



the David &
Lucile Packard
FOUNDATION

Millennial Ocean Plastics Research

*Plastics as the Gateway to Engaging the
Next Generation of Ocean Conservationists*

April 2017

Packard Millennial Ocean Research

A two-year investigation of Millennial audiences and opportunities to cultivate the next generation of ocean conservationists.



Additional resources: <https://www.packard.org/what-were-learning/resource/american-millennials-cultivating-the-next-generation-of-ocean-conservationists/>

OR CONTACT:

Lisa Dropkin at dropkin@edgeresearch.com

Stacia Tipton at tipton@edgeresearch.com

Aaron Berneking at berneking@edgeresearch.com

- **Continuing research to explore whether Millennial interest in plastics, ocean trash and debris can be a gateway to greater engagement on ocean conservation.**
- Key questions to answer:
 - What are the most effective ways to talk about plastics with Millennials?
 - Does concern about ocean plastics lead to interest or willingness to engage on other ocean conservation challenges?
 - If so, what is the pivot? Which issues bridge or transition into deeper ocean engagement?

Online Survey Methodology



Millennials

- **1,002 U.S. Millennial Respondents (Ages 19-34)**
- Balanced for Gender, Race/Ethnicity, & Geography



Engaged

- **711 Surfrider Members**
- **850 Ocean Conservancy Members**
- Edge worked with the groups to field the surveys; branching questions as appropriate
- Thank you!!



For Millennials, plastic in the ocean has traction as a top pollution concern.

There is belief we can make progress and they find compelling solutions in personal actions and the work of conservation groups.

- **Plastics, specifically in the ocean**, generate concern more so than plastic pollution generally

- Impacts to **animals** are the lever

- **Lifestyle** solutions are top but there is support for the work of **conservation groups** as well

- **Exposure** to the ocean plastics issue appears to generate **greater willingness to support conservation**
- **Marine mammal protection, water quality** and **habitat** are the “next step” issues
- Fisheries is not the beneficiary

- As a **gateway to ocean conservation**, plastics generates:
- **Interest in what conservation groups** are doing;
- **Support for big picture solutions**;
- Willingness to **give \$**
- **Desire to learn more**

Context

Current Concerns

- Majorities of Millennials surveyed are concerned about economic issues, social issues and the environment.
- However, the environment falls well behind economic issues and is slightly lower than social issues.

	Environment Issues		Economic Issues		Social Issues	
	Millennials	Engaged	Millennials	Engaged	Millennials	Engaged
Top 1 or 2	18%	66%	32%	32%	22%	11%
	62%	96%	72%	85%	69%	67%
In the top 5	44%	30%	40%	53%	47%	56%
Top 10 (but not top 5)	25%	3%	19%	12%	20%	28%
Not in the top 10	7%	<1%	5%	4%	4%	2%
Not a Concern	5%	0%	6%	1%	5%	1%

Target Millennial Segments

- With all that is happening, social justice is getting more attention than other issues
- There is different intensity on the issues across the target segments



Global Greens

Coastal Concerned

Waiting in Wings

87%
Social Justice

73%
Social Justice

69%
Social Justice

78%
Economic

73%
Economic

62%
Economic

77%
Environment

68%
Environment

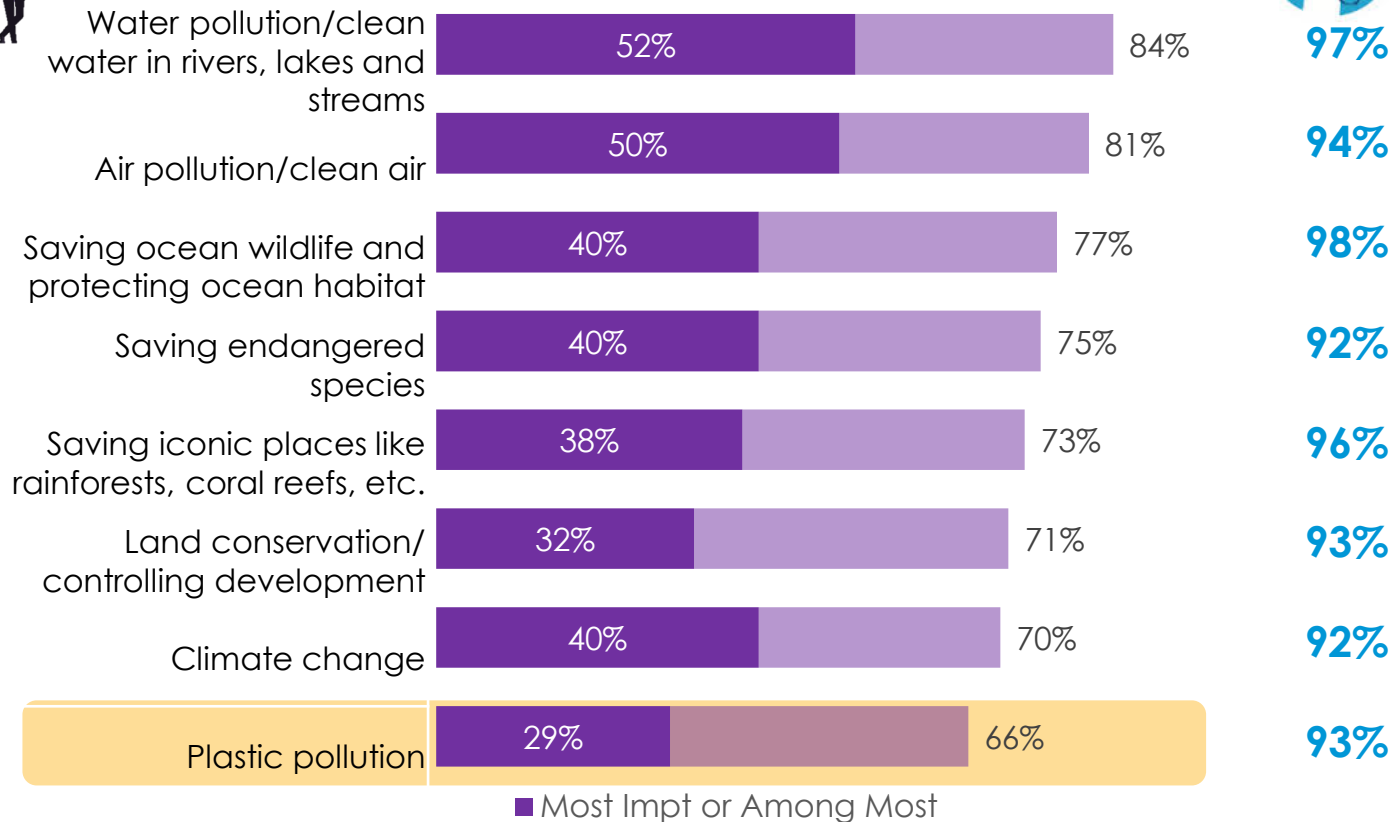
55%
Environment

parity

parity

Environmental Priorities

- Millennials are like other Americans in prioritizing clean water and air, while ocean continues to be a second tier issue
- “Plastic pollution” with no context does not register strongly
- Engaged audiences prioritize everything!



Global Greens have more concern all on the issues and are higher than other Millennial segments

Advancing the Ocean Plastics Issue

Ocean Attention-Getters

- Millennials rate the Ocean on Fossil Fuels ad and the Sea of Garbage picture as attention getting images they would click on to learn more.
- For engaged audiences, climate impacts and ocean trash are most compelling right now



purple=Millennials



blue=Engaged



Most likely to get attention
30% (Millennials)
42% (Engaged)

Would click to learn more
39% (Millennials)
44% (Engaged)



Most likely to get attention
12% (Millennials)
9% (Engaged)

Would click to learn more
18% (Millennials)
16% (Engaged)



Most likely to get attention
28% (Millennials)
24% (Engaged)

Would click to learn more
33% (Millennials)
32% (Engaged)



Most likely to get attention
7% (Millennials)
7% (Engaged)

Would click to learn more
15% (Millennials)
20% (Engaged)



Most likely to get attention
12% (Millennials)
13% (Engaged)

Would click to learn more
25% (Millennials)
37% (Engaged)

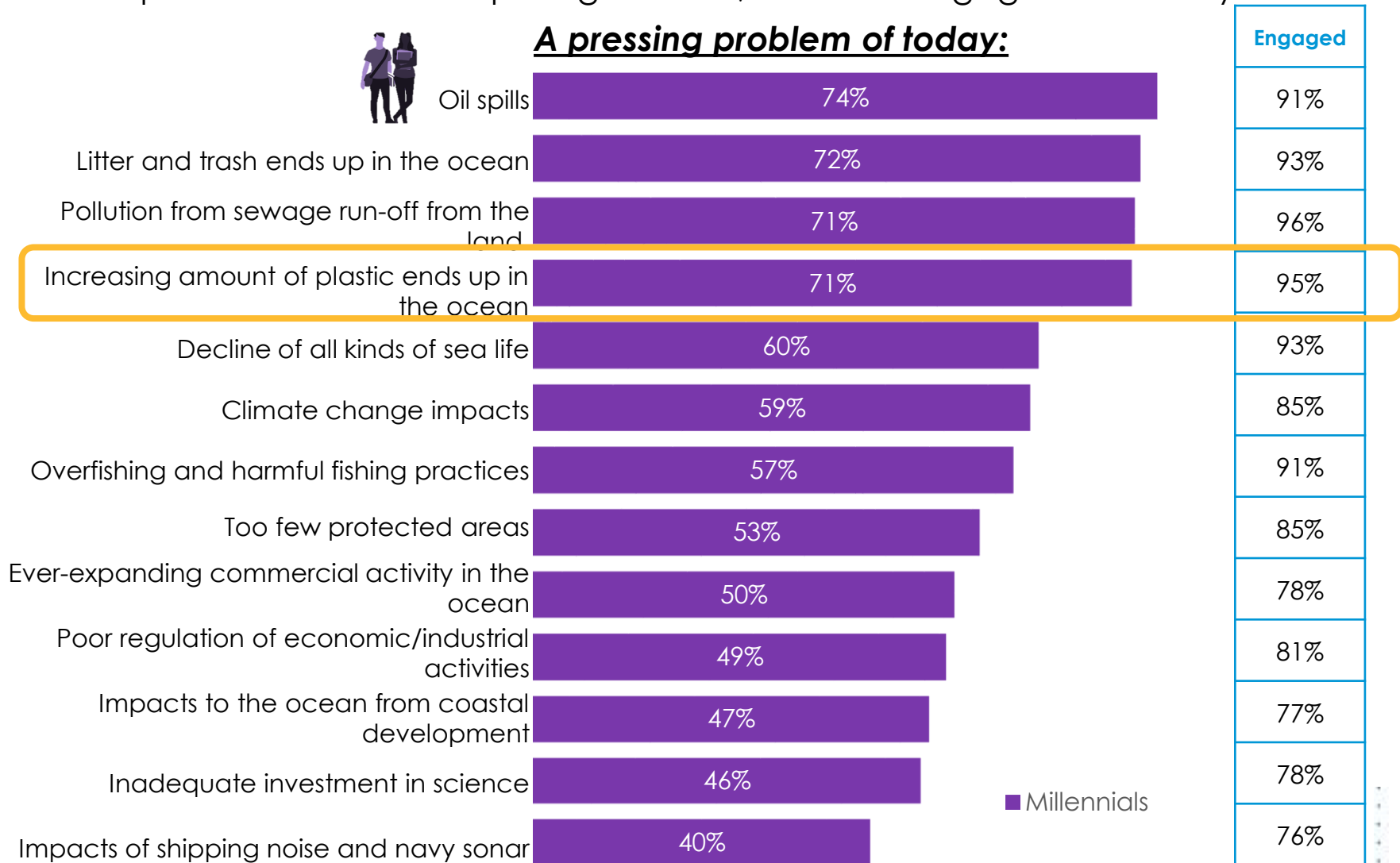


Most likely to get attention
6% (Millennials)
2% (Engaged)

Would click to learn more
12% (Millennials)
18% (Engaged)

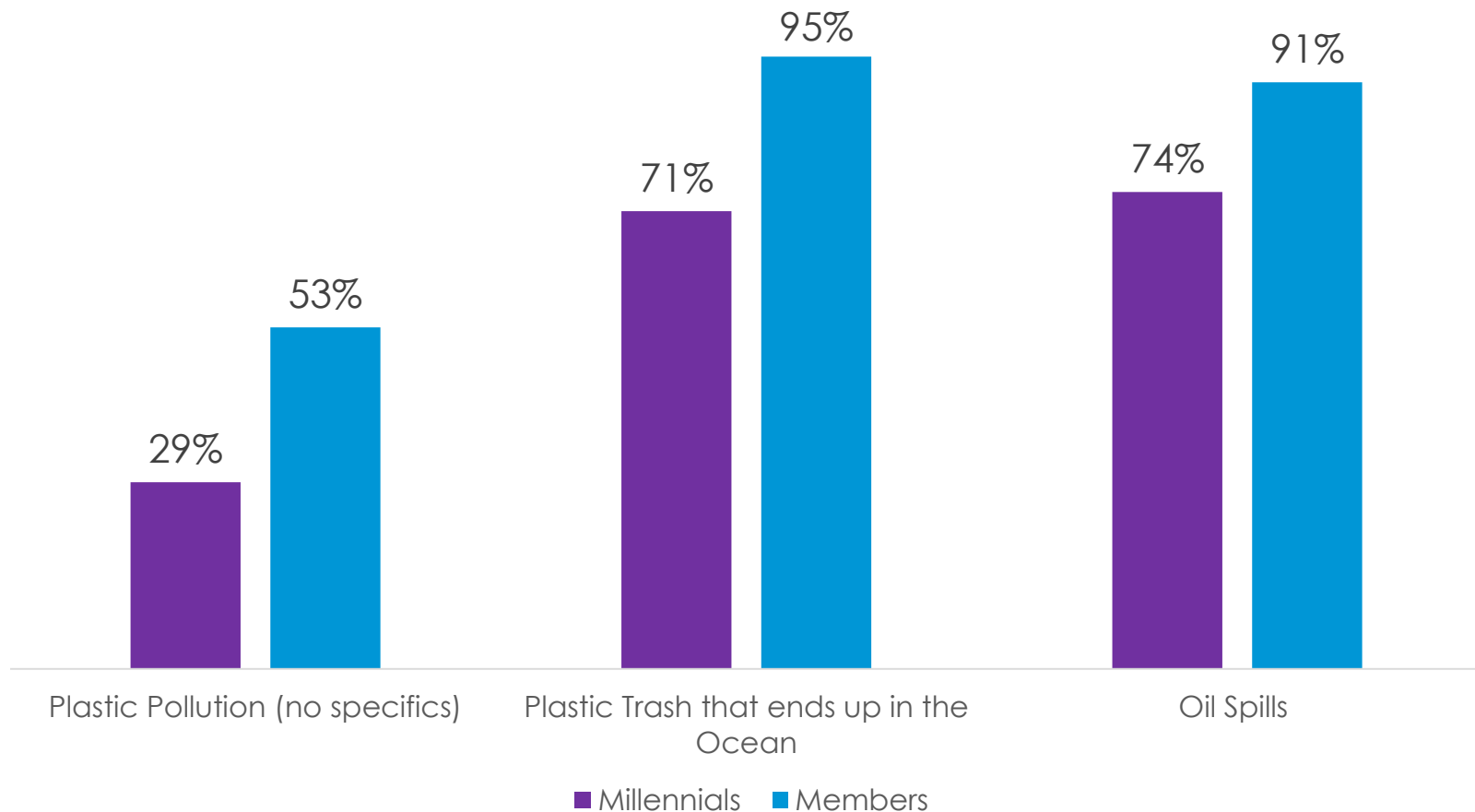
Ocean Problems: Is Plastics the New Oil Spill?

- Among ocean threats, ocean plastics is among the top three problems for Millennials. All pollution is more compelling to them, while the Engaged see many threats.



Plastic *In the Ocean* Is Powerful

- Plastic in the ocean is on par with oil spills – the perceived leading threat to the ocean since we began tracking in 1998



Plastic Attention-Getters

- Millennials and Engaged audiences can't seem to ignore animals + plastic. Images showing the danger to animals were the most attention grabbing and the most clicked to learn more.



purple=Millennials



blue=Engaged



Most likely to get attention
34% (Millennials)
43% (Engaged)

Would click to learn more
36% (Millennials)
34% (Engaged)



Most likely to get attention
14% (Millennials)
7% (Engaged)

Would click to learn more
23% (Millennials)
21% (Engaged)



Most likely to get attention
21% (Millennials)
21% (Engaged)

Would click to learn more
31% (Millennials)
34% (Engaged)



Most likely to get attention
7% (Millennials)
8% (Engaged)

Would click to learn more
25% (Millennials)
44% (Engaged)



Most likely to get attention
14% (Millennials)
15% (Engaged)

Would click to learn more
27% (Millennials)
33% (Engaged)



Most likely to get attention
6% (Millennials)
5% (Engaged)

Would click to learn more
16% (Millennials)
19% (Engaged)

Why Care?

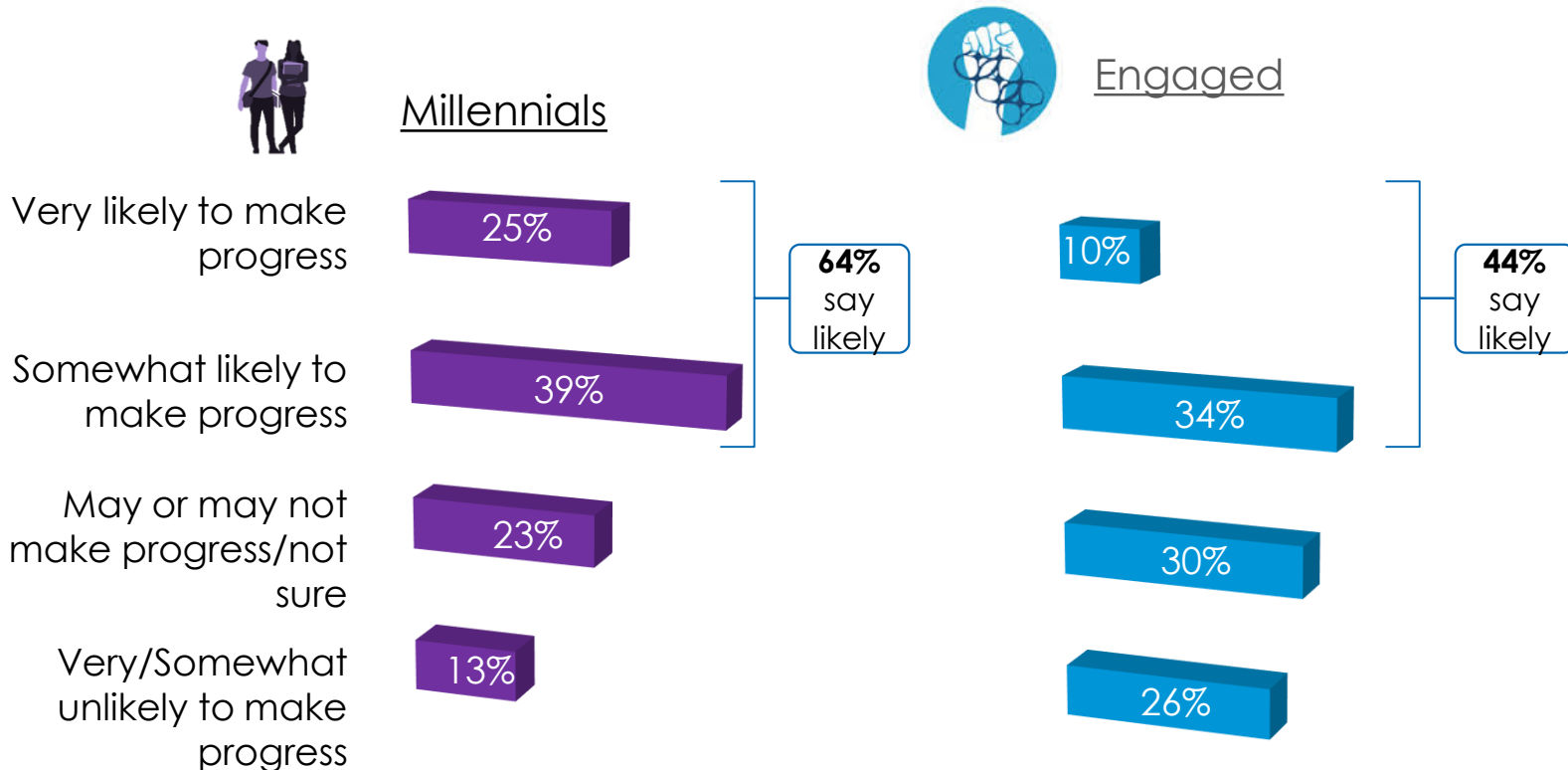
- Both Millennials and the Engaged are motivated by plastics' impact on marine life.

	Millennials	Engaged
Marine animals getting tangled up and injured by plastic garbage	44%	46%
Marine animals eating plastic/mistaking it for food	42%	54%
Plastic contains toxic chemicals and fish we eat have ingested these chemicals	35%	24%
Plastic breaks down into smaller pieces but never disappears; it stays in the ocean	20%	36%
That there is so much plastic in the ocean, huge garbage patches'	20%	21%
So much plastic trash ends up on beaches and it ruins beautiful places and how we enjoy them	22%	8%
It is disrespectful and no way to treat nature in the long run	17%	10%

Can We Solve It?

- Thinking about the future, Millennials surveyed are positive about the possibility of reducing the amount of plastic going into the ocean.

How likely do you think we are to make progress on reducing the amount of plastic trash going into the ocean in the next 5 years?



Telling the Ocean Plastics Story

- Sheer volume, marine life consuming toxins, and failure to recycle are motivators
- The controversial “more plastic than fish” statistic is compelling



Highly Motivating

Engaged

By 2050 researchers estimate there could be more plastic in the ocean than fish. If we don't start now, the problem will be unfixable.	58%	82%
Currently 8 million metric tons of plastic get washed into the ocean each year.	47%	65%
Plastic is toxic trash -- as it travels around the ocean it picks up other chemicals and pollutants in the ocean and enters the food chain when it is eaten by fish	46%	65%
[SPLIT SAMPLE] Worldwide people use roughly 200 billion plastic water bottles each year. In the US, the average consumer uses 167 plastic bottles and recycles only 38 of them.	44%	65%
Fish ingest small plastic particles from ocean water. We don't yet know the impact on people of eating fish contaminated with plastic.	41%	52%
80% of ocean trash comes from land - entering through waterways, leaking landfills and washed off streets and beaches. Most of that trash is plastic.	40%	59%
Experts estimate there are 5 trash bags of plastic in the ocean for every foot of coastline in the world.	40%	61%
It takes 10 minutes to eat a sandwich or salad sold in a plastic food takeout container- but the plastic package will last in the environment for generations.	39%	61%

Telling the Ocean Plastics Story

- Other facts help define the problem and ecosystem impacts but have less traction with Millennials.
- Noteworthy that the “Worldwide” plastic water bottle fact is more motivating than the “American” plastic bags fact.



Most plastic enters the ocean through storm drain overflows and trash in rivers in streams. This trash often concentrates in poor communities with less infrastructure making plastic pollution an environmental justice issue.

Developing countries around the world are moving toward single-use plastic packaging for food, water, and everyday items, generating ever-increasing amounts of trash.

Plastic does not bio-degrade, it just breaks down to smaller and smaller pieces that disperse throughout the ocean environment.

[SPLIT SAMPLE] It is estimated that Americans go through about 100 billion plastic bags a year, or about 360 bags per year for every man, woman and child in the country.

It is estimated that about 30% of plastic trash ends up in the ocean.

Most plastic has no recycle value. Only water bottles have value as recycled material. So most plastic waste is truly trash.

Highly Motivating

37%

38%

39%

38%

36%

35%



Engaged

48%

60%

63%

61%

56%

56%

Views On Villains

- Almost half of Millennials gave individual behavior the top “bad guy” rank, compared to the one-third of the Engaged who did the same.
- Consumptive lifestyles are most likely to get the blame from Engaged audiences



Millennials

% Top	% Top2
30%	48%
21%	44%
16%	38%
17%	36%
16%	34%

Ranking Villains

[INDIVIDUAL BEHAVIOR]

Too many people in the US and around the world don't dispose of trash properly or recycle.

[OCEAN IS SECOND CLASS CITIZEN]

The ocean is out of sight & out of mind.

[RECYCLE MYTH]

Recycling has been sold as the answer to everything when in fact it doesn't help that much.

[CONSUMPTIVE LIFESTYLE]

Developed countries have high consumption lifestyles and value convenience which leads to a lot of single-use, throwaway packaging.

[INDUSTRY]

Plastics are made from petro-chemicals; as long as there is cheap oil and there is no reason to innovate or change materials.

Engaged



% Top2	% Top
35%	21%
41%	21%
35%	14%
47%	25%
41%	19%

Engaging Millennial Behaviors

- Reducing everyday plastics & choosing recyclable plastics are ways to build on what Millennials are already doing. Scalable actions given their perspectives on individual behavior as the main villain



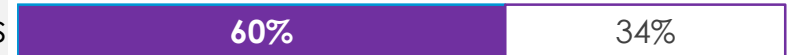
Millennials

■ Already doing □ Willing to do

Carry and use a reusable water bottle, coffee mug, etc.



Carry and shop with reusable bags



Recycle plastic bottles, containers and other packaging



Reduce everyday plastics such as sandwich bags and juice cartons by replacing them with a reusable lunch bag/box that includes a thermos.



For any plastics you buy, choose #1 (PETE) or #2 (HDPE) - the most commonly recycled plastics.



Refuse single-serving packaging, straws and other 'disposable' plastics.



Don't buy single servings or individually packaged food servings



Carry reusable utensils in your purse, backpack or car to use at bbq's, potlucks or take-out restaurants.



Millennial Top 10 Actions

- Greatest willingness to act in the form of community clean-up, personal use and consumer incentives to re-use



Millennials

Volunteer time at a clean-up

Selected as willing to do

Reduce or stop the use of single use plastic in your life - no straws, plastic utensils, water bottles, etc.

Support plastic bottle deposits- pay 5 cents more for a plastic bottle get it back when you return it for re-use

Post online about ocean plastic pollution

Follow ocean conservation group/experts on social media

Use an app to track and reduce your own single-use plastic usage

Support regulations that require companies profiting from plastics to contribute to environmental efforts

Join/donate to aquariums that educate about plastic pollution

Pressure companies to reduce plastic packaging

Donate to a non-profit organization working on ocean plastic pollution

45%

40%

37%

32%

30%

30%

30%

26%

26%

25%

Less enthusiasm for:

- Snapchat
- Starting petition for a plastic bag ban
- Distributing info to local restaurants
- Alerting manufacturers or officials by uploading photos of trash
- Emailing museums/aquariums/zoo about eliminating plastic
- Speaking at local city council or county board

Plastics as a Gateway?

3 Behavioral Tests

- To understand strength of plastics to persuade and generate commitment, we embedded three behavior tests in the survey.

#1



Millennial Respondents were divided into 2 random groups; 1 was asked which ocean issues they want to be involved in before getting any plastics info; the other group was asked after getting the plastics info

#2



Millennial Respondents were offered information about 4 additional ocean topics and we measured the percent to “click-thru”

#3



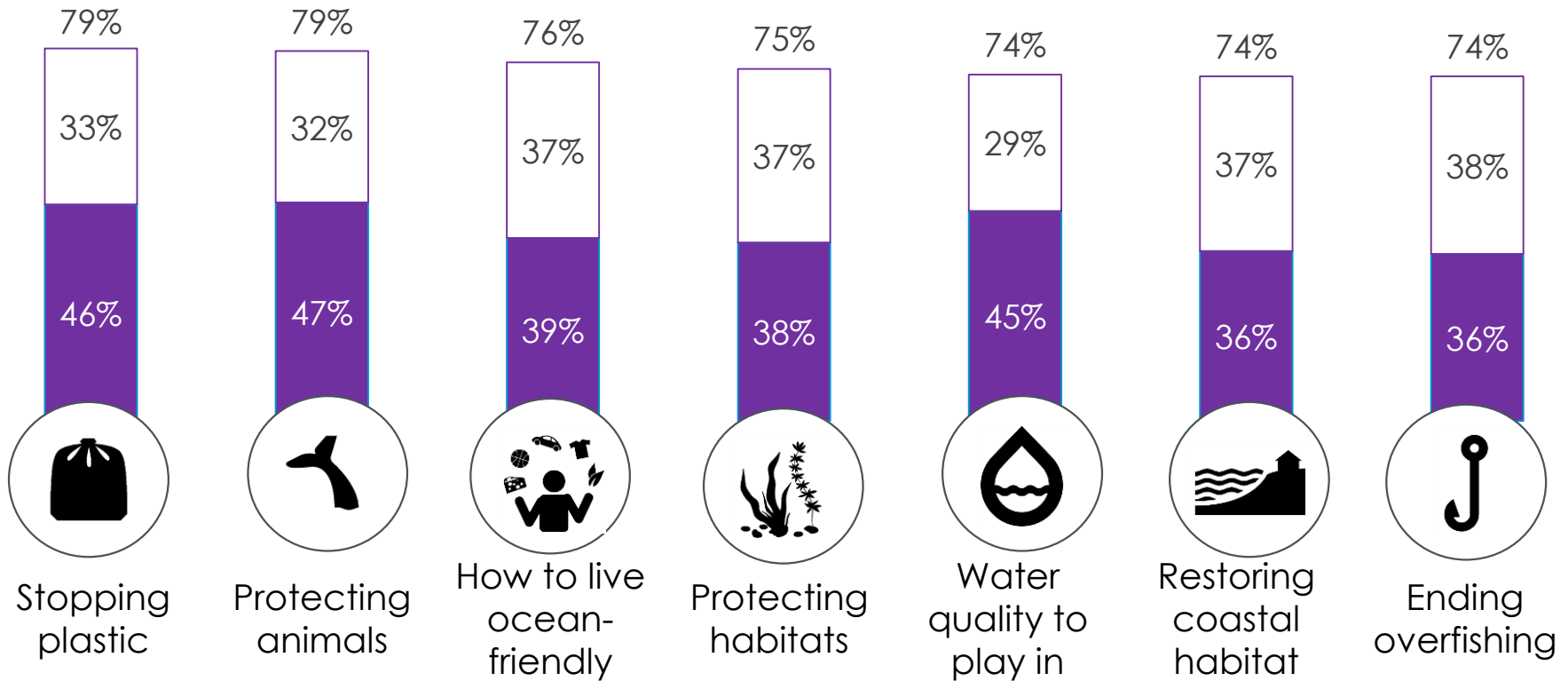
Millennial Respondents were given \$5 at the start of the survey. They could keep it or give it away. They were sorted into 3 random groups: 1 group who got asked to give/keep at the beginning; 1 that asked after the plastics programs; and 1 that was asked after hearing about other ocean issues

Appetite for Ocean Engagement

- Early in the survey, stopping the increasing plastic pollution of the ocean & protecting marine animals are the issues that Millennials most want to be involved in.



Millennials



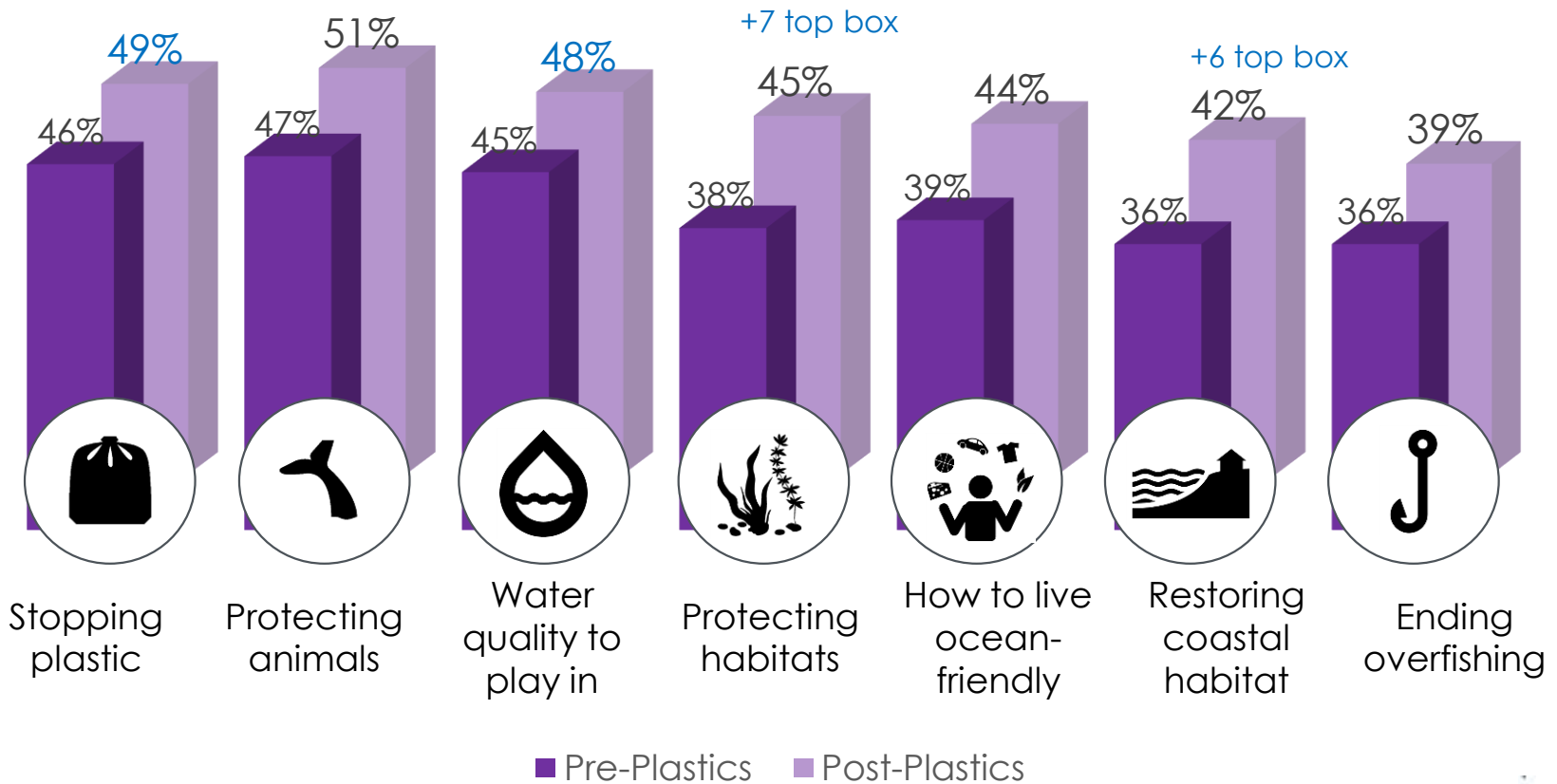
□ Some
■ A lot of interest

Impact on Engagement

- Post-plastics exposure, there is higher intensity interest among Millennials on water quality and habitat.




Millennials




 A lot of interest

Pivot Messages


- Respondents were presented with an opportunity to learn more about other ocean issues, and could click thru to show their interest

A blue silhouette of a whale breaching the water.


[MARINE ANIMALS] Plastic pollution is one of many threats to ocean wildlife. Habitat destruction, harmful fishing gear, and even the noise from shipping and underwater sonar are harming marine animals. There are laws and rules we can pass now to change fishing gear, reduce shipping traffic in important breeding areas and so on.

A blue silhouette of a fishing hook.

[FISHING] We are just beginning to learn how plastic pollution is affecting us and the fish we eat, but we do know that many species of fish are suffering from overfishing and damage to their habitat caused by fishing trawls and gear. People can help by looking for and purchasing only seafood caught in an ocean-friendly way. It is also important for people to support the sustainable fishing laws of the United States and advocate for other countries to follow these rules.

A blue silhouette of a coastline with waves.

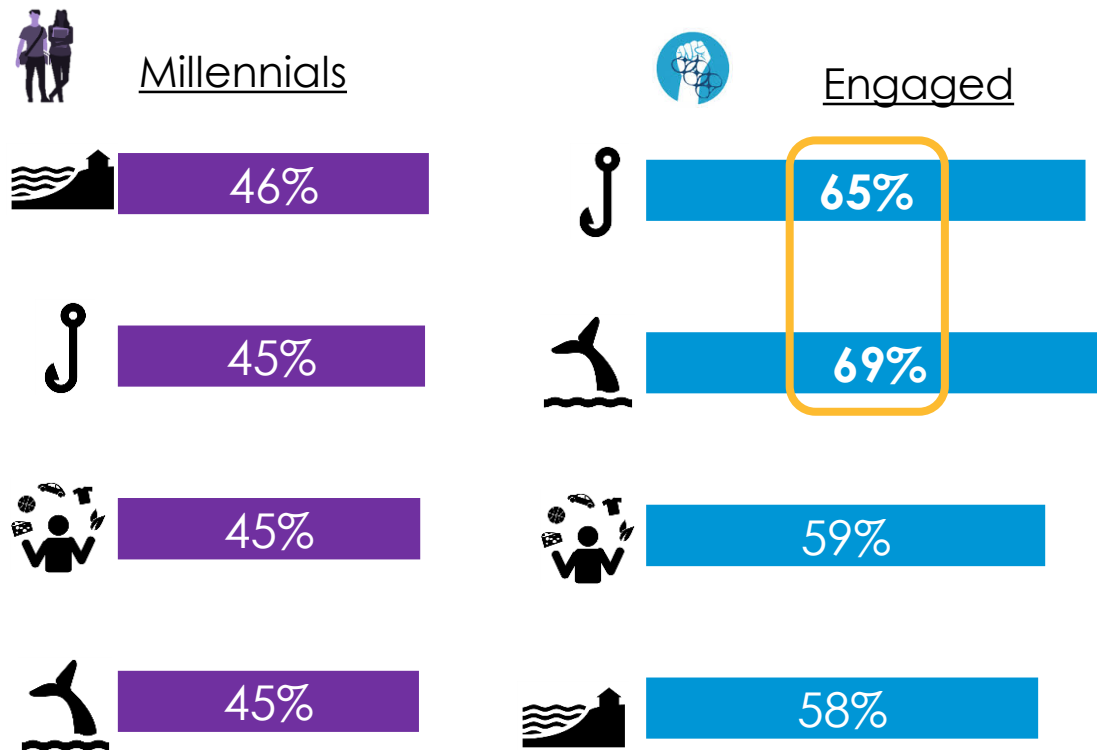
[COASTAL PROTECTION] Plastic pollution is one way we have allowed the natural habitat of rivers and coastal areas to degrade. We not only need to worry about trash, we also need to focus on restoring coastal habitats and responsive development and green infrastructure. This will improve water quality, beach quality, and support healthy and abundant fish and ocean wildlife and protect our communities from storms and sea level rise.

A blue silhouette of a person holding a recycling symbol and a trash can.

[OCEAN FRIENDLY LIFESTYLE] Plastic pollution is just one example of the way in which our consumer lives cause unintended harm to nature. We each need to be more mindful of the ways we impact the ocean directly and indirectly and do the things we can to minimize those impacts. We also need to share with others – the more people who take individual action, even small ones, the greater the positive impact we can have.

How to Pivot?

- 4 in 10 Millennials “click” to learn more after pivot messages, with all the topics generating the same amount of interest.
- The Engaged show more interest and differentiation across topics.

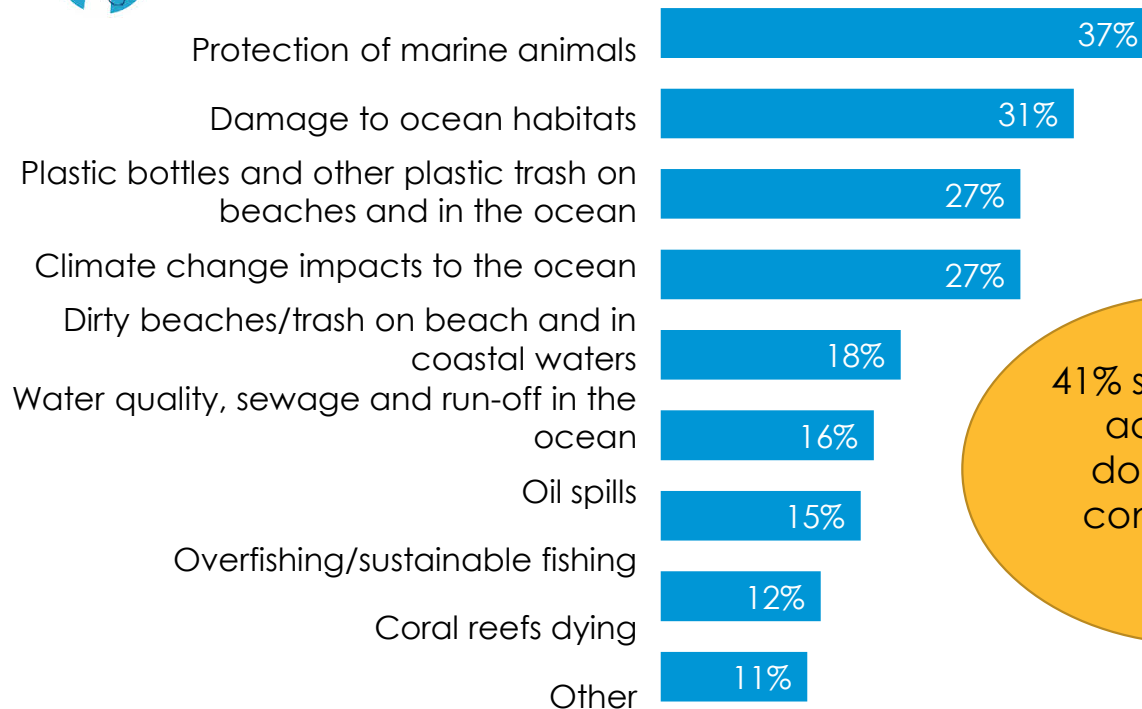


23% of Millennials surveyed clicked to learn more on all topics

Member Initial Involvement

- To compare, the path to engagement for conservation group members was also triggered by marine animal and habitat

What aspect or aspects of ocean conservation were you first interested in?



41% say their first act was to donate to a conservation group

Ocean Community Efforts

- Respondents read about three approaches underway to solve the problem of ocean plastics

Surfrider is the only coastal conservation organization that focuses on protecting our beaches and coastal waters for all to enjoy. They have local chapters all over the country. They empower and support individuals to start campaigns in their communities to reduce plastic waste, among other things. Surfrider works proactively to ban single-use plastics from the source through campaigns to pass local ordinances to get bans in place – they helped 19 cities and towns get them last year. Nearly every weekend, their 140 chapters and clubs host beach cleanups to prevent plastics from entering our waterways. And currently, they are launching a national ocean-friendly restaurant program to help restaurants move to plastic-free meals – compostable containers and utensils, no straws, etc. Finally, they have a “Hold Onto Your Butts” campaign for communities that want to eliminate cigarette butts from their beaches. When local communities act to stop plastic trash, the word spreads and more join in.

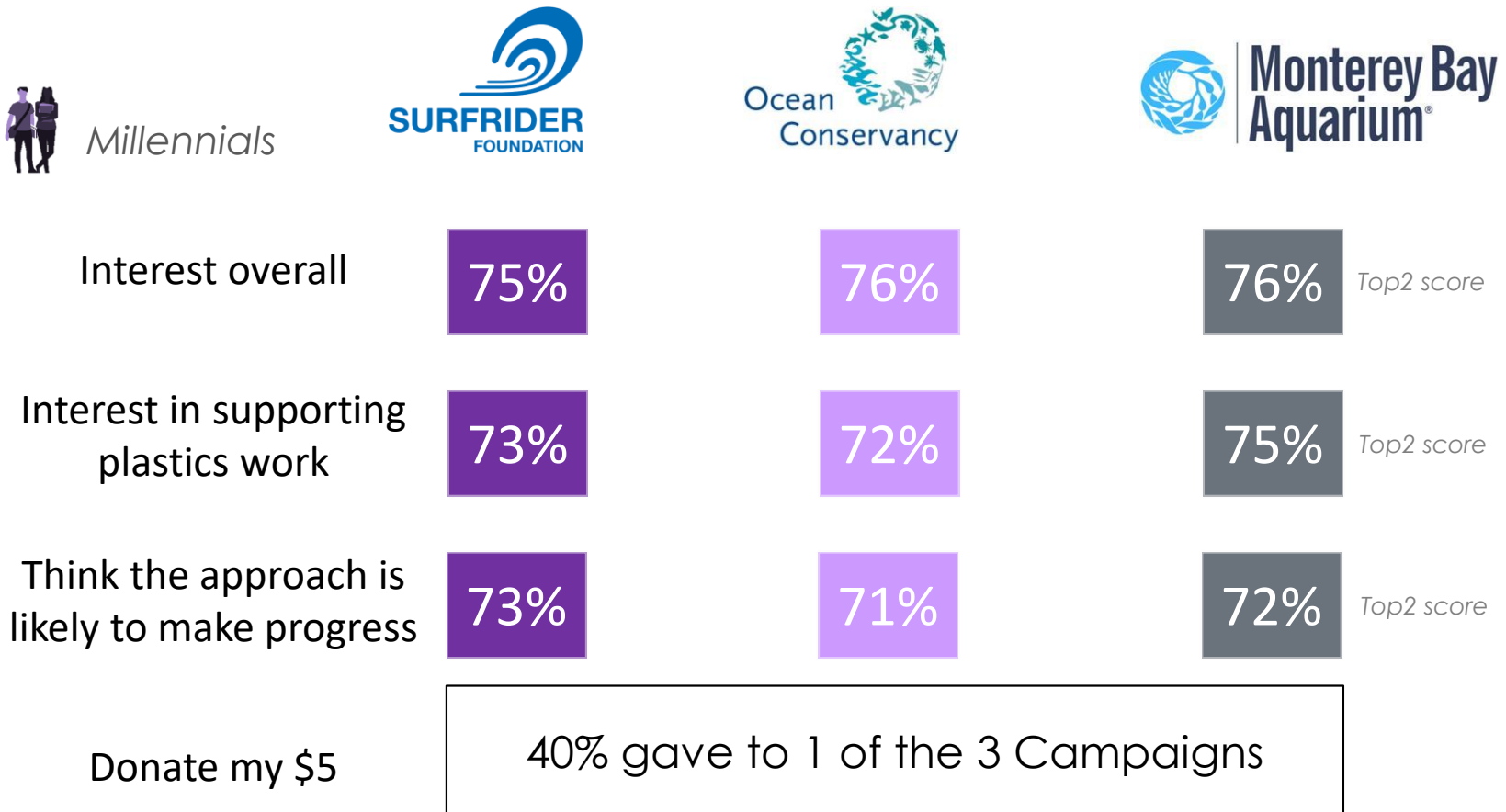
The **Ocean Conservancy** is a nonprofit organization dedicated to ocean conservation with projects around the US, including restoration in the Gulf Coast and supporting the shellfish industry on the West Coast and Northeast. They commissioned a study of the sources of ocean plastic and found that 5 countries are the main sources of plastic pollution, mainly because of inadequate waste management infrastructure. These countries which include Indonesia, Philippines and Viet Nam which have developing economies and a growing middle class that is consuming more and more packaged goods. They are working to bring together governments, investors and consumer goods companies to fund waste management infrastructure to stop the problem at its main source.

Monterey Bay Aquarium is a global ocean conservation leader and developed the Seafood Watch program, which helps consumers and businesses choose seafood that's caught or farmed in an ocean-friendly way. It works with fishermen, seafood suppliers, restaurants, major seafood buyers and governments around the world to ensure the seafood they produce, sell and serve is sustainable. It is now taking the same approach to plastic.

It is working with aquariums around the country to significantly reduce single-use plastic (straws, disposable utensils, etc.) from their food services and gift shops and to help other businesses in their communities to do the same. It is also educating its 2 million annual visitors about the problem of ocean plastic and what each of us can do to reduce plastic use in our own lives. If enough people and community businesses take up the call to demand alternatives to single-use plastic and reduce other plastic, it will create market demand among major businesses and spark manufacturers to meet the demand for products that use more environmentally friendly materials.

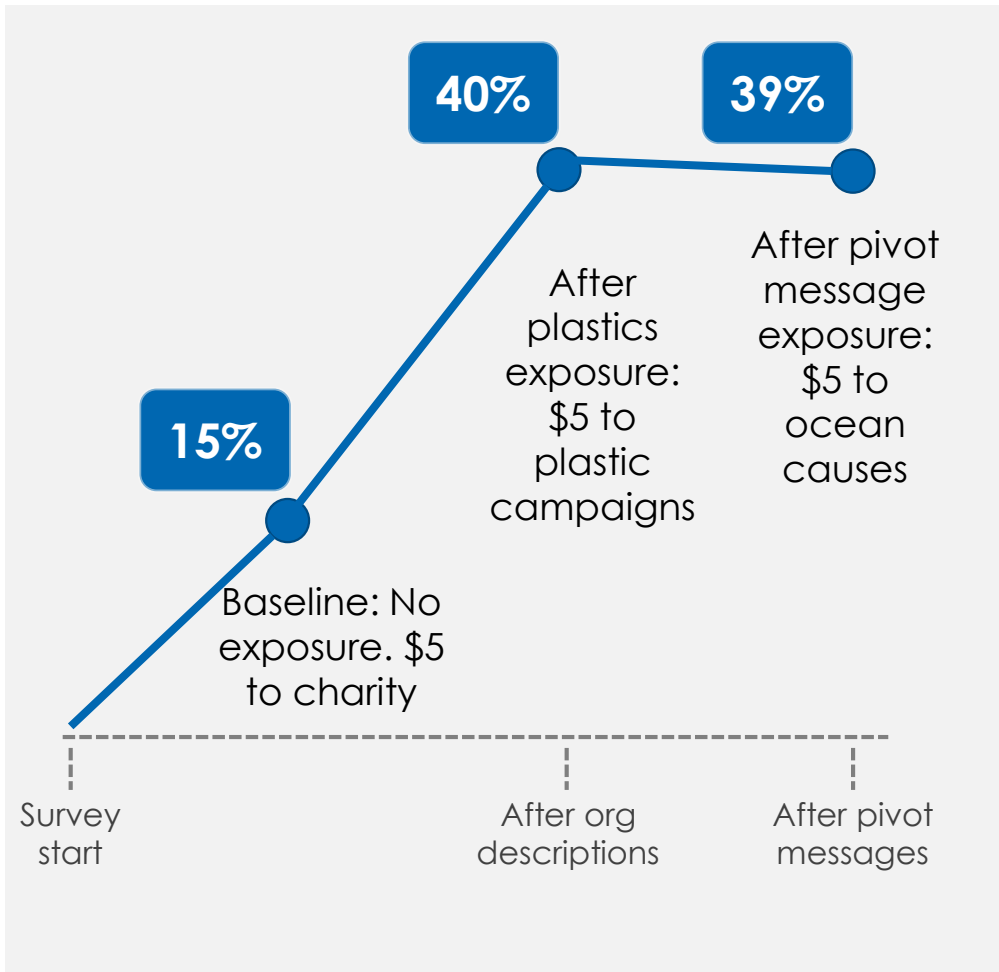
Response to Ocean Community

- After reading descriptions of work underway in the ocean community, Millennials respond with interest and belief that these approaches will make a difference.
- With specifics, 40% would donate to one of the three programs we showed

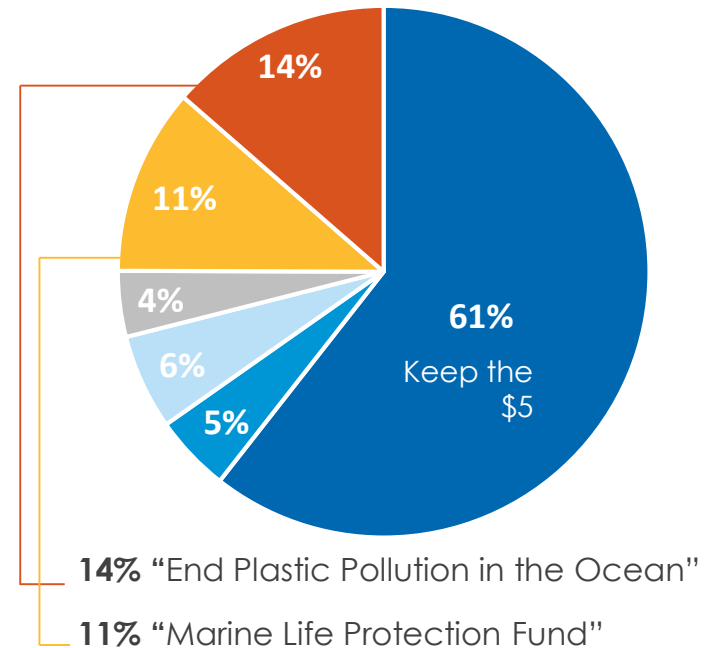


Behavioral Test

- Respondents had \$5 to keep or donate and were divided into 3 random groups that were asked to decide at 3 different points in the survey
- By the end of the survey more Millennials are giving money to charity, and giving both to end ocean plastic pollution and to protect marine life.



After pivot messages:
Would you like to donate to any of the ocean conservation causes?



Wrap Up/Implications

What are the most effective ways to talk about plastics with Millennials?

- Sheer Volume
- Impact on Marine Animals

Does concern about ocean plastics lead to interest or willingness to engage on other ocean conservation challenges?

- Most importantly it leads to engagement on **this issue** – a big opportunity to connect!
- Giving money to groups opens the door to communications
- Taking personal action becomes something to talk about

If so, what is the pivot?
Which issues bridge or transition into deeper ocean engagement?

- Marine Mammals
- Habitat protection
- But, not fisheries

For additional information, please contact:

Lisa Dropkin | 703-842-0212 | dropkin@edgeresearch.com

Stacia Tipton | 703-842-0211 | tipton@edgeresearch.com

Aaron Berneking | 703-842-0223 | berneking@edgeresearch.com

Edge Research
1560 Wilson Blvd, Suite 602
Arlington, VA 22209
www.edgeresearch.com