

HB 1060 - Natural Organic Reduction – Q&A

A Natural Option for Maryland Families

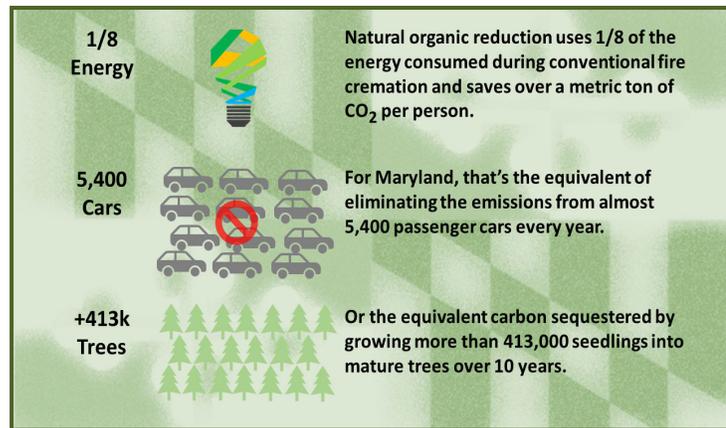
What does this legislation do? HB1060 amends current law by adding *natural organic reduction (NOR)* as another choice Maryland families would have after death, providing a sustainable alternative to cremation and burial. It will conform NOR to existing death care laws, enable appropriate regulation of the process and continue the tradition of giving Marylanders the right to choose the method of mortuary disposition that's best for their family.

What is natural organic reduction and how does it work? NOR gently transforms human remains into soil in 4-6 weeks. The process uses large vessels to hold human remains which are combined with straw, wood chips, and other natural materials. The decomposing process creates heat of over 131F, which kills viruses, bacteria, and pathogens, and exceeds EPA requirements for heavy metals, which are stabilized in the soil, not volatilized. The resulting soil is safe for gardens, trees and scattering.

Is this death care method being used anywhere else? Yes. Six states have now legalized the process: Washington (2019), Colorado (2021), Oregon (2021), Vermont (2022), California (2022) and New York (2022). Maryland can become the seventh.

What are the benefits of NOR?

- The primary benefit is the ability to offer consumers additional options after death.
- With significant savings in fossil fuel emissions and land use, NOR addresses the increasing demand for more sustainable alternatives. It isn't a silver bullet for climate change, but it's low-hanging fruit that sure can help.



Is there a demand for NOR? Yes.

Surveys show that 64% of Americans consistently express an interest in green burial options, indicating a need for sustainable and affordable alternatives. Even before the process was first legalized, over 400 customers prepaid a funeral home in the State of Washington in the hopes it would be allowed eventually. Since then, several new funeral homes have begun offering it to families in other states.

What is done with the soil? Much like the choices people have with cremated remains, families will choose the best place for resting the soil created in this process. They might choose to plant a tree or garden, for example, but some state regulations forbid using the soil to grow food for humans or animals. With most NOR companies, families can also opt to donate their soil to a conservation forest.

Where would NOR facilities be located? Facilities meeting state permitting and licensing requirements could be located anywhere in Maryland where the local zoning allows it.

Does it smell? The NOR process does not smell. Microorganisms present in the process break down odorous gases into water and CO₂. In addition, biofilters and mechanical ventilation are used to aerate the process and ensure that no trace of odor is emitted.

Is it safe? Yes. The process kills bacteria and viruses, including COVID-19. Farmers have used mortality composting for many decades to safely dispose of deceased livestock and control odor.

Has it been tested and validated scientifically? Yes. Research at Western Carolina University and Washington State University (WSU) has demonstrated the viability of NOR as a natural method of disposition for humans, and WSU's Soil Science Department conducted a pilot study which proved the safety and efficacy of the process. Long before it was ever applied to human bodies, farmers also safely used mortality composting and universities have tested it exhaustively.

Is it suitable for every situation? No. Remains that have been embalmed are not viable candidates for NOR because the chemicals involved will delay the decomposition process. Also, NOR is not indicated in cases that involve Ebola or prion diseases. (Prion diseases are a family of rare neurodegenerative disorders that affect both humans and animals, and existing scientific research has not yet proven that prions are broken down during the NOR process.)

What happens to heavy metals like mercury? NOR helps to ensure that mercury remains stabilized in the soil, rather than being volatilized. (Volatilized mercury from cremation accounts for a significant amount of mercury released into the atmosphere.) Research completed by WSU showed that heavy metals, including arsenic, cadmium, copper, zinc, lead, and mercury, were all well under EPA limits.

What happens to pharmaceuticals? Because current funeral practices are not required to account for drug concentrations, very little is known about pharmaceutical agents in human cadavers. However, it is known that most medications are metabolized or excreted from the body within a few hours after ingestion, so concentrations in cadavers are likely low. Unlike cremation and burial, NOR breaks down many of the pharmaceuticals that do remain in the body after death. The research completed to date showed a 95% reduction of tracked pharmaceuticals.

How would regulations work under the bill? Under the sponsor's amendments that were developed in response to the Maryland State Board of Morticians and Funeral Directors (BOMFD) and the Maryland Office of Cemetery Oversight (OCO), both agencies would share regulatory jurisdiction over licensing NOR in the same way they each currently regulate crematories. Within their respective scopes of authority, BOMFD and OCO would be empowered to promulgate identical regulations, issue licenses, establish minimum training requirements, inspect and enforce the laws for any location where NOR is performed.

What is the impact to the existing funeral industry? Maryland's funeral industry will have the ability to offer NOR as desired. With growing consumer interest in sustainable alternatives, this legislation simply provides another option for existing businesses to expand their scope of services (or not).

Are any Maryland funeral homes planning to offer NOR? Yes. Other states projected 5-10 eventual providers, and Green Legacy is a local start up co-founded by Lily Buerkle, a licensed mortician supporting HB 1060. The company is looking for commercial space now to open a full-service funeral home that will earn Green Burial Council certification. After licensing, Green Legacy says it will become Maryland's first provider to specialize in Aquamation-Alkaline Hydrolysis and deathcare that is "radically compassionate," and her team also plans to offer NOR eventually.

Will there be any fiscal impact? Although legislative staff in most of the other states where NOR has been adopted project the fiscal impact to be "minimal," "negligible," or "none," the impact in Maryland has not been scored by DLS as of this writing. The only state so far with a significant fiscal impact appears to be California, which also is the only state that has decided to regulate the NOR equipment manufacturers in addition to facilities. All of the other states project normal impacts associated with writing new regulations and updating the forms and systems that handle licensing.

- more -

Is there any value in waiting for further study or research? Why should Maryland fall behind other states? NOR has grown out from theoretical seeds of urban planning and applied science that were planted and published more than a decade ago. The concept was fertilized with research studies carried out over the past ten years. Since 2019, NOR has blossomed into accepted funerary practice – it’s even featured this year by the National Association Funeral Directors (NFDA) as part of its “Virtual Cremation Success Seminar.” Seven other states have adopted laws authorizing NOR because the modest change involved just gives families and funeral businesses one more choice - at the same time, eliminating the carbon emissions for families who opt in.

Contact: Lily Buerkle | lily@greenlegacy.com | (301) 264-7959
Green Legacy Brands LLC
8403 Colesville Road, Suite 1100, Silver Spring, Maryland 20910

HB 1060 online: <https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/hb1060?ys=2023RS>