



Hi everyone, welcome to Waste360's NothingWasted! Podcast on every episode we invite the most interesting people in waste recycling and organics to sit down with us and chat candidly about their thoughts their work this unique industry and so much more so thanks for listening and enjoy this episode.

[INTRO MUSIC]

Hi everyone, this is Liz Bothwell from Waste360 with Tori Carlie, Waste Reduction Supervisor at the city of Greensboro. Welcome Tori and thank you for being on the show.

Tori: Thank you for having me, Liz.

Liz: Please tell me a little bit about your background and how you ended up in this wonderful industry.

Tori: Yes. So, I kind of like apparently a lot of people fell into the waste industry. I was in grad school. I did a bachelor's in biology and decided to stick around for a master's in environmental studies and we were going over like all of the different kinds of jobs that we could have to the degree that I was pursuing at the time. And you know, we were a park ranger or work at an aquarium, or a zoo and I was like yes that's what I want to do. When we got down to waste like waste recycling, I was like "who would ever want to be in that industry. That sounds so gross."

And when I graduated. I did internships with the city of Wilmington, North Carolina in their stormwater department and water education and then I went and worked for Disney at Disney's Animal Kingdom. And I was an environmental educator at Disney's Animal Kingdom and got to teach kids and adults of all ages about animals and nature and basically how to save the world. And it was wild for sure. It was very magical job.

And I was coming to the end of my contract with Disney and I didn't really know what I wanted to do. I had been a perpetual intern for about five or six years of college and post college, and I was just really tired of applying for jobs and trying to find what I would consider a big girl job with paid vacation and benefits.

So, I was on this Facebook page of people that it all worked in my same position as an environmental educator at Disney. And someone posted this recycling education job in Greensboro, North Carolina and I'm originally from the next town over, Winston-Salem, and I was like "work in Greensboro like probably crash with my parents for a little while I get under my feet and find my own place to stay, like work and recycling and education that sounds like fun". And I didn't really know a whole lot about the recycling industry beyond what an average resident would know. And so, I was like All right cool. That sounds good. And so I applied for the job ended up getting the job and then it all took off from there and I eat, sleep and breathe recycling these days and when I say I was an average resident recycler, I was one of those that thought like "oh plastic bags Yeah I'm gonna put those in". And you know, they were made of plastic. And then "oh if this you know something isn't recyclable maybe it is maybe it's not but if it's not I'll just put it in there and they can take it out".

And now you know as a somebody that's in the industry I know like that wishful recycling plastic bags like that's, you know, a huge detriment to what we're working with right now in the industry.

And but when it when I'm talking to residents about it, you know, it's actually a really big win because I'm able to say "no it's really OK, like we understand. I used to do that". And you know it's a way for us to be able to connect when we're educating residents like boots on the ground

Liz: Definitely. And I think that's a great point because you realize the challenges in actually executing this on a personal level. And you seem to be working on some pretty innovative programs in your current role around education. Are you having luck reducing contamination or recycling?

Tori: I think so. The hard thing about all of these education programs that me and my team have been working on for the past about four years since I've been here is, we have not been able to execute a reliable audit since I've been here. And we're actually getting ready to do that this month. Hopefully by the end of the month or sometime in July. We will get a recycling audit finished so that we can really try to say definitively, yes these education programs have been working because if it's not measurable and you can't say that you know we reduced contamination x percent then why am I doing what I'm doing I need to change something.

Liz: Absolutely. And then I read that Greensburg won't be accepting glass in the recycling stream starting this summer, so you have a lot happening this summer. Was that a tough decision?

Tori: Yeah it was definitely a decision that we didn't come to lightly and it was one that I was against at first. And, you know, really you know, glass is something that is. Infinitely recyclable it's something that's been a part of the recycling industry since, you know, really took off in the 70s and even beyond that. You know, the taking the bottles back. You know, milk man style. You know, that was reuse and recycling as well. So, when we made that decision it was one that we came to together between the city and Republic.

Republic was asking us to take glass out of our stream because when it's mixed in with all of your other recyclables, glass doesn't play well with others, you know, it sticks to a lot of other recyclables. So, then the paper mills and the plastic reproducers aren't happy with that. It attracts contamination. So when you have, you know, chicken bones and food and corks and tampon applicators and everything that ends up in the glass pile because I've literally seen it all and it's gross, you know, that pile is literally composting and steaming because of all the contamination in it and all of the food that ends up in there. And so, you know while glass is a wonderful thing to recycle it's not something

that we can have in our single stream right now and we're not the only community that's doing it.

I've really looked into it and there are lists out there that people are keeping of all the changes going on across the country and almost every state in the country is dealing with glass as an issue or plastics or paper as an issue in some way or the other. And they're having to either make changes to their accepted list or change them the pricing for residents or for communities and then that price and cost is then relayed to the residents. So we're really having to think about recycling as a service again and not just as a feel good let's do it for the environment kind of thing, like recycling as a service just like garbage, just like your yard waste and just like fire and police and air and water and everything else. So, it's important for the perception of that to kind of shift, in order for the cost increases and the "oh this isn't recyclable" to be a little easier to pass on to the resident because they're not happy about it.

Liz: Right. Exactly. And it was introduced to them in a very different way. So, I think changing perception is sort of our new reality especially with what's going on in Asia and what caused a lot of this to begin with.

Tori: Yeah. And it's a difficult concept to explain to because, you know, as a as an average resident, I wasn't one that would have really looked into this. And so really to try and break down like world economics in the most simplest terms possible is something that is a challenge but it's been fun. And while residents are angry about it I do feel like the more that we talk about it and the more that we have the conversations with them and the more that we share the realities of our industry the better equipped they will be to make decisions that benefit our industry and ultimately benefit them in moving forward as we continue with recycling.

Liz: True. So do you think contracts will be changing anytime soon or have they changed to reflect the reality of recycling today? Like a revenue share or lower fees?

Tori: I know that in North Carolina there are multiple communities that have gone through some contract changes including us. Glass has gone out of recycling in more than one community in our region in North and South Carolina and in Georgia, I've read about glass coming out of various communities recycling streams, but I don't think it's

forever. And I do think that there is hope on the horizon for glass recycling as a whole. I think last processors they want that material. And so, they're going to have to come to the table the processors are going to have to come to the table, the MURPHS and the communities and I think we all need to talk about reasonable solutions to keep glass in recycling.

And you know, we're in the meantime going to have drop off locations or glass. We know we won't get the tonnage that we would receive if it was in single stream because the participation won't be as high. But I do know, I think it was Houston. They had a change in their contract a couple of years ago that took glass out and just recently they started a new contract and I think there were upgrades or potentially a number and they brought glass back. And so that I have been you, know, letting residents know that there is hope and I do think for other community recycling coordinators. You know, I don't think these changes will be forever because this isn't the only market downturn that recycling has gone through.

I've only been in this industry four years and I came into it like right as there were rumblings about green events and potential changes and stuff in 2016. There have been other major market downturns in the recycling industry since the 70s. And so, I do think that it's cyclical and we will come back from this and that recycling will be more resilient than ever before.

Liz: Definitely. So, what do you think people can do today to be better at recycling?

Tori: Well I think all of us in the industry can come together. I think whether your nonprofit, private sector, a process, a MURPH, whatever communities. I think we all need to be coming together to really come up with regional solutions and more unified messaging for residents because I think recycling has gotten so confusing over the years because we went through that period of "oh well we need to put everything in recycling so that we'll get these contracts" and you know, there was this push to recycle more, more, more, more, more, but we really just need to recycle better.

And I think you know as industry leaders I think we need to really collaborate and come together and all be at the table when we make these decisions and do what is best for the industry that also do what is simple and what is easy for residents to digest and then

participate because we're basically doing aboveground mining. That's all that recycling is you know instead of digging up oil or digging up bauxite for aluminum cans, you know, we're mining from above ground. But the challenges that we face mining above ground are demanding low ground. You know, they might be very different but they're equally as difficult. And so, getting that resonant participation is what is going to provide feedstock and so resident participation is going to be the I think the biggest thing for making sure that our industry is cleaner and that we get above the national average. I think like 30 or 35 % recycling rate. I think if we get more and better education for resident but also the policies to back it up, the more that we will see increased tonnages in recycling.

Liz: Definitely. Now do you think policy is keeping up with today's consumer behavior around recycling?

Tori: A very smart professor of mine once told me that you can't have one without the other. You can't have an education program without the policy to back it up and you can't have a successful policy executed, without education to let people know about the policy.

And so, I think that it is critical that they go hand in hand. But I think that there's been a huge disconnect between what we're asking residents to do and then what we are putting in ordinances and contracts and things like that for the community to have skin in the game or the MURPH to have skin in the game and then for the resident to understand like if you're not going to do this, then we need to make a change. We either need to educate you more and tell you more about why it's important to do this or we need to take your recycling card away.

Greensboro in the last year we started a tagging program. And you know, I've seen them pop up in a lot of different places and they're recycling partnership is doing a lot of work to make sure the communities have the resources to be able to provide more direct feedback. And I think that that is critical.

So, we came up with policies that you know if residents are not going to recycle, or not going to recycle correctly, we're going to let them know what the what the issue is with their recycling. We're going to monitor the recycling for all residents and if they choose

not to correct their mistakes, we're going to take their recycling card away. Because in our current market situation the thing is it's better for the recycling to go into the trash than for the trash to be in recycling.

Yes, I want to increase tonnage in recycling but if my Murph is going to have to reject loads or if they're going to be accidental casualties where plastic bottles and metal cans are getting pulled off the line with a plastic bag or with a tarp or something like that the resident might as well not have a recycling cart if they're not going to participate. And that's been hugely successful, we've gotten a ton of feedback from residents. We've gotten a ton of attention. We've sent out more than 10,000 postcards. And the thing that our program is a little bit different from other tagging programs is we do a combination of on the cart feedback and then direct mail feedback.

So, the recycling inspector has the time and the resources to put a sticker on our part or a hang tag on a cart for some communities. But our recycling drivers don't. They are working on making sure that everything gets picked up. They have tablets and can virtually tag an address if they have plastic bags or yard waste or Styrofoam in them or whatever. And then we run those reports every day and create these postcards that say, you know, "this is a contamination notice, your recycling cart was inspected on X date the following unacceptable were found". And so, we're able to customize that postcard. And then let the resident know that this your first, your second notification and if you continue to do this, we're gonna eventually take your card away.

And it's been really successful because we've been able to reach so many people but also the number of cards that we've actually taken away versus the number of postcards we sent out is drastically different. I mean 10,000 notices but only 75 carts actually taken away in a year is huge. And I think it's indicative of the success of the program and the first notifications versus the second, third notifications... It's so many more first notifications. So that direct mail feedback is kind of that trigger of like "oh they are actually looking at this. I need to make sure that I don't put plastic bags in my recycling".

And my hope is that with these with this upcoming audit we'll be able to say like "oh we actually don't have this amount of contamination that we thought we've got a little bit

less because we've been working on this for a year". So hopefully my dreams will come true. And the audit will be awesome.

Liz: Oh, I bet it will. And I think that's fantastic the way that you've brought technology and to make your job easier and to be able to personalize at such a level that you are changing the behavior. And you're getting that outcome that you're hopeful about. That's fantastic.

Tori: Yeah and the great thing is you don't need a ton of technology for a tagging program. You can literally do pen and paper and an excel sheet and get a tagging program started. And if you're able to pilot it and improve that you're decreasing contamination through like visual audits and stuff like that of the pilot area then you could potentially prove to your community like "hey we should invest in tablets and a software program to be able to reduce contamination so that hopefully when our contract expires and X number of years, we'll be able to prove like hey we've done a lot of work, you know, so and so company can. Can we have a lower rate because we've decreased our contamination so much?"

Liz: Right. That's a smart way to roll that out. Now did you initially do that, or had you rolled out the technology at first and then kept improving from there?

Tori: We actually have we got the technology first and it took a few years. When I started as the educator and we had just gotten the technology start going until I took over my role as the supervisor of this program. And so, once I took over, I was like "This is something that we need to really focus on". Contamination is not going away, and we need something that is direct feedback.

And so, I started kind of developing how we would do it. We're using one program right now that it took a lot of lifting to get it to work the way that we want. But I'm really hoping that there is another program coming down the pipe soon that I've heard rumblings of that the recycling partnership might be a part of and was said in one of their webinars that communities will maybe be able to subscribe to and will actually be designed for this kind of program because what we're using right now isn't ideal. And I would hope that since more and more tagging programs are popping up that the technology would catch up with what we actually need as recycling coordinators to be able to do this right.



Liz: Right, okay. That would be great. Hopefully improvements are coming. So, I see you worked on it resident facing mobile app. Could you tell me a little bit about that?

Tori: Oh yes, it is awesome. We have an app called GSO collects. It's powered by recollect. They're out of Canada and it is amazing.

I absolutely love this app because I'm able to put in calendars and schedule reminders like a resident gets a reminder every week to put out their trash or their recycling cart. And if we have a holiday or if we have inclement weather, to the resident it just magically automatically adjust. But for me, I'm able to literally go into a program and drag and drop it whether I'm here in the office or I was actually literally driving in the snow one time and we were canceling service that day and we were going to postpone it until the snow was cleared. And I had my laptop and I had my work phone and I turned on the hot button was able to move it and then it's got a waste wizard search feature so residents can search items and we can actually see that like "oh mattresses is something that people really are wondering about. You know, maybe we should put out a little bit of information about what to do with your mattresses".

And then we actually integrated and partnered with our communications department and we were able to connect our communications system to recollects reporting feature and residents are able to go in and report either a missed collection or a pothole or graffiti or anything that they might see that's an issue within the community. And then our contact center is able to distribute that out to the correct department and the correct person to get that issue taking care of. And so, it's been a really seamless integration.

We had really high participation and I'm with all of these changes with glass and the other things that we're taking out of recycling. We're gonna have drop glass drop off locations. I'm also going to be able to push our education campaigns with those weekly notices, so the residents don't just get a reminder like "hey put your trash card out". But also, like "hey put your trash card out but just say you know glass is no longer recyclable in your brown recycling cart at home. It needs to go to a drop off location".

Liz: Wow, what a great way to communicate with your residents.

Tori: And I really think that this is something that more communities are going to be subscribing to whether it's with recollect or another company that does this because it is so easy and residents really, really love it. I was actually I was sitting in the contact center; I had met with them and then I was kind of like shadowing to see what it's like. And there's one lady was calling in to complain about one thing, but she was like I just I just love that app. I think it's important for every community. And I was like oh my gosh like I was never like with cold chills. I see like reports and like people calling in and saying that they love the app and I see like a monthly report but to actually hear somebody say it when they're talking to somebody that's not a recycling person like really just validating for someone that actually was able to bring this from just an idea to actually being used.

Liz: Oh yeah absolutely. That's huge. And then how were your adoption rates and are people really subscribing.

Tori: Yeah. We have a ton of subscribers. I don't have the numbers right in front of me but I think we're approaching 10% and that is that's huge because you know for a medium sized community like we are to get 10%, I think 18 months we've been we've been with recollect, we've done a lot to really integrate the GSO collects app with everything that we do like, oh you get a brochure it's got GSO collects on it, oh you get something in the mail, oh it's got GSO collects on it, like we put it literally on everything. We do like weekly videos that we push out called Trash Talk Tuesday. We've got a weekly blog that we push out called Ever Wonder Wednesday and on every single one of those there is something about like "wonder what goes where use the waste wizard in the GSO collects app".

And so I think the key success is, if you're having issues with something you can push it through GSO collects if you're trying to get more people to remember to put their card out, like push it through GSO collect and let people know about it. So, we've done a lot to really integrate.

Liz: Oh, I bet, and you will just see those numbers increase, I'm sure.

Tori: Oh, I hope so.

Liz: Good for you. What are some of the biggest challenges that municipalities are facing today?

Tori: Well as someone that is going through program changes and accepted list changes right now, I think the biggest issue for me is the perception that residents are getting and that, you know, the municipality doesn't want to recycle anymore doesn't want to like let us recycle something that's crazy recyclable. Like there is a market for Glass, this is lousy leadership and it's like yes there is a market for glass but glass and residential recycling and single stream recycling is it, so it's just so low value that it's not something that can feasibly continue to be recycled the way it's recycled right now. And so the perception is that we're taking steps backwards but I'm working so hard and my team is working so hard to take step forward and to continue to number one keep Greensboro recycling because you know if we had you know gone down another path and the past had been too much, you know, there could have come a point where a decision might have been made and I don't think Greensboro would ever do this realistically but for some communities recycling has just been cancelled.

And that's not something that we ever want to see happen in Greensboro. Greensboro is a community that recycles, and a lot of communities are going to try and recycle at all costs. But at some point, if that cost gets so high that it's bleeding the community dry or it's bleeding the MURPH dry.

We can't, we can't ever come to a situation like that we're where we're at a crossroads of are we going to go bankrupt or are we going to keep recycling. Because I know that we would stop recycling so that we wouldn't go bankrupt or at least that's what any reasonable business or municipality would do.

Liz: Sure.

Tori: And so, it's one of those things where yes this hurts right now. But these are growing pains. And even though it doesn't feel like we're growing because it feels like we're taking steps backward, we have to make recycling better. And what we've been doing hasn't been working. So, we're trying something else.

Liz: I think that's great. And you're right. So, what are you seeing in Greensboro around food waste?

Tori: I see a big desire to compost it from residents. What is really difficult is we don't have any infrastructure close by. Our closest composting facility is, I think two counties away. And you know where we're relatively a mid-sized community in the southeast. And we are not far from the big the big cities of Raleigh and the really forward-thinking cities like Durham and Chapel Hill and, you know, a lot of residents there have access, more access to food waste composting. But, you know, right now it's we can offer education for how to backyard compost or how-to Vermont compost. If you don't have a backyard but we're not at a place right now where the municipality is looking into food waste composting either for businesses or residents.

But I'm really hoping that if you're a compost or out there and you want to come check out Greensboro like we've got a lot of residents that want to do it.

Liz: Sure.

Tori: I don't know if I'll be able to help but if you want to come and start a composting business in Greensboro please, I'll give you my food waste. I have a little vermon compost has been in my office and people at the office give me their coffee grounds and banana peels and whatnot and I've just got some happy worms right now.

Liz: That's great. Hey at least the desire is there. So that's always a jumping off point which is great. So, Tori what else should we be paying attention to in the world of waste recycling and organics?

Tori: I think as we move forward especially in the next decade especially with some of the folks that you've had on this podcast, I think there's some crazy cool innovations coming in robotics and technology and Murph upgrades. You know, I think that we are primed right now. You know, China is an unfortunate situation that happened. You know, the green sword and the green fence you know it really, really sucks right now. If I'm being completely honest but I think the United States is primed for some really amazing domestic markets for reprocessing materials for manufacturing recycled content items. But even if we don't get to the manufacturing process if we just get to the processing and turning the scrap plastic into chip and stuff like that, I think we're going

to see a boom in the recycling industry. It might not be next year; it might be five years from now. But I think that with this huge glut of recycled content from MURPHS that we're seeing there is a huge opportunity for amazing entrepreneurs to come in and really think about "OK how can we get this to a form that more people want", whether it's better contamination removal, better sorting, robots. I think that all that stuff is really cool and I'm really looking forward to seeing what our industry comes up with to really pull ourselves up by your bootstraps and make a huge impact in the way that we process waste.

Liz: I think that's great. And I agree. And I think you're right that referencing the challenges from the 70s and how we've always recovered, and it breeds innovation I think that that is on the horizon and it's exciting to be here to watch.

Tori: Yeah. And we as humans are nothing if we are not innovative at fixing problems that we create.

Liz: Right. Exactly. Very good point. So, what keeps you busy outside of work outside of work?

Tori: I am a dog and cat mom. I've got two dogs and we just got a puppy that's a Great Dane-lab mix. And so, he is a handful but him and his older sister, I love them so much. So, we love going for walks and hanging out at local breweries and meeting new people and trying new beers and stuff like that to me and my husband have a lot of fun doing that on weekends.

Liz: Oh, I love it. That's great. So, tell us how can listeners hear more from you?

Tori: So we are on Facebook and Twitter at GSOGoesGreen and then I'm also on LinkedIn, Tori Carle. So if you my my name is kind of strange so my last name Carle which looks like Carl, but it's actually Carle.

Liz: Well thank you so much I feel like you've shared so many thoughts from a public sector perspective that we haven't had on this show before so super valuable and know our listeners will love it. So, thank you so much, Tori. This has been great.

Tori: Thank you, Liz. Thank you. Thank you.

Liz: OK and we'll talk soon. Thanks Tori.

Tori: All right. Bye bye.