

Operations Plan

Sacred Groves Conservation Green Burial Cemetery

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Preface

Sacred Groves is more than just a nonprofit or a burial option –it’s a movement, a heartfelt reimagining of how we honor life and memory. We believe that saying goodbye to a loved one should be as natural and meaningful as the life they lived. Through green conservation burial, we provide a way for people to return to the earth gently, in harmony with the land, nourishing the roots of trees in beautiful, protected Family Groves.

Our tagline, “**Green conservation burial in the root zone of trees in Family Groves,**” reflects our deep commitment to sustainability, legacy, and love. Instead of traditional cemeteries filled with concrete, headstones and toxic chemicals, we create living sanctuaries—places where trees stand as lasting tributes, where the earth is healed rather than harmed, and where future generations can walk in the shade of those who came before them.

At the heart of Sacred Groves is a revolutionary burial method we call “entreement”—a term that moves beyond “interment” or “burial”—placing loved ones in the root zones of trees. Entreement allows departed loved ones to become part of the land, nourishing the trees that will grow strong and tall in their honor. Each Family Grove, made up of three to six trees, becomes a sacred space of remembrance, reflection, and renewal. Some groves will hold existing trees, while others will welcome new ones, planted with love and care.

This approach isn't just about conservation—it's about connection. We honor those who came before us, starting with the first peoples of this land and continuing through to today's diverse communities. Sacred Groves embraces people of all backgrounds, cultures, and beliefs, offering a natural resting place that is as inclusive as it is peaceful. Winding through these serene landscapes, gentle trails invite loved ones to visit, to walk among the trees, to feel the quiet presence of those who rest there. Instead of rows of marble and concrete, we offer wildflowers, grasslands, and forests that evolve and thrive.

Sacred Groves is built on a foundation of community and collaboration. Through dialogue, partnerships, and inclusive engagement, we will shape this vision together. Our journey begins with careful planning: staff training, design workshops, and pilot programs that will lead to a full launch. Every step of the way, we are committed to environmental stewardship, thoughtful design, and the highest standards of care.

To bring this vision to life, we are actively working with conservationists, landowners, and ecological designers. We are securing permits, creating best practices, and developing spaces that will stand for generations. Fundraising will include crowdfunding, grants, and donor relationships, ensuring that we can protect and restore the land while offering families an affordable and beautiful alternative to traditional burial.

Success for Sacred Groves will be measured not only in the number of families served but in something even greater: a shift in how we think about death, memory, and our place in nature. By choosing to return to the earth in a way that heals rather than harms, we create a lasting legacy—not just for ourselves, but for the planet and for those who will come after us.

This is our mission. This is our promise. This is Sacred Groves.

Organizational Structure

Sacred Groves is organized as a Registered California Religious Corporation and an IRS 501(c)(3) Nonprofit.

Our religious status stems from being a membership organization, the Sacred Groves Society, composed of people from all faiths who share common beliefs in nature integration, and dedicated care and conservation of wild lands and natural systems..

Management Team

The management team will comprise the Board of Directors and several part-time staff. The amount of working time for staff will depend strongly on the number of grove establishments and burials, which is currently uncertain. We expect and plan to be adaptive based on the level of activity.

All staff will be overseen and accountable to the [Sacred Groves Board of Directors](https://sacredfamilygroves.org/about-us/board-of-directors/) (<https://sacredfamilygroves.org/about-us/board-of-directors/>)

The paid staff will include:

Cemetery Manager

Will oversee all operations. The cemetery manager will be licensed by the State Bureau of Consumers Affairs. If this person is unexperienced, s/he will be overseen in the initial period by an experienced, licensed Cemetery Manager

Grounds Maintenance Staff

Will care for the site and be overseen by the Ecology subcommittee of the Board of Directors.

Administrative Staff

Will execute all administrative functions, including legal and regulatory compliance, sales, finance, and so on. Some administrative work associated with fundraising and publicity is expected to be undertaken by Board members or contractors.

Cemetery Function, Layout, and Design

Interments (Entreement)

Sacred Groves will accept for interment:

1. Unembalmed bodies
2. Cremated Remains
3. Aquamation (alkaline hydrolysis) fluid
4. Human Compost (*after 2027*)
5. Pets (see below for conditions)

Following the principles of natural-green burial, Sacred Groves will not accept embalmed bodies (with case-by-case consideration of nontoxic embalming), coffins, caskets, or shrouds that are not composed of natural materials that are fully and readily biodegradable, and will not emplace any vaults or grave liners.

Prior to burial

Sacred Groves will not provide care for decedents prior to burial. Our services are limited to burial sites, ceremonies, visitation of burial sites, and directly related activities. Document preparation, body preparation, refrigeration, and transport of decedents are left to families, end-of-life doulas, funeral homes, hospices, and other service providers. Sacred Groves may provide information and education to help families with death care, but will not provide direct services other than burial, related rituals, and site and vegetation management.

Infrastructure

Cemetery area

The cemetery will consist of a meadow to be converted to a savannah (primarily grassland with scattered trees and very small groves), and an oak woodland dominated by White Oak, California Bay, Madrone, grasses, and forbs. See the Site Map.

Access

A well-located and constructed all-weather access road has provided access to the property for many years. The lease and easement will include ingress and egress for grove/burial plot owners. The access road is suitable for large fire trucks and water tenders in the event of wildfire. The road is maintained with regular application of rock to keep dust down. The road has a posted speed limit of 5 Miles per hour, also to keep the dust down. See the Plan Map

Traffic Levels

Current vehicular traffic is estimated at 12 vehicles in and out per day (360/month) and special events traffic is 0.5 per day (13/month). Project operations are expected at a maximum to require 20 vehicles in and out once a month for burial visits, 30 vehicles in and out for special permission visits, and 10 vehicles in and out four times a month for burial services for a total of up to 2 vehicles per day and up to 90 vehicles in and out per month, a 20% increase over current vehicle traffic volume. Traffic frequency was estimated based on interviews with five similar cemeteries in the United States, twice a month for burial services for a total of 31-62 vehicles in and out per month.

Traffic Source	Daily	Monthly
Existing daily traffic.	12	360
Special event traffic	0.5	13
Cemetery operations	3	90

Parking

A parking area that can support up to 10 vehicles is shown on the Site Map. Visitation will be limited to 10 vehicles except on a case-by-case basis in exceptional circumstances. In the event of special circumstances, abundant temporary overflow parking is available as the terrain is largely flat in many places.

Restroom facilities

A handicapped-accessible portable restroom will be placed in a location shown on the Site Map that is accessible to visitors who use wheelchairs and to a servicing truck. A screen will be placed around the porta-potty for additional privacy and visual values.

Sanctuary Shelter

A rustic memorial sanctuary shelter of approximately 1000-1500 square feet and ~30 feet tall will be built in the area shown on the Site Map. The Sacred Groves Board has an architectural subcommittee to design a tasteful, simple, but elegant structure that fits with the wild character of the land and blends organically with the surrounding oak woodland. The structure will be gutter connected to a 4,000-gallon rainwater collection tank. A separate building permit will be submitted to County Planning as our financing and designs for the chapel come to fruition.

Walking Trails

The cemetery area can be readily accessed via walking in its native condition – slopes are gentle, and the ground is amenable. A simple network of trails will be developed to control

access and limit the impact of foot traffic. These will be emplaced with minimal disturbance (simply mowed and delineated, with little or no excavation). The entire cemetery area is handicapped accessible with a fat-tire wheelchair or small motorized carts that are available.

Practices and Procedures

Burial practices will be entirely consistent with State and local Health and Safety regulations and accepted best practices for minimal environmental impacts and ecological protection and restoration.

Among our Board members is an MD and former Humboldt County Public Health Officer who has recently consulted with current County Public Health Officer Stockton and the Environmental Health staff about this project and compliance with public health practices for natural burials and the California Health and Safety Codes. Ongoing coordination with the county public health officers is planned.

Best Practices

The following best practices are, in part, based on the Green Burial Council's Best Practices for Conservation Burial, which are the highest class of cemetery certification, as well as practices adopted from other conservation/green burial implementations.

- Site suitability is established by examining soil properties, surface and groundwater presence, and sensitive plant species. Some limited areas have shallow rock ledges that perch water in the rainy season. These areas will be avoided, no burials will occur unless a full soil profile is present.
- Use operational and burial practices that do not result in any long-term degradation of soil health, plant diversity, water quality, and ecological habitat.
- Burial density will not exceed 120 graves per acre. (Traditional cemeteries have burial densities of 1,200+ graves per acre.), and when fully utilized, will be closer to 30 per acre under the current design. Family grove placement will be adaptive, based on ecosystem management principles, and regularly reviewed by the Ecology Subcommittee of the Board of Directors.
- Provide clients and families with the opportunity to participate in the burial and ritual process and consult with Sacred Groves on species selection for any tree plantings.

- Consumer protections consistent with State Codes of Commerce and cemetery operation will be employed and fully transparent.
- Family groves will be planted with trees that are native to California. Species selection will be under the control of Sacred Groves.
- An arboretum of approximately one acre may be established, subject to the Board of Directors' desires and direction.
- No invasive plants of any kind will be introduced. Existing invasive plants will be rigorously detected, removed, and destroyed.
- When a grave site is located, a botanical survey will be conducted. Native grasses and forbs will be identified for removal and replanting after backfill to the extent feasible. Non-native grasses and forbs will be destroyed to favor natives. The propagation of any rescued native plants and seeds collected on-site will be considered.
- Excavation of graves and tree-planting holes will be monitored as they occur, and any cultural artifacts that are found will result in bringing in a qualified archeologist and taking the appropriate action based on the finding, including recording the discovery, moving the grave or grove to an area where they are not encountered, coordination with the Wiyot Tribe, or other appropriate measures. (Note: In a recent and detailed archaeological survey of the meadow, no indigenous artifacts were observed).
- Excavated soil will be placed on tarps. Soil horizons will be placed in separate piles. Soil will be backfilled to approximate the original horizonation of the soil, with careful attention to the topsoil placement. Salvaged native plants will be replanted to the extent feasible.
- Accept for burial only decedents that have not been embalmed or those embalmed only with Green Burial Council-approved, nontoxic chemicals after a case-by-case review by Sacred Groves.
- Prohibit the use of any burial vaults (partial, inverted, or otherwise), a vault lid, concrete box, slab, or fiberglass, plastic, steel, or concrete liner in the burial plot.
- All burial containers, shrouds, and other associated products are made only of natural, biodegradable materials. Shroud burials will be encouraged.
- Cremated remains may be spread only after treatment for neutralization.

- All staff members, contractors, and volunteers will utilize a Maintenance and Operations Manual to implement site goals, policies, and best practices.
- Establish an endowment fund to ensure the long-term maintenance of the site by setting aside at least 5% of all burial grove and plot sales.
- Limit the type and size of memorial markers to ensure they do not compromise the ecological integrity and aesthetic appeal of the natural landscape. Any monuments will be flush with the ground. Currently, only the trees will serve as monuments, and a buried or ground-level metal marker will be used to locate all human graves accurately.
- Operations are designed with sustainability in mind, minimizing the overall carbon footprint, fuel and material use, and avoiding any long-term or irreversible impacts on the site.
- After burial events and ceremonies as well as open visitation times, the site will be inspected for garbage. Garbage will be collected and removed from the site after each event and visitation period. Visitors will be instructed to pack out any waste generated during their visits, to prevent an attractive nuisance for wildlife.
- Layout groves and graves to facilitate light grazing by horses and wildlife, as well as haying and mowing, to enhance meadow ecology. This approach will keep the site accessible for agricultural and timber production while maintaining open space visual qualities.

Allowable planting in groves

Only California native trees will be allowed, and will be limited to the following species:

Tree Species Palette.

Oregon white oak
 Canyon live oak
 Black oak
 Valley oak
 Madrone
 Coast redwood

California bay
 Tan oak
 Incense cedar
 Western red cedar
 California dogwood

Burial Density

Burial density will not exceed 120 graves per acre. (Traditional cemeteries have burial densities of 1,200+ graves per acre.), and when the site is fully utilized, will be closer to 30 graves per acre under the current design. Family grove placement will be adaptive, based on principles of ecosystem management, and regularly reviewed by the Ecology Subcommittee of the Board of Directors. Family Groves will be placed at variable density, but the overall density of groves will be 4-5 per acre.

Visitation Policies

We acknowledge that the environmental effects of a natural cemetery are not necessarily negligible because human visitation to a wild site can have an impact. As such, visitation will be limited. The Sacred Groves cemetery is not generally open to the public and will be open to visitors in only three circumstances:

1. For burial services, ceremonies, and sales tours by appointment. The maximum number of vehicles will be limited to 10 or less.
2. For Grove or other burial plot owners and their families, visitation is allowed one weekend each month (The last weekend of each month is the current plan). The site will be closed one hour after sunset on the Sunday of the visiting weekend.
3. By special permission from Sacred Groves administration.

Water Use

Tree plantings will benefit from irrigation once or twice during their first summer of establishment. After establishment, no irrigation will be required. This will require approximately 20 gallons per tree and 80-100 gallons per grove, applied once or twice per summer, typically during the first summer after planting. Water will be sourced from a 4,000-gallon rainwater collection tank connected to the shelter structure.

Educational Tours and Nature Walks

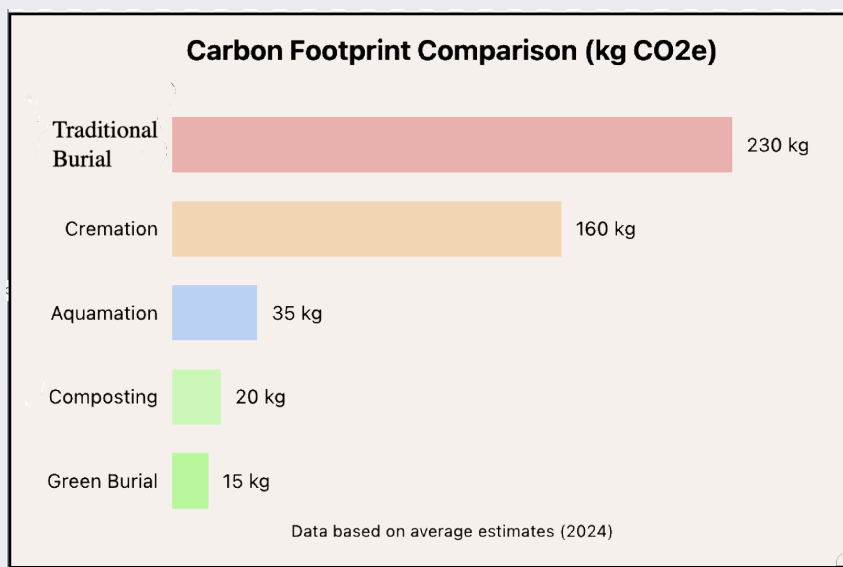
Sacred Groves and the Landowner envision the continuation of tours for education, natural and human history, and appreciation of nature, as they currently occur and are expected to

continue intermittently.

Carbon Footprint Reduction

Green burial has a lower carbon footprint than conventional burial or cremation. Additional practices are included in our Best Practices that further limit the carbon footprint of our operations.

In addition to the best practices outlined above, a carbon sequestration accounting has been conducted for the full ownership, and carbon offset credits are being pursued as an overall goal of the property management.



Forests Management and Carbon

An NTMP (Non-commercial Timber Management Plan) is in place and approved by the California Department of Forestry and Fire Protection based on the California Forest Practice rules. This NTMP significantly restricts the amount of timber harvested on the overall property. No timber harvest is anticipated in the project area, except for some possible removal of Douglas fir and Bay encroaching on the Oak Woodland and possible very light thinning to promote forest health. Any harvesting on the site or larger property is subject to the California Forest Practice Rules and the approved LTMP.

The establishment of a Conservation Easement for the entire property is in progress, administered by the North Coast Regional Land Trust. This will incorporate the NTMP and special provisions for the cemetery area to ensure the perpetual conservation of ecological and cemetery values.

Marketing and Community Outreach

Our marketing approach will be based on the following:

1. A detailed website
2. Word-of-mouth recommendations
3. Existing list of interested persons in Humboldt County
4. Social media postings such as those produced by "Better Place Forests".
5. Reaching out to local County residents to let them know this is an option for memorialization and disposition.
6. Establishing partnerships with local funeral homes, Hospice of Humboldt and Hearth of the Redwoods Hospice, and local licensed funeral managers so that all have the relevant information and can provide it to families.
7. We may conduct tours and educational events to demonstrate options and how we steward and restore site ecology.

Special Circumstances

Winter Burials

Burial timing depends on when people die, so cemetery operations must be responsive and on call. The site in occasional winter periods has snow cover that prevents regular vehicular access for a week or two. During this time, bodies must be refrigerated at a funeral home facility or be buried in a lower-elevation cemetery, or over-snow equipment must be rented to facilitate burial on the site. The ground has never frozen at this elevation (approximately 2,200 feet) and therefore can always be excavated for burials.

Accommodating Cultural and Religious Practices

Sacred Groves will accommodate desired cultural or religious practices that are feasible and compatible with the operating philosophy and conservation best practices in place. Any particular culture or religious practices will be discussed prior to the sale of groves or plots.

Green Burial for Pets

Sacred Groves will allow the interment of small pets. This typically includes dogs, cats, hamsters, rabbits, and other small animals, as well as herps. Large pets, such as horses and pigs, would only be allowed on a case-by-case basis and generally not permitted inside Family Groves.

Perpetuity Planning: Long-term Land Conservation Strategies and Legal Protections for Cemetery Land

Sacred Groves is intended to be a perpetually conserved area consistent with its use as a cemetery. While not all cemeteries have perpetuity provisions, Sacred Groves explicitly states that we intend to protect this cemetery in perpetuity.

Our primary approach to perpetuity includes:

1. A perpetual or 99-year lease between the landowner and Sacred Groves.
2. A comprehensive Conservation Easement that includes provisions for the perpetual protection of the cemetery, well-drawn and monitored by a reputable and professional Land Trust; in this case, North Coast Regional Land Trust, which has a top-tier reputation, robust Board and Staff, and endowment funding.
<https://ncrlt.org/>
3. Building a robust operation that pays employees, serves the community well, attracts young Board members and employees, and provides for their succession.
4. If Sacred Groves were to cease operations, existing graves and groves will be protected under the terms of the Conservation Easement and provisions of the long-term lease to ensure that no development occurs and that the graves are have perpetual protection.

Endowment Fund Management

Sacred Groves will maintain an endowment fund to help ensure long-term monitoring and care of the cemetery beyond what NCRLT will provide for any Conservation Easement. The Sacred Groves Board of Directors will carefully manage and protect the fund to ensure its proper use.

Succession Planning for Management and Staff

Sacred Groves Board of Directors is focused on perpetuity and the need for robust succession planning for the Staff and Directors. As retirements and resignations are anticipated or arise, succession planning will be a Board priority.

Partnerships with Conservation and End-of-Life Organizations

Sacred Groves is partnered with the North Coast Regional Land Trust and the Trust for Working Lands. We intend to partner with other compatible environmental organizations as the project and its relationships develop.

Sacred Groves is partnered with The Green Burial Council, the Conservation Burial Alliance, and the Funeral Consumers Alliance.

Sacred Groves has a relatively new and robust subcommittee for education and the cultivation of a local Community of Practice for End-of-Life Doulas. This group will be partnering with the two county Hospices, several Funeral Homes and Services, cemetery managers, gravediggers, and other cemeteries to coordinate efforts and provide the best possible care for those at the end of their lives and their families.

Sacred Groves is committed to protecting the well-being and thriving of trees and wildlife in the project area. We intend to place graves near trees in a manner that does not cause significant injury to tree roots. We have assembled a top-tier group to advise on best practices for this, which includes prominent forestry professors, soil scientists, and arborists.

Appendixes

8-4-25

- Safety
- Burial depth
- Tree protection for forest burial

The Safety of Dead Bodies in a Green Cemetery



<https://www.nhfuneral.org/infographics.html>

WHAT EXPERTS SAY ABOUT THE SAFETY OF DEAD BODIES

from *The Science Behind Green Burial* by Lee Webster et al, Green Burial Council Resources

Here's what some experts say about the risk of infection from dead bodies:

- *"...concern that dead bodies are infectious can be considered a 'natural' reaction by persons wanting to protect themselves from disease" although "the risk that bodies (that died in a natural disaster) pose for the public is extremely small."*
[Pan American Health Organization](#)
- *"Transmission of infection requires the presence of an infectious agent, exposure to that agent, and a susceptible host... The human body is host to many organisms, only some of which are pathogenic. When the body dies, the environment in which pathogens live can no longer sustain them. Microorganisms involved in the decay process (putrefaction) are not pathogenic..."*
[Pan American Health Organization](#)
- *"Historically, epidemics resulting in mass casualties have only occurred from a few diseases, including plague, cholera, typhoid, tuberculosis, anthrax, and smallpox...such infections are no more likely to be present in disaster victims than in the general population. Furthermore, although some of these diseases are highly contagious, their causative agents are unable to survive long in the human body following death... It is therefore unlikely that such epidemics will result from contact with a cadaver. Indeed, survivors present a much more important reservoir for disease..."*
[World Health Organization](#)
- *"Dead or decayed human bodies do not generally create a serious health hazard, unless they are polluting sources of drinking water with fecal matter, or are infected with plague or typhus, in which case they may be infested with the fleas or lice that spread these diseases. In most smaller or less acute emergency situations therefore, families may carry out all the necessary activities following a death..."*
[World Health Organization](#), regarding mass burials in emergencies

A note on the above quote: It's important to understand why this is, as it leads to a lot of the confusion about bodies contaminating soil. Water does not decompose anything, it dissolve things. So when we flush medication or place a body in water, the organic material persists and stays in the water. Anything that remains infectious in those circumstances can then be transmitted. Soil is a living organism and can decompose organic matter; anything that remains infectious in a dead body will be deprived of its nutrient source as it decomposes.
- *"...the mere presence of a dead body without regard to its embalmed status and one that is not leaking blood from an open wound or perforation, does not pose an increased [health] risk of infectious disease transmission for the person who might handle that body or review it in a private setting. Once a human dies, infectious agents that would be of any concern, including those on the individual's skin or internal organs, is greatly diminished...there simply is no measurable risk of that body transmitting an infectious disease agent..."*
 Dr. Michael Osterholm, [Center for Infectious Disease Research](#)

Old beliefs that feed our unfounded fears include miasma theory, the precursor to germ theory, that supported the notion that foul air, dark and wet, spread diseases, so dead bodies must be

adding to the waft of bad air; the erroneous belief that all bodies are imbued with infectious properties as soon as they cease to breathe; and the confusion between live infectious organisms and their conduits as opposed to normal decomposition processes.

Note: We consulted with Humboldt County officials, with the following outcomes:

- **Public Health Officer (Dr. Stockton):** Stated he had no public health concerns and was positive about the project. Our board member, former Public Health Officer Dr. Rebecca Stauffer, met with Dr. Stockton and discussed the project.
- **Office of Environmental Health:** Recommended portable restrooms and had no further concerns.

Analysis of Groundwater Contamination Risk from Pathogens

Summary

This document addresses the potential for groundwater contamination, specifically from pathogens, resulting from the practice of green or natural burial. A comprehensive review of soil science and microbiology confirms that when conducted in suitable, well-characterized soils, **green burial poses an extremely limited risk of offsite pathogen migration or groundwater contamination.**

The soil environment functions as a highly effective natural filter and biological reactor, containing, attenuating, and rapidly neutralizing human-borne pathogens. The combination of physical filtration, chemical adsorption, and overwhelming microbial antagonism within the soil matrix ensures that decomposition occurs safely and locally. This assessment is based on established principles of soil hydrology and microbiology.

2.0 The Soil Matrix as a Physical Containment and Filtration System

The primary mechanism preventing the off-site transport of microorganisms is the physical structure of the soil itself. Suitable soils for burial are present on the proposed site, based on survey and analysis by a professional soil scientist and green burial expert. Burial density is very low, at approximately 5% of the typical cemeteries.

The primary mechanism preventing the offsite transport of microorganisms is the physical properties of the soil itself.

- **Mechanical Filtration:** Soil consists of solid particles (sand, silt, clay) and pore spaces. As water percolates downward from a burial site, it must travel through a tortuous network of these pores. Microorganisms, which are orders of magnitude larger than water molecules, are physically strained and filtered out

of the water as they are unable to pass through the smallest pores. The deeper the burial and the greater the unsaturated soil depth above the water table, the more effective this filtration becomes.

- **Adsorption:** Soil particles, particularly clay and organic matter, carry electrochemical charges on their surfaces. Most bacteria and viruses also have a surface charge. This differential results in adsorption, where microorganisms are electrochemically bound to soil particles, halting their movement through the soil column. This process effectively immobilizes pathogens, preventing them from being transported by percolating water.

For a burial at a typical depth of 3-4 feet in a suitable soil with a water table significantly deeper (e.g., >10 feet), the travel path for any potential leachate is extensive, ensuring physical filtration and adsorption are maximized.

3.0 The Soil Biome as a Biological Reactor

Beyond its physical properties, soil is a living, biologically active ecosystem. The native microbial community within a healthy soil is the most critical factor in neutralizing pathogens from a decomposing body.

- **Microbial Antagonism and Competition:** A single gram of healthy topsoil contains billions of native microorganisms (bacteria, fungi, archaea, protozoa). This established and highly adapted community vastly outnumbers any pathogens introduced with a human body. Native soil microbes out-compete human-borne pathogens for limited resources like carbon, nitrogen, and water. Furthermore, many soil microbes produce antibiotic compounds as a natural defense mechanism, actively killing competing organisms. Human pathogens, which are adapted to the stable, nutrient-rich environment of a living host, are poorly equipped to survive in this highly competitive and hostile soil environment.
- **Predation:** The soil food web includes numerous microscopic predators, such as protozoa and nematodes. These organisms actively prey on bacteria, including any potential pathogens introduced into the soil, further reducing their populations.
- **Decomposition:** The decomposition of a body is driven almost entirely by this native soil microbial community. These organisms efficiently break down complex organic matter into simpler compounds (water, carbon dioxide, minerals), a process that is fundamental to all terrestrial ecosystems. Pathogens are consumed and recycled along with all other organic materials.

In essence, the soil acts not as a passive storage medium, but as an active, aggressive, and highly efficient biological treatment system. The risk is not from the introduction of pathogens, but would only arise if the soil's capacity to process them were overwhelmed,

a scenario that is not credible for individual burials spaced appropriately. The burial site becomes a localized "hotspot" of nutrient cycling where native organisms thrive and rapidly eliminate non-native microbes.

4.0 Conclusion

The conclusion that green burial in suitable soils is safe from a groundwater perspective is scientifically robust. The risk of pathogen migration is negligible due to the dual-action nature of the soil system:

Physical Containment: The soil matrix physically filters and adsorbs microorganisms, preventing their transport.

Biological Neutralization: The native soil biome actively outcompetes, preys upon, and decomposes any introduced pathogens.

Confidence is warranted provided that site selection is based on standard hydrogeological criteria, ensuring that soils are well-drained, biologically active, and provide sufficient depth to the seasonal high water table. Under these conditions, which have been confirmed for the site in question, green burial is a safe and sustainable practice that relies on the same effective natural processes that have managed decomposition in ecosystems for millennia.

Comparative Risk Analysis: Green Burial vs. Onsite Septic Systems

To provide a clear context for the minimal risk posed by green burial, it is useful to compare it to a universally accepted and far more impactful land use: the residential septic system. Millions of homes in the United States rely on these systems, which continuously discharge pollutants into the subsurface.

- **Septic System: A Chronic Pollutant Source:** A standard septic system is designed to discharge hundreds of gallons of liquid effluent into a drain field on a daily basis. This effluent is a significant source of multiple contaminants:
 - **Pathogens:** The effluent contains high concentrations of active fecal coliform bacteria and viruses from living individuals, which are continuously replenished and discharged. This presents a direct and ongoing risk to groundwater if the system is not functioning perfectly.
 - **Nitrogen:** A typical family of four discharges over 16 kilograms (~36 pounds) of nitrogen into their drain field annually.
 - **Phosphorus:** The same family discharges approximately 2.7 kilograms (~6 pounds) of phosphorus annually, a key nutrient in freshwater eutrophication.

- **Green Burial: A Finite Organic Event:** In contrast, a green burial represents a single, finite input of organic matter that is processed locally by the soil.
 - **Pathogens:** The pathogenic organisms within a deceased human body are no longer being replenished. They are immediately subjected to the hostile and competitive soil environment, where they are rapidly outcompeted and neutralized by the native soil biome.
 - **Nitrogen:** An average 70 kg (154 lb) adult body contains approximately 1.8 kilograms (~4 pounds) of nitrogen in total.
 - **Phosphorus:** The same body contains approximately 0.5 kilograms (~1.1 pounds) of phosphorus.

Conclusion of Comparison: A single-family septic system introduces a continuous, high-volume stream of active pathogens into the soil and discharges nearly **ten times more nitrogen** and **five times more phosphorus** in **one year** than is contained in an entire human body. The pollutant load from a green burial is finite, contained, and rapidly assimilated by a healthy soil ecosystem. From a regulatory perspective, the environmental and groundwater impact of a green burial is orders of magnitude smaller and represents a fundamentally different and less impactful process than the accepted, ongoing operation of a residential septic system.

Burial Depth

In **California**, the minimum burial depth is **18 inches of earth or turf covering a casket, vault, or shrouded body**, as measured at the time of burial. This requirement is established by the **California Health & Safety Code § 8113.1 (a) (2025)** – “there shall be no less than 18 inches of dirt or turf on top of all vaults or caskets as measured at the time of burial” [RivCo Economic Development+5Justia Law+5bbkucd.org+5](#).

Exceptions:

- **Double burials:** If two caskets are buried in the same grave (consensual double burial), the upper casket must have at least **12 inches** of cover [Justia Law](#).
- **Hardship exceptions:** In cases of extreme hardship, upon request by the next of kin, burial with between **12 inches and 18 inches** of soil may be permitted [Justia Law](#).
- **Cremated remains:** Bodies that have been cremated and placed in an urn or urn vault covered with at least three-quarters of an inch of concrete, brass, granite, or metal plate are **exempt** from the 18-inch requirement.

Summary Table

Situation	Minimum Soil Cover Above	Legal Reference
Standard single burial	18 inches	Cal. Health & Safety Code § 8113.1(a)
Double burial (upper casket)	12 inches	§ 8113.1(c)
Hardship case	12–18 inches	§ 8113.1(d)
Cremated remains (urn)	N/A (exempt)	§ 8113.1(b)

These requirements apply statewide—in **public and private cemeteries**, including those operated by counties, cities, districts, associations, or private entities that manage burials in California § 8113.1(a)–(d)

In extensive research and interviews, it is clear that there are no incidence of animals digging up graves, with either green or conventional burial. Local gravedigger Bob Wilson with experience in the county with thousands of graves, no instances of graves being dug up by animals has been observed. This is the experience nationwide.

Burial Depth Regulations: No National Standard, States Set Own Rules

While the phrase "six feet under" is a common idiom for burial, there is no federal law mandating a specific burial depth in the United States. Instead, regulations for grave depth are determined at the state and sometimes even local level, resulting in a variety of requirements across the country.

In **California**, the general requirement for burial depth is a minimum of **18 inches of soil or turf on top of the casket or burial vault**. This is outlined in the California Health and Safety Code.

However, the state's regulations also allow for some exceptions. For instance, in the case of "double-depth" or "companion" burials, where two caskets are placed in the same grave, the topmost casket must have at least 12 inches of soil covering it. Additionally, in circumstances of extreme hardship, a burial with as little as 12 inches of cover may be permitted with the approval of the next of kin or the person responsible for the burial arrangements.

Across the United States, the required burial depth can vary significantly. Some states have no statewide mandate, leaving the decision to individual cemeteries or local ordinances. For those that do have regulations, the requirements often fall within the range of 18 to 24 inches of cover.

For example, states like Florida and Delaware also require a minimum of 18 inches. Others may require a deeper burial. The intention behind these regulations is multifaceted, aiming to prevent the disturbance of the grave by animals, protect public health, and ensure the stability of the cemetery grounds.

The concept of a six-foot burial depth is largely a historical artifact, with theories suggesting it originated during the 1665 London plague to prevent the spread of disease. In modern times, with the common use of burial vaults and caskets, such a depth is deemed unnecessary.

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Tree protection

A protocol and best practices for root protection when digging graves near established trees is included in the Operating Plan

Best Practices for Digging Graves Near Established Trees

Intent: Ensure that the process of digging graves and burying the dead is conducted in a manner that respects and preserves the health of established trees, contributing to the overall sustainability and ecological balance of the cemetery environment.

1. Tree Assessment and Site Selection:

- Conduct a thorough assessment of the tree's health, root structure, and canopy spread. Use a probe to locate the large anchor roots that are to be avoided.
- Select grave sites that minimize disturbance to the tree's anchor roots. Ideally, graves should be placed outside the tree's critical root zone (CRZ), which typically extends roughly halfway to the drip line (the outermost edge of the tree's canopy). Feeder roots regenerate very quickly and are opportunistic and highly regenerative.

2. Root Zone Protection:

- Identify and mark the CRZ of the tree. Avoid digging within this zone whenever possible.
- If digging within the CRZ is unavoidable, aim to minimize root damage by carefully excavating around major roots. Use hand tools or an Air Spade to expose roots.

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3. Excavation Techniques:

- Prefer shroud burials rather than caskets.
- Excavate the grave perpendicular (radial) to the tree, such that the excavation can minimize or avoid large roots.
- Employ non-invasive excavation methods. Hand digging is preferred over mechanical digging to reduce the risk of root damage.
- If mechanical equipment is necessary, use smaller, lightweight machinery to limit soil compaction and root disturbance.
- In circumstances where the proximity of the grave to the tree is planned, use an AirSpade to excavate, which preserves large roots, and place the remains under the large roots.

4. Root Pruning and Care:

- When encountering roots larger than 1 inch in diameter, carefully prune them using clean, sharp tools to create smooth cuts. This helps the tree heal more effectively and reduces the risk of disease.

5. Soil Management:

- Preserve the soil structure and avoid compaction by placing plywood or mats over the work area.
- Backfill graves with only native soil, avoiding the use of any materials that could alter the soil chemistry and affect tree health.
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Additional Considerations

Collaboration with Experts: We have collaborated and will continue to work closely with arborists, Professional Foresters, soil scientists, and environmental consultants, developing and implementing best practices tailored to the specific conditions of the cemetery.