



# **INSTITUTING RESILIENCE:**

Recommendations for Governors and  
Legislators on Establishing and  
Supporting Chief Resilience Officers



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# FOREWORD

One climate-fueled disaster after another continues to devastate communities across the country, from deadly wildfires and extreme drought in the West to powerful hurricanes that come in rapid succession to the Gulf Coast and Eastern seaboard. Even extreme wind events are becoming more common, such as the event from summer 2020 that flattened houses, businesses and crops across the Corn Belt, killed four people and caused an estimated \$7.5 billion in damages.

At Environmental Council of the States (ECOS), an association of state environmental secretaries, commissioners and directors, and at National Emergency Management Association (NEMA), an association of state emergency management directors, our members are on the front lines of dealing with these hazards. To share best practices among our respective organizations, at NEMA, we have a standing Resilience Committee; and at ECOS, resilience is a topic that weaves through all our standing committees such as air, water and waste.

In both of our organizations, our members are constantly searching for, and identifying, innovative ways to mitigate and plan for disasters before they occur. Financial resources are important but so too are appropriate governance structures within states that help to ensure that a system is set up for success.

Given our work with states, in the past several years, we have seen several of them – through executive orders and legislation – create Chief Resilience Officer (CRO) positions to coordinate resilience and lead risk mitigation and planning activities across government. As states create these CRO positions, we have seen some in public safety agencies where several of NEMA's members serve and others in environmental agencies where ECOS' members serve, while others serve in a governor's office.

Environmental Defense Fund – a global nonprofit organization that uses science, economics, and the law

to drive environmental outcomes on behalf of its over 2.5 million members – has worked with states and communities on coastal and watershed resilience and has also noticed the increasing number of CROs and is working with several of them.

Each of our organizations, with an eye toward ensuring sound risk management and resilience planning across the country, want to see CROs thrive. To that end, we wanted to provide a governance roadmap for state decisionmakers who may be thinking about having a CRO – or enhancing an existing CRO.

We are grateful to the many CROs and other state officials who came together to offer their experience and insights about how to make the most of a CRO position. Time is not something these officials have much of – complicated by the ravages of a global pandemic – and they came together to inform us in this effort, which is appreciated. Also, given the target audience for the roadmap, we are grateful to the staff from the National Governors Association Center for Best Practices (NGA Center) and National Conference of State Legislatures (NCSL) who participated throughout the process.

While many states have resilience and adaptation functions, this report invited input from those state officials who are officially charged as Chief (State) Resilience Officers and heads of statutorily-created resilience offices – as well as officials from states that are contemplating CRO positions.

Throughout this process, one thing is abundantly clear: Looking to a CRO to lead on resilience for any given authority has strong bipartisan appeal. Democratic and Republican administrations alike have created CRO positions; and Democratic and Republican legislators have introduced and passed bipartisan legislation to create CRO positions. Given the high stakes that a changing climate poses to human life and property, that is as it should be.





# INTRODUCTION

In January 2021, Environmental Council of States (ECOS), National Emergency Management Association (NEMA), and Environmental Defense Fund (EDF) launched a six-month-long Chief Resilience Officer Work Group with the goal of producing a governance roadmap for governors and legislators who are interested in creating or enhancing a Chief Resilience Officer (CRO) position.

Due to the growing importance of this coordinating position in state government, there has been a steady increase in the number of CROs across the country. These CROs have been created by executive orders as well as through legislation; and CROs have been situated in governors' offices, environmental agencies or public safety agencies. Importantly, whether through a governor's office or legislature, creating CROs has proven to be bipartisan with governors and legislators of both parties working to establish CROs.

Without question, CROs are seen as critical positions to successfully tackle the complex issues involved in risk management, and resilience planning and implementation. For the safety and wellbeing of communities, all participating organizations and CROs have an interest in seeing that CROs are successful.

In order to come together on recommendations for policymakers, over the course of the six months, CROs and others discussed many salient topics of how CROs are working in their respective states. These included: "origin stories" (that is, how the CRO position came to be); internal and external engagement; government-to-government engagement; approaches to risk management; and state resilience planning. From experiences shared in those conversations, the recommendations in this report emerged. We offer these without attribution in order to elicit candid viewpoints.

While most recommendations are directed at governors and legislators who may be contemplating CRO positions, in reviewing the recommendations, CROs found several that are especially pertinent within the CRO community and as new CROs come online. Those are highlighted separately.



# BACKGROUND ON CHIEF RESILIENCE OFFICERS

The idea of a “Chief Resilience Officer” (CRO) first entered the policy sphere on May 14, 2013, with the launch of the Rockefeller Foundation’s “100 Resilient Cities” initiative.<sup>1</sup> With a goal that “more cities build resilience to the physical, social, and economic challenges that are a growing part of the 21st century,” Rockefeller and participating cities saw a CRO as a critical position that cities would need to fill to drive and coordinate their resilience-building efforts. As initially envisioned, the CRO reported directly to the city’s chief executive and acted as the city’s point person for resilience.

Within city government, Rockefeller saw the CRO as being able to:

1. Coordinate across city departments to improve internal communications and collaborations, share knowledge and reduce duplication.
2. Engage a wide array of stakeholders – government officials, private sector, nonprofit and civil society – to learn about the city’s challenges and help build support for individual and community initiatives.
3. Lead the implementation of a resilience strategy.
4. Serve as the “resilience point person” ensuring that the city is applying a resilience lens to leverage resources holistically, potentially achieving multiple resilience or department goals with one project. For example, a flood barrier also serving as a bike path, promoting healthy residents and cohesive communities.

Building on the city example, states have created CRO positions – in name and/or function – housing them in various areas of government, to include among them: the governor’s office; state department of environment; or state department of public safety. Many state CROs were created following a disaster – such as Hurricane Florence in North Carolina in 2018 or the epochal floods in West Virginia in 2016 – as states looked to have a singular point of contact for collaborating across government and outside of government, and for coordinating the deployment of state and federal disaster resources. Other CROs – such as Virginia, New Jersey and Rhode Island – were created and tasked with designing resilience plans.

<sup>1</sup> <https://www.rockefellerfoundation.org/100-resilient-cities/>  
<https://philanthropynewsdigest.org/news/rockefeller-foundation-launches-100-million-challenge-to-build-resilient-cities>

# STATES WITH CHIEF RESILIENCE OFFICERS

## Colorado

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Today, the Colorado Resiliency Office is housed in the Department of Local Affairs (DLA), a unique agency among states that is responsible for “strengthening Colorado’s local communities.”<sup>2</sup> The precursor was the Colorado Recovery Office created in 2013 by Gov. Hickenlooper to work out of the governor’s office and with local communities to address the impacts of devastating flooding that destroyed thousands of homes, roads and highways, and other critical infrastructure.<sup>3</sup>

In 2018, the Legislature, through bipartisan legislation, created the Colorado Resiliency Office in DLA to proactively address impacts to Colorado’s communities due to changing conditions or challenges – including climate change and natural hazards.<sup>4</sup> The office is tasked with a number of responsibilities, some of which include:

- Develop a plan to improve coordination among state agencies and local jurisdictions to support community and economic recovery efforts and to address risk and vulnerability reduction.
- Provide technical assistance to local governments for the implementation of resilience planning, including resilience frameworks, vulnerability profiles, risk-reduction plans and economic development strategies.
- Provide technical assistance to state agencies for the implementation of resilience policies and procedures and to institutionalize resilience practices across departments and agencies.
- Integrate resilience criteria into existing competitive grant programs.
- Provide policy advocacy to shape federal resilience efforts.
- Develop metrics and targets to measure the short- and long-term success of resilience efforts and actions.<sup>5</sup>

## Florida

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In May 2019 Gov. Ron DeSantis indicated his intention to hire a Chief Resilience Officer and on August 1, 2019, he announced the state’s first CRO. Serving in the governor’s office, the CRO was “tasked with preparing Florida for the environmental, physical and economic impacts of sea level rise” and directed to “work in partnership with the Florida Department of

<sup>2</sup> <https://cdola.colorado.gov/about-dola>

<sup>3</sup> <https://kdvr.com/news/politics/hickenlooper-announces-chief-recovery-officer-says-2k-homes-lost-by-flooding/>

<sup>4</sup> HB18-1394, <https://leg.colorado.gov/bills/hb18-1394>

<sup>5</sup> Colo. Rev. Stat. § 24-32-122, <https://codes.findlaw.com/co/title-24-government-state/co-rev-st-sect-24-32-122.html>

# STATES WITH CHIEF RESILIENCE OFFICERS

Environmental Protection, the Florida Department of Transportation, the Florida Division of Emergency Management, the Florida Department of Agriculture and Consumer Services, the Florida Fish and Wildlife Conservation Commission, and the Florida Department of Economic Opportunity, in addition to local communities and stakeholders.”<sup>6</sup> After the resignation of the first CRO in spring of 2020, the governor announced that the Secretary for the State Department of Environmental Protection would also have the title of CRO, thus becoming “dual-hatted,” holding the titles and functions of both the secretary and CRO.

Legislation introduced in 2021 would formally create a CRO position in the governor’s office but it did not pass.<sup>7</sup>

## Louisiana

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On February 20, 2020, Gov. John Bel Edwards issued an executive order creating a CRO in the governor’s office and requiring each state agency to identify “resilience coordinators” to serve as the agency lead on adaptation and resilience.<sup>8</sup> The order also requires agencies to assess “vulnerabilities to extreme weather events and persistent coastal change and the identification of adaptation options for agency assets and the agency’s ability to carry out its mission.”<sup>9</sup>

Years before Gov. Edwards’ actions to create a CRO position and after devastating losses due to Hurricanes Katrina and Rita, Louisiana’s legislature in 2005 passed SB71<sup>10</sup> to create the Coastal Protection and Restoration Authority (CPRA) within the governor’s office with the goal of coordinating across state government as well as the federal and local governments and levee districts. The head of CPRA, appointed by the governor and confirmed by the senate is tasked with developing the state’s comprehensive coastal protection master plan.

Today, the head of CPRA and Louisiana’s CRO work cooperatively within the governor’s office, with the head of CPRA working to implement the state’s coastal master plan and the CRO advancing resilience priorities across the entirety of state government.

## New Jersey

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On October 29, 2019, Gov. Phil Murphy signed an executive order empowering the Commissioner of the State Department of Environmental Protection to appoint a Chief Resilience Officer who would, among other things: lead a new Climate and Flood Resilience Program; co-chair a new Interagency Council on Climate Resilience; develop a Scientific Report on Climate Change; and develop a Statewide Climate Change Resilience Strategy. The Assistant Commissioner for Climate and Flood Resilience is currently the appointed, dual hatted CRO.<sup>11</sup>

<sup>6</sup> <https://flgov.com/2019/08/01/governor-ron-desantis-announces-dr-julia-nesheiwat-as-floridas-first-chief-resilience-officer/>

<sup>7</sup> SB 7016, introduced in the 2020 session, would create a Statewide Office of Resiliency in the Office of the Governor and create a Statewide Sea-Level Rise Task Force. The bill passed the Senate but died in the House.

<sup>8</sup> CRO position created by Executive Order JBE 2020-19, February 20, 2020. <https://gov.louisiana.gov/assets/ExecutiveOrders/2020/JBE-2020-19-Coastal-Resilience.pdf>

<sup>9</sup> Ibid.

<sup>10</sup> <https://www.legis.la.gov/Legis/BillInfo.aspx?i=103818> & <https://www.legis.la.gov/Legis/ViewDocument.aspx?d=329021>

<sup>11</sup> CRO position created by Executive Order 89, October 29, 2019. <https://nj.gov/infobank/eo/056murphy/pdf/EO-89.pdf>



# STATES WITH CHIEF RESILIENCE OFFICERS

## North Carolina

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In 2018, Hurricane Florence ravaged North Carolina. In response, the General Assembly passed the 2018 Hurricane Florence Disaster Act with Section 5.7.(a) creating the North Carolina Office of Recovery and Resiliency (NCORR) in the Emergency Management Division of the state Department of Public Safety to help coordinate state and federal resources.<sup>12</sup> Gov. Roy Cooper’s administration named the state’s first Chief Resilience Officer on May 15, 2019 to lead the office.<sup>13</sup>

## Oregon

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In 2015, Oregon adopted the nation’s first legislatively created State Resilience Officer (SRO) position. The legislation put the SRO in the Governor’s office – to be appointed by the governor and confirmed by the Senate – and included an emergency clause so that the law went into immediate effect upon signing by the governor. The creation of the SRO position grew directly out of recommendations offered by a Governor’s Task Force on Resilience Plan Implementation to prepare Oregon for a large Cascadia Subduction Zone earthquake. The SRO’s statutory direction is to “direct, coordinate, and oversee seismic safety and resilience planning and preparation by state agencies,” though the SRO has subsequently taken on additional resilience planning activities across the state.

## Rhode Island

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On September 15, 2017, Gov. Gina Raimondo issued an executive order to design and implement an *Action Plan to Stand Up to Climate Change* that focused on making the state more resilient to climate change, specifically looking at community resilience, economic resilience, critical infrastructure and environmental resilience.<sup>14</sup> Recognizing the resource needs to build resilience, the governor placed the CRO in the Rhode Island Infrastructure Bank, tapping the Director of Stormwater and Resiliency in a dual-hatted position. Gov. Raimondo’s order also requires state agencies to appoint “resiliency coordinators” to serve as the respective agency’s point of contact on resilience matters.<sup>15</sup>

## South Carolina

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On September 25, 2020, the Legislature sent a bipartisan bill to the governor to move the South Carolina Disaster Recovery Office from the state Department of Administration into the Governor’s Office to be led by a new CRO appointed by the governor and confirmed by the state senate.<sup>16</sup> Gov. McMaster appointed the new CRO on March 9, 2021.<sup>17</sup>

<sup>12</sup> <https://www.ncleg.net/EnactedLegislation/SessionLaws/HTML/2017-2018/SL2018-136.html>

<sup>13</sup> <https://www.ncdps.gov/news/press-releases/2019/05/15/nc-office-recovery-and-resiliency-names-key-resilience-officers>

<sup>14</sup> CRO position created by Executive Order 17-10, September 15, 2017. <https://governor.ri.gov/documents/orders/ExecOrder-17-10-09152017.pdf>.

<sup>15</sup> Ibid.

<sup>16</sup> S259 [https://www.scstatehouse.gov/sess123\\_2019-2020/bills/259.htm](https://www.scstatehouse.gov/sess123_2019-2020/bills/259.htm)

<sup>17</sup> <https://governor.sc.gov/news/2021-03/gov-henry-mcmaster-names-south-carolinas-first-chief-resilience-officer>

# STATES WITH CHIEF RESILIENCE OFFICERS

## Virginia

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In December 2014, Gov. Terry McAuliffe appointed his secretary of Public Safety and Homeland Security as Virginia's first CRO in a dual-hatted position. On November 2, 2018, Gov. Ralph Northam launched an initiative to increase Virginia's resilience to sea level rise and issued an executive order setting in motion several activities to bolster the state's resilience, including adoption of a Coastal Resilience Master Plan.<sup>18</sup> The executive order also moved the CRO position to the Secretary of Natural Resources.

In the 2020 legislative session, the Virginia Assembly passed and the governor signed a bill to codify a state Chief Resilience Officer position for the Commonwealth,<sup>19</sup> and in the 2021 session, the Assembly passed legislation that both expanded the title of the Department of Natural Resources to Natural and Historic Resources and codified the CRO position with the secretary of the department.<sup>20</sup>

In addition to having a CRO established in state statute, it is important to note that in 2018, Virginia's Assembly passed SB 265 to create a Special Assistant to the Governor for Coastal Adaptation and Protection. Specifically, the bill established the position in the governor's office and put the Special Assistant in the lead to develop a statewide coastal flooding adaptation strategy. The bill also directed the Special Assistant to "initiate and assist with economic development opportunities associated with adaptation, to advance academic expertise at the Commonwealth Center for Recurrent Flooding and Resiliency, and to pursue federal, state, and local funding opportunities for adaptation initiatives."<sup>21</sup> The 2020 legislation codifying the CRO position requires consultation with the Special Assistant on matters of flooding.

## West Virginia

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In 2017, in response to devastating floods, the state legislature established a Joint Legislative Committee on Flooding and created the State Resiliency Office and State Resiliency Officer within the Development Office in the Department of Commerce, as well as a State Resiliency Office Board.<sup>22</sup> In February 2020, the governor signed legislation that, among other things, moved the State Resiliency Officer into the governor's office.<sup>23</sup>

## Wyoming

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Within the Wyoming Office of Homeland Security that is part of the Governor's office there is a Resilience Officer position that sits in the Grants & Finance Section of the organization.<sup>24</sup> The position supports local communities with their investments in mitigation planning to be more resilient to natural hazards. The position was created administratively, without executive order or legislation.

<sup>18</sup> <https://www.governor.virginia.gov/media/governorvirginiagov/executive-actions/ED-24-Increasing-Virginias-Resilience-To-Sea-Level-Rise-And-Natural-Hazards.pdf>

<sup>19</sup> <https://lis.virginia.gov/cgi-bin/legp604.exe?201+sum+HB1313S&201+sum+HB1313S>

<sup>20</sup> <https://lis.virginia.gov/cgi-bin/legp604.exe?212+sum+HB1836>

<sup>21</sup> <https://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+SB265>

<sup>22</sup> HB2935 [http://www.wvlegislature.gov/Bill\\_Status/bills\\_text.cfm?billdoc=HB2935%20SUB%20ENR.htm&yr=2017&sesstype=RS&i=2935](http://www.wvlegislature.gov/Bill_Status/bills_text.cfm?billdoc=HB2935%20SUB%20ENR.htm&yr=2017&sesstype=RS&i=2935)

<sup>23</sup> [https://www.wvlegislature.gov/Bill\\_Status/Bills\\_history.cfm?input=586&year=2020&sessiontype=RS&btype=bill](https://www.wvlegislature.gov/Bill_Status/Bills_history.cfm?input=586&year=2020&sessiontype=RS&btype=bill) updated the SRO and brought the State Resiliency Officer into the Governor's Office with advice and consent of the Senate.

<sup>24</sup> <https://hls.wyo.gov/contacts>

# STATES EXPLORING CHIEF RESILIENCE OFFICER POSITIONS

## Maryland

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Legislation introduced in 2020 by Sen. Katie Hestor would have required the Director of the Maryland Emergency Agency to appoint a Chief Resilience Officer responsible for coordinating state and local efforts to build resilience to risks identified in the Maryland Hazard Mitigation Plan.<sup>25</sup>

The CRO would have coordinated across state and local agencies to prepare and implement resilience strategies and identified and helped secure federal, state and local resources to finance those strategies. The CRO would have been required to report annually on the status of resilience efforts across the state. The legislation did not pass.

In the 2021 session, the bill was reintroduced but, again, did not pass.<sup>26</sup>

## New Mexico

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In the 2019 session, legislation supported by Gov. Michelle Lujan Grisham would have created a Chief Sustainability and Resilience Officer position, tasked with directing the state agencies' efforts to address climate change and greening state government. The legislation passed the House, but not the Senate.<sup>27</sup>

## Washington

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In the 2019 session, the Legislature passed, and the governor signed, a bill to create a Washington Disaster Resiliency work group tasked with providing a recommendation by December 1, 2020 on whether the state should create a permanent disaster resiliency program. The state's separately elected Insurance Commissioner chaired the work group.<sup>28</sup> The work group *strongly recommended* that "Washington create an ongoing resiliency program."<sup>29</sup>

In 2021, Reps. Cindy Ryu and Brad Klippert introduced bipartisan legislation to create a state Office of Resiliency in the Governor's Office, to be managed by a director who would be appointed by the Governor.<sup>30</sup> The legislation did not pass.

On July 7, 2021, Hilary Franz, the separately elected Commissioner for the state Department of Natural Resources, appointed a Chief Resilience Officer specific to that agency.<sup>31</sup>

<sup>25</sup> <https://legiscan.com/MD/bill/SB721/2020>

<sup>26</sup> <https://legiscan.com/MD/bill/SB62/2021>

<sup>27</sup> <https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=28&year=19>

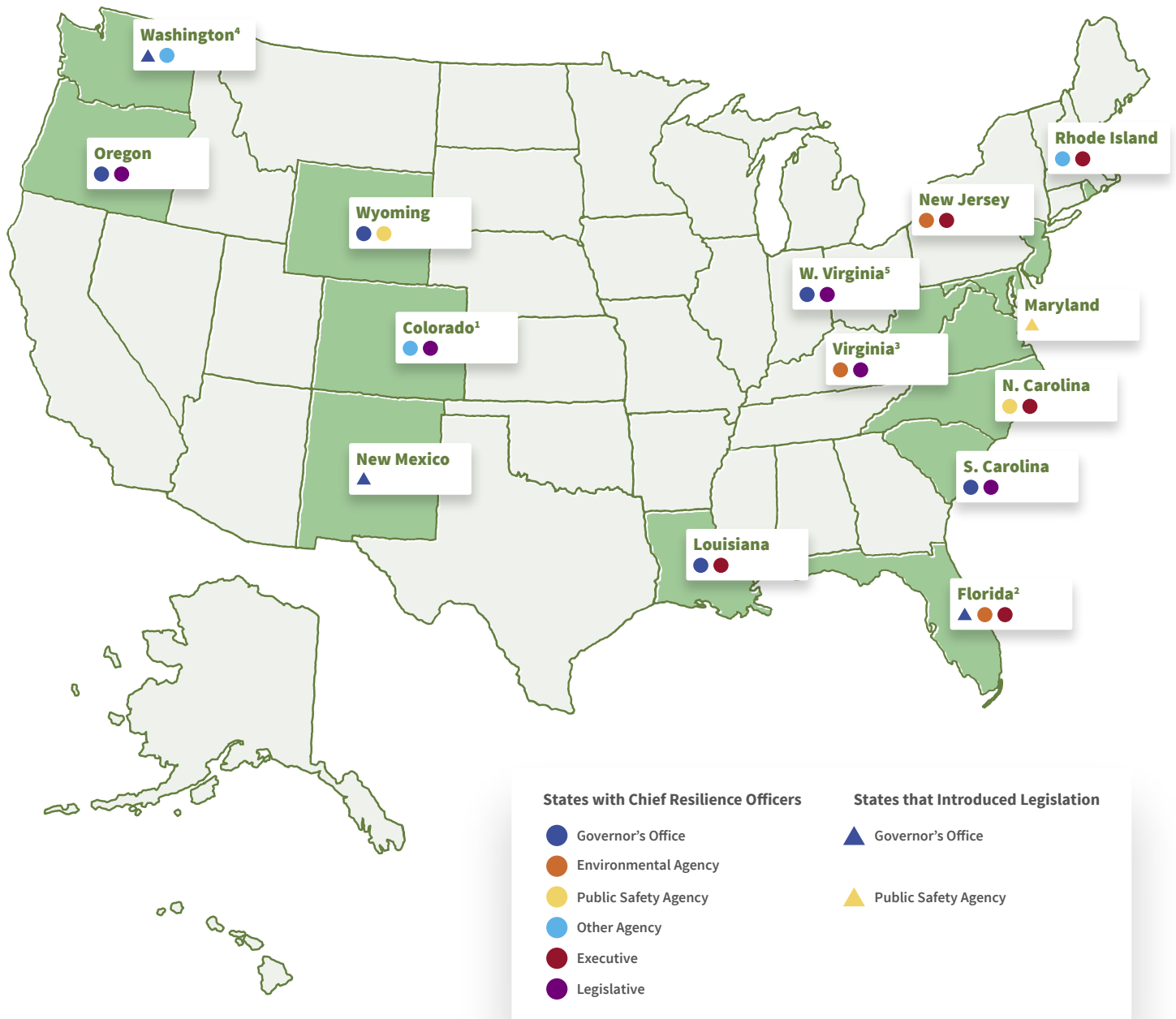
<sup>28</sup> SSB5106 <https://app.leg.wa.gov/billsummary?BillNumber=5106&Initiative=false&Year=2019>

<sup>29</sup> <https://www.insurance.wa.gov/sites/default/files/documents/washington-disaster-resiliency-work-group-final-report-november-2020.pdf>, Page 14.

<sup>30</sup> HB1147 <https://app.leg.wa.gov/billsummary?BillNumber=1147&Year=2021&Initiative=false>

<sup>31</sup> <https://www.dnr.wa.gov/news/commissioner-franz-appoints-new-policy-director-chief-resilience-officer>

# STATES WITH OR EXPLORING CHIEF RESILIENCE OFFICER POSITIONS



<sup>1</sup> Initially in governor's office through executive authority and later created in the Department of Local Affairs by legislation.

<sup>2</sup> Initially in governor's office through executive authority and later given to the Secretary of Environmental Protection in a dual-hatted role.

<sup>3</sup> Initially in Public Safety and Homeland Security by executive authority, then moved to Department of Natural Resources by executive authority. Ultimately codified by legislature in Department of Natural and Historic Resources.

<sup>4</sup> The separately elected Commissioner of Public Lands installed a CRO in that Department in July 2021.

<sup>5</sup> The legislature initially created the CRO position in the Department of Commerce and later moved to the Governor's office.



# EMERGING TRENDS IN ESTABLISHING AND SUPPORTING CROs

Whether created through executive authority or legislation, there are some common themes that emerge among CROs and their specific charge such as the contemporaneous creation of a council or task force and a requirement to create a state or regional resilience plan.

Specific to legislatively-created CROs, there is often a requirement that the gubernatorial appointed CRO be confirmed by the state senate.

## Establishment of Advisory Councils, Task Forces or Working Groups for Driving Resilience Efforts

Often when creating a CRO, an advisory council, task force or working group is also created, consisting of representatives of various state agencies, and chaired or led by the CRO. The council, with help from the CRO, is authorized to call upon any state agency to supply it with information or other assistance as determined to be necessary to accomplish the work. The advisory council is often charged with coordinating resilience activities within and across state agencies including developing consistent statewide policies and actions and establishing both short-term and long-term action plans.

### New Jersey Example

Executive Order 89 established the New Jersey Interagency Council on Climate Resilience composed of 16 agencies to develop action plans to mitigate, adapt and protect New Jersey's economy, communities, infrastructure and natural resources. The council also supports the development and implementation of a State Resilience Strategy to inform actions to address the impacts of climate change.

### Louisiana Example

By Executive Order, state agencies appoint a "resilience coordinator" to be the agency's point person for adaptation and resilience efforts, and to coordinate with the CRO and advisory board as required. The resilience coordinator is identified in the executive order as an undersecretary or comparable who has the knowledge and awareness of the full breadth of an agency's mission and programs.

As noted earlier, years before Gov. Edwards' actions to create a CRO position and after devastating losses due to Hurricanes Katrina and Rita, Louisiana's legislature in 2005 passed

# EMERGING TRENDS IN ESTABLISHING AND SUPPORTING CROs

SB71<sup>32</sup> to create the Coastal Protection and Restoration Authority (CPRA) within the governor's office with the goal of coordinating across state government as well as the federal and local governments and levee districts. The head of CPRA, appointed by the governor and confirmed by the senate, is tasked with developing the state's comprehensive coastal protection master plan.

## Colorado Example

Since the initial days of the Colorado Recovery Office in the governor's office and to now with the Colorado Resiliency Office in the Department of Local Affairs, the Colorado Resiliency Working Group (CRWG) has coordinated recovery and resilience planning among state and federal agencies working together with local governments.

## West Virginia Example

Along with the State Resiliency Officer, a State Resiliency Office Board was established with the leaders of several state agencies, among them: Commerce; Environmental Protection; Emergency Management Council; Homeland Security; Transportation; and members of the House of Delegates and Senate.<sup>33</sup>

## Developing a Regional and/or Statewide Resilience Plan or Strategy

In establishing the CRO position, the executive order or legislation sometimes includes a charge for the CRO to develop, implement and maintain a statewide (or regional) resilience plan. The plan is rooted in science and will outline programs and policies for adoption to protect the people and property of the state from damage and destruction from climate-related events and natural disasters.

## South Carolina Example

The enabling statute tasks the CRO with leading, reviewing, revising and implementing a Strategic Statewide Resilience and Risk Reduction Plan to serve as framework to guide state investment in flood mitigation and the adoption of programs and policies to protect people and property. The work is to be supported by an Advisory Committee comprised of state agencies.<sup>34</sup>

<sup>32</sup> <https://www.legis.la.gov/Legis/BillInfo.aspx?i=103818>

<sup>33</sup> [https://www.wvlegislature.gov/Bill\\_Text\\_HTML/2020\\_SESSIONS/RS/signed\\_bills/senate/SB586%20SUB1%20ENR\\_signed.pdf](https://www.wvlegislature.gov/Bill_Text_HTML/2020_SESSIONS/RS/signed_bills/senate/SB586%20SUB1%20ENR_signed.pdf)

<sup>34</sup> [https://www.scstatehouse.gov/sess123\\_2019-2020/bills/259.htm](https://www.scstatehouse.gov/sess123_2019-2020/bills/259.htm)

# EMERGING TRENDS IN ESTABLISHING AND SUPPORTING CROs

## New Jersey Example

The executive order requires the CRO to develop a Statewide Climate Change Resilience Strategy to promote the long-term mitigation, adaptation, and resilience of the economy, communities, infrastructure, and natural resources throughout the state. This is led by the CRO with support from the Interagency Council. The Strategy includes guidance and strategies for other state agencies, municipalities, and regional planning groups to implement. Within the larger Strategy, a Coastal Resilience Plan includes recommendations for resilience and adaptation in coastal areas. It will identify existing and new strategies that will reduce physical, economic and social risk to flood events, enhance state and local capabilities, and encourage innovative solutions to the complex challenges of rising sea levels. The plan will not prescribe projects for every reach of the shoreline but is intended as a first step to put New Jersey on a path to resilience.<sup>35</sup>

## Rhode Island Example

Working with the Rhode Island Executive Climate Change Coordinating Council, the CRO is required by executive order to develop a statewide Action Plan to Stand Up to Climate Change that recommends “key actions to make Rhode Island’s residents, economy, infrastructure, health system, and natural resources more resilient to the impacts of climate change.”<sup>36</sup>

## Virginia Example

The executive order tasks the CRO and Special Assistant to the Governor for Coastal Adaptation and Protection with developing a Coastal Resilience Master Plan to reduce the impacts of tidal and storm surge flooding. The order requires that the CRO consult with local governments, relevant state agencies, planning districts, federal partners, academic institutions, NGOs and other stakeholder groups throughout the process.<sup>37</sup>

## Legislatively-created CROs tend to require gubernatorial appointment and senate confirmation.

In those states with legislatively created CRO positions, most require gubernatorial appointment and senate confirmation. These include **Oregon**, **South Carolina**, and **West Virginia**. In **Virginia** in 2021, the legislature effectively codified the executive order creating a dual-hatted position for the secretary of natural resources as both secretary and CRO. Given that the senate confirms the secretary, the Virginia Senate is in effect confirming the CRO as well.

<sup>35</sup> <https://nj.gov/infobank/eo/056murphy/pdf/EO-89.pdf>

<sup>36</sup> <https://governor.ri.gov/sites/g/files/xkgbur236/files/documents/ordersExecOrder-17-10-09152017.pdf>

<sup>37</sup> <https://www.governor.virginia.gov/media/governorviriniagov/executive-actions/ED-24-Increasing-Virginias-Resilience-To-Sea-Level-Rise-And-Natural-Hazards.pdf>



# RECOMMENDATIONS

The following recommendations are in no particular or prioritized order. When reviewing draft recommendations, the CRO Work Group members determined that while most recommendations are geared toward providing governors and legislators with direction to create CRO positions, there were a few recommendations that had greater direct application within the CRO community and can inform new CROs from current or former CROs. These recommendations are broken into two sets.

## For Governors and Legislators:

- 1. Regardless of where the CRO position resides (state agency or governor’s office), gubernatorial support is critical for providing the CRO with the authority to engage and meaningfully collaborate across all state agencies, and with legislators and stakeholders.**

For the CRO to have the maximum ability to engage with partners and stakeholders, their authority is key and governors, through words and actions, can underscore and provide that authority.

- 2. With the CRO as the “hub” of state resilience efforts, each individual agency should have a point of contact who has the support of agency leadership and authority to work directly with the CRO.**

For each agency, the point of contact should be empowered by agency leadership and have a full understanding of the mission and authorities of the entire agency. Whether or not the contact is the political head of the agency is less important. Formalizing the role through an employee’s job description – with appropriate resources – also provides for continuity between administrations.

- 3. Legislation can provide permanency and continuity for CRO positions while also codifying the intention and outcomes the state expects.**

If created by executive order, there can be uncertainty as to what a next administration may do with the CRO position, unnecessarily undermining the stature and authority of the current CRO. To date, legislation creating CROs has been bipartisan, ensuring durability of the position over time.



## RECOMMENDATIONS (CONT.)

### **4. Legislation can provide an important basis for appropriately resourcing CROs.**

Where legislatures have crafted bills to create a CRO position, they have provided fiscal scenarios for resourcing the CRO and any additional support staff, demonstrating an understanding that CROs need resources to carry out their work.<sup>38</sup>

### **5. Through enabling legislation or executive order, creating a council or other governing body to work with the CRO supports coordination among state agencies needed to plan for climate-induced natural disasters and other disruptions such as COVID-19.**

An oft-repeated theme has been the importance of the CRO working in partnership and in collaboration with state agencies. Directing a council to work with the CRO supports the authority of the CRO.

### **6. State Emergency Management Agencies should engage the CRO in the state's Threat Hazard Identification and Risk Assessment (THIRA) process.**

As required by federal law, states go through a THIRA process every three years, presenting an assessment for communities to better understand their hazards and risks and how to mitigate them. The CRO perspective is important as their work will likely go beyond the THIRA in looking at, for example, future conditions of floodplain management that the THIRA does not currently require.

### **7. State agencies, supported by the CRO, should undertake vulnerability assessments to understand threats within their respective missions. Assessments will inform agencies' strategic plans, policies, prioritizations and resource needs.**

For the CRO to best serve the state's resilience efforts, agencies need to understand their own vulnerabilities in the face of natural disasters and other disruptions with respect to communities, equity and justice, businesses and infrastructure.

### **8. If the CRO is dual-hatted, there needs to be explicit guidance about the roles and auspices under which they are taking any particular action.**

Setting up a dual-hatted regime is inherently creating two full-time positions embodied in one person with distinct roles and expectations. For those dual-hatted individuals, policymakers must be clear about the expectations for each role.

<sup>38</sup> <https://fnspublic.ofm.wa.gov/FNSPublicSearch/GetPDF?packageID=61512> and [https://www.scstatehouse.gov/sess123\\_2019-2020/fiscalimpactstatements/S0259%202019-01-08%20introduced.pdf](https://www.scstatehouse.gov/sess123_2019-2020/fiscalimpactstatements/S0259%202019-01-08%20introduced.pdf)

## RECOMMENDATIONS (CONT.)

- 9. Dual-hatted CROs based in an agency can provide the CRO with that agency's resources and staff but be mindful that the agency's resources are not necessarily *dedicated* funds for CRO work.**

When identifying and prioritizing the work of a CRO, the position and work assigned need to have their own dedicated resources.

### For Chief Resilience Officers:

- 1. Create and maintain a community of practice for CROs where they can continue to learn from one another.**

Although some CROs already connect through various forums on specific issues, having a community of practice focused on allowing CROs to learn from one another would be helpful. This could allow CROs to better understand organizational structures for CROs; share successes and failures; discuss new tools; transfer knowledge; and advocate on federal matters of shared interest.

- 2. Create an in-state community of practice with diverse stakeholders (business, academia, NGOs, faith communities, environmental justice communities, etc.) to not only inform the work of the CRO but document the work, as well.**

In addition, a knowledge management system for institutional memory is critical for cataloguing a CRO's experiences and expertise prior to her departure. For example, the Colorado Resiliency Office is rolling out an updated website with case studies, toolkits, a peer exchange platform, and other tools.<sup>39</sup>

- 3. Work with and support local jurisdictions.**

Given the importance of local jurisdictions in mitigating disasters and recovering from them, identify clear mechanisms for working with and supporting them. CROs can help increase access to flood data and provide resources that help local governments and residents better understand current and future flood risks and how to mitigate them. This includes working to update flood maps and climate models, making data easily accessible online, investing in resilience toolkits and supporting on-the-ground research. This data can help inform and guide investments for how to address risks at the local level. The Colorado Resiliency Office, within the Department of Local Affairs, supports cities and counties in their resilience planning and project prioritization.<sup>40</sup> Similarly, Rhode Island's Municipal Resilience Program "provides direct support to cities and towns...to improve the municipality's resilience to all natural and climate-related hazards."<sup>41</sup>

<sup>39</sup> <https://www.coresiliency.com>

<sup>40</sup> <https://www.coresiliency.com/the-cro>

<sup>41</sup> <https://www.riib.org/mrp>

# RECOMMENDATIONS (CONT.)

## 4. Design easily adaptable tools for use in state and beyond.

Tools are getting more sophisticated in assessing risks and for response planning. States should work together and with the federal government to design tools for use in-state as well as with regional or national applications. Tools developed for one state should be easily adaptable for other states to “steal” and adjust for desired functionality.

During the CRO Work Group, members were introduced to two new and unique tools: Colorado’s Future Avoided Cost Explorer (FACE)<sup>42</sup> and Massachusetts’ Climate Resilience Design Standards & Guidelines.<sup>43</sup> The former, designed in partnership with FEMA Region 8 and FEMA headquarters, provides local governments and others the opportunity to visualize the economic impacts of floods, droughts and wildfires with or without mitigation planning. The latter provides climate change exposure and risk rating for state-funded projects, offering recommended climate resilience design standards. These tools and others should be curated to identify the best and most useful tools and be readily available “off the shelf” and adaptable to other jurisdictions.

<sup>42</sup> <https://storymaps.arcgis.com/stories/4e653ffb2b654ebe95848c9ba8ff316e>

<sup>43</sup> [https://resilientma.org/rmat\\_home/designstandards/](https://resilientma.org/rmat_home/designstandards/)



# CONCLUSION

The challenges that climate change is posing to states' residents, communities and businesses are increasing and have huge implications on human health and safety, state budgets, infrastructure and services. Chief Resilience Officers serve a valuable role to identify risks to human health and safety, to develop plans and policies to mitigate those risks and to implement resilience solutions. The CRO must work across the whole of state government, as well as with the federal, tribal, and local governments.

As more states continue to establish CROs, it is imperative that policymakers empower the CRO with the authority, independence and resources necessary to carry out well-defined objectives. With this in hand, the CRO can lead the building of a more resilient state for its constituents today and for future generations.

# APPENDIX I – CRO WORK GROUP PARTICIPANTS

## Participating Chief Resilience Officers

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**Matt Strickler**, Secretary and Chief Resilience Officer, Virginia Department of Natural and Cultural Resources

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