



**American Chemistry Council
Statement for the Record
Senate Committee on Environment and Public Works**

“Cleaning Up the Oceans: How to Reduce the Impact of Man-Made Trash on the Environment, Wildlife, and Human Health”

September 26, 2018

The American Chemistry Council (ACC) is pleased to submit this Written Testimony to the Senate Committee on Environment and Public Works regarding the September 26, 2018 hearing, “Cleaning Up the Oceans: How to Reduce the Impact of Man-Made Trash on the Environment, Wildlife, and Human Health.”

While marine debris is a huge problem, it is also a solvable one. ACC, together with America’s Plastics Makers®, are committed to ending plastic waste in the environment. We are proud to have partnered with governments, NGOs, and the private sector to deliver sustainable solutions to marine debris. Hundreds of projects are underway or already completed, but we know that there is much more to be done.

ACC represents a diverse set of companies engaged in the U.S. business of chemistry, a \$768 billion enterprise that is helping to solve the biggest challenges facing our country and the world. Chemistry touches 96 percent of all manufactured goods, and the use of plastics in modern automotive, building and construction, and food packaging industries is helping to create a more sustainable society.

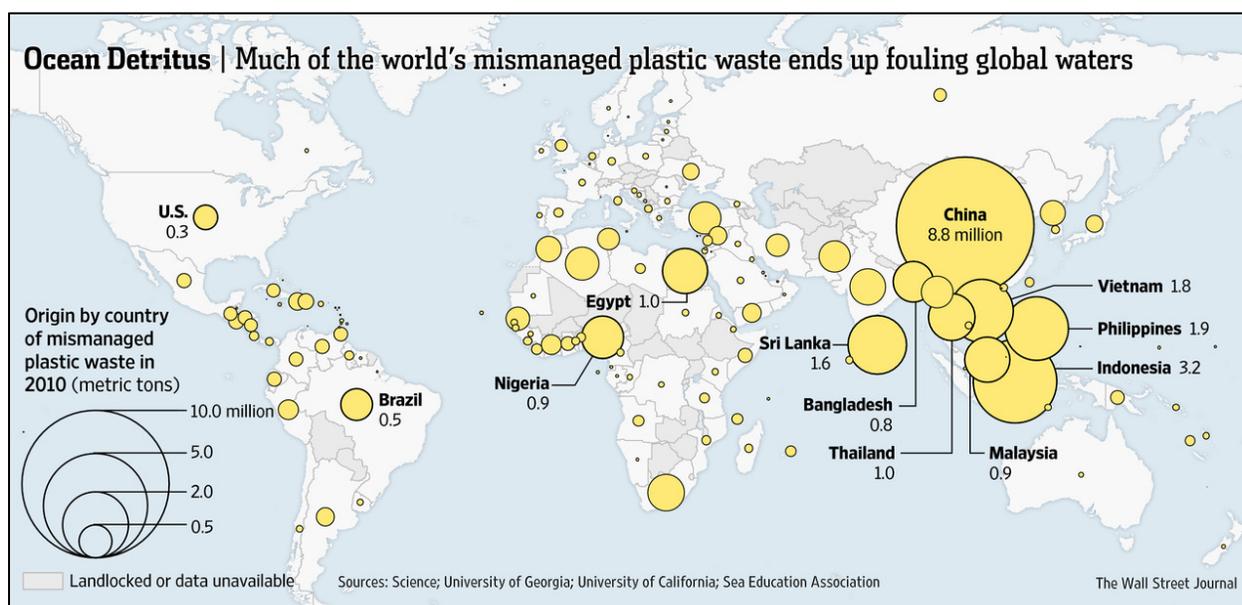
- *Automotive:* Today’s plastics make up 50 percent of the volume of new cars but only 10 percent of the weight. Lighter cars are more fuel efficient, and as a result, emit fewer CO2 emissions.
- *Building and Construction:* Architects and designers rely on plastics to help maximize energy efficiency, durability and performance of our homes, offices, and schools.
- *Food Packaging:* Plastics help keep our food fresh and clean with less packaging while reducing food waste. Reducing food waste is important because EPA estimates that more food reaches landfills and incinerators than any other single material in our everyday trash, constituting 22 percent of discarded municipal solid waste.



Although plastics provide important benefits to society, plastics and other trash don't belong in our waterways or the environment. That's why ACC and our members are actively engaged in concrete, well-researched, and sustainable actions to reduce litter and prevent marine debris.

The first step to ending plastic waste in the environment starts with understanding the sources. A number of scientific studies have concluded that plastic litter in the ocean is the result of poor or insufficient waste management and lack of sufficient collection, recycling and recovery facilities infrastructure in rapidly developing countries.

Twenty countries account for 83 percent of the mismanaged plastic waste available to enter the ocean.¹ The largest sources are rapidly developing economies, mainly in Asia, where basic waste management infrastructure has not kept pace with the rise in demand for consumer goods. Over half of land-based plastic waste leaks from just five countries: China, Indonesia, the Philippines, Thailand, and Vietnam.



A recent World Bank study confirms that root cause. Human trash in Indonesian rivers includes 53 percent organic waste, 13 percent diapers, 29 percent plastic and the remainder other debris.² Although consumer plastics are a large fraction of the waste stream, holistic solutions are needed to keep plastics out of our oceans and waterways.

The World Bank finding is also consistent with McKinsey's analysis for Ocean Conservancy's Trash Free Seas Alliance® which identified the need to immediately accelerate implementation

¹ J. R. Jambeck, R. Geyer, C. Wilcox, T. R. Siegler, M. Perryman, A. Andrady, R. Narayan, and K. L. Law, "Plastic waste inputs from land into the ocean," *Science*, 2015, Volume 347, Number 6223

² The World Bank Group, Indonesia Marine Debris Hotspot Rapid Assessment Synthesis Report, April 2018



of waste collection infrastructure, plug post collection leakage, and improve processing of collected waste in source countries.³

S. 756, “The Save our Seas Act”, first passed in the Senate in 2017 and later by the House in 2018, is a well-designed and thoughtful piece of bipartisan, bicameral legislation. ACC and our members have long supported S. 756 for three important reasons:

- first, it emphasizes greater engagement with the key source countries;
- second, the bill would help ensure that precious waste management resources, technologies and investments are allocated to where they are needed most; and
- third, it reauthorizes the Marine Debris Act, which provides provisions to further study land-based waste management solutions and causes of marine debris, as well as increase investment and technical assistance to help expand waste management systems and best-practices in rapidly industrializing nations.

We are pleased that Senate passage of S. 756, with House amendments, is imminent and will allow for expeditious passage in the House before being sent to the President for his signature.

Legislation is one part of the answer. ACC and our members are working with governments, NGOs, and our industry peers to deliver sustainable solutions to marine debris. In 2011, ACC helped lead the development of the Declaration of the Global Plastics Associations for Solutions on Marine Litter.⁴ The Global Declaration obliges signatories to commit to action in six areas: education, research, public policy, best practices, recycling/recovery, and product stewardship.

Attached to this Testimony are two documents which highlight work both completed and underway on several marine debris projects across each of the six focus areas:

- “America’s Plastics Makers Contribute to Solutions on Marine Litter” (*See Appendix A*);
- “The Declaration of the Global Plastics Associations for Solutions on Marine Litter, 4th Progress Report – Executive Summary” (*See Appendix B*).

75 plastics associations in 40 countries have signed the Declaration since its launch. More than 355 marine litter projects are planned, underway, or have been completed around the globe. Each of them helps to forge cooperation and continuous progress to prevent, reduce, and improve understanding of marine litter.

One of those projects involves a unique partnership between ACC and Circulate Capital, an investment management firm dedicated to financing innovation, companies, and infrastructure that prevent the flow of plastic waste into the world's oceans. Starting initially with Southeast

³ Ocean Conservancy, McKinsey Center for Business and Environment, “Stemming the Tide: Land-based strategies for a plastic-free ocean,” Oct. 2015

⁴ www.marinelittersolutions.com



Asia, Circulate Capital will provide capital investments to improve collection, sorting and recycling markets, particularly across the plastic value chain. This emphasis on international cooperation on waste management in the largest source countries is critical to reducing trash in our oceans.

ACC and America's Plastics Makers® are also taking important steps in the United States. In May, ACC's Plastics Division announced three ambitious goals that crystalize U.S. plastics resin producers' commitment to recycle or recover all plastic packaging used in the United States by 2040 and to further enhance plastic pellet stewardship by 2022.

Specifically, members of ACC's Plastics Division have set the following goals for capturing, recycling, and recovering plastics:

- 100 percent of plastics packaging is re-used, recycled or recovered by 2040.
- 100 percent of plastics packaging is recyclable or recoverable by 2030.

Circularity at its core is about reducing waste, promoting reuse, increasing recycling rates and developing new recovery technologies. Achieving a more "circular economy" for plastics will enable society to continue to harness plastics' essential benefits, like enhancing the safety and sanitary packaging of food and personal care products, while helping to protect and restore the environment for future generations.

It's important to note that achieving a circular economy does not mean eliminating plastics, since plastics serve an essential role in helping to accomplish ambitious goals in sustainability across all three pillars – social, environmental, and economic. Many proposals to restrict or eliminate certain plastics fail to consider how they can help reduce environmental costs.

For example, a July 2016 study by Trucost found that replacing plastics in consumer products and packaging with a mix of alternative materials with the same function would increase environmental costs from \$139 billion to \$533 billion annually.⁵ The higher environmental cost of alternatives to plastic is a function of the increased quantity of materials needed to fulfill plastic functions. Every material has a cost, including plastics, but the Trucost study tell us that using alternatives to plastic has costs that are almost four times higher.

Another important feature of plastics that is not commonly known is that their "captured energy" is greater than wood, paper or even coal. Today, an emerging set of technologies has begun to unlock that captured energy, transforming non-recycled plastics into alternative fuels and feedstock materials for new manufacturing. In fact, established energy recovery facilities can reduce by 80 percent the volume of waste that goes to landfill.

⁵ Trucost, "Plastics and Sustainability: A Valuation of Environmental Benefits, Costs and Opportunities for Continuous Improvement," July 2016



Plastics that go on to become fuel and other forms of energy are plastics that do not end up in our oceans. Some of the most widely used and rapidly emerging technologies include plastics-to-fuels, pyrolysis, gasification, solid recovery fuels, and waste-to-energy. With the rise of these new technologies comes new jobs and economic growth.

Together with the Trucost findings, the increased recycling and the potential shift toward greater recovery of plastics serves as another example for why product-specific restrictions do not advance social, environmental, or economic goals. Contrary to popular opinion, product bans are not sustainable solutions. Legislation like the “Save Our Seas Act” recognizes this important fact.

Innovations in plastics have helped improve the lives of billions of people around the globe. At the same time, the problem of marine debris is one that businesses, environmental groups, policymakers, and citizens around the globe have become all too familiar with.

ACC believes that awareness, deep appreciation and understanding of the marine debris problem now serves as the necessary prologue to embark on a journey toward creating and implementing sustainable solutions.

We thank you for the opportunity to testify today and look forward to our continued partnership in protecting and restoring the environment for future generations.

The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care[®]; common sense advocacy designed to address major public policy issues; and health and environmental research and product testing. The business of chemistry is a \$768 billion enterprise and a key element of the nation's economy. It is among the largest exporters in the nation, accounting for fourteen percent of all U.S. goods exports. Chemistry companies are among the largest investors in research and development. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation's critical infrastructure.





AMERICA'S PLASTICS MAKERS CONTRIBUTE TO SOLUTIONS ON MARINE LITTER

In 2011, through the American Chemistry Council (ACC), America's Plastics Makers® helped lead the development of the Declaration of the Global Plastics Associations for Solutions on Marine Litter. Otherwise known as the Global Declaration, this is a global commitment to combat ocean pollution. Since its inception, seventy-five plastics associations in 40 countries have signed the Declaration and more than 355 marine litter projects are planned, underway, or have been completed around the globe.

EDUCATION

This commitment can help change the behavior that ultimately leads to marine litter. Education initiatives spread awareness of the problem and highlight steps people can take to address it.

• Keep It Beachy Clean (Virginia Beach)

Keep it Beachy Clean is an education and outreach program aimed at reducing beach litter. Clean Virginia Waterways developed the program, which provides Virginia Beach's resort community with anti-litter messaging. Following a successful first year, the program is expanding to capture a wider segment of the Virginia Beach resort community. Feedback from the first year of the program helped to refine the messaging and prioritize actions for year two.

• I Want To Be Recycled

ACC is a founding partner and continuing sponsor of Keep America Beautiful's public service campaign "I Want To Be Recycled." Since its inception, the campaign has leveraged over \$115 million in donated advertising. This national advertising campaign aims to increase consumer awareness and participation in recycling. The campaign directs consumers to IWantToBeRecycled.org, which offers information on which products to recycle, how to recycle them and what the products could transform into when recycled properly.

• Wrap Recycling Action Program

The Wrap Recycling Action Program (WRAP) is a national public education and outreach initiative. Its goal is to double the recycling of polyethylene (PE) bags, wraps and film to 2 billion pounds by 2020. WRAP brings together a range of stakeholders that includes US EPA, state governments, businesses, industry, and non-profit groups. WRAP has been shown to as much as double plastic film recycling in target communities.

RESEARCH

Studies are important to further understand the impacts of plastic marine litter, how and why marine litter enters the ocean, as well as how to prevent it.

• Trash Free Seas Alliance®

America's Plastics Makers® joined the Trash Free Seas Alliance (TFSA) in 2015. Since then, we've worked together with other members of the Alliance to advance the scientific rigor on the topic of marine debris. Advancing new knowledge, understanding how materials enter our ocean, and identifying cost effective strategies to confront plastic pollution at the global scale is central to the Alliance's work. TFSA has published several important studies including Stemming the Tide that found waste collection and management represent the most effective and most urgently needed mechanisms to prevent plastics debris emerging from large source countries.

• Study of Additives in Marine Debris

ACC worked with plastic manufacturers to provide information for a modeling study of the potential migration of additives commonly found in marine debris items. Results of the study are expected later in 2018.

• Fate of Plastics Research Project

Working with researchers in Woods Hole, Massachusetts, ACC is supporting a study of the fate of plastics in the marine environment. The researchers are investigating how plastics break down into smaller fragments when exposed to high and low energy environments. Results of the study are expected in 2019.

PUBLIC POLICY

Government programs and effective policies - and the way they are or are not enforced- can help prevent marine litter.

• SAVE OUR SEAS ACT

The Save Our Seas Act reauthorizes the NOAA Marine Debris program and also provides direction to the Administration regarding engagement with foreign governments to address the source of marine debris. Specifically, the legislation encourages the federal government to work with governments in rapidly developing economies to improve waste management infrastructure.

- **Development of Straw Product Stewardship Position**

Our partners in the environmental community challenged us to address straws, an item commonly found during the international coastal cleanup. Working with our member companies and others throughout the value chain we developed a product stewardship position advocating for the responsible use of straws to help decrease plastic straws pollution. The position was announced as part of ongoing efforts to help promote the responsible use of valuable plastic materials and in accordance with our commitment to the Trash Free Seas Alliance® (TFSA).

BEST PRACTICES

While individual projects vary from place to place, sharing successes helps industry, government, and others understand what works best.

- **Circulate Capital (formerly Closed Loop Ocean)**

In 2017, ACC and the World Plastics Council joined a coalition of partners to support Closed Loop Ocean (CLO). In 2017 WPC and CLO announced the creation of a \$150 million fund to support waste management in key source countries. In 2018, CLO became Circulate Capital, a separate entity to manage investments in waste management infrastructure in developing countries. Initially, Circulate Capital will focus on waste infrastructure solutions in Southeast Asia. Research indicates that the majority of plastic debris originates from five fast growing economies in Asia—Indonesia, the Philippines, Vietnam, Thailand and China. Circulate Capital investments will be provided to improve collection, sorting and recycling markets, particularly across the plastic value chain.

- **Save the Bay Narragansett Bay, Rhode Island**

America's Plastics Makers® are partnering with Save the Bay (Narragansett Bay) on the City of Warwick Shoreline Trash Reduction & Prevention project. This initiative aims to reduce littering behavior with a combination of cleanups, community engagement and education. The project is utilizing lessons learned from other efforts to reduce litter and marine debris. Results of the project are expected later in 2018.

- **Toronto Trash Wheel Feasibility Study**

Working with the Canadian Plastics Industry Association, ACC supported a feasibility study to determine the benefit of installing a trash wheel in Toronto. Such a project would help to reduce the flow of plastic and other marine debris into Lake Ontario, while also providing education to residents and visitors on the importance of properly disposing of trash.

RECYCLING/RECOVERY

Capturing plastics for recycling and conversion into fuels keeps plastics out of the waste and litter streams, as well as reduces energy use and lowers greenhouse gas emissions.

- Helping improve community recycling programs through education and use of larger carts by partnering with The Recycling Partnership, a national nonprofit that reaches 1.4 million households in 71 communities. recyclingpartnership.org
- Tracking access to plastics recycling programs and the amount of plastics recycled in the United States, both of which have increased every year since tracking began. plastics.americanchemistry.com
- Dramatically increasing consumer and commercial collection of plastic film packaging for recycling through the Wrap Recycling Action Program (WRAP) and by partnering with The Sustainable Packaging Coalition and state and local governments. Recycling of plastic film reached nearly 1.2 billion pounds in 2014, quadruple the amount in 2005 when measuring began. plasticfilmrecycling.org/wrap

PELLET CONTAINMENT

Plastic pellets are a valuable resource and can be difficult to recapture if spilled or released into the environment, where they create both a litter problem and potential risks to sea and wild life. This means reducing plastic pellet loss is critical.

- **OPERATION CLEAN SWEEP®**

OPERATION CLEAN SWEEP (OCS) is an international program designed to prevent plastic pellet loss and the potential introduction of pellets to the marine environment. The purpose of OCS is to help each segment of the plastics industry implement good housekeeping and pellet containment practices- helping resin producers, transporters, bulk terminal operators, and plastics processors achieve zero pellet loss. In 2017 a new membership level, OCS Blue, was added to the program. OCS Blue companies will provide information on metrics to better capture progress towards the goal of zero pellet, flake, or powder loss. ACC Plastic Division member resin producers recently committed to having all US facilities participate in OCS Blue by 2020.

For more information: www.marinelittersolutions.com/US

The Declaration of the Global Plastics Associations for Solutions on Marine Litter

4th PROGRESS REPORT

Executive Summary

March 2018



Marine Litter

Marine litter is human-created waste that has been intentionally or unintentionally discharged into the coastal or marine environment. Its effects have prompted governments, private enterprises, environmental groups, and countless citizens to take action.

Marine litter is not only unsightly – it can harm ocean ecosystems, wildlife, and humans. It can injure coral reefs and bottom dwelling species and entangle or drown ocean wildlife. Some marine animals ingest the litter, which can result in starvation and death. Medical waste (such as syringes), sharp objects, and large pieces of litter can pose a direct threat to humans. In addition, the economic impact of marine litter is significant.

Global Declaration

Plastics makers and processors agree that plastics have no place in the ocean and have long been involved in efforts to reduce plastic marine litter, from conducting research to enhancing product stewardship to cleaning up beaches.

To consolidate and leverage these efforts, and to generate additional innovative solutions, 47 plastics associations from regions across the globe signed the *Declaration of the Global Plastics Associations for Solutions on Marine Litter* in 2011. The Global Declaration represented a public commitment by a global industry to help tackle a global problem: plastic litter in the coastal and marine environment.



The Global Declaration, announced at the 5th International Marine Debris Conference in Honolulu, Hawaii, identified six areas where contributions could be made and asked signatories to make specific commitments to achieve sustainable solutions across these areas. Signatories were further asked to identify specific actions – from sharing best practices to increasing plastics recycling – to undertake in the six work areas.

Making Progress...

2011		2013		2015		2017	
Members	47	Members	60	Members	65	Members	74
Countries	27	Countries	34	Countries	34	Countries	40
Projects	100	Projects	185	Projects	260	Projects	355

Projects

The 4th Progress Report (March 2018) provides an update on the commitments made under the Global Declaration.

As of December 2017, approximately 355 projects have been planned, underway, or completed. This represents an increase of more than three and a half times the number of projects since the Global Declaration was announced. The projects vary widely, from expanding waste management capacities to advocating effective public policies to creating education campaigns. These projects have been undertaken by 74 plastics associations that have signed the Global Declaration in 40 countries, plus an additional 13 associations that have not signed the Declaration.

“Marine litter is a global problem that we must tackle on a global scale,” said Steve Russell, vice president of plastics for the American Chemistry Council. “It’s heartening to see the growing number of plastics makers and associations across the globe involved in developing sustainable solutions.”

“Marine litter is a complex environmental challenge that requires joint efforts at the local, regional, and global level,” confirms Karl-H. Foerster, executive director of Plastics Europe. “We look forward to continue developing and executing programs that address marine litter and working with governments, non-governmental organizations,

Number of Projects in each Work Area

Work Area #1 / Education	136
Work Area #2 / Research	38
Work Area #3 / Public Policy	42
Work Area #4 / Best Practices	41
Work Area #5 / Recycling/Recovery	91
Work Area #6 / Plastic Pellet Containment	9

researchers, and other stakeholders. It is essential that we have these partnerships and continue to invite additional stakeholders to tackle this very serious issue together.”

“To capture waste before it reaches the oceans, Asia Plastics Forum member countries have implemented many ongoing projects, including education and public awareness programs, beach and river clean ups, and major ‘Trash Free Festivals,’” said Callum Chen, Secretary-General of the Asia Plastics Forum, “in collaboration with raw material suppliers, schools, local municipalities, ministries of environment, and NGOs. Progress in these areas could have a great impact on reducing all types of marine litter, including plastics.”

Number of Projects per Region

Africa	24
The Americas	128
Arabian Gulf	7
Asia	70
Australia/New Zealand	12
Europe including Turkey & Russia	109
Global	7

The Progress Report can be viewed at: <https://www.marinelittersolutions.com/what-we-do/progress-report/>

The Global Declaration and list of signatories can be found at: www.marinelittersolutions.com/about-us/joint-declaration/

Calvin M. Dooley

President and Chief Executive Officer, American Chemistry Council



Cal Dooley is President and CEO of the American Chemistry Council (ACC). Since joining ACC in 2008, Dooley has enhanced member value and strengthened the competitive position of U.S. chemical manufacturers by advocating for a business and regulatory climate that drives innovation, supports job growth and enhances safety.

Under Dooley's leadership, ACC achieved its strongest financial position in a decade, while at the same time enhancing member value through reduced dues. ACC membership has grown by more than 25 percent during

Dooley's tenure, with approximately 50 new manufacturing companies joining the Council.

In 2012, Dooley oversaw the launch of a national energy advocacy and awareness campaign, "From Chemistry to Energy." The campaign calls on policymakers to support the development of natural gas from shale while promoting energy efficiency and the development of alternative sources such as energy recovery and renewable energy. Dooley's leadership in this initiative has been critical to ensuring that federal and state policymakers understand the link between domestic shale gas, the chemical industry and growth in America's manufacturing sector that will drive U.S. competitiveness, boost exports, and create new, high-paying jobs.

Also in 2012, following a multi-year strategic review process that took place under Cal's leadership, the ACC Board of Directors approved a series of enhancements to Responsible Care®, the chemical industry's world-class environment, health, safety and security performance initiative. Dooley oversaw development of the new Responsible Care Product Safety Code, which guides chemical manufacturers in evaluating and improving product safety performance. This revamped Responsible Care launched in early 2013 in conjunction with the program's 25th Anniversary.

In 2010, Dooley played an instrumental role in bringing together a coalition of nearly 100 business associations, the American Alliance for Innovation (AAI), to promote science-based modernization of the U.S. Toxic Substances Control Act (TSCA). In addition to his commitment to updating federal chemical safety regulations, Dooley has called on Congress and the U.S. Environmental Protection Agency (EPA) to ensure the best available science and technology are at the foundation of government science and risk assessment programs. Dooley's current focus is on reforming EPA's Integrated Risk Information System (IRIS) so that lawmakers and industry can have confidence in the credibility and reliability of chemical safety determinations.

Prior to joining ACC, Dooley served as President and CEO of the Grocery Manufacturers Association (GMA). He took over leadership of GMA after serving as President and CEO of the Food Products Association (FPA), which merged with GMA in January 2007.

In Congress, Dooley represented the 20th District of California as a Member of the U.S. House of Representatives from 1991 to 2004. He served on the House Agriculture Committee, as well as the House Resources Committee. Dooley was honored by the Washington International Trade Foundation with its prestigious Distinguished Service Award, and was twice recognized by Consumers for Free Trade for his strong support for international trade. Congressional Quarterly named Mr. Dooley one of the House's most influential "Power Players," in recognition of the breadth and effectiveness of his leadership in Congress.

Dooley holds a bachelor's degree in agricultural economics from the University of California, Davis and, as a Sloan Fellow, earned a master's degree in management from Stanford University.