

MLICA Scoop

LAND IMPROVEMENT CONTRACTORS ~ MICHIGAN CHAPTER

2021 ISSUE

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From the Lead Plow, Adam Cook, President MLICA

It's getting to be that time again, where it seems like we all shift from "slow" to crazy mode, and try to cram in as much work as we can before we're all planted out. The way things have been going, I'm sure that time will come before we know it. I hope you all had a chance this winter to relax a little, get some of your much needed maintenances done, and catch up on your honey-do lists (I'm starting to believe catching up is just a myth). I know travel is a bit restricted these days, but I've enjoyed seeing and hearing about the way some of you have been spending time vacationing in your time off.

Speaking of vacationing, National LICA is still on for this summer, in Niagara Falls, NY from July 27th-31st. I know this is one location that I'm very excited about going to. I hope to see a good Michigan turnout there. I can't stress enough how great it is to have the friendships I have across the country from years of these national meetings. I look forward to seeing some of the friends that we haven't seen in a few years there. That kind of camaraderie is something that I haven't gained from a corny drainage Facebook page quite yet...

Once again I'll smoothly transition, while speaking on camaraderie, to announce that the MLICA board has decided that we will be hosting a golf outing this summer in July. We don't have a confirmed date or location as of now, but we do plan to have it centrally located in the Lansing area. We've seen other states do it, and we are

excited to give everyone an opportunity to get together and just have some fun. Associates and members should keep an eye out for registration and more information some time in May.

Lastly, I'd like to congratulate Nikki Schwark on accepting the Secretary/Treasurer role for MLICA. Nikki will soon be marrying MLICA board member Nathan Payne, and becoming grand daughter-in-law to long time member Charlie Braje. I'm confident that she will do a fine job for us in the years to come... I'm sure many of you wonder what this means for my dad (Mike) and his position in LICA, and I'm sure most of you that know him know, he's not really going anywhere. He is just ready to be relieved of some of the responsibilities he's had in the last 35+ years of service to LICA. My grandfather (John Cook) helped bring LICA to the state of Michigan, and my dad carried on the legacy that he started, holding every office imaginable in LICA. I'd like to thank him for all he's done for the organization, and congratulate him on finally being able to sit back and relax a little. He's earned it!

Good luck everyone, with your spring seasons. Stay safe, and don't be afraid to reach out to your fellow members and our associates if needed! I hope to see you all at one of our chances to get together in July!



FEATURES

DIARY OF AN EXECUTIVE DIRECTOR | UPCOMING EVENTS

TRUCK SAFETY RULES & REGULATIONS

2021 POLYETHYLENE UPDATE

EHSAN GHANE'S DRAIN SPACING TOOL

COVID - 19 WORKPLACE RULES SIMPLIFIED

WILLIAM LYLE "BILL" WORD OBITUARY

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Diary of an Executive Director

Geese are migrating north, birds are chirping, the length of daylight hours is getting longer and the weather is warming up. Signs of spring are showing, and many of you are getting back in the fields.

Canceling our convention and annual meeting in January had me thinking about the educational sessions everyone would be missing out on. That gave me the idea to create an "Educational Special" edition of the newsletter, featuring topics we would have included at convention. The members of the board liked the idea and thought of several topics to try to include. While some topics didn't really pan out into articles that could be published, new topics presented themselves. Keep reading for articles on Truck Safety Rules & Regulations, 2021 Polyethylene Update, Ehsan Ghane's Drain Spacing

Tool, and COVID – 19 Workplace Rules Simplified. I hope you are able to gain information from these articles, much like you would have our convention educational sessions.

This summer, we are looking forward to holding a golf outing and member's picnic. While we know not all of you are golfers, we hope to see you attend! We plan to find ways for everyone to have fun and enjoy catching up with other members!

As Adam already mentioned, National LICA is still planning the summer meeting in Niagara Falls July 27th – 31st. I am glad they were able to re-schedule from 2020, because this is one location I am excited to see!

I'd also like to extend a warm welcome to our newest member Brent Welke as well as our new associate Carry Pumps!

UPCOMING EVENTS

MLICA GOLF OUTING & PICNIC
LOCATION & DATE TBD

NATIONAL LICA SUMMER MEETING



NIAGARA FALLS, NEW YORK
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Truck Safety Rules & Regulations

SUBMITTED BY WILL WORD

In the past, we have had either a Michigan State Motor Carrier Officer or Ron Edwards from the Michigan Center for Truck Safety at our annual convention to give us update on trucking regulations and to answer questions we might have. So as a service to our members, new and old, we thought it might be a good idea to review some of the current laws on the books. I took some liberty in abbreviating the terms for the sake of space and to keep you from falling asleep!



Cell Phone Use - Prohibited FMCSR 392.82

Common sense here. It is also illegal to talk or text while temporarily stopped due to traffic, a stoplight or momentary delay. Hands-free one touch communication is permitted.

What happens if a driver is caught using a hand-held phone or texting while driving?

The rule imposes sanctions for driver offenses, including civil penalties up to \$2,750 and driver disqualification for multiple offenses. Motor carriers are also prohibited from requiring or allowing their drivers to text or use a hand-held mobile phone while driving and may be subject to civil penalties up to \$11,000.

Emergency Equipment FMCSR 393.95 FMCSR 392.8.



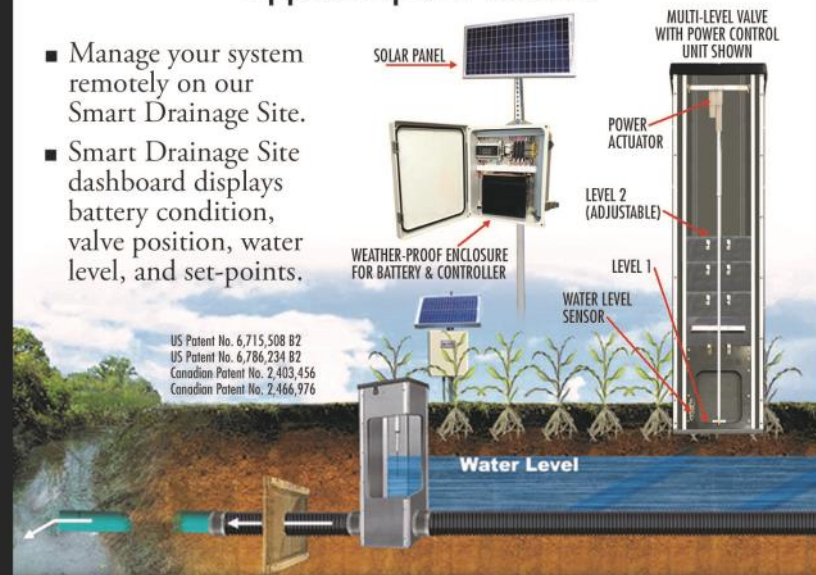
Each truck, truck tractor and bus must be equipped with the following: Fire Extinguisher, Reflective

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Truck Safety Continued

triangles or flares, spare fuses. Although first aid kits are not mandatory, it is recommended.

Weigh Stations MVC 257.724(5)

A driver or owner of a commercial vehicle with other vehicles or trailers in combination, a truck or truck-tractor, a truck or truck-tractor with other vehicles



in combination, or any special mobile equipment, who fails to stop at or bypasses any scales or weighing station is guilty of a misdemeanor. **NOTE: This would include a pickup truck, being used commercially, towing a trailer.**

Logbook Requirements 395.8 / Short-Haul Operations 395.1(e)



A CDL driver operating a property carrying vehicle which requires a CDL to operate, does not have to complete the daily log if he/she:

- following 10 consecutive hours off duty, does not drive more than 11 hours, and
- operates within a 100 air-mile radius of the normal work reporting location, and
- returns to the work reporting location and is released from duty within 12 hours after coming on duty.

A photograph of three people in silhouette against a bright sunset. The person on the left is a man in a plaid shirt and cap, looking towards the center. The person in the middle is a woman in a light-colored cap, looking towards the right. The person on the right is a man in a dark shirt and cap, looking towards the center. They appear to be in a field or construction site. The sun is low on the horizon, creating a strong backlight effect.

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A close-up, vertical shot of a black corrugated pipe, showing the repeating ridges and grooves of its structure.

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2021 Polyethylene Update

WRITTEN BY CHRIS OVERMYER, PRESIDENT | FRATCO, INC.

**ED Note: While gathering content for this newsletter, I was presented with this letter. The explanations in this letter are so well written, providing unbiased information and references that apply to all our tile manufacturing associates, that I felt it needed to be included in this newsletter issue. Michigan LICA appreciates ALL of our associates and the support they provide to our state chapter.*

After a fairly consistent and predictable market in 2019 and 2020, 2021 was supposed to bring more of the same, as far as anyone could tell, even as late as December 2020. With Asia and Europe expecting weak demand, US exports to these regions were supposed to be fairly small, allowing domestic supplies of PE from Houston area producers (Hays, 2020). Unfortunately, a “series of unfortunate events”, as the saying goes, unfolded to provide us with a different reality in the most unforeseen ways.

First, there was the dispute between the Mexican government and Braskem, a PE producer in Mexico that helped the Houston area suppliers over the last few years by taking a load off of exports. A dispute regarding natural gas costs led to the Mexican government shutting off the supply of natural gas to this Braskem plant literally in the middle of the night, taking its output to zero immediately. This tipped the balance of supply and demand in the Gulf region just enough to stabilize, and even slightly increase PE prices in North America through the remainder of December, which was a surprise to everyone involved (Reuters, 2020).

While prices inched up even through January, we were dealt new news: That Texas was about to encounter a deep freeze. To us in the Midwest, this didn't sound like the biggest deal. We spend half of the winter deeply frozen. Texas, though, as the kids say today, is “built different.” Most residential buildings are only heated with electric heat pumps, for instance. This sudden demand for electricity crippled the electrical grid in Texas, which has some rather outdated rules, not allowing some regional providers to share capacity with others. This, as we now know, led to many Texans being without heat or electricity for an extended period of time. Large industry wasn't immune to this, and was

shut down for the most part as well. This meant the large, small town-sized refineries and reactors that produce everything from gasoline to polyethylene, were left idle as well (Benson, 2020).

Again, this didn't seem like anything to get too worked up about. After all, every hurricane season brings scares that sometimes evacuate these plants, and they're usually back up in running in a matter of days. What nobody knew or expected, though, was the damage that this freezing might cause the miles of cast iron pipes that convey material through these plants. As the freeze ended, we learned that many of these pipes and very large cast iron valves had developed cracks and been rendered unusable. We are now a few weeks into a situation where 85% of US production of polyethylene is shut down, and even after this time, there is no roadmap as to when they may be back in production (Benson, 2020).

Every major producer of polyethylene has declared “force majeure”, meaning they basically aren't honoring any contractual supply obligations, because they simply can't. Think about it: Everything from milk jugs to water bottles... garbage bags to medical supplies... that rely on contracted, regular deliveries of prime PE are left scrambling for material that isn't there. These producers began to bid on spot market, or “wide spec” virgin material, and driven the price of that market well above the prime contracted price now. However, there's really none of that material to be had either, since if you're not making prime, you're not making off spec material. Next, everyone rushed to the recycled market, bidding it up to unprecedented prices in just a couple of short weeks as well.

(Continued on page 8)

2021 Polyethylene Update Continued

(Continued from page 7)

I apologize on behalf of Fratco to you as our customers for the inconvenience of this whole experience. We understand the difficulty that no market visibility and sudden, measurable price changes cause. Please understand the unprecedented situation we find ourselves in nation-wide, though, and that this is much bigger than our corrugated pipe market. We can make no promises other than the highest of effort to continue to supply you with the highest quality HDPE pipe and accessories possible through this situation that we don't have an end in sight for yet. We will, of course, be forced to price our products according to raw material market conditions with no ability to forecast for the time being. While that may sound extreme, it is indeed the situation we all find ourselves in.

Humble Regards,
Chris Overmyer
President | Fratco, Inc.

References

- Benson, N. (2021, March 04). Texas may thaw after a deep freeze, but the ripple effect causes issues for a WNY manufacturer. Retrieved March 10, 2021, from <https://www.wgrz.com/article/money/business/texas-deep-freeze-causing-issues-for-western-new-york-manufacturing/71-847a2484-2440-4c98-873b-981dc7cd8b40>
- Hays, K. (2020, December 4). Commodities 2021: Global polyethylene markets expecting oversupply in H1 2021. Retrieved March 10, 2021, from <https://www.spglobal.com/platts/en/market-insights/latest-news/petrochemicals/120420-commodities-2021-global-pe-markets-expecting-oversupply-in-h1-2021>
- Reuters. (2020, December 02). Mexico has cut off gas supply of Brazil's braskem, president says. Retrieved March 10, 2021, from <https://financialpost.com/pmn/business-pmn/mexico-has-cut-off-gas-supply-of-brazils-braskem-president-says>



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DRAIN SPACING TOOL

SUBMITTED BY EHSAN GHANE, PUBLICATION E3450

OVERVIEW OF THE DRAIN SPACING TOOL

The Drain Spacing Tool estimates the optimum drain spacing that maximizes economic return on investment in the drainage system. For soils that would benefit from subsurface (tile) drainage, use this tool to estimate the optimum drain spacing for any combination of corn and soybean rotations (Figure 1). The tool has a geographical user-interface that allows navigating to a specific field in the Midwest USA. Once at the specific field, enter a few simple inputs. Then, the tool uses site-specific soil and weather data to estimate the optimum drain spacing. An advanced input setting is also available for entering custom soil and economic inputs for a tailored analysis.

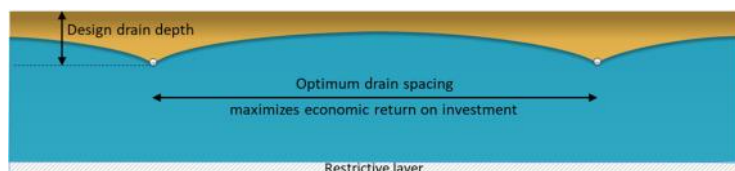


Figure 1- An example of the soil and water-table profile with a subsurface drainage system (drawn to scale).

WHY IS THE TOOL NEEDED?

Choosing a drain spacing that is too narrow, increases the cost of the drainage system, reduces profit, and leads to higher nitrate loss (Kladivko et al., 2004; Skaggs, 2017). On the other hand, choosing a drain spacing that is too wide, increases yield variability across the field and removes less total water that may cause yield loss from not enough drainage (Figure 2). The Drain Spacing Tool estimates the optimum drain spacing that removes enough water to maximize economic return on investment (golden rule of drainage), and it helps avoid over-design and under-design of drainage systems.

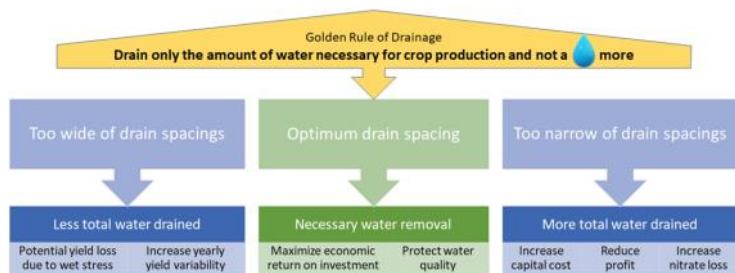


Figure 2- Summary of the potential outcomes for choosing a too wide or too narrow drain spacings at a constant drain depth.

HOW DOES THE TOOL WORK?

The tool relies on thoroughly researched equations to estimate the optimum drain spacing and the long-term annual drainage discharge. This section briefly describes these two equations.

ESTIMATION OF THE OPTIMUM DRAIN SPACING

The tool uses an equation developed by Ghane et al. (2021a) to estimate the optimum drain spacing. That equation was developed based on modeling work for continuous corn production for three drain depths and five soils at four locations. Figure 3 shows an example calculation for the Lansing (MI) location that was used to develop the equation. In this example, the maximum annual return on investment occurred at a 56-ft optimum drain spacing. Similar calculations were performed for Albany (NY), Urbana (IL), and Waseca (MN) to develop the equation. Even though the equation was developed for continuous corn, it is valid for corn-soybean rotation because soybean is generally considered to be more tolerant of wet conditions than corn.

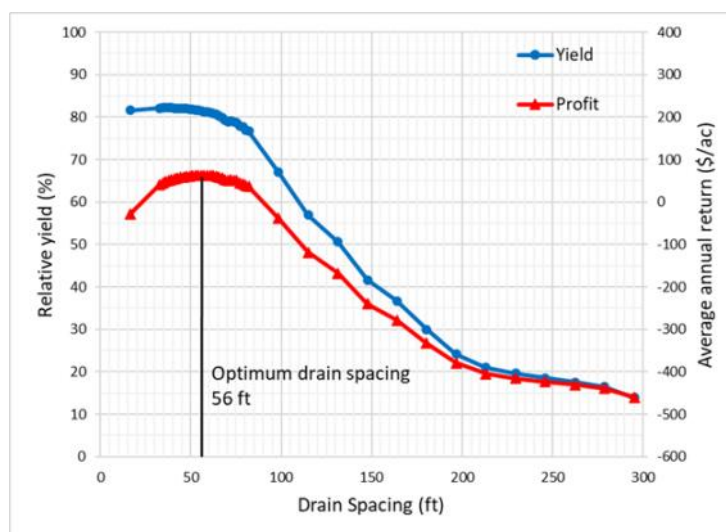


Figure 3- Relationship between drain spacing and 30-year average annual return on investment (1990-2019) for a Drummer silty clay loam soil in Lansing, Michigan. The peak of the profit line is the 56-ft optimum drain spacing for drains installed at 2.5-ft depth.

To estimate the optimum drain spacing, the tool uses site-specific data. Some of data are manually entered in the tool by the user (for user inputs, see section 6). Soil

(Continued on page 10)

DRAIN SPACING TOOL CONTINUED

and weather data (from 1990-2019) are automatically imported into the tool from the gSSURGO database (USDA-NRCS, 2021) and the PRISM Climate Group database (PRISM, 2020), respectively. The advanced inputs of the tool allow entering custom soil and economic inputs for a tailored analysis.

ESTIMATION OF THE LONG-TERM AVERAGE ANNUAL DRAINAGE DISCHARGE

The tool uses an equation developed by Ghane et al. (2021b) to estimate the long-term average annual drainage discharge. The authors determined three meaningful predictors of drainage discharge based on the same modeling data described in section 3.1. The three predictors were the long-term average annual precipitation, drain depth, and drain spacing. To estimate drainage discharge, the tool uses the manual user-entered design drain depth (Figure 4). The drain spacing and annual precipitation are estimated internally by the tool.

HOW TO IMPROVE YOUR BOTTOM LINE USING THE TOOL?

The Drain Spacing Tool estimates the optimum drain spacing that provides the best corn yield at the lowest drainage system cost (Figure 3). This tool allows entering economic inputs (corn price, drainage system cost, etc.) for tailoring the tool to custom economic conditions. This tool helps avoid spacings that are narrower than necessary, thereby preventing an unnecessary increase in drainage system cost.

HOW DOES THE TOOL PROTECT WATER QUALITY?

In this section, two water-quality benefits of the tool are described.

AVOIDING TOO NARROW OF DRAIN SPACINGS

The tool improves water quality by helping the user avoid choosing too narrow of drain spacings that would otherwise increase nitrate loss. When drain spacing is narrower than necessary, more water is drained, and thereby nitrate loss increases (Kladivko et al., 1999; Skaggs, 2017). As a water-quality guide, avoid choosing a drain spacing smaller than the one the tool estimates.

REDUCING NITRATE LOAD WITH SHALLOW DRAINS

Research showed that shallow drains generate less drainage discharge than deep drains (Ghane and Askar, 2021). On the other hand, reduction in drainage discharge is the main mechanism for reducing nitrate load from drainage systems (Ross et al., 2016). Therefore, shallow drains reduce nitrate load by reducing drainage discharge.

The tool encourages the adoption of shallow drains by showing its potential to reduce nitrate load. The tool allows estimating drainage discharge reduction with shallow drains than deep drains. Therefore, the tool's estimate of drainage discharge increases awareness about the potential nitrate load reduction of shallow drains.

RECOMMENDATIONS

As a water-quality guide, avoid choosing a drain spacing narrower than the one the tool estimates. Avoiding too narrow of a spacing provides a water-quality benefit by reducing nitrate loss. The second water-quality benefit is that the tool encourages the adoption of shallow drains by showing its potential to reduce nitrate load compared to deep drains.

The tool relies on NRCS soil data to estimate the optimum drain spacing. For best results, verify the site's soil properties and use the advanced input setting for tailoring the tool to custom soil conditions. Overall, use the tool's estimate of the optimum drain spacing as a guide for drainage design instead of a rigid design criterion.

ACKNOWLEDGMENT

Dr. Ehsan Ghane contributed to the conceptualization of the tool. Ian Kropp, Dr. Amirpouyan Nejadhashemi, and Dr. Babak Saravi contributed to the tool development at the Decision Support and Informatics Lab. Funding for this tool has been provided by Michigan State University and USDA NIFA Federal Award # 2015-68007-23193.

The pioneering groundwork to estimate the optimum drain spacing was first initiated by Skaggs and Nassehza-deh-Tabrizi (1986). Later, it was advanced by Skaggs et al. (2006) and Skaggs (2007). Finally, it was further advanced by Ghane et al. (2021a).

(Continued on page 12)



Owosso Manufacturing Facility



Clifford Manufacturing Facility

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DRAIN SPACING TOOL CONTINUED

EXPERT REVIEWED

The author expresses gratitude to the reviewers: Dr. Jeppe Kjaersgaard (Research Scientist, Minnesota Department of Agriculture), Dr. Jane R. Frankenberger (Professor, Purdue University), and Dr. Matthew J. Helmers (Professor, Iowa State University).

REFERENCES

Ghane, E., Askar, M.H., 2021. Impact of shallow drains on hydrology and corn yield: A synthesis of DRAINMOD simulations across the eastern USA. *Agric. Water Manag.* Under rev, Manuscript No. AGWAT-S-21-00198.

Ghane, E., Askar, M.H., Skaggs, R.W., 2021. Design drainage rates to optimize crop production for subsurface-drained fields. *Agric. Water Manag.* Under rev, Manuscript No. AGWAT-S-20-00839.

Kladivko, E.J., Frankenberger, J.R., Jaynes, D.B., Meek, D.W., Jenkinson, B.J., Fausey, N.R., 2004. Nitrate leaching to subsurface drains as affected by drain spacing and changes in crop production system. *J. Environ. Qual.* 33, 1803–1813. <https://doi.org/10.2134/jeq2004.1803>

PRISM, 2020. PRISM Climate Group. Gridded climate dataset [WWW Document]. Oregon State Univ. URL <http://www.prism.oregonstate.edu/> (accessed 5.14.20).

Ross, J.A., Herbert, M.E., Sowa, S.P., Frankenberger, J.R., King, K.W., Christopher, S.F., Tank, J.L., Arnold, J.G., White, M.J., Yen, H., 2016. A synthesis and comparative evaluation of factors influencing the effectiveness of drainage water management. *Agric. Water Manag.* 178, 366–376. <https://doi.org/10.1016/j.agwat.2016.10.011>

Skaggs, R.W., 2017. Coefficients for quantifying subsurface drainage rates. *Appl. Eng. Agric.* 33, 793–799.

Skaggs, R.W., 2007. Criteria for calculating drain spacing and depth. *Trans. ASABE* 50, 1657–1662. <https://doi.org/10.13031/2013.23971>

Skaggs, R.W., Nassehzadeh-Tabrizi, A., 1986. Design drainage rates for estimating drain spacings in North Carolina. *Trans. ASAE* 29, 1631–1640. <https://doi.org/10.13031/2013.30364>

Skaggs, R.W., Youssef, M.A., Chescheir, G.M., 2006. Drainage design coefficients for eastern United States. *Agric. Water Manag.* 86, 40–49. <https://doi.org/10.1016/j.agwat.2006.06.007>

USDA-NRCS, 2021. Soil Survey Staff. Gridded Soil Survey Geographic (gSSURGO) Database for the Conterminous United States. United States Department of Agriculture, Natural Resources Conservation Service [WWW Document]. URL <https://gdg.sc.egov.usda.gov/>

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COVID – 19 WORKPLACE RULES SIMPLIFIED

BY JIM GETTING, PHD, CSP

Do you need help understanding rules related to keeping your workers safe from COVID-19? Well, we're here to help! Since the pandemic began, the Michigan Occupational Safety and Health Administration (MIOSHA) has fielded thousands of phone calls from business owners and workers to help answer their questions and concerns. In fact, you can still easily get an answer using the MIOSHA COVID-19 hotline at 888-535-6136.

There are two main sets of rules, the Gatherings and Face Mask Order, issued by the Michigan Department of Health and Human Services (MDHHS) and the MIOSHA Covid-19 Emergency Rules. The MDHHS order pertains to the general public with rules about wearing face masks in public spaces, restrictions on gatherings and so on. The MIOSHA rules establish workplace safety for employers and employees in the workplace.

To get started with implementing COVID-19 workplace safety rules, you need to have a written plan. To start the plan, you determine the exposure risk of your workers as low, medium, high or very high. If workers can mostly maintain social distance and have infrequent contact with the public, then they will be categorized as "low risk."

Next comes describing the measures your company takes to prevent employee exposure. The six categories to include are engineering controls, administrative controls, basic infection prevention measures, personal protective equip-

ment, health surveillance and training. MIOSHA has developed a resource to highlight some of the specifics you must use in these categories. Be sure you have a copy of the plan on all job sites.

Engineering controls and administrative controls include some of the safety basics. A COVID-19 safety coordinator must be designated to implement and monitor your plan. Workers must maintain six feet social distance whenever possible. This includes break time and lunch time. When social distance is not possible, face masks must be worn. Many workers like to have the face masks on so when workers do need to get close they can quickly and easily cover their mouth and nose. The employer needs to supply the masks, but workers can use their own.

Basic infection prevention measures are required. That means workers must have a place to wash their hands frequently, or at least have hand sanitizer available. Also, cleaning and disinfection of the workplace, including tools and high touch surfaces of equipment is required. And you need a policy to make sure workers are hand washing and workplace cleaning is done often. Basic infection prevention also means requiring workers who are sick to stay home and following a procedure for extra cleaning if a worker becomes sick at work.

Health surveillance means doing a daily screening of all workers daily. This is a simple questionnaire and a temperature check with a no-touch thermometer. Of course, anybody with symp-

COVID – 19 WORKPLACE RULES SIMPLIFIED CONTINUED

toms needs to go home immediately. And, if an employee contracts COVID-19, it must be reported to the county health department. Be sure to keep a record of the health screenings.

Training is required for all employees. Put simply, the workers need to know the plan if they are going to follow it.

Every work situation is different, but the key components are having a plan, daily screening, social distance, mask wearing, hand washing and hygiene and disinfecting. For more information, check out the below resources. And if you want some one-on-one guidance, the MIOSHA Consultation, Education and Training (CET) Division has a group of safety consultants specifically dedicated to assist construction companies.

Their help is free and cannot result in an inspection, violations or fines. You can learn more at [Michigan.gov/cetrca](https://www.michigan.gov/cetrca) or by calling 517-284-7720.

COVID-19 has been a challenge to everyone in so many ways. But hopefully keeping your workers safe and complying with the rules is easier to understand.

Additional resources:

MIOSHA Emergency Rules

https://www.michigan.gov/documents/leo/leo_miosha_COVID-19_Emergency_Rules_705296_7.pdf

MIOSHA Covid-19 Response Resources and Guidelines

<https://www.michigan.gov/leo/0,5863,7-336-100207---,00.html>

CDC Guidelines for Workplaces and Businesses

<https://www.cdc.gov/coronavirus/2019-ncov/community/workplaces-businesses/index.html>

William Lyle “Bill” Word Obituary



William Lyle “Bill” Word, 74, of Camden, passed away peacefully with his family by his side on Thursday, December 24, 2020 at Ascension Borgess Medical Center after a 30 day battle with COVID. He was born on September 7, 1946 in Hillsdale to Kenneth and Thelma (Hassett) Word. Bill leaves be-

hind wife of 52 years, Mary Ellen Kurtz, which he married on June 22, 1968.

Bill graduated from Camden-Frontier High School in 1966 and went on to serve his country in the United States ARMY. He to this day, kept in touch with veterans that he served with in Vietnam while attending his Vietnam veteran reunions. Bill also served on the Hillsdale County Veterans Affairs Board. He owned and operated Bill’s Construction for 15 years and later retired as the Hillsdale County Drain Commissioner after 28 years. Bill enjoyed life to its fullest and loved farming and doing construction work. He loved his family and friends, from all walks of life. His grandchildren

were special to his heart. He also loved to travel in his motor home, going to his cousin Dan’s in Florida every winter for 6-7 weeks, visiting North Dakota and Illinois to visit some of his ARMY buddies or going to his property in Lake City to camp.

In addition to his wife, Mary Ellen, Bill is survived by one daughter, Wendy (Vincent) Giner of Brewster, NY; four sons, Will (Melissa) Word of Camden, Joe (Heather Chapman) Word of Deland, FL., Jacob (Suzie McConahay) Word of Angola, IN., Matt (Megan) Word of Reading; one sister, Sharon (Raymond) Rigelman of Camden; one brother, Wayne (Char) Word of Edon, OH.; five grandchildren, Tonya Giner, Jara Giner, Logan Word, Chloe Word and Weston Word.

Bill was preceded in death by his parents; sister, Karen Troxell and brother-in-law, Tom Troxell.

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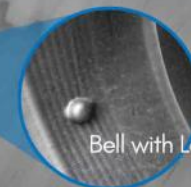
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