

Contents

1 Summary and Policy Options 1

- Introduction to Earthquakes 1
- Policy Response to Date: Focus on NEHRP 12
- NEHRP Contributions and Challenges 16
- Policy Options 20

2 Understanding Seismic Hazards 33

- Earthquakes 34
- Seismic Hazards Across the United States 41
- Earthquake-Related Research in Earth Science 51
- Summary and Key Findings 67

3 The Built Environment 71

- Casualties 72
- Damage to Buildings 74
- Damage to Lifelines 86
- Accomplishments and Needs of Federally Sponsored Research 90

4 Implementation 95

- The Implementation Process 96
- Factors Affecting Implementation 111
- How Matters Might Be Improved 119

APPENDICES

- A The National Earthquake Hazards Reduction Program 125**
- B Agency Efforts in the Current NEHRP 129**
- C International Earthquake Programs 144**
- D Acronyms 157**

Index 159

