



Comparing Footprints:

The Environmental Impact Of Funeral Choices

by Earth Funeral



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Introduction

If you care about the environment, you're probably asking "What's the most eco-friendly way to handle my body after I die?"

It's a smart question, and you're not alone. Nearly 7 out of 10 Americans want green funeral options.

Every year, 3 million Americans die, and our funeral choices have a massive environmental impact:

- Cemeteries cover 2 million acres
- Cremation releases 360,000 tons of CO₂ annually
- Funerals bury 2.5 million gallons of toxic chemicals each year

The good news? You have better options than ever before.

This guide gives you the facts on five real options:

- Traditional burial
- Cremation
- Aquamation
- Green burial
- Soil transformation

You'll learn:

- Which options help the environment (and which ones hurt it)
- What each choice means for the planet 50 years from now
- How planning ahead protects both your family and your values

Whether you're planning for yourself or helping a loved one, this guide will help you choose with confidence.

Traditional Burial

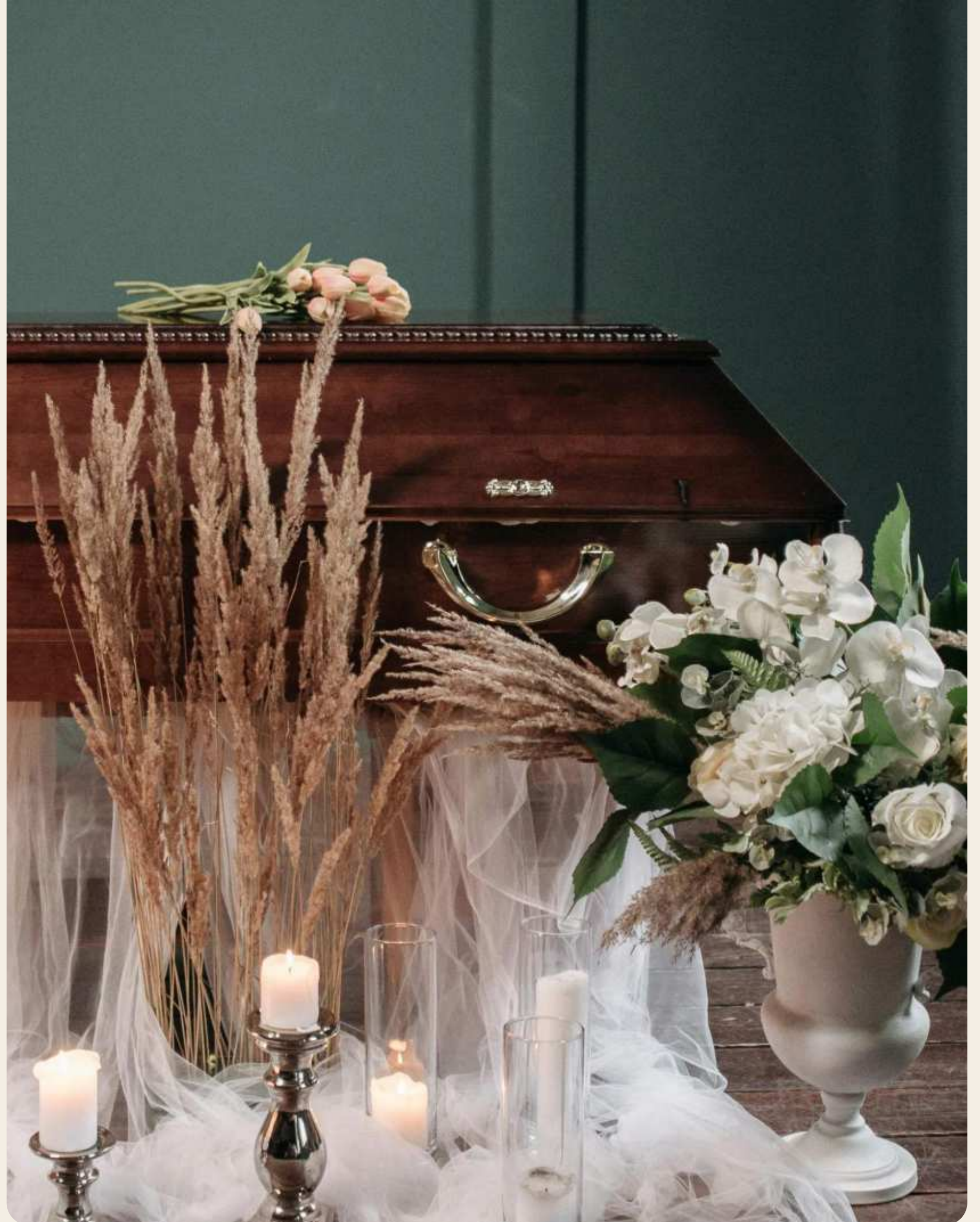
Traditional burial is what most Americans think of as a "normal" funeral. The practice started during the Civil War and hasn't changed much since.

The process involves embalming the body with chemicals, placing it in a casket, and burying it at a cemetery.

Traditional burial has been the standard for generations, but it's losing popularity. It's the most expensive option available, and the environmental impact is significant.

U.S. cemeteries cover 2 million acres—more land than Los Angeles, Chicago, New York City, and Houston combined. That's enough space for approximately 8 million homes.

These costs explain why more Americans are looking for better options.



How Traditional Burial Works

- **Body Preparation:** The body is embalmed with formaldehyde-based chemicals, methanol, phenol, and glycerin to delay decomposition for viewing and transport.
- **Casket Selection:** The body is placed in a casket made from steel, expensive hardwoods, or bronze with decorative finishes.
- **Grave Preparation:** The burial site is dug approximately 6 feet deep.
- **Vault Installation:** A concrete vault is placed in the grave to hold the casket and prevent ground settling.
- **Interment:** The casket is placed inside the concrete vault, covered with a concrete lid, then backfilled with soil.
- **Memorialization:** A permanent headstone marks the grave. The cemetery requires perpetual maintenance—mowing, watering, pest control, and landscaping.

Environmental Factor	Rating	Details
Carbon Emissions	High	Single burial <u>generates between 330-440 pounds of CO₂</u> from embalming, casket/vault production, and cemetery upkeep
Energy Use	High	High energy embodied in materials (steel, concrete, hardwood) and cemetery operations
Water Usage	High	Cemeteries use massive amounts of water for irrigation and maintenance—the largest US cemetery uses <u>293 million gallons</u> annually
Land Use Impact	Very High	Requires permanent cemetery space, contributes to urban sprawl and habitat loss, creates "single-use" land
Chemical Usage	Severe	Uses <u>2.5 million gallons of embalming fluid annually</u> in the US, including nearly 100,000 gallons of toxic formaldehyde, a known carcinogen
Resource Consumption	Very High	Uses 20 million board feet of hardwood, 1.6 million tons of concrete, 17,000 tons of copper/bronze, 64,500 tons of steel <u>annually</u> in the US
Output	Harmful	Non-biodegradable materials persist indefinitely with risk of toxic leaching
Long-Term Impact	Negative	Permanent land occupation, toxic chemical persistence, soil/groundwater contamination for decades

Traditional Burial In 50 Years

In just 5 years, traditional burial will use enough resources to build 150,000 homes—while releasing 500,000 gallons of formaldehyde into the ground.

If we continue for 50 years, we'll face an environmental crisis. Millions of gallons of toxic chemicals will transform cemeteries into slow-release contamination sites. These are the same substances that require evacuation and emergency response when just one gallon spills.

We'll also waste millions of acres needed for housing, while burying an entire city's worth of construction materials underground every few years.

When concrete vaults and steel caskets inevitably deteriorate, communities will face substantial cleanup costs for what was marketed as "permanent" burial. By then, traditional burial will likely be viewed as environmentally costly and outdated as other practices society has abandoned.

Cremation

Cremation burns human remains in purpose-built furnaces at temperatures of 1,400–1,800°F for 2–3 hours.

This method has become increasingly popular mainly due to its flexibility and lower cost. With a median cost of \$6,280 it's often less expensive than traditional burial. Families also appreciate that there's no grave to maintain, and having multiple options for the ashes.

This convenience comes at an environmental cost. Annually in the US, cremation releases 360,000 tons of CO₂, equivalent to powering 31,500 homes for an entire year and requiring a forest 20 times the size of Manhattan to offset.



How Cremation Works

- **Body Preparation:** Staff remove medical devices and metal jewelry. The body is placed in a simple cardboard or wood container. No embalming is needed unless there's a viewing.
- **High-Temperature Process:** The container and body are placed in an industrial furnace that operates on natural gas at 1,400–1,800°F for 2–3 hours.
- **Emissions:** The process releases CO₂, water vapor, and other gases into the atmosphere despite modern equipment designed to reduce smoke and odor.
- **Cooling and Processing:** After burning, staff remove bone fragments and metal pieces. Magnets separate metals for recycling. A machine grinds bone fragments into fine ash.
- **Final Product:** The process creates 3–7 pounds of ashes that are placed in an urn.
- **Memorialization:** Families can keep the ashes, scatter them, bury them, or place them in a memorial wall.

Environmental Factor	Rating	Details
Carbon Emissions	High	Produces <u>535 lbs of CO₂ per cremation</u>
Energy Use	High	Requires natural gas or propane to maintain 1,400-1,800°F for 2-3 hours
Water Usage	None	No direct water usage in process
Land Use Impact	None	No burial plot needed; ashes can be stored, scattered, or kept in urns
Chemical Usage	Minimal	No embalming needed, though chemicals from medical implants may be present
Resource Consumption	Low	Uses lightweight containers and fossil fuels; avoids heavy caskets and vaults
Output	Moderate	Creates 3-7 lbs of ash plus air pollutants (CO ₂ , nitrogen oxides, carbon monoxide, sulfur dioxide, particulate matter)
Long-Term Impact	Negative	Cumulative emissions impact air quality; untreated ashes can disrupt soil and water health

Cremation In 50 Years

In the next 5 years, cremation will emit enough CO₂ to power 150,000 homes for an entire year.

If cremation rates continue growing over the next 50 years, we'll face an air pollution crisis that undermines climate goals and adds over 27 billion pounds of CO₂ to the atmosphere.

Mercury from dental fillings will continue contaminating air, water, and food chains despite filtering systems. Other pollutants—nitrogen oxides, carbon monoxide, sulfur dioxide, and harmful particulates—will worsen urban air quality. As society transitions to clean energy, cremation's dependence on fossil fuels and extreme heat will make it increasingly outdated and expensive.

Stricter air pollution regulations will likely force costly upgrades to cremation facilities. Environmental damage from scattered ashes—which harm flora and fauna due to high pH levels and sodium content—will become more apparent, driving people toward better alternatives.

Aquamation

Aquamation, also called alkaline hydrolysis or water cremation, uses water, heat, and alkaline chemicals to break down the body.

This water-based method gives families similar results to cremation—ash-like remains that you can keep, scatter, or bury. The process dissolves soft tissue while preserving bones, which are then ground into fine powder.

Aquamation costs more than regular cremation but less than traditional burial. However, it's less commonly available due to higher equipment costs and specialized facility requirements. Its reputation as a cleaner option is driving growing interest across the country.



How Aquamation Works

- **Body Preparation:** The body is placed in a stainless steel chamber, wrapped in cloth or a biodegradable container. Staff remove pacemakers, but other medical devices typically remain. No embalming is needed.
- **Water Setup:** The sealed chamber is filled with 300–400 gallons of water mixed with 5% alkaline solution (potassium or sodium hydroxide) and heated to 300°F under pressure.
- **Chemical Breakdown:** The process runs 4–8 hours. Water, heat, and alkalinity dissolve soft tissues into basic building blocks while destroying pathogens.
- **Liquid Disposal:** The sterile, coffee-colored liquid is drained and discharged to municipal wastewater systems or treated according to local regulations.
- **Bone Processing:** The remaining softened bones are rinsed, dried, and ground into fine white powder.
- **Memorialization:** Families receive the ash in an urn while metal devices are recycled.

Environmental Factor	Rating	Details
Carbon Emissions	Low	Produces <u>90% less carbon emissions</u> than cremation
Energy Use	Low	Uses <u>90% less energy</u> than cremation
Water Usage	High	Uses <u>300 - 400 gallons</u> per body
Land Use Impact	None	No land footprint required
Chemical Usage	Moderate	Uses alkaline chemicals (potassium or sodium hydroxide) that are neutralized by the end of the process
Resource Consumption	Low	Primary resources are electricity, water, and small amounts of common industrial chemicals
Output	Minimal	Liquid effluent is sterile and safely discharged
Long-Term Impact	Neutral	No burial footprint

Aquamation In 50 Years

Aquamation could become the funeral industry's middle-ground choice, eliminating cremation's emissions while trading air pollution for water usage.

When powered by clean energy, aquamation produces virtually no carbon emissions and eliminates the mercury pollution associated with cremation.

However, widespread adoption would dramatically increase water usage, which could become problematic as climate change makes fresh water increasingly precious. While future technology might develop water recycling systems, some regions may lack equal access without significant facility improvements.

By 2075, aquamation may be viewed as an excellent choice for families wanting cremation-like results without climate impact. However, environmentally conscious individuals will likely choose methods like human composting that use less water and actively help restore nature.

Green Burial

Green burial works the way nature intended. This method eliminates embalming chemicals, non-biodegradable caskets, and concrete burial vaults, following a simple "dust to dust" philosophy. Bodies decompose naturally within designated natural areas that are often permanently protected.

Green burial currently handles about 5% of all burials but represents one of the fastest-growing funeral options, with 68% of Americans saying they would explore green funeral options for environmental benefits.

While green burial costs are comparable to or less than traditional burial, families appreciate knowing their choice helps restore wildlife habitat.



How Green Burial Works

- **Body Preparation:** No embalming chemicals are used. The body is kept cool through refrigeration or dry ice and may be washed and dressed in biodegradable clothing or wrapped in natural fiber cloth.
- **Container Selection:** The body is placed in containers made from biodegradable materials—such as untreated pine wood, wicker, bamboo, cardboard, or simple cloth wrapping.
- **Grave Preparation:** Graves are dug 3–4 feet deep, keeping the body in the active soil layer where it supports beneficial microorganisms.
- **Natural Burial:** No concrete vaults or grave liners are used. The body in its natural container is placed directly into the earth, allowing immediate soil contact for natural decomposition.
- **Natural Markers:** Graves are marked with natural stones, small wooden plaques, or GPS coordinates. Many sites plant native trees or wildflowers on burial sites.
- **Memorialization:** Green burial grounds function as nature preserves with walking trails and wildlife habitat.

Environmental Factor	Rating	Details
Carbon Emissions	Carbon Negative	Sequesters <u>25 lbs</u> of carbon per burial
Energy Use	Very Low	No embalming, vault, or casket manufacturing; minimal fossil fuel use
Water Usage	Low	No irrigation or maintenance required in natural burial preserves
Land Use Impact	High	Still requires burial plots, though typically higher-density than conventional cemeteries
Chemical Usage	None	No embalming or chemical treatments; avoids soil/water contamination
Resource Consumption	Low	Uses biodegradable shrouds or untreated wood/bamboo caskets
Output	None	Body and container decompose naturally; returns nutrients to soil
Long-Term Impact	Positive	Supports conservation; burial preserves often double as protected green spaces with carbon sequestration and biodiversity benefits

Green Burial In 50 Years

Continued green burial adoption could eliminate the materials and chemicals of traditional cemeteries, while trading land use for carbon sequestration.

Over the next 50 years, green burial could create thousands of acres of thriving conservation parks, serving as wildlife refuges and ecological corridors within increasingly developed regions. These natural burial grounds would evolve into ecosystems that improve with age, storing carbon in plants and soil while providing climate benefits like reducing urban heat and managing stormwater.

Eliminating millions of gallons of toxic chemicals and reducing demand for casket wood, metals, and concrete vaults would conserve significant resources and improve local water quality as embalming chemicals are phased out.

By 2075, green burial may overcome cultural barriers entirely, becoming viewed as both honorable and practical—creating landscapes where visiting a loved one's grave means walking through a thriving forest.

Soil Transformation

Soil transformation, also called natural organic reduction, human composting, or terramation, transforms the body into nutrient-rich soil. This process accelerates what happens naturally on a forest floor, only faster, safer, and in a controlled environment.

Over 30–45 days, the body naturally breaks down with help from organic materials like mulch, wood chips, and wildflowers into living soil that supports new life.

Soil transformation eliminates embalming chemicals, expensive caskets, and burial plots while typically costing less than traditional options. Nearly half of Americans find this appealing because they want their final act to benefit future generations.



How Soil Transformation Works

- **Body Preparation:** The body is wrapped and placed in a reusable container with organic mulch, wood chips, and wildflowers.
- **Controlled Environment:** The sealed vessel maintains 131–160°F with proper moisture and airflow for beneficial microorganisms.
- **Transformation:** Over 30–45 days, microorganisms break down all organic matter completely, safely processing medications and pathogens while retaining valuable nutrients.
- **Bone Processing:** Soft tissues decompose fully while softened bones and teeth are reduced to powder and incorporated into the soil.
- **Soil Creation:** Each body creates one cubic yard of nutrient-rich soil ready to support plant growth.
- **Memorialization:** Families choose how much soil they'd like returned for personal gardens or memorial plantings. The remainder goes to conservation projects and reforestation efforts.

Environmental Factor	Rating	Details
Carbon Emissions	Carbon Negative	Stores 600-800 lbs of carbon per person when soil is used for restoration
Energy Use	Very Low	Uses far less energy than cremation; powered by renewable sources
Water Usage	Minimal	Uses very little water, only for moisture balance in vessels
Land Use Impact	None	No burial land needed; soil can be used in gardens or conservation
Chemical Usage	None	No embalming or synthetic chemicals at any stage
Resource Consumption	Very Low	Only organic materials like mulch, wood chips, and wildflowers; no casket, vault, or toxic inputs
Output	Beneficial	Creates 1 cubic yard of nutrient-rich soil that helps ecosystems
Long-Term Impact	Positive	Restores ecosystems, supports reforestation, improves soil health

Soil Transformation In 50 Years

Soil transformation eliminates the downsides of current funeral practices while fundamentally reshaping our relationship to death.

If human composting becomes widely adopted over the next 50 years, we could transform death from an environmental problem into active planetary healing. Each person choosing this method prevents CO₂ emissions while creating soil that helps trees capture even more carbon for decades—a multiplying benefit that could sequester millions of tons of greenhouse gases annually.

Communities could convert existing cemetery land into parks and nature preserves, freeing thousands of acres for housing, habitat, and recreational spaces. Rather than visiting somber graveyards, families would tend living memorials that invite ongoing connection.

By 2075, human composting may be recognized as the choice that helped heal damaged ecosystems, combat climate change, and transform how we view death, making death an act of environmental restoration rather than environmental harm.

Plan Ahead And For The Planet

	Soil Transformation	Green Burial	Aquamation	Cremation	Traditional Burial
Carbon Emissions	Carbon Negative	Carbon Negative	Low	High	High
Energy Use	Very Low	Very Low	Low	High	High
Water Usage	Minimal	Low	High	None	Low
Land Use Impact	None	High	None	None	Very High
Chemical Usage	None	None	Moderate	Minimal	Severe
Resource Consumption	Very Low	Low	Low	Low	Very High
Output	Beneficial	None	Minimal	Moderate	Harmful
Long-Term Impact	Positive	Positive	Neutral	Negative	Negative

Across millions of deaths in America each year, each person's funeral choice adds up.

Traditional burial practices are hard on the planet and there are viable green options that dramatically reduce CO₂ emissions, water consumption, and land use.

While the funeral industry is at a crossroads, individuals don't need to be.

For people asking "what's the most environmentally friendly burial option," the data points to [human composting](#). It creates a positive environmental impact that grows over generations, transforming death from an environmental problem into environmental healing.

Common Misconceptions About Green Funerals

As sustainable funeral choices become more popular, several myths persist about human composting, green burial, and other environmentally friendly options. Here are the facts:

"Human composting is more expensive" → FALSE

Human composting often costs less than full-service traditional funerals. Traditional burial averages \$8,300, cremation with services costs \$6,280, while Earth Funeral soil transformations begin at \$5,450 with worldwide travel protection included.

"Embalming is legally required for burial" → FALSE

No U.S. state requires chemical preservation except in rare edge cases. Funeral homes may promote embalming for profit reasons, but refrigeration works perfectly for short-term body care.

"Green funeral options aren't properly regulated" → FALSE

Human composting facilities operate under comprehensive state regulations covering permits, temperature monitoring, pathogen testing, and safety protocols. Green burial grounds follow the same health department oversight as traditional cemeteries.

"You can't have traditional funeral services with green options" → FALSE

Families can hold viewings, memorial services, and traditional ceremonies with green options. The only difference is the final disposition method used.

"The resulting soil can't be used safely" → FALSE

Families can safely use soil from human composting in home gardens, donate it to conservation projects, or plant it in memorial forests. The soil meets all safety standards for unrestricted use.

About Earth Funeral

Earth Funeral is the nation's leading provider of soil transformation services, pioneering an approach to end-of-life care that transforms death into environmental healing. We specialize in natural organic reduction—offering families a meaningful alternative that honors both their loved ones and the planet.

Our Environmental Commitment

Our process operates on 100% clean energy, produces zero net CO₂ emissions, and uses minimal water. Over 30–45 days, we transform the body into approximately one cubic yard of nutrient-rich soil that helps restore nature. Families can keep a portion for personal gardens and memorials while donating the remainder to conservation projects.



Our Expertise

Our team combines decades of funeral industry experience with cutting-edge soil science and advanced technology. We operate state-of-the-art facilities equipped with proprietary vessel technology that mimics natural conditions, providing peaceful, dignified settings for this transformative process.

Our Services

As fully licensed funeral professionals, Earth Funeral provides comprehensive services including transportation, documentation, the transformation process, and respectful return of soil to families. Our online platform simplifies arrangements while providing real-time updates and memorial resources.

The Benefits Of Pre-Planning Your Earth Funeral

Give Your Family A Gift

Pre-planning spares your family from making over 125 decisions while grieving. Only 36% of Americans have funeral plans—meaning nearly two-thirds leave difficult decisions for their survivors during vulnerable times. Your plan provides clear guidance, preventing confusion and family disagreements.

Financial Protection

Funeral costs continue rising. Pre-planning locks in today's pricing and protects against emotional overspending—when grieving families make expensive choices due to guilt and time pressure. Unprepared families face lost wages, travel costs, and rush charges—totaling up to \$34,100.

Peace Of Mind

Pre-planning creates "mortality ease"—a sense of completion that allows you to focus fully on living. Pre-planning ensures your final farewell truly represents who you are while creating positive environmental impact.

Your Will Isn't Enough

Wills often aren't reviewed until after the funeral during probate. A will might say "I want soil transformation" but won't specify which facility or how to pay. You need both a will and a funeral plan.

Take Action Today

The most common regret isn't about what was planned—it's about what wasn't planned when there was still time. Even when families think they know your wishes, they often misunderstand verbal instructions. Written plans eliminate confusion and family conflict.

Visit EarthFuneral.com to:

- Explore pricing options
- Get a custom quote
- Speak with our Care team

Choose Your Next Step

Now that you understand the environmental impact of funeral choices, take the next step toward making an informed decision that aligns with your values.

Complete Guide To Funeral Pre-Planning

Our complete guide shares insights from helping over 5,000 families, covering the emotional, financial, and practical benefits of planning ahead.

Perfect if: You want to understand all the benefits of pre-planning before beginning the process.

[View Guide](#) →

Test Your Human Composting Knowledge

Most people only answer 3 out of 8 questions correctly on our quiz. Join thousands who've tested their knowledge about this emerging burial alternative.

Perfect if: You're curious about human composting and want to separate fact from fiction.

[Take Quiz](#) →

Personalized Funeral Finder

Answer a few quick questions about your values, budget, and preferences to discover which option best fits your situation.

Perfect if: You want personalized guidance and are ready to move from research to decision-making.

[Use Funeral Finder](#) →



