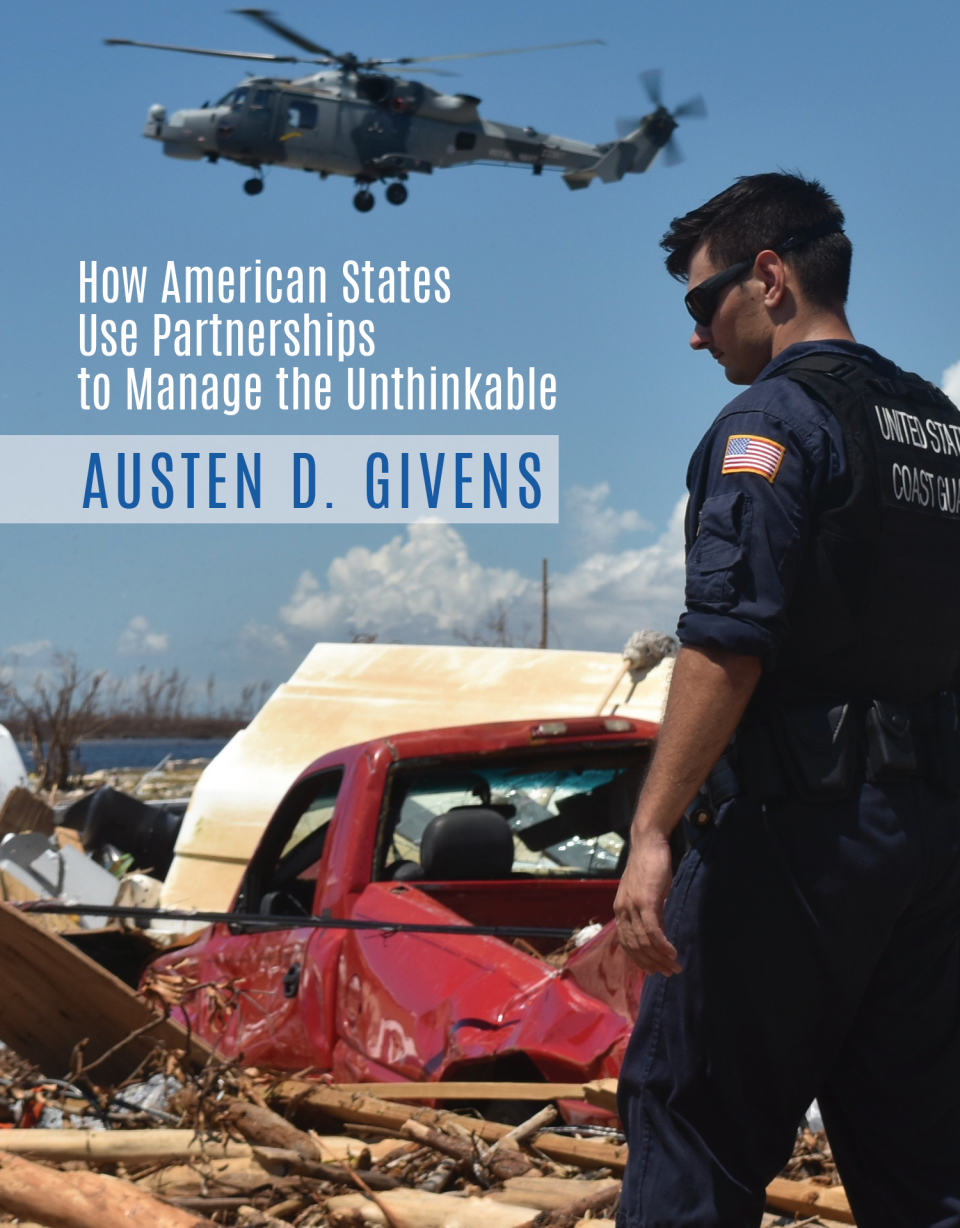


DISASTER LABS

How American States
Use Partnerships
to Manage the Unthinkable

AUSTEN D. GIVENS



DISASTER LABS

DISASTER LABS

How American States Use Partnerships
to Manage the Unthinkable

Austen D. Givens, PhD

MCUP

MARINE CORPS UNIVERSITY PRESS

Quantico, Virginia

2020

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Names: Givens, Austen D., 1982- author.

Title: Disaster labs : how American states use partnerships to manage the unthinkable / Austen D. Givens.

Description: First edition. | Quantico, Virginia : Marine Corps University Press, 2020. | Includes bibliographical references and index. | Summary: "Disaster Labs examines the promise and potential drawbacks of public-private disaster response frameworks during the course of seven chapters. After the introduction, the author introduces a series of case studies and then provides a detailed discussion of public-private collaboration in California, Florida, New York, and Virginia. A concluding chapter then comparatively assesses the value of these partnerships. The cases discussed in Disaster Labs range from informal ad hoc collaborations to formalized initiatives with detailed structures defined in contracts and memoranda, setting expectations for performance and accountability for both the government and private actors. Such accountability is desirable as it can limit fraud and corruption. But it is important to emphasize that not all solutions work in all situations, either"— Provided by publisher.

Identifiers: LCCN 2020006958 | ISBN 9780160955242 (paperback)

Subjects: LCSH: Disaster relief—United States. | Emergency management—United States. | Public-private sector cooperation—United States.

Classification: LCC HV555.U6 G58 2020 | DDC 363.34/80973—dc23

LC record available at <https://lcn.loc.gov/2020006958>

Disclaimer

The views expressed in this publication are solely those of the authors. They do not necessarily reflect the opinions of the organizations for which they work, Marine Corps University, the U.S. Marine Corps, the Department of the Navy, or the U.S. government. The information contained in this book was accurate at the time of printing. Every effort has been made to secure copyright permission on excerpts and artworks reproduced in this volume. Please contact the editors to rectify inadvertent errors or omissions.

The production of this book and other MCUP products is graciously supported by the Marine Corps University Foundation.

Published by

Marine Corps University Press

2044 Broadway Drive

Quantico, VA 22134

www.mcu.usmcu.edu/mcupress

First edition, 2020

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

ISBN 978-0-16-095524-2

This book is dedicated to four members
of the greatest generation:

Melvin A. Gianniny

Curtis D. Givens

Randolph R. Lang

William L. Metzger

CONTENTS

Foreword	ix
Acknowledgments	xv
Abbreviations	xvii
Introduction	3
CHAPTER	
ONE	The Rise of State Disaster-Oriented Public-Private Partnerships 47
TWO	California Dreaming? 76
THREE	Disaster-Oriented PPPs in Florida 116
FOUR	The Divided Empire State 152
FIVE	Disasters in the Old Dominion 193
SIX	Toward New Understandings of State Disaster-Oriented PPPs 222
Epilogue:	The 2019 Coronavirus Disease 275
Appendix A:	Interview Participants 285
Appendix B:	Interview Questions 288
Appendix C:	Human Subjects Protection 290
Bibliography	293
Index	321

FOREWORD

Disasters have profound effects on communities. Tragically, they often lead to deaths and injuries. They can also disrupt vital services such as water, electric power, and natural gas.

Since disasters adversely impact communities, disaster responses must be rapid, flexible, and prioritize critical needs. They also must integrate actions from a variety of disciplines: law enforcement, fire services, pre-hospital health care or emergency medical services, hospitals (including trauma and specialty care centers), utilities, sanitation, transportation, and the community itself.

Disasters not only impact people and property. They can influence organizational capacity and behavior too. These human and organizational dimensions demand the incorporation of crisis management skills and activities into the overall response architecture.

Public-Private Partnerships

Public-private partnerships (PPP) are part of a growing trend in emergency management. These partnerships leverage private resources—corporate, private voluntary, or humanitarian contributions—to respond to and recover from disasters within communities. The nature of private contributions varies across communities, but in general PPPs add important capabilities and capacities to emergency responses. A recent Rand study found that PPPs are integral to effective and efficient disaster management by reducing the burden on governments at all levels and facilitating the flow of critical goods, services, and logistics that may not be immediately available to government agencies after disasters.¹

This is especially true of private sector assets such as telecommunications, pharmaceuticals for epidemic response, and surge capacity for critical infrastructure components. PPPs are also an important component of global disaster risk reduction efforts as illustrated by the *Sendai Framework for Disaster Risk Reduction, 2015–2030*.²

¹ Anita Chandra, Shaela Moen, and Clarissa Sellers, *What Role Does the Private Sector Have in Supporting Disaster Recovery, and What Challenges Does It Face in Doing So?* (Santa Monica, CA: Rand, 2016), <https://doi.org/10.7249/PE187>. A good academic overview of this can be found in Marino L. Eyerkauf, Fabiana S. Lima, and Mirian B. Gonçalves, "Public and Private Partnership in Disaster Risk Management," *JAMBA: Journal of Disaster Risk Studies* 8, no. 1 (2016): 277, <https://dx.doi.org/10.4102%2Fjambav8i1.277>.

² See *Sendai Framework for Disaster Risk Reduction, 2015–2030* (New York: UN Office for Disaster Risk Reduction, 2015).

Disaster Labs: How American States Use Partnerships to Manage the Unthinkable examines the promise and potential drawbacks of public-private disaster response frameworks during the course of six chapters. After the introduction, the author introduces a series of case studies and then provides a detailed discussion of public-private collaboration in California, Florida, New York, and Virginia. A concluding chapter then comparatively assesses the value of these partnerships.

The cases discussed in *Disaster Labs* range from informal, ad hoc collaborations to formalized initiatives with detailed structures defined in contracts and memoranda, setting expectations for performance and accountability for both the government and private actors. Such accountability is desirable as it can limit fraud and corruption. But it is important to emphasize that not all solutions work in all situations, either.

Balancing Interoperability and Flexibility

Achieving optimal disaster response demands a balance between flexibility and structure. Ideal responses also include interoperability and standards to suit unique local needs and concerns, but disaster responses present different circumstances and challenges. These include the hazards encountered, the scope of damage, cascading impacts, population(s) affected, resources available, and agencies (or private actors) responding. These unique response networks

bring tailored capabilities and challenges to the disaster response. Managing these circumstances calls for a form of command known as meta-leadership where trust, command capacity, and command climate emphasize collaboration and organizational agility. This dynamic requirement can be nurtured and sustained by implementing a public-private disaster coordination center, which acts as the civil analog of a civil-military operations center (CMOC) within the various emergency operations centers (EOCs) activated to support disaster response.

Emphasizing State and Local Capacity

Because disasters exceed local abilities to respond, some see an opportunity to supplant local capabilities with federal response capacity. This is natural, but it ignores the unique set of local understandings and capacity that bolster and sustain ongoing emergency management and resilience. Rather than replace state and local governments' roles, federal actions are most effective when they build from and support local capacity and address local circumstances, including terrain, political considerations, population/social factors, and economic dynamics. These local networks must incorporate and integrate federal and military support, as well as private-public contributions for humanitarian aid and post-disaster recovery.

The future is likely to bring new and more challenging disasters. Earthquakes, floods, epidemics, and food crises are all amplified in urban settings, in-

creasing the probability that comprehensive disaster responses, including those to catastrophic events, will require federal and military intervention to save lives, restore normalcy, and rebuild viable communities. These future crises will also demand support from private actors.

Protecting the public, preserving homeland security, and meeting the challenges of future disasters requires integrated and mutually supporting elements. *Disaster Labs* offers compelling evidence that interorganizational collaboration is indispensable for large-scale emergency responses today. And, if the recent past is any guide, this interorganizational collaboration will remain vital in the emergency-management field for the foreseeable future.

Dr. John P. Sullivan

Los Angeles, June 2019

ACKNOWLEDGMENTS

I begin by thanking my wife, Rachel, and daughters, Serafina and Augusta, for the love and encouragement that they have shown me throughout the writing of this book.

At King's College London (KCL), the late Ken Young—together with Ami J. Abou-bakr, Wyn Q. Bowen, and Emily C. Skarbek—provided crucial research and editorial guidance. I also thank Sir David Omand, GCB, from KCL's Department of War Studies, and Martin Lodge, from the London School of Economics and Political Science, for their suggestions and comments. I am indebted to Joe Giordano and James Norrie for carving out the physical and temporal space necessary for me to continue my research at Utica College, New York. The Center for American Studies at Christopher Newport University, Virginia, provided me with generous support and guidance during the course of writing this book. One cannot overstate the value of good mentors in academia, so I offer my gratitude to Nathan Busch and Dale Jones in

particular for helping shape my career through their sound counsel. This book would not have been possible without them.

I am especially grateful to Angela Anderson and Jason Gosnell of Marine Corps University Press, who together with Alex Kindell from the Marine Corps Operations Analysis Directorate helped shepherd this project from conception to completion.

Finally, my thanks go to the women and men in the emergency-management profession who generously spent many hours with me during the course of writing this book. While most have chosen to identify themselves, some have elected to remain anonymous.

ACKNOWLEDGMENTS

ABBREVIATIONS

ALAN	American Logistics Aid Network
APIP	Alaska Partnership for Infrastructure Protection
BBB	Better Business Bureau
BCP	business continuity planning
BECC	Business Emergency Coordination Center
BENS	Business Executives for National Security
BUOC	Business and Utility Operations Center
CalOES	California Governor's Office of Emergency Services
CEO	chief executive officer
CGA	California Grocers Association
CRA	California Resiliency Alliance
DEO	Department of Economic Opportunity
DHS	Department of Homeland Security
EOC	Emergency Operations Center
ESF	emergency support function

FDEM	Florida Division of Emergency Management
FEMA	Federal Emergency Management Agency
FRF	Florida Retail Federation
GIS	geographic information system
HREMC	Hampton Roads Emergency Management Committee
ICS	Incident Command System
ISIS	Islamic State in Iraq and Syria
MLS	Major League Soccer
MOU	memorandum of understanding
NIMS	National Incident Management System
NRF	<i>National Response Framework</i>
NRP	<i>National Response Plan</i>
NYCOEM	New York City Office of Emergency Management
NYS	New York State
NYSE	New York Stock Exchange
NYSOEM	New York State Office of Emergency Management
PPP	public-private partnership
SBA	Small Business Administration
SEOC	State Emergency Operations Center
SIP	Safeguard Iowa Partnership
SOC	State Operations Center
VBEOC	Virtual Business Emergency Operations Center
VDEM	Virginia Department of Emergency Management

ABBREVIATIONS

VDH	Virginia Department of Health
VDOT	Virginia Department of Transportation
VEOC	Virginia Emergency Operations Center
VOAD	Voluntary Organizations Active in Disasters
U.S.	United States
USA	United States of America

ABBREVIATIONS

DISASTER LABS

INTRODUCTION

Hurricane Sandy swept through the New York City metro area on 29 October 2012. Lisa Perez, a resident of Staten Island—one of New York City’s five boroughs—was fortunate to survive the storm.¹ While Sandy blew through Staten Island, Perez exited her house to move her car to higher ground.² Before she could move her car, however, rushing floodwaters overwhelmed her.³ Perez felt herself being pulled away by the rushing water, and yelled to her daughter, “If I die, just stay there!”⁴ Eddie Perez (no relation), Lisa Perez’s neighbor, was pulled away by the flood at the same time.⁵ Eddie Perez indicated to Lisa Perez that they both should attempt to make their way through

¹ For a detailed explanation of the human subjects protection measures used for this study, see appendix C.

² Alan Taylor, “Hurricane Sandy: Staten Island Survivors,” *Atlantic* (photo gallery), 21 November 2012.

³ Taylor, “Hurricane Sandy.”

⁴ Taylor, “Hurricane Sandy.”

⁵ Taylor, “Hurricane Sandy.”

the floodwater to a nearby tree.⁶ For the next two hours, they clung to the tree, riding out the storm.⁷

This exceptional story demonstrates the depth of destruction in areas of New York City that were hit hardest by Hurricane Sandy. Estimates show that the storm killed at least 117 people and caused approximately \$50 billion in damages.⁸ The storm triggered fires in the New York City borough of Queens, burning an entire neighborhood to the ground.⁹ Subway tunnels filled with water, and as a result this vital mode of public transportation was halted.¹⁰ In addition, five city hospitals were evacuated by authorities due to flooding and power outages.¹¹ The storm deposited 8.5 million cubic yards of debris onto streets.¹²

After the hurricane passed, government and private sector officials immediately began collaborating to recover from the effects of the storm. Andrew M.

⁶ Taylor, "Hurricane Sandy."

⁷ Taylor, "Hurricane Sandy."

⁸ In 2012 dollars, unadjusted for inflation. Eric S. Blake et al., *Tropical Cyclone Report: Hurricane Sandy (AL182012), 22–29 October 2012* (Miami, FL: National Hurricane Center, 2013), 1; and U.S. Centers for Disease Control and Prevention, "Deaths Associated with Hurricane Sandy—October–November 2012," *Morbidity and Mortality Weekly Report* 62, no. 20 (May 2013): 393–97.

⁹ "Breezy Point, Queens Looks Forward after Devastating Fire Following Superstorm Sandy," CBS News, 31 October 2012.

¹⁰ Matt Flegenheimer, "Flooded Tunnels May Keep City's Subway Network Closed for Several Days," *New York Times*, 30 October 2012.

¹¹ "NYC Hospitals Evacuated for Superstorm," CBS News, 2015, accessed 29 March 2017.

¹² "6 Months Report: Superstorm Sandy from Pre-Disaster to Recovery," Federal Emergency Management Agency (FEMA), 25 April 2013.

INTRODUCTION

Cuomo, the governor of New York State, advocated for a state law to facilitate post-Sandy reconstruction. This law gave private businesses an explicit role in financing, designing, and rebuilding damaged public sector infrastructure, such as roads and bridges.¹³ Moreover, the New York Bankers Association and New York Business Development Corporation, in conjunction with the State of New York, made emergency loans available to small businesses impacted by Hurricane Sandy.¹⁴

These examples of public-private sector coordination after Hurricane Sandy are part of a growing trend within the emergency-management profession.¹⁵ In this book, *emergency management* refers to the managerial framework that works to reduce public vulnerability to disasters and addresses the effects of disasters when they occur.¹⁶ *Disasters* refer to

¹³ Freeman Klopott, "Cuomo Aims to Speed New York Sandy Recovery with Private Funding," Bloomberg, 23 January 2013.

¹⁴ "Governor Cuomo Announces Small Business Emergency Loan Fund to Provide Assistance to Businesses Affected by Sandy," New York State, 14 November 2012.

¹⁵ *Principles of Emergency Management Supplement* (Washington, DC: Federal Emergency Management Agency, 2007), 4; and Michael K. Lindell, Carla Prater, and Ronald W. Perry, *Introduction to Emergency Management* (Hoboken, NJ: John Wiley & Sons, 2007), 10–13. Businesses now perform roles in all phases of the emergency management cycle—mitigation, preparedness, response, and recovery. See also Anita Chandra, Shaela Moen, and Clarissa Sellers, *What Role Does the Private Sector Have in Supporting Disaster Recovery, and What Challenges Does It Face in Doing So?* (Santa Monica, CA: Rand, 2016), 5–7, <https://doi.org/10.7249/PE187>.

¹⁶ "Emergency Management: Definition, Vision, Mission, Principles," FEMA, accessed 6 December 2017.

INTRODUCTION

natural, human-caused, or technological events that result in a substantial number of fatalities, extensive property damage, injuries, and environmental damage, frequently triggering requests for outside assistance.¹⁷ In the United States, emergency-management offices exist at the local, state, and federal levels of government.¹⁸ Today, public-private sector partnerships for emergency management are also present at each of these levels of government.¹⁹ Moreover, nonprofits, civic groups, and individual citizens cooperate and collaborate to help communities manage the effects of large-scale emergencies.²⁰ Each of these actors plays important roles in emergency management.²¹ This book, however, focuses on state-level, public-private sector partnerships for emergency manage-

¹⁷ "Glossary of Terms," in *Guide for All-Hazard Emergency Operations Planning, State and Local Guide (SLG) 101* (Washington, DC: FEMA, 1996), GLO-2; and *Catastrophic Incident Annex to the National Response Framework* (Washington, DC: FEMA, 2008), CAT-1.

¹⁸ For example, see *Governor's Office of Emergency Services Public/Private Partnership Initiative* (Mather, CA: Governor's Office of Emergency Services, n.d.); "FEMA Continues to Support Response to Colorado Flooding," FEMA, 15 September 2013; and "Take Action to Protect Your Business," New York City Office of Emergency Management, 2015, accessed 29 March 2017.

¹⁹ Ami J. Abou-bakr, *Managing Disasters through Public-Private Partnerships* (Washington, DC: Georgetown University Press, 2013), 50–52; *Governor's Office of Emergency Services Public/Private Partnership Initiative*, 2; and "Take Action to Protect Your Business."

²⁰ Naim Kapucu, "Collaborative Emergency Management: Better Community Organizing, Better Public Preparedness and Response," *Disasters* 32, no. 2 (June 2008): 247, <https://doi.org/10.1111/j.1467-7717.2008.01037.x>.

²¹ Kapucu, "Collaborative Emergency Management," 249–56.

INTRODUCTION

ment, or disaster-oriented PPPs.²² For the sake of variety in this book, related terms are also used to signify disaster-oriented PPPs. These terms include, but are not limited to, disaster partnerships, interorganizational partnerships, emergency-management accords, and collaborations for disaster management. Readers should assume that the author means disaster-oriented PPP when these alternative formulations are used, unless stated otherwise.

What Are Disaster-Oriented PPPs?

Disaster-oriented PPPs in this book refer to deliberate, purposeful collaboration between at least one state agency and one profit-seeking private sector entity or nonprofit organization for emergency-management purposes. Disaster-oriented PPPs can include a wide range of collaborative public-private sector activities. As Stephen Goldsmith and William D. Eggers have shown, these partnerships can include service contract partnerships in which governments use contracts to obtain goods or services from firms in exchange for payment; supply chain partnerships, in which one or more firms contribute goods or services in the creation of a complex product, such as a computer server; ad hoc partnerships, which form in response to a particular situation, such as a sudden flood or hurricane; channel partnerships, where companies carry out certain transactions on

²² Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 1. "Disaster-oriented PPPs" is Abou-bakr's formulation.

behalf of government entities; information dissemination partnerships, such as through a shared online information portal containing data provided by both government and private sector entities; and civic switchboard partnerships, where government or private sector bodies use their connections to link third parties with one another, much like telephone operators once used wires and plugs to connect calls in the past.²³

One popular form of collaboration that is beyond the scope of this book is the Emergency Management Assistance Compact (EMAC). The EMAC is a mechanism that permits states to request and receive mutual aid and legal protections in the event of disasters. EMACs are administered by state governors through their respective emergency-management agencies. While there is no doubt that EMACs play vital roles in emergency management, the focus of the present book is primarily on agreements between governments and nongovernmental entities such as firms and nonprofits. Since EMACs, by contrast, focus on state-to-state cooperation, this book does not offer a deeper examination.

The definition of *disaster partnerships* used in this book also excludes independent public or private initiatives for emergency management as well

²³ Stephen Goldsmith and William D. Eggers, *Governing by Network: The New Shape of the Public Sector* (Washington, DC: Brookings Institution Press, 2004), 69–70; and E. S. Savas, *Privatization and Public-Private Partnerships* (New York: Chatham House Publishers, 2000), 88–89.

as what has been called parallel play—that is, when agencies work alongside one another to achieve a common objective but without coordinating their respective actions.²⁴ However, the definition incorporates the activities of nonprofit entities such as the American Red Cross or Salvation Army.²⁵ The reason for the inclusion of nonprofit organizations here is that these organizations often partner with state government agencies and firms simultaneously for disaster-management purposes, making it difficult to disentangle nonprofits' disaster-management work from that of their profit-seeking corporate partners, at least in the context of state-level emergency-management practices. And as will be shown in chapters 3 through 6, nonprofit entities act frequently as trusted agents for firms that wish to participate in disaster-management activities with state government agencies.

Why State-Level Partnerships?

Disaster Labs builds directly on research the author conducted with Nathan E. Busch for his last book, *The*

²⁴ Scott E. Robinson and Benjamin S. Gaddis, "Seeing Past Parallel Play: Measures of Collaboration in Disaster Situations," *Policy Studies Journal* 40, no. 2 (May 2012): 260, <https://doi.org/10.1111/j.1541-0072.2012.00452.x>.

²⁵ Previous studies have examined the role of public-nonprofit partnerships for emergency management in depth. For example, see Naim Kapucu, "Public-Nonprofit Partnerships for Collective Action in Dynamic Contexts of Emergencies," *Public Administration* 84, no. 1 (March 2006): 216–17; and Naim Kapucu, "Non-profit Response to Catastrophic Disasters," *Disaster Prevention and Management* 16, no. 4 (2007): 555–58, <https://doi.org/10.1108/09653560710817039>.

Business of Counterterrorism: Public-Private Partnerships in Homeland Security, which included a chapter on the interactions between firms and government agencies in the disaster-management field.²⁶ As the author wrote *The Business of Counterterrorism*, he began to wonder whether state governments, as opposed to the federal government, were experiencing a similar movement to grow public-private sector partnerships for disaster-management purposes. The desire to learn more about how state governments managed disasters was the genesis of *Disaster Labs*.

At first, the author assumed that states were already partnering with firms for disaster-management purposes and that this organizational behavior was being driven by federal-level leadership, such as within the Federal Emergency Management Agency (FEMA). However, that assumption proved to be incorrect.

After interviewing state government, business, and nonprofit leaders for *Disaster Labs*, it became clear that it was, in fact, the federal government that followed the lead of state governments in advancing public-private sector partnerships for disaster management. Put another way, the tail (i.e., state governments) was wagging the dog (i.e., the feder-

²⁶ Nathan E. Busch and Austen D. Givens, *The Business of Counterterrorism: Public-Private Partnerships in Homeland Security* (New York: Peter Lang, 2014).

al government). That realization helped shape this book's two central arguments.

First, public-private partnerships for emergency management provide essential support for state-level disaster management across the United States. These partnerships are innovative, messy, productive, and unique. They sometimes fall apart. But what is striking about these partnerships—and what continues to be a point of fascination now—is that they are conceptualized, planned, and managed by state governments, firms, and nonprofits with virtually no direction or support from the federal government. Emergency managers in state capitals are not waiting around for federal policy makers to tell them to create disaster collaborations. They cannot afford to. The stakes are too high, and the costs of inaction too great.

For an era in which federal government influence seems to loom in virtually every area of societal endeavor—business, education, health care, technology, and so on—disaster partnerships stand out as an anomaly. These agreements are a bottom-up, grassroots public policy solution for communities struggling to respond to and recover from large-scale emergencies.²⁷ The author believes that these examples of public-private coordination also reflect Amer-

²⁷ David Colander and Roland Kupers, *Complexity and the Art of Public Policy: Solving Society's Problems from the Bottom Up* (Princeton, NJ: Princeton University Press, 2014), 35–36.

ican communities at their best, because they can combine the efforts of government agencies, businesses, and nonprofit organizations to aid disaster survivors in desperate circumstances.

These observations lead to the second argument in this book: that state governments should be left to develop their own public-private partnerships without federal interference. There is a tendency within the emergency-management profession to standardize practices and procedures, and this standardization is almost always driven by the federal government. At times, this tendency can be helpful. For example, in the wake of the 11 September 2001 (9/11) terrorist attacks, emergency officials recognized the need to establish a universal management system for large-scale emergencies involving multiple jurisdictions and organizations. The purpose of such a system is to avoid the coordination problems evident during the emergency responses to the 9/11 terrorist attacks, most notably in New York City. With this in mind, the U.S. Department of Homeland Security developed the National Incident Management System (NIMS)—a standardized emergency-management method that has now been widely adopted by governments at all levels in the United States.²⁸

However, the federally driven standardization of emergency-management practices can have unde-

²⁸ Charles R. Wise, "Organizing for Homeland Security after Katrina: Is Adaptive Management What's Missing?," *Public Administration Review* 66, no. 3 (May–June 2006): 307, <https://doi.org/10.1111/j.1540-6210.2006.00587.x>.

sired consequences too. For example, the successful use of NIMS depends heavily on pre-incident planning. If emergencies occur that fall outside the scope of these emergency plans, then reliance on NIMS can lead to inflexible response actions.²⁹ And while NIMS is a helpful framework for coordinating emergency response actions among multiple organizations, the ability to clearly tackle value-based trade-offs among those organizations during disasters is less transparent.³⁰

Consider the following hypothetical example. Let us suppose that a large wildfire in California threatens to burn two essentially identical communities at the same time. How do first responders with limited resources choose which community to protect first? NIMS offers us no clear answer. Responders instead must look to local values and circumstances to make well-informed emergency response decisions.³¹ This hypothetical example underlines why it is so crucial for the federal government to leave state governments to manage their own partnerships as they like. The states know best what works well for them.

But there are also practical reasons to study how state governments, firms, and nonprofits work together to deal with the effects of disasters. These

²⁹ Rui Chen et al., "Coordination in Emergency Response Management," *Communications of the ACM* 51, no. 5 (May 2008): 70, <https://doi.org/10.1145/1342327.1342340>.

³⁰ Dutch Leonard and Arnold Howitt, "A Command System for All Agencies?," *Crisis Response Journal* 1, no. 2 (June 2005): 42.

³¹ Colander and Kupers, *Complexity and the Art of Public Policy*, 36.

interorganizational partnerships for emergency management can have far-reaching effects. For example, to reduce the exposure and vulnerability of local communities to natural and man-made disasters, state government leaders can carry out systematic risk assessments. These risk assessments may be conducted by firms that state governments retain on contract, especially when state governments lack the personnel or expertise to carry them out.³² The results of these assessments may lead to more stringent local building codes and rezoning property in disaster-prone areas, which can ultimately save lives and property.

Moreover, state government agencies and businesses can collaborate to develop statewide evacuation plans. If a particular state region is then affected by a disaster, residents in that region can evacuate to another safe region en masse.³³ Once these residents evacuate, state governments may open state-managed emergency shelters for evacuees until the emergency ends. These evacuees will usually require food, water, and basic hygiene supplies for the duration of their stay in the shelter. State government agencies can obtain food, water, and hygiene sup-

³² For example, see the Risk and Strategic Management Corporation, accessed 29 March 2017.

³³ *State Governments and Community Disaster Recovery* (Washington, DC: U.S. Chamber Foundation, n.d.), 15. Developing local plans to reduce the risks of disasters requiring mass evacuations are also a global goal. See *Sendai Framework for Disaster risk Reduction, 2015–2030* (New York: United Nations, n.d.), 12.

plies for evacuees from firms through cash payments and charitable donations.³⁴

Disaster response collaborations can also be critical in post-disaster recovery efforts and help mitigate the effects of future disasters. After a disaster, state governments can work with private insurance companies to help ensure the availability of insurance payments to disaster survivors.³⁵ State agencies can encourage local governments to write locally focused disaster recovery plans, and those recovery plans can include roles for businesses. When firms sell goods and services after disasters, their engagement in business transactions with residents can deliver a helpful short-term boost to local economies that may have slowed because of the disaster's impact.³⁶ State agencies and firms can collaborate to rebuild damaged state infrastructure such as bridges and tunnels. Additionally, states can accelerate building permit and licensing processes, which allow construction firms to begin repair work quickly.³⁷

State governments can even serve as incubators for new emergency-management practices that encourage further collaboration between state agencies and businesses. For example, after the 9/11 terrorist attacks, the federal government elevated the Incident Command System (ICS)—an emergency

³⁴ *State Governments and Community Disaster Recovery*, 15.

³⁵ *State Governments and Community Disaster Recovery*, 16.

³⁶ *State Governments and Community Disaster Recovery*, 3.

³⁷ *State Governments and Community Disaster Recovery*, 20–21.

response methodology first developed in California—to the nationwide emergency-management method and made it the conceptual cornerstone of NIMS.³⁸ Since the federal government has now mandated the use of ICS for large-scale emergencies throughout the United States, what was once a California-specific emergency-management practice now affects all 50 U.S. states, territories, and insular areas by providing a means for government agencies and firms to integrate their operations during disaster responses.³⁹

California is one of several states that have embraced disaster partnerships. The next section outlines the specific methods used to explore these agreements in this study.

General Methodology Used for This Study

This book presents a qualitative study based on elite interviews with senior government, business, and nonprofit leaders in four U.S. states: California, Flor-

³⁸ Dick A. Buck, Joseph E. Trainor, and Benigno E. Aguirre, "A Critical Evaluation of the Incident Command System and NIMS," *Journal of Homeland Security and Emergency Management* 3, no. 3, (September 2006): 1, <https://doi.org/10.2202/1547-7355.1252>; and *National Incident Management System* (Washington, DC: U.S. Department of Homeland Security, 2008), 45.

³⁹ George W. Bush, *Homeland Security Presidential Directive/HSPD-5—Management of Domestic Incidents* (Washington, DC: Government Printing Office, 2003), 231–32; and *National Incident Management System* (Washington, DC: U.S. Department of Homeland Security, 2017), 3n5.

ida, New York, and Virginia.⁴⁰ The leaders interviewed for this study are in an excellent position to describe how these partnerships function, to recount examples of how these partnerships have (or have not) met expectations, and to provide the data necessary for deeper analyses.⁴¹

Data collected from these interviews was analyzed in tandem with other primary and secondary source material. Searches were conducted for articles about disaster partnerships published by the Congressional Research Service, the U.S. Government Accountability Office, the U.S. Department of Homeland Security, the National Governors Association, industry trade associations, and government agencies in the four states.

News accounts about disaster response coordination from national periodicals such as the *New York Times* and the *Washington Post*, as well as state periodicals such as the *Sacramento Bee* (California), the *Miami Herald* (Florida), the *Albany Times-Union* (New York), and the *Richmond Times-Dispatch* (Virginia) were also searched. While this study is primarily based on data provided by the interviewees, these secondary sources were also valuable in that they added greater context and meaning to the informa-

⁴⁰ Lewis Anthony Dexter, *Elite and Specialized Interviewing* (Evanston, IL: Northwestern University Press, 1970), 5.

⁴¹ Dexter, *Elite and Specialized Interviewing*, 5–6.

tion that surfaced during the interviews conducted.⁴²

The initial interviewees in this study were selected based on the author's own prior experience working in the fields of U.S. homeland security and emergency management as a practitioner and researcher between 2005 and 2011. The interviewees were chosen for their seniority within their respective organizations as well as for their work in these partnerships. Referrals from these public sector officials were then used to identify additional interviewees within other state government agencies and private firms. The process also worked in the opposite direction; in some cases, referrals obtained from private sector officials were used to arrange interviews with public sector employees.

To increase the reliability and validity of this study, the researcher also sought out opponents and skeptics of partnerships in the four states.⁴³ Government and private sector officials may oppose these partnerships because they see these collaborations as opportunistic and exploitative of vulnerable populations, an example of war profiteering that unfairly takes advantage of extreme circumstances, a

⁴² This is a form of data triangulation. See Bruce A. Chadwick, Howard M. Bahr, and Stan L. Albrecht, *Social Science Research Methods* (Englewood Cliffs, NJ: Prentice Hall, 1984), 40; and Steven J. Taylor and Robert Bogdan, *Introduction to Qualitative Research Methods: The Search for Meanings*, 2d ed. (New York: John Wiley & Sons, 1984), 80–82.

⁴³ Chadwick, Bahr, and Albrecht, *Social Science Research Methods*, 40–41; and Taylor and Bogdan, *Introduction to Qualitative Research Methods*, 7–8.

INTRODUCTION

hindrance to transparent and effective governance, a drain on tax revenue, or an obstacle to organizational efficiency and effectiveness.⁴⁴ This list of potential reasons to oppose disaster partnerships is not exhaustive, but these may be valid observations that merit further investigation. These opposing perspectives are valuable for this study, because while emergency-management collaborations offer a host of benefits for governments and businesses, they also introduce a range of challenges for the public and private sectors.

Most interviews were conducted via telephone or online videoconferencing. In an effort to encourage candid responses from the interviewees, the interviews were not recorded. Instead, the author took detailed written notes, then transcribed these notes for recordkeeping and analysis purposes. The next section introduces the four cases that will be evaluated in this book and offers an initial glimpse of how these states leverage partnership agreements for disaster-management purposes.

The Four Cases

Sometimes dubbed the “laboratories” of American democracy, state governments are often testing grounds for creative policies designed to reduce the effects of large-scale emergencies. The four cases

⁴⁴ Criticisms of private sector engagement in emergency management include Vincanne Adams, *Markets of Sorrow, Labors of Faith: New Orleans in the Wake of Katrina* (Durham, NC: Duke University Press, 2013), 4–7.

that are explored in this book were chosen to provide a representative sample of state governments engaged in disaster partnerships in the United States.⁴⁵ The cases were selected specifically because they represent different geographic regions of the United States, experience different and overlapping hazards each year, are known for a range of industries, and vary in their population sizes and population densities. This mixture of characteristics means that the four cases serve as a reasonable proxy for state-level emergency-management partnerships nationwide.⁴⁶ Table 0.1 provides a brief profile of each state.

The first state, California, has taken several steps to develop these partnerships. For example, in September 2005, Governor Arnold Schwarzenegger signed California Senate Bill 546, which expanded the authority of the California Governor's Office of Emergency Services (CalOES) to partner with businesses.⁴⁷ The bill included language that encourages

⁴⁵ Examples of states that use disaster partnerships but are beyond the scope of this book are Louisiana, Washington State, Colorado, Iowa, and Missouri. See Ramesh Kolluru, *Compendium of Public-Private Partnerships for Emergency Management* (Lafayette: NIMSAT Institute, University of Louisiana at Lafayette, 2012), 38–45.

⁴⁶ Purposive sampling is common in disaster research, for example, Fran H. Norris, "Disaster Research Methods: Past Progress and Future Directions," *Journal of Traumatic Stress* 19, no. 2 (April 2006): 176, <https://doi.org/10.1002/jts.20109>; and Thomas R. Dye, "Executive Power and Public Policy in the States," *Western Political Quarterly* 22, no. 4 (December 1969): 928, <https://doi.org/10.1177/106591296902200414>.

⁴⁷ *Business and Utility Operations Center (BUOC) Administrative Policy—December 2016* (Mather: California Governor's Office of Emergency Services, 2016), 7–8.

INTRODUCTION

Table 0.1: Overview of states examined in *Disaster Labs*

State	Region	Examples of hazards faced by state	Examples of state industries	State population (millions)	State population density (approximations)
California	West	earthquakes, fires, and floods	agriculture, technology, and television/film production	39.5	239 people per square mile
Florida	Southeast	hurricanes, nuclear incidents, and floods	agriculture, international trade, space research/exploration	21.4	350 people per square mile
New York	Northeast	hurricanes, winter weather, and terrorism	construction, finance, and health care	19.4	411 people per square mile
Virginia	Mid-Atlantic	floods, hurricanes, and tornadoes	data centers, plastics, and food processing	8.5	202 people per square mile

Source: State-level population data are taken from "QuickFacts," U.S. Census Bureau, accessed 23 February 2019.

sharing technology, outreach to firms, and protection for business proprietary information that may be shared by businesses with the state.⁴⁸ Schwarzenegger also signed *Executive Order S-04-06*, which provided further authority to the director of the California Governor's Office of Emergency Services (CalOES) to secure advance agreements with businesses for resources that may be needed during disasters.⁴⁹ Senate Bill 546 and *Executive Order S-04-06* sent a powerful signal that California makes partnering with businesses and nonprofits a public policy priority.

California has transformed emergency-management collaborations from a theoretical aspiration into an operational reality. CalOES established a Business and Utility Operations Center (BUOC), an umbrella group that links private sector officials with state government officials during crises.⁵⁰ The BUOC connects the state with numerous large, well-known firms, including Lowe's, Home Depot, Walmart, Target, Bank of America, Gap, UPS, and Wells Fargo.⁵¹ During a disaster, the state can activate the BUOC and request that a BUOC representative report to the state's operations center or regional emergency op-

⁴⁸ *Business and Utility Operations Center (BUOC) Administrative Policy*, 7–8.

⁴⁹ Office of the Governor of the State of California, *Executive Order S-04-06*, 2006, 1–2.

⁵⁰ "State Partnership—California Emergency Management Agency," FEMA, accessed 26 February 2014.

⁵¹ "State Partnership"; and "Business & Utility Operations Center," California Office of Emergency Services, accessed 30 October 2019.

erations centers.⁵² The BUOC representative serves as a liaison between state officials and the firms that comprise the BUOC.⁵³ In this way, if the state needs private sector goods or services, it can route requests for those goods and services through the BUOC representative.⁵⁴ The BUOC provides an excellent example of how California uses these agreements today.

Florida, the second state, also employs emergency-management partnerships. The former head of the Florida Division of Emergency Management (FDEM), W. Craig Fugate, was long a vocal advocate for these interorganizational collaborations, suggesting that there is high-level support within the state government for them.⁵⁵ The state also hosts a number of prominent conferences each year that address these public-private partnerships, further underlining that the state embraces the concept of working with firms.⁵⁶ These examples suggest that the state offers a potentially illustrative case study.

The third state, New York, has also taken steps to develop these partnerships. For example, New York law contains specific provisions that require the state Office of Counter Terrorism (OCT) to work with firms to conduct vulnerability assessments of criti-

⁵² "State Partnership," 2.

⁵³ "State Partnership," 2.

⁵⁴ "State Partnership," 2.

⁵⁵ Abby Brownback, "Florida's Former Manager of Natural Disasters Took His Training National," *Tampa Bay (FL) Times*, 26 March 2011.

⁵⁶ Governor's Hurricane Conference, accessed 30 October 2019; and "Save the Date: 2015 Public-Private Partnership Summit," Florida Association of Counties, accessed 30 October 2019.

cal infrastructure.⁵⁷ These vulnerability assessments evaluate potential weak points in critical infrastructure components, such as bridges, hospitals, and water treatment facilities.⁵⁸ The goal of the assessments is to reduce these vulnerabilities, which in turn can help avoid disruption or destruction of critical infrastructure, whether by man-made (e.g., terrorism) or natural hazards (e.g., hurricanes).⁵⁹ Cooperation between emergency managers and private sector officials is integral to this process of vulnerability assessment and protection.⁶⁰ Other recent examples of partnerships in New York State include efforts to rebuild damaged infrastructure after Hurricane Sandy (2012) and support affected businesses after Hurricane Irene (2011).⁶¹

Virginia, the fourth state, has used emergency-management partnerships for several years. The Virginia Department of Emergency Management (VDEM) has a dedicated private sector liaison officer who is charged with cultivating relationships with businesses for emergency-management pur-

⁵⁷ 2012 New York Consolidated Laws: Executive Article 26—(70–9718), Division of Homeland Security and Emergency Services, NY Exec L § 709 (2012).

⁵⁸ “Critical Infrastructure Protection Unit,” New York State Office of Counter Terrorism, accessed 29 March 2017.

⁵⁹ “Critical Infrastructure Protection Unit.”

⁶⁰ “Critical Infrastructure Protection Unit.”

⁶¹ Klopott, “Cuomo Aims to Speed New York Sandy Recovery with Private Funding”; and *New York State Responds: Hurricane Irene and Tropical Storm Lee: One Year Later* (Albany, NY: New York State, 2012), 7, 9.

poses.⁶² Similar to New York State's emphasis on developing connections with critical infrastructure sectors, VDEM also prioritizes building connections with these sectors, including energy providers, transportation companies, and commercial facilities.⁶³ To date, these interorganizational agreements have helped VDEM make arrangements for post-disaster clean-up and recovery operations, among other activities.⁶⁴ California, Florida, New York, and Virginia each provide a unique perspective on and approach to state-level partnerships for disaster management.

Questions and Context

Disaster Labs asks two central questions. First, how do interorganizational partnerships influence state-level emergency-management practices in California, Florida, New York, and Virginia today? In seeking to answer this question, this book develops new understandings of these partnerships in the United States.

Second, the book asks whether a particular analytical framework, described later in this chapter, is viable as a tool to assess these partnerships, particularly when they are executed at the state level of government. The book's response to this second

⁶² "Private Sector Liaison Program," Virginia Department of Emergency Management, 2.

⁶³ "Private Sector Liaison Program," 3.

⁶⁴ "Commonwealth of Virginia Standard Contract: Contract Number 127-11-0001," Virginia Department of Emergency Management, accessed 31 October 2019.

question contributes to growing lines of research on interorganizational collaboration for emergency-management purposes and interorganizational collaboration in general.

Government partnerships are now a major force in emergency management that can improve societal resilience by helping the public sector attend better to citizens' needs before, during, and after disasters. For example, in *Managing Disasters through Public-Private Partnerships*, Ami J. Abou-bakr suggests that disaster partnerships may prove helpful for state-level emergency-management practices and societal resilience by providing the same kinds of benefits that federal emergency-management partnerships confer.⁶⁵

A related book, *Seeds of Disaster, Roots of Response: How Private Action Can Reduce Public Vulnerability*, discusses the significant role of businesses in critical infrastructure protection activities, such as in securing computer networks and preparing for public health crises.⁶⁶ Critical infrastructure protection is not the focus of the present study; however, *Seeds of Disaster* is nevertheless valuable, for it highlights the essential nature of public-private sector collaboration in the post-9/11 era, and this cross-sector collaboration is a central theme of this book.

⁶⁵ See generally Abou-bakr, *Managing Disasters through Public-Private Partnerships*.

⁶⁶ Philip E. Auerwald et al., eds., *Seeds of Disaster, Roots of Response: How Private Action Can Reduce Public Vulnerability* (New York: Cambridge University Press, 2006).

Other scholars have explored the nature of public sector partnerships in emergency management, but they do not approach the level of depth and sustained emphasis on PPPs that Abou-bakr or *Seeds of Disaster* achieve. For example, a few researchers have looked at the utility of government-private sector insurance schemes for disaster survivors and using PPPs as tools to improve the resilience of critical infrastructure.⁶⁷ Still others have characterized the rise of public sector partnerships for emergency management as both a necessary and inevitable development to enhance resilience.⁶⁸

Related research has explored how best to structure these PPPs. Emergency-management agreements need to be designed in ways that provide incentives for public and private sector actors if they

⁶⁷ Joanne Linnerooth-Bayer and Reinhard Mechler, "Disaster Safety Nets for Developing Countries: Extending Public-Private Partnerships," *Environmental Hazards* 7, no. 1 (2007): 56, 58, <https://doi.org/10.1016/j.envhaz.2007.04.004>; and Geoffrey T. Stewart, Ramesh Koluru, and Mark Smith, "Leveraging Public-Private Partnerships to Improve Community Resilience in Times of Disaster," *International Journal of Physical Distribution and Logistics Management* 39, no. 5 (2009): 350, <https://doi.org/10.1108/09600030910973724>.

⁶⁸ For example, Beth Gazley, "Building Collaborative Capacity for Disaster Resiliency," in *Disaster Resiliency: Interdisciplinary Perspectives*, ed. Naim Kapucu, Christopher V. Hawkins, and Fernando I. Rivera (New York: Routledge, 2013), 89, <https://doi.org/10.4324/9780203102459>; Kapucu, "Public-Nonprofit Partnerships for Collective Action in Dynamic Contexts of Emergencies," 217; and Naim Kapucu and Montgomery Van Wart, "The Evolving Role of the Public Sector in Managing Catastrophic Disasters: Lessons Learned," *Administration and Society* 38, no. 3 (2006): 303, <https://doi.org/10.1177/0095399706289718>.

are to be useful.⁶⁹ Perhaps the most rigid example of this structure is the business contract. In this book, *business contracts* refer specifically to formal documents in which state emergency-management agencies agree to pay firms for products or services.⁷⁰

These partnerships can be structured in ways that deliver nonmonetary incentives, as well. These agreements may foster a shared sense of responsibility to communities.⁷¹ Leaders of public and private sector entities may recognize the importance of this interdependence, and this recognition can incentivize them to work for the good of the partnership, as well as the community at large.

Despite the importance of building incentives into the structure of these partnerships, to date there has not been a study that closely examines the mixture of incentives used in these emergency-management agreements at the state level. *Disaster Labs* addresses this need by comparing a range of state emergency-management partnerships, identifying their structures, and exploring the key variables within them. This new knowledge expands under-

⁶⁹ Nathan E. Busch and Austen D. Givens, "Achieving Resilience in Disaster Management: The Role of Public-Private Partnerships," *Journal of Strategic Security* 6, no. 2 (Summer 2013): 10, <http://dx.doi.org/10.5038/1944-0472.6.2.1>.

⁷⁰ Stewart, Kolluru, and Smith, "Leveraging Public-Private Partnerships," 346. This definition follows Stewart, Kolluru, and Smith's chosen definition for contracts.

⁷¹ Peter J. May and Chris Koski, "Addressing Public Risks: Extreme Events and Critical Infrastructures," *Review of Policy Research* 30, no. 2 (March 2013): 151, <https://doi.org/10.1111/ropr.12012>.

standing of how incentives can improve PPPs. Moreover, these insights add to previous scholarship that examines how the structure of these partnerships can be a critical determinant of their long-term viability.⁷²

While state-level emergency-management partnerships may hold great promise, they also introduce a range of potential public policy challenges. For example, state involvement in private homeowner insurance—one type of agreement that is especially relevant after disasters—can lead to situations in which homeowners take risks that they would not otherwise take precisely because they are insured.⁷³ If homeowners take unnecessary risks because they are insured, then experience damage to their homes, governments that partly subsidize homeowner insurance policies must pay out insurance benefits to those homeowners. That can drain government coffers quickly.

Other challenges can result from these partnerships too. If a state business partner blunders during a disaster, it can be difficult to pin responsibility for the mistake entirely on the partner, since state officials decided to enter into the partnership, and there-

⁷² Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 191.

⁷³ Linnerooth-Bayer and Mechler, “Disaster Safety Nets for Developing Countries,” 58. It is also the case that local zoning decisions to permit building in hazardous areas can contribute to property losses during disasters. Since these zoning decisions are municipal matters, rather than state-level affairs, they are not addressed in depth here.

fore share some degree of accountability with the partner.⁷⁴ But when accountability is shared, fixing problems with the partnership can be more difficult than if accountability for the mistake rests solely on a single business or state agency. Overreliance on contractors can also lead to a “hollowing out” effect in which long-term state capacity to perform certain functions erodes.⁷⁵ If the state’s ability to perform diminishes, this can feed a cycle of government dependence on contractors in the long run.

There is also a body of literature on disasters and emergency management that omits discussions of these partnerships. It is worth highlighting two of these works in particular, because while they are quite broad treatments of emergency management, they do not address these partnerships at all. This absence illustrates the degree to which these agreements remain underexamined by scholars, and underscores the contribution that *Disaster Labs* makes.

The edited volume *Emergency Management: The American Experience, 1900–2010* surveys the federal government’s role in emergency management exclusively, and at most includes scattered discussions of businesses during disasters, but without any explicit reference to partnerships between businesses

⁷⁴ Busch and Givens, “Achieving Resilience in Disaster Management,” 15.

⁷⁵ Busch and Givens, “Achieving Resilience in Disaster Management,” 15–16.

and government agencies.⁷⁶ For example, Richard T. Sylves mentions two professional baseball teams—both independent business franchises—in a wider discussion of the 1989 Loma Prieta earthquake in California, because the temblor interrupted game three of the 1989 World Series, baseball’s annual best-of-seven-games championship.⁷⁷ In the same volume, John R. Harrald examines BP’s role in the context of the *Deepwater Horizon* oil spill in the Gulf of Mexico, including the awkward tension between politicians, first responders, and business officials during the incident.⁷⁸ However, apart from these few mentions of businesses in emergency management, this book does not include discussion of emergency-management partnerships.

A second wide-ranging work that omits discussion of disaster partnerships is Thomas A. Birkland’s *Lessons of Disaster: Policy Change after Catastrophic Events*, which examines how potential “focusing events” can advance policy change.⁷⁹ Notable failures

⁷⁶ Claire B. Rubin, ed., *Emergency Management: The American Experience, 1900–2010*, 2d ed. (Boca Raton, FL: CRC Press, 2012).

⁷⁷ Richard T. Sylves, “Federal Emergency Management Comes of Age: 1979–2001,” in *Emergency Management*, 146.

⁷⁸ John R. Harrald, “The System Is Tested: Response to the BP *Deepwater Horizon* Oil Spill,” in *Emergency Management*, 224–25.

⁷⁹ Thomas A. Birkland, *Lessons of Disaster: Policy Change after Catastrophic Events* (Washington, DC: Georgetown University Press, 2006), 2. *Focusing events* refer to sudden, harmful events that attract policy maker attention and can lead to policy changes. See also Thomas A. Birkland, *After Disaster: Agenda Setting, Public Policy, and Focusing Events* (Washington, DC: Georgetown University Press, 1997), 3.

INTRODUCTION

in disaster responses shape public policy agendas and can prompt policy makers to reform emergency-management practices. For example, Birkland notes that state agencies in Florida have learned a great deal about how to respond to hurricanes over the years because that state has been hit repeatedly by hurricanes.⁸⁰ This cumulative learning has sparked state-level policy changes that seek to mitigate the damage hurricanes cause.⁸¹ One possible consequence of this cumulative state-level learning is the development of disaster PPPs. Indeed, Florida has recently embraced interorganizational agreements as a tool to enhance emergency management and resilience, and this book explores the case of Florida in depth.⁸² Yet, Birkland's work neither addresses disaster partnerships in Florida, nor in any other context.

That sweeping works such as *Emergency Management* and *Lessons of Disaster* exclude discussion of these agreements means significant questions remain about how partnerships shape emergency-management practices. *Disaster Labs* contributes to this discussion by showing how these partnerships fit into the recent history of emergency management in the United States and advancing understanding of

⁸⁰ Birkland, *Lessons of Disaster*, 139.

⁸¹ Birkland, *Lessons of Disaster*, 140–46.

⁸² For example, see “Public Private Partnership Case Study: Digital Billboards Deliver Emergency Messages,” Florida Division of Emergency Management, accessed 15 February 2014.

how they can form as a result of post-focusing event policy learning.

This book also contributes to broader theoretical literature on public sector collaboration. For meaningful public sector collaboration to occur, there are certain preconditions that must be met by prospective collaborators. Dialogue among potential partners and a confluence of organizational interests are baseline requirements for collaboration to begin.⁸³ In the case of emergency-management partnerships, those interests can include improving service delivery (a public sector motivation) or securing government contracts (a private sector motivation).⁸⁴ There must also be trust among the partners—absent trust, the partners cannot be certain that they will be unharmed by the outcome of the partnership, and

⁸³ Judith E. Innes and David E. Booher, "Collaborative Policymaking: Governance through Dialogue," in *Deliberative Policy Analysis: Understanding Governance in the Network Society*, ed. Maarten A. Hajer and Hendrik Wagenaar (Cambridge, UK: Cambridge University Press, 2003), 40, <https://doi.org/10.1017/CBO9780511490934.003>; and Anne Marie Thomson, James L. Perry, and Theodore K. Miller, "Conceptualizing and Measuring Collaboration," *Journal of Public Administration Research and Theory* 19, no. 1 (January 2009): 27, <https://doi.org/10.1093/jopart/mum036>.

⁸⁴ Ken Coghill and Dennis Woodward, "Political Issues of Public-Private Partnerships," in *The Challenge of Public-Private Partnerships: Learning from International Experience*, ed. Graeme A. Hodge and Carsten Greve (Northampton, MA: Edward Elgar Publishing, 2005), 88; and Jocelyn M. Johnston and Barbara S. Romzek, "Traditional Contracts as Partnerships: Effective Accountability in Social Services Contracts in the American States," in *The Challenge of Public-Private Partnerships*, 118.

this uncertainty can block collaboration.⁸⁵ However, even a mutual desire to partner does not necessarily mean that the parties are able to partner or make significant contributions in partnership.⁸⁶ For state-level partnerships to form, there must also be dialogue, shared interests, mutual trust, and a capacity or ability to partner.

Public sector partnerships are subject to a variety of tensions that can impact both the individual actors in the partnerships and the partnerships as a whole. In the context of a partnership, there is a natural tendency for organizations to return to working independently; at the same time, however, there is a competing tension that pulls organizations together toward working in partnership.⁸⁷ Moreover, there are underlying motivational tensions that can tug at public and private sector partners. Businesses are set up to make money; government agencies exist to serve the public interest. The presence of a profit motive in the private sector can be a source of frustration for public sector officials who view emergency manage-

⁸⁵ Erik-Hans Klijn and Geert R. Teisman, "Governing Public-Private Partnerships: Analysing and Managing the Processes and Institutional Characteristics of Public-Private Partnerships," in *Public-Private Partnerships: Theory and Practice in International Perspective*, ed. Stephen P. Osborne (London: Routledge, 2000), 92.

⁸⁶ Ronald W. McQuaid, "The Theory of Partnership: Why Have Partnerships?," in *Public-Private Partnerships*, 29.

⁸⁷ Angel Saz-Carranza and Sonia M. Ospina, "The Behavioral Dimension of Governing Interorganizational Goal-Directed Networks —Managing the Unity-Diversity Tension," *Journal of Public Administration Research and Theory* 21, no. 2 (April 2011): 356–57, <https://doi.org/10.1093/jopart/muq050>.

ment as a matter of purely serving the public interest.⁸⁸

It is worth pointing out here that significant disagreement exists among scholars about what a true public sector “partnership” is.⁸⁹ The notion of a partnership is closely linked to the ideas of collaboration and networks, and in this book, partnerships require purposeful steps toward collaboration, rather than a coincidental convergence of effort among organizations.⁹⁰ As Robert Agranoff puts it:

[N]etwork activity goes beyond serendipitous interactions to incorporate this variety of regular and purposive interorganizational contacts. Network activity is thus a variant of collaboration.⁹¹

At the same time, however, the boundaries of the activities that do or do not constitute collaboration can be blurry.⁹² This book contributes to these lines of inquiry by examining specific types of public sector partnerships, exploring the level of collaboration present within them, as well as assessing the effectiveness of this collaboration.

⁸⁸ For examples of how the profit motive can complicate PPPs, see Savas, *Privatization and Public-Private Partnerships*, 77–78.

⁸⁹ Goldsmith and Eggers, *Governing by Network*, 69–70; and Savas, *Privatization and Public-Private Partnerships*, 88–89.

⁹⁰ Robert Agranoff, *Collaborating to Manage: A Primer for the Public Sector* (Washington, DC: Georgetown University Press, 2012), 2; and Thomson, Perry, and Miller, “Conceptualizing and Measuring Collaboration,” 23–24.

⁹¹ Agranoff, *Collaborating to Manage*, 15.

⁹² Agranoff, *Collaborating to Manage*, 12–16.

The Analytical Framework

Disaster Labs sits at the intersection of two distinct but related literatures. The first of these is a body of literature focused on collaboration, coordination, and networks, or what will be referred to here as “public policy literature on collaboration.”⁹³ The second stream of literature specifically addresses public sector collaboration, coordination, and networks for emergency-management purposes, or “public policy literature on collaboration for emergency management.”⁹⁴ Since the research design and topic is located at the intersection of these two streams of literature, both streams were examined to identify potential frameworks for analysis. The analytical framework selected for this book was chosen after an exhaustive search of these literatures for robust

⁹³ For example, see Kirk Emerson, Tina Nabatchi, and Stephen Balogh, “An Integrative Framework for Collaborative Governance,” *Journal of Public Administration Research and Theory* 22, no. 1 (January 2012): 1–29, <https://doi.org/10.1093/jopart/mur011>; Kit Van Gestel, Joris Voets, and Koen Verhoest, “How Governance of Complex PPPs Affects Performance,” *Public Administration Quarterly* 36, no. 2 (Summer 2012): 140–88; and Eugene Bardach, *Getting Agencies to Work Together: The Practice and Theory of Managerial Craftsmanship* (Washington, DC: Brookings Institution Press, 1998).

⁹⁴ Examples of this literature include Naim Kapucu, Tolga Arslan, and Matthew Lloyd Collins, “Examining Intergovernmental and Interorganizational Response to Catastrophic Disasters: Toward a Network-Centric Approach,” *Administration & Society* 42, no. 2 (2010): 222–47, <https://doi.org/10.1177%2F0095399710362517>; and Kapucu, “Public-Nonprofit Partnerships for Collective Action in Dynamic Contexts of Emergencies,” 205–20.

analytical frameworks that were especially appropriate for studies of state emergency-management partnerships.

This section first introduces the analytical framework and offers working definitions for each of the terms within the framework. It then assesses the advantages and potential shortcomings of the chosen framework in light of other, similar frameworks that scholars have used in related studies. Throughout *Disaster Labs*, Abou-bakr's analytical framework is used to evaluate disaster partnerships. The factors that comprise the framework include crisis, leadership, organizational structure, information sharing, shared benefits, trust, and adaptability or sustainability.⁹⁵ Working definitions for each of the terms in the framework are as follows.

Crisis, the first term in the framework, is understood to mean an exigent circumstance caused by a potential or actual disaster and/or catastrophe that presents an immediate threat to life, property, or the environment. Examples of crises, in this context, could include the need to evacuate flooded neighborhoods for safety reasons, preparations for impending infectious disease outbreaks, or supply shortages during post-hurricane cleanup efforts. It is important to emphasize that crisis is considered within the context of emergency management, rath-

⁹⁵ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 43. The framework was first developed by Abou-bakr to evaluate federal-level, disaster-oriented PPPs.

er than within the context of crisis management or crisis governance.

Leadership, the framework's second factor, refers to the exercise of organizational authority—real and perceived—by government, business, and non-profit officials at senior levels within their respective organizations. Leadership could be interpreted literally to mean the top officials within state emergency-management agencies. Moreover, leadership could include the decision by a state official to implement a new policy related to post-disaster food aid or a nonprofit official coordinating their organization's preparations for disasters with local business executives.

Organizational structure, the third factor, is understood to mean the architecture or organizational design of a disaster-oriented PPP. For example, organizational structure could take the form of a memorandum of understanding (MOU); a centralized facility to which public and private sector official report during disaster responses; or a more ambiguous, informal agreement among partnership stakeholders to provide certain goods in the event of a disaster.

Information sharing, the fourth term in the framework, means the exchange of data among public sector, private sector, and nonprofit representatives—and, by extension, their respective organizations. The types of information shared, and the means through which this sharing occurs, can vary significantly. One government official might place a telephone call to

a business official to request supplies, for example. At the same time, a group of nonprofit organizations might share access to an online information-sharing portal developed by a university but under the organizational control of a state emergency-management agency. Each of these examples qualifies as information sharing.

Mutual benefits, the framework's fifth factor, refers to the monetary and nonmonetary advantages conferred on partnership stakeholders by other partnership stakeholders as a result of their participation in a disaster-oriented PPP. Examples of these mutual benefits could include no-cost marketing exposure for firms that partner with government agencies for disaster relief purposes or businesses granting public sector agencies access to scarce goods and services.

Trust, the sixth factor in the framework, means confidence that one's expectations will be met, usually (though not always) based on past confirming evidence that one's expectations will be met. For instance, a government official may trust that a vendor with whom they have worked in the past will deliver certain goods on time and at a previously agreed on price. Alternatively, a business representative may trust a government official not to disclose their proprietary business information to a journalist.

Adaptability, the seventh term in the framework, is understood to signify the ability of a disaster-oriented PPP and its constituent stakeholders to

modify their responses to changing circumstances. This could mean that a disaster-oriented PPP originally developed around information-sharing needs morphs into a more complex partnership involving the formal exchange of personnel for rotational tours of duty.

Sustainability, the eighth and final factor in the framework, refers to the capacity of a disaster-oriented PPP to meet or exceed its stakeholders' expectations in the medium- to long-run. For example, all else being equal, a disaster-oriented PPP that forms solely to address the needs of a particular disaster likely is unsustainable, absent some form of adaptation that would make the partnership well-suited to address other, future disasters. It should be noted here that the concepts of adaptability and sustainability are frequently linked in the context of disaster-oriented PPPs, since the latter concept frequently hinges on the former.

Abou-bakr's framework offers at least three specific advantages that make it especially well-suited to the present study. First, the framework focuses on U.S. emergency-management practices.⁹⁶ Abou-bakr's original study examined federal disaster collaborations in the United States through data she gathered in elite interviews with public and private sector officials.⁹⁷ Abou-bakr compared what she

⁹⁶ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 1.

⁹⁷ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 6.

termed a contemporary “strategic alliance” (the U.S. Federal Reserve System) and a historical “responsive alliance” (the U.S. War Industries Board during World War I) with existing national disaster partnerships to understand better how these agreements work in practice, as well as to offer suggestions about how they might be improved.⁹⁸ Given diverse global understandings of what PPPs are, Abou-bakr’s U.S.-centric study makes it well-suited to the present study, which also looks at U.S. emergency-management partnerships.⁹⁹

The second key advantage to Abou-bakr’s framework for the purposes of the present study is the methodology she used to construct the framework. Abou-bakr developed her analytical framework based on key factors that emerged repeatedly in 25 interviews with senior public and private sector officials who were asked about their direct participation in interorganizational collaboration for emergency management.¹⁰⁰ The eight factors themselves, Abou-bakr notes, were identified by the interviewees “either as necessary conditions for the success of disaster-oriented PPPs or as challenges that must be overcome for them to function effectively.”¹⁰¹ The present study similarly uses elite interviews with public

⁹⁸ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 6–10.

⁹⁹ See earlier in this chapter for an extended discussion of PPPs.

¹⁰⁰ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 9.

¹⁰¹ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 9–10.

and private sector officials in California, Florida, New York, and Virginia. The approach of the present study therefore offers an excellent setting in which to apply Abou-bakr's framework for analytical purposes, as well as to consider whether the framework might be viable for analyses of disaster partnerships in other U.S. states and territories.

The third key advantage of Abou-bakr's framework is its tight focus on collaboration between government agencies and profit-seeking businesses for emergency-management purposes, as opposed to collaboration between government agencies and non-profit organizations. The present study of state disaster partnerships focuses primarily on the agreements and interactions between government agencies and businesses, while also capturing interactions among government agencies, firms, and nonprofit agencies. As will be shown in subsequent chapters, in individual states, it is difficult to disentangle government, private sector, and nonprofit organizations' efforts in the context of emergency management. Abou-bakr's study of federal emergency-management partnerships paints a different picture, in that they appear to be relatively insulated from nonprofit organizations involved in emergency management.

Despite its analytical strength and suitability for the present study, Abou-bakr's framework also has a number of potential limitations worth addressing. The first potential limitation is that the eight factors in Abou-bakr's framework appear to be general

enough that they could lend themselves to scholarly analyses of any number of government programs or organizations, such as those found in education, finance, or transportation, for instance. One could therefore claim that the framework has weak explanatory power, since the factors themselves are so broad and generic.

Upon closer scrutiny, though, this potential limitation is unfounded. As shown above, numerous highly regarded studies of public sector collaboration for emergency management employ similarly broad analytical frameworks. Abou-bakr's framework keeps with this research tradition of using categorical analytical frameworks in studies of emergency management. Moreover, as discussed earlier in this section, Abou-bakr's framework is derived from elite interviews with public and private sector officials who have firsthand knowledge of disaster partnerships in the United States by virtue of their direct involvement in these PPPs. This means that while the categories in Abou-bakr's framework may seem broad, they are in fact quite specific to emergency management.

A second potential limitation to Abou-bakr's analytical framework is that its qualitative orientation may fail to capture other important quantitative data about these partnerships. Examples of these types of data may include the number of agreements in which a given government agency participates or the specific amount of money passed from a government agency to a vendor to buy emergency supplies. How-

ever, these quantitative data, while important in their own right, paint an incomplete picture.

Related work by scholars such as Naim Kapucu shows that there is a rich stream of data about the performance of collaborations in emergency management that cannot be easily captured or measured by quantitative methods; and, in contrast, can be described and evaluated in a deep and meaningful way using qualitative methods.¹⁰² The total number of partnerships in which a government agency participates offers limited information about the quality or richness of those partnerships, for instance. The amount of money a government agency spends on emergency supplies is relatively meaningless unless it is placed in a broader analytical context—as a percentage of total annual agency spending, for example, or in a year-over-year comparison. In contrast, the studies described above fit into a long line of qualitative studies of emergency management in general, as well as a more limited literature on collaboration in emergency management, demonstrating that qualitative analytical tools, such as Abou-bakr's framework, are commonplace in studies of emergency management.

Abou-bakr's framework also shares a number

¹⁰² Naim Kapucu, "Non-profit Response to Catastrophic Disasters," 551–61; Kapucu, "Public-Nonprofit Partnerships for Collective Action in Dynamic Contexts of Emergencies," 205–20; Kapucu and Van Wart, "The Evolving Role of the Public Sector in Managing Catastrophic Disasters," 279–308; and Daniel B. Prieto, "Information Sharing with the Private Sector: History, Challenges, Innovation, and Prospects," in *Seeds of Disaster, Roots of Response*, 404–28.

of theoretical and conceptual links with the public policy literature on collaboration, in general, and collaboration for emergency management, specifically. Abou-bakr situates her framework alongside Philip E. Auerswald et al.'s *Seeds of Disaster, Roots of Response: How Private Action Can Reduce Vulnerability*.¹⁰³ *Seeds of Disaster* is arguably the single most influential study in the development of Abou-bakr's framework, in that it surveys public-private partnerships for disaster prevention and management purposes in a wide range of contexts, including cybersecurity, insurance markets, and public health emergencies.¹⁰⁴ Abou-bakr's study, as well as the present study, also share a linkage with *Seeds of Disaster* by focusing on public-private partnerships for emergency management.

In addition, Abou-bakr's framework shares a number of theoretical and conceptual links with the public policy literature on collaboration in general. Past studies by Kit Van Gestel et al., Kirk Emerson et al., and Eugene Bardach, for example, use similarly broad categories within their own respective analyt-

¹⁰³ Auerswald et al., eds., *Seeds of Disaster, Roots of Response*.

¹⁰⁴ Sean P. Gorman, "A Cyber Threat to National Security?," in *Seeds of Disaster, Roots of Response*, 239–57; Erwann O. Michel-Kerjan, "Insurance, the 14th Critical Sector," in *Seeds of Disaster, Roots of Response*, 279–91; and Patrick Lagadec and Erwann O. Michel-Kerjan, "The Paris Initiative, 'Anthrax and Beyond': Transnational Collaboration among Interdependent Critical Networks," in *Seeds of Disaster, Roots of Response*, 457–80.

ical frameworks.¹⁰⁵ Abou-bakr's framework is consistent with this approach to qualitative analysis in that it employs a framework that consists of broad categories. Given the numerous advantages Abou-bakr's framework offers, as well as the similarities it shares with two distinct yet related streams of public policy literature, it is well-suited for the present study of disaster response partnerships.

¹⁰⁵ Gestel, Voets, and Verhoest, "How Governance of Complex PPPs Affects Performance," 140–88; Emerson, Nabatchi, and Balogh, "An Integrative Framework for Collaborative Governance," 1–29; and see generally, Bardach, *Getting Agencies to Work Together*.

Chapter One

THE RISE OF STATE DISASTER- ORIENTED PUBLIC-PRIVATE PARTNERSHIPS

Each year, approximately 75 percent of all goods entering and exiting the United States pass through maritime ports.¹ This activity can generate billions of dollars in revenue for state economies.² Many U.S. maritime ports also feature an array of government agencies that perform diverse functions, from inspecting cargo containers to providing physical security.³ This means that managing maritime ports—and coping with disasters involving maritime ports—requires excellent cooperation between businesses and public sector agencies.

In 2010, California state agencies designed the

¹ Marc Thibault, Mary R. Brooks, and Kenneth J. Button, “The Response of the U.S. Maritime Industry to the New Container Security Initiatives,” *Transportation Journal* 45, no. 1 (Winter 2006): 6.

² *2018 National Economic Impact of the U.S. Coastal Port System: Executive Summary* (Lancaster, PA: Martin Associates, March 2019).

³ “Cargo Examination,” U.S. Customs and Border Protection, 15 May 2017; and “ACN 134/18–NOV 2018 Promulgation of Foreign Freight Vessel Exam (FFVE) Tactics, Techniques, and Procedures (TTP), CGTTP 3-72.8,” U.S. Coast Guard, 16 November 2018.

Golden Guardian Exercise to practice their disaster response procedures and to assess their state emergency-management partnerships in the context of maritime port disasters.⁴ As part of the exercise, the fictitious M/V *Goodship* struck an underwater bomb in the Port of Oakland on 18 May 2010 and lost its ability to navigate, blocking the entrance to the port.⁵ On the next day of the exercise, “terrorists” in Long Beach seized a private ferry and took its passengers hostage.⁶ Throughout the exercise, private sector liaisons went to various emergency operations centers around the state to coordinate response actions with their local, state, and federal government counterparts.⁷ In the state’s formal report on the results of Golden Guardian, state officials specifically noted that one of the exercise’s key strengths was its reinforcement of the value of disaster partnerships.⁸

The 2010 Golden Guardian Exercise demonstrated several of the key themes related to the rise of emergency-management collaborations in recent years. The state of California recognizes that firms should be involved in state-level disaster responses.⁹ And public-private sector cooperation is particularly essential when disasters impact components of criti-

⁴ 2010 *Golden Guardian After Action Report Executive Summary* (Mather: California Emergency Management Agency, 2010), 5.

⁵ M/V refers to motor vessel, a common prefix for merchant ships. 2010 *Golden Guardian After Action Report Executive Summary*, 8.

⁶ 2010 *Golden Guardian After Action Report Executive Summary*, 11.

⁷ 2010 *Golden Guardian After Action Report Executive Summary*, 13.

⁸ 2010 *Golden Guardian After Action Report Executive Summary*, 13.

⁹ 2010 *Golden Guardian After Action Report Executive Summary*, 13.

cal infrastructure such as maritime ports.¹⁰ Critical infrastructure, in this context, refers to those industries and assets within the United States that are so vital, their disruption or destruction would have significant adverse effects on society as a whole.¹¹ These characteristics distinguish critical infrastructure from other types of businesses or organizations. Additional examples of critical infrastructure include hospitals, airports, banks, and power plants. Perhaps most importantly, California sees the advance of emergency-management partnerships as a generally positive development that can prove helpful in preparing for and responding to disasters.¹²

This chapter will show that the role of businesses in government emergency-management efforts has been increasing since at least 2001.¹³ Although this trend has been most visible at the federal level of gov-

¹⁰ Austen D. Givens and Nathan E. Busch, "Realizing the Promise of Public-Private Partnerships in U.S. Critical Infrastructure Protection," *International Journal of Critical Infrastructure Protection* 6, no. 1 (March 2013): 39–50, <https://doi.org/10.1016/j.ijcip.2013.02.002>.

¹¹ This definition is adapted from Steven M. Rinaldi, James P. Perrenboom, and Terrence K. Kelly, "Identifying, Understanding, and Analyzing Critical Infrastructure Interdependencies," *IEEE Control Systems Magazine* 21, no. 6 (December 2001): 12, <https://doi.org/10.1109/37.969131>.

¹² 2010 *Golden Guardian After Action Report Executive Summary*, 13.

¹³ Ami J. Abou-bakr, *Managing Disasters through Public-Private Partnerships* (Washington, DC: Georgetown University Press, 2013), 46–47; and Brian Lopez, "Critical Infrastructure Protection in the United States Since 1993," in *Seeds of Disaster, Roots of Response: How Private Action Can Reduce Public Vulnerability*, ed. Phillip E. Auerswald et al. (New York: Cambridge University Press, 2006), 37–50.

ernment, evidence presented in this chapter demonstrates that firms are having a substantial impact on state-level emergency-management practices too.

The chapter proceeds in three steps. First, it traces the evolution of private sector involvement in emergency management from 2001 to 2012. Second, it surveys state disaster partnerships around the United States using the analytical framework first introduced in chapter 1. These examples of emergency-management agreements suggest that the framework is a viable tool to engage with disaster partnerships at the state level and to assess the four cases in this book. Third, the chapter highlights the absence of federal interventions in the state partnerships that it surveyed. That absence of federal interventions implies that state governments are willing and able to establish and manage disaster-oriented PPPs independently. The chapter closes with a discussion of the key themes that this chapter presents.

The Evolution of Private Sector Engagement in Emergency Management: 2001–12

In the years preceding the 9/11 terrorist attacks, the federal government undertook various initiatives to bolster public-private sector cooperation for emergency management-related reasons. For example, in 1953 the federal government created the U.S. Small Business Administration's (SBA) Disaster Loan Assistance program to provide emergency financing

to business owners affected by large-scale emergencies.¹⁴ Since its creation, the program has been used many times to support businesses after disasters: when Hurricane Andrew hit Florida in 1992, for instance, the SBA received emergency loan applications worth hundreds of millions of dollars from Florida firms whose facilities were damaged or destroyed by the storm.¹⁵ The federal government provided similar financial assistance to businesses in Oklahoma City following Timothy McVeigh's bombing of the Alfred P. Murrah Federal Building in 1995.¹⁶ One year after the Oklahoma City bombing, President William J. "Bill" Clinton commissioned a joint group of public and private sector officials to examine multiple U.S. commercial industries for security vulnerabilities.¹⁷ That group, known as the President's Commission on Critical Infrastructure Protection, for the first time explicitly linked the viability of U.S. businesses to federal national security interests.¹⁸

¹⁴ Ronald Smothers, "After the Storm; Money, and Gripes, in Loan Program," *New York Times*, 3 September 1992, section A, 19.

¹⁵ Smothers, "After the Storm," 19; and Marcia Heroux Pounds, "SBA Hurricane Loans Top \$554m," *South Florida Sun-Sentinel*, 16 November 2004.

¹⁶ Todd S. Purdum, "Terror in Oklahoma: The Overview; Clinton Seeks More Anti-Terrorism Measures," *New York Times*, 27 April 1995, section A, 1.

¹⁷ Exec. Order No. 13010, Critical Infrastructure Protection, 15 July 1996.

¹⁸ *Critical Foundations: Protecting America's Infrastructures* (Washington, DC: President's Commission on Critical Infrastructure Protection, 1997), vii.

But today's federal government efforts to enhance public-private sector cooperation for emergency management were sparked by the recognition that businesses played significant roles in the responses to the 9/11 terrorist attacks. During the attacks, terrorists used private sector assets (i.e., commercial aircraft) to attack other elements of the private sector (i.e., the World Trade Center towers).¹⁹ Firms like Verizon, which quickly repaired network cables used by the New York Stock Exchange that had been damaged by the collapse of the World Trade Center, contributed significantly to recovery efforts after the attacks.²⁰ The private sector controls most U.S. critical infrastructure, and the private sector is therefore in the best position to protect critical infrastructure and to repair it in the event of damage or destruction.²¹ Consequently, governments at all levels in the United States have little choice but to partner with firms to increase the resilience of critical infrastructure.

Efforts to grow public-private sector ties after the 9/11 attacks occurred in the broader context of huge organizational changes in the federal government to prevent future terrorist incidents. The most

¹⁹ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 16.

²⁰ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 18.

²¹ *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States (9/11 Report)* (Washington, DC: National Commission of Terrorist Attacks upon the United States, 2004), 397–98.

notable of these changes was the creation of a new Department of Homeland Security (DHS) in 2002, which placed agencies responsible for counterterrorism activities and the nation's top-level emergency-management agency—FEMA—together within the same government organization.²² In the years following DHS's creation, the department published a series of foundational documents about emergency management that made the need for private sector involvement in government emergency-management efforts at the federal, state, and local levels of government increasingly explicit.

The first two significant DHS documents outlining the department's views of private sector involvement in emergency management were the *National Incident Management System* (NIMS) and the *National Response Plan* (NRP).²³ First published in 2004, NIMS and the NRP stressed the importance of coordination between government agencies and businesses in emergency management.²⁴ The language used in the NIMS and NRP publications

²² Richard J. Harknett and James A. Stever, "The Struggle to Reform Intelligence after 9/11," *Public Administration Review* 71, no. 5 (September/October 2011): 700, <https://doi.org/10.1111/j.1540-6210.2011.02409.x>; "About the Agency," FEMA, last updated 3 June 2019; and "Mission," U.S. Transportation Security Administration, accessed 14 September 2015.

²³ *National Incident Management System* (Washington, DC: U.S. Department of Homeland Security, 2004); and *National Response Plan* (Washington, DC: U.S. Department of Homeland Security, 2004), x.

²⁴ *National Incident Management System*, 17; and *National Response Plan*, x.

framed the private sector as one of a wide range of actors involved in emergency-management efforts. In the NRP in particular, it seems as though the private sector was to play an important but assisting role in emergency management vis-à-vis government agencies:

Private-sector owners and operators . . . are encouraged (or in some cases required under law) to develop appropriate emergency response and business continuity plans . . . that clearly map to regional, State, and local emergency response plans and information-sharing networks.²⁵

With the NRP and NIMS's recognition of the need for businesses to be involved in emergency planning, the stage appeared set for a future disaster that could help the federal government reinforce the lessons it learned from the 9/11 attacks and further assess the need for private sector involvement in emergency management. That disaster came just one year after the publication of the NRP and NIMS.

When Hurricane Katrina struck the Gulf Coast in 2005, DHS confronted the most significant test it had faced during its short existence. The destructive force of the storm's floodwaters and wind were compounded by what was later viewed as a bungled

²⁵ *National Response Plan*, x.

federal government response.²⁶ Despite shortfalls in the federal government's response to the hurricane, private sector involvement in the response to the storm proved helpful for Katrina survivors and further highlighted the value of private sector engagement in emergency management. Anticipating the storm's arrival days before it made landfall, Walmart sent truckloads of relief supplies to the area around New Orleans, Louisiana.²⁷ Clothing, diapers, toothbrushes, bottled water, ice, and nonperishable food items emerged from Walmart's fleet of vehicles as the storm passed.²⁸ Following the storm, a local government leader noted in an interview that if the governmental response to Katrina had been like that of Walmart, the post-Katrina humanitarian crisis itself might have been averted.²⁹ In the midst of a significant disaster, Walmart filled important gaps in governmental response efforts.

Other firms contributed significantly to the Katrina response as well. For example, Weyerhaeuser, a

²⁶ Sandra K. Schneider, "Administrative Breakdowns in the Governmental Response to Hurricane Katrina," *Public Administration Review* 65, no. 5 (September 2005): 515–16, <https://doi.org/10.1111/j.1540-6210.2005.00478.x>; and *A Performance Review of FEMA's Disaster Management Activities in Response to Hurricane Katrina* (Washington, DC: Office of Inspector General, U.S. Department of Homeland Security, 2006), 1.

²⁷ Steven Horwitz, "Wal-Mart to the Rescue: Private Enterprise's Response to Hurricane Katrina," *Independent Review* 13, no. 4 (Spring 2009): 511–28; and see also Michael Barbaro and Justin Gillis, "Wal-Mart at Forefront of Hurricane Relief," *Washington Post*, 6 September 2005.

²⁸ Barbaro and Gillis, "Wal-Mart at Forefront of Hurricane Relief."

²⁹ Barbaro and Gillis, "Wal-Mart at Forefront of Hurricane Relief."

large wood and paper products firm, donated more than \$1 million through its charitable foundation to assist the American Red Cross and local relief agencies in the Gulf Coast region.³⁰ The firm also developed an adopt-a-family program, wherein firm employees affected by the storm were connected with other Weyerhaeuser employee groups. These employee groups pledged for one year to assist Katrina-affected families and provide them with resources and support after the disaster.³¹ Chevron, an energy company, donated more than \$5 million to local organizations in need, including day care centers for children, the United Way, and school districts.³² Walmart, Weyerhaeuser, and Chevron's actions demonstrated that private sector responses to disasters could be helpful. They delivered aid directly to disaster survivors, helped boost other relief agencies' capacities to assist affected residents through cash donations, and complemented government responses to the storm.

The federal government acknowledged in its formal report on the Hurricane Katrina response that the private sector could and should participate in future emergency-management efforts.³³ The report's lessons learned underlined the wide range of poten-

³⁰ George Haddow, *Case Studies in Emergency and Risk Management* (Washington, DC: FEMA, 2004), chapter 11, 6.

³¹ Haddow, *Case Studies in Emergency and Risk Management*, 7–8.

³² Haddow, *Case Studies in Emergency and Risk Management*, 17.

³³ Frances F. Townsend, "Lessons Learned," in *The Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: White House, 2006), 56, 59, 61, 64.

tial roles that the private sector could play in disaster response. By improving logistical capabilities, developing temporary housing options for disaster survivors, and assessing the impact of disasters on critical infrastructure, businesses could supplement and build on government emergency-management practices.³⁴ Subsequent versions of the NRP and NIMS appeared to draw from the lessons learned after Katrina by elevating the role that the federal government envisioned for the private sector in emergency management.

In 2008, DHS published revisions to the NRP and NIMS, renaming the NRP the *National Response Framework* (NRF). The 2008 revisions to the NRF and NIMS again emphasized the essential private sector role in U.S. emergency management, but the language in the documents was notably strengthened from the 2004 versions of these documents and established more firmly the importance of businesses in emergency management.³⁵ For example, in the NIMS there is growing federal recognition that firms and government agencies would be better off as co-equal partners, as opposed to simply cooperating in emergency plans:

The private sector plays a vital role in emergency management and incident response

³⁴ Townsend, "Lessons Learned," 56, 60, 61.

³⁵ *National Response Framework*, 2d ed. (Washington, DC: U.S. Department of Homeland Security, 2013), 19–20; and *National Incident Management System*, 15.

and should be incorporated into all aspects of NIMS. . . . It is essential that private-sector organizations directly involved in emergency management and incident response, or identified as a component of critical infrastructure (e.g., hospitals, public and private utility companies, schools), be included, as appropriate, in a jurisdiction's preparedness efforts.³⁶

By framing the private sector role as "vital" and calling for the incorporation of businesses into all aspects of NIMS, DHS made the private sector an indispensable participant in emergency management. Two years after the release of the 2008 NRF and NIMS, the federal government faced a new disaster that showed how necessary businesses could be in managing crises.

The response to the 2010 BP *Deepwater Horizon* oil rig explosion and spill involved scores of governmental, nonprofit, and private sector actors.³⁷ The spill's geographic scale and logistical demands were enormous. At its peak, more than 45,000 people participated in the response effort.³⁸ However, the private sector's responsibilities in the oil spill response

³⁶ *National Incident Management System*, 15.

³⁷ *Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling—Report to the President* (Washington, DC: National Commission on the BP *Deepwater Horizon* Oil Spill and Offshore Drilling, 2011), 129–70. At the time of this writing, the BP incident remains the largest oil spill in U.S. history.

³⁸ *Deep Water*, 133.

differed from the private sector role after the 9/11 attacks and Hurricane Katrina in at least one key respect. Unlike the role of businesses following the 9/11 attacks and Hurricane Katrina, which complemented government emergency-management efforts, in this case it was a business—BP—that was directly responsible for the oil spill because of questionable drilling safety practices and faulty equipment its employees installed to pump oil from the Gulf of Mexico sea floor.³⁹ BP's role in the *Deepwater Horizon* response was necessary precisely because it was BP's equipment that had failed, and only BP had the special tools to repair that failed equipment.⁴⁰ The federal government's role was to help contain the spill and manage the response and recovery effort, but it could only go so far in this role, as it lacked the equipment and technical expertise to shut off the leaky oil well.⁴¹

While BP eventually stopped the oil flow, the delicate interplay between government officials and BP representatives throughout the response led to moments of tension. Rear Admiral Sally Brice-O'Hara of the U.S. Coast Guard, one of the federal agencies involved in the spill response, called BP the government's "partner" at a White House press conference; Secretary of Homeland Security Janet A. Napolitano, who was Brice-O'Hara's boss at the time, quickly cor-

³⁹ *Deep Water*, vii, 114.

⁴⁰ *Deep Water*, 161–62, 164–67.

⁴¹ *Deep Water*, 243.

rected her and said, "They are not our partner."⁴² Other federal officials were significantly more blunt. Ken Salazar, secretary of the U.S. Department of the Interior, which regulates oil drilling for the federal government, said that "[the federal government's] job is to keep the boot on the neck of BP to ensure it meets its obligations."⁴³ Brice-O'Hara, Napolitano, and Salazar's remarks encapsulate the tensions faced by federal government officials who needed to appear in charge of the incident response while remaining accountable to the public and working closely with BP to stop the oil flow. Their comments also highlight how essential the private sector can be to emergency-management efforts, especially in managing the effects of damage to privately owned critical infrastructure.

In 2011, remnants of Hurricane Irene hit New York State, prompting the state government to work with businesses to help communities recover from flood damage. Private construction companies dispatched workers to assist state employees.⁴⁴ With cranes, trailers, and other heavy equipment, these companies partnered with the public sector to remove debris

⁴² Office of the Press Secretary, "Press Briefing on the BP Oil Spill in the Gulf Coast," press release, 29 April 2010.

⁴³ "Salazar Calls Oil Spill 'Massive' and a Potential Catastrophe," CNN, 2 May 2010.

⁴⁴ Mark Herbst, *Testimony before the New York State Senate Standing Committee on Transportation* (27 September 2011), 49, lines 16–20, hereafter Herbst testimony.

and begin rebuilding.⁴⁵ These actions further demonstrated the wide range of roles that firms can play in immediate disaster response and recovery activities.

New York State also moved to support small businesses in areas affected by the storm through emergency grants.⁴⁶ This state assistance was shrewd. Nearly 50 percent of all private sector jobs in the United States are with small businesses.⁴⁷ When small businesses fail after disasters, their failure can have negative knock-on effects on local economies.⁴⁸ By providing emergency grants to affected small businesses, New York State helped prevent these firms from failing.

State aid was not limited to small businesses, however. BAE Systems, a large defense contractor, lost an entire office complex in New York State due to flooding from Irene.⁴⁹ Yet after negotiating with the state, BAE was able to secure a mixture of job and investment-related tax credits. These financial incentives prompted the company to keep its operations in

⁴⁵ Herbst testimony, 49, lines 16–20.

⁴⁶ *Hurricane Irene and Tropical Storm Lee: One Year Later* (Albany: New York State, 2012), 7, 9.

⁴⁷ “Frequently Asked Questions,” U.S. Small Business Administration, September 2012, 1.

⁴⁸ Yu Xiao and Shannon Van Zandt, “Building Community Resiliency: Spatial Links between Household and Business Post-disaster Return,” *Urban Studies* 49, no. 11 (August 2012): 2526, <https://doi.org/10.1177/0042098011428178>.

⁴⁹ “Governor Cuomo Announces BAE Systems to Remain in the Southern Tier, Saving Nearly 1,400 Jobs,” New York State, 17 November 2011.

New York State after the flood, rather than relocating to another state.⁵⁰

DHS published a revised version of the NRF in 2013. The 2013 version further enhances the private sector role in emergency management. The language in the NRF elevates firms to partners, and states that these private sector partners should be directly involved in emergency decision-making when necessary:

During an incident, key private sector partners should have a direct link to emergency managers and, in some cases, be involved in the decision making process. Strong integration into response efforts can offer many benefits to both the public and private sectors.⁵¹

The federal government continues to integrate businesses into emergency management. FEMA has established a private sector liaison office whose mission is to cultivate professional relationships with businesses for emergency-management purposes.⁵² While the future of private sector involvement in emergency management is uncertain, recent history shows that firms can play a significant role in supporting government emergency-management efforts. Although this section focused primarily on federal government cooperation with businesses, incidents

⁵⁰ "Governor Cuomo Announces BAE Systems to Remain in the Southern Tier."

⁵¹ *National Response Framework*, 10.

⁵² "Office of External Affairs," FEMA, 2 September 2015.

like Hurricane Irene demonstrate that state governments can work with firms to manage emergencies as well. But how can we measure this public-private cooperation? The next section explores how the analytical framework used in this book serves as a valuable tool to assess disaster partnerships.

The Analytical Framework and State Disaster-Oriented PPPs

The analytical framework presented in the introduction, which was first developed to assess federal emergency-management partnerships, is largely applicable to state disaster partnerships for at least three reasons.⁵³ First, state governments and the federal government are structured and function in similar ways. This means that the federal and state governments probably enjoy comparable benefits from these agreements, and they also share many of the same pathologies and dysfunctions.⁵⁴ Second, preliminary evidence from states other than those examined in this book—Washington, Oklahoma, Alaska, Iowa, Utah, Arizona, and Missouri, specifically—shows that the eight factors in the analytical framework each can play a part in the formation of state disaster-oriented PPPs. Third, since disasters

⁵³ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 9–10.

⁵⁴ Donald F. Kettl, "The Transformation of Governance: Globalization, Devolution, and the Role of Government," *Public Administration Review* 60, no. 6 (November/December 2000): 488–97, <https://doi.org/10.1111/0033-3352.00112>.

can simultaneously affect state governments and the federal government, it makes sense that emergency-management collaborations at both levels may react similarly to disasters.

Crisis, the first factor in the analytical framework, can be pivotal in the formation of state partnerships. For example, in 2006, a significant windstorm in Washington State knocked out electricity to 400,000 residents. This experience prompted the Washington State Emergency Management Division to elevate the presence of businesses in its emergency operations by creating a Corporate Relations Program to strengthen private sector ties.⁵⁵ This crisis-driven approach to forming emergency-management collaborations had a direct impact during a subsequent incident in the state. In 2009, the U.S. Army Corps of Engineers, which directs large civil engineering projects, became concerned about seepage out of the Howard A. Hanson Dam on the Green River in Washington. The Corps of Engineers warned the surrounding Green River Valley community that there was a 1 in 3 chance that the valley could flood because of the dam seepage. Numerous area businesses began to request emergency preparedness information from the Washington State Emergency Management Division because of these warnings.⁵⁶

To share this preparedness information easily with businesses, the division used an online, password-

⁵⁵ "State Partnership—Washington," 2.

⁵⁶ "State Partnership—Washington," 1-2.

protected information portal.⁵⁷ The division posted emergency plans and alerts on the portal that business owners could download.⁵⁸ The division also employs a mechanism on the portal for business owners to share information on their own operations with the division, creating a two-way flow of emergency preparedness data between the state and the private sector.⁵⁹ Washington State's experiences in the 2006 windstorm, as well as the 2009 Green River Valley flood preparedness initiative, show that crises can directly influence the formation of state partnerships.

The second factor, public and private sector leadership, can also influence the formation of state emergency-management collaborations. The Oklahoma Safe Room Initiative, a program to build specially constructed tornado-resistant rooms inside houses, exemplifies this. After tornadoes tore through the state in 1999, killing 44 and injuring nearly 800, Oklahoma launched the initiative with strong political support from then-governor Francis A. Keating and assistance from the construction industry.⁶⁰ The initiative employed a combination of federal funding, state-level program administration, and private sector technical expertise to educate the public about safe rooms, to outline the terms under which homeowners could apply for rebates for the construction

⁵⁷ "State Partnership—Washington," 1.

⁵⁸ "State Partnership—Washington," 1–2.

⁵⁹ "State Partnership—Washington," 1.

⁶⁰ "Gov. Francis Anthony Keating," National Governors Association, accessed 12 November 2019.

of safe rooms, and to successfully complete the construction of safe rooms. Two firms involved in the initiative—American Polysteel and Liteform International—assembled a safe room kit that contained all the materials a construction company would need to install a safe room in a home, including walls and doors. Taking a cue from the program’s success, BMI Construction, a local homebuilder, formed a team to construct an entire subdivision of new homes in Tulsa, each with its own safe room—the first subdivision of its kind in the nation. The initiative ultimately resulted in more than 6,000 privately constructed, publicly financed safe rooms, and demonstrated that a combination of focused state and private sector leadership can lead to positive outcomes.⁶¹

Organizational structure, the third factor, can similarly affect the creation of state partnerships. Before proceeding further, it is important to clarify that organizational structure here refers specifically to the organizational framework governing these agreements.⁶² Although there is no standardized framework for state emergency-management collaborations, such a framework would likely include factors such as consistent political support, regulatory guidelines, cross-sector communication, and so

⁶¹ *Safe Rooms Save Lives: Oklahoma Safe Room Initiative* (Washington, DC: FEMA, 2003), 2–17.

⁶² Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 52–53.

on.⁶³ The varying structures of state disaster-oriented PPPs that exist today show that the lack or presence of an organizational template can influence the formation of these partnerships in the first place.

Some emergency-management agreements are well organized, and this may be attributable to a pre-existing framework for the disaster-oriented PPP. For example, the Alaska Partnership for Infrastructure Protection (APIP) was created to engage owners and operators of critical infrastructure in emergency preparedness initiatives. The APIP was formed in 2004 as an evolution of the Critical Infrastructure Committee of the Federal/State Anti-Terrorism Advisory Council-Alaska, which had been created after the 9/11 terrorist attacks. Made up of government and business representatives, the APIP boasts a tightly defined set of strategic and tactical objectives and works “to enhance private sector emergency preparedness for all-hazards through information sharing and preparedness activities.” Working across a range of industries, APIP members have participated in emergency exercises and use a secure information portal to exchange sensitive or confidential data.⁶⁴ The APIP’s well-defined objectives and track record of tangible achievements illustrates that preexisting organizational structures can potentially be helpful in the formation of state partnerships.

⁶³ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 52–53.

⁶⁴ “State Partnership—Alaska Partnership for Infrastructure Protection,” FEMA, accessed 2 January 2020, 1–3.

Grassroots emergency-management partnerships, which are created without a preexisting organizational structure, may also work well. In 2006, Business Executives for National Security (BENS), a professional association and advocacy group, contacted the Iowa Business Council to discuss the possibility of creating a partnership for the state. BENS recognized that Iowa had no organized system for distributing private sector goods and services after disasters.⁶⁵ Several Iowa state agencies and BENS supported the eventual launch of the Safeguard Iowa Partnership (SIP), an emergency-management agreement that focuses on strengthening information sharing, post-disaster business continuity, and growing businesses and communities.⁶⁶ A board of directors governs SIP, its members pay dues, and the organization can send representatives to emergency operations centers during crises.⁶⁷ One of SIP's roles is to facilitate donations of private sector goods and services before and after disasters.⁶⁸ To that end, SIP has collaborated with the Iowa Department of Public Health to develop plans for distribution of privately produced medicines in the event of severe disease outbreaks.⁶⁹

The fourth factor in the framework—information sharing—can be essential in forming disaster

⁶⁵ "State Partnership—Safeguard Iowa Partnership," 1.

⁶⁶ "State Partnership—Safeguard Iowa Partnership," 1.

⁶⁷ "State Partnership—Safeguard Iowa Partnership," 2–3.

⁶⁸ "State Partnership—Safeguard Iowa Partnership," 3.

⁶⁹ "State Partnership—Safeguard Iowa Partnership," 1–3.

partnerships. After the 9/11 terrorist attacks, government counterterrorism agencies recognized the need to exchange more information with one another.⁷⁰ Moreover, the 9/11 attacks underscored the value of sharing information with businesses, for the private sector played a substantial role in response and recovery efforts.⁷¹ The rise of disaster partnerships was therefore one response to this need for increased information sharing.⁷²

It was against this post-9/11 backdrop of increased information sharing among government agencies and firms that Salt Lake City, Utah, hosted the Winter Olympics in 2002.⁷³ Preparing for the 2002 Olympics required significant coordination and information sharing among state agencies and businesses in Utah.⁷⁴ A few years later, the state's BeReady Utah/Private Sector Section in the Division of Homeland Security formed and was built in part on the relationships established to prepare for

⁷⁰ *The 9/11 Commission Report*, 416–19.

⁷¹ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 18–21.

⁷² Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 21; and Austen D. Givens and Nathan E. Busch, "Information Sharing and Homeland Security: The Role of Public-Private Partnerships," *Homeland Security Review* 7, no. 2 (Summer 2013): 123–50.

⁷³ "State Partnership—Utah," FEMA, 1, accessed 2 January 2020.

⁷⁴ "State Partnership—Utah"; and *The 2002 Olympics in Salt Lake City, Utah: Cooperation between Federal, State, Local, and Private Agencies to Address Public Safety Concerns: Hearing Before the Committee on the Judiciary, United States Senate*, 107th Cong. (31 May 2001).

the 2002 Winter Olympics.⁷⁵ The coordinating council's primary objective is to strengthen information sharing and collaboration among its members, who represent a range of critical infrastructure industries, and the Utah Department of Public Safety's Division of Homeland Security, which is responsible for state-wide emergency management.⁷⁶ The council also helps its members plan, train, and perform exercises in advance of disasters for the purpose of supporting themselves and the state's response efforts.⁷⁷ The information-sharing foundation of the council, first established in advance of the 2002 Winter Olympics, continues to serve it in advancing public and private sector emergency preparedness in Utah.

Mutual benefits, the fifth factor, are indispensable for the formation and success of disaster partnerships.⁷⁸ The Arizona Division of Emergency Management's (ADEM) efforts to work with businesses provide a ready example of how state PPPs can be beneficial for both sectors. The Arizona Business Emergency Coordination Center (BECC) serves as a central facility for firms to coordinate disaster responses with the state government.⁷⁹ During crises, the BECC passes information about private sector needs and concerns to the State Emergency Oper-

⁷⁵ "State Partnership—Utah," 1.

⁷⁶ "State Partnership—Utah," 1.

⁷⁷ "State Partnership—Utah," 1.

⁷⁸ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 67.

⁷⁹ "State Partnership—Arizona," FEMA, accessed 12 November 2019.

ations Center (SEOC), a government-owned and operated facility.⁸⁰ This information can be helpful for state emergency-management officials by showing them how a disaster is affecting the private sector. The state provides businesses benefits for partnering with it in emergency management too. ADEM makes emergency-management classes normally intended for public sector employees available to firms, for instance.⁸¹ These classes offer businesses greater expertise in specialized topics such as hazardous materials response and the Incident Command System.⁸² This specialized knowledge can help businesses make more informed emergency-management decisions during disasters.

The sixth factor, trust, is a key determinant of whether these agreements succeed.⁸³ The Missouri Public-Private Partnership Committee, which facilitates coordination among state agencies and businesses for emergency-management purposes, recognizes trust as foundational for cross-sector relationships.⁸⁴ In an official information handout, the committee identifies “[e]stablishing strong trust-

⁸⁰ “State Partnership—Arizona,” 3.

⁸¹ “State Partnership—Arizona,” 3.

⁸² “State Partnership—Arizona,” 3.

⁸³ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 74; and Nathan E. Busch and Austen D. Givens, “Achieving Resilience in Disaster Management: The Role of Public-Private Partnerships,” *Journal of Strategic Security* 6, no. 2 (Summer 2013): 9, <http://dx.doi.org/10.5038/1944-0472.6.2.1>.

⁸⁴ “State Partnership—Missouri,” FEMA, 3, accessed 17 January 2020.

ing relationships” as one of four key objectives for emergency-management collaborations.⁸⁵ One of the most visible committee initiatives is its Business Emergency Operations Center (BEOC), which is designed to serve as a coordination hub that provides private sector expertise to the state before, during, and after disasters.⁸⁶ The committee’s emphasis on trusting partnerships and its activities in the BEOC can link directly with one another, for without cross-sector trust, it would be implausible that firms would send representatives to the BEOC during crises.

The seventh and eighth factors, adaptability and sustainability, are qualities that permit these partnerships to continue evolving and thriving as needs change over time. Many PPPs, however, remain “too new to rate.”⁸⁷ That is, these partnerships are so new that there is not a long track record to show how important adaptability and sustainability are in their formation and continued operation. However, there is at least some evidence that preexisting state partnership structures can morph into emergency-management agreements, such as those in Utah and Alaska.⁸⁸ It is therefore plausible that partnerships

⁸⁵ “State Partnership—Missouri,” 3.

⁸⁶ *State of Missouri Business Emergency Operations Center (BEOC)* (Jefferson City: State of Missouri, 2012), 3.

⁸⁷ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 76.

⁸⁸ For example, see “State Partnership—Utah,” 1; and “State Partnership—Alaska,” 1.

can also adapt to changing circumstances and remain sustainable in the long run.

As these examples demonstrate, the eight factors are directly relevant to state disaster partnerships and provide a framework to evaluate their viability. Moreover, the evidence presented in these examples strongly suggests that states themselves possess impressive capacity to create, launch, and manage agreements on their own terms.

Disaster-Oriented PPPs: State-Managed Solutions

The analysis above shows that the states of Washington, Oklahoma, Alaska, Iowa, Utah, Arizona, and Missouri have each successfully created emergency-management agreements with public and private sector actors. These partnerships reflect the unique hazards faced in each state. They are managed independently by state governments without direct federal government intervention, though in some cases, such as Oklahoma, they have also been the recipients of federal grant money earmarked for emergency-management purposes. In many cases, the existence of these partnerships actually predates the federal government's recognition of the importance of partnerships in policy documents, such as the NRP and NRF. These agreements have emerged from diverse circumstances, ranging from the experience of floods (i.e., Washington State) to cooperation built on the existing structures of other organizations (i.e., Utah).

The confluence of these factors strongly suggests that state-level disaster partnerships nationwide can be launched and successfully managed without federal government involvement. In fact, the striking success of certain state-level partnerships, such as in Oklahoma's Safe Room Initiative, inveighs against the direct involvement of the federal government in managing or leading state-level, disaster-oriented PPPs. And as this book will show in subsequent chapters, there is ample evidence to support this argument against federal involvement in other states, as well.

Conclusions

This chapter argued that the importance of businesses in emergency management has been rising since at least 2001. Although this trend has been most apparent at the federal level of government, evidence in this chapter shows that the private sector is also deeply involved in state-level emergency-management practices.

The chapter first traced the history of emergency-management partnerships from 2001 to 2012. During these years, firms played roles in prominent disasters, including the 9/11 attacks, Hurricane Katrina, the *Deepwater Horizon* oil spill, and Hurricane Irene. Moreover, since 2001, the federal government has explicitly increased its emphasis on the role of businesses in emergency management, as demonstrated in prominent federal emergency-management documents such as the NRF and NIMS.

This chapter then explored the analytical framework that will be employed throughout this book in the context of state disaster-oriented PPPs. The framework's eight factors play important roles in the formation and operation of state emergency-management agreements. The cases of Washington, Oklahoma, Alaska, Iowa, Utah, Arizona, and Missouri were each explored to demonstrate where and how the framework applied. These analyses indicate that an analytical framework is equally applicable to federal and state disaster partnerships. In addition, the strength of the collaborations observed in these states indicates that disaster partnerships can be created and led at the state level of government without direct federal intervention or guidance. This suggests, at least, that the federal government would be well-served by leaving states to manage their own partnerships independently. The four cases that this book will examine in later chapters—California, Florida, New York, and Virginia—further demonstrate that the framework is applicable to state disaster partnerships and that the management of these PPPs is best left to state governments. Chapter 2 examines the first of the four cases—disaster partnerships in California.

Chapter Two

CALIFORNIA DREAMING?

As wildfires raged across southern California in late 2017, wealthy homeowners in Los Angeles, Ventura, and San Diego counties became the unexpected beneficiaries of an innovative emergency-management practice—the use of private firefighters. Insurance firms such as Chubb, AIG, and PURE have in the past decade teamed up with private firefighting companies to protect the expensive homes of wealthy clients who live in wildfire-prone areas. The California Department of Forestry and Fire Protection, the state’s firefighting agency, has procedures in place that now permit crews of certified private firefighters to obtain special permission to enter otherwise restricted areas, all in an effort to prevent damage to insured houses. These private-sector firefighters may remove combustible material from near the outer walls of homes, for instance, or turn on outdoor water sprinkler systems. If a fire is closing in rapidly, the private firefighting crews may even spray homes’ ex-

teriors with fire-retardant foams and gels.¹ Because wildfire response duties like these are typically handled by government-employed firefighters, the private firefighters augment and supplement the state's efforts to keep homeowners' properties safe.

Today, California is an impressive model for the development of emergency-management partnerships. The state has earned national recognition for its approach to working with businesses during disasters.² The California Governor's Office of Emergency Services (CalOES) employs a dedicated public-private sector partnership coordinator.³ Within the State Operations Center (SOC), a separate unit called the Business and Utility Operations Center (BUOC) permits business representatives to work directly with one another and state officials during disasters.⁴ Moreover, nonprofit organizations such as the American Red Cross and California Resilience Alliance act as "trusted agents" in the state and help bring state officials and business representa-

¹ Leslie Scism, "As Wildfires Raged, Insurers Sent in Private Firefighters to Protect Homes of the Wealthy," *Wall Street Journal*, 5 November 2017.

² "State Partnership—California Emergency Management Agency," FEMA, accessed 17 January 2020.

³ Erika Baker, interview with the author via telephone, 16 April 2014, hereafter Baker interview.

⁴ Baker interview.

tives together for disaster management purposes.⁵

This chapter first evaluates California's disaster partnerships using the analytical framework, then argues that nonprofit and industry organizations—a potential ninth factor—play significant, if understated, roles in California's approach to managing large-scale emergencies. The chapter then makes the case that California's partnerships are managed well without federal government involvement. They should remain that way if they are to endure in the long run. The chapter concludes by summarizing its key findings.

Crisis

Disasters can spark crises in California. These crises can create the conditions necessary for emergency-management collaborations to form in at least three ways. First, crises are engines for the formation of hastily formed networks—ad hoc groupings of organizations—and these networks frequently bring CalOES and firms together. Wildfires in 2007–8 and a widespread power outage in 2011 show how short-term collaboration to address the immediate effects of California's crises led to longer-term relationships between the state and its corporate partners.

Second, crises offer a means to assess existing partnerships between businesses and the state,

⁵ Tracy McBroom, interview with the author via telephone, 10 November 2014, hereafter McBroom interview; and "Welcome to the California Resiliency Alliance," California Resiliency Alliance, accessed 11 June 2015.

such as when a 2010 earthquake in Mexico prompted CalOES to work quickly with its private sector partners to ship supplies to earthquake survivors in Mexico. This 2010 incident is explored in greater depth below.

Third, crises help reinforce the connections between state officials and business representatives by cementing professional relationships. The state's need for data exchanges during disasters, as well as the American Red Cross's work with a firm whose employees were affected by a recent wildfire, illustrate how crises help bolster relationships between individual public and private sector representatives.

The crises created by California's disasters have triggered the creation of numerous partnerships there. For example, in 2007–8, fires near San Diego led to evacuations of area residents and livestock on nearby farms.⁶ The California Grocers Association (CGA), a trade group representing grocery stores in the state, offered the state donations of grain, alfalfa, and hay to feed the evacuated animals.⁷ The California Highway Patrol and California Department of Transportation worked with the CGA to transport the donated food securely to help feed the livestock, thereby avoiding a secondary disaster—the deaths of farm animals from hunger.⁸ Similarly, a large power outage in California in 2011 left Walmart officials

⁶ Baker interview.

⁷ Baker interview.

⁸ Baker interview.

scrambling to get a better sense of how the power outage impacted its business operations in the state.⁹ In the wake of these communication difficulties, however, Walmart representatives made contact with CalOES representatives, beginning a partnership that continues at the time of this writing.¹⁰

An international disaster involving CalOES shows how large-scale emergencies can test the state's emergency-management partnerships. In 2010, a 7.2 magnitude earthquake caused widespread damage in the state of Baja California, Mexico, which borders California's southern tip.¹¹ CalOES saw this disaster as an opportunity to donate goods to help earthquake survivors in the region. The agency first contacted the U.S. Department of State, which told CalOES officials that they approved of the idea of donating these supplies in principle, but added that any shipment of donated goods to Mexico could take weeks to get through customs.¹²

Eager to ship these supplies to Mexico quickly, CalOES's public-private sector liaison officer asked BUOC members if they had any suggestions about how to proceed faster. One member of CalOES's BUOC offered to get in touch with a representative of UPS, a global shipping company, whom she already

⁹ Brooke Brager, interview with the author via telephone, 5 December 2014, hereafter Brager interview.

¹⁰ Brager interview.

¹¹ For more on the earthquake, see Jennifer Steinhauer, "Strong Mexico Quake Shakes Buildings and Nerves in California," *New York Times*, 5 April 2010.

¹² Baker interview.

knew. The UPS representative offered to fly the donated goods to Mexico. Because of UPS's assistance, the donated goods were able to pass through customs and enter Mexico faster than the original two-week time line proposed by the Department of State. Moreover, the UPS official with whom CalOES communicated about transporting the donated supplies later became a new member of the BUOC, in part due to his participation in this disaster-response effort.¹³ This incident provides evidence of how an existing partnership—the alliance between BUOC members and CalOES—was tested in the context of a specific crisis and was able to yield helpful results, underlining the value of the partnership itself.

Crises can also strengthen professional relationships among CalOES and business representatives. For instance, CalOES's partnerships with retailers help it to better understand Californians' needs during disasters.¹⁴ When retailers share aggregated customer purchase data with CalOES, the agency can learn what popular items retailers need to keep in stock are during disasters.¹⁵ This crisis-specific information provides value to CalOES, because the organization can then use the retailers' aggregated customer purchase data to adjust how it deploys its own equipment and supplies.¹⁶ The exchange also

¹³ Baker interview.

¹⁴ Dan Bout, interview with the author via telephone, 21 November 2014, hereafter Bout interview.

¹⁵ Bout interview.

¹⁶ Bout interview.

benefits firms, because it helps CalOES avoid duplicating the sale and distribution of goods that the private sector already has in stock.

The American Red Cross, which partners with CalOES and businesses in the BUOC, has also bolstered the strength of its ties with firms during crises. It is important to note here that the American Red Cross enjoys a special relationship with governments at all levels in the United States. It also differs from other private sector and nonprofit actors discussed in this book. The American Red Cross is a unique, congressionally chartered humanitarian organization with mandatory responsibilities under the federal government's *National Response Framework*.¹⁷ In addition, the Red Cross subscribes to a humanitarian ethics that prizes neutrality, impartiality, and independence. For these reasons, the Red Cross shares the characteristics of other nonprofits and also humanitarian aid organizations, but during disasters it acts as a quasi-government agency.

The American Red Cross's collaboration with one firm took on a new dimension following a large wildfire that directly impacted the firm's employees. The American Red Cross provided disaster assistance to the business's employees who were affected by the fire. At the same time, the organization ramped up its

¹⁷ "Our Federal Charter: Our Relationship with the Federal Government," American Red Cross, accessed 2 January 2020; and *National Response Framework*, 4th ed. (Washington, DC: FEMA, 2019), 28–29.

efforts to collect monetary donations from the firm's employees who were not affected by the fire.¹⁸ The crisis faced by the firm's employees strengthened the partnership between the American Red Cross and the firm, as both organizations benefited from their respective actions.

Thus, crises influence California's approaches to disaster management in multiple ways. They can serve as catalysts for the creation of new partnerships, borne out of disaster-specific needs. Crises can also act as a testing ground for existing partnerships, permitting government and business officials to evaluate their partnerships. Crises triggered by large-scale emergencies also can strengthen ties between California state agencies and businesses, helping maintain these partnerships. Public and private sector leadership is a significant determinant of the health of the state's emergency-management agreements.

Leadership

Organizational leaders in California exercise significant influence in shaping the success or failure of the state's partnerships. Top-level leaders in government, business, and nonprofit organizations help promote these agreements by providing the resources to build and grow these partnerships. Mid-level managers execute their day-to-day administration. These

¹⁸ McBroom interview.

mid-level managers leverage a different but essential form of leadership from that of their organizational superiors.

Government agency leaders can influence partnerships by earmarking money and resources to build and sustain them. For example, CalOES employs a public-private sector liaison coordinator who steers the BUOC.¹⁹ The decision to fund this position is at least in part attributable to the agency director's views of PPPs' value, because if they did not view these partnerships as important, then they probably would not agree to finance the liaison position in CalOES's budget. CalOES employees say that their leadership has been essential in building the agency's agreements with firms and nonprofits, reinforcing the connection between agency-level leadership and CalOES's efforts to expand its public-private partnerships.²⁰

Corporate executive-level leadership can also prove pivotal in shaping the success of emergency-management collaborations. Cisco, a multinational internet technology company, is connected to CalOES via the California Resiliency Alliance (CRA).²¹ John T. Chambers, the former CEO of Cisco, was said to respect and appreciate his employees' work in emergency management.²² Walmart's CEO similar-

¹⁹ Baker interview.

²⁰ Bout interview; and Baker interview.

²¹ Rakesh Bharania, interview with the author via telephone, 4 December 2014, hereafter Bharania interview.

²² Bharania interview.

ly offered support to develop the firm's emergency-management capabilities after Hurricane Katrina struck New Orleans in 2005.²³ The success of Walmart's partnership with CalOES hinges on Walmart executives' continuing support for the firm's emergency-management department, and that support remains strong today.²⁴

Executive leadership in nonprofit organizations, too, helps build and grow California's emergency-management partnerships. For example, the former head of the CRA previously worked in the business and government sectors.²⁵ The CRA counts among its members blue chip technology companies such as Google, Apple, and Facebook. And in addition to local and state government agencies, it also includes well-known banks, credit card companies, consultancies, and shipping corporations.²⁶ The CRA's former leader continued this type of work by fostering communication and coordination among the CRA's public and private sector members for emergency-management purposes.

The roles of mid-level organizational coordinators in managing these partnerships also appear essential to their success in California. CalOES's public-private sector liaison is cited frequently as a linchpin in the state's efforts to work with businesses for disaster

²³ Brager interview.

²⁴ Brager interview.

²⁵ Jim Turner, interview with the author via telephone, 18 November 2014, hereafter Turner interview.

²⁶ "Members," California Resiliency Alliance, accessed 11 June 2015.

management purposes.²⁷ CalOES's deputy director of planning and preparedness is also mentioned as a key figure in building the state's agreements with firms and nonprofits.²⁸ These positions play different but complementary roles within CalOES, as their duties include overseeing CalOES's partnerships with firms and securing formal agreements to cooperate with businesses for emergency-management purposes.²⁹

Organizational coordinators play an essential part in California's partnerships too. Walmart divides California into different regions for business management purposes.³⁰ Corporate leaders in each region look to Walmart's emergency-management department as a central repository of disaster-related information.³¹ To meet this need, Walmart's emergency-management team collects disaster-related information from California state officials, compiles the information, then sends the information back out to local Walmart representatives in California.³² Among nonprofits, the American Red Cross employs a liaison to work directly with the state government and firms.³³

²⁷ McBroom interview; anonymous executive interview with the author via telephone, 6 October 2014, hereafter anonymous executive interview; and Kendall Skillicorn, interview with the author via telephone, 24 April 2014, hereafter Skillicorn interview.

²⁸ Baker interview; and Skillicorn interview.

²⁹ Skillicorn interview; and Baker interview.

³⁰ Brager interview.

³¹ Brager interview.

³² Brager interview.

³³ McBroom interview.

Leadership is invaluable in shaping California's emergency-management partnerships. Government and business executives can provide the top-tier support needed for their respective organizations to forge and grow these agreements. Mid-level coordinators offer a different but no less important form of leadership by carrying out the day-to-day management of the partnerships. Leaders' actions can give rise to distinct structures for CalOES's emergency-management agreements.

Organizational Structure

California officials prefer a formal structure, codified in memoranda of understanding (MOUs), for their disaster-oriented PPPs.³⁴ Once firms cosign MOUs with CalOES, they automatically become part of the BUOC, embedding firms organizationally within CalOES.³⁵ However, public and private sector officials acknowledge openly that this MOU-driven structure suffers from numerous shortcomings, including a general reluctance for firms to sign MOUs; MOUs may lack tangible commitments, raising questions about the MOUs' value; and the number of signed MOUs can act as a misleading indicator of success.

Firms can be reluctant to sign MOUs with CalOES for numerous reasons.³⁶ For example, MOUs may lead to concrete agreements for goods or services; but

³⁴ Baker interview; Skillicorn interview; and Bout interview.

³⁵ Skillicorn interview.

³⁶ Anonymous executive interview.

during disasters, firms may be impacted and unable to meet their MOU obligations.³⁷ If firms are especially nervous about signing an MOU, they will sometimes opt for an MOU that is more symbolic than committal.³⁸ An additional challenge is that CalOES seeks to limit the number of MOU signatories, which can stymie firms' flexibility in responding to disasters, since only MOU signatories may be given access to information from CalOES.³⁹ The American Red Cross prefers MOUs for its partnerships, but in practice can leave some of the terms of MOUs ambiguous during negotiations.⁴⁰

Despite these limitations, state officials stress the value of MOUs in structuring their partnerships.⁴¹ However, if MOUs are so flexible that they lack any concrete commitments, this calls into question the value of MOUs in the first place. If CalOES's MOUs do not commit either the agency or its partners to significant obligations, then what purpose do they serve?

MOUs appear to perform at least two key functions necessary for disaster partnerships in California. First, MOUs provide tangible proof that an organizational relationship exists between CalOES and firms. Having this tangible proof at hand benefits CalOES.⁴² For example, if there is ever a question about the

³⁷ Anonymous executive interview.

³⁸ Anonymous executive interview.

³⁹ Brager interview.

⁴⁰ McBroom interview.

⁴¹ For example, see Skillicorn interview.

⁴² Bryan Koon, interview with the author via telephone, 9 February 2015.

original purpose of the relationship between CalOES and one of its partners, the MOU provides CalOES and its partner with a shared foundational document for reference purposes. The MOU itself is evidence that the relationship between CalOES and its partner was developed in a thoughtful manner and agreed to by organizational leaders.

The second key function that MOUs perform is to ease the effects of personnel turnover for both the state and its private sector partners. The absence of measures to mitigate the impact of personnel turnover can harm partnerships.⁴³ The reason for this is that if the specific organizational representatives involved in PPPs leave their respective roles, then the partnerships themselves can fall apart.⁴⁴ When personnel leave, having a written document on file that formally codifies the relationship can act as a helpful reference point for the partners' respective organizations.⁴⁵

Getting MOUs signed can be arduous for businesses. In large firms, MOUs may go through multiple layers of corporate approvals prior to signature, making the approval process as a whole difficult.⁴⁶ In contrast, the MOU template that CalOES uses with its partners has already been heavily vetted and revised by CalOES's lawyers, so the MOU process imposes a comparatively light organizational burden on CalOES

⁴³ Bout interview; and McBroom interview.

⁴⁴ Bout interview.

⁴⁵ McBroom interview.

⁴⁶ Brager interview.

vis-à-vis its private sector partners.⁴⁷ All of this suggests that it is CalOES, not the private sector, which is the chief beneficiary of signed MOUs.

CalOES measures its success in forging partnerships by the number of MOUs it cosigns with firms. But when used as a metric to gauge the success of the state's partnerships, the total number of signed MOUs can hide dysfunction and variation in partnership quality, revealing little about the true level of private sector commitment to these partnerships.⁴⁸ One executive cautions that the most important consideration for firms participating in these agreements is not cosigned MOUs, but the extent to which these partnerships can help firms cut costs or boost profits.⁴⁹ This executive emphasizes that MOUs offer limited value both as a tool to increase businesses' willingness to partner with CalOES and as a means to assess the success of CalOES's collaborations.

California's emergency-management agreements are primarily structured in a formal way. These partnerships are rooted in MOUs between CalOES and firms. This approach has numerous drawbacks that

⁴⁷ Skillicorn interview.

⁴⁸ Nathan E. Busch and Austen D. Givens, "Achieving Resilience in Disaster Management: The Role of Public-Private Partnerships," *Journal of Strategic Security* 6, no. 2 (Summer 2013): 14–16, <http://dx.doi.org/10.5038/1944-0472.6.2.1>; Austen D. Givens and Nathan E. Busch, "Realizing the Promise of Public-Private Partnerships in U.S. Critical Infrastructure Protection," *International Journal of Critical Infrastructure Protection* 6, no. 1 (March 2013): 42–45, <http://dx.doi.org/10.1016/j.ijcip.2013.02.002>; and Bout interview.

⁴⁹ Anonymous executive interview.

state officials and business representatives acknowledge. Moreover, the state's focus on the number of MOUs that it has in place as a metric of success may mistakenly lead state officials to believe that their partnerships are stronger than they truly are. Regardless of the specific form that these accords between CalOES and firms take, it is essential for organizational partners to exchange information.

Information Sharing

Virtually all of the information shared between firms and CalOES relates to specific disaster responses or disaster preparedness activities. Public and private sector officials in California appear to agree that both of these types of information exchange are useful. Nevertheless, organizational roadblocks to information sharing; conflicting information; and high-volume, low-quality information can challenge this type of emergency-management partnership in the state.

During disaster responses in California, business representatives in the state's BUOC are given full access to the SOC's data systems.⁵⁰ Having access to these systems can be useful for firms, because they provide private sector representatives with a live view of how the state responds to disasters. This type of information exchange, carried out in the specific context of disaster responses, permits CalOES and

⁵⁰ Baker interview.

private sector officials to address disaster needs in a more coordinated manner.

The state and its partners also share disaster-specific information when they are not physically located in the BUOC. For instance, Walmart manages emergency operations from its headquarters in Bentonville, Arkansas, and receives information on vehicle traffic, road closures, and shelter locations from CalOES via email.⁵¹ The American Red Cross and Walmart have access to state information flows remotely via the state's web-based computer application for logging and tracking situational updates and resource requests.⁵² The American Red Cross also uses the state's web-based application to broadcast its own requests for resources during disasters, such as difficult-to-locate supplies or personnel with special skills.⁵³

CalOES and its partners also share disaster preparedness information. Utility companies sometimes offer information such as entrance and exit points for their facilities with CalOES.⁵⁴ In the event of a disaster that affects the utility companies, CalOES can relay this information to first responders, saving them valuable time when they arrive at the scene. CalOES sponsors disaster preparedness training events for its private sector partners as well. One CalOES official

⁵¹ Brager interview.

⁵² McBroom interview; and Brager interview.

⁵³ McBroom interview.

⁵⁴ Baker interview.

recalled a recent disaster preparedness workshop that CalOES hosted with the U.S. Centers for Disease Control and Prevention (CDC), a federal public health agency.⁵⁵ The workshop brought together representatives from businesses, nonprofits, and different state agencies to exchange views about disaster preparedness. The CalOES official said, “Just getting opinions about what the non-profit/private sector thinks and needs was very enlightening to a lot of us.”⁵⁶

Conflicting information, however, can limit the utility of data exchanges between the state and its partners. For example, during the 2009 H1N1 (a.k.a. swine flu) flu virus outbreak, federal, state, and local government agencies provided differing guidance about how to control the spread of the virus.⁵⁷ This led to confusion on the part of private sector employers, because some encouraged their employees to work from home, while other employees continued to come to work and send their children to school each day.⁵⁸ The H1N1 flu virus outbreak response shows that even well-intentioned information sharing between the state and its partners can run into prob-

⁵⁵ Skillicorn interview. See, for example, “California Specialized Training Institute (CSTI): Training Opportunities,” Bulletin No. 01-2020, CalOES, January 2020.

⁵⁶ Skillicorn interview.

⁵⁷ Turner interview. See, for example, Donald G. McNeil Jr., “Swine Flu Prompts W.H.O. to Issue Higher Alert, with Advice,” *New York Times*, 27 April 2009; and Vicki Freimuth et al., “Trust During the Early Stages of the 2009 H1N1 Pandemic,” *Journal of Health Communication* 19, no. 3 (2014): 321–39, <https://doi.org/10.1080/10810730.2013.811323>.

⁵⁸ Turner interview.

lems if different government agencies do not agree about proper courses of action during large-scale emergencies.

Organizational roadblocks to information sharing can affect California's partnerships too. In all government bureaucracies there is the possibility that specific government employees will hoard information to maintain a sense of organizational control.⁵⁹ This means that government employees may be in a position to block information sharing with firms.⁶⁰ Employees within businesses may be prone to similar behavior. They also have numerous behavioral incentives to withhold information.⁶¹

A third potential limitation to California's information-sharing partnerships is information overload. Since the 9/11 terrorist attacks, governments at all levels in the United States have emphasized the need to break down information silos and share more data.⁶² As a result of this renewed emphasis on information sharing, many government officials now say that their inboxes are filled with reports that

⁵⁹ Bout interview.

⁶⁰ Joel M. Evans, Michael G. Hendron, and James B. Oldroyd, "Withholding the Ace: The Individual- and Unit-Level Performance Effects of Self-Reported and Perceived Knowledge Hoarding," *Organization Science* 26, no. 2 (March–April 2015): 13, <https://doi.org/10.1287/orsc.2014.0945>.

⁶¹ Evans, Hendron, and Oldroyd, "Withholding the Ace," 3.

⁶² Austen D. Givens and Nathan E. Busch, "Information Sharing and Homeland Security: The Role of Public-Private Partnerships," *Homeland Security Review* 7, no. 2 (Summer 2013): 125.

are not timely or useful.⁶³ Although none of the public or private sector officials the author spoke with indicated that they were overwhelmed by high-volume or low-quality information from their partners, this possibility exists for California's emergency-management agreements.

CalOES shares information for emergency-management purposes in two key categories: data specific to disaster responses and information related to emergency preparedness. There is also evidence suggesting that this information sharing may not always function as intended. Conflicting guidance, organizational roadblocks, and high-volume, low-quality information can impose limits on the benefits of CalOES's information exchanges with its partners.

Mutual Benefits

CalOES and its partners derive specific benefits from working together. BUOC members, such as Home Depot, Cisco, Walmart, and the American Red Cross, enjoy sales and access to nonpublic information through their collaboration with CalOES. The state benefits from firms through material and logistical assistance, as well as access to private sector information. CalOES and its partners appear to understand, too, that inattention to these mutual benefits can damage their relationships.

⁶³ Givens and Busch, "Information Sharing and Homeland Security," 134–36; and Hamilton Bean, "Exploring the Relationship between Homeland Security Information Sharing and Local Emergency Preparedness," *Homeland Security Affairs* 5, no. 2 (May 2009): 6–11.

California's partnerships can result in revenue for firms. For instance, one private sector representative says that their firm's collaboration with California state officials helps them to work within California's disaster-procurement laws.⁶⁴ This collaboration with the state can potentially lead to the company selling goods to the state, because it helps the firm know precisely what it must do to bid on and win business from the state.⁶⁵ CalOES also can encourage citizens to purchase goods from its partners during disaster situations. For example, Home Depot, a CalOES partner, sells protective masks that prevent the inhalation of particulate matter contained in smoke. During wildfires, if residents become concerned about air quality, CalOES can direct them to Home Depot to purchase the masks. In both of these cases, public-private sector collaboration has the potential to generate corporate revenue directly.

These partnerships also can generate revenue indirectly. Cisco's Tactical Operations (TacOps) team, which deploys to disaster zones to restore communications capabilities, field-tests Cisco equipment during their responses to disasters.⁶⁶ The team then relays information about how well the Cisco equipment worked—or did not work—to potential Cisco customers, including government agencies, alongside Cisco's sales personnel.⁶⁷ The team is not re-

⁶⁴ Brager interview.

⁶⁵ Brager interview.

⁶⁶ Bharania interview.

⁶⁷ Bharania interview.

sponsible for generating money for the company, but their assessments of the Cisco equipment can lead indirectly to equipment sales for Cisco.⁶⁸

Public-private sector collaboration can deliver helpful material and logistical assistance for CalOES. For example, following a 2014 earthquake in Napa Valley, California, the American Red Cross struggled to obtain accessible portable showers for earthquake survivors.⁶⁹ The state's corporate BUOC partners banded together to purchase the showers for the American Red Cross.⁷⁰ The BUOC members' assistance in this case offered numerous mutual benefits for CalOES, the Red Cross, and BUOC members. CalOES benefited because it was not burdened with having to locate and purchase the showers using state funds. The American Red Cross benefited because its need for accessible showers was fulfilled, relieving it of the financial cost of paying for the showers independently. BUOC members also gained from the purchase of the showers, because in buying this sort of disaster aid for the nonprofit American Red Cross, they would then be able to write off the expense of the showers when paying corporate taxes, helping them to reduce their business operating costs.

⁶⁸ Bharania interview.

⁶⁹ McBroom interview. See, for example, Elizabeth Weise, "120 Injured, 3 Critical after Napa, California Quake," *USA Today*, 24 August 2014.

⁷⁰ McBroom interview.

State officials appear keen to avoid duplicating the private sector's material and logistical services, emphasizing the value of CalOES's collaborations. The agency says that its priority is to get businesses up and running after a disaster, because that can help communities return to normalcy. There is also recognition within CalOES that the private sector is simply more efficient at certain types of tasks integral to emergency responses, such as the logistics of moving thousands of water bottles from one point to another.⁷¹ Given this recognition of private sector efficiencies in certain facets of emergency response, as well as CalOES's emphasis on reopening businesses after disasters, CalOES is eager to leverage the private sector's capabilities to increase disaster resilience.

An additional benefit for the state of California and its corporate partners is access to information. Receiving real-time private sector information during disasters can be valuable for CalOES, because the state can use this information to adjust its own response actions.⁷² Information sharing is also helpful for nonprofits. For example, when the American Red Cross shares its plans and response actions with businesses, firms are then able to assist the Red Cross faster, because firms will not have to spend as much time learning about what the organization has

⁷¹ Bout interview.

⁷² Baker interview.

done during the disaster, or what they need for the purposes of disaster response.⁷³

While disaster partnerships offer benefits for firms and the state, neglecting these mutual benefits can harm the partnerships between the state and firms. If a firm or the state focuses solely on what it can derive from a partnership rather than what it can contribute to a partnership, there is a risk of the partnership deteriorating due to a lack of reciprocity.⁷⁴ For nonprofit organizations, having mutual benefits in their relationships can be essential for organizational survival, since these mutual benefits can include money, volunteers, and resources that nonprofit organizations need to continue operating.⁷⁵ Because of these factors, the existence of mutual benefits in California's disaster-oriented PPPs is a key predictor of their success.⁷⁶

Emergency-management agreements can benefit the state and firms through sales, positive media coverage, materiel and logistical assistance, and access to information. At the same time, government and business representatives seem to agree that sensitivity to and awareness of one another's benefits is imperative for their partnerships to be successful.

⁷³ McBroom interview.

⁷⁴ Brager interview; and Alberto Caimo and Alessandro Lomi, "Knowledge Sharing in Organizations: A Bayesian Analysis of the Role of Reciprocity and Formal Structure," *Journal of Management* 41, no. 2 (2015): 679, <https://doi.org/10.1177/0149206314552192>.

⁷⁵ McBroom interview.

⁷⁶ Skillicorn interview.

Trust is a key factor in strengthening this sensitivity to public and private sector benefits.

Trust in Organizational Relationships

Business and government representatives in California are emphatic about the indispensable role of trust in their organizational relationships.⁷⁷ The trust present in these PPPs can be classified broadly into three types: interfirm trust, intersector trust, and trust related to information sharing.

Firms that partner with the state must trust one another to collaborate well. Several of the state's corporate partners are business competitors.⁷⁸ However, business representatives in the BUOC have strong incentives to cooperate with one another during crises, because in collaborating, they can help their own respective businesses return to normal operations faster.⁷⁹ An official with Walmart's emergency-management team points toward the progress firms in the BUOC have made in recent years:

The [BUOC] concept has served as a strong networking platform for the private sector for information sharing purposes as it has allowed us a better understanding of what other private sector organizations are doing before, during and after a disaster for associates, operations and the communities they

⁷⁷ McBroom interview; Bharania interview; and Baker interview.

⁷⁸ Baker interview.

⁷⁹ Baker interview.

serve. Prior to the [BUOC] concept, sharing information [between firms] was not as common simply because we didn't have an understanding of who to reach out to for this type of information. Now we all understand that we're in this together in an effort to create overall resiliency.⁸⁰

In addition to highlighting how trust within the BUOC can spur cooperation, these comments also reveal insights about the dynamics of interorganizational relationships generally, a theme to which we will return in chapter 6.

It is important to note that while concerns about interfirm competition during disasters are plausible in theory, they may not be grounded in reality. There is a common misperception that trust exists between organizations, but interfirm trust is in reality cultivated by specific individuals on whom that interorganizational trust hinges.⁸¹ Strong one-to-one professional relationships among BUOC members may, therefore, go a long way toward building trust between their respective employers. It may also be the case that firms do not use disasters as an opportu-

⁸⁰ Brooke Brager, email to the author, 26 June 2015.

⁸¹ Bout interview; and Mick Marchington and Steven Vincent, "Analysing the Influence of Institutional, Organizational, and Interpersonal Forces in Shaping Inter-Organizational Relations," *Journal of Management Studies* 41, no. 6 (September 2004): 1036–37, <https://doi.org/10.1111/j.1467-6486.2004.00465.x>.

nity to gain business advantages over competitors.⁸²

Trust between firms and CalOES appears essential for partnerships in California as well. This interorganizational trust can have direct impacts on disaster responses. For example, business owners sometimes must enter restricted areas during disasters to access their business facilities.⁸³ This action requires that first responders trust business owners not to endanger themselves when they enter these areas.⁸⁴ It also requires that business owners trust first responders to permit them to access their commercial facilities, even if the conditions within them are potentially unsafe. Concerns about trust in partnerships extend to nonprofit organizations as well. For example, an American Red Cross official stresses the implications of the organization associating with private sector firms during disasters, suggesting that the Red Cross is sensitive to public perceptions of its organizational brand, so “you wouldn’t want to co-brand with a brand that’s doing bad stuff or something illegal.”⁸⁵ These observations imply that interorganizational trust and public perceptions of the American Red Cross’s disaster responses are intertwined.

Cisco deliberately steeps its employees in emergency-management culture and jargon to help build intersector trust. The Cisco TacOps team includes

⁸² Jim Williams, interview with the author via telephone, 1 December 2014.

⁸³ Turner interview.

⁸⁴ Turner interview.

⁸⁵ McBroom interview.

a significant number of former military personnel, police officers, firefighters, and emergency medical technicians.⁸⁶ Every member of the Cisco TacOps team receives formal training in the NIMS and ICS, which are standardized emergency-management methods promoted by FEMA.⁸⁷ Hiring employees with experience managing disasters and providing them with high-quality training pays dividends for Cisco by helping the firm to build trust with its government partners during disasters.⁸⁸

The trust needed for the state of California and its partners to share sensitive information with one another is essential for that information sharing to continue. Utility companies that partner with the state, for instance, may share confidential or proprietary information about their operations to help the state better respond to disasters.⁸⁹ But leaks of this kind of information can damage the trust that exists between the state and its partners, reducing the possibility of future cooperation.⁹⁰ The trust relationship goes both ways: firms also must trust that the state will share information with them and firms must have confidence that the public sector will also fulfill its promises to businesses and maintain emergency-management partnership programs over

⁸⁶ Bharania interview.

⁸⁷ Bharania interview; and "NIMS: Frequently Asked Questions," U.S. Department of Homeland Security, accessed 11 June 2015.

⁸⁸ Bharania interview.

⁸⁹ Baker interview.

⁹⁰ Skillicorn interview.

time.⁹¹ These factors highlight that trust is a crucial element in facilitating data exchange between businesses and CalOES.

Trust among firms that partner with the state, trust between companies and CalOES, and trust surrounding information-sharing practices each play significant roles in California's partnerships. Information sharing in particular can place challenging demands on CalOES and firms in the BUOC. Over time, though, government agencies and companies must adjust their practices, as well as other facets of their cooperation with one another, to sustain their partnerships.

Adaptability and Sustainability

Emergency-management agreements in California show limited evidence of adaptation to changing circumstances, suggesting that adaptability is not an essential component of CalOES's relationships with firms and nonprofits.⁹² The longer-term sustainability of the state's partnerships is also threatened from at least two corners. First, a decrease in the number of disasters may lead policy makers to diminish the importance of CalOES's partnerships. To counter this possibility, CalOES and its partners communicate frequently with one another and participate often in disaster preparedness exercises. Second, potential cuts to disaster aid budgets in government agencies

⁹¹ Turner interview.

⁹² Baker interview; and anonymous executive interview.

and businesses may make it harder to sustain the state of California's disaster partnerships into the future.

There are few indications that California's emergency-management partnerships can adapt. Perhaps the most significant adaptation in the history of CalOES's partnership program occurred at the creation of the program itself.⁹³ A cooperative response to San Diego wildfires in 2006–7 led to firms signing MOUs with CalOES and the establishment of the BUOC.⁹⁴ Yet, this shift from short-term wildfire response partnerships to long-term partnerships may be the only substantial way in which CalOES's disaster management agreements have changed. In the BUOC's early days, CalOES sought to partner with professional industry organizations, because doing so would permit CalOES to reach and interact with hundreds of businesses at once.⁹⁵ Later, the agency shifted its approach to focus on large retailers, such as Home Depot and Lowe's, and developed partnerships with these big firms.⁹⁶

California has experienced no shortage of disasters in recent years. However, it is worth pointing out that the passage of time without disasters can be problematic, because it can lead policy makers to believe incorrectly that the risks of disasters have dimin-

⁹³ Turner interview.

⁹⁴ Turner interview.

⁹⁵ Baker interview.

⁹⁶ Baker interview.

ished.⁹⁷ Since policy makers may believe that certain risks are diminishing, they may also deprioritize emergency management, generally, and partnerships, in particular. Deprioritizing these collaborations means that the professional relationships that are integral for these partnerships may erode over time, harming them. Underscoring the potential for this deprioritization, one California executive notes that a lack of disasters can change a once-healthy relationship marked by frequent interorganizational contact into an “on-demand” relationship, in which one party calls another only on an as-needed basis.⁹⁸

To help sustain California’s emergency-management partnerships in the future, CalOES and its corporate partners know that they must keep in frequent contact with one another. For instance, one American Red Cross official says that they speak with the organization’s partners frequently and ensures that the Red Cross has up-to-date contact information for its partners.⁹⁹ These contacts between organizational representatives can keep interorganizational relationships fresh. A CalOES official concurs with their American Red Cross counterpart, saying that disaster partnerships require continuous engagement between public and private sector representatives.¹⁰⁰

Despite efforts to sustain the state’s partner-

⁹⁷ Bout interview.

⁹⁸ Anonymous executive interview.

⁹⁹ McBroom interview.

¹⁰⁰ Baker interview.

ships, CalOES's collaborations are threatened by potential future shortfalls in funding, with the money committed for building and growing these disaster partnerships absorbed in diverse parts of the CalOES budget rather than in a dedicated section of the organization's budget.¹⁰¹ If CalOES is unwilling to fund a dedicated budget line for building and growing these partnerships, that leaves CalOES with the option to halt the state's emergency-management partnership program easily. However, CalOES officials have not indicated they have plans to end the agency's program.

Shortcomings in private sector funding for these agreements can threaten the sustainability of CalOES's partnerships too. Cisco's TacOps team is funded by the firm's overhead budget and is not responsible for generating any revenue for the company.¹⁰² Since the TacOps team does not generate revenue directly, the firm could opt to cut the team in part or whole to increase Cisco's profitability.¹⁰³ The American Red Cross is highly dependent on outside financial support for its operations.¹⁰⁴ Gaps in funding could cause the organization to scale back many initiatives, including its work in emergency management. Walmart has invested heavily in its emergency-management capabilities. Though, like Cisco, a de-

¹⁰¹ Baker interview.

¹⁰² Bharania interview.

¹⁰³ John-Paul Marney and Heather Tarbert, *Corporate Finance for Business* (Oxford, UK: Oxford University Press, 2011), 17–18.

¹⁰⁴ McBroom interview.

sire to improve corporate profitability could lead the firm's executives to cut costs, including trimming back the staff dedicated to managing the firm's relationships with emergency-management agencies.¹⁰⁵ No one that was contacted for this study indicated that their organization planned to scale back or cut its disaster partnership program. But this could change at any time.

CalOES's emergency-management relationships do not appear to have adapted significantly over time. A decline in the number of disasters and the potential for budget shortfalls may threaten the sustainability of the state's partnerships as well. California state government and private sector officials acknowledge the need to remain engaged with one another, and they do this primarily through regular communication and participation in disaster response exercises. If budgetary constraints lead CalOES and its partners to trim funding for the state's disaster management partnerships, they may then seek ways to make their coordination more efficient. One way to improve the efficiency of these agreements is through the use of nonprofit organizations.

The Role of Nonprofit Organizations: A Ninth Factor?

Throughout this chapter, two nonprofit organizations consistently emerged as trusted facilitators of partnerships in California: the American Red Cross

¹⁰⁵ Brager interview.

and the CRA. The Red Cross facilitates these agreements by partnering with businesses and the state to support its own organizational operations, as well as by participating in the BUOC alongside state officials and business representatives.¹⁰⁶ The CRA exists for the sole purpose of bringing together public and private sector actors to improve emergency-management capabilities.¹⁰⁷

The American Red Cross acts as a trusted agent in California's disaster partnerships, connecting businesses and government agencies for emergency-management purposes. The Red Cross develops close working relationships with its organizational partners, because it relies on external funding, resources, and volunteers for its day-to-day operations.¹⁰⁸ These partnerships are fundamentally different from those of profit-seeking BUOC members. Unlike firms such as Walmart, which generate revenue independent of their partnerships with government agencies or businesses, the Red Cross's very existence depends on strong ties to other organizations.¹⁰⁹ The Red Cross carries these strong ties inside the BUOC during cri-

¹⁰⁶ McBroom interview.

¹⁰⁷ "About Us," California Resiliency Alliance, accessed 11 June 2015.

¹⁰⁸ McBroom interview.

¹⁰⁹ Douglas R. White and Michael Houseman, "The Navigability of Strong Ties: Small Worlds, Tie Strength, and Network Topology," special issue, *Networks and Complexity* 8, no. 1 (September/October 2002): 72–81, <https://doi.org/10.1002/cplx.10053>; and see also Mark S. Granovetter, "The Strength of Weak Ties," *American Journal of Sociology* 78, no. 6 (May 1973): 1360–80, <https://doi.org/10.1086/225469>.

ses, creating a network multiplier effect.¹¹⁰ The network multiplier effect, in this context, means that by adding a single, well-connected organization to the BUOC, such as the Red Cross, the net present value of participating in the BUOC increases for all members, and the expected future value of participating in the BUOC increases for prospective BUOC members as well. The American Red Cross's strong ties to its partners provide a significant boost to the BUOC in this regard.

The CRA, whose work to build emergency-management capacity includes and extends beyond the BUOC, also creates a network multiplier effect in the BUOC.¹¹¹ The CRA was instrumental in the creation of the BUOC.¹¹² Today, the CRA boasts more than 400 government, business, and nonprofit sector members.¹¹³ At the inception of the BUOC, CalOES would have benefited immediately from the CRA's connections. Engaging with the CRA would have given CalOES a single point of contact to reach a huge range of firms, including banking, information technology, and shipping companies.¹¹⁴ In addition, just

¹¹⁰ Keith G. Provan and H. Brinton Milward, "Do Networks Really Work?: A Framework for Evaluating Public-Sector Organizational Networks," *Public Administration Review* 51, no. 4 (July/August 2001): 420, <https://doi.org/10.1111/0033-3352.00045>.

¹¹¹ California Resiliency Alliance members also include local and federal government representatives. See "Members," California Resiliency Alliance, accessed 11 June 2015.

¹¹² Turner interview.

¹¹³ "Members."

¹¹⁴ "Members."

as with the American Red Cross, the CRA depends on the engagement of its members for its own organizational survival. Absent revenue and participation from CRA members, they would probably fold. This means that independent of its partnership with CalOES, the CRA has powerful financial incentives to develop strong ties with its members. Thus, when CalOES partners with the CRA, it benefits from the alliance's strong ties to its members.

The American Red Cross and CRA's partnerships with CalOES indicate that nonprofit organizations play a vital role in facilitating California's disaster partnerships. When nonprofits with ties to other organizations partner with the state, these connections can offer immediate benefits to the state and its other corporate partners. The increasing size and strength of the state's partnership network boosts the range and number of resources available to the state and its partners. Moreover, this larger and more robust interorganizational network lifts the expected future value of the state's emergency-management agreements. Knowing that the state already partners with well-connected organizations such as the Red Cross and CRA may prove enticing for firms that are considering, but have not yet committed, to develop their own partnerships with the state.

California's Disaster-Oriented PPPs: A State-Managed Solution

This chapter has discussed CalOES's management

of an array of disaster partnerships. These partnerships are concentrated in the BUOC, which traces its origins to a series of California wildfires in 2006–7. That time line means that the BUOC, and California’s embrace of emergency-management agreements, predates the federal government’s recognition of the need to include businesses as full participants and partners in emergency-management operations. In other words, with respect to disaster-oriented PPPs, California set an example of public-private sector co-operation that the federal government was able to study.

California’s partnerships serve many purposes, from the procurement and distribution of physical aid (e.g., Walmart and UPS) to sheltering operations (e.g., the American Red Cross). And these partnerships, like the other agreements that we have seen so far, are tailored to the unique variety of hazards and circumstances that California faces. The totality of this evidence makes a powerful case for CalOES to be left to create and manage its partnerships without federal interference. Indeed, federal involvement—such as the imposition of a particular template or set of administrative requirements for partnerships—would likely disrupt the success the BUOC has enjoyed to date. Not only would this be a misguided decision, but it would run contrary to the safety interests of ordinary Californians, who must count on CalOES and its private sector partners during disasters.

Conclusions

California's partnerships help the state government and firms manage disasters. However, adaptability does not appear to play an important role in the state's agreements. In addition, nonprofit organizations in the CalOES BUOC exert surprising influence within the state's disaster partnerships. Two other aspects of CalOES's partnerships are also noteworthy. CalOES relies on MOUs as the preferred organizational structure for its partnerships, and the state and its partners share information using a range of tools and methods.

California's emergency-management agreements appear to work well. In disaster responses ranging from wildfires to earthquakes, CalOES has benefited tangibly from the knowledge, physical resources, and logistical capabilities of BUOC members. For their part, CalOES's partners gain from their partnerships with the state through potential increases in sales, media exposure, and access to nonpublic information from CalOES.

At the same time, CalOES's corporate partnerships are striking for their lack of adaptability. Apart from the creation of the BUOC, which transformed a handful of short-term disaster response relationships into longer-term partnerships, there has been virtually no evolution in the state's partnerships with firms since the creation of the BUOC itself. But this absence of evolution does not seem to matter. CalOES's partnerships have routinely been used to

respond successfully to disasters in California and outside the state.

The influence of the American Red Cross and CRA on the BUOC suggests that the analytical framework could be enhanced through the addition of a ninth factor—the role of nonprofit organizations. The Red Cross and CRA depend on strong interorganizational relationships for their day-to-day operations. Both organizations carry these relationships into their work with CalOES, benefiting existing BUOC members and increasing the potential future value of BUOC membership for prospective members.

The state's emphasis on developing MOUs with its corporate partners is notable as well. MOUs primarily benefit CalOES—not firms—and offer little in the way of concrete commitments from businesses. CalOES uses the number of cosigned MOUs it has on file as a metric to gauge the success of its disaster partnership program. This practice can present a misleading picture of the strength of CalOES's PPPs, but to the agency's credit, CalOES recognizes that it needs to develop new ways to assess its collaborations.

CalOES and its corporate partners share disaster response information and disaster preparedness information using multiple tools and methods, including proprietary databases. This information sharing may at times face obstacles, such as individual employees who hoard information. But when consid-

ered in the aggregate, information-sharing practices in California's partnerships appear to be robust.

California's emergency-management agreements show remarkable success, despite the fact that they have not evolved significantly. This success is also attributable, at least in part, to the fact that the state has so far been able to forge agreements in the absence of federal government pressure or requirements. In the next chapter, we turn our attention to Florida, where in contrast to California, state-level, disaster-oriented PPPs have transformed repeatedly during the past decade.

Chapter Three

DISASTER-ORIENTED PPPS IN FLORIDA

The Orlando, Florida, emergency dispatcher who took the 911 call at 0235 on 12 June 2016 was initially confused by what they heard. The caller spoke rapidly in Arabic: "Praise be to God, and prayers as well as peace be upon the prophet of God." The caller then switched to English and delivered a chilling message to the emergency dispatcher: "I wanna let you know, I'm in Orlando and I did the shootings." The caller next declared their allegiance to Abu Bakr al-Baghdadi, the leader of the terrorist organization Islamic State of Iraq and Syria (ISIS), and informed the dispatcher that he was located in Orlando.¹ Then the line went dead.

The entire call lasted only 50 seconds. Investigators later learned that the caller, Omar Mateen, had dialed 911 from inside an Orlando nightclub called Pulse, where he used a pistol and a high-

¹ Andrea Aprea, "Investigative Update Regarding Pulse Nightclub Shooting," FBI, 20 June 2016.

powered rifle to murder 49 people and injure 53 others.² At the time, Mateen's was the deadliest mass shooting in modern American history.³

In the wake of the Pulse nightclub shooting, the Florida Division of Emergency Management (FDEM) worked with an array of companies to provide services for survivors. JetBlue offered free flights.⁴ Airbnb, a home-sharing website, assisted survivors with lodging.⁵ Uber, a ridesharing service, provided ground transportation.⁶ The Walt Disney Company maintains a large presence in the Orlando area, and set up a children's recreation area inside an improvised family assistance center.⁷ In addition, Disney donated \$1 million to the OneOrlando Fund, which Orlando mayor John H. "Buddy" Dyer created to collect and disburse money for organizations involved in the response to the Pulse nightclub shooting.⁸ Assistance

² Tripp Mickle and Laura Stevens, "Federal Authorities Call Orlando Shooting Hate Crime, Act of Terrorism," *Wall Street Journal*, 15 June 2016.

³ Mickle and Stevens, "Federal Authorities Call Orlando Shooting Hate Crime."

⁴ Lizette Alvarez and Nick Madigan, "In the Dead in Orlando, Puerto Ricans Hear a Roll Call of Their Kin," *New York Times*, 14 June 2016.

⁵ "Orlando Nightclub Response," U.S. Chamber of Commerce Foundation, 23 August 2016.

⁶ "Orlando Nightclub Response."

⁷ Larry Griffin, "To Find 'New Normal' after Pulse Attack, City and County Launch Family Assistance Center," *Orlando Rising*, 23 June 2016.

⁸ Caitlin Dewey, "How GoFundMe Is Making Sure All of Those Orlando Victim Fundraisers Are Legit," *Washington Post*, 14 June 2016; and Kate Santich, Susan Jacobson, and Kyle Arnold, "Mayor Creates OneOrlando Fund; Disney Is Biggest Donor So Far with \$1 Million to Help Pulse Victims," *Orlando (FL) Sentinel*, 14 June 2016.

came from the nonprofit community too. The American Red Cross does not usually service hospitals in the Orlando area, yet following the Pulse nightclub shooting, it delivered 30 units of blood to area hospitals for survivors of the attack, many of whom had suffered severe blood loss from bullet wounds.⁹ The Red Cross also opened a center staffed by mental health counselors to aid the loved ones of shooting victims.¹⁰ Throughout the tragic aftermath of the Pulse nightclub shooting, firms and nonprofit organizations rallied to aid survivors and support the Orlando community.

Today, the FDEM maintains a well-developed disaster partnership program. This program consists primarily of state agreements with industry organizations, such as Enterprise Florida, a business recruitment group; the Florida Restaurant and Lodging Association; and the Florida Chamber of Commerce.¹¹ In addition, two nonprofit organizations that work directly and indirectly with the FDEM—the American Logistics Aid Network (ALAN) and Voluntary Organizations Active in Disasters (VOAD)—show the potential and promise of emergency-management agreements in Florida.

⁹ “Red Cross Issues Statement on Orlando Mass Shooting,” American Red Cross, 12 June 2016; and Denise Grady, “Orlando Injuries Were Severe, but Trauma Care Was Nearby,” *New York Times*, 14 June 2016.

¹⁰ “Caring for Each Other After the Orlando Shooting,” American Red Cross, 22 June 2016.

¹¹ “Emergency Support Functions,” FDEM, accessed 2 January 2020.

CHAPTER THREE

In this chapter, an analytical framework is used to explore disaster partnerships in Florida. This will show that these partnerships rely heavily on the roles of industry and nonprofit organizations. This reliance is so acute that the analytical framework should be amended to include the roles of these types of organizations to be useful for broader analyses of state-level, disaster-oriented PPPs. This chapter then argues that the federal government should leave Florida emergency-management officials to manage their agreements as they wish. The chapter concludes by making the case that it remains uncertain how Florida's partnerships will fare during future large-scale emergencies.

Crisis

The 2004–5 hurricane seasons saw eight storms directly impact Florida.¹² These hurricanes sparked crises that led to long-term disaster partnerships in the state. Because power outages were widespread during the 2004–5 hurricane season, Publix, a large Florida-based grocery chain, spent millions of dollars during several years installing emergency electrical generators in their stores.¹³ The FDEM assisted Publix to obtain the permits required to install the generators.¹⁴ The FDEM likely provided this assistance be-

¹² The hurricanes were Charley, Frances, Ivan, and Jeanne (2004); and Dennis, Katrina, Rita, and Wilma (2005).

¹³ Chuck Hagan, email to the author, 26 June 2015, hereafter Hagan email.

¹⁴ Hagan email.

cause the agency's leaders recognized that having grocery stores open after disasters would free FDEM from having to worry about delivering emergency food supplies directly to citizens. And instead of FDEM providing emergency rations to disaster survivors, survivors could instead purchase food directly from grocery stores themselves. This arrangement benefited Publix by increasing customer traffic and sales revenue; it also benefited FDEM by permitting the agency to focus on other disaster response priorities. Publix's experience illustrates how one common type of disaster-caused crisis—power outages—can lead directly to partnerships for emergency management.

Crises affecting the private sector during emergencies can also lead to new state laws. Many Florida gas stations lost electricity during the 2004 hurricane season, for instance.¹⁵ The loss of power at gas stations, coupled with increased demand for vehicle fuel after the storm, led to general shortages of vehicle fuel in Florida.¹⁶ The chief executive officer (CEO) of Tropical Shipping, an international maritime freight company based in Florida, recognized the longer-term business implications of gas shortages during such natural disasters after the 2004 hurricane season. The firm relies on rail and truck shipments of goods, both

¹⁵ *Florida State's Energy Emergency Response to the 2004 Hurricanes* (Washington, DC: Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy, 2005), 8.

¹⁶ *Florida State's Energy Emergency Response to the 2004 Hurricanes*, 13.

of which require a great deal of fuel.¹⁷ That realization prompted the CEO to hire an attorney to draft a state law requiring gas stations located along hurricane evacuation routes to have generators or generator hookups on site.¹⁸ The CEO points out that when gas stations can function during disasters, the chances of fuel shortages triggered by inoperative gas stations diminish. Backed by the FDEM, the CEO—as a private citizen—lobbied behind the scenes to introduce the law in Florida’s legislature.¹⁹ The legislation eventually passed the state legislature and was signed into law by Florida governor John E. “Jeb” Bush in 2007.²⁰ In this case, the impact of gas shortages on a private business was addressed through privately initiated legislation, which later gained the political support of state officials.

The need to address crises has led to formal public-private sector cooperation in Florida’s Emergency Operations Center (EOC) as well. The Florida EOC is organized into 18 distinct emergency support functions, or ESFs, to manage crises.²¹ Each ESF consists of a cluster of government employees respon-

¹⁷ Rick Murrell, interview with the author via telephone, 23 January 2015, hereafter Murrell interview.

¹⁸ Chuck Hagan, interview with the author via telephone, 29 January 2015; and Murrell interview.

¹⁹ Murrell interview; and Jim Williams, interview with the author via telephone, 1 December 2014, hereafter Williams interview. See Florida Statute, “Alternate Generated Power Capacity for Motor Fuel Dispensing Facilities,” Title 32, § 526.143 (2007).

²⁰ Murrell interview.

²¹ “Emergency Support Functions.”

sible for managing specific types of disaster-caused crises, such as opening roads blocked by debris or restoring electricity to neighborhoods. One of these ESFs, called ESF-18, is dedicated to addressing the impacts of disasters within the business community, illustrating the extent to which the FDEM prioritizes its cooperation with the private sector.²² During disasters, representatives from industry organizations, such as the Florida Retail Association and Florida Banking Association, sit in ESF-18 alongside state officials.²³ The physical proximity of these representatives helps them communicate quickly when disasters affect the state.²⁴

Crises in Florida have also spurred cooperation among businesses in the state. For example, recognizing that employees who are worried about their families will not be able to work well, Tropical Shipping's CEO instructs employees to bring their immediate family members with them to work after disasters.²⁵ Through the firm's partnerships with other businesses, such as Walmart and Publix, Tropical Shipping provides its employees and their families with food, water, fuel, and other supplies for free after disasters.²⁶ Rick Murrell claims that this approach to crises yields benefits for Tropical Shipping. Within 24

²² "Emergency Support Functions: ESF #18 Business, Industry and Economic Stabilization," FDEM, accessed 2 January 2020.

²³ Hagan interview.

²⁴ Greg Blosé II, interview with the author via telephone, 5 February 2015, hereafter Blosé II interview.

²⁵ Murrell interview.

²⁶ Murrell interview.

hours after every disaster since 1989, he says, the firm and its employees have been fully functional again.²⁷

Leadership

Public and private sector leaders in Florida have played important roles in the development of partnerships in the state. This leadership exists in at least three distinct tiers. The first tier is executive-level public and private sector leadership, which gives government and business managers the organizational buy-in necessary to strengthen emergency-management capabilities, establish emergency-management collaborations, and grow them over time. The second tier is management-level public and private sector leadership. Mid-level managers in government and firms steer the day-to-day administration of the state's partnerships. The third tier is multiorganizational leadership that is specific to the demands of particular disasters. All three varieties of leadership are indispensable in the state's partnerships.

Strong public sector executive leadership creates an environment favorable for emergency-management accords in Florida. The state government's executive branch is said to be business friendly, and this makes the creation of partnerships easier.²⁸ The

²⁷ Murrell interview.

²⁸ Larry McIntyre, interview with the author via telephone, 3 February 2015, hereafter McIntyre interview; and Bryan Koon, interview with the author via telephone, 9 February 2015, hereafter Koon interview.

immediate past head of FDEM was appointed by former governor Richard L. “Rick” Scott and came into government service after having worked in the private sector.²⁹ These factors seem to have influenced the state’s current approach to disaster partnerships.³⁰

Executive-tier leadership in the private sector helps create the organizational conditions necessary for these partnerships to take root. For example, corporate leaders of Walgreens, an international pharmacy chain and partner with FDEM, offer strong support for the firm’s emergency-management personnel, providing the firm’s managers with the buy-in necessary to launch and build emergency-management agreements.³¹

Private sector executives in Florida can help foster a broader organizational culture conducive to collaboration with the FDEM as well. Waffle House, a restaurant chain with which FDEM collaborates during disasters, sometimes sends top corporate executives into the field during large-scale emergencies to wash dishes, serve coffee, and clean toilets.³² Publix is said to have a similarly strong cultural commitment to disaster resilience, earning it praise from FDEM officials.³³ Waffle House and Publix’s institutional dedication to disaster preparedness as part of their respective corporate cultures demonstrates

²⁹ McIntyre interview.

³⁰ McIntyre interview.

³¹ Williams interview.

³² Hagan interview.

³³ Hagan interview.

that private sector executives' support for disaster management can contribute to developing partnerships with the FDEM, since FDEM has worked closely with both firms, and FDEM personnel are impressed by their respective corporate disaster preparedness cultures.³⁴

Beyond public and private sector executive leadership, mid-tier managers in Florida government and businesses also play key leadership roles by steering the day-to-day operations of the state's partnerships. W. Craig Fugate, a former head of the FDEM who later ran FEMA, is cited often as having been a leading advocate for these public-private sector agreements during his tenure at the FDEM.³⁵ Bryan Koon, Fugate's successor, once led Walmart's global emergency-management department, giving him key insights into the business world.³⁶ A former senior emergency planner for Walgreens facilitated conference calls of more than 200 participants during disasters, underscoring the degree to which their work brought together representatives from FDEM, Walgreens, and other agencies and firms.³⁷

An additional leadership-related consideration in Florida relates to the development of incident-specific networks of responders. Since no two inci-

³⁴ Hagan interview; and Koon interview.

³⁵ Williams interview; Hagan interview; and Kathy Fulton, interview with the author via telephone, 5 February 2015, hereafter Fulton telephone interview.

³⁶ McIntyre interview.

³⁷ Williams interview.

dents are exactly alike, it follows that the groups and individuals responding to specific emergencies will differ. These emerging multiorganizational networks, or EMONs, vary in structure.³⁸ Some may be flexible, while others may be governed by the dictates of contracts or standard operating procedures. But regardless of their form or structure, EMONs are shaped by the leaders of the respective organizations within them. And in the absence of effective EMON-level leadership, disparate groups and agencies are unlikely to work well with one another.

Organizational Structure

The FDEM prefers its partnerships to be informally structured. The author has found no evidence that any of FDEM's partnerships are structured in a formal way, such as via MOUs. On the contrary, FDEM officials and their private sector partners express a nearly uniform disdain for MOUs. Still, the FDEM's public-private sector cooperation occurs primarily with FDEM's ESF-18. Therefore, despite the stated preference for informality, FDEM's partnerships are located within a formal organizational framework.

The FDEM's partners do not like MOUs.³⁹ Their partners' dislike for MOUs appears, in part, to be connected to the MOUs' perceived weakness as tools to codify the existence of organizational relationships.

³⁸ Thomas E. Drabek, "Managing the Emergency Response," *Public Administration Review* 45, Special Issue (January 1985): 86–90, <https://doi.org/10.2307/3135002>.

³⁹ Williams interview.

MOUs are not legally binding, so they may actually be of little value in Florida's partnerships.⁴⁰ A representative from Walgreens, for instance, says that their firm is willing to assist other organizations when asked.⁴¹ ALAN, a nonprofit that connects businesses with charities in need after disasters, also prefers informal agreements with its partners, since the dynamic nature of disasters often requires partners to be flexible.⁴² All of this suggests that the rigidity of MOUs may not be compatible with the fluid nature of disaster responses, a theme to which the author will return to in chapter 6.

The FDEM also prefers to develop emergency-management agreements without the use of MOUs. Its former head was blunt, saying that MOUs are "a waste of time, lawyers, money, and paper."⁴³ Instead of using MOUs in FDEM's partnerships, the real value of these collaborations is located in the strength of the relationships between the organizational representatives who are working with one another.⁴⁴

A former researcher with Florida State University's (FSU) Center for Disaster Risk Policy recounts a story that similarly illustrates the FDEM's preference for informally structured partnerships. While working for FSU, a public university, the researcher

⁴⁰ Williams interview.

⁴¹ Williams interview.

⁴² Kathy Fulton, email to the author, 1 February 2015, hereafter Fulton email interview; and Fulton telephone interview.

⁴³ Koon interview.

⁴⁴ Koon interview.

built an internet-based information sharing application for FDEM at the organization's request.⁴⁵ Had the project to develop the application gone through FDEM's formal procurement process, it may have run into bureaucratic obstacles, slowing the project.⁴⁶ The researcher believes that they avoided these potential headaches associated with FDEM's procurement process by approaching the development of the platform as a research project for FSU and doing the work for free.⁴⁷ The benefit to FDEM in this case is that it obtained a valuable information-sharing tool built by the researcher at essentially zero cost. And the researcher benefited from the value of the project, because it gave him keen insights into the information-sharing needs of the FDEM.

While FDEM officials say that they prefer informally structured partnerships, the agency nonetheless manages its partners within a defined organizational unit—ESF-18.⁴⁸ There is not a formal agreement between ESF-18 members and FDEM. Instead, the state views the fluid, informal nature of ESF-18 members' associations with the FDEM as an asset, because some ESF-18 members may be needed in certain types of disasters, but not in others.⁴⁹

The tension between formal and informal part-

⁴⁵ Tom Duffy, interview with the author via telephone, 2 February 2015, hereafter Duffy interview.

⁴⁶ Duffy interview.

⁴⁷ Duffy interview.

⁴⁸ "Emergency Support Functions: ESF #18."

⁴⁹ McIntyre interview.

nership agreements exemplified by FDEM's approach to its partnerships points toward a larger issue worth mentioning: the need to balance structure and flexibility in disaster responses. The FDEM may not be fond of MOUs, but MOUs can serve important functions. They help to set mutual expectations. They provide a common reference point that confirms the existence of an interorganizational relationship. And they help instill accountability among the stakeholders in the partnership. Accountability, in turn, can lead to better emergency management and help reduce potential waste and fraud.⁵⁰ Another key way in which FDEM and its partners engage with one another is via information sharing.

The Importance of Information Sharing

Florida and its partners exchange information in a variety of ways. Conferences provide a forum for the FDEM and private sector representatives to step away from their day-to-day responsibilities and learn from one another. Disaster exercises offer the FDEM and its partners another way to share information about their hypothetical responses to large-scale emergencies. During actual disasters, private sector representatives and FDEM officials share business opening and closing information as well as status updates. Having access to this type of information

⁵⁰ B. E. Aguirre and David Lane, "Fraud in Disaster: Rethinking the Phases," *International Journal of Disaster Risk Reduction*, no. 39 (October 2019): 3, <https://doi.org/10.1016/j.ijdr.2019.101232>.

during disasters can help FDEM and firms make better tactical decisions, because it provides them with a fuller picture of what is happening during disasters. Businesses and FDEM are increasingly likely to use web-based applications for information-sharing purposes, because electronic information sharing tools offer advantages in terms of speed, ease of access, and cost. The rise of electronic information sharing also presents data integration challenges for the FDEM and its partners.

One way FDEM and its partners have exchanged information is through two annual conferences: Florida's Annual Governor's Hurricane Conference and the FDEM's Public-Private Partnership Summit. While the former conference continues to be put on each year, the latter has been consolidated into a broader, southeastern region conference that is facilitated by DHS. Both events attract representatives from the business and government sectors in Florida that are interested in learning more about how to manage disasters.⁵¹ For example, the 2014 Public-Private Partnership Summit featured a seminar about how private sector officials can work with government representatives to access their own damaged business facilities during disasters, a process emergency managers call reentry.⁵² Representatives from Waffle

⁵¹ "Governor's Hurricane Conference," accessed 2 January 2020; and "Southeast Private-Public Partner Summit," FEMA, 29 April 2019.

⁵² Duffy interview.

House and Publix attended this seminar on reentry at the 2014 summit, along with key FDEM officials, illustrating the degree of public and private sector interest in learning more about the topic.⁵³ But beyond simply providing information to participants, conference attendees can benefit in other ways as well. For instance, corporate executives who attend the conferences may learn more about emergency management in general, a subject with which they may not be familiar.⁵⁴

Disaster response exercises and real-world disaster responses offer business and government representatives a chance to share crucial information with one another. Exercise participants from Florida state agencies report that these exercises are highly realistic and the learning that takes places in the exercises is valuable.⁵⁵ And when actual disasters impact Florida, firms and FDEM share a range of disaster-specific information. For example, the FDEM views businesses as a “service delivery partner,” so it uses a stoplight color code system—green, yellow, and red—to indicate store opening and closing information. Businesses that are coded green are open and functioning normally. Those that are yellow are open but operating at limited capacity. Firms that are coded red are closed. This simple coding system

⁵³ Duffy interview.

⁵⁴ Murrell interview.

⁵⁵ McIntyre interview; and Koon interview.

helps the agency determine where to locate FDEM's distribution points for supplies, with the goal of targeting areas where retailers are not open.⁵⁶

The FDEM and businesses also share status updates with one another during disasters. For example, FDEM gives firms information on curfews, road closures, and supply chain disruptions during large-scale emergencies, and all of this data can help firms make better decisions.⁵⁷ ALAN pulls information continually from electronic data feeds from its government and business partners, all in an effort to help businesses operate more efficiently during disaster conditions.⁵⁸ The Florida Chamber of Commerce is similar. Its representative in ESF-18 will call local chambers of commerce throughout the state to let them know about the state's information needs in advance.⁵⁹ This kind of proactive information exchange helps the Florida of Chamber of Commerce act as a conduit for data passing between local chambers of commerce and FDEM.

To exchange information during disasters, firms and FDEM increasingly rely on proprietary web-based information sharing platforms rather than email. Integrating data from multiple information platforms, however, can prove difficult. For example, FDEM's Virtual Business Emergency Operations Center (VBEOC), an online information sharing platform, is intended

⁵⁶ Hagan interview.

⁵⁷ Koon interview.

⁵⁸ Fulton telephone interview.

⁵⁹ Blósé II interview.

for smaller firms with 7–10 employees.⁶⁰ Larger firms such as Walgreens or Walmart have their own systems, so synchronizing the data from the large and small firms' systems, and determining what data to display to some versus all the users of the system, can be onerous.⁶¹ This suggests that FDEM and its partners will have to work carefully through the process of integrating their information-sharing systems to synchronize their work with both large and small firms.

The FDEM and its private sector partners share information via professional conferences and disaster response exercises. When disasters happen, they exchange business opening and closing information and status updates. While web-based information-sharing systems appear to hold promise as a tool for FDEM and its partners, integrating data from multiple systems and displaying it correctly to system users can be problematic. But despite these issues, access to state and private sector information is one of a host of benefits enjoyed by FDEM and other ESF-18 members.

Mutual Benefits

The FDEM uses its partnerships to access private sector supplies in times of emergency. This can lead to increased organizational efficiency for the FDEM, because it means that FDEM does not need

⁶⁰ Duffy interview.

⁶¹ Duffy interview.

to hold these supplies in storage; instead, it can rely on a firm's own product inventories, which ultimately saves the FDEM money. In addition, private sector partners benefit from exchanging data with both the FDEM and with one another. By cooperating in times of disaster, firms benefit from faster business restoration times, which can lead to increased sales and stronger brand loyalties from customers.

During his tenure as director of the FDEM, W. Craig Fugate understood that firms could provide repair supplies and medications for disaster survivors, which the state would not be able to deliver on its own.⁶² By partnering with firms, Fugate enhanced FDEM's abilities to respond to disasters, since the organization was able to rely on firms for access to supplies that the state did not have in stock.

Today, FDEM could choose not to partner with the private sector, but doing so would almost certainly increase operating costs for the organization, and disaster survivors would probably not be satisfied with the quality of goods and services that they would receive from state officials.⁶³ "We will never be as good as the private sector; we can never give you a hotel room or a meal as well as the private sector does," says one former director of FDEM.⁶⁴ The FDEM increases its own effectiveness by turning to businesses for higher quality goods and services, be-

⁶² Williams interview.

⁶³ Koon interview.

⁶⁴ Koon interview.

cause officials realize that they are unable to supply certain goods and services with the same efficiency that the private sector delivers.

Access to information also proves valuable for FDEM and its partners. For example, knowing where stores are open in a given area after a disaster helps FDEM, because it provides the agency with data that it can use to develop its own supply distribution plans.⁶⁵ The FDEM also benefits from disaster-specific information that it receives from businesses. For example, when businesses give FDEM information on local flooding, this can help the agency develop a more complete picture of how disasters have impacted particular areas of the state. Not only does this type of disaster-specific information help FDEM develop greater awareness of how disasters affect the state, but it also can shrink the agency's labor costs, since it means that fewer personnel will be out in the field assessing damage. FDEM information about road and school closures during disasters can help firms make more well-informed decisions during disasters too.⁶⁶ When schools close due to disasters, for instance, this can generate childcare issues for firms' employees, leading to increased employee absentee-

⁶⁵ Hagan interview.

⁶⁶ Koon interview.

ism.⁶⁷ Knowing about school closures in advance can therefore be especially useful in contingency planning, for it offers firms a way to assess how school closings might affect their workforce absentee rates, permitting them to make staffing adjustments.

State and business representatives agree that partnering together can help businesses return to normal operations faster. Florida officials believe that firms' partnerships with the state can make the difference between firms reopening or closing permanently after disasters.⁶⁸ Disaster partnerships, in this respect, can help businesses reopen quickly after disasters, because they give firms access to state information and resources that they would not have otherwise.⁶⁹ Florida firms agree that working with FDEM permits them to return to normal operations as soon as possible after disasters, which can strengthen Florida communities' resilience.⁷⁰

There is some evidence that working with FDEM and resuming business operations quickly after a disaster can result in longer-term financial benefits for businesses as well. For example, Publix saw great

⁶⁷ For example, one study estimates that about 16 percent of the United Kingdom's workforce would be absent from their jobs because of school closures to prevent a flu pandemic. See Md Z. Sadique, Elisabeth J. Adams, and William J. Edmunds, "Estimating the Costs of School Closure for Mitigating an Influenza Pandemic," *BMC Public Health* 8, no. 135 (December 2008): 137, <https://doi.org/10.1186/1471-2458-8-135>.

⁶⁸ Koon interview; and McIntyre interview.

⁶⁹ McIntyre interview.

⁷⁰ Blósé II interview.

financial benefits as a result of working with FDEM to install emergency electrical generators in many of their stores. The generators initially cost Publix several hundred million dollars, but as a result of the installation of the generators, Publix will minimize (if not eliminate) losses on foods that would otherwise spoil during power outages. In addition, the generators will likely lead to increased revenue because stores will be able to reopen more rapidly after disasters. The ability of stores to open quickly with fresh goods to sell will probably help build long-term brand loyalty among customers, who have already seen that Publix is a disaster-resilient business.⁷¹

Florida firms and FDEM benefit from working with one another for emergency-management purposes. The agency gains access to important private sector emergency supplies and services through its partnerships. Businesses in Florida and FDEM share information with one another, which helps them both make better-informed decisions during disasters. There is also evidence that emergency-management partnerships help businesses in disaster-affected areas of Florida return to normal operations faster. This can result in long-term benefits for Florida firms, including increased revenue and customer loyalty. Trust proves essential in launching and growing Florida's disaster partnerships.

⁷¹ Hagan interview.

Building Trusting Relationships

The FDEM's emergency-management agreements are underpinned by trusting relationships between the agency and business officials. While business representatives and Florida officials do not agree about how the trust between FDEM and its partners forms, trust nonetheless seems to be the key factor that permits the organization and its partners to rely on one another during disaster responses, even if they have not been in close contact prior to the event. However, unlike the other states examined in this book, trust does not appear to be as explicitly significant as other factors in the analytical framework, such as leadership or information sharing.

There is no consensus among FDEM officials and Florida business representatives about how to build mutual trust. Meetings between public and private sector officials during nonemergency circumstances appear to be a valuable first step to build trusting cross-sector relationships.⁷² Close personal ties between individual organizational representatives also seem to have a positive influence upon the trust-building process.⁷³ Nonetheless, simply knowing one another well does not automatically mean that either Florida business or FDEM representatives will trust one another. Time is also necessary to slowly build up these trusting relationships.⁷⁴ An

⁷² Murrell interview.

⁷³ Hagan interview.

⁷⁴ Fulton email interview; and McIntyre interview.

additional factor essential to trust building is mutual observation of how well public and private sector representatives perform during disaster responses and exercises.⁷⁵ Getting together under nonemergency circumstances, building strong relationships over time, and repeatedly meeting or exceeding performance expectations seem essential to build emergency-management accords in Florida.

Trust is central to FDEM and its partners' reliance on one another. For example, trust is indispensable in Walgreens' partnership with FDEM because the firm partners with all 50 state governments, and actively managing the partnerships with all of these state agencies can be logistically difficult. Trust also means that public sector partners know that Walgreens will be willing to assist them during disasters—and conversely, trust is connected with the belief that government agencies will assist Walgreens when they are called on for support.⁷⁶

Although trust plays a role in FDEM's partnerships, it did not stand out in an explicit way in the author's conversations with Florida government and business officials as an especially significant factor in FDEM's disaster collaborations. At the same time, it is obvious that trust influences how much FDEM and its partners feel that they can rely on one another. Regardless of how trust forms between Florida firms

⁷⁵ McIntyre interview.

⁷⁶ Williams interview.

and FDEM, their partnerships must remain flexible to endure in the long run.

Adaptability and Sustainability

Florida's partnerships show evidence of adaptability in at least two key ways. First, the agency's work with large industry organizations is now expanding to include smaller firms via the VBEOC. Second, ESF-18 shows adaptability as an organization, for its members are able to shift comfortably into leadership positions, even in the absence of a formal leader. To maintain these agreements into the future, state and private officials emphasize steady growth and informal communications. They also participate jointly in disaster-response exercises along with professional mentoring and outreach programs.

The FDEM's work with large industry organizations is expanding to include smaller firms that may not be represented in these industry organizations. ESF-18 remains a physical place within FDEM's EOC, but the ESF-18 concept is being adapted to meet changing needs with the creation of the VBEOC.⁷⁷ FDEM officials recognize that it is impossible for all ESF-18 members to share information with many Florida businesses at once, so FDEM's VBEOC holds promise as a way to get small- and medium-size businesses to share information electronically with the agency in much the same way that ESF-18

⁷⁷ Hagan interview.

members share information with FDEM face-to-face.⁷⁸

ESF-18 members also show evidence of adaptability. For example, ESF-18 members are familiar with one another's disaster response capabilities by virtue of having worked together. Even if ESF-18's formal leader is absent during disasters, other members are able to assume leadership responsibilities for the group.⁷⁹ Having ESF-18 personnel that are able to shift into different leadership and supporting roles shows that FDEM's partnerships are flexible.

The FDEM views the development of emergency-management agreements as a long-term, strategic process.⁸⁰ Disasters serve as reminders of the need to prepare for emergencies, but in their absence, business owners are likely to focus on other threats to their firms, such as rival businesses or regulatory issues.⁸¹ Some of FDEM's partnerships may not be needed during certain types of disasters.⁸² This means that years may pass between the disasters during which FDEM and a subset of its partners work together.⁸³ To be sure, disasters have a way of concentrating the attention of government policy makers and business owners on emergency-management

⁷⁸ Duffy interview.

⁷⁹ McIntyre interview.

⁸⁰ McIntyre interview.

⁸¹ McIntyre interview.

⁸² Fulton telephone interview; and McIntyre interview.

⁸³ Fulton telephone interview; and McIntyre interview.

related matters.⁸⁴ But in the absence of disasters, this focus can potentially wane.

Florida businesses and FDEM officials take deliberate steps to sustain their partnerships in the absence of disasters. One way they do this is through informal communications with their respective partners. It is important to note that this activity is not quite the same thing as information sharing. Rather, it is simply touching base to maintain these partnerships. For instance, one FDEM official calls contractors at least monthly to reconnect with them. This practice helps keep relationships with the FDEM's contractors fresh.⁸⁵

The executive director of ALAN will sometimes call the organization's partners in advance of severe weather events that may impact them. These actions are not tied to a deliberate communication strategy for ALAN; instead, they are ad hoc and reflect a concern for the welfare of ALAN's partners, on whom ALAN relies for physical aid. Not only does this informal practice help ALAN maintain official communications with its partner organizations, but it also assists the executive director and their counterparts in strengthening professional relationships.⁸⁶ These actions show that the long-term sustainability of

⁸⁴ For example, see Thomas A. Birkland, "Focusing Events, Mobilization, and Agenda Setting," *Journal of Public Policy* 18, no. 1 (January–April 1998): 55, <https://doi.org/10.1017/S0143814X98000038>.

⁸⁵ Hagan interview.

⁸⁶ Fulton telephone interview.

these partnerships is a priority for both the state and its partners.

Florida businesses and FDEM also rely on disaster-response exercises to sustain their professional relationships and disaster response skills.⁸⁷ FDEM officials take disaster-response exercises seriously and try to make them as realistic as possible.⁸⁸ Still, even well-designed exercises cannot replicate the exact conditions of true disasters.⁸⁹

A third way that Florida sustains agreements is through professional mentoring. The FDEM runs a mentorship program in which the agency invites firms to send representatives to ESF-18 to familiarize them with the agency's structure and functions during disasters.⁹⁰ FDEM mentees participate in ESF-18 during the program, learning from the organization's officials and other private sector representatives who are already ESF-18 members.

The FDEM's mentorship program complements a fourth agency initiative to ensure the longer-term sustainability of the state's partnerships: outreach to other businesses and governments. The agency's mentorship program helps develop relationships with other firms that may not already be ESF-18 members. For example, Bank of America is identified as one of FDEM's biggest advocates in encouraging other businesses to work with government emergency

⁸⁷ Koon interview.

⁸⁸ Koon interview; and McIntyre interview.

⁸⁹ Duffy interview; and Koon interview.

⁹⁰ McIntyre interview.

managers, due in part to its participation in ESF-18's mentorship program.⁹¹ Having FDEM's private sector mentees market the virtues of collaboration in this way could make it easier for the agency to maintain partnerships with firms. The reason for this is that the FDEM's mentees are in an excellent position to assess the value of partnering with them from a private sector perspective—a perspective that would likely resonate with other firms as well.

It is also apparent that FDEM wants to build support for partnerships at the local level of government throughout the state, because this can strengthen local governments' disaster resilience without direct agency assistance. The FDEM's role is to support local government emergency-management capabilities.⁹² Encouraging local-level agreements is important, because doing so may build local governments' disaster-response capacity.

Florida's partnerships appear to be adaptable to changing needs and circumstances. Florida firms and FDEM communicate informally and participate jointly in disaster-response exercises to help sustain their partnerships. The organization also uses professional mentorship and outreach initiatives to engage with business representatives, grow the number of agency partnerships with firms, and expand these agreements to local governments. The FDEM's partnerships with industry groups and non-

⁹¹ McIntyre interview.

⁹² McIntyre interview.

profit groups suggest that the agency's outreach efforts are working.

Industry and Nonprofit Organizations

Two key traits of Florida's partnerships stand out in this chapter. The FDEM's deliberate strategy of partnering with industry organizations, rather than individual firms, is unique among the states explored by *Disaster Labs*. In addition, the existence of organizations designed to facilitate private-private partnerships for emergency management is also an unusual and interesting attribute of the state's partnerships.

The FDEM seems to have deliberately chosen a strategy of partnering with industry organizations to develop its emergency management agreements. One likely explanation for this is that industry organizations provide a means for FDEM to reach many businesses at once. An agency official notes that the Florida Retail Federation (FRF), one of the FDEM's industry partners, "has members from major corporations to little mom-and-pops."⁹³ He adds that the FRF, one of several associations that have a representative in the state EOC during activations, provides an efficient means to distribute information to state businesses under ESF-18.⁹⁴ These comments suggest that convenience, efficiency, and speed may be the primary motivations that underpin the FDEM's partnerships with industry organizations.

⁹³ Hagan email.

⁹⁴ Hagan email.

Other evidence indicates that the idea of private-private partnerships for emergency management is gaining wider traction in Florida. While ALAN and VOAD carry nonprofit status, they both rely heavily on businesses for members, supplies, and financial support.⁹⁵ These nonprofits in Florida exemplify broader business community interest in emergency management.⁹⁶

ALAN and VOAD may represent the future of Florida's partnerships. These groups are, in effect, hybrid partnerships, because they combine elements of public-private partnerships with private-private partnerships and public-nonprofit partnerships. The organizational model of these groups is roughly as follows: businesses first bind themselves within a nonprofit organization dedicated to emergency management and that nonprofit organization itself—not its individual business members—then partners with FDEM.

For business officials, there are at least two advantages to this hybrid partnership model. First, this arrangement places firms in close organizational proximity to other individual businesses—that is, other members of the nonprofit group—who can assist them directly during disasters. This means that individual firms may receive assistance faster from other businesses than if they had to funnel

⁹⁵ "Who We Are," National Voluntary Organizations Active in Disaster, accessed 22 June 2015; and "About ALAN," American Logistics Aid Network, accessed 22 June 2015.

⁹⁶ Fulton interview.

their requests for assistance through government agencies. The nonprofit organizational structure of the hybrid partnership model offers firms a second advantage as well—it permits profit-seeking businesses to organize themselves formally for emergency-management purposes while simultaneously shielding them from certain state tax obligations, since U.S. nonprofit organizations are generally tax-exempt.⁹⁷

This hybrid partnership model stands in contrast to FDEM’s current model for emergency-management accords. Florida’s current model offers fewer direct advantages to individual businesses than the hybrid model of partnership exemplified by groups such as ALAN and VOAD. Under the current partnership model, industry organization representatives—whose daily work centers primarily on nonemergency management related matters—sit alongside one another in ESF-18.

However, this arrangement may actually increase the time required for individual businesses to receive disaster assistance from the state. The reason for this is that the individual businesses must direct their requests for disaster assistance through industry organizations in ESF-18, rather than going directly to other firms. Moreover, organizing disaster assistance for firms under the current model does not offer firms tax

⁹⁷ “What Benefit Does Being 501(c)(3) Offer My Nonprofit and Its Contributors?,” Foundation Group, accessed 22 June 2015.

benefits. The hybrid model, on the other hand, offers direct tax benefits for businesses and may be more appealing to firms as a result. For these reasons, the hybrid partnership model exemplified by VOAD and ALAN holds promise as a potential new way for Florida to structure its partnerships.

Florida's Disaster-Oriented PPPs: A State-Managed Solution

The organizational partnerships that we have examined in Florida stand out in multiple ways. They are efficient in that they leverage nonprofit and industry organizations to link FDEM and many firms at once. These partnerships are also nuanced, in the sense that the exceptional dedication of business leaders and government executives helps shape a broader policy environment that is conducive to public-private sector cooperation. The FDEM's partnerships are used to serve a variety of emergency-management objectives, including obtaining and delivering physical aid (e.g., ALAN) and feeding Floridians (e.g., Publix) during disasters.

As we have already observed in several states, Florida's partnerships are created and managed without federal government direction. In fact, some emergency-management leaders in the state, such as one former head of FDEM, appear eager to involve more private sector entities than public sector entities in emergency-management activities. They do this because of a sober recognition that the private

sector is able to provide certain goods and services better than government agencies can. For these reasons, it is difficult to see how greater federal government involvement or guidance could improve Florida's emergency-management agreements. Not only would this federal involvement potentially disrupt the state's existing partnerships, but it may even be resisted actively by Florida state government officials. In light of these possibilities, direct federal government involvement in the state's emergency-management partnerships is not advisable.

Conclusions

Florida's disaster-oriented PPPs are organized informally and primarily place representatives of industry organizations like the Florida Restaurant and Lodging Association in ESF-18. Both of these characteristics are noteworthy. The informal organizational structure of the state's partnerships means that FDEM's partnerships are flexible in a way that may not be possible under the terms of a formal MOU, for instance. The FDEM's preference for informal partnerships is driven both by its leadership as well as the agency's private sector partners. The author found no evidence that this preference for informally structured partnerships has had any negative effects on the state's collaboration with firms, though it is nonetheless possible that such evidence exists. The FDEM also prefers partnerships with industry groups, rather than individual businesses. This arrangement is beneficial for

FDEM because it permits the agency to reach and interact with a large number of firms at once, without the administrative burdens that would come from developing individual relationships with thousands of businesses. Hybrid groups such as ALAN and VOAD that allow private sector businesses to operate together under nonprofit, tax-exempt status for disaster relief may represent the future of Florida's partnerships.

Trust plays a subtle—yet vital—role in Florida's emergency-management agreements. FDEM representatives and business officials agree that trust is important for their partnerships with one another. Private sector and FDEM representatives say that trust helps individuals in these partnerships work smoothly with one another, even if they have not been in contact for extended periods of time. Still, there is no consensus among state officials and business representatives on precisely how trust forms within their partnerships.

Irrespective of how trust is built within the state's partnerships, it is hard to see how federal government involvement in Florida's public-private partnerships for emergency management could improve matters. For whatever weaknesses may exist within the state's current partnership environment, the evidence presented in this chapter demonstrates persuasively that FDEM is able to create and manage these partnerships on its own. Even as Florida continues to develop new ways to coordinate the efforts

of government and private sector actors in disasters, the next chapter will show that a comparably populous state—New York—boasts a diversity of disaster-oriented PPPs.

Chapter Four

THE DIVIDED EMPIRE STATE

Some media outlets called it “Snowzilla.”¹ Others chose the more benign-sounding “Winter Storm Jonas.”² In January 2016, large portions of the U.S. East Coast were hit by a winter nor’easter, an enormous counterclockwise rotation of powerful coastal winds and precipitation.³ More than two feet of snow fell in Manhattan, and government officials in New York City struggled to respond to the effects of the storm.⁴ New York City mayor Bill de Blasio imposed a temporary travel ban to keep vehicles off city streets.⁵ New York City’s public transportation infrastructure, which

¹ James Samenow, “Snowzilla Makes History from Northern Virginia to New York,” *Washington Post*, 24 January 2016.

² “Winter Storm Aftermath: Live Updates,” *New York Times*, 24 January 2016.

³ Jeff Halverson, “The Nuts and Bolts Meteorology of an Epic Snowstorm in Washington, D.C.,” *Washington Post*, 24 January 2016.

⁴ Jason Barron and Rick Rojas, “Major Cities Grind to a Halt and Face Days of Digging Out Snow,” *New York Times*, 23 January 2016.

⁵ “Winter Storm Aftermath.”

moves millions of people each day, was shut down.⁶ Thousands of passengers at LaGuardia Airport in Queens were stranded due to canceled flights.⁷ Many city garbage trucks were repurposed to plow snow, causing city residents' trash to pile up on sidewalks more than usual.⁸

Yet, amid the disruptions that Snowzilla caused in New York City, local government officials assisted area businesses in a remarkable way. Mayor Bill de Blasio activated the Corporate Emergency Access System (CEAS), a special badge permit that authorizes certain business owners to travel on city streets, even during emergency travel bans, to reach their business facilities.⁹ The thinking behind CEAS is straightforward. Firms sell goods and services to people, and the ability to sell goods and services to residents who need them is indispensable for disaster recovery. Therefore, restricting business owners' abilities to reach their firms during disasters makes little sense. Not only does this inconvenience residents, but it also exacerbates the challenges faced by local governments during disasters, which must simultaneously manage the physical effects of disasters and ensure that area residents have access to adequate

⁶ Chas Danner, "New York Nears Record Snowfall After Blizzard Pummels City, East Coast," *New York*, 24 January 2016.

⁷ Mark Berman, "More than 10,000 Flights Canceled as Storm Shuts Down Subways, Buses and Roads," *Washington Post*, 23 January 2016.

⁸ "Winter Storm Aftermath."

⁹ "New York City Activates CEAS for Winter Storm Jonas," press release, Corporate Emergency Access System, 23 January 2015.

food, clothing, and shelter. The CEAS offers an innovative solution to this problem by balancing the city government's responsibilities to manage the physical effects of disasters and ensure the safety of New Yorkers. The CEAS is the brainchild of the New York City Office of Emergency Management's (NYCOEM) public-private partnership initiative and exemplifies the type of positive outcomes that disaster partnerships can generate.¹⁰

The New York State government's response to Hurricane Sandy in late 2012 shared many similarities with the New York City government's response to Snowzilla in 2016. More than 200,000 personnel from 23 state agencies participated in response and recovery efforts after Hurricane Sandy.¹¹ The governor's office worked with oil and gas company Hess to ensure that following the storm its stores could receive adequate supplies of fuel.¹² Garner Environmental Services, a Texas firm that responds to disasters, rushed supplies such as outdoor lighting to areas of the city affected by power outages.¹³ There was widespread cooperation between state agencies

¹⁰ The NYCOEM rebranded itself as NYC Emergency Management in 2015. The interviews and research in this chapter were completed prior to the rebranding.

¹¹ *New York State Disaster Preparedness Commission 2012 Annual Report* (Albany: Division of Homeland Security & Emergency Services, Office of Emergency Management, New York State, 2013), 10.

¹² Anonymous official, interview with the author via telephone, 6 October 2014, hereafter anonymous official interview.

¹³ Kenny Hayes, interview with the author via telephone, 7 October 2014, hereafter Hayes interview.

and firms to help New Yorkers begin to recover from Hurricane Sandy.

New York City and New York State's approaches to disasters, and their use of partnerships in these two incidents, may at first glance seem similar. But surface appearances mask a more complex reality. There is no organized effort to forge emergency-management agreements at the state level.¹⁴ Instead, the state government partners with the private sector during disasters on a largely ad hoc or contractual basis.¹⁵ By contrast, there is a longstanding New York City-level commitment to establishing and growing disaster partnerships.¹⁶

Further complicating matters, New York City strongly influences the state government, making it difficult to assess New York State's partnerships without also examining New York City. Approximately 8.4 million people live in New York City, representing about 43 percent of the state's total population.¹⁷ New York City residents pay about 45 percent of all

¹⁴ Bill Davis, Nora Porter, and Bill Dugan, interviews with the author, New York State Office of Emergency Management, Albany, NY, 18 September 2014, hereafter Davis, Porter, and Dugan interview.

¹⁵ Anonymous official interview.

¹⁶ "Big City Partnership—New York City Office of Emergency Management," FEMA, accessed 15 June 2015; Ira Tannenbaum, interview with the author via telephone, 21 October 2014, hereafter Tannenbaum interview; anonymous official interview; and Hayes interview.

¹⁷ "Quick Facts: New York City, New York," U.S. Census Bureau, 19 November 2019.

state-level personal income tax.¹⁸ New York City residents also receive around 40 percent of state tax distributions.¹⁹ Given the significant percentage of the New York State population that lives in New York City and the influence of New York City residents on state-level tax revenues and distributions, disentangling the city from the rest of the state for state-level policy analyses is difficult. Moreover, the New York City government is known for being progressive in its approach to public safety generally, and this progressive approach is also true of the city government's use of disaster partnerships in particular.²⁰ For these reasons, analyses of both New York State and New York City's approaches to emergency management are necessary to understand fully the statewide approach to disaster-oriented PPPs.

This chapter describes the institutional differences in New York State and New York City's approaches to disaster partnerships. It then assesses New York State and New York City's emergency-management agreements using the analytical framework. This analysis shows that New York State and New York City's uses of disaster partnerships diverge in many

¹⁸ "Giving and Getting: Regional Distribution of Revenue and Spending in the New York State Budget, Fiscal Year 2009–10," *New York State Brief*, December 2011, 5, table 1a.

¹⁹ "Giving and Getting," 5, table 1a.

²⁰ Bernard E. Harcourt and Jens Ludwig, "Broken Windows: New Evidence from New York City and a Five-City Social Experiment," *University of Chicago Law Review* 73, no. 1 (Winter 2006): 271–320; and "Big City Partnership."

ways. The chapter then makes the case that nonprofit and industry associations play an understated yet vital role in New York State and New York City's partnerships. The chapter concludes by arguing that New York State and New York City's disaster response collaborations are well-positioned to endure over the long run—provided that they continue to function without direct federal involvement.

New York's Differing Approaches to Disaster-Oriented PPPs

Putting aside significant geographic and demographic differences, New York State and New York City's approaches to partnering diverge for at least two key institutional reasons. The first key reason is financial. State officials say that the state's emergency-management budget, and the budgets of its corporate partners, have been constrained for years. As a result, the state's ability to grow its partnerships is limited. Matters are different in New York City, where government leaders openly acknowledge that the NYCOEM is generously funded. Differing funding levels have meant that the NYCOEM is better able to establish and expand disaster partnerships than the New York State Office of Emergency Management (NYSOEM). Staffing is the second main difference between the approaches of New York State and New York City. While New York City has a full-time employee working solely on these partnerships, the state does not.

Budget cuts have stymied the NYSOEM's ability

to establish and expand disaster partnerships. The 2008 recession led to an agency hiring freeze.²¹ Experienced NYSOEM managers were given financial incentives to retire early to cut agency costs. This led to a loss of both institutional memory and retiring officials' business contacts. These personnel losses hampered continuity in the agency's work with firms.²²

A further challenge to the state's ability to build these agreements is the need for post-disaster funding. The two primary sources of federal post-disaster funding for the NYSOEM are the U.S. Small Business Administration and FEMA. When FEMA funding flows to the NYSOEM after disasters, the agency finds it easier to work with businesses to buy the resources that it needs. However, during smaller-scale disasters for which FEMA funding is not available, NYSOEM must rely on the Small Business Administration for smaller amounts of money.²³ To make up for any shortfalls in federal funding, NYSOEM must pay out more money for resources from its own organizational budget. This reduces the availability of money for other NYSOEM priorities. So, when smaller-scale disasters drain NYSOEM's coffers, and only small amounts of federal money are available to fill in NYSOEM's funding gaps, this in turn means that

²¹ Bill Dugan and Nora Porter, interviews with the author, NYSOEM, Albany, NY, 18 September 2014, hereafter Dugan and Porter interview.

²² Davis, Porter, and Dugan interview.

²³ Davis, Porter, and Dugan interview.

the chances that there will be an NYSOEM employee paid and dedicated to forging interorganizational agreements will diminish.²⁴

The NYSOEM has just one funded full-time employee dedicated to coordinating the procurement and distribution of resources for disaster survivors, and only one portion of this person's job description is to work with businesses. That makes it difficult for the agency to sustain any effort to develop disaster partnerships. The NYSOEM is a relatively new agency, only coming into existence in 2010 following a large state government reorganization.²⁵ The short amount of time that the NYSOEM has existed in its current form means that it has not had the time to fully mature its capabilities—including by hiring an employee to manage its partnerships.

Private sector emergency-management personnel, with whom state emergency managers would normally work, were similarly affected by the 2008 recession. Firms trimmed private sector emergency-management positions.²⁶ This means that in recent history there have been fewer dedicated emergency managers working in businesses. Since these positions would be the mostly likely to work directly with the state in these partnerships, the probability of firms coordinating directly with the state for emergency-management purposes is reduced.

²⁴ Anonymous official interview.

²⁵ Davis, Porter, and Dugan interview.

²⁶ Anonymous official interview.

Unlike the state's emergency-management office, NYCOEM is comparatively well-funded and has a full-time coordinator with a staff dedicated to establishing and growing disaster partnerships. This means that the agency is able to devote considerable resources toward its work with businesses. NYCOEM personnel attend meetings regularly with businesses across the city and engage with industry organizations representing clusters of firms. During disasters, private sector representatives come to the city's emergency operations center (EOC) and are involved in the agency's decision-making processes.²⁷ These factors contribute to the relative sophistication of the NYCOEM's partnership program compared with the NYSOEM's approach to collaborating with firms and nonprofits.

A historical example demonstrates the long-standing commitment within the New York City government to support disaster partnerships. An emergency manager with Texas-based Garner Environmental Services recalls how city money and political will were used to manage the West Nile Virus in New York City in 1999.²⁸ After being summoned to New York City, Mayor Rudolph W. "Rudy" Giuliani told the emergency manager directly that he wanted a can of Off!—a brand of insect repellent in an aerosol can—for every New York City resident to control the

²⁷ Tannenbaum interview.

²⁸ This specific incident falls outside the time scope of the present study, which runs from 2002 to 2014, but it is included here for illustrative purposes.

spread of the West Nile Virus, which is transmitted by mosquitoes.²⁹ The emergency manager continued:

I said, "Ok, let me see what I can do." Now, keep in mind that we're talking about 8 million residents—that's 8 million cans of Off!. Well, in four hours we had located every can of Off! that wasn't on a store shelf inside the continental United States. I called my Chief Financial Officer and said, "I need a credit card"... I [leased] a 727 jet on a credit card. We called the Federal Aviation Administration director, the U.S. Secretary of Transportation, and a Congressman to sign a safety waiver and we loaded the entire 727 in St. Louis [where Off! is manufactured], from cockpit to tail, with cases of Off!³⁰

The 727 jet flew from St. Louis, Missouri, to New York City. Under the emergency manager's direction, UPS—a shipping company—then off-loaded and delivered 8 million cans of Off! from John F. Kennedy International Airport in Queens to the command post where the West Nile Virus response was being managed. The cases of Off! were then placed in city police cars, and police officers distributed the Off! to citizens in neighborhoods where they patrolled normally.³¹

²⁹ Hayes interview; and "West Nile Virus," U.S. Centers for Disease Control and Prevention, 9 June 2015.

³⁰ Hayes interview.

³¹ Hayes interview.

That the New York City government was able to retain a contractor who coordinated the fast purchase and air delivery of 8 million cans of Off!—more than a decade prior to this writing—underlines that the New York City government has been involved seriously in emergency-management partnerships for some time. The response to this incident shows that New York City is willing to spend significant amounts of money on private contractors when disasters take place.

New York State and New York City's approaches to disaster partnerships differ. These differences exist for at least two key institutional reasons: finances and staffing. The analytical framework highlights crucial differences when used to assess how New York State and New York City work with firms for emergency-management reasons. When disasters happen in New York, the state and city's differing approaches to these partnerships can surface quickly.

Crisis: Opportunities for Cooperation

Disasters in New York State provide opportunities for the public and private sectors to cooperate. At the state level, partnerships are used during crises primarily to procure and deliver physical aid to those in need.³² In contrast, the NYCOEM uses its agreements mostly to exchange information in disasters, and to a much lesser degree, gain access to scarce physical resources.

Hurricanes Sandy (2012) and Irene (2011) brought

³² Davis, Porter, and Dugan interview.

private sector firms and the New York State government together for emergency-management purposes. Representatives from Walmart and FedEx were in the state's EOC after Hurricane Sandy.³³ FedEx provided free shipping services for the NYSOEM, and Walmart delivered bottled water to Sandy survivors.³⁴ That these firms' representatives were present in the NYSOEM offices—and provided specific goods for the agency—shows how the state focuses on obtaining physical aid from firms during disasters. Personnel from Garner Environmental Services deployed to New York City after Sandy to track distribution of emergency equipment and set up outdoor lighting in areas that suffered electrical outages.³⁵ Packaged food giant PepsiCo, along with restaurants in the New York City area, donated food to disaster survivors.³⁶ These examples underline further the notion that crises drive the need for physical aid in New York State, and government officials turn frequently to firms to provide that aid.

After Hurricane Irene in 2011, New York's governor established a volunteer disaster recovery program called Labor for Your Neighbor. This volunteer program explicitly integrated firms such as Walmart and Home Depot into disaster responses to obtain

³³ Davis, Porter, and Dugan interview.

³⁴ Davis, Porter, and Dugan interview.

³⁵ Hayes interview.

³⁶ Anonymous official interview; and "Governor Cuomo Secures First Major Private Donation to Support New Yorkers in Recovery Efforts," State of New York, 4 November 2012.

needed supplies.³⁷ The state's work with the private sector after Hurricane Irene through the Labor for Your Neighbor program shows the strong focus of the state's partnerships on obtaining physical aid during crises. From bottled water to shipping services to outdoor lighting and other supplies, private firms enhanced the state's ability to respond to disasters.

The NYCOEM develops disaster-management agreements before large-scale emergencies occur and uses disasters as an opportunity to make use of those partnerships.³⁸ In the months leading up to November 2014, an outbreak of the Ebola virus had killed more than 5,000 people in West Africa.³⁹ By November 2014, fewer than five total cases of Ebola had appeared in the United States, but the virus's high mortality rate spurred U.S. government agencies to accelerate preparations for Ebola patients. Against this backdrop, the NYCOEM's public-private partnership coordinator shuttled between meetings with private sector officials concerned about the Ebola virus coming to New York City:

They're asking questions like, "What happens if somebody comes into my lobby and starts vomiting? What is the cleanup process like?" They're looking for answers from people on the public health side. . . . I find myself spending a lot of time explaining what the expecta-

³⁷ Anonymous official interview.

³⁸ Tannenbaum interview.

³⁹ "Ebola (Ebola Virus Disease): Case Counts," U.S. Centers for Disease Control and Prevention, 12 June 2015.

tions are. We're not going to show up in moon suits and start collecting samples without telling you what's going on.⁴⁰

This official's comments demonstrate proactive concern from business leaders about the Ebola virus, since the first case of Ebola had not yet appeared in New York City. This was a forward-leaning approach to informing private sector representatives about how to handle the virus if it were to appear, and an understanding of the need for the NYCOEM to manage private sector expectations about city responses to the virus—all in advance of the Ebola virus arriving in the city.

Hurricane Irene, which hit New York City in 2011, further demonstrates how the NYCOEM partners with businesses during disasters to address crises. As Irene approached the city, local business leaders made their way to the New York City EOC. Representatives of many industry umbrella groups—apartment buildings, utilities, hotels, security services, financial firms, universities, supermarkets, and restaurants—were all in the EOC as Irene closed in on the East Coast. While these industry representatives were in the EOC, a rumor about a preemptive shutdown of the electrical grid appeared in a New York City newspaper, making business owners skittish, since business operations of all types depend on electricity. Because so many different industry representatives

⁴⁰ Tannenbaum interview.

were together in the EOC, they were able to correct and address the rumor quickly; an employee of ConEdison, one of the leading electricity suppliers in the city, stressed that shutting down the electrical grid was a purely hypothetical option and not something that the company was considering seriously. The business officials in the EOC were then able to relay this clarification from ConEdison to their respective stakeholders, quashing the rumor.⁴¹ This example of private sector action in a crisis demonstrates the degree to which NYCOEM has gone to forge relationships with private sector industry groups. It also shows the value of having representatives of those groups colocated with the NYCOEM during disasters.

Leadership and Disaster-Oriented PPPs

Government and business leadership shape New York's disaster-oriented PPPs. The arrangement of this leadership, however, differs between the state and city levels of government. The state's interactions with businesses for emergency-management purposes flow primarily through the state executive, not the NYSOEM. In contrast, New York City's disaster-oriented PPPs are managed by the NYCOEM, not the New York City mayor's office. Each approach appears to work well for New York State and New York City, respectively.

⁴¹ Tannenbaum interview.

At the state level, the governor's office controls the state government's approach to emergency management, and has even relocated responsibility for some emergency management-related tasks to the governor's office itself.⁴² Moreover, NYSOEM's top leaders are gubernatorial appointees, meaning that their management decisions are influenced directly and indirectly by the governor.⁴³ These factors mean that during disasters it is the governor's office, not the NYSOEM, that is the primary point of interface between businesses and the state government. This arrangement limits significantly the NYSOEM's ability to build and grow disaster-oriented PPPs. At the same time, the governor's strong ties to the business sector appear to play a part in helping the state secure corporate donations after disasters.

Part of the reason that firms appear to turn first to the governor's office during disasters, rather than to the NYSOEM, is that the governor's office has built strong relationships with firms outside the context of emergency management and leverages these relationships during crises.⁴⁴ These relationships can build political capital, which the governor's office can then spend to benefit the state during and after disasters.⁴⁵ For example, after Hurricane Sandy,

⁴² Anonymous official interview; and "Governor's Office of Storm Recovery: About," State of New York, accessed 15 June 2015.

⁴³ Davis, Porter, and Dugan interview.

⁴⁴ Anonymous official interview.

⁴⁵ Anonymous official interview.

companies called the governor's office—not the NYSOEM—directly to ask what resources they could contribute for post-Sandy relief.⁴⁶

Business leaders have been instrumental in providing support to the New York State government during disasters too. For example, New York governor Andrew Cuomo specifically requested a particular FedEx manager to be the company's point of contact for the purpose of working with the state after Sandy.⁴⁷ Since there is no formal disaster-oriented PPP program in New York State, Cuomo's request suggests that a business relationship between the governor's office and FedEx developed before Hurricane Sandy came along. Similarly, high-level contacts between state officials and Garner Environmental Services, which already held contracts in New York State, helped the state retain the firm for the Sandy response effort.⁴⁸ Both FedEx and Garner's collaboration with the state after Sandy show how government and business leadership can facilitate disaster-oriented PPPs.

In New York City, top-level political support has been invaluable for the city's disaster-oriented PPPs. In 2004, the New York City mayor directed the NYCOEM commissioner to develop relationships with firms for emergency-management purposes.⁴⁹

⁴⁶ Anonymous official interview.

⁴⁷ "FedEx among Companies Recognized by NYSE for Hurricane Sandy Relief Support," FedEx, 9 November 2012.

⁴⁸ Hayes interview.

⁴⁹ Tannenbaum interview.

Since 2004, the NYCOEM has built a large portfolio of disaster-oriented PPPs, including partnerships with law firm WilmerHale, as well as retail giants Macy's and Gap, to help prepare these businesses to continue operations during disasters.⁵⁰ These examples illustrate that city government leaders have been important drivers of New York City's disaster-oriented PPPs.

Leaders in government and business have an impact on disaster-oriented PPPs in New York State. Relationships between the governor's office and businesses, formed outside of disasters, appear to help the state secure corporate assistance during and after disasters. In New York City, top-level political support for disaster-oriented PPPs gives the NYCOEM the executive buy-in necessary to make these partnerships a priority. At both the state and city levels, these partnerships can vary significantly in their structure, from loose, informal relationships to formal written agreements between public- and private-sector leaders.

Organizational Structure

New York State's interactions with businesses for emergency-management purposes usually take one of two forms: a formal contract for goods or services or ad hoc cooperation. New York City's disaster-oriented PPPs range more widely in their structures,

⁵⁰ "Partners in Preparedness: List of Program Partners," NYCOEM, accessed 29 September 2015.

from formal MOUs to informal, relationship-based partnerships.

New York State's work with businesses for emergency-management purposes is usually tied either to business contracts or is purely improvisational. For example, firms perform tasks such as budget assessments and organizational planning for the state.⁵¹ That businesses perform budget assessments indicates a potentially integral role for firms in state-level emergency management. However, structuring disaster-oriented PPPs formally can be difficult. Regional NYSOEM representatives may have informal agreements in place with local firms, for instance, but if the need for a formal public-private sector agreement reaches the NYSOEM main office in Albany, the approval process for those formal agreements can be arduous.⁵² Outside of the formal cooperation that takes place between the NYSOEM and businesses, most of the agency's engagement with firms is ad hoc and driven by the circumstances of individual disasters.⁵³ Regardless of whether the disaster-oriented PPP in question is contractual or ad hoc, the state manages to work with firms, as demonstrated by its collaboration with businesses such as Garner, Home Depot, Pepsi-Co, and FedEx after Hurricanes Sandy and Irene.⁵⁴

⁵¹ Hayes interview.

⁵² Davis, Porter, and Dugan interview.

⁵³ Anonymous official interview.

⁵⁴ Hayes interview; anonymous official interview; and "FedEx Among Companies Recognized."

In New York City, disaster-oriented PPPs can take many forms. For example, the New York Mets, a professional baseball team, are written formally into New York City's coastal storm response plan as a full partner with the NYCOEM.⁵⁵ ConEdison also works with the organization to promote emergency preparedness and also made former NYCOEM head Joseph F. Bruno a keynote speaker at a ConEdison employees' conference.⁵⁶ Less formal partnerships also exist. The New York Stock Exchange (NYSE), for instance, partners with NYCOEM by participating in the CEAS.⁵⁷

While NYCOEM hopes to institutionalize disaster-oriented PPPs through formal agreements, there are organizational obstacles that can make this hard. Partnerships can deteriorate when the NYCOEM's contacts in firms turn over. Business executives may worry about being sued for potential mistakes they make during disasters, causing them to think twice about formalizing disaster-oriented PPPs. During disasters or catastrophes, companies may be unable to fulfill orders for goods due to supply chain disruptions.⁵⁸ Despite these pressures, NYCOEM enjoys a range of organizational structures in its disaster-oriented PPPs.

⁵⁵ Tannenbaum interview.

⁵⁶ *New York Office of Emergency Management Biennial Report, 2009* (New York: NYCOEM, 2009), 13.

⁵⁷ "Businesses: Partners in Preparedness: October 2013: The New York Stock Exchange," NYCOEM, accessed June 15 June 2015.

⁵⁸ Tannenbaum interview.

The organizational structures of New York's disaster-oriented PPPs vary significantly. At the state government level, disaster-oriented PPPs are largely ad hoc or carried out in the context of business contracts. The New York City government's partnerships range in structure from formal written agreements to more informal cooperation in select emergency-management initiatives. Information sharing is one of the most frequent activities in which government agencies and firms engage in New York.

Information Sharing

New York State government agencies share limited information with firms for emergency-management purposes, and firms share little information with the state. The information that is exchanged between the two communities relates mostly to the movement and delivery of physical aid during and after disasters. By contrast, in New York City, businesses and NYCOEM share information on a wide range of topics, from emergency preparedness tips, to situational awareness reports, to data about staging physical aid in advance of natural disasters. This information sharing occurs before, during, and after disasters.

The New York State government shares select emergency management-related information with firms and nonprofit organizations during disasters. For example, during Hurricane Sandy, a FedEx representative at the New York State EOC taught state employees how to load and unload large trucks of

supplies that were traveling to the New York City metro area.⁵⁹ FedEx's experience shows that the types of information that firms share with New York State can relate closely to deliveries of physical aid.

But it does not appear that the state government has prioritized information sharing with firms in general. State officials offer firms information about road conditions, the weather, public health, and safety concerns.⁶⁰ Yet, the state would distribute this information anyway, since state governments routinely collect and disseminate data on road conditions, weather forecasts, and public health matters, regardless of whether there is an emergency taking place. This suggests that the state is not pushing confidential, restricted, or otherwise high-value, nonpublic data to firms. This can frustrate business officials.⁶¹ It also seems that state government officials are not fully aware of the other types of information businesses could offer to the state, such as reports on local store traffic, staffing levels, or store closings.⁶²

By contrast, the NYCOEM exchanges information freely with businesses before, during, and after disasters. The agency first began exchanging information regularly with firms in anticipation of the year 2000 (a.k.a. Y2K) rollover in 1999, and information shar-

⁵⁹ Davis, Porter, and Dugan interview.

⁶⁰ Anonymous official interview.

⁶¹ Hayes interview.

⁶² Anonymous official interview.

ing remains a top priority for the NYCOEM today.⁶³ In addition to sharing information with firms during crises, such as the Ebola virus scare of October 2014 or Hurricane Irene in 2011, the NYCOEM now uses firms as a way to gather ground-level intelligence on disaster conditions. In a recent telling example of this intelligence collection, the NYCOEM used an automated telephone call system to gather data on local restaurant opening schedules after Hurricane Sandy. The automated phone call would dial the telephone numbers of restaurants, and a preprogrammed audio message would play, inviting the listener to press 1 if the restaurant was currently open, press 2 if the restaurant would be open within the next 48 hours, and so on. Using this information on restaurant openings, NYCOEM was able to increase its situational awareness and place food distribution points in hard-hit areas where few restaurants reopened after the hurricane.⁶⁴

Information sharing between the NYCOEM and firms also benefits businesses. Private sector officials want access to timely and accurate information from the NYCOEM that can help them on the

⁶³ Tannenbaum interview. The Y2K bug, also called Year 2000 bug or Millennium Bug, was a potential issue in the coding of computerized systems projected to create worldwide havoc networks. After more than a year of international alarm, feverish preparations, and programming corrections, few major failures occurred in the transition from 31 December 1999 to 1 January 2000. See Geoff Manaugh, "When Russia and America Cooperate to Avert a Y2K Apocalypse," *New Yorker*, 30 December 2019.

⁶⁴ Tannenbaum interview.

job.⁶⁵ Business officials can gain credibility within their respective organizations by receiving this information.⁶⁶ Several firms exemplify how information sharing between the NYCOEM and businesses improves private sector emergency preparedness. For example, CME Group, a financial derivatives trading marketplace, hosted the NYCOEM head in meetings with employees to discuss how to improve personal and organizational emergency preparedness.⁶⁷ AIG, an insurance giant, has worked with the NYCOEM to improve its disaster preparedness measures, and in 2013 ran a simulated disaster drill in which employees were forced to work from home during a Manhattan-wide power outage.⁶⁸ Major League Soccer (MLS), the United States' largest professional soccer organization, is headquartered in New York City.⁶⁹ MLS worked with the NYCOEM after Hurricane Sandy to improve its emergency-preparedness measures.⁷⁰ One outgrowth of this collaboration was MLS's implementation of a new emergency communications system for employees.⁷¹

The New York State and New York City govern-

⁶⁵ Tannenbaum interview.

⁶⁶ Tannenbaum interview.

⁶⁷ "Partners in Preparedness: March 2014: CME Group," NYCOEM, accessed 15 June 2015.

⁶⁸ "Partners in Preparedness: July 2013: AIG," NYCOEM, accessed 15 June 2015.

⁶⁹ "Partners in Preparedness: April 2013: Major League Soccer," NYCOEM, accessed 15 June 2015.

⁷⁰ "Partners in Preparedness: April 2013."

⁷¹ "Partners in Preparedness: April 2013."

ments share information with firms in different ways. At the state level, information exchange with businesses centers primarily on the movement and delivery of physical aid after disasters. State communication with firms about emergency management rarely occurs outside the context of disasters. In New York City, by contrast, the NYCOEM's approach to information sharing is more well-developed than the state's approach. The NYCOEM shares information with firms on a range of topics, from emergency-preparedness tips to resource-sharing agreements. This information exchange takes place before, during, and after disasters. At both the state and city levels, information sharing benefits governments and firms alike.

Mutual Benefits

The public and private sectors must derive benefits from disaster-oriented PPPs, for without these benefits, they would lack incentives to work with one another. At the state level, these mutual benefits relate mostly to physical aid. In New York City, the chief mutual benefits of disaster-oriented PPPs appear to be access to useful information and scarce resources.

Physical aid, whether purchased or donated, generates most of the benefits for the state government and businesses in New York. The NYCOEM has contracts with firms for a range of supplies that may be needed during disasters.⁷² When the state obtains

⁷² Davis, Porter, and Dugan interview.

these items during a disaster, it helps the state provide needed physical aid for citizens.

Delivering physical aid brings financial and marketing benefits for firms. If goods are delivered on contract, then the state pays firms money. If firms donate physical aid, this can provide firms with tax advantages, since such donations usually can be written off.⁷³ Corporate donations to the state also can generate positive press for firms. After Hurricane Sandy, for example, beer brewer Anheuser-Busch provided the state with free drinking water in aluminum cans.⁷⁴ Honda motor company donated a truck full of gasoline-powered electrical generators to the state.⁷⁵ In both of these cases, firms were able to use these donations to gain positive marketing exposure, as well as to meet their own corporate citizenship goals.⁷⁶

In New York City, the chief mutual benefits of disaster-oriented PPPs are information sharing and access to scarce resources. This information sharing is valuable for the NYCOEM and businesses. Meeting regularly with corporate partners, NYCOEM officials learn about private sector needs and concerns—giving them the information they need to voice those

⁷³ Anonymous official interview.

⁷⁴ "Governor Cuomo Suspends Regulations to Allow Drinking Water Donations for New Yorkers Affected by Hurricane Sandy," State of New York, 4 November 2012.

⁷⁵ Davis, Porter, and Dugan interview.

⁷⁶ Laura Petrecca, "Businesses Step Up to Aid Victims of Superstorm Sandy," *USA Today*, 4 November 2012; and "What We Believe," Honda Corporate Social Responsibility, 26 November 2019.

private sector concerns within the NYCOEM. The NYCOEM also can gain a better sense of how a large-scale emergency is unfolding by tapping into its network of business partners across the city.⁷⁷

Information sharing by the NYCOEM benefits firms as well. Emergency preparedness information, for instance, helps companies improve their own readiness for disasters. The law firm Cravath, Swaine & Moore LLP incorporates NYCOEM emergency preparedness information into its internal corporate training plans.⁷⁸ ABC, a national television network with offices in New York City, distributed NYCOEM information on business continuity planning at a company event focused on disaster preparedness.⁷⁹ Bank of New York Mellon (BNY Mellon), a global financial institution headquartered in New York City, also has disseminated preparedness information from the NYCOEM to its employees.⁸⁰ Information sharing during crises benefits firms too. The NYCOEM strives to provide its corporate partners with the “latest and greatest and most accurate information”—information that is not generally available through public sources.⁸¹ This data can help firms make business decisions faster, since their leaders do not have to wait

⁷⁷ Tannenbaum interview.

⁷⁸ “Partners in Preparedness: February 2013: Cravath, Swaine, & Moore LLP,” NYCOEM, accessed 15 June 2015.

⁷⁹ “Partners in Preparedness: October 2012: Featured Partner: ABC TV,” NYCOEM, accessed 15 June 2015.

⁸⁰ “Partners in Preparedness: January 2012: Featured Partner: Bank of New York Mellon,” NYCOEM, accessed 15 June 2015.

⁸¹ Tannenbaum interview.

for disaster-specific information to go public before reacting to the information.

New York City's disaster-oriented PPPs also can help the city government access scarce resources. The New York City government possesses many physical resources to deal with the effects of disasters.⁸² For instance, the city government owns some 25,000 vehicles, ranging from backhoes to large trucks. However, there are certain physical commodities that are hard to come by in the city, and the NYCOEM leverages its partnerships to access these scarce commodities. For example, large patches of open space—especially space that is paved with concrete—are hard to find in New York City. The NYCOEM needs such spaces during disasters to serve as staging areas for emergency supplies. To meet this need, the NYCOEM partnered with the New York Mets. After Hurricane Sandy, the NYCOEM took over the Mets' paved parking lots for months, packing them with hurricane-relief supplies.⁸³ The NYCOEM later nominated the Mets for a federal award for their assistance after Hurricane Sandy—which the Mets received in December 2013.⁸⁴

Mutual benefits present in New York's disaster-oriented PPPs vary between the state level of government and the city level of government. At the state

⁸² Tannenbaum interview.

⁸³ Tannenbaum interview.

⁸⁴ "The Department of Homeland Security Announces Recipients of the 2013 Rick Rescorla National Award for Resilience," press release, U.S. Department of Homeland Security, 4 December 2013.

level, contacts with businesses are geared mostly toward acquiring and distributing physical aid. In New York City, disaster-oriented PPPs deliver mutual benefits through information exchange. Moreover, the city government gains from access to scarce resources in the private sector domain. Participants in New York's disaster-oriented PPPs need to maintain high levels of mutual trust to collaborate well.

Trust

Trust plays a central role in New York's disaster-oriented PPPs, but the state and city governments view trust differently. State officials point toward an implicit trust in the firms with which it works. This implicit trust is based on corporate reputations, the quality of personal relationships between state representatives and business officials, and contacts between the state and private sector outside the context of disasters.⁸⁵ The NYCOEM, by contrast, views trust as a direct function of engagement in partnership-oriented activities.

Public officials in New York State believe that trust is indispensable for disaster-oriented PPPs.⁸⁶ Yet, the state government's trust in firms does not appear to come from firms consistently meeting or ex-

⁸⁵ Davis, Porter, and Dugan interview; and David M. Van Slyke, "Collaboration and Relational Contracting," in *The Collaborative Public Manager: New Ideas for the Twenty-first Century*, ed. Rosemary O'Leary and Lisa Blomgren Bingham (Washington, DC: Georgetown University Press, 2009), 149–50.

⁸⁶ Davis, Porter, and Dugan interview.

ceeding the state's expectations. Instead, the state's trust in firms is in part a product of the firms' public reputations, as well as the quality of direct relationships between state and private sector officials.⁸⁷ These observations are consistent with studies of public sector networks, which have found that factors such as high-quality personal relationships are essential for interorganizational collaboration.⁸⁸

State representatives also work extensively with business groups outside the context of disasters. This work with firms outside of disasters can build trust, which is then leveraged during disasters. For example, representatives from the Business Council of New York State, a major lobbying group for the private sector, interact frequently with state government officials. These repeated interactions help build trust between state officials and the business community. During disasters, this trust between the private sector and state officials provides a foundation from which firms and the state can then collaborate to address disaster-caused crises, thereby increasing the state's resilience.⁸⁹

Firms that work with the state agree that trust is essential in disaster-oriented PPPs as well. Businesses must trust government agencies to give them

⁸⁷ Davis, Porter, and Dugan interview.

⁸⁸ For example, see Barbara Romzek et al., "Informal Accountability in Multisector Service Delivery Collaborations," *Journal of Public Administration Research and Theory* 24, no. 4 (October 2014): 825, <https://doi.org/10.1093/jopart/mut027>.

⁸⁹ Anonymous official interview.

accurate information during disasters. For example, retailers occasionally use government announcements about utility restoration times to set staffing levels during large-scale emergencies. If these projections are wrong, then employers can lose significant amounts of money on employees who report to work but have to remain idle, because without power or water, they cannot open their businesses.⁹⁰ If firms trust the public sector to provide them with correct information during disasters, and this information is not correct, then trust between the public and private sectors can erode.

NYCOEM also views trust as central to disaster-oriented PPPs. However, unlike the New York State government, the city agency sees this trust as a function of direct participation in disaster-oriented PPPs. The NYCOEM is well-funded and has the staff and resources to meet regularly with business groups to discuss emergency-management priorities. This routine engagement with business representatives helps build interorganizational trust, because it attunes the agency to the private sector's concerns and interests.⁹¹

The NYCOEM's private sector partners agree that trust is essential in disaster-oriented PPPs. For example, after Hurricane Sandy, a particular hardware store owner failed to deliver building supplies to a borough president at an appointed date and time. This failed

⁹⁰ Hayes interview.

⁹¹ Tannenbaum interview.

delivery damaged the relationships between the hardware store owner and the borough president, as well as those between the borough president and its residents.⁹²

Trust matters in New York State's disaster-oriented PPPs. At the state level, this trust is a function of the reputation of the firms with which the state collaborates, personal relationships between public and private sector officials, and regular contacts between companies and the state in nondisaster circumstances. In New York City, trust is built through meetings, planning, and communication—all of which are made possible by the NYCOEM's generous funding and staffing levels. To sustain New York's disaster-oriented PPPs in the long term, it will be essential for these partnerships to adapt to new and uncertain circumstances.

Adaptability and Sustainability

NYSOEM partners with businesses for emergency-management purposes in a short-term, transactional manner. However, the city agency, NYCOEM, strives to sustain its disaster-oriented PPPs in the long run. These differing approaches mean that the NYSOEM's development of disaster-oriented PPPs is stunted, while the NYCOEM's disaster-oriented PPPs program thrives.

State officials interviewed for this book cannot cite any examples of a state-level, disaster-oriented

⁹² Hayes interview.

PPP evolving.⁹³ There are several plausible explanations for this. First, the NYSOEM has no organizational “owner” of its disaster-oriented PPPs. Instead, the responsibility for working with businesses is concentrated in the state governor’s office. Second, contacts within the state government and its partners turn over regularly. This turnover can interrupt or sever disaster-oriented PPPs, because there are no procedures in place to smoothly transition the management of PPPs from outgoing to incoming employees. A lack of state-level succession planning for disaster-oriented PPPs means that when key individuals leave, certain PPPs can dissolve.⁹⁴ Severed ties mean that the relationships between the state and businesses do not have the opportunity to change—let alone sustain themselves into the future.

The NYCOEM’s relationships with firms, by contrast, have progressed, helping sustain its disaster-oriented PPPs. The agency’s relationship with the New York Mets exemplifies how disaster-oriented PPPs can adapt to shifting needs. As part of a larger initiative to encourage New Yorkers to prepare for disasters, the NYCOEM first contacted the Mets to ask if the team would be willing to show a public service announcement about emergency preparedness on the Mets’ jumbotron scoreboard during a baseball game. Today, the NYCOEM and the Mets work

⁹³ Anonymous official interview; and Davis, Porter, and Dugan interview.

⁹⁴ Davis interview.

together to create emergency plans and have jointly produced public service announcements featuring the Mets' mascot. From an initial drive to publicize information about emergency preparedness to citizens, the Mets have now become a full partner with the NYCOEM and are written into the agency's official emergency response plans for the city.⁹⁵

The NYCOEM has seen a similar adaptation and evolution in its partnerships with the legal industry. An initial contact with a single individual in a prominent law firm and the agency unexpectedly blossomed into something much larger. The law firm employee was interested in learning about emergency preparedness and contacted the NYCOEM to set up a meeting. This initial meeting between city representatives and the employee grew eventually into a consortium of 42 New York City law firms, which today meet monthly to discuss business continuity and crisis management. The success of the NYCOEM's outreach in this case came as a pleasant surprise to agency officials.⁹⁶

At the state level, disaster-oriented PPPs are short-lived and transactional in nature. There is no organized effort to sustain this public-private collaboration, so New York State's disaster-oriented PPPs have not evolved. In New York City, however, there is an organized effort to create and grow disaster-oriented PPPs in the long term. This means that part-

⁹⁵ Tannenbaum interview.

⁹⁶ Tannenbaum interview.

nerships between the NYCOEM and businesses have evolved and adapted. The city's work with the New York Mets and a consortium of law firms that have made business continuity planning a high priority exemplify this adaptation. The rising importance of nonprofit and industry organizations for emergency management in New York, too, may offer important insights into the evolution of disaster-oriented PPPs in New York.

Nonprofit and Industry Organizations: A Ninth Factor

NYSOEM and the NYCOEM work closely with nonprofit and industry organizations to manage emergencies. Frequently, nonprofit organizations obtain donations from firms and pass them on to government agencies, which distribute them to citizens in need. Industry associations provide a mechanism for the NYSOEM and NYCOEM to connect with many businesses at once. While the analytical framework does not account for these organizations, they nonetheless play such a key role in state disaster responses that it is crucial to incorporate nonprofit and industry groups in the framework.

The NYSOEM's work with nonprofit and industry organizations helps it respond to disasters. The agency's collaboration with nonprofits focuses on distributing physical aid and emergency planning. For example, the state partners with the Aidmatrix Foundation, a nonprofit organization that develops supply

chain software for humanitarian relief efforts.⁹⁷ The foundation receives financial donations and supplies from firms, which it passes on to the state or individual citizens in need.⁹⁸ This collaboration demonstrates that Aidmatrix plays an important role as NYSOEM's partner for emergency-management purposes and acts as a bridge between firms and the state. The state agency has also worked with trade associations representing supermarkets and the insurance industry, as well as regional branches of Catholic Charities USA, a nonprofit network of charities, for emergency-planning purposes.⁹⁹ These examples of collaboration between the NYSOEM, nonprofits, and industry organizations highlight the broader role that charities and professional groups can play to enhance state-wide emergency planning.

The NYCOEM also has used partnerships with industry organizations to build connections with the business community. These partnerships help the agency gather information about the business community's needs outside the context of emergencies as well as to coordinate response actions with the business community during crises.¹⁰⁰ By identifying the needs of individual business groups through

⁹⁷ Davis, Porter, and Dugan interview.

⁹⁸ Davis, Porter, and Dugan interview. The Aidmatrix Foundation merged with the Atlanta-based nonprofit TechBridge in 2015.

⁹⁹ Anonymous official interview; and Davis, Porter, and Dugan interview.

¹⁰⁰ Tannenbaum interview.

these business association meetings, the NYCOEM is able to strengthen relationships with the associations' individual members. In time, these strengthened relationships can be valuable for the agency, especially when they have specific needs for information or resources.

During disasters, the NYCOEM works with non-profits and industry organizations to address ongoing emergency-management challenges. For example, the Mayor's Fund to Advance New York City, a non-profit organization, played a pivotal role in securing financial and physical aid donations from firms for residents impacted by Hurricane Sandy.¹⁰¹ During disasters, representatives from business associations sit in the New York City EOC, because this arrangement permits a single representative from an organization to act as a point of contact for thousands of businesses at once. Working directly with these organizations can help the NYCOEM avoid logistical challenges.

There are more than 200,000 businesses in New York City, so it is physically impossible to accommodate representatives from every firm in the city's EOC. Even having multiple representatives from a single industry in the EOC can create physical space constraints and trigger corporate and political friction, especially when two companies' representatives are in direct business competition with each another.

¹⁰¹ *Hurricane Sandy 6-Month Update* (New York: Mayor's Fund to Advance New York City, 2013).

Working with individual association representatives is helpful in this regard, because the NYCOEM can avoid having to contend with business competition issues and space constraint difficulties.¹⁰² The presence of individual business association representatives in the New York City EOC during disasters makes the NYCOEM's disaster-oriented PPPs more efficient by streamlining disaster response coordination.

Nonprofit and industry organizations play significant roles in emergency management in New York State and New York City. At the state level, these organizations connect with businesses, directly or indirectly, and in turn work with the NYSOEM to distribute physical aid and facilitate emergency planning. The NYCOEM uses partnerships with nonprofits and industry organizations as a way to collect information about private sector needs, as well as to coordinate disaster response actions during crises. The NYSOEM and NYCOEM's work with nonprofit and industry organizations shows that these groups can be natural complements to disaster-oriented PPPs.

New York's Disaster-Oriented PPPs: A State-Managed Solution

New York State and New York City's disaster-oriented PPPs vary considerably. Because there is no organized disaster-oriented PPP program at the state level, one could argue that the state would be well-served by looking toward peer states for model programs to em-

¹⁰² Tannenbaum interview.

ulate, such as those in California or Florida. The state's PPPs, while mostly ad hoc in nature, serve a variety of objectives, from delivering electricity (e.g., Honda) to basic foodstuffs (e.g., PepsiCo). The NYCOEM's disaster-oriented PPP program has operated since at least 1999—well before the federal government advocated explicitly for private sector involvement in emergency management—and incorporates a remarkable range of organizations, from the New York Mets to law firms and retail stores. At both the state and city levels of government, nonprofit and industry organizations connect government agencies with many other organizations instantaneously.

It is therefore challenging to understand how direct federal government involvement in disaster-oriented PPPs could be beneficial in New York. One could make the case that the state's underdeveloped collaboration program would be somehow enhanced through federal assistance, for instance. And, to be fair, the NYSOEM benefits from federal funding via FEMA and the SBA after disasters. Nonetheless, funding for the NYSOEM's disaster-relief efforts and the administration of a disaster partnership program are fundamentally different things. Forcing a federal "disaster-oriented PPP template" on the NYSOEM, for example—one comparable to NIMS—would be counterproductive, because it either would be rejected by the governor's office, which has amassed significant responsibility for emergency-management activities in the state, or it would damage existing

informal agreements between firms and state agencies.

New York City's partnership program is robust. If anything, it could serve as a model for the federal government's outreach to the private sector. Compelling the NYCOEM to follow federal guidance for developing and managing these partnerships would ultimately run contrary to the public safety interests of New Yorkers, since it would disrupt what is by any reasonable measure an impressive disaster-oriented PPP program.

Conclusion

This chapter showed that each of the eight factors in the analytical framework—crisis, leadership, organizational structure, information sharing, trust, mutual benefits, adaptability, and sustainability—are present in New York State and New York City's disaster partnerships, but to very different extents. Across each of the eight factors, New York State and New York City employ these agreements in distinct ways. New York State's partnerships are primarily ad hoc or contractual and focus on obtaining and distributing physical aid. By contrast, New York City's are longer lasting and focus on information sharing and gaining access to scarce resources. These differences appear to be a function of how the state and city governments fund their respective emergency-management agencies and allocate staff to manage these partnerships.

Nonprofit and industrial organizations also fig-

ure prominently at the state and city levels in New York—a factor for which the analytical framework does not account. At the state level, nonprofits work with firms to obtain and distribute physical aid for disaster-management purposes. The NYSOEM's work with these nonprofits means that the agency is connected indirectly with firms through these nonprofits. Moreover, the state has worked with groups of firms representing specific industries, such as grocers and insurers, and used this collaboration to access private sector resources. In New York City, the NYCOEM works closely with industry associations, since these associations provide a way for the city agency to connect with multiple firms simultaneously. This interaction with industry associations takes place both outside the context of disasters as well as during disasters.

While New York State and New York City's partnerships differ substantially, it is challenging to see how federal involvement in these agreements at either level of government could yield more desirable outcomes. The governor's office appears to steer much of the day-to-day activity in emergency management, so it is unreasonable to expect it to defer to the federal government's requirements without resistance. The NYCOEM's program is exemplary. It would be a mistake to make changes to this program, because it appears to work well as-is.

Chapter Five

DISASTERS IN THE OLD DOMINION

Earthquakes are rare in Virginia. But a highly unusual August 2011 temblor in the state provided an opportunity for the Virginia Department of Emergency Management (VDEM), in conjunction with a corporate partner and teams of dedicated volunteers, to aid disaster-stricken citizens. Residents of Mineral City, a rural community halfway between Charlottesville and Richmond, rely heavily on wood to heat their homes during colder months. After the earthquake cracked residential chimneys in Mineral City, local officials worried that damage to these chimneys could lead to carbon monoxide poisoning and chimney fires during the coming winter.¹ Local government officials contacted VDEM to voice their concerns. VDEM, in turn, reached out to Lowe's, a national chain of hardware stores. Lowe's donated 1,000 smoke and car-

¹ Amanda Reidelbach, interview with the author via telephone, 3 June 2014, hereafter Reidelbach interview.

bon monoxide detectors to VDEM.² Local volunteers in Mineral City, in conjunction with VDEM, handed out the smoke and carbon monoxide detectors to residents at a central pick-up site. The arrangement proved mutually advantageous for the state, which was able to deliver assistance to Mineral City via its partnership with Lowe's, as well as local officials, who gained some degree of assurance that their citizens would be provided sufficient warning in their homes of potential carbon monoxide poisoning and chimney fires.³

Today, VDEM retains a full-time disaster partnership coordinator, a position that was first created in 2011.⁴ VDEM also partners with Dominion, a Fortune 500 energy company, along with other businesses and nonprofit organizations, to prepare for, respond to, and recover from disasters.⁵

This chapter explores Virginia's emergency-management accords using the analytical framework, then argues that nonprofit and industry organizations appear to play an essential role in the smooth functioning of Virginia's partnerships. The chapter

² Benjamin Muncy, interview with the author via telephone, 5 August 2014, hereafter Muncy interview.

³ Muncy interview.

⁴ Ryan Garnowski, interview with the author via telephone, 27 May 2014, hereafter Garnowski interview.

⁵ For example, see Tracey Lamb, interview with the author via telephone, 18 June 2014, hereafter Lamb interview; Robert Conley, interview with the author via telephone, 24 June 2014, hereafter Conley interview; and David Vanderbloemen, interview with the author via telephone, 1 July 2014, hereafter Vanderbloemen interview.

then makes the case that VDEM should be permitted to continue managing its agreements without federal interference and concludes by drawing together the main themes from the preceding analyses.

Crises

Crises caused by disasters such as the Mineral City earthquake are important drivers of Virginia's partnerships. Crisis situations have prompted VDEM officials to reexamine their private sector relationships to fill resource gaps that they otherwise might have overlooked. Moreover, crises have generated opportunities to cement relationships between business representatives and VDEM officials, strengthening ties between their respective organizations.

Crises spur the state government to reexamine its emergency-management agreements to identify and close gaps in capabilities. For instance, Dominion learned from issues after Hurricane Irene in 2011 that after hurricanes it should assign response crews to work alongside Virginia Department of Transportation (VDOT) workers.⁶ VDOT crews are responsible for removing debris from roads after hurricanes, such as fallen trees. Toppled trees often fall on power lines. By pairing Dominion employees with VDOT workers, both organizations are able to help citizens and achieve efficiencies by opening blocked roadways and restoring electricity in sync with one another.

Responding to crises can also reinforce organi-

⁶ Vanderbloemen interview.

zational relationships. During Hurricane Irene, for example, the pharmacy chain Walgreens used its Virginia stores' outdoor electronic display boards to show emergency management-related messages at the direct request of state government officials.⁷ Using Walgreens' technology helped state officials disseminate information more widely than if they had relied solely on state government resources. It also reinforced to both Walgreens and state officials the value of their partnership.⁸ In addition, retailers such as Home Depot rely on VDEM for vetted, high-quality information reports on weather emergencies, such as hurricanes or snowstorms.⁹ Home Depot store managers may use these reports to adjust staffing and inventory levels prior to weather emergencies occurring.¹⁰

Leadership

The actions of individual leaders in both the public and private sectors have helped forge and sustain disaster partnerships in Virginia. In several cases, leaders have played the pivotal role in transforming the vision of a partnership into a functional reality. There are two primary types of leadership in Virginia's partnerships: executive leadership in firms and state government, and the day-to-day management

⁷ Jim Williams, interview with the author via telephone, 1 December 2014, hereafter Williams interview.

⁸ Williams interview.

⁹ Muncy interview.

¹⁰ Muncy interview.

of public-private partnerships. These collaborations have sprouted and flourished in Virginia because of these types of leadership.

Public and private sector executives can provide the top-level organizational support that is essential for building partnerships.¹¹ Leaders deliver this support by providing organizational approvals and endorsements to empower their subordinates to build and maintain extraorganizational contacts and relationships. This top-level buy-in helps ensure that leaders' subordinates, who manage the partnerships, collaborate well with their partners.¹²

For example, Virginia 811 is a nonprofit organization whose 500 members are private utility companies doing business in Virginia, including Verizon, Dominion, and Cox Communications. The CEO of Virginia 811 has pushed the organization to partner with VDEM, in part to ensure that Virginia 811 has a back-up plan to continue supporting its members during large-scale emergencies. Virginia 811's members are frequently active in disaster responses; the organization's staff supplies utility companies with vital infor-

¹¹ Ami J. Abou-bakr, *Managing Disasters through Public-Private Partnerships* (Washington, DC: Georgetown University Press, 2013), 46–52; Ari Ginsberg and Eric Abrahamson, "Champions of Change and Strategic Shifts: The Role of Internal and External Change Advocates," *Journal of Management Studies* 28, no. 2 (March 1991): 185–86, <https://doi.org/10.1111/j.1467-6486.1991.tb00276.x>; and Stanley E. Fawcett et al., "Organizational Commitment and Governance for Supply Chain Success," *International Journal of Physical Distribution & Logistics Management* 36, no. 1 (January 2006): 31, <https://doi.org/10.1108/09600030610642913>.

¹² Garnowski interview.

mation to help them make repairs to their damaged infrastructure after disasters.¹³ Since VDEM and Virginia 811's disaster recovery objectives align, Virginia 811's drive to partner with VDEM makes sense.

Like Virginia 811, Virginia 1st is a nonprofit organization for the financial industry, but its members are private sector financial institutions such as banks and credit unions.¹⁴ The executive director of Virginia 1st encourages the organization and its members to partner with the state.¹⁵ For example, Virginia 1st divides the state into separate regions for management purposes.¹⁶ Those regional boundaries were designed deliberately to mirror the regional boundaries used by VDEM during disasters, demonstrating Virginia 1st's desire to cooperate with the state.¹⁷ The leadership displayed by the heads of Virginia 811 and Virginia 1st to forge ties with the state emergency-management apparatus underscores how private sector executives can help create and grow state partnerships.

Executive leadership within VDEM also can be a boon to the development of these agreements. The

¹³ Lamb interview.

¹⁴ "Virginia 1st," Ready Hampton Roads, accessed 30 September 2015.

¹⁵ Multiple interviewees individually identified Gary T. Lupton by name for his work in disaster-oriented PPPs, including Robert Conley of Cox Communications; Ryan Garnowski of VDEM; and Benjamin Muncy, formerly of VDEM.

¹⁶ Gary Lupton, interview with the author via telephone, 14 August 2014, hereafter Lupton interview.

¹⁷ Lupton interview.

founder of VDEM's public-private partnership program credits VDEM leaders with advocating for the creation of their position in 2011.¹⁸ A second VDEM employee, who manages donations of physical aid from the private sector, echoes these sentiments by pointing out that their job exists because of a specific commitment from VDEM leaders to fund the position in the agency's budget—a tacit recognition of the value VDEM leaders saw in setting aside money to develop relationships with businesses.¹⁹ These observations are important because they illustrate that leaders' commitments to forge partnerships led to the financing of full-time equivalent jobs within VDEM. Those positions, in turn, helped cement Virginia 811 and Virginia 1st's partnerships with VDEM.

Leadership is also critical in the daily management of disaster-management agreements. These day-to-day needs can range from dealing with mundane administrative matters to reaching out to organizations that are not yet partners but may become partners in the future. An official from Cox Communications, a telecommunications company, recalls that one official in the Virginia governor's office was pivotal in encouraging state-level partnerships and facilitating cooperation among private sector actors for emergency-management purposes.²⁰ Without this state official's management skills, communication

¹⁸ Muncy interview.

¹⁹ Reidelbach interview.

²⁰ Conley interview.

between Cox and the state may have been less than ideal. Today Cox and VDEM invite one another's representatives to table-top exercises to practice simulated disaster responses.²¹ A former VDEM private sector liaison shows the importance of leadership by highlighting his agency's work to connect Walgreens with the Virginia Department of Health for collaboration on public health-related projects.²² Without these efforts, it is doubtful that the Walgreens/Virginia Department of Health partnership would exist.

Organizational Structure

Most state-level partnerships in Virginia lack a formal organizational structure. They are not governed by MOUs or other legally binding agreements, except in the case of contracts for specific products or services to be provided during a disaster. This informality is by design. VDEM has resisted creating MOUs; private firms do not appear eager to enter into MOUs either. Despite the predominant lack of formal organizational structure, there is a pattern to PPPs in the state. The organization of partnerships is primarily a function of a mutual commitment to so-called "handshake" agreements, coupled with the strength of relationships between pivotal individual actors in the partnership. The commitment to handshake agreements provides the foundation for these part-

²¹ Conley interview.

²² Garnowski interview.

nerships, while the key actors in the partnership help build, launch, and sustain the partnership.

VDEM's commitment to informally structured partnerships began in earnest when the agency first hired a full-time, public-private sector liaison in 2011.²³ The information shared at the time was not sensitive enough to warrant an MOU and firms often did not want formal agreements with VDEM. Instead, the organizational structure of the partnerships was based on trust. Despite internal resistance to MOUs, at least two MOUs were signed during the early years of the emergency-management collaboration program at VDEM—one with a telecommunications company and another with an electricity provider.²⁴ VDEM's next public-private sector liaison continued largely to advance the view within VDEM that partnerships should not be structured formally.²⁵ However, VDEM uses a new online information sharing portal called WebEOC, and access to the site is governed by MOUs.²⁶ Therefore, while VDEM's informal approach to most partnerships dominates, it also seems that MOUs continue to hold a minor role.

VDEM's coordinator of private sector donations takes a nuanced view of how the state's partnerships are structured. They believe that while informal agreements are preferable, it is also possible to have

²³ Garnowski interview.

²⁴ Muncy interview.

²⁵ Garnowski interview.

²⁶ Garnowski interview.

an MOU and at the same time to act informally.²⁷ This implies that in Virginia, firms can simultaneously have elements of both formal and informal PPPs with VDEM. VDEM's public-private sector liaison echoes this theme. VDEM partners were sometimes told up front that a significant amount of their collaboration with VDEM would be improvisational, suggesting that the demands of particular emergencies dictate the precise ways in which a partnership manifests itself.²⁸

Individual leaders contribute significantly to the development and organizational structure of Virginia's agreements. In many cases, the professional relationship between just two organizational heads provides the impetus for a broader partnership. For example, one representative from Cox Communications formerly served in the U.S. Air Force.²⁹ They underline how their military background helped them bond with VDEM's director of operations, who had served in the U.S. Marine Corps.³⁰ This experience highlights the importance of one-to-one relationships in the broader context of Virginia's emergency-management partnerships. Similarly, Virginia 811's CEO approached VDEM personally because they were interested in bolstering Virginia 811's disaster resilience.³¹ Interpersonal conversations among the actors in the PPP can also deepen the ties between

²⁷ Reidelbach interview.

²⁸ Garnowski interview.

²⁹ Conley interview.

³⁰ Conley interview.

³¹ Lamb interview.

organizations.³² These strong ties can yield dividends during emergencies, says one VDEM official, directly associating the notions of strong relationships and effectiveness in emergency responses.³³

There are, however, drawbacks to informally structured partnerships. When the personnel who actively manage PPPs for their respective organizations turn over, this causes a de facto reset of the partnership, since there may not be a formal document in place attesting to the existence of a partnership.³⁴ Public and private sector managers must be introduced to one another and build a relationship again from the ground up.³⁵ Rebuilding working relationships in this way takes time and commitment from government and business representatives. If efforts to rebuild the relationship founder, it is possible that a once healthy and active partnership can atrophy or disappear altogether.

An additional potential risk to informally structured partnerships is that they may increase the risks of breakdowns in accountability and corruption. No one interviewed for this study suggested that there is anything improper happening in Virginia's disaster partnerships. But it is true that informally structured partnerships lack the accountability present within more formal agreements such as contracts and MOUs. For these reasons, when problems arise in

³² Reidelbach interview.

³³ Reidelbach interview.

³⁴ Garnowski interview.

³⁵ Garnowski interview.

disaster responses, identifying the actors responsible for the problems becomes harder, since responsibilities are loosely defined in informal agreements. And there may also be greater potential for graft.³⁶ So, while the flexibility of informal structures carries numerous advantages, the lack of a formal organizational structure for disaster-oriented PPPs can also prove to be a weakness.

Information Sharing

Information exchange among businesses and VDEM appears to be the chief objective and primary benefit of emergency-management collaborations in the state.³⁷ This sharing of information can be broken down into two types: informal exchange, such as in telephone conversations, meetings, and conferences; and formal exchange, including situational updates, forecasts, and resource requests. It is fair to say that informal information sharing is more valuable for both VDEM and businesses than formal information sharing.

VDEM and its private sector partners value informal information exchange. Part of the reason this informal sharing is so important is that it acts as a kind of currency to build social capital among VDEM

³⁶ For an example of this line of argument, see William F. Shughart II, "Disaster Relief as Bad Public Policy," *Independent Review* 15, no. 4 (Spring 2011): 521.

³⁷ Garnowski interview; Reidelbach interview; Lamb interview; Conley interview; Vanderbloemen interview; Muncy interview; and Lup-ton interview.

and its partners. For example, within VDEM itself, two officials who work regularly with private sector and volunteer organizations participate in one another's meetings and include each other in programs and presentations. This type of informal information exchange permits them both to work together better. The degree to which these officials have been able to jointly build a network of private sector actors and share information with them has yielded benefits for VDEM too. VDEM's private sector partners occasionally meet other business representatives seeking official emergency-related information. Active VDEM partners will steer non-VDEM partners to these two agency employees for information.³⁸ These new contacts permit partnerships to form between VDEM and businesses, reinforcing the value of its public-private sector liaison program.

The social capital accrued from informal information exchanges is of such value that especially strong PPPs are handled with great care. For example, one former VDEM official resisted another state office's requests to share their business sector contacts with them.³⁹ There was a risk, the official says, of the other state office sending their business sector contacts unwanted email, which they feared would then damage their partnerships.⁴⁰ The VDEM official's efforts to shield partners from unwanted communications

³⁸ Reidelbach interview.

³⁹ Muncy interview.

⁴⁰ Muncy interview.

underlines the significance of informal information sharing in Virginia's partnerships. This perceived value of informal information exchange is not exclusive to VDEM either; a telecom company representative that works with VDEM agrees that strong interpersonal communication skills used in informal exchanges, such as attentive listening and discretion, are essential for successful partnerships.⁴¹

Meetings, conferences, and exercises involving VDEM and firms are frequently cited forms of informal information sharing that can strengthen disaster partnerships. VDEM representatives participate routinely in business continuity planning (BCP) tabletop exercises, in which businesses simulate how they would respond to a disaster. This type of activity is helpful for firms, because if BCP assumptions are based on flawed understandings of VDEM's own plans, then firms' plans may prove useless during disasters. This type of information sharing from VDEM to firms enables businesses to make corrections and modifications to their own emergency plans, potentially benefiting them during disasters. VDEM also has shared its business contacts with local government emergency managers. This connection allows corporate donors with existing state-level relationships to be paired with local governments in need of donations for assistance.⁴²

Meetings, conferences, and exercises can also

⁴¹ Conley interview.

⁴² Garnowski interview.

be valuable for firms. For example, Cox Communications has invited VDEM representatives to give presentations to its employees and has participated with VDEM in exercises to test disaster response capabilities.⁴³ The executive director of Virginia 1st was introduced to the former head of VDEM at a meeting of the Hampton Roads Emergency Management Committee (HREMC), a regional organization to support emergency preparedness.⁴⁴ That initial meeting eventually led to a working relationship between Virginia 1st and VDEM.⁴⁵ Dominion is invited regularly to state-sponsored conferences on emergency management. In these conferences, state organizations praise Dominion for its collaborative approach to emergency management. In this way, Dominion showcases its enthusiasm for state emergency-management agreements and influences other firms to partner with the state.⁴⁶

Formal information exchange, such as sharing situational updates and resource requests during crises, permits VDEM and its partners to act more effectively during large-scale emergencies. State officials routinely bring representatives from firms such as Walmart and Home Depot to the Virginia Emergency Operations Center (VEOC) during disasters, which is operated by VDEM.⁴⁷ This practice facilitates disaster-

⁴³ Conley interview.

⁴⁴ Lupton interview.

⁴⁵ Lupton interview.

⁴⁶ Vanderbloemen interview.

⁴⁷ Hayes interview.

related information sharing between the state and the private sector.⁴⁸ Dominion assigns one of its employees to work from the VEOC every day, regardless of whether a disaster is happening.⁴⁹ Other firms can access a web-based information sharing tool that VDEM uses during large-scale emergencies.⁵⁰ These forms of formal information sharing between the state and businesses permit both the state and the private sector to be better informed during emergencies.

Mutual Benefits

Private firms and VDEM would have little reason to partner without the presence of immediate or expected benefits. VDEM officials therefore make a conscious effort to ensure that their PPPs are mutually beneficial. These mutual benefits tend to fall into one of the following two categories: situational awareness or functional knowledge.

A former public-private sector liaison for VDEM says that they recognized the need for partnerships to be mutually beneficial.⁵¹ VDEM's efforts in this regard left a positive impression on the agency's partners. Officials from Dominion, Virginia 811, and Virginia 1st offered high praise for the VDEM liaison's work in interviews, demonstrating that VDEM's focus

⁴⁸ Hayes interview.

⁴⁹ Vanderbloemen interview.

⁵⁰ Garnowski interview.

⁵¹ Garnowski interview.

on maximizing value for its corporate partners is having a positive effect.⁵²

One of the most significant shared benefits of Virginia's partnerships is situational awareness, which FEMA defines as the ability to "identify, process, and comprehend the most critical informational elements" about a disaster.⁵³ Without good situational awareness, there is potential for overlapping or conflicting emergency response actions, as well as unnecessary duplication of effort.⁵⁴ The relationships that form in these agreements and the information sharing that occurs within them improve situational awareness. For example, Towne Insurance generates reports on local branch closings and provides this information to VDEM.⁵⁵ This type of information can help VDEM develop a better sense of where needs exist during crises. In a similar way, Virginia 1st receives VDEM's daily briefing—an email report for situational awareness purposes—which is then distributed internally among Virginia 1st's members.⁵⁶

Functional knowledge is a key mutual benefit of Virginia's partnerships. In this context, functional

⁵² Vanderbloemen interview; Lamb interview; and Lupton interview.

⁵³ "Glossary and Acronyms," FEMA, accessed 28 August 2015, 17.

⁵⁴ For an example of how effective coordination can reduce duplication of effort in disaster responses, see Dave Yates and Scott Paquette, "Emergency Knowledge Management and Social Media Technologies: A Case Study of the 2010 Haitian Earthquake," *International Journal of Information Management* 31, no. 1 (February 2011): 10, <https://doi.org/10.1016/j.ijinfomgt.2010.10.001>.

⁵⁵ Lupton interview.

⁵⁶ Lupton interview.

knowledge refers to a detailed awareness of the inner machinations, processes, hierarchies, internal relationships, and personalities within organizations.

There are two especially successful areas where functional knowledge has increased. First, VDEM has passed state-level private sector contacts on to local government emergency managers. With these state-level contacts in hand, local emergency managers are able to address their own emergency needs better by taking advantage of VDEM's private sector network. Second, VDEM has helped firms to improve their own emergency plans by participating with them in emergency exercises. This new functional knowledge can empower firms to continue operating during crises, which benefits local economies.⁵⁷ At the same time, VDEM gains from these exchanges, because they help the agency become more familiar with private sector emergency plans. Dominion shares geographic information systems (GIS) data on critical infrastructure sites throughout the state with VDEM.⁵⁸ This information is valuable for VDEM during emergencies, especially if there is a chance that these sites may be offline during a crisis. During a Virginia 1st meeting in Richmond, VDEM brought a mobile incident command post, a kind of disaster "war room" on wheels, to show Virginia 1st members.⁵⁹ Familiarizing Virginia 1st members with this equipment

⁵⁷ Garnowski interview.

⁵⁸ Vanderbloemen interview.

⁵⁹ Lupton interview.

was beneficial, because it helped them be aware of the types of technology VDEM might deploy to their own businesses during disaster responses.⁶⁰

Physical aid, while important in its own right, does not appear to be a commonly shared benefit in Virginia's disaster-management accords. No state officials or business representatives that were interviewed identified specific additional examples of physical aid as a by-product of these partnerships. There are a few potential explanations for this. It is possible that physical aid is not perceived to be as valuable as information during Virginia's disasters. Alternatively, it may be that while firms are eager to share information with the state, they are less willing to give up valuable physical inventory, which costs them more than sharing information. A third possible explanation is that state requests for physical aid after disasters are infrequent, insignificant, or both.

Trust

Trust is of unparalleled importance in Virginia's partnerships. VDEM officials and business representatives consistently emphasize the pivotal role that trust plays in forming, maintaining, and growing emergency-management agreements.⁶¹

The early establishment of trust between VDEM and businesses appears critical to forming partner-

⁶⁰ Lupton interview.

⁶¹ Vanderbloemen interview; Garnowski interview; Lamb interview; Conley interview; Muncy interview; and Lupton interview.

ships. The agency takes a deliberately slow approach to building trust with private sector partners and tends to view partnerships as personal relationships.⁶² In initial meetings with prospective partners, VDEM will give the partner a sense of its capabilities as an agency but also sets the expectation with firm representatives that much of their joint cooperation will be unplanned.⁶³ This open, candid approach helps foster trust between VDEM and its partners.⁶⁴ An official from Virginia 811 is quick to describe the VDEM liaison's professionalism, efficiency, and productivity in their partnership.⁶⁵ They also indicate the importance of trust, suggesting a link between the VDEM liaison's efforts and the importance of trust in their partnership.⁶⁶

Trust is essential to maintain these partnerships over time. State and business officials agree that they must be able to rely on the information that they share with one another during disasters.⁶⁷ Without trustworthy information from their partners, employees may report to inoperable business facilities or government officials may wait for hours for deliveries of supplies that never materialize.⁶⁸ A representative from Cox Communications says trust is indispensable, especially when there are sensitive communi-

⁶² Garnowski interview.

⁶³ Garnowski interview.

⁶⁴ Garnowski interview.

⁶⁵ Lamb interview.

⁶⁶ Lamb interview.

⁶⁷ Vanderbloemen interview; and Hayes interview.

⁶⁸ Vanderbloemen interview; and Hayes interview.

cations among partners during emergencies that could prove damaging to reputations if aired publicly.⁶⁹ Moreover, banks will sometimes need to share proprietary information with VDEM and other government agencies.⁷⁰ These banks have to trust that the proprietary information they share with VDEM will not be disclosed.⁷¹

As these agreements evolve, trust remains vital to keep partnerships strong. When VDEM's private sector contacts turn over, the agency has to begin the time-consuming work of building trust and relationships with the new private sector contacts.⁷² Institutional-level trust does not transfer automatically from one person to another when personnel leave or change jobs. Rather, trust must be built again with each new contact. The founder of VDEM's private sector liaison program describes an example demonstrating why trust and personal relationships influence the growth of partnerships. VDEM created a dedicated email address for its private sector program, but the agency's partners would not use the address because it felt impersonal.⁷³ "Trust plays into that because they want to believe there's a person behind this, that there is a person advocating for them," the founder says.⁷⁴ Even as VDEM's partner-

⁶⁹ Conley interview.

⁷⁰ Lupton interview.

⁷¹ Lupton interview.

⁷² Garnowski interview.

⁷³ Muncy interview.

⁷⁴ Muncy interview.

ship program expanded, its private sector collaborators wanted a dedicated contact person whom they knew and trusted personally.

Adaptability and Sustainability

Virginia's disaster-oriented PPPs adapt continually to changing circumstances. In some cases, early one-to-one relationships between a single VDEM representative and a business executive grow into partnerships. Existing PPPs change too. Disasters are becoming more complex, so the state's disaster-oriented PPPs shift to keep pace with their demands. Public expectations are also changing. Uncertain budget outlooks and personnel turnover can make it harder for management agencies and businesses to keep their disaster-oriented PPPs going.⁷⁵ Collectively, these challenges show why adaptability is critical for the long-run success of disaster-oriented PPPs.

There is evidence of individual contacts between VDEM and business representatives leading to disaster partnerships between their respective organizations.⁷⁶ Virginia 811's experience with VDEM exemplifies this adaptability. Initial informal contacts between Virginia 811's CEO and VDEM representatives have pushed forward the relationship between the two organizations.⁷⁷ Today, Virginia 811 employees take emergency-management courses to acquire a

⁷⁵ Vanderbloemen interview.

⁷⁶ Garnowski interview.

⁷⁷ Lamb interview; and Garnowski interview.

technical knowledge base that will permit them to engage further with VDEM. This suggests that Virginia 811 is committed to working with VDEM permanently to increase its resilience.⁷⁸

Public expectations of emergency-management agencies are changing. VDEM and its partners must adapt to keep pace. For instance, Cox is now using social media platforms and trying to determine the best way to communicate with technology-savvy customers.⁷⁹ The need for government agencies to build public support for their work is prompting VDEM and its partners to use new tactics as well. One such initiative, called the Superstars program, honors outstanding community volunteers working in the public safety arena at local city council meetings.⁸⁰ Virginia 1st members attend these meetings, providing a way for banks to demonstrate their engagement in local communities while also highlighting their partnerships with VDEM.⁸¹

Sustaining the momentum and strength of disaster partnerships can be challenging for VDEM and businesses. For example, firms can be restricted by budgetary shortfalls and constraints on personnel, preventing them from dedicating many resources to the partnership.⁸² Moreover, firms face a different

⁷⁸ Lamb interview.

⁷⁹ Conley interview.

⁸⁰ Lupton interview. See "Superstar Awards 2010," Virginia Citizen Corps, accessed 6 February 2020.

⁸¹ Lupton interview.

⁸² Vanderbloemen interview.

set of behavioral incentives than government agencies. While government agencies are taxpayer funded and designed to serve the public interest, private firms must ensure that their own leaders, clients, and shareholders are getting the financial results that they desire.⁸³ This fundamental difference in public- and private-sector behavioral incentives means that the partnership may not get the level of attention that representatives on either side consider to be ideal. When personnel change roles, representatives on both sides of the partnership must also adapt to new circumstances.⁸⁴ The time required to adapt to new personnel can mean that actions within the partnership diminish temporarily until new personnel are up to speed.

Nonprofit and Industry Organizations: A Missing Link

Nonprofit and industry organizations play a quiet, yet instrumental, role in Virginia's disaster partnerships. Nonprofit professional associations like the Better Business Bureau (BBB) permit VDEM to connect instantly with a slew of firms. This arrangement can make forming partnerships easier for VDEM than attempting to form individual partnerships with one firm at a time. Volunteers, such as those that assisted Mineral City residents after the 2011 earthquake there, or the recipients of Superstar awards at local

⁸³ Vanderbloemen interview.

⁸⁴ Garnowski interview.

council meetings, play a pivotal role in disaster response too. They can perform many of the disaster response tasks that otherwise would be filled by government employees, such as distributing aid or assisting homeowners with cleanup tasks. Nonprofit and industry organizations are missing from the analytical framework, but the evidence from Virginia suggests that the framework may be worth modifying to incorporate these organizations to capture more fully the dynamics of state partnerships.

The BBB, Virginia 1st, and Virginia 811 demonstrate why partnering with nonprofit organizations can be a powerful way for the state to develop agreements with profit-seeking firms. For example, a former VDEM private sector liaison highlights their relationship with the former Richmond-area BBB head, since the BBB acted as a gateway for VDEM to connect with many small businesses that were BBB members.⁸⁵ This experience shows a connection between VDEM's desire to partner with businesses and their liaison's professional relationship with the head of the BBB. VDEM's experience with Virginia 1st is similar. In some ways, VDEM's relationship with Virginia 1st was a natural fit, as the financial sector has long been a leader in continuity planning.⁸⁶ Virginia 1st also provided a way for VDEM to connect with many financial firms at once.⁸⁷ Virginia 811, whose

⁸⁵ Muncy interview.

⁸⁶ Muncy interview.

⁸⁷ Garnowski interview.

partnership with VDEM is new, is similar to the BBB and Virginia 1st because its members are almost exclusively profit-seeking utility companies.⁸⁸

Volunteer organizations can perform roles that bridge gaps between business and government capabilities, making them valuable intermediaries in disaster management partnerships. For example, volunteers can play essential roles in post-disaster responses, such as mold remediation or debris removal, which are both tasks that could be performed by either government or business employees, depending on the specific circumstances of the disaster.⁸⁹

Virginia's Disaster Partnerships: A State-Managed Solution

The emergency-management agreements present in Virginia vary. While nonprofit and industry organizations play key roles within them, VDEM also partners directly with many firms. These partnerships have yielded tangible results for Virginians affected by disasters, such as residents impacted by the Mineral City earthquake who needed carbon monoxide detectors. Additionally, during Hurricane Irene, residents received emergency warning messages posted on Walgreens' outdoor display signs. The culture of VDEM's partnership program is also noteworthy because of its informal nature. While VDEM does not

⁸⁸ Lamb interview.

⁸⁹ Reidelbach interview.

reject the trappings of formal partnerships, such as MOUs, the leaders of the state's partnership program make a point to approach partnerships as personal relationships. That seems to strengthen the sense of trust that exists between VDEM and its partners.

The unique approach that VDEM takes in forming and creating partnerships invites us to consider what advantages, if any, federal government involvement would bring to the state's partnership program. The state budget outlook in Virginia can shift with political fortunes in Richmond. This means that a generous amount of emergency-management funding today may vanish tomorrow. To guard against this possibility, an injection of federal funding, such as a homeland security grant, may help ensure that VDEM retains a public-private sector coordinator position. But if that funding has specific conditions attached to it—such as the need to structure these agreements in a particular way—then VDEM leaders would do well to reconsider the decision to accept these federal dollars.

Restructuring the state's emergency-management partnership program would make little sense at this point. The program has demonstrated that it can produce results that advance VDEM's mission. Moreover, the agency's partners have gone on the record to express their satisfaction with the state's administration of its program. None of this is to suggest that all of VDEM's partnerships are somehow ideal. But it does indicate that federal involvement in Virginia's

emergency-management accords, particularly dictating the ways in which those partnerships are administered or structured, would likely do more harm than good.

Conclusions

This chapter showed that Virginia's disaster-oriented PPPs are driven by the eight factors—crisis, leadership, organizational structure, information sharing, trust, mutual benefits, adaptability, and sustainability. Of the eight factors, state and business officials appear to agree that trust is the most important of the factors, with shared benefits a close second.

The evidence presented also shows that the analytical framework is viable a tool to assess disaster partnerships in Virginia. However, an additional factor—the role of nonprofit and industry organizations as a facilitator of PPPs—appears pivotal in the state's partnerships. Nonprofits can serve as convenient hubs that permit many firms and VDEM to partner en masse; they can be valuable intermediaries between businesses and government. Nonprofit organizations can provide volunteers who perform roles that bridge gaps in emergency-management capabilities between the public and private sectors. Since nonprofit and industry organizations can play these important roles in emergency management, and act as important links between government agencies and businesses, it may be that the analytical framework requires modification to capture more completely

the roles of these organizations in disaster partnerships.

The special culture of VDEM's disaster-oriented PPPs combines an informal approach with a degree of admirable candor and trust among partners. While it is difficult to quantify the value of that culture, the evidence presented here suggests that it is worth preserving, because it seems to fit VDEM's needs well. Imposing federal structures or guidelines on the state's disaster-oriented PPP program would be unwise, because to do so risks disrupting an established, successful emergency-management initiative.

Chapter Six

TOWARD NEW UNDERSTANDINGS OF STATE DISASTER-ORIENTED PPPS

Thus far, we have seen how disaster partnerships influence emergency-management practices in California, Florida, New York, and Virginia. Each state faces an array of natural and man-made hazards, and to varying extents their partnerships were designed with these hazards in mind. The states have also developed emergency-management agreements in ways that reflect the unique political, economic, and demographic characteristics that each state possesses.

In this final chapter, the analytical framework is used to compare partnerships that are present in the four states. The purpose of this analysis is twofold: first, it is to assess how viable the analytical framework is for evaluations of state-level partnerships and to show how the eight factors were observed across the four cases. Second, this analysis serves to compare and contrast the emergency-management col-

laborations present in California, Florida, New York, and Virginia, highlighting their unique traits and the degree to which they reflect local conditions and circumstances.

The chapter proceeds in three steps. First, a table is presented that summarizes how the eight factors were manifest across the four cases. Next, a systematic comparative analysis of each of the eight factors is presented for California, Florida, New York, and Virginia's disaster partnerships. For added clarity, this comparative analysis is organized across four themes: key findings, unexpected results, comparative similarities and differences, and analyses of the reasons for the underlying differences observed across the cases. The chapter closes with an assessment of how these findings can lead to new understandings of partnerships, as well as advising that the federal government not interfere in the direction or management of state-level partnerships for emergency management.

Crises

KEY FINDINGS

Crises triggered by disasters exert a powerful influence on state-level disaster partnerships. Across each of the states, crises consistently led to two types of events: the creation of disaster-oriented PPPs and the cementing of professional relationships within preexisting partnerships.

Table 6.1. Summary of findings—disaster-oriented PPPs in California, Florida, New York, and Virginia

Framework factors		Crisis	Leadership	Organizational structure	Information sharing	Mutual benefits	Trust	Adaptability	Sustainability	Nonprofit and industry organizations
States	California	✓	✓	✓	✓	✓	✓	✓	X	✓
	Florida	✓	✓	✓	✓	✓	✓	✓	✓	✓
	New York	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Virginia	✓	✓	✓	✓	✓	✓	✓	X	✓

✓ = factor present in state

X= factor not present in state

Source: compiled by author.

Disaster-caused crises in all four states led to new emergency-management partnerships. Indeed, crises appear to be the primary generator of state-level disaster partnerships. For example, in Virginia, the Mineral City earthquake (2011) led to new levels of public-private sector engagement in the state. This collaboration provided potentially lifesaving smoke and carbon monoxide detectors to residents who needed them. Hurricanes Irene and Sandy, which struck New York State in 2011 and 2012, respectively, prompted the NYSOEM to work with FedEx, Walmart, PepsiCo, and Home Depot, among many other firms, to deliver physical aid to disaster survivors. The Ebola virus outbreak of 2014 led the NYCOEM to coordinate closely with private sector officials concerned about the possibility of the virus spreading from West Africa to New York City. California wildfires in 2006–7 and the 2004–5 hurricane season in Florida had similar effects, in that they led CalOES and the FDEM to work with businesses to meet the material needs of disaster survivors and help restore local economic activity. In each of these cases, specific disaster-caused crises brought state government and business officials together to address the crises in a coordinated manner.

Preexisting professional relationships within existing emergency-management accords also were strengthened through crises. For instance, in Virginia, Home Depot managers have relied on VDEM

reports to adjust their staffing levels during hurricanes. This sort of activity plays an important role in maintaining disaster partnerships, for it can reinforce the bonds between firms and state agencies. A senior CalOES official acknowledges that the agency's regular contact with firms during crises is evidence of why strong professional relationships among partners are vital. In Florida, crises caused by disaster events led to the creation of private-private partnerships between a shipping firm and other businesses, as well as the involvement of groups such as the ALAN and VOAD, reinforcing the ties between south Florida businesses. The trial by fire nature of crises bolsters partnerships because they allow state officials and business representatives to collaborate in mutually beneficial ways. When this government-business collaboration successfully meets public and private sector objectives, it also strengthens the relationships between government and business partners.

UNEXPECTED RESULTS

That disaster-caused crises can drive the creation of state partnerships is, in itself, unsurprising. This finding is consistent with research carried out by other scholars. For example, Ami J. Abou-bakr found that crises have significant influence on federal emergency-management agreements, and Thomas A. Birkland identified the potential of disasters as policy "focusing events" that can spur governmental

action, including, perhaps, the formation of disaster partnerships.¹

Researchers already know that crises can induce altruistic, cooperative, community-oriented behavior from individuals.² The phenomenon is so acute that it has been dubbed the “post-disaster Utopia,” though this feeling of altruism is not a universal experience.³ But given that disasters—and by extension, disaster-caused crises—can spur this sort of behavior among individuals in communities, it is not surprising that disaster-caused crises can also help strengthen professional relationships among public and private sector actors involved in disaster responses.

COMPARATIVE SIMILARITIES/DIFFERENCES

In California and Florida, disaster-caused crises have led to the development of CalOES’s BUOC and FDEM’s ESF-18, respectively. New York and Virginia have each experienced disaster-caused crises, which led to the development of partnerships. These accords differ sharply from those of California and

¹ Ami J. Abou-bakr, *Managing Disasters through Public-Private Partnerships* (Washington, DC: Georgetown University Press, 2013), 43–45; and Thomas A. Birkland, *After Disaster: Agenda Setting, Public Policy, and Focusing Events* (Washington, DC: Georgetown University Press, 1997), 59–62.

² Krzysztof Kaniasty and Fran Norris, “The Experience of Disaster: Individuals and Communities Sharing Trauma,” in *Response to Disaster: Psychosocial, Community, and Ecological Approaches*, ed. Richard Gist and Bernard Lubin (Philadelphia, PA: Taylor & Francis, 1999), 28–35.

³ Kaniasty and Norris, “The Experience of Disaster,” 31.

Florida, in the sense that they do not operate within comparable formal organizational frameworks. While disaster-caused crises have driven the creation of collaborations across the four cases, the forms of the resulting partnerships are distinct. In all four states, disaster-caused crises reinforce professional relationships among government and business representatives.

ACCOUNTING FOR OBSERVED DIFFERENCES

The effect of crises on the creation of disaster partnerships are negligible across the four states. The diverse organizational structures of the resultant partnerships, however, can be attributed to a host of potential variables, such as the state political climate, economic health of the state in question, staffing levels at individual state emergency-management agencies, and so on. These variables will be explored in greater depth later in this chapter.

Leadership

KEY FINDINGS

Leaders within business entities and government agencies hold considerable influence over the creation and future directions of disaster partnerships. This leadership consistently occurs in two tiers. The top tier—executive-level leadership—offers crucial organizational direction and support for the development and maintenance of disaster partnerships. The second-tier, management-level leadership, is re-

sponsible for shaping the daily operations of state emergency-management agreements.

Without top-level engagement within government agencies and businesses, the partnerships explored here would likely not exist. One way that executives make emergency-management agreements possible is through their ability to manage their respective organizations' budgets. In Virginia, for example, VDEM leaders decided to create and fund a public-private sector liaison position, as well as a coordinator of donations from businesses. A second way executives support partnerships is to foster organizational cultures conducive to interorganizational collaborations. The CEO of Virginia 811 reached out directly to VDEM to enhance their organization's emergency preparedness, leading to a partnership between VDEM and Virginia 811.

The governor's office in New York State has a strong commitment to and relationship with business leaders, and this support translates into coordination with firms during disasters. New York City differs from New York State in this regard, because while the state government has no formal disaster partnership program, the city does, and it is backed by explicit support from both the New York City mayor's office and the commissioner of the NYCOEM.

In California, the former executive director of the CRA organized hundreds of public and private sector representatives involved in emergency management throughout the state. Across all four states, execu-

tive-level leaders consistently provide the organizational support necessary for disaster partnerships to exist by channeling money and personnel toward developing these partnerships.

Mid-level organizational managers in state agencies and businesses direct the day-to-day administration of these agreements, and their leadership skills permit disaster partnerships to continue operating. For instance, in California, CalOES's public-private sector coordinator is cited repeatedly as the organizational keystone in the state government's efforts to launch and maintain emergency-management partnerships. Managers at Walmart, the American Red Cross, and Cisco, all of whom work directly or indirectly with CalOES, manage their respective organizations' relationships with the agency. Florida government officials with the Department of Economic Opportunity and the FDEM are strong proponents of the business community in general, and their favorable views of the private sector seem to translate into their consistent support of and work with the state's private sector partners.

UNEXPECTED RESULTS

The influence of leadership in the context of state partnerships is somewhat predictable, given the similarities among federal- and state-level emergency-management activities. What stands out, however, is the degree to which New York State officials are able to partner with firms, despite the absence of a formal

partnership program in the state. Through a combination of efforts in the NYSOEM and the governor's office, New York engages with firms during disasters to deliver goods such as food and emergency electrical generators to disaster survivors. New York State is unique among the four cases in this regard, because only New York State lacked a formal partnership program.

COMPARATIVE SIMILARITIES/DIFFERENCES

Senior officials in government agencies and businesses in all four states are instrumental in the initial formation and operations of these emergency-management agreements. Yet, subtle differences are apparent across the four cases too. In California and Virginia, for example, few officials interviewed mentioned the role of state-level political forces in those states' partnerships. By contrast, political forces in New York and Florida seemed to loom large within the state bureaucracy, since so much of New York's partnership efforts are concentrated in the office of the governor; and in Florida, former governor Rick Scott made boosting business activity a prominent policy priority.

ACCOUNTING FOR OBSERVED DIFFERENCES

The differing roles of political forces across the cases are likely attributable to historical factors too complex to examine in detail here. But, in brief, it may be that New York and Florida are known as states

with executives who are perceived to be particularly hands-on leaders, whereas California and Virginia's governors are not known to be deeply engaged in the machinations of the state bureaucracy. It may also be the case that senior state officials within the NYSOEM and the FDEM enjoy especially strong trust from the state's political leaders and are given a correspondingly wide latitude to forge partnerships and otherwise engage with businesses to help the state manage disasters.

Organizational Structure

KEY FINDINGS

No topic of discussion elicited more animated responses from the officials interviewed for this book than organizational structure—and, specifically, discussions of MOUs. Only California finds MOUs desirable for its partnerships, although at least one CalOES official acknowledges the limitations of MOUs as tools to manage interorganizational relationships and measure program success. Virginia, New York, and Florida officials take varied positions on MOUs, from a somewhat tepid embrace of MOUs (i.e., New York) to outright opposition (i.e., Florida).

California uses signed MOUs as a way to gauge the success of its partnership program. This approach to measuring success offers a mixture of benefits and disadvantages. MOUs provide CalOES with a tangible way to demonstrate that an organi-

zational relationship exists between the organization and BUOC members. MOUs also can help buffer the effects of personnel turnover for both CalOES and its partners. Yet, MOUs have at least one downside: relying on them as a metric to assess the success of CalOES's program can be misleading, for the sheer number of signed MOUs offers no details about the quality of the partnerships themselves. Moreover, MOUs can be written in such a way that they do not explicitly commit either CalOES or its partners to anything. To CalOES's credit, the agency recognizes that the MOU structure has limitations and is working to develop new metrics to measure the success of its program.

New York, Virginia, and Florida government and business representatives use MOUs in different ways from California. In New York State, there is no formal partnership program, so MOUs governing state-level, disaster-oriented PPPs do not exist—though this does not indicate that the state would either embrace or reject MOUs if the NYSOEM were to create an emergency management collaboration program. Instead, the bulk of the state's work with businesses during disasters is improvisational. The NYCOEM aspires to develop formal agreements with firms, and in many cases has done so successfully; however, the NYCOEM recognizes that official agreements can be problematic for businesses. Virginia and Florida both lean away from developing MOUs. In the eyes of gov-

ernment and business officials in these states, the strength of the personal relationships between public and private sector representatives in partnerships are fundamentally more important than any type of written agreement and offer a more robust way of predicting whether a partner will deliver results during disasters.

UNEXPECTED RESULTS

The divisions among the states regarding their attitudes toward MOUs were surprisingly diverse. These divisions reflect a variety of state-level understandings of the roles that MOUs can play in the context of partnerships. Scholars have recognized the degree to which informal factors such as trust can play roles alongside and interact with formal partnership mechanisms and tools such as MOUs or contracts. These findings are consistent with other literature on the dynamics of public policy partnerships. For example, writing of partnerships for international development, such as HIV prevention campaigns, Thomas Franklin notes:

Successful partnerships do not always have, nor do they always need, formal structures. Viability often depends as much on intangibles such as good personal and social relations as it does on finely honed memoranda of understanding. Mutual respect and reciprocity often determine the degree to which partners are genuinely committed to joint ac-

tion. Trust and confidence are as important as signatures and logos.⁴

Franklin demonstrates here that instruments such as MOUs can exist alongside other informal mechanisms in institutional partnerships. So, while California's focus on MOUs may be understandable from the standpoint of government measurement and evaluation, many other forces converge to make partnerships work well. New York, Virginia, and Florida appear to recognize this distinction among formal and informal partnership factors, because MOUs play a far less significant role in those states' disaster-oriented PPPs.

COMPARATIVE SIMILARITIES/DIFFERENCES

Disaster management agreements in the four cases exist along a spectrum of formality, ranging from a mostly improvisational approach to partnership (New York) to a rigid, formal organizational structure (California). At the same time, there are obvious similarities among the cases; each of the four states partners with firms that provide goods (e.g., Walmart in California) and services (e.g., FedEx in New York). While it is challenging to develop a generalizable conclusion from this evidence, it appears that the diversity of the partnership structures themselves is

⁴ Thomas Franklin, "How Partnership Works," *Development in Practice* 19, no. 6 (August 2009): 790–91, <https://doi.org/10.1080/09614520903027106>.

a point of strength across the cases. In other words, there is no one correct way to create or maintain partnerships.

ACCOUNTING FOR OBSERVED DIFFERENCES

The differing approaches to partnership structures that appear across the four cases are probably attributable to a mixture of public policy and political variables unique to each individual state. California's focus on signing MOUs with its partners may be a symptom of a broader state tendency toward formal government regulations of activities in a host of public policy areas. For example, California has long been seen as a national leader among states for its stringent pollution restrictions, which exceed those of the federal government, and today are increasingly adopted by other states.⁵ Yet, this explanation—that California prizes formal regulation of public policy activities, and therefore is more partial to MOUs than the other states—is not satisfying. New York has a similar reputation for regulatory heavy-handedness but lacks a formal partnership program in the NYSOEM.⁶

It is here that we might speculate on the role of

⁵ Roger Karapin, *Political Opportunities for Climate Policy: California, New York, and the Federal Government* (New York: Cambridge University Press, 2016), 4.

⁶ Michael J. Malbin and Peter W. Brusoe, "Campaign Finance Policy in the State and City of New York," in *The Oxford Handbook of New York State Government and Politics*, ed. Gerald Benjamin (New York: Oxford University Press, 2012), 79, <https://doi.org/10.1093/oxfordhb/9780195387230.013.0004>.

politics within the states, and especially the working relationships among elected officials and state bureaucrats. For instance, it is possible that California politicians—especially the governor—somehow give CalOES employees less professional leeway than in other states. Such broad generalizations are practically impossible to demonstrate, but these generalizations do provide a partial explanation. Moreover, of relevance here is what Christopher Hood and Martin Lodge refer to as “public service bargains”; that is, the professional interplay between bureaucrats and politicians, including the risk/reward systems that can incentivize action among state workers and elected officials.⁷ For example, state governors who appoint agency heads, such as the director of CalOES, may implicitly trust some of those agency heads more than others. Alternatively, certain cabinet officials may be perceived as more loyal to the governor than others. Governors, in turn, may reward these most trusted appointees by giving them considerable discretion to manage their agencies without interference from the governor’s office. It may be that the types of public service bargains that exist in California differ from the bargains seen in other states, and these differences influence how CalOES officials act.

An additional point worth noting here is the degree to which informal partnership structures can

⁷ Christopher Hood and Martin Lodge, *The Politics of Public Service Bargains: Reward, Competency, Loyalty—and Blame* (New York: Oxford University Press, 2006), 15, <https://doi.org/10.1093/019926967X.001.0001>.

potentially reduce accountability and provide opportunities for corruption. No evidence surfaced during the course of this study to suggest that disaster management-related corruption is an issue in California, Florida, New York, or Virginia. But we would also be naïve to assume that such corruption has never, and will never, occur in any of these states. Informal partnership structures offer partnership participants degrees of flexibility and latitude that help facilitate easier communication and collaboration among organizational partners. However, that same flexibility can, under the right circumstances, provide an opening for potential mismanagement of funds and physical aid that are earmarked for disaster-stricken communities.⁸

Information Sharing

KEY FINDINGS

Data exchange is the most common activity in each of the four state-level partnership programs examined in this book. This information sharing can be characterized as either strategic or tactical. *Strategic communication* refers to interactions that take place

⁸ See, for example, Eiji Yamamura, "Impact of Natural Disaster on Public Sector Corruption," *Public Choice* 161, no. 3/4 (2014): 385–405, <https://doi.org/10.1007/s11127-014-0154-6>; Adriana Cordis and Jeff Milyo, *Don't Blame the Weather: Federal Natural Disaster Aid and Public Corruption*, Mercatus Working Paper (Arlington, VA: Mercatus Center, George Mason University, 2015); and Aimee Ortiz, "Plot to Steal Florida Hurricane Aid Leads to Indictments," *New York Times*, 20 November 2019.

outside of specific disasters, including regular meetings, conferences, disaster response exercises, and informal contacts via phone or email. *Tactical communication* relates to the exchange of data in the context of specific disasters and crises. Both varieties of information sharing are fundamental in Virginia, New York, California, and Florida's partnerships.

Strategic communications between state emergency-management agencies and firms can enhance state-level, disaster-oriented PPPs. In Virginia, for example, companies such as Cox Communications and groups such as Virginia 1st participate in meetings and exercises that build rapport with VDEM representatives. CalOES hosts disaster-preparedness workshops with private sector representatives. Florida sponsors two large conferences every year that bring together government emergency-management officials and business representatives to discuss disaster preparedness. New York State is unique in its use of strategic communications. Although there is no formal program in New York State, frequent informal contact takes place between the governor's office and businesses, and these contacts appear to have created a range of strong public-private sector relationships in the state that are leveraged during disasters. Each of these initiatives by state governments demonstrate a focus on strategic information sharing between state government agencies and firms. This type of data exchange helps partnerships to remain fresh and engaging, even in the absence of disasters.

Tactical communications are concerned chiefly with the myriad issues that must be sorted through in responding to disasters. For example, in Florida, firms share status updates with the FDEM, and the agency provides businesses with information on curfews, road closures, and supply chain disruptions. Firms with operations in California, such as Walmart, send information to CalOES using a proprietary, web-based information sharing system. CalOES offers its BUOC partners access to the system for its own benefit, because this can give CalOES a window into the business community's needs, helping the agency deploy its own resources and operations more productively. The vast majority of the public-private sector information sharing that takes place between businesses and the NYSOEM concerns the movement and delivery of physical aid during and after disasters. In Virginia, private firms and the VDEM exchange situational updates and resource requests in the context of disasters. Tactical information sharing is integral to partnerships in the four states, reinforcing the value of this facet of the analytical framework in assessments of state-level, disaster-oriented PPPs.

UNEXPECTED RESULTS

Although each of the four cases above provided strong evidence of information sharing, New York State proved to be the most surprising case, given that the state lacks an organized emergency management collaboration program. Since so much emer-

gency management-related activity is concentrated in the office of governor, rather than within the bureaucracy, it is logical that the bulk of public-private sector information sharing examined in the present study would also take place in the governor's office, rather than within the NYSOEM. New York State also presents a curious puzzle: the strategic information sharing that takes place in the governor's office is centered primarily around ordinary commercial and business activity, not emergency management. This same information sharing proves valuable in the context of disasters, because it helps strengthen relationships between state and private sector officials, and those professional relationships are then used during disaster responses.

COMPARATIVE SIMILARITIES/DIFFERENCES

The extent to which states now use dedicated electronic information sharing platforms, in addition to more conventional communication methods such as telephone calls and email, is impressive. In California, BUOC members can send and receive information with CalOES using a web-based information sharing system, and in Florida, ESF-18 members stand to benefit from the state's new Virtual Business Emergency Operations Center (VBEOC). In Virginia, interviewees mentioned the WebEOC system, which seems analogous to the systems used in California and Florida. In New York, by contrast, interviewees did not bring up any such dedicated web-based information sharing

platform. Although this does not preclude the possibility of such platforms existing in the state, it does suggest that, at some level, these platforms were not important enough to mention for emergency-management personnel in New York during their conversations.

A second finding of note is the mixture of formal and informal information sharing that takes place across the cases. Florida stands out here for its two annual emergency management-related conferences that draw attendees from the public and private sectors. No comparable conferences or gatherings came up in the other states' discussions. Florida and Virginia also are notable for the informality of their information sharing. The VDEM and the FDEM partnerships seem to be cultivated through strong interpersonal relationships among public and private sector officials in those states, in contrast to New York and California's approaches to developing disaster partnerships.

ACCOUNTING FOR OBSERVED DIFFERENCES

The use of online information-sharing platforms in California, Florida, and Virginia is attributable to a range of potential causes, none of which offers robust explanatory power. For instance, one could make the far-fetched argument that because Silicon Valley is located in California, arguably the world's leading region for new technology, it is only natural that CalOES would be on the cutting edge of using web-based in-

formation sharing tools for emergency-management purposes. There was no supporting evidence for such an argument, however. Florida's development of the VBEOC was more the product of opportune timing than a natural affinity for technology. Tom Duffy, the lead developer of the VBEOC, noted that his employer offered to build the VBEOC for free, in part to avoid bureaucratic red tape associated with procurement processes, but also to provide researchers at Florida State University in Tallahassee with access to unique data relevant to the study of emergency management.⁹ The history of how WebEOC came to be used in Virginia is unknown, though it is likely that a technology-savvy VDEM leader championed its adoption.

The contrasting formal and informal approaches to information sharing across the states defy easy explanation, but they are in part attributable to the management philosophies of emergency-management leaders in those states. In Virginia, for example, the founder of VDEM's private sector liaison program made a point of approaching partnerships as interpersonal relationships, rather than impersonal, organizational-level relationships. They actively resisted MOUs, preferring a more loosely organized structure for the state's PPPs. Those early efforts appear to have helped create a culture of informal-

⁹ Tom Duffy, interview with the author via telephone, 2 February 2015.

ity around Virginia's partnerships that endures. One former director of the FDEM came into their position after having served as director of emergency management for Walmart. That previous experience with Walmart colors their views of how to manage these agreements in government, and they advocate strongly for partnerships that are nimble and flexible. Informal information sharing, it would seem, goes hand in hand with this desired flexibility. California and New York's information-sharing activities appear to differ from those of Florida and Virginia, though the reasons for this likely have to do with California and New York's more tightly controlled approaches to managing their respective partnerships.¹⁰

Mutual Benefits

KEY FINDINGS

There is evidence of state partnerships benefiting government agencies through access to information and physical aid in each of the cases that this study examines. Yet, only in California and Florida is there evidence that these agreements offer financial benefits for firms as well. While it is understood that firms in Virginia and New York likely benefit financially from working with state emergency-management agencies, the evidence of businesses benefiting in this way is far weaker in these states. Notwithstanding

¹⁰ These differences are detailed above under the heading "Organizational Structure."

this variation across the four cases, mutual benefits are a critical element of state disaster partnerships.

The mutual benefits of disaster partnerships in Florida and California appear more balanced than those in Virginia and New York in the sense that they offer financial benefits for firms, specifically. For instance, in California, Walmart and Cisco representatives point toward direct and indirect sales of products, as well as positive media exposure, as examples of how disaster partnerships can benefit their respective firms financially. Florida businesses can also reap other direct financial benefits from their work with the FDEM: when Florida firms reopen quickly after disasters, this can translate into increased sales revenue and brand loyalty from customers. The FDEM and CalOES also exchange data with firms, which helps both these government agencies and their private sector partners make more well-informed decisions.

Virginia and New York's state-level emergency-management agencies appear to benefit disproportionately from their private sector partners' participation in emergency-management agreements. For example, when disasters occur, Virginia firms and VDEM exchange intelligence on local-level disaster conditions, which helps them both make better-informed decisions. VDEM also jointly exercises with firms to practice disaster responses, helping public and private sector representatives learn who to contact during actual large-scale emergencies.

While the benefits of this information exchange and joint exercising seem intuitive, no one interviewed indicated that these partnerships offer particular financial rewards for firms, independent of the revenue that they collect through contracts with VDEM. In fairness, however, several of VDEM's partners also indicated that they are satisfied with the benefits they derive from their work with VDEM independent of any financial rewards they might expect to receive from partnering.

In New York, the NYSOEM benefits almost solely from access to private sector physical aid during disasters. This reflects the underdeveloped nature of the state government's approach to disaster partnerships in general. A significant proportion of the physical aid received by the NYSOEM is also donated, which potentially can provide the firms donating the physical aid with tax benefits. The NYCOEM boasts a well-organized partnership program, but the available evidence shows that the bulk of the benefits from these partnerships are enjoyed disproportionately by the NYCOEM, and not its partners. For instance, one of the most common ways that the NYCOEM offers direct benefits to its partners is by sharing emergency preparedness tips and emergency planning information. Distributing this type of information is not especially burdensome for the NYCOEM, since it posts this information on its website, and can duplicate it freely without significant additional effort. However, the NYCOEM relies a great deal on its private sector

partners for disaster-related intelligence and access to scarce resources that it cannot obtain otherwise, suggesting an imbalance in the benefits derived from the NYCOEM's disaster partnerships.

UNEXPECTED RESULTS

New York State stands out among the four cases for the absence of mutual benefits for the NYSOEM and its private sector partners. With the exception of physical aid delivered by firms, the state's partnerships suffer from a lack of organization. As previously noted, the state does not have an emergency management collaboration program, and the benefits the state reaps from firms seem to begin and end with physical aid.

COMPARATIVE SIMILARITIES/DIFFERENCES

The pattern of mutual benefits seen across California, Florida, and Virginia's partnerships is similar. Government agencies and firms in these three states are able to draw on one another's resources for emergency-management purposes. For businesses, this can result in more revenue, positive marketing, and strengthened customer loyalty. For state emergency-management agencies, partnerships can yield access to useful intelligence and generate better responses.

ACCOUNTING FOR OBSERVED DIFFERENCES

The reason New York State differs so sharply from the other cases with respect to mutual benefits is most

TOWARD NEW UNDERSTANDINGS

likely the lack of any organized disaster partnership program at the state level. It is simply unrealistic—and unlikely—to expect any change in the status of these mutual benefits in the absence of a dedicated program in the state.

Trust

KEY FINDINGS

Trust is a key element of each of the partnerships in *Disaster Labs*. However, there is no consensus among business and government representatives about how trust forms, and once formed, what specific aspects of partnerships require high levels of trust. Despite the lack of consensus on how trust forms and the particular roles that trust plays in state emergency-management collaborations, no one interviewed sought to downplay or deny its importance.

The process by which trust forms is understood differently by representatives of state-level emergency-management agencies and businesses. VDEM officials, for example, stress the importance of building one-to-one personal relationships with private sector officials slowly. In New York, interpretations of the trust-forming process are more nuanced. At the state level of government, relationships between government and business representatives have a quasi-political connotation, since they are forged and handled primarily by the governor's office, rather than within the NYSOEM. Leaders at the NYSOEM base their trust on the firms' public reputations. The

NYCOEM takes a different view of trust from the NYSOEM, interpreting it as a direct function of businesses' participation in partnerships. Regardless of the specific approaches used to build public-private sector trust in state partnerships, trust is essential.

Trust plays diverse roles in state-level, disaster-oriented PPPs. One of the most commonly cited areas in which trust figures prominently is in the context of information sharing. For example, VDEM and Dominion officials say that trust is indispensable when they share information with one another, because if the information that they exchange is incorrect, this can impose significant costs on their respective organizations. The trust that exists between firms and the New York State government acts in a similar way. Although there is no formal partnership program in the NYSOEM, private sector representatives still need to receive accurate, timely information from the NYSOEM. If this government-supplied information is incorrect, then businesses can make decisions about personnel staffing that waste money, such as by telling employees to report to a facility that has been rendered inoperable by a disaster. For CalOES and its corporate partners, trust and the protection of confidential or proprietary information go hand in hand. At least one private sector official in Florida explains how their trust in FDEM public relations staff is directly related to how willing FDEM is to share sensitive information with them.

Trust figures prominently in sustaining partner-

ships over time as well. One of the chief difficulties for state agencies and firms is that when key personnel in partnerships leave, there are no procedures in place to mitigate the effects of this personnel turnover. As a result, trust between their successors must be rebuilt. Firms that participate in disaster-oriented PPPs have to be able to trust that the program itself will continue in the long run; otherwise, firms' engagement in these programs could simply be a waste of time and money.

UNEXPECTED RESULTS

Although trust was evident as a key factor across all the states, its presence was surprisingly subtle in Florida and New York's partnerships. Few interviewees in Florida brought up trust explicitly. Instead, trust was described in terms of met and unmet expectations, which can build or damage trust. In New York, state officials were candid that the public reputations of the organizations with which they partner foster trust between the NYSOEM and those private sector organizations. It seems that in the NYSOEM, trust is linked more closely with perceptions than past contact and experience with those business entities.

COMPARATIVE SIMILARITIES/DIFFERENCES

In California, Florida, New York, and Virginia's emergency-management accords, trust stands out consistently as a pivotal factor in the context of information sharing. The sometimes confidential or proprietary

nature of data exchanged among state agencies and businesses means that they each expose themselves to potential reputational losses or competitive disadvantages if sensitive information leaks. To partner meaningfully, it would seem that state agencies and businesses must trust one another not to disclose—inadvertently or purposefully—potentially harmful or damaging information.

As detailed above, the four cases have different understandings of trust, and the means by which trust is built varies. For example, in Florida, trust is built through interpersonal contacts as well as performance in disaster response exercises and actual disasters. Partnerships in Virginia, by contrast, are developed in a slow, calculated manner so as to build trust over time.

ACCOUNTING FOR OBSERVED DIFFERENCES

It is challenging to understand precisely why trust is understood differently across the cases, as well as why trust is built in such diverse ways. A partial explanation begins with the nature of the states' partnership programs themselves. In New York State, there is no organized program, so it is understandable that the NYSOEM would look to the public reputations of its potential partners as a proxy for their trustworthiness. Awareness of brand perceptions, in this regard, is important for state partner organizations. For example, Tracy L. McBroom of the American Red Cross in California pointed out that, in general, her organi-

zation is sensitive to how partnering with a disreputable organization could be perceived negatively by the Red Cross's stakeholders.¹¹

The NYCOEM, VDEM, and the FDEM, each of which boast well-organized partnership programs, seem to root their understandings of trust in past experiences with their partners. For the NYCOEM, trust may be the by-product of past successful collaborations with firms. At VDEM, interorganizational trust with a business may be based on a single professional relationship between a VDEM representative and a private sector leader. In the FDEM, past experience working with firms in disaster response exercises—as well as actual disaster responses—shape how the FDEM views the trustworthiness of its private sector partners.

Adaptability/Sustainability

KEY FINDINGS

Several patterns emerge when examining the adaptability and sustainability of the state partnerships explored in this study. State emergency-management accords form and adapt constantly to new circumstances. Moreover, the absence of recent disasters can threaten the sustainability of partnerships, suggesting that state governments and firms would do well to find ways to continue working together, even when no disasters have occurred recently. The

¹¹ Tracy L. McBroom, interview with the author via telephone, 10 November 2014.

potentially damaging effects of public and private sector budget cuts, as well as personnel turnover, demonstrate why it is prudent for stakeholders in disaster-oriented PPPs to develop plans to mitigate their effects.

State emergency-management collaborations appear to adapt to changing circumstances in a consistent pattern across all four cases. First, a disaster or catastrophe acts as a focusing event, bringing public and private sector actors together, or making public and private organizations recognize that they need to work more closely with one another. Second, government officials and business representatives track the development of their partnerships over time and ensure that they remain in close contact with one another. Doing this sustains these partnerships and helps them continue to evolve.

A significant amount of time between major disasters, however, can threaten the sustainability of certain partnerships. At least one senior CalOES official recognizes that the passage of time without a disaster can cause complacency in disaster preparedness for policy makers and the general public. A former FDEM head voices similar concerns about sustaining Florida's agreements into the future, since long periods between disasters can mean that "people are less likely to pay attention to them."¹²

Nevertheless, state governments and their part-

¹² Bryan Koon, interview with the author via telephone, 9 February 2015.

ners can engage in an array of activities to help sustain their focus on disaster preparedness, even when there have not been any recent disasters. In Florida, for instance, the FDEM and firms participate in regular conferences and disaster response exercises to keep their relationships fresh and their focus on disaster preparedness sharp. The FDEM's private sector mentorship program, in which business representatives sit in ESF-18 to learn about disaster response procedures, is particularly innovative among the four states in this regard. The NYCOEM offers other examples of ways to sustain partnerships in the absence of disasters. The agency embraces a strategy of cultivating individual private sector advocates for PPPs, whose efforts can ultimately lead the NYCOEM to develop a partnership with these private sector representatives' firms. The VDEM and its partners participate in regular meetings, conferences, and exercises regardless of whether a disaster is occurring. These activities keep them connected and engaged with one another during periods of low disaster activity.

Budget cuts and personnel turnover can hamper the ability of partnerships to adapt and endure over time, since these events remove key employees and resources from the partnerships themselves. Of the four states examined, California and Virginia appear to confront the greatest potential threats from budget cuts and personnel turnover. The possibility of budget cuts and personnel turnover suggests

that joint succession planning for state partnerships would be prudent.

UNEXPECTED RESULTS

One of the more surprising findings is the extent to which the four states fail to prepare for the impact of personnel turnover on their disaster-oriented PPPs. The data show that this turnover, though a natural part of any organization's lifecycle, can impede the perceived success of disaster partnerships. Institutional memory can be lost when key figures leave. Trust between public and private sector representatives, which can take significant amounts of time to build, erodes or vanishes when they depart their respective organizations. Information exchange between partner organizations, which may have been a by-product of a strong, trusting, interpersonal relationship among specific representatives, has the potential to slow or stop when those same representatives leave.

COMPARATIVE SIMILARITIES/DIFFERENCES

The greatest similarity across the four cases is the effect of personnel turnover on the health of the states' disaster-oriented PPPs. There was a divergence among the states with respect to sustainability, however. California experienced devastating wildfires in 2019, for example, but the state has not seen a disaster like the 1994 Northridge earthquake

in the San Fernando Valley in many years.¹³ Florida has not suffered from notable disasters in recent years either. For these reasons, the staying power of those states' partnerships is questionable, since the PPPs themselves have not been severely tested recently under disaster conditions. In New York and Virginia, by contrast, disasters like Hurricane Sandy (2012) and the Mineral City earthquake (2011) have kept those states' partnerships engaged in real-world responses to disasters, as opposed to disaster response exercises.

A second key difference across the cases was the extent to which California and Virginia's agreements may be threatened by potential budget cuts. If CalOES and VDEM do not fund certain positions that are instrumental to those agencies' programs, then the agencies' partnerships may weaken over time for want of key personnel to give the partnerships the necessary time and attention that they require.

ACCOUNTING FOR OBSERVED DIFFERENCES

The differences among the cases discussed above appear to be attributable to divergent weather patterns and statewide budgetary priorities. California and Florida, for example, are each known to face significant natural disasters on a consistent basis, such as wildfires and hurricanes.

¹³ See Alan Taylor, "The Northridge Earthquake: 20 Years Ago Today," *Atlantic*, 17 January 2014.

Differing state budgetary priorities also play a role in the sustainability of California and Virginia's partnerships. It is challenging to generalize about statewide budgets, but interviewees in California and Virginia both suggested that budgetary concerns could have long-term impacts on the sustainability of emergency-management accords in those states. Funding key positions that work directly on disaster-oriented PPPs in CalOES and VDEM appears pivotal to the sustainability of partnerships in California and Virginia. Without the work of partnership-focused employees in CalOES and VDEM, it seems improbable that California and Virginia's programs would be as well developed as they are.

A shift in state budgetary priorities could upend California and Virginia's partnerships by scaling back or eliminating the personnel funded to work on those states' partnership programs. Although no one interviewed indicated that personnel cuts are looming or imminent, the possibility remains, potentially jeopardizing the future of California and Virginia's programs.

The Missing Ninth Factor: Nonprofit and Industry Organizations

The eight factors discussed in the analytical framework are, to varying extents, applicable to state-level, disaster-oriented PPPs in California, Florida, New York, and Virginia. This indicates that the analytical framework is viable as a tool to evaluate state-level, disaster-oriented PPPs. However, the framework

consistently failed to account for the significant role of nonprofit and industry organizations in each of the cases that have been explored. Because industry and nonprofit groups played such consistent and substantial roles in the four cases and were instrumental in bringing state agencies and firms together for emergency-management purposes, they should be included as a ninth factor in the framework.

One cannot overstate the significance of nonprofit and industry organizations in the four states. In California, groups such as the CRA and the American Red Cross link many firms and other government agencies with CalOES. The NYSOEM maintains strong relationships with nonprofits such as the Aidmatrix Foundation and Catholic Charities USA, which each work closely with businesses to obtain supplies for disaster survivors, linking the NYSOEM indirectly with the for-profit community at large. For NYCOEM, ties to nonprofit and industry organizations are more important, because city agency representatives meet regularly with such groups to gather information about their needs, and these groups send representatives to the New York City EOC during disasters too.

Organizations such as the Better Business Bureau, Virginia 1st, and Virginia 811 form an integral part of VDEM's interorganizational partnership program. The overwhelming majority of ESF-18 members in Florida are industry organizations, suggesting that the FDEM has embraced a strategy of partnering with industry organizations as the most efficacious means

to develop ties with the private sector in general.

Nonprofit and industry organizations should be included as a ninth factor in the analytical framework because they appear to play at least three pivotal roles in state-level, disaster-oriented PPPs. First, they offer a one-stop shop for states and businesses to gather information from and disseminate information to one another. VDEM's work with the Richmond, Virginia, area Better Business Bureau (BBB) exemplifies this type of activity. Second, nonprofit organizations in particular act as trusted agents to funnel resources to businesses and government emergency-management organizations. The American Red Cross in California and ALAN in Florida illustrate this concept well, since they both work regularly with businesses to obtain money and physical aid, then redistribute this money and physical aid to disaster survivors, complementing the efforts of government emergency-management agencies.

Third, industry and nonprofit organizations permit state emergency-management agencies and firms to economize the process of building, maintaining, and growing partnerships. Florida's near-exclusive work with industry organizations in ESF-18 provides strong evidence of this. The organizational reach of the industry groups with which the FDEM partners in ESF-18 is vast. It would be logistically impossible for the FDEM to form individual relationships with all of the firms to which the FDEM is connected via these industry groups. By deliberately partnering with in-

dustry groups in ESF-18, the FDEM reduces the time, cost, and organizational effort required to connect with many businesses at once. Excluding nonprofit and industry organizations from the framework omits an indispensable element in the formation, maintenance, and success of state partnerships. For these reasons, the framework should incorporate the role of nonprofit and industry groups.

How Nonprofit and Industry Organizations Relate to the Analytical Framework

Since nonprofit and industry organizations appear to play pivotal roles in state disaster-oriented PPPs, it is helpful now to reassess the original analytical framework's factors and their relationship to this new finding. Nonprofit and industry organizations seem to connect most directly to three of the original analytical framework's factors: information sharing, trust, and organizational structure.

Nonprofit and industry organizations appear to facilitate information sharing in disaster-oriented PPPs in ways not envisaged by the analytical framework. The framework, it is worth recalling, was first created to evaluate partnerships involving federal agencies and profit-seeking businesses.¹⁴ Still, groups such as the BBB in Virginia, American Red

¹⁴ Abou-bakr, *Managing Disasters through Public-Private Partnerships*, 5.

Cross in California, and the Florida Chamber of Commerce are integral to information-sharing practices in those states. It may be the case that understandings of information-sharing practices in the framework are artificially constrained by considering PPPs as simple two-party relationships between one state emergency-management agency and one business. Information sharing in state emergency-management agreements is far more complex than a two-party partnership and can involve nonprofit/industry intermediaries in partnerships between state agencies and businesses.

Trust can also be reassessed as part of the original analytical framework in light of the role of nonprofit and industry organizations. The previous chapters have shown that direct trust between state emergency-management agencies and businesses may not be necessary for partnerships, though the importance of trust in general is viewed by public and private sector officials as vital. For example, in Florida, trust is seen as a function of repeated contact between public and private sector representatives in disaster response exercises. As state official Larry McIntyre pointed out, this type of trust is earned through repeated observations of performance during exercises and actual disaster responses. Nonprofit and industry organizations also can act as trusted third parties between government agencies and firms. They may play roles as collectors of donated goods, for instance, and redistribute these goods to disaster survivors,

thus complementing public sector efforts to provide disaster relief services. Therefore, trust as understood in the analytical framework can be complicated by the role of nonprofit and industry organizations.

Organizational structure may also need to be reevaluated as a result of the evidence developed in this book. In Florida, for instance, the nonprofit and industry organizations that make up ESF-18 complicate the notion of what a disaster-oriented PPP is, since the state partners with nonprofit and industry groups to reach individual businesses. What might have been understood as a public-private partnership could be more precisely described as a public/nonprofit/private partnership here, since Florida's partnerships with firms would be curtailed sharply without the involvement of nonprofit and industry organizations.

Given the ways in which nonprofit and industry organizations complicate three of the existing framework's factors, it seems appropriate to consider the roles of nonprofit and industry organizations separately, in addition to the original analytical framework in future studies. In other words, the influence of nonprofit and industry organizations on state partnerships is significant enough that the presence (or absence) of these organizations in a given state's emergency-management apparatus has the potential to change altogether how that state's agreements are assessed.

For these reasons, the role of nonprofit and in-

dustrial organizations makes sense as a new, ninth factor in the analytical framework. Overlooking the potential roles of these organizations may risk skewing analyses of state partnerships in ways that do not portray accurately the forces at work in state emergency-management accords.

Assessment of Findings

Of the eight factors used to examine disaster-oriented PPPs in California, Florida, New York, and Virginia, organizational structure emerges as the most important. Personnel turnover also threatens disaster partnerships in all four states. To sustain these emergency-management agreements into the future, state government and business leaders would do well to create succession plans for their partnerships.

Organizational structure appears to be the most critical factor in the state partnerships examined here. Three of the four states—Florida, New York, and Virginia—do not seem to make the creation of formally structured partnerships a high priority. California, however, makes MOUs a precondition for formal cooperation with businesses. In this instance, the totality of the available evidence suggests that MOUs are not a good predictor of successful partnerships.

A second finding related to the organizational structure of disaster-oriented PPPs—the advent of hybrid partnerships for emergency management—may offer a glimpse of the future of state-level, disaster-oriented PPPs. For firms, the chief advantages of hy-

brid partnership groups like the ALAN and VOAD in Florida are that they permit businesses to provide direct relief to nonprofit agencies affected by disasters, bypassing the involvement of state government agencies. Members of these groups may also benefit from the tax advantages associated with being involved in nonprofit organizations. Both of these characteristics suggest that hybrid partnerships may offer a more beneficial model for firms involved in disaster management than existing state-level organizational structures for disaster-oriented PPPs. Moreover, when groups such as ALAN partner with state emergency-management agencies, state governments benefit immediately from direct access to a group of businesses that have strong ties to one another. All of this could mean that state emergency-management agencies will increasingly seek to work with hybrid partnership organizations in the future, rather than connecting directly with businesses.

Given the profound influence of nonprofit and industry organizations in state-level, disaster-oriented PPPs, it is worth examining briefly why the framework does not account for these groups' roles in the first place. The simplest and most likely explanation for why the analytical framework does not account for the roles of nonprofit and industry organizations is that Ami J. Abou-bakr, who first used the framework in a study of federal disaster-oriented PPPs, deliberately avoided discussion of nonprofit and industry organizations in her original analysis. As a result, it is

logical and understandable that the analytical framework did not account for these groups either.

A second possible explanation for the absence of nonprofit and industry organizations in the analytical framework relates to how the federal government, vis-à-vis state governments, defines the term *private sector*. FEMA, for example, states that “we see the nation’s vast network of business, industry, academia, trade associations, and other non-governmental organizations as equal—and equally responsible—partners in every phase from preparedness to response and recovery to mitigation.”¹⁵ In other words, from the federal government’s perspective, nongovernmental organizations such as the American Red Cross, as well as trade associations, are part of the private sector.

FEMA’s definition of the private sector is not uniformly shared across state government emergency-management agencies. VDEM, for example, has one full-time employee charged with managing disaster-oriented PPPs—that is, partnerships with profit-seeking businesses—and another full-time employee who works with groups in the nonprofit sector. These two positions report to different division heads within VDEM, although in practice there is substantial overlap and interaction between these two employees.

VDEM’s arrangement demonstrates that there may be a kind of artificial separation between collab-

¹⁵ “The Role of Voluntary Organizations in Emergency Management,” FEMA, November 2013, 3–6.

oration with for-profit firms and nonprofit organizations in the context of state emergency-management agencies. The author did not appreciate it fully at the time, but one VDEM representative recognized this artificial separation of responsibilities during the conversation with them:

A primary role for the profit-oriented private sector is understanding how it can affiliate with the voluntary sector in emergency management. So from a CEO/President perspective, they have certain resources that they can give directly to the voluntary sector or indirectly through [government] emergency management [agencies].¹⁶

These comments imply that when state emergency-management agencies attempt to filter out nonprofit and industry groups from their disaster-oriented PPPs, they are imposing an artificial—and arguably counterproductive—barrier to public-private sector cooperation. A more inclusive arrangement that incorporates for-profit and nonprofit organizations under the broader category of public-private partnerships would reflect better the working reality of for-profit, nonprofit, and public sector collaboration in state-level emergency management today.

The most damaging organizational pathology

¹⁶ Amanda Reidelbach, interview with the author via telephone, 3 June 2014.

affecting state disaster-oriented PPPs is personnel turnover. Developing simple succession plans—which are common in the business world—could go a long way toward smoothing personnel transitions and ensuring that disaster-oriented PPPs continue to work as intended over the long run. There is a degree of irony here, in that none of the emergency management agency representatives the author spoke with appear to have developed contingency plans for their disaster-oriented PPPs, despite the fact that so much of the emergency management field itself rests on the idea of planning for unforeseen contingencies. Developing succession plans would likely not prove overly burdensome for either state emergency-management agencies or their private sector partners.

Conclusions

This book explored, analyzed, and compared disaster-oriented PPPs in four U.S. states—California, Florida, New York, and Virginia—using an eight-factor analytical framework, consisting of crisis, leadership, organizational structure, information sharing, mutual benefits, trust, adaptability, and sustainability. The author began with two primary questions in writing this book: first, the author wanted to explore how disaster-oriented PPPs influence state-level disaster management in the United States; and second, the author sought to assess whether the analytical framework that was selected is viable as a tool to as-

sess disaster-oriented PPPs at the state level of government.

This chapter analyzed the four cases comparatively by highlighting unexpected results, evaluating similarities and differences, and explaining observed differences across each of the factors. The key findings below summarize and highlight the three most significant findings from this study, which are derived from the evidence presented in preceding chapters.

First, of the eight factors used to explore disaster partnerships, organizational structure stands out as the most important. This finding has important implications for state-level, disaster-oriented PPPs. The evidence presented here strongly suggests that informally structured partnerships that feature high levels of interpersonal trust tend to be the most successful. Therefore, to the extent that state emergency-management agencies and firms can strike informal agreements to partner with one another for emergency-management purposes and provide opportunities for employees of their respective organizations to get to know and trust one another, they will likely increase the probability that both sides will benefit from working together during future disasters.

Second, nonprofit and industry organizations play an indispensable role in state-level, disaster-oriented PPPs. This finding has important theoretical implications, for it suggests that the analytical framework requires the addition of a ninth factor—the role of

nonprofit and industry organizations—to capture more fully the key variables involved in state partnerships. Nonprofit and industry groups frequently act as hubs for the collection and distribution of information in emergency-management collaborations. They are, in effect, trusted agents that facilitate the exchange of essential physical aid among firms, nonprofits, and government emergency-management agencies. Industry and nonprofit organizations also permit both state emergency-management agencies and businesses to economize on the process of forging, building, and maintaining partnerships by increasing interorganizational efficiencies. The remarkable roles played by nonprofit and industry organizations in state partnerships suggest that state emergency-management organizations would benefit from adopting strategies that integrate these groups into their partnerships alongside stand-alone businesses.

The third major finding is that the primary obstacle to maintaining state partnerships over time is personnel turnover. Firms and state emergency management agencies would be well-served by developing plans to mitigate the effects of this turnover. When key personnel leave, the prior existence of MOUs cannot guarantee these partnerships will survive. Instead, it is apparent that these PPPs are actually just functions of the strength of the one-to-one relationships of those who manage these partnerships. Creating formal relationship hand-off procedures,

in which organizational representatives introduce their successor to their respective counterpart, could prove valuable for state government emergency managers and their private sector partners.

Preserving the Disaster Labs

State governments have long served as proverbial laboratories for the development and testing of innovative public policies.¹⁷ The most successful of these state-level policies are occasionally adopted by the federal government and implemented nationally. The state-level, disaster-oriented PPPs explored in this book offer another potential way for the federal government to learn what works well in emergency management—and what does not work well in emergency management—through the disaster laboratories of state governments.

Yet, this model of policy innovation for emergency management—in which states can act as testing grounds for public policies later adopted at the federal level of government—is, as first seen in chapter 1, potentially threatened by a movement toward the centralized planning of disaster partnerships. FEMA's creation of a national private sector liaison office and the deployment of federal private sector liaisons in FEMA regional offices nationwide shows

¹⁷ For example, see Keith Boeckelman, "The Influence of States on Federal Policy Adoptions," *Policy Studies Journal* 20, no. 3 (September 1992): 365–75, <https://doi.org/10.1111/j.1541-0072.1992.tb00164.x>.

that FEMA may be interested in a standardized national model for these agreements. Moreover, the eight-factor analytical framework used in *Disaster Labs* comes from a study that assumed that a standardization of these partnerships would be desirable at the federal level.

Imposing an organizational model for disaster-oriented PPPs from the top down—that is, from the federal government down to state governments—would be a serious mistake. The sometimes unruly, messy nature of state-level public policy making is one of the key ways in which it is a source of innovation that attracts the attention of national policy makers. This book offers a counterpoint to the federal government's tendency to standardize emergency-management practices. It also provides an alternative to Abou-bakr's work, which favors a fixed template for disaster-oriented PPPs.

California, Florida, New York, and Virginia boast a diversity of disaster partnerships, each tailored to the unique conditions and circumstances of the state governments that employ them. The federal government can learn much from their experiences of using these partnerships to achieve their respective organizational missions. It is also essential that the federal government permit state governments to test, evaluate, and recalibrate their emergency-management agreements without attempting to impose a standardized model of partnerships on them. Doing so would risk dampening, or eliminating,

the innovative forces at work in state emergency-management agencies.

Elected representatives, government policy makers, and leaders from firms and nongovernment organization can draw at least three additional key lessons from this book. For public sector officials, forging alliances with umbrella organizations, such as industry groups, offers an efficient means for government agencies to develop partnerships with businesses. However, the evidence presented here demonstrates that it is important for government officials to look closely at the strength of ties within those umbrella groups, too. Organizations such as the American Red Cross offer government agencies the promise of an engaged network of other public sector and private sector partners with strong incentives to cooperate. The Red Cross depends heavily on monetary donations from firms and individuals, so its representatives take pains to ensure that its many stakeholders benefit from partnering with them. Other umbrella groups may not have such strong incentives to cooperate or may do a poor job of keeping their respective stakeholders satisfied. As a result, they might not offer the most efficient means for government agencies to develop partnerships with the private sector.

To avoid potential conflicts in partnerships, private sector representatives should work to define expectations with their government partners up front. This is not to say that formal MOUs are essential for emergency-management agreements. On the

contrary, one can point to multiple examples of successful partnerships that do not feature MOUs. The process by which government agencies and firms come to mutual understandings of their expectations and roles in disaster partnerships, however, is indispensable. Whether these mutual understandings come about via face-to-face dialogue in formal meetings, through repeated informal contact among organizational representatives, in MOUs, or through some combination of these measures, seems immaterial.

Nonprofit organizations and industry groups often are in search of financial support to keep their operations going. Participation in partnerships may offer a way for these groups to help shore up their financial futures. When nonprofit organizations engage with the public and private sectors in the context of emergency management, this elevates the public profiles of nonprofit organizations. This offers nonprofits what is, in effect, free marketing exposure. Organizations ranging from the California Grocers Association to the Florida Retail Federation find themselves playing essential roles in state-level emergency management. Their participation in emergency management-related activities, and the public attention that comes with this participation, may expose them to a much larger potential membership and donor pool.

The future offers several avenues for other scholars to build on this research in the disciplines most

closely related to this book: political science (encompassing public policy as well as political economy) and economics, with a view to informing and illuminating government policy discourse. The most apparent pathway for future exploration seems to be examinations of the roles of nonprofit organizations in state-level emergency-management organizations. *Disaster Labs* has shown that nonprofit organizations make important contributions to state-level emergency management, but the nature of these contributions—and their impacts—are not well-understood. More broadly, the post-9/11 literature on disaster management tends to emphasize the role of the federal government. Nevertheless, there is also a rich seam for scholars to mine at the state level of government. Academics could benefit from learning more about how California, Florida, New York, and Virginia officials keep state policy makers focused on emergency preparedness, even in the absence of disasters. After all, there is little doubt that disasters will strike these states again.

Epilogue

THE 2019 CORONAVIRUS DISEASE

As this book was going to press in early 2020, coronavirus disease 2019 (COVID-19)—a heretofore unknown pathogen—was silently infecting thousands of people in Wuhan, China. COVID-19 can cause pulmonary inflammation and congestion, accompanied by persistent fever, cough, and gastrointestinal distress, among other symptoms. The disease spreads via respiratory droplets during human-to-human contact, even among asymptomatic carriers of the virus, and can remain alive on uncleaned surfaces for at least 17 days.¹ In older adults, as well as persons with compromised immune systems, COVID-19 can be fatal. Within a matter of weeks after first emerging in Wuhan, COVID-19 cases appeared in dozens of countries, killing tens of thousands and leading the World

¹ Leah F. Moriarty et al., “Public Health Responses to COVID-19 Outbreaks on Cruise Ships—Worldwide, February–March 2020,” *Morbidity and Mortality Weekly Report* 69, no. 12 (March 2020): 347–52, <http://dx.doi.org/10.15585/mmwr.mm6912e3>.

Health Organization (WHO) to officially designate the spread of COVID-19 a global pandemic.²

While the author writes these words in late March 2020, the COVID-19 pandemic is disrupting a staggering and unprecedented amount of activity at every level of society. Several world leaders, including British prime minister Alexander Boris de Pfeffel Johnson, Prince Charles Philip Arthur George of Wales, Canadian prime minister Justin Pierre James Trudeau, German chancellor Angela D. Merkel, and Prince Albert Alexandre Louis Pierre Grimaldi of Monaco are either in self-isolation or have tested positive for COVID-19.³ City centers stand empty as billions of people shelter in place under government orders to slow the spread of the pandemic. Some morgues and crematoria in Italy and Spain are unable to keep pace with the influx of human corpses.⁴ Global trade and capital markets are plummeting. Schools and universities are closed. Religious services are canceled. There are widespread anecdotal reports in the United States of toilet paper and hand

² "WHO Announces COVID-19 Outbreak a Pandemic," World Health Organization Regional Office for Europe, 12 March 2020.

³ Johnny Diaz and Derrick Bryston Taylor, "Celebrities, Athletes and Politicians Who Have Tested Positive for Coronavirus," *New York Times*, 27 March 2020; and Katrin Bennhold and Melissa Eddy, "Germany Bans Groups of More Than 2 to Stop Coronavirus as Merkel Self-Isolates," *New York Times*, 22 March 2020.

⁴ James Mackenzie and Crispian Balmer, "Italy Passes China's Coronavirus Death Toll, Prepares to Extend Lockdown," Reuters, 19 March 2020; and "Spain's Coronavirus Death Toll Overtakes China's," *Japan Times*, 25 March 2020.

sanitizer shortages.⁵ Many U.S. health care providers say that they lack adequate supplies of disposable medical masks and ventilators to care for large numbers of COVID-19 patients.⁶ There is a purgatorial feel to daily life for millions of Americans too, because no one—not even the top public health experts in the United States—knows precisely when the COVID-19 pandemic will ebb.

In the midst of this turmoil, several U.S. state governments—including California, Florida, New York, and Virginia, which this book examined in detail—have taken actions to stop the spread of COVID-19. In addition to limiting the movement and gathering of people in their respective states, they are partnering in unique ways with businesses and nonprofit organizations. From deploying innovative staffing solutions to sharing information and producing vital supplies, these arrangements underline the value of public-private disaster collaborations.

California governor Gavin C. Newsom is working with the private sector and nonprofits to arrest the spread of COVID-19 in his state. He directed the California National Guard to assist food banks, which have seen an understandable decline in volunteer

⁵ David Lazarus, “Stockpiling Sanitizer, Toilet Paper Is Understandable, But Is It Rational?,” *Los Angeles Times*, 5 March 2020.

⁶ “Strategies for Optimizing the Supply of N95 Respirators: Crisis/Alternate Strategies,” U.S. Centers for Disease Control and Prevention, 17 March 2020.

workers during the pandemic.⁷ Newsom signed *Executive Order N-33-20*, instructing nearly all California residents to stay home, but exempting many private sector workers in critical infrastructure sectors, such as health care and agriculture, whose services will be indispensable during the pandemic.⁸ The state government is collaborating with the U.S. Small Business Administration to make emergency loans available for California firms affected by the economic slowdown caused by COVID-19.⁹ The state has also set up an online portal to recruit volunteers to aid nonprofit organizations engaged in the pandemic response.¹⁰

In Florida, Governor Ronald D. DeSantis and the Department of Health are monitoring nearly 2,000 possible cases of COVID-19 infections and are working closely with private testing labs.¹¹ The state has made available lists of governmental, private sector, and nonprofit resources for Florida residents who may experience emotional distress during the pan-

⁷ "Governor Newsom Deploys California National Guard to Help Distribute Food at Food Banks & Protect California's Most Vulnerable," press release, Office of Governor Gavin Newsom, 20 March 2020.

⁸ "Essential Critical Infrastructure Workers," California State Government, 22 March 2020.

⁹ Bryan May, "SBA Offers Disaster Assistance to California Small Businesses Economically Impacted by the Coronavirus (COVID-19)," California Governor's Office of Emergency Services, 17 March 2020.

¹⁰ "Help Your Community Safely with COVID-19," California Volunteers, Office of the Governor, accessed 27 March 2020.

¹¹ "Florida Department of Health Updates New COVID-19 Cases, Announces Two New Deaths Related to COVID-19, 11 a.m. Update," Florida Department of Health, 25 March 2020.

demic.¹² DeSantis issued a number of directives related to COVID-19, as well, including *Executive Order 20-82*, which mandates that individuals traveling to Florida from areas of “substantial community spread” self-isolate for 14 days.¹³

New York governor Andrew M. Cuomo is also leveraging partnerships with the private sector to respond to the COVID-19 pandemic. His administration has turned to unusual sources to acquire needed goods and services. For example, after appealing to the private sector for assistance, Cuomo struck an agreement with Christian Siriano—a fashion designer and former star on the television show *Project Runway*—to have Siriano’s sewing team create protective masks for health care workers in New York State.¹⁴ The state’s correctional enterprise, Corcraft, started to bottle its own New York State-branded hand sanitizer.¹⁵ In addition, Cuomo enlisted Hollywood actors Ben Stiller, Danny DeVito, and Robert De Niro to shoot brief public service announcements (PSAs) encouraging New Yorkers to stay home to combat the spread of COVID-19.¹⁶ The state government also

¹² “Coping with COVID-19: Supportive Resource Links,” Florida Department of Emergency Management.

¹³ *Exec. Order No. 20-82*, State of Florida Office of the Governor, 24 March 2020.

¹⁴ “Pop Superstar Rihanna Donates \$5 million to Relief Efforts,” ABC News, 21 March 2020.

¹⁵ Jesse McKinley, “Cuomo’s Fix for Sanitizer Shortage: 100,000 Gallons Made by Prisoners,” *New York Times*, 9 March 2020.

¹⁶ Tyler McCarthy, “Robert De Niro, Ben Stiller and Other Celebrities Share Coronavirus PSAs,” Fox News, 24 March 2020.

issued an open call for workers in the technology sector, such as software developers and engineers, to contribute to COVID-19 “SWAT teams” that will use technology skills to, in their words, “accelerate and amplify our response to COVID-19.”¹⁷

In the Commonwealth of Virginia, Governor Ralph S. Northam and the Virginia Department of Emergency Management (VDEM) have taken a proactive approach to engaging with businesses and nonprofits to address the COVID-19 pandemic. A prominent banner on the VDEM website invites private sector organizations to register with VDEM and to identify, in writing, the types of goods and services that they may be able to contribute.¹⁸ The State Corporation Commission has published categories of private sector critical infrastructure workers whose services will remain essential during the pandemic, as well.¹⁹

Despite these state governments’ positive steps to work with firms and nonprofits, the COVID-19 pandemic is going to devastate the private sector. Many state governments have ordered the closure of nonessential businesses to limit human-to-human contact. These closures have already led to massive employee layoffs and lost revenue. Especially vulnerable during these times are small businesses. They

¹⁷ “New York State COVID-19 Technology SWAT Team: Leveraging Technology Expertise to Scale Our Efforts,” New York State, 27 March 2020.

¹⁸ “Coronavirus,” Virginia Department of Emergency Management, 27 March 2020.

¹⁹ “Order Certifying Critical Infrastructure Workers,” Commonwealth of Virginia State Corporation Commission, 23 March 2020.

typically operate on thin margins with minimal cash reserves. But small firms also account for about 44 percent of the annual U.S. gross domestic product (GDP), a measure of economic output.²⁰ That level of contribution to annual GDP means that damage to small businesses across the country will have a large aggregate effect on U.S. economic prospects. Non-profits, which rely on private philanthropy to operate, are certain to suffer from the economic downturn that the pandemic is causing.

It is difficult to forecast how this situation will end. At the time of this writing, no medical interventions have been verified in randomized controlled trials to treat COVID-19 infections directly. Governments and researchers around the world—in China, Germany, Israel, the United States, and elsewhere—race to develop a COVID-19 vaccine. Firms and nonprofit organizations in U.S. states are delivering increasingly scarce supplies to health care facilities caring for COVID-19 patients. Epidemiologists at the U.S. Centers for Disease Control and Prevention (CDC) have modeled the potential trajectory of the pandemic in the United States using a range of input variables. Those models indicate that absent certain kinds of interventions, such as social distancing, between 200,000 and 1.7 million people in the United States

²⁰ Kathryn Kobe and Richard Schwinn, *Small Business GDP, 1998–2014* (Washington, DC: U.S. Small Business Administration, 2018), 3.

may perish from COVID-19.²¹ If the United States were to not implement mitigation measures at all, a study published by a team at Imperial College London estimates that 2.1–2.2 million Americans would die from COVID-19.²²

But there are also reasons for cautious optimism. The actions of state governments, such as those in California, Florida, New York, and Virginia, are likely to have a positive effect on the COVID-19 pandemic by slowing the infection growth rate and easing pressure on health care facilities and workers. Current circumstances force governments, firms, nonprofits, civic groups, and citizens to communicate and cooperate in extraordinary ways. The U.S. federal government, as well as allied foreign governments, are taking steps to buttress their economies through stimuli such as direct cash payments to citizens and central bank purchases of government bonds. As public awareness of the need to practice social distancing and good hygiene increases, one expects that the total number of COVID-19 infections will decline.

The COVID-19 pandemic is a once-in-a-lifetime kind of event. Its outcome remains uncertain. But when the history of this pandemic is eventually writ-

²¹ Sheri Fink, "Worst-Case Estimates for U.S. Coronavirus Deaths," *New York Times*, 13 March 2020.

²² Patrick GT Walker et al., *The Global Impact of COVID-19 and Strategies for Mitigation and Suppression* (London: WHO Collaborating Centre for Infectious Disease Modelling, MRC Centre for Global Infectious Disease Analysis, Abdul Latif Jameel Institute for Disease and Emergency Analytics, Imperial College London, 2020).

ten, the disaster labs of U.S. state governments—and their vital work with firms and nonprofits—will offer powerful reminders of the creativity, energy, and grit upon which Americans drew to survive this ordeal.

Austen D. Givens

Utica, New York

27 March 2020

Appendix A

INTERVIEW PARTICIPANTS

Author's note: the organizational names, affiliations, and titles of the individuals below were current at the time they were interviewed.

Erika Baker

Senior Emergency Services Coordinator, California
Governor's Office of Emergency Services

Rakesh Bharania

Tactical Operations, Cisco

Greg Blosé II

Grassroots Development and Engagement Manager,
Florida Chamber of Commerce

Dan Bout

Assistant Director for Response, California Governor's
Office of Emergency Services

Brooke Brager

Senior Manager, Emergency Planning and Preparedness,
Walmart Stores, Inc.

Robert Conley

Director of HR-Security, Risk, and Safety, Cox Communications

-
- Bill Davis
Director, New York State Office of Emergency Management
- Tom Duffy
Former Researcher, Florida State University Center for Disaster Risk Policy
- Bill Dugan
Human Services and Individual Assistance Section Chief, New York State Office of Emergency Management
- Kathy Fulton
Executive Director, American Logistics Aid Network
- Ryan Garnowski
Private Sector Liaison, Virginia Department of Emergency Management
- Chuck Hagan
Chief, State Joint Logistics, Florida Division of Emergency Management
- Kenny Hayes
Project Manager, Disaster Response Division, Garner Environmental Services; former Chief of Logistics, Virginia Department of Emergency Management
- Bryan Koon
Director, Florida Division of Emergency Management; President, National Emergency Management Association; former Director of Emergency Management, Walmart Stores, Inc.
- Tracey Lamb
Public Awareness and Training Manager, Virginia 811
- Gary T. Lupton
Executive Director, Virginia 1st
- Tracy L. McBroom
Director, Division Disaster State Relations-Pacific, California and FEMA Region IX, American Red Cross

Larry McIntyre
Coordinator, Florida Department of Economic Opportunity

Benjamin L. Muncy
Founder, Private Sector Liaison Program, Virginia Department of Emergency Management

Rick Murrell
President and CEO, Tropical Shipping, LLC; Chairman, South Florida Disaster Resiliency Coalition

Nora Porter
Citizen Corps Coordinator, New York State Office of Emergency Management

Amanda Reidelbach
Disaster Relief and Volunteers Coordinator, Virginia Department of Emergency Management

Kendall Skillicorn
Senior Program Analyst, California Governor's Office of Emergency Services

Ira Tannenbaum
Director of Public/Private Initiatives, New York City Office of Emergency Management

Jim Turner
Executive Director, California Resiliency Alliance

David Vanderbloemen
Director, Electric Distribution Operations Centers, Dominion

Jim Williams
Manager, Emergency Preparedness and Response, Walgreens

INTERVIEW PARTICIPANTS

Appendix B

INTERVIEW QUESTIONS

(Adapted as needed for each interview)

1. How would you characterize your agency/firm's role in emergency management within your state?
2. What would you say is the general role of the public sector/private sector in emergency management within your state?
3. Has your agency/firm participated in a public-private partnership for emergency management? If so, can you explain why the partnership formed and describe the nature of that public-private partnership?
4. What role does leadership play in forming and nurturing public-private partnerships for emergency management?
5. What role does trust play in public-private partnerships for emergency management?
6. If your agency/firm has participated in a public-private partnership for emergency management, could you speak about how that partnership played

a role in response to a few recent large-scale emergencies?

7. Have public-private partnerships for emergency management helped to prepare your state for disasters? If so, how? If not, why?
8. What are the most pressing challenges facing public-private partnerships for emergency management in your state? Why do you think this is so?
9. In what areas do public-private partnerships for emergency management work well in your state? Why do you think this is so?
10. What needs to be changed about public-private partnerships for emergency management in your state?
11. How do you determine if a public-private partnership for emergency management is successful? How would you measure that success?

Appendix C

HUMAN SUBJECTS PROTECTION

Disaster Labs began as a PhD thesis written at King's College London. Like any other academic study that requires direct contact with human subjects, this study was vetted by an institutional review board and approved prior to the author commencing this research. The purpose of this appendix is to summarize the process that was followed to ensure the safety of human subjects in the course of the present study.

To obtain ethical clearance to begin the research, the author completed and submitted to King's College London's College Research Ethics Committee (CREC) a copy of the Low Risk Ethics Application Form (2013/14), as this research involved only minimal risk to human subjects, since it consisted exclusively of interviews and conversations, rather than experimentation or hands-on interventions. That application was approved by the CREC on 4 March 2014 and assigned a reference code of REP/13/14-35. The author filed an amendment to the initial application form in December 2014—specifically to modify one of the participant groups, update relevant documentation to reflect the change in participant groups, and extend the time during which he was permitted to collect data.

Interviewees in the present study were selected using

"snowball" sampling, beginning with professional contacts of the author from previous work in the homeland security/emergency management field.¹ Each interviewee was provided with a copy of an information sheet about the study as well as a consent form to sign and return, which the author retained electronically for record-keeping purposes. The interviews were conducted via video conferencing technology, telephone, email, and/or face-to-face. The interviews were not audio recorded. The author instead took notes about the conversations, transcribing them verbatim when needed. Participants' names and identifying information were stored separately from the interview notes in an encrypted, password-protected document. Interviewees were given the opportunity to review for accuracy and clarity their responses to interview questions that the author wanted to include in the final book, as well as to revise and update their comments, if necessary.

¹ *Snowball sampling* refers to a nonprobability sampling technique where existing study subjects recruit future subjects from their acquaintances.

BIBLIOGRAPHY

Official Publications

The 2002 Olympics in Salt Lake City, Utah: Cooperation between Federal, State, Local, and Private Agencies to Address Public Safety Concerns: Hearing Before the Committee on the Judiciary, United States Senate. 107th Cong., 31 May 2001.

2012 New York Consolidated Laws: Executive Article 26–(709–718). Albany, NY: Division of Homeland Security and Emergency Services, 2012.

Abtew, Wossenu, R. Scott Huebner, Violeta Ciuca, and Eric Swartz. *The 2005 Hurricane Season in South Florida*, Technical Publication ERA #439. Florida: Water Quality Assessment Division, Environmental Resource Assessment Department, South Florida Water Management District, 2006.

Aprea, Andrea. "Investigative Update Regarding Pulse Nightclub Shooting." Press release. FBI Tampa, FL, 20 June 2016.

Arizona Division of Emergency Management. "Private/Public Partnership." 2003.

Bloomberg, Michael R., and Megan Sheekey. *Mayor's Fund to Advance New York City: Hurricane Sandy 6-Month Update*. New York: New York City Service, 2013.

-
- Bush, George W. "Homeland Security Presidential Directive/HSPD-5—Management of Domestic Incidents." In *Administration of George W. Bush, 2003*. Washington, DC: Government Printing Office, 2003.
- California Department of Finance. *A Brief History of the California Economy: 20th Century Industries—Motion Pictures Immigrate*. Sacramento, CA: n.d.
- . *A Brief History of the California Economy: Leading the Way*. Sacramento, CA: n.d.
- California Emergency Management Agency. "Business and & Utility Operations Center." 2019.
- . "Business and Utility Operations Center (BUOC) Administrative Policy—December 2016." 2016.
- . *Golden Guardian 2010 After Action Report: Executive Summary*. Mather, CA: 2010.
- . "MyHazards: Hazard Mitigation Portal." 2014.
- California Governor's Office of Emergency Services. "Governor's Office of Emergency Services Public/Private Partnership Initiative." n.d.
- Clinton, William J. "Executive Order EO 13010: Critical Infrastructure Protection." Intelligence Resource Program, Federation of American Scientists, 15 July 1996.
- Commonwealth of Virginia. "Hazard Identification and Risk Assessment." In *Commonwealth of Virginia Hazard Mitigation Plan*. Richmond, VA: Virginia Department of Emergency Management, 2018.
- Commonwealth of Virginia State Corporation Commission. *Special Report of the Division of Energy Regulation: Preparation for and Response to Hurricane Isabel by Virginia's Electric Utilities*. Richmond, VA: 2004.
- Federal Emergency Management Agency. "6 Months Report: Superstorm Sandy from Pre-Disaster to Recovery." 25 April 2013.

BIBLIOGRAPHY

-
- . "About the Agency." 3 June 2019.
- . "Big City Partnership—New York City Office of Emergency Management." n.d.
- . "Catastrophic Incident Annex." 2008.
- . "The Disaster Process and Disaster Aid Programs." 2012.
- . "FEMA Continues to Support Response to Colorado Flooding." Press release. 16 September 2013.
- . "Glossary and Acronyms." January 2008.
- . "Glossary of Terms." September 1996.
- . "Hurricane Sandy: A Timeline." 2013.
- . "Office of External Affairs." 2 September 2015.
- . "Private Sector." 12 May 2015.
- . "Private Sector Liaison Program." n.d.
- . "Public Private Partnership Case Study: Digital Billboards Deliver Emergency Messages." n.d.
- . "Public Private Partnership Models." n.d.
- . "The Role of Voluntary Organizations in Emergency Management." November 2013.
- . *Safe Rooms Save Lives: State of Oklahoma Safe Room Initiative*. Mitigation Case Studies. Washington, DC: FEMA, 2003.
- . "State Partnership—Alaska Partnership for Infrastructure Protection." n.d.
- . "State Partnership—Arizona." n.d.
- . "State Partnership—California Emergency Management Agency." n.d.
- . "State Partnership—Missouri." n.d.
- . "State Partnership—Safeguard Iowa Partnership." n.d.
- . "State Partnership—Utah." n.d.
- . "State Partnership: Washington Emergency Management Division." n.d.
- . *Testimony of W. Craig Fugate, Administrator, Feder-*

BIBLIOGRAPHY

-
- al Emergency Management Agency, Before U.S. Senate Appropriations Committee, Subcommittee on Homeland Security*, 25 September 2012.
- Federal Emergency Management Agency and Florida State Emergency Response Team. "Backgrounder: 'Charley Command': The Beginning of a Unified FEMA-State Team." 13 August 2009.
- Florida Association of Counties. "Save the Date: 2015 Public-Private Partnership Summit." 12 November 2015.
- Florida Disaster, Division of Emergency Management. "3rd Annual Public-Private Partnership Summit: December 15–16, 2014." 12 November 2014.
- . "Emergency Support Functions." 2019.
- . "ESF #18 Business, Industry and Economic Stabilization." 2019.
- . "Public Sector-Private Sector Disaster Preparedness Summit: Summary Report." 2012.
- Fugate, Craig W. "One Year Later: Examining the Ongoing Recovery from Hurricane Sandy." FEMA, 6 November 2013.
- Gibbs, Linda I., and Caswell F. Holloway. *Hurricane Sandy After Action: Report and Recommendations to Mayor Michael R. Bloomberg*. New York: New York City Government, 2013.
- Governor's Hurricane Conference. 2019.
- Governor's Hurricane Conference. "2015 Training Sessions." 2014.
- . "Directors and Officers: 2014–2015 Governor's Hurricane Conference." 2014.
- Governor's Office of Emergency Services. "Public & Private Partnerships." 2015.
- Herbst, Mark. *Public Hearing: How to Utilize Public-Private Partnerships (P3s) to Repair and Improve New York State's Transportation System. Before the New York*

BIBLIOGRAPHY

-
- State Senate Standing Committee on Transportation. 27 September 2011.
- International Association of Emergency Managers. *Principles of Emergency Management Supplement*. Washington, DC: FEMA, 2007.
- Martin Associates. *2018 National Economic Impact of the U.S. Coastal Port System: Executive Summary*. Los Angeles, CA: 2019.
- Mayor's Fund to Advance New York City. "Relief and Recovery: Hurricane Sandy Recovery." 2015.
- National Commission on the BP *Deepwater Horizon* Oil Spill and Offshore Drilling. *Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling*. Washington, DC: 2011.
- National Commission on Terrorist Attacks Upon the United States. *The 9/11 Commission Report*. Washington, DC: 2004.
- National Governors Association. "Former Oklahoma Governors." 2011.
- New York City. "About the Fund." 2015.
- New York City Office of Emergency Management. *Biennial Report, 2009*. New York: New York City Government, 2009.
- . "Building Partnerships. Enhancing Resiliency. Supporting Businesses and Organizations Before, During, and After Emergencies." n.d.
- . "Businesses: Partners in Preparedness: April 2013: Major League Soccer." n.d.
- . "Businesses: Partners in Preparedness: December 2013: Con Edison." n.d.
- . "Businesses: Partners in Preparedness: February 2013: Cravath, Swaine, & Moore LLP." n.d.
- . "Businesses: Partners in Preparedness: January 2012: Featured Partner: Bank of New York Mellon." n.d.

BIBLIOGRAPHY

-
- . "Businesses: Partners in Preparedness: January 2013: SelectCare." 2015.
- . "Businesses: Partners in Preparedness: July 2013: AIG." n.d.
- . "Businesses: Partners in Preparedness: March 2014: CME Group." n.d.
- . "Businesses: Partners in Preparedness: November 2013: Central Park Conservancy." 2015.
- . "Businesses: Partners in Preparedness: October 2012: Featured Partner: ABC TV." n.d.
- . "Businesses: Partners in Preparedness: October 2013: The New York Stock Exchange." n.d.
- . "Partners in Preparedness: List of Program Partners." 2015.
- . "Take Action to Protect Your Business." 2015.
- New York Police Department. "Terrorist Plots Targeting New York City." 2015.
- New York State Department of Labor. *Significant Industries: A Report to the Workforce Development System*. Albany: New York State Department of Labor, 2010.
- New York State Disaster Preparedness Commission. *2012 Annual Report*. Albany: NYS Division of Homeland Security & Emergency Services Office of Emergency Management, 2013.
- New York State Empire State Development. "Storm Recovery." 2010.
- New York State Office of Counter Terrorism. "Critical Infrastructure Protection Unit." n.d.
- New York State Office of Emergency Management. "Section 3.0: Hazard Identification and Risk Assessment." In *New York State Hazard Mitigation Plan*. Albany, NY: Division of Homeland Security and Emergency Services, 2014.
- Office of the Governor of the State of California. *Executive Order S-04-06*. Sacramento, CA: Office of the Governor, 2006.

BIBLIOGRAPHY

-
- President's Commission on Critical Infrastructure Protection. *Critical Foundations: Protecting America's Infrastructures*. Washington, DC: White House, 1997.
- Richardson, James A. *The Economic Impact of the Ports of Louisiana*. Baton Rouge: Ports Association of Louisiana, 2012.
- State of Florida. "Florida Quick Facts." 2015.
- State of Missouri. "State of Missouri Business Emergency Operations Center (BEOC)." January 2012.
- State of New York. "Governor Cuomo Announces BAE Systems to Remain in the Southern Tier, Saving Nearly 1,400 Jobs." Press release. 17 November 2011.
- . "Governor Cuomo Announces Small Business Emergency Loan Fund to Provide Assistance to Businesses Affected by Sandy." 14 November 2012.
- . "Governor Cuomo Secures First Major Private Donation to Support New Yorkers in Recovery Efforts." 4 November 2012.
- . "Governor Cuomo Suspends Regulations to Allow Drinking Water Donations for New Yorkers Affected by Hurricane Sandy." 4 November 2012.
- . "Governor's Office of Storm Recovery (GOSR): About." n.d.
- . *New York State Responds: Hurricane Irene and Tropical Storm Lee: One Year Later*. Albany, NY: Office of the Governor, 2012.
- Townsend, Frances F. *The Federal Response to Hurricane Katrina: Lessons Learned*. Washington, DC: White House, 2006.
- United Nations. *Sendai Framework for Disaster Risk Reduction, 2015–2030*. Geneva, Switzerland: Office for Disaster Risk Reduction, n.d.
- U.S. Census Bureau. "Quick Facts: New York City, New York." 29 May 2015.
- . "State & County QuickFacts: California." 28 May 2015.

BIBLIOGRAPHY

-
- . "State & County QuickFacts: Florida." 28 May 2015.
- . "State & County QuickFacts: New York." 28 May 2015.
- . "State & County QuickFacts: Virginia." 28 May 2015.
- U.S. Centers for Disease Control and Prevention. "Deaths Associated with Hurricane Sandy—October–November 2012." *Morbidity and Mortality Weekly Report* 62, no. 20 (24 May 2013): 393–97.
- . "Ebola (Ebola Virus Disease): Case Counts." 12 June 2015.
- . "West Nile Virus." 9 June 2015.
- U.S. Chamber of Commerce Foundation. "Hurricane Sandy—Corporate Aid Tracker." 2015.
- . "Orlando Nightclub Response." 23 August 2016.
- . *State Governments and Community Disaster Recovery: A Critical Role*. Washington, DC: U.S. Chamber of Commerce Foundation, n.d.
- U.S. Coast Guard. "ACN 134/18 - NOV 2018 Promulgation of Foreign Freight Vessel Exam (FFVE) Tactics, Techniques, and Procedures (TTP), CGTTP 3-72.8." 16 November 2018.
- . "Missions: Maritime Security." 5 September 2014.
- U.S. Customs and Border Protection. "Cargo Examination." 15 May 2017.
- U.S. Department of Energy and National Association of State Energy Officials. *Appendix B: Florida State's Energy Emergency Response to the 2004 Hurricanes*. Arlington, VA: National Association of State Energy Officials, 2005.
- U.S. Department of Homeland Security (DHS). "The Department of Homeland Security Announces Recipients of the 2013 Rick Rescorla National Award for Resilience." Press release. 4 December 2013.
- . *National Incident Management System*. Washington, DC: DHS, 2008.

BIBLIOGRAPHY

-
- . *National Response Framework*. 2d ed. Washington, DC: DHS, 2013.
- . *National Response Plan*. Washington, DC: DHS, 2004.
- . "NIMS: Frequently Asked Questions." n.d.
- . *A Performance Review of FEMA's Disaster Management Activities in Response to Hurricane Katrina*. Washington, DC: Office of Inspector General, DHS, 2006.
- U.S. Small Business Administration. "Frequently Asked Questions." September 2012.
- U.S. Transportation Security Administration. "Mission." n.d.
- Virginia Department of Emergency Management. "Commonwealth of Virginia Standard Contract 127-11-0001." 2011.
- . "Hurricane History: 21st Century Hurricanes." 2012.
- . "VDEM Emergency Contracts." 2012.
- Virginia Economic Development Partnership. "Data Centers: Industry Overview." 2015.
- . "Food Processing: Industry Overview." 2015.
- . "Plastics and Advanced Materials: Industry Overview." 2015.
- White House. "Press Briefing on the BP Oil Spill in the Gulf Coast." Press release. 29 April 2010.

Magazine and Website Articles

- American Red Cross. "Red Cross Issues Statement on Orlando Mass Shooting." Press release. 12 June 2016.
- . "Our Federal Charter." n.d.
- . "Red Cross Providing Support in Orlando After Tragic and Deadly Shooting." Press release. 13 June 2016.
- Bell, Beverly. "Recession Hits Emergency Management," *Capitol Ideas*. July/August 2009.
- CBS News. "Breezy Point, Queens Looks Forward after Dev-

-
- astating Fire Following Superstorm Sandy." 31 October 2012.
- . "NYC Hospitals Evacuated for Superstorm." 2015.
- CBS New York. "One Year Later, Superstorm Sandy Survivors to Light Up Shore." 29 October 2013.
- CNN. "Salazar Calls Oil Spill 'Massive' and a Potential Catastrophe." *PoliticalTicker* (blog). 2 May 2010.
- Corporate Emergency Access System. "New York City Activates CEAS for Winter Storm Jonas." Press release. 23 January 2015.
- Danner, Chas. "New York Nears Record Snowfall after Blizzard Pummels City, East Coast." *New York*. 24 January 2016.
- Duke, Alan. "Superstorm Sandy Breaks Records." CNN. 31 October 2012.
- Farmer, Liz. "Federal Government Budget Problems Make State Budgeting Impossible." *Governing*, 22 November 2013.
- Griffin, Larry. "To Find 'New Normal' after Pulse Attack, City and County Launch Family Assistance Center." *Orlando Rising*. 23 June 2016.
- Klopott, Freeman. "Cuomo Aims to Speed New York Sandy Recovery with Private Funding." Bloomberg. 23 January 2013.
- PressConnects. "It's Official: BAE Systems to Remain at Endicott's Huron Campus." *USA Today*. 7 March 2012.
- Taylor, Alan. "Hurricane Sandy: Staten Island Survivors." *Atlantic*. 21 November 2012.
- WTLX. "Twelve State Agencies Provide Updates on Response to Orlando Shooting." 15 June 2016.

Secondary Sources

SCHOLARLY BOOKS AND REPORTS

- Abou-bakr, Ami J. *Managing Disasters through Public-Private Partnerships*. Washington, DC: Georgetown University Press, 2013.

BIBLIOGRAPHY

-
- Adams, Vincanne. *Markets of Sorrow, Labors of Faith: New Orleans in the Wake of Katrina*. Durham, NC: Duke University Press, 2013.
- Agranoff, Robert. *Collaborating to Manage: A Primer for the Public Sector*. Washington, DC: Georgetown University Press, 2012.
- Aldrich, Daniel P. *Building Resilience: Social Capital in Post-Disaster Recovery*. Chicago: University of Chicago Press, 2012.
- Auerswald, Phillip E., Lewis M. Branscomb, Todd M. La Porte, and Erwann O. Michel-Kerjan, eds. *Seeds of Disaster, Roots of Response: How Private Action Can Reduce Public Vulnerability*. New York: Cambridge University Press, 2006.
- Bardach, Eugene. *Getting Agencies to Work Together: The Practice and Theory of Managerial Craftsmanship*. Washington, DC: Brookings Institution Press, 1998.
- Birkland, Thomas A. *After Disaster: Agenda Setting, Public Policy, and Focusing Events*. Washington, DC: Georgetown University Press, 1997.
- . *Lessons of Disaster: Policy Change after Catastrophic Events*. Washington, DC: Georgetown University Press, 2006.
- Blake, Eric S., Todd B. Kimberlain, Robert J. Berg, John P. Cangialosi, and John L. Beven II. *Tropical Cyclone Report: Hurricane Sandy (AL182012): 22–29 October 2012*. Miami: National Hurricane Center. 12 February 2013.
- Bushman, Edward. "Policy Options to Address Crucial Communication Gaps in the Incident Command System." Master's thesis, Naval Postgraduate School, 2012.
- Chadwick, Bruce A., Howard M. Bahr, and Stan L. Albrecht. *Social Science Research Methods*. New Englewood Cliffs, NJ: Prentice Hall, 1984.
- Colander, David, and Roland Kupers. *Complexity and the Art of Public Policy: Solving Society's Problems from*

BIBLIOGRAPHY

-
- the Bottom Up*. Princeton, NJ: Princeton University Press, 2014.
- Comfort, Louise K., Arjen Boin, and Chris C. Demchak, eds. *Designing Resilience: Preparing for Extreme Events*. Pittsburgh, PA: University of Pittsburgh Press, 2010.
- Dexter, Lewis Anthony. *Elite and Specialized Interviewing*. Evanston, IL: Northwestern University Press, 1970.
- Flynn, Stephen E. *The Edge of Disaster: Rebuilding a Resilient Nation*. New York: Random House, 2007.
- Goldsmith, Stephen, and William D. Eggers. *Governing by Network: The New Shape of the Public Sector*. Washington, DC: Brookings Institution Press, 2004.
- Hood, Christopher, and Martin Lodge. *The Politics of Public Service Bargains: Reward, Competency, Loyalty—and Blame*. New York: Oxford University Press, 2006.
- Kapucu, Naim, Christopher V. Hawkins, and Fernando I. Rivera, eds. *Disaster Resiliency: Interdisciplinary Perspectives*. London, UK: Routledge, 2013.
- Karapin, Roger. *Political Opportunities for Climate Policy: California, New York, and the Federal Government*. New York: Cambridge University Press, 2016.
- Kolluru, Ramesh. *Compendium of Public-Private Partnerships for Emergency Management*. Lafayette: National Incident Management Systems and Advanced Technologies, University of Louisiana at Lafayette, 2012.
- Lindell, Michael K., Carla Prater, and Ronald W. Perry. *Introduction to Emergency Management*. Hoboken, NJ: John Wiley & Sons, 2007.
- Marney, John-Paul, and Heather Tarbert. *Corporate Finance for Business*. Oxford, UK: Oxford University Press, 2011.
- Miskel, James F. *Disaster Response and Homeland Security: What Works, What Doesn't*. Stanford, CA: Stanford University Press, 2008.

BIBLIOGRAPHY

-
- Patton, Michael Q. *Qualitative Evaluation and Research Methods*. 2d ed. Newbury Park, CA: Sage Publications, 1990.
- Quarantelli, E. L. "Catastrophes Are Different from Disasters: Some Implications for Crisis Managing and Planning Drawn from Katrina." Social Science Research Council. 11 June 2006.
- Rosenau, Pauline Vaillancourt, ed. *Public-Private Policy Partnerships*. Cambridge, MA: MIT Press, 2000.
- Rubin, Claire B., ed. *Emergency Management: The American Experience, 1900–2010*. 2d ed. Boca Raton, FL: CRC Press, 2012.
- Savas, Emanuel S. *Privatization and Public-Private Partnerships*. New York: Chatham House Publishers, 2000.
- Schultz, Laura, and Michelle Cummings. *Giving or Getting?: Regional Distribution of Revenue and Spending in the New York State Budget, Fiscal Year 2009–10*. *New York State Brief*. Albany, NY: Nelson A. Rockefeller Institute of Government at the University of Albany, State University of New York, 2011.
- Taylor, Stephen J., and Robert Bogdan. *Introduction to Qualitative Research Methods: The Search for Meanings*. 2d ed. New York: John Wiley & Sons, 1984.

CHAPTERS IN BOOKS

- Alexander, David. "An Interpretation of Disaster in Terms of Changes in Culture, Society, and International Relations." In *What Is a Disaster?: New Answers to Old Questions*. Edited by Ronald W. Perry and E. L. Quarantelli. London: International Research Committee on Disasters, Routledge, 2005.
- Almqvist, Roland, and Olle Hogberg. "Public-Private Partnerships in Social Services: The Example of the City of Stockholm." In *The Challenge of Public-Private Partnerships: Learning from International Experi-*

-
- ence. Edited by Graeme Hodge and Carsten Greve. Northampton, MA: Edward Elgar Publishing, 2005.
- Beauregard, Robert A. "Public-Private Partnerships as Historical Chameleons: The Case of the United States." In *Partnerships in Urban Governance: European and American Experience*. Edited by Jon Pierre. London: MacMillan Press, 1997.
- Boin, Arjen. "From Crisis to Disaster: Towards an Integrative Perspective." In *What Is a Disaster?: New Answers to Old Questions*. Edited by Ronald W. Perry and E. L. Quarantelli. London: International Research Committee on Disasters and Routledge, 2005.
- Boin, Arjen, Louise K. Comfort, and Chris C. Demchak. "The Rise of Resilience." In *Designing Resilience: Preparing for Extreme Events*. Edited by Louise K. Comfort, Arjen Boin, and Chris C. Demchak. Pittsburgh, PA: University of Pittsburgh Press, 2010.
- Britton, Neil R. "What's a Word?: Opening Up the Debate." In *What Is a Disaster?* Edited by Perry and Quarantelli.
- Buckle, Philip. "Disaster: Mandated Definitions, Local Knowledge and Complexity." In *What Is a Disaster?* Edited by Perry and Quarantelli.
- Coghill, Ken, and Dennis Woodward. "Political Issues of Public-Private Partnerships." In *The Challenge of Public-Private Partnerships*. Edited by Hodge and Greve.
- Common, Richard. "The East Asia Region: Do Public-Private Partnerships Make Sense?" In *Public-Private Partnerships: Theory and Practice in International Perspective*. Edited by Stephen P. Osborne. London: Routledge, 2000.
- Corner, David. "The United Kingdom Private Finance Initiative: The Challenge of Allocating Risk." In *The Challenge of Public-Private Partnerships*. Edited by Hodge and Greve.
- Cutter, Susan L. "Are We Asking the Right Question?" In

BIBLIOGRAPHY

-
- What Is a Disaster?* Edited by Perry and Quarantelli.
- English, Linda M. "Using Public-Private Partnerships to Deliver Social Infrastructure: The Australian Experience." In *The Challenge of Public-Private Partnerships*. Edited by Hodge and Greve.
- Gazley, Beth. "Building Collaborative Capacity for Disaster Resiliency." In *Disaster Resiliency: Interdisciplinary Perspectives*. Edited by Naim Kapucu, Christopher V. Hawkins, and Fernando I. Rivera. London: Routledge, 2013.
- Greve, Carsten, and Graeme Hodge. "Introduction." In *The Challenge of Public-Private Partnerships*. Edited by Hodge and Greve.
- Gorman, Sean P. "A Cyber Threat to National Security?" In *Seeds of Disaster, Roots of Response: How Private Action Can Reduce Public Vulnerability*. Edited by Phillip E. Auerwald, Lewis M. Branscomb, Todd M. LaPorte, and Erwann O. Michel-Kerjan. New York: Cambridge University Press, 2006.
- Haddow, George. *Case Studies in Emergency and Risk Management*. Washington, DC: FEMA, 2004.
- Harrauld, John R. "The System Is Tested: Response to the BP Deepwater Horizon Oil Spill." In *Emergency Management: The American Experience, 1900–2010*. Edited by Claire B. Rubin. Boca Raton, FL: CRC Press, 2012.
- Innes, Judith E., and David E. Booher. "Collaborative Policymaking: Governance through Dialogue." In *Deliberative Policy Analysis: Understanding Governance in the Network Society*. Edited by Maarten A. Hajer and Hendrik Wagenaar. Cambridge, UK: Cambridge University Press, 2003.
- Johnston, Jocelyn M., and Barbara S. Romzek. "Traditional Contracts as Partnerships: Effective Accountability in Social Services Contracts in the American States." In *The Challenge of Public-Private Partnerships*. Edited by Hodge and Greve.

BIBLIOGRAPHY

-
- Kaniasty, Krzysztof, and Fran Norris. "The Experience of Disaster: Individuals and Communities Sharing Trauma." In *Response to Disaster: Psychosocial, Community, and Ecological Approaches*. Edited by Richard Gist and Bernard Lubin. Philadelphia, PA: Taylor & Francis, 1999.
- Klijn, Erik-Hans, and Geert R. Teisman. "Governing Public-Private Partnerships: Analysing and Managing the Processes and Institutional Characteristics of Public-Private Partnerships." In *Public-Private Partnerships*. Edited by Osborne.
- Lagadec, Patrick, and Erwann O. Michel-Kerjan. "The Paris Initiative, 'Anthrax and Beyond': Transnational Collaboration Among Interdependent Critical Networks." In *Seeds of Disaster, Roots of Response*. Edited by Auerswald, Branscomb, LaPorte, and Michel-Kerjan.
- Linder, Stephen H. "Coming to Terms with the Public-Private Partnership: A Grammar of Multiple Meanings." In *Public-Private Policy Partnerships*. Edited by Pauline Vaillancourt Rosenau. Cambridge, MA: MIT Press, 2000.
- Lopez, Brian. "Critical Infrastructure Protection in the United States Since 1993." In *Seeds of Disaster, Roots of Response*. Edited by Auerswald, Branscomb, LaPorte, and Michel-Kerjan.
- Malbin, Michael J., and Peter W. Brusoe. "Campaign Finance Policy in the State and City of New York." In *The Oxford Handbook of New York State Government and Politics*. Edited by Gerald Benjamin. New York: Oxford University Press, 2012.
- McQuaid, Ronald W. "The Theory of Partnership: Why Have Partnerships?" In *Public-Private Partnerships*. Edited by Osborne.
- Michel-Kerjan, Erwann O. "Insurance, the 14th Critical Sector." In *Seeds of Disaster, Roots of Response*. Edited

BIBLIOGRAPHY

-
- by Auerswald, Branscomb, LaPorte, and Michel-Kerjan.
- Moulton, Lynne, and Helmut K. Anheier. "Public-Private Partnerships in the United States: Historical Patterns and Current Trends." In *Public-Private Partnerships*. Edited by Osborne.
- Pedraza, Jorge M. "Elements for Effective Management of a Business Corporation Crisis Situation." In *Crisis Management*. Edited by Patrick Alvintzi and Hannes Eder. New York: Nova Science Publishers, 2010.
- Perry, Ronald W. "Disasters, Definitions and Theory Construction." In *What Is a Disaster?* Edited by Perry and Quarantelli.
- Pollitt, Michael. "Learning from the UK Private Finance Initiative experience." In *The Challenge of Public-Private Partnerships*. Edited by Hodge and Greve.
- Prieto III, Daniel B. "Information Sharing with the Private Sector: History, Challenges, Innovation, and Prospects." In *Seeds of Disaster, Roots of Response*. Edited by Auerswald, Branscomb, LaPorte, and Michel-Kerjan.
- Smith, Denis. "Through a Glass Darkly: A Response to Stallings." In *What Is a Disaster?* Edited by Perry and Quarantelli.
- Sylves, Richard T. "Federal Emergency Management Comes of Age: 1979–2001." In *Emergency Management*. Edited by Rubin.
- Teisman, Geert R., and Erik-Hans Klijn. "Public-Private Partnerships in the European Union: Officially Suspect, Embraced in Daily Practice." In *Public-Private Partnerships*. Edited by Osborne.
- Townsend, Francis F. "Lessons Learned." In *The Federal Response to Hurricane Katrina: Lessons Learned*. Washington, DC: White House, 2006.
- Van Slyke, David M. "Collaboration and Relational Contracting." In *The Collaborative Public Manager: New Ideas*

BIBLIOGRAPHY

for the Twenty-first Century. Edited by Rosemary O'Leary and Lisa Blomgren Bingham. Washington, DC: Georgetown University Press, 2009.

JOURNAL ARTICLES

- Bean, Hamilton. "Exploring the Relationship between Homeland Security Information Sharing & Local Emergency Preparedness." *Homeland Security Affairs* 5, no 2 (May 2009): 1–18.
- Birkland, Thomas A. "Focusing Events, Mobilization, and Agenda Setting." *Journal of Public Policy* 18, no. 1 (January–April 1998): 53–74, <https://doi.org/10.1017/S0143814X98000038>.
- Boeckelman, Keith. "The Influence of States on Federal Policy Adoptions." *Policy Studies Journal* 20, no. 3 (September 1992): 365–75, <https://doi.org/10.1111/j.1541-0072.1992.tb00164.x>.
- Busch, Nathan E., and Austen D. Givens. "Achieving Resilience in Disaster Management: The Role of Public-Private Partnerships." *Journal of Strategic Security* 6, no. 2 (June 2013): 1–19, <http://dx.doi.org/10.5038/1944-0472.6.2.1>.
- . "Public-Private Partnerships in Homeland Security: Opportunities and Challenges." *Homeland Security Affairs*, no. 8 (2012): 1–24.
- Caimo, Alberto, and Alessandro Lomi. "Knowledge Sharing in Organizations: A Bayesian Analysis of the Role of Reciprocity and Formal Structure." *Journal of Management* 41, no. 2 (February 2015): 665–91, <https://doi.org/10.1177/0149206314552192>.
- Chen, Justine, Ted Hsuan Yun Chen, Ilan Vertinsky, Lilia Yumagulova, and Chansoo Park. "Public-Private Partnerships for the Development of Disaster Resilient Communities." *Journal of Contingencies and Crisis Management* 21, no. 3 (September 2013): 130–43, <https://doi.org/10.1111/1468-5973.12021>.

BIBLIOGRAPHY

-
- Curley, Tyler M. "Models of Emergency Statebuilding in the United States." *PS: Perspectives on Politics* 13, no. 3 (September 2015): 697–713.
- Daniels, R. Steven. "The Rise of Politics and the Decline of Vulnerability as Criteria in Disaster Decisions of the United States, 1953–2009." *Disasters* 37, no. 4 (October 2013): 669–94, <https://doi.org/10.1111/disa.12026>.
- Day, Christine L. "Katrina Seven Years On: The Politics of Race and Recovery—Notes on a Roundtable Meeting Organized for the 2012 APSA Annual Meeting." *PS: Political Science and Politics* 46, no. 4 (October 2013): 748–52.
- Dye, Thomas R. "Executive Power and Public Policy in the States." *Western Political Quarterly* 22, no. 4 (December 1969): 926–39, <https://doi.org/10.1177/106591296902200414>.
- Emerson, Kirk, Tina Nabatchi, and Stephen Balogh. "An Integrative Framework for Collaborative Governance." *Journal of Public Administration Research and Theory* 22, no. 1 (January 2012): 1–29, <https://doi.org/10.1093/jopart/mur011>.
- Evans, Joel M., Michael G. Hendron, and James B. Oldroyd. "Withholding the Ace: The Individual- and Unit-Level Performance Effects of Self-Reported and Perceived Knowledge Hoarding." *Organization Science* 26, no. 2 (March–April 2015): 1–17, <https://doi.org/10.1287/orsc.2014.0945>.
- Fawcett, Stanley E., Jeffrey A. Ogden, Gregory M. Magnan, and M. Bixby Cooper. "Organizational Commitment and Governance for Supply Chain Success." *International Journal of Physical Distribution & Logistics Management* 36, no. 1 (January 2006): 22–35, <https://doi.org/10.1108/09600030610642913>.
- Franklin, Thomas. "How Partnership Works." *Development in Practice* 19, no. 6 (July 2009): 789–91, <https://doi.org/10.1080/09614520903027106>.

BIBLIOGRAPHY

-
- Galle, Brian D., and Kirk J. Stark. "Beyond Bailouts: Federal Tools for Preventing Budget Crises." *Indiana Law Journal* 87, no. 2 (Spring 2012): 599–644.
- Ginsberg, Ari, and Eric Abrahamson. "Champions of Change and Strategic Shifts: The Role of Internal and External Change Advocates." *Journal of Management Studies* 28, no. 2 (March 1991): 173–90, <https://doi.org/10.1111/j.1467-6486.1991.tb00276.x>.
- Givens, Austen D., and Nathan E. Busch. "Information Sharing and Homeland Security: The Role of Public-Private Partnerships." *Homeland Security Review* 7, no. 2 (Summer 2013): 123–50.
- . "Realizing the Promise of Public-Private Partnerships in US Critical Infrastructure Protection." *International Journal of Critical Infrastructure Protection* 6, no. 1 (March 2013): 39–50.
- Goldberg, Stephen D., and Beverly B. Harzog. "Oil Spill: Management Crisis or Crisis Management?" *Journal of Contingencies and Crisis Management* 4, no. 1 (March 1996): 1–9, <https://doi.org/10.1111/j.1468-5973.1996.tb00070.x>.
- Granovetter, Mark S. "The Strength of Weak Ties." *American Journal of Sociology* 78, no. 6 (May 1973): 1360–80, <https://doi.org/10.1086/225469>.
- Greve, Carston. "New Avenues for Contracting Out and Implications for a Theoretical Framework." *Public Performance & Management Review* 24, no. 3 (March 2001): 270–84, <https://doi.org/10.2307/3381089>.
- Grimsey, Darrin, and Mervyn K. Lewis. "Are Public-Private Partnerships Value for Money? Evaluating Alternative Approaches and Comparing Academic and Practitioner Views." *Accounting Forum* 29, no. 4 (December 2005): 345–78, <https://doi.org/10.1016/j.accfor.2005.01.001>.
- Harcourt, Bernard E., and Jens Ludwig. "Broken Windows: New Evidence from New York City and a Five-City

BIBLIOGRAPHY

-
- Social Experiment." *University of Chicago Law Review* 73, no. 1 (Winter 2006): 271–320.
- Harknett, Richard J., and James A. Stever. "The Struggle to Reform Intelligence After 9/11." *Public Administration Review* 71, no. 5 (September/October 2011): 700–6, <https://doi.org/10.1111/j.1540-6210.2011.02409.x>.
- Hodge, Graeme A., and Carsten Greve. "Public-Private Partnerships: An International Performance Review." *Public Administration Review* 67, no. 3 (May 2007): 545–58, <https://doi.org/10.1111/j.1540-6210.2007.00736.x>.
- Horwitz, Steven. "Wal-Mart to the Rescue: Private Enterprise's Response to Hurricane Katrina." *Independent Review* 13, no. 4 (Spring 2009): 511–28.
- Howell, Jane M., and Christopher A. Higgins. "Champions of Technological Innovation." *Administrative Science Quarterly* 35, no. 2 (June 1990): 317–41, <https://doi.org/10.2307/2393393>.
- Jacobitz, Steve. "Learning from Disaster; Florida's 2004 Hurricane Season Provides a Number of Lessons for Improving Transportation and Response." *Public Roads* 69, no. 3 (November/December 2005).
- Kapucu, Naim. "Collaborative Emergency Management: Better Community Organizing, Better Public Preparedness and Response." *Disasters* 32, no. 2 (June 2008): 239–62, <https://doi.org/10.1111/j.1467-7717.2008.01037.x>.
- . "Disaster Resilience and Adaptive Capacity in Central Florida, US, and in Eastern Marmara Region, Turkey." *Journal of Comparative Policy Analysis: Research and Practice* 14, no. 3 (June 2012): 202–16, <https://doi.org/10.1080/13876988.2012.687620>.
- . "Non-Profit Response to Catastrophic Disasters." *Disaster Prevention and Management* 16, no. 4 (2007): 551–61, <https://doi.org/10.1108/09653560710817039>.
- . "Public-Nonprofit Partnerships for Collective Ac-

BIBLIOGRAPHY

-
- tion in Dynamic Contexts of Emergencies." *Public Administration* 84, no. 1 (March 2006): 205–20, <https://doi.org/10.1111/j.0033-3298.2006.00500.x>.
- Kapucu, Naim, and Montgomery van Wart. "The Evolving Role of the Public Sector in Managing Catastrophic Disasters: Lessons Learned." *Administration & Society* 38, no. 3 (July 2006): 279–308, <https://doi.org/10.1177/0095399706289718>.
- Kapucu, Naim, Tolga Arslan, and Matthew Lloyd Collins. "Examining Intergovernmental and Interorganizational Response to Catastrophic Disasters: Toward a Network-Centric Approach." *Administration & Society* 42, no. 2 (April 2010): 222–47, <https://doi.org/10.1177/0095399710362517>.
- Kettl, Donald F. "The Transformation of Governance: Globalization, Devolution, and the Role of Government." *Public Administration Review* 60, no. 6 (November/December 2000): 488–97, <https://doi.org/10.1111/0033-3352.00112>.
- Linnerooth-Bayer, Joanne, and Reinhard Mechler. "Disaster Safety Nets for Developing Countries: Extending Public-Private Partnerships." *Environmental Hazards* 7, no. 1 (2007): 54–61, <https://doi.org/10.1016/j.envhaz.2007.04.004>.
- Lund-Thomsen, Peter. "Assessing the Impact of Public-Private Partnerships in the Global South: The Case of the Kasur Tanneries Pollution Control Project." *Journal of Business Ethics* 90, no. 1 (2009): 57–78, <https://doi.org/10.1007/s10551-008-9914-x>.
- MacManus, Susan A., and Kiki Caruson. "Emergency Management: Gauging the Extensiveness and Quality of Public- and Private-Sector Collaboration at the Local Level." *Urban Affairs Review* 47, no. 2 (March 2011): 280–99, <https://doi.org/10.1177/1078087410362050>.
- Malmstadt, Jill, Kelsey Scheitlin, and James Elsner. "Florida

BIBLIOGRAPHY

-
- Hurricanes and Damage Costs." *Southeastern Geographer* 49, no. 2 (Summer 2009): 108–31.
- Marchington, Mick, and Steven Vincent. "Analysing the Influence of Institutional, Organizational, and Interpersonal Forces in Shaping Inter-Organizational Relations." *Journal of Management Studies* 41, no. 6 (September 2004): 1029–56, <https://doi.org/10.1111/j.1467-6486.2004.00465.x>.
- May, Peter J., and Chris Koski. "Addressing Public Risks: Extreme Events and Critical Infrastructures." *Review of Policy Research* 30, no. 2 (March 2013): 139–59, <https://doi.org/10.1111/ropr.12012>.
- Minamoto, Yuriko. "Social Capital and Livelihood Recovery: Post-Tsunami Sri Lanka as a Case." *Disaster Prevention and Management: An International Journal* 19, no. 5 (2010): 548–64, <https://doi.org/10.1108/09653561011091887>.
- Norris, Fran H. "Disaster Research Methods: Past Progress and Future Directions." *Journal of Traumatic Stress* 19, no. 2 (April 2006): 173–84, <https://doi.org/10.1002/jts.20109>.
- Pearson, Christine M., and Ian I. Mitroff. "From Crisis Prone to Crisis Prepared: A Framework for Crisis Management." *Executive* 7, no. 1 (February 1993): 48–59, <https://doi.org/10.5465/ame.1993.9409142058>.
- Pearson, Christine M., and Judith A. Clair. "Reframing Crisis Management." *Academy of Management Review* 23, no. 1 (January 1998): 59–76, <https://doi.org/10.5465/amr.1998.192960>.
- Petak, William J. "Emergency Management: A Challenge for Public Administration." *Public Administration Review*, no. 15, Special Issue: Emergency Management: A Challenge for Public Administration (January 1985): 3–7, <https://doi.org/10.2307/3134992>.
- Posner, Eric A., and Adrian Vermeule. "Crisis Governance

BIBLIOGRAPHY

-
- in the Administrative State: 9/11 and the Financial Meltdown of 2008." *University of Chicago Law Review* 76, no. 4 (Fall 2009): 1613–81.
- Provan, Keith G., and H. Brinton Milward. "Do Networks Really Work?: A Framework for Evaluating Public-Sector Organizational Networks." *Public Administration Review* 61, no. 4 (July/August 2001): 414–23, <https://doi.org/10.1111/0033-3352.00045>.
- Robinson, Scott E., and Benjamin S. Gaddis. "Seeing Past Parallel Play: Measures of Collaboration in Disaster Situations." *Policy Studies Journal* 40, no. 2 (May 2012): 256–73, <https://doi.org/10.1111/j.1541-0072.2012.00452.x>.
- Romzek, Barbara, Kelly LeRoux, Jocelyn Johnston, Robin J. Kempf, and Jaclyn Schede Piatak. "Informal Accountability in Multisector Service Delivery Collaborations." *Journal of Public Administration Research and Theory* 24, no. 4 (October 2014): 813–42, <https://doi.org/10.1093/jopart/mut027>.
- Sadique, Md Z, Elisabeth J. Adams, and William J. Edmunds. "Estimating the Costs of School Closure for Mitigating an Influenza Pandemic." *BMC Public Health*, no. 8 (December 2008): 135–41, <https://doi.org/10.1186/1471-2458-8-135>.
- Saz-Carranza, Angel, and Sonia M. Ospina. "The Behavioral Dimension of Governing Interorganizational Goal-Directed Networks—Managing the Unity-Diversity Tension." *Journal of Public Administration Research and Theory* 21, no. 2 (April 2011): 327–65, <https://doi.org/10.1093/jopart/muq050>.
- Schaeffer, Peter V., and Scott Loveridge. "Toward an Understanding of Types of Public-Private Cooperation." *Public Performance & Management Review* 26, no. 2 (December 2002): 169–89, <https://doi.org/10.1177/1530957602238261>.
- Schneider, Sandra K. "Administrative Breakdowns in the

BIBLIOGRAPHY

-
- Governmental Response to Hurricane Katrina." *Public Administration Review* 65, no. 5 (September/October 2005): 515–16, <https://doi.org/10.1111/j.1540-6210.2005.00478.x>.
- Shugart II, William F. "Disaster Relief as Bad Public Policy." *Independent Review* 15, no. 4 (Spring 2011): 519–39.
- Stewart, Geoffrey T., Ramesh Kolluru, and Mark Smith. "Leveraging Public-Private Partnerships to Improve Community Resilience in Times of Disaster." *International Journal of Physical Distribution and Logistics Management* 39, no. 5 (2009): 343–64, <https://doi.org/10.1108/09600030910973724>.
- Sweetser, Kaye D., and Emily T. Metzgar. "Communicating during Crisis: Use of Blogs as a Relationship Management Tool." *Public Relations Review* 33, no. 3 (September 2007): 340–42, <https://doi.org/10.1016/j.pubrev.2007.05.016>.
- Thibault, Marc, Mary R. Brooks, and Kenneth J. Button. "The Response of the U.S. Maritime Industry to the New Container Security Initiatives." *Transportation Journal* 45, no. 1 (Winter 2006): 5–15.
- Thomson, Anne Marie, James L. Perry, and Theodore K. Miller. "Conceptualizing and Measuring Collaboration." *Journal of Public Administration Research and Theory* 19, no. 1 (January 2009): 23–56, <https://doi.org/10.1093/jopart/mum036>.
- Van Gestel, Kit, Joris Voets, and Koen Verhoest. "How Governance of Complex PPPs Affects Performance." *Public Administration Quarterly* 36, no. 2 (Summer 2012): 140–88.
- Waugh, William L. Jr., and Gregory Streib. "Collaboration and Leadership for Effective Emergency Management." *Public Administration Review*, no. 66, Special Issue 1 (November 2006): 131–40, <https://doi.org/10.1111/j.1540-6210.2006.00673.x>.
- White, Douglas R., and Michael Houseman. "The Naviga-

BIBLIOGRAPHY

-
- bility of Strong Ties: Small Worlds, Tie Strength, and Network Topology." *Complexity* 8, no. 1 (September/October 2002): 72–81, <https://doi.org/10.1002/cplx.10053>.
- Wise, Charles R. "Organizing for Homeland Security After Katrina: Is Adaptive Management What's Missing?" *Public Administration Review* 66, no. 3 (May–June 2006): 302–18, <https://doi.org/10.1111/j.1540-6210.2006.00587.x>.
- Xiao, Yu, and Shannon Van Zandt. "Building Community Resiliency: Spatial Links between Household and Business Post-Disaster Return." *Urban Studies* 49, no. 11 (August 2012): 2523–42, <https://doi.org/10.1177/0042098011428178>.
- Yates, Dave, and Scott Paquette. "Emergency Knowledge Management and Social Media Technologies: A Case Study of the 2010 Haitian Earthquake." *International Journal of Information Management* 31, no. 1 (February 2011): 6–13, <https://doi.org/10.1016/j.ijinfomgt.2010.10.001>.

WEBSITES/OTHER

- American Logistics Aid Network. "About ALAN." 2012.
- California Resiliency Alliance. "Welcome to the California Resiliency Alliance." 2015.
- Central Park Conservancy. "About Us: We Are the Caretakers of Central Park." 2014.
- FedEx. "About FedEx: FedEx among Companies Recognized by NYSE for Hurricane Sandy Relief Support." 9 November 2012.
- Foundation Group. "FAQs: What Benefit Does Being 501(c)(3) Offer My Nonprofit and Its Contributors?" 2015.
- Honda Corporate Social Responsibility. "Hurricane Sandy." 1 November 2012.
- . "What We Believe." 26 November 2019.

BIBLIOGRAPHY

-
- Insurance Information Institute. "Spotlight On: Catastrophes—Insurance Issues." August 2015.
- National Voluntary Organizations Active in Disaster. "Who We Are." 2014.
- PREP Oregon. "Planning for Resilience and Emergency Preparedness." n.d.
- Ready Hampton Roads. "Virginia 1st." 2015.
- Risk and Strategic Management Consulting. 2010.

BIBLIOGRAPHY

INDEX

- 11 September 2001 terrorist attacks (9/11), 12, 15; and recognition of the need to exchange more information during disasters, 69; significant roles played by businesses in responses to, 52, 69,
- 2009 H1N1 Pandemic, 93–94
- Abou-bakr, Ami J.: analytical framework of, 37, 42, 44, 45–46; analytical framework applicable to state disaster partnerships, 63, 75, 257–58, 262, 267; different factors of analytical framework, 37–41, 63, 72; failure to account for non-profit and industry organizations, 258–59, 262–65; limitations of framework of, 42–43
- Alaska: creation of emergency-management agreements, 73
- Alaska Partnership for Infrastructure Protection (APIP), 67
- al-Baghdadi, Abu Bakr, 116
- American Logistics Aid Network (ALAN), 226; and hybrid model of partnership, 147–48, 150, 264; reliance on businesses for support, 146; work with FDEM, 118, 132, 259; work with partners, 142
- American Red Cross, 9, 56, 77, 79, 102; dependence on outside financial support, 107, 272; facilitator of partnerships in California, 109–10, 259–61; influence on BUOC, 114; information sharing with California, 92, 108; partnerships with, 82–

-
- 83, 86, 97, 106, 111, 258; preference for MOUs, 88; and Pulse shooting, 118
- Anheuser-Busch: and Hurricane Sandy relief efforts, 177
- Arizona: creation of emergency-management agreements, 73; State Emergency Operations Center (SEOC), 70–71
- Arizona Business Emergency Coordination Center (BECC): coordination with firms for disaster responses, 70
- Arizona Division of Emergency Management (ADEM), 70; emergency-management classes available for firms, 71
- Bank of America, 143–44
- BeReady Utah/Private Sector Section: formation of to prepare for 2002 Winter Olympics, 69–70
- Better Business Bureau (BBB), 216–17, 259–60
- BP, 31, 58–60. *See also* *Deepwater Horizon*, 68
- Bush, John E. “Jeb,” 121
- Business and Utility Operations Center (BUOC), 22–23, 77, 80–81, 84, 87, 90–91, 99, 112; and coordination with American Red Cross, 109–10; establishment of, 105, 112, 227; importance of trust to, 101; information sharing with firms, 92, 104, 241; and MOUs, 233; mutual benefits for the state and firms, 97; nonprofit organizations’ influence in, 113–14; private sector members of, 95. *See also* California Governor’s Office of Emergency Services (CalOES)
- business continuity planning (BCP): VDEM’s use of, 206
- Business Council of New York State, 181
- Business Emergency Coordination Center (BECC)
- Business Emergency Operations Center (BEOC): provides private sector expertise to Missouri during disasters, 72
- businesses: and role in emergency-management efforts, 49, 50
- Business Executives for National Security (BENS), 68
- California: crises and triggering of partnerships, 79, 81, 83; development of Golden Guardian Exercise to practice disaster responses, 47–48; and disaster-management partnerships, 16, 20, 23, 115; emergency-management partnerships, 77, 112, 222–23; *Executive Order N-33-20*, 278; and *Executive Order S-04-*

INDEX

-
- 06, 22; fires near San Diego, 79; importance of trust in organizational relationships, 100, 103; incentives for firms to partner with, 96; leadership's importance to emergency-management partnerships of, 87; limitations to California's information-sharing partnerships, 94; and Loma Prieta earthquake, 31; limited adaptation of emergency-management agreements, 104, 113; mutual benefits for the state and firms partnerships, 99, 244–45, 247; Napa Valley earthquake, 97; nonprofit and industry associations' involvement in disaster management, 78; Northridge earthquake, 255–56; power outages in, 79; response to COVID-19, 277–78; and Senate Bill 546, 20; use of private firefighters in, 76–77; wildfires in, 76, 78, 105, 255
- California Department of Forestry and Fire Protection, 76
- California Department of Transportation, 79
- California Governor's Office of Emergency Services (CalOES), 20, 22, 77–78, 80–82, 106, 112; and disaster preparedness, 93; emergency-management agreements of, 87, 90, 230; and expanding public-private partnerships, 84; importance of trust to partnerships, 102, 104, 249–50; information sharing with firms, 90–92, 95, 98, 104, 114–15, 226, 239–42, 249; lack of adaptation of emergency-management agreements, 108, 113; partnership with CRA, 111, 258; and partnership with Walmart, 85; and partnerships with private firms, 86, 96, 98, 225; preference for MOUs, 87–91, 105, 113–14, 232–33, 235–36, 263; and public-private sector liaison, 84–86; State Operations Center (SOC), 77; threats to sustainability, 107–8, 256–57
- California Grocers Association (CGA), 79, 273
- California Highway Patrol, 79
- California National Guard: and COVID-19 response, 277–78
- California Resiliency Alliance (CRA), 77, 84, 109–10, 229; dependence on revenue from members, 111; influence on BUOC, 114; partnership with CalOES, 111, 258; private sector members of, 85
- Centers for Disease Control and

INDEX

-
- Prevention (CDC), 93; and COVID-19 response, 281
- Chevron: donations to local organizations after Hurricane Katrina, 56
- Cisco, 84; and Tactical Operations Team, 96–97, 102–3, 107
- Clinton, William J. “Bill,” 51
- ConEdison: partnership with NYCOEM, 171
- COVID-19: economic effects of, 281–82; spread of, 275–77; state government actions to stop spread of, 277–82; in the United States, 277, 281–82
- Cuomo, Andrew M., 4–5, 168; response to COVID-19, 279
- de Blasio, Bill, 152
- Deepwater Horizon*: and oil spill, 31, 58–59. *See also* BP
- Department of Economic Opportunity (DEO), 230
- Department of Homeland Security (DHS), 12; creation of, 53; and Hurricane Katrina, 54
- disaster-oriented public-private partnerships (PPPs), 10; and analytical framework used to examine state, 75; definition of, 7; lack of federal involvement in, 11, 12; and nonprofits, 9; other terms for, 7; and private sector involvement in emergency management, 58; and revised version of NRF, 62; rising importance of business to since 9/11, 74; state governments leading advancement of, 10; and state-level disaster management, 11. *See also* emergency management; state partnerships
- Department of the Interior, 60
- Department of State, 80–81
- DeSantis, Ronald D., 278
- disaster-response collaborations: and post-disaster recovery efforts, 15
- Dyer, John H. “Buddy,” 117
- earthquakes: Loma Prieta, 31; in Mexico, 79–80; Mineral City, 193–94, 216, 218, 225; Northridge, 255–56
- emergency management: definition of, 5; and development of partnerships for, 33; differences between states in partnerships for, 235–36, 242; similarities in states in partnerships for, 235; use of private-public partnerships for, 5–6, 11. *See also* state partnerships
- emergency-management agreements, 27–28, 50; absence of federal intervention in, 50; at the state level, 28
- ESF-18: adaptability of, 140, 41; dedicated to addressing

INDEX

-
- disasters within the business community, 122; development of, 227; Florida's public-private sector cooperation in, 126; industry organizations and, 147, 149; and information exchange with partners during disasters, 132–33, 140–41, 145, 241; mentorship programs with firms, 143–44, 254; as an organizational unit for FDEM to manage its partners, 128, 258–60, 262. *See also* Florida Division of Emergency Management (FDEM)
- Federal Emergency Management Agency (FEMA), 10, 53, 103; definition of private sector, 265; establishment of private sector liaison office, 62, 270–71
- FedEx: and Hurricane Sandy, 163, 168, 172–73
- Florida: adaptability of partnerships with, 140; and agencies learning to deal with hurricanes, 32; and emergency-management partnerships, 23, 123; disasters as a catalyst for the development of disaster-management partnerships, 119, 141–42, 222–23, 226; Emergency Operations Center (EOC), 121–22; 140, 145; efficiency of partnerships with, 148; Executive Order 20-82, 279; hosting conferences that address public-private partnerships, 23; and Hurricane Andrew, 51; interorganizational agreements, 32; response to COVID-19, 278–79; state law requiring generators at gas stations on evacuation routes, 121; strong public sector executive leadership, 123–24; use of hybrid partnership models, 146–48, 150, 264
- Florida Chamber of Commerce, 118, 132, 261
- Florida Department of Health: response to COVID-19, 278
- Florida Division of Emergency Management (FDEM), 23; assistance in installing emergency generators at Publix, 119–20; benefits to firms of partnering with, 134, 136–37, 244–45, 247; and conferences for disaster preparedness, 130–31, 242, 254; disaster-response exercises, 143; efficiency of partnerships with, 148; and emergency-management agreements of, 118; expansion to partnering with smaller firms, 140; FSU and development of an information-sharing application for, 128; gas shortages during disasters, 120–21;

information exchange with partners, 129–33, 135, 140–41, 239–40, 242; incident specific networks of responders, 125–26; lack of MOUs, 126–27, 232–33; mentorship program with ESF-18, 143–44, 254; outreach to other business and governments, 143–45; partnering with industry organizations, 145, 149, 258–59; partners within a formal organizational framework in, 126, 128; power outages leading to disaster partnerships, 120; preference for informally structured partnerships, 126–28, 149; private sector partners of, 124–25, 225, 230; public-private sector agreements of, 125; state law requiring generators at gas stations on evacuation routes, 121; support for local government emergency-management capabilities, 144; sustainability of partnerships with, 142–43; trust as a key factor in partnerships, 138–39, 249–50, 252, 261; use of partnerships to access private sector supplies during emergencies, 133–35; and Virtual Business Emergency Operations Center (VBEOC), 132–33, 140, 241, 243; work with private sector after Pulse shooting, 117. *See also* ESF-18

Florida Restaurant and Lodging Association, 118

Florida Retail Federation (FRF), 145, 273

Florida State University: and development of an information sharing application for FDEM, 128, 243

Fugate, W. Craig, 23, 125, 134

Giuliani, Rudolph W. “Rudy,” 160

Golden Guardian Exercise, 48

Hampton Roads Emergency Management Committee (HREMC), 207

Honda: and Hurricane Sandy relief efforts, 177

Howard A. Hanson Dam, 64

Hurricane Andrew, 51;

Hurricane Irene, 24, 60, 63, 162–63, 195–96, 218, 225; private sector aid during, 74

Hurricane Katrina, 54; and federal government acknowledgment of need for private sector help during disasters, 56, 57; and private sector aid during, 55–56, 74, 85

Hurricane Sandy, 3–5, 24, 162–63, 167–68, 172–74, 177, 179, 225, 256

Incident Command System (ICS), 15–16, 71, 103

INDEX

-
- Iowa: creation of emergency-management agreements, 73; launch of emergency-management agreement SIP, 68. *See also* Safeguard Iowa Partnership (SIP)
- Iowa Business Council, 68
- Iowa Department of Public Health, 68
- Islamic State in Iraq and Syria (ISIS), 116
- Keating, Francis A., 65
- Koon, Bryan, 125
- Lowe's: and relief for Mineral City earthquake, 193–94
- Major League Soccer (MLS), 175
- Mateen, Omar, 116–17
- McVeigh, Timothy, 51
- memorandum of understanding (MOU), 38; differences in uses between states studied, 232–35, 263
- Mineral City, Virginia: earthquake in, 193–94, 216, 218, 225, 256
- Missouri Public-Private Partnership Committee, 71
- Napolitano, Janet A., 59–60
- National Incident Management Systems (NIMS), 12, 13, 16, 53–54, 57, 103; private sector incorporation into, 58, 75
- National Response Framework (NRF), 57–58, 73; 2013 version, 62; and private sector role in emergency management, 62, 74
- National Response Plan (NRP), 53–54, 57, 73, 82
- New Orleans, Louisiana: and Hurricane Katrina, 55, 85
- Newsom, Gavin C., 277
- New York Bankers Association, 5
- New York Business Development Corporation, 5
- New York City: benefits to partners of, 180, 244–45; collaboration with New York Mets, 171; commitment to establishing disaster partnerships, 155, 162; and Corporate Emergency Access System (CEAS), 153–54, 171; differences with state in emergency management, 156–57, 162, 166, 175–76, 179–80, 183, 189–90, 229; disaster-oriented PPPs in, 169–71; emergency operations center (EOC) of, 160, 165–66, 188–89; emergency responses during 9/11, 12; and fires in Queens, 4; and Hurricane Irene, 165, 225; and Hurricane Sandy, 3–4, 24, 225; information sharing with partners of, 172, 177, 180, 191; influence on state government, 155–56; and management of West Nile Virus, 160–62; and Snowzilla, 152–54; vital

INDEX

-
- role of nonprofits in partnerships with, 157, 191–92
- New York City Office of Emergency Management (NYCOEM): ability to establish and expand disaster partnerships, 157; adaptability of partnerships with, 185–86; benefits to partners of, 174–78, 246; collaboration with New York Mets, 171, 179, 184–85; and creation of CEAS, 154; development of emergency-management agreements, 164–65, 233; disaster-oriented PPPs of, 166, 171; generous funding of, 157, 160, 182–83; importance of trust to, 180, 182–83, 249, 252; and information exchange with partners, 173–78, 246–47; partnership with ConEdison, 171; partnerships with businesses, 165–66, 169, 225, 254; partnerships with industry organizations and nonprofits, 187–88, 258; regularly meeting with businesses, 160, 164; response to Hurricane Sandy, 174, 179, 188; sustainability of disaster-oriented PPPs, 184; use of firms to gather information, 174; use of partnerships to acquire scarce resources during disasters, 179; work with nonprofits and industry organizations during disasters, 188–89
- New York Mets: and collaboration with NYCOEM, 171, 179, 184–85
- New York State: benefits to partners of, 176, 244–45; businesses' support during disasters, 168–70; differences with New York City in emergency management, 156–57, 162, 166, 175–76, 179–80, 183, 189, 229; and disaster-management partnerships, 23–24, 172, 222–23, 227; emergency management budget constraints, 157–58; governor's relationships with firms, 167, 241, 248; and Hurricane Irene, 24, 60–61, 63, 163; importance of trust for disaster-oriented PPPs, 180–83; and information sharing, 172–73, 176, 239–41, 249; lack of organized effort to forge emergency-management agreements, 155, 231, 233, 236, 247–49, 251; partnerships with the private sector, 163–64, 166; response to COVID-19, 279–80; and response to Hurricane Sandy, 5, 154, 163, 172–73; vital role of nonprofits in partnerships with, 157, 191–92; and volunteer disaster

INDEX

-
- recovery program, 163–64;
 - work with firms outside of disasters, 181
 - New York State Office of Emergency Management (NYSO-EM): absence of mutual benefits for private sector partners, 247; benefits to partner firms, 177; budget constraints of, 157–59; collaboration with firms and partnerships, 160, 225, 231; creation of, 159; firms providing physical aid during disasters, 176–77, 191, 246; funding by FEMA and SBA, 158, 190; gubernatorial appointee leadership of, 167; influence from governor of New York, 167, 231, 241, 248; key role of nonprofits and industry organizations in disaster responses, 186–87, 189, 258; sustainability of disaster-oriented PPPs, 183–84
 - New York Stock Exchange, 52, 171
 - Northam, Ralph S., 280
 - Office of Counter Terrorism (OCT), 23
 - Oklahoma: creation of emergency-management agreements, 73
 - Oklahoma City: bombing of the Alfred P. Murrah Federal Building, 51; construction of homes in Tulsa with safe rooms, 66; Oklahoma Safe Room Initiative, 65, 74
 - OneOrlando Fund, 117
 - Orlando, Florida: mass shooting at Pulse nightclub, 116–17
 - PepsiCo: and Hurricane Sandy, 163
 - President's Commission on Critical Infrastructure Protection, 51
 - public-private partnerships (PPPs), 6; evolution of, 50; use of incentives to improve, 29
 - Publix: and benefits of partnering with Florida in disaster management, 136–37; and disaster management, 124–25, 130–31; FDEM assistance in installing emergency generators, 119
 - Safeguard Iowa Partnership (SIP), 68
 - Salazar, Ken, 60
 - Salt Lake City, Utah: hosting of 2002 Winter Olympics, 69; information sharing in preparation for Olympics, 70
 - Salvation Army, 9
 - Schwarzenegger, Arnold: as governor of California, 20, 22
 - Scott, Richard L. "Rick," 124
 - Small Business Administration (SBA): Disaster Loan Assistance Program, 50–51
 - Snowzilla, 152–53

INDEX

-
- Staten Island, 3
- state partnerships: accounting for difference between, 256–57; adaptability of, 252–53; crisis as pivotal in the formation of, 64, 223, 225–26, 228–29, 252–53, 256, 274; importance of nonprofits and industry organizations to, 258–61, 266, 268–69, 273–74; and informally structured partnerships of, 268; and information sharing in, 68–69, 238–39, 244, 261; influence of leaders on the development of, 228–31; mutual benefits of, 70, 244; organizational structure of, 66, 263, 268; and personnel turnover, 255, 263, 267–68; public and private sector leadership as an influence on emergency-management collaborations of, 65; and success without federal involvement, 74; sustainability of, 252–54, 256–57; trust as key to success of, 71, 248–51, 255, 261, 268; use of hybrid partnerships in, 263–64. *See also* emergency management
- strategic communications, 238–39
- tactical communications, 240
- United Way, 56
- UPS, 80–81
- U.S. Army Corps of Engineers, 64
- Utah: creation of emergency-management agreements, 73; Department of Public Safety's Division of Homeland Security, 70
- Verizon, 52
- Virginia: and crises as important drivers of partnerships, 195, 225, 227; emergency-management partnership with Walgreens, 196, 218; and emergency-management partnerships of, 24, 218, 220, 222–23; and Hurricane Irene, 195–96, 218; lack of formal organizational structure to partnerships, 200; Mineral City earthquake, 193–95, 216, 218, 225, 256; partnership with Dominion, 207–8; partnership with Virginia 1st, 198; resistance to MOUs, 200, 233, 243; use of handshake agreements, 200–1
- Virginia 1st: partnership with VDEM, 207, 209–11, 217, 258; partnerships with the State of Virginia, 198–99
- Virginia 811: disaster-management responses, 197–98;

-
- partnership with VDEM, 197–99, 202, 212, 214–16, 229, 258
- Virginia Department of Emergency Management (VDEM), 24–25; adaptability of partnerships, 214–15; benefits to partners, 208–9, 244–47; collaboration with Cox Communications, 200, 207, 212–13; drawbacks to informal partnerships, 203–4; and essential role of nonprofit and industry associations, 194, 216–18, 220, 258, 265–66; importance of relationships to partnerships, 202–3, 219; information sharing with partners, 196, 204–6, 208–10, 213, 239–40, 242, 245; lack of formal organizational structure to partnerships, 200–2, 221; and leaders' commitments to forge partnerships, 199; partnership with Dominion, 210, 249; partnerships with firms, 193–94, 218, 229, 265–66; partnership with Virginia 1st, 207, 209–11, 217, 258; partnership with Virginia 811, 197–98, 202, 212, 214–18, 229, 258; and private sector liaison program, 205, 213, 243; response to COVID-19, 280; sustainability of partnerships, 256–57; trust as basis for partnerships, 201, 211–13, 219–21, 248–52; use of planning exercises, 206, 245, 254; and WebEOC, 201, 241, 243
- Virginia Department of Health (VDH): collaboration with Walgreens on public health-related topics, 200
- Virginia Department of Transportation (VDOT): and partnership with Dominion, 195
- Virginia Emergency Operations Center (VEOC), 207–8
- Voluntary Organizations Active in Disasters (VOAD), 226; and hybrid model of partnership, 147–48, 150, 264; reliance on businesses for support, 146; work with FDEM, 118
- Waffle House: and disaster management, 124–25, 130–31
- Walt Disney Company, 117
- Walgreens, 124–25, 127, 196; collaboration with VDH, 200; partnership with FDEM, 139
- Walmart, 84–85; and Hurricane Katrina relief supplies, 55; and Hurricane Sandy relief, 163; and organizational co-

-
- ordinators in California, 85;
and partnership with state
agencies, 85, 92, 100–1; and
power outage in California,
79–80
- Washington State, 64; coordina-
tion with businesses due
to risk of disaster, 64–65;
creation of emergency-
management agreements,
73; and Green River Valley
risk of flooding from dam,
64–65
- Washington State Emergency
Management Division, 64
- Weyerhaeuser: contribution to
Hurricane Katrina relief ef-
forts, 55–56
- World Health Organization, 276–
77
- World Trade Center, 52
- Wuhan, China: and COVID-19,
275
- Y2K, 173