COMMUNITY ENGAGEMENT

Strategies to engage citizens, businesses and vulnerable populations in achieving safe, sustainable, and prospering communities.

Donald Watson, FAIA

COMMUNITY ENGAGEMENT

Strategies to engage citizens, businesses and vulnerable populations in achieving safe, sustainable, and prospering communities.

What are the best ways to engage plans & actions to address natural hazard and climate/weather risks?

Are there advantages if PoCDs & economic development plans are integrated w/ mitigation/adaptation plans?

Who can best take the lead: municipalities, businesses, non-profit organizations, innovative partnerships?
WHAT IS THE OBJECTIVE?

D. Watson www.TheOARSlist.com

DRR
Disaster Risk Reduction
Emergency Preparedness

CAP
Clean Air/Water
Climate Action Planning

SAFETY
Reduces Harm

- Change in land use, relocation
- Emergency & business continuity planning
- Upgrades or hardening of building and infrastructure
- Residential programs promoting adaptation
- Health programs

Mitigation

- Green Buildings
  - Energy conservation and efficiency
  - Renewable energy
  - Sustainable transportation, improved fuel efficiency
  - Capture and use of landfill and digester gas
  - Carbon sinks

Health
Reduces Emissions

- Nexus of Food, Energy, Water
- Smart Growth
  - Environment & Law
- Resilience in the face of climate change
- Health programs

Adaptation

- Resilience in the face of climate change
- Health programs

Venn Diagram showing the overlap of Adaptation and Mitigation strategies for safety and health.
WHAT IS THE OBJECTIVE?

ECONOMIC DEVELOPMENT
Business Recruitment
Jobs, Training

ENVIRONMENTAL JUSTICE
Sustainability
“future fairness”

SAFETY
Reduces Harm

DRR
Disaster Risk Reduction
Emergency Preparedness

HEALTH
Reduces Emissions

EQUITY
Honors & protects human rights

ECONOMY
Creates opportunity & prosperity

Adaptation
Change in land use, relocation
Emergency & business continuity planning
Upgrades or hardening of building and infrastructure
Residential programs promoting adaptation
Health programs

Mitigation
Green Buildings
Nexus of Food, Energy & Water
GOVERNANCE
Smart Growth (LID)
Health, safety, justice

CAP
Clean Air/Water
Climate Action Planning

Clean energy
Sustainable transportation, improved fuel efficiency
Capture and use of landfill and digester gas
Carbon sinks
What’s in it for me & mine?

UPLAND

MORE PRIVATE INVESTMENT

Higher density development

Urban tree canopy green roofs connected greenways

Green infrastructure

LOWLAND

Retreat to higher ground

Dry floodproofing (commercial) elevation (residential) local berms

Floodproofing + local berms

COAST

MORE PUBLIC INVESTMENT

Surge design elevation

Rising seas - changing shoreline

Shoreline stabilization + marsh creation

Offshore reef, wave attenuation + habitat creation

Detention / retention basins

Raised streets & structures

Berm/ wall + overtopping zone

INCREASED PROPERTY PROTECTION

Property value protection
What’s in it for our families & businesses?

**UPLAND**
- Higher density development

**LOWLAND**
- Retreat to higher ground
- Removal of low lying structures

**COAST**
- Rising seas - changing shoreline
- Surge design elevation

**Business continuity**
- Urban tree canopy
- Green roofs

**Property value protection**
- Floodproofing + local berms
- Dry floodproofing
- Elevation (residential)
- Local berms

**NHMP / regulatory**
- Connected greenways
- Larger interventions in vacant lots

**MORE PRIVATE INVESTMENT**

**MORE PUBLIC INVESTMENT**
- Detention / retention basins
- Raised streets & structures
- Offshore reef, wave attenuation + habitat creation
- Berm / wall + overtopping zone

**INCREASED COMMUNITY PROTECTION**
- DECREASED RISK INSURANCE (case by case)**
What’s in it for our whole community?
What’s in it for our city, state, & region?

UPLAND
- Higher density development
- Urban tree canopy
- Green infrastructure
- Detention / retention basins

LOWLAND
- Retreat to higher ground
- Floodproofing + local berms
- Raised structures

COAST
- Removal of low lying structures
- Surge design elevation
- Rising seas - changing shoreline
- Shoreline stabilization + marsh creation
- Offshore reef, wave attenuation + habitat creation
- Berm / wall + overtopping zone

MORE PRIVATE INVESTMENT
- Economic competition
- Business continuity
- Property value protection
- NHMP / regulatory
- NFIP CRS incentives
- Community HSW (equity)

MORE PUBLIC INVESTMENT

FULL SPECTRUM COMMUNITY RESILIENCE
HOW TO CONVENE THE CONVERSATION

FEMA NHMP updates

Table Top Drills ("weakest link")

Study Groups

Hackathons
“FUTURE PROBABLE CONDITIONS”

Tulsa's PUBLIC PARTICIPATION PLAN
### Tulsa's PUBLIC PARTICIPATION PLAN

<table>
<thead>
<tr>
<th>Message</th>
<th>Desired Outcome</th>
<th>CRS Priority Topics (for comparison only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Know your risk of flooding</td>
<td>A. More requests for flood information and/or elevation certificates</td>
<td>Know your flood hazard</td>
</tr>
<tr>
<td>B. What are your options if you live in a repetitive loss property?</td>
<td>B. More requests for information on options for repetitive loss properties</td>
<td></td>
</tr>
<tr>
<td>C. You need flood insurance</td>
<td>C. Increase in the number of flood insurance policies</td>
<td>Insure your property for your flood hazard</td>
</tr>
<tr>
<td>D. Turn around, don’t drown</td>
<td>D. Fewer deaths due to drowning, or reports of water rescues or police ticketing drivers who ignore barricades</td>
<td>Protect people from the hazard</td>
</tr>
<tr>
<td>E. You can protect your property from flooding</td>
<td>E. More requests for information on flood-resistant construction and rehabilitation</td>
<td>Protect your property from the hazard</td>
</tr>
<tr>
<td>F. Get a building permit when constructing in flood-prone areas</td>
<td>F. Fewer floodplain violations</td>
<td>Build responsibly</td>
</tr>
<tr>
<td>G. Storm drains are for rain</td>
<td>G. Measured increase in water quality in watershed</td>
<td>Protect natural floodplain functions</td>
</tr>
<tr>
<td>H. LID improves water quality</td>
<td>H. More requests for information on low impact development or increase in related building permits</td>
<td><strong>PPI Additional Topic:</strong> Low Impact Development</td>
</tr>
</tbody>
</table>
NOTABLE CONNECTICUT EXEMPLARS

- Listening Sessions
- Visioning Charrettes
- Municipal plans (PoCD)
- FEMA NHMP updates
- Emergency Operations Plans
- Science Advisories (CIRCA)
- Resiliency Demonstrations
- Climate Action Planning

- JUMP START THE CONVERSATION
- COORDINATE REGULATORY PLANS
- SUPPORT CLIMATE ACTION PLANS

- ENGAGE ACADEMIC/BUSINESS PROGRAMS
- COORDINATE INCENTIVES/SUPPORT PROVISIONS

- Conferences
  - Corporate Risk Management
  - Executive Education Programs

- CIRCA programs
  - Sustainable CT
How Does Climate Change Affect Our Community?

- More Intense storms
- Impacts from flooding
- Impacts on H₂O quality
- Longer growing season
- Extended droughts
- Increase in plant pathogens
- Increased erosion
- Impacts to recreation
- Vegetation impacts
- Increased H₂O use
SHARED VISION & ROAD MAP

Resilient Communities Scorecard
A Tool for Assessing Your Community

Vermont's Roadmap to Resilience – ISC (2013)  [Website]

Resilient Communities Scorecard - VNRC (2013)  [Website]
LISTENING SESSIONS
Visioning Charrettes
Orton Heart&Soul

MUNICIPAL PLANS (PoCD)
FEMA NHMP updates
Resiliency Scorecard (TAMU)

SCIENCE ADVISORIES (CIRCA)
Resiliency Demonstrations
Climaid (NYS)

NOTABLE NATIONAL EXEMPLARS

- Science Projects
- Executive Education Program
- MD Small Business Climate Plans
- CIRCA programs
- Sustainable CT
- Sustainable Jersey
- Abt / KRESGE roadmap

FLOWCHART:
- JUMP START THE CONVERSATION
- ENgage Academic/Business Programs
- COORDINATE REGULATORY PLANS
- COORDINATE INCENTIVES/SUPPORT PROVISIONS
- SUPPORT CLIMATE ACTION PLANS
- ACHIEVE FULL SPECTRUM VISION ROAD MAPS
Community Heart&Soul begins with a partnership between local government and residents in a process….of engagement about what matters most—emotionally—to residents.”

Lyman Orton

1 Lay the groundwork
2 Explore your community
3 Make decisions
4 Take Action
RESILIENCE SCOREDCARD (TAMU)

Norfolk Virginia

Burke, Phil et al. *Local Planning Networks and Neighborhood Vulnerability Indicators* (2017)
coastalresiliencemcenter.unc.edu/crc-projects/phil-berke
ClimAID (NYS)

### Projection of Mean Annual Changes Air Temperature and Precipitation for Region 4 (New York City Long Island)

Data indicates middle range (25th to 75th percentile except as noted)

<table>
<thead>
<tr>
<th></th>
<th>Baseline 1971-2000</th>
<th>2020s</th>
<th>2050s</th>
<th>2080s</th>
<th>2100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air temperature</strong></td>
<td>54.6°F</td>
<td>+ 2.0 – 2.9°F</td>
<td>+ 4.1 – 5.7°F</td>
<td>+5.3-8.8°F</td>
<td>+12.1°F</td>
</tr>
<tr>
<td><strong>Precipitation</strong></td>
<td>49.7&quot;/annum</td>
<td>- 1 + 8%</td>
<td>+ 4 + 11%</td>
<td>+5 to + 13%</td>
<td>-1 +19%</td>
</tr>
<tr>
<td><strong>SLR (Montauk)</strong></td>
<td>0 2000-2004</td>
<td>4 to 8 in.</td>
<td>11 to 21 in.</td>
<td>18 to 39 in.</td>
<td>21 to 47 in.</td>
</tr>
<tr>
<td><strong>SLR HighRange (Montauk)</strong></td>
<td>0 2000-2004</td>
<td>10 in.</td>
<td>30 in.</td>
<td>58 in.</td>
<td>72 in.</td>
</tr>
</tbody>
</table>
BUSINESS FRAMEWORK (MD)

**FIGURE 2:** Types of Impacts Experienced by Businesses from Weather Events in Past Five Years

- Disrupted operations: 59%
- Personnel impacts: 43%
- Temporary closure of business: 35%
- Other: 35%
- Damage to infrastructure: 19%

**FIGURE 6:** Types of Resources Needed by Businesses Surveyed in Order to Address Extreme Weather and Climate Risks

- Information on funding: 54%
- How to prepare/enhance protection: 51%
- Detailed region/sector impacts: 43%
- Landowner/tenant responsibilities: 35%
- Contact details for state or city officials: 32%
- Flood maps: 27%
- A network of other small businesses: 24%
- Other: 16%

Municipal resilience is the ability of a community to adapt and thrive in the face of extreme events and stresses. Municipal resilience is achieved by anticipating risk, planning to limit impacts, and implementing adaptation strategies that integrate all community systems – civic, environmental, social and economic – to support recovery and growth.
Abt / KRESGE FOUNDATION
Climate Adaptation Practices

Abt / Kresge (2016) Climate Adaptation: State of Practice in U.S. Communities
kresge.org/sites/default/files/library/climate-adaptation
INTEGRATED PLANNING

MASTER PLAN + HAZARD MITIGATION = FULL-SPECTRUM PLANNING

- Master plan
- Climate action plan
- Hazard mitigation plan
- Storm hazard
- Environmental risks
- Emergency refuge/evacuation
- Temporary services / staging
- Continuous dry-run & updates

ONE PLAN
Think regionally, act regionally
MORE RESOURCES

resources, funding sources, job listings, newsletters

the OARS list
Organizations Addressing Resilience & Sustainability

peer organizations
international resources
job listings & internships
grants & funding

WWW.theOARSlist.com

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