

Transcript

Virgil

What is your role and what are your proudest accomplishments during your time in this role?

CDR Matt Deptola

My role is the branch chief for the Waste Resource and Recovery Branch (WRRB). Our scope of services cover NIH Bethesda Campus and satellite Maryland/DMV locations as well. We cover chemical waste, low level radioactive waste, medical pathological waste (MPW), solid waste, [and] recycling operations as well. We've got two contracts; one covers chemical waste [and] low-level radioactive waste, the other one is [for] solid waste, MPW, and recycling. Just for size, they are getting closer to about \$6 million a year per contract.

Virgil

Wow!

CDR Matt Deptola

Very sizeable in cost, but it also links to the scope of how much has to be collected, transported, disposed of, and so forth.

Virgil

That is a lot.

CDR Matt Deptola

laughter

Virgil

I guess it makes sense with all the different operations that we have going on.

CDR Matt Deptola

Yeah, I mean, to some extent, [operations] depend on how many laboratories we're servicing in a year or the small amount of the indoor recycling containers, which we have roughly 2000, just from that application, and that's just recycling within the building. Then you look at construction debris recycling for all of the renovation projects and construction projects that go on, which gives you another element. The thousand labs that we service typically; there's a lot more, but they don't always produce waste. Each element depending on where it falls can be substantial in scope.

Virgil

That's for sure. What would you say, so far that you've been in this role, would be your proudest achievement? Overall, thus far, or just something that you think is really cool and significant.

CDR Matt Deptola

It's a good question. I was thinking through: "What would I lay my finger on, one thing?" I would say: the freedom for the staff to take an approach that wasn't the standard approach. Think outside the box, challenge themselves. Come up with an idea that might be completely out of the norm, or something that they always wanted to pursue, and see where it went. Because following the same standard procedures all the time may not get us to where we want to go to.

For some examples, in the four years that I've been here, we revamped the Chemical Waste Tag completely, added characterization components to it, and then tools and presentations to support that. We revamped the NIH Waste Disposal Guide, which is our guidance document for everything 'waste' here at NIH. For the first time, we created [an] NIH Chemicals Waste Compliance Poster, which is very significant because we've got QR codes attached to the different areas that can help [people] improve [their] compliance with the waste tag. [It shows] what containers [are for] and how to properly set up your container, [as well as] the top five elements that we see from a compliance perspective from our laboratory inspections.

The biggest thing about it all is: it's data-driven. That goes to about 54 Power BI datasets and reports at this point.

Virgil

Oh man!

CDR Matt Deptola

We started out with zero. We started out in a fashion where it was Word documents and Excel. We still use Excel, of course, but we use that as our basis to import our data now. So we've taken all of our data, put it into Power BI data sets, and now we're starting to see the relationships among all the data, and where we want to take different routes and pursue different things. That's where the Chemical Waste Compliance Poster came from. We continue to see different routes that, to be honest, if I was sitting here today without those datasets, we wouldn't have taken.

So that has been very significant. To add to it, we are finally getting to a position where we can make what we call [a] 'health status indicator'. It will show the labs not only their inspection compliance, but we're going to start to put together significant amounts of data sets: square footage and the type of laboratory that might be, is it a path[ological] lab versus chemistry lab versus another type of lab. We want to collect all those data sets so that at some point down the road, we make different reports that say: "Here's how we can accurately identify how much it's going to cost when we go to set up new laboratories [or] a new building that has *this* type of a laboratory." Or *this* type of laboratory and *this* type of square footage. Or we take that data and we say to the Institutes: "Here's your health status." Here's how you're doing with regards to compliance and outreach and so forth.

We've captured a lot of different things, those are just a handful of different things that we've taken a look at. With regards to recycling and composting: we brought back composting in the last four years. We've created the Styrofoam Recycling [Program] where we take it up to a densifier and it gets remolded and recycled. We're currently getting ready to visit a facility in Jessup that we're trying to take our animal bedding [to] and actually compost it. It was something that we did a long time ago, but we haven't had a facility of as of recent that could do it. That's a significant game changer. We're talking like 800 tons a year.

We're looking to add a couple other components of the Clinical Center that feeds the patients over there and add them to our pre-consumer food scraps Composting Program that we started a couple years ago. So there's been a lot. I mean, I could go on with the MPW totes and so forth, but I think the biggest accomplishment was giving the staff the freedom to run with different ideas. To think of something new, outside of the box, for us to pursue. Whether or not it will work, we would go with it. If it wouldn't work, at least we knew where we stood at that point.

Virgil

That's a significant amount of progress in just four years, that's impressive!

CDR Matt Deptola

[The] staff works hard! They can put out some extremely good products. Me sitting here; it's not without the staff making it happen.

Virgil

For sure! In what you just told me, you describe a bunch of different branches of waste management, recycling, composting, all these different aspects. How do you think that impacts NIH and its environmental sustainability as a whole? How do you think waste management plays to our 'sustainability factor'?

CDR Matt Deptola

Many ways! So, waste cost money, let's just start off there, right?

Virgil

Yeah.

CDR Matt Deptola

We've got to collect it, we may have to sort it, we may have to bulk it, we have to transport it, we've got to take it to disposal. Cradle to grave. It's played a big role because we want to cut down on costs. We most definitely want to cut down on waste, as [with] NIH's environmental impact. So we're always looking for new ways to promote reuse. How do we promote chemical reduction? Do you need this amount of chemicals in your laboratory? Can we do it in a 'first in, first out' leaner approach on the front end? [We're] trying to reduce the amount that we could potentially have as waste down the road.

Then we've gotten into: "What programs can we environmentally put into play?" We always want to reduce, we want to reuse, but then let's get further down. Instead of sending it to a landfill, can you recycle, can you compost, can you do something else with it? Crispin Hernandez started [Solvent Recovery and the Chemical Redistribution Programs](#) [in] January of 2013. Although we're about ten, almost eleven years in, those are two of the more significant "newer programs" that [have] had a fairly big impact.

We have compost and Styrofoam recycling, [where] we are able to take formalin and xylene, distill it, send it back out into the community, and reuse those chemicals. Then, [with] the Chemical Redistribution, we're taking in the chemicals that aren't used, that aren't expired, [putting them] on [NIH](#)

[Free Stuff](#), and then having the community be able to pick [them] up free of charge and reuse those chemicals. It plays a huge role.

The less waste, the better, obviously. So we're always looking at ways to promote the front end of the process, and then if we can't, what can we do on the back end to limit our environmental impact?

Virgil

That's huge. I really like how you emphasize that the 'reduce' and the 'reuse' are pretty important as well. People just look at: "Oh, how can we recycle?" But doing those front end things to make sure there's less waste in general is also good. With that in mind, what are some ways that you would say people can recycle at NIH that usually aren't considered? When you think about recycling, it's: "OK, well, I'll put my plastic bottles in the recycle bin." That's sort of thing. You already spoke about some of [the unusual ways] with the chemicals. What are some other ways? Or, if you want to expound on the ones you've already given.

CDR Matt Deptola

Yeah! So the Solvent Recovery where we take and distill specific chemicals, formalin, xylene, alcohols: that is a very good program to have other laboratories use those chemicals that would [otherwise] go to waste. As well as the NIH Chemical Redistribution Program where unused, unexpired chemicals are redistributed through the NIH Free Stuff. So those are two programs previously we spoke about.

When you look at a lot of the locations where we either have cardboard or paper, or our plastic and metal and glass recycling containers, those are pretty standard.

But [at Bethesda] we've got [soft plastics films, so we have locations on campus](#). You can find them on our NEMS site. They are established so that we can pick up high-density [and] low-density polyethylene at collection points. Then we take those out for recycling. We do recycling in the construction debris [area]. We said we have different rollbacks for different things, such as metals and soils and so forth. We take those to the different routes of recycling.

One of the other ones is the Styrofoam coolers. We have a contract with a company that has a densifier, so that they are remolded and made into other products. We do have [collection points \[for\] the Styrofoam Program](#), also listed on the NEMS website. We do battery recycling: nickel cadmium, alkaline batteries, rechargeable batteries. We do UPS stations too, which is a small percentage of the population, but a lot of times we get that question: "If I have an UPS battery station, where can I go?" If they give us a call, we'll actually take the casing apart and take the battery out for them so that we can recycle the battery.

Virgil

Oh! That's awesome!

CDR Matt Deptola

That's another small program that we've started. There are many different ways [to recycle]. When we talk to the population a lot, one of the questions we end up getting a lot is: not just for recycling at NIH, but how do we do recycling outside? One of the things we always point people to is their county resources.

Depending on what county you may be in, you may have a transfer station. They have certain collection bins set up. Most recently, for example, they gave the participants who live in the Columbia, MD area [composting bins](#). So they can do their food scraps at home and they actually take them to the Alpha Ridge Landfill, which is [the] Howard County Transfer Station. They have a fairly new composting setup where they take yard waste [and] food scraps from the resident and they turn it into compost that they actually sell back to the residents. They do testing on it and so forth.

Virgil

impressed noise

CDR Matt Deptola

I say that to say: take a look at what you have available to you because there are a lot of resources, [like] the transfer station through your county. If you go even farther from a reuse perspective, there's even [places] like Facebook marketplace. There are other free entities out there, not to promote one over the other. So there are many different means nowadays, especially with the Internet, in order to be able to find something someone is giving away. There are plenty of different routes to go with, reduce, reuse, and recycling.

Virgil

That's true. This is a lot of really good information. I like how you went over what we have currently, [such as] the different programs that we're going through. Also earlier you talked about what we've done in the past four years and reintroducing certain things; the posters, the programs. How about the future? How are you hoping for NIH to grow and improve in the sector of waste management in the next 5-10 years?

CDR Matt Deptola

That one always becomes challenging. I think it's to use new processes that come into play. We're always heavily emphasized on that front end. Try and reduce the amount of materials we're using. Trying to subsequently reduce the amount of waste we're using. For the future, I honestly believe we're going to see a substantial change in the plastics market. One of the things that we found out most recently is that: we do not recycle the amount of plastics that we really thought that we did. We see a lot of it going into landfills. How does that change? Are we going to constantly still be a heavily plastic market and users, or are we going to change to something else? What does that look like?

One, staying ahead of the market changes, which I think will be significant in the next handful of years. Two, utilizing new technology. What does that technology look like? Can we use it to recycle? Or can we use it to change the dynamics of our waste so that it doesn't [go] into a landfill or an incinerator, for example?

Virgil

Right.

CDR Matt Deptola

Those are going to be the two big things: staying ahead of the market [and] finding new technology that we can use. We will always emphasize the reduction on the front end, that will always [have] to play a prominent role in what we do. [Those are] the two areas we'll probably look at moving forward.

Virgil

Awesome! I always come into these interviews with a set perspective, and sometimes that can be limited just from what I know. Is there anything at all that you would like to share that I haven't asked about? Or any cool tidbits you want to leave us with?

CDR Matt Deptola

I honestly believe that [if] the NIH community [saw] the actual aggregate numbers that we produce in waste, and especially just in the Bethesda campus, they would be astonished. As a community, granted, we're very much a similar size of a small town. The tidbit is, collectively, we might be 30,000 people here: it takes more than just one or two of us, but it takes all of us. Anything that we can do along the process, to bring to light new things that they've seen [and] best practices. We do that through a lot of things, such as the [Green Team Leads Council](#) (GTLC) and the [Sustainable Lab Practices Working Group](#) (SLPWG). We do that through people who are very active and adamant about environmental causes, sustainability, [and] waste reduction. I put that to the community: continuing to bring up new ideas, new processes, and championing is the only way, collectively, we're going to get to a point where we can continue to progress, reduce, and have a sustainable situation.

Virgil

Excellent!