



**U.S. National Advisory Committee**  
*Independent Federal Advisors on the  
North American Agreement on Environmental Cooperation*

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The Honorable Andrew R. Wheeler  
Acting Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

Dear Acting Administrator Wheeler:

The National Advisory Committee (NAC) to the U.S. Representative to the North American Commission for Environmental Cooperation (CEC) held its 51st meeting in Tucson, Arizona in the Pascua Yaqui Tribe lands, on October 10-11, 2018. This letter represents our full advice resulting from that meeting.

The main objective of our meeting was to provide advice to the Environmental Protection Agency (EPA) to help inform decision making about membership in the North America Extreme Event Advisory Committee (NAEEAC). This newly formed Advisory Committee is seeking input about extreme weather events and how tribes, state, local government and the private sector organize to respond to these events, how their membership could be expanded to include experts from sub-national governments, the private and non-profit sectors. The members of the NAC were very pleased with the opportunity to provide advice on this critical issue and to inform committee membership decision making.

Jane Nishida, Principal Deputy Assistant Administrator for the Office of International and Tribal Affairs, was not able to join the meeting due to other responsibilities. However, she sent Mr. Luis Troche, Senior Advisor for North America to provide her remarks on the charge questions. North American Senior Advisor, Luis Troche explained that EPA's desire for advice stemmed from the results of the CEC June 26-27, 2018 Council Session in Oklahoma City. He reiterated the meeting charge to provide EPA advice on actors and capacities at the local, tribal and private sector level who have expertise, best practices and resources on early warning, preparedness, response and resilience to drought-flood, wildfires and extreme temperatures. Recognizing that preparedness response and resilience is primarily a local effort, these actors may contribute their expertise and best practices through the CEC initiative to help advance capacities across North America.

Simone Sagovac  
*Michigan*

Ivonne Santiago  
*Texas*

The NAC/GAC meeting was opened with a welcome from Federal Advisory Committee Management Division (FACMD) Designated Federal Officer, Oscar Carrillo, followed by a second welcome from Mr. Verlon Jose, Vice-Chairman of the Tohono O’odham Nation.

Mr. Jose gave a warm welcome to the Southwest Desert and extended his sincere hospitality to the members of the NAC and GAC and the EPA team. He thanked the committees for their on-going contributions to protecting the environment and remarked on the long-standing relationship between the Tohono O’odham Nation and the nearby Pascua Yaqui Nation. Mr. Jose noted the timeliness of this NAC/GAC meeting given the recent emergency declared after remnants of Hurricane Rosa devastated the area.

We also received an important briefing on the proposed U.S.-Mexico-Canada Agreement (USMCA), which replaces the North American Free Trade Agreement (NAFTA). The briefing was conducted via phone by Sarah Stewart, Deputy Assistant, Environmental and Natural Resources, U.S. Trade Representative (USTR) and Joe Ferrante, Senior Advisor on Trade and Economics, OITA, EPA. Ms. Stewart highlighted components of the USMCA Environment Chapter, which are the most comprehensive enforceable objectives of any such agreement. Issues such as transboundary events, air pollution, shared fishery stock and wildlife trafficking are important to all Parties. In the USMCA final chapter, a new article on air quality that leverages prior CEC efforts is included as well as new articles on marine litter and sustainable forest management.

The Agreement also contains enhancements on fishing and wildlife and places special emphasis on marine species conservation. Mr. Joe Ferrante provided an update on the proposed new Environmental Cooperation Agreement (ECA), which aligns with the USMCA Environment Chapter. He indicated that the institutions and organizations of the current structure are being retained and that there has been progress in negotiations with Mexico and Canada and a seamless transition to a new platform in cooperation among the Parties is anticipated.

The committee also received updates on key activities at the CEC Secretariat from Executive Director Cesar Rafael Chavez. Mr. Chavez updated members on the active 2017–2018 operational plan cooperative projects and grants. We also received a report on JPAC activities from Dr. Octaviana Trujillo, on behalf of Mr. Gustavo Alanis-Ortega, JPAC Chair, who was not able to join us.

In support of our discussion, Dr. Gregg Garfin, Deputy Director, Science Translation Research, University of Arizona provided a rich overview of extreme weather events, and observed climate trends and variability, observed impacts (e.g., water or drought) and capacities (e.g., emergency management).

In addition, Ms. Judy Lynn, South Region Coordinator, Emergency Management, Arizona Department of Emergency and Military Affairs (AZDEMA), described the Arizona state emergency management system and its “all-hazards” framework. This approach is not specific to any one emergency but is flexible to meet the emergent needs in real-time and adopts language common to the region being served.

We received excellent briefings from Mr. Cornelius Antone, a member of the Government Advisory Committee (GAC) and Environment Director for the Tohono O'odham Nation and Robert DeLeon, Director of the Gila River Indian Tribe Office of Emergency Response, who both presented on tribal government emergency preparedness efforts and responses to extreme weather events.

The NAC deeply appreciates the excellent support provided by the FACMD and thanks Director Monisha Harris, and all the FACMD staff for their support, before, during and after the meeting.

Sincerely,



Theresa A. Pardo, Ph.D., Chair  
National Advisory Committee

cc: Jane T. Nishida, Principal Deputy Assistant Administrator for the Office of International and Tribal Affairs  
Monisha Harris, Director, Federal Advisory Committee Management Division (FACMD)  
Oscar Carrillo, Designated Federal Officer, FACMD, OARM  
Mark Kasman, Director, Office of Regional & Bilateral Affairs, OITA, EPA  
Luis Troche, Senior Advisor, North American Affairs, OITA, EPA  
Gustavo Alanis-Ortega, Chair, Joint Public Advisory Committee  
César Rafael Chávez, Executive Director, CEC  
Members of the U.S. National and Governmental Advisory Committees

National Advisory Committee (NAC)  
To the U.S. Representative to the  
Commission for Environmental Cooperation (CEC)

Advice 2018-2  
Meeting – October 10-11, 2018

The October 2018 Charge Question to the National Advisory Committee (NAC) seeks advice on: *Sharing and Enhancing Capacity for early warning, preparedness, response and adaptation/resilience; to extreme events. The U.S. seeks advice on actors and capacities at the local, tribal and private sector who have expertise, best practices, experience and resources on:*

- *Early warning, preparedness, response and resilience to drought-flood, wildfires and extreme temperatures.*
- *Because preparedness response and resilience is primarily a local effort, these actors may contribute their expertise and best practices through the CEC initiative to help advance capacities across North America.*

The advice provided by the members of the NAC is in response to the 2018 Charge Question is organized into three sections as follows:

- 1) Observations, Issues and Recommendations on extreme events preparedness, response and adaptation/resilience for consideration by the North American Extreme Event Advisory Committee (NAEEAC).
- 2) Names or Titles of actors who have the requested expertise, experiences or resources
- 3) Entities that have the requested expertise, experiences or resources.

**SECTION 1. OBSERVATIONS, ISSUES AND RECOMMENDATIONS ON EXTREME EVENTS PREPAREDNESS, RESPONSE AND ADAPTATION/RESILIENCE FOR CONSIDERATION BY THE NAEEAC.**

***The Nature of Extreme Events***

- Members of the NAC agree that all disasters are local and as a consequence agree strongly with the EPA that local actors should be added to the NAEEAC.
- Members of the NAC discussed the complexity of the phrase “extreme event” and acknowledge that the phrase itself needs further consideration. For example, they noted, a drought is a condition not an event.
- Members of the NAC agreed that extreme events are exacerbated by the variety and frequency of such events and due to a lack of preparedness and planning.
- Members of the NAC agreed that vast regional differences that influence the nature of an event. The variety of events and contextual characteristics need to be considered in any effort to increase early warning, preparedness, response and adaptation/resilience.

***Community Focus***

- Members of the NAC recommend that any effort focused on building early warning, preparedness, response and adaptation/resilience capability in a community must consider vulnerable populations and access to information and resources.
- Members of the NAC observed that first responders are often neighbors and recommend that organizations focused on organizing neighborhoods to help vulnerable populations are important

participants in local emergency planning and response efforts, and as such, the NAEAC. This includes identifying sub-populations and determining who the formal and informal leaders are for these groups or who has responsibility for those groups. Organizations such as The Community Building in Idaho are very aware of and regularly serve vulnerable individuals in their community. <https://www.atimeforteens.com/>.

- Members of the NAC observed that differential responses to vulnerable communities require community vulnerability assessments. They recognize the limitations of universal versus differential emergency responses, which could be reflective of the needs and vulnerability of the community. Therefore, they recommend that given that all disasters are local, all assessments should be local. Resources to help in understanding local characteristics in terms of needs and vulnerability include the *NOAA Community Vulnerability Assessment Tool* <https://coast.noaa.gov/digitalcoast/topics/vulnerability-assessments.html>.
- Members of the NAC discussed the critical role of volunteer groups and how such resources can be formally engaged in early warning, preparedness, response and resilience related efforts. For example, the “Cajun Navy” [https://en.wikipedia.org/wiki/Cajun\\_Navy](https://en.wikipedia.org/wiki/Cajun_Navy); <https://louisianacn.com/>.

### ***Communicating with Communities***

- Members of the NAC recommend attention to the challenge of communicating to the full range of community members such as the elderly, those who live remotely, non-english speakers and those rely, for various reasons, on verbal face to face communication, among others.
- Members of the NAC observed the challenges associated with “getting the word out”. They recognize the potential of mobile apps, but also strongly recommend attention to over-reliance on such modes of communication given that in many areas and for many demographics, mobile apps are not relevant. For example, in rural area such as reservations, non-technical approaches to warning people tend to be most effective, going door to door and talking face to face with people. In such situations, NAC Members observed, traditional alarm systems continue to be effective; ring the alarm and then everyone knows something is wrong and then they start talking to each other.

### ***Resource Issues***

- Members of the NAC observed that in rural areas, most responders tend to be volunteers, such as volunteer fire fighters or community-based groups; how the role and value of such groups are accounted for in national-level planning efforts is key to early warning, preparedness, response and adaptation/resilience at the local level. Therefore, they recommend that the national emergency response framework be adaptable and translatable to the state and local levels
- Members of the NAC discussed the impact of bureaucratic challenges in extreme events related activities. In particular, the fact that the increasing number and severity of extreme events, has “emptied the pot”.
- Members of the NAC discussed the challenge of a lack of institutional memory among organizations engaged in extreme event mitigation and response. Often the person “in charge” knows what to do, but when they leave, confusion reigns. They called for an increasing investment in institutional and community expertise and capability versus individual expertise and capability.
- Members of the NAC discussed the challenge that many communities face when working to rebuild and create new levels of resilience. One challenge, in particular, is their lack of knowledge about resources for disaster relief and the lack of expertise and capacity to apply for such relief funds. This limits the opportunity that small and rural communities, in particular, have in creating early warning, preparedness, response and resilience capability and expanding capacity. A second is a lack of full understanding of the “strings” that are often attached to recovery funding; often limiting the opportunity to rebuild in such a way as to mitigate impact of future extreme events.
- Members of the NAC recommend attention to information as a critical resource in the context of early warning, preparedness, response and adaptation/resilience efforts. For example, creating lists at the local level of safe places to shelter in a variety of extreme events, such as extreme heat. Developing

such information resources and making them publically available could be parlayed into advice on a best practice for extreme events.

### ***Long-Term Planning***

- Members of the NAC recommend the development of longitudinal analysis of the impact of current planning processes on effectiveness of extreme event early warning, preparedness, response and resilience efforts. If such efforts are not informed by insights about the value of past practices – then we won't increase effectiveness of future practices.
- Members of the NAC recommend the development of new understanding of the impact of “second-order” events such as long-term power outages in Puerto Rico after Hurricane Maria and in NYC after Hurricane Sandy and the lack of attention or investment in this problem. For example, of the 120 million that was spent after sandy, 75 million went to relief leaving only 45 million for rebuilding.

## **SECTION 2. NAMES OR TITLES OF ACTORS WHO HAVE THE REQUESTED EXPERTISE, EXPERIENCES OR RESOURCES**

Members of the NAC recommend inviting representatives from a set of specific communities with experience preparing for and responding to extreme weather events that should be represented on the North America Extreme Events Advisory Group. Recommended communities are:

- Alaskan Athabascans (flooding)
- Calexico, California (extreme heat)
- Colorado Springs, Colorado (wild fires)
- GRIC (flooding)
- Houston, Harris County, Texas (flooding)
- Miami (sea level rise)
- New Orleans (hurricane)
- Phoenix and the Paso del Norte Region that includes, El Paso, Texas, Las Cruces, New Mexico and Ciudad Juárez, Mexico (extreme heat and flooding)
- Todono O'odham Nation (flooding)

Specific individuals recommended for membership to the NAEEOAC are:

- Raed Aldouri University of Texas at El Paso
- Cornelius Antone, Environment Director, Tohono O'odham Nation
- Jerard Brotzge, Ph.D., Program Director, NYS' MESONET
- Andy Carey, Border Philanthropy Partnership, San Diego, CA
- Victor de León, Private Sector Office, Department of Homeland Security
- Alfredo Estrada, Fire OES, Imperial County, California
- Greg Garfin, University of Arizona
- Hunter Jones, NOAA
- Lisa Jones, Director, Office of Emergency Management, City of Phoenix
- Jayson Kratoville, Interim Director, National Center for Security and Preparedness, University at Albany, State University of New York
- Brian LaFlure, Chief and Director, Fire Coordinator, Warren County Office of Emergency Services, Warren County, NYS
- Sarah Leroy, University of Arizona
- Miguel Velez-Reyes, University of Texas at El Paso

### SECTION 3. ENTITIES THAT HAVE THE REQUESTED EXPERTISE, EXPERIENCES OR RESOURCES.

Members of the NAC recommend the following community anchor institutions and other organizations for membership on the NAEAC:

- EPA’s own Local Emergency Planning Committees (LEPCs).
  - LEPC’s have responsibility for planning and running drills at the community level. LEPCs include representatives from hospitals, religious communities, local professional and volunteer firefighters and other critical community anchor institutions.
  - State EPC’s are often represented on such bodies – but local representation will provide an important alternative perspective.
- State and local government planning committees such as:
  - Planning for Resilient Communities, Michigan
    - Attachment # 1 contains a list of resources produced by such entities. NAEAC members should be aware of the rich robust resources being produced by such entities across the country and leverage such planning activities to the fullest extent possible.
- Regional Associations of Government (ex: SANDAG in San Diego)
- Embassy of Mexico and Consular network based across the USA – largest of any country with over 50 consulates in the USA.
- Other Embassies to be considered based on population numbers (Guatemala, Honduras, El Salvador, Ecuador, Colombia, Brazil)
- Organizations who with vulnerable communities at the neighborhood level such as:
  - The Community Builder program. <https://www.atimeforteens.com/>.
  - Climate Assessment of the Southwest (CLIMAS) Program. <https://www.climas.arizona.edu/>
- Non-profit groups and other national and international organizations with local reach including:
  - The American Red Cross
  - Rockefeller Foundation’s Resilient Cities
  - The Walmart Corporation
  - United Way of America
  - AmeriCorps Disaster Response Team
  - Team Rubicon
  - Arizona Hospital and Healthcare Association
- The National Association of Counties Resilient Counties Initiative
  - <https://www.naco.org/resources/signature-projects/resilient-counties-initiative>
- The National League of Cities Public Safety Program
  - <https://www.nlc.org/topics/public-safety>
- Associations of relevant Public Health and Emergency Response Professionals, for example:
  - National Association of City and County Health Officials. <https://www.naccho.org/>
  - NYS Association of Fire Chiefs. <https://www.nysfirechiefs.com/>
  - Western Fire Chiefs Association. <https://wfca.com/>
- Associations for Volunteer Firefighters. For example:
  - The Volunteer Fire Fighter Alliance. <http://www.volunteerfirefighteralliance.org/programs.html>
  - The National Volunteer Fire Council. <https://www.nvfc.org/>
- Volunteer groups who have been recognized for playing a significant role in extreme events, for example:
  - The Cajun Navy. [https://en.wikipedia.org/wiki/Cajun\\_Navy](https://en.wikipedia.org/wiki/Cajun_Navy); <https://louisianacn.com/>
- Organizations with responsibilities for pets – such as SPCA and local humane societies.

National Advisory Committee (NAC)  
To the U.S. Representative to the  
Commission for Environmental Cooperation (CEC)

Advice 2018-2  
Meeting – October 12-13, 2018

Attachment # 1

**RESOURCE: MICHIGAN CLIMATE ACTION PLAN**

<https://www.adaptationclearinghouse.org/resources/michigan-climate-action-plan.html>

The Michigan Climate Action Plan (CAP), produced by the Michigan Climate Action Council (MCAC), provides greenhouse gas emissions inventory and forecast, recommended emission reduction goals, and advice for state and local governments on measures to address climate change. The Plan focuses mainly on climate change mitigation through reduction of greenhouse gas emissions. Adaptation is recognized as one of the key elements and recommendations in the CAP. Specifically, the MCAC recommends that Michigan further analyze actions needed for adaptation. According to the report, the MCAC was unable to examine the impacts of climate change on Michigan's natural resources and the Great Lakes due to time and resource constraints. As such, MCAC recommended that Michigan conduct additional analyses of the state's vulnerability to the impacts of climate change and develop specific adaptation plans for key sectors. The Plan focuses on the following sectors, describing key challenges facing each and offering policy recommendations to reduce their greenhouse gas emissions:

- Energy Supply Sector
- Residential, Commercial, and Industrial Sectors
- Transportation and Land Use Sectors
- Agriculture, Forestry, and Waste Management Sectors

**RESOURCE: STRENGTHENING LOCAL COMMUNITIES TO MEET GLOBAL CHALLENGES**

<http://www.resilientmichigan.org/>

[Land Information Access Association \(LIAA\)](#) is a nonprofit community service and planning organization headquartered in Traverse City, Michigan. Planning for Resilient Communities is a community engagement and technical services program developed by LIAA with numerous statewide partners. The program is helping citizens, local leaders and public officials plan communities that are more resilient to global challenges such as climate variability, extreme weather events and economic challenges. With grant funding and direct assistance from project partners, LIAA provides a full range of professional planning and technical support services to participating communities, including public education and participation processes, data gathering and analyses, evaluation of future scenarios, vulnerability analyses, visioning and goal setting, task identification, and formal master plan development.

**RESOURCE: PLANNING FOR RESILIENCE IN MICHIGAN HANDBOOK**

[http://www.resilientmichigan.org/downloads/michigan\\_resiliency\\_handbook\\_web.pdf](http://www.resilientmichigan.org/downloads/michigan_resiliency_handbook_web.pdf)

According to the Rockefeller Foundation, *community resilience* is defined as “the capacity of (communities) to function, so that the people living and working in (communities) – particularly the poor and vulnerable – survive and thrive no matter what stresses or shocks they encounter.” Land use planners and policy makers throughout Michigan are committed to thinking long-term about how change, trends and unanticipated shocks will impact their community. [This Handbook](#) is intended to be used as a reference tool by a diverse array of land use policy and planning practitioners in local efforts to bring about greater resilience in their community.

**RESOURCE: MICHIGAN CLIMATE ACTION PLAN**

[https://www.michigan.gov/documents/deq/deq-miclimateactionplan-part1\\_276563\\_7.pdf](https://www.michigan.gov/documents/deq/deq-miclimateactionplan-part1_276563_7.pdf)

The Michigan Climate Action Plan was developed through a collaborative effort by a diverse array of state agencies, private companies, and non-profits.

**RESOURCE: A SUMMARY OF LOCAL BEST MANAGEMENT PRACTICES**

[www.planningmi.org](http://www.planningmi.org)

**RESOURCE: PLANNING PORTAL**

<http://www.michigancoastalcommunities.com>.

**MAP Creates Resource for Master Planning for Resiliency and Sustainability.** This information portal is designed to help communities plan for, protect, and preserve their waterfronts. Michigan is a state rich in lakes and rivers and home to the longest freshwater coastline in the world. The list of communities that do not have some sort of waterfront is much shorter than the list of communities that do.

**RESOURCE: RESILIENCY WORKSHOPS**

Workshops, being held in Oscoda, Escanaba, and Monroe, provide professional planners, elected and appointed municipal leaders, and other public servants with the tools, applications and best practices to empower intentional actions that will help your community mitigate the impacts of severe weather events and fluctuating water levels in the Great Lakes through planning, policy, and regulatory solutions.