Chair
Jeffrey Wennberg
Tel. 802-793-5345
wennberg.ccs@gmail.com

Designated Federal Officer
Oscar Carrillo
Tel. 202-564-2294
carrillo.oscar@epa.gov

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

May 30, 2018

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Administrator Pruitt:

The Governmental Advisory Committee (GAC) to the U.S. Representative to the North American Commission for Environmental Cooperation (CEC) held its 50th meeting in Washington, D.C. on April 26-27, 2018. This letter represents our full advice resulting from that meeting.

The advice sought by EPA pertains to the challenge of marine litter and the best management practices being employed by government, industry and others to address it. Jane Nishida, Principal Deputy Assistant Administrator for the Office of International and Tribal Affairs, updated members on recent EPA/CEC activities, the April 2018 Alt Rep meeting, the 2018 Council Session and matters pertaining to tribal affairs. Present during our first day of deliberations were representatives of SEMARNAT, Mexico's Environment Ministry; and members of the CEC Secretariat in Montreal, who were in Washington for the Alt Rep meeting the previous day.

Principal Deputy Assistant Administrator Nishida explained that EPA's desire for advice about marine litter came from multiple engagements including the United Nations (UN) Environment Assembly resolution by Member States on preventing marine litter, the Group of Seven (G7) countries' commitment to take deliberate action to address marine litter and debris, and the current CEC project titled "Building Community Solutions for Marine Litter."

In support of our discussion, Robert S. Benson, Acting Chief, Partner Programs Branch, EPA Office of Water, reported on the domestic activities of EPA's Trash Free Waters (TFW) Program. We also heard from Ms. Carla Friedrich, Program Officer, UN Environment, North America Office, who described the UN Environment Programme (UNEP) and discussed the UN Environment's marine litter efforts.

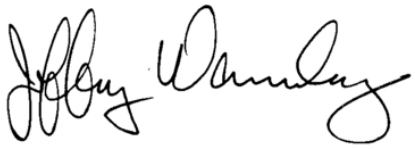
We received excellent briefings on private sector efforts from Stewart Harris, Director for Marine and Environmental Stewardship for the American Chemistry Council's Plastics Division, and Jennifer Ronk, North American Sustainability and Advocacy Manager for the Dow Chemical Company's Packaging and Specialty Plastics Division. We also learned about entrepreneurial efforts to develop alternatives to plastics from Daniella D. Russo, CEO of Think Beyond Plastic.

Local government efforts were highlighted by Julie Lawson, Director of the D.C. Mayor's Office of the Clean City, who described the work her office is doing to reduce and prevent marine litter in the nation's capital.

The committee received updates on key activities at the CEC Secretariat from Executive Director Cesar Rafael Chavez who updated members on the active 2017–2018 operational plan cooperative projects and grants. We also received an update on Submissions on Enforcement Matters (SEM) and status of submissions from Robert Moyer, SEM Director, and a report on JPAC activities from Gustavo Alanis-Ortega, JPAC Chair.

The meeting was opened by a welcome from Federal Advisory Committee Management Division (FACMD) Director Monisha Harris, who provided an update on FACMD activities, including the role of EPA's advisory committees. The GAC deeply appreciates the excellent support provided by the FACMD and thanks Director Harris, NAC/GAC Designated Federal Officer Oscar Carrillo and all the FACMD staff for their support, before, during and after the meeting.

Sincerely,



Jeffrey Wennberg, Chair
Governmental Advisory Committee

cc:
Jane T. Nishida, Principal Deputy Assistant Administrator for the Office of International & Tribal Affairs
Monisha Harris, Director, Federal Advisory Committee Management Division (FACMD), EPA
Oscar Carrillo, Designated Federal Officer (FACMD), EPA
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

Governmental Advisory Committee (GAC)
to the U.S. Representative to the
Commission for Environmental Cooperation (CEC)

Advice 2018-1 (May 30, 2018):

Charge Question:

Provide advice focused on best practices being implemented by state and local governments, private sector, academia and local communities to:

- ***Prevent/reduce sources of debris and plastics from entering into waterways to become marine debris/litter;***
- ***Innovative uses of alternative materials that are able to decay or compost reducing the impact on waterways and coastal ecosystems;***
- ***Mitigate marine debris and plastics that has found its way into waterways and coastal areas; and***
- ***Increase public awareness and action to address the problem of marine debris/plastics.***

Marine debris, including plastics and micro plastics, have become a global concern. Rising living standards in regions with emerging economies has dramatically increased the demand for single-use plastic products and packaging. In many of these regions urban centers cluster along the coasts and lack adequate waste management infrastructure. Research on the fate and effect of microplastics on living organisms and ecosystems is decades behind the fact that these materials are now found nearly everywhere on the planet.

The nations of North America contribute to this problem, but it is believed our three integrated economies may be well-suited to develop the technological, market, and regulatory tools to solve it. The Governmental Advisory Committee (GAC) believes solving this problem can only be accomplished if two prerequisites are met: industry and the public must be *motivated* to change and have the *opportunity* to do so. The GAC also believes the governments of North America and the CEC can play a critical role in bringing this about.

Motivate the Public

Motivating the public to prefer environmentally friendly products and responsibly manage waste is nothing new. Governments and the private sector have had great success in the past with advertising and other campaigns to educate and promote public awareness of the costs and consequences of our choices. To be effective these messages need to connect the individual with the local consequences of his behavior. Large regions of floating debris in the North Atlantic Gyre will generally not motivate the average Nebraskan to reduce her use of single-serving water bottles.

An excellent example of a local public awareness campaign is Hawaii's Beach Environmental Awareness Campaign Hawai`i (B.E.A.C.H.). In existence for 12 years, this all volunteer, non-profit organization brings awareness and solutions to marine debris through environmental

education, marine debris removal and research, and plastic reduction/litter prevention campaigns. B.E.A.C.H. gives educational presentations to all ages of school students, university students and teachers as well as in the community to raise awareness of marine debris impacts and solutions to the problem. Marine debris removal, research, and plastic reduction and litter prevention campaigns are also undertaken by this award-winning program.

On March 24, 2018, event coordinators and volunteers celebrated the 25th consecutive "River, Lakes, Bays 'N Bayous Trash Bash," the largest single-day cleanup of waterways in Texas. Annually thousands of people from the community come together to clean up waterways in the greater Houston area. The event promotes environmental stewardship of the Galveston Bay Watershed through volunteer removal of litter and debris, hands-on educational displays, and collaborative partnerships among environmental groups, governmental bodies, and private organizations.

A unique aspect of Trash Bash is its ability to change behavior and foster community-wide clean water environmental awareness. For example, this year each Trash Bash site had a series of interactive exhibits where volunteers learned how their personal changes can improve the environment.

Since the first cleanup in 1994, Trash Bash has grown from seven to fourteen sites and attracts about 4,400 volunteers. During its 25-year history, volunteers have collected 2,274 tons of trash, 11,065 tires, and 17.3 tons of recyclable materials. And while the number of volunteers has remained steady the volume of trash collected each year continues to decline as public awareness grows.

In 2017 The Alliance for the Great Lakes sponsored the Adopt-a-Beach program. A total of 3,940 Michigan volunteers participated. These volunteers contributed 8,730 volunteer hours to pick up 11,897 pounds of litter through 445 cleanup events at 131 sites within 31 counties. As part of these events, participants collected data on the types of litter collected. By participating in the program, these individuals also learned of the importance of keeping litter from beaches and the Great Lakes shoreline.

Another effective way to motivate changes in behavior is through price signals. Beverage container deposits have effectively reduced littering of these items in many states. The presentation by Julie Lawson, Director for D.C. Mayor's Office of the Clean City, documented a successful Montgomery County, Maryland program to reduce the use and disposal of single-use plastic and paper shopping bags. All retail establishments in Montgomery County that provide customers a plastic or paper carryout bag at the point of sale are required to charge 5 cents per bag. The revenues from this charge are deposited into the County's Water Quality Protection Charge (WQPC) fund to shift the burden of litter cleanup costs from public taxpayers to consumers who choose not to use reusable bags. According to the *Washington Post*, bag sales increased slightly between 2014 and 2015. Montgomery County attributed the increase in bag sales to improved economic conditions, population increases, an increase in the number of stores and a higher level of retailer compliance. But the *Post* also reported that bag collections at "traps at 15 stream sites in the county monitored by the Metropolitan Washington Council of

Governments show a decline in the number of plastic bags collected, from 856 in 2011 to 777 in 2015. The figure from the first half of 2016 shows an even steeper drop, to 281."

Increase Opportunities for the Public

Promoting education and awareness are well understood. But the opportunity for individuals to act on their desire to make better choices is not universal. The U.S., Canada, and Mexico have good waste management infrastructure but because this is typically a local responsibility there are significant differences in the availability of these services within each nation. And, as mentioned above, in the developing world some populous regions can lack even basic waste management services.

The gap between the global priority to address this issue and the local capability to create and maintain the necessary infrastructure must be addressed, especially if the education and awareness campaigns are successful in motivating people to change their behavior.

The CEC could play a key role toward this end. One of the CEC's greatest contributions since its creation has been to harmonize environmental measurements and standards across North America. The GAC believes the development of a three-nation perspective on marine litter should begin similarly – by examining the current data and methods of measurement and proposing a standardized system of measurement and reporting common to all. In addition, the CEC could evaluate gaps in the data and propose means of filling them. Finally, the CEC could create an inventory of provincial, state and urban area waste management capabilities to help focus regional and national resources on those areas that have the greatest need and represent the greatest risk to the environment.

Motivate Industry

Manufacturers and retailers of single use plastic products must develop and offer consumers alternatives if the campaigns to educate and motivate consumers are to succeed. Consumer demand is arguably the most effective means of incenting industry to invest in alternative materials and systems, but regulation can also play an important role.

The GAC believes the favorable economics of single use plastic products is partially the result of the disconnect between the cost to produce the products and the cost to responsibly dispose of or recycle them. For the most part the external cost of handling the post-consumer waste is paid by either government or the environment through degradation. Either way, the producer, retailer and consumer shift responsibility for the management of these products to society as a whole. And once the materials are carried beyond jurisdictional limits to the oceans the implied national obligation to manage the waste also disappears.

A good example of an industry response to consumer demand is the German discount food market chain ALDI, and their subsidiary brand Trader Joes. ALDI does not offer single-use shopping bags at any of its stores. Customers may purchase reusable bags or bring their own.

The chain promotes this policy as both environmentally progressive and contributing to discounted prices on the shelves. The chain reportedly has nearly 11,000 stores in 18 countries, and U.S. market share has grown 40 percent in slightly over 3 years.

The presentation by Stewart Harris, Director of the American Chemistry Council's Plastics' Division Marine and Environmental Stewardship program was another good example of industry action to address this challenge. In 2011 global plastics associations jointly presented a 6-point strategy for industry action that included research, education, partnership development, enhanced recycling and energy recovery, enforcement of existing laws and stewardship of plastic pellets. The association supported the federal ban of plastic microbeads in cosmetics in 2015, the reauthorization of the Marine Debris Act and funding for NOAA's Marine Debris Program.

Numerous partnerships have been developed under this program including with EPA's Trash Free Waters Program and The Meadows Center for Water and the Environment at Texas State University, with the goal of fostering a litter-free environment in the Trinity River Basin. This effort is typical of many that are aimed at addressing local litter challenges through local voluntary action and education.

The GAC applauds these efforts but acknowledges that replicating them globally will take enormous resources and a great deal of time. These efforts focus on collecting trash after it is released and changing behavior, but in regions where governments and the private sector lack the infrastructure to properly manage waste it is difficult to see how such programs could succeed.

Enable Industry to Change

The GAC agrees that there should be greater emphasis by industry toward the development of new materials possessing the same beneficial properties as plastics but without the persistence and potential for environmental harm. Unfortunately, the plastics industry is fragmented, with a small group of companies developing the "raw material", another much larger group processing that material into containers, films and other products, and still another even larger group using those products to conveniently and cost-effectively deliver their products to the market. As long as the societal cost of inappropriate disposal is not reflected in the product price, industry will lack the economic incentive to invest in the development of replacement materials and methods.

The presentation by Daniella Russo of Think Beyond Plastic indicated that there are several innovative alternatives under development. The purpose of her organization is to facilitate the conversion of promising alternatives into viable commercial enterprises. Ms. Russo asserted that the common assumption that risk capital would naturally flow to support the commercialization of worthy products is false. Risk capital by its very nature needs to realize a rapid return, but given the established global plastic market the time required to bring a replacement to profitability is unacceptably long.

The GAC suggests that some means of assessing the societal cost of disposal and environmental degradation to the raw material or manufactured product could serve the dual function of

accelerating innovation and generating revenue to fund innovation, education, waste management, and clean up. To be effective this must be done at the international level.

Government Actions

Government is the key player in defining the scope of the problem through measurement and research and identifying the tools and techniques most likely to succeed. A good example is the NOAA Marine Debris Program which focuses on prevention, removal, research, regional coordination and emergency response. An example of a local program sponsored by NOAA is The Great Lakes Land-based Marine Debris Action Plan. The Action Plan is a road map for strategic progress in making the Great Lakes, its coasts, people, and wildlife free from the impacts of marine debris. The plan consists of 53 actions which are to be completed between 2014 and 2019, and include researching existing policies and studies, social science research, promoting communication among experts and advocates, and inventorying educational resources, awareness campaigns, and social marketing campaigns.

Complicating the challenge of effectively communicating the nature of the problem to the public is the misapplication of the term "biodegradable" to materials that physically degrade but do not chemically degrade. The CEC could take the lead in assembling representatives from the three nations and stakeholders including industry representatives to develop a consistent definition of "biodegradable" that is closer to the meaning that the public ascribes as inert or beneficial to the environment and living things.

The incentive to create the Montgomery County, MD program came from the previously unprecedented step by EPA to issue a trash Total Maximum Daily Load (TMDL) for the Anacostia River under the U.S. Clean Water Act. The TMDL was essentially an order to the jurisdictions through which the river flowed to reduce the amount of trash in the river by a specific amount and sustain that level by reducing future trash deposits. Under the Clean Water Act there may be an opportunity to incorporate litter prevention and control through the Municipal Separate Storm Sewer System (MS4). According to EPA, there are 7,550 MS4 communities within which more than 80 percent of the US population lives. If the MS4 rules required best management practices to reduce or prevent trash from entering the waterways, local jurisdictions would have to assess the sources of water borne trash and implement best management practices and other measures as the Metropolitan Washington Council of Governments has done in response to the trash TMDL.

Another opportunity within current environmental laws could be to amend the Resource Conservation and Recovery Act to focus more effectively on the feedback loop between industry and consumer demand through consumer education and incentives.

The Clean Water Act and RCRA may be useful tools in this country, but Mexico and Canada have different regulatory architectures to address water pollution and waste management. The CEC could play a role in reviewing the national and subnational opportunities to use existing

pollution prevention laws in each nation to implement an effective continental trash management regulatory system.

One of the largest unknowns associated with microplastics is the long-term impact on public health. Working with the public health agencies in all three nations, the CEC could evaluate the current research, identify gaps, and promote coordination and partnerships to fill those gaps.

In summary, the GAC recommends EPA seek agreement with the other parties for the CEC to undertake the following:

- **Research the pace, effectiveness and replicability of volunteer-based clean up and awareness campaigns. Identify exemplary programs and promote their replication.**
- **Research the economics of plastic and other single use products to determine their true life-cycle costs. Use that information to explore economic models designed to collect end-of-life costs at the time of purchase and use those revenues to support proper disposal, reuse, cleanup and the development of more environmentally friendly materials.**
- **Review the national and subnational opportunities in Canada, Mexico and the U.S. to use existing pollution prevention laws in each nation to implement an effective trash management regulatory system.**
- **Examine the current data and methods of measurement used in the U.S., Mexico and Canada and propose a standardized system common to all three nations. Evaluate gaps in the available data and propose means of filling them.**
- **Create an inventory of provincial, state and urban area waste management capabilities to help focus regional and national resources to those areas that have the greatest need and represent the greatest risk to the environment.**
- **Evaluate the current research on the health impacts of microplastics, identify gaps, and promote coordination and partnerships to fill those gaps.**
- **Assemble representatives from the three nations and stakeholders including industry representatives to develop a consistent definition of "biodegradable" that is closer to the meaning that the public ascribes.**