



WASTE MANAGEMENT SUSTAINABILITY FORUM

FEBRUARY 2018

Jim Fish, President and CEO
Keynote Speech

Good morning to you all – and welcome to Phoenix! It's great to be with you today ... in a beautiful setting known as the valley of the sun ... at the dawn of 2018.

We've been hosting our Sustainability Forum, in conjunction with the Waste Management Phoenix Open, since 2011. I believe – and I hope you do, too – that each year gets better and better. And we, collectively, become better advocates for what you've heard me call our fifth constituent – the environment that surrounds and serves us all. And while I'm proud of the work we've done, as a company ... an industry ... and society as a whole – there is much, much more we can and *should* be doing. I'm not talking incremental, step-up 'more'. That's all good – and has brought us to where we are today. No, I'm thinking Go-big-or-go-home style 'more'. We need to shoot for the moon with our ideas, actions and investments. With our policies and with our programs. It's time to think big. And that starts with each of us – as individuals, and as part of our communities and companies. Simply put, we need to work together to do more, faster.

On September 12, 1962 – exactly 17 months after the Soviet cosmonaut Yuri Gagarin became the first human to go into space (and coincidentally, two months after I was born) – President John F. Kennedy announced an ambitious program to allow an American to walk on the moon's surface by the end of the decade. It was a daring promise. The challenge of all challenges. We would go to the moon – walk on the moon – explore the universe. And in the process, we would expand human understanding and connection here on earth. At the time, President Kennedy told the world: *"We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard; because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one we intend to win."* His words moved a nation to action and to do *more* than we had ever envisioned or endeavored before.

Fifty-some years later, we face new frontiers of our own: A challenge that might seem daunting. A task that calls for the best and brightest minds and break-through thinking. And an opportunity to be bold in answering the most pressing question of our time:
How do we meet the needs of society today – without compromising the ability of future generations to meet theirs?

How do we utilize our planet's resources responsibly ... ethically ... intelligently – so that my two daughters, your own daughters and sons, and generations to come have a fair shot at a bright future? There's no easy answer, of course. No silver bullet solution. And I appreciate how far we've come. I really do. I don't want to discount the tremendous progress that the U.S., Canada, and the rest of the world has made in protecting the environment over the past few decades. There are so many shining examples of environmental progress. Who remembers the photos and videos of Lake Erie on fire in the 1970s? I spent plenty of time in Erie, Pennsylvania during the 5 years that we lived in Pittsburgh and Lake Erie is now a beautiful, clean lake. But at the same time, I'm *convinced* that we can take even *bigger* steps forward than we've taken in

the past. Year-over-year, step-by-step improvement is valuable, but we can do more.

We've all talked at length about triple bottom lines that focus on people, profits and the planet. We've made measured progress, compiled reams of metrics and data. We've done the easy – and the not-so-easy – stuff. But now we need to amp up our efforts, recalibrate our thinking, invest in the long-term. And this needs to start with all of us. At home and in our communities. Individually and at work. We all have a role, and need to be willing to make hard choices and investments as part of our collective global community.

So why now? Let's use a golf course as an example - that seems appropriate given there's a small golf tournament happening right next door to us! Memorial Park Municipal Golf Course near my house in Houston probably gets between 50,000-60,000 rounds of golf played on it each year. And it's in pretty good shape for that amount of play. Now Augusta National on the other hand, is only open from mid-October through May, doesn't allow golf carts on the course, doesn't allow golfers to wear metal spikes, and probably only has 10 to 15 groups per day on the course, which totals around 7,000 to 8,000 rounds per year. So, one course has 7 to 8 times the fairway divots, cleat marks, ball marks on the greens, discarded tees, lost balls, discarded candy wrappers and water bottles, foot traffic wear, and infinitely more tire damage to the course, cart noise, and electricity for the carts. Are you surprised that Memorial Park doesn't look like Augusta National? The world was Augusta National in 1800. But it gets a lot more play today than it did back then. As the population multiplies, so too does our waste, our consumption of resources, and our general wear and tear on this planet.

Consider this:

- It took almost 11,000 years for the earth to hit the 1 billion people mark in the early 1800s.
- In the last 200 years, it has grown to almost 8 billion people.
- If I live to be 100, the earth's population will have tripled in my lifetime.
- The pace of invention has increased immeasurably since 1900. There was a 2000-year span between the invention of pottery and the invention of the plow.
- There was a 60-year span between the invention of the automobile and the invention of the space shuttle.

This golf course that we call "earth" is getting a lot more play than it used to. And we all used to "walk the course" so to speak. Now, in today's technological world, we all "ride the course" in energy consuming golf carts. As modern day human beings, we simply consume more resources than we used to, so you can see why it is so important that we take strong steps right away to preserve this planet for our children and their children.

So, let me ask you something. Doesn't it feel like, here in the U.S., we ticked off Mother Nature last year? I can't tell you why she seemed to be in such a bad mood but something clearly got under her skin. Maybe it wasn't a bad mood. Maybe it was a wake-up call. There's nothing subtle about her wakeup calls. She demands our attention with dramatic affect – floods,

droughts, earthquakes, mudslides, fires ...

And hurricanes. If it felt like we were being pummeled and punished during last year's hurricane season – we were! The 2017 Atlantic hurricane season saw 17 named storms – the 5th most active season on record. It included the greatest number of consecutive hurricanes in the satellite era, and was one of only six years on record to feature multiple Category 5 hurricanes. Not surprisingly, it also was the costliest season on record. Our fifth constituent – the environment - got our attention, and then some. The 2017 hurricane season was a challenge for many communities and individuals. And for us at Waste Management as well. First came the crushing blow of Hurricane Harvey, which ravaged our company's headquarters' city of Houston, and smaller towns and cities in Southeast Texas. And then, Hurricane Irma pounded communities we serve in Georgia, Alabama, the Carolinas – and most severely, Florida. We watched with dismay the devastation in Puerto Rico and the Caribbean and witnessed the massive, consuming wildfires in California. And then on the heels of that devastation, mudslides that have claimed the lives of 20, if not more, people. After events like these, at Waste Management, our first order of business is to account for each of our employees, making sure they are safe and able to take care of their families and homes. Because in the wake of storms, caring for the immediate needs of those affected comes first. Then we move to recovery and restoration. Harvey and Irma challenged our operations, but we plan for emergencies, learn, refine, and get even better at restoring order in the aftermath of chaos.

And here's a point we shouldn't overlook: 'Preparedness,' the rigorous work of bracing for natural disasters, is work that simply has to be done. Especially when you consider the multiple and concurrent challenges that appear to be our new normal. We've been getting our fair share of practice lately – responding to events that seem to line up like dominoes – descending one after the other ... after the other. Cities, companies and individuals across the country have invested in plans to be prepared for all sorts of crisis situations. It is unfortunate that we've had to get so good at it. After the storms this year, we felt the urgency to do more to protect that 5th constituent as we were reminded of our vulnerability through her fury. It isn't coincidence that when more people move into low lying areas of coastal cities, we become more susceptible to flooding. When we uproot vegetation, nature's natural soil binding agent, we expose ourselves to mudslides. 2017 gave us a long, hard look at near-simultaneous events – and the tremendous toll they take on resources, responders, communities and families.

Our communities and our people. This is something *else* I feel strongly about: the human component of preparedness and response. Because you can have the *best* plans, contingencies and processes in the world. You can run scenarios and conduct countless crisis drills. But *none* of that matters – none of that *works* – without people. Think about the stories that stick with you after a catastrophic event. They're the human stories. Examples of selflessness ... caring ... compassion. The stories of neighbors helping neighbors. Small and big acts of kindness. *Those* are the stories – and the people – we remember. I count our employees within the circle of

those who stepped up to help, comfort and solve problems. As a company, we directed \$3M to relief efforts in areas where our employees lived and we operated. While we don't have operations in Puerto Rico anymore, the needs – you all saw the horrifying footage and read the stories - were enormous. We helped by airlifting medical supplies into the territory. At the time, we were asked why we did that, since we don't have business interests or employees in Puerto Rico. The better question, and our response, was simply: *How could we not?*

So, this year seemed like a good time to take stock of perseverance under pressure, resiliency, and what it takes in difficult times to safeguard our planet. We've put that resilient mindset to the test in recent years, in response to changing industry dynamics. You've heard me speak before about these dynamics within our sector: changes in global markets, commodity prices, and the changing waste stream. You also know how we responded – because we collaborated with so many of you and others: We increased efficiencies, lowered operating costs, improved our processes, revamped contract terms and worked to educate and advocate for 'recycling right,' which in turn reduced contamination and processing costs. We worked hard at it. And, we're going to keep working hard at it.

Which leads me to an interesting and very current example of what can happen when the environment is neglected in the name of economic growth – and the resulting, and very real impact on individuals, communities and industry across the globe. As most of you know, China has been a great fit for the recycling industry. Recycling programs in countries throughout the world were growing at the same time as the Chinese economy was really taking off. The flow of trade between the U.S. and China has long been beneficial. We purchase products from China ... those goods arrive in containers ... and those same containers go back full of recyclable materials ... that are then turned into new products and packaging materials for the goods that China sells globally. China is natural-resource-poor and has relied on recyclables for products and packaging. This relationship was a win-win for China, the U.S. and for the world economy. In fact, until recently, Waste Management was moving 30 percent of our recycled material into export markets, with China being the largest consumer. And here's a little-known fact: Waste Management is the seventh largest exporter in the U.S. by container volumes. The six exporters ahead of us on that list are Chinese mill buyers in the U.S. Combined, this makes recycled paper the largest U.S. export by container count. As an industry, we have become dependent on China, relying on the country to buy the bulk of our recyclable materials. For many of these high-growth years, China's environmental controls were less stringent than those in North America, Europe and other developed countries. But, the Chinese government simply could not ignore the environmental impacts of their unregulated industrial growth. We've all seen the images of the terrible air quality and polluted waterways. They simply *had* to do something to protect their fifth constituent. In 2013, China began to tighten up on the importing of certain materials to address their environmental concerns. They also began to source more material domestically. In 2013, they announced an initiative called "Greenfence," followed earlier this

year with “Sword at the Gate” or “National Sword”. Both were enforcements of existing regulations to improve the quality of material being imported to China. Then, in July of last year, China notified the World Trade Organization that it will ban 24 materials from import into China, including mixed plastic, rigid plastics and unsorted mixed waste paper. With this last announcement, the Chinese government made it clear that they were changing the rules on imports – and disrupting an entire global industry in the process. China went further – instituting a new quota for import licenses. By restricting their mills’ import quotas, the Chinese government limited their mills’ ability to purchase a variety of materials, including cardboard and newspaper – materials not covered in the earlier ban. Then, just last month, the Chinese government announced additional tightening of quality regulations for any type of recyclable commodity imported into their country.

While it is unfortunate that they’re in the position they’re in, we applaud them for acting. For making *hard* decisions. Yes, China is to be *commended* for taking a global leadership role, and investing in its environment after a long, destabilizing emphasis on economic dominance. That economic growth came at a heavy cost to China’s natural resources and a heavy cost to the health of their population; a cost they are now recognizing and addressing. In fact, their new policies are likely to have a negative impact on their own business community in the near future. China is now working to re-balance economic needs with quality of life – clean air, water and a safe climate.

And that is – or should be – a universal pursuit.

China is doing the right thing – the hard thing – the costly thing. They’re shaking up the marketplace. They are taking a short-term economic hit for longer-term, sustainable gain. And it is *much* more complicated and expensive to address after the fact.

Will we recognize the premium that we will pay by waiting and trying to fix things *after* the damage is done? We’ve been in China’s position – or at least close to it. In the 1980s and 1990s, as our environmental standards heightened, the U.S. drove mills out of business. The mills moved – you guessed it – to China. Now, we’re back again. The chess pieces have shifted, but the game’s the same.

What have we learned? What will we do? Will we be willing to invest in our environment? Do we have the will and the wherewithal to design sustainable urban centers ... rethink energy production and use ... use our land and other resources wisely ... develop new transportation alternatives? I believe those investments are needed – and that they will yield huge quality of life returns.

JFK’s moon shot came with a hefty price tag: NASA’s budget in 1962 – the year he threw down the gauntlet to win the space race – was three times the previous year’s budget – and greater than the previous eight years combined. To do all this and do it right, he told the country, “we must be bold.” *We must, too.*

Being bold starts with recognizing the truth – and dealing with reality. China’s bans and

restrictions have been a wake-up call for our industry. I won't pretend that the shift hasn't caused us some recalibration, because we have near-term challenges that must be addressed. As recyclers, we have an obligation to do what we can to support demand for our materials. Thankfully, our team had been successful in developing alternative markets – here in the U.S. and in Southeast Asia and India. Because developing diverse domestic and global end-markets is the best way to ensure long-term successful, sustainable and economically viable recycling programs. It is resiliency at work in our recycling strategy.

Resiliency, innovation and imagination are needed. You see, we're unlike manufacturers when it comes to demand side shifts. If demand decreases for manufacturers, they move quickly to decrease the raw materials they purchase. In our business, no matter what happens with demand, the supply from curbside recycling programs continues. We have a constant push from customers and governments to increase recycling rates. Just because China stops buying doesn't mean we don't receive thousands of tons of recyclables every day. We can't tell folks – “the demand dropped off – don't bother recycling today!” And, we can never lose sight of the fact that what we purchase, consume, discard and assign value to – all has a reach beyond our lifetime. Our actions today have long and lasting reach.

While it's early still, I'm an optimist. I believe this experience will inform us about how to make recycling more efficient, make us better stewards of the materials that can be reused, -- and shine a light on the central fact *that the demand for recycled products AND recycled content is paramount*. By emphasizing the need for demand pull, we can develop more sustainable recycling programs. But demand needs to be matched by capacity and efficiency.

Over the last few years, we have been thinking a lot about the ways in which information can drive smart behavior when it comes to recycling. For some time, we've focused on a simple concept: recycle more – of everything. The metric has been increased diversion by weight. But despite good intentions, recycling tonnages have *not* significantly changed. This led us to look critically at whether the weight of recyclables produced is an end - in and of itself. We realized we need to look carefully at our recycling goals to see if they reflect our broader environmental goals. Do they capture the aspirations of our partners in the recycling chain? You see, although we will invest a quarter of a billion dollars per year in the cleanest Near Zero Emissions trucks available, our greatest contribution to reducing environmental impact is through the waste reduction and recycling services that we provide to our customers. Fully 60% of our emissions reduction contribution is tied to recycling alone. This is why we simply must focus on *recycling the right things, well*.

Recycling only benefits the environment when it results in a reduction of raw material use at the beginning of the life of products and packaging. By reducing the use of virgin resources through reduction and recycling we can reduce energy use and the corresponding greenhouse gas emissions. In other words, we know our role in serving that fifth constituent, the environment, is to help reduce natural resource use and corresponding greenhouse gas emissions over the life of the manufacturing and services sector. We need to look at the life

cycle of the things we make, use and discard to reduce the environmental burden at every point along the way.

We want to – and do - serve our customers and the environment beyond just handling trash. And we're committed to serving as a partner in a broader, 'life cycle thinking' approach. The case for life cycle thinking is enormously compelling: We've done a lot of research aimed at reducing emissions associated with the materials we manage. We've learned a lot about waste reduction and about reducing the use of raw materials.

The more we learn, the clearer it becomes that there are positive steps we can take to reduce emissions... and here they are:

- Use less stuff
- Prevent food waste
- Recycle your paper, cardboard, bottles and cans.

By recycling the right things really well, we can reduce greenhouse gas emissions by over 80 percent. That's a huge net positive that is both doable – and essential.

But, we can all do more - together. Two years ago, we assessed how Waste Management's comprehensive actions impact the environment. We took the familiar look at our own carbon footprint. We know the extent of the greenhouse gases our company generates while handling our customers' waste. And, we calculated the emissions we *save* by what we do. For example, we support companies and cities as they look for recycling programs that serve their specific needs. We capture renewable energy and are creating low-carbon fuel from your waste. In 2016, we calculated that those customer-enabling services reduce *by three times* the greenhouse gas emissions generated by our operations. That's good, but it's not enough – for us. So, we've decided to take our own moon-shot and increase those emission *reductions* to a factor of *four times* over what we're doing today.

What does this mean? Why is this such a big deal? Well, as a service provider, we can't achieve this goal on our own. We need to work with our customers, and to help our customers do more to succeed with their goals. We are acutely aware it's an ambitious goal. But we're fine with ambition when it's aimed at our fifth constituent.

Now here's what's different about a moon shot on behalf of the environment – and the pledge to plant the U.S. flag in the soil of a distant planet: Our work doesn't have an end date. It's constant. And, the most important results of our work will extend beyond our lifetime. This is *not* about us. Actually, it is. Because *we're* the ones who *have* to get it right so that future generations – our children, grandchildren, and theirs – will have the sustenance they need, and the abundance they deserve. Moon shot-change requires vision – at times beyond our current comprehension or generation. Sometimes it calls for a nudge — or a punch-to-the-gut threat –

that results in *real* transformation.

In closing, we can all agree that as a society, we need to care for our collective 5th constituent – the environment we share and depend upon. And, as an environmental services company, we see our role as taking care of the environment and being a voice for this voiceless constituent. *It's what we do.* Anything less would be hypocritical of me; and *grossly* hypocritical to stand up here, pass the buck and say that *society* needs to protect the environment. We believe taking care of our environment, begins at home – by *first taking care of our own*. Because, when we take care of our employees, they in turn can take care of all the other constituents – those with voices and those without. We invest in our own and we're going to continue to invest in our own. And I know that, if we do that, every one of our 43,000 employees will gladly, ably care for that voiceless 5th constituent. With your help, I believe we *can* leave our world a better place. And I also believe there is much more we can do to leave *less* behind. That's a legacy, I believe, worth pursuing: stepping lightly ... leaving less ... and giving voice to our fifth constituent.

The question we began with: *'How do we meet the needs of society today – without compromising the ability of future generations to meet theirs?'* – that is our call to action. And this is our collective moonshot moment. Thank you for being with us today – and for joining us on the journey of a lifetime!

-30-