

The greatest recycling story never told

Ron Alexander

Today, more than 50% of the biosolids generated are beneficially reused (millions of dry tons per year). But let's face it, many of us spend most of our time defending the practice of biosolids reuse or trying to keep our program under wraps. We are not out in the public eye promoting the incredible service and products that we provide.

Biosolids is not a dirty word. With decades of success under our belt, it is pretty obvious that the repurposing and beneficial reuse of biosolids is probably the greatest recycling story in the U.S. But no one really talks about it, and many don't even know the story.

Remembering the story

In the old days – we're talking about the 1980s and before – *biosolids* were called *sewage sludge*. Back then, many coastal community utilities dumped sewage sludge in the ocean. But the U.S. Environmental Protection Agency (EPA) wanted to end this practice and create safe land-based uses for the material.

With the help of Clean Water Act funding, pretreatment programs began. These programs identified and lowered



industrial sources of heavy metals getting into the water system. This led to cleaner solids being generated.

The EPA and the U.S. Department of Agriculture (USDA) then worked together to address the biological pathogens present in sludge. They developed the concept of Process to Further Reduce Pathogens (PFRP), which determined the time and temperature relationships needed to kill human pathogens. They also teamed to complete in-depth heavy metal and pollutant research that led to a related risk assessment completed in large part by Rufus Chaney at USDA.

All of this work assessing and learning

how to destroy pathogens and remove heavy metal came together in EPA's regulations in Part 503 of the *Code of Federal Regulations* in 1993. These rules greatly expanded large-scale recycling of biosolids (Class A and B) to the land.

Early endeavors

I entered this field in 1984 in college doing research pertaining to heavy metal movement into agricultural crops where biosolids was applied. Before graduation, I was interviewed by the first biosolids compost brokerage company in the U.S. After graduation, I joined that company and was one of the first full-time biosolids compost salespeople.

I got to work with great researchers, such as Frank Gouin, and interact with legendary biosolids champions, such as Rufus Chaney, Pat Milner, Eliot Epstein, and many others. We were successful – marketing a lot of biosolids compost, creating new products and uses, and generating positive momentum in the marketplace. Others in the young Class A biosolids marketing world also were finding success.

Many of us promoting biosolids products “in the early days” studied hard. We sought to understand how to use the product in its many forms; that meant reading research.



This turf at a Maryland park has been improved by incorporating biosolids compost into the soil. Ron Alexander

We also investigated related health and safety issues. We understood that the product was going to be stigmatized, so we really needed to be prepared to be better than the companies selling traditional products.

We worked hard and educated end users, and others, about the benefits of using biosolids-based products. Momentum continued to grow in the marketplace. We knew that we had a great story to tell, but the masses weren't ready to listen.

Retelling the story

Today, the world has shifted. Recycling everything from household plastic and aluminum to cell phone batteries and computer gear has become standard. The public cares about conserving water, supporting local businesses and products, and capturing resources from what used to be considered "dirty" waste streams.

It's time to start re-telling the biosolids story loudly and proudly. *Sewage treatment plants* are gone; now we're using *water resource recovery facilities* to remove pollutants while generating energy,

reclaiming water, and producing nutrient-rich products. One-third of those benefits are rooted directly in biosolids.

Certainly, the water sector needs more investment into research and large-scale education. EPA and the Water Environment Federation could be a great help here, but

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individual generators could also do more. But we can make a start by re-telling our great story. Maybe, we need help to better understand how to explain what we do and tell "our story." (Perhaps seeking help from experts in communications.) Regardless, the goal should be to recapture the positive momentum that we have lost in the marketplace.

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