Disaster Labs
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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

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⁵⁰ “Governor Cuomo Announces BAE Systems to Remain in the Southern Tier.”
⁵¹ National Response Framework, 10.
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. 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. 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

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53 Abou-bakr, Managing Disasters through Public-Private Partnerships, 9–10.
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.\(^5\)\(^5\) 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.\(^5\)\(^6\)

To share this preparedness information easily with businesses, the division used an online, password-
protected information portal. The division posted emergency plans and alerts on the portal that business owners could download. 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. 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. 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

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.\textsuperscript{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.\textsuperscript{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

\textsuperscript{62} Abou-bakr, Managing Disasters through Public-Private Partnerships, 52–53.
on. 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. 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.

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

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. 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. A board of directors governs SIP, its members pay dues, and the organization can send representatives to emergency operations centers during crises. One of SIP’s roles is to facilitate donations of private sector goods and services before and after disasters. 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.

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

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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. 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. The rise of disaster partnerships was therefore one response to this need for increased information sharing.

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. Preparing for the 2002 Olympics required significant coordination and information sharing among state agencies and businesses in Utah. 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

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71 Abou-bakr, Managing Disasters through Public-Private Partnerships, 18–21.
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.\textsuperscript{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 statewide emergency management.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{79} During crises, the BECC passes information about private sector needs and concerns to the State Emergency Oper-

\textsuperscript{75} “State Partnership—Utah,” 1.
\textsuperscript{76} “State Partnership—Utah,” 1.
\textsuperscript{77} “State Partnership—Utah,” 1.
\textsuperscript{78} Abou-bakr, Managing Disasters through Public-Private Partnerships, 67.
ations Center (SEOC), a government-owned and operated facility. 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. These classes offer businesses greater expertise in specialized topics such as hazardous materials response and the Incident Command System. 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. 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. In an official information handout, the committee identifies “[e]stablishing strong trust-

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80 “State Partnership—Arizona,” 3.
81 “State Partnership—Arizona,” 3.
82 “State Partnership—Arizona,” 3.
ing relationships” as one of four key objectives for emergency-management collaborations.\textsuperscript{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.\textsuperscript{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.”\textsuperscript{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.\textsuperscript{88} It is therefore plausible that partnerships

\begin{itemize}
\item \textsuperscript{85} “State Partnership—Missouri,” 3.
\item \textsuperscript{86} State of Missouri Business Emergency Operations Center (BEOC) (Jefferson City: State of Missouri, 2012), 3.
\item \textsuperscript{87} Abou-bakr, Managing Disasters through Public-Private Partnerships, 76.
\item \textsuperscript{88} For example, see “State Partnership—Utah,” 1; and “State Partnership—Alaska,” 1.
\end{itemize}
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).
CHAPTER ONE

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.
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 Resiliency Alliance act as “trusted agents” in the state and help bring state officials and business representa-

³ Erika Baker, interview with the author via telephone, 16 April 2014, hereafter Baker interview.
⁴ Baker interview.
tives together for disaster management purposes.\textsuperscript{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,

\textsuperscript{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. 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. 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. Similarly, a large power outage in California in 2011 left Walmart officials

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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. 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.

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. 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.

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

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9 Brooke Brager, interview with the author via telephone, 5 December 2014, hereafter Brager interview.
10 Brager interview.
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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{16} The exchange also

\textsuperscript{13} Baker interview.
\textsuperscript{14} Dan Bout, interview with the author via telephone, 21 November 2014, hereafter Bout interview.
\textsuperscript{15} Bout interview.
\textsuperscript{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. 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

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efforts to collect monetary donations from the firm’s employees who were not affected by the fire.\textsuperscript{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.

\textbf{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

\textsuperscript{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. 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.

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). John T. Chambers, the former CEO of Cisco, was said to respect and appreciate his employees’ work in emergency management. Walmart’s CEO similar-

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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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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

\begin{flushright}
\textsuperscript{23} Brager interview. \\
\textsuperscript{24} Brager interview. \\
\textsuperscript{25} Jim Turner, interview with the author via telephone, 18 November 2014, hereafter Turner interview. \\
\textsuperscript{26} “Members,” California Resiliency Alliance, accessed 11 June 2015.
\end{flushright}
management purposes. 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. 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.

Organizational coordinators play an essential part in California’s partnerships too. Walmart divides California into different regions for business management purposes. Corporate leaders in each region look to Walmart’s emergency-management department as a central repository of disaster-related information. 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. Among nonprofits, the American Red Cross employs a liaison to work directly with the state government and firms.

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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.\footnote{Anonymous executive interview.} If firms are especially nervous about signing an MOU, they will sometimes opt for an MOU that is more symbolic than committal.\footnote{Anonymous executive interview.} 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.\footnote{Brager interview.} The American Red Cross prefers MOUs for its partnerships, but in practice can leave some of the terms of MOUs ambiguous during negotiations.\footnote{McBroom interview.}

Despite these limitations, state officials stress the value of MOUs in structuring their partnerships.\footnote{For example, see Skillicorn interview.} 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.\footnote{Bryan Koon, interview with the author via telephone, 9 February 2015.} For example, if there is ever a question about the

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\begin{itemize}
  \item Anonymous executive interview.
  \item Anonymous executive interview.
  \item Brager interview.
  \item McBroom interview.
  \item For example, see Skillicorn interview.
  \item Bryan Koon, interview with the author via telephone, 9 February 2015.
\end{itemize}
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. 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. 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.

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. 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.

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43 Bout interview; and McBroom interview.
44 Bout interview.
45 McBroom interview.
46 Brager interview.
vis-à-vis its private sector partners. 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.

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. 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

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47 Skillicorn 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.\(^5^0\) 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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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

\textsuperscript{51} Brager interview.
\textsuperscript{52} McBroom interview; and Brager interview.
\textsuperscript{53} McBroom interview.
\textsuperscript{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. 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.”

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. 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. 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.
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. This means that government employees may be in a position to block information sharing with firms. Employees within businesses may be prone to similar behavior. They also have numerous behavioral incentives to withhold information.

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. 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.
61 Evans, Hendron, and Oldroyd, “Witholding the Ace,” 3.
are not timely or useful.\textsuperscript{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.

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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{67} The team is not re-

\textsuperscript{64} Brager interview.
\textsuperscript{65} Brager interview.
\textsuperscript{66} Bharania interview.
\textsuperscript{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.\textsuperscript{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.\textsuperscript{69} The state’s corporate BUOC partners banded together to purchase the showers for the American Red Cross.\textsuperscript{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.

\textsuperscript{68} Bharania interview.
\textsuperscript{69} McBroom interview. See, for example, Elizabeth Weise, “120 Injured, 3 Critical after Napa, California Quake,” \textit{USA Today}, 24 August 2014.
\textsuperscript{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.\textsuperscript{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.\textsuperscript{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

\textsuperscript{71} Bout interview.
\textsuperscript{72} Baker interview.
done during the disaster, or what they need for the purposes of disaster response.\textsuperscript{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.\textsuperscript{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.\textsuperscript{75} Because of these factors, the existence of mutual benefits in California’s disaster-oriented PPPs is a key predictor of their success.\textsuperscript{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.

\textsuperscript{73} McBroom interview.
\textsuperscript{75} McBroom interview.
\textsuperscript{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.\(^8\)

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.\(^8\) 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-
nity to gain business advantages over competitors.\textsuperscript{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.\textsuperscript{83} This action requires that first responders trust business owners not to endanger themselves when they enter these areas.\textsuperscript{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.”\textsuperscript{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

\textsuperscript{82} Jim Williams, interview with the author via telephone, 1 December 2014.
\textsuperscript{83} Turner interview.
\textsuperscript{84} Turner interview.
\textsuperscript{85} McBroom interview.
a significant number of former military personnel, police officers, firefighters, and emergency medical technicians. Every member of the Cisco TacOps team receives formal training in the NIMS and ICS, which are standardized emergency-management methods promoted by FEMA. 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.

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. 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. 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.
88 Bharania interview.
89 Baker interview.
90 Skillicorn interview.
time. 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. 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

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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 CaIOES’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 CaIOES 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 CaIOES’s disaster management agreements have changed. In the BUOC’s early days, CaIOES sought to partner with professional industry organizations, because doing so would permit CaIOES 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.

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ished. 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.

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. 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.

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.
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. 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.
The CRA exists for the sole purpose of bringing together public and private sector actors to improve emergency-management capabilities. 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. 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. The Red Cross carries these strong ties inside the BUOC during cri-

106 McBroom interview.
108 McBroom interview.
ses, creating a network multiplier effect.\textsuperscript{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.\textsuperscript{111} The CRA was instrumental in the creation of the BUOC.\textsuperscript{112} Today, the CRA boasts more than 400 government, business, and nonprofit sector members.\textsuperscript{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.\textsuperscript{114} In addition, just


\textsuperscript{111} California Resiliency Alliance members also include local and federal government representatives. See “Members,” California Resiliency Alliance, accessed 11 June 2015.

\textsuperscript{112} Turner interview.

\textsuperscript{113} “Members.”

\textsuperscript{114} “Members.”

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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 timeline 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 cooperation 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-

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

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. Airbnb, a home-sharing website, assisted survivors with lodging. Uber, a ridesharing service, provided ground transportation. 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. 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.

3 Mickle and Stevens, “Federal Authorities Call Orlando Shooting Hate Crime.”
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.
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. The Red Cross also opened a center staffed by mental health counselors to aid the loved ones of shooting victims. 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. 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.

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10 “Caring for Each Other After the Orlando Shooting,” American Red Cross, 22 June 2016.
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.\textsuperscript{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.\textsuperscript{13} The FDEM assisted Publix to obtain the permits required to install the generators.\textsuperscript{14} The FDEM likely provided this assistance be-

\textsuperscript{12} The hurricanes were Charley, Frances, Ivan, and Jeanne (2004); and Dennis, Katrina, Rita, and Wilma (2005).
\textsuperscript{13} Chuck Hagan, email to the author, 26 June 2015, hereafter Hagan email.
\textsuperscript{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. 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. 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

of which require a great deal of fuel. 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. 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. The legislation eventually passed the state legislature and was signed into law by Florida governor John E. “Jeb” Bush in 2007. 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. Each ESF consists of a cluster of government employees respon-

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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.
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

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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.\textsuperscript{27}

\textbf{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.\textsuperscript{28} The

\textsuperscript{27} Murrell interview.

\textsuperscript{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. These factors seem to have influenced the state’s current approach to disaster partnerships.

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.

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. Publix is said to have a similarly strong cultural commitment to disaster resilience, earning it praise from FDEM officials. Waffle House and Publix’s institutional dedication to disaster preparedness as part of their respective corporate cultures demonstrates

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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. 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. 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.

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39 Williams interview.
MOUs are not legally binding, so they may actually be of little value in Florida’s partnerships. A representative from Walgreens, for instance, says that their firm is willing to assist other organizations when asked. 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. 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.” 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.

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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{49}

The tension between formal and informal part-

\textsuperscript{45} Tom Duffy, interview with the author via telephone, 2 February 2015, hereafter Duffy interview.
\textsuperscript{46} Duffy interview.
\textsuperscript{47} Duffy interview.
\textsuperscript{48} “Emergency Support Functions: ESF #18.”
\textsuperscript{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.\textsuperscript{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

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.\footnote{“Governor’s Hurricane Conference,” accessed 2 January 2020; and “Southeast Private-Public Partner Summit,” FEMA, 29 April 2019.} 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.\footnote{Duffy interview.} Representatives from Waffle
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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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

\begin{footnotesize}
\textsuperscript{53} Duffy interview.
\textsuperscript{54} Murrell interview.
\textsuperscript{55} McIntyre interview; and Koon interview.
\end{footnotesize}
helps the agency determine where to locate FDEM’s distribution points for supplies, with the goal of targeting areas where retailers are not open.\footnote{Hagan interview.}

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.\footnote{Koon interview.} 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.\footnote{Fulton telephone interview.} 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.\footnote{Blosé II interview.} This kind of proactive information exchange helps the Florida 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...
for smaller firms with 7–10 employees.\textsuperscript{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.\textsuperscript{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

\textsuperscript{60} Duffy interview.
\textsuperscript{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. 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. “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. The FDEM increases its own effectiveness by turning to businesses for higher quality goods and services, be-

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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.
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. 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. 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.

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

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68 Koon interview; and McIntyre interview.

69 McIntyre interview.

70 Blosé 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.\footnote{Hagan interview.}

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.
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. Close personal ties between individual organizational representatives also seem to have a positive influence upon the trust-building process. 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.

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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.\textsuperscript{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.\textsuperscript{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

\textsuperscript{75} McIntyre interview.
\textsuperscript{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. 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 does.

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77 Hagan interview.
members share information with FDEM face-to-face.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{81} Some of FDEM’s partnerships may not be needed during certain types of disasters.\textsuperscript{82} This means that years may pass between the disasters during which FDEM and a subset of its partners work together.\textsuperscript{83} To be sure, disasters have a way of concentrating the attention of government policy makers and business owners on emergency-management

\textsuperscript{78} Duffy interview.
\textsuperscript{79} McIntyre interview.
\textsuperscript{80} McIntyre interview.
\textsuperscript{81} McIntyre interview.
\textsuperscript{82} Fulton telephone interview; and McIntyre interview.
\textsuperscript{83} Fulton telephone interview; and McIntyre interview.
related matters. 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.

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. These actions show that the long-term sustainability of

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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. FDEM officials take disaster-response exercises seriously and try to make them as realistic as possible. Still, even well-designed exercises cannot replicate the exact conditions of true disasters.

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. 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

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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.\textsuperscript{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.\textsuperscript{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-

\textsuperscript{91} McIntyre interview.
\textsuperscript{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.”

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. These comments suggest that convenience, efficiency, and speed may be the primary motivations that underpin the FDEM’s partnerships with industry organizations.

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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. These nonprofits in Florida exemplify broader business community interest in emergency management.

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

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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

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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.
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

5 “Winter Storm Aftermath.”
moves millions of people each day, was shut down.\textsuperscript{6} Thousands of passengers at LaGuardia Airport in Queens were stranded due to canceled flights.\textsuperscript{7} Many city garbage trucks were repurposed to plow snow, causing city residents’ trash to pile up on sidewalks more than usual.\textsuperscript{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.\textsuperscript{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

\textsuperscript{8} “Winter Storm Aftermath.”
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.
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.\(^\text{14}\) Instead, the state government partners with the private sector during disasters on a largely ad hoc or contractual basis.\(^\text{15}\) By contrast, there is a longstanding New York City-level commitment to establishing and growing disaster partnerships.\(^\text{16}\)

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.\(^\text{17}\) New York City residents pay about 45 percent of all

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\(^{14}\) 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.  
state-level personal income tax.\textsuperscript{18} New York City residents also receive around 40 percent of state tax distributions.\textsuperscript{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.\textsuperscript{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


\textsuperscript{19} “Giving and Getting,” 5, table 1a.

ways. The chapter then makes the case that nonprof-
it and industry associations play an understated yet
vital role in New York State and New York City’s part-
nerships. The chapter concludes by arguing that New
York State and New York City’s disaster response col-
laborations 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 demograph-
ic 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 finan-
cial. 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 govern-
ment 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 work-
ing 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. Ex-
perienced 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.

A further challenge to the state’s ability to build these agreements is the need for post-disaster fund-
ing. 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. 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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.

\textsuperscript{24} Anonymous official interview.
\textsuperscript{25} Davis, Porter, and Dugan interview.
\textsuperscript{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.\textsuperscript{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 longstanding 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.\textsuperscript{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

\textsuperscript{27} Tannenbaum interview.

\textsuperscript{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.\textsuperscript{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!\textsuperscript{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.\textsuperscript{31}

\textsuperscript{29} Hayes interview; and “West Nile Virus,” U.S. Centers for Disease Control and Prevention, 9 June 2015.
\textsuperscript{30} Hayes interview.
\textsuperscript{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

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\(^{32}\) 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.\textsuperscript{33} FedEx provided free shipping services for the NYSEOM, and Walmart delivered bottled water to Sandy survivors.\textsuperscript{34} That these firms’ representatives were present in the NYSEOM 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.\textsuperscript{35} Packaged food giant PepsiCo, along with restaurants in the New York City area, donated food to disaster survivors.\textsuperscript{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

\textsuperscript{33} Davis, Porter, and Dugan interview.
\textsuperscript{34} Davis, Porter, and Dugan interview.
\textsuperscript{35} Hayes interview.
\textsuperscript{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. 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. In the months leading up to November 2014, an outbreak of the Ebola virus had killed more than 5,000 people in West Africa. 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-

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37 Anonymous official interview.
38 Tannenbaum interview.
tions are. We’re not going to show up in moon suits and start collecting samples without telling you what’s going on.\textsuperscript{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

\textsuperscript{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. 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.

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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.\textsuperscript{42} Moreover, NYSEOM’s top leaders are gubernatorial appointees, meaning that their management decisions are influenced directly and indirectly by the governor.\textsuperscript{43} These factors mean that during disasters it is the governor’s office, not the NYSEOM, that is the primary point of interface between businesses and the state government. This arrangement limits significantly the NYSEOM’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 NYSEOM, is that the governor’s office has built strong relationships with firms outside the context of emergency management and leverages these relationships during crises.\textsuperscript{44} These relationships can build political capital, which the governor’s office can then spend to benefit the state during and after disasters.\textsuperscript{45} For example, after Hurricane Sandy,

\textsuperscript{42} Anonymous official interview; and “Governor’s Office of Storm Recovery: About,” State of New York, accessed 15 June 2015.
\textsuperscript{43} Davis, Porter, and Dugan interview.
\textsuperscript{44} Anonymous official interview.
\textsuperscript{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.\footnote{Anonymous official interview.}

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.\footnote{“FedEx among Companies Recognized by NYSE for Hurricane Sandy Relief Support,” FedEx, 9 November 2012.} 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.\footnote{Hayes interview.} 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.\footnote{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. 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,

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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. 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. 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. 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.

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. 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. Less formal partnerships also exist. The New York Stock Exchange (NYSE), for instance, partners with NYCOEM by participating in the CEAS.

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. Despite these pressures, NYCOEM enjoys a range of organizational structures in its disaster-oriented PPPs.

55 Tannenbaum interview.
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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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-

\textsuperscript{59} Davis, Porter, and Dugan interview.
\textsuperscript{60} Anonymous official interview.
\textsuperscript{61} Hayes interview.
\textsuperscript{62} Anonymous official interview.
ing remains a top priority for the NYCOEM today.\footnote{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,” \textit{New Yorker}, 30 December 2019.} 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.\footnote{Tannenbaum interview.}

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
job. Business officials can gain credibility within their respective organizations by receiving this information. 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. 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. Major League Soccer (MLS), the United States’ largest professional soccer organization, is headquartered in New York City. MLS worked with the NYCOEM after Hurricane Sandy to improve its emergency-preparedness measures. One outgrowth of this collaboration was MLS’s implementation of a new emergency communications system for employees.

The New York State and New York City govern-

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65 Tannenbaum interview.
66 Tannenbaum interview.
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 NYSOEM has contracts with firms for a range of supplies that may be needed during disasters.\(^\text{72}\) When the state obtains

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\(^{72}\) 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.\textsuperscript{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.\textsuperscript{74} Honda motor company donated a truck full of gasoline-powered electrical generators to the state.\textsuperscript{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.\textsuperscript{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

\textsuperscript{73} Anonymous official interview.
\textsuperscript{74} “Governor Cuomo Suspends Regulations to Allow Drinking Water Donations for New Yorkers Affected by Hurricane Sandy,” State of New York, 4 November 2012.
\textsuperscript{75} Davis, Porter, and Dugan interview.
\textsuperscript{76} Laura Petrecca, “Businesses Step Up to Aid Victims of Superstorm Sandy,” \textit{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{81} This data can help firms make business decisions faster, since their leaders do not have to wait

\begin{footnotes}
\item[77] Tannenbaum interview.
\item[81] Tannenbaum interview.
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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.\textsuperscript{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.\textsuperscript{83} The NYCOEM later nominated the Mets for a federal award for their assistance after Hurricane Sandy—which the Mets received in December 2013.\textsuperscript{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

\textsuperscript{82} Tannenbaum interview.

\textsuperscript{83} Tannenbaum interview.

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-

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\(^{86}\) 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. 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.

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.

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

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87 Davis, Porter, and Dugan interview.
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

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\(^{90}\) 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...
PPP evolving. 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. 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-

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95 Tannenbaum interview.
96 Tannenbaum interview.
Partnerships 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. The foundation receives financial donations and supplies from firms, which it passes on to the state or individual citizens in need. 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. These examples of collaboration between the NYSOEM, nonprofits, and industry organizations highlight the broader role that charities and professional groups can play to enhance statewide 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. By identifying the needs of individual business groups through

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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.