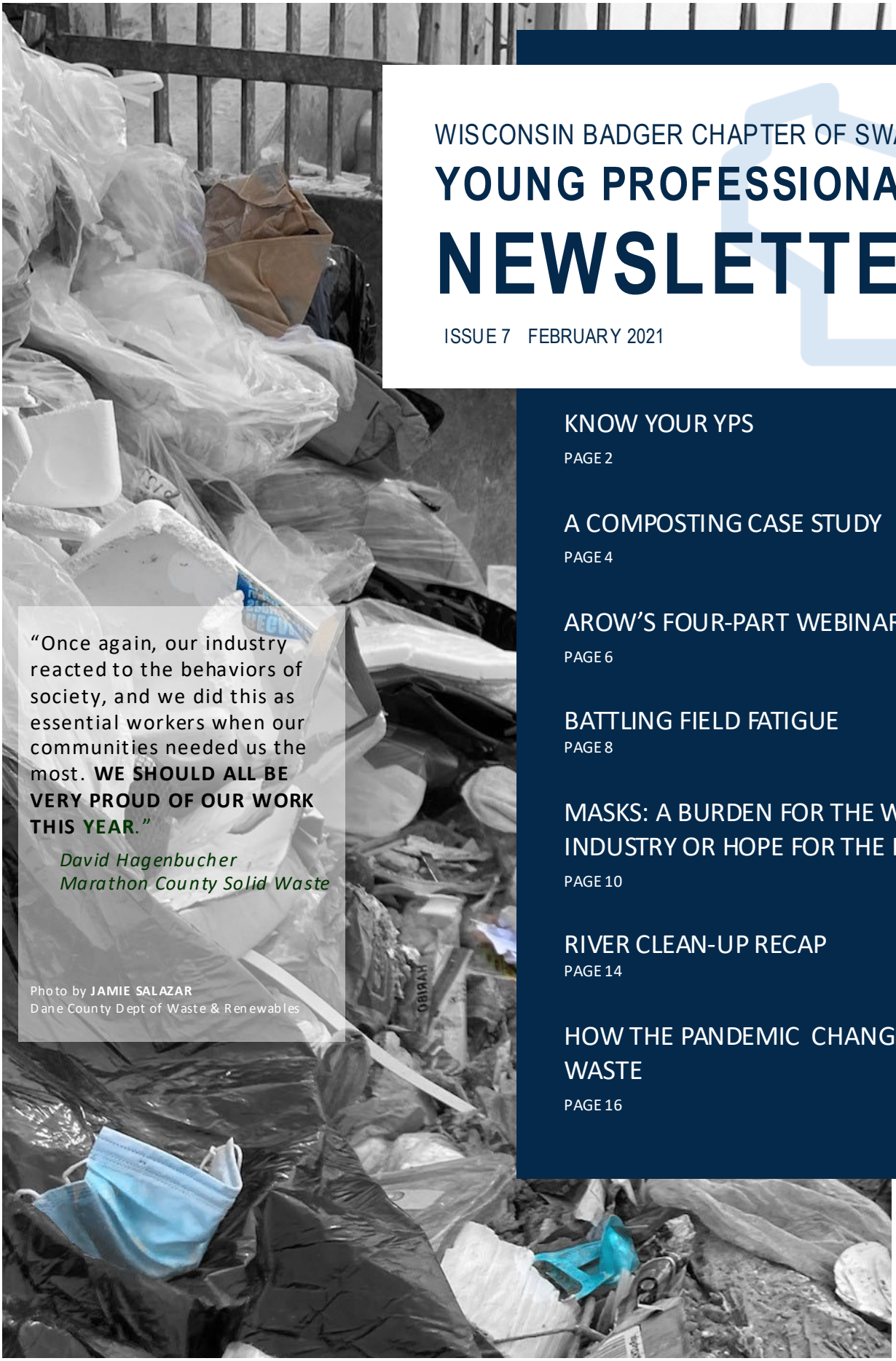


WISCONSIN BADGER CHAPTER OF SWANA

YOUNG PROFESSIONALS NEWSLETTER

ISSUE 7 FEBRUARY 2021

"Once again, our industry reacted to the behaviors of society, and we did this as essential workers when our communities needed us the most. **WE SHOULD ALL BE VERY PROUD OF OUR WORK THIS YEAR.**"

David Hagenbucher
Marathon County Solid Waste

Photo by **JAMIE SALAZAR**
Dane County Dept of Waste & Renewables

GET TO KNOW YOUR SWANA

YOUNG PROFESSIONALS

SUJATA GAUTAM

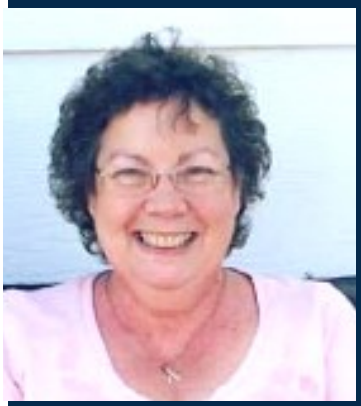
2020 BRENDA LEE QUINNELL
RISING LEADER SCHOLARSHIP RECIPIENT

After earning her bachelor's degree in Civil and Environmental Engineering from the University of Houston in 2017, **SUJATA GAUTAM** served for two years with AmeriCorps in the state of Vermont. Here, she led outreach and education efforts around the state's progressive organics management regulations where food scraps have been banned from landfill disposal. She also became certified as a master composter and served as a volunteer fire fighter.

In 2019 Sujata relocated to Madison, Wisconsin to start her graduate work at Edgewood College. On the path to earning her master's degree, she has completed courses like "Leadership, Social Innovation, and Sustainability" and "Designing Regenerative Communities".

> Sujata approaches her study and design of sustainable processes and communities from a perspective that places equity at the center. She is constantly looking for unique ways in which to up-end the status quo and to partner with diverse groups to advance well-being for all. Sujata *is the future* of sustainability leadership.
>
> **Carrie Sanders**
> CEO HOPE COMMUNITY CAPITAL
> FACULTY EDGEWOOD COLLEGE

Sujata also works at the Dane County Department of Waste & Renewables where she is leading their education and outreach efforts. In addition to revamping their website and creating and hosting virtual tours, she recently completed design and construction of TrashLab, a waste museum on wheels. The mobile exhibit was created in partnership with the Madison Children's Museum and explores the social justice, economic, and environmental effects of waste.



In August 2018 the solid waste and recycling community lost one of its most devoted members. **BRENDA QUINNELL**, former director of the Adams County Solid Waste Department, served for over 10 years as the Chapter's administrative assistant. During her years of service, Brenda was much more than an assistant, she was a leader.

The Wisconsin Badger Chapter is proud to continue to award the **BRENDA LEE QUINNELL RISING LEADER SCHOLARSHIP** each year. It is considered the Chapter's highest student honor with its recipient having demonstrated commitment and passion to the industry, just as Brenda did in all aspects of her life.

ALEX THOMAS is currently a Graduate Research Assistant at the University of Wisconsin - Stevens Point (UWSP) working towards his master's degree in Soil and Waste Resources.

Alex obtained his bachelor's in Biology and Soil and Waste Resources from UWSP in 2017. After that, Alex served with Americorps working on sustainability education and higher education waste planning in Eastern Washington state.

Alex was recently appointed as the Student Director of the SAWNA Badger Chapter's Board of Directors but Alex is no stranger to the Wisconsin solid waste industry. He has attended WIRMC, coordinated UWSP student attendance at WIRMC and presented at WIRMC, among many other significant accomplishments and contributions. However, he is well suited and ready to expand his role in SWANA. He is particularly interested in making an impact on policy and legislation.

I am confident that he will continue to grow as a leader, influencing everyone around him. His positive attitude and aptitude to learn will truly be an asset to the mission of moving SWANA from waste management to resource management.

Dave Hagenbucher
MARATHON COUNTY SOLID WASTE

Alex worked for Marathon County Solid Waste as an undergraduate and has returned while he earns his master's degree. He worked to site and establish the their composting operations and has worked to reduce erosion. You can learn about one of Alex's recent projects on **PAGE 4.**

The SWANA Badger Chapter **STUDENT DIRECTOR** position was created in June 2020.

The purpose of the position is to provide an opportunity for the voice of the student membership of the Wisconsin Badger Chapter to be heard.

The Student Director will also act as the main communication link between the Board of Directors and the student membership of the Wisconsin Badger Chapter.

2020 SCHOLARSHIP RECIPIENTS

ADAM GORSKI is finishing his undergraduate degree at UW-Madison in Civil/Environmental Engineering. Much of his interest in sustainability and solid waste began with an Eagle Scout project as Outagamie County transitioned to single stream recycling and a local nature center needed to educate the public. Adam's hobbies include running marathons, classic vehicle restoration, and backpacking.

MADISON ZEPNICK served as an intern at Dane County's Department of Waste & Renewables from May to December of 2019. She provided assistance with construction of their landfill gas plant and helped with install of a perimeter gas migration system. At the time of the award, she had nearly completed her undergraduate studies in Geologic Engineering at UW-Madison.

SUSANNA BAKER is a Marathon County Solid Waste employee and recent graduate from the University of Wisconsin-Stevens Point with a B.S. for Soil and Waste Resources. With an interest in local sustainability efforts and composting, Susanna has been involved in the Rising Sand Organics Curbside Compost Collection, UWSP campus composting, and undergraduate research for composting CWD infected deer.

ALEX THOMAS is a Graduate Research Assistant at the University of Wisconsin - Stevens Point in the Soils and Waste Resources Department. Learn more about him on **PAGE 3.**

A COMPOSTING CASE STUDY

Slope Retention Comparison of Varying Soil Types

THE PROBLEM

In central Wisconsin, it's not hard to imagine that the soil readily available for intermediate landfill cover is predominately silt and sand. At the Marathon County Landfill, a clay layer is often added to help reduce emissions and prevent the erosion of sandy cover soil. Because of the low organic content of both soils, it can be incredibly difficult to grow vegetation and the elements always seem to prevail, eventually eroding away cover and requiring maintenance year after year.

RESEARCH AND ARTICLE BY **SUSANNA BAKER & ALEX**

THE APPROACH

In the Summer of 2020, the Marathon County Solid Waste Department conducted a case study to determine the best type of landfill cover for growing vegetation and withstanding erosion. The design of this case study was a side-by-side comparison; **the goal was to compare the ability of different soil materials to withstand a summer of erosion and to grow vegetation when fertilized and seeded.** To keep environmental factors constant, an area without vegetation, with relatively consistent slope and aspect, was selected on the south-facing slope of a landfill.

Using a haul truck, five soil types were piled at the top of the slope. A bulldozer was used to push the piles down the slope to create strips of consistent thickness and length over the previously bare surface. The substrate ended up being roughly 6 inches thick in each strip, and strips were about 50 feet in length. After pushing out the soil, a skid steer with seeder attachment was used to scatter and lightly incorporate a grass/alfalfa mixture with fertilizer pellets as evenly as possible across the strips.

SOIL TYPES

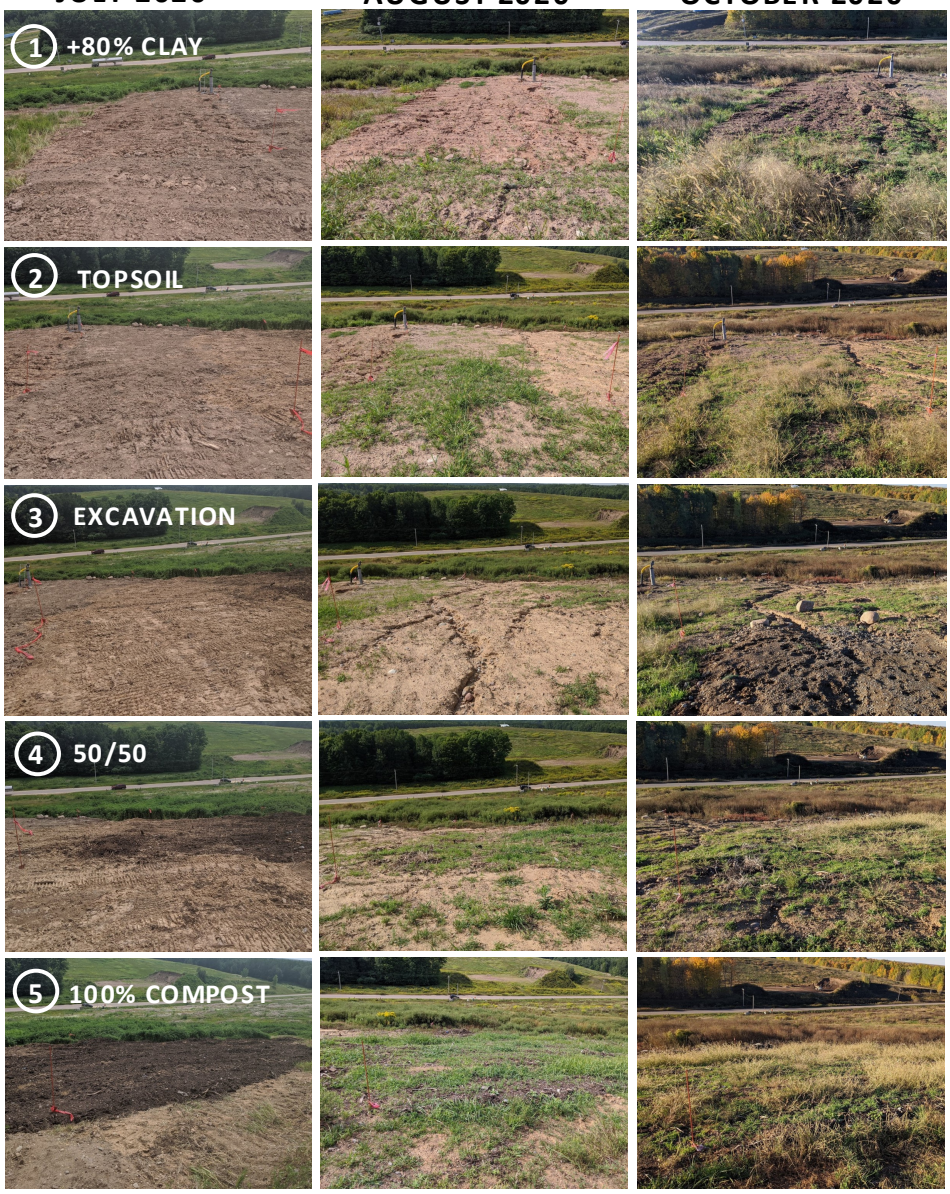
1. **+80% CLAY**
2. **TOPSOIL**
3. **EXCAVATION (SANDY SILT)**
4. **EXCAVATION/ COMPOST (50%/50%)**
5. **100% COMPOST**

THE COMPOST

Compost for this study was produced onsite from residential and commercial organic waste. Commercial organic material was primarily landscaping waste, such as limb trimmings and ornamental plant waste; residential organic material consisted of leaves, limbs, and stumps. Windrows of this material were created and allowed to compost until most of the material had fully broken down— roughly 90 days in early summer 2020. Tree limbs were still present in the finished product, as without chipping, they were much too thick to break down in the 90-day time frame. Pile temperatures were monitored, and temperatures between 120° F and 160° F were maintained throughout the process. The pile was occasionally turned with a frontend loader to provide adequate oxygen.

RESULTS/OBSERVATIONS

The series of images illustrate the key differences among the slope substrates. The 100% compost grew thicker vegetation and had no visible signs of erosion. The clay, 50/50 mixture, and topsoil were comparable; each held up well to erosion, with the latter two having much thicker vegetative growth than the clay. The sandy soil had the highest rate of erosion, with large erosion rills, and had the second lowest vegetation growth, second only to the clay strip. Based on the observations of this study, compost can have benefits for both resisting and maintaining resistance to erosion.



ADDITIONAL BENEFITS

There are other benefits associated with the use of compost on side slopes. Previous slope construction, with either clay or site soil, would result in erosion and the need to reshape and reseed. Even when fertilized, those two soil types rarely grew sufficient vegetation to help resist the effects of weathering. In the past, problem areas needed to be addressed as many as two or three times per summer.

Preventing erosion will save Marathon County Solid Waste employees time each summer. There are also monetary savings when comparing compost addition to a contracted alternative. In future contracts, Marathon County can compare the costs of having staff create compost slopes to contracting that work out. The results of this case study have demonstrated that composting is not only a source of profit for the landfill (via tip fees for accepting the material) but is also a useful soil amendment on site slopes.

BONUS DATA!

At the same time this study was being conducted, two other slopes needed reshaping and seeding. The east slope had been created as part of an expansion project the previous summer, and the west slope had been created as intermediate cover in early summer 2020. To expand possible comparisons in this case study, Marathon County Solid Waste staff shaped the west slope with 50/50 site soil/compost and seeded it with an annual grass mixture, deciding to do this during the time when a contracted construction company was reseeding the east slope. The east slope was seeded in a similar fashion, with a fast rye grass mixture, and had an erosion mat placed on top. The results shown to the right are after 2 months of growth. **The additional case study, comparing composting and self-seeding efforts to a commercially seeded slope, again demonstrates the benefits of using compost on site.**

WEBINAR SERIES FACILITATED BY
KRYSTAL CLARK

Krystal graduated from the University of Wisconsin – Green Bay in May 2016 with a Bachelor's of Environmental Science and currently works at Foth as an Environmental Scientist.

She is an active member of the SWANA Badger Chapter and AROW. She currently serves as the Chair of the AROW Emerging Leaders and as an appointed member of the Wisconsin Integrated Resource Management Conference (WIRMC) Planning Committee.

AROW'S FOUR-PART

WEBINAR SERIES

The **ASSOCIATED RECYCLERS OF WISCONSIN,** or AROW for short, is a 501(c)(3) non-profit association that provides statewide proactive leadership on waste reduction and recycling through education, advocacy, collaboration, programs, and services. AROW has several committees including Communications, Marketing, and Education (CME), Product Stewardship, Hazardous Waste, Government Affairs, Membership, and the Emerging Leaders (ELs). I have had the privilege of serving as Chair of the ELs since April 2019. Prior to being elected Chair, the committee had been talking about wanting to create some sort of presentation that would help ELs better understand the regulatory world. I decided to pursue this awesome idea during my leadership. Keep reading to hear about how this simple idea blossomed into what ultimately became a four part webinar series, and how you can watch them, too!

I find it surprising and impressive that this four part webinar series came to life in less than five meetings and that each meeting had less than five people in attendance. If you don't think it's possible for your particular group of like-minded individuals to plan a webinar series, think again! I'd like to give a special shout out to the people who attended these meetings and helped tremendously: Meleesa Johnson, Amanda Haffele, Lily Koss, and John Peralta. We decided we wanted each webinar to be one hour long and hosted over the lunch hour, starting at noon. Our planning was very dynamic; would you believe the webinar series has had three different names?! At first, we were calling it "State Statute Boot Camp", then we decided to go with "Government 101", but in the end we went with "The 4 C's of Statutes and Regulations." This title mirrored the fact that each webinar focuses on a different theme related to statutes and regulations.

Each webinar is FREE to AROW members, with donations encouraged. For non-AROW members, the cost is $25 and all proceeds benefit AROW.

The first presentation, *Foundations of Environmental Policy*, is presented by myself and covers broad legislation including CERCLA, RCRA, CAA, CWA, SWDA, TSCA, and NEPA. This webinar packs in a lot of terminology and historical background. The President of AROW, Meleesa Johnson, had this to say about it; "I want everyone else to know, what Krystal covered, I had in two semesters!"





CURRENT	CREATING	CLARIFYING	CHALLENGING
11.18.20	12.16.20	1.13.21	2.17.21
Current Statutes and Regulations: Foundations of Environmental Policy	Creating Statutes and Regulations: From Ideas to Laws	Clarifying Statues and Regulations: From Black & White to Shades of Gray	Challenging Statutes and Regulations: Becoming an Activist
Krystal Clark	Amber Meyer Smith John Welch	Mark Torresani Valerie Joosten	Meleesa Johnson

The second presentation, *From Ideas to Law*, features Amber Meyer Smith from Clean Wisconsin and John Welch, Director of Dane County Department of Waste and Renewables. The topic for this webinar is the complex process of rulemaking. Amber and John describe how a bill becomes law in Wisconsin, and cover two AROW case studies related to this including fighting for recycling funding and regulating formaldehyde emissions. John shared a famous and comedic quote with us, "Laws are like sausages; it's better not to see them being made!"

The third presentation, *From Black and White to Shades of Gray*, is presented by Mark Torresani from Tetra Tech and Valerie Joosten from Wisconsin Department of Natural Resources. This presentation discusses how language in code can be ambiguous, the creation of guidance docs and the role they play, and examples of regulatory framework that may be interpreted multiple ways. This presentation gives you rare and valuable peek into both the public and private perspective on interpreting regulations.

The fourth presentation, *Becoming an Activist*, was a presentation by Meleesa Johnson, and focused on: when and how to challenge code, how to become an advocate, and how being in the public or private sector changes your role as an advocate. I'll leave you with this hint from the speaker herself; "it's about capacity, coalition, and consensus!"

If you are interested in viewing any of these amazing webinars, you can do so by contacting Karin Sieg, Executive Director of AROW, at

execdirector@arow-online.org.

LINDSEY CARLSON works at SCS Engineers on their solid waste management team performing Construction Quality Assurance (CQA) and reporting for field projects. She is also working on operations, monitoring and maintenance on landfills and assisting with landfill reporting and compliance. Lindsey spent the 2020 construction season in Sheboygan, WI where she provided CQA oversight for an ash pond closure project.

BATTLING FIELD FATIGUE

Having filled construction quality assurance (CQA) roles for various construction projects for months at a time over the last couple years, I have learned a thing or two about battling field fatigue. Whether you're working in your local area and are home every night, or away on a long term and out-of-town project, that daily field grind can get you down. Here are some pro-tips for maintaining your stamina when your work responsibilities are compromised primarily of field work for long stretches of time.

1. DRINK WATER

It may seem like such an obvious thing, but staying hydrated is one of the most important things you can do to keep your stamina up in the field. It is important for both physical and mental energy levels. Yes, it's annoying to have to go the porta-john multiple times a day, but the increased energy levels are so worth it!

WASTE REDUCTION PRO-TIP: Invest in a large water bottle like the one pictured to the left rather than a 24-pack of water bottles.

2. USE YOUR PTO!

You earn PTO for a reason! Taking a break every now and then is crucial to your mental well-being. You will not be as effective or efficient if you're running on 1% battery for weeks on end. Take time for yourself! Talk with your supervisor and get a long weekend on the calendar every other month or so. You earned that backcountry hiking trip or bottle of wine and bubble bath!

3. MEAL PREP

We've all been there– you get to the site nice and early, you skipped breakfast and even lunch... Then 2pm rolls around, and your stomach demands that you get WHATEVER you can in your belly AS FAST AS YOU CAN, and naturally, you stop at the closest fast food joint. Not only is this an expensive habit, it's not conducive to being the best version of yourself. You truly are what you eat, and if you put junk in, you are bound to get junk out. Eat intentionally and be prepared with a healthy lunch and snacks to get you through the day.

WASTE REDUCTION PRO-TIP: Use glass pyrex food storage containers or some other reusable food container instead of sandwich baggies and other single use plastic.

4. PRACTICE MINDFULNESS

You ever have those days where your mind is incessantly ratting off all the tasks you must accomplish, how many gas wells you have to monitor or NDG tests you have to perform? Plus wrapping up reporting, catching up on emails, finding time to do laundry etc etc etc... You get it. The next time you are being swept away by your thoughts, take a breath in for 10 seconds and release for 10 seconds... quiet your mind, think of at least one thing you're grateful for, and take the day one step or task at a time. I like to end the day with a "Yoga with Adrienne" session on Youtube, which not only invokes mindfulness of your body, but also improves the headspace significantly.

Wisconsin Badger Chapter SWANA
Solid Waste Association of North America

5. STAY CONNECTED

Most important, be sure to stay connected with others. Check in with your teammates or project team on a regular basis, and take time to shoot the ****. Attend a YP Monthly Meeting in an informal discussion about what the rest of us YPs are up to! Find ways to express yourself and connect with others.

Masks: A Burden for the Waste Industry or Hope for the Future?

LILY KOSS
graduated from University of Wisconsin – Stevens Point's College of Natural Resources with a degree in Soil and Waste Resources: Waste Management Emphasis. She works as an Environmental Health and Safety Specialist with Generac Power Systems in Whitewater, WI.

ALI RATHSACK
is a Special Projects & Materials Manager at Dane County's Department of Waste & Renewables. She holds a Bachelor of Civil Engineering, with environmental and geotechnical emphases from the University of Wisconsin – Platteville.

SUJATA GAUTAM
is a current graduate student pursuing her master's in Social Innovation & Sustainability Leadership at Edgewood College, and currently interns with the Dane County Department of Waste & Renewables. Learn more about her on **PAGE 2.**

WRITTEN BY **ALI RATHSACK, LILY KOSS, & SUJATA GAUTAM**

Every month an estimated 129 billion disposable masks and 65 billion disposable gloves are disposed of globally due to the pandemic.

By now, everyone is starting to grasp the financial, social, and environmental impacts that the COVID-19 pandemic has brought on everyday life, specifically the waste industry, over the past year. COVID-19 has affected all aspects of the industry's operations while placing employees' health as a priority, alongside safety. In the midst of the pandemic, many companies in the industry have implemented stringent cleaning procedures and contactless options that go above and beyond to protect the health and wellbeing of their employees and customers.

One of the greatest improvements due to the pandemic is the widely available personal protective equipment (PPE), including masks, hand sanitizer, disinfectant wipes, and gloves. Among these lies arguably the most crucial PPE known to aid in combating the virus, the mask. The type of mask may vary along with the effectiveness of the mask. There are three different types of masks: N95, surgical, and cloth masks — each with certain guidelines for use, effectiveness, and disposal. It's important to note that masks with exhalation valves and face shields are not known to prevent the spread of viruses or pathogens and are not recommended.

N95 Masks

N95 masks are used in contaminated environments and must pass rigorous testing standards that show they can filter at least 95% of particles 0.3 microns in size (OSHA). Particles are any airborne contaminants like dust or microbial agents and are broken down into two different categories: droplets and aerosols. The key difference between droplets and aerosols is size; any particle greater than or equal to 5 microns are considered droplets and anything less than 5 micron are considered aerosols (Charmaine). N95 masks are single use and must be thrown away per CDC, OSHA, and FDA guidelines. Due to limited supply, N95 masks should be reserved for healthcare professionals.

Surgical Masks

Surgical masks are similar to N95 masks in that they protect against droplets but a surgical mask typically does not have a tight fit around the mouth and nose making them ineffective against aerosols. Surgical masks are made out of "melt blown fabric", which are very thin pieces of plastic layered on top of each other making them very effective for filtering out droplets and containing droplets from the mask wearer (Fix the Mask & Coronavirus). Like N95 masks, surgical masks are also single use and must be thrown away after each use.

The finest silk thread is nearly 10x bigger than melt blown fabric threads.

Want to know how to make your surgical mask more effective? Consider a mask brace.

You can make your own reusable mask brace with a rubber sheet or purchase a ready made brace online. Check out fixthemask.com for instructions and to learn more about this innovative tool.

Although PPE is a great improvement, and deemed necessary to combat the pandemic, it also has a tremendous downside...more waste generation. Many of the PPE options to combat COVID-19 do not come in reusable forms. Although non-reusable, disposable PPE is crucial to keep those critically ill or those taking care of the critically ill best protected. The general public has more options to lessen the environmental burden of the pandemic. A great way to accomplish this is by making a reusable cloth mask.

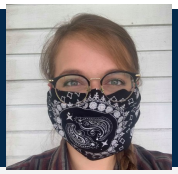
Cloth Masks

Cloth masks are intended to contain the mask wearers droplets although not fully proven, the CDC is researching the effectiveness of cloth masks against filtering out inhaled droplets but is highly variable depending on the material (Coronavirus). The most effective cloth masks are made out of tightly woven fabric such as cotton and must consist of at least two layers. Although cloth masks do not provide as much protection as surgical or N95 masks, they have a tremendous benefit in that they are reusable when washed regularly.

Reusable masks using multi-layered cotton with a snug fit around the nose and mouth result in the best filtration. A damp or wet mask should be replaced by a new mask, and set aside to be cleaned before the next use. Two ways to make your own reusable cloth mask follow.

THE NO-SEW BANDANA MASK

DIYS MASKS WITH LILY KOSS



GATHER SUPPLIES: One Bandana and two hair ties.

1) Spread your bandana out in front of you in a square.

2) Then, fold down the top of the bandana and fold up the bottom so the bandana is folded into thirds.

3) Loop the hair ties around the ends of the folded bandana, about ⅓ into each end.

4) Loop the hair ties around your ears, and your no-sew mask is done!

5) Adjust hair ties further out on the bandana if your mask is too tight, and adjust them further in if the mask is too loose.

Reusable Mask Care

When it comes to reusable masks, proper care is important to ensure effectiveness, which means regularly cleaning your reusable mask. ***What does "regular" mean?*** The answer varies among different health experts, ranging from everyday to after every use. One piece of advice is to "treat it like you would underwear"; you wouldn't want to wear the same pair of underwear for too long without washing, and the same goes for your face mask. When it comes to the mask sanitation, there are several recommended practices: machine washing, hand washing, or pressure cooking.

Hand Wash

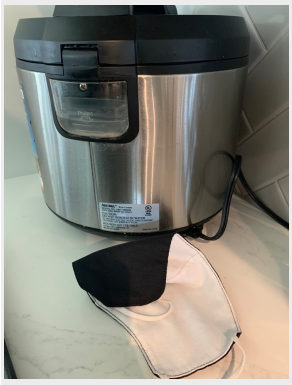
When it comes to washing your reusable face covering by hand, the CDC recommends simply washing your mask with tap water and laundry detergent or soap. After scrubbing for at least 20 seconds, the mask should then be rinsed thoroughly with clean water to remove detergent or soap. If you want to go the extra mile, other experts suggest preparing a bleach solution of five tablespoons bleach per gallon of water to soak the face coverings in as well. The face covering should be soaked for at least five minutes and rinsed thoroughly afterwards.

Machine Wash

The CDC says simply tossing your cloth face covering in the wash with your regular load should be enough. Of course, it's important to remove detachable parts like interior filters or elastic ear bands from a folded scarf or bandana before washing. Regular laundry detergent and the appropriate settings according to the fabric label should be used.

Pressure Cooker Sanitation

Ryan Sinclair, PhD, MPH, associate professor of environmental microbiology at Loma Linda University School of Public Health, says pressure cookers can be used to sanitize N95 face masks up to five times, and cloth face masks, with the following instructions:



GATHER SUPPLIES

- Slow or pressure cooker (with "sous vide" or similar function)
- Rack designed to fit in pressure cooker
- Paper bag
- Distilled water (6-quart cooker = 2 ⅛ cups, 8-quart cooker = 3 cups)
- Disposable gloves
- Stapler or paper clips

1) Pour pre-measured water into the pressure cooker, covering the bottom.
2) Place the rack inside the pressure cooker, making sure that it rests above the water line, in order to keep the paper bag and mask dry. You can add binder clips to the bottom of the rack for extra height. "It's important to avoid getting N95 masks wet, as the filtering capacity may be compromised," Sinclair emphasizes.
3) Put on disposable gloves and place up to three used face masks inside the paper bag. Fold over the top of the bag and seal with a couple staples or paper clips. Place inside the cooker on the rack.
4) Secure the pressure cooker lid and set the cooking function to "sous vide" at 140-degrees Fahrenheit for 30 minutes and press start.
5) After the cooking cycle ends, remove masks and set out on a clean surface to air dry for at least an hour.

Dr

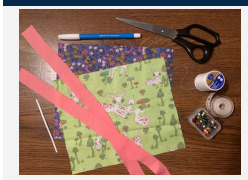
Whether you decide to use a dryer or air dry your mask, it's important that your face covering is completely dried. The CDC recommends using the warm or hot dryer setting if using a machine. If you prefer going the air dry route, the mask should be placed in direct sunlight to completely dry. If possible, it is best to allow masks to be exposed to the sun and heat for an entire day — flipping it over mid-day.

Going Forward

Although wearing a face mask is critical for preventing the spread of COVID-19, it does not replace the need for social distancing and handwashing. To truly combat COVID-19, all three measures must be taken. We can all agree that we are living in unprecedented times, but it is still important to strive for a sustainable future in addition to protecting human health. A reusable face mask is a simple way towards accomplishing that goal while remaining environmentally conscious.

"In the face of difficulty lies opportunity." ~Albert Einstein

DOUBLE SIDED ACCORDION STYLE SEW MASK



GATHER SUPPLIES: 2 pieces of fabric (9 in x 7 ¼ in for adults, 8 in x 7 ¼ in for children), 2 pieces of fabric (40 in x 1 ½ in), metal nose piece (I used a nose piece removed from a surgical mask, you can also use jewelry wire or other malleable metal objects), sewing machine and general sewing supplies. This project can be hand sewn. An iron will make the process easier for reinforcing any seams and pleats, but it is not needed.

1) Lay out your 9 in x 7 ¼ in pieces of fabric horizontally. The 9 in length of the fabric will be spread from ear to ear, with pleats sewn into the sides along the 7 ¼ length

2) Add 3 pleats into the sides of the 7 ¼ in length of each piece of fabric separately. Do this by marking each side of fabric at 2 in, 3 ½ in, 5 in, and 6 ½ in down from the top. Bring the 2 in mark down to ¾ in above the 3 ½ in mark and pin. Do the same with the 3 ½ in and 5 in mark. The 6 ½ in mark will not make a 4th pleat, this is just to reference how far down to bring the 5 in pleat. Doing this accurately on both cuts of fabric is important to ensure your accordion will unfold properly when wearing either side of your double sided mask.

3) Put the metal nose piece on the back side of one of the pieces of fabric. Fold ¼ in seams on the top and bottom of each piece of fabric and pin (pinning the seams down and both pieces of fabric together), enclosing the metal nose piece as you do so. If you need to increase your seam amount to fully enclose your metal nose piece, you may do so.

4) Sew down the top and bottom seams, careful to avoid hitting the nose piece with the needle.

5) Take your 40 in by 1 ½ in pieces of fabric and fold each end into the center, creating four layers of fabric. Pin the four layers the length of the pieces of fabric, pinning the mask into the center ensuring that the mask is in between the layers of the layers of fabric that will make the tie.

6) Sew down the folded fabric to make the tie.

7) Fold each end of the ties three times and sew. Depending on the thickness of your fabric after sewing, this may be best to do by hand depending on your sewing machines capabilities.

8) Once you complete sewing the ties, tie the mask around your head to ensure a snug fit, and your mask is complete!

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RIVER CLEAN UP

On Public Land's Day, September 19, 2020, the SWANA Young Professionals and AROW Emerging Leaders once again joined forces to perform a litter clean up! All that 2020 brought with it could not keep us away from what we care about most… GARBAGE!

On a yearly basis, our Wisconsin-based resource management organizations join together to perform the riparian version of "Adopt a HWY" litter clean up.

Six of us showed up to **HAVENWOODS STATE FOREST** *that day and cleaned up a clover-leaf interchange near the State Forest. The interchange's storm water infrastructure is connected to Lincoln Creek, which meanders through Havenwoods State Forest. Our efforts to clean up the interchange kept 13-bags worth of single use plastics out of the ecosystem!*

River Clean-up Recap

SWANA AND AROW'S 2ND ANNUAL RIVER CLEAN-UP AT **HAVENWOODS STATE FOREST**

WRITTEN BY **LINDSEY CARLSON** WITH HISTORICAL INFORMATION PROVIDED BY WDNR STAFF **SAMANTHA KUEFFLER**

HAVENWOODS STATE FOREST is a 237-acre property managed by the Wisconsin Department of Natural Resources (DNR) within the city limits of Milwaukee. The forest was created to provide an urban green space and education center. Of that 237-acres, a 16-acre parcel within it has quite a history!

From approximately 1958-1970, it was used by the city to dump incinerated garbage. Of course with this waste disposal site being pre-RCRA, it did not have the required engineering features that landfills require today. The "dump" was eventually abandoned with only intermediate soil cover.

Although the property became a state forest in the early 80s, the DNR did not perform management activities until nearly a decade later due to the need to secure capital to fund an engineered cap.

Starting in the early 1990s, DNR waste specialists and engineers began planning for an appropriate capping of the surface, but it wasn't until another decade later that funding was secured.

COMPOST FACILITY TOUR *After we cleaned the interchange, we met at Compost Crusader's processing location in Franklin. The site is located a short walk from Franklin's House of Corrections. This grassroots business currently works with the House of Corrections to turn organic waste from the facility into a rich soil amendment.*

THE REWARD *After a day of service and education, we wrapped things up by enjoying cheese curds, a fresh grilled burger and tap beer from the South Shore Beer Garden on Lake Michigan, courtesy of SWANA. A great day through and through!*

THANK YOUS!

WDNR staff **JANET HUTCHENS** and **SAMANTHA KUEFFLER** for welcoming us to Havenwoods State Forest!

MELISSA TASHIJAN of Compost Crusador for showing us your star-screen compost processor in action, aerated compost experiments, and general operations!

The Volunteers **SUSANNA BAKER, LINDSEY CARLSON, SUJATA GAUTAM, ABBY LICHTSCHEIDL, IAN MUNGER, AND JAMES SOUR**

Havenwoods State Forest in Milwaukee, WI 1974. Photo courtesy of Project: Picturing Milwaukee. http://blcfieldschool2012.weebly.com/havenwoods-state-forest.html

In 2000, the State Building Commission approved capping the landfill in coordination with MMSD flood control work. This was a favorable solution, because the east side of the creek was to undergo excavation activity of its clayey soils to provide flood basins, and the dump west of the creek needed to be capped with soil. The clayey makeup of the soil was just what was needed.

The landfill was capped in 2000-2001. For restoration activity, a contractor was hired to develop a prairie on the cap. However, due to non compliance with modern day BMPs, the "prairie" resulted in about 95% weed cover. There are two suspected causes of the prairie failure: 1) "topsoil" was imported from other construction sites, carrying with it weed seeds and 2) the contractor neither prepared the soil nor followed up with mowing or herbicide.

In 2004-2005, through a plan developed with the Department of Administration, funds remaining from the landfill capping/restoration project were used to properly restore the prairie. Under Havenwoods' supervision, contractors prepared the soil, and DNR wildlife staff seeded it. Havenwoods staff is assuming the maintenance of the prairie now.

WHAT WE RECOVERED

- 13 bags of single use plastic
- A stereo
- Front bumper (with license plate!) of a car
- A COMMODE!

HOW THE COVID-19 PANDEMIC CHANGED WASTE

WRITTEN BY
DAVID HAGENBUCHER

Dave is the Operations Manager for Marathon County Solid Waste (MCSW), overseeing solid waste facilities and recycling programs that serve a large portion of Central Wisconsin.

Beyond serving on the Board of Directors, as a YP Chapter Liaison, and being a busy dad, he is a thoughtful and regular contributor to the YP newsletter.

Garbage doesn't just magically disappear — not even during a global pandemic. And for those of us in the waste industry during 2020, it became abundantly clear how critical our work really is to maintain the health and safety of the various communities we serve.

Last March, the coronavirus disease-2019 (COVID-19) began spreading across the United States, causing many areas to enact Stay at Home orders, and altering the way of life as we knew it. Change became the norm, and there were a lot of questions that no one really knew the answers to. But very early on, solid waste management was deemed an essential infrastructure in the State of Wisconsin – after all, where would waste go if our landfills closed?

And so, disposal didn't slow down; in fact, it increased significantly. Solid waste tonnages increased at landfills nearly 20% in some regions, and it's important that we take the time to evaluate why these changes occurred.

The Stay at Home order caused a shift in waste generation from commercial to residential. A lot more people were working out of the home, and many children were not in school, so the amount of curbside materials went up significantly. And with extra time that homeowners had, there was a massive increase in garage and house cleanouts. Many families received stimulus checks from the federal government, and while the funding was a necessity for some, others used the money for small home remodeling projects, increasing generation of construction and demolition materials.

Not only did homeowners take advantage of the time at home, construction and demolition contractors did as well. With schools closed and people not in offices, building remodels were given the go-ahead. Without people around, it was the perfect time to remove an asbestos roof, or redo the main entrance of a building. Not only was it convenient to work in an empty building, it minimized danger to the public.

As summer approached, the amount of waste continued to rise. We began to learn more about COVID-19, and how we can protect ourselves and others from this virus. Often times the answer was more single use plastics. Restaurants and local food establishments began take-out services for customers, using plastics that were cheap, clean, and disposable. The goal for many was to keep the business open, and keep the people safe. Many stores didn't allow reusable bags anymore, and gas stations wouldn't allow reusable coffee mugs. This meant more plastic bags, more disposable coffee cups, and more waste going to our landfills.

The last line of defense to protect ourselves from any sort of harm, including diseases, is personal protective equipment (PPE). Using gloves, masks, gowns and shields has become the standard, and all those items eventually require disposal. Not only in the medical field are these commonplace, but everywhere you go, you now see people using these items to prevent the spread of the disease. In addition to the PPE, we are using sanitizer, wipes, and cleaning supplies regularly. For those of us in the waste industry, an obvious question came up right away: can we get COVID-19 from incoming waste? The answer was… we really don't know.

For those of us in the waste industry, an obvious question came up right away: **CAN WE GET COVID-19 FROM INCOMING WASTE?** The answer was... we really don't know.

And to this date, we still have not heard of anyone contracting the virus from garbage. Our jobs inherently require a lot of PPE, which is intended to protect us from other potentially harmful items that are discarded every day.

Once again, our industry reacted to the behaviors of society, and we did this as essential workers when our communities needed us the most; we should all be very proud of our work this year. Some might look at this increased waste as a bad thing, but we need to remember that controlling the virus was the first priority. Even though this increased tonnage is a little disconcerting, it probably won't last. If anything, we should be looking at the whole situation as a call to action. If you can't reuse items, what can you reduce or recycle instead? It starts with change, and, this year we've all had to make big changes. We've changed the way we work, the way we operate our businesses, and how we protect each other as we try to get back to some level of normality.

ABOUT THIS NEWSLETTER

The first issue of this newsletter was compiled in Winter 2016/2017 and it was four pages of chapter updates (well the first page was a title page, so three pages).

Regardless of the page count, it was an ambitious and welcomed idea. It created an opportunity for YP engagement at a time when most of our YP activities had been focused around "networking". Since that first issue, this publication has evolved substantially.

I think a lot of us can relate to having "fallen into" waste management, but I get a sense that Young Professionals are starting to choose to be in waste and that they really have a passion for what they do. It is obvious in the articles in this issue and can only mean great things for the solid waste and recycling industry.

Thanks to the Chapter's Board of Directors for continued support of the YP initiatives, including this newsletter. It is clearly paying off.

Thanks to the readers for tuning in and please let us know how we can make this publication even better!

Roxanne Wienkes
EDITOR IN CHIEF

Photo from the first issue of this newsletter (released in February 2017) of a group of Badger Chapter members at a Timber Rattlers game in Appleton.