

## CONCURRENCE IN SENATE AMENDMENTS

AB 351 (Cristina Garcia and Robert Rivas)

As Amended August 25, 2022

Majority vote

**SUMMARY**

Defines reduction as the process of transforming a human body into soil using the natural decomposition process, accelerated with the addition of organic materials. Establishes the regulatory process for reduction facilities and reduction equipment under the Cemetery and Funeral Bureau (Bureau) and the Department of Public Health (DPH), and outlines management and training requirements for licensed reduction facility employees. Imposes the same requirements for reduced human remains as cremated and hydrolyzed remains and requires the Bureau and DPH to implement specified regulations by January 1, 2027.

**Senate Amendments**

Strike the prior contents of this bill and insert the following provisions:

- 1) Authorizes a corporation, partnership, or natural person to operate, establish, or maintain a licensed reduction facility (LRF) with a valid license issued by the Bureau.
- 2) Requires an application for an LRF to be made on a form approved by the Bureau, as specified, and requires any change in ownership of an LRF to be reported to the Bureau, and a transfer in a single transaction or related transactions of more than 50% of the equitable interest in an LRF constitutes a change of ownership. Requires when a change in ownership in an LRF occurs, the existing reduction facility license lapses and the new owner must obtain a new license from the Bureau, as specified.
- 3) Requires the DPH to adopt, amend as necessary, the rules and regulations prescribing the standards for LRFs to preserve the public health and safety and to ensure the destruction of pathogenic micro-organisms, and permits an LRF to apply to the DPH for approval of a reduction chamber.
- 4) Requires an LRF to ensure or conduct annual maintenance of all reduction chambers in use by the facility, and prohibits the Bureau from renewing an LRF without proof of annual maintenance, as specified. Prohibits an LRF from conducting the reduction of human remains unless specified conditions are met.
- 5) Makes it a misdemeanor for a person, firm, or corporation to reduce human remains, or to dispose of reduced human remains, without a valid unexpired reduction facility license, as specified.
- 6) Subjects an LRF to discipline from the Bureau.
- 7) Makes various definitions related to an LRF and reducing human remains.
- 8) Prohibits certain actions related to reducing human remains. Requires an LRF to maintain on its premises or other business location within the state records of the maintenance performed on the reduction chamber. Requires an LRF to maintain an identification system allowing identification of each decedent beginning from the time the reduction facility accepts

delivery of human remains until the point at which it releases the reduced human remains to a third party, and after the reduction an identifying disk, tab, or other permanent label, is to be placed with the reduced human remains container or containers before the reduced human remains are released from the LRF.

- 9) Requires an LRF, or its authorized representatives to provide instruction to all facility personnel involved in the reduction process, which must lead to a demonstrated knowledge on the part of an employee regarding identification procedures used during reduction, operation of the reduction chamber and related equipment, and all laws relevant to the handling of a body and reduced human remains. The instruction must be outlined in a written plan maintained by the licensee for inspection and comment by the Bureau. Prohibits an employee from operating a reduction chamber or related equipment until the employee has demonstrated to the certified manager of the LRF or authorized representative that the employee understands the procedures required to ensure that health and safety conditions are maintained and that reduced human remains are not comingled, as specified.
- 10) Imposes the same requirements for reduced human remains as cremated human remains or hydrolyzed remains, for registered cremated remains disposers, funeral directors, and funeral establishments as specified.
- 11) Imposes similar penalty violations for removal or reduced remains, as specified, and imposes the same requirements for the integration of reduced remains into the soil as the scattering of cremated or hydrolyzed remains, as specified. Incorporates the reduction of human remains into the requirements for the certificate of death, as specified.
- 12) Adds reduced human remains to the requirements for a permit for disposition of remains, as specified, and requires a cremated remains disposer to document and retain all permits and private authorizations required for all reduced remains that were integrated into soil outside of a cemetery.
- 13) Delays the implementation of this bill until January 1, 2027, and makes other technical and clarifying changes.

## COMMENTS

*Natural Organic Reduction.* Natural Organic Reduction (NOR) is a method that transforms human remains into soil using the natural decomposition process, accelerated by the addition of natural materials. Generally, NOR occurs in a contained, aerated steel vessel, where the body is covered with organic material including wood chips, alfalfa, and straw.

Throughout approximately 30 days, microbes that naturally occur in the air and on the organic materials decompose the human body at an accelerated pace. The chamber undergoes mixing at several intervals to continue the aerobic process and ensure that all the entire body – including bones and teeth – is fully broken down and transformed. At the end of the process, non-organic materials, such as metal surgical or dental implants, are removed. The transformation results in soil – defined as "reduced human remains" under this bill – that is dark brown in appearance, and considered safe for disposal. Generally, the preferred method of disposal is integrating the remains as a soil amendment for trees or plants. To date, Washington is the first, and currently only state, to approve natural organic reduction as an alternative to burying or cremating human remains.

*Available research on the safety of NOR.* While research on human natural organic reduction is limited, a wide range of academic studies are available on animal reduction, which has been used to dispose of deceased animals in agriculture, meat processing and distribution, or environmental management. With the exception of rare cases, the safety of animal composting has become well documented: according to the Department of Crop and Soil Sciences at the Cornell Waste Management Institute, "Composting provides an alternative to traditional carcass disposal as it can be less expensive, is self-sufficient and is biosecure. The temperatures achieved through the composting process may eliminate or greatly reduce pathogens, hindering the spread of disease. Research continues to demonstrate effective destruction of nearly all livestock diseases of concern. Properly composted material is environmentally safe and a useful soil amendment."

In 2018, Recompose, an organization offering NOR services in the state of Washington, sponsored a research project with the Washington State University Soil Science Department to demonstrate that safety and efficacy of the NOR process. Using six human research subjects, the study concluded that the "process of recomposition has been shown to effectively and quickly biologically convert human remains. Final material was obtained that was unrecognizable visually, chemically, or microbiologically as human remains." Similar to animal composting, human NOR can reach temperatures high enough to destroy almost all harmful pathogens, and transform the body, wood chips, and straw into a final material which is safe for humans and plant life.

Recompose notes that there are two disease types that disqualify a person from being eligible for natural organic reduction: Ebola and 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. In human burial or cremation, whenever the death occurred from a disease declared by the state department to be infectious, contagious, or communicable and dangerous to the public health, no permit for the disposition of the body can be issued by the local registrar, except under those conditions as may be prescribed by the state department and local health officers.

*Regulatory Function of the Bureau.* The Bureau licenses and regulates over 13,000 licensees across various license categories, including funeral establishments, funeral directors, embalmers, cemeteries, cemetery managers, cemetery brokers, cemetery salesperson, crematories, crematory managers, cremated remains disposers. The Bureau does not license or regulate cemeteries operated by religious organizations, cities, counties, cemetery districts, the military, Native American tribal organizations, or other groups. The Bureau has the oversight responsibility for both fiduciary and operational activities of its licensing population and has the statutory authority to enforce the licensing and practice acts in the BPC along with jurisdiction over specified provisions of the HSC dealing specifically with human remains, cemetery, and crematory provisions.

The Bureau may also issue licenses for hydrolysis facilities, in which human remains are hydrolyzed. Approved by the legislature 2017 as another alternative to cremation, alkaline hydrolysis is a process by which human remains are reduced to bone fragments with the utilization of water and a blended alkaline solution, combined with heat and pressure.

This bill aims to model the licensure and regulation of crematories and hydrolysis facilities, and authorizes cremated remains disposers to also dispose of human remains that were reduced through natural organic reduction. Similarly, existing law regarding the proper reporting,

handling, and disposal of cremated or hydrolyzed remains are applied to reduced remains. To provide an adequate implementation window, the bill's provisions become effective July 1, 2027

*Licensure and regulation of reduction facilities.* This bill creates a new license type for reduction facilities, modeled after the licensure process for crematory licenses and hydrolysis facility licenses. The bill enumerates the requirements to apply for such a license, including submitting a written application, pay the applicable fees, demonstrate compliance with all applicable laws, and obtaining any relevant permits. Reduction chambers – the vessels that would be used to conduct natural organic reduction – would be approved by the State Department of Public Health to ensure the destruction of any pathogenic micro-organisms during the reduction process.

Under this bill, any licensed reduction facility must be operated under the supervision of a manager. Alternatively, a licensed crematory manager may be designated as the reduction facility manager, upon determination by the Bureau that such person has an understanding of the applicable laws. The bill also specifies that all employees of a licensed reduction facility receive appropriate training and instruction to ensure appropriate handling of remains, knowledge of the reduction process, and regulatory compliance. Similarly to crematories or hydrolysis facilities, reduction facilities would be required to maintain accurate records of all reductions performed, and maintain an identification system allowing for the proper identification of human remains throughout the entire reduction process.

This bill places licensed reduction facilities under the jurisdiction of the Bureau. Accordingly, these facilities and associated records would be subject to inspection by the Bureau, with any violation subject to disciplinary action.

*Disposal of reduced human remains.* To preserve vital records and information about deceased individuals, existing law outlines specific rules for the disposition of cremated remains and hydrolyzed remains, including obtaining relevant local permits and registering the location at which the remains were scattered. This bill aligns the requirements for soil integration of reduced human remains with existing requirements for the scattering of cremated or hydrolyzed ashes. Specifically, reduced remains would be integrated in an area where no local prohibition exists, would not be distinguishable to the public, and written permission would be obtained from the property owner or governing agency to integrate into the soil on the property. In addition, a person who integrates into the soil reduced remains must obtain a permit from the local registrar of births and deaths, and sign an acknowledgment that trespass and nuisance laws apply to the disposition of reduced remains and that the permit gives no right of unrestricted access to property not owned by the person for the purpose of disposing of the remains.

#### **According to the Author**

"AB 351 will provide an additional option for California residents that is more environmentally friendly and gives them another choice for burial. With climate change and sea-level rise as very real threats to our environment, this is an alternative method of final disposition that will not contribute emissions into our atmosphere. For each individual who chooses NOR over conventional burial or cremation, the process saves the equivalent of one metric ton of carbon from entering the environment.

"As cemeteries fill up and people look for more sustainable death care practices, many in the industry hope to one day offer its service to the California public, so that friends and family can use the soil to plant a tree or memorial garden honoring loved ones. Trees are important carbon

breaks for the environment. They are the best filters for air quality and if more people participate in organic reduction and tree planting, we can help with California's carbon footprint."

### **Arguments in Support**

*Recompose*, which currently operates in multiple states that allow natural organic reduction of human remains, writes the following in support: "Natural organic reduction is safe, sustainable, and informed by nature. This process would provide California's 39 million residents with a respectful option that offers significant savings in carbon emissions and land usage over conventional burial or cremation. It also empowers California consumers with an additional end-of-life choice and creates business opportunities for funeral homes to expand their offerings.

There is significant environmental benefit to adding natural organic reduction to California's list of end-of-life options. California's rate of cremation was over 60% in 2018. If every California resident chose natural reduction as their after-death preference, we would save nearly 2.5 million metric tons of CO<sub>2</sub> in just 10 years. That's carbon-savings equivalent of the energy required to power 225,000 homes for one year or the letting 65 million seedlings grow into trees over 10 years.

Natural organic reduction offers an additional choice for after-death care that is natural and sustainable. It is a respectful option for the individuals and families who find it a meaningful choice, it is a business opportunity for the funeral industry, and a carbon-friendly approach to disposition of remains."

*Better Place Forests* writes the following in support: "Legalization of natural organic reduction in California would provide more end of life options for Californians. Better Place Forests' mission is to help people write a better ending to their story by providing a unique and sustainable end of life option for those who choose cremation. Although Better Place Forests has no direct connection to natural organic reduction, the company supports creating more options for those at the end of their lives. Many Californians are looking for sustainable alternatives at the end of life. Options like natural organic reduction and scattering ashes in a forest -- which is what Better Place Forests provides -- are increasingly appealing to those who want to have a smaller environmental footprint and protect our natural resources for future generations."

*Earth Funeral* and its Chief Operating Officer writes the following in support: "As a hospice volunteer and End of Life Doula, I have seen firsthand how important it is for people to have access to death care options that are aligned with their values and preferences, providing comfort, solace, and meaning during a difficult time. According to the National Funeral Directors Association 2022 survey, 60.5% of respondents would be interested in exploring "green" funeral options, a nearly 9% increase from 2021. I expect that this number will only grow.

"Natural organic reduction, or soil transformation, as we call it, is the most environmentally-friendly death care option available. Unlike cremation, it is not a fossil-fuel driven process. In fact, we use only renewable energy sources for the little energy that is required during the reduction process. Cremation emits harmful substances, including ~540 pounds of CO<sub>2</sub> per process; whereas, NOR is carbon neutral. The soil that is produced even helps to sequester carbon. As for traditional burial, over 800,000 gallons of formaldehyde (a known carcinogen), 104,000 tons of steel, 1.6 million tons of reinforced concrete, and 30 million board feet of hardwood is buried in the United States each and every year. For perspective, that amount of wood could build thousands of homes, and that is more steel than was used in the construction of

the Golden Gate Bridge. Cemeteries take up space and can require fertilizers, pesticides, water, and mowing in perpetuity. Cremation and traditional burial will likely be the primary choice for many people due to cultural, religious, or other considerations, but their environmental impact has led many others to seek out alternative options."

*Californians Against Waste* writes the following in support: "Cremation accounts for over 66% of after-death choices within California but requires fossil fuels and emits CO2 into the atmosphere, polluting our air and contributing to climate change. Traditional burials with a casket leaches chemicals into the ground from the treated casket wood and embalming chemicals. For every individual that chooses traditional burial or cremation, one metric ton of carbon is emitted into the atmosphere.

"Compost, however, is created through a natural process by which organics which may be human remains are allowed to decompose into a nutrient rich soil, or humus. This rich material may be used by gardeners as a soil amendment to improve soil health and perhaps to support memorial gardens. As cemeteries begin to fill up and land is less available for burial plots, Californians are looking for more sustainable death care practices. AB 351 would create an additional option for death care practice that is more environmentally friendly and sustainable."

### **Arguments in Opposition**

The *California Catholic Conference* opposes this bill and writes, "We are understanding of the arguments in favor of this bill legalizing and regulating the natural organic reduction (NOR) of human remains. However, we note that the NOR process, as does the alkaline hydrolysis disposition of human remains, reduces the human body to simply a disposable commodity. The practice of respectfully burying the bodies or the honoring the ashes of the deceased comports with the virtually universal norm of reverence and care towards the deceased."

## **FISCAL COMMENTS**

According to the Senate Appropriations Committee, the California Department of Public Health (CDPH) estimates total General Fund costs of \$1,095,000 over the first three years of the program and \$193,000 ongoing. Initial costs include workload associated with developing and adopting regulations prescribing the standards for human remains reduction chambers. Ongoing costs include workload associated with reviewing applications for the evaluation of a reduction chamber. The CDPH's ongoing administrative costs may be offset to some extent by application and renewal fees.

The Cemetery and Funeral Bureau anticipates costs of approximately \$6,000 for staff time associated with reviewing and processing applications (Cemetery and Funeral Fund). The Bureau anticipates ongoing annual revenue increases of approximately \$4,500 for initial application and license renewal fees, which may offset its administrative costs to some extent. This estimate assumes there will be five reduction facilities that would seek licensure under this bill, with application and license renewal fees of \$900 each. The actual increase in fee revenue is unknown and would depend on the number of reduction facilities that seek a license with the Bureau.

The Office of Information Services within the Department of Consumer Affairs estimates a total one-time IT impact of \$140,000 to create a new platform, which may be absorbed through the redirection of existing maintenance resources.

**ASM GOVERNMENTAL ORGANIZATION: 21-0-1**

**YES:** Frazier, Bigelow, Aguiar-Curry, Berman, Carrillo, Cooley, Cooper, Daly, Davies, Eduardo Garcia, Gipson, Jones-Sawyer, Lackey, Villapudua, Mathis, Quirk-Silva, Ramos, Robert Rivas, Blanca Rubio, Salas, Smith

**ABS, ABST OR NV:** Gallagher

**ASSEMBLY FLOOR: 77-0-1**

**YES:** Aguiar-Curry, Arambula, Bauer-Kahan, Bennett, Berman, Bigelow, Bloom, Boerner Horvath, Burke, Calderon, Carrillo, Cervantes, Chau, Chen, Chiu, Choi, Cooley, Cooper, Cunningham, Megan Dahle, Daly, Davies, Flora, Fong, Frazier, Friedman, Gabriel, Gallagher, Cristina Garcia, Eduardo Garcia, Gipson, Lorena Gonzalez, Gray, Grayson, Holden, Irwin, Jones-Sawyer, Kalra, Kiley, Lackey, Lee, Levine, Low, Maienschein, Mathis, Mayes, McCarty, Medina, Mullin, Muratsuchi, Nazarian, Nguyen, O'Donnell, Patterson, Petrie-Norris, Quirk, Quirk-Silva, Ramos, Reyes, Robert Rivas, Rodriguez, Blanca Rubio, Salas, Santiago, Seyarto, Smith, Stone, Ting, Valladares, Villapudua, Voepel, Waldron, Ward, Akilah Weber, Wicks, Wood, Rendon

**ABS, ABST OR NV:** Luz Rivas

**SENATE FLOOR: 35-0-5**

**YES:** Allen, Archuleta, Atkins, Becker, Bradford, Caballero, Cortese, Dahle, Dodd, Eggman, Glazer, Gonzalez, Hertzberg, Hueso, Hurtado, Jones, Kamlager, Laird, Leyva, Limón, McGuire, Melendez, Newman, Nielsen, Ochoa Bogh, Pan, Portantino, Roth, Rubio, Skinner, Stern, Umberg, Wieckowski, Wiener, Wilk

**ABS, ABST OR NV:** Bates, Borgeas, Durazo, Grove, Min

**UPDATED**

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