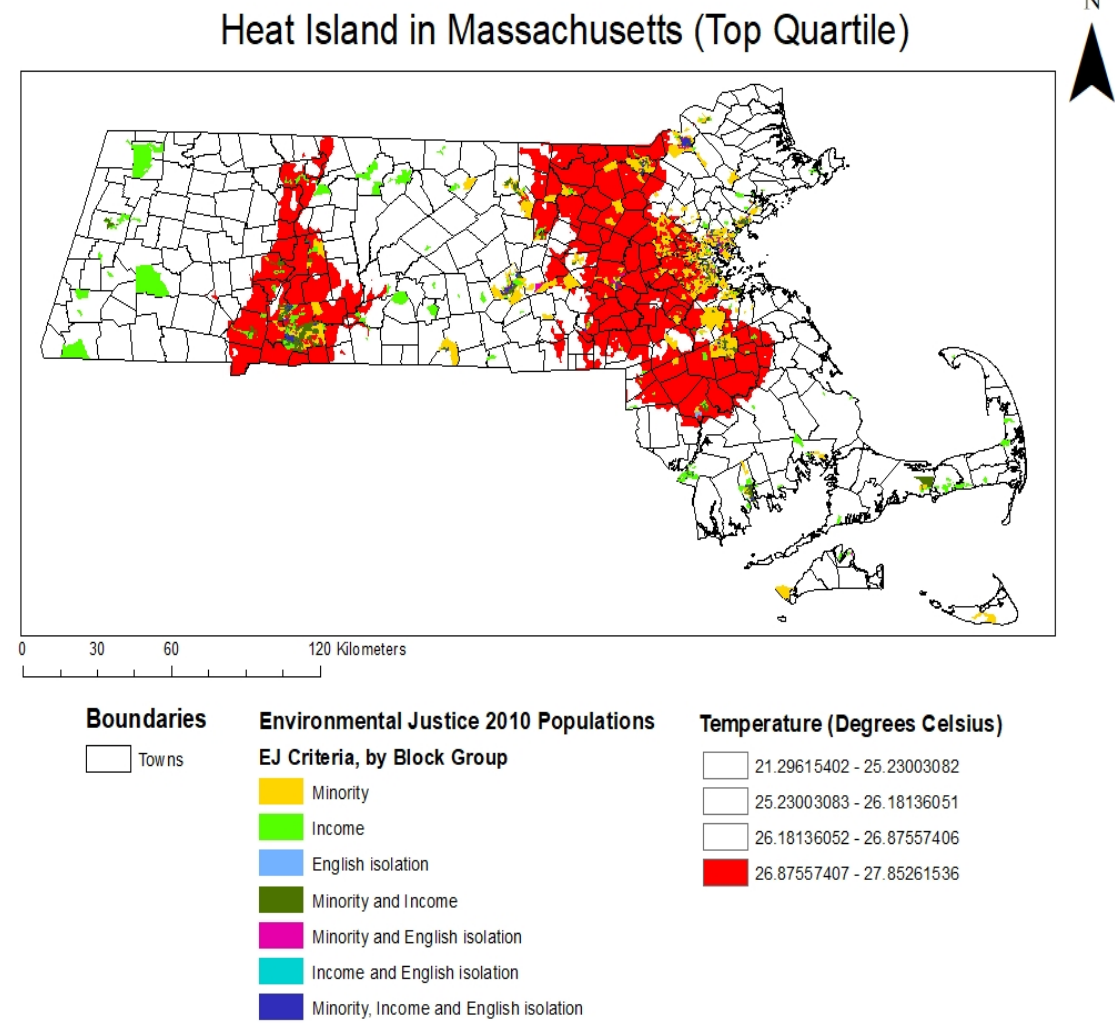
# STRATEGY #2: FOCUS ON FOOD

Actions	Metrics (by 2030)
Vacant Lots to Farms	500 acres of <i>new</i> farms and community gardens (food to feed 5,000 people into the future)
Expand MDAR's APR Program to protect whole farms (forest and wetlands)	5,000 acres of farms protected (food to feed 50,000 people - \$800 per person) – focused on farmers of color
Expand the Urban Green Teams	Expand Groundwork model to 20 cities to focus on urban farm programs and create 200 jobs and increased diverse conservation staff



# STRATEGY #3: FOCUS ON URBAN GREENSPACE AND PUBLIC HEALTH

Actions	Metrics (by 2030)
Greening urban lots	1,200 acres of <i>new</i> urban greenspace created – forests, gardens and parks
Implement the Pilot Park Access Project	42 one-half mile cool and safe walking routes to parks renovated in 4 Gateway Cities
Urban Youth Green Teams	50 acres of <i>new</i> urban gardens created (200 jobs in 20 cities) – increased diverse conservation





# STRATEGY #4: FOCUS ON WATER

Actions	Metrics (by 2030)
Watershed Habitat Conservation Grants	10,000 acres of best remaining water supply and habitat protected
Expand Urban River Restoration	100 acres of new urban habitat in 5 greenways in EJ areas
Launch a "Save Land for Watersheds" Pilot	Pilot : "Bank" for mitigating land impacts via restoration
Parking Lot Restoration	50 acres of pavement restored to green in 10 cities



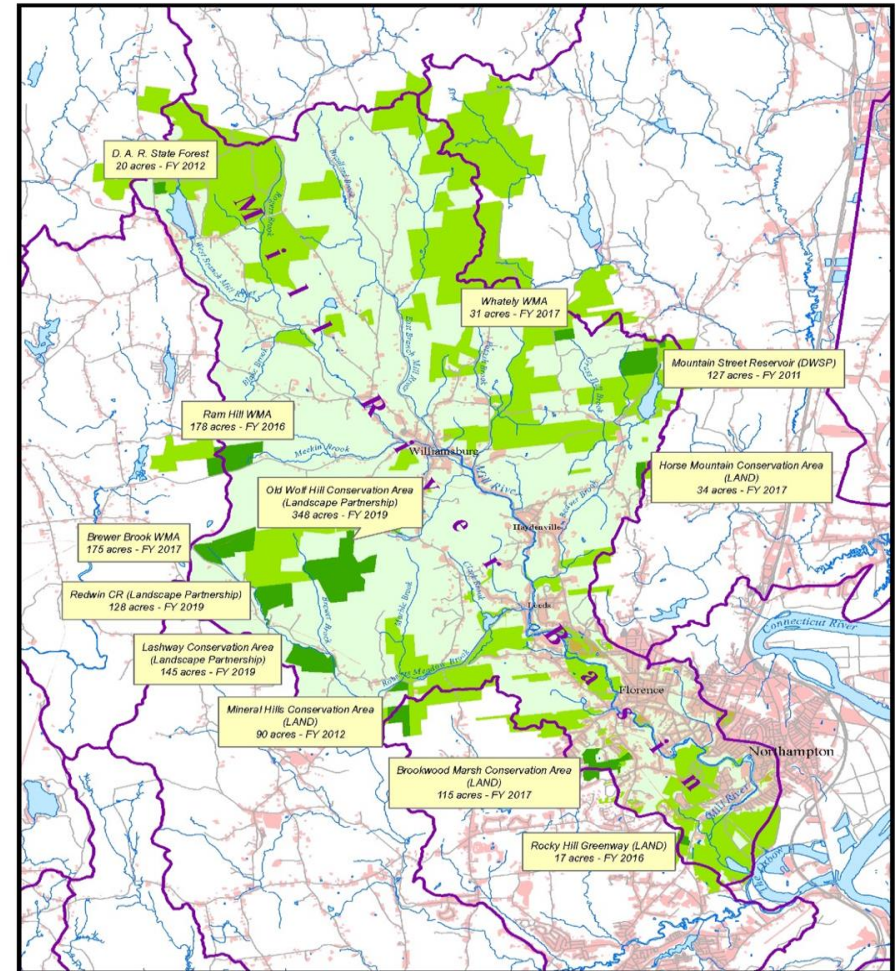
# STRATEGY #5: FOCUS ON CLIMATE RESILIENCE

Actions	Metrics (by 2030)
Launch the Forest Resilience Program and Chapter 61 "c"	100,000 acres of forest managed to enhance carbon and resilience
Adopt Key Rec's of Healthy Soils Action Plan	10,000 acres of cultivated farmland managed for healthy soils with significant carbon storage
Increasing % of Long-Lived Forest Products	Increased storage of the existing MA forest harvest to realize the carbon benefits



# STRATEGY #6: FOCUS ON LANDSCAPES

Actions	Metrics (by 2030)
Expand landscape and watershed-scale conservation, stewardship and restoration projects	30,000 of the Commonwealth's most intact landscapes would be protected. This Action would also protect people from climate impacts



# RESILIENT LANDS INITIATIVE - STRATEGY #6: FOCUS ON THE GREEN ECONOMY

- **Create a new green economy with expanded jobs in farm and forest products, increased forest resilience, enhanced urban tree canopy, and healthier soils that store more carbon:**
  - Create 10 new jobs in each of our 100 rural communities and 30 new tree planting and land restoration jobs by 2030 in each of our cities with expanded forest and farm resilience and urban forestry projects
  - Create a new program to provide municipal and private forest and farm landowners annual payments for implementing best practices and making at least a 20-year commitment to keeping their land open.
  - Pass a “Lands for People” law that includes “PILOT for Climate” and refundable tax credits for land restoration and tree planting projects (with added incentives in EJ areas).



# RESILIENT LANDS INITIATIVE – STRATEGY #8: FOCUS ON COLLABORATION

Actions	Metrics (by 2030)
Make the Resilient Lands Initiative a model program for public involvement and inclusion	This Action is critical if the RLI is to be a truly inclusive program that reaches every resident
Total All 20 Actions	29,100 acres new forest and farms and 45,000 of best landscapes protected



# CONSERVING AND MANAGING LAND FOR RESILIENCE AND CONNECTIVITY

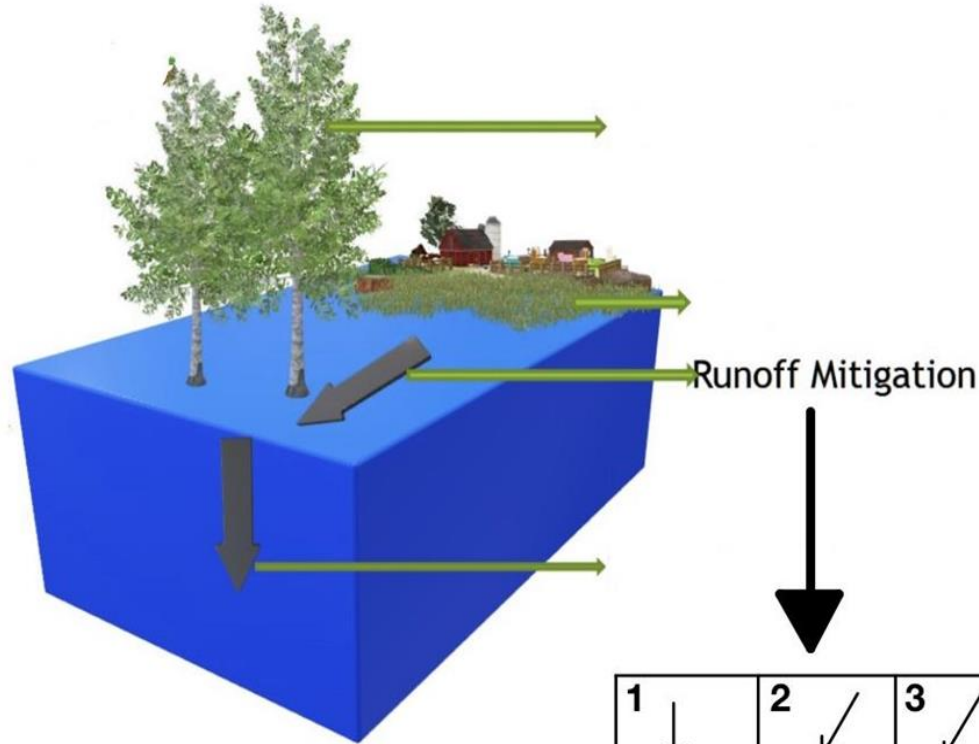
- NIACS, TNC, MassAudubon and NEFF are completing a pilot for the forest carbon and resilience practices;
- TNC has developed a land resilience model for the northeast used as a rating criteria for EEA grants.



▪ **I-CARES:**  
Information for  
Climatic  
Adaptation and  
Resilience for  
Ecosystem  
Services -  
resilience for  
people



# Runoff Calculation



1 ↓	2 ↙	3 ↙	4 ↙
5 ↓	6 ↙	7 ↙	8 ↙
9 ↓	10 ↙	11 ←	12 ←
13 ↙	14 ←	15 ←	16 ←

$$\frac{\text{Onsite}}{\text{Runoff}} Q = \frac{(P - 0.2 S)}{(P + 0.8 S)}$$

$$\text{Vol}(7) = \text{Vol}(3) + \text{Vol}(4) + \text{Vol}(8)$$

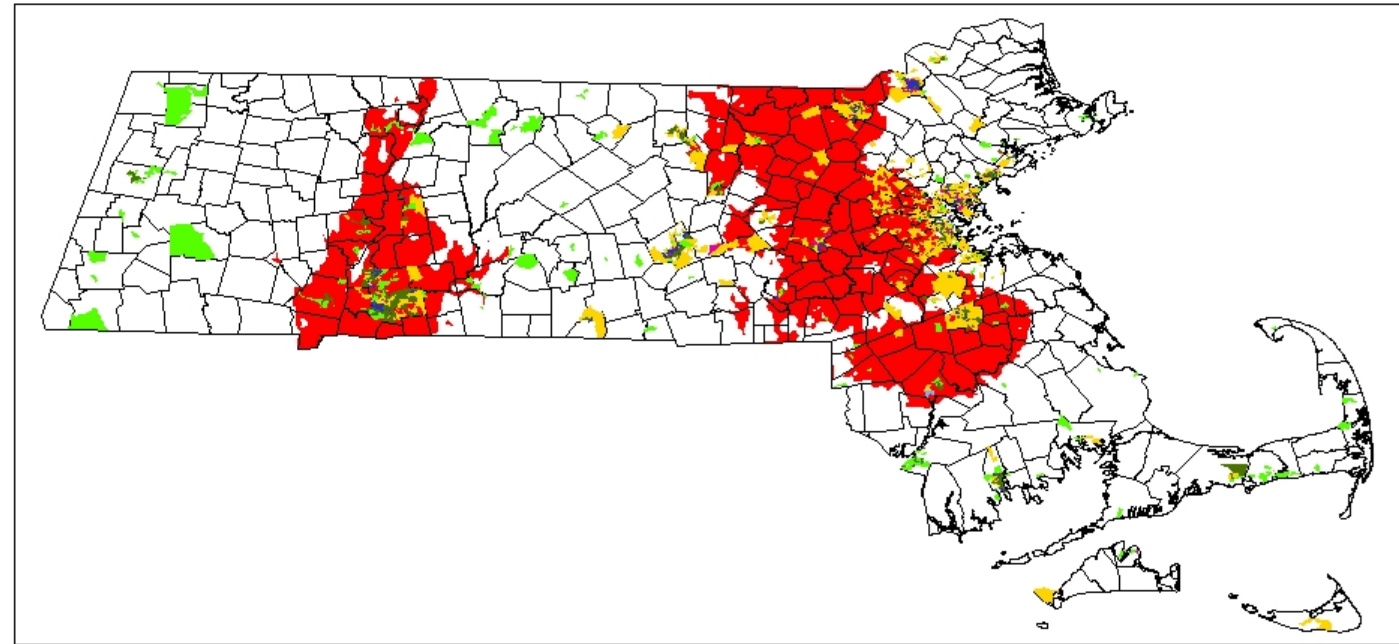
**Accumulated Output**

$$\text{Vol}(13) = \text{Vol}(1) + \text{Vol}(2) + \text{Vol}(3) + \text{Vol}(4) + \text{Vol}(5) + \text{Vol}(6) + \text{Vol}(7) + \text{Vol}(8) + \text{Vol}(9) + \text{Vol}(10) + \text{Vol}(11) + \text{Vol}(12) + \text{Vol}(14) + \text{Vol}(15) + \text{Vol}(16)$$



# ENVIRONMENTAL JUSTICE (TOP QUARTILES)

## Heat Island in Massachusetts (Top Quartile)



0 30 60 120 Kilometers

### Boundaries

Towns

### Environmental Justice 2010 Populations

#### EJ Criteria, by Block Group

- Minority
- Income
- English isolation
- Minority and Income
- Minority and English isolation
- Income and English isolation
- Minority, Income and English isolation

### Temperature (Degrees Celsius)

- 21.29615402 - 25.23003082
- 25.23003083 - 26.18136051
- 26.18136052 - 26.87557406
- 26.87557407 - 27.85261536

Timothy Randhir, UMass

30 Year  
Average  
Heat Island  
Maps

# FUNDING FOR CONSERVING RESILIENT LANDS

- LAND grants
- Landscape Partnership grants
- Land and Water Conservation Fund
- Conservation Partnership Grants
- Drinking Water Supply Protection Grants
- Municipal Vulnerability Grants
- USFS Community Forest Grants
- Forest Legacy
- NRCS Regional Cons Partnership



# THE RESILIENT LANDS INITIATIVE: *EXPANDING NATURE ACROSS THE COMMONWEALTH TO HELP PEOPLE AND NATURE*

