



# GREEN BURIAL & CREMATION

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A GUIDE TO SUSTAINABLE MEMORIALIZATION



HERITAGE  
— FUNERAL & CREMATION —

# **GREEN & SUSTAINABLE** FUNERALS & BURIALS

Our understanding about how our decisions affect the environment continues to grow. As a result, more and more people want to make choices that minimize activities or products that adversely affect the environment.

This guide is an introduction to sustainable options and alternatives for your final resting place.

Our goal is to provide you with information so that you can make an informed choice regarding the sustainable alternatives available to you today. It is our hope that the information in this guide will assist you in this process and clarify those choices in line with your values.

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[www.heritagefunerals.com](http://www.heritagefunerals.com)

(509) 838-8900

508 North Government Way Spokane, WA 99224



# THE ENVIRONMENTAL IMPACT OF CONVENTIONAL BURIAL

Choosing a green burial or cremation is an important step to minimize the negative impact on the environment resulting from conventional methods of burial, cremation, and interment. Below are estimates of the annual impact on the environment in the United States derived from traditional methods:



**4.3M**  
GALLONS  
**EMBALMING  
FLUID**



**60,000**  
TONS  
**STEEL**  
FOR CASKETS



**1.6M**  
TONS  
**REINFORCED  
CONCRETE**  
FOR GRAVE VAULTS



**20M**  
BOARD FEET  
**HARDWOODS**  
FOR CASKETS



**17,000**  
TONS  
**COPPER & BRONZE**  
FOR CASKETS

## GREEN ALTERNATIVES

If you want choices with fewer consequences, green burial or cremation may be right for you or your loved ones. There are green alternatives available to ensure that our final resting place is gentle on our world.



# GREEN ALTERNATIVES FOR CREMATION & BURIAL

As we understand more about the environmental impact of the choices we make every day, it is appropriate to consider the impact that our final resting place may have.

Heritage Funeral & Cremation and Fairmount Memorial Association are pleased to be the first in the Inland Northwest to provide alternatives that are more sustainable and provide a more carbon neutral alternative to traditional methods of caring for the body and interment.

Aside from the environmentally friendly aspects of green burials, sometimes a simpler approach to laying a loved one to rest can feel more personal and meaningful.

We encourage you to consider three aspects of green burial to assist you in determining the options that align with your values and priorities. These three areas are:



## DISPOSITION OF THE BODY

CREMATION OR  
BODY BURIAL?

Cremation or body burial are the two primary options that should be considered.

While traditional, heat-based cremation has generally been accepted as more environmentally friendly, it is not perfect. Body burial - with its use of caskets, vaults, and consumption of land - can be even more problematic.

Fortunately, there are alternatives for both options that address these concerns.



## SUSTAINABLE INTERMENT

GREEN FUNERALS  
& BURIAL

For either body burial or cremation, the next question is how and where the body or remains should be preserved or maintained - the interment.

Cemeteries and memorial parks are increasingly providing sustainable options that allow families to select choices with a lower carbon footprint, while also ensuring to preserve your legacy with dignity.



## ECO-FRIENDLY MATERIALS

BIODEGRADABLE  
CASKETS & URNS

The materials used in the process of preparing a body for interment, as well as for memorials, urns, and other items, require consideration of the emissions and byproducts created in the process of production for those materials, as well as their long term impact.

Fortunately, there are an increasing number of sustainable caskets, urns, markers and monuments that address these concerns.



# WATER CREMATION

## AN ECO-FRIENDLY OPTION

### AQUAMATION / ALKALINE HYDROLYSIS

While cremation is considered more environmentally friendly than burial, the requirement of heat for traditional cremation has drawbacks: It releases potentially harmful toxins into the environment and requires a lot of energy.

Water cremation, using a process called alkaline hydrolysis (also referred to as *aquamation*), uses *water* and *potassium hydroxide* to reduce the body to ash without requiring the consumption of energy to produce flames at the required temperature. This process uses less energy and avoids releasing any of those harmful toxins.



**NO BURNING OF  
FOSSIL FUELS**



**NO DIRECT EMISSIONS  
OF HARMFUL  
GREENHOUSE GASES  
OR MERCURY**



**1/7 OF THE ENERGY  
REQUIRED**

Water cremation breaks down bodily tissue using microscopic bacteria - the same natural process that occurs when a body is buried in the ground. Whereas the enzymatic process for ground burial relies on *soil bacteria*, water cremation replicates this process through the use of an alkali-based solution and heated water.

This gentle method speeds up the natural process, allowing for a low impact, cremation alternative.

### **PRESERVING THE ENVIRONMENT. PRESERVING YOUR MEMORY.**

Family members and loved ones will still be able to receive ashes as with traditional cremation, but you can trust that the process of getting there is better for the environment.

The financial cost is comparable to what you would pay for a flame-based cremation or traditional funeral.



# SUSTAINABLE CHOICES FOR CREMATION & BURIAL

Cremation or body burial are the two primary options that most people choose. Eco-friendly solutions are available for either choice.



## CREMATION



### TRADITIONAL CREMATION

Cremation is generally considered to be more green than traditional burial, and in many ways, it is.

However, traditional cremation requires heat. In fact, it takes 100,000 BTUs of heat energy - equivalent to the consumption of 20 gallons of gas.

When multiplied by the one million cremations that are performed each year, the carbon footprint of cremation is considerable.

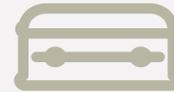
Fortunately, there is a green alternative: alkaline hydrolysis.

### ALKALINE HYDROLYSIS

Alkaline hydrolysis, also known as liquid cremation, biocremation, aquamation, or resomation, is the process of dissolving the remains in an alkaline solution.

While the process may sound like it uses dangerous chemicals, it's actually a mixture of water and potash (potash is a water-soluble potassium salt).

The process works in much the same way that a body would naturally decompose in soil, except at an accelerated rate. In nature, your body takes anywhere from 10 to 50 years to decompose to a skeleton; with alkaline hydrolysis, the process can take anywhere from two to 12 hours.



## BODY BURIAL



### NATURAL BURIAL

Traditional burial produces 250 lbs. of carbon, whereas green burial sequesters 25 lbs. of carbon.

Green burial reduces the carbon impact through a combination of practices:

- ⌘ Foregoes toxic embalming
- ⌘ Does away with vaults
- ⌘ Chooses biodegradable containers, caskets, shrouds, and urns
- ⌘ Discontinues herbicides, pesticides, fertilizers
- ⌘ Encourages sustainable management practices
- ⌘ May use GPS units or non-native stone markers to mark grave sites
- ⌘ May support land conservation efforts

### COMPOSTING

While composting is not normally associated with interment, this new approach has the least impact on the environment of any other method.

Sharing some attributes with the natural burial method, composting primarily focuses on nature's natural microbial activity to break the body down into soil, which can then go on to nourish the surrounding environment.



# GREEN BURIAL

## A RETURN TO NATURAL BURIAL

### A SUSTAINABLE APPROACH TO BODY BURIAL

Green burial, also referred to as natural burial, is any burial that selects burial alternatives with the intention of avoiding the negative environmental effects common to traditional methods and materials.

Embalming of the body, or the use of outer protective vaults for a casket, are examples of these traditional practices. Contrary to a common belief, neither embalming nor a vault is legally required for body burial, although is often required by many cemeteries.

These practices are chosen out of tradition or cemetery rules. Green burial provides the option to skip the use of chemicals and substances used in conventional burial that can be damaging to the earth.

What we call green burial today would have been known as traditional burial for all of human history up until the 20th century.

In a green burial, the deceased is not embalmed with toxic chemicals. Instead, the body is either left in its natural state or embalmed with non-toxic, formaldehyde-free fluids. Only biodegradable materials are used, such as natural-fiber shrouds and caskets made of pine, wicker, bamboo, or paper. There is no concrete vault or liner placed around the casket, so the body is in direct contact with the earth.

Caskets and vaults used on conventional burial are implicitly designed to prevent the decomposition of the body. Whereas with green burial the caskets and shrouds (used to wrap the body) are designed to facilitate and encourage the decomposition process (and decompose themselves). The purpose is to enable the natural, organic decomposition of the body over time.



*A biodegradable container with a body shroud used in green burial.*



*With conventional burial, the casket is placed inside a concrete vault. Natural burial avoids the use of concrete vaults.*



# SUSTAINABLE INTERMENT AT HARMONY WITH NATURE

Burial grounds or cemetery sections designed for green burial prioritize the minimization of impediments to decomposition. That means no embalming, no liners, or vaults, and using biodegradable containers, whether caskets, shrouds, or nothing at all. But green burial also considers how the site is prepared, maintained, and managed.

It is common for cemeteries to use a backhoe for digging the grave. Backhoes are not permitted with green burial, but instead the grave is dug by hand with shovels. Cemetery staff can perform this task, but some families prefer to take part in this process.

Because a green burial grave does not need to be as deep or wide as a conventional grave, it is more practical for the body to be lowered into the grave using strips of canvas or rope, instead of a mechanically operated device.



The green burial grounds are also designed and managed to minimize their environmental impact. Preserving the natural vegetation and minimizing disruption to the area is paramount, as are restrictions on the use of any artificial pesticides, landscape watering or grounds maintenance using carbon-fueled machinery or tools.



# GREEN FUNERALS

## TRIBUTES CONNECTED TO THE EARTH

One of the reasons a family might choose a green burial is because it can provide a more loving and personal experience for saying goodbye to those who have passed away. For example, mourners may choose to participate in nearly every aspect of the burial process, from digging the grave and transporting the body, to lowering the body into the ground, and filling the grave.

For many people, participating in the green burial ritual gives them peace and helps them with the grieving process in a way that a conventional service — for some, a more sterile experience — doesn't.

Once the body has been placed into the grave, the casket or carrier is then filled with a layer of leaves, grass, and flowers followed by compost and soil.





# NATURAL MARKERS

## MINIMIZE DISRUPTION

In contrast to the engraved polished marble or granite monuments that are so common in traditional cemeteries, a green burial seeks to minimize disruption to the natural environment by using natural materials as markers.

Natural stone markers are a preferred method given their durability and harmony within the context of nature. Depending on the rules of the cemetery, families may consider other natural objects for a marker, such as a tree or native fieldstone.



*Naturally formed basalt columns are native to the Inland Northwest and a popular option.*

*Natural stone markers are subtle yet dignified markers for a cherished loved one.*



# EARTH-FRIENDLY URNS

## SUSTAINABLE CREMATION OPTIONS

As with traditional cremation, green cremation provides for the remains to be returned to the family for burial or scattering.

If they are buried, the ashes are placed in a biodegradable container designed to break down within days or months.

### BIODEGRADABLE URNS:

#### Biodegradable Urn

*An urn made of materials that is designed to decompose in time, returning the cremated remains (and the urn) back to nature.*



#### Himalayan Rock Salt

*An urn made of Himalayan rock salt designed to decompose into the natural environment*



#### Cast Paper Urn

*Another material available that provides for earth-friendly decomposition.*



#### A Living Urn

*An urn where the remains are combined with mulch, nutrients and seeds to produce a tree and continue the cycle of life with a lasting memorial.*



# FAQ

## FREQUENTLY ASKED QUESTIONS

### WHO DEFINES STANDARDS FOR GREEN BURIAL?

The Green Burial Council provides the criteria and standards for green burials. Certification of the processes and materials fall into different levels of certification levels - hybrid, natural, and conservation.

### WHY AREN'T CONCRETE BURIAL VAULTS NOT GREEN?

While the concrete and metal in vaults may be considered “natural” to some, the manufacturing and transporting of vaults uses a tremendous amount of energy and causes significant carbon emissions. In the US, vault manufacturing requires the production of 1.6 tons of reinforced concrete annually. No state legally requires a vault purchase - individual cemeteries determine their own vault requirements.

### WHAT IS REQUIRED FOR A SHROUD BURIAL?

A shroud burial is usually just that — a body wrapped in a biodegradable shroud lowered into a grave. While burial garments may be used, often by followers of certain religious customs, they are neither required or discouraged as a matter of course. Some shroud burials also include a casket for ease of processions and lowering, but the main determining factor is the cemetery’s own policy and guidelines, usually written into their bylaws.

### HOW DOES A SHROUDED BODY GET TO THE GRAVE?

Many cemeteries have a vehicle for moving shrouded and casketed bodies, including retrofitted golf carts, wagons, trailers, or other wheeled conveyances. Some families choose to conduct a procession with pallbearers. The pallbearers would either carry the casket on their shoulders or, for shroud burials, through carrying handles on the shroud board.

### WILL ANIMALS DIG UP BURIED BODIES?

No. Burials occur 3.5 feet under the ground with, at minimum, an 18-inch scent barrier. Animals are much more interested in *living* prey *above ground* than in working that hard.

### HOW LONG DOES DECOMPOSITION TAKE?

Depending on soil type, oxygen availability, and moisture present, it takes on average 6 weeks to lose the majority of soft tissue through moisture absorption by the soil, and up to 2 years for complete decomposition. It may take up to twenty years for bones to absorb in moist soils.



# FAQ

## FREQUENTLY ASKED QUESTIONS

### **HOW LONG DOES ALKALINE HYDROLYSIS TAKE?**

The green cremation or alkaline hydrolysis process takes 6-8 hours, or 18-20 hours depending on the operating temperature of the equipment. The 6-8 hour process takes place at 300° F, and the 18-20 hour process takes place at 200° F. Traditional flame cremation, for comparison, takes 1-3 hours and takes place at 1600-1800° F.

### **IS A CASKET OR CONTAINER REQUIRED FOR GREEN CREMATION?**

No. Unlike flame cremation, a box or casket is not used in the process. These materials will not break down in the aquamation process, nor will clothing unless it is protein-based (silk, wool, or leather). In states that require an alternative container, the body will be placed in a special material that safely biodegrades in the process. There are also beautiful silk and or wool shrouds the family can choose for this process that are similar in appearance to those used for natural burial.

### **CAN A MEMORIAL SERVICE BE HELD AFTER GREEN CREMATION?**

Yes. Many families choose to have a memorial service or celebration of life to honor the life of their loved one and gather with friends and family.

### **ARE THE REMAINS FROM GREEN CREMATION SAFE TO HANDLE?**

Yes, the ash remains are 100% safe to handle, pathogen and disease free. Alkaline hydrolysis is a proven sterilization process.

### **CAN THE FAMILY STILL HAVE A VIEWING WITH GREEN CREMATION?**

Yes, in fact many families choose to have a full-service visitation for family and friends prior to the green cremation process. There are funeral professionals who can perform a visitation service with or without traditional embalming, as the family chooses.

### **WHAT CAN BE DONE WITH THE ASHES?**

Anything that can be done with traditional cremation ashes are available for green cremation. An environmentally conscious choice may be to bury the remains in a biodegradable urn in a dedicated green burial section at a cemetery. There are also numerous memorial products that can be made with the ashes - hand blown glass memorials, ceramic art pieces, man-made diamonds, memorial plantings for your garden, and many more.

### **CAN THE BODY BE EMBALMED?**

Yes, this is a choice that is in the hands of the individual or family. All embalming fluids are completely broken down in the process.



# TAKING THE NEXT STEP

## CONTACT US TO CREATE YOUR PLAN

We hope that you found this guide useful in understanding the choices available to you to limit the impact of your final resting place on the environment.

If you have more questions or would like to learn more about how you can create a plan to put in place for yourself or a loved one, contact us at Heritage Funeral & Cremation and we would be honored to assist you in any way we can.

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