



**Resilient Nashua Summit
December 18th, 2018
Rivier University
Dion Center Reception Room**

Attendees:

Alison	Skare	Milford High School
Amanda	Kohn	Kim Lundgren Associates
Americo	Imperatore	Community Member
Amir	Toosi	Rivier University
Amy	Bewley	Academy for Science and Design
Amy	Hamilton	US Army Corps of Engineers
Arlene	Magoon	FEMA
Ash	Bustead	Citizens Climate Lobby
Bob	Lazzara	Circuit Connect, Inc.
Bobbie D	Bagley	DPHCS
Brian	Harris-Jones	Recent graduate of environmental science
Carlos	Camacho	Nashua Police
Carole	Totzkay	NH DHHS ESU
Charles	Hall	American Red Cross
Christa	Daniels	Antioch University
Cooper	Martin	National League of Cities
Dan	Weeks	ReVision Energy
Daniel	Modricker	DHS CISA
Dave	McConville	DMc Permaculture
Deb	Chisholm	City of Nashua
Donald	Ware	Pennichuck Water Works, Inc.
Doria	Brown	Worthen Industries
Ed	Lecius	Nashua Police
Ed	Walker	Town of Peterborough
Elise	Simons	EPA Region 1

Emily	Martuscello	FEMA
Heather	Snide	Student
Hector	Ortiz	Rise
James	Pyle	Nashua Environment & Energy Committee
Jan	Schmidt	BOA/State Rep
Jarad	Monin	US Army (76th ORC)
Jay	Minkarah	Nashua Regional Planning Commission
Jennifer	LaTouche	Expert Design Solutions
Jennifer	Gilbert	NH Office of Strategic Initiatives
Jennifer	DiMaria	Milford High School
Jessica	Hillman	Nashua Division of Health and Community Services
Justin	Kates	City of Nashua, NH
Kashena	Window	NH DHHS: Emergency Services Unit
Laurie	Branchaud	Gateways Community Services
Linda	McGhee	City of Nashua
Liz	Gilboy	NH HSEM
M	Vornehm	Church of Jesus Christ of Latter-day Saints
Maida	Sengupta	AARP
Mark	Hastings	SNHHS
Mason	Twombly	Nashua Regional Planning Commission
Matthew	Chigas	City of Nashua Office of Emergency Management
Matthew	Bachler	Town of Swanzey
Michael	Pedersen	Nashua City Planning Board
Michelle	Veasey	NH Businesses for Social Responsibility
Mikaela	Engert	Consultant
Nick	Miseirvitch	City of Nashua
Nick	Kasza	National League of Cities
Nicole	Viau	City of Nashua Division of Public Health and Community Services
Patricia	Klee	City of Nashua
Patrick	Morrison	Nashua CERT
Patty	Crooker	Nashua Division of Public Health and Community Services

Paul	Janampa	NH Catholic Charities, Nashua
Peter	Burke	Farnum Center
Ray	Rowell	Worthen Industries
Rebecca	Ohler	NH Dept. of Environmental Services
Ren	Beaudoin	City of Nashua Environmental Health
Rhett	Lamb	City of Keene
Richard	Eldridge	Team Rubicon
Roger	Houston	Nashua Planning Department
Roland	Vance	St Joseph Hospital
Russ	Norris	Rivier University
Sara	Ceaser	United Way of Greater Nashua
Sarah	Marchant	City of Nashua
Sarah	Gibson	NHPR
Scott	McPhie	City Of Nashua
Scott	Cote	Southern NH Health System
Scott	Osterhuber	Fidelity Investments
Sharon	Nall	NHDES
Shaylin	Deignan	Foundation for Healthy Communities
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Sherry	Godlewski	NHDES
sonny	harris	Kearsarge-Sunapee Region Biogeochemistry
Stephen	Buckley	New Hampshire Municipal Association
steve	genest	southern nh services
Susan	Snide	town of pelham
Suzanne	Delaney	Greater Nashua Chamber of Commerce
Sylvie	Stewart	Environment and Energy Committee
Terri	McAllister	NIST
Tiffany	Skogstrom	MA Office of Technical Assistance
Tiffany	Calvino	Fresenius Medical Care
Timothy	Mallette	NHDOT
William	McKinney	Dept. of Building Safety, City of Nashua
Zeina	Eyceoz	SNHU- Nashua Citizen

9:00am-9:20am - Welcome

Sister Paula Marie Buley, IHM - President - Rivier University

- Welcomed everyone to Rivier and was happy to have the event at Rivier because universities create the next generation of resilient citizens

Cooper Martin - Program Director - National League of Cities Sustainable Cities Institute

- Noted that most Americans live in cities of under 50,000 and even though Nashua has under 100,000 it is just as important to highlight the work in resilience that cities of this size do, not just large cities. He also noted that he is inspired by the hard work local employees and politicians do for their communities.

James Donchess - Mayor - City of Nashua, NH

- Stated that it is important to be involved in this initiative and highlighted the work that has been done so far on the Resilient Nashua Initiative

9:20am-10:20am - Projected Climate Impacts to our Region from the Southern New Hampshire Climate Assessment

Dr. Cameron Wake - Josephine A. Lamprey Professor of Climate and Sustainability - University of New Hampshire Sustainability Institute

- Described climate change as the innovation opportunity for government and businesses of the 21st century.
- Added that climate change impacts all other areas of policy making and daily life. Provided an overview of current impacts humans have had on climate change and projected future impacts.
- Noted that the Nashua economy is fundamentally tied to the economy of the NH Seacoast and to Boston which are both fundamentally connected to and impacted by sea level rise.
- Recommended mitigation actions including: reducing greenhouse gas emissions, adapting to climate change, keeping current ecosystems, individuals invest retirement and investment accounts into the future they want to see (environmental, social and governance investing), and to ask questions of every new piece of infrastructure about sustainability and how it prevents flooding, etc.

10:20am-11:20am - Efforts the City of Keene has Taken to Reduce their Greenhouse Gases and Adapt to Future Hazards

Rhett Lamb - Director of Community Development/Assistant City Manager - City of Keene, NH

- Keene has been using the ICLEI model for climate change mitigation since the early 2000s culminating in the 2007 Climate Resiliency Plan and climate resiliency became further institutionalized through the City's 2010 Comprehensive Master Plan (CMP)
- Noted that that the efforts created a broader discussion regarding climate resilience due to the City being involved in a non-traditional role in government
- Required city departments to tie Capital Improvement Plan (CIP) budget requests to the CMP which further institutionalized sustainability. This helped align CIP requests with what the community said it wanted Keene's future to be like through the CMP

- Noted that this was easy for departments to do in a general sense but not so easy day to day
- It is important to make land use consistent with what the goal is for the future
- Both the city transfer station and Keene State College run biofuel generators
- Noted the discovery that taxing solar generation properties with a “power property tax” makes them not viable and ways need to be found to exempt these properties. This also includes zoning issues and making sure city codes are in harmony with the goal of resilience
- Decisions made today should reflect a changing and different future
- Dynamic solutions are required to deal with both current and future problems and codes will not solve everything

11:20am-11:45am - Overview of Nashua’s Current and Future Resilience and Sustainability Initiatives

Sarah Marchant - Director of Community Development - City of Nashua, NH

- Discussed the positive impact that the bike sharing program has had on the city
- Noted that the bike lanes will be repainted after the paving and the winter
- Added that feedback on bike lanes and other projects can be provided via the Livable Nashua Dashboard
- KLA has been contracted to produce and manage the Liveable Nashua Dashboard as a way to let the public know all of the great projects that Community Development has been working on and allow for the public to interact more with Community Development and the projects

12:15pm-1:00pm - How to Use the New Resilient Nashua Toolkit - Simple Tools and Templates to Prepare Your Business, Organization, or Department

Justin Kates - Director of Emergency Management - City of Nashua, NH

- Unveiled the Resilient Nashua Toolkit a resource for local businesses, schools, organizations, and healthcare facilities to do emergency and continuity of operations planning
- The tool combines resources from all over into a comprehensive step by step guide that produces useful products and technical assistance from city offices can be utilized along the way as needed
- A group activity using resources from the site was conducted where participants identified who would be on their organization’s planning team, what hazards their organization faces, and what some response actions to those hazards could be
- Toolkit can be accessed at www.readynashua.org

1:00pm-2:00pm - Making the Case for Resilience as a Competitive Edge

Dr. Stephen Flynn - Founding Director - Northeastern University Global Resilience Institute

- Noted the “professional protector problem” that public safety and government has long excluded citizens from the response process but society is moving towards an “all hands evolution”

- People need to feel empowered and included so their social and “hidden” capital can be included in response
- Showed a slide of Newark, NJ where efficient transportation engineering has created a resilience problem as resilience is often counterintuitive to traditional engineering which has led to a new field of resilience engineering
- “Resilience Imperative”: Disasters are far more costly and disruptive due to the cascading nature of interconnectedness
- Americans are generally optimistic and have trouble thinking about these types of events
- Resilience as a competitive advantage: people and businesses will move to areas that are good at (or comparatively better at) managing risk
- Dr. Flynn has not found anyone against resilience anywhere on the political spectrum
- Problems with understand resilience include:
 - Risk Illiteracy: Getting people to understand how hazard impact things that they value and then getting them to act on that new knowledge
 - Inadequate Designs: Traditional engineering has not been building things with resilience in mind
 - Pervasive Economic Incentives: The market rewards efficiency not resilience. Resilience needs to be incentivized
 - Inadequate Governance Frameworks: Focus on improvement tends to be after disasters and events not before. These frameworks need better communication. Assumptions are made on things that are not true and nothing exists in isolation
 - Inadequate Training: People have not been trained or educated in this way of thinking. People tend to be locked into silos and not communicating in academia and government
- Funding should be more focused on resilience to all hazards than trying to eliminate certain threats and hazards
- Ignoring the interconnectivity and interdependence of things can lead an organization to become an “island of resilience in a sea of agility”
- Recovery is the missing piece that we don’t plan for
- Recovery gets people invested in mitigation and thinking systematically
- We have gotten very good at response but need to focus on continuous improvement in recovery
- Resilience requires deploying innovative solutions by thinking differently about design solutions (Hoboken Sea Wall as an example)
- “Retrofitting Problem”: Mitigation and adaptation actions need to be done ahead of time so they are more integrated and beautiful as well as cost effective
- Harnessing civil society includes planning for people to show up to help and giving them a task as well as communicating effectively with the population through social media. This encourages social capital and helps retain it for when it is needed most
- New federal “opportunity zones” can be used as resilience experiments
- Academia can be leveraged not just as a source of knowledge but to foster conversations and growth

- Companies who build resilience into daily function actually function much better than those who ignore it. The same could be true for communities
- Americans have resilience built into our DNA due to our history but it is a race against time because we are already behind the curve as Dr. Wake highlighted in his presentation
- “We secure liberty by empowering our people to know they can overcome adversity when they encounter it”

2:00pm-3:00pm - The Waffle House Index

Pat Warner - Director of Public Relations and External Affairs - Waffle House, Inc.

- Practices resilience through a four step model:
 - Plan
 - Pre-Season Prep
 - Storm Prep
 - Response
- Planning includes building relationships with health departments, other local officials, and active communication and coordination with vendors
- Planning also includes understanding interconnectivity and interdependence with vendors and the community and provides for back ups on contracts and power. They can run a restaurant as long as they have gas for the grill
- Pre-Season Prep includes getting procedures and kits in order for the store itself, managers, and employees as well as appropriate training
- Storm Prep includes staging and mobilization
- Response includes bringing in staged equipment and mobilized staff from other regions as well as executives from the company to be able to make decisions locally

Poster Questions & Responses:

Hazard: Increasing Temperatures:

What concerns you most about this hazard?

- Impact on low income residents
- Impact on the most vulnerable populations
- Impact of aging population without adequate cooling options
- Escalating use of non-renewable energy without up front investment in renewables

What could help community members be better prepared for this hazard?

- More community engagement and outreach
- Communication to the most vulnerable populations on where to seek refuge from extreme temperatures
- Doing the math on fuel/energy assistance programs vs. reducing that need by investing in solar

What actions have you already taken or would you be willing to take to protect yourself from this hazard?

- Already driving an electric car
- Want residential solar
- Currently do not use A/C
- Want to plant more trees

Hazard: Intense Storms

What concerns you most about this hazard?

- Flash Flooding
- Lack of infrastructure that can handle run off
- Damage to property
- Damage to citizen's livelihoods
- Damage to or loss of infrastructure
- Being unprepared
- Loss of life
- Public health & safety

What could help community members be better prepared for this hazard?

- Awareness to create the ability to shelter in place
- City incentives and investment in storm water systems as well as home repairs (ex. roofs and basements)
- Warning system for community
- NERT (Neighborhood Emergency Response Teams) that can help build strong local communities that can come together to assist others during emergencies
- More accurate flood maps that show the true risk of flooding

What actions have you already taken or would you be willing to take to protect yourself from this hazard?

- Get a boat

Mentimeter Questions & Responses (Duplicates Included):

What future climate impacts do you feel Nashua is least prepared for? (Votes)

Increased Annual Temperatures	1
More frequent extreme heat days	10
Increased Annual Precipitation	2
More frequent extreme precipitation days	15
More frequent drought conditions	4

What Keene project could you see happening in Nashua?

- Building walkable neighborhoods that are connected
- Solar power at the airport
- City encouraged solar/renewable projects

- Working on the investment to work on the infrastructure
- Electric car charging stations
- Solar panels on buildings
- Installing solar panels on municipal buildings
- "Energy efficiency building standards.
- Site development standards that decrease storm water runoff and no point source pollution."
- the education of our community on the impact of our greenhouse gas emissions on our future and doing the municipal and community study to see where we currently are to plan for our behavior changes short term and long term.
- solar on public buildings
- Solar on public land
- Electric car charging stations.
- Incentive to encourage green buildings
- Biodiesel utilization...
- Solar panels on city buildings
- Storm water system management and cleaning
- Bike Mayor
- Methane capture & energy generation at landfill.
- Campaigns like anti-idling
- Increased LED lighting such as traffic lights...
- Large solar farms

What are three hazards you identified for your organization?

- Power_grid_failure
- School_has_aging_building Winter_storms
- Tank_failure Flooding
- Power_outage Flooding
- Flooding Power_Outage Extreme_Temperatures
- Flooding Traffic
- Hurricanes Fires Flooding
- Extreme_flooding Active_shooting Data_breach_cyber_attack
- Weather_events Power_loss Staffing
- Weather_incidents Human_factors Street_Closures
- Winter_storms Flooding Extreme_heat
- Flooding Extreme_Heat_Cold Disease_Outbreak
- Weather Epidemic Cyber_security
- active_shooter loss_of_heat
- Active_shooter
- Snow_and_ice Flooding Pandemic
- Active_shooter Power_outage Cyber_attack
- Building_infrastructure Winter_storms Extreme_heat
- Injury Air_quality Death

- IT_Outage Irate_Citizen Cybersecurity
- Flooding No_communications Power_outa
- Active_shooter Power_outage
- Weather Disease Hostile_individuals
- Super_Blizzard
- weather Drought Heat
- Severe_weather Mass_Casualty_situation Highly_infectious_disease
- Active_shooter Winter_storms Power_out
- Flooding Car_accidents Fire

What can your organization provide during a disaster?

- Shelter
- Equipment, personnel, knowledge
- mental health support, emergency planning support/expertise, humor, messaging, communication planning, bilingual support, technical assistance, mass vaccination planning support, disease control response, technical expertise, support, IT support
- Volunteers
- SMEs, equipment, education, access to safe food and water, surveillance
- Sheltering and medical resources (ESF 6 & 8)
- People
- Networking for support services through EOC
- Legal services for municipal response and public meetings
- Manpower
- "Meteorological data, water quality dat, ground water data, steam flow dat. Communications assistance."
- Healthcare, shelter, showers, cell phone charging, etc
- Mobilize volunteers
- Systems Thinking Expertise