

CONTENTS

<i>Introduction</i>	vii
<i>How to use this book</i>	ix
PART 1: DISASTER PREPAREDNESS	1
Ensuring tornado warnings work when it matters most Tuscaloosa County Emergency Management Agency, Alabama	3
3D mapping helps prepare for flood events National Science and Technology Center for Disaster Reduction, Taiwan	9
Counties organize evacuations well in advance US Army Corps of Engineers, New York District	15
Drone imagery helps stay crisis-ready despite growth North Central Texas Emergency Communications District	23
Simulating a nuclear disaster Lithuanian Fire and Rescue Department	28
Fire district uses apps to prepare for emergencies Northwest Fire District, Tucson, Arizona	35
Getting started with GIS	42
PART 2: DISASTER RESPONSE	51
Tracking coronavirus with real-time dashboards Johns Hopkins University’s Center for Systems Science and Engineering	53
Apps transform hurricane response Geographic Mapping Technologies, Corp.	61

GIS supports response to Hurricane Irma City of Fort Lauderdale, Florida	71
Scientists, emergency responders put drones to work Center for Robot-Assisted Search and Rescue	80
Extending GIS in the field for resource advising Resource Advisors	86
Getting started with GIS	94
PART 3: DISASTER RECOVERY	101
Relief workers use drone imagery to help refugees International Organization for Migration	103
The eye after the hurricane The National Insurance Crime Bureau and a coalition of geospatial organizations	109
After a disaster, imagery gives insurance companies a clear picture Travelers Insurance	117
Authorities map and model damage from deadly Alabama tornadoes Federal Emergency Management Agency, National Weather Service, and Alabama Law Enforcement Agency	122
Mapping the needs of people impacted by deadly tornadoes Lee County Emergency Operations Center and the Alabama Fire College	130
Getting started with GIS	136
<i>Contributors</i>	139