Granite State Future

November 4, 2013 | 9:00 AM – 3:00 PM
NH Local Government Center
Concord, NH

What we've heard across the State and where we're headed.

Statewide Advisory Committee Meeting Agenda

9:00 AM	Opening – Kerrie Diers, Nashua Regional Planning Commission
9:05 AM	Regional Climate Change Assessments for Southern and Northern NH Elizabeth Burakowski, University of New Hampshire Earth Systems Research Center
9:30 AM	Regional Highlights – Central NH RPC, Lakes RPC, North Country Council
9:45 AM	Statewide Existing Conditions and Trends Assessment Jennifer Czysz, Nashua Regional Planning Commission
9:55 AM	NH's Housing Preferences Preliminary Findings Dennis Delay, NH Center for Public Policy Studies, Russ Thibeault, AER
10:20 AM	Regional Highlights – Nashua RPC, Rockingham Planning Commission, Southern NH RPC
10:35 AM	BREAK
10:45 AM	Granite State Future Survey Results Tracy Keirns, UNH Survey Center
11:05 AM	Regional Highlights – Southwest RPC, Strafford RPC, Upper Valley Lake Sunapee RPC
11:20 AM	Report out of the Statewide Listening Sessions, Michele Holt-Shannon, NH Listens and Molly Donovan, UNH Cooperative Extension
11:40 AM	The Equity and Engagement Checklist Bruce Mallory, UNH Carsey Institute and Equity and Engagement TASC Chair

Granite State Future

November 4, 2013 | 9:00 AM – 3:00 PM

NH Local Government Center

Concord, NH

What we've heard across the State and where we're headed.

Statewide Executive Committee Meeting Agenda

12:00 PM Brown bag lunch roundtable conversations with the RPCs

Bring your lunch, join a table, and learn more about what is happing in each of the regions and what they have heard through their outreach and research process.

Technical Advisory Subcommittees Meeting Agenda

1:00 PM TASC Breakout Group Meetings

Each of the 6 TASCs will meet simultaneously and hold their meeting as a breakout group. Convening attendees are invited to join the TASC meeting of their choice.

Based on the morning's presentations and working within the scope of the TASC's livability principle, brainstorm and discuss the following:

- What were the overarching issues and needs you heard in the morning presentations that can and need to be addressed at the State level?
- What are the key needs identified that can be feasibly addressed in the next 10 years?
- What can state agencies and organizations do? What actions can we take? Who would take the lead?

Granite State Future

November 4, 2013 | 9:00 AM – 3:00 PM

NH Local Government Center ~ Concord, NH

Statewide Advisory Committee Meeting

ATTENDEES

Emily Preston – NH Fish and Game
Glenn Greenwood – Rockingham PC
Jack Munn – SNHPC
Cynthia Copeland – Strafford RPC
Nate Miller – UVLSRPC
Van Chestnut – Advance Transit
Arlene Kershaw – Easter Seals
Felice Janelle – NHDES
Kendall Buck – NH Home Builders Assoc.
Ben Frost – New Hampshire Housing
Dennis Delay – NHCPPS
Terry Johnson – HEAL NH
Janine Lesser – DHHS/DFA
Gerald Coogan – Lakes Region PC
Katrina Evans – NH Emp Sec., ELMI
Dari Sassan – Lakes Region PC
Glenn Coppelman - CDFA
Annette Nielsen – NH Emp Sec., ELMI
Matt Monahan – Central NH RPC
Joanne Cassulo – NH OEP
Kim Goddu, NRPC
Mary Kate Ryan – NHDHR
Susan Slack – NH OEP
Fay Rubin – UNH
Jen Czysz – NRPC
Kerrie Diers - NRPC
Scott Bogle – Rockingham PC
Tracy Keirns – UNH Survey Center
Meena Gyawali – CDFA
Eileen Sipple – North Country Council
Tara Germond – Southwest RPC
Sherry Godlewski – NH DES
Julie LaBranche – Rockingham PC
Eric Feldbaum – NH State Parks
Shayna Sylvia – Strafford RPC
Matt Sullivan – Strafford RPC
Nadine Peterson – NH DHR
David Preece – SNHPC
Julia Dundorf – NEGEF
Robin LeBlanc – Plan NH
Molly Donovan – UNH Coop Ext.
Kevin Peterson – NHCF
Courtney Croteau – Central NH RPC
Tara Bamford – North Country Council
Stephanie Alexander – Central NH RPC
Bill Guinther – NHHFA
Mike Tardiff – Central NH RPC
Jeff Hayes – North Country Council
Barbara Salvatore – Engaging NH
Jazmin Miranda – Consultant/HEAL
Jillian Harris – SNHPC
Elizabeth Burakowski – UNH ES Resrch Ctr
Bruce Mallory, UNH Carsey Institute
Russ Thibeault, AER

Granite State Future

Statewide Convening Meeting

November 4, 2013 | 9:00 AM – 3:00 PM
NH Local Government Center ~ Concord, NH

RPC Regional Highlights

Central New Hampshire Regional Planning Commission

- Community vitality was best, access to natural resources and scenic beauty. Need more economic vitality and transportation. Decline in school districts.

Lakes Region Planning Commission

- Number 1 priority is protecting the environment and resource protection. Skills and needs aren't matching for local economic development. Need investments in water infrastructure and multimodal transportation systems. Renewable energy as well as affordable housing is a concern. People like the small town villages and the mountains the best.

North Country Council

- Low income, high unemployment, poor public health, very diverse classes, higher income vacationers, love the mountains. Need for better paying jobs that are consistent with the natural beauty. Lack of public transportation and need for Ride Share.

Nashua Regional Planning Commission

- Transportation is key in the region, not a lot of resources for public transit. People really like the region as it is, close to amenities but somewhat rural. Establish how to maintain what they do like and be resilient in the future. Continue having community conversations. No draw or identity to the region, but good agriculture. How can we market our region to attract more visitors; aging population is key.

Rockingham Planning Commission

- Web based survey for outreach, reviewing local masters for visions of communities and the differences expressed in community conversations. Need for diverse housing stock but lack of diverse housing stock. Need tool to help towns make their community plans better; make plan or a guiding tool or model for resilient communities.

Southern New Hampshire Planning Commission

- Strong sense of community, strong sense of place, value ability to make local decisions, diverse settlement patterns. High commuters in the region, more services and opportunities, people like where they live but need greater transportation choices, i.e. passenger rail. Need for expanded creative solutions for the transportation choices in the future.

Southwest Region Planning Commission

- Community engagement is number one, but how to maintain in the face of changing demographics. Need to ensure economic opportunities for young people so they will have the same in the future. Need more employment options for living wages for younger workers. Transportation is second priority, natural resources are also priority.

Strafford Regional Planning Commission

- Want to reach 1% of population. Lots of comments resulted in folks liking community, recreation, and access to amenities. Also, rural environment, and natural resources. Improvements to schools and more opportunity for recreation. Other concerns were taxes, affordable housing, need for public transportation. Want semi controlled housing development with conservation and open space in region; residents love access to cities.

Upper Valley Lake Sunapee Regional Planning Commission

- Lots of small business, like the rural character, environmental awareness is importance, like privacy and individual resilience. Concern with decreased enrollment in high schools.

NH Regional Climate Change Assessments

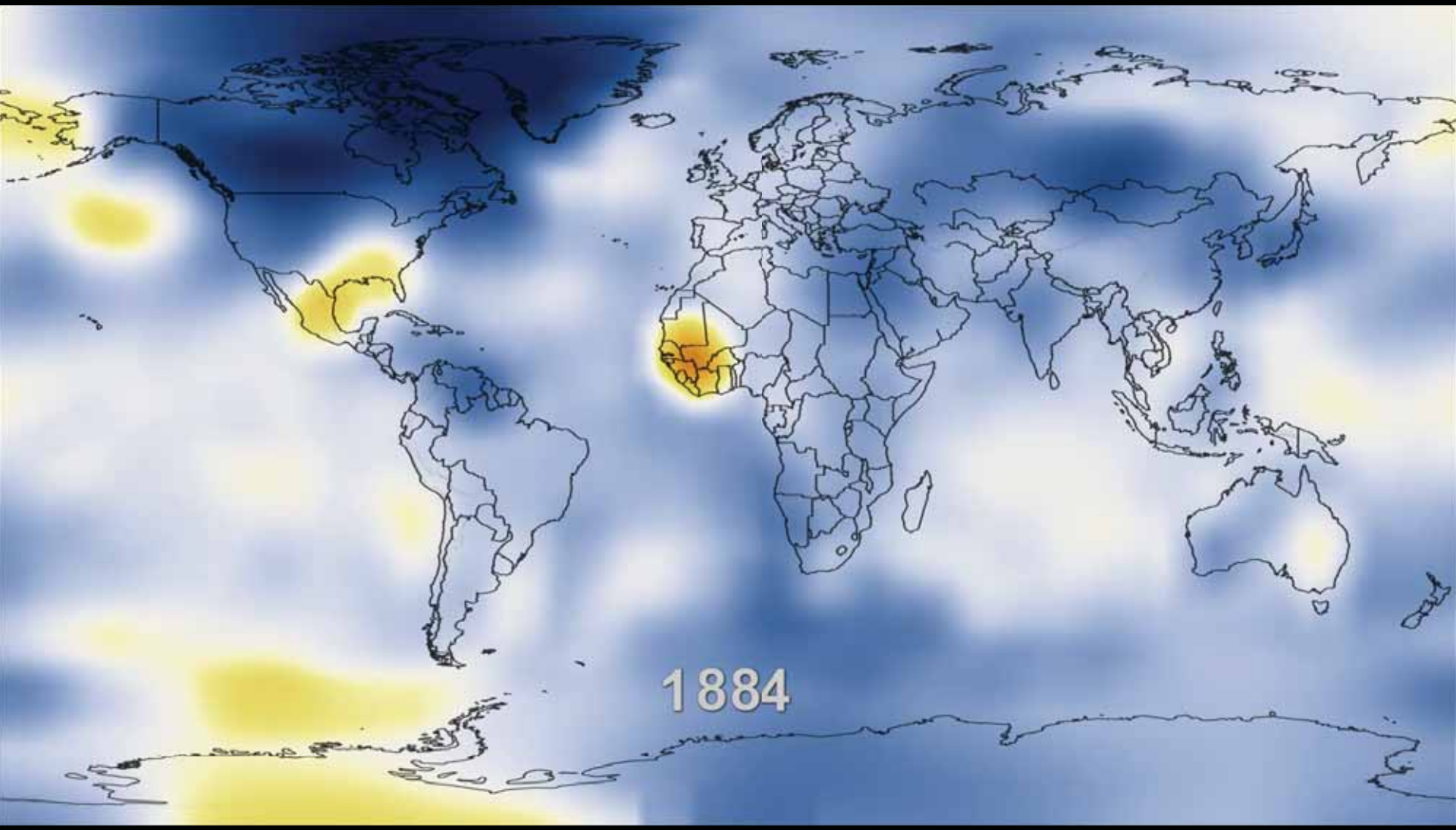
Elizabeth Burakowski & Cameron Wake
Institute for the Study of Earth, Oceans, and Space (EOS)
University of New Hampshire
@TheClimateDr @LizBurakowski
http://CarbonSolutionsNE.org

GSF Statewide Convening 4 Nov 2013

Photo By David Lutz

climate solutions new england

UNIVERSITY of NEW HAMPSHIRE



NASA Scientific Visulization Studio,
Goddard Institute for Space Studies (GISS) Surface Temperature

Were You Ready for the Storm?

Northeast US 30 October 2011

Newmarket, NH April 2007

Woodford, VT 28 Aug 2011

Seaside Heights, NJ Nov 2012

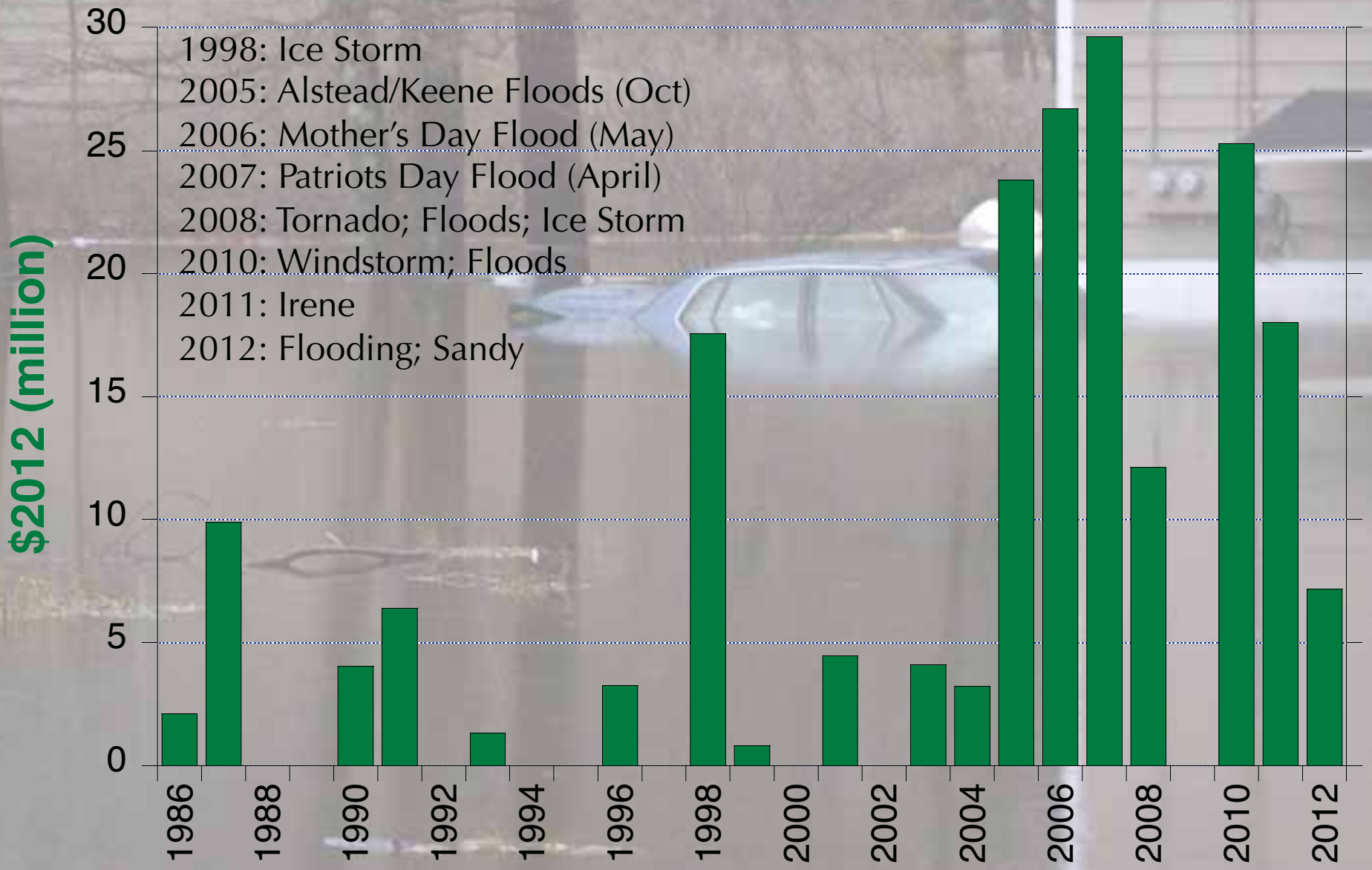
QUADRENNIAL DEFENSE REVIEW REPORT

FEBRUARY 2010

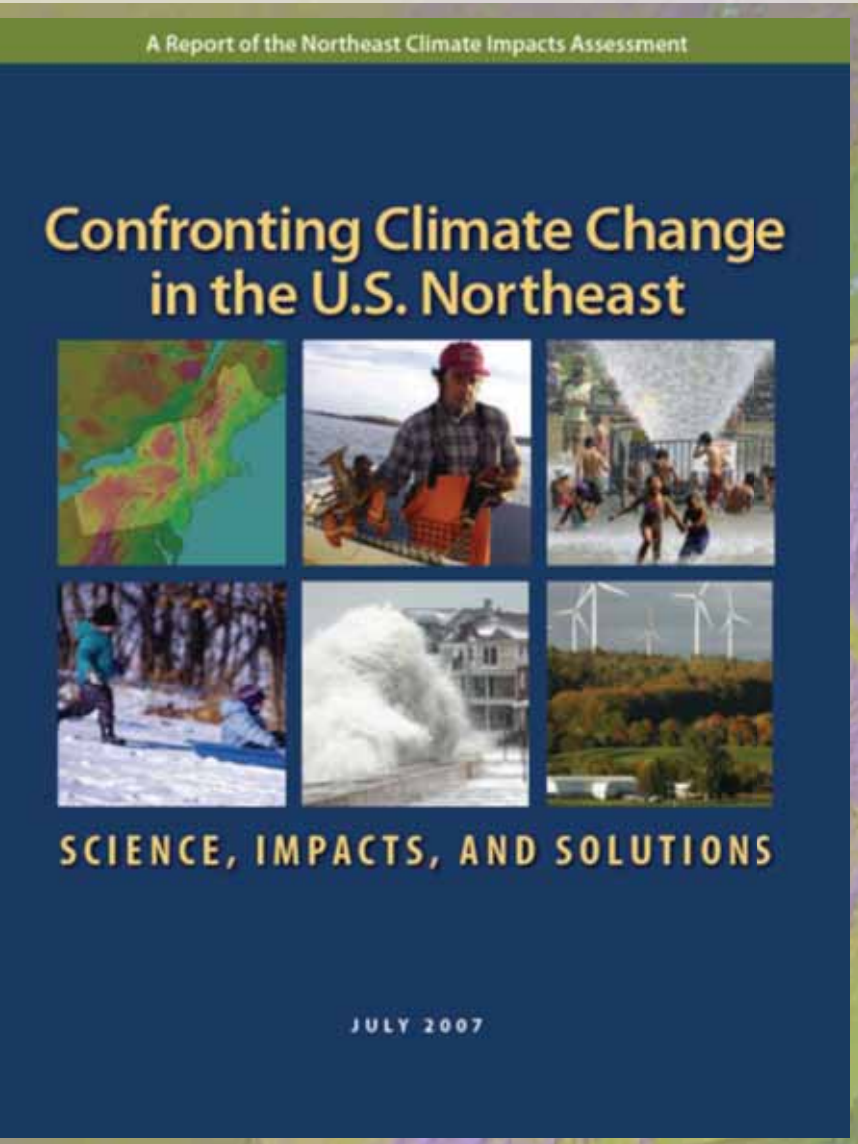
"Although they produce distinct types of challenges, climate change, energy security, and economic stability are inextricably linked"

http://www.defense.gov/qdr/

Federal Expenditures on Presidentially Declared Disasters And Emergency Declarations in NH



Northeast Climate Impacts Assessment



Collaboration between Union of Concerned Scientists and 50 independent scientists

Geographic Scope

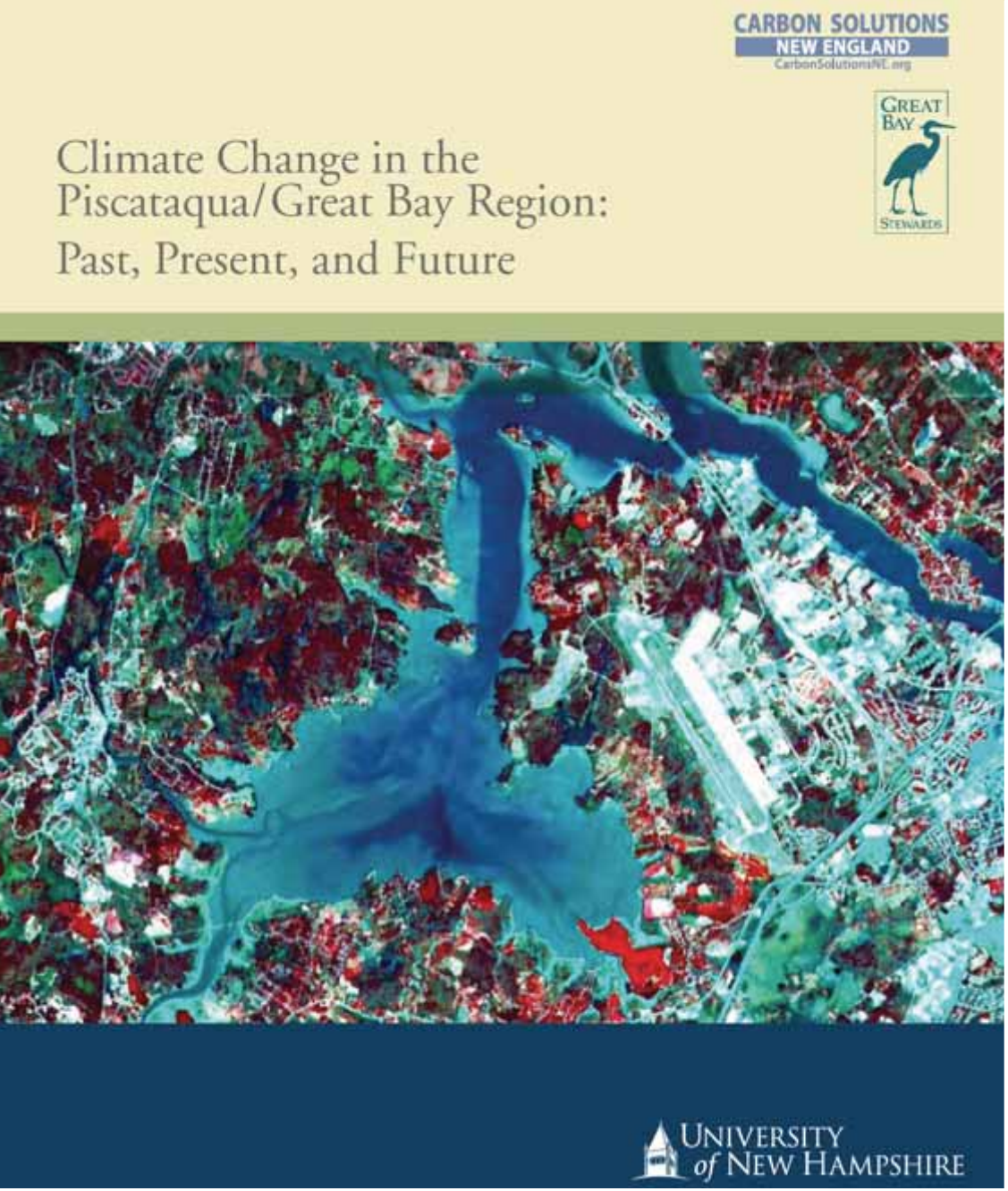
Nine Northeast states, from Maine to Pennsylvania

Peer Review

Climate Dynamics, 2007

14 papers in *Adaptation and Mitigation of Climate Change*, 2008

www.climatechoices.org



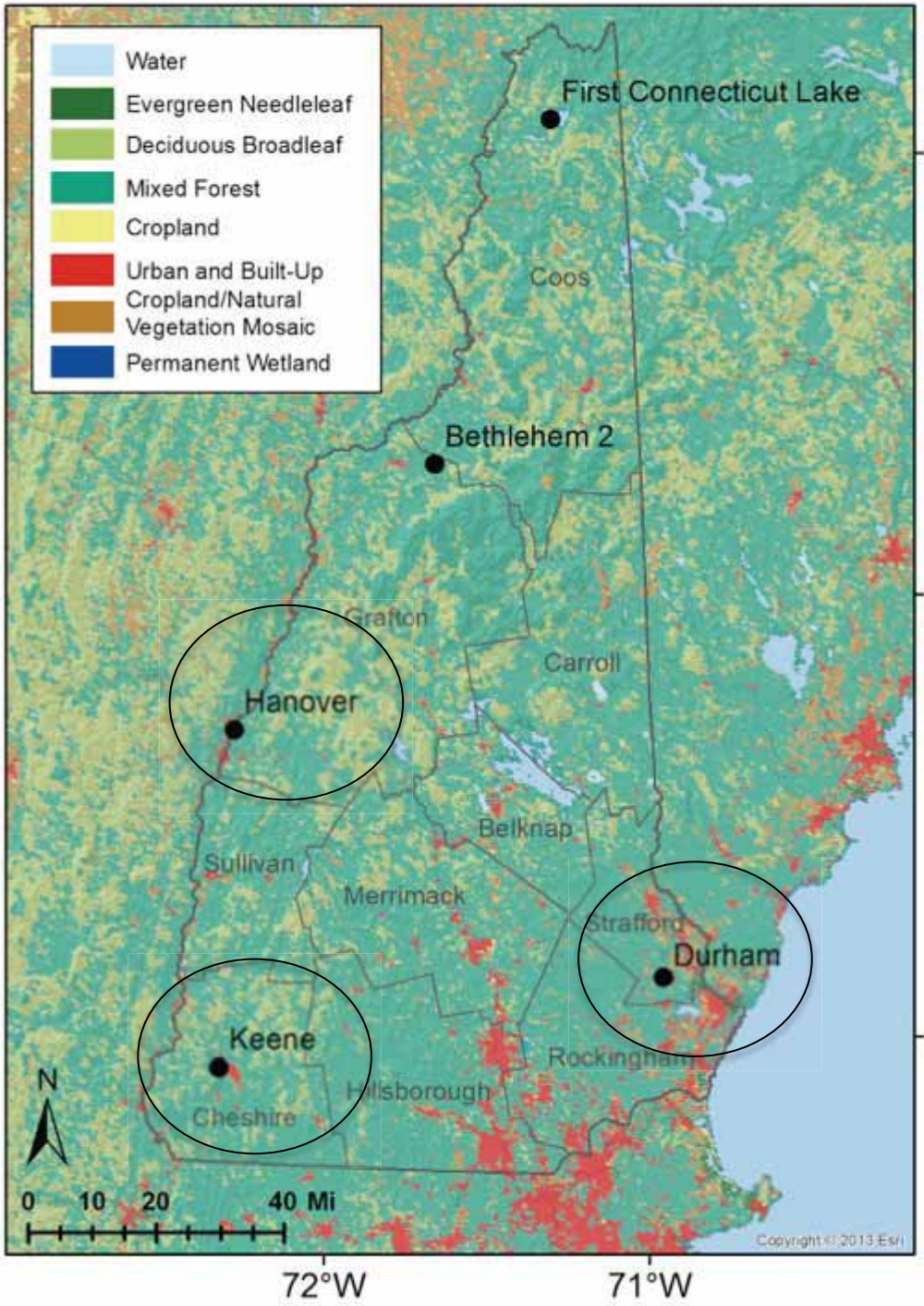
Cameron Wake
Elizabeth Burakowski
Eric Kelsey
Carbon Solutions New England
Institute for the Study of Earth,
Oceans, and Space
University of New Hampshire

Katharine Hayhoe& Anne Stoner
Texas Tech University

Chris Watson& Ellen Douglas
UMass Boston

http://CarbonSolutionsNE.org

Southern New Hampshire

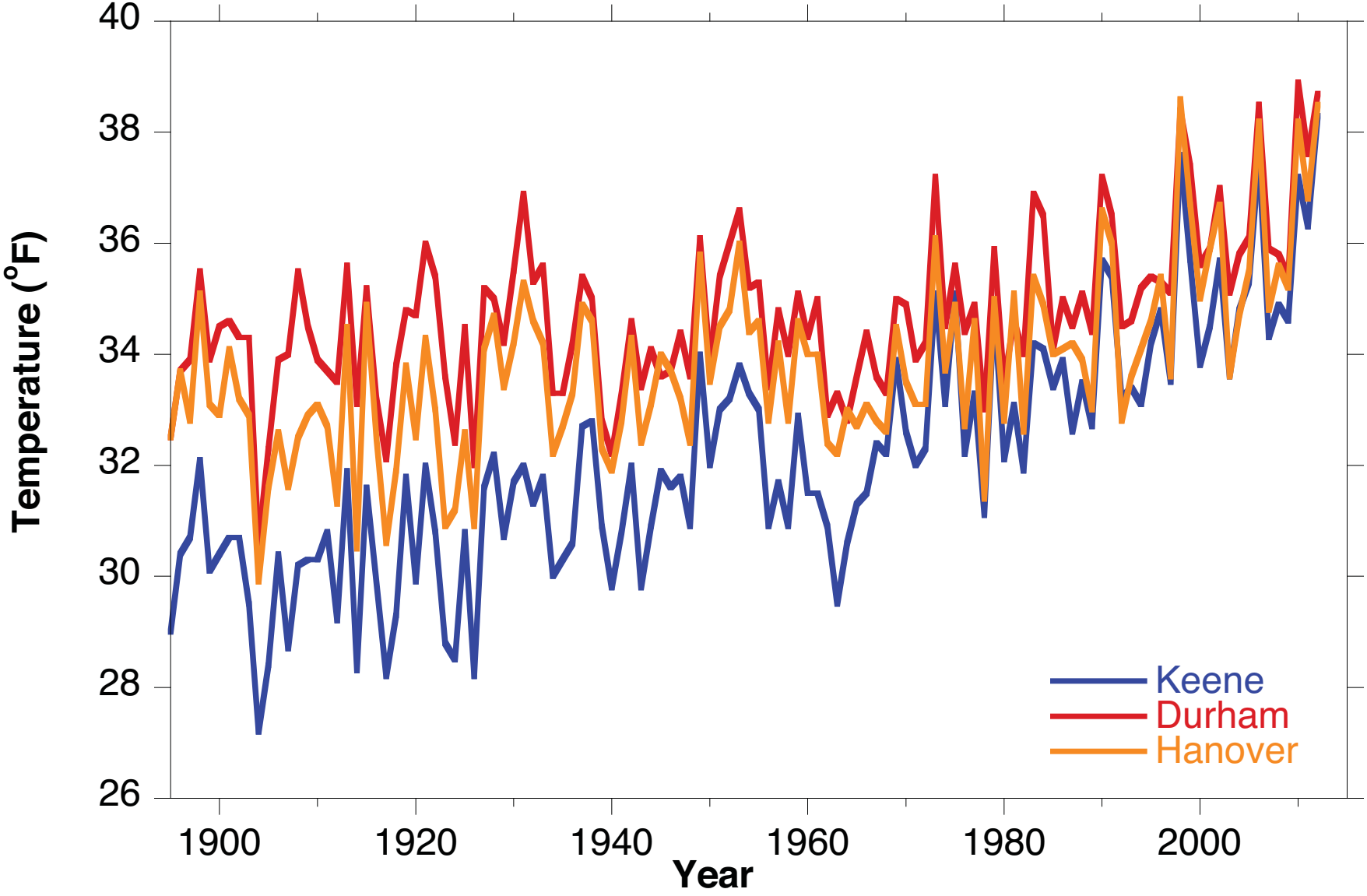


Historical Climate

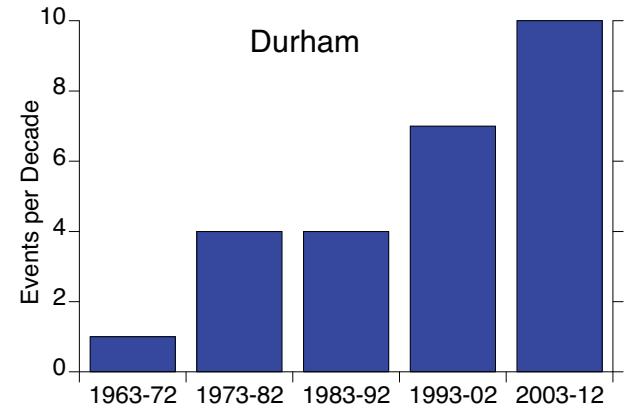
United States Historical Climatology Network (USHCN-Monthly)

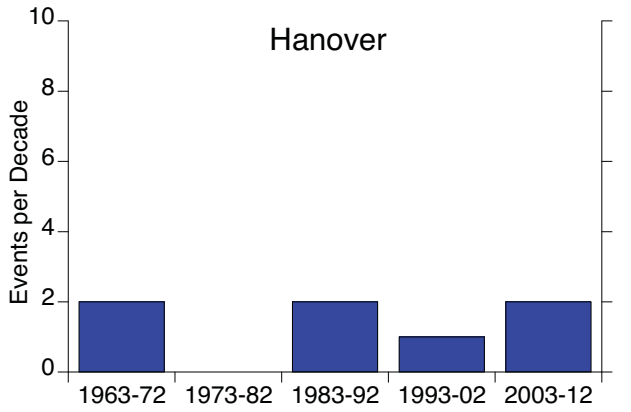
Meteorological Stations (•)
Long-Term (1895-2012)
Temperature & Precipitation

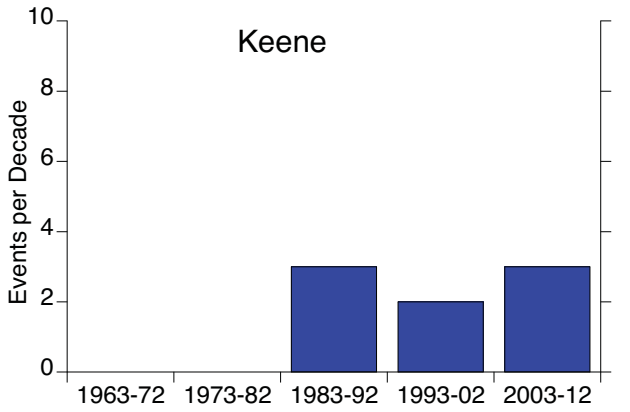
Annual TMIN 1895 - 2012

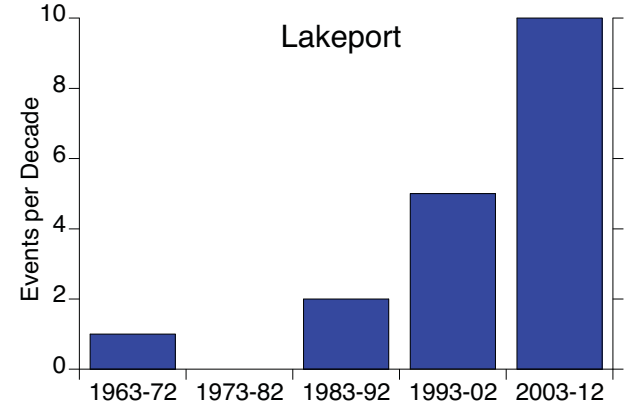


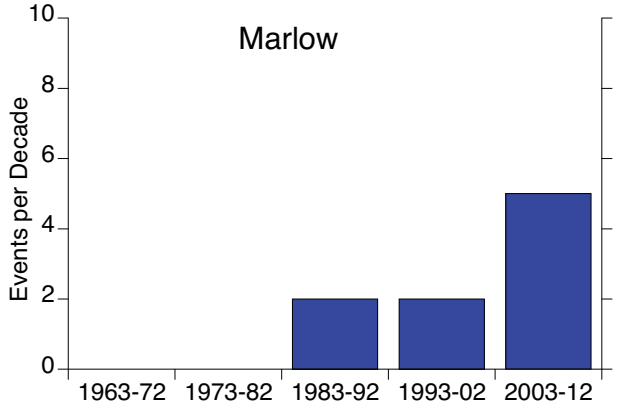
Precipitation Events >4″ in 48 hrs - per Decade

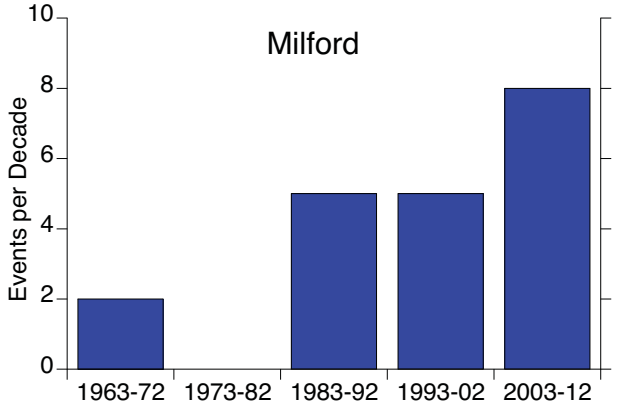


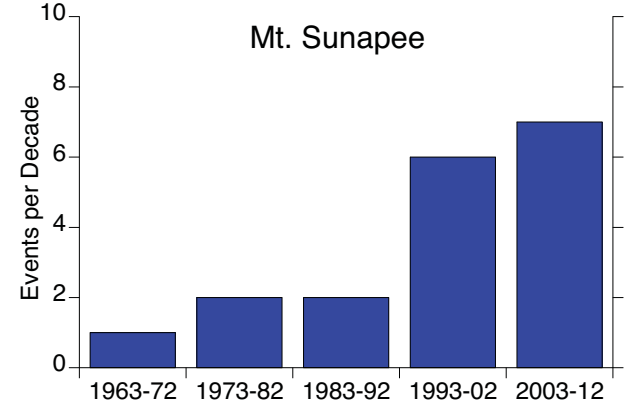


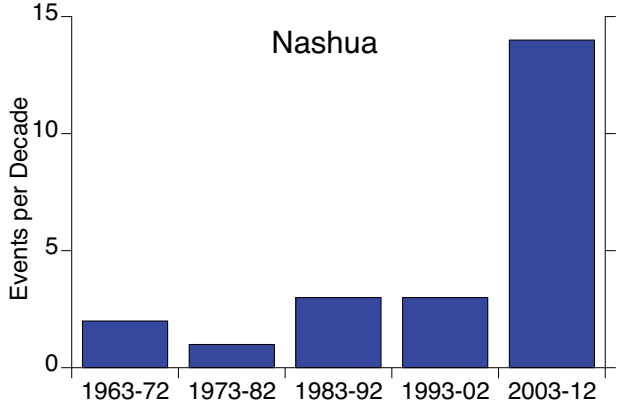


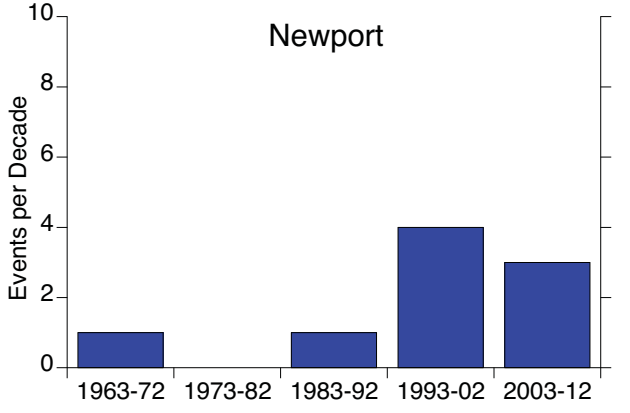












Parameter	Durham	Keene	Hanover
	1895-2012	1895-2012	1895-2012
TMAX (°F per decade)			
Annual	**0.21**	**0.09**	0.05
Winter	**0.20**	0.10	0.08
Spring	**0.32**	0.10	**0.15**
Summer	**0.27**	**0.12**	0.08
Fall	**0.11**	0.04	-0.05

Table 2

Trends that meet Mann-Kendall non-parametric test for statistical significance are **bold and underlined**.

Parameter	Durham		Keene		Hanover	
	1895-2012	1970-2012	1895-2012	1970-2012	1895-2012	1970-2012
TMAX (°F per decade)						
Annual	**0.21**	**0.55**	**0.09**	**0.61**	0.05	0.25
Winter	**0.20**	**0.80**	0.10	**0.71**	0.08	0.37
Spring	**0.32**	**0.72**	0.10	0.58	**0.15**	0.29
Summer	**0.27**	**0.47**	**0.12**	0.35	0.08	-0.05
Fall	**0.11**	**0.48**	0.04	**0.68**	-0.05	**0.60**
TMIN (°F per decade)						
Annual	**0.20**	**0.58**	**0.50**	**0.82**	**0.25**	**0.74**
Winter	**0.28**	**0.93**	**0.58**	**1.70**	**0.36**	**1.45**
Spring	**0.18**	0.24	**0.45**	0.31	**0.23**	**0.60**
Summer	**0.25**	**0.71**	**0.49**	**0.47**	**0.27**	**0.60**
Fall	**0.14**	**0.83**	**0.50**	**1.11**	**0.22**	**0.61**

Table 2

Trends that meet Mann-Kendall non-parametric test for statistical significance are **bold and underlined**.

Parameter	Durham		Keene		Hanover	
	1895-2012	1970-2012	1895-2012	1970-2012	1895-2012	1970-2012
TMAX (°F per decade)						
Annual	**0.21**	**0.55**	**0.09**	**0.61**	0.05	0.25
Winter	**0.20**	**0.80**	0.10	**0.71**	0.08	0.37
Spring	**0.32**	**0.72**	0.10	0.58	**0.15**	0.29
Summer	**0.27**	**0.47**	**0.12**	0.35	0.08	-0.05
Fall	**0.11**	**0.48**	0.04	**0.68**	-0.05	**0.60**
TMIN (°F per decade)						
Annual	**0.20**	**0.58**	**0.50**	**0.82**	**0.25**	**0.74**
Winter	**0.28**	**0.93**	**0.58**	**1.70**	**0.36**	**1.45**
Spring	**0.18**	0.24	**0.45**	0.31	**0.23**	**0.60**
Summer	**0.25**	**0.71**	**0.49**	**0.47**	**0.27**	**0.60**
Fall	**0.14**	**0.83**	**0.50**	**1.11**	**0.22**	**0.61**
Precipitation (inches per decade)						
Annual	**0.56**	1.63	0.32	2.02	0.26	1.16
Winter	-0.03	-0.61	0.45	0.16	0.37	-0.11
Spring	0.08	0.20	0.21	0.14	0.20	0.22
Summer	0.14	**0.93**	0.31	0.57	0.27	0.55
Fall	**0.27**	0.26	0.32	1.12	0.24	0.19
Snowfall	NA	**-9.14**	NA	0.34	NA	-3.44

Table 2

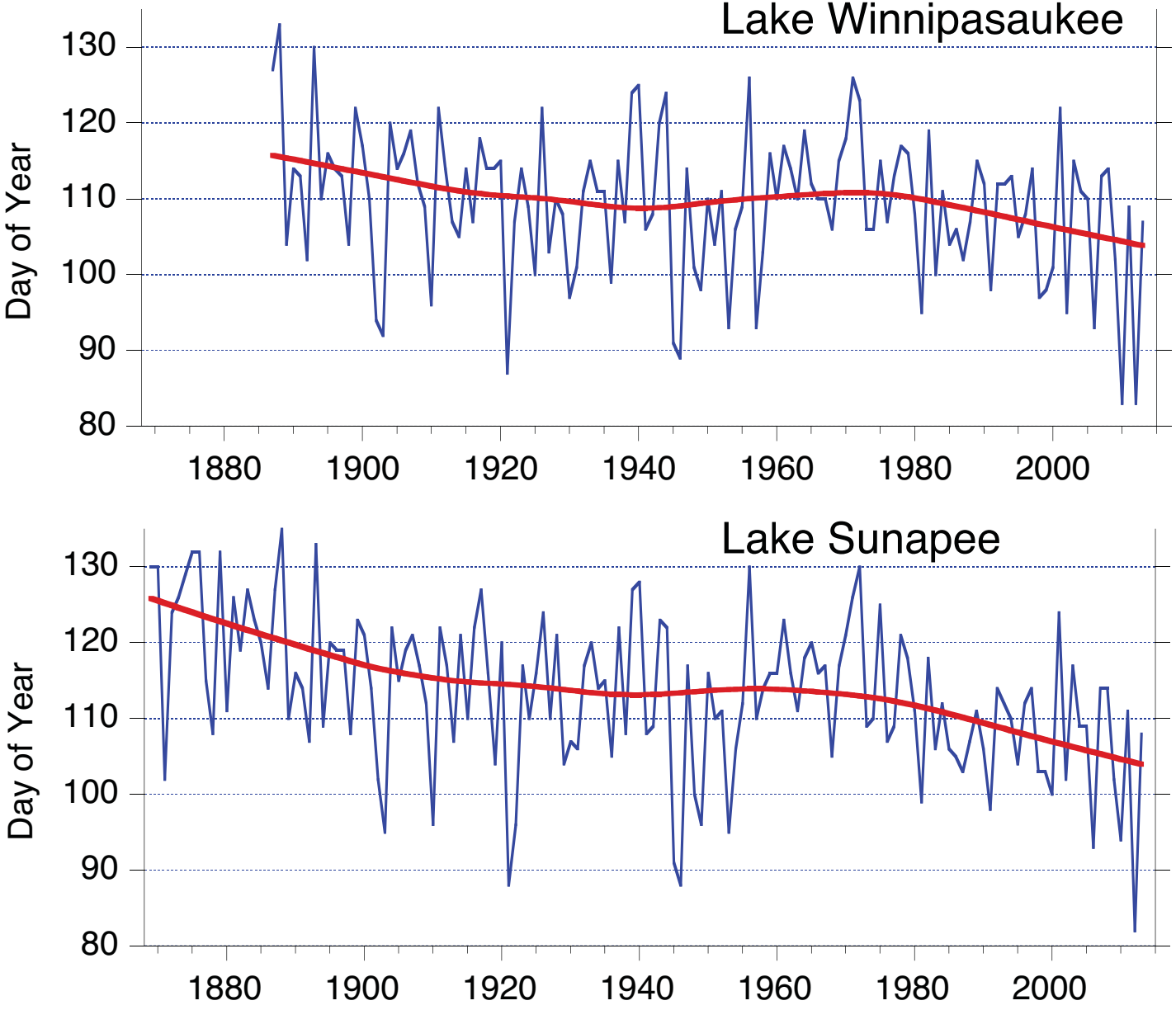
Trends that meet Mann-Kendall non-parametric test for statistical significance are **bold and underlined**.

Parameter	Durham		Keene		Hanover	
	1895-2012	1970-2012	1895-2012	1970-2012	1895-2012	1970-2012
TMAX (°F per decade)						
Annual	**0.21**	**0.55**	**0.09**	**0.61**	0.05	0.25
Winter	**0.20**	**0.80**	0.10	**0.71**	0.08	0.37
Spring	**0.32**	**0.72**	0.10	0.58	**0.15**	0.29
Summer	**0.27**	**0.47**	**0.12**	0.35	0.08	-0.05
Fall	**0.11**	**0.48**	0.04	**0.68**	-0.05	**0.60**
TMIN (°F per decade)						
Annual	**0.20**	**0.58**	**0.50**	**0.82**	**0.25**	**0.74**
Winter	**0.28**	**0.93**	**0.58**	**1.70**	**0.36**	**1.45**
Spring	**0.18**	0.24	**0.45**	0.31	**0.23**	**0.60**
Summer	**0.25**	**0.71**	**0.49**	**0.47**	**0.27**	**0.60**
Fall	**0.14**	**0.83**	**0.50**	**1.11**	**0.22**	**0.61**
Precipitation (inches per decade)						
Annual	**0.56**	1.63	0.32	2.02	0.26	1.16
Winter	-0.03	-0.61	0.45	0.16	0.37	-0.11
Spring	0.08	0.20	0.21	0.14	0.20	0.22
Summer	0.14	**0.93**	0.31	0.57	0.27	0.55
Fall	**0.27**	0.26	0.32	1.12	0.24	0.19
Snowfall	NA	**-9.14**	NA	0.34	NA	-3.44
Snow Covered Days (days per decade)						
Winter	NA	**-6.6**	NA	0.0	NA	-2.9
NA means data not available						

Table 2

Trends that meet Mann-Kendall non-parametric test for statistical significance are **bold and underlined**.

Ice-Out Dates



www.onfrozenponds.co

Global Greenhouse Gas Emission Scenarios

Key Input for GCM projections of future climate change

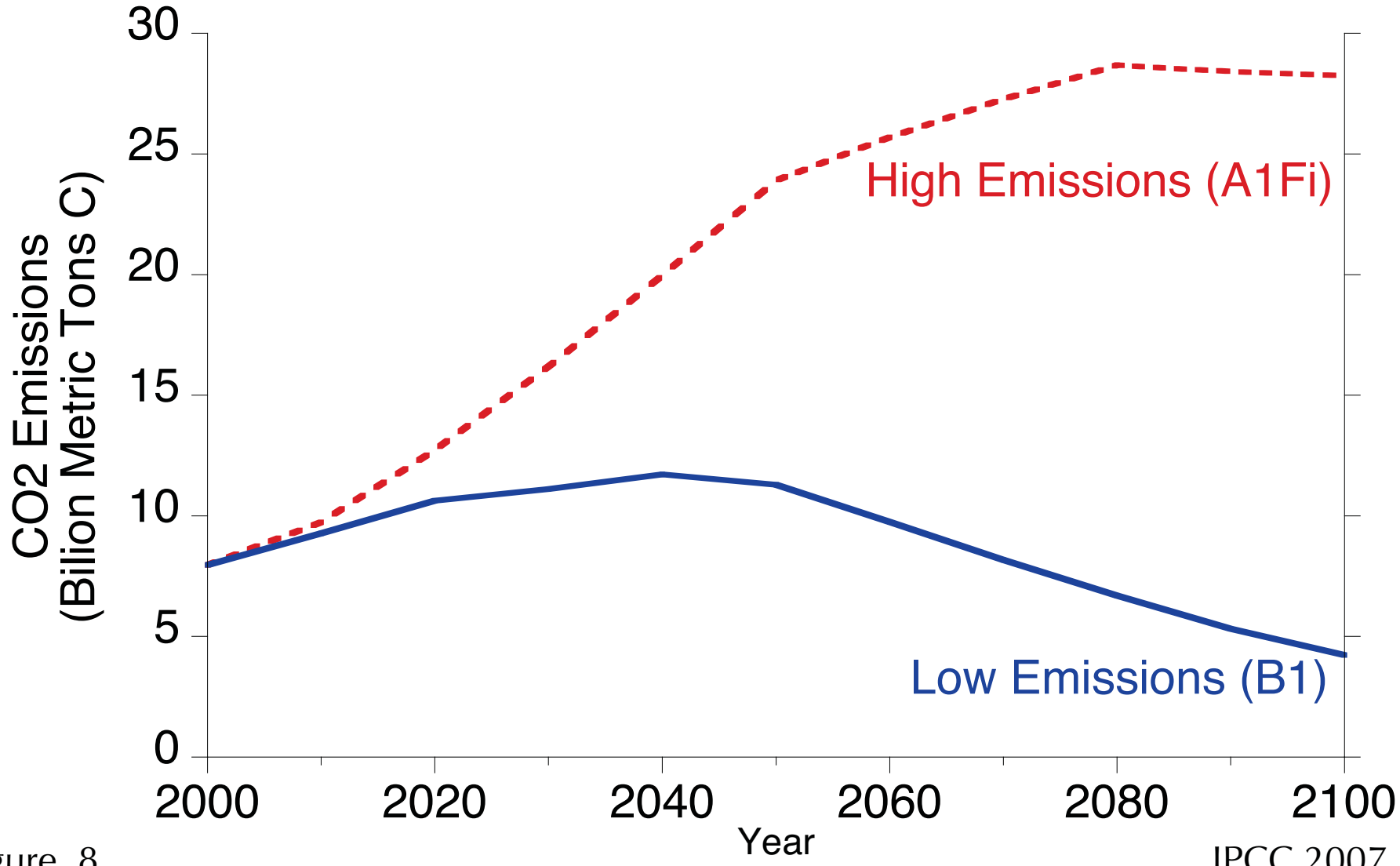
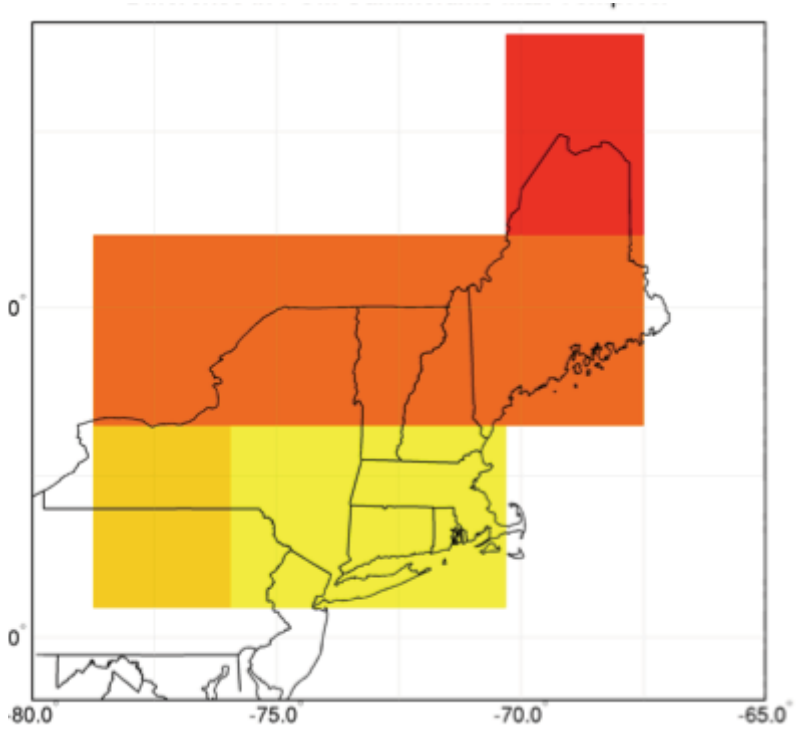


Figure 8

IPCC 2007

Projecting Future Climate Change for the Northeast: Downscale Global Projections to Regional Level



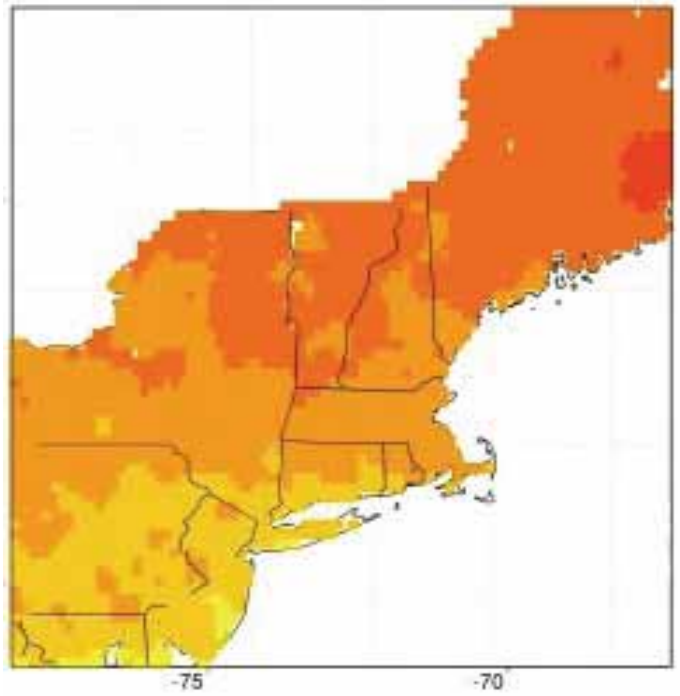
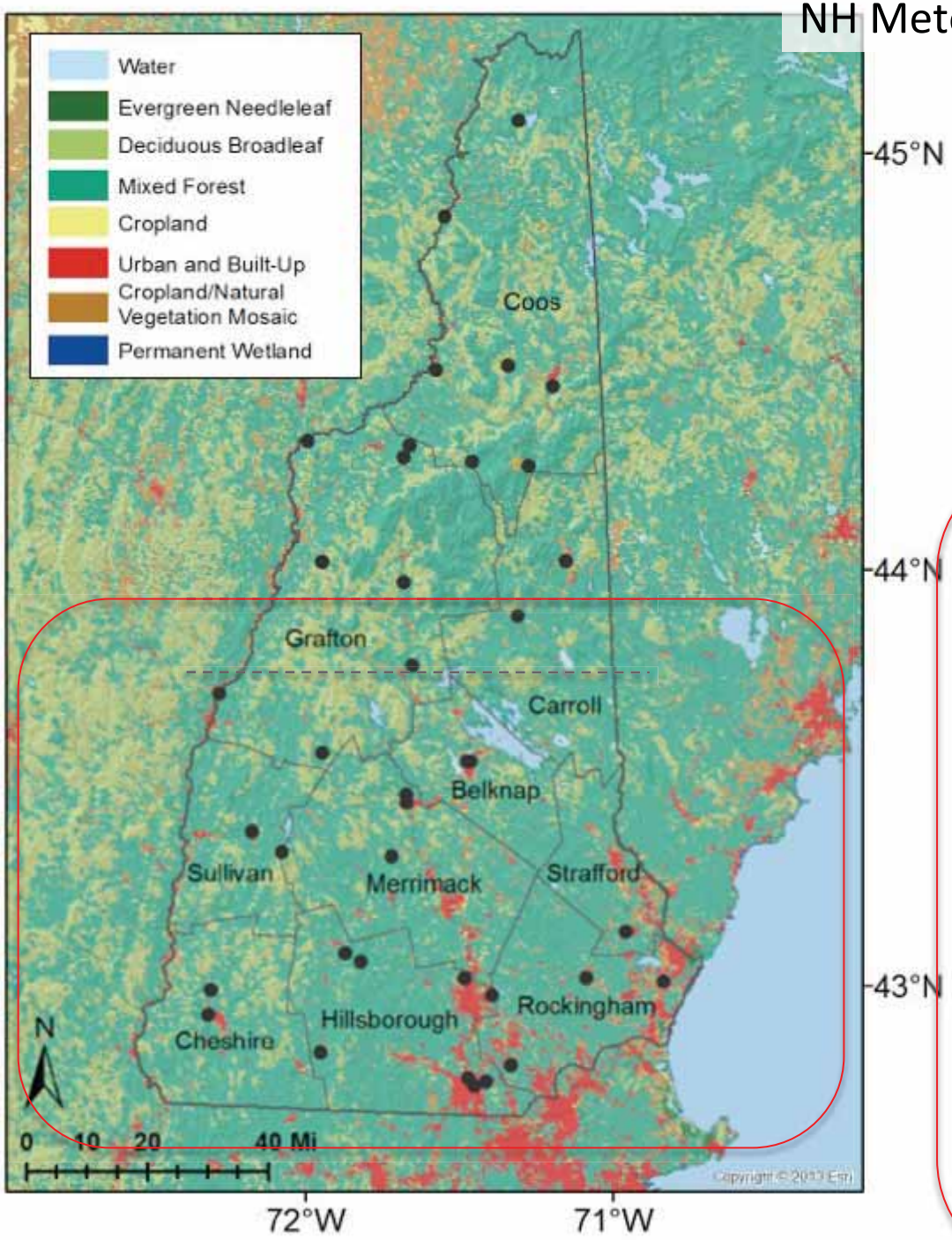


Table 8. GCMs (General Circulation Models) Used in this Study

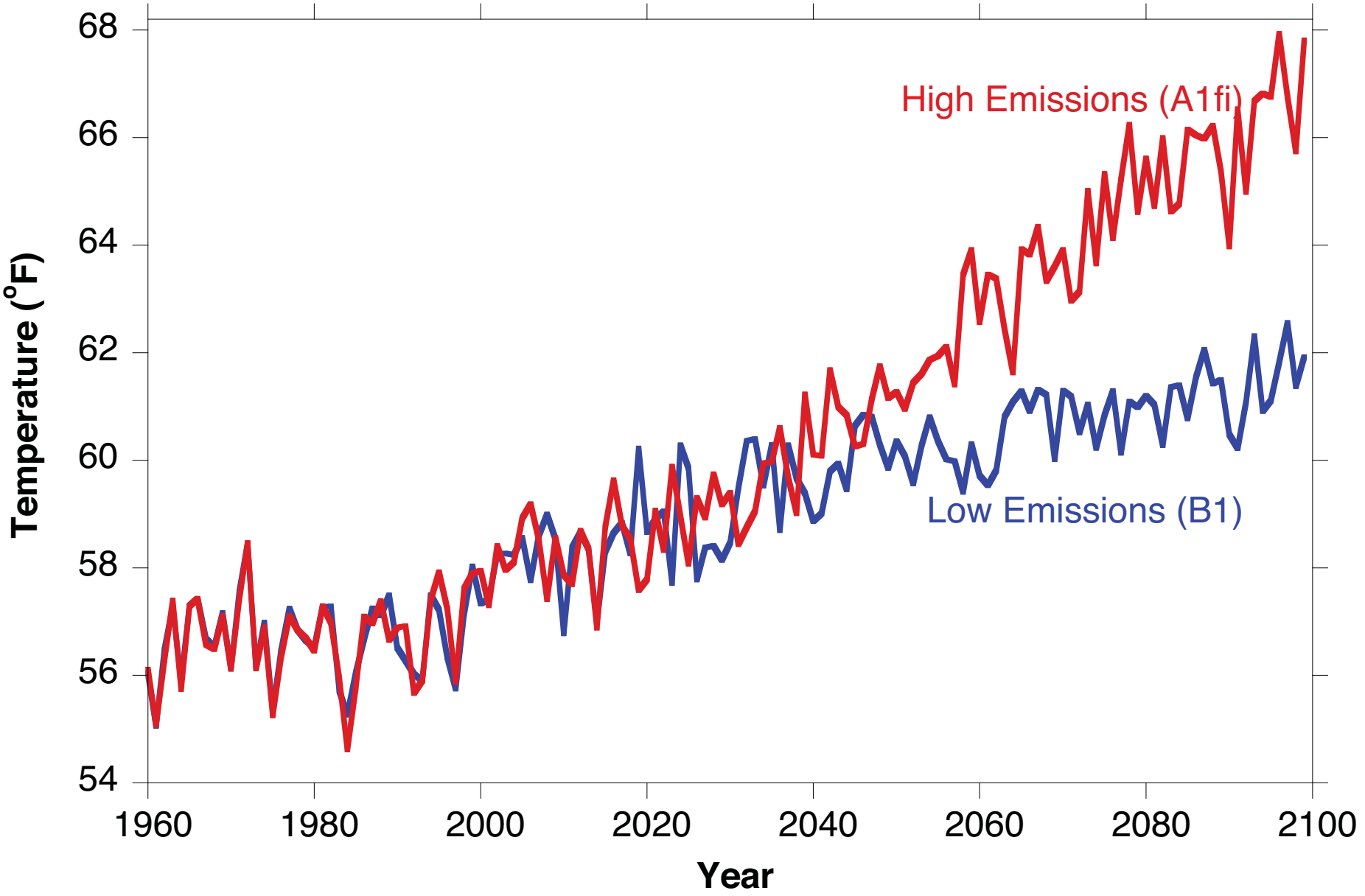
Origin	Model Name	Scenarios
National Center for Atmospheric Research, USA	CCSM3	A1fi, B1
National Center for Atmospheric Research, USA	PCM	A1fi, B1
Geophysical Fluid Dynamics Laboratory, USA	GFDL 2.1	A1fi, B1
UK Meteorological Office Hadley Center	HadCM3	A1fi, B1

NH Meteorological Stations (•) Temperature

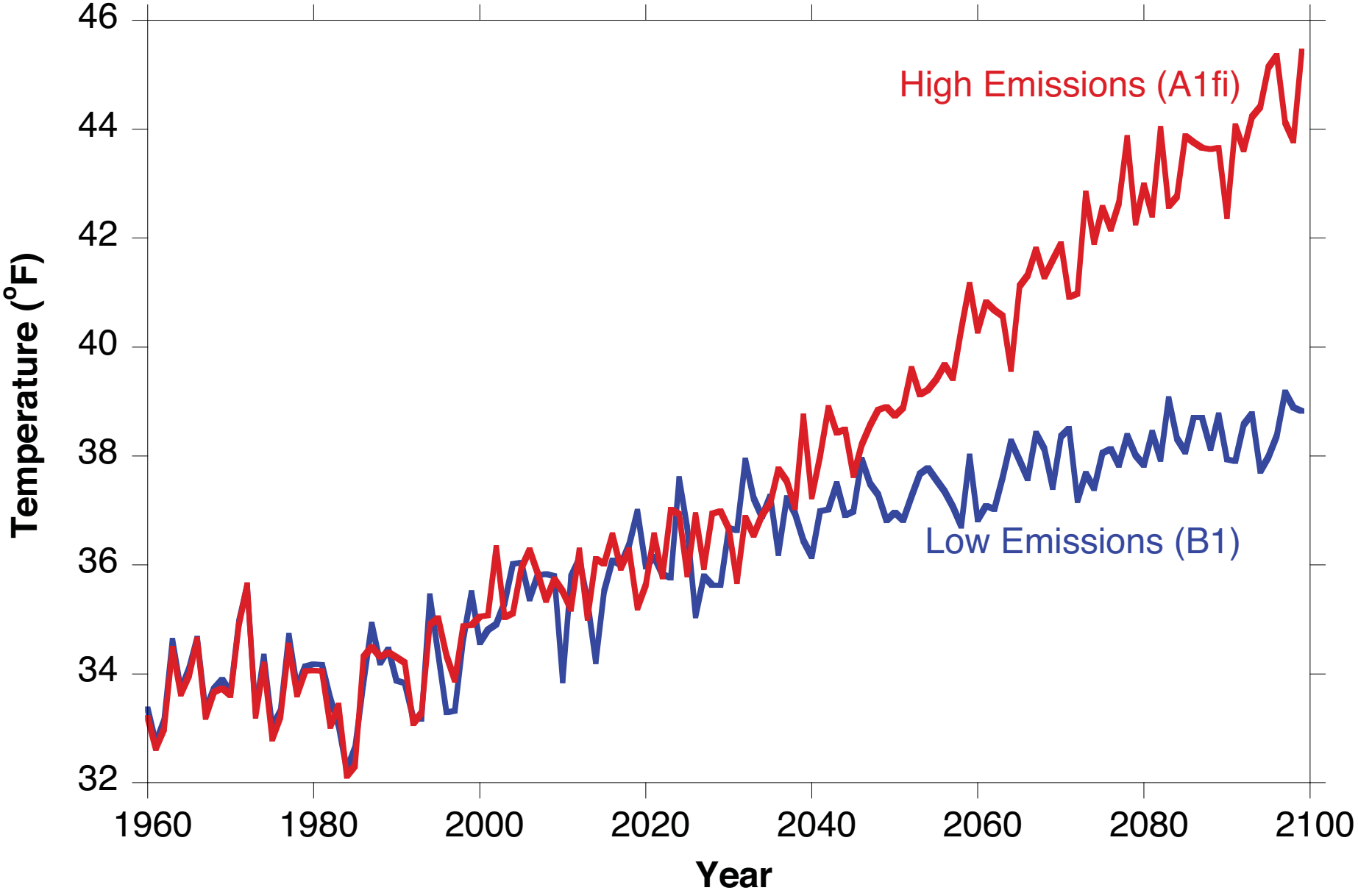


Station Name	Lat.	Long.	Elev (ft)
First Connecticut Lake	45.1	71.3	506
Colebrook	44.9	71.5	341
York Pond	44.5	71.3	466
Lancaster	44.5	71.6	262
Berlin	44.4	71.2	284
Monroe	44.3	72.0	201
Bethlehem	44.3	71.7	360
Bethlehem	44.3	71.7	421
Fabyan	44.3	71.5	494
Pinkham Notch	44.3	71.3	613
Benton	44.0	71.9	366
North Conway	44.0	71.1	166
Woodstock	44.0	71.7	220
Tamworth	43.9	71.3	241
Plymouth	43.8	71.7	201
Hanover	43.7	72.3	178
Grafton	43.6	72.0	253
Lakeport	43.6	71.5	171
Lakeport	43.5	71.5	152
Franklin Falls	43.5	71.7	131
Franklin	43.5	71.7	119
Newport	43.4	72.2	235
Mt. Sunapee	43.3	72.1	387
Blackwater Dam	43.3	71.7	183
Durham	43.1	71.0	23
Deering	43.1	71.9	325
East Deering	43.1	71.8	241
Manchester	43.0	71.5	64
Epping	43.0	71.1	49
Greenland	43.0	70.8	26
Surry Mtn	43.0	72.3	171
Massabesic Lake	43.0	71.4	77
Keene	42.9	72.3	156
Peterboro	42.9	72.0	311
Windham	42.8	71.3	67
Nashua	42.8	71.5	41
Hudson	42.8	71.4	56
Nashua	42.8	71.5	27

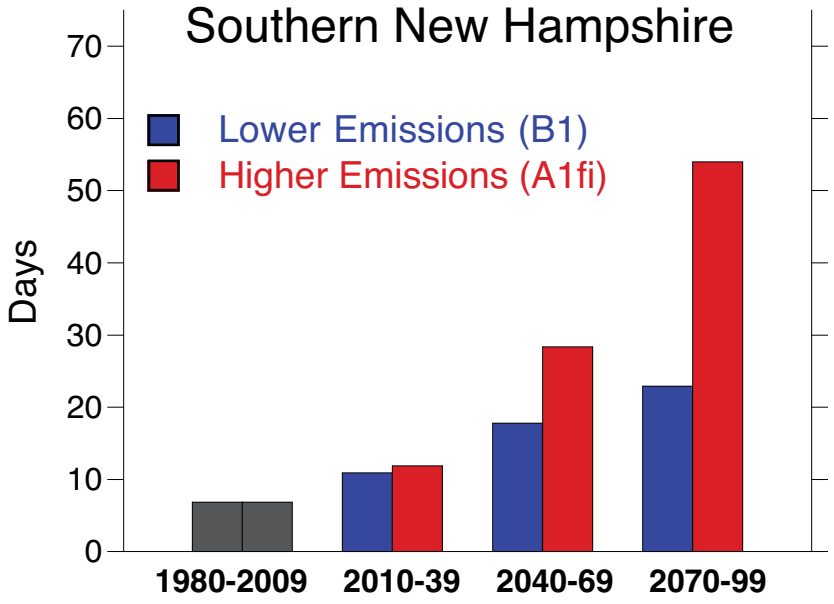
Annual Maximum Temperature, Southern NH (25 stations)

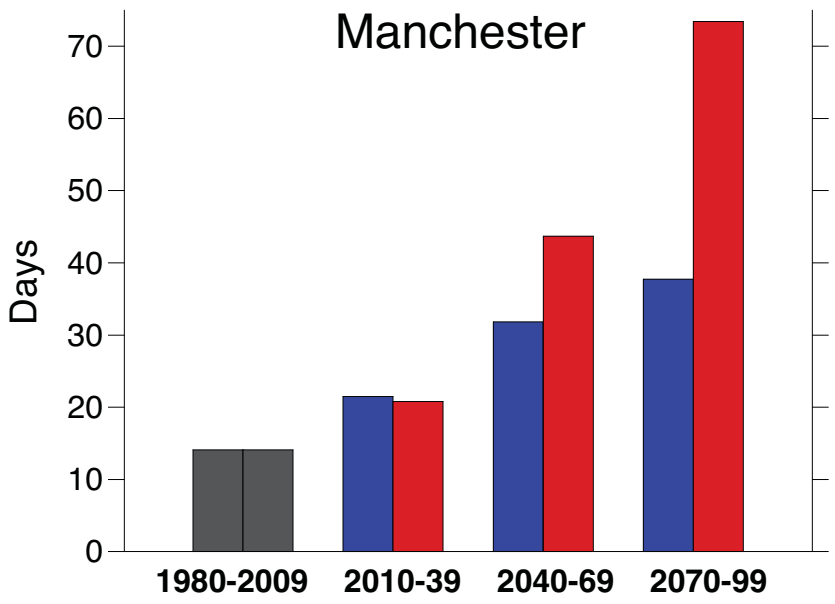


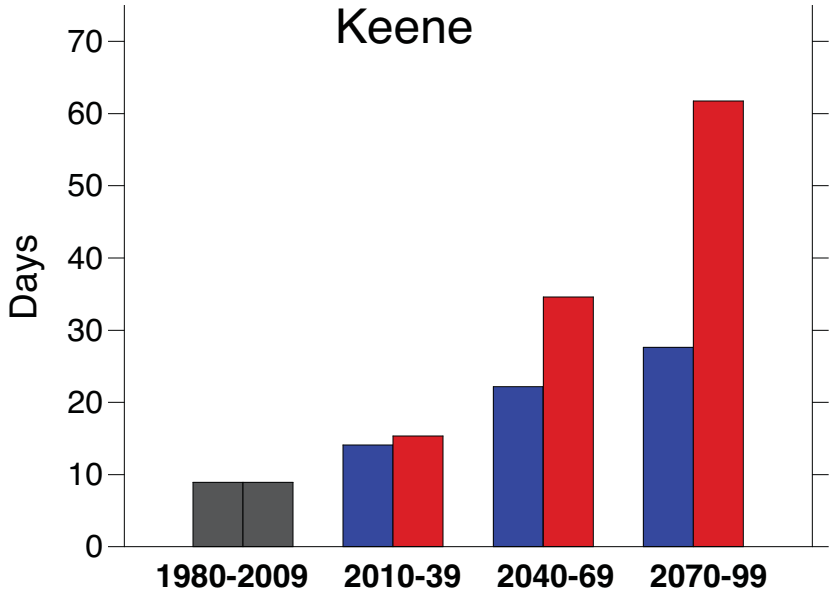
Annual Minimum Temperature, Southern NH (25 stations)

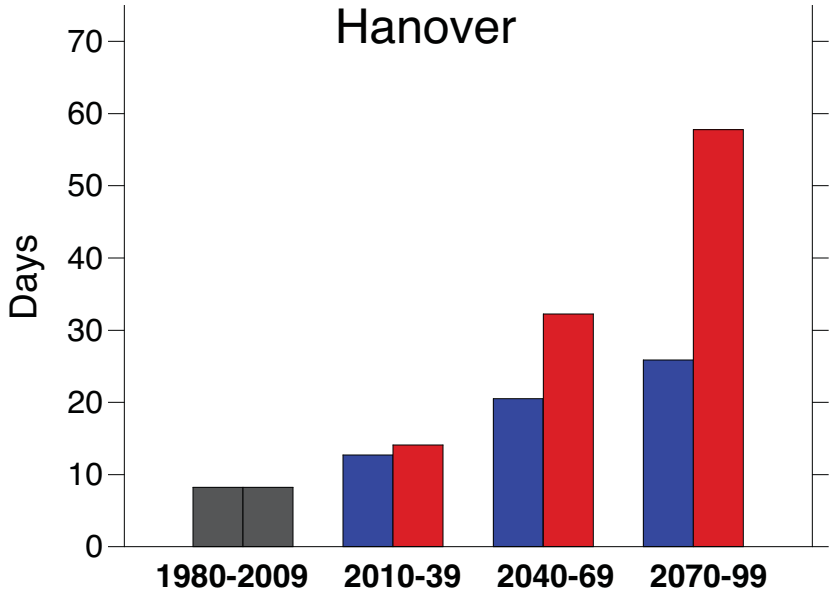


Number of Days Hotter than 90°F (30 year averages)

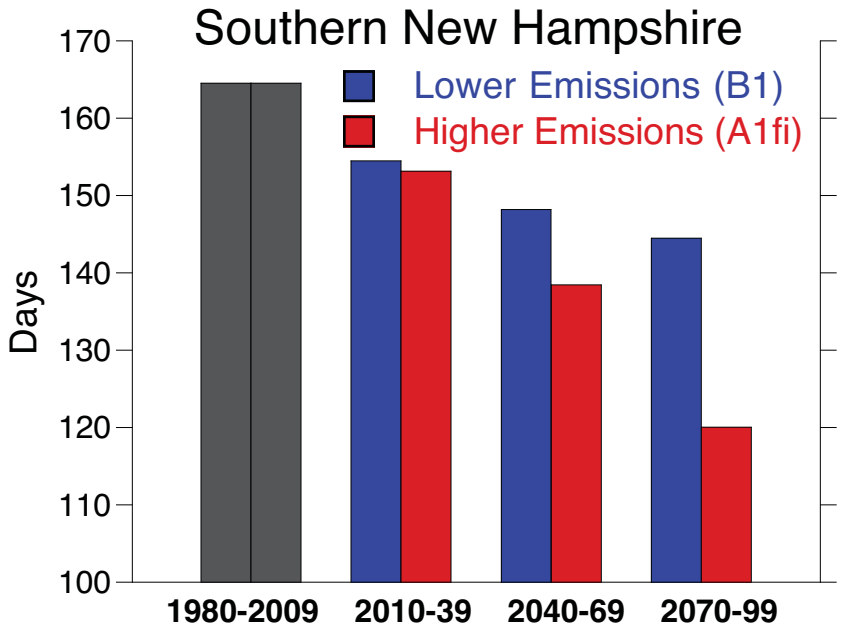


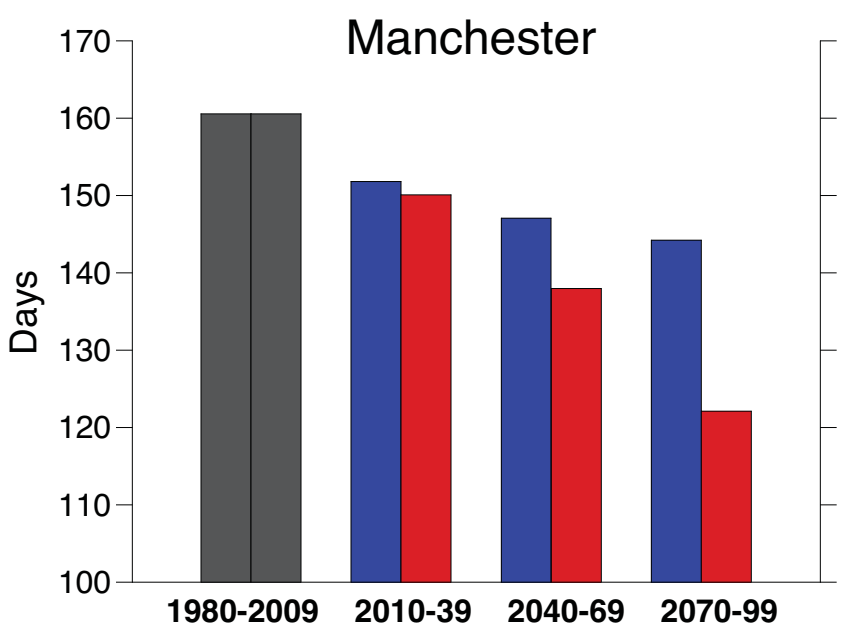


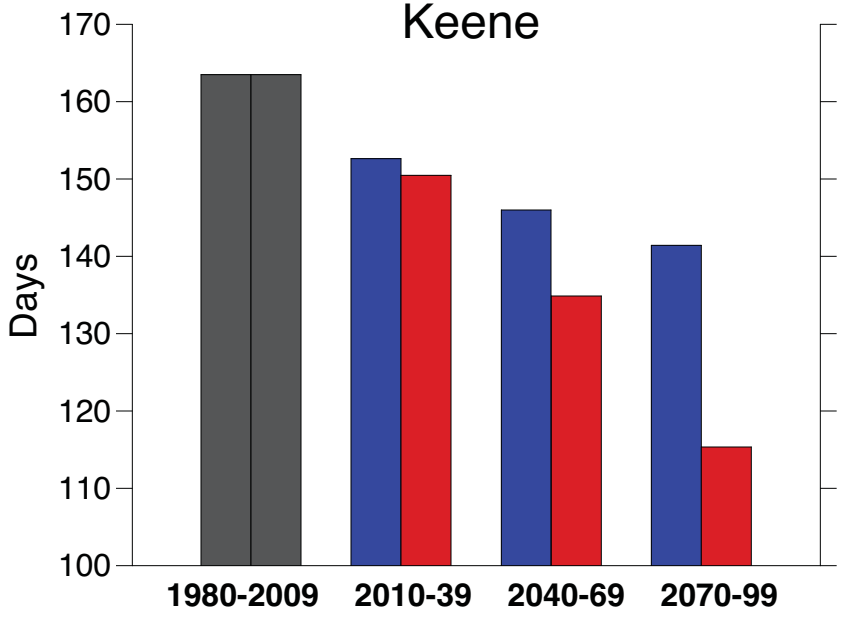




Number of Days Cooler than 32°F (30 yr averages)







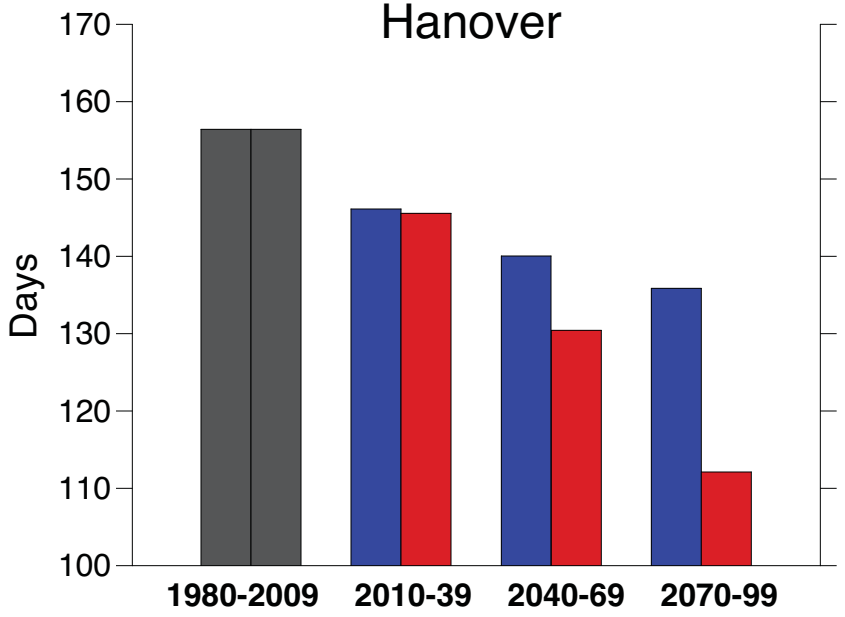
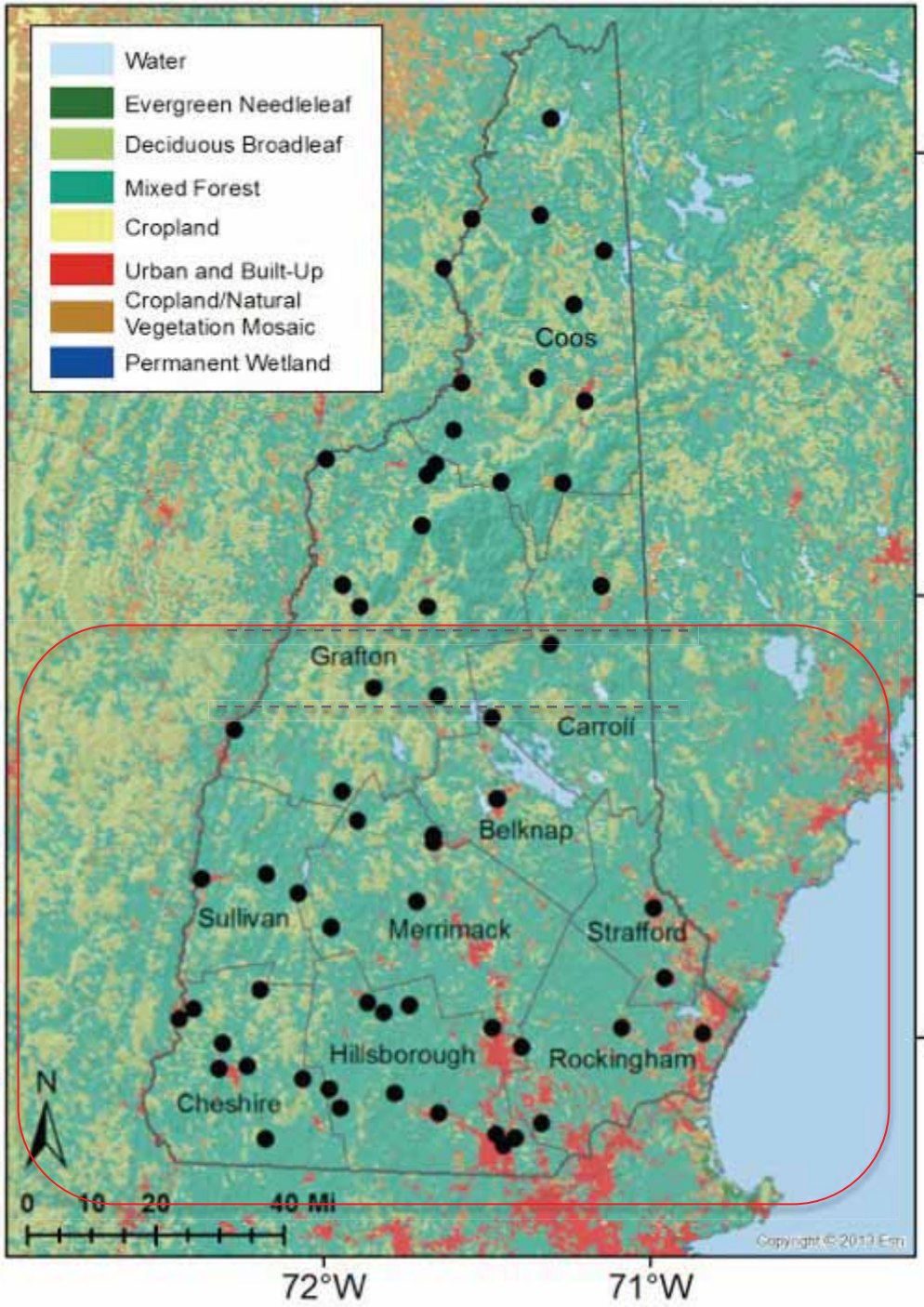


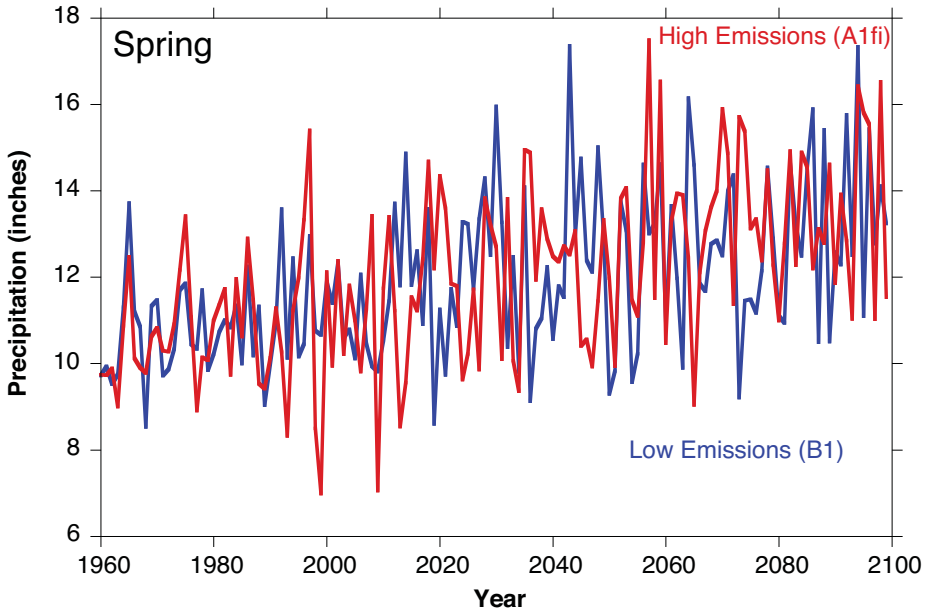
Figure 15

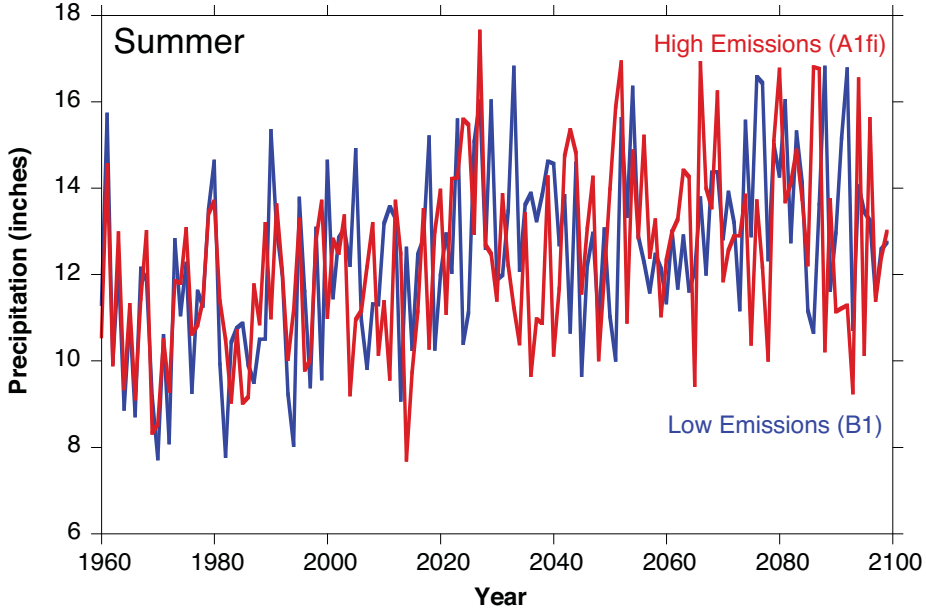
NH Meteorological Stations (•) Precip.

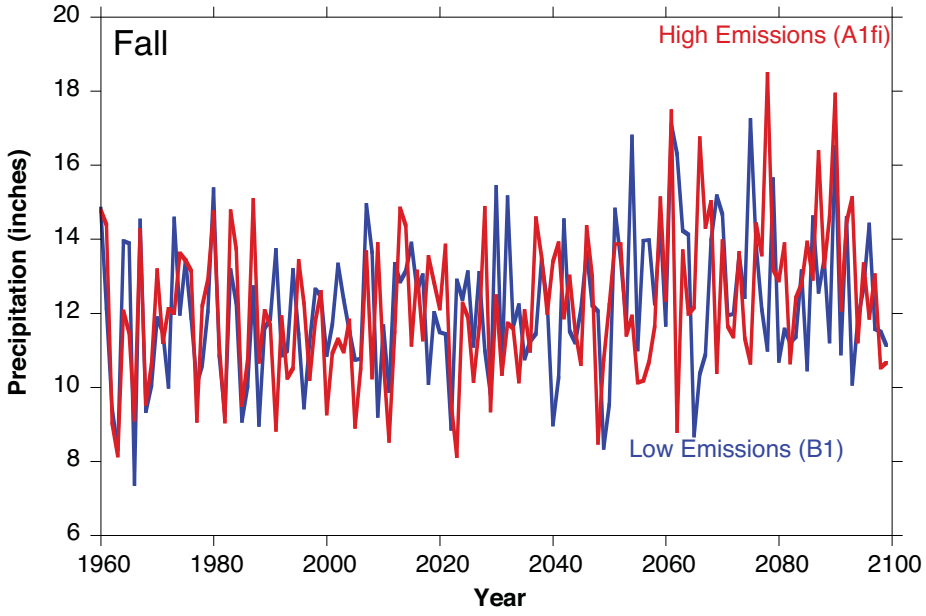


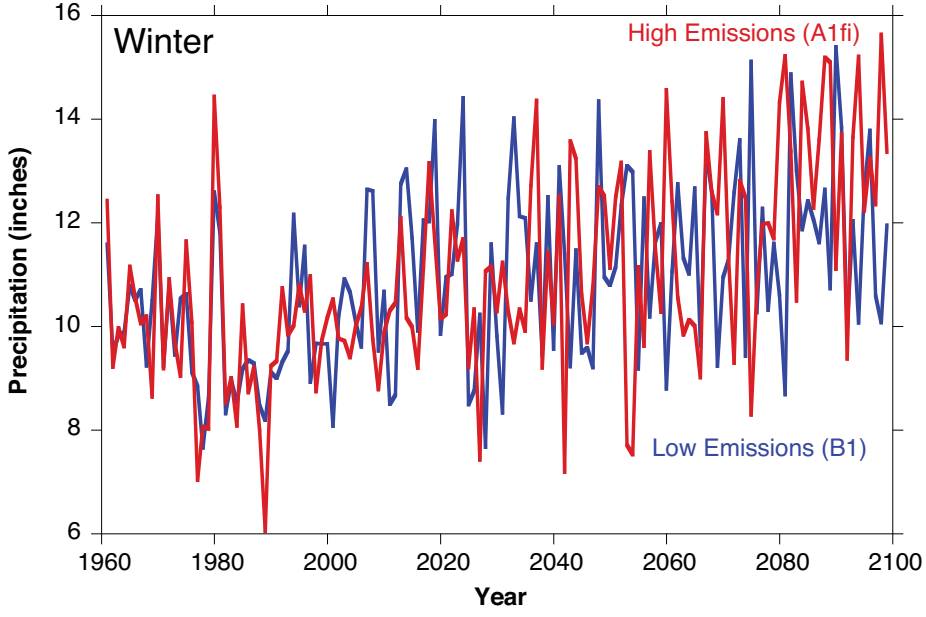
Station Name	Lat	Lon	Elev
First Connecticut Lake	45.09	-71.29	506.0
Dixville Notch	44.87	-71.32	515.1
Colebrook	44.86	-71.54	341.4
Errol	44.79	-71.12	390.1
North Stratford	44.75	-71.63	277.4
Milan	44.67	-71.22	360.0
York Pond	44.50	-71.33	466.3
Lancaster	44.49	-71.57	262.1
Berlin	44.45	-71.18	283.5
Whitefield	44.38	-71.60	331.9
Monroe	44.32	-72.00	201.2
Bethlehem	44.31	-71.66	359.7
Bethlehem	44.28	-71.68	420.6
Fabyan	44.27	-71.45	494.1
Pinkham Notch	44.26	-71.26	612.6
Cannon Mtn	44.17	-71.70	1220.1
Benton	44.03	-71.95	365.8
North Conway	44.03	-71.14	165.8
Glencliff	43.98	-71.89	329.2
Woodstock	43.98	-71.68	220.1
Tamworth	43.90	-71.30	240.8
West Rumney	43.80	-71.85	170.7
Plymouth	43.78	-71.65	201.2
Moultonboro	43.73	-71.48	182.9
Hanover	43.71	-72.29	178.0
Grafton	43.57	-71.95	253.0
Lakeport	43.55	-71.47	170.7
Lakeport2	43.55	-71.46	152.4
South Danbury	43.50	-71.90	284.1
Franklin Falls Dam	43.47	-71.67	131.1
Franklin	43.45	-71.67	118.9
Newport	43.38	-72.18	234.7
Claremont Junction	43.37	-72.38	131.1
Mt. Sunapee	43.33	-72.08	387.1
Blackwater Dam	43.32	-71.72	182.9
Rochester	43.30	-70.98	70.1
Bradford	43.26	-71.98	286.5
Durham	43.14	-70.95	22.9
Marlow	43.12	-72.20	359.7
Deering	43.09	-71.87	325.2
Weare	43.08	-71.74	219.5
East Deering	43.07	-71.82	241.1
Walpole3	43.07	-72.41	283.5
Walpole	43.05	-72.45	92.0
Epping	43.03	-71.08	48.8
Manchester	43.03	-71.48	64.0
Greenland	43.02	-70.83	25.9
Surry Mtn. Lake	43.00	-72.31	170.7
Massabesic Lake	42.99	-71.39	77.1
Otter Brook lake	42.95	-72.24	207.3
Keene	42.94	-72.32	155.8
Dublin	42.92	-72.07	454.2
Edward Macdowell Lake	42.89	-71.98	295.7
South Lyndeboro	42.88	-71.78	198.1
Peterboro	42.85	-71.95	310.9
Milford	42.84	-71.65	97.5
Windham	42.82	-71.33	67.1
Nashua2	42.79	-71.47	41.1
Nashua	42.77	-71.45	26.5
Fitzwilliam	42.78	-72.18	362.7
Hudson	42.78	-71.41	56.4

Seasonal Precipitation, Southern NH (41 stations)

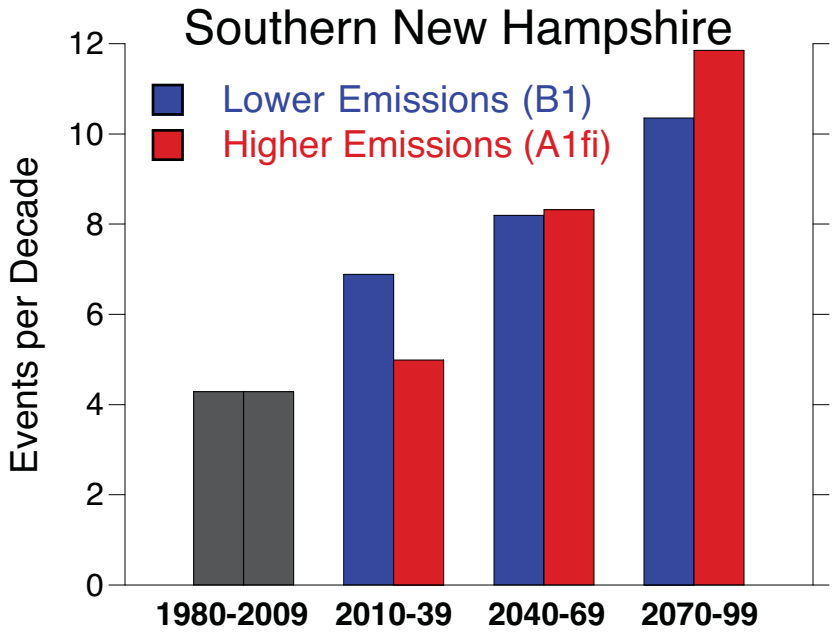


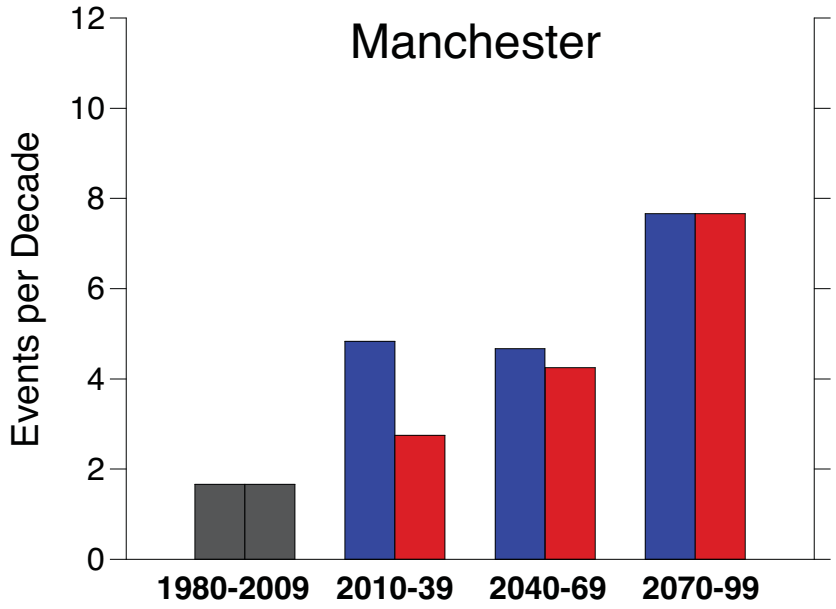


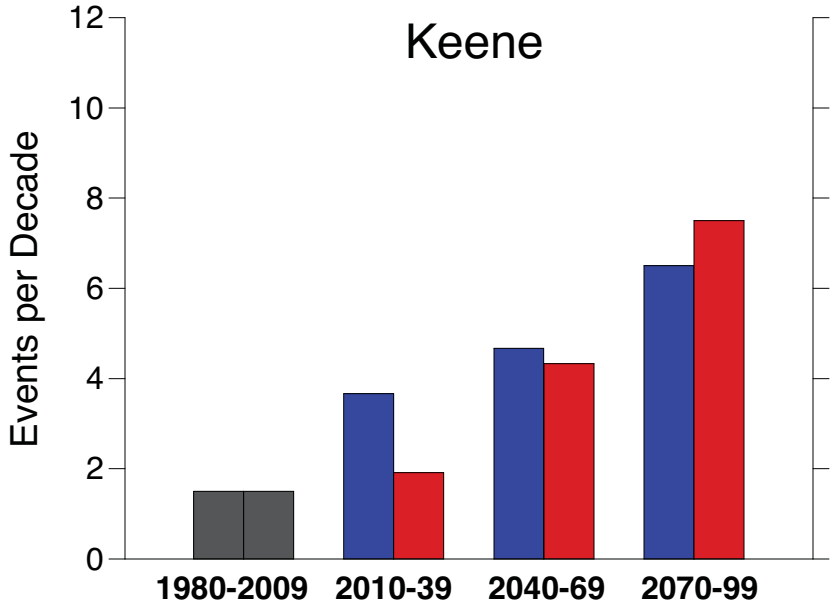


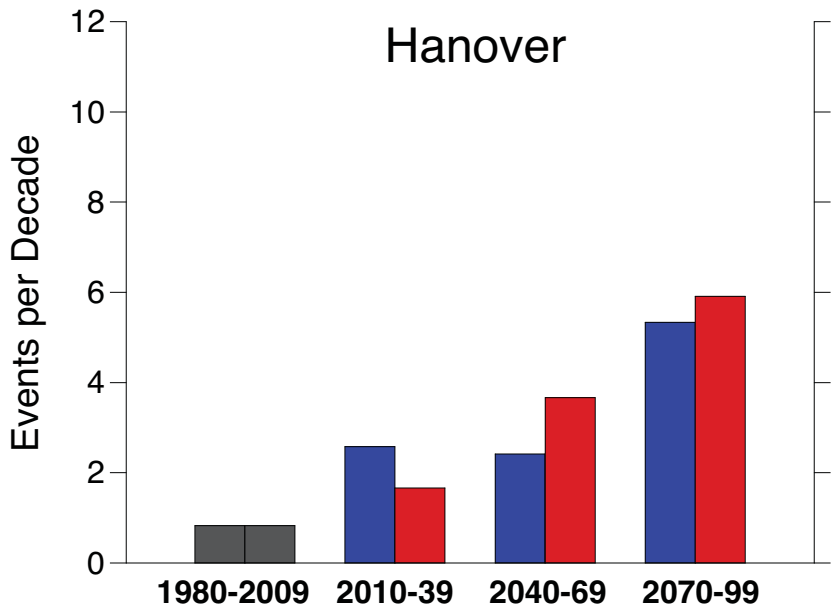


4″ in 48 hrs per Decade (30 year averages)

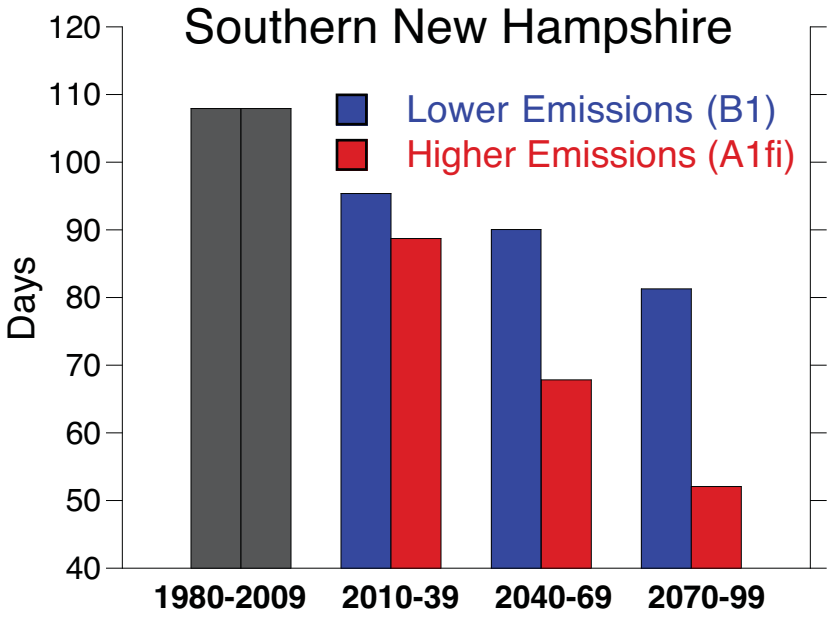


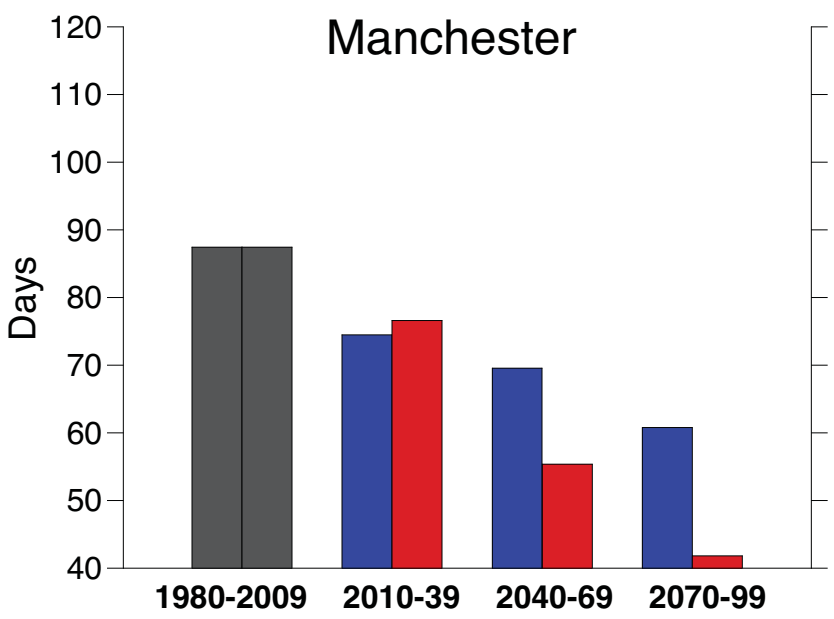


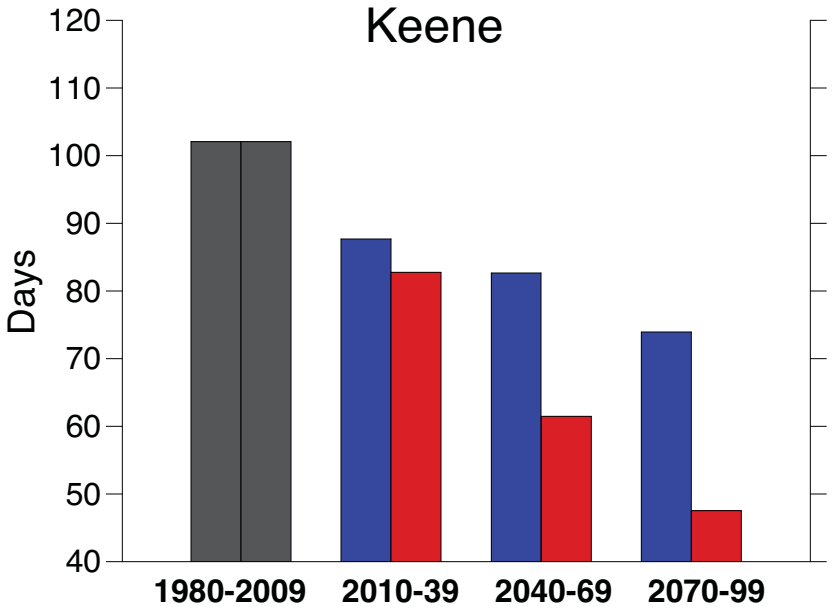


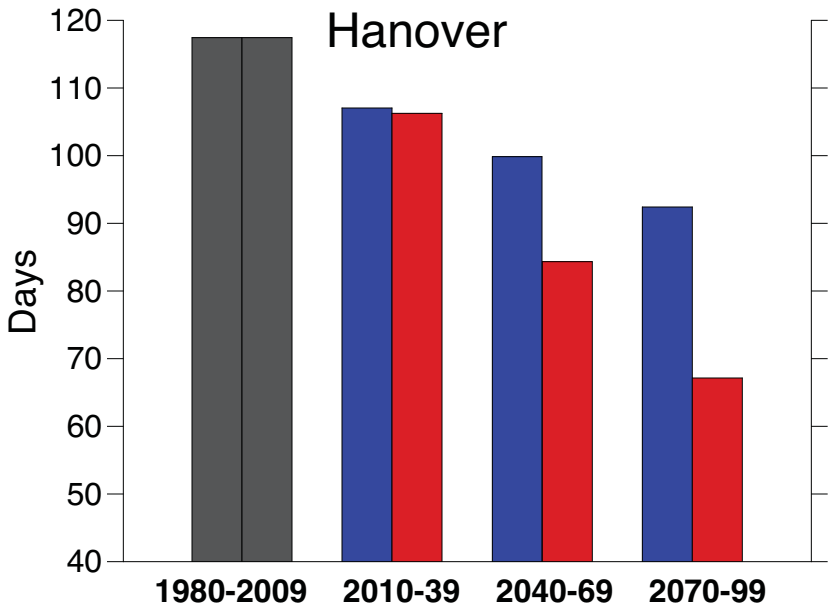


Snow Covered Days (30 yr averages)

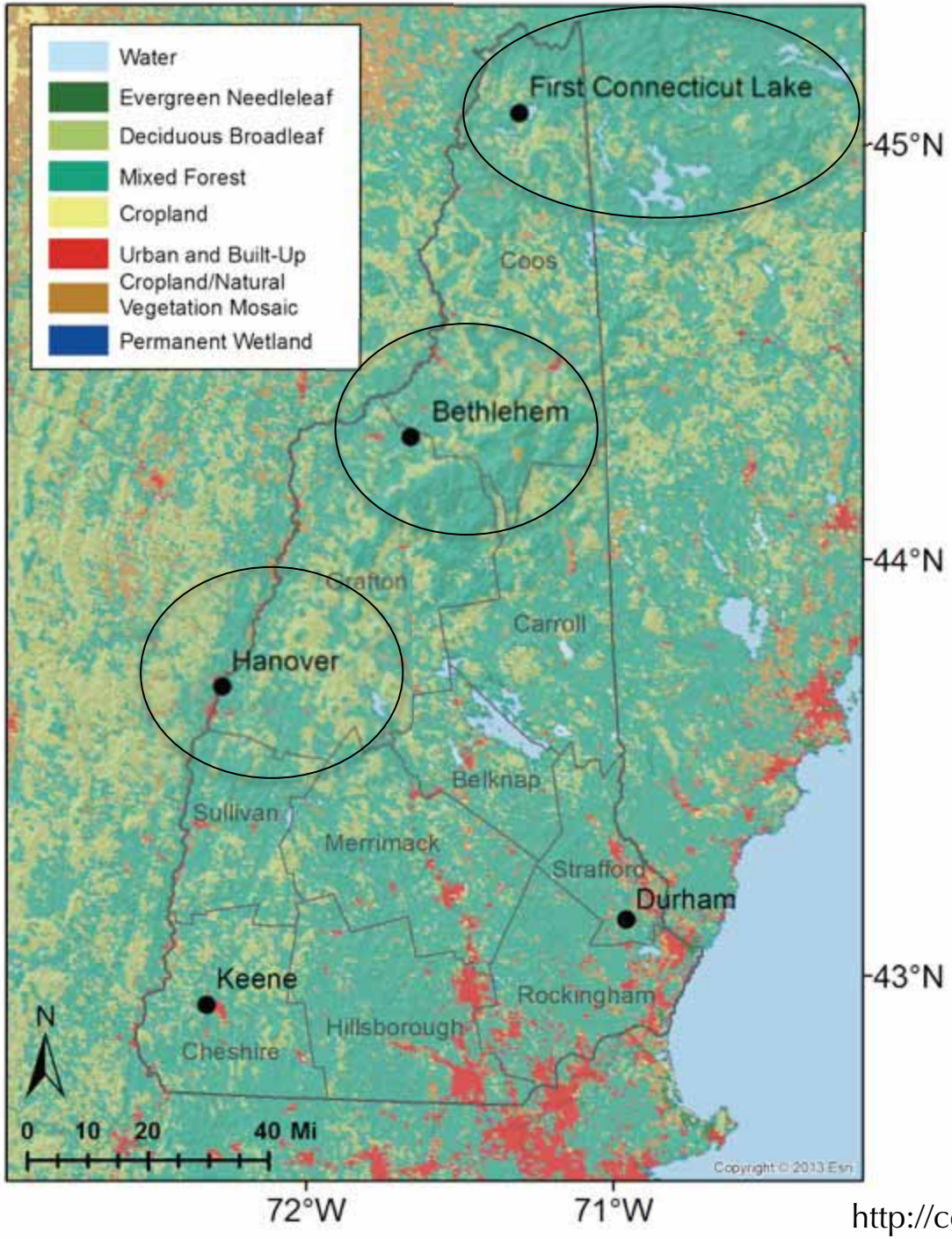








Northern New Hampshire



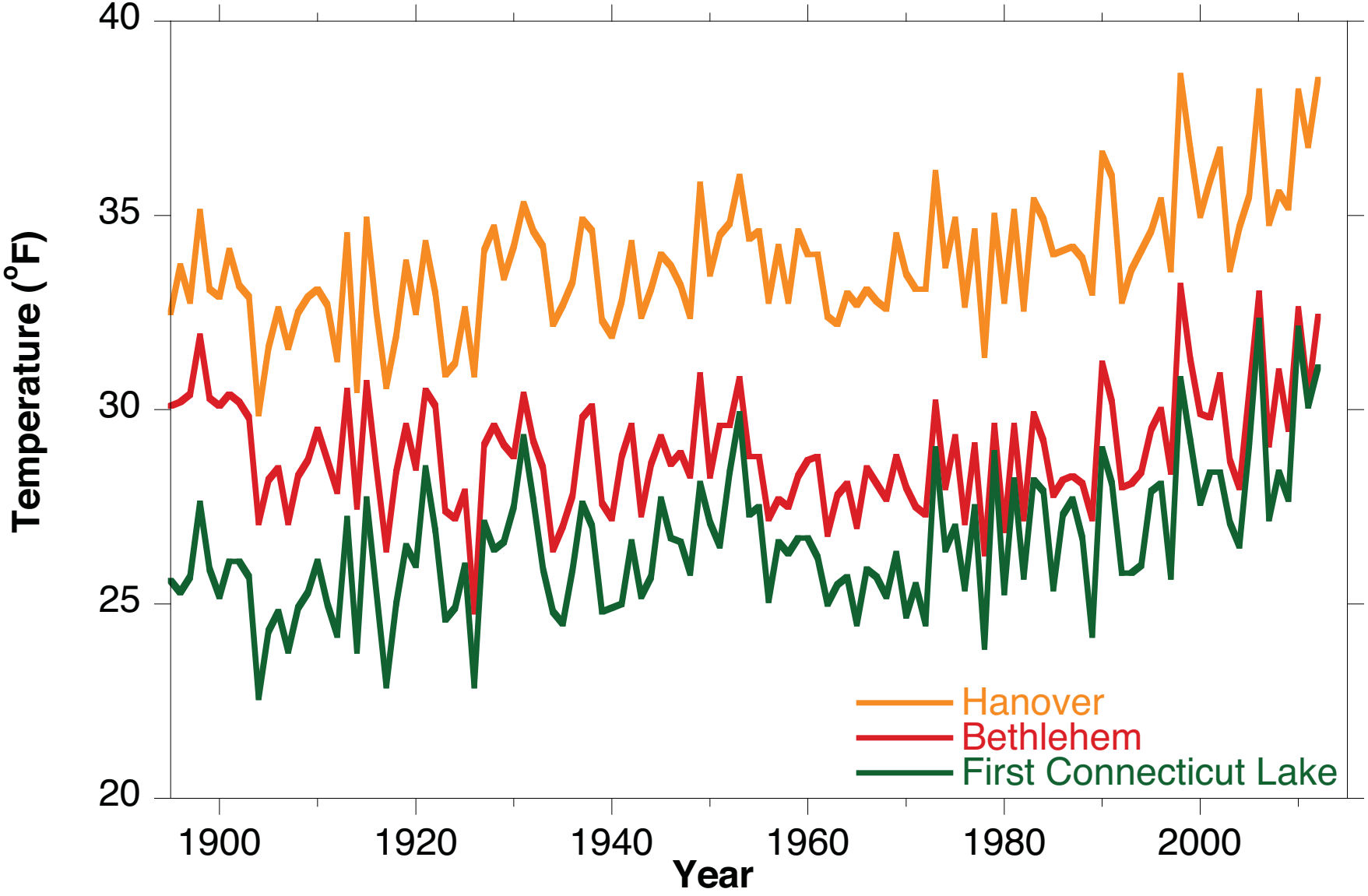
Historical Climate

United States Historical Climatology Network (USHCN-Monthly)

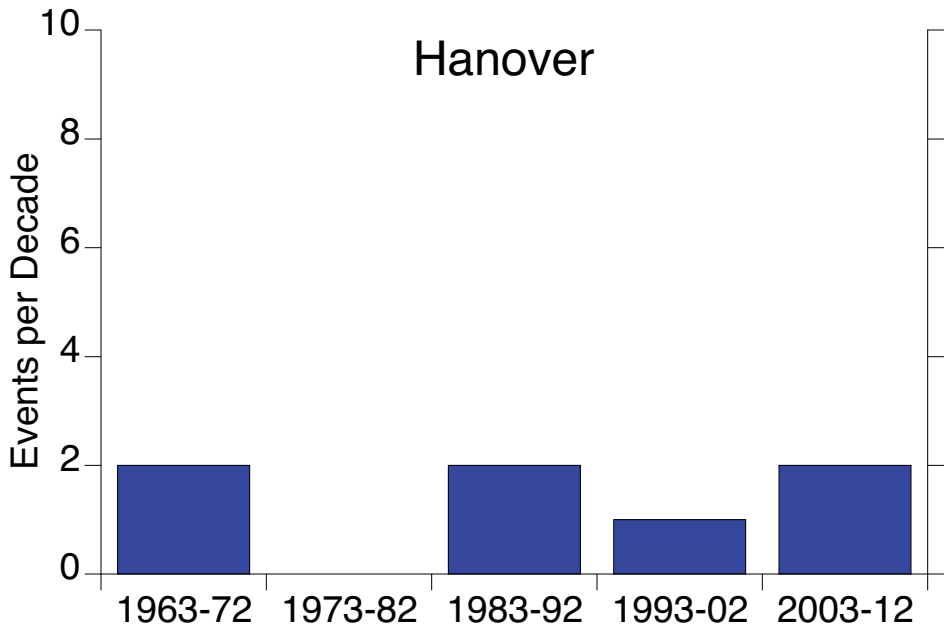
Meteorological Stations (•)
Long-Term (1895-2012)
Temperature & Precipitation

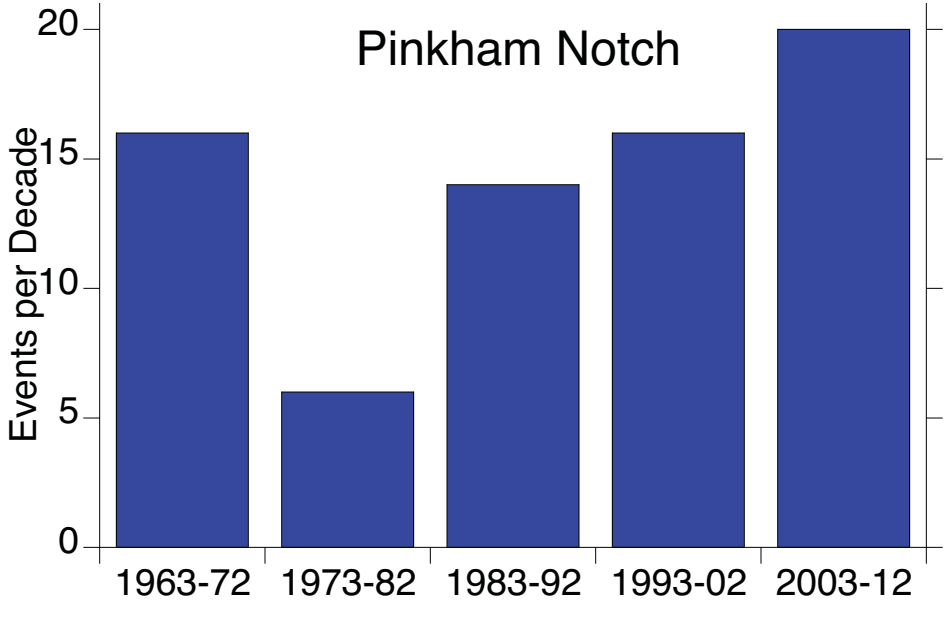
http://cdiac.ornl.gov/epubs/ndp/ushcn/daily_doc.html

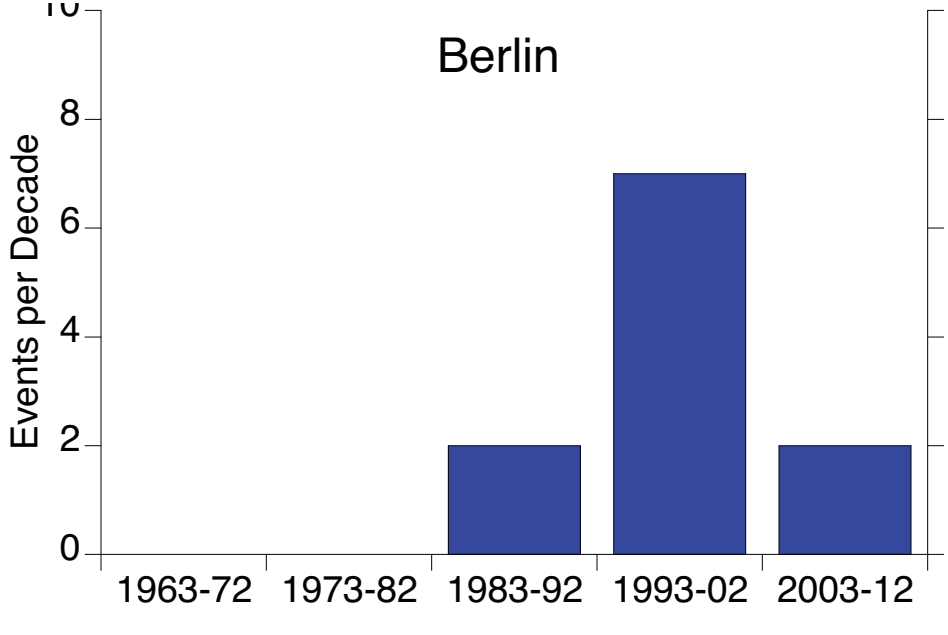
Annual TMIN 1895 - 2012

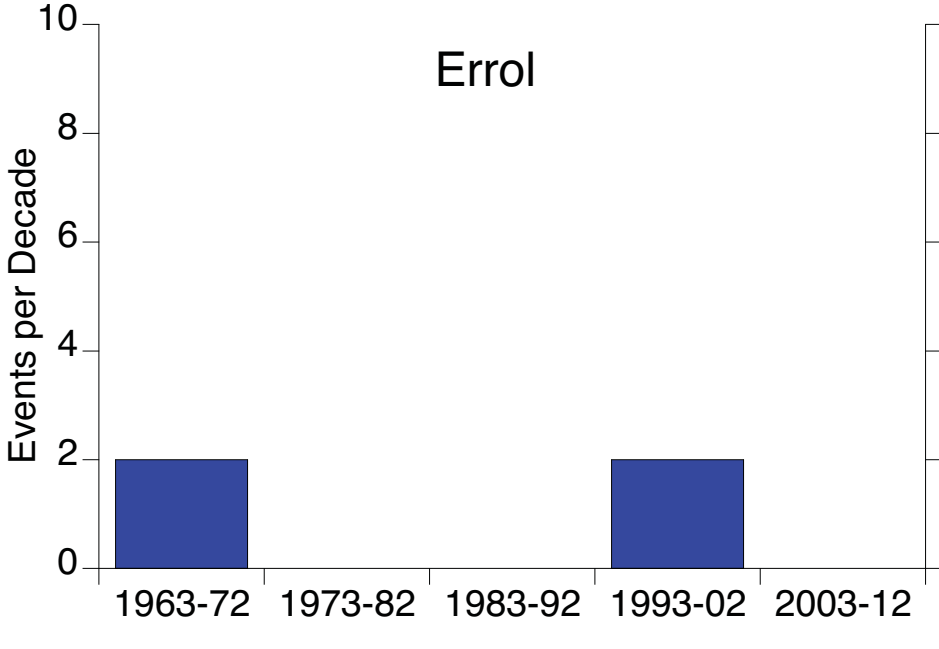


Precipitation Events >4″ in 48 hrs - per Decade









Historical Trends in Temperature and Precipitation

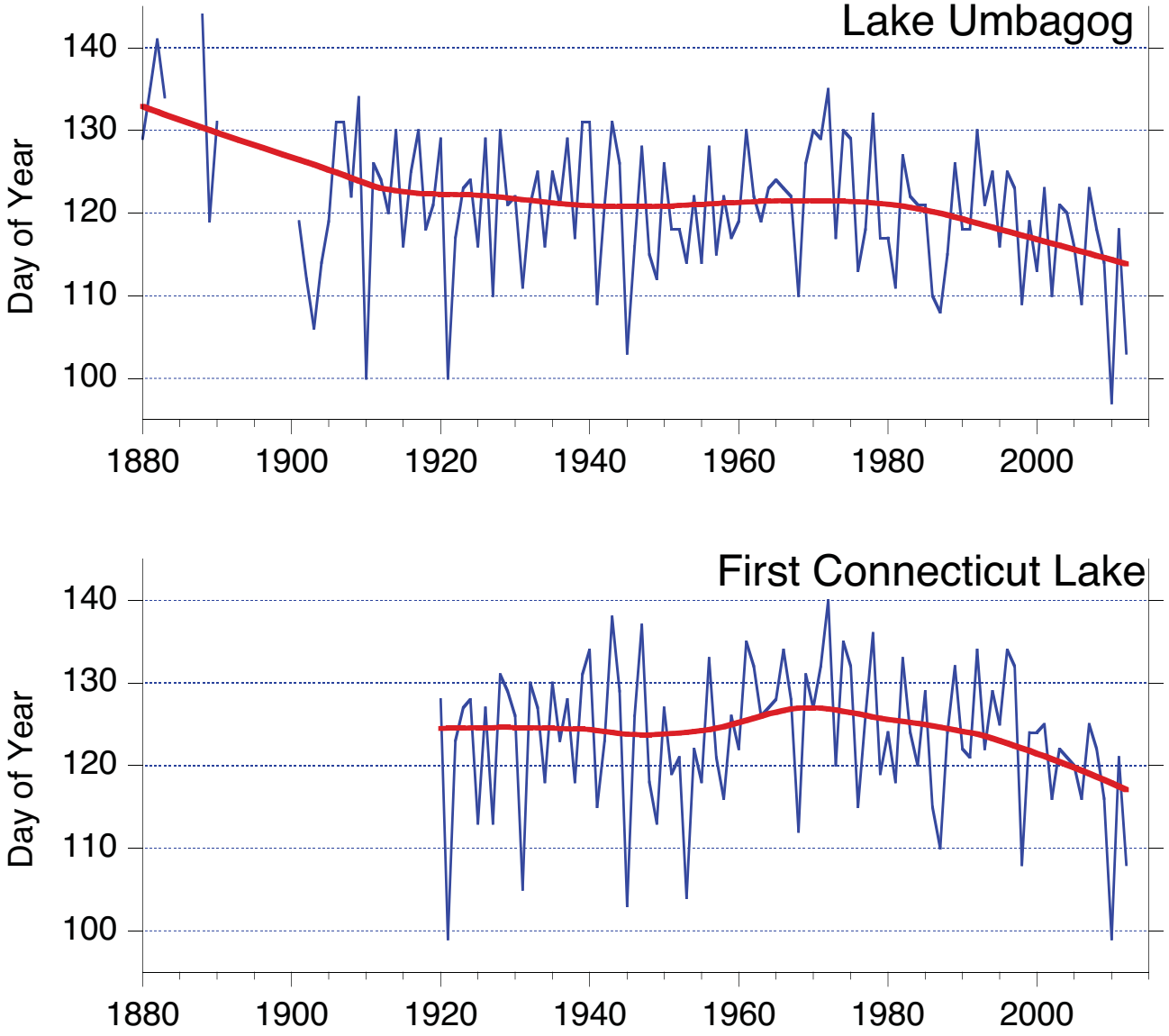
Parameter	Bethlehem		First Connecticut Lake		Hanover	
	1895-2012	1970-2012	1895-2012	1970-2012	1895-2012	1970-2012
TMAX (°F per decade)						
Annual	**0.10**	**0.50**	**0.14**	**0.36**	0.05	0.25
Winter	0.11	**0.84**	**0.16**	0.61	0.08	0.37
Spring	**0.17**	0.22	**0.20**	0.33	**0.15**	0.29
Summer	**0.11**	0.15	0.09	0.04	0.08	-0.05
Fall	0.07	**0.98**	**0.13**	**0.56**	-0.05	**0.60**
TMIN (°F per decade)						
Annual	0.03	**0.77**	**0.24**	**0.86**	**0.25**	**0.74**
Winter	0.19	**1.57**	**0.38**	**1.44**	**0.36**	**1.45**
Spring	0.05	0.61	**0.21**	**0.72**	**0.23**	**0.60**
Summer	-0.04	0.32	**0.19**	**0.50**	**0.27**	**0.60**
Fall	0.00	**0.78**	**0.24**	**0.95**	**0.22**	**0.61**
Precipitation (inches per decade)						
Annual	**0.39**	0.68	-0.03	**1.74**	**0.39**	1.16
Winter	**0.14**	-0.09	-0.05	0.03	**0.12**	-0.11
Spring	0.02	-0.07	0.01	0.32	0.02	0.22
Summer	0.15	0.17	0.16	0.66	0.10	0.55
Fall	0.06	0.13	-0.05	0.52	**0.18**	0.19
Snowfall	NA	-4.29	NA	-3.94	NA	-3.44
Snow Covered Days (days per decade)						
Winter	NA	-0.4	NA	0.0	NA	-2.9

NA means data not available

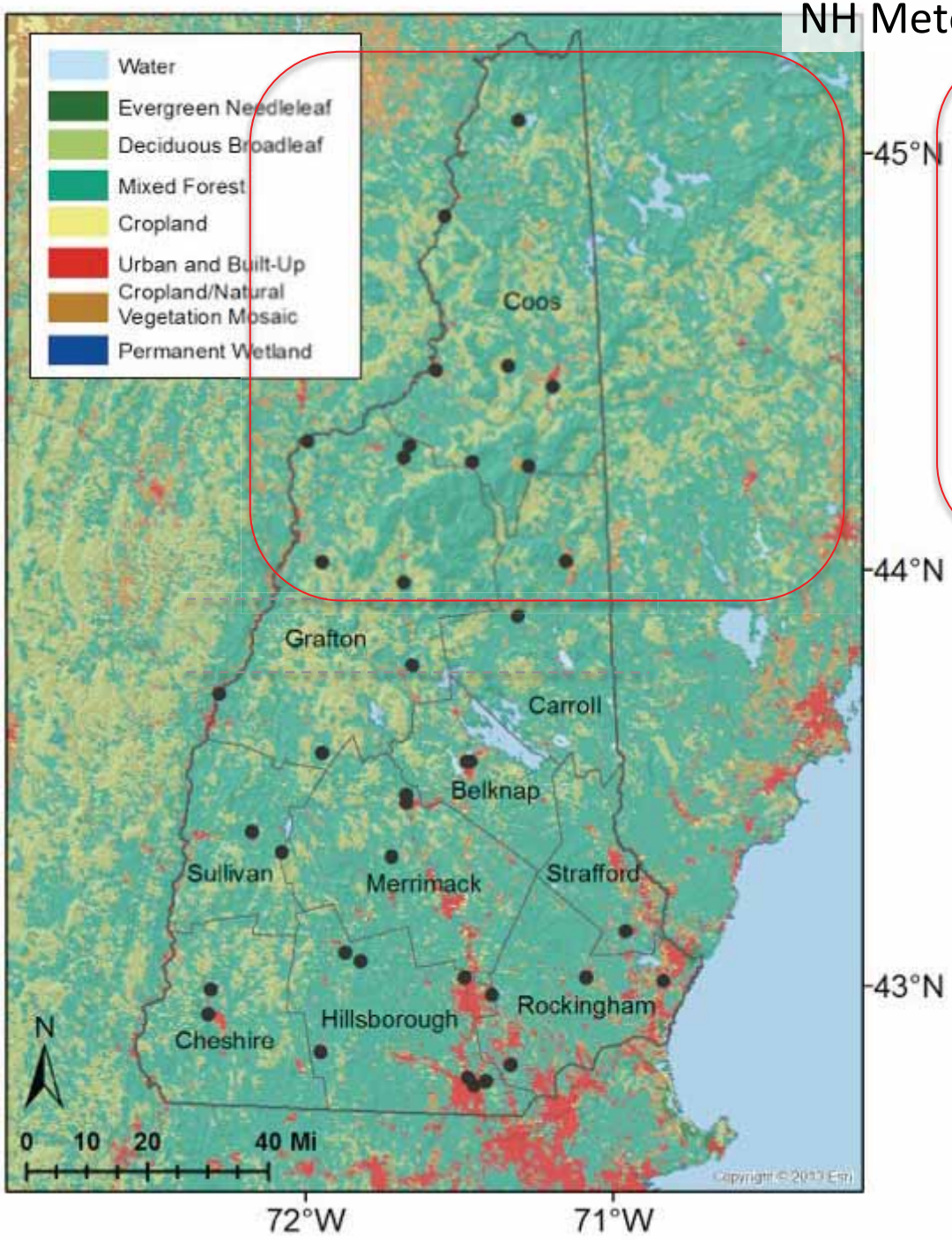
*Snowfall & snow covered days data not available for Bethlehem; instead data from Pinkham Notch re

Trends that meet Mann-Kendall non-parametric test for statistical significance are **bold and underlined**.

Ice-Out Dates

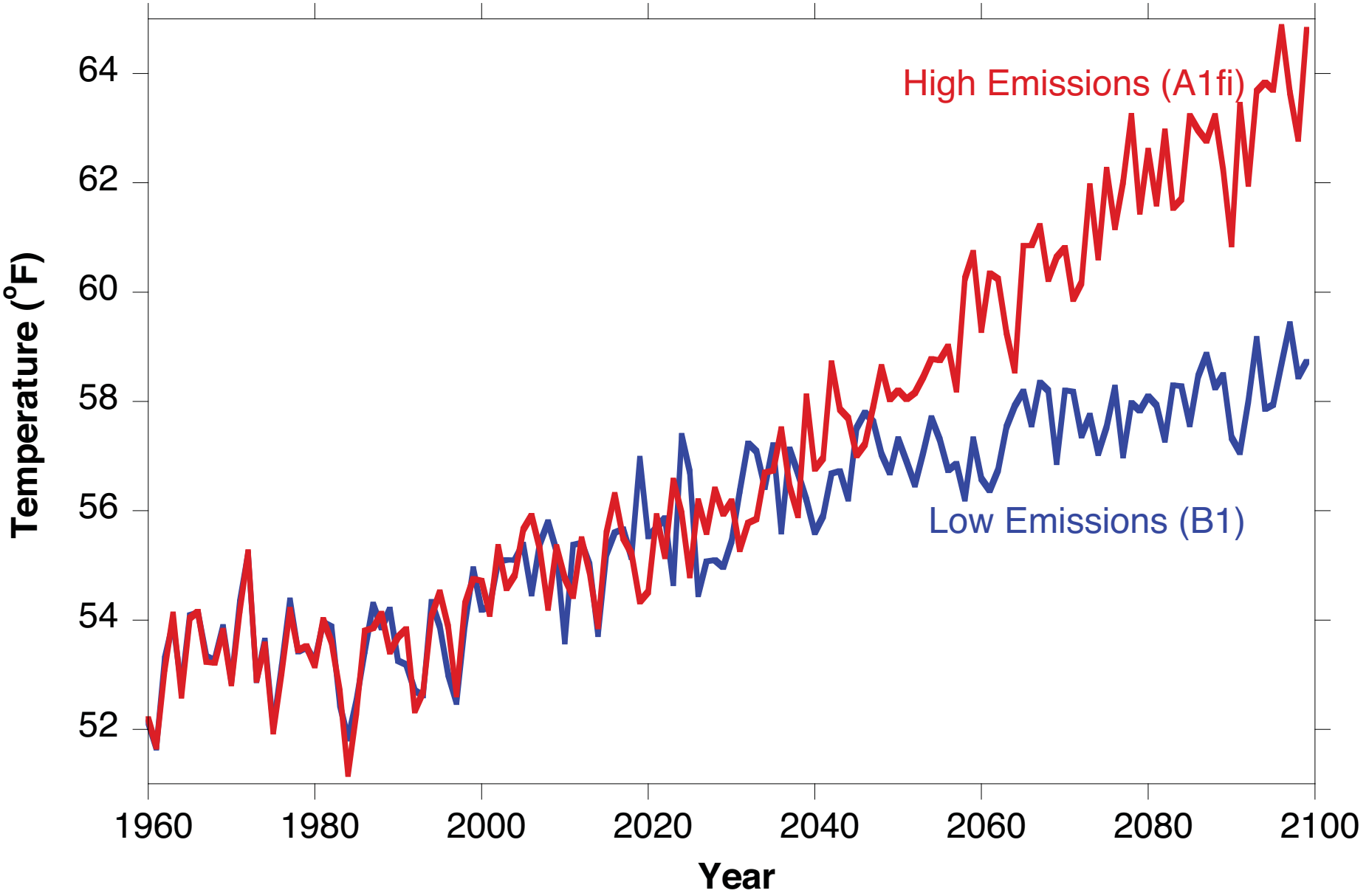


NH Meteorological Stations (•) Temperature

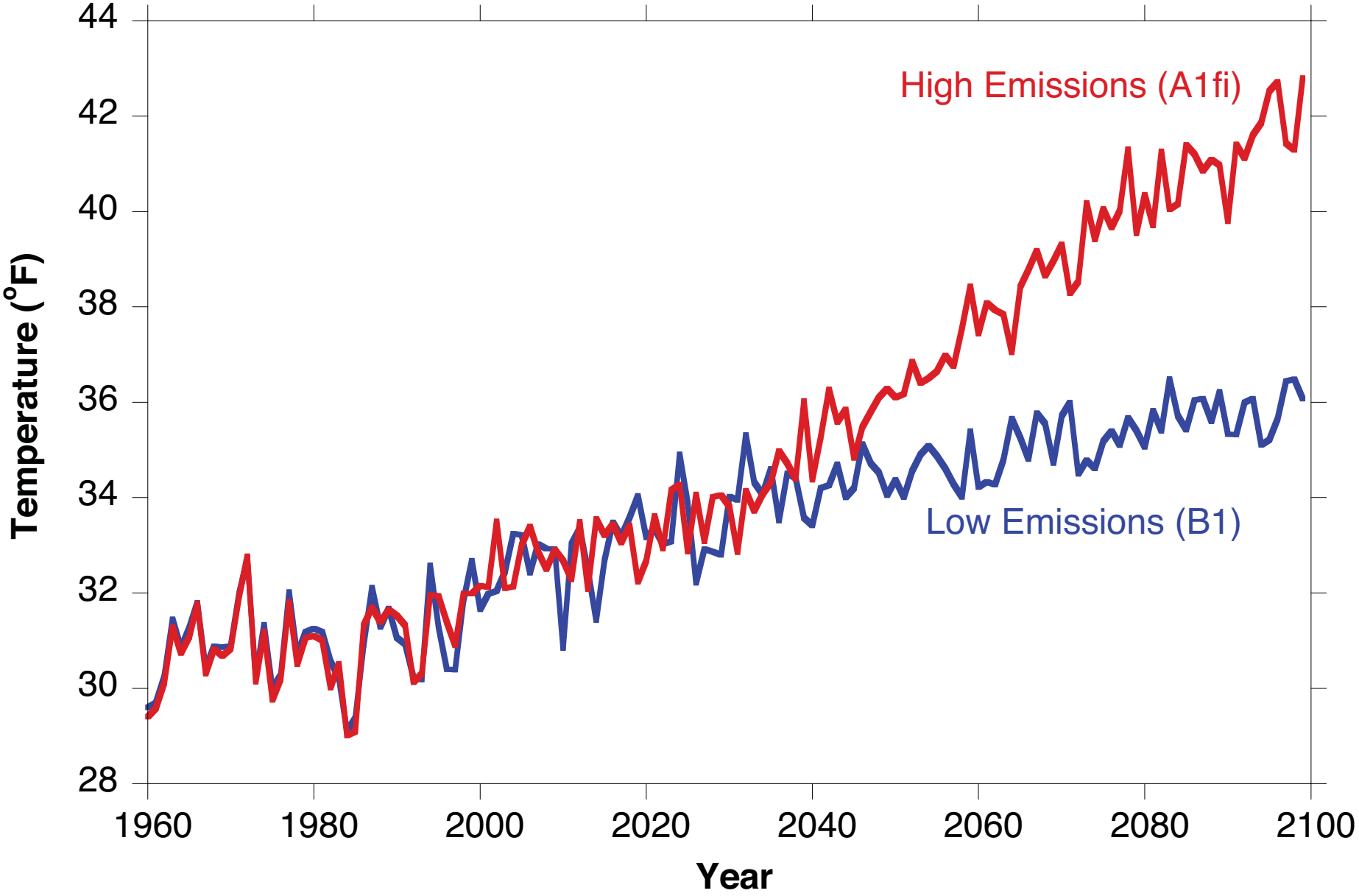


Station Name	Lat.	Long.	Elev (ft)
First Connecticut Lake	45.1	71.3	506
Colebrook	44.9	71.5	341
York Pond	44.5	71.3	466
Lancaster	44.5	71.6	262
Berlin	44.4	71.2	284
Monroe	44.3	72.0	201
Bethlehem	44.3	71.7	360
Bethlehem	44.3	71.7	421
Fabyan	44.3	71.5	494
Pinkham Notch	44.3	71.3	613
Benton	44.0	71.9	366
North Conway	44.0	71.1	166
Woodstock	44.0	71.7	220
Tamworth	43.9	71.3	241
Plymouth	43.8	71.7	201
Hanover	43.7	72.3	178
Grafton	43.6	72.0	253
Lakeport	43.6	71.5	171
Lakeport	43.5	71.5	152
Franklin Falls	43.5	71.7	131
Franklin	43.5	71.7	119
Newport	43.4	72.2	235
Mt. Sunapee	43.3	72.1	387
Blackwater Dam	43.3	71.7	183
Durham	43.1	71.0	23
Deering	43.1	71.9	325
East Deering	43.1	71.8	241
Manchester	43.0	71.5	64
Epping	43.0	71.1	49
Greenland	43.0	70.8	26
Surry Mtn	43.0	72.3	171
Massabesic Lake	43.0	71.4	77
Keene	42.9	72.3	156
Peterboro	42.9	72.0	311
Windham	42.8	71.3	67
Nashua	42.8	71.5	41
Hudson	42.8	71.4	56
Nashua	42.8	71.5	27

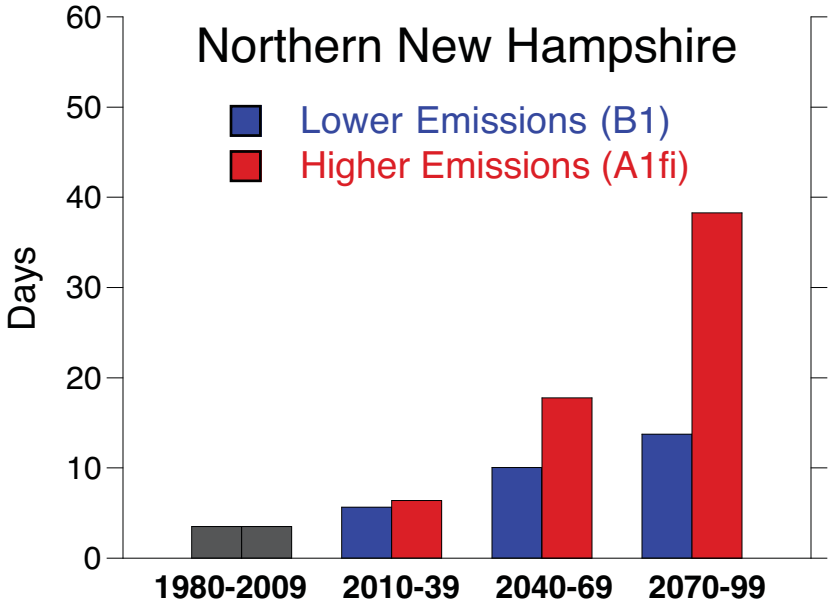
Annual Maximum Temperature, Northern NH (15 stations)

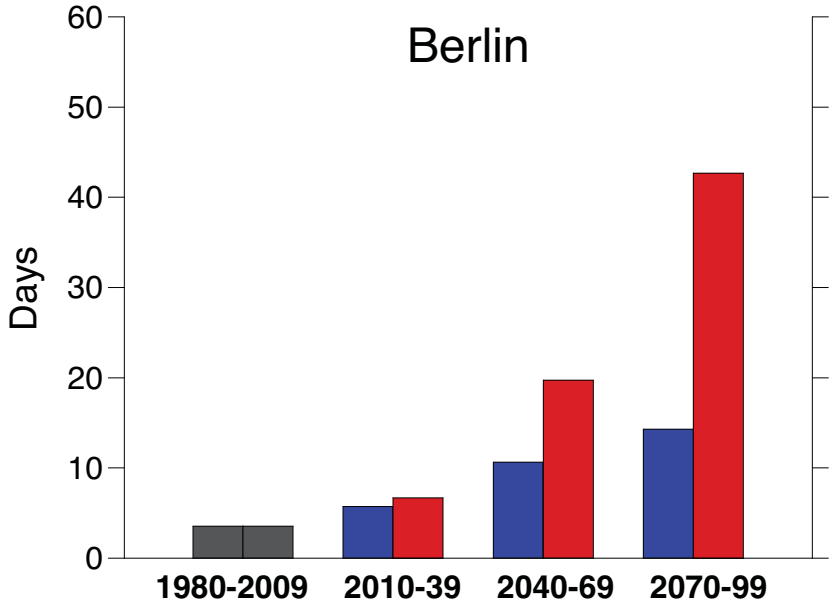


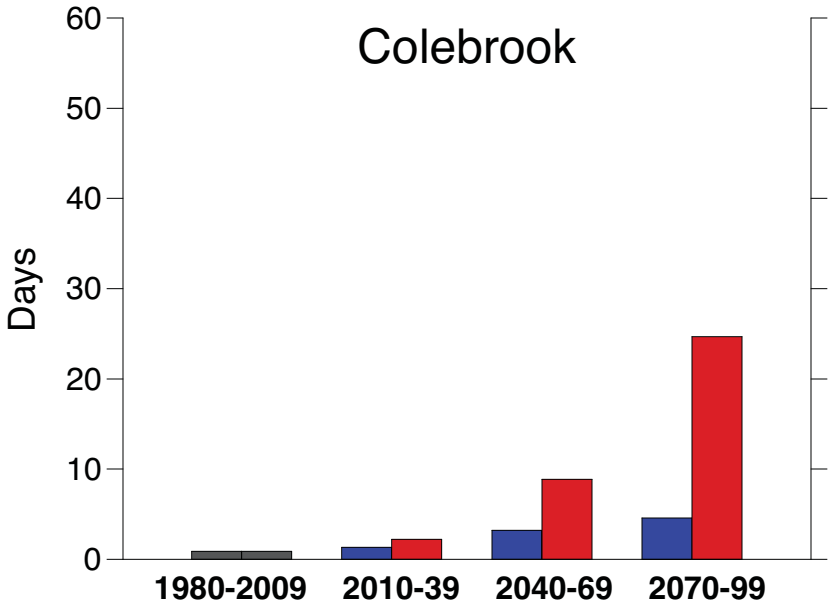
Annual Minimum Temperature, Northern NH (15 stations)

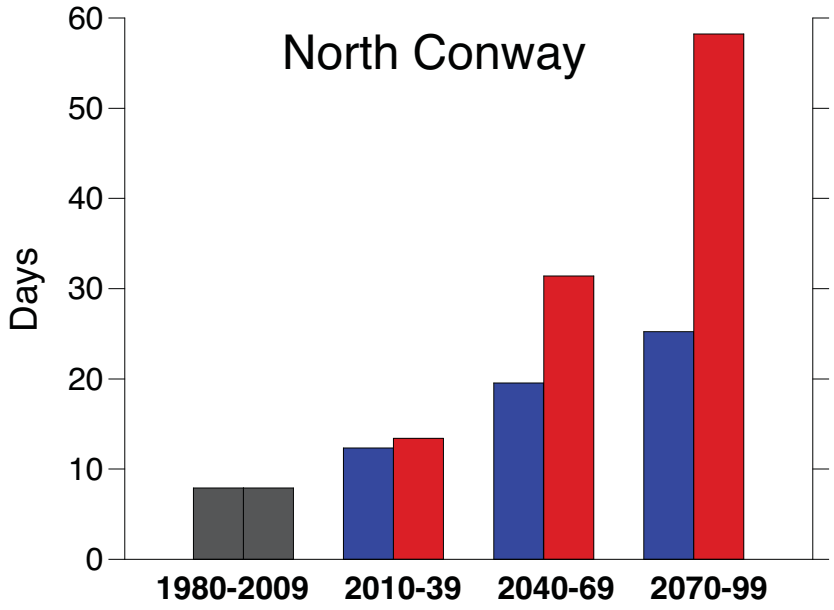


Number of Days Hotter than 90°F (30 year averages)

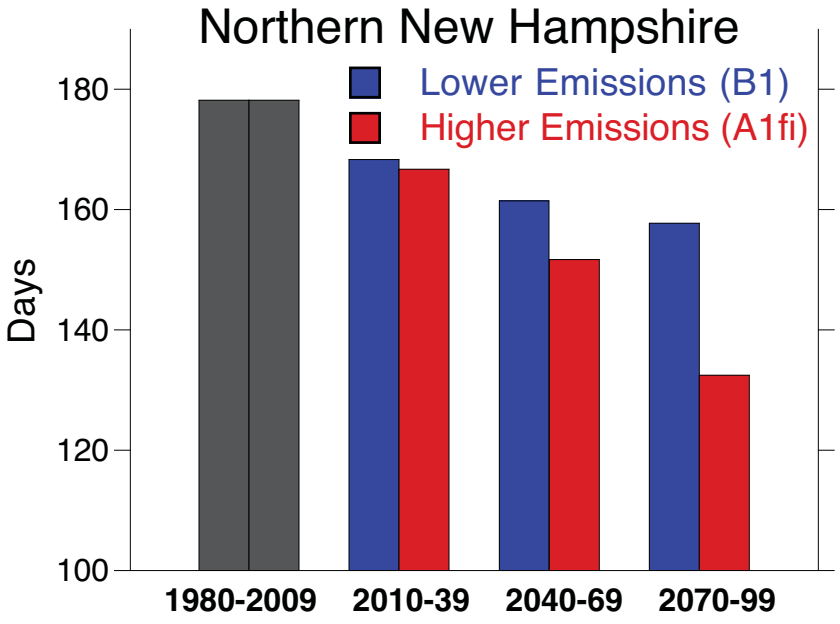


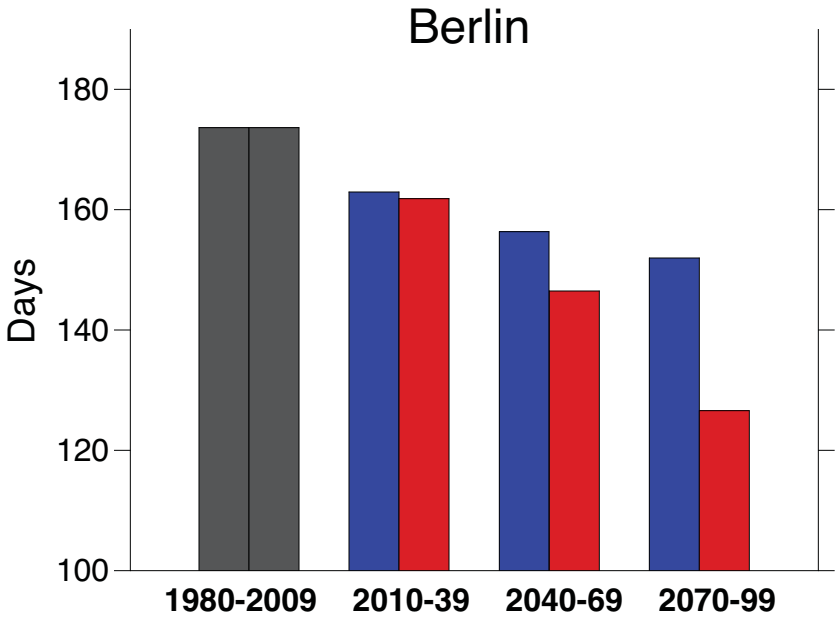


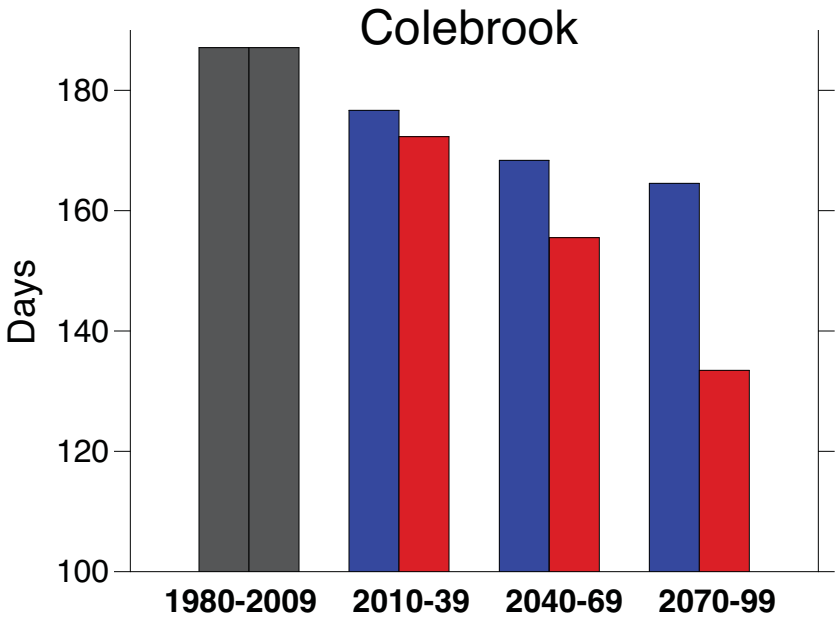


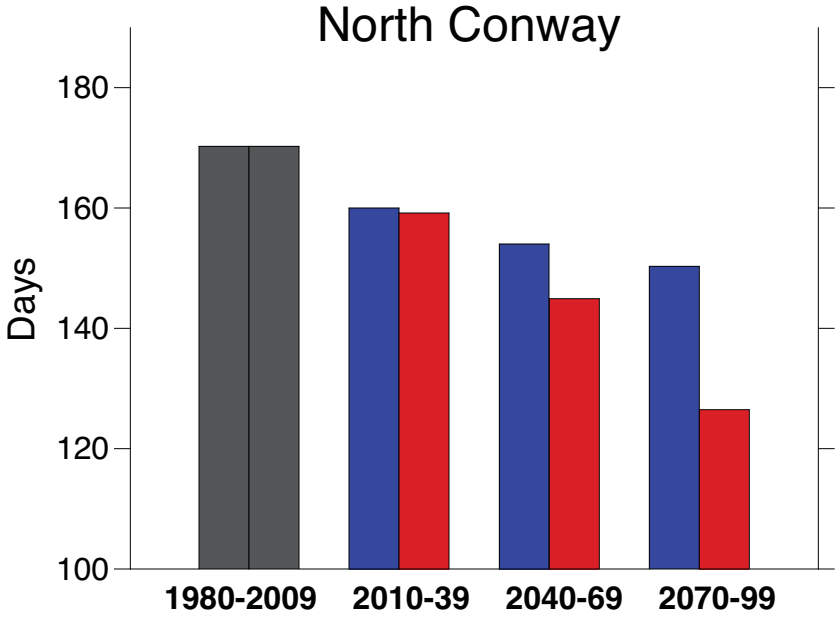


Number of Days Cooler than 32°F (30 yr averages)

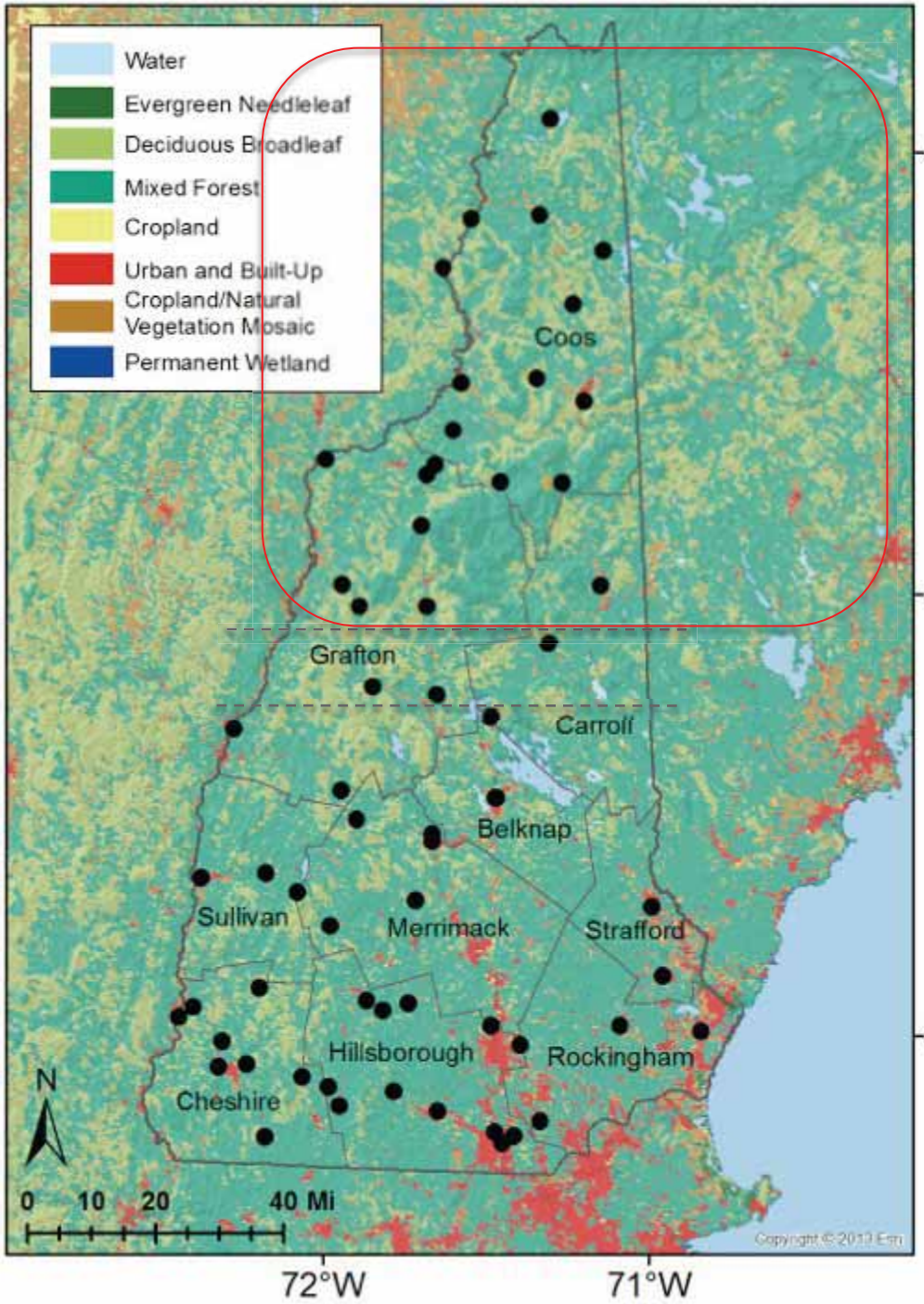






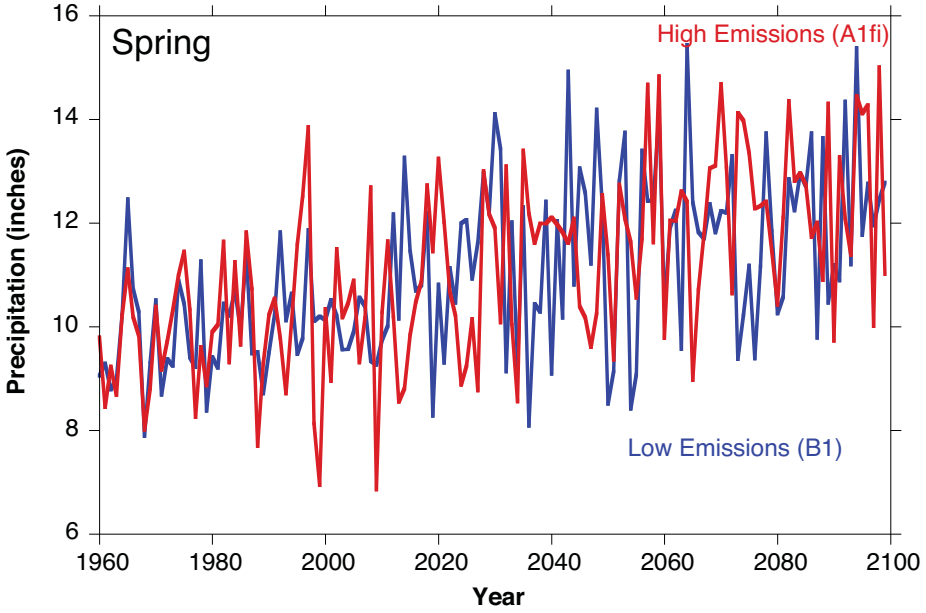


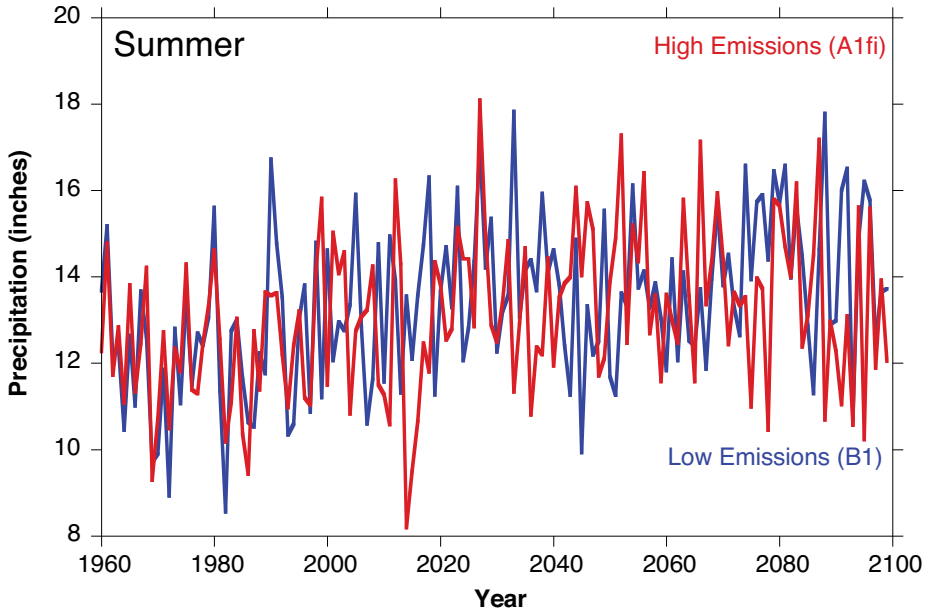
NH Meteorological Stations (•) Precip.

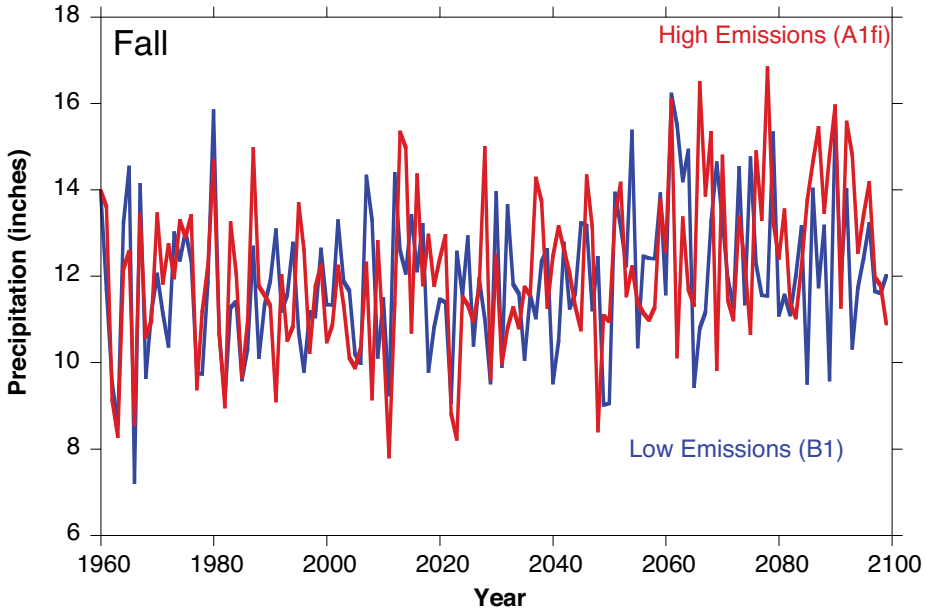


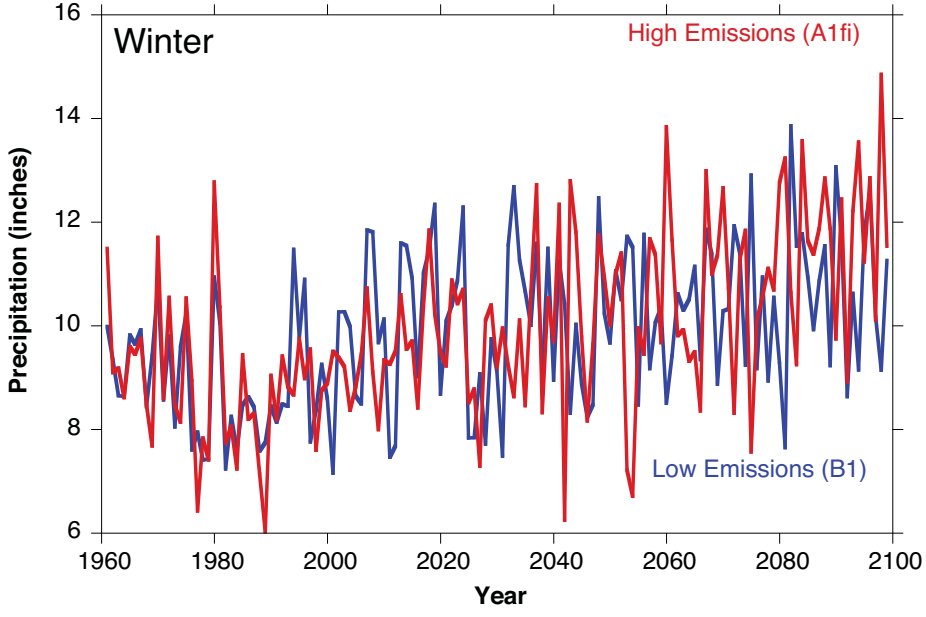
Station Name	Lat	Lon	Elev
First Connecticut Lake	45.09	-71.29	506.0
Dixville Notch	44.87	-71.32	515.1
Colebrook	44.86	-71.54	341.4
Errol	44.79	-71.12	390.1
North Stratford	44.75	-71.63	277.4
Milan	44.67	-71.22	360.0
York Pond	44.50	-71.33	466.3
Lancaster	44.49	-71.57	262.1
Berlin	44.45	-71.18	283.5
Whitefield	44.38	-71.60	331.9
Monroe	44.32	-72.00	201.2
Bethlehem	44.31	-71.66	359.7
Bethlehem	44.28	-71.68	420.6
Fabyan	44.27	-71.45	494.1
Pinkham Notch	44.26	-71.26	612.6
Cannon Mtn	44.17	-71.70	1220.1
Benton	44.03	-71.95	365.8
North Conway	44.03	-71.14	165.8
Glencliff	43.98	-71.89	329.2
Woodstock	43.98	-71.68	220.1
Tamworth	43.90	-71.30	240.8
West Rumney	43.80	-71.85	170.7
Plymouth	43.78	-71.65	201.2
Moultonboro	43.73	-71.48	182.9
Hanover	43.71	-72.29	178.0
Grafton	43.57	-71.95	253.0
Lakeport	43.55	-71.47	170.7
Lakeport2	43.55	-71.46	152.4
South Danbury	43.50	-71.90	284.1
Franklin Falls Dam	43.47	-71.67	131.1
Franklin	43.45	-71.67	118.9
Newport	43.38	-72.18	234.7
Claremont Junction	43.37	-72.38	131.1
Mt. Sunapee	43.33	-72.08	387.1
Blackwater Dam	43.32	-71.72	182.9
Rochester	43.30	-70.98	70.1
Bradford	43.26	-71.98	286.5
Durham	43.14	-70.95	22.9
Marlow	43.12	-72.20	359.7
Deering	43.09	-71.87	325.2
Weare	43.08	-71.74	219.5
East Deering	43.07	-71.82	241.1
Walpole3	43.07	-72.41	283.5
Walpole	43.05	-72.45	92.0
Epping	43.03	-71.08	48.8
Manchester	43.03	-71.48	64.0
Greenland	43.02	-70.83	25.9
Surry Mtn. Lake	43.00	-72.31	170.7
Massabesic Lake	42.99	-71.39	77.1
Otter Brook lake	42.95	-72.24	207.3
Keene	42.94	-72.32	155.8
Dublin	42.92	-72.07	454.2
Edward Macdowell Lak	42.89	-71.98	295.7
South Lyndeboro	42.88	-71.78	198.1
Peterboro	42.85	-71.95	310.9
Milford	42.84	-71.65	97.5
Windham	42.82	-71.33	67.1
Nashua2	42.79	-71.47	41.1
Nashua	42.77	-71.45	26.5
Fitzwilliam	42.78	-72.18	362.7
Hudson	42.78	-71.41	56.4

Seasonal Precipitation, Northern NH (23 stations)

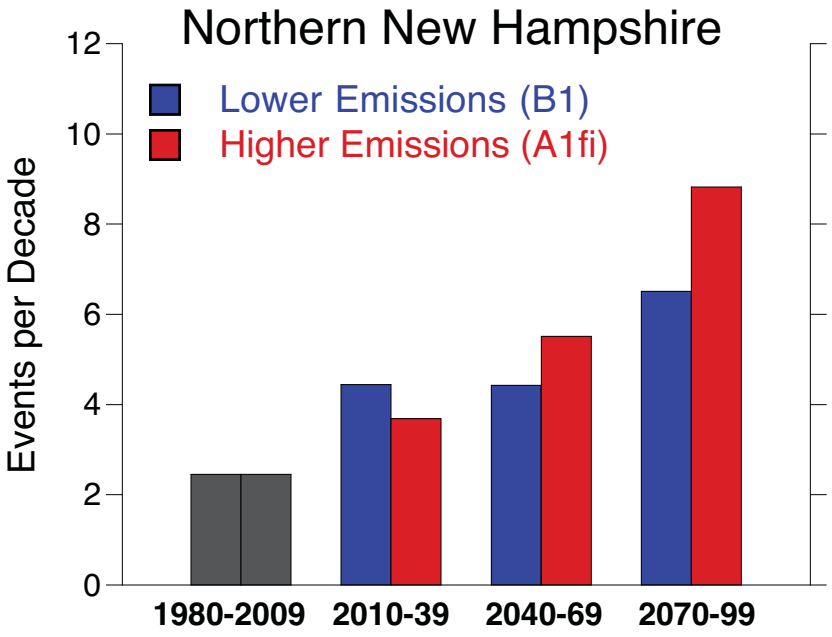


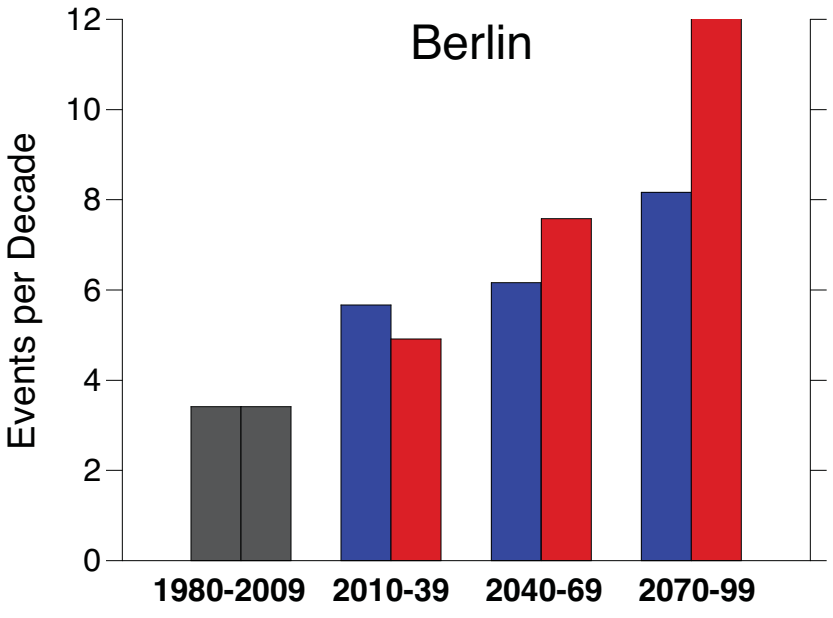


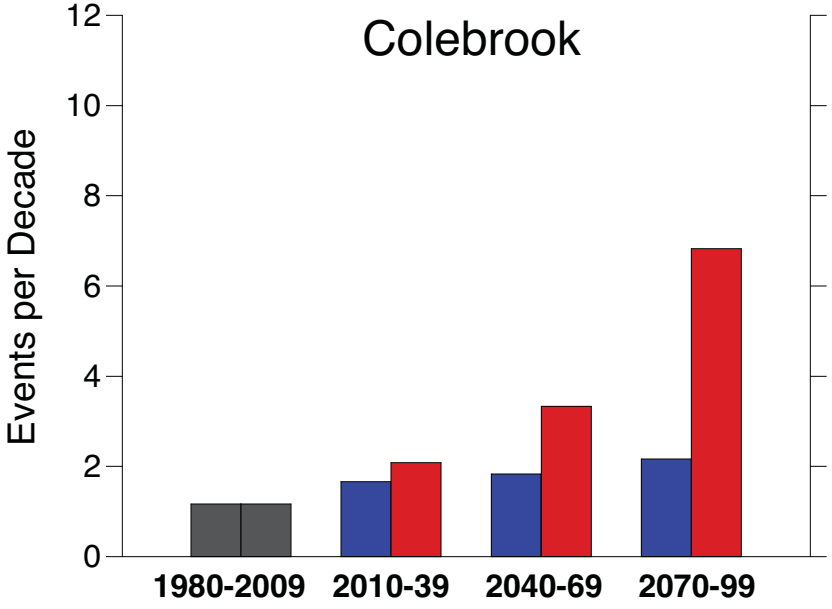


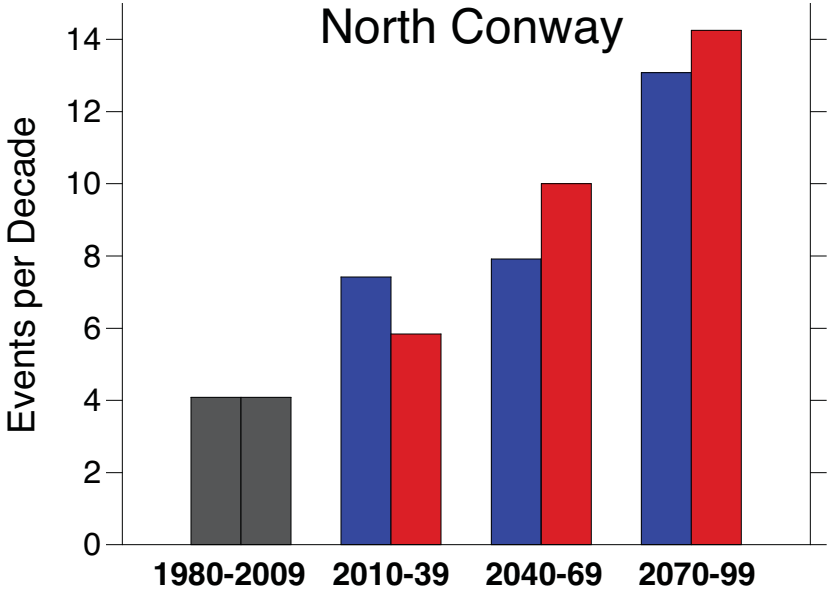


Precipitation Events >4″ in 48 hrs per Decade (30 year averages)



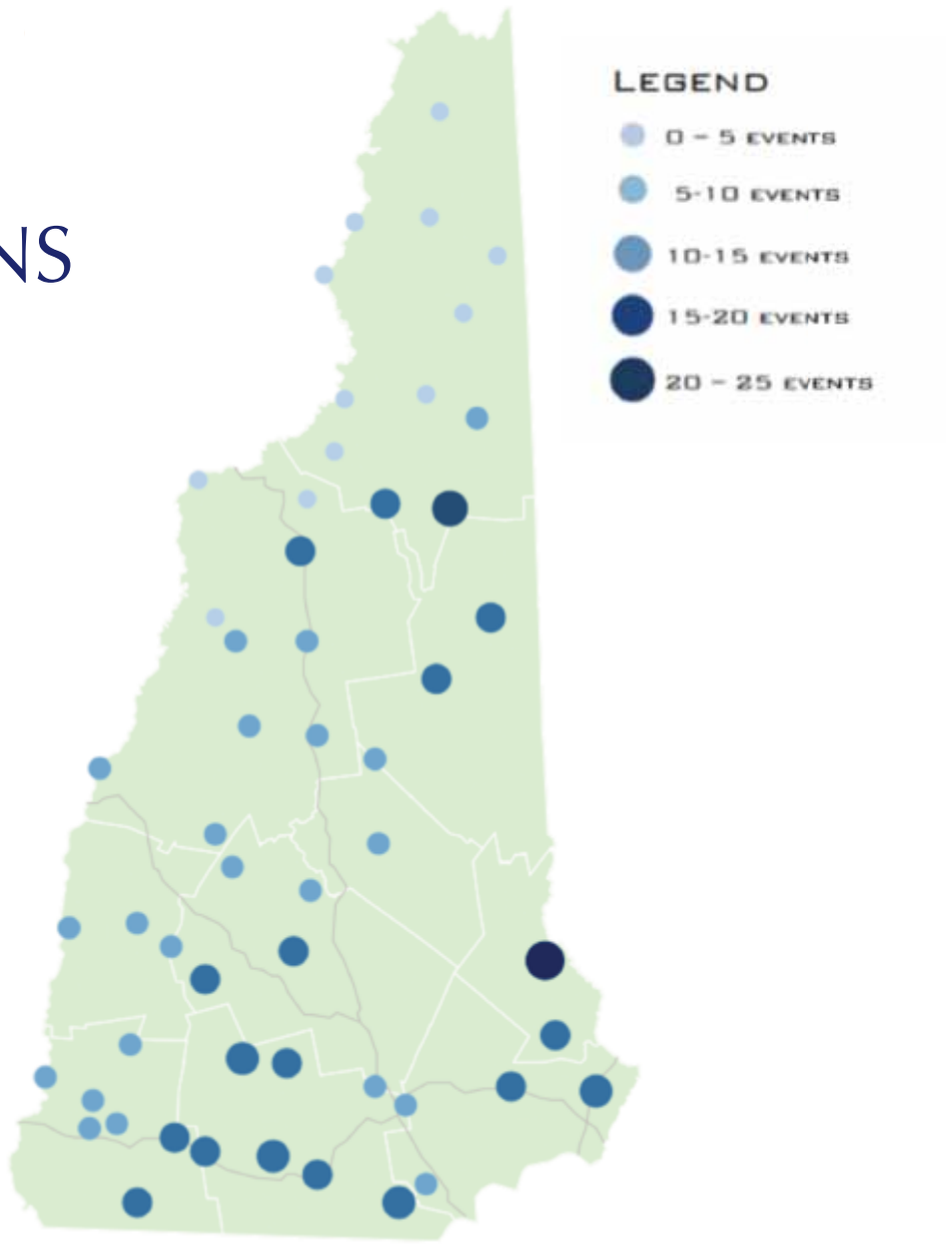






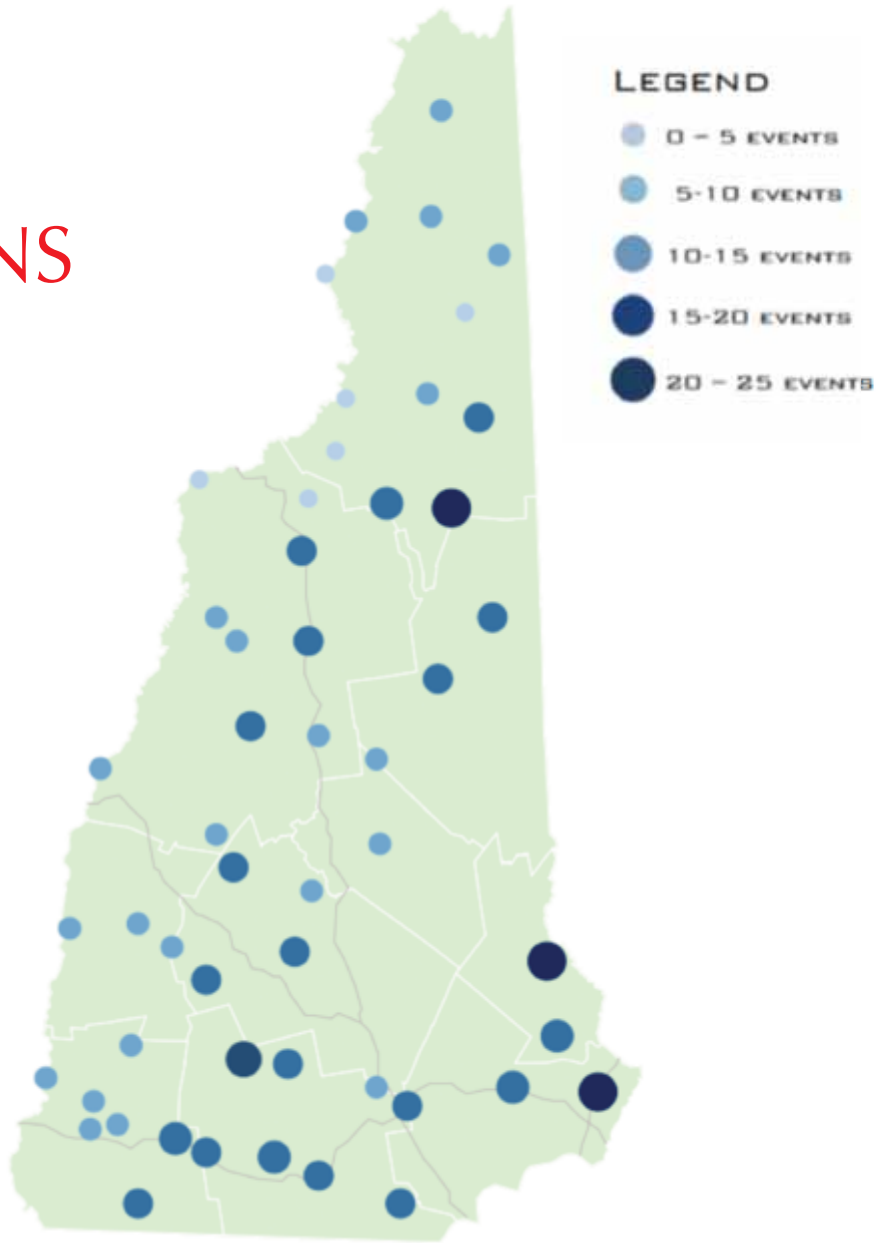
Precipitation Events Greater than 4″ in 48 hours

LOW
EMISSIONS

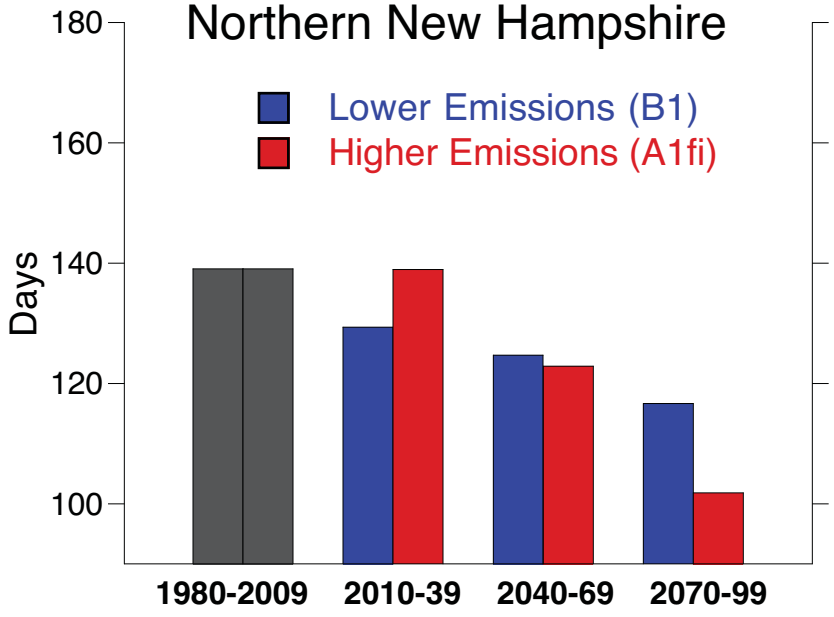


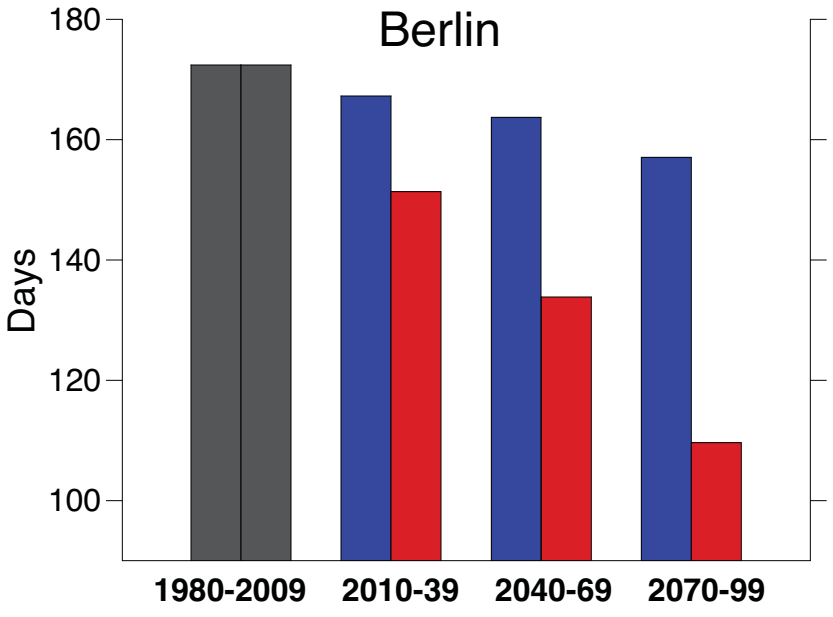
Precipitation Events Greater than 4″ in 48 hours

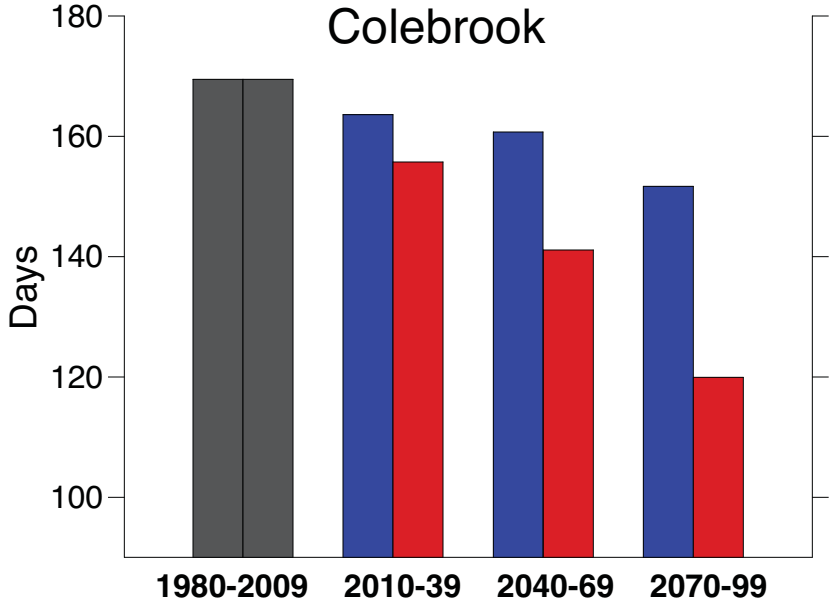
HIGH
EMISSIONS

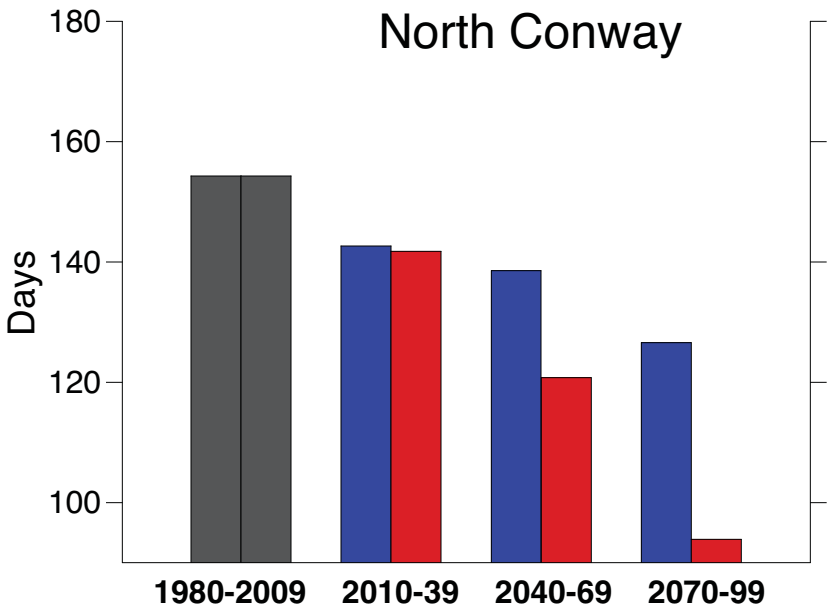


Snow Covered Days (30 yr averages)









Northern NH Average

Indicators	Historical* 1980-2009	Actual					
		Short Term 2010-2039		Medium Term 2040-2069		Long Term 2070-2099	
		Low Emissions	High Emissions	Low Emissions	High Emissions	Low Emissions	High Emissions
Temperature Anomaly (°F)							
Annual TMIN	31.5	33.4	33.6	34.6	36.9	35.6	40.7
Winter TMIN	8.5	11.1	11.4	12.6	14.9	14.2	19.2
Spring TMIN	29.3	32.5	31.0	34.3	33.9	35.5	37.3
Summer TMIN	52.5	54.1	54.6	55.3	58.0	55.9	62.0
Fall TMIN	37.5	37.7	39.3	38.0	42.6	38.5	46.0
Annual TMAX	53.9	55.7	55.7	57.1	58.9	58.2	62.4
Winter TMAX	29.3	31.3	31.1	32.1	33.2	33.4	36.0
Spring TMAX	52.6	55.1	54.2	57.5	57.4	59.2	61.4
Summer TMAX	77.0	78.8	79.1	80.4	82.8	81.2	86.6
Fall TMAX	56.4	57.4	58.1	57.8	61.9	58.0	65.1
Temperature Extreme (days per year)							
<32°F	178	168	167	161	152	158	132
<0 °F	28	21	21	17	12	15	7
>90°F	3	6	6	10	18	14	38
>95°F	0	1	1	2	4	3	13
TMAX on hottest day of the year	90.8	92.5	92.3	93.6	95.7	94.9	99.6
TMIN on coldest day of the year	-21.8	-17.8	-17.6	-15.9	-11.4	-13.9	-3.5
Precipitation (inches)							
Annual mean	43.2	46.7	45.4	47.6	48.4	49.4	50.5
Winter mean	8.9	10.0	9.8	10.2	10.4	10.7	11.3
Spring mean	10.1	11.1	10.9	11.8	11.7	12.0	12.6
Summer mean	12.6	14.0	13.0	13.2	14.0	14.5	13.3
Fall mean	11.5	11.6	11.7	12.4	12.4	12.3	13.2
Extreme Precipitation (events per year)							
1" in 24 hrs	8.1	9.2	9.2	9.9	10.4	10.5	12.8
2" in 48 hours	2.8	4.1	4.1	3.1	5.2	4.2	7.7
Extreme Precipitation (events per decade)							
4" in 48 hours	2.5	4.4	3.7	4.4	5.5	6.5	8.8
Snow Covered Days	144	129	139	125	123	117	102
Drought (months per 30 year period)		To Be calculated					
Growing Season (days)	150	159	161	168	179	171	200

Appendix will contain "climate grid" for 14 towns in northern NH and Northern NH Average

Summary

TEMPERATURES

WHAT HAVE WE SEEN SINCE 1970?

- Average maximum temperatures have warmed by 2.0°F (annual) and 2.9°F (winter)
- Average minimum temperatures have warmed by 3.2°F (annual) and 6.1°F (winter)

WHAT CAN WE EXPECT?

- Warmer winters: 20-45 fewer days below 32°F
- Hotter summers:
  10-35 days above 90°F for northern NH (compared to 3 currently);
  16-47 days above 90°F for southern NH (compared to 7 currently)

RAINFALL AND FLOODING

WHAT HAVE WE SEEN SINCE 1970?

- Annual precipitation has increased 8-22%
- Both the frequency and magnitude of extreme precipitation events has increased

WHAT CAN WE EXPECT?

- More precipitation (annual averages will increase by 15-20%)
- A two- to three-fold increase in extreme precipitation events
- More frequent and severe flooding

SNOW AND ICE

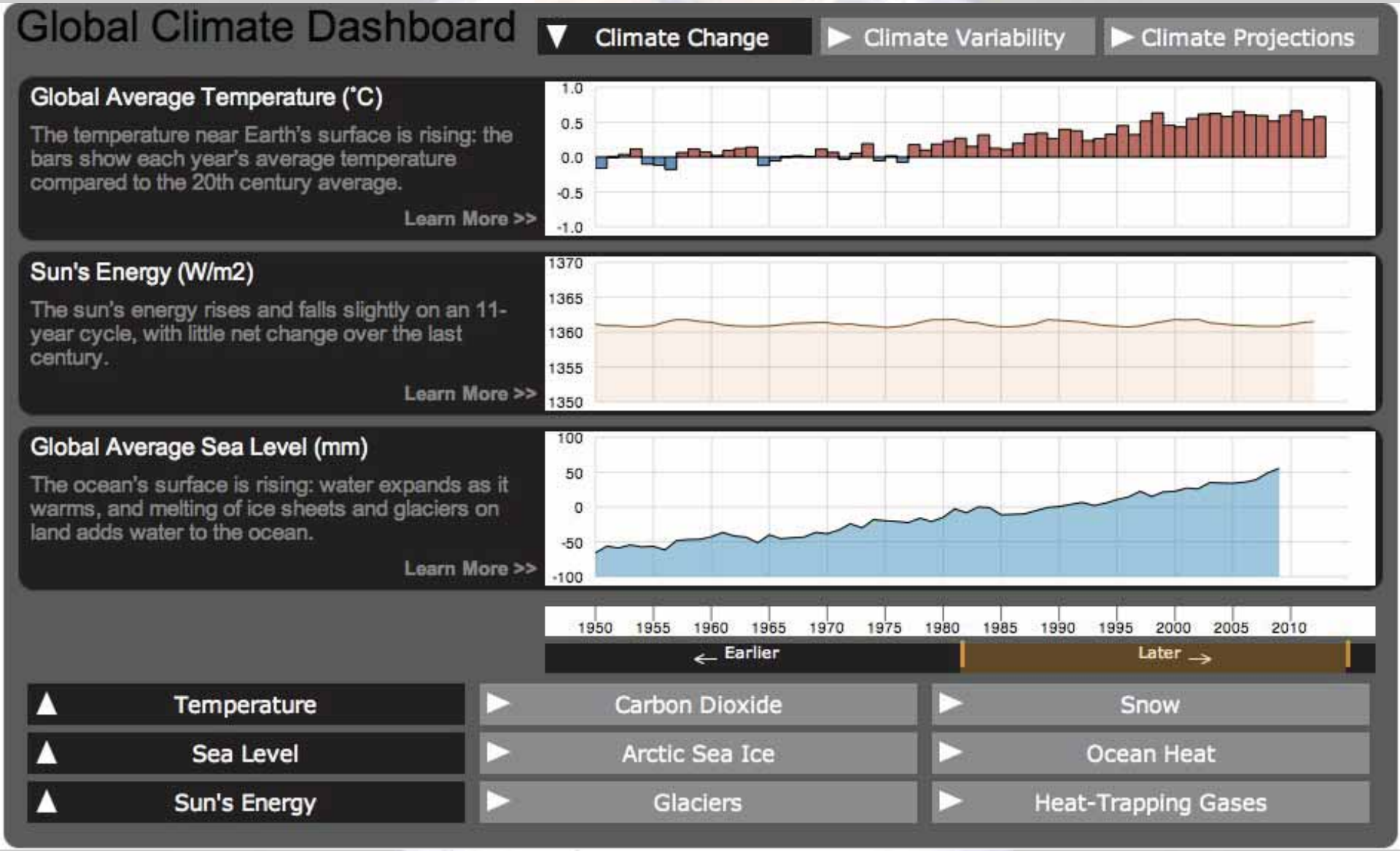
WHAT HAVE WE SEEN SINCE 1970?

- Fewer days with snow cover
- Lake ice-out dates are occurring earlier

WHAT CAN WE EXPECT?

- Less snow and more rain
- Significant decrease in number of snow covered days: 20-30% decrease in northern NH; 20-50% decrease in southern NH

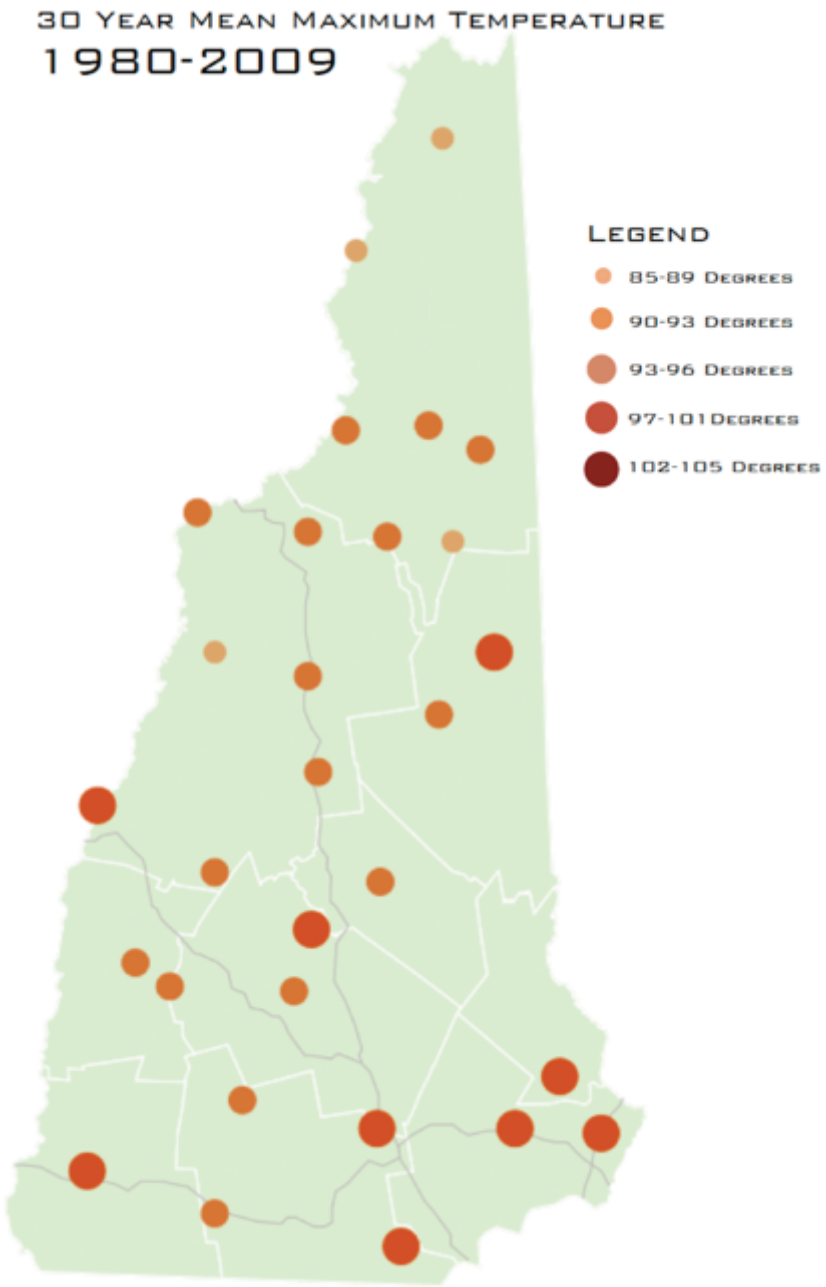
www.climate.gov

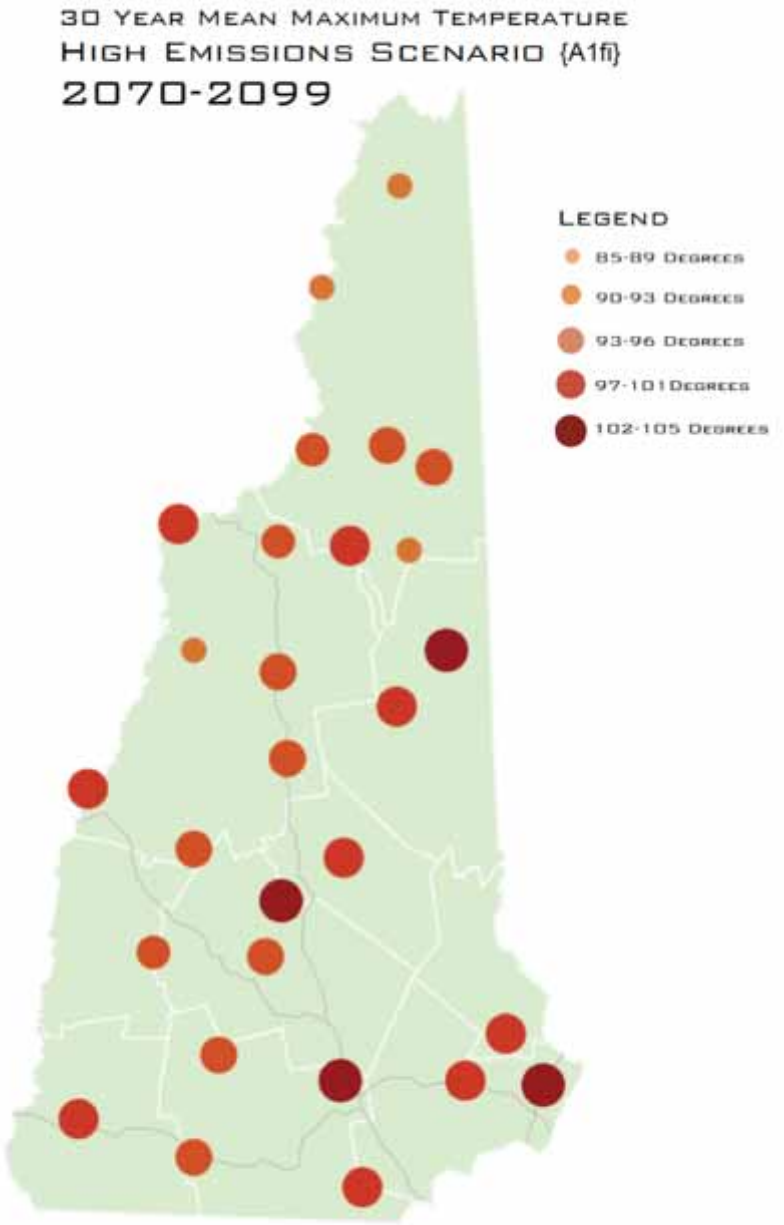


www.RealClimate.org

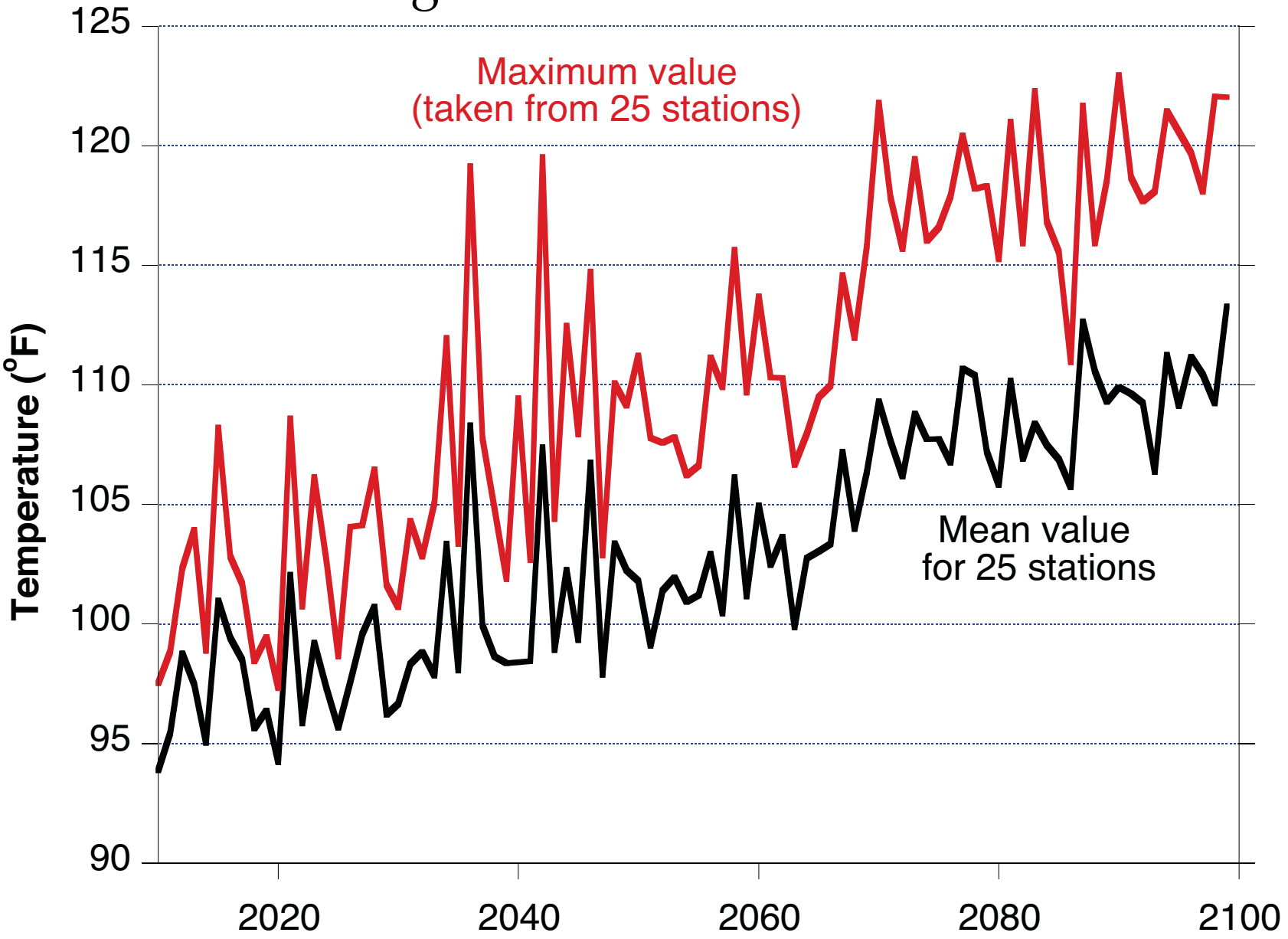
www.SkepticalScience.com

Hottest Day of the Year (30 year averages)



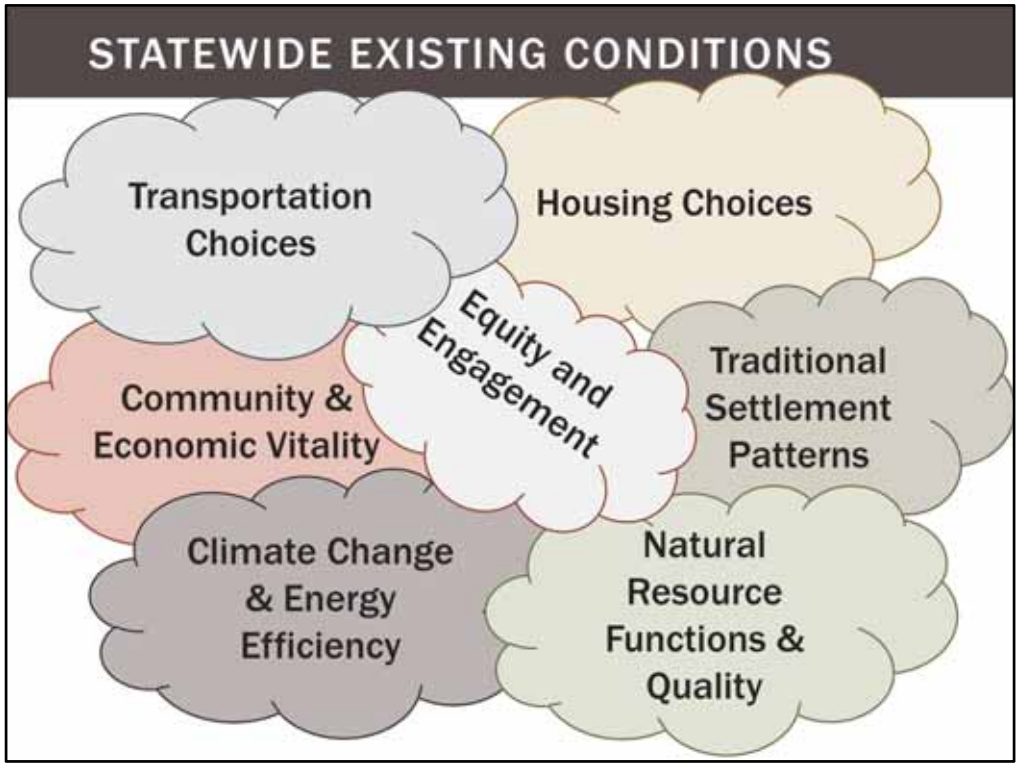


Projected Hottest Day of the Year in S. New Hampshire
High Emissions Scenario



Statewide Existing Conditions and Trends

November 4, 2013



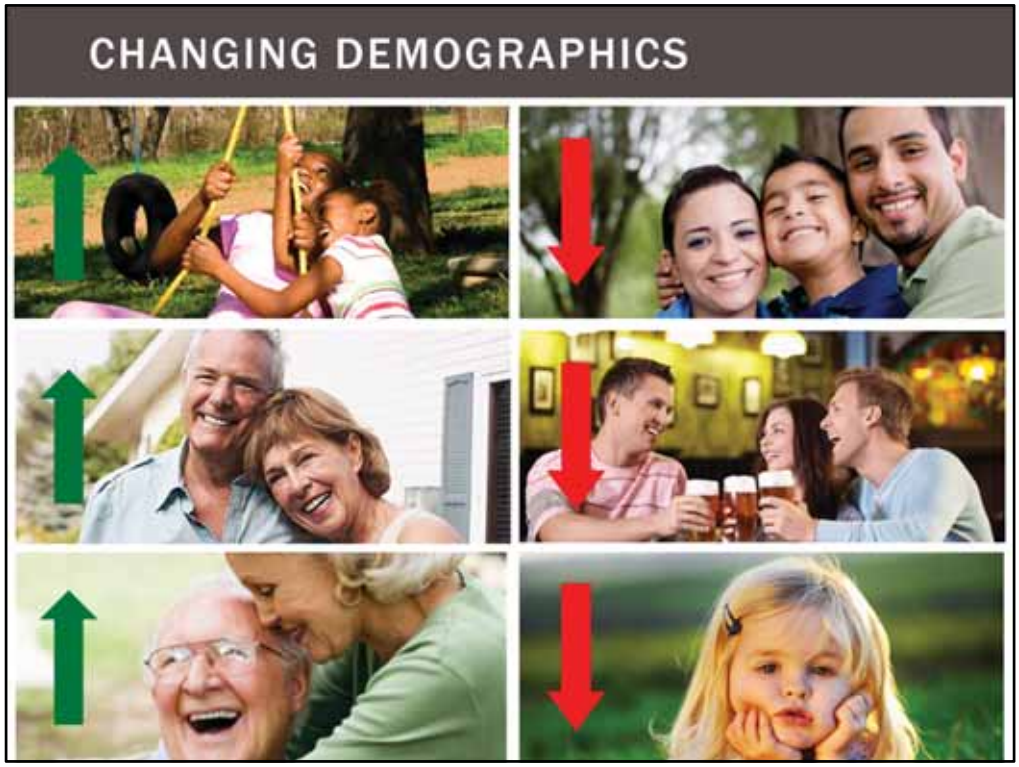
A little background first.

Many of you have devoted a large amount of time to participating on one of the many GSF committees

The Existing Conditions and Trends document has been developed using the hard work of the 6 TASCs to compile existing resources, goals/polices, existing conditions, and metrics to measure success.

Using this work we have written the Regional Plan Framework (a suite of resources to help start the research process), 51 core metrics computed for the entire state (an online home is in the works), and the Existing Conditions and Trends Assessment.

This report does not try to duplicate the many existing and exemplary resources currently available. Instead, it pulls together key trends and issues that exist in NH, as they relate to the livability principles.



New Hampshire is still growing but not nearly at the same rates of change that were seen in the past six decades.

- Peak growth in NH's population occurred from 1970-1980
- 2000 to 2010 was only 6.5%
- Most due to natural population change

A high proportion of New Hampshire's workforce is near retirement age, its population is aging, and families are having fewer children.

- rapid increase in the size of its oldest population cohorts
- NH's birth rates have steadily declined and NH's death rates have increased
- Rural New Hampshire near the lowest percentage of residents who are ages 25-44 nationally and NH metro counties closer to the national median
- Rural NH 2nd highest % of residents over 65, metro NH in the bottom 1/3 of states

Less than half the State's population was born here and previously high in-migration is slowing, resulting in a shrinking, yet more diverse, workforce.

- Lest than ½ of NH residents were born in state.
- As of 2010 minorities comprised <8% of the State's pop but were approx. 50% of our population growth
- >12% of children in NH are Minorities

New Hampshire's regions each have a mix of development patterns including rural, suburban and urban.

- Urbanized area expanded from 356,861 acres in 2000 to 412,185 in 2010
- However, expanded our urbanized footprint from .24 acres/capita to .31 (1990-2010)
- Intuitively the greatest expansions were where there were greatest population growth

New Hampshire's mix of development patterns each present different opportunities and costs for residents and businesses.

- Proximity to grocery stores varies across the state – dense areas drive ~1 mile
- Across the state approx. 2% of the population does not have access to a car or groceries within 1 mile of their home
- Nearly all residents in NH spend ~50% of their income on combined housing and transportation costs

New Hampshire is highly dependent on private wells for safe drinking water and the demand for resources and costs of maintenance is growing.

- 42% of NH's population rely on private wells, compared to national average of 14%
- 695 community water systems across NH, infrastructure 50-100 years old

The housing stock in New Hampshire lacks affordable choices and generally is not proximate to key employment centers in the State.

- Housing prices peaked in 2007 at $252,000, now down to about $200,000
- Rents have remained high, 2012 peak over $1000 ; 24% increase over the last decade
- Most notable rent increases for homes with 4+bedrooms
- Across the state approximately 54% of rental homes and 11% of homes for purchase are affordable to those making 80% of the area median family income

Universality is important, as is the need for a better balance between single-family and rental housing able to meet changing preferences.

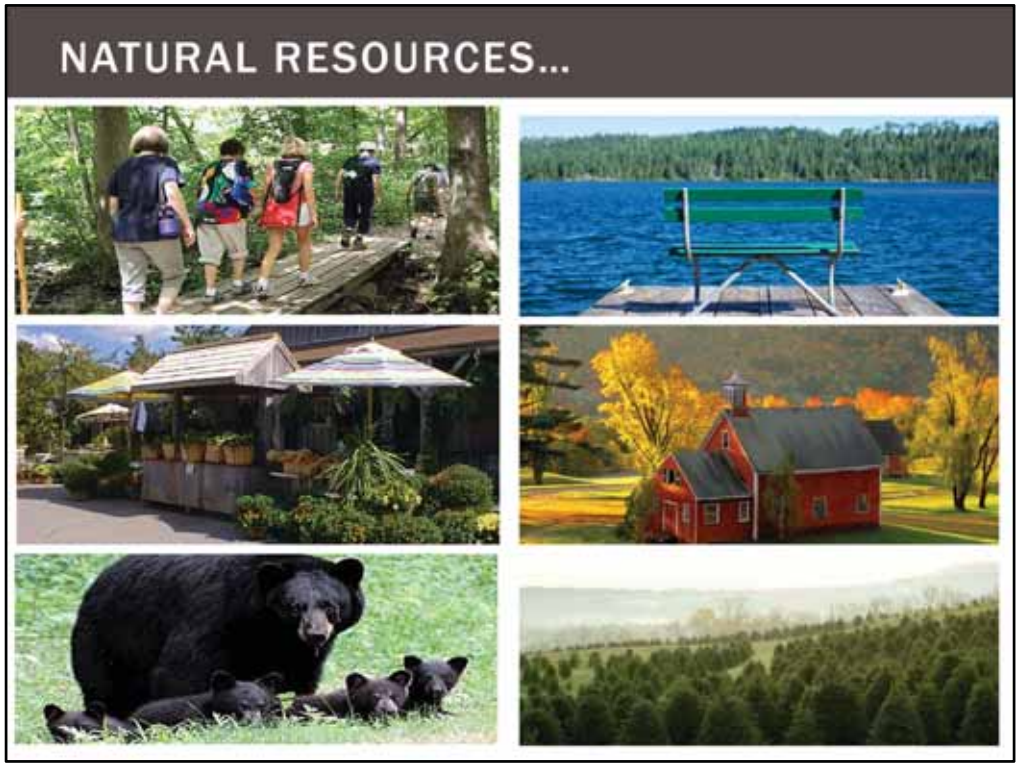
- No change in distribution of home types – 62% of homes are single family

As a state, more people in New Hampshire drive to work than any other transportation mode.

- NH residents own more cars than the national average, however the number has decreased in recent years
- 82% of commuters drive alone
- Almost half of commuters drive less than 10 miles to work
- 2 out of the 11 transit providers represent more than half the states transit ridership (UNH & Upper Valley)
- An estimated 34,000 residents have lost or turned down a job due to a lack of transportation
- 62,000 have missed a medical appointment without transportation

New Hampshire lacks infrastructure for other modes of transportation, and the infrastructure the state has is falling more and more into despair.

- An additional $12 million/year is needed to maintain the number of 2013 roads in good or fair condition
- 149 bridges are on the “red list”, 256 are one step away
- NH provides the 8th lowest amount nationally toward transit



New Hampshire's high quality water resources, habitat, water and forest lands are intrinsically linked to the State's economy.

- 84% of the state landscape is forested
- Forest products: manufacturing = $1.7 billion/year, tourism = $940 million
- 16,984 miles of rivers and streams
- 164,615 acres of lakes and ponds
- Value of swimming, boating and fishing to NH = $379 million in sales, $134 million in income and 5,990 jobs created

Local agriculture contributes positively to the State's food security, environment, health and nutrition system.

- Local foods = 6% of state economy and 12% of crops sold at farmer's markets (0.5% nationally)
- However NH's local food production can only support 6% of NH's population compared to a NE average of 10% and 39% in Maine

Hampshire residents, as a whole, are well off, however, there are pockets within the state where poverty levels are rising.

- NH unemployment peaked in 2009 at just over 7% compared to 10% nationally
- Rates vary across the state with highest unemployment in the North country
- Per capita income in NH is higher than the national average but lower than the NE average
- 8% of residents though live below the poverty level in NH with the highest rates among Hispanics and African Americans (2-3 times higher)

Our economy has been evolving over time – shifting from an agricultural based economy to a manufacturing base.

- Small businesses represent 87% of firms, but 22% of jobs
- More than half the State's jobs are either government, retail, health care, or manufacturing

New Hampshire's high quality of life makes the state a good place to locate a business or raise a family.

- NH is ranked as the most child friendly state in the country and has been so for 9 out of the last 10 years
- A third of NH residents have a Bachelor's degree, compared to 28% nationally and 91% have completed high school compared to 85% nationally

Fossil fuels represent more than half the State's energy consumption, can be costly for households, and also result in the release of carbon dioxide.

- Fossil fuels represent 61% of NH's energy consumption
- In the last new years natural gas has increased to be 33% of electricity generation
- NH's renewable portfolio standard requires 23.8% of electricity sold to come from renewable sources by 2025 – in 2011 14% came from renewables
- 36% of energy is consumed for transportation and 28% for homes
- Nearly 90% of NH's energy comes from out of state sources

Initiatives are underway and future opportunities exist to lower State energy consumption and become more energy efficient.

- 5,758 energy star homes in NH
- Implementation of improved energy codes could lead to energy savings of .56 trillion BTUs per year and carbon dioxide emissions reductions of .03 million metric tons per year

There have been significant changes in key climate indicators over the last 100 years and these trends are projected to continue and/or increase.

Please refer to Liz Burakowski's presentation for additional details.

QUESTIONS

Jen Czysz, Senior Regional Planner
Nashua Regional Planning Commission
jenc@nashuarpc.org
424-2240 x31

NRPC

Thank you.

N H C P P S

New Hampshire Center for Public Policy Studies

Navigating Housing's Future

Granite State Future Convening

Monday, November 4, 2013

"…to raise new ideas and improve policy debates through quality information and analysis on issues shaping New Hampshire's future."

NHCPPS

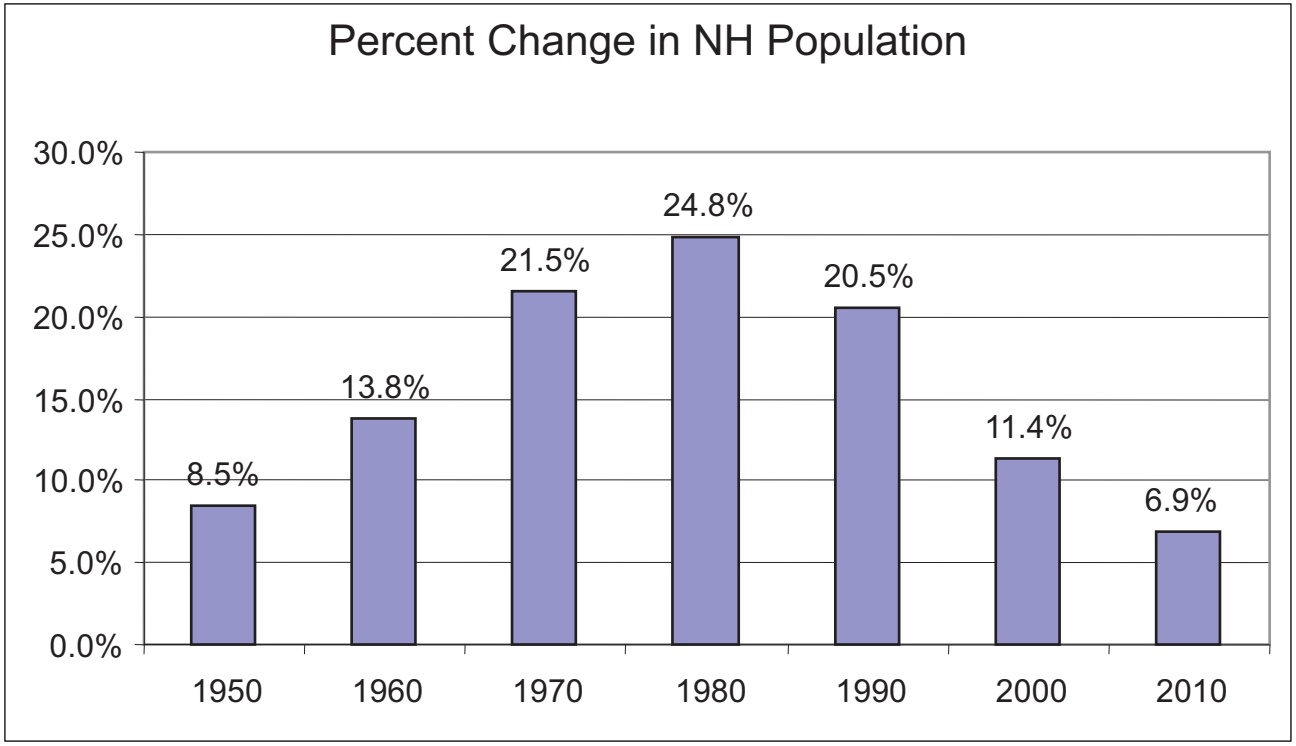
New Hampshire Center for Public Policy Studies

The Big Picture

- Need to identify:
  - The impact of New Hampshire's slower growth and evolving demographics on:
    - Housing demand
    - Housing supply
    - Housing preferences, particularly among young households and ageing households

New Hampshire Center for Public Policy Studies

Past high rates of migration – now slowing



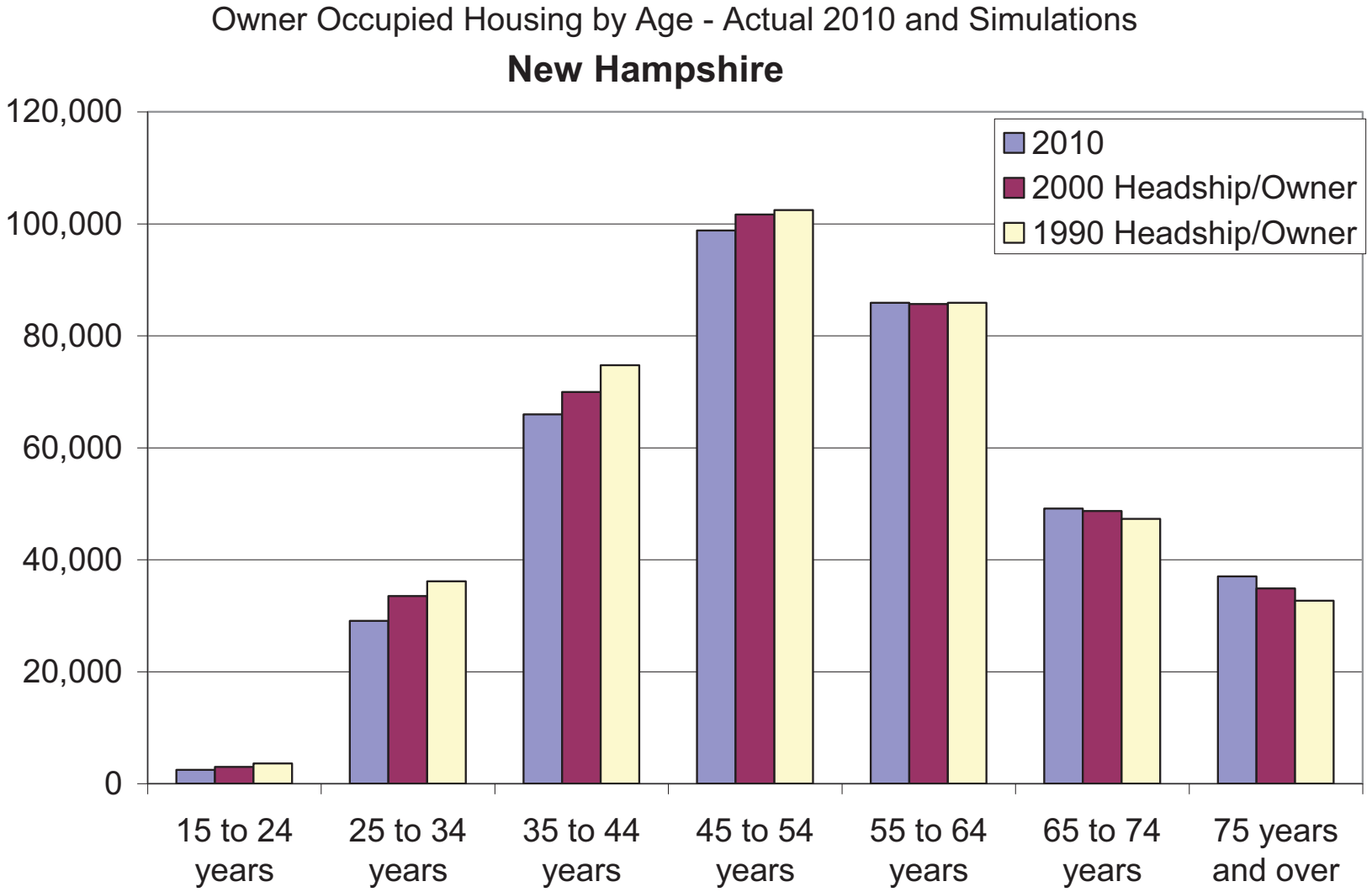
Source: New Hampshire Center for Public Policy Studies, analysis of U.S. Census data

U.S. Census figures released in December 2010 show that the 2000s saw the slowest rate of population growth in New Hampshire in six decades. Later this year, the Census Bureau will release specific population figures for counties and communities. What will those numbers tell us about the state's demographic patterns over the past decade?

NHCPPS

New Hampshire Center for Public Policy Studies

If old ratios held NH would have more younger owners

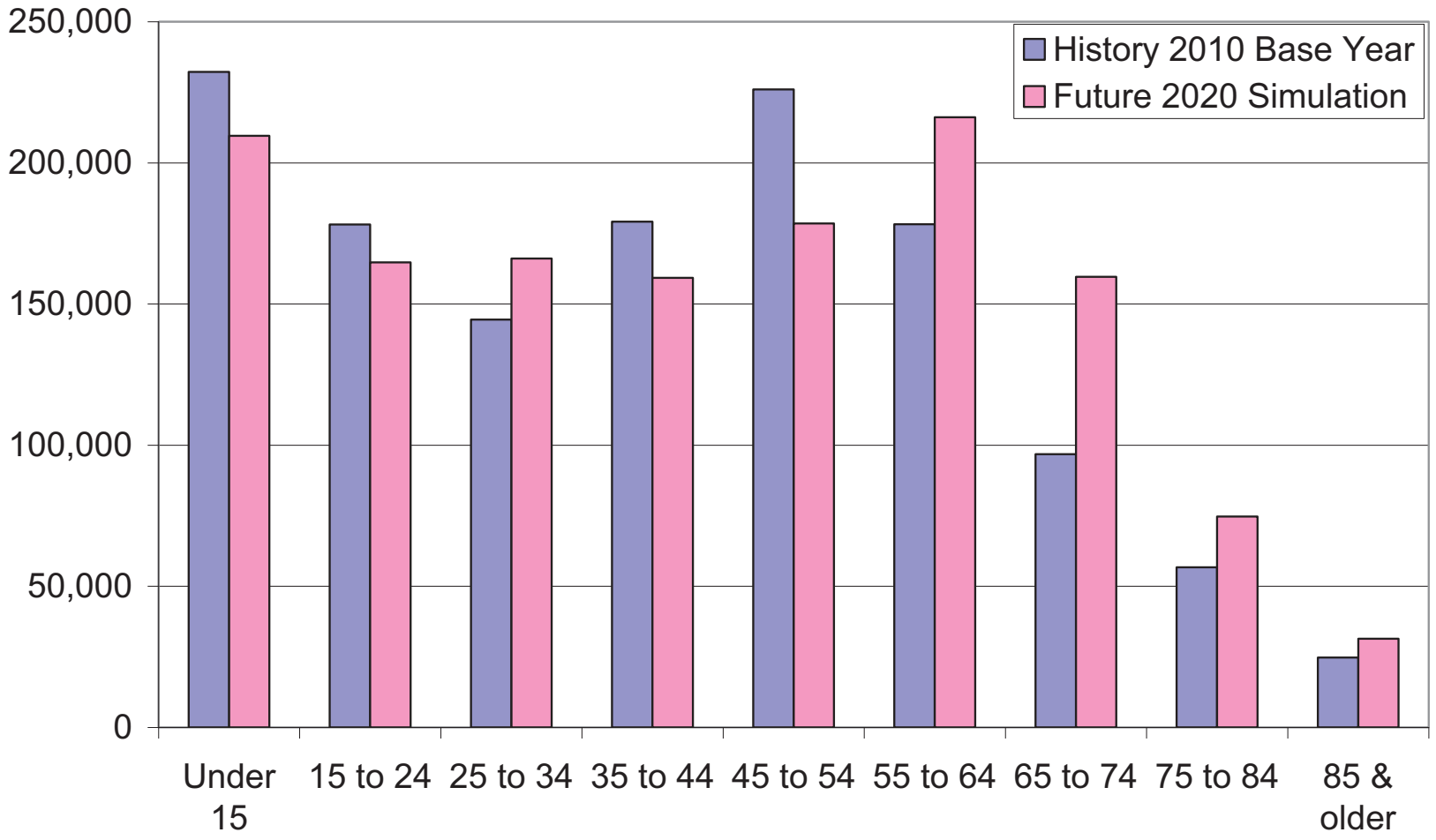


NHCPPS

New Hampshire Center for Public Policy Studies

Expected Increase in Older Population

New Hampshire Population by Age

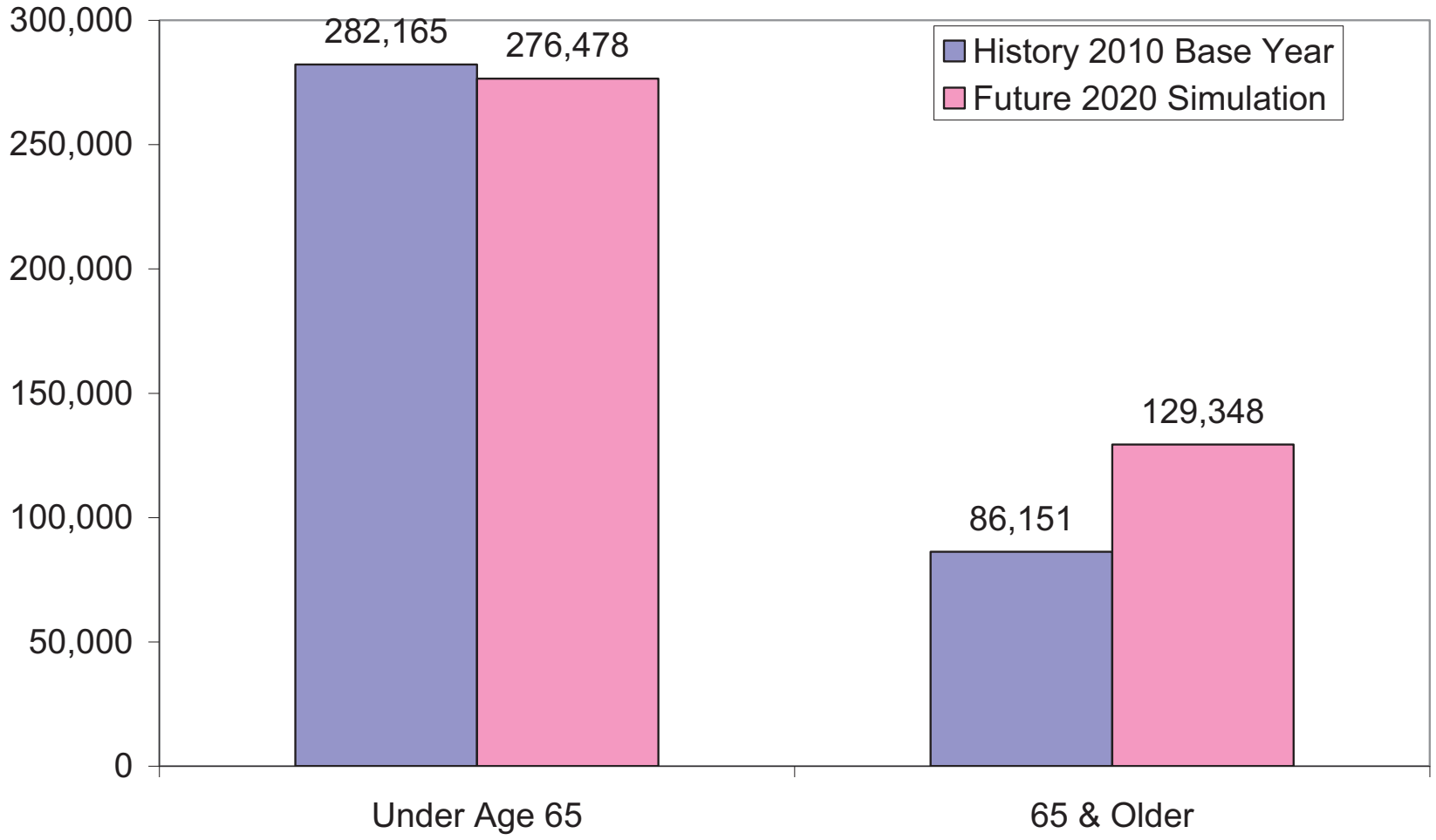


NHCPPS

New Hampshire Center for Public Policy Studies

Will Mean an Increase in Older Home Owners

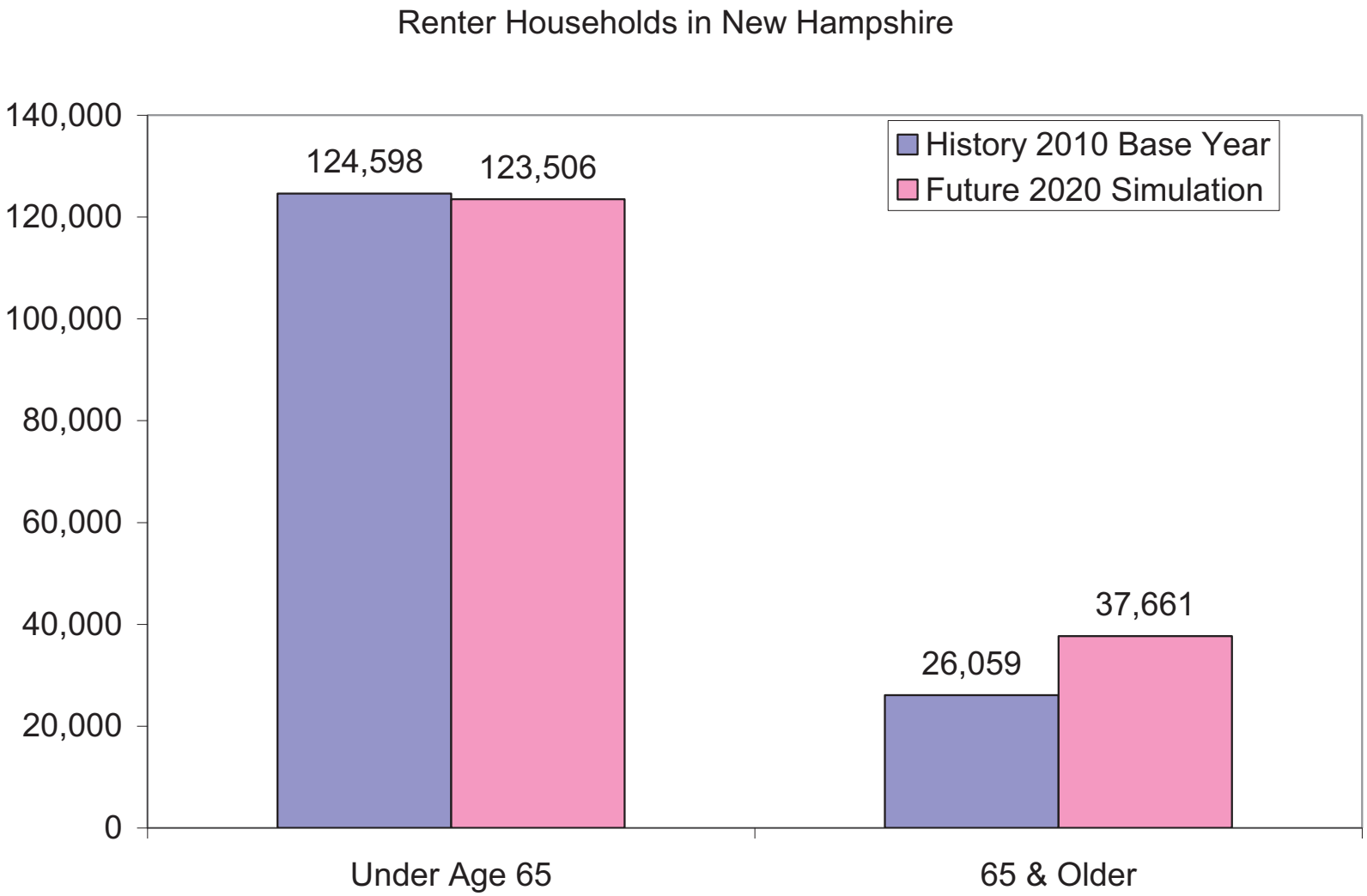
Owner Households in New Hampshire



NHCPPS

New Hampshire Center for Public Policy Studies

And More Older Renters

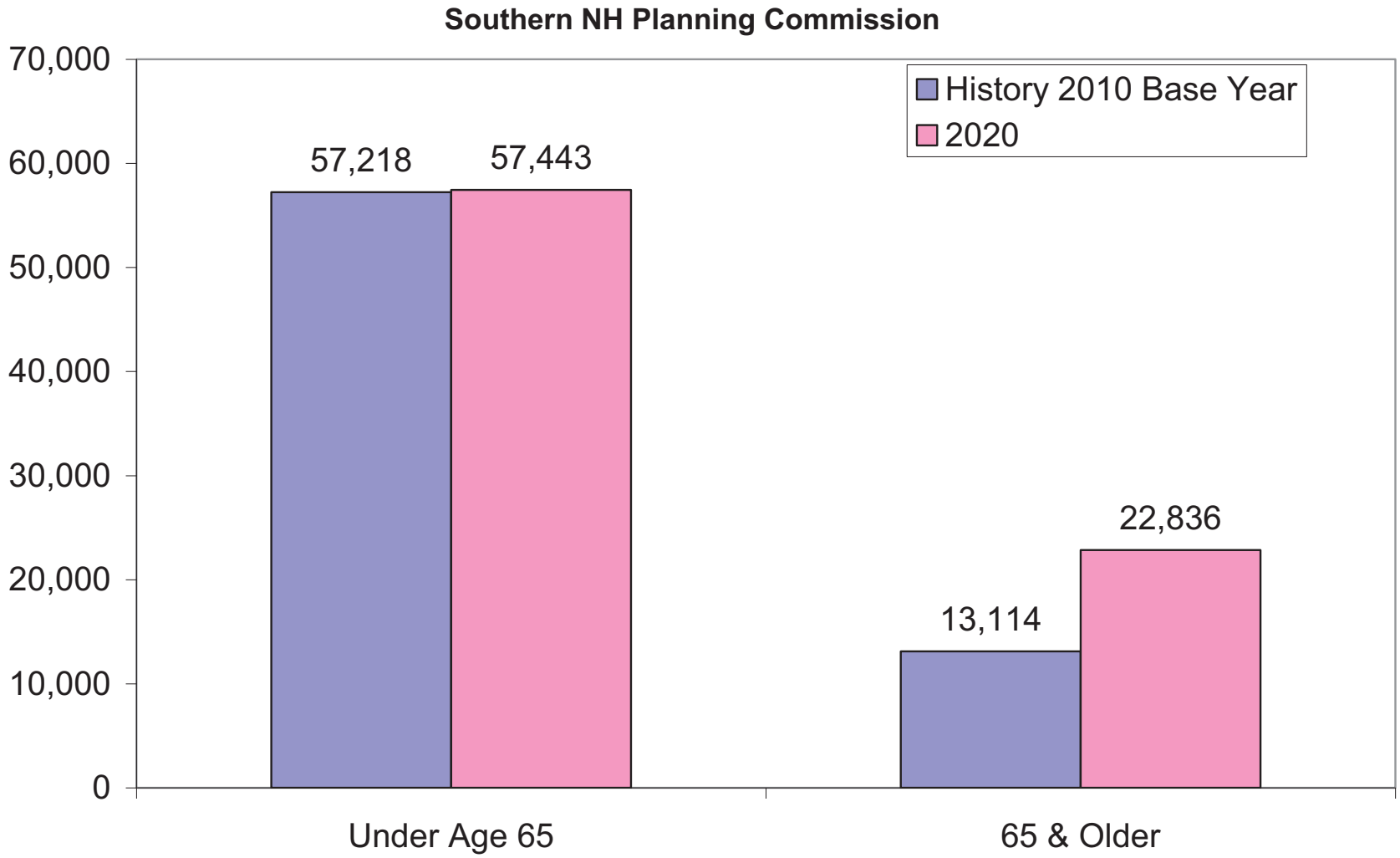


NHCPPS

New Hampshire Center for Public Policy Studies

Forecasts for Regional Planning Commissions

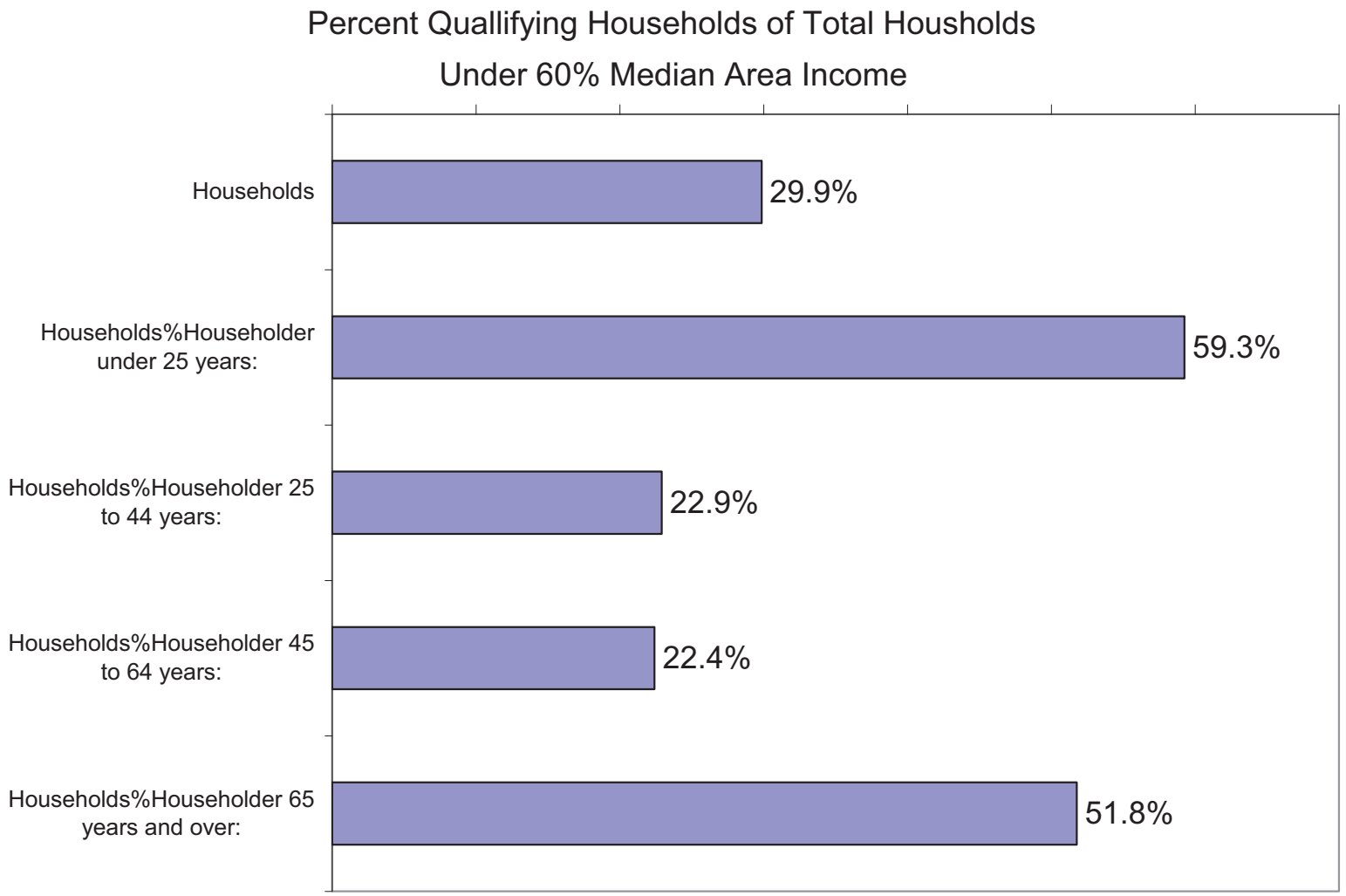
Owner Households



NHCPPS

New Hampshire Center for Public Policy Studies

Older Households have Less Income



NHCPPS

New Hampshire Center for Public Policy Studies

Housing Production Needs

NEW HAMPSHIRE - AVERAGE ANNUAL HOUSING PRODUCTION REQUIRED TO MEET GROWTH ASSUMPTIONS			
	1	2	3
Production Components by Tenure	**Employment Growth Model 1**	**Employment Population Average 2**	**Population Projection Based Model**
Ownership Units			
Household growth	5,418	4,581	3,744
Vacancy reserve (1)	-325	-334	-342
Replace units lost to demolition/disaster	150	150	150
Total production	5,243	4,398	3,552
% Of production for vacancy reserve	-6.2%	-7.6%	-9.6%
Rental Units			
Household growth	1,726	1,379	1,032
Vacancy reserve (1)	-630	-644	-659
Replace units lost to demolition/disaster	131	131	131
Total production	1,228	866	505
% Of production for vacancy reserve	-51.3%	-74.4%	-130.5%
Total Units for Year-Round Residents			
Household growth	7,144	5,960	4,776
Vacancy reserve (1)	-955	-978	-1,001
Replace units lost to demolition/disaster	281	281	281
Total production	6,471	5,264	4,057
% Of production for vacancy reserve	-14.8%	-18.6%	-24.7%

New Hampshire Center for Public Policy Studies

Want to learn more?

- Online: nhpolicy.org
- Facebook: facebook.com/nhpolicy
- Twitter: @nhpublicpolicy
- Our blog: policyblognh.org
- (603) 226-2500

"…to raise new ideas and improve policy debates through quality information and analysis on issues shaping New Hampshire's future."

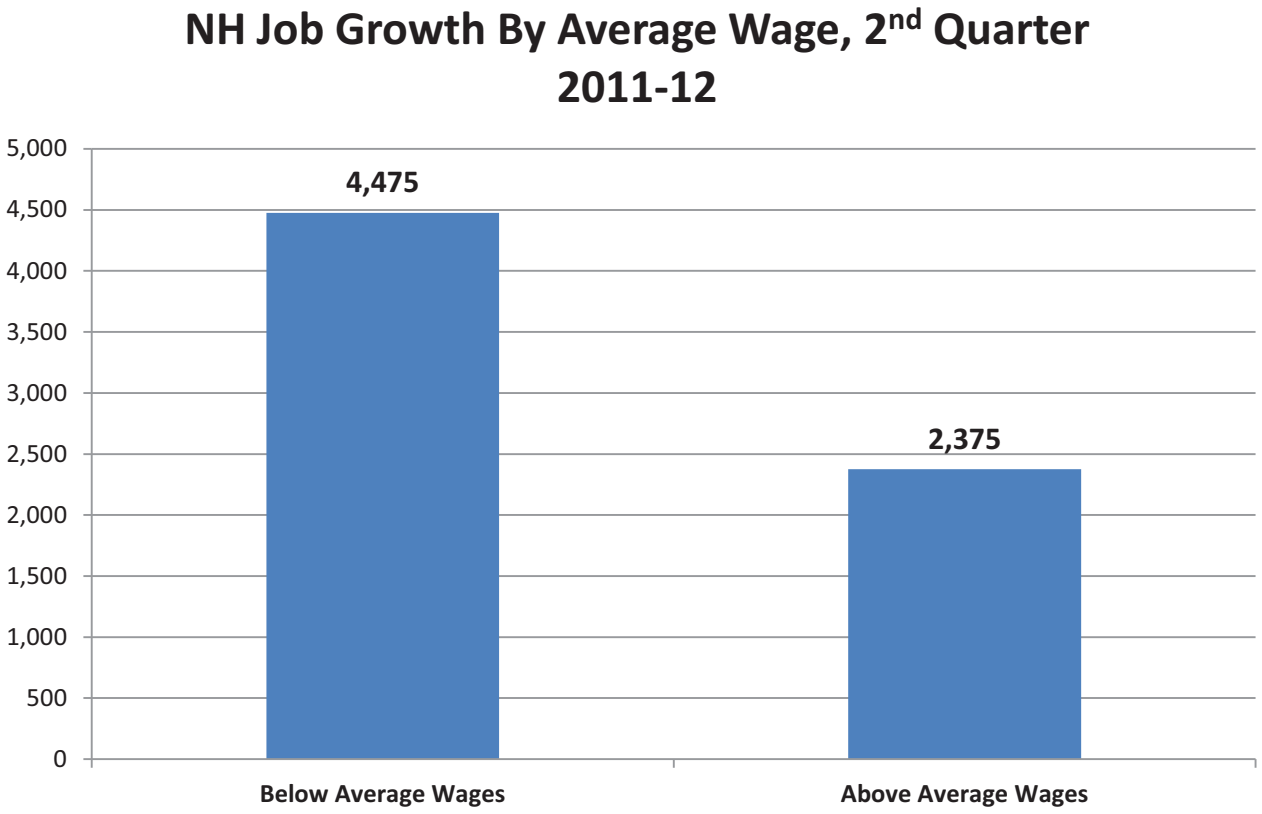
Market Conditions and Qualitative Observations

Synopsis of Market Conditions

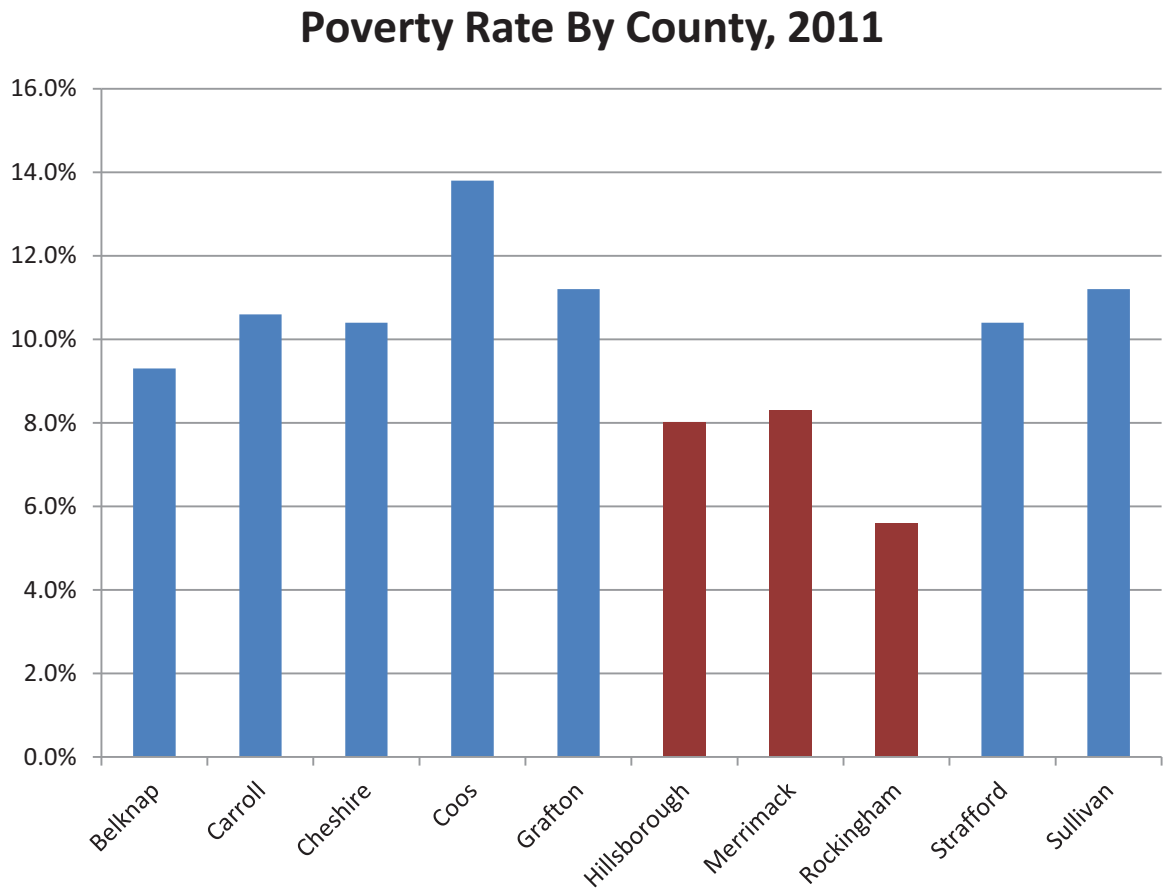
- Focus will shift from accommodating *growth* to accommodating *change*;
  - Less growth overall
  - More senior households
  - Fewer young households
  - Strained first time buyers
  - Changing lending standards
- Ownership market is in recovery phase;
- State economy and lending standards are dampening home ownership affordability, despite some favorable macro trends;
- The rental market is strong, but affordability is weak.

The Jobs Picture is Unfavorable

Job Quality is Mediocre



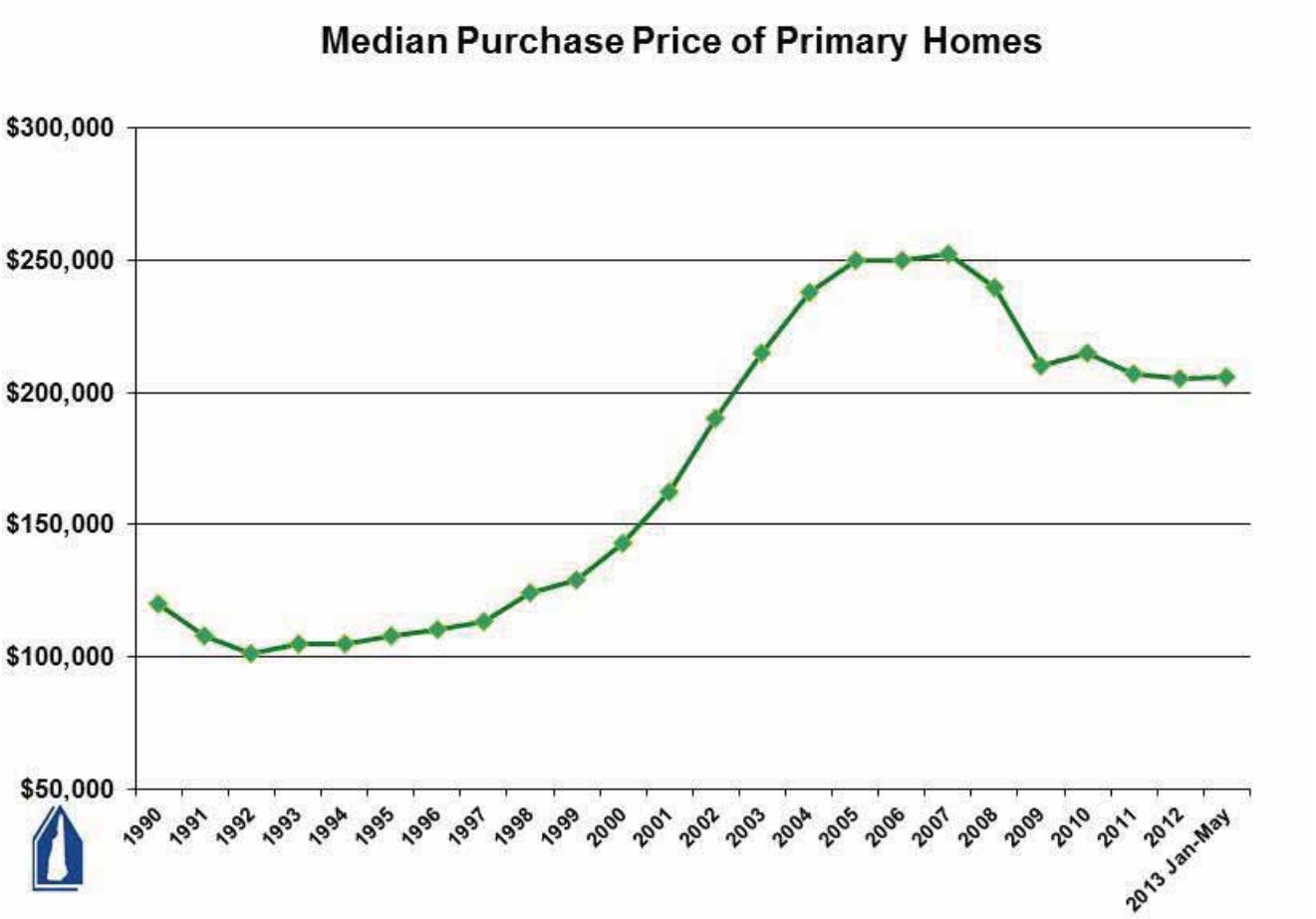
Poverty Rates are High Outside of Urban Counties



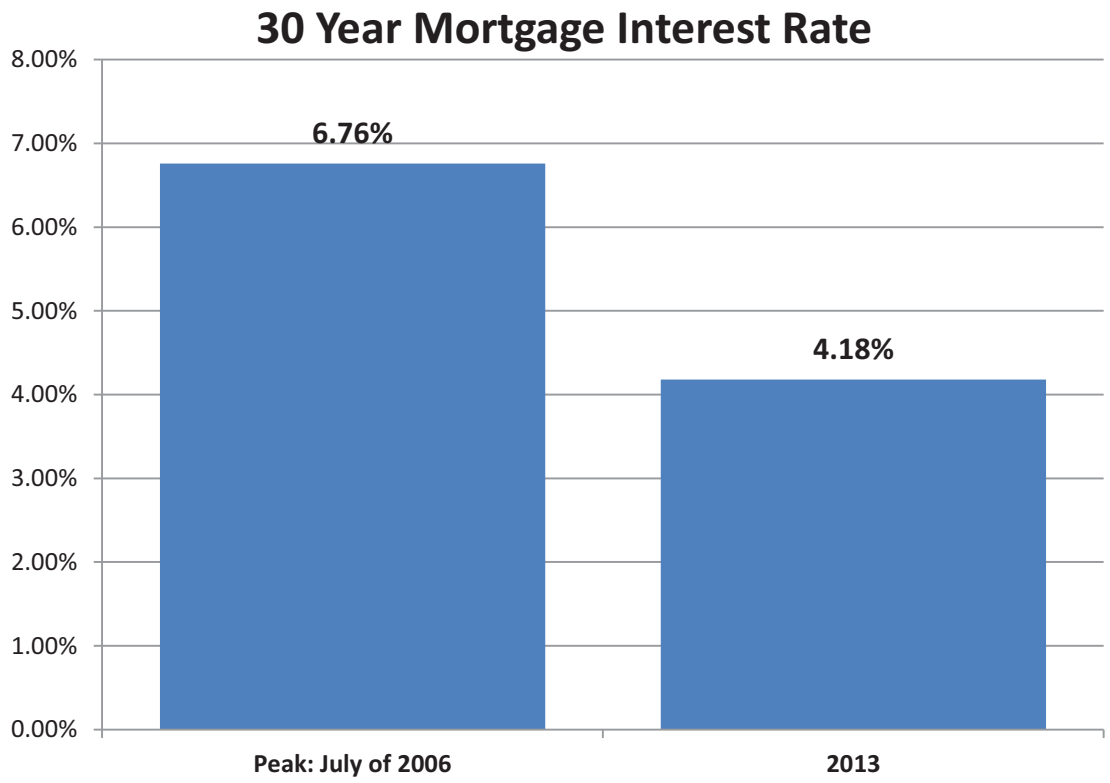
A Bifurcated Market

Home Ownership
More Affordable *ON AVERAGE*

NH Prices Are Down About 20%

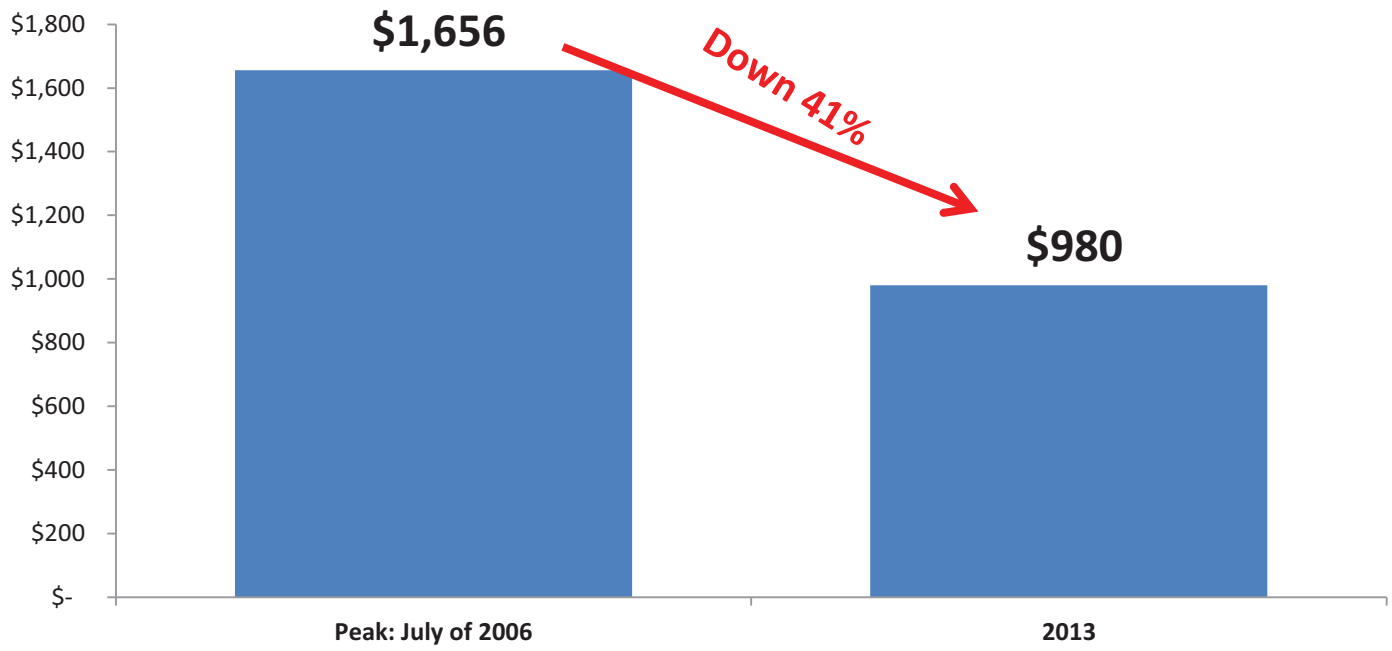


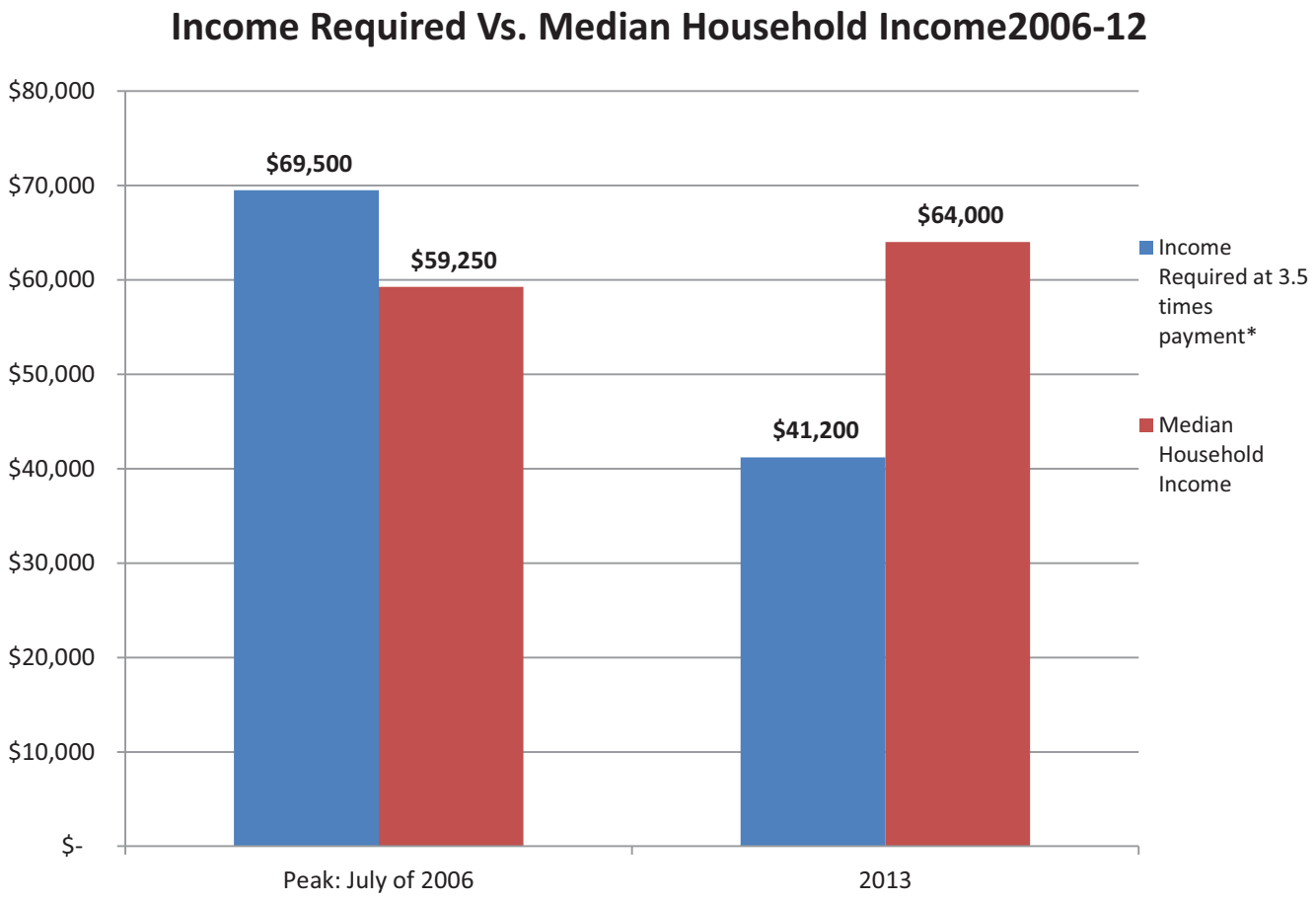
Interest Rates Also Down



Monthly Mortgage Payment For Median NH Home

30 Year Conventional Mortgage@ 90% of Purchase Price




Income Required Vs. Median Household Income2006-12
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$-
$69,500
$59,250
$41,200
$64,000
Peak: July of 2006
2013
Income Required at 3.5 times payment*
Median Household Income

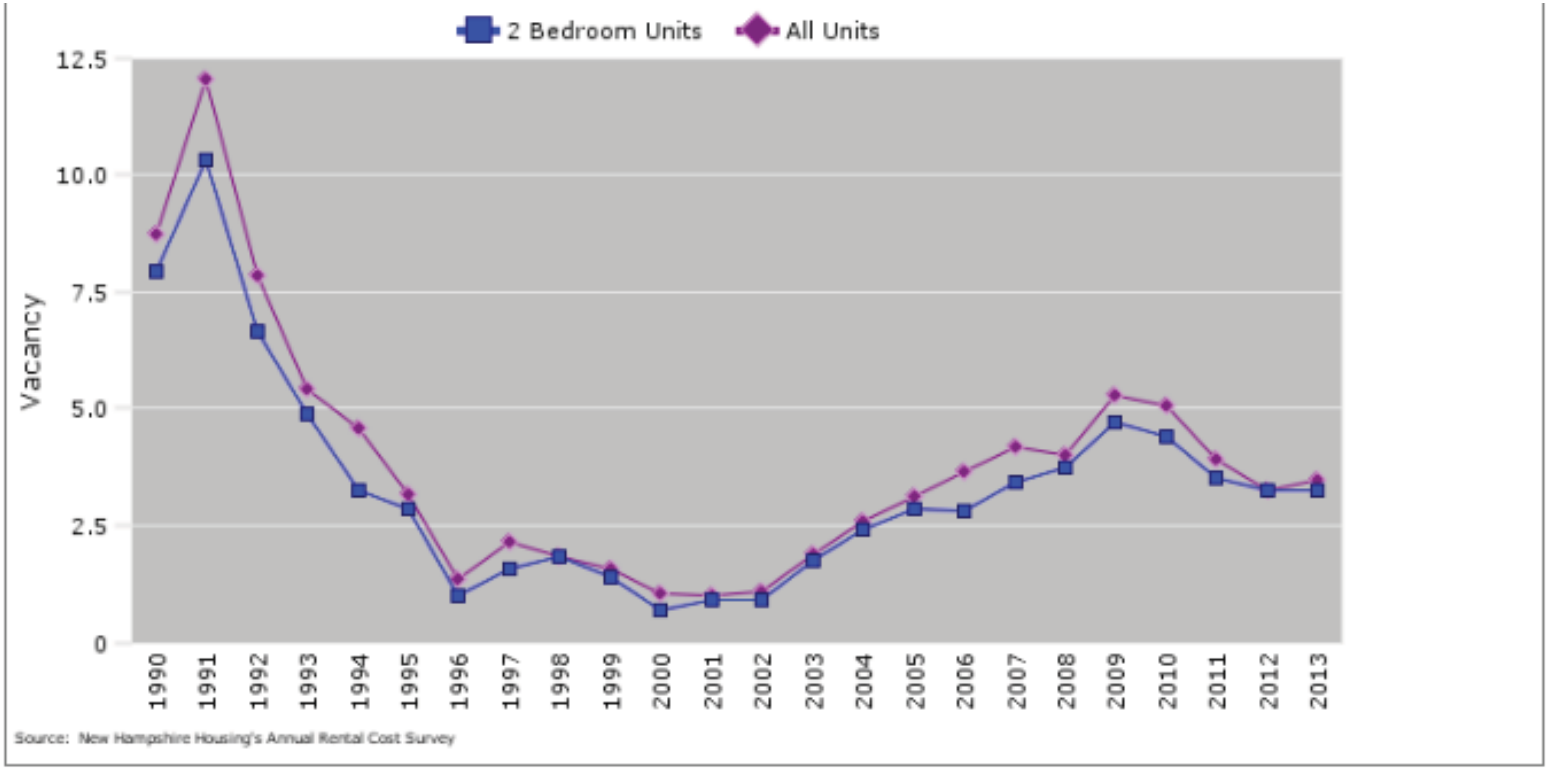
BUT:

- NH's Young households are burdened by highest level of **student debt** in the Nation;
- **Lending standards** are more rigorous—Qualifying Mortgage, 43% debt to income limit, etc.;
- With rents rising and mediocre job quality, more **difficult to save** and qualify;
- Nearly 20,000 **foreclosed units** in past several years in the state—some will not qualify;
- Lack of liquidity is keeping **boomers in larger houses** than they need;
- Prices and interest rates are rising in past several months, **blunting recent affordability** improvements.

A Less Affordable Rental Market

Rental Market is Strong

Vacancy Rates Are Falling

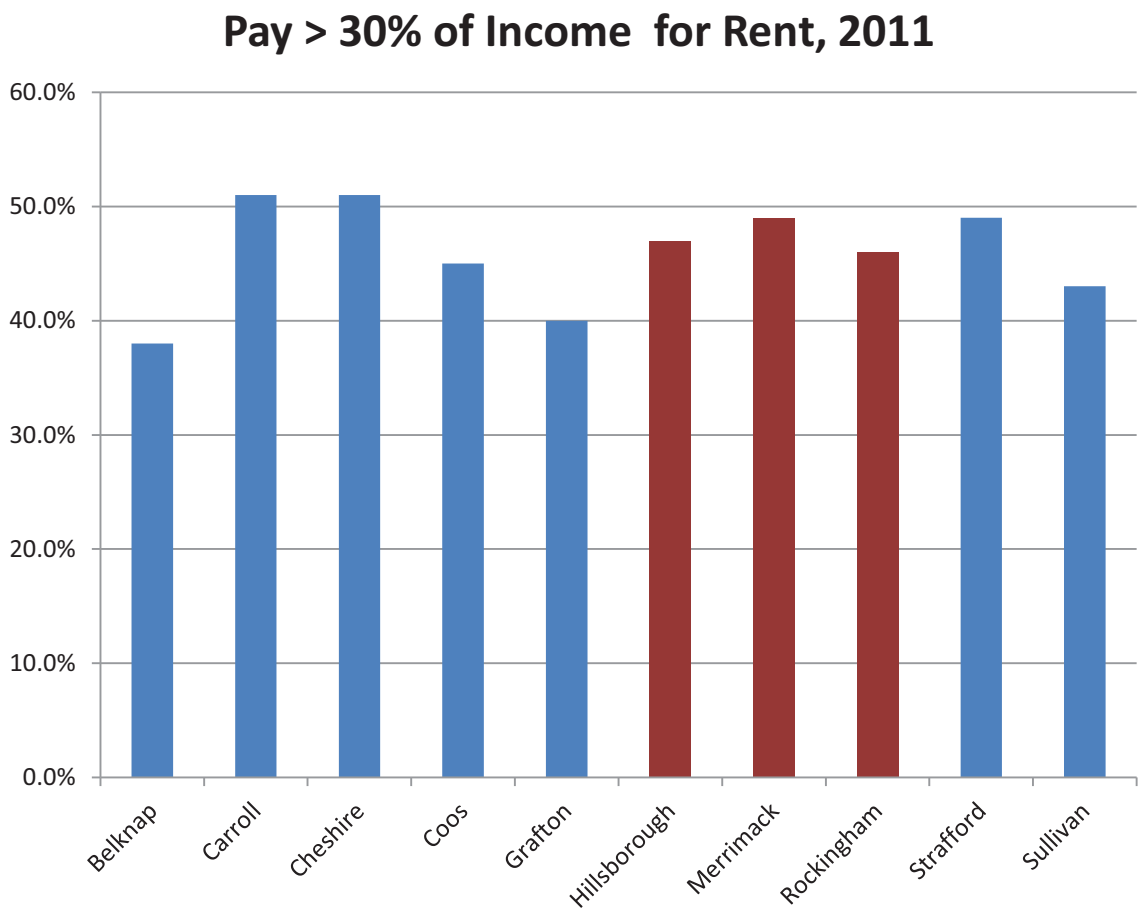


Almost 40% of State's Renter Households Are Paying More Than 35% of Their Income For Rent= 50,000+ Households

	Households	% of Age Category
Householder 15 to 24 years:	6,764	47%
Householder 25 to 34 years:	10,964	32%
Householder 35 to 64 years:	24,328	37%
Householder 65 years and	9,038	44%
	51,084	38%

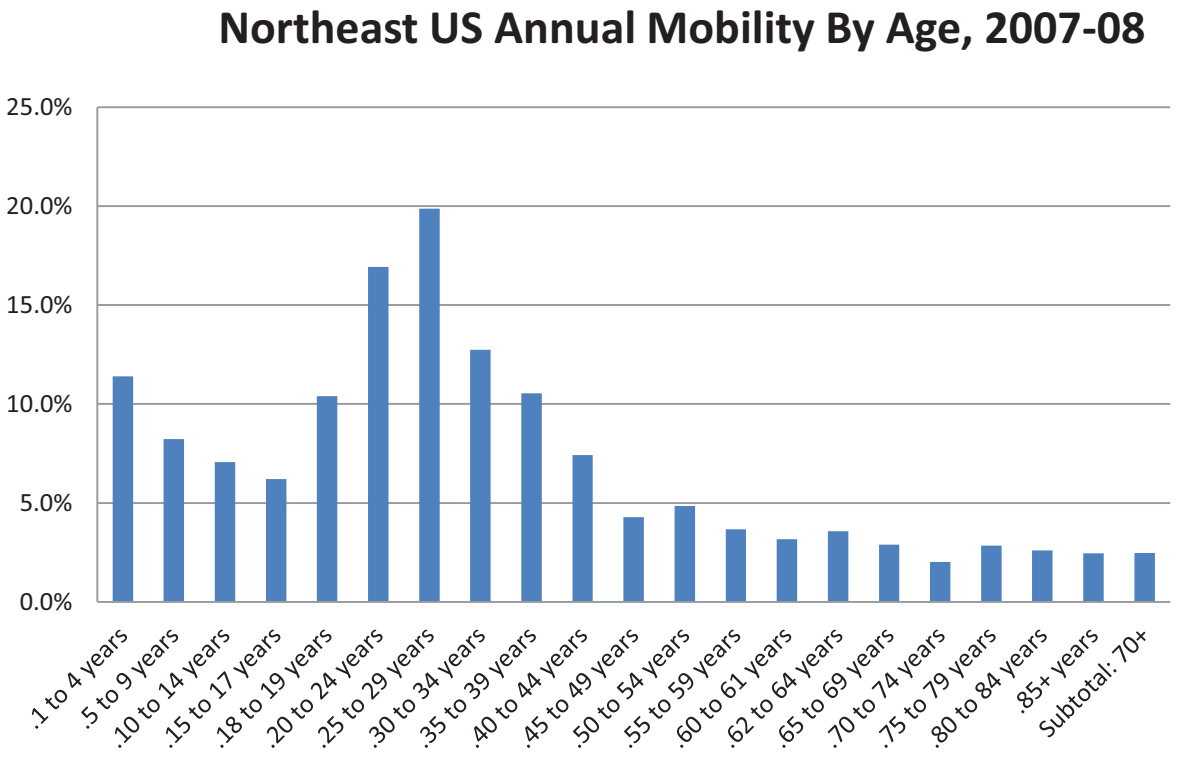
Source: American Community Survey, 2007-11

Overpayment Issue is State-Wide



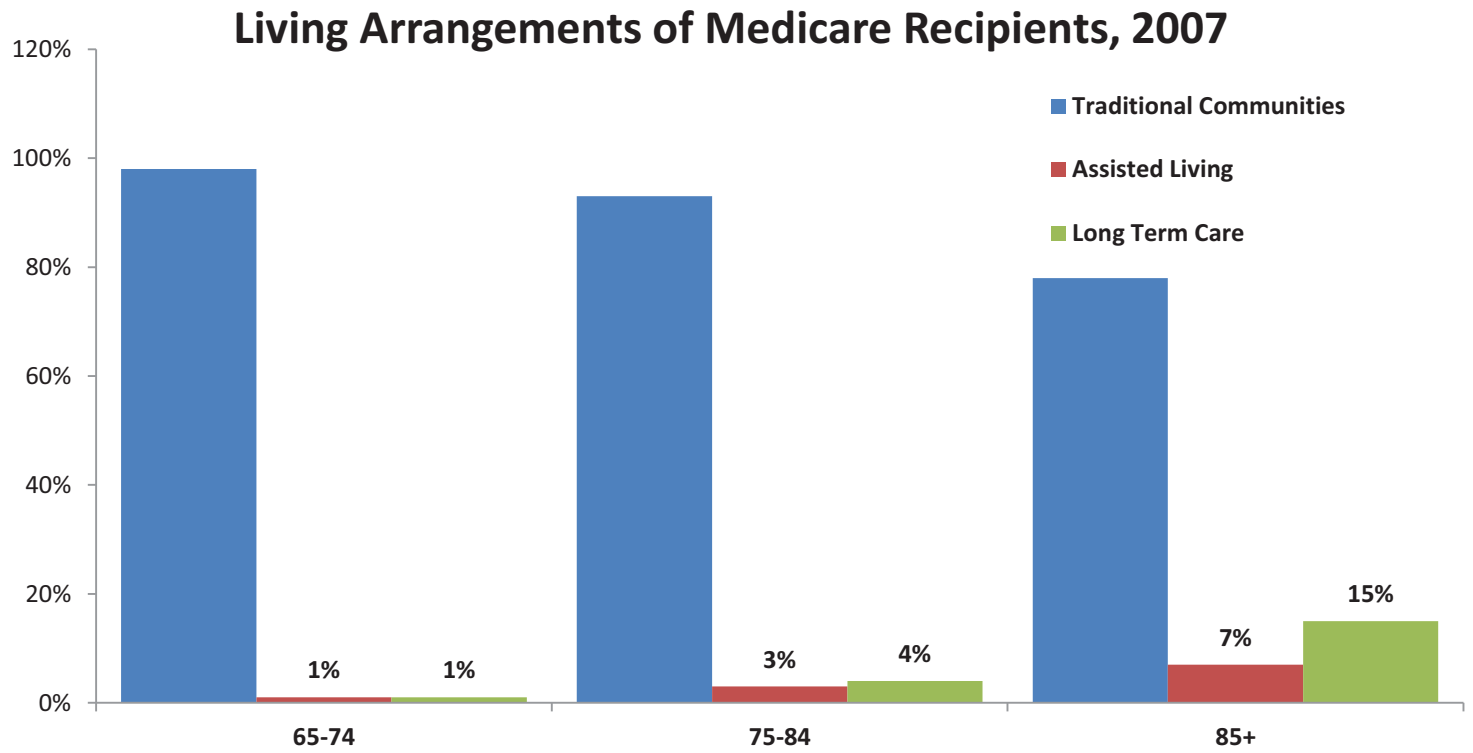
Senior Housing Perspectives

Senior Household Mobility Has Been Low

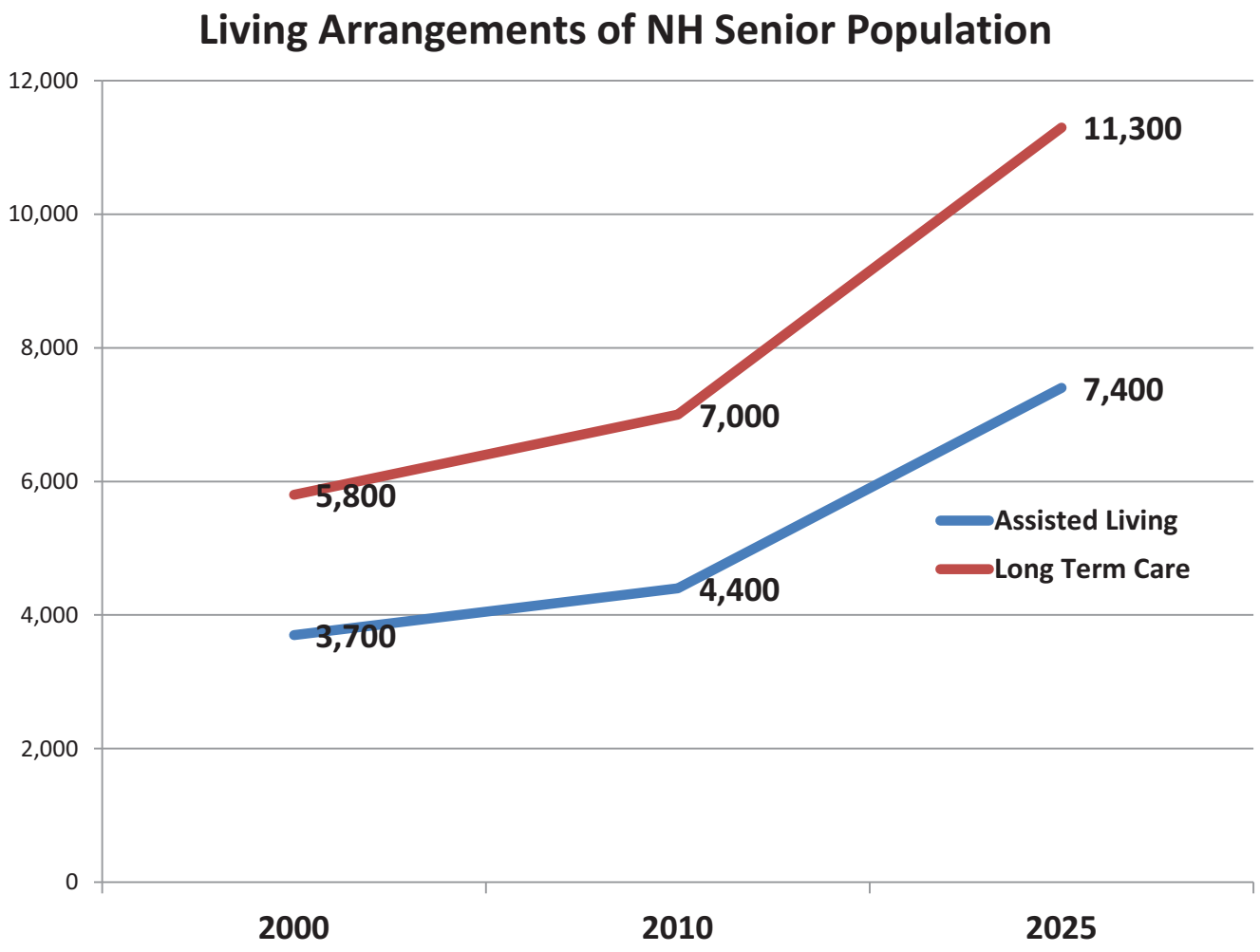


Source: US Dept of Commerce, Current Population Survey

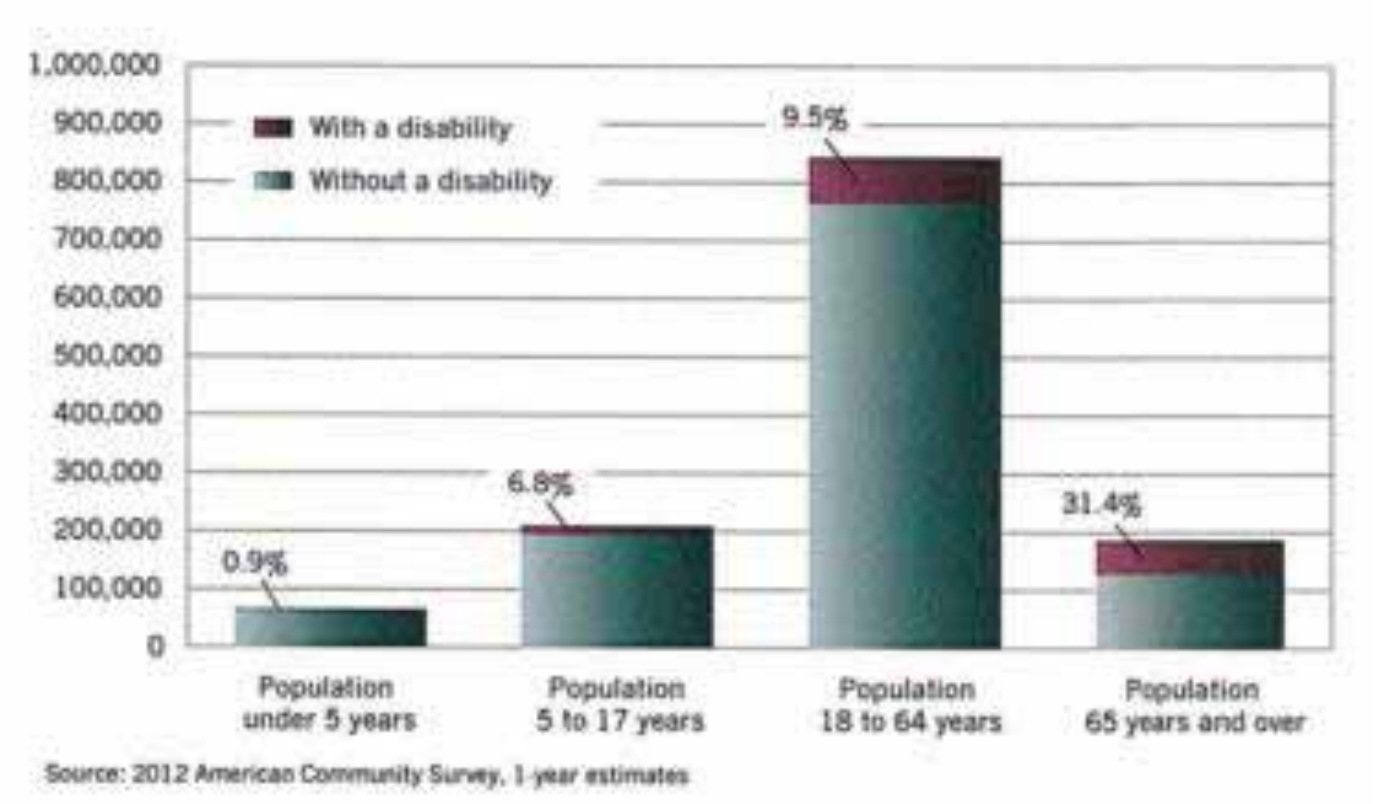
Ageing in Place is Common



Will There Be Room in the Inn?



153,000 NH Residents Have a Disability, Including 31% of Those Over Age 65



Qualitative Observations

- **Community Factors**
  - Many feel that accommodating housing, especially innovative housing, will overwhelm **rural character** of State's smaller communities;
    - Need about 5,000 units per year, state-wide
      - State land area is 5.7 million acres
      - Even at 2 units per acre, absorption is less than 2 percent of state's land area ***per decade***
  - There is a continuing perception that new housing is a **fiscal burden**, despite falling school enrollment and low student generation per unit in most communities;
  - Cumulative impact of **rising regulation** is hampering development of a more adaptable housing inventory and perpetuating an adversarial planning board environment;
  - Rural communities lack **professional guidance**, resulting in regulatory inertia and fear'
  - Fiscal pressures limit **infrastructure expansion**;
  - **Property taxes** loom large

- **Market Factors**
  - Who will buy the boomers' houses
  - Building new **workforce housing** remains challenging, despite strong demand;
  - The housing preferences of **younger households** are not clear—do they prefer renting, or are they locked in—Generation Renters?
  - **Market Conditions** are hampering housing mobility;
  - There is not much assistance available for housing **rehabilitation**;
  - Growth is increasingly focused close to major **transportation corridors** and communities with **quality schools**;
  - Disparities between low wage service **job growth** and housing costs are growing—particularly north of Concord
  - Need innovative ways to accommodate elderly population

University of New Hampshire

NH Regional Planning Commission
A Granite State Future Survey

Statewide Results

November 4, 2013

Purpose

- Develop a survey representative of the statewide population and selected regional planning commission regions.

- Opinions on a range of issues facing communities around the State – housing, transportation, economic development, and environmental issues.

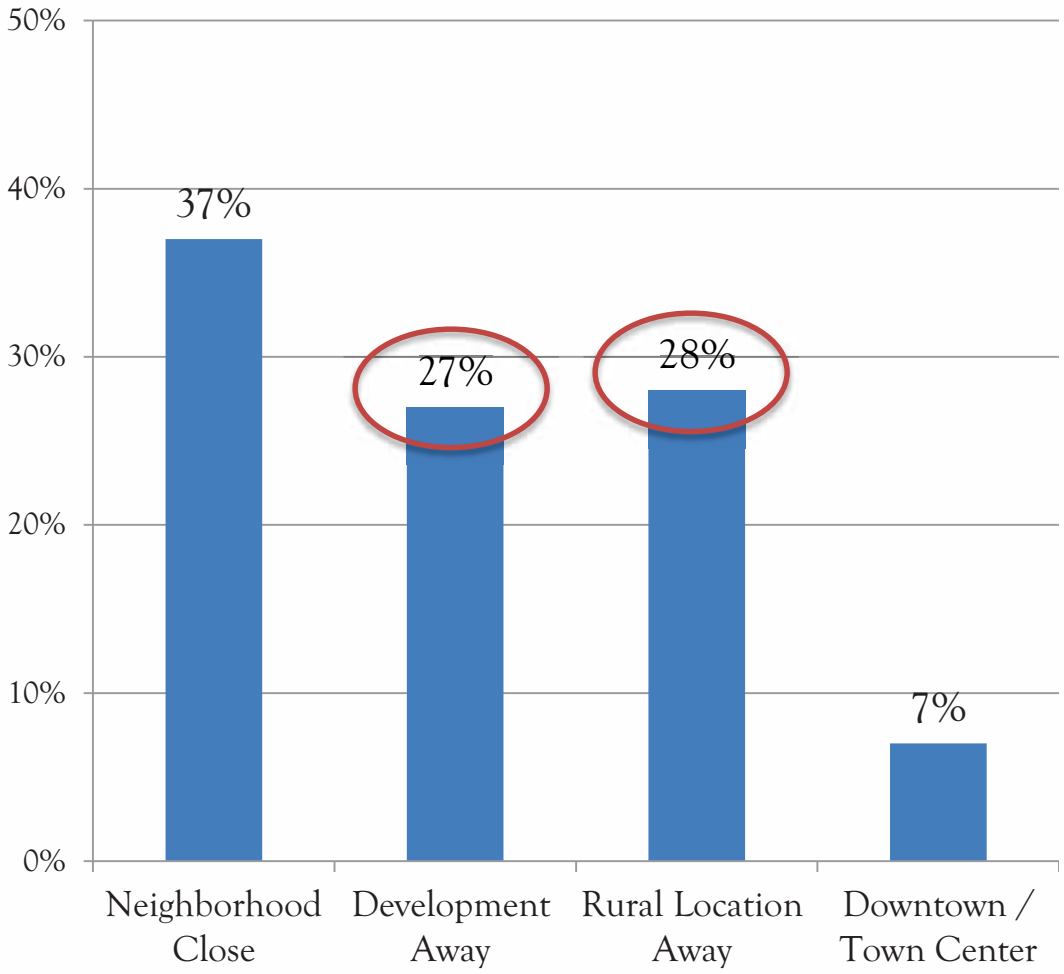
Technical Report

- 2,935 completed interviews with NH adult residents.
- Response rate: 33%
- May 9 through July 21, 2013.
- Up to 8 attempts were made to each number.
- Calls were staggered by day of the week and time of day to maximize the chance of reaching a selected respondent.

HOUSING

- Most adults live *away* from a town center

- Small majorities prefer smaller homes with shorter commutes and residential only neighborhoods

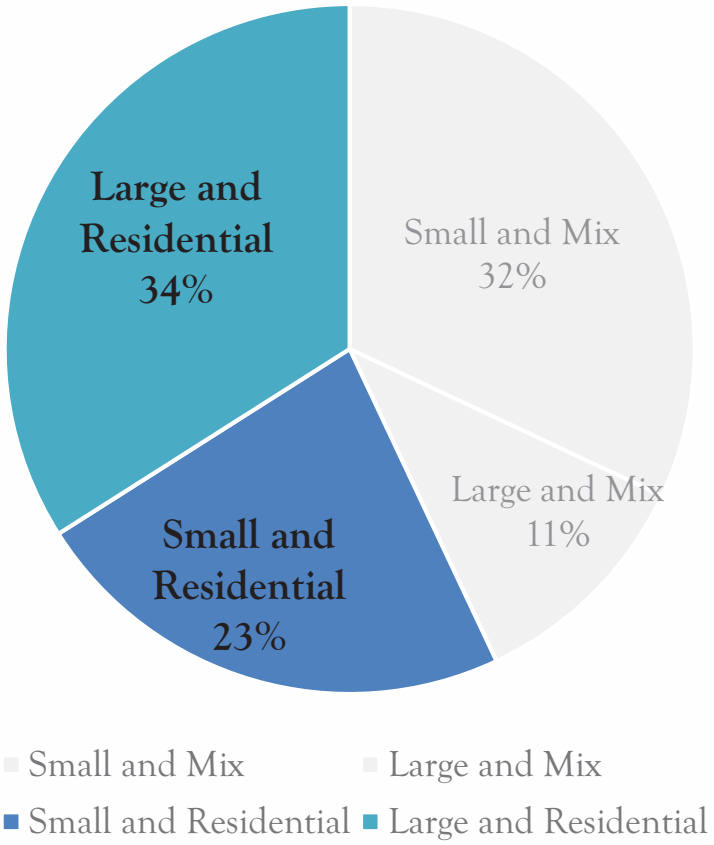


- Most adults live away from a town center

- Small majorities prefer smaller homes with shorter commutes and residential only neighborhoods

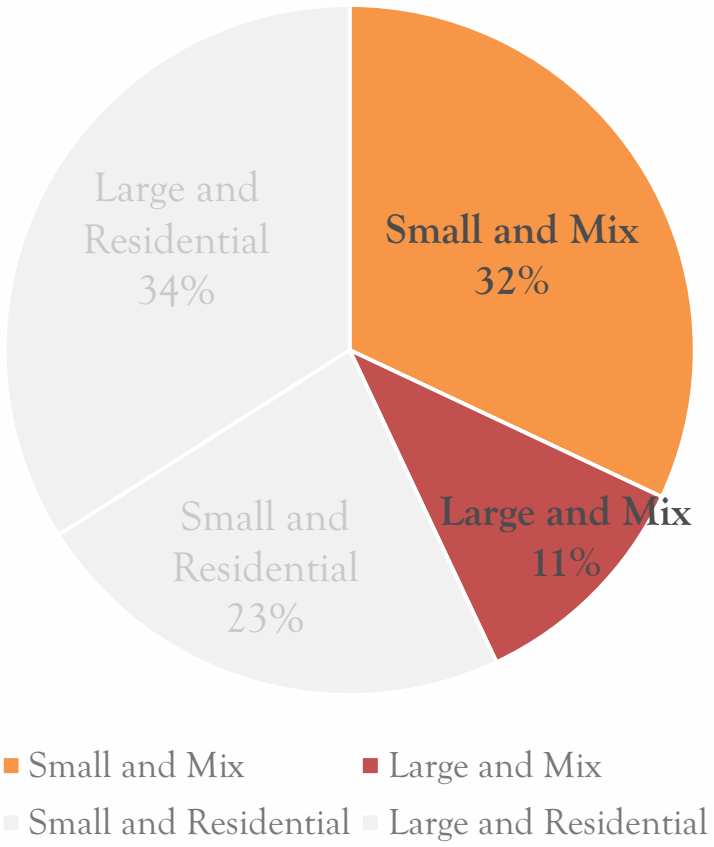
House Size Preferences in a Residential Neighborhood

- Among the 57% who prefer a residential only neighborhood, a larger share also prefers a *large* house.



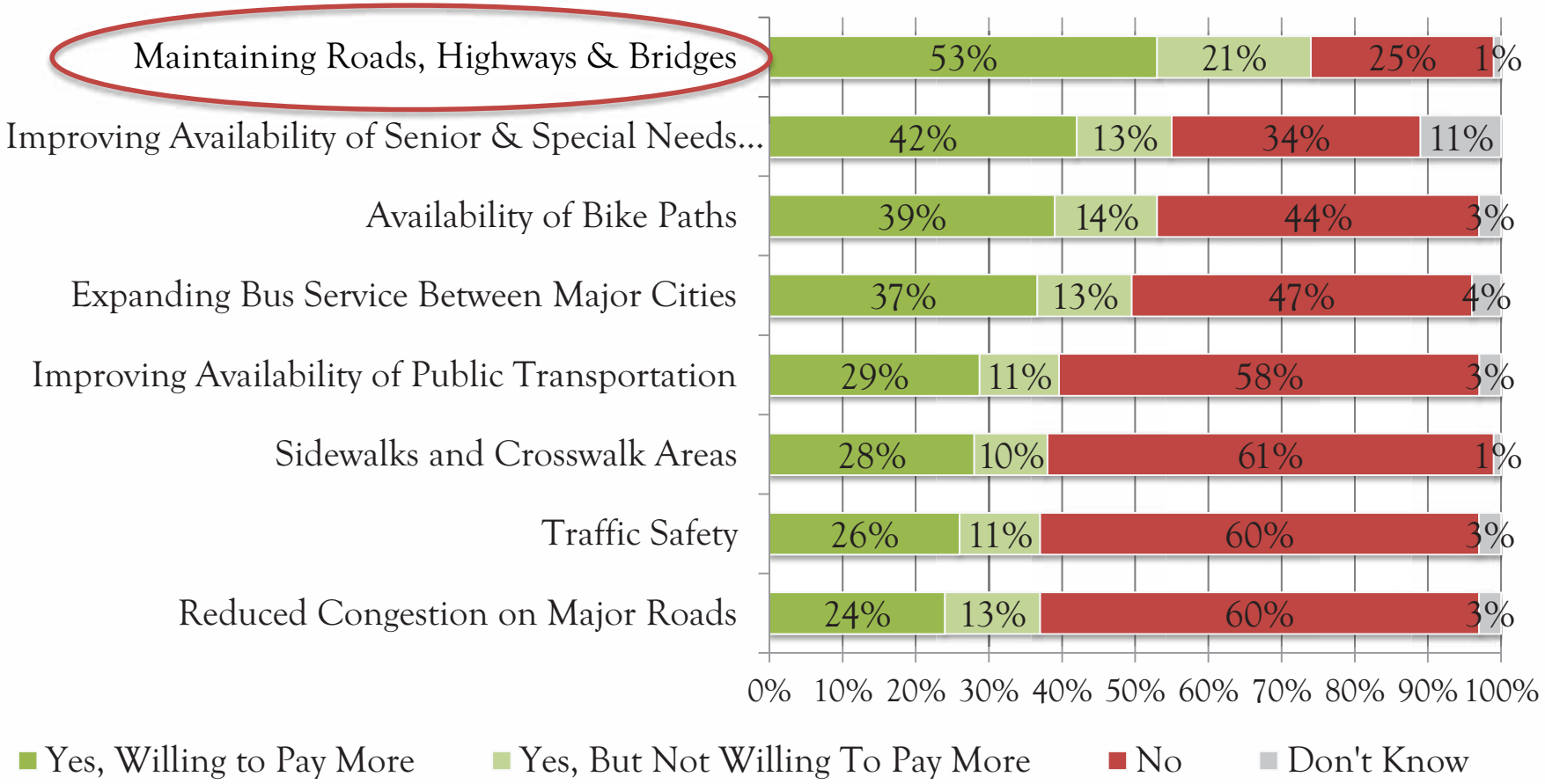
House Size Preferences in a Residential Neighborhood

- Among the 43% who prefer a neighborhood with a mix of residential and businesses, a larger share also prefers a *small* house.



TRANSPORTATION

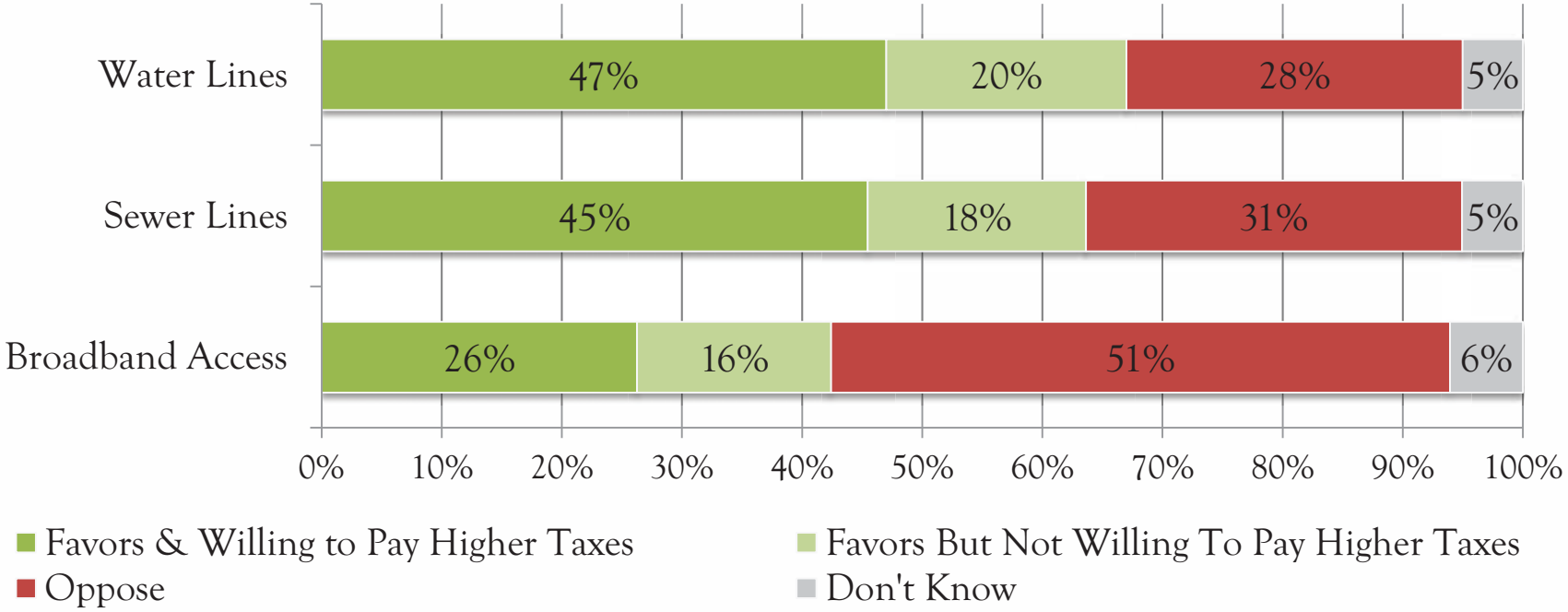
Residents view maintaining roads, highways and bridges to be the most important priority for transportation funding and a majority are willing to pay increased fees or taxes.



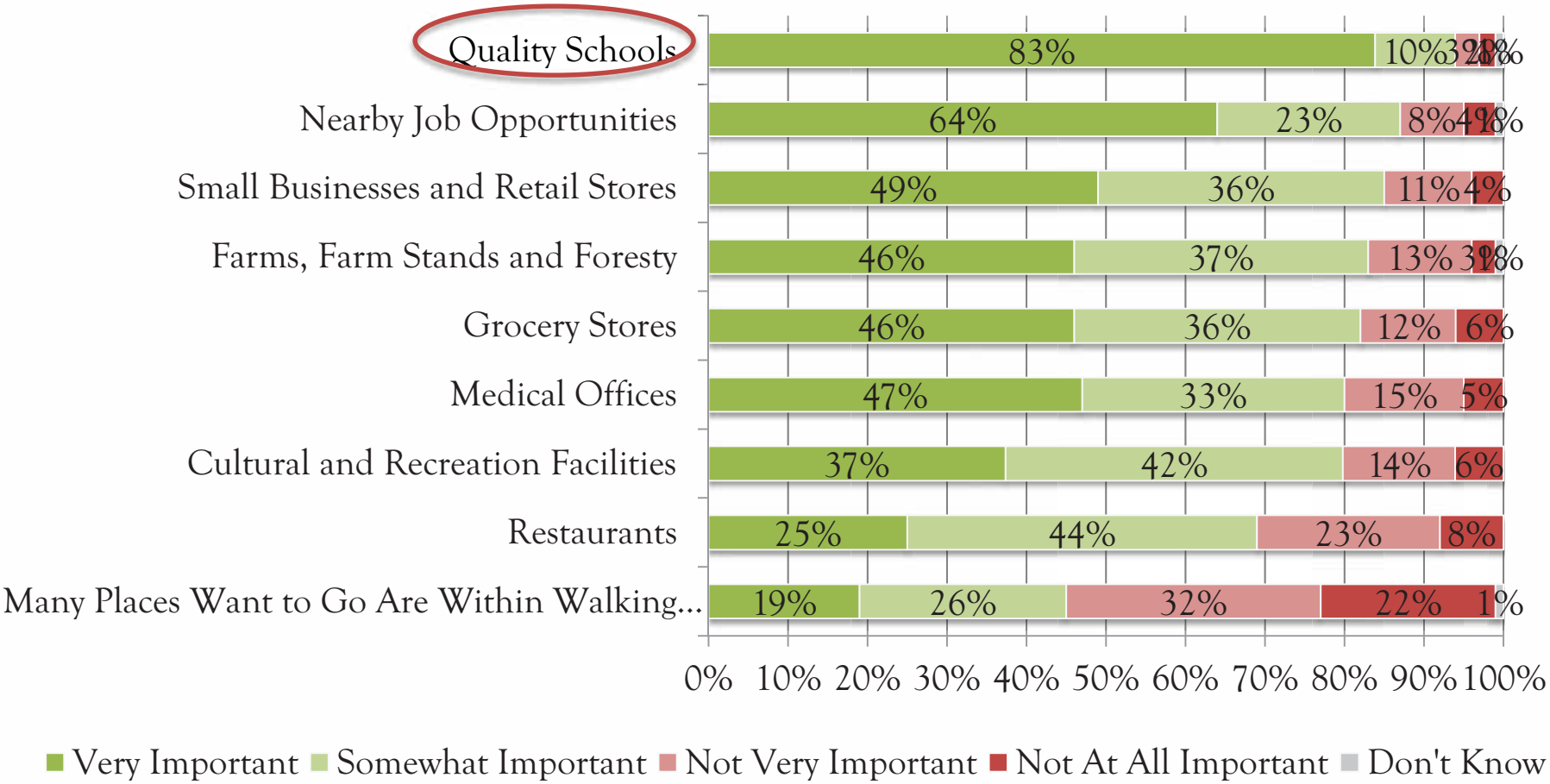
COMMUNITY DEVELOPMENT

Residents favor using municipal funds to provide water and sewer lines to existing and potential development.

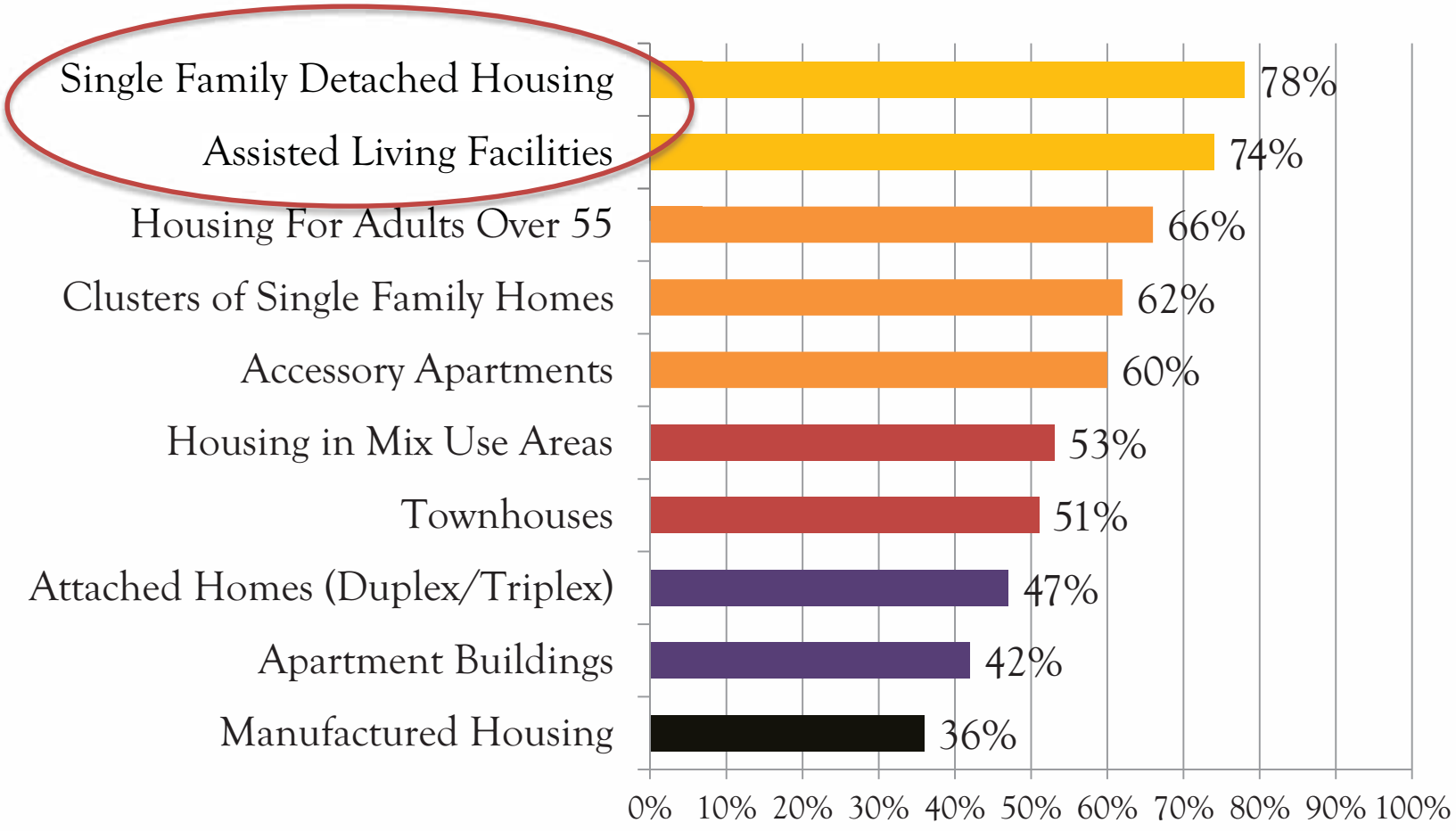
There is less support for using municipal funds to provide broadband to existing and potential development.



Residents view quality schools as the most important thing to have in their community.

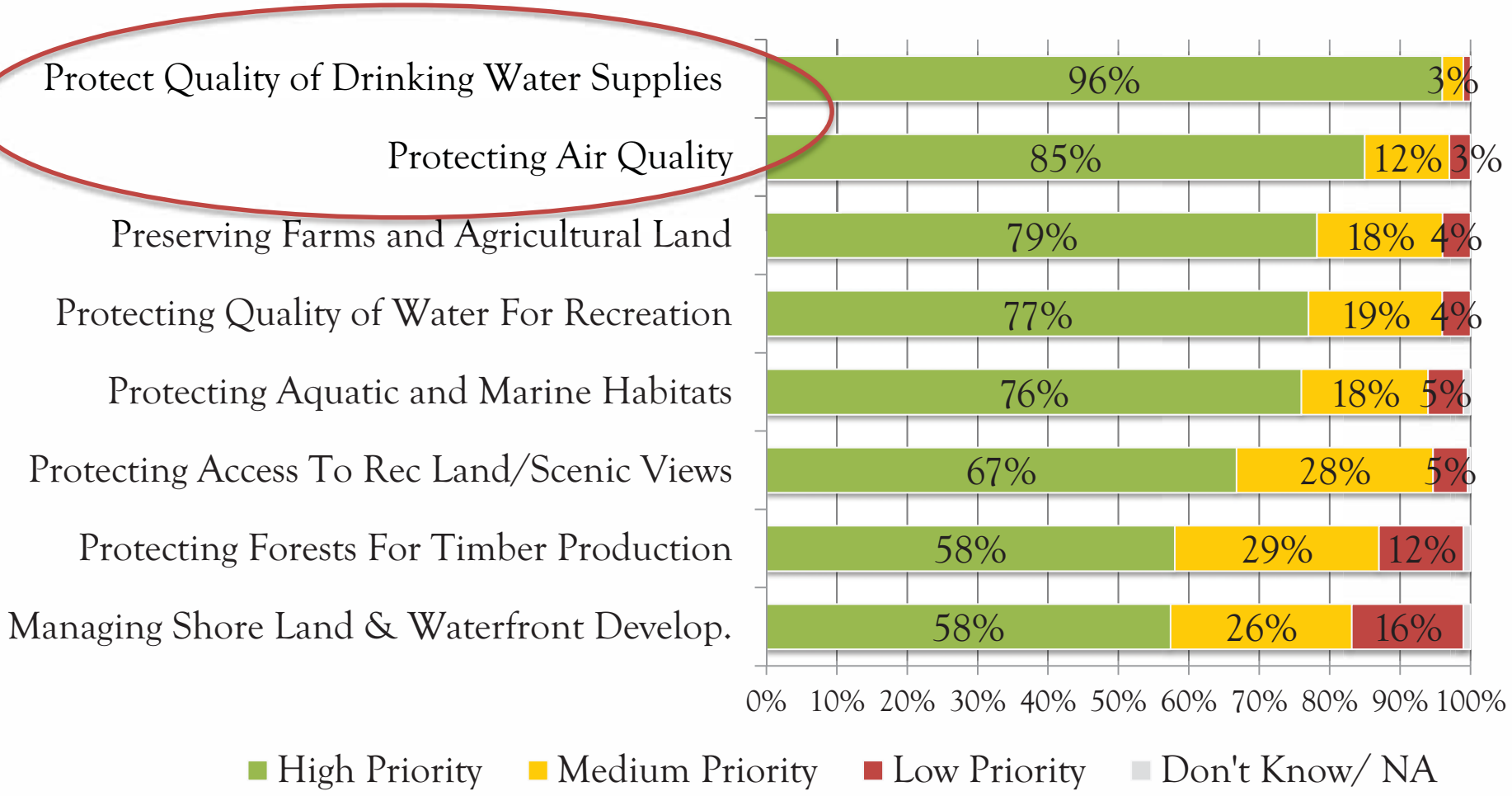


Residents say their community should *encourage* single family housing and assisted living facilities.

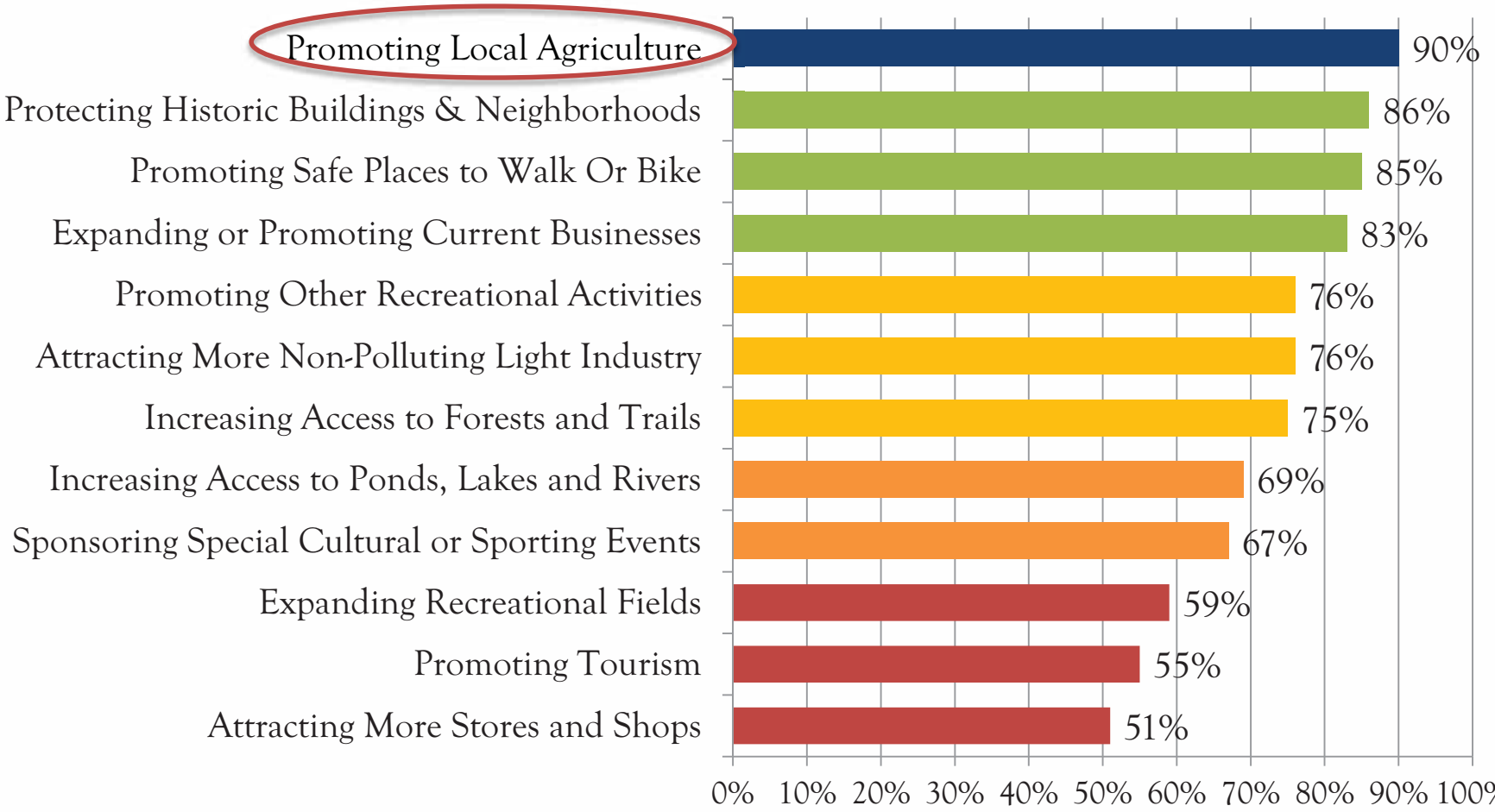


ENVIRONMENTAL PROTECTION

Residents view protecting water and air quality as high priorities for their community.



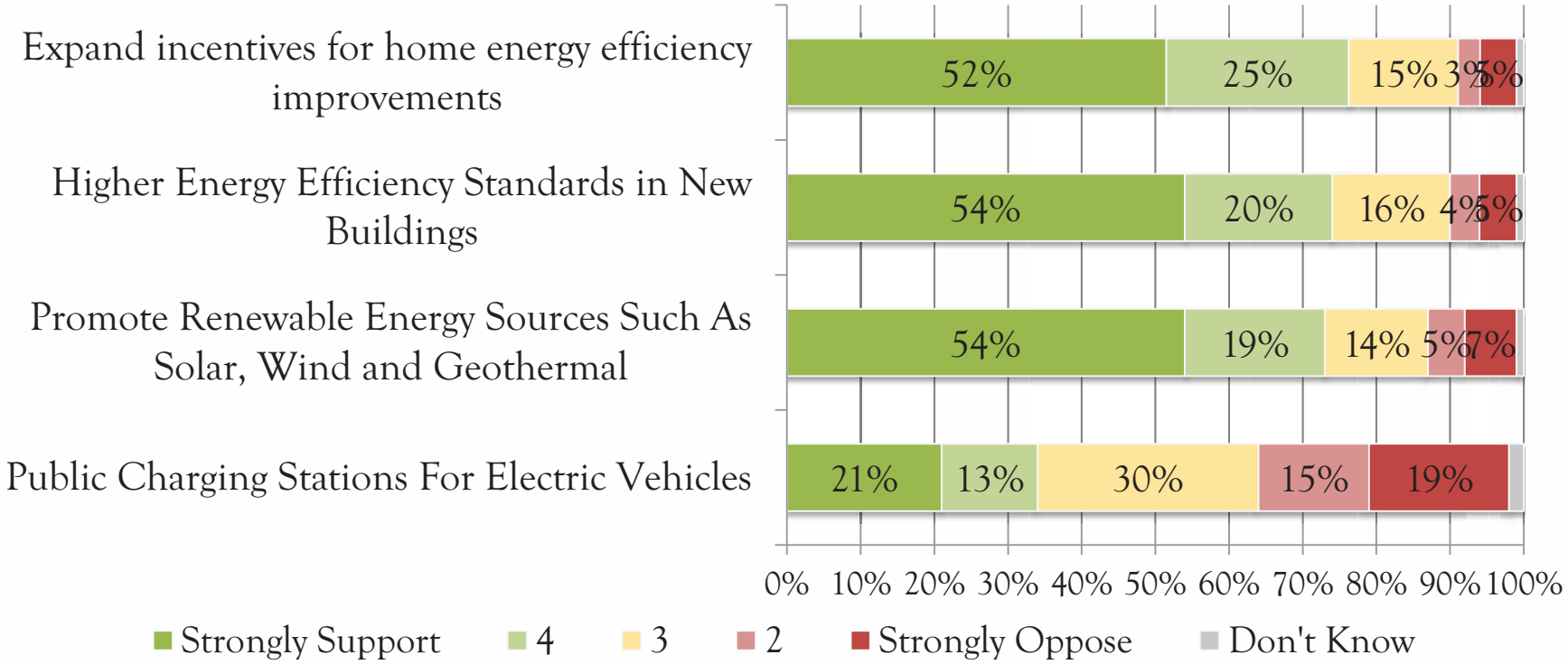
Residents say that the top activity that their community should *actively encourage* is promoting local agriculture.



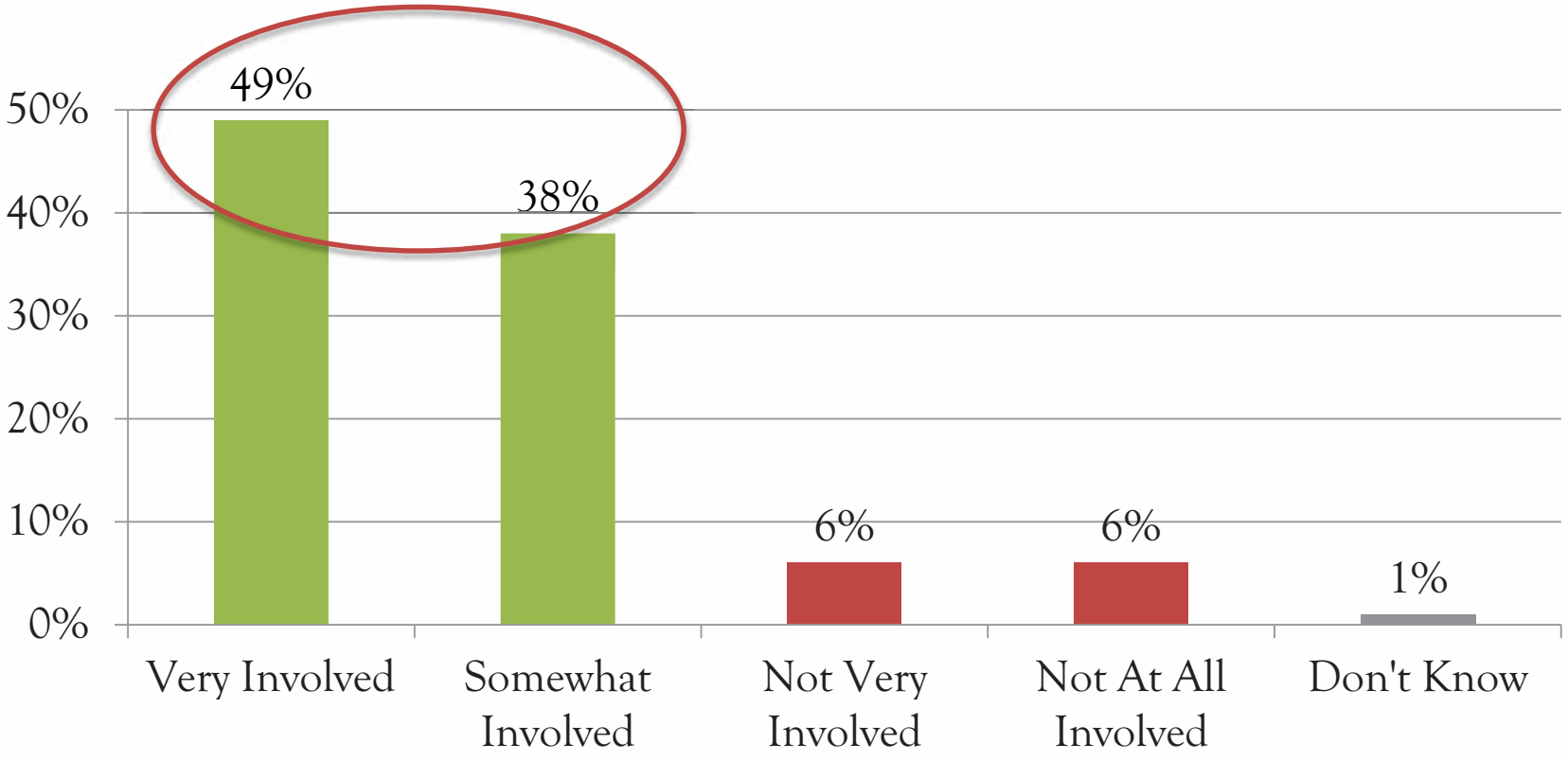
ENERGY POLICIES

Residents support energy efficiency initiatives and renewable energy.

There is little support for public charging stations for electric vehicles.

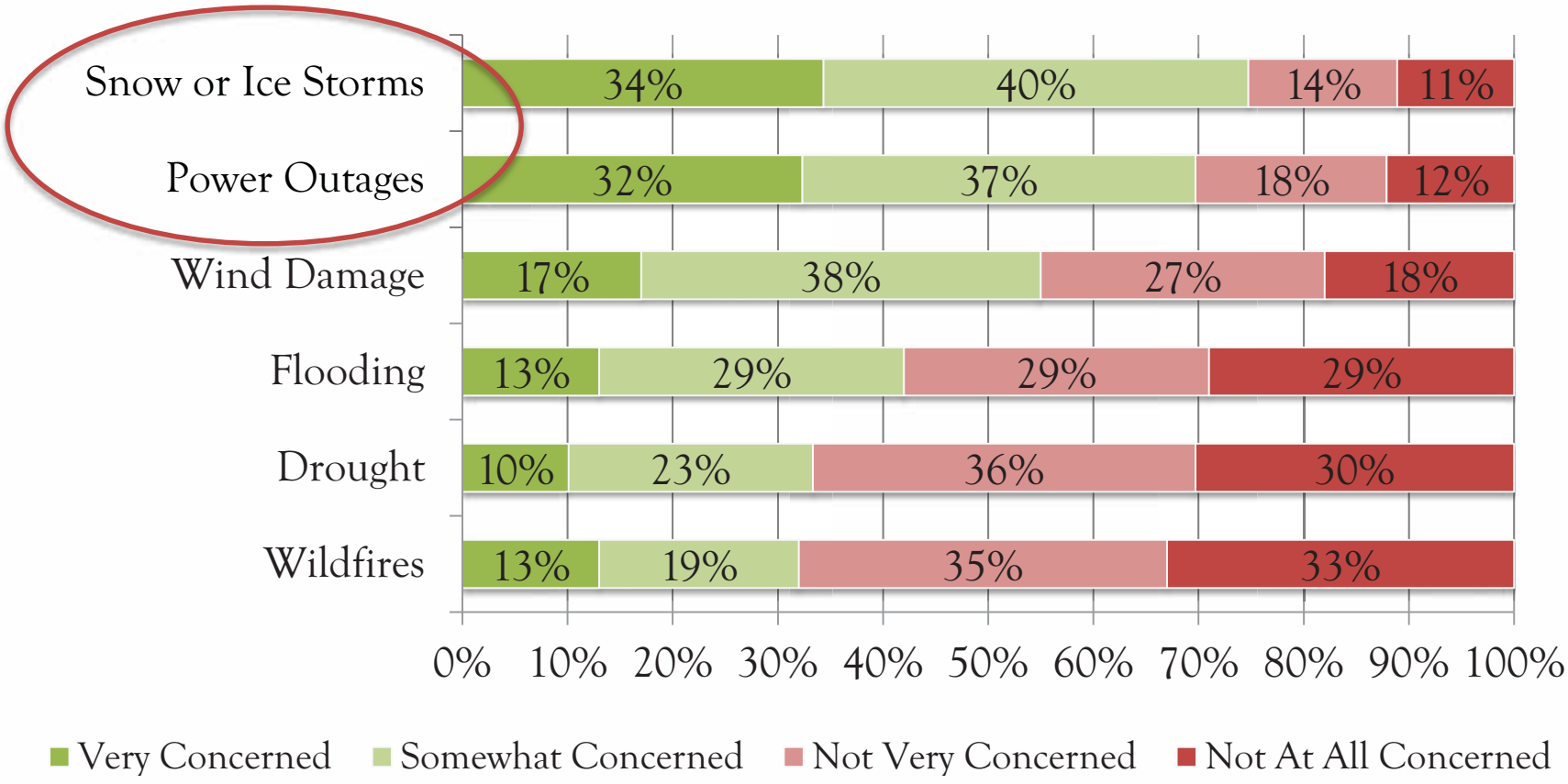


Residents think local governments should be involved in guidelines for renewable energy (such as large wind farms).

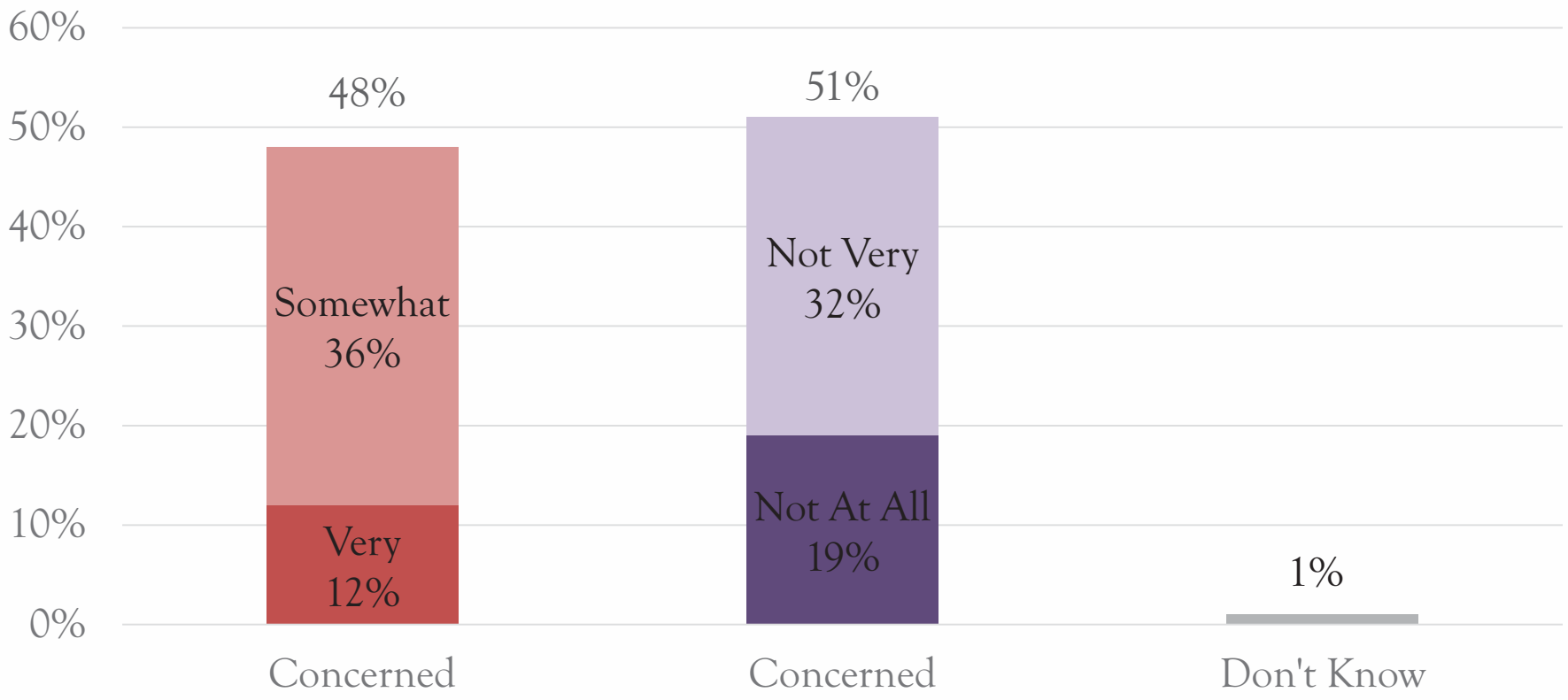


EMERGENCY PREPAREDNESS

The greatest concern about weather related events is snow or ice storms and power outages.



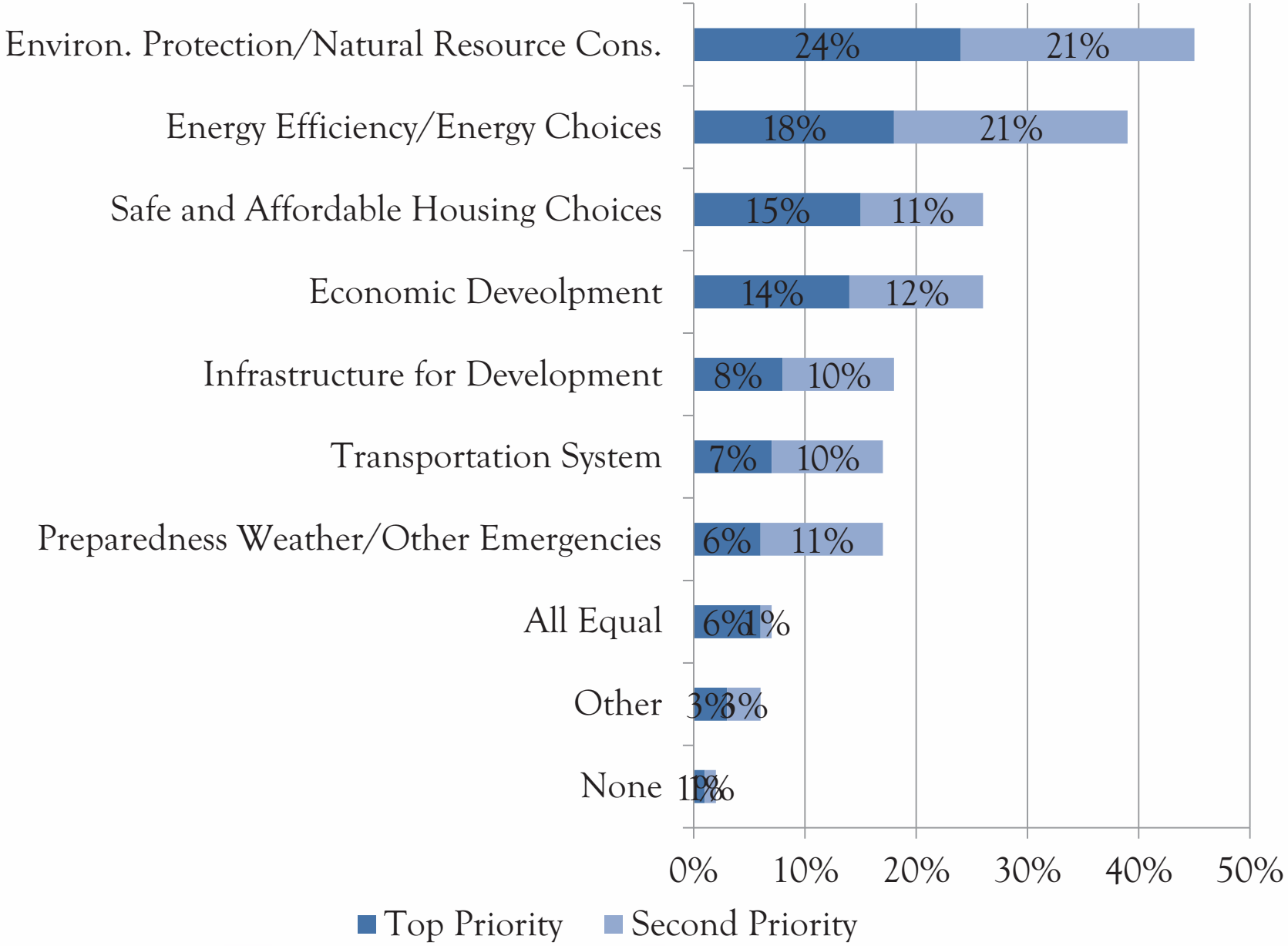
Residents are nearly evenly split with concern about their community's level of preparedness.



PRIORITIES FOR INVESTING PUBLIC DOLLARS

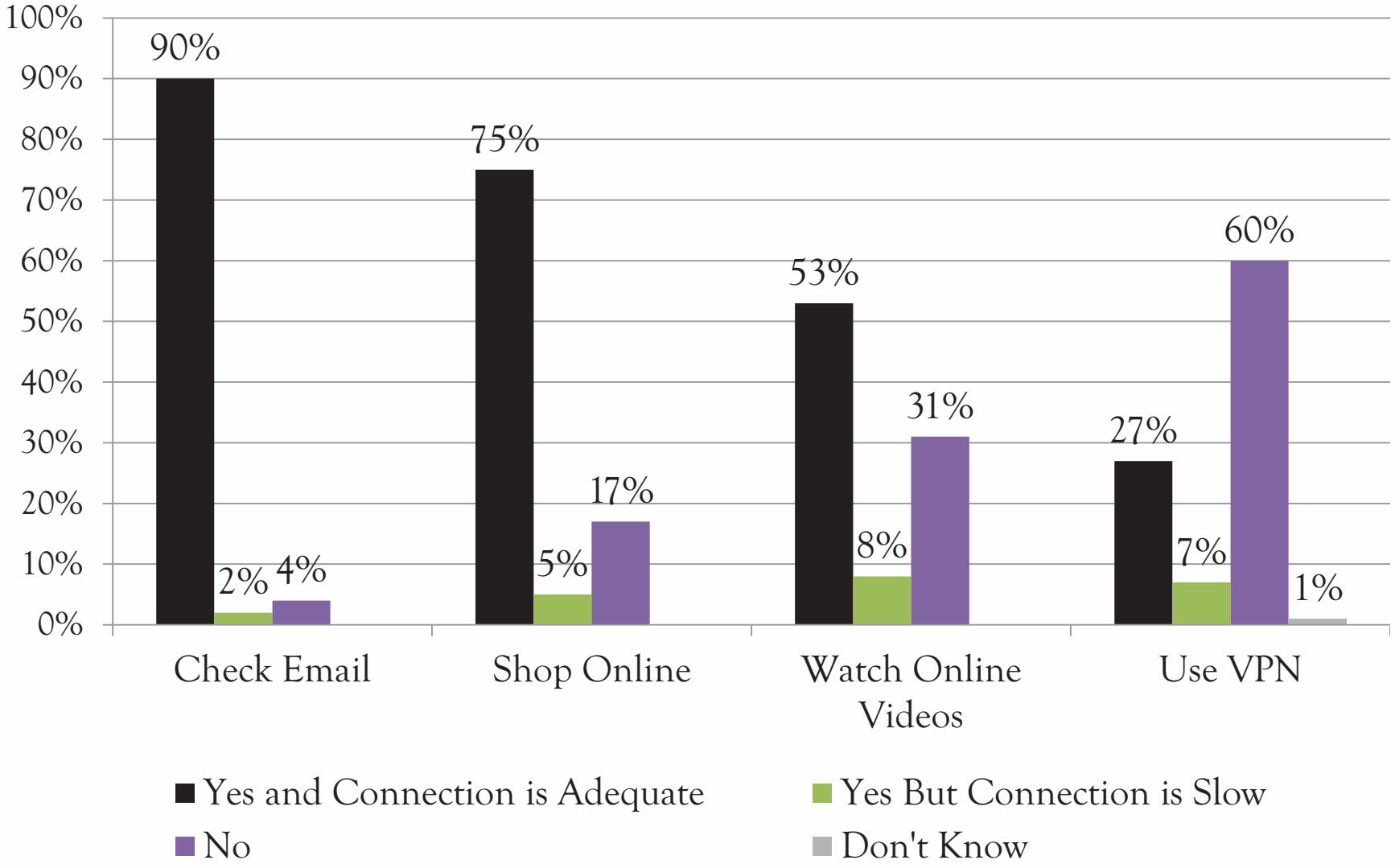
"We have discussed many issues facing New Hampshire communities. Which of the following do you think should be the TOP priority for investment of public dollars?"
"And what do you think should be the SECOND priority?"

- Environmental protection was the *most* cited first or second priority for investing public dollars.
- Energy efficiency and renewable energy choices was the *second most cited* first or second priority.
- Safe and affordable housing and economic development are tied for *third most cited* first or second priority.


Environ. Protection/Natural Resource Cons.
24%
21%
Energy Efficiency/Energy Choices
18%
21%
Safe and Affordable Housing Choices
15%
11%
Economic Deveolpment
14%
12%
Infrastructure for Development
8%
10%
Transportation System
7%
10%
Preparedness Weather/Other Emergencies
6%
11%
All Equal
6%
1%
Other
3%
3%
None
1%
0%
10%
20%
30%
40%
50%
Top Priority
Second Priority

BROADBAND

What Do You Use The Internet At Home For



THANK YOU

TRACY KEIRNS
UNH SURVEY CENTER

Statewide Public Engagement for Granite State Future

- Communities of Interest
- Communities of Place
- Stories, Outreach, and Methodology
- Q and A

University of New Hampshire Cooperative Extension

new hampshire listens

Communities of Interest:

A community of people who share a common interest, goal or knowledge about something – common bond or interest.

- December 2012– April 2013
- Small focus group at their location
- 8 different staff from UNH Cooperative Extension
- 20 organizations across the state
- 120 participants representing communities of interest

Communities of Place:

A gathering of people who share a common local and regional geographic location.

- February 2013– May 2013
- 10 Locations
- 45 Small Groups
- Over 500 participants
- Over 115 different towns represented
- 89 percent were “glad they participated in these community conversations.”
- 81 percent felt “our group talked about the most important issues.”
- 90 percent indicated the “facilitator helped the group set ground rules and stick to them.”


DREAM
Group
G

Top Themes

Interest

Transportation

Housing

Jobs

Access to Social Services

Youth recreation

Place

Employment and Education

Keeping and Educating Youth

Aging Population

Transportation

Housing

Combined

Transportation

Housing

Jobs

Schools/Education

Higher Education

Thank you

It was our honor working with you all!

Molly Donovan
UNH Cooperative Extension

Michele Holt Shannon
NH Listens

Bruce Mallory
Carsey Institute

Equity and Engagement Checklist

In order to ensure maximum and equitable participation by all residents of a community or region, the Equity and Engagement Technical Assistance Subcommittee of the Granite State Future project has developed the following suggestions for conducting planning initiatives.

1. Strive for **demographically representative engagement** that reflects the community or region where planning is occurring. This may entail special efforts to reach out and engage groups that traditionally have not participated in such work, for reasons of place, economic status, age, education levels, mobility limitations or other disabilities, or cultural and ethnic differences.
2. To the extent that is legally permissible, create opportunities for **participatory decision making** as the first principle in planning activities. Planners have special expertise and knowledge. That expertise and knowledge should be shared with community partners as much as possible, in order to increase informed participation, a shared sense of investment in decisions and implementation, and equitable relationships. The goal of **mutual empowerment of planners and community members** is crucial
3. As planning goals are set and decisions are made, **consider the impact of those decisions (before they are finalized) on all constituent groups and sectors** in a community or region.
4. In public conversations, media releases, and reports published for public consumption, **use plain, everyday language accessible to anyone** (including considerations of reading level and translation from English to other languages as appropriate).
5. As plans and goals are developed**, take into account their impact on diverse groups**, including best judgments about what groups could be advantaged and what groups could be disadvantaged by those decisions, and taking steps to mitigate any anticipated losses of resources, status, or power by those who might be disadvantaged.
6. Design **effective feedback loops** to inform participants about the ways their input was considered and acted upon.
7. Respect the **core value of local control** that characterizes New Hampshire's political and community culture. Plans and goals that require regional collaboration (for example in areas such as transportation, natural resource management, public school governance,

economic development) should strive to maintain community identity and integrity as much as possible.

8. Planning processes must **attend to the "soft infrastructure" of communities**—the people who live, work, and interact with each other, not just the built environment that serves those people.
9. Specific planning decisions concerned with principles of equity will take into account such matters as where stores and businesses are located with respect to walking and transportation routes used by less affluent or minority populations or those with special mobility needs; access to fresh, affordable foods; personal safety; and other criteria that reflect the goal of **maximum access and participation in community life**.
10. Practices of equitable engagement in local and regional planning efforts should be **sufficiently consistent across sites** so that residents moving from one community to another will have similar access to and be able to understand planning and decision-making processes.

December 2012

GSF Statewide Convening
Climate Change and Energy Efficiency TASC Breakout Session
November 4, 2013 ~ 1:00pm
Meeting Notes

1. **Introductions**
   - Kim Goddu, Nashua Regional Planning Commission *(committee staff)*
   - Julie LaBranche, Rockingham Planning Commission *(committee staff)*
   - Mary Kate Ryan, NH Division of Historical Resources *(committee member)*
   - Julia Dundorf, New England Grassroots Environmental Fund *(committee member)*
   - Sherry Godlewski, NH DES *(committee member)*
   - Chris Skogland, NHDES *(committee member)*
   - Eileen Sipple, NCC (participant)

2. **Developing goals and ideas for future implementation**

Question 1: What were the overarching issues and needs you heard in the morning presentations that can and need to be addressed at the State level?

- From the morning presentations, the committee heard energy efficient housing and new buildings are a need in NH. It was also noted that out of all energy use in NH, residential uses are 28% and commercial uses are 22%. The committee felt this need fit the energy efficiency section of the livability principle.
- The committee discussed rehabilitating older buildings, retrofitting buildings, the large stock of older large homes and the housing preferences of a younger population. From the morning's presentations, the committee heard the need for different housing choices such as co-habitation and multigenerational housing choices. The committee discussed different housing choices as a solution to the problem.
- Next, the committee highlighted the need of having the correct building stock for a changing demographic. This fit both the climate change and energy efficiency sections of the livability principle. There was also a discussion of urban vs. rural housing stock, building traits, needing incentives for developers, septic vs. sewer and the current square footage of large single family homes. This need fit both the climate change and energy efficiency section of the livability principle.
- It was also noted by the committee, top 3 concerns from the Statewide survey for residents were, environmental protection, energy efficiency and renewable energy, housing and economic development in that order.
- The committee then discussed the issue of current policies and if they support the goals of the residents. This need fit with climate change and energy efficiency section of the livability principle.
- Next, the need for a stronger buffer system to handle flooding was noted. This fit the climate change section of the livability principle.

- The next thoughts were the need for local support from residents, financial support, and energy code compliance.
- The committee also noted there is an issue of concern over the need for emergency preparedness by municipalities. The UNH Phone Survey indicated a split in the concern over if residents felt their municipalities was prepared for future weather events. The committee wondered why there was almost a 50/50 split in public opinions. There was also a need to find out what the public perception is on the topic. This fit the climate change section of the livability principle.
- Next was a discussion on transportation and the need to address settlement patterns, lack of access and options, lack of connectivity (which was noted as a barrier) and that 36% of NH energy use is for transportation purposes.
- The committee then discussed economic development and the need for high paying jobs. This was also noted as a barrier due to the current lack of high paying jobs.
- Climate change was brought up as an issue unto itself and the direct impacts are:
    - Extreme temperature
    - Temperature increase
    - Flooding
    - Increase precipitation
    - Less snow
    - Drought
    - Sea level rise
    - Coastal storm events
- Next, poverty greater than 10% in some rural counties was identified as a barrier.
- The next barrier brought up is the reliance on out of state sources of energy and the 61% of use statewide.
- The committee then discussed the need to protect local agriculture and food production.
- Lastly, the need for local involvement in renewable energy guidelines was noted by the committee.

Question 2: What are the key needs identified that can be feasibly addressed in the next 10 years?

- One of the key needs the committee identified is the increased compliance with existing energy code to 20% by 2017 and also that the Energy Code Collaborative is already working on this.
- Next, the committee mentioned if the existing policies support goals and perhaps the need may be to implement the climate action plan or sections.
- The committee then came up with 2 goals in conjunction with the Climate Action Plan the committee felt they could address.
    - Goal 1: Energy efficiency
        - To support regional and national actions to increase energy efficiency in buildings, decrease vehicle miles traveled and support renewable energy.
    - Goal 2: Climate change
        - To support community preparedness and resiliency to address climate change.

Question 3: What can state agencies and organizations do? What actions can we take? Who would take the lead?

- The committee then discussed who could implement some of these goals. State agencies or other organizations can inform regional planning commissions (RPC's) and create support through information sharing.
- It was also noted that GSF can facilitate the process of informing other organizations, such as RPC collaboration on information to help identify funding sources to continue the work that has begun through GSF.
- It was also noted there may be an opportunity for Ad hoc/technical groups to continue to provide guidance on certain topics.

3. **Continued work**

- The committee then divvied up work to be done on further developing the energy efficiency and climate change goals.

4. **Future meeting dates and time**

- Next meeting will be January 2014. Future meeting dates will be posted at http://www.nashuarpc.org/gsf/ once they are determined.

GSF Statewide Convening

Community and Economic Vitality TASC Breakout Session

November 4, 2013 ~ 1:00pm

Meeting Notes

Attendees:

Mary Lou Beaver – Every Child Matters/Family Housing Assistance Adv. Council
Terry Johnson – HEAL NH
Janine Lesser – DHHS/DFA
Gerald Coogan – Lakes Region Planning Commission
Katrina Evans – NH Employment Security, Economic & LMI Bureau
Glenn Coppelman - CDFA
Annette Nielsen – NH Employment Security, ELMI
Deb Avery – State of NH DRED, Economic Development
Matt Monahan – Central NH Regional Planning Commission

1. What were the overarching issues and needs you heard in the morning presentations that can and need to be addressed at the State level? (Issues and Needs)
    - Jobs/opportunity's for young
    - Aging population
    - Transportation
        - For jobs/opportunity for young
        - For aging population
    - Issues overlap
    - Regions/towns overlap – global
    - Economics/environmental resources are connected
    - Public transit
        - Density
        - Anchor destinations
        - Rideshare – need match drivers/riders
        - Dollars and way to pay
        - Rideshare safety/access
        - Lack of transportation options can impact unemployment or under employment
    - Companies are doing their own rideshare
    - Need for living wage

- Identify ways to link investors to entrepreneurial efforts within industries that towns want
- Advanced manufacturers, need more employment
- Greater need/expectations for employees to come in trained in one day
- Need adequate support for life/work balance
- Education and education investment

2. What are the key needs identified that can be feasibly addressed in the next 10 years?
   - Creatively deal with transportation
     - Link riders/drivers and riders/riders
     - Capitalize on large anchors for public transportation – buses
   - Expand training programs at community colleges/high schools
   - Support/incubate entrepreneurs
     - Business incubators/Hanna Grimes models
   - Find ways to get seasonal residents to become local entrepreneurs
   - Public engagement t around education
3. What can state agencies and organizations do? What actions can we take? Who would take the lead?
   - State agencies action
   - Public/private partnerships (schools, infrastructure, land lease, etc.
   - Break down silos especially in dollars
   - Protect money for transportation choice
   - Identify and promote other draws for business
   - Get young workers to stay
   - Engage legislature and public

GSF Statewide Convening

Equity & Engagement TASC Breakout Session

November 4, 2013 ~ 1:00pm

Meeting Notes

Attendees:

Tara Bamford – North Country Council
Jazmin Miranda – Consultant/HEAL
Bill Guinther – NHHFA
Bruce Mallory – UNH/Carsey
Molly Donovan – UNH Cooperative
Barbara Salvatore – Engaging NH
Shayna Sylvia – Strafford PC

What were the overarching issues and needs you heard in the morning presentations that can and need to be addressed at the State level?

1.A. Process

- Safe & inclusive, expanded public engagement.
- Planning needs to keep being done this way after this project is done.
- Need to keep communication with everyone going for collaboration in implementation.
- And for feedback regarding how are we doing

1.B. Challenges

- How do we replicate it at the state level?
- Can this experience be used to rejuvenate engagement at the local level?
- Background – data + outreach
- Labor and time intensive
- Will this process change regional planning mode of operation and town plans?

What are the key needs identified that can be feasibly addressed in the next 10 years?

2. Needs

- Create norms & expectations for planning process at local, regional and state level.
- Maintain relationships and build on and learn from what worked and what did not.
- Tools and resources for planners.

- More training and help with equity skill set vs. engagement, i.e. understanding how to compare the equity impacts of various scenarios.
- Look at strengths and needs and ask does this proposal address.
- Look at commonalities among people, asset based.

What can state agencies and organizations do? What actions can we take? Who would take the lead?

3. Actions

- Recent BIA process as model.
- Build on RPC staff relationship with other organizations.
- Add individuals to RPC committees who can add to the conversation regarding equity.
- Need a holistic SCI-like coordinated state planning process with citizen engagement on priorities for spending limited funds.
- ID how to measure 1, 3 and 5 years out.
- Learn from what difference it made to the RPCs, e.g., it impacted the process in x way, how it will affect future projects? (Strafford developed an outreach plan and so can revisit and evaluate after.)
- How to carry this knowledge forward through staff changes.

GSF Statewide Convening

Housing and Transportation TASC Breakout Session

November 4, 2013 ~ 1:00pm

Meeting Notes

Attendees:

Nate Miller – Upper Valley Lake Sunapee RPC
Van Chestnut – Advance Transit
Arlene Kershaw – Easter Seals
Felice Janelle – NHDES
J.B. Mack – Southwest Regional Planning Commission
Becky Ohler – NHDES
Kendall Buck – NH Home Builders Assoc.
Ben Frost – New Hampshire Housing
Dennis Delay – NHCPPS

1. What were the overarching issues and needs you heard in the morning presentations that can and need to be addressed at the State level? (Issues and Needs)
    - Housing issues need to be coupled with quality of life.
        - How do we equate proper housing with quality of life?
        - Builders/planners need to work on messaging
        - "Diversity" of housing will help "diversity" of age groups, etc
        - How does housing impact community?
    - People still want large single family house
        - Who's going to buy?
        - What about aging and millennial's—do they want single family house?
        - This represents the majority, but its not a significant majority
    - Need for rental units
        - With transportation options (shortage on labor, mobility – take new jobs)
        - Through zoning
    - People seemingly contradict needs and wants (disconnected) – need to educate
    - "So many NH's" rural and urban split
    - Shift in demographics
        - Aging population
        - Fewer younger households (less likely to be homeowners)

- Competition – young first time homebuyer vs. seniors for capes/ranches
- Debt to income making it more difficult (student debt now considered)—younger people having more trouble buying
- Seniors that might move here are underwater (taking on debt)
- Consumer Protection Finance Bureau is affecting ability to purchase homes
- DRED – need to attract and retain young professionals
- Why people not moving to NH
  -MA better economy
  -MA residents (particularly older residents) locked in with existing housing, which was traditional population migrating into NH

- Transportation Infrastructure: We are falling behind on basic maintenance
  - Bridges and pavement maintenance (we don't have strategy)
- Geographic extent of public transit is not available as population ages (we don't have strategy)
- Financing transportation by gas tax with more efficient vehicles, driving less
- Downward trend of federal financing of housing
  - Real estate transfer tax to affordable housing could help improve conditions
- Need for maintenance roads/bridges
  - Increase gas tax until….a new funding mechanism is in place
  - Who? Voice needed at legislative hearings to express need for transportation finance. This would include transportation providers, municipalities, businesses:
    – Transport NH Collective Effort
    -RPC's (have data & opportunity cost locally)
    -Municipal Association?
    -DRED
    -AGC
    -Business Industry Association

2. What are the key needs identified that can be feasibly addressed in the next 10 years?

- Greater use of visualization techniques to describe impacts to the community of "business as usual"
  - Greater public discussion and education
  - Defining "sense of community"
  - Better marketing/messaging
  - Need to visualize aging communities
  - Partners might include:
    -NHCF
    -AARP

-Endowment for Health
-Granite State Independent Living
-Employers (major – Dartmouth Hitchcock) – BIA Plan
-Leadership NH
-Local Chambers of Commerce

3. What can state agencies and organizations do? What actions can we take? Who would take the lead?

- DOT's, DRED, DES – don't force "one size fits all" solutions
  - Dealing with North/South - perceived or real differences in geographic investment?
- Increase state support of the affordable housing fund (for rental housing)
  - Who? – Housing Action NH – eg. Real Estate Transfer Tax surcharge
- Need affordable rentals, transportation to attract and retain young professionals.
- Zoning – allowing sufficient density
  - Who: - local planning boards
- Constitutional amendment on state financing gas tax of transportation
  - Commuter rail
  - Local vehicle registration surcharge should be raised (legislative charge)
  - Clarify BID (Business Improvement District) authority relative to transit operating cost

GSF Statewide Convening

Natural Resources TASC Breakout Session

November 4, 2013 ~ 1:00pm

Meeting Notes

Attendees:

Emily Preston – NH Fish and Game
Carolyn Russell – NHDES
Glenn Greenwood – Rockingham Planning Commission
Jack Munn – Southern NH Regional Planning Commission
Cynthia Copeland – Strafford Regional Planning Commission
Dari Sassan – Lakes Region Planning Commission

1. What were the overarching issues and needs you heard in the morning presentations that can and need to be addressed at the State level? (We're Hearing)

   - People want economic development that supports/protects environment
     - Came out in survey and in RPC outreach
     - People want to invest public dollars in environmental protection
     - Protect local decision makers re: difficulties with political process and making wise decisions with budget
     - People want housing/living choices
     - People want transportation choices

2. What are the key needs identified that can be feasibly addressed in the next 10 years? (Key Needs)
   - Balanced approach b/w protecting and expanding existing programs and developing new, innovative strategies.
   - Ensure State funding meets economic AND environmental needs.
   - More independent institutions that separate regulatory functions from practice
     - LCHIP
   - Draw economic link to environmental issues
   - Better paying green jobs
   - Open space protection

    - Target key functions/values
    - Strategic
    - Connected
    - Climate adaptation considerations
    - Flood plain function – acquiring protections that will ensure maintenance of the floodplain function
  - Ensure that local zoning reflects/supports desired protections
  - Outreach to towns
  - Strong public champions
    - Public leaders with loud voices
    - Local leaders – appeal to the silver tsunami and their legacy

3. What can state agencies and organizations do? What actions can we take? Who would take the lead? (What can organizations do?)
  - Strengthen links b/w good decisions and protecting deeply held values and traditions surrounding the nat environment.
  - Stormwater
    - Address increased precipitation (climate change)
    - Draw link
    - Look at redevelopment as a way to limit overall percentage impervious
    - Treat stormwater management as a matter of public infrastructure in areas where development is desired
  - LID
  - Bring environmental principles (which we know are universally shared) into the municipal regulatory scheme
  - Connect zoning with local wildlife/river/special place – so the towns people understand it
  - Develop grand plan with multiple steps
    - Our priority is step #1
  - Work to develop leaders amongst silver tsunami

NEXT STEPS

A) Marketing letter to rest of TASC to engage them in this opportunity
B) Dig into data – what do the conversation and survey results mean
C) Meet to develop 2-3 ideas to then share with other TASCs

GSF Statewide Convening
Climate Change and Energy Efficiency TASC Breakout Session
November 4, 2013 ~ 1:00pm
Meeting Notes

Attendees:

Nadine Peterson – NHDHR
Robin LeBlanc – Plan NH
Courtney Croteau – Central NH Planning Commission
Lisa Murphy – Southwest Region Planning Commission
Matt Sullivan – Southern NH Planning Commission
Jillian Harris – Southern NH Planning Commission

1. **What were the overarching issues and needs you heard in the morning presentations that can and need to be addressed at the State level?**
   - One of the bigger themes from the morning session seemed to be sustaining our communities. I think it's particularly important to educate individuals about the fact that one of the best ways to preserve our natural resources is to avoid sprawl development.
   - Transportation is another important theme as there are key linkages to multiple topics from there. Younger generations would just as soon not have a car because of the high costs related to vehicle purchase, maintenance, and fueling. Additionally, with a large percentage of jobs below average wage, it's increasingly difficult to pay for both transportation and housing.
   - As a state, we are fortunate to have such wonderful communities. However, unless infrastructure is in place to support economic development, our jobs/employment environment will not change.
   - Recent surveys suggest that individuals will choose where to live before they chose where to work. Also, "empty-nesters" are downsizing and choosing to locate closer to services in downtown areas.
   - It's interesting that Equity and Engagement Checklist placed a strong emphasis on the importance of local level decision-making. The comment from the morning session stating that communities with strongest social relationships are most likely to recover from economic hardship, was also partially surprising.
   - Quality of Life important as well as preferred housing choices (mixed use vs. residential only). Better mix of uses to maintain (TSP – Adaptive Reuse – Regulations).

- Social networks – value to local decision making process – correlation to health & vitality, economic recover – strong sense of place & community – energy efficiency.
- Broadband to support the economic base. Broadband as a public utility is important for economic development. There must be a culture change supporting the understanding of broadband as a public utility rather than a private commodity.

2. What are the key needs identified that can be feasibly addressed in the next 10 years?

The Sub-Committee engaged in a discussion related to what the definitions and intents of the words "action" and "goal" are for the purposes of this effort.
Matt Sullivan reviewed the minutes of the last meeting in May of 2013.

- State Priorities:
    - Transportation Infrastructure and alternatives.
    - Community listening sessions/dialogue – support RPC's facilitation & organizations/entities like Stay, Work, Play.
    - Economic incentives for business/economic development areas.
    - Streamline/remove barriers for adaptive reuse, historic preservation.
    - Guidance on integrating historic/cultural resources into master planning.
    - Continued the public dialogue associated with Traditional Settlement Patterns in our State in the future?
- Toolkit on compact development, financial/regulatory incentives or tools.
- In response to the Traditional Settlement Patterns toolkit discussion from the last meeting, question asked if an implementation toolkit already exists that would result in a duplication of efforts.
- Education about what the toolkit means for communities and stakeholders is the first step in the process. There must be an explanation of compact development, why is it important, what are the advantages, and how does it impact the environment and social connections? This is more than simply a toolkit, it's a multi-phase campaign.
- Parallels between this idea and the NH Citizen Planner effort. Local connections are essential to such an effort. "Partner Identification" to be added to the next TSP TASC agenda. Hold a summit to discuss this topic and raise awareness at the state level could be an appropriate first step.
- Larger statewide events supporters/professional planners are usually in attendance; our Sub-Committee needs to reach out to non-supporters or un-educated to accomplish our mission.
- Would the creation of statewide committee (legislative) to review and discuss compact development be appropriate?
- Possible creation of a statewide policy for use by local planners and planning boards.

- Are there case studies for Compact Development/Traditional Settlement Patterns in NH that would allow for us to create a toolkit?
- Is Traditional Patterns to broad a concept to have as a toolkit?
- Final action of group to create tools for Outreach and Engagement related to the impact of Traditional Settlement Patterns.
- Identify regulations that are impediments to compact development.
- Create a presentation that can be given in any community to explain Traditional Settlement Patterns and their impact.
- Support and fund OEP and Planning.
- Conferences/workshops – cross sector collaboration.

3. **What can state agencies and organizations do? What actions can we take? Who would take the lead?**
    - Our two actions should be outreach/education and the creation of some types of model ordinances, case study examples, toolkit/guidance/checklist, list of barriers.
    - The Outreach and Engagement campaign could be cross-pollenated with other state agencies.
    - Who might take the lead on an effort like this? The Group agreed that OEP would likely be the appropriate partner to take a lead role with RPCs and establish a state appointed advisory committee.
    - All of the TASCs want to create healthy, vibrant communities. We're working on physical design/compact design. We want to have guidelines, policies, regulations that get us there. To get those you need political will and public will. To build political/public will, you need understanding and buy-in. To create that, we need to have knowledge and awareness.
    - Coordinate with other TASCs to determine what their goal/action item will be. Perhaps we could coordinate our efforts.
    - Next Meeting: Mid-December or early January (Tuesday, Wednesday, Thursday)