

HB 1060 – Cremation – Natural Organic Reduction – Regulation
Maryland House of Delegates
Health and Government Operations Committee
Unofficial Hearing Digest
Wednesday, March 8, 2023

#	Video	Question / Answer / Comment
1.	3:16:30	<p>Chair Pena-Melnyk</p> <p>The Chair called the hearing to order for House Bill 1060 – Cremation – Natural Organic Reduction – Regulation, and invited the bill sponsor to assemble the first panel.</p>
2.	3:16:49	<p>Delegate Kaiser (Sponsor)</p> <p>Delegate Kaiser thanked the Chair and Committee Members. She reported that, after her initial reluctance to sponsor HB 1060, she was persuaded to do so after thinking carefully about it. Delegate Kaiser explained that, while she planned to follow her Jewish tradition and expected to be buried in a simple pine box after she dies, her religious beliefs also preclude her from interposing on people who follow different practices or beliefs. Delegate Kaiser believes that natural organic reduction will give people a sustainable alternative to cremation or burial after death. She explained that natural organic reduction – or “NOR” – gently transforms human remains into soil in 4 to 6 weeks using large vessels to hold the remains that are combined with straw, wood chips and other natural materials. The process of decomposition then creates heat over 130 degrees to kill viruses, bacteria and pathogens. Delegate Kaiser said the process is environmentally sound, popular and also workable based on authorizing legislation passed in other states. She reported that amendments have been drafted to resolve some confusion about shared oversight by the State’s Office of Cemetery Oversight (OCO) or the Board of Morticians and Funeral Directors (BOMFD). Delegate Kaiser concluded by noting that the bill merely provides another option when they pass and she asked the committee for a favorable report.</p>
3.	3:19:43	<p>Lily Buerkle (Green Legacy Brands LLC) – Favorable w/Amendments</p> <p>Lily Burkle thanked the sponsor and the committee for starting the conversation about natural organic reduction. She then introduced herself as a mortician licensed in Maryland, D.C. and Virginia, who has worked in funeral homes mostly in Maryland for nearly a decade – serving all different types of families. Ms. Burkle said she was before the committee representing the families who have been searching for greener funeral options for a long time – since the options in Maryland have not changed much since the Civil War. She expressed her support for the bill and promised to make three main points. First, she explained, the bill is about adding a greener option – one additional choice – not about eliminating any of the current practices or options for families or practitioners. Second, Ms. Buerkle cited conflicting statistics from the National Funeral Directors Association that, although more than 60% of consumers want green funeral options, the rates for fire cremation in Maryland are projected to reach 75% by 2040. Third, she expressed strong support for natural burial practices, but explained that that burial method would not be sufficient to solve the environmental impact of deathcare alone, which is one of the reasons to support passing the bill. In closing, Ms. Buerkle noted that many people in Maryland are trying to live more sustainable lives and do not want their final act to be one that delivers a half-ton of carbon into the atmosphere (which fire cremation does). She urged the committee for a favorable report so that more Marylanders can choose to die a more sustainable death.</p>
4.	3:21:42	<p>Adrian Gardner (Green Legacy Brands LLC) – Favorable w/Amendments</p> <p>Adrian Gardner introduced himself as a founder of Green Legacy, a company that is trying to bring natural organic reduction as an option in Maryland. He invited the committee to ask him about the bill amendments (referenced by Delegate Kaiser), but said he would focus his testimony on his journey to becoming an advocate for the bill. Mr. Gardner explained that almost one year to-the-day before giving his testimony, he had taken his mother for a medical scan that ultimately confirmed her terminal condition. He reported that she had died during previous June, had a magnificent funeral and that his family was</p>

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		managing her loss okay. Under those circumstances, he had become a funeral consumer looking for green options. About the same time a year ago, Mr. Gardner reported that he had listened to a Ted Talk on the subject of natural organic reduction. Eventually he retired after working for more than 20 years as a lawyer for a public agency in the state, and Mr. Gardner said he decided to start up his company with Ms. Buerkle because Maryland offers so few green options. He allowed that, although natural organic reduction would not have been the right choice for his mother’s death, the process should have been available as an option for his family; but wasn’t. Mr. Gardner concluded by saying the reason he is advocating for passing the bill is to give his son the option of natural organic reduction when he dies, along with providing that option for his nieces, nephews and others in the next generation. He urged the committee to “vote green.”
5.	3:23:52	<p>Delegate Hutchinson (HGO)</p> <p>Delegate Hutchinson observed an entrepreneurial aspect of matching a market need with a positive environmental impact. After a friendly, humorous repartee, he asked whether market research showed a justification for investing in natural organic reduction in Maryland.</p> <p>Mr. Gardner responded. Mr. Gardner believes the market for NOR is viable because so-called “green burial” is the only potential option in the area and it does not work in many situations. For example, he discussed families that may want to inter a loved one in Arlington National Cemetery or together with others family-members in a cemetery plot that does not follow green practices. In those instances, Maryland does not offer any green option that would be suitable. As such, he considers the few cemeteries that do follow green burial practices – no grave liners or embalming, for example – as the only options in Maryland. Mr. Gardner indicated that his company (Green Legacy) is not the only company that is interested in providing NOR in Maryland, but that he and Ms. Buerkle want to be first because, as she testified earlier, so many families in Maryland express the desire for more green options. He closed by citing a recent example of a Maryland family that made arrangements to send a loved one all the way to North Carolina to have a green burial option.</p>
6.	3:26:08	<p>Delegate White (HGO)</p> <p>Delegate White asked about a letter of concern filed by the Board of Morticians and Funeral Directors (BOMFD) regarding the bill and whether the amendments proposed would address the concerns, including those related to the Maryland Department of Environment.</p> <p>Mr. Gardner reported that the amendments had been prepared, in part, to address concerns by the BOMFD, the Office of Cemetery Oversight (OCO) and a Maryland association of funeral consumers. He explained the amendments had two key aspects. First, although the original bill would have excluded OCO from issuing permits for natural organic reduction, the amendment changes that – that is, as amended, the bill will now include OCO following the same shared regulatory jurisdiction with BOMFD over crematories in the state. Second, the amendments amplify the subject matter of the regulation of natural organic reduction to include: registration requirements, operating requirements, training requirements and procedures for handling soil. Mr. Gardner believes those amendments should help to address most of the BOMFD concerns.</p>
7.	3:28:20	<p>Delegate Johnson (HGO)</p> <p>Delegate Johnson noted that the bill uses the term “accelerated” (in the definitions of NOR on page 5 at line 5 and line 20). That term led him to question whether the process involved the use of any chemicals.</p> <p>Ms. Buerkle responded that no chemicals were involved. She explained that everyone has gut bacteria present in their body that will begin the process of decomposition immediately upon death. So the process allows the naturally occurring bacteria to work in an environment that controls moisture within organic material and takes advantage of the naturally occurring process initiated by the bacteria. As it begins breaking down the body, the bacteria also creates heat that will kill pathogens as well.</p>

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8.	3:29:35	<p>Delegate Martinez (HGO)</p> <p>Delegate Martinez asked about the process after a body transforms into soil through natural organic reduction – whether the funeral home would maintain the soil, it would be given to the family or whatever. Ms. Buerkle compared it to the results of fire cremation where the family receives cremated remains that are crushed bones that comprise about the same in volume as a sack of sugar. By contrast, with natural organic reduction, she explained that the family also has the choice of what to do with the soil, but that the volume is much greater – about the volume of a pickup truck bed. Ms. Buerkle explained that operators normally give the family only a portion of the soil with the remainder being donated to sustain new life in a conservation forest or, if the family is able to handle the entire volume, it can be taken back for family use.</p>
9.	3:30:49	<p>Delegate Woods (HGO)</p> <p>Delegate Woods asked for someone on the panel to elaborate on how the remains (soil) can be used to help the environment.</p> <p>Mr. Gardner echoed the discussion by Ms. Buerkle about soil and mentioned that various companies offering natural organic reduction were taking slightly different approaches to the disposition of soil. He noted that some are offering the family a small portion, but families can use it for scattering or planting – wildflowers or trees, for example. Mr. Gardner mentioned that, as he recently learned while becoming a certified crematory operator, many families across the country have no plans for cremated remains and leave them sitting idly on their mantles with no place to go. By contrast, as one illustration, because the soil is fertile, he mentioned the possibility of a family using it to plant a memorial tree on a property that is considered special. Mr. Gardner suggested the members consider also asking the next witness, Katrina Spade to follow up on this question because she is the person who invented the natural organic reduction process for humans.</p>
10.	3:32:44	<p>Delegate Lewis (HGO)</p> <p>Delegate Lewis asked if there are certain types or categories for which natural organic reduction would not be indicated.</p> <p>Ms. Buerkle responded substantively that, for the same reasons that embalming does not eliminate the biological risk, natural organic reduction is not suitable when people have died of prion diseases. She explained that prion diseases are protein diseases typically found in the brain – for example, Crutchfield-Jacobs disease in humans or what people call “mad cow disease” in animals. Ms. Buerkle said that tuberculosis is another disease where NOR may not be indicated and she emphasized again that these biological risks are also associated with embalming.</p>
11.	3:34:04	<p>Delegate Taveras (HGO)</p> <p>Delegate Taveras thanked the sponsor for the bill and mentioned that she had been able to speak in advance with Mr. Gardner. She asked the panel to discuss the price point on natural organic reduction and the relative environmental benefit.</p> <p>Mr. Gardner responded that, based the pricing he had observed for NOR providers he had reviewed to date, the prices offered were comparable to most traditional cremation funerals – with the exception of the lowest-cost option known as “direct cremation.” For illustrative purposes, he reported that the prices for the basic full service could range between \$5,000 and \$7,000 which, he explained, was less than average funeral costs in Maryland which are among the highest in the country at about \$10,000.</p>
12.	3:36:06	<p>Delegate Lopez (HGO)</p> <p>Delegate Lopez thanked the sponsor for the bill and asked the panel whether it also covered the process of natural organic reduction for pets or animals.</p> <p>Ms. Buerkle answered that pets and animals were not addressed in the bill. Mr. Gardner also indicated his belief that the disposition of pets and animals is not regulated.</p>

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13.	3:36:38	<p>Delegate Rosenberg (HGO) Delegate Rosenberg asked the sponsor what the response would be to any hypothetical opposition to the bill.</p> <p>Delegate Kaiser responded that the nature of the opposition would matter. If the objections were based on personal grounds, her response would be to point out that the bill is about choice. If the opposition is from the regulators, the question of shared jurisdiction is resolved. Overall, Delegate Kaiser concluded, natural organic reduction is available in other states and she believes Maryland should make it available too as a choice that people should have. She offered to follow up with Delegate Rosenberg if elaboration later seems appropriate.</p>
14.	3:37:27	<p>Delegate Bhandari (HGO) Delegate Bhandari asked: how to ensure that natural organic reduction is sustainable and does not have negative environmental impacts; what is the proper way to dispose of the resulting soil to avoid traces of harmful chemicals or pollutants; and what methods can be used to mitigate such risks?</p> <p>Delegate Kaiser suggested that Ms. Buerkle can follow up directly with Delegate Bhandari to answer his questions in more detail. In the moment, Delegate Kaiser said that she is advised there is no environmental down-side to NOR because the pathogens are destroyed in the process and our bodies naturally metabolize medicinal substances as the process concludes. As a practical matter, she added that any policy concerns that materialize after passing the bill could be addressed in follow up legislation but that, based on the reports so far from other states, there are no apparent down sides.</p>
15.	3:38:54	<p>Chair Pena-Melnyk The Chair asked how many states have allowed NOR. Delegate Kaiser identified the six states that had passed legislation so far as: Washington, Colorado, Oregon, Vermont, California and New York. The Chair then asked Delegate Kaiser to investigate the response in those states so far and to provide that information to the subcommittee’s deliberation. Delegate Kaiser pledged to follow up as requested by the Chair.</p>
16.	3:39:18	<p>Chair Pena-Melnyk Seeing no other questions by the committee, the Chair excused the panel and thanked them. She then announced the next witness who was attending virtually.</p>
17.	3:39:46	<p>Katrina Spade (Recompose) – Favorable w/Amendments Katrina Spade thanked the chair and members of the committee for inviting her to discuss HB 1060. She noted that she has testified before about natural organic reduction in several other states around the country and that the conversation today in HGO included the best puns that she’s heard so far. Ms. Spade introduced herself as the founder and CEO of Recompose, a licensed funeral home based in Seattle, Washington, that offers NOR to the public. She explains that, over about 10 years, she first conceived of the process of natural organic reduction and developed it for the public to utilize. Ms. Spade echoed that, as the previous panel discussed, NOR has been proven safe and effective for human deathcare after being used in agricultural settings for over 30 years. She highly recommended that the committee peruse the regulations adopted by Washington State because they cover the safety issues raised during a previous discussion. Ms. Spade also confirmed that her company’s assessment of the environmental impact that each case where NOR is selected will save a metric ton of carbon in comparison to either cremation or conventional burial. She explained that the impact is multiplied as more and more people begin to select the carbon-saving process. Finally, as to the previous question about whether a viable market for NOR exists, Ms. Spade pointed out that fully one-third of her company’s customers are being drawn from outside of Washington State – from away as far as Texas and West Virginia. She concludes that demonstrates a nation-wide appetite in the marketplace for this green funeral option.</p>

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18.	3:42:44	<p>Chair Pena-Melnyk</p> <p>The Chair encouraged members to take advantage and ask the witness questions because she is an expert.</p>
19.	3:42:50	<p>Delegate Bhandari (HGO)</p> <p>Delegate Bhandari appreciated that Ms. Spade would provide an expert perspective on the subject matter of the bill. He asked her to elaborate on several specific concerns with natural organic reduction: possible contamination of soil and groundwater; the risk of emitting greenhouse gasses; the potential spread of pathogens and diseases; as well as odors and aesthetic issues or unpleasant visual impacts for nearby residents associated with the process.</p> <p>Ms. Spade explained that NOR begins inside of enclosed chamber – called a “vessel” – that is aerated and treats the air with bio-filters. From an aesthetic perspective, she explained it’s analogous to cremation because the process involves placing the remains inside a piece of equipment and the transformation occurs inside of that equipment. So, there would be no visual experience outside of the equipment or outside of the facility in which it is contained.</p> <p>Ms. Spade also discussed safety and elaborated on the potential for pathogens by noting that the process of composting livestock has been thoroughly researched and is favored for fighting bio-pathogens. She cited examples where the authorities fought outbreaks of avian flu by composting infected flocks precisely because it’s so good at destroying pathogens and creating material that is safe.</p> <p>Contrary to an assumption that natural organic reduction would produce methane as a body decomposes, Ms. Spade discussed why it does not. Specifically, she explained that bodies decomposing in the ground produce those gasses because they are contained in an anerobic environment. (Note: Webster’s defines anaerobic as: occurring or existing in the absence of free oxygen.) By contrast, Ms. Spade said that NOR occurs in an aerated process; that is, an aerobic environment that does not produce methane as the microbial activity is managed. (Note: Webster’s defines aerobic as: occurring or existing only in the presence of oxygen.)</p> <p>With regard to Delegate Bhandari’s concern about a potential for decomposition to contaminate soil and groundwater, Ms. Spade explained that natural organic reduction elevates the temperature of the body while it is inside of the vessel above levels that will kill pathogens. Under the regulations adopted in Washington State, the operator is required to monitor the temperature to ensure that threshold temperatures are achieved in each cycle and, in a measure of redundancy, the regulations also require a certain third-party testing protocol to further assure the resulting soil. She concludes there is no harm or risk exposure to soil or groundwater.</p>
20.	3:45:56	<p>Delegate Chisolm (HGO)</p> <p>After noting that the State of Washington has a lot more open land than Maryland, Delegate Chisolm asked about the quantity of space needed to hold the equipment required for a natural organic reduction facility.</p> <p>Ms. Spade recounted that NOR was conceived as a green funeral option for cities – a funeral process that could help urban areas that were running out of cemetery space with an alternative that would be eco-friendly and not require a lot of property. Like most NOR operators, Recompose has designed its vessels to be stacked vertically into an array that can fit into a warehouse-type of space. A vessel is specifically designed for a one-per-cycle throughput, such that each vessel is reused after each cycle and a cleaning. A typical facility does not use much more space than a conventional crematory.</p>
21.	3:47:46	<p>Delegate Taveras (HGO)</p> <p>Delegate Taveras asked the witness to discuss the marketing approach utilized for the natural organic reduction business.</p> <p>Ms. Spade reported that she realized the challenge involved in promoting something about which many people would be squeamish. In that reason, she wanted to be really clear that the process involved</p>

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		“returning to earth” – about creating soil out of our bodies and rejoining the ecosystem again. Ms. Spade said her team tries to keep that focus in clear and direct messaging.
22.	3:48:38	<p>Delegate Johnson (HGO)</p> <p>Delegate Johnson asked how long the NOR process takes and whether there is any toxicity to the biofilters.</p> <p>Ms. Spade reported the bio-filters are not related to toxicity but utilized mostly to scrub the air to control the odors before discharging outside of the facility. They are constructed like big boxes that are filled with loose organic material she described as being shaped “like big kitty litter” that absorbs any odors. As for the cycle time, for the process at her company Recompose, the process takes about one month inside the vessel. After that, the staff removes the soil and places it in a different container to cure for approximately one month. She notes that some operators take longer than the two-month process her company follows.</p>
23.	3:49:56	<p>Delegate Woods (HGO)</p> <p>Delegate Woods asked Ms. Spade to discuss the natural products that can be used to prepare bodies and how families can be involved in the preparation process.</p> <p>Ms. Spade explained that her company invites families to have a ceremony called the “laying in” where the body is eventually introduced into the vessel. She reports that most ceremonies start as gatherings that are to funerals or memorials with ministers or family speakers. The difference is that, after the narrative part is over, the people attending place wood chips, straw, flowers and perhaps favorite books or writings in with the deceased. Then the body is placed into the vessel and the process begins. Ms. Spade also clarified that families are free to use oils to prepare the body and almost any other rituals before the laying in. The only thing that cannot happen to the body before NOR is embalming it.</p>
24.	3:51:37	<p>Delegate Alston (HGO)</p> <p>Delegate Alston asked whether any communicable diseases would survive the NOR process, for example, if the soil was used to plant food.</p> <p>Ms. Spade explained that communicable diseases would not survive because the pathogens are destroyed when the temperatures rise during the process above the safety threshold. She reiterated her earlier testimony that mortality composting is proven to be very effective at using microbes to eliminate pathogens. At the same time, even though there is no biological reason to preclude using soil to produce food, she expressed her personal opinion that it wouldn’t be unreasonable to prohibit that use to assuage concerns. For that reason, Ms. Spade recommends people utilize the soil for trees and ornamental planting.</p>
25.	3:52:48	<p>Chair Pena-Melnyk</p> <p>The Chair asked whether there are any zoning restrictions in any of the six jurisdictions where natural organic reduction is allowed, and whether she’s aware of any complaints by nearby residents about odor or anything else.</p> <p>Ms. Spade reported that the city of Seattle determined that industrial or manufacturing zones would be the appropriate category for her land use as a natural organic reduction facility. She believes that Denver has made the same determination and that most operators are located within industrial areas because of the space required to handle logistics. Ms. Spade is not aware of any resident complaints because none of the facilities that she knows about are in a residential area. The facility operators seem to gravitate to industrial areas so they can have dock doors, handle material deliveries, etc. She also reported that a local agency regularly tests her facility for odor and that it has passed every time with flying colors.</p>
26.	3:54:15	<p>Chair Pena-Melnyk</p> <p>The Chair thanked Ms. Spade for providing her testimony to the committee. She then called the next and final witness, Sandra Baker.</p>

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27.	3:54:58	<p>Sandra Baker – Favorable</p> <p>Sandra Baker thanked the committee for the opportunity to speak and proposing the legislation. She introduced herself as a licensed mortician and funeral director in Maryland, Virginia and Washington, D.C. Ms. Baker reported that many of the families she serves inquire about which green options are available in Maryland, and that she finds it unfortunate that she doesn’t have much to offer. She has encountered families that expressed remorse after burying loved ones using conventional methods when they learned about facilities out-of-state like the one operated by Ms. Spade. Ms. Baker aspires to provide families in Maryland with NOR and more options that are better for the environment.</p>
28.	3:56:26	<p>Chair Pena-Melnyk</p> <p>The Chair thanked Ms. Baker for her patience and announced the conclusion of the committee’s bill hearing on HB 1060.</p>

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Please contact us with any comments, additions or corrections.