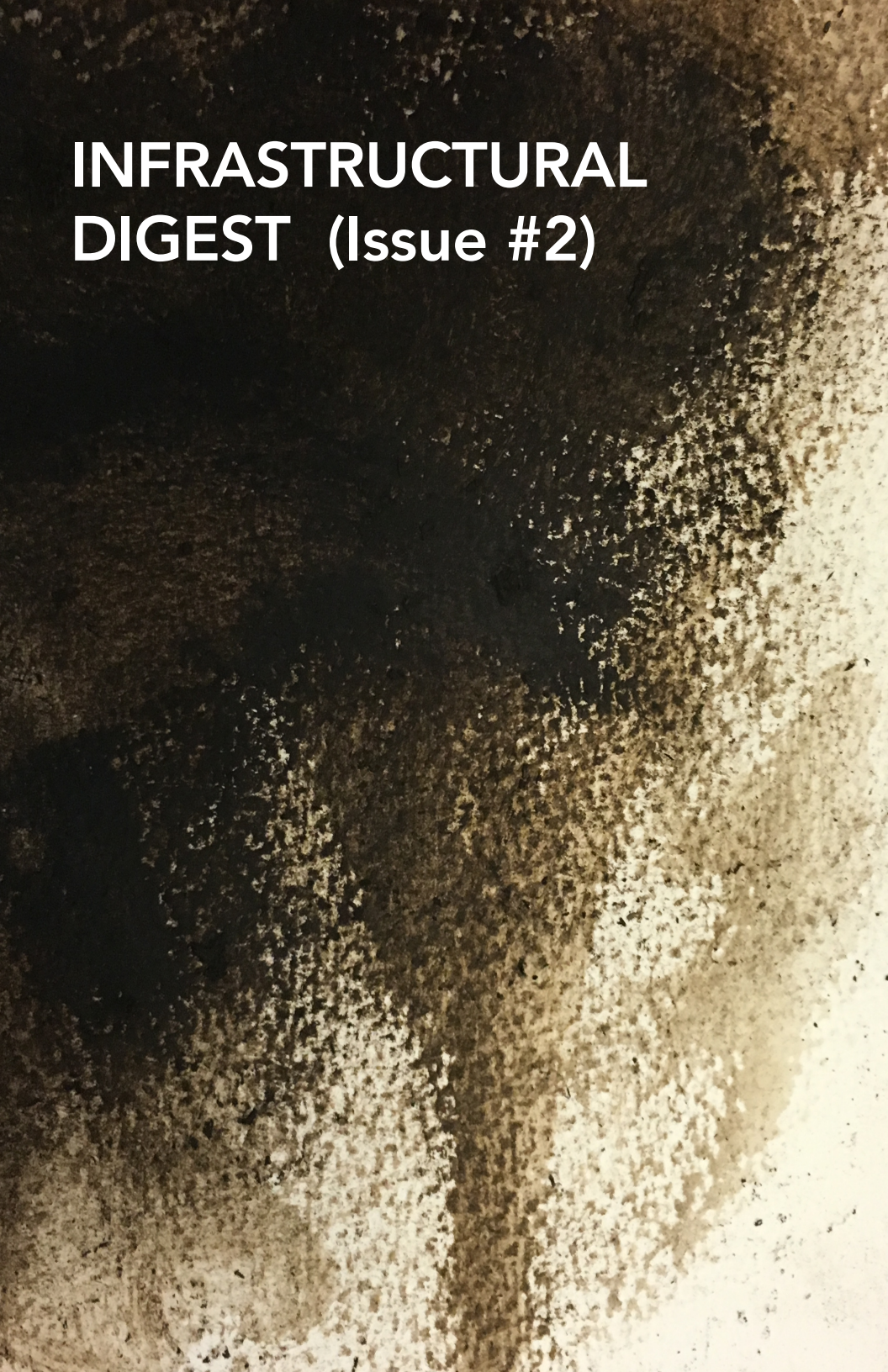
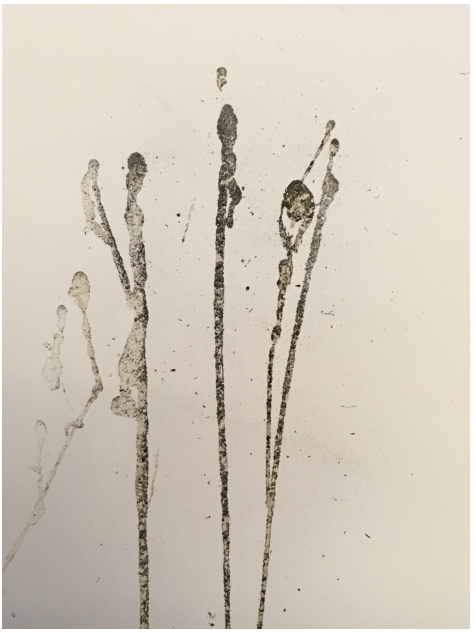
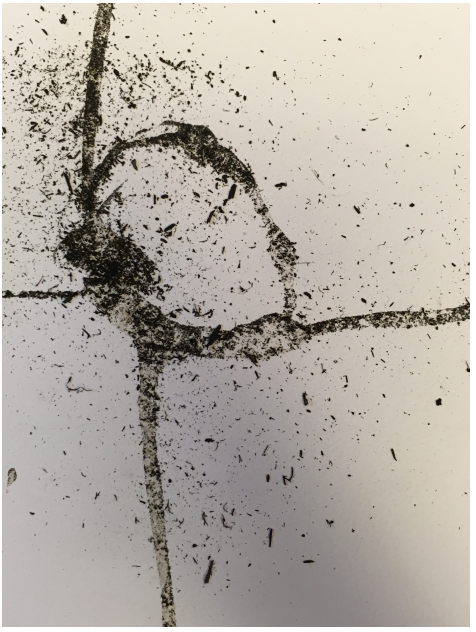
INFRASTRUCTURAL DIGEST (Issue #2)

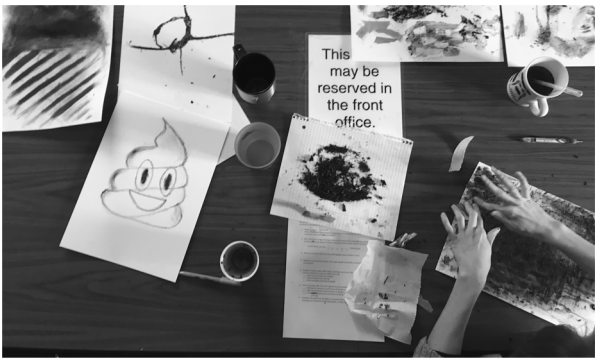






Biosolids watercolors
By Forbes Lipschitz

Table of Contents



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Privy2:
An Introduction

Welcome! This zine serves as a companion to the installation of "Privy2: Biosolids and You." The aim of the project is to bring the cycle of waste transformation to the Ohio State University's main campus. The architectural pavilion installed on site is made from recycled plastics while the corn is grown in compost derived from biosolids (i.e. treated sanitation waste) produced by the City of Columbus. By giving OSU students, faculty, and staff the opportunity to interact with these resources, we hope this project can spark conversations about the challenges of sustainability in times of increasing resource constraint and sweeping environmental change.

We hope you take time to explore the site, read the zine, and even find opportunities to talk to friends, colleagues, and classmates about the future of waste management on campus, in the city, and across the world. If you want more information about the project's conception, construction, and installation, you can visit our website: http://privytwo.wordpress.com

Privy2 is brought to you by faculty and students from the Knowlton School of Architecture and the Department of Anthropology. It is funded by the Initiative for Food and AgriCultural Transformation (InFACT).

Privy2 Installation. Ohio State University. August 2019.

You Are Here

Nick Kawa

If you happen to use a flush toilet on a regular basis, my guess is that you probably don't spend a whole lot of time thinking about where your bodily solids and liquids will journey after you've deposited them. That's because modern sanitation systems are designed to limit users' responsibilities when it comes to the management of these most intimate forms of excreta. With the simple flush of the toilet, your bodily wastes are carried out of sight and out of mind, leaving the impression that they can be effectively made to "disappear." Milan Kundera wonderfully captured this point, writing: "Even though the sewer pipelines reach far into our houses with their tentacles, they are carefully hidden from view, and we are happily ignorant of the invisible Venice of shit underlying our bathrooms, bedrooms, dance halls, and parliaments."

So, what actually does happen when we flush? Where does our bodily waste go and what becomes of it? And perhaps most important of all: Is it really just waste, or might it be something more?

For millennia, farmers across the world have relied on human excrement as a fertilizer, often known euphemistically as "night soil." In the 19th century, however, a host of factors related to urban and industrial growth in Europe and North America led to the adoption of water-borne waste removal, which became the basis of the modern hydraulic sanitation system. With this development emerged a *culture of flushing* that resulted in the channeling of human excrement into subterranean networks and waterways. In effect, this disrupted the cycling of nutrients from urban metropolises to surrounding agricultural lands.

Today, many initiatives around the world are attempting to restore localized nutrient cycles. Part of this is through the

local food movement, which aims to devise locally-based and self-reliant food economies that enable sustainable food production, processing, distribution, and consumption. An often less visible but no less significant movement is the growing interest in harnessing human excreta and returning it to the land as a soil amendment. In nations that maintain hydraulic sanitation systems, this is primarily done through the production of "biosolids"— treated sanitation sludge that can be spread over the surface of farm fields, or when in liquid form, injected underground. Still, the use of this resource is considerably limited in the world today. In the United States, for example, the Environmental Protection Agency (EPA) estimates that of the approximately eight million dry tons of biosolids produced in the country annually, but only half is applied on productive lands. Although many farmers, researchers, and sanitation engineers view the use of biosolids as a beneficial model for agricultural fertilization on a planet of finite resources, others have raised concerns about the potential consequences of biosolids usage for environmental and public health.

For reasons noted above, "closing the loop" in nutrient cycling will require negotiating a series of challenges, from addressing public health concerns to better evaluating the possible long-term effects of industrial pollutants on agricultural lands. Taking these factors into consideration, it cannot be denied that the bodily substances we all produce are critical elements of our ecosystems, and how we manage them will continue to have significant consequences for the global environment. With increasing recognition of an ecological crisis facing humanity, we simply cannot afford to hide from our "waste" anymore.

The Good Daughter-in-law

by Hsieh Chang-yi

"Early in the morning, the magpies cry,
The newly-wed daughter-in-law is carrying excreta on a pole
Liquid from the excreta stains her new trousers
The hot sweat soaks into her embroidered jacket
The commune members praise her and mother is pleased
All tell her she has got a good daughter-in-law."

Night Soil, Then & Now

Cynthia Chen

I can't remember precisely where or when I first heard that excrement could be mixed into the soil to produce better crops. In my memory, it seems like such an ordinary thing – a "well, duh" tidbit of information that should be common knowledge. Perhaps this has to do with my childhood growing up in China in the years around the turn of the century, when economic reforms had been set into motion for only about 20 years or so, and the full-throttle effects of what we currently associate with 'modernity' hadn't yet reached the semi-rural municipality where I lived. It may also have been a result of having rice paddies not too far away. Everyone in the neighborhood had some kind of tie to the fields as a result of land distribution linked to the *Household Responsibility System*. Now, thinking back, I can't recall ever having waded through the fields myself. But still, I reaffirm that the use of animal and human manure was a perfectly ordinary thing to me, or so I thought.

Later, when I went to high school in the US, I recall watching an episode of the 2008 *John Adams* miniseries in which the eponymous character, standing next to a pile of cow manure, tells his son how alive the earth is and how animals and plants cooperate in a beautiful symbiotic cycle of life. Then, to the disbelief of both me and my classmates, the elder Adams proceeds to bend down and *taste* the bovine excrement. I still recall the utter disgust, but also morbid fascination that took hold of me as I watched the scene unfold.

Would I have reacted the same way, with the same emotions, if I were watching something similar in a Chinese historical drama? Perhaps, but not with the same intensity. As Michael G. McGarry notes "in most so-called developed countries, human wastes are regarded as unwanted by-products and discharged as pollutants into the surrounding environment." We are taught in the US that anything related to fecal matter

is disgusting, if not outright sinful. It is an ingrained cultural value – not necessarily a 'bad' one, per se, as it is one out of many paths of waste management, and likely had social evolutionary benefits such as disease prevention. However, in the modern era, this view of excrement is—dare I say—outdated, especially in the wake of the ongoing human population boom and technological advances, which together create unprecedented strain on our surrounding environment, be it resources, the climate, or other humans. By looking elsewhere in our shared human history, we can start to find other ways of sustaining both the environment and the longevity of the human race.

A woman carrying buckets of night-soil. Fuzhou, Fujian province, China.

Photograph by John Thomson, 1871.

In Chinese culture, the general social view of excreta has been much more nuanced. Undoubtedly, it is viewed as "waste" and elicits feelings of disgust; but there is also a logical overtone of "utility." Before acknowledging the elephant in the room, let us first speak of animal waste, or animal excreta. In traditional Chinese medicine, all things edible (this itself touches on a millennium-long debate still unconcluded, but here I digress) have medicinal properties. *Cang Sha,* literally dried silkworm larvae 'sand' (droppings), have been used for centuries to treat ailments such as stomach pain or arthritis. In this and similar

situations, the form of excrement is given a distinct name and the emotional reactions of disgust are separated from the object. In other cases, even this sheer premise of sugarcoating is removed, such as with pig excrement, which has been used as 'free fertilizer' for a large part of recorded history – not only in ancient China, but in various parts of medieval Europe as well. But where the West and the East diverge is on the subject and treatment of human waste. Anything related to humans, and human "waste" especially, is a touchy subject. The West teaches that human waste is an abomination and should be hidden away or destroyed at all costs. But the large urban populations of ancient China had long learned that at some point, the excess produced by humans will overwhelm a civilization no matter how much you attempt to hide from it. So, it really wasn't too long before farmers started discovering the benefits of human excrement for crop production and 'night-soil' came to be recognized as a prized substance.

This use of night soil in agriculture outlasted a series of dynasties, persisted through Imperial China, and made it well into the communist era. During the latter period, a time marked by overwhelming scarcity, it provided remarkable economic and health benefits: "between 1963 and 1971 [in the PRC] food production per acre increased by 4%, [and] enteric pathogen morbidity decreased by 80%", reports the hygiene section of the Hopei Province Chien Ann district revolution committee. By seeing this waste as a potential resource and a low-cost source of energy, swine and human manure became a major, if unexpected, factor in saving the lives of millions from disease and starvation.

Further research into the use of manure as a resource has gradually been on the decline since China's economic growth began in the late 1970s; in the West, serious exploration of this topic also ceased since industrialization began to dominate. But in the face of increasingly urgent fossil-fuel deficiency and climate change, perhaps it is time for us – as humans, from both the East and the West – to look back at our history, and see if we can harness the untapped potentials of forgotten resources... 'night-soil', or otherwise.

Odorless Utopias

Syamil Normas Yakin

Modern civilization is marked by sterility. This conditioning of cleanliness defines much of contemporary urban life. However, this has not always been the case. As Jonathan Reinarz describes in his book *Past Scent*, the idealized model of cities designed as hygienic "odorless utopias" is in fact a relatively new phenomenon. Until recently, large cities were known just as much for their spectacles and excitement as they were for how badly they smelled.

FATHER THAMES INTRODUCING HIS OFFSPRING TO THE FAIR CITY OF LONDON.

(*A Design for a Fresco in the New Houses of Parliament.*)

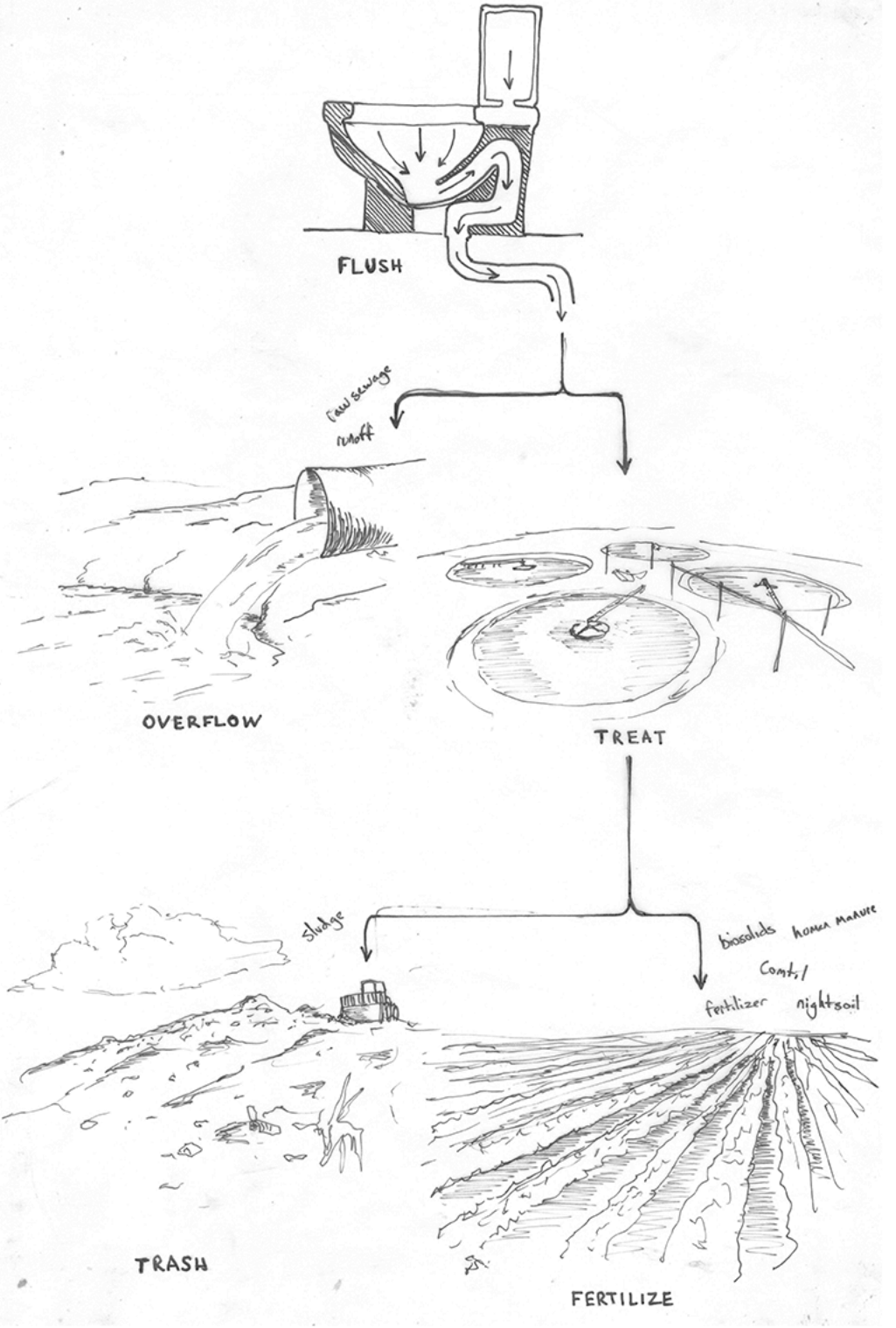
Paris and London are both examples of cities that were infamous for their awful stench. In the 17th and 18th centuries, Paris and London's populations grew considerably. With that, came incredible quantities of waste. Human excrement, slaughtered animal's entrails, food remains, and filth littered the streets and produced overpowering odors that blanketed

these cities. Many foreign visitors and travelers made note in poems and prose about the smells that welcomed them, even before they arrived at these cities' limits. The rivers that ran through Paris and London were designated as dumping sites that carried waste materials and refuse. Miasmatic beliefs of the time led people to think that "bad airs" spread diseases like cholera, diphtheria, and scrofula – even though the primary cause of these diseases were the rampant bacteria that thrived in urban filth. These conditions became normalized and were accepted as price one paid for living in an urban metropolis.

So, what changed? Eventually, the stenches grew so overwhelming that people began to voice their concerns and make a strong push for governmental intervention. "The Great Stink" that overtook London in the summer of 1858 was a major turning point. Shortly thereafter, Joseph Bazalgette, a civil engineer, was hired by London's officials to create a system of sewers that would effectively handle the city's waste.

Earlier in Paris, Jean-Baptiste Colbert, France's finance minister had organized a committee that would be in charge of imposing taxes to pay people to clean up the city's streets. Small actions, like imposing taxes and shoveling filth out of the streets, along with big ones, like dispensing corporal punishment and constructing thousand-mile long sewer systems, began to take place in London, Paris, and other major European cities.

Slowly, with advancements in city planning and civil engineering, large cities were able to better manage their waste materials. Or, at the very least, with water-borne sewage systems, they were able to flush them away, further downstream. Of course, more problems cropped up even as solutions continued to appear. But over time, shit and its unsavory odors became increasingly cloistered in private closets and moved out of public space. And today, it's difficult to imagine that even in Europe's most sophisticated capital cities, it was not long ago that residents were once used to stepping on their neighbour's shit on their way to work.


FLUSH
raw sewage
runoff
OVERFLOW
TREAT
sludge
biosolids
human manure
Compost
fertilizer
nightsoil
TRASH
FERTILIZE


WARNING
POSSIBLE SEWAGE OVERFLOW
DURING HEAVY RAINFALL. AVOID
PHYSICAL CONTACT WITH WATER
FOR MORE INFORMATION OR TO REPORT
A SEWAGE OVERFLOW DURING DRY WEATHER
CALL:
CITY OF COLUMBUS
DIVISION OF SEWERAGE AND DRAINAGE
614-645-7102


MOYNO
BIO SOLIDS LOADING

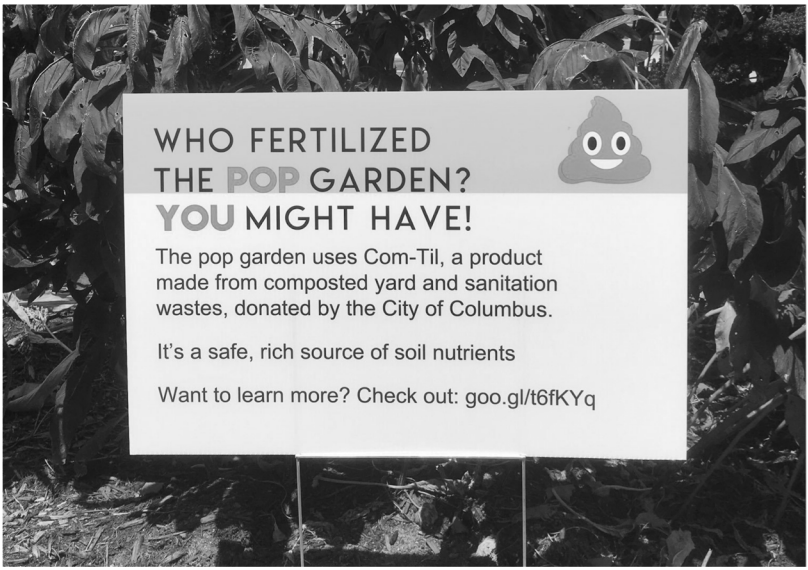

* THE GREAT, GREAT
GRANDCHILD OF
A BACTERIA THAT
ATE BEYONCÉ'S POOP
MAY BE IN HERE.

Biosolids & You

Nick Kawa

The term "biosolids" is a relatively recent coinage. It was developed in the early 1990s by the Water Environment Federation as an attempt to rebrand sewage sludge and promote beneficial use of it, particularly as a soil amendment. The term was adopted by the EPA in 1992 and it has stuck ever since. And there's a good reason for that: just let the word "biosolids" roll around in your mouth for a second or two. You can't even smell it, can you?

Following current EPA regulations, there are two grades of biosolids: Class A and Class B. In Class A biosolids, pathogens must be reduced to undetectable levels and strict standards are applied with regards to heavy metals and offensive odors. This class of biosolids can be applied to land without restrictions and is frequently sold as fertilizer or compost to ordinary homeowners and gardeners. Different cities have even marketed their own brands of class A biosolids, including Milwaukee's Milorganite, Tacoma's Tagro, and here in Columbus, Ohio, we have "Com-Til."

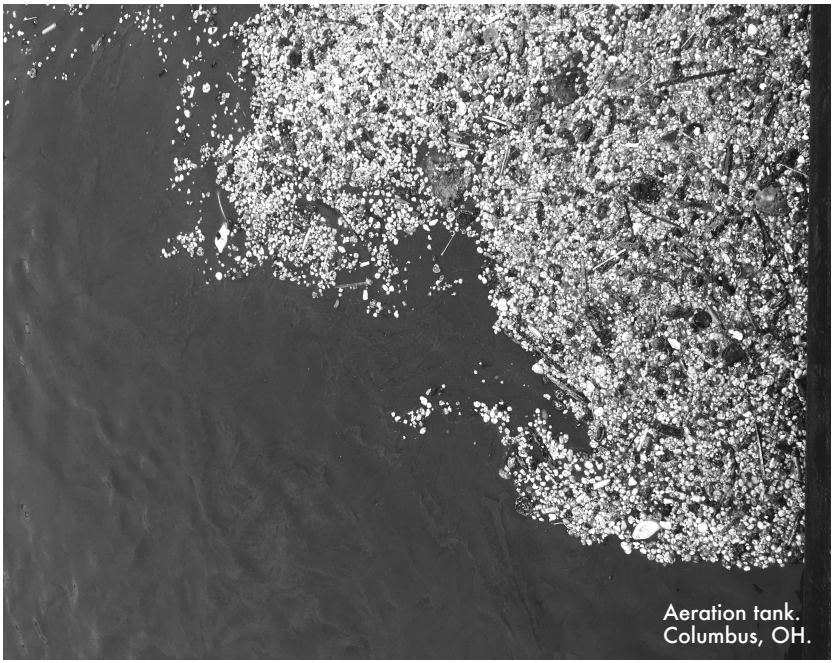


Class B biosolids, by contrast, undergo treatment but contain marginal levels of detectable pathogens and require EPA permits for their use on agricultural lands. Still, many large-scale agricultural operations use Class B biosolids, particularly for the production of commodity crops like wheat, corn, and soy. Perhaps, unsurprisingly, the use of Class B biosolids has generated the most public resistance.

While interviewing an environmental chemist named Tony who has worked with biosolids for decades, I asked what he thought of the ongoing debates regarding the safety of using biosolids in agriculture. He admitted the early biosolids might have had some "nasty stuff" in them. However, the EPA developed what he described as a "carrot and stick approach" by the early 1990s. "They said if you produce class A biosolids, then regulatory burden will be taken off your shoulders. If you don't, then we will regulate the hell out of you." And, according to Tony, it pretty much worked. Having studied metals in soils for decades, all the biosolids are—in his words—"clean" today.

But what's more interesting, he added, is that while people are worried about all the things that end up in biosolids, they are often present at very reduced amounts when compared to what people typically ingest or expose themselves to. Take triclosan, for example. Tony described it is a "pesticide," although I later found it to be identified as "an antibacterial and antifungal agent." Regardless of its classification, it is a common ingredient in hand soap as well as toothpaste. Products like Colgate Total rely on triclosan to reduce plaque build-up on teeth, but it has also been shown to pose possible health risks – including disruption of sex and thyroid hormones. And triclosan has been shown to contribute to broader bacterial resistance and the rise of so-called superbugs. Tony laughed as he described attending meetings in which wastewater treatment plant managers berated Proctor and Gamble execs, demanding they take antibacterial agents out of soaps and other products because they messed with the ability of microbes in wastewater aeration tanks to do their job. Tony conceded that triclosan is usually shredded

up pretty quickly by microbes in wastewater treatment facilities. But it invited me to wonder: what other chemicals found in the sanitation system that aren't so easily eaten up?

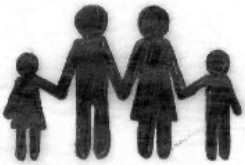


Aeration tank.
Columbus, OH.

Before meeting Tony, I had naively thought of biosolids as treated human excreta that serve as fertilizer. But biosolids are so much more than human shit. For a minute, think about all the things you might put down your toilets or drains besides bodily excreta: toilet paper, tissues, tampons, toothpaste, baby wipes, shampoo, shaving creams, soap suds, matches, ashes, pet snakes, solvents, slimes, flosses, fats, grease, goldfish, paints, condoms, bleach... the list goes on and on. This doesn't even account for all things dumped by businesses and manufacturers. Although we know and understand this, it is only on rare occasions that we reflect upon all the unwanted things that are channeled into the sanitation system, much less how they might complicate attempts of "closing the loop" in agricultural systems and returning our bodily excreta back to the land. My hope is that in learning to live with our wastes, we may start to more critically assess the broader industrial ecologies in which they circulate and direct more of our attention to the practices and inputs further upstream.

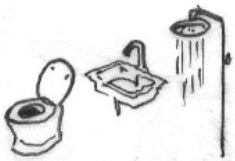
INFRASTRUCTURE

the system as a whole



A family of four produces 400 about gallons of wastewater/day.

× 860,090 People in the City of Columbus =



86,009,000 gallons of wastewater per day

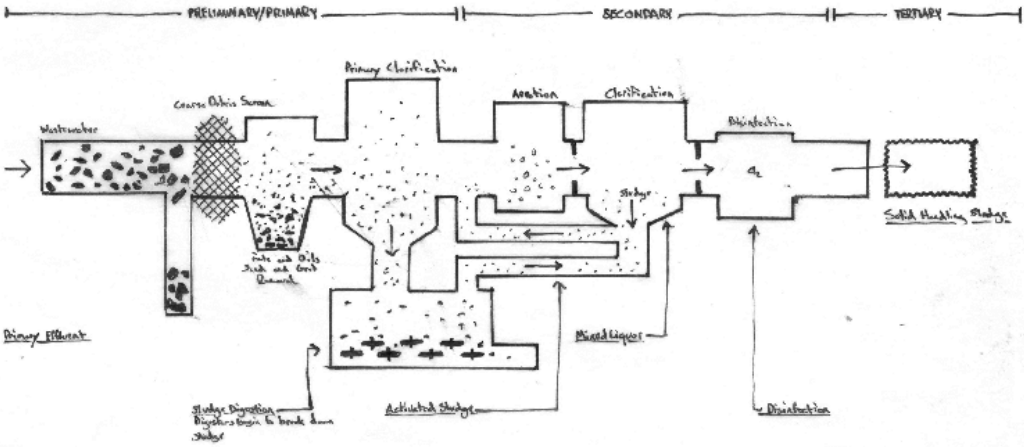
COLUMBUS WASTEWATER TREATMENT SYSTEM OVERVIEW

Southerly Wastewater Treatment Plant — 114 million gallons per day
Jackson Pike Wastewater Treatment Plant — 102 million gallons per day

216 MGD

WET STREAM

seperating water from solid waste



Infinite Digest

Forbes Lipschitz

Digestion is a cycle. Every day, the food we eat makes its way through our digestive system, and is transformed in the process. The nutrient rich substance we expel goes by many names—feces, excrement, poop, shit, and waste, to name but a few. But no matter where our shit ends up, it will inevitably be consumed by other organisms, digested and expelled again. This second-order shit can be used to grow and sustain other organisms that we eat, and so the cycle continues. Although the precise contours of urban sewage treatment systems vary throughout time and across cultures, the role of organisms in facilitating digestive processes and enabling waste transformation holds constant.

Pigs were the original garbage disposals in many US cities.

In early American cities, animals provided the primary means of sewage disposal and treatment. Semi-feral pigs—in addition to dogs, rats, and roaches—roamed the streets, eating food and human "waste" thrown out by households. Despite the dangers of the free-roaming swine, many citizens preferred them to the alternative of noxious feces decomposing in the streets. Dedicated piggeries were erected for large towns, with a sounder of 75 swine capable of digesting one metric ton of waste per day. Through their own digestive processes, pigs transformed human shit into protein and manure.

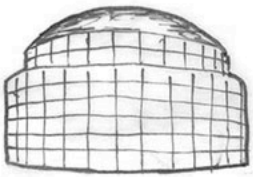
Eventually engineers and city planners replaced pigs with pipes. Today, there are some 13 million miles of public and private sewer lines in the United States, directing 32 billion gallons of wastewater to around 16,000 treatment plants each day. Though this infrastructural network is vast, it is ultimately tiny microorganisms that perform the bulk of the grunt work in a sewage treatment plant. The most predominant among these hardworking microorganisms are aerobic bacteria, with higher organisms like protozoa and rotifers playing a supporting role. Bacteria feed on the waste in the water, converting organics into carbon dioxide and new biomass. The new solids are then dewatered and concentrated for reuse in biosolids.

When applied to fields, biosolids provide valuable nutrients and organic matter to the soil. With a permit from the Environmental Protection Agency (EPA), Class B biosolids can be used for land application on commercial farms. Dewatered biosolids can be applied using manure spreaders, while specialized vehicles can inject liquid biosolids directly into the soil in order to minimize unwanted odors. Biosolids can also be mixed with woodchips and composted. By heating biosolids, the composting process removes dangerous pathogens and makes the resulting compost suitable for fertilizer on farms and vegetable gardens, without securing a permit from the EPA. In the city of Columbus, 11% of biosolids are used for liquid land application and 33% are composted and distributed as “Com-Til.”

The digestive cycle does not stop at the sewage treatment plant. Whether applied to the soil of a commercial cornfield or a small-scale community garden, the biosolids mix with a diverse suite of soil biota. Litter transformers graze on the organic matter in biosolids and decomposers then breakdown that available matter. Mycorrhizal and microbial populations transform the high levels of carbon in biosolids into nitrogen and phosphorous, while the digestive system of worms leaves behind a nutrient rich mix of humus and castings. Plants then uptake those nutrients before being harvested for human or animal consumption. And so, the cycle continues, over and over again, *ad infinitum*.

DRY HANDLING

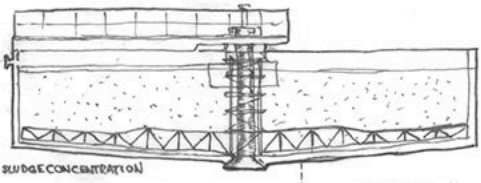
making some cake



SLUDGE HOLDING TANK

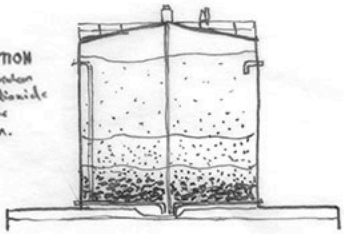
Tanks hold sludge allowing sludge to settle further so more water can be removed.

Gravity Thickening



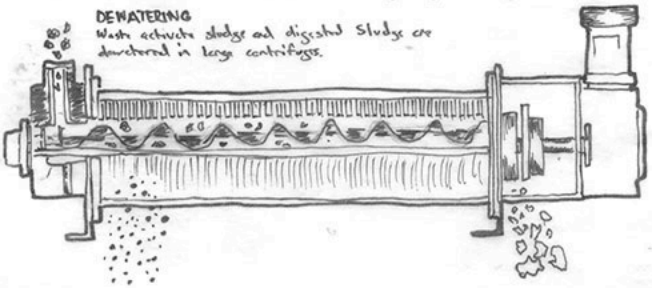
ANAEROBIC DIGESTION

Combined sludge is broken down into carbon dioxide and methane in the absence of oxygen.



DEWATERING

Waste activate sludge and digested sludge are dewatered in large centrifuges.



"Is This Even Organic, Bro?!"

Lucas Tsitouris

Following federal regulations, biosolids are not permitted for the production of organic crops certified by the United States Department of Agriculture (USDA). Which raises the question: what *is* considered organic? The word has many different meanings and associations that extend well beyond the USDA's definition of it. For me, the term conjures up memories of early biology and chemistry courses, the aroma of delicious fruits and vegetables, a vague sense of environmental friendliness, and of course, the Wholefoods grocery chain (or what some sarcastically refer to as "Whole Paycheck").

Though organic farming has existed since the origins of agriculture, it has now become a model for a "more natural" approach to agriculture that stands in contrast to so-called "conventional agriculture," which often relies on chemical pesticides, fertilizers, and genetically modified organisms (GMOs). But does this mean that organic is always better? Well, that really depends.

The USDA's classification is determined by a list of basic requirements (and restrictions) that foods must meet in order to be considered organic. One of the main tenets of organic farming is that no synthetics or industrially-produced substances such as fertilizers, growth hormones, and/or additives should be used. However, there is a list of approved synthetics and methods that are allowed such as the tools used to harvest. Another well-known rule of USDA's organic guidelines is no GMOs! This means that any plant or animal that has had a gene altered by humans (in a laboratory process) cannot be used in organic foods. But, there are exceptions to these guidelines, including the use of manure from animals that were fed GMOs.

Biosolids application
Mansfield, WA. 2017.

Biosolids, or treated sanitation waste, is prohibited from use in USDA-certified organic operations. This means that even though biosolids result from the recycling of human bodily organic materials, they are not an accepted source of fertilization on organic farms. This is likely due in large part to concerns about what else might be found in biosolids, including residual amounts of pharmaceuticals and compounds in personal care products. Still, I'm fairly sure that Americans' uneasiness with the use of human poop to grow food – even if it's several steps removed from the human body – may play a significant role too.

Though the USDA has established the standards for organic agriculture, it does not mean that its methods are always necessarily the most sustainable in all scenarios or contexts. To provide humanity with a surplus of food while also sustaining our natural ecosystems, we have to find better ways to effectively (and safely) return bodily organic materials back to the soil. Could biosolids play a role in building a more sustainable model of organic agriculture in the future? That all really depends on the future of our waste stream and its management. Biosolids might not ever pass the bar for USDA-certified organic production, but it remains a vital source of organic matter that can help support degraded lands that have suffered from neglect for too long.

Bio-(X)

Logan Rance

Uncle Kevin scrunches his forehead and taps his fingers on a beer can, puzzled by my description of human waste recycling. He asks, "But isn't that where they make gasoline out of corn?"

"No, Uncle Kevin, that's bio *fuel*."

"So you're telling me you're making gasoline out of shit?"

I sigh, and then respond, "Well, no, but... Actually yes. Sure."

"Well, look," he says. "Biofuel, biocorn, biogas, it's all bio, right? Biosolids is just another way to say it."

I could crack one open with Uncle Kevin and attempt to explain the differences in all of these bio-words, but then I decide to steer our talk back to a safer place, like high school football or taxes. But in the back of my mind, I'm left wondering... Do I even understand the meaning of the prefix *bio*?

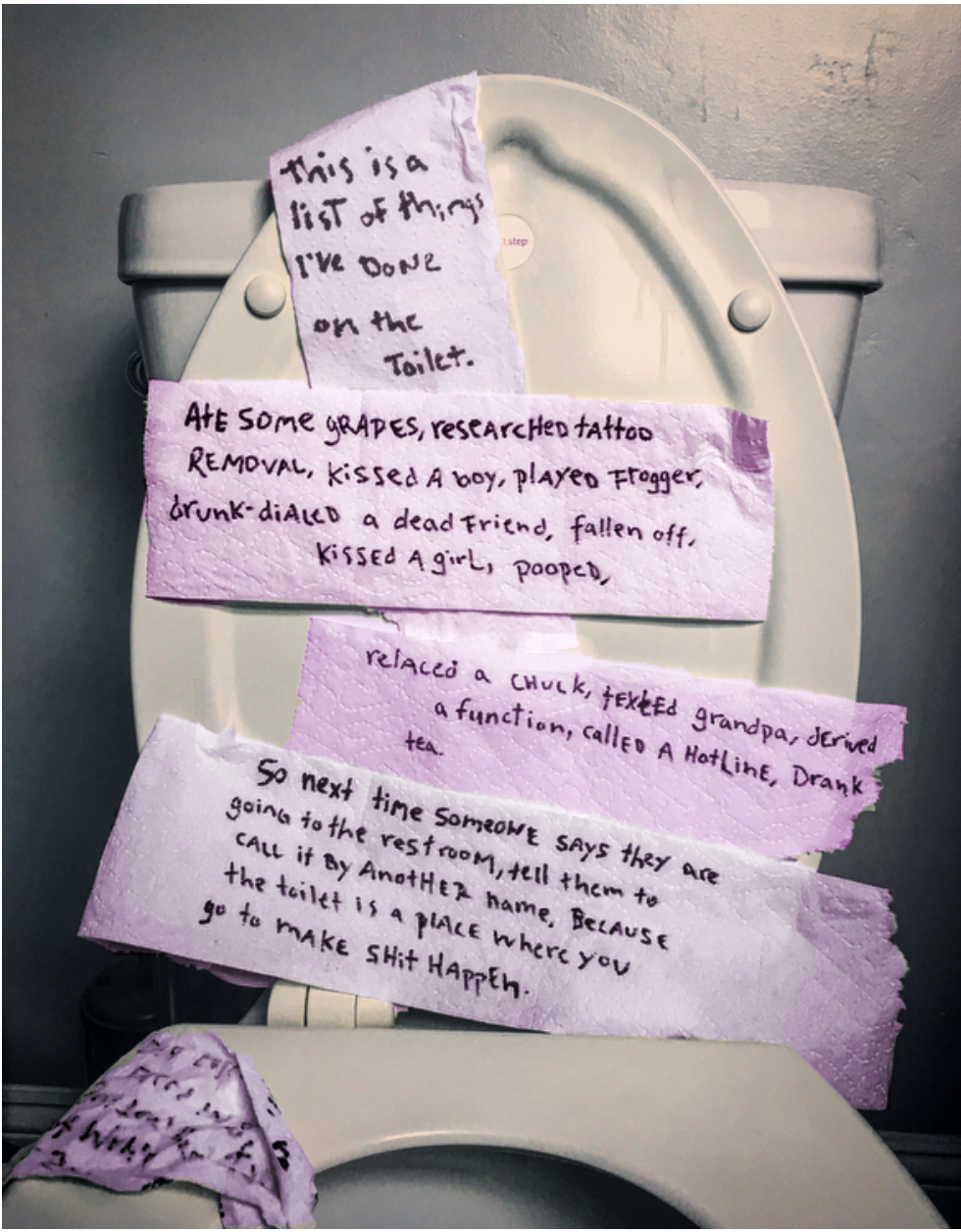
Bio means life. It means frogs doing amplexus and orchids opening every morning. It means SN1 chemical reactions, cell division, microscopes too expensive for me to touch, nematodes, and David Attenborough. *Bio* is green, lush, and vibrant. It chirps and hums, and has existed for a very long time. If *bio* were a person, she would be a little girl with flowers in her hair, skipping through a forest glen. That's how I always thought of *bio*– at least until Uncle Kevin sat down next to me in a sleeveless Busch Lite shirt and said, "So, what's biosolids?"

It turns out that people have their own preconceived ideas of what it means to be " *bio* ", and so did I. I never thought of poop as *bio*. Poop was poop. It was dead, and it was gross.

It was the end result of something that used to be *bio* but no longer was. It smelled bad because it was full of dead stuff, and dead stuff is the exact antithesis of *bio*.

But Uncle Kevin got me thinking, and it even seemed like he understood the word *biosolids* a little better than me. *Bio* fuel, gas, and solids all had something in common. Since that something was the prefix *bio*, I considered some of the ways poop might not be as dead as I thought.

This semester I learned that 50% of our excrement is living bacteria, including but not limited to Salmonella, Staphylococcus, Shigella, Campylobacter, E. coli, Helicobacter, and the protozoa that cause Beaver Fever. Bacteria that live, breed, and biosynthesize right in our gut. I also learned that back in the old days, farmers would mix their waste into the soil to produce tall, healthy crops that gave *life* to entire communities. I envisioned four generations of farmers gathered around a lamplit table, laughing and enjoying a meal grown in shit. I found out that biosolids are injected into the earth to replenish barren soils, and to help trees grow where they couldn't grow before. And I learned that when I explain to my family what I'm attempting to study, it always elicits a good laugh. *Bio* means life, and you can't have life without laughter. So after some consideration and talking with Uncle Kevin, I reconsidered my stance on poop, and what it means to be *bio*. While biosolids and poop are not the same, they share some common ground. History has shown us that both contain lots of wiggly microbes, and that both can inject dull, dusty ground with renewed vigor. Biosolids are far from dead. On the contrary– they teem with life, and with potential life. They are like a less attractive, slightly smelly phoenix, from whose ashes poplars, corn, and poop puns spring forth. They are alive, and very *bio* indeed.


this is a list of things I've done on the toilet.
Ate some grapes, researched tattoo removal, kissed a boy, played Frogger, drunk-dialed a dead friend, fallen off, kissed a girl, pooped,
relaced a Chuck, texted grandpa, derived a function, called a Hotline, Drank tea.
So next time someone says they are going to the restroom, tell them to call it by another name, because the toilet is a place where you go to make shit happen.