

Lakes Region Plan: Chapter Outline – draft

Natural Hazards and Climate Change

I. Preamble

A. Vision

B. Purpose

C. Overview and Introduction

II. Existing Conditions

A. Natural Hazards

1. hazards (local and regional events)
 - a. flood
 - b. severe winter weather
 - c. severe winds (tornado, downburst)
 - d. fire (wildfire and conflagration)
 - e. earthquake
 - f. other
2. vulnerability – for each hazard
 - a. description
 - b. frequency
 - c. extent (How bad could it get?)
 - d. location
 - e. Summary
3. impacts
 - a. infrastructure
 01. FEMA disasters (NH, VT, region)
 02. local calculations
 - b. economy
4. [Sources]
 - a. local hazard mitigation plans
 - b. NOAA Storm Events database
 - c. USGS – earthquakes
 - d. NH HSEM

B. Climate Change – past to present

1. temperature – generally warmer (in NH 1.5°F overall, 4°F in winter)
2. precipitation – generally wetter, with more big events (>4” in 48 hrs)
3. snow cover and ice out
 - a. generally fewer days of snow cover
 - b. Lake Winnepesaukee is iced over about 103 days/year now as opposed to 112 days/year a century ago.
4. other – type and frequency of storms
5. impacts
 - a. habitat and wildlife
 01. flora
 02. moose
 03. pests and diseases – ticks surviving over the winter, mosquito-borne diseases
 - b. infrastructure
 01. road washouts, culvert enlargements

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- c. economy
 - 01. winter recreation - skiing, snowmobiling, ice fishing, dog sledding
- 6. [Sources]
 - a. 2013 National Climate Assessment (draft) – US Global Research Change Project
 - b. Northeast Regional Climate Center (based at Cornell)
 - c. 2009 National Science Foundation report?
 - d. Wake, UNH
 - e. Climate Choices (Union of Concerned Scientists)

III. Future Conditions

- A. Various scenarios
 - 1. Low emissions scenario (climate similar to northern VA by 2080)
 - 2. High emissions scenario (climate similar to NC by 2080)
- B. Benefits and costs
 - 1. economic
 - 2. environmental
 - 3. social
- C. Limitations of models

IV. Goals, Objectives, Actions

- A. Mitigation and adaptation options
- B. Current Initiatives (federal, state, regional, local)
 - 1. NH Climate Action Plan
 - 2. NH HSEM State HMP
 - 3. NH Wildlife Action Plan
 - 4. NH DES
 - 5. NH DHHS
 - 6. NH DOT
 - 7. local hazard mitigation actions
 - a. culvert enlargement
 - b. [references in master plans]
 - c. other
 - 8. case studies/examples
- C. Issues/ Barriers & Opportunities/ Assets (stakeholders & resources)
 - 1. costs vs. benefits
- D. Recommendations and Implementation
 - 1. recommendations
 - a. vulnerability assessment
 - b. infrastructure
 - c. planning
 - d. outreach
 - 2. implementation
 - a. short/medium/long term