

Cremation Association of North America

Statement on Natural Organic Reduction

[Adopted by the board of directors on November 16, 2022]

Background

There are four forms of disposition currently legal and in practice in parts of the United States. Cremation laws have been passed and amended over time to distinguish cremation from burial and codify definitions and procedures for cremation. Many of these laws are based on or reference CANA Model laws. Common elements of these laws are based on industry best practices and include content currently taught in the CANA Crematory Operations Certification Program (CANA COCP).

In many states, the two newest forms of disposition – alkaline hydrolysis and natural organic reduction – have been frequently legislated by modifying existing cremation law, adding new definitions and additional text to describe the new form of disposition. The common factor between cremation, alkaline hydrolysis and natural organic reduction is the use of a facility and equipment to accelerate the reduction of human remains. Cremation and alkaline hydrolysis (AH) reduce human remains to bone fragments and natural organic reduction (NOR) to soil.

It is CANA's position that natural organic reduction is a unique form of disposition, not a type of cremation or alkaline hydrolysis, and should be regulated separately.

Definitions

The Cremation Association of North America (CANA) defines cremation in the following manner: "The mechanical and/or thermal or other dissolution process that reduces human remains to bone fragments." Cremation includes the processing of the bone fragments, often accompanied by their pulverization. CANA's definition covers a variety of technologies that may be applied to achieve reduction to bone fragments, including traditional flame-based cremation, calcination, and alkaline hydrolysis.

Alkaline hydrolysis fits the definition of cremation as a process that uses water, alkaline chemicals, heat, and sometimes pressure and agitation, to accelerate natural decomposition, leaving bone fragments and a neutral liquid called effluent. Like flame cremation, these fragments are often pulverized to be unrecognizable as bone. In both cases, the cremated remains are often referred to as "ashes."

Natural organic reduction (NOR) is generally defined as **the contained, accelerated conversion of human remains to soil**. During NOR, the human remains are placed in a large container or similar vessel together with straw, wood chips, and/or other natural materials for a predefined period of time. By the time the process has run its course, and potentially with the help of mechanical pulverization, no recognizable bones or bone fragments remain. Practically speaking, natural organic reduction more closely resembles natural burial, except that with

NOR the final resting place of the remains/soil will be in a location other than where the conversion process took place. Natural organic reduction is a unique form of disposition.

The language used in this position statement to refer to NOR is the scientific or legal terms commonly used. There are additional terms that have been coined by practitioners and used for marketing purposes; i.e. Recomposition or Terramation. The general public and media tend to describe the process as human or body composting.

Comparison of Reduction of Human Remains Processes*

	Cremation	Alkaline Hydrolysis	Natural Organic Reduction
May remains be embalmed?	Optional	Optional	No
May casket/container be used during the disposition process?	Yes; most states require a leak-resistant, rigid and combustible container.	No	No
May shroud/clothing be used?	Yes	Only silk, wool, bioplastic or other protein-based materials	Limited options (preferably none). Any barrier between the body and the soil delays the process.
How long does process take?	1.5-3 hours	4-24 hours	45-365 days
What remains?	“ashes” — burned remnants of bone, mostly calcium phosphates, with some other minor minerals	“ashes” — hydrolyzed remnants of bone, mostly calcium phosphates, with some other minor minerals.	A cubic yard of soil

* Please note that funeral services before or after disposition may involve additional products and services.

Suggested Guidelines

Several states and provinces have legalized NOR as a method of disposition and the text of these laws and regulations is available for review in the Resource list at the end of this document. When contemplating legislation and related regulations concerning NOR, it is important to understand that current disposition laws and regulations may be sufficient to address matters including, but not limited to, transportation, storage, identification, authorization or right to control final disposition.

NOR is unique in the equipment used, the technological processes and interaction with municipal agencies. CANA outlines guidelines for consideration in new and revised regulations and legislation:

- 1) States and provinces should legalize natural organic reduction as a distinct form of disposition, separate from burial, cremation and alkaline hydrolysis.
- 2) States and provinces should utilize common, legal terms in legislation and avoid proprietary or trademarked terms.
- 3) Laws and regulations relating to record keeping, chain of custody, and identification should be in place and may be similar to those governing other forms of disposition.
- 4) Coordination with other regulatory agencies is advisable. Agencies include, but are not limited to departments of public health, departments of natural resources or land use, environmental protection agencies, and potentially more specific to the state/province/county/city or other jurisdictions. The US Composting Council sets standards for composted soil.
- 5) The end product from natural organic reduction processes is soil and not identifiable as human remains. Once the human body is reduced to soil, it loses all physically identifying characteristics as human body (e.g., DNA traces).
- 6) The soil produced from human natural reduction is often more than one cubic yard. At this volume, the final placement of the soil is an important consideration. Some of this soil could be contained in an urn or keepsake jewelry. Procedures for scattering need to be addressed to reflect the volume of soil when scattered in whole or part on land not belonging to the recipients of the soil. The burden is on the consumer to determine where appropriate permanent placement may be which presents an opportunity for NOR operators to offer options and for cemeteries to update policies regarding placement of NOR remains.

Other considerations:

- For the regulation of the NOR equipment and technology, CANA defers to authorities such as the United States Centers for Disease Control and American Society of Mechanical Engineers to set standards and local regulators to set standards. Washington State's standards are currently the most comprehensive of existing regulations. They dictate that natural organic reduction facilities must:
 - Only use a contained reduction vessel that is designed to promote aerobic reduction and minimizes odors and vectors;
 - Employ a licensed natural organic reduction facility operator;

- Comply with all other applicable local, state, and federal laws and regulations; and
- Reach a minimum temperature of 131 degrees Fahrenheit for seventy-two consecutive hours during the reduction process.
- State and provincial regulatory authorities that govern funeral providers should be authorized to regulate and license NOR providers. Additionally state, provincial and other municipal authorities that will govern NOR will need to participate in the development and enforcement of these regulations.
- Non-organic implants must be removed prior to scattering or soil placement.
- The presence of prion disease infection, mycobacterium tuberculosis infection, or Ebola virus disease infection may prohibit this form of disposition.
- Embalming human remains or body parts may prohibit this form of disposition.

Resource List

LINKS to **Washington, Oregon, Colorado**, Vermont, California and New York, MN laws

1. Washington Enacted Legislation – Senate Bill 5001 (Effective May 1, 2020):
<https://app.leg.wa.gov/billsummary?BillNumber=5001&Initiative=false&Year=2019>
2. Oregon Enacted Legislation – House Bill 2574 (Effective January 1, 2022; Operative July 1, 2022): <https://olis.oregonlegislature.gov/liz/2021R1/Measures/Overview/HB2574>
3. Colorado Enacted Legislation – Senate Bill 21-006 (Effective September 17, 2021):
<https://leg.colorado.gov/bills/sb21-006>
4. Vermont Enacted Legislation – House Bill 244, Act 169 (Effective January 1, 2023):
<https://legislature.vermont.gov/bill/status/2022/H.244>
5. California Enacted Legislation – Assembly Bill 351 (Effective January 1, 2027):
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB351
6. New York Proposed Legislation – Assembly Bill 382 (Prefiled January 6, 2021):
<https://www.nysenate.gov/legislation/bills/2021/A382>
7. Minnesota Proposed Legislation – Senate Bill SF3045 (Introduced February 15, 2022):
<https://www.revisor.mn.gov/bills/bill.php?view=chrono&f=SF3045&y=2022&ssn=0&b=senate#actions>

CANA Model Cremation Law and Explanation:

<https://www.cremationassociation.org/PositionStatements>

CANA Position Statement on Alkaline Hydrolysis:

<https://www.cremationassociation.org/PositionStatements>

LINK to blog post: <https://www.cremationassociation.org/blogpost/776820/481214/Is-Human-Composting-Really-a-Thing>