



# **Sustainable Lexington Committee** ***Presentation to Selectmen***

March 14, 2011

# ***Enhancing Quality of Life***

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*The Sustainable Lexington Committee will advise the Selectmen on proposals which affect Lexington's sustainability and resilience and will recommend, develop, and monitor programs designed to enhance Lexington's long-term sustainability and resilience in response to environmental, resource and energy challenges.*



# ***Sustainable Lexington***

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***First steps to a more prosperous, healthy and productive community***

- ***Resilience***

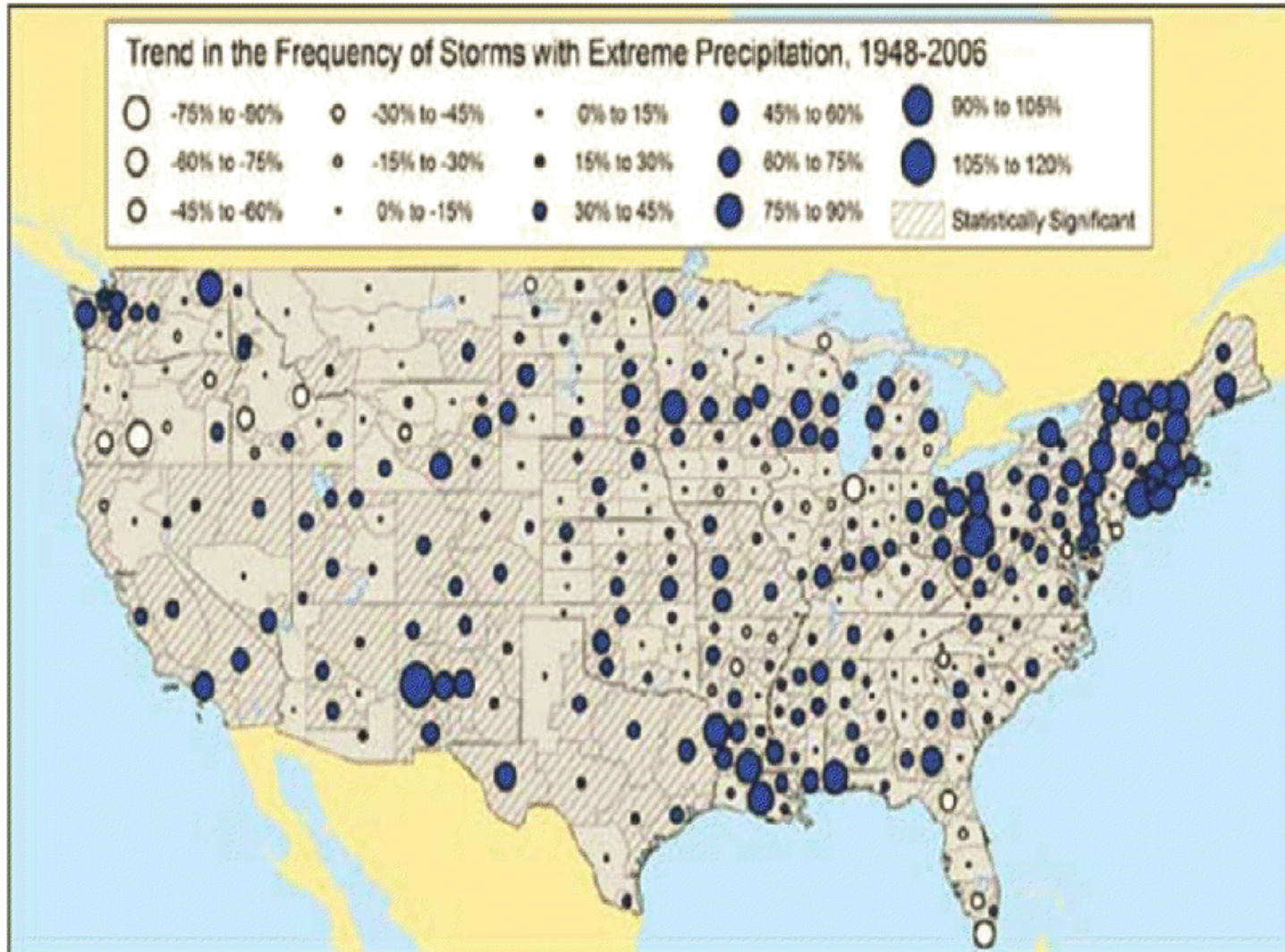
- *Recommend steps to adapt to the increasing frequency and intensity of extreme storms*

- ***Sustainability***

- *Establish programs to help residents and businesses reduce energy consumption.*

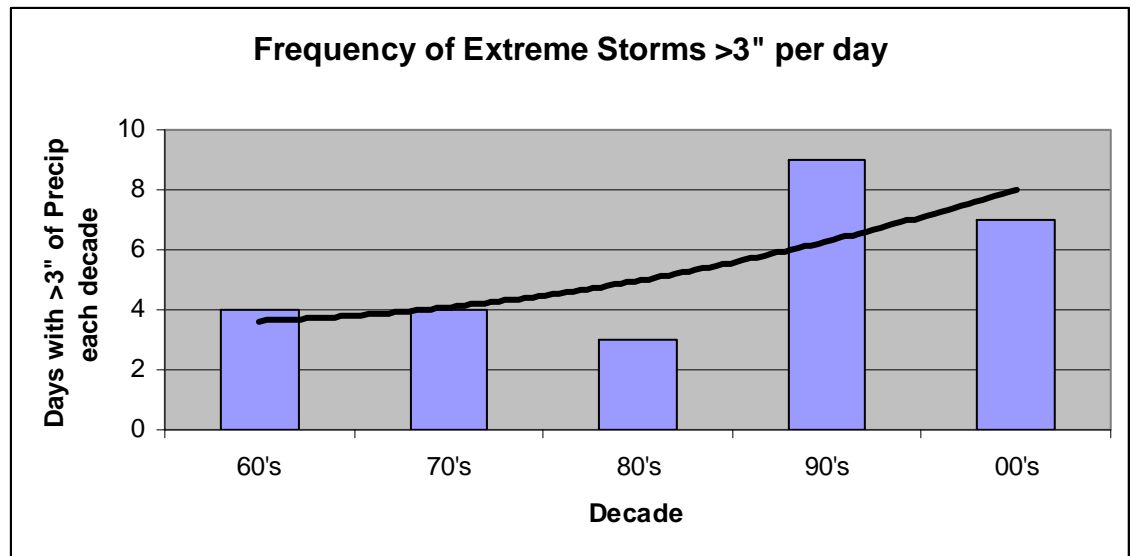


# *Extreme Storms Increasing Especially in New England*



# What Does it Mean for Lexington?

- Hanscom data:
  - 1957 – 1990: 1 day with 4"+ of rain (in 33 yrs)
  - 1991 – 2010: 7 days with 4"+ of rain (in 20 yrs)
- Our infrastructure is not designed to handle new rainfall patterns
  - Super storm rate now 12x historical rate
- Trend projected to continue



# Next Steps

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**Recommend** – Town implement pilot projects and possibly broad application of low-impact design

## **Research - Best Practices**

Leading communities are using “low-impact design” to

- Prevent flooding
- Protect infrastructure
- Preserve water quality



## **Coordinate**

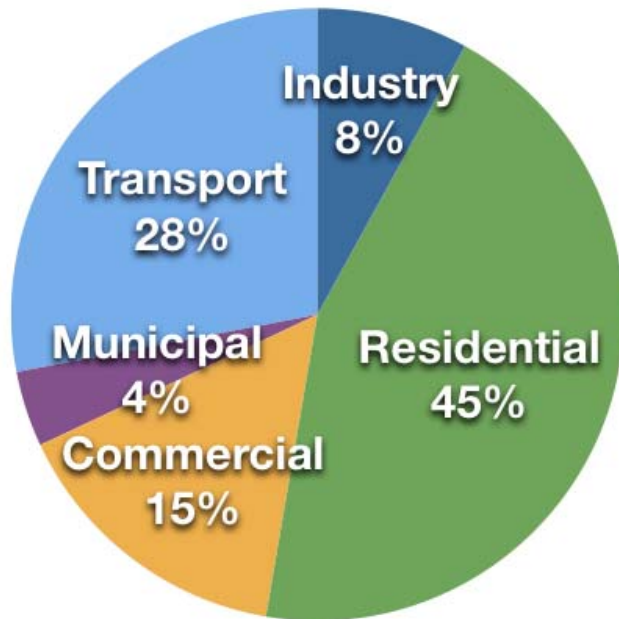
Town departments, boards, and committees – many interests are at stake



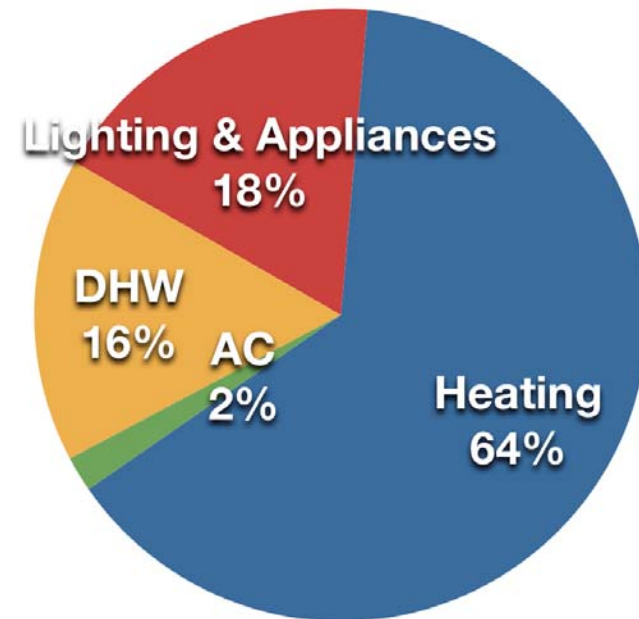
# Lexington's Energy Use

Lexington's buildings consume ~64% of our energy, and ~66% of that energy is for heating and cooling.

Lexington Energy Use by Sector



NE Residential Energy End Use



Source: EIA 2005 Residential Energy Consumption Survey



# ***Energy Efficiency – 20 by 20***

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*Reduce Lexington's residential energy use 20% by 2020*

*Establish programs to reach 1,000 homes per year and deliver 20% energy average savings*





# 20 by 20 - Residential Programs

## Five approaches for reaching likely homeowners

Residential Segment	New construction	Home Improvement	Home Sales	Furnace Upgrades	Gusher Program
<b>Program</b>	Stretch Code	Builder Program	Realtor Program	Furnace Upgrades	MassSave (NSL)
<b>Status</b>	Active	Planning	Planning	Planning	Planning
<b>Description</b>	Design Standards & Performance Testing	Builder pledge and Training	Realtor promotes implementing improvements	Conversions High Efficiency Upgrades	Target Gushers Outreach to top 10%
<b>Target Units</b>	75 – 100 / yr	1,200	300 / yr	11,000	1,100 / yr
<b>Participating Homes</b>	75 – 100 / yr	360 / yr	50 / yr	500 / yr	300 / yr
<b>Expected Improvement</b>	>20%	10% – 30%	10% – 20%	20 - 50%	>30%



# ***Gusher Program***

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- First steps - Pilot project this spring with Sagewell to identify “gusher” homes.
- Recommend program kickoff with Next Step Living (NSL) in September 2011.



# ***Next Step Living***

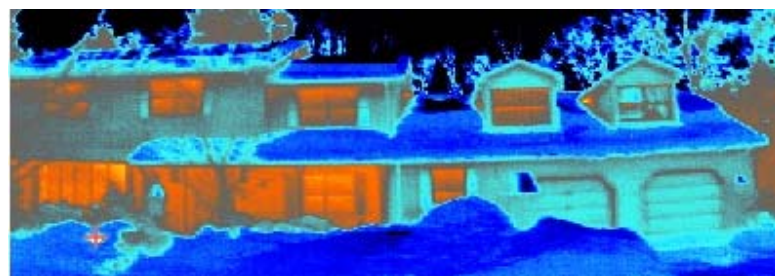
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- NSL conducts home energy evaluations and energy efficiency upgrades – reducing home energy use by 10% to 30%. NSL is:
  - Approved and selected by MassSave
  - The lead provider of this service in Massachusetts
  - Selected by Boston, Newton, Brookline, & Lincoln
- NSL will support community outreach in Lexington to attract residents with the most to gain.
- No cost to the Town or residents. We would provide supporting data and meeting space.



# Identifying Gushers

- SageWell identifies homes with the greatest need for weatherization. They have taken infra-red photos of 1,000 Lexington homes.
- Proposed pilot program will send 200 residents an infra-red picture of their home. Respondents will receive a detailed report with recommendations to improve comfort and save money.
- Mailing to homes where savings of 30% to 40% can be achieved.



# ***Commercial Energy Efficiency***

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- Iblogix is a Lexington firm that identifies commercial energy efficiency opportunities.
- Currently working with Pat Goddard on a promising pilot to indentify savings for Lexington
- With permission from owners, iblogix reviews utility data to identify opportunities to reduce consumption – no audits or site visits required!
- With Town support, local owner and the utilities will be more likely to participate and find opportunities for significant savings.



# ***Conclusion***

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**To move us toward our energy efficiency objective, we request that the Town Selectmen:**

- Agree to move forward with a memorandum of understanding with NSL to kickoff the 20 by 20 program in September 2011.
- Support the gusher identification pilot program with SageWell.
- Support a pilot program with iblogix, NStar and National Grid to reduce commercial energy use by 20%.

