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A Conversation with Tim Flanagan, SWANA President

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The conversation between public and private sector players is increasingly powerful and is especially important with its profound influence on the global populace and politicians' interest in climate change. As an industry, we have the opportunity to be heard more than ever, to educate and demonstrate that essential services, such as waste conversion, are positively impacting our planet, and that we have made and continue making great strides in our response to climate change. Tim Flanagan, SWANA's current President, gives his thoughts on hot topics in the waste industry and how SWANA is involved.

Discuss how demand is accelerating the development curve: The acceleration of change in the waste industry is akin to the rapid change and growth in cell phones. It is demanding, and its visibility

creates a need for adaptation at a rapid pace. It also drives better communications and environmental innovation. When I started in the industry, literally, there were probably a total of three dozen communities in the entire U.S. that had curbside recycling programs, and I was running one of them in the city of Palo Alto. The early network of curbside recycling programs typically took place in college communities with a progressive and dedicated community supporting it.

Very quickly through the 1980s and into the 1990s, it kicked into gear with the advent of those who can remember the Mobro garbage barge. That is when the recycling of materials started becoming a more common practice in the solid waste industry. Mobro was an enormous trash barge made infamous in 1987 for hauling the same load of trash along the east coast of North America from New York City to Belize and back until a way was found to dispose of the garbage. With the advent of the California Integrated Waste Management Act -AB 939, Californians established a 50 percent diversion goal for all communities. That really kicked up recycling, both the residential and commercial levels, into high gear. I was very fortunate to get involved in a dynamic industry that is still evolving to this day.

How is technology driving innovation? The early recycling programs did not have vehicles dedicated to them. The creative garbage companies that were doing most of the collection back then literally made their collection vehicles, as was my experience in the city of Palo Alto with the Palo Alto Sanitation Company. We invented our recycling processing equipment to sort—typically out of reusing other materials. So, the early recycling industry was essentially recycling itself because they borrowed trucks and remanufactured trucks to

serve a new collection purpose and repurposed onsite equipment to create recycling processing lines, sort systems, etc. The industry obviously has come a long way.

Necessity is the mother of invention, but when the technology industry was beginning to boom, and there was a need in the waste industry, we had natural cohesion. With the increasing advancement and use of technology, the waste industry has evolved from being one where waste collection was a manual collection process—and very difficult for workers collecting eight to 10 tons a day of garbage by themselves—into a now automated process. Municipalities and waste companies evolved to automated collection with robotic arms to collect carts and bins lifted into the truck body because it protects workers and is much more efficient. Communities approve because it prevents litter in the communities on garbage day. This is an example of technology improving efficiency and providing a huge benefit for the workforce doing this type of work day in and day out in all conditions—snow, rain, and heat. Now, automated collection is the standard of practice in the industry.

How is SWANA involved in recycling legislation? EPA's National Recycling Goal is 50 percent recycled by 2030. SWANA continues to be at the forefront of efforts to improve the U.S.

recycling system. SWANA played a key role in shaping the 50 percent goal and is helping to implement it. We have volunteered to help EPA implement its National Recycling Strategy and have presented at congressional recycling events over the past few years. Under the Bipartisan Infrastructure Law, EPA is developing three new waste prevention, reuse, and recycling programs:

- Solid Waste Infrastructure for Recycling Grant Program
- Recycling Education and Outreach Grant Program, Model Recycling Program Toolkit, and School Curriculum
- Battery Collection Best Practices and Voluntary Battery Labeling Guidelines

SWANA recently submitted comments to EPA on how to shape its recycling grant programs. The EPA grant application process for \$75M in FY 2023 is expected to start in late Fall.

How will PFAS and leachate be addressed? EPA's Strategic Roadmap for PFAS will increase costs for landfill disposal of MSW but creates opportunities for waste conversion technologies. EPA is considering proposing PFAS as a "hazardous substance" under Superfund—creating huge potential retroactive liability for landfills that send leachate to wastewater treatment facilities or discharge it into rivers/streams after treatment.

The National Waste & Recycling Association (NWRA) joined with SWANA in a letter to the leadership of the Senate Environment and Public Works, House Transportation and Infrastructure, and House Energy and Commerce committees urging Congress to provide the MSW industry with a narrow exemption from certain provisions of CERCLA. SWANA is concerned that there could be significant unintended consequences if landfills are held liable under CERCLA for receiving PFAS-laden waste, which there is no way to sort. SWANA supports the goal of addressing PFAS contamination and holding manufacturers and heavy users of these compounds accountable by keeping CERCLA's liability on the industries that create the pollution.

How is waste management changing? Our industry is constantly evolving. One of the most important aspects of our industry is that the more we do with the waste stream, the more we work to reuse it, recycle it, convert it into energy or by-products, the more new jobs develop. It does not take a lot of workforce to bring material into a landfill and bury it. In fact, you need comparatively few people to do that.

When you start talking about going through the waste stream, sorting it, sorting out the hazardous materials, reusable materials, recyclable materials, and making the waste that's left ready to be converted to energy or landfill gas—those create significant amounts of jobs for the industry. This will be at the forefront as our industry continues to evolve and emerge. We will be a job creation industry—essentially a triple bottom line of environment + economy + workforce. In every part of what we do, we are in an industry that protects the environment, creates jobs, and provides a good living for our workforce. It is not something we talk about a lot, but it is a fact.

As climate change comes increasingly to the forefront, the pressure to have less intensive waste management practices becomes more prominent. Landfill gas-to-energy systems were developed in the early 1980s. The facility I ran in Monterey, CA, had one of the first landfill energy gas recovery facilities in the U.S. in 1983. Now, it is very common. In fact, all landfills must be under positive gas control to prevent methane from being released into the environment. Climate change goes beyond that simple aspect of it. Everything we do, from the collection vehicles we use to the processes we have to reduce, remove, and recycle material, is focused on climate change.

Here in California, SB1383 is perhaps one of North America's most landmark legislative ideas, focusing on removing 75 percent of the organic matter that currently goes to landfills. A whole industry is being developed around organics management to keep organics from being buried and instead put to beneficial use. The law in California looks to divert food waste to active food recovery programs to ease the growing burden of food insecurity affecting many of our larger metropolitan areas. This is a wide-ranging law that, I think, will be viewed for its success, and subsequent iterations of similar legislation will tweak and improve the efficiencies. It demonstrates the linkage between responsible waste management practices and climate change that are with us now and forever.

Additionally, we are seeing an emphasis on some of the more problematic parts of the waste stream that heretofore have not been adequately dealt with—plastics, for instance. Some emerging industries look to develop alternatives for beneficial use, either breaking it back down, breaking it down into its chemical constituencies for remanufacturing, or potentially into fuel components, as well as finding new products which can be manufactured, such as some of the film plastics that have been repurposed into dimensional lumber—plastic-wood.

As we go farther into the waste stream and go after more challenging materials, this will lead to cottage industries and then full-throated industries. As these technologies emerge, we can deal with more challenging items like plastics in the waste stream and even some of the more hazardous constituents currently harmful in the waste stream, such as lithium-ion. Batteries are targeted for the reuse and harvesting of precious metals. Why mine new when you have unique chemicals or minerals that make up some of the batteries in our kitchen drawers in the form of used batteries? The idea is to bring those batteries into a safe and recyclable format and extract their unique minerals in more environmentally friendly ways.

How can the industry attract young professionals and create Diversity, Equity, and Inclusion (DEI) programs? SWANA's Young Professionals (YP) and DEI Programs enhance process change and adaptation. DEI and YPs with whom we transition knowledge and experience will attract more smart, capable professionals to our industry. SWANA YPs include everyone in our industry—from field/operations staff to office workers, in the public or private sector, operations or management, collections, processing or disposal, legal,

or marketing. The YP Group actively pursues the career advancement of its fellow YPs through learning, networking, and leadership opportunities in SWANA and from the NOT-QUITE-YPs-ANYMORE professionals. SWANA's Young Professionals (YP) Leadership Academy is a year-long program designed to help YPs increase their awareness of solid waste issues, learn specific skills necessary to handle industry issues, and discover their leadership qualities and potential.

One of the exciting developments as we try to attract young professionals into our industry is how we work on leadership diversity in our workforce. SWANA has embarked on developing our DEI program. I was part of the formation and sit on SWANA's task force. The focus is on how we create opportunities for folks in our workforce that may not have a clear path to work their way up the ranks. Our industry is very diverse, particularly at the operator and supervisor levels. Our goal at SWANA is to embark on a program where we can ensure that our training and advancement opportunities are structured to serve an emerging workforce eager to move forward and upward as our industry continues to evolve. To me, it is really exciting as we work to make inroads so that we have a workforce that represents the communities we serve up and down the ranks.

Discuss some ways SWANA keeps safety at the forefront of industry

discussion: SWANA has a national Alliance with OSHA and a regional Alliance with OSHA Region 2 in New York.

Collecting waste remains the 6th most dangerous job in the U.S. and a major focus of our Strategic Plan. SWANA provides the finest safety training in the industry. Still, we go further and integrate training with other initiatives by frequently speaking with EPA, Congress, OSHA, and the State Department at the federal level and are regularly in contact

with key state, provincial, and local government officials and agencies throughout the U.S. and Canada. We are engaging with smaller haulers (both public and private sector) to facilitate safety and have Safety Ambassadors in all 47 chapters. We are also facilitating a new OSHA safety alliance, including ongoing research into lithium-ion battery fires, and PFAS, along with other developing industry trends.

How can the industry continue to move forward? Speaking as one powerful voice, a blend of your voices at SWANA gives us more opportunities to shape our future sustainably and equitably. Today represents an opportunity for us to look for ways to network and partner together in ways to help our industry soar. That is why SWANA named its April 2023 conference SOAR. This is an opportunity for me and my time as President of SWANA to also thank you. I thank the women and men in the waste industry for their dedication, efforts, and success in moving solid waste management, waste conversion, and recycling this far, this fast. When I joined the industry 40 years ago, there was discussion about why we even bother to recycle. Now, our conversation is around how much we can recycle and how we can make beneficial use of a variety of materials—it is a huge paradigm shift. I hope that every one of you appreciates and affirms for yourselves what a huge contribution you make to the planet, your community, and your local area for your work in our dynamic, exciting industry. | WA



Up Close: Solid Waste Association of North America (SWANA)

SWANA is the world's largest member waste association with 11,000 Members, 47 Regional Chapters, and seven Technical Divisions. SWANA is the U.S. and Canadian National International Solid Waste Association Member. Importantly, the association is the strategic planner, partner, and waste industry voice to federal and state legislators and agencies. SWANA members know that being in the spotlight means being heard. Having the media's attention and the most in-depth knowledge of legislative policies allows members to use SWANA's unique communication channels to leverage and demonstrate how waste conversion and related services such as recycling are interrelated, evolving, and responding to the needs of our citizens. SWANA is the authority that the media, government agencies, and vendors reach out to when they need information. SWANA briefs Congress and committees focusing now more than ever on the management and innovations needed to help lower emissions and greenhouse gases.

Waste Recovery and Energy Recovery Technical Division

SWANA is organized with seven technical divisions aligning with significant parts of our industry: collection and transfer division, sustainable materials management division, landfill gas division, and a waste conversion and energy recovery technical division, among others. These technical divisions are specialty hubs with professionals within SWANA that manage, operate, design, and plan for a high impact.

In the Waste Recovery and Energy Recovery Division, leaders in new

technologies, processes, and research specific to waste recovery facilities, waste to energy facilities, and waste conversion facilities across North America and the Western Pacific, collaborate using SWANA's advisory committee as a powerful voice for our industry.

This alignment is important because these technical divisions work within their trade practice, helping SWANA develop policies and research while keeping our industry and the media informed on issues. SWANA's 11,000 members are well-informed about what is emerging in their area of expertise and what policies and advocacy changes need to be addressed to help promote and develop that part of their work or training.

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