

TAX INCENTIVES FOR GREEN BURIAL

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INTRODUCTION

Every living being is doomed to decay and die and decay some more.¹ Death is inevitable, and the disposal of our dead is a fundamental global activity with the potential to have significant environmental impact. In the United States, the environmental toxicity of “traditional” modern burial is stark.² A cosmeticized body is pumped with three gallons of embalming fluid (contain-

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¹ Well, *almost* every living being. It is worth mentioning that there are reported cases of “incorrupt” corpses—including Saint Paula Frassinetti and Blessed Anna Maria Taigi. To be incorrupt means that although the corpse should have putrefied or decayed, it did not, without scientific explanation. Elizabeth Harper, *Photographing the Real Bodies of Incorrupt Saints*, SLATE (Aug. 14, 2015, 11:10 AM), <https://slate.com/human-interest/2015/08/photographing-the-real-bodies-of-incorrupt-saints.html> [https://perma.cc/AXN4-8EHY]; Caitlin Doughty, *The (Not Really so Very) Incorrupt Corpses*, THE ORD. OF THE GOOD DEATH (June 5, 2014), <http://www.orderofthegooddeath.com/really-whats-incorrupt-corpses> [https://perma.cc/FF2Q-5QF6].

² Historical burial practices have varied widely, from consumption to dissection to burning to burying. For purposes of this Article, “traditional” modern burial practice refers to the traditions over the past century in the United States. For more information on historical practice, see GARY LADERMAN, *REST IN PEACE: A CULTURAL HISTORY OF DEATH AND THE FUNERAL HOME IN TWENTIETH-CENTURY AMERICA* (2003).

ing chemicals such as formaldehyde)³ that eventually leaches through metal and wood and into the ground.⁴ An estimated 5.3 million gallons of embalming chemicals⁵ are buried annually in what are essentially luxury landfills-slash-golf-courses, with landscaping and grass to maintain and mow,⁶ in coffins that are typically constructed of nonbiodegradable chipboard.⁷

The death care industry⁸ draws consumers down one of two normative paths—casket or cremation—with the latter viewed as the more eco-friendly alternative.⁹ And while it is certainly *greener* than traditional burial, incineration cremation falls short of being labeled a green alternative. Fire-based cremation utilizes significant resources and energy, attributable to the substantial quantity of fossil fuel required to burn human remains at 1,562°F (850°C)¹⁰ to reduce a corpse to ash. Pollutants are generated in doing so,¹¹ with an average of 540 pounds of carbon dioxide being released in the atmosphere per cremation (or 250,000 tons annually).¹² Further, incineration of dental fillings releas-

³ Embalming fluids often contain a combination of formaldehyde, chemicals like methanol and ethanol, and water. Let's look a little more closely at that first ingredient, since formaldehyde can comprise up to 50 percent of a typical embalming fluid. Outside the funeral home, formaldehyde is used in medical labs as a tissue preservative and in pesticides and fertilizers. It's also a flammable, strong-smelling gas that's released from a variety of sources—cigarettes, exhaust pipes and building materials among them—and a known carcinogen. . . . So drinking a little bit of formaldehyde won't kill you, right? Actually, it probably will. Drinking [one] ounce ([thirty] milliliters) of formalin—a solution made up of water, menthol and 37 percent formaldehyde—can kill an adult.

Jeff Harder, *What If You Drank Embalming Fluid?*, HOWSTUFFWORKS (June 29, 2015), <https://science.howstuffworks.com/science-vs-myth/what-if/what-if-drank-embalming-fluid.htm> [<https://perma.cc/UJF9-TK9C>] (citations omitted).

⁴ Shannon Palus, *How to Be Eco-Friendly When You're Dead*, ATLANTIC (Oct. 30, 2014), <https://www.theatlantic.com/technology/archive/2014/10/how-to-be-eco-friendly-when-youre-dead/382120> [<https://perma.cc/853Y-YYQS>].

⁵ Brian Kahn, *I Dug a Green Grave and Learned the Truth About the Dirty Death Industry*, GIZMODO (Jan. 3, 2019, 10:11 AM), <https://earthier.gizmodo.com/i-dug-a-green-grave-and-learned-the-truth-about-the-dir-1831175305> [<https://perma.cc/4GPL-PGVK>].

⁶ Palus, *supra* note 4.

⁷ Marina Kamenev, *Aquamation: A Greener Alternative to Cremation?*, TIME (Sept. 28, 2010), <http://content.time.com/time/health/article/0,8599,2022206,00.html> [<https://perma.cc/3L79-NDW3>].

⁸ The term “death care industry” includes companies that provide death-related services, from funerals and burials to memorials and headstones. E. Mazareanu, *Death Care Services - Statistics & Facts*, STATISTA (July 10, 2019), <https://www.statista.com/topics/4731/death-care-services-in-the-us> [<https://perma.cc/8JQR-46LA>].

⁹ Brendan Kiley, *The Architect Who Wants to Redesign Being Dead*, STRANGER (Mar. 3, 2015), <https://www.thestranger.com/features/feature/2015/03/03/21792773/the-architect-who-wants-to-redesign-being-dead> [<https://perma.cc/6HSU-4MT3>].

¹⁰ Kamenev, *supra* note 7.

¹¹ Palus, *supra* note 4.

¹² Katrina Spade, *How Your Death Affects Climate Change*, HUFFPOST (Feb. 02, 2015), https://www.huffpost.com/entry/how-your-death-affects-cl_b_6263152 [<https://perma.cc/C6BY-8FHP>].

es mercury fumes into the environment:¹³ an estimated 320 pounds (according to the Environmental Protection Agency) or as much as 6,000 pounds (according to environmental activists) of mercury per year.¹⁴

This tradition-steeped industry has projected domestic annual revenues of \$68 billion (by 2023), and, interestingly, the industry has slowly started to “go green.”¹⁵ A survey conducted by the National Funeral Directors Association found that 53.8 percent of respondents were interested in green burial options.¹⁶ Changing the way in which one is buried will not solve the problem of climate change, but it does respect the notion that one’s last act on earth should not be to harm it. A commitment to being environmentally friendly requires that the scope of all human activity be integrated into the biosphere in a way that is sustainable.¹⁷ And though death will come to every living organism on the planet, the green disposal of one’s corpse remains a topic rarely discussed.

Industry norms are on the brink of disruption: there is capital investment into new innovative death service technologies¹⁸ (e.g., Funeralcity and WeCroak);¹⁹ green funeral tech startups are dramatically broadening available options for reintegrating human remains back into the environment in an eco-friendly manner; and the alt-death or death positive²⁰ movement seeks to infuse

¹³ “[I]t is estimated that one third of Sweden’s mercury emissions come from crematoria.” *Is Promission the Ultimate Ecological Goodbye?*, FUNERAL MAG., <http://www.funeralmagazine.co.uk/promission> [<https://perma.cc/AK6F-KKYN>].

¹⁴ Terence Chea, *Cremation Pollution? Neighbors Nervous*, NBC NEWS (Jan. 16, 2007, 3:54 PM), <http://www.nbcnews.com/id/16656749> [<https://perma.cc/BAA8-HHEG>].

¹⁵ Rsch. & Mkts., *United States Death Care Market Report 2018-2023: Market is Estimated to Reach Revenues of Around \$68 Billion*, CISION: PRNEWswire (Nov. 27, 2018, 9:30 PM), <https://www.prnewswire.com/news-releases/united-states-death-care-market-report-2018-2023-market-is-estimated-to-reach-revenues-of-around-68-billion-300755813.html> [<https://perma.cc/CE5X-YBAE>].

¹⁶ *NFDA Consumer Survey: Funeral Planning Not a Priority for Americans*, NAT’L FUNERAL DIRS. ASS’N (June 22, 2017), <https://web.archive.org/web/20171029012644/http://www.nfda.org/news/media-center/nfda-news-releases/id/2419/nfda-consumer-survey-funeral-planning-not-a-priority-for-americans> [<https://perma.cc/R244-RDBL>].

¹⁷ Brian Walsh, *When You Die, You’ll Probably Be Embalmed. Thank Abraham Lincoln for That*, SMITHSONIAN MAG. (Nov. 1, 2017), <https://www.smithsonianmag.com/science-nature/how-lincolns-embrace-embalming-birthered-american-funeral-industry-180967038> [<https://perma.cc/E6WY-93LZ>] (noting that no other country in the world embalms their deceased at rates even approaching those in the United States).

¹⁸ Natasha Bernal, *Funeral Tech Startups Expand Your Posthumous Possibilities*, WIRED (Jan. 12, 2020, 10:00 AM), <https://www.wired.com/story/tech-is-making-funerals-weird> [<https://perma.cc/6G7J-F9L5>] (“Technology companies have long bemoaned the fact that the market is dominated by old-fashioned funeral directors who can mark prices up by between 300 and 600 percent.”).

¹⁹ The WeCroak app sends five daily reminders that we are all going to die, to facilitate pre-need planning. John Leland, *The Positive Death Movement Comes to Life*, N.Y. TIMES (June 22, 2018), <https://nyti.ms/2KahXYx> [<https://perma.cc/58FY-UPXL>].

²⁰ Elahe Izadi & Sonia Rao, *The List: 2020*, WASH. POST (Dec. 30, 2019), <https://www.washingtonpost.com/graphics/2020/lifestyle/year-in-review-in-out-list> [<https://perma.cc/7JN4-9TQB>] (listing “death positivity” on a list of things that are “in” for 2020).

the human experience²¹ back into death.²² Unfortunately, a myriad of market failures and obstacles are impeding that disruption. The grief-stricken consumer does not behave like the typical consumer and is forced to deal with an extraordinarily expensive expenditure at a time when he or she is particularly vulnerable and cognitively impaired.²³ Information is constrained by nature of the investment, and the average consumer is only aware of the prices and options²⁴ made available by the first funeral home consulted.²⁵ Despite the fact that pre-need planning and prepayment promise potential for change, the average consumer waits to make a monetary investment in this space until age sixty-five (via installment).²⁶ The options for funeral prepayment are limited, with disadvantages that frequently outweigh benefits.

The thesis of this Article is equal parts positive, normative, descriptive, and prescriptive—plumbing the depths of our modern disconnection from death, the need to transition human remains in an environmentally friendly manner, the importance of pre-need or pre-death planning and prepayment to protect the grieving consumer, and the power of advancing important social policy through a green tax credit. An overview of the death industry in the United States (including traditional modern burial and funeral custom) will be explored in Part I, as well as consideration of fire-based cremation and disposal of “cremains.”

²¹ If you happen to die in North America, this is probably what will happen next: Someone will pause for a moment in front of your corpse and then make a phone call. They’ll call either a funeral home or a local government agency, depending on how much money you have. Some minutes later—I’ve never timed the interval, but in my experience it’s always at the crossroads of too soon and eternity—two people will show up in suits to take your body away.

Kiley, *supra* note 9.

²² There are death doulas (caring for the terminally ill), death cafes (to discuss life’s last chapter over cake and tea), death celebrants (officiants who lead end-of-life events), living funerals (attended by the honored while still breathing), and end-of-life workshops (for the healthy who think ahead). The Internet allows lives to continue indefinitely in memorial Facebook pages, tribute vlogs on YouTube and instamemorials on Instagram.

Karen Heller, *The Funeral as We Know It Is Becoming a Relic – Just in Time for a Death Boom*, WASH. POST (Apr. 15, 2019, 2:00 AM), https://www.washingtonpost.com/lifestyle/style/the-funeral-as-we-know-it-is-becoming-a-relic--just-in-time-for-a-death-boom/2019/04/14/a49003c4-50c2-11e9-8d28-f5149e5a2fda_story.html [<https://perma.cc/7MHN-JCJY>].

²³ In the U.K., “[t]he average family falls into £1,600 debt to cover funeral costs, often taking payday loans to cover the expense.” Bernal, *supra* note 18.

²⁴ “Your funeral director won’t tell you a green burial will save you two-thirds of the cost, or that the expensive shiny brass coffin handles you paid extra for will be thrown in a tub and sold as scrap metal . . .” *Id.*

²⁵ Unusual for a large purchase, “[m]ost people go to the same funeral home their family has always used, and just say ‘yes’ to everything . . .” Kelli B. Grant, *Amid the Tears, Don’t Overpay for Funeral Costs*, CNBC (Sept. 27, 2016, 1:57 PM), <https://www.cnbc.com/2016/09/22/comparison-shopping-funeral-costs-can-yield-big-savings-.html> [<https://perma.cc/2GAL-8KEK>].

²⁶ Complaint for Injunctive Relief, Restitution, and Other Equitable Remedies at 8, Cemetery & Funeral Bureau v. California Master Tr., No. BC459862 (Cal. Super. Ct. dismissed Mar. 7, 2019), https://oag.ca.gov/system/files/attachments/press_releases/n2072_complaint_-_funeral.pdf [<https://perma.cc/FJQ2-U5LY>].

There is a surprising gap in readily accessible information with regard to green burial in the United States, and Part II will explore the disposition of human remains as an eco-friendly process—weighing the wide variety of non-normative options presently available. Change is creeping into a tradition-steeped industry as the alt-death movement gains traction and there is increased interest in green death care industry technologies. In Part III, this Article will trace through the many reasons why this space is poised for positive disruption. Part IV will consider the precedential use of tax incentives to advance green technology and will propose the following structure for a “green burial” tax credit:²⁷ a Pigouvian subsidy in the form of a refundable tax credit for qualified expenditures related to the nonrefundable prepayment of expenses arising from “sustainable disposition or transition of human remains.”

I. END OF LIFE OPTIONS

After the Civil War, with the rise of urbanization, American funeral custom in the United States shifted from modest home funerals to more costly events hosted by small, full-service funeral homes.²⁸ As the popularity of the American funeral gave way to exorbitant costs and potential exploitation, the Federal Trade Commission issued regulations in 1982 designed to protect the grieving consumer.²⁹ And though these rules remain in force today, the death care industry is arguably in the early stages of yet another shift. Part I of this Article explores modern burial and funeral practice in the United States, and also considers fire-based cremation and disposal of “cremains.”³⁰

A. *Modern Burial and Funeral Custom in the United States*

Traditional modern funeral and burial in the United States varies dramatically based upon the religious rituals observed. A Jewish burial is a unique combination of custom (“minhag”) and commandment (“mitzvah”), with the deceased being interred in a plain wood box soon after death.³¹ Those of the Muslim faith also believe that the decedent should be buried as soon after death as possible.³² Although some Buddhists opt for burial, cremation is the prefer-

²⁷ “Green burial” is used here for ease of reference to refer to all green death care industry technologies that would be supported by the tax credit proposed in Part IV of this Article.

²⁸ David Foos, *State Ready-to-Embalm Laws and the Modern Funeral Market: The Need for Change and Suggested Alternatives*, 2012 MICH. ST. L. REV. 1375, 1376.

²⁹ *Id.*

³⁰ *Cremains*, CAMBRIDGE ENGLISH DICTIONARY (2020), <https://dictionary.cambridge.org/us/dictionary/english/cremains> [<https://perma.cc/8VLD-JPZU>] (defining “cremains” as “the ashes that remain after a dead body has been cremated”).

³¹ *Religious Traditions: Judaism Funeral Customs*, FUNERAL SOURCE, <http://thefuneralsource.org/trad0203.html> [<https://perma.cc/3VWT-EUM5>].

³² *Attending a Muslim Funeral—a Guide for Non-Muslims*, MUSLIM BURIAL COUNCIL LEICESTERSHIRE, http://www.mbc.org.uk/funeral-procedure/attending-a-muslim-funeral-a-guide-for-non-muslims/#.XzdJ_ZNKj_Q [<https://perma.cc/J3YY-JZXA>].

ence, with funeral attendees customarily wearing white.³³ Christian traditions vary widely, and though burial has been traditional, some churches make allowances for modern options such as cremation.³⁴ When the deceased is an atheist, or not affiliated with a specific religion,³⁵ usually a non-religious or humanist funeral is planned—which is a religion-less funeral with a focus on celebration of life and attendees referred to as celebrants.³⁶

Recognizing that the process will vary based upon religious affiliation, a traditional end-of-life processing of human remains generally has three distinct stages: the pre-funeral or viewing phase, the funeral phase, and the burial site phase.

Visitation or viewing of the deceased takes place one or more days before the funeral in a service that may be called a “viewing” or a “wake.” With an open casket, the deceased may have been prepared for viewing through the application of cosmetics and a preservation process called embalming. No state law requires embalming—although some states require that refrigeration be used in lieu of embalming.³⁷ If the human remains have been damaged or maimed, or an open casket viewing will be too emotional for attendees, relatives of the deceased may instead opt for a closed casket wake. The viewing typically takes place at a funeral home or a church and may conclude with a prayer.

As with the viewing, the funeral service may take place at either a funeral home or a church. These ceremonies typically involve religious rites, prayers, works of comfort from clergy, and eulogies from relatives or friends of the deceased. For some religious denominations, eulogies are a departure from religious traditions and are prohibited.³⁸ Mourners sometimes take one last oppor-

³³ *Buddhist Funeral Traditions: The Ceremony, Cremation, Mourning, & More*, CREMATION INST., <https://cremationinstitute.com/buddhist-funeral-traditions> [<https://perma.cc/9H32-APP5>].

³⁴ Joe Carter, *The FAQs: What Christians Should Know About Cremation*, GOSPEL COAL., <https://www.thegospelcoalition.org/article/the-faqs-what-christians-should-know-about-cremation> [<https://perma.cc/2E9C-U4A4>] (noting that although Christian tradition clearly favors burial, nothing in the Bible prohibits cremation and it is therefore not considered a sin).

³⁵ Roughly 22.8 percent of people surveyed identify as religiously unaffiliated or religious “nones” in the United States. *Religious Landscape Study*, PEW RSCH. CTR., <https://www.pewforum.org/religious-landscape-study> [<https://perma.cc/228A-QYFQ>].

³⁶ Olivia Waring, *What Is a Humanist Funeral? Dale Winton to Be Laid to Rest at Non-Religious Service*, METRO (May 22, 2018, 1:03 PM), <https://metro.co.uk/2018/05/22/humanist-funeral-dale-winton-laid-rest-non-religious-service-7568038> [<https://perma.cc/5KXY-VYUS>].

³⁷ *The FTC Funeral Rule*, FED. TRADE COMM’N: CONSUMER INFORMATION (2012), <https://www.consumer.ftc.gov/articles/0300-ftc-funeral-rule> [<https://perma.cc/792V-3WS3>].

³⁸ *Eulogies Are Not Permitted at Catholic Funerals*, BOS. CATH. J., <http://www.boston-catholic-journal.com/eulogies-not-permitted-at-catholic-funerals.htm> [<https://perma.cc/D43H-39CP>] (“In 1989 the Vatican published the revised Order of Christian Funerals (OCF) for the United States. The long-standing prohibition of eulogies at Catholic funerals was again upheld and restated.”).

tunity to view the body of the deceased before or after the funeral, before closing the casket for the last time. It is not uncommon for specially chosen pallbearers to carry the casket from the funeral service to the vehicle that will be transporting the casket to the hearse, for transport to the burial site or crematorium.

If the burial site has been prepared in advance, a procession of mourners may travel from the location of the funeral to the burial site (i.e., a grave, tomb, or mausoleum). Although the casket usually remains closed at the burial site, there are religious traditions that reopen the casket one last time for mourners to say final farewells.³⁹ A modern trend is the use of therapy animals at the burial site to comfort mourners.⁴⁰ It is not unusual for a luncheon or gathering to be held after the burial. Such gatherings may involve a food and beverages and sometimes take the tone of a festive celebration of the deceased.

A private funeral and burial process happens when the relatives of the deceased would like members of the public to be excluded. Private services may be preferred if the deceased is involved in some type of controversy that will draw protesters, media, or spectators (e.g., when the deceased is a convicted criminal, crime victim, etc.). Such services may also be chosen if the deceased was stillborn or an infant or if the family simply cannot emotionally cope with anyone being present outside of the family.

B. *Traditional Cremation and Disposal of “Cremains”*

The elaborate or traditional funeral ceremony and burial is starting to become antiquated⁴¹ in many parts of the country and the world.⁴² Funeral homes are beginning to see revenues decline as more people are unchurched (only 36 percent regularly attend services),⁴³ more people are concerned about the envi-

³⁹ Helen T. Gray, *How Different Religions Bury Their Dead*, WICHITA EAGLE (July 15, 2019, 1:09 PM), <https://www.kansas.com/living/religion/article1063828.html> [<https://perma.cc/RVZ9-HVY7>].

⁴⁰ “The National Funeral Directors Association doesn’t keep track of how many funeral homes in the U.S. own therapy dogs, but the number has been on the rise in the last few years, said spokeswoman Jessica Koth.” A. Pawlowski, *When Humans Grieve, More Funeral Homes Are Offering Therapy Dogs to Help*, TODAY (June 22, 2017, 8:39 AM), <https://www.today.com/health/therapy-dogs-funeral-homes-help-mourners-process-grief-t112992> [<https://perma.cc/V8P5-RGL5>].

⁴¹ “Somber, embalmed-body funerals, with their \$9,000 industry average price tag, are, for many families, a relic. Instead, end-of-life ceremonies are being personalized: golf-course cocktail send-offs, backyard potluck memorials, more Sinatra and Clapton, less ‘Ave Maria,’ more Hawaiian shirts, fewer dark suits. Families want to put the ‘fun’ in funerals.” Heller, *supra* note 22.

⁴² Meanwhile, the luxury funeral business is in demand in Asia—from \$100,000 gold plated caskets to seven figure burial plots. Razak Ahmad & Angie Teo, *Lavish Funerals in Vogue as Rich Asians Go Out in Style*, REUTERS (Sept. 23, 2010, 10:07 PM), <https://www.reuters.com/article/us-malaysia-funerals/lavish-funerals-in-vogue-as-rich-asians-go-out-in-style-idUSTRE68N0OX20100924> [<https://perma.cc/GQJ2-8MZS>].

⁴³ Heller, *supra* note 22.

ronment,⁴⁴ and fewer people have an interest in visiting gravesites.⁴⁵ In 2016, incineration cremation⁴⁶ surpassed traditional burial for the first time in the United States—55 percent in 2016, compared to 5 percent in 1970, with numbers projected to increase to 71 percent by 2030.⁴⁷ Why the shift in approach? The answer may be as simple as economics—cremation is far cheaper than traditional burial, costing roughly a third as much as the average traditional burial.⁴⁸ The average cost of a funeral in 2019 is \$8,500 in the United States, which is a 227.1 percent increase from 1986 to 2017.⁴⁹ This rising interest in cremation has arguably fueled increasingly personalized, innovative, and emerging technologies to facilitate the disposal of cremated remains or “cremains.” This section details the wide variety of new and emerging approaches to disposal of cremated remains, to make an important point: the public is unaware that it is unaware of the depth of options now available.

One popular example of a new approach to the handling of remains is memorial or remembrance jewelry, with everything from urn jewelry to jewelry infused with cremation ashes.⁵⁰ One can also place remains into a commemorative hourglass urn, to be worn as a necklace or placed on display on a fireplace mantel.⁵¹ Holy Smokes, LLC in Alabama is a firm that specializes in loading cremated remains into ammunition.⁵² For the pizza lover in one’s family, re-

⁴⁴ Cary Funk & Brian Kennedy, *How Americans See Climate Change and the Environment in 7 Charts*, PEW RSCH. CTR. (Apr. 21, 2020), <https://www.pewresearch.org/fact-tank/2020/04/21/how-americans-see-climate-change-and-the-environment-in-7-charts> [<https://perma.cc/Q6H9-KRTB>].

⁴⁵ Heller, *supra* note 22.

⁴⁶ Incineration cremation refers to the fire-based method of cremation done at a crematorium. There are alternatives to this traditional approach to cremation. *See infra* Part II.

⁴⁷ Leanne Pott, *6 Funeral Trends That Are Changing Death Rituals*, AARP (Nov. 20, 2017), <https://www.aarp.org/home-family/friends-family/info-2017/funeral-ceremony-trends-fd.html> [<https://perma.cc/2VZT-LBMF>].

⁴⁸ *Id.*

⁴⁹ Sarah Chavez, *The Story of Death Is the Story of Women*, YES! (Aug. 22, 2019), <https://www.yesmagazine.org/issues/death/dying-feminist-funeral-women-caitlin-doughty-20190821> [<https://perma.cc/3YZ5-FWVK>].

⁵⁰ Jonathan, *Blue Spiral Teardrop Pendant with Infused Cremated Ash*, SPIRIT PIECES, <https://www.spiritpieces.com/products/blue-spiral-teardrop-pendant-with-infused-cremation-ash?gclid> [<https://perma.cc/7QDQ-B8U5>].

⁵¹ *Hourglass Keepsake Urns*, LIGHT URNS, <https://www.inthelighturns.com/hourglass-urns.html> [<https://perma.cc/Q3JF-GM8Z>].

⁵² “I will rest in peace knowing that the last thing that turkey will see is me screaming at him at about 900 feet per second . . .” Daniel Burke, *Holy Smoke: Alabama Hunters Launch Company That Will Load Cremated Remains into Bullets*, HUFFPOST (Dec. 6, 2011), https://www.huffpost.com/entry/holy-smoke-bullets_n_999094 [<https://perma.cc/Q3VY-PWNA>]; *see also* Kelli Dugan, *Alabama Company Turns Gun Lovers’ Ashes into Ammunition*, REUTERS (Sept. 30, 2011, 1:00 PM), <https://www.reuters.com/article/us-alabama-ashes/alabama-company-turns-gun-lovers-ashes-into-ammunition-idUSTRE78T56C20110930> [<https://perma.cc/763X-Y2RG>].

mains can be placed into a pizza box urn.⁵³ Some funeral homes offer the ability to have cremated remains placed in fireworks.⁵⁴ Companies—such as Memorials.com—allow one to have an “art in ashes” cremation painting done by a skilled artist who turns cremated remains into a work of art ready for display.⁵⁵ Similarly, glass artisans can incorporate swirling ash designs from cremation remains into a memorial piece of glass artwork.⁵⁶ US-based ceramics company Chronicle Cremation Design will create ceramic cups that incorporate ashes into the glaze.⁵⁷ And Vinyl—with the slogan “Live on from beyond the groove!”—will press cremated remains into a vinyl record.⁵⁸

Cremated remains can be turned into beautiful jewelry through companies willing to turn your deceased relative into a sparkling synthetic diamond or gemstone. In fact, a robust marketplace has arisen for so-called “cremation diamonds.”⁵⁹ Carbon is extracted from remains through high temperatures (around 2,500°F) and is then subjected to intense pressure, which creates crystals that slowly form.⁶⁰ The length of the process depends upon the color of the desired stone: yellow diamonds, thirty-five to seventy days; green diamonds, forty to eighty days; blue diamonds, sixty to 120 days; and colorless diamonds,

⁵³ *Pizza Box Cremation Urn*, LIGHT URNS, <https://www.inthelighturns.com/pizza-box-cremation-urn-honored-by-ripley-s-believe-it-or-not.html> [<https://perma.cc/RYF4-ZNL3>].

⁵⁴ At Greenlawn, the service starts at about \$1,000, and \$3,000 gets you a four-to-five-minute display with musical accompaniment. When Drobnis offered the service, his company shot the fireworks from a boat off the Southern California coast, and he charged a starting price of \$4,250. Both of these figures are cheaper than the average cost of a funeral.

Heather Schwedel, *Yep, You Can Really Make a Fireworks Display from Cremated Remains*, SLATE (May 14, 2019, 5:59 PM), <https://slate.com/culture/2019/05/memorial-fireworks-hum-an-ashes-cremation-poms-movie.html> [<https://perma.cc/H39K-FVYH>].

⁵⁵ *Art in Ashes*, MEMORIALS.COM, <https://www.memorials.com/art-in-ashes.php> [<https://perma.cc/QW8R-KRRJ>].

⁵⁶ Anna Gragert, *Loved Ones’ Ashes Swirled into Comforting Glass Art Creations*, MY MOD. MET (Mar. 7, 2016), <https://mymodernmet.com/artful-ashes-memorials> [<https://perma.cc/42RB-TJGE>].

⁵⁷ *17 Creative Cremation Ashes Ideas*, FUNERAL GUIDE (June 21, 2018), <https://www.funeralguide.co.uk/blog/what-to-do-with-cremation-ashes> [<https://perma.cc/R34H-AAUL>].

⁵⁸ The content of the 7–12-inch can range from the standard greatest hits, specially-composed tracks, audio of the deceased person’s voice, or even just plain silence so families can really hear their loved ones crackle! Like any kind of end of life arrangement, the price tag isn’t cheap. The minimum cost is £900 (\$1,160) and with luxury features such as RIV artwork, the price can rise to around £3,500 (about \$4,600).

Steve Palace, *“Rest in Vinyl” – A Company Will Press Your Ashes into a Working Vinyl Album*, VINTAGE NEWS (Feb. 14, 2019), <https://www.thevintagenews.com/2019/02/14/vinyl> [<https://perma.cc/G6V5-9Y5A>].

⁵⁹ See, e.g., Taylor Locke, *‘Shark Tank’: Why Mark Cuban Invested \$600,000 into a Business That Turns Human Ashes into Diamonds*, CNBC (Oct. 14, 2019 12:44 PM), <https://www.cnbc.com/2019/10/14/shark-tank-mark-cuban-invested-in-business-turning-ashes-to-diamonds.html> [<https://perma.cc/TK7J-4NQQ>].

⁶⁰ Amy Gardner, *Cremation Diamonds Buyer’s Guide: What Should You Pay?*, CREMATION INST. (Nov. 21, 2019), <https://cremationinstitute.com/cremation-diamonds-guide> [<https://perma.cc/SVY7-TY76>].

seventy to 150 days.⁶¹ It is said that different remains will result in stones of different colors and hues, and the process is as individual as each person's remains.⁶² The diamond may then be shaped and polished as desired by the consumer. The stones usually vary from 0.03 carats up to 2.0 carats.⁶³ Price varies based upon the company hired to perform the process. Heart in Diamond prices range from \$750 for a mini orange-yellow diamond to over \$17,000 for a two-carat deep red diamond.⁶⁴ LifeGem's prices range from \$2,999 for a 0.10 blue diamond to nearly \$20,000 for a one-carat stone.⁶⁵ Ever Dear claims to be the most cost-effective option, with prices ranging from \$695 for a 0.10 yellow diamond to \$18,200 for a 2.0 to 2.29 carat colorless or blue diamond.⁶⁶ Algordanza will produce three rough-cut 0.20 carat diamonds for \$6,299, so that multiple family members may have a commemorative diamond.⁶⁷

Some family members may feel as though the deceased individual is always a part of them—literally, not figuratively—and for these family members, a ritual tattoo may be an option. A ritual tattoo is one in which a small amount of cremation ashes (usually less than a tablespoon) is mixed with tattoo ink to create an ash-infused solution (sometimes colloquially referred to as “morbid ink”)⁶⁸ that is used to indelibly etch a memorial or commemorative tattoo.⁶⁹ These tattoos are controversial within the tattoo industry,⁷⁰ and because only a small number are done each year, it is a relatively unregulated process.⁷¹ There is no data tracking memorial tattoos, but anecdotal tales suggest that these tat-

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Our Prices*, HEART IN DIAMOND, <https://www.heart-in-diamond.com/cremation-diamonds/cost.html> [<https://perma.cc/W2G3-LM5T>].

⁶⁵ *LifeGem Prices*, LIFE GEM, <https://www.lifegem.com/LifeGemPrices.php> [<https://perma.cc/TBE8-T68B>].

⁶⁶ *Same Price, Bigger Diamond: The Cost of Turning Ashes into Diamonds*, EVER DEAR, <http://everdear.co/cremation-diamonds-from-ashes/turning-ashes-into-diamonds-cost> [<https://perma.cc/8XUS-X5B2>].

⁶⁷ *Memorial Diamond Selection & Prices*, ALGORDANZA, <https://mymemorialdiamond.com/ashes-into-diamonds-selection-prices> [<https://perma.cc/6WYQ-DT4F>].

⁶⁸ *What to Do with Cremation Ashes: Tattoo Ink*, NEPTUNE SOC'Y (Feb. 18, 2016), <https://www.neptunesociety.com/cremation-information-articles/what-to-do-with-cremation-ashes-tattoo-ink> [<https://perma.cc/8AM4-MA3R>].

⁶⁹ *Id.*

⁷⁰ “Adding people parts to one’s tat sounds like a helluva [sic] health-code violation. But Dr. Sandra Whitehead, the director of Program and Partnership Development at the National Environmental Health Association, says it’s no more dangerous or gross than non-human ink ingredients.” Beca Grimm, *Tattooing a Dead Friend’s Ashes on Your Body Is the Ultimate Tribute*, VICE (Feb. 14, 2017, 1:06 PM), https://www.vice.com/en_us/article/vvxnmx/tattooing-a-dead-friends-ashes-onto-your-body-is-the-ultimate-tribute [<https://perma.cc/LU2U-LSJD>].

⁷¹ *What to Do with Cremation Ashes: Tattoo Ink*, *supra* note 68.

toos are itchier than traditional body art and should be avoided by those with sensitive skin.⁷²

Alternatively, perhaps the deceased would have enjoyed knowing that their ashes were dispersed into the environment in a creative manner. For example, Disney custodians report that loved ones are dispersed at Disneyland and Disney World roughly once a month.⁷³ For those who are interested in having a Viking burial, already-cremated remains can be placed in a wicker Viking ship that is then set aflame.⁷⁴ Relatives may also purchase an ash scattering cannon online, which will shoot cremation remains up to seventy feet in the atmosphere.⁷⁵ For the airplane-loving deceased, Fly a Spitfire will scatter ashes from a vintage airplane.⁷⁶ Company Your Wings will drop ashes during a video recorded skydive, or you may participate as a tandem jumper and drop the ashes yourself.⁷⁷ Eternal Ascent Society and Mesoloft will place remains into balloons that reach high altitudes before breaking and scattering ashes to the wind.⁷⁸

Yet another option caters to the deceased who perhaps longed to travel into space. On June 25, 2019, Space X launched its Falcon Heavy rocket.⁷⁹ One of the twenty-four satellites being launched into orbit contains cremains (or cremated remains) from 152 dead people.⁸⁰ Space burial has been offered since

⁷² *Id.*

⁷³ Erich Schwartzel, *Disney World's Big Secret: It's a Favorite Spot to Scatter Family Ashes*, WALL ST. J. (Oct. 24, 2018, 10:10 AM), <https://www.wsj.com/articles/disney-worlds-big-secret-its-a-favorite-spot-to-scatter-family-ashes-1540390229> [<https://perma.cc/9GHU-U3SW>].

Human ashes have been spread in flower beds, on bushes and on Magic Kingdom lawns; outside the park gates and during fireworks displays; on Pirates of the Caribbean and in the moat underneath the flying elephants of the Dumbo ride. Most frequently of all, according to custodians and park workers, they've been dispersed throughout the Haunted Mansion, the 49-year-old attraction featuring an eerie old estate full of imaginary ghosts. "The Haunted Mansion probably has so much human ashes in it that it's not even funny," said one Disneyland custodian.

Id.

⁷⁴ 17 *Creative Cremation Ashes Ideas*, *supra* note 57.

⁷⁵ *The Loved One Launcher (Ash Scattering Cannon)*, CREMATION SOLS., <https://www.cremationsolutions.com/the-loved-one-launcher-ash-scattering-cannon> [<https://perma.cc/Q3C7-C46S>].

⁷⁶ *Ashes Drop Memorial Flight*, FLY SPITFIRE, <https://flyspitfire.com/ashes-drop-memorial-flight> [<https://perma.cc/J5Q9-RF99>].

⁷⁷ *What Do We Do?*, YOUR WINGS, http://www.yourwings.co.uk/your_wings_what.html [<https://perma.cc/65NA-82JV>].

⁷⁸ Kristin Hunt, 9 *Creative Things to Do with Ashes*, EVERPLANS, <https://www.everplans.com/articles/9-creative-things-to-do-with-ashes> [<https://perma.cc/MX8J-C5LD>].

⁷⁹ Associated Press, *SpaceX Launches Falcon Heavy Rocket with 24 Satellites, but Core Booster Misses Ocean Platform*, NBC NEWS (June 25, 2019, 1:18 AM) <https://www.nbcnews.com/mach/science/spacex-launches-falcon-heavy-rocket-24-satellites-core-booster-misses-ncna1021306> [<https://perma.cc/SM6R-JZFR>].

⁸⁰ Dave Mosher, *SpaceX Is About to Launch 152 Dead People's Remains into Orbit Aboard a Falcon Heavy Rocket*, BUS. INSIDER (June 23, 2019, 10:46 AM), <https://www.businessinsider.com/spacex-falcon-heavy-launch-cremated-remains-celestis-2019-6> [<https://perma.cc/WK>].

1992 when the NASA shuttle Columbia carried the remains of Gene Roddenberry on a space flight and then returned the remains to earth.⁸¹ Space burials include suborbital flights (the spacecraft is at the end of the atmosphere, where weightlessness is possible but orbiting is not),⁸² moon burials, and deep space or lunar flights. Celetis (founded in 1994) and Elysium Space (founded in 2014) both offer post-mortem celestial services, with the former having arranged for cremated remains to be transported to space on more than a dozen occasions.⁸³ Family members are able to send between one and seven grams of remains to space for roughly \$5,000 (for one gram of ashes for an orbital flight) or upwards of \$12,500 (for deep-space or lunar flights).⁸⁴

A number of eco-aware cremains options are also available. Memorial Reef International offers an alternative to traditional burial by placing remains into a “reef ball,” which is a hollow egg of pH-balanced concrete that is then placed into an under-ocean memorial garden.⁸⁵ The reef ball has a bronze plaque to honor the deceased and is easily located for future visits.⁸⁶ “There are more than 1,800 Eternal Reefs placed off the coasts of Florida, South Carolina, North Carolina, Maryland, New Jersey, Texas, and Virginia.”⁸⁷ Dorset-based Solace Reef sells memorial reefs that are placed off the coast of Weymouth in the United Kingdom.⁸⁸

For some, the beauty of a tree is replacing the tradition of a tombstone—which has led to the eco-conscious bio urn and planting system developed by The Living Urn.⁸⁹ Cemeteries have tried burying cremated remains only to discover that the ashes can be quite harmful to vegetation because of high pH and

P2-G8MC].

⁸¹ Kaleigh Rogers, *There Are Ashes of Dead People Orbiting Earth*, VICE (Jan. 15, 2015, 1:45 PM), https://www.vice.com/en_us/article/78x73q/the-ashes-of-dead-people-orbiting-earth [https://perma.cc/8F4Z-7NUV].

⁸² Oscar Gonzalez, *What Is a Suborbital Flight? How SpaceX and Blue Origin’s Launches Differ*, INVERSE (Apr. 28, 2018, 3:03 PM), <https://www.inverse.com/article/44283-suborbital-flight-blue-origin-spacex-difference> [https://perma.cc/9M5G-MWJ8].

⁸³ Mosher, *supra* note 80.

⁸⁴ *Id.*

⁸⁵ *What Is a Memorial Reef?*, MEM’L REEFS INT’L, <https://www.memorialreefs.international/reef-memorials> [https://perma.cc/5TBV-2LF4]; *What Is an Eternal Reef?*, ETERNAL REEFS, <https://www.eternalreefs.com/the-eternal-reefs-story-/what-is-an-eternal-reef> [https://perma.cc/MW5V-R7GA]; *About Reef Balls*, ETERNAL REEFS, <https://www.eternalreefs.com/the-eternal-reefs-story/about-reef-balls> [https://perma.cc/U3E3-TTZH].

⁸⁶ *What is a Memorial Reef?*, *supra* note 85.

⁸⁷ Lucy Berry, *15 Unique Things to Do with Your Cremated Ashes When You Die*, AL.COM (Jan. 13, 2019), https://www.al.com/business/2015/01/15_unique_things_to_do_your_cr.html [https://perma.cc/UCC5-92UX].

⁸⁸ *17 Creative Cremation Ashes Ideas*, *supra* note 57. “Cremated remains are placed in pyramid-shaped ‘Solace Stones’ that are laid to rest on the sea bed.” *Id.*

⁸⁹ *What Is the Living Urn?*, LIVING URN, <https://www.thelivingurn.com> [https://perma.cc/Y4B8-BVTM].

sodium levels.⁹⁰ The Living Urn uses RootProtect to neutralize harmful attributes of cremains, so that the growth of the memorial tree or plant is not inhibited.⁹¹ Any amount of cremated remains may be buried with the plant or tree.⁹²

Better Place Forests is a San Francisco-based start-up that has raised \$12 million in venture capital funding in an effort to “redesign the entire end-of-life experience.”⁹³ The company is buying forests in California, obtaining conservation easements to prevent development of the land, and selling the ability to feed cremated remains mixed with fertilizer to a specific tree.⁹⁴ Thousands of trees have already been sold to the living, with costs varying based upon type of tree: \$3,000 for those who wish to be placed by a young tree or less desirable tree species, up to \$30,000 for those who wish to be placed to rest next to an old redwood (which can live for more than 700 years).⁹⁵ One can pay \$970 to be placed with others at the base of a community tree.⁹⁶

II. EMERGING OPTIONS

We are distanced from death in the United States: preferring the aging process to be invisible, the infirm to receive medical care in hospitals, and the dead to be whisked away to funeral homes.⁹⁷ Our “death illiteracy” renders the consumer particularly vulnerable to purchasing unnecessary and expensive death

⁹⁰ *Why Burying Ashes Is Harmful to the Environment*, LET YOUR LOVE GROW, <https://letyourlovegrow.com/blogs/blog/why-burying-ashes-is-harmful-to-the-environment> [<https://perma.cc/ZTN3-E2L4>] (“[T]he pH level of the cremated ashes is extremely high and will not allow for the natural release of the good nutrients within the cremated ashes. . . . In addition, cremated ashes also contain sodium in amounts that range from 200 to 2000 times what plant life can tolerate.”); see also Armani Goens, *Cremation Ashes Will KILL Your Plants, Unless You Follow These Steps!*, FUNERAL DIRECT (May 3, 2018), <https://www.funeraldirect.shop/blogs/cremation-urns/human-ashes-tree> [<https://perma.cc/QSA6-TMUR>].

⁹¹ *Frequently Asked Questions: What’s the Purpose of RootProtect?*, LIVING URN, <https://www.thelivingurn.com/apps/help-center#!in-my-living-urn-i-received-a-special-ash-neutralizing-agent-and-a-special-premium-growth-mix-what-are-the-purposes-of-these-components-and-are-they-important> [<https://perma.cc/PT6W-2CXR>].

⁹² *Frequently Asked Questions: How Much of the Cremated Remains Do I Need to Use with the Living Urn Bio Urn and Planting System?*, LIVING URN, <https://www.thelivingurn.com/apps/help-center#how-much-of-the-cremated-remains-do-i-need-to-use-with-the-living-urn> [<https://perma.cc/D72H-UBNA>].

⁹³ Nellie Bowles, *Could Trees Be the New Gravestones?*, N.Y. TIMES (June 12, 2019), <https://nyti.ms/2IDDXeJ> [<https://perma.cc/UZ5H-PAFJ>].

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.* (“For an extra fee, customers can have a digital memorial video made. Walking through the forest, visitors will be able to scan a placard and watch a 12-minute digital portrait of the deceased talking straight to camera about his or her life.”).

⁹⁷ Jen Ortiz, *The Women Who Love Death*, MARIE CLAIRE (Oct. 31, 2016), <https://www.marieclaire.com/culture/a22236/women-in-death-positivity-movement> [<https://perma.cc/8VPA-WLDL>] (“Without a regular face-to-face relationship with death, we’ve developed an aversion to the subject entirely.”).

products and processes.⁹⁸ Enter the “death positive” movement⁹⁹ and the end of concealment—a process of disruption intended to bring transparency,¹⁰⁰ humanity, and personalization to the treatment of human remains.¹⁰¹ This movement comes at a time when a large segment of the population is aging into retirement, and at least one in five Americans are likely to be contemplating death.¹⁰² Part III further explores emerging options with regard to the transitioning of human remains.

An emerging trend by which survivors may memorialize remains is a process by which the body art of the deceased is preserved and professionally mounted behind UV-glass so it may be displayed.¹⁰³ An Ohio-based company called Save My Ink Forever works with funeral homes to surgically excise and preserve tattoo art on a decedent (excluding tattoos on the face or genitals).¹⁰⁴ More than one-third of Americans aged eighteen to twenty-nine have at least one tattoo, and there are more than 20,000 tattoo parlors in the United States.¹⁰⁵ There is unquestionably a growing market of consumers who may be interested in such a product.

An expensive nontraditional option is mummification. Based in Salt Lake City, a religious organization called Summum subscribes to the belief that the spirit continues after death and is bereft by the destruction of its physical ves-

⁹⁸ Chavez, *supra* note 49.

⁹⁹ Caitlin Doughty, a mortician, successful author, and YouTube celebrity based in Los Angeles, first coined this expression. Caitlin Doughty (@TheGoodDeath), TWITTER (Apr. 28, 2013, 3:28 PM), <https://twitter.com/TheGoodDeath/status/328636776367415296> [<https://perma.cc/9NQ5-SLGK>].

¹⁰⁰ Chavez, *supra* note 49 (“While White patriarchy has spent the past hundred years shutting the doors and pulling the curtain—obfuscating and profiting from one of life’s most significant milestones—modern women are questioning whom our current system is serving and telling the funeral industry that its time is up.”).

¹⁰¹ *Id.* (“Gelbart’s body was brought home, to be washed and wrapped in a golden shroud by Bareham and Metzner. For Metzner, caring for his husband’s body was a natural continuation of the love and care Metzner provided him in life, allowing for a ‘healing journey through grief that the funeral industry wants to deny us,’ he explained. For the next three days, mourners could spend time with Gelbart at the couple’s home.”).

¹⁰² *Older People Projected to Outnumber Children for First Time in U.S. History*, U.S. CENSUS BUREAU (Oct. 8, 2019), <https://www.census.gov/newsroom/press-releases/2018/cb18-41-population-projections.html> [<https://perma.cc/YC9P-ZLGK>] (“This [age shift] will expand the size of the older population so that 1 in every 5 residents will be retirement age.”). The U.S. Census Bureau also noted that by 2030, “all baby boomers will be older than age 65.” *Id.*

¹⁰³ Jessica Murphy, *Preserving a Loved One’s Tattoos After Death*, BBC NEWS (May 3, 2019), <https://www.bbc.com/news/world-us-canada-48047002> [<https://perma.cc/3HFJ-GEVU>].

¹⁰⁴ Leyland Cecco, *Canada: How a Dying Man’s Wish That His Tattoos Outlive Him Came True*, GUARDIAN (Nov. 15, 2018, 12:13 PM), <https://www.theguardian.com/world/2018/nov/15/canada-dying-man-wish-preserve-tattoos> [<https://perma.cc/5D4D-Y9MP>].

¹⁰⁵ *Tattoo Statistics – How Many People Have Tattoos?*, HIST. OF TATTOOS, <http://www.historyoftattoos.net/tattoo-facts/tattoo-statistics> [<https://perma.cc/7SYL-DYJK>].

sel¹⁰⁶—and mummification will ease the journey of the spirit to its next destination.¹⁰⁷ It is a preservation process that takes four to six months to complete, with the mummified corpse stored in a hermetically sealed sarcophagus called a mummiform.¹⁰⁸ This extravagant process is work- and cost-intensive, with prices starting at \$67,000 (excluding the cost of the mummiform).¹⁰⁹

The practice of at-home funerals was a historical norm and is once again gaining traction. The rise of the positive death or alt-death movement in the United States is undeniable—and the movement is challenging conventional and commercial services.¹¹⁰ Called a family-directed funeral or home-based funeral, this approach allow relatives and loved ones to do much of the preparation of the corpse¹¹¹ and to keep the deceased at home for viewing until it is time for burial or cremation.¹¹² A home funeral generally must be planned in advance: states have different legal requirements as to how the deceased must be stored at home, and a handful of states have enacted formalities that make it an impossibility,¹¹³ including the requirement that a funeral home and/or funeral director be involved.¹¹⁴

There is rising interest in the reintegration and transition of human remains back into the environment in a way that respects the planet—an area that has broadly been labeled “green burial.”¹¹⁵ Although historically regarded as a

¹⁰⁶ Ella Morton, *Modern Mummification for You and Your Pet*, SLATE: ATLAS OBSCURA (Mar. 28, 2014, 11:49 AM), http://www.slate.com/blogs/atlas_obscura/2014/03/28/salt_lake_city_based_group_summum_will_mummify_you_and_your_pet.html [https://perma.cc/7GT7-5XN7].

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Mummification Costs*, SUMMUM, <http://www.summum.org/cost.shtml> [https://perma.cc/3CQJ-HLHK]. Although costs are not available for the mummiforms, animal mummification starts at \$28,000, and the bronze mummiform is an additional \$50,000 to \$100,000. Namrata Dixit, *Pet Mummification Makes Your Beloved Pal Immortal*, LUXURYLAUNCHES (May 14, 2012), https://luxurylaunches.com/pets/pet_mummification_makes_your_beloved_pal_immortal.php [https://perma.cc/6VU9-P2CN]. Forms for pets weighing 61 to 100 pounds are priced at \$50,000 to more than \$100,000. *Id.*

¹¹⁰ See Asmara M. Tekle, *Have a Scoop of Grandpa: Composting as a Means of Final Disposition of Human Remains*, 3 SAVANNAH L. REV. 137, 141 (2016).

¹¹¹ *Planning a Home Funeral*, SEVENPONDS, <http://www.sevenponds.com/after-death/planning-a-home-funeral> [https://perma.cc/C3H9-XQZ7]. Family members prepare the body for viewing. *Id.* Rather than a chemical process attended to by a stranger in a funeral home, family members are able to wash the body of their loved one in their home, and apply favorite lotions, perfumes or colognes. *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ Brandon Heffinger, *Only Nine States Require the Use of Funeral Directors*, FUNERAL L. BLOG (Mar. 3, 2014, 8:29 PM), <https://funerallaw.typepad.com/blog/2014/03/only-nine-states-require-the-use-of-funeral-directors.html> [https://perma.cc/ZP9A-V5C6]. As of 2014, the nine states are Connecticut, Illinois, Iowa, Indiana, Louisiana, New York, Michigan, Nebraska, and New Jersey. *Id.*

¹¹⁵ *The Science of Decay and Decomposition*, CORPSE PROJECT, <http://www.thecorpseproject>

waste product, the idea of human remains as a natural part of an organic cycle is starting to gain mass appeal. The green death industry (sometimes referred to as “green burial”) broadly encompasses any process that reintegrates human remains into the planet in an environmentally friendly way.

Incineration cremation is far more environmentally friendly than traditional burial but falls short from being ideal.¹¹⁶ One green alternative to fire-based cremation is a process gradually becoming legal in the United States: a form of alkaline hydrolysis known as aquamation¹¹⁷ (also resomation or bio cremation), which essentially liquifies a corpse, leaving behind bones that can be ground to produce ash.¹¹⁸ As with incineration cremation, families may use the resulting powder or ask to memorialize the deceased.¹¹⁹ Further, aquamation may be available when incineration cremation is not (e.g., when the casket of an obese corpse is too large for the crematorium).¹²⁰

Aquamation uses only 10 percent of the energy of a traditional cremation, produces no air emissions,¹²¹ and has been used for years to dispose of bodies donated for scientific use.¹²² The process of alkaline hydrolysis was patented in 1888, and yet, only fifteen states allow alkaline hydrolysis for commercial use

.net/decompositionscience [https://perma.cc/U78S-JCXX] (“It seems that there is significant environmental value in the decay of cadavres [sic] on the surface. However, this is clearly not an option for human corpses.”).

¹¹⁶ Becky Little, *The Environmental Toll of Cremating the Dead*, NAT’L GEOGRAPHIC (Nov. 5, 2019), <https://www.nationalgeographic.com/science/2019/11/is-cremation-environmentally-friendly-heres-the-science> [https://perma.cc/B5K6-C2VA].

¹¹⁷ Kamenev, *supra* note 7 (“In 2009, TIME listed resomation as one of the year’s top 10 environmental ideas.”).

¹¹⁸ Devin Powell, *Dissolve the Dead? Controversy Swirls Around Liquid Cremation*, SCI. AM. (Sept. 7, 2017), <https://www.scientificamerican.com/article/dissolve-the-dead-controversy-swirls-around-liquid-cremation> [https://perma.cc/45U7-453X].

¹¹⁹ Robin Scher, *Don’t Burn Your Body When You’re Dead: Dissolving Yourself Is Much More Eco-Friendly*, ALTERNET (Jan. 23, 2018), <https://www.alternet.org/2018/01/dont-burn-your-body-when-youre-dead-dissolving-yourself-much-more-eco-friendly> [https://perma.cc/8RYA-SJKD].

¹²⁰ David Trayner, *Coffins of Obese Scottish People Are Too Big to Be Cremated*, INDEP. (Aug. 16, 2015, 10:53 AM), <https://www.independent.co.uk/news/uk/home-news/scotland-obesity-coffins-too-big-crematoriums-10457621.html> [https://perma.cc/H5ZA-TYWB]

(“Obese Scots are having to be buried rather than cremated as their supersize coffins are too big for furnaces, funeral directors have warned.”).

¹²¹ Sara Marsden-Ille, *Aquamation or Resomation: A ‘Green’ Alternative to the Traditional Funeral*, US FUNERALS ONLINE (Apr. 22, 2014), <http://www.us-funerals.com/funeral-articles/aquamation-or-resomation-a-green-alternative-to-the-traditional-funeral.html#.XVL L9KeZNZ0> [https://perma.cc/3JW8-FZEN].

¹²² Powell, *supra* note 118 (“Eight times a year a funeral director sets off by boat from Camp Pendleton Marine Corps base carrying about two dozen plastic bags filled with unusual human remains. The powder he pours overboard is from corpses that have been “cremated”—not by fire, but by liquid. That’s how the University of California, Los Angeles, disposes of bodies donated to science: by dissolving the flesh off their bones. The bones are then ground to dust and scattered into the sea two miles offshore, forming white rings that slowly float away into the Pacific Ocean.”).

as of 2018.¹²³ Aquamation has not gained traction¹²⁴ for commercial use for any number of reasons, but also owing in part to the hyperbolic tales woven by opposing legislators of boiling human remains and then flushing said remains down a drain.¹²⁵ In at least one state, the legalization process was derailed by a legislator who was coincidentally a casket maker.¹²⁶ And though the Vatican has not specifically addressed alkaline hydrolysis, local Bishops have decided that it is not an acceptable method of disposition for Catholics.¹²⁷

Green burial itself may take place in hybrid cemeteries (offering both conventional and green burial options),¹²⁸ natural burial grounds (committed to sustainable, organic practices), or conservation burial grounds (to ensure perpetual protection of the land through deed restriction or conservation easement).¹²⁹ Although green burials vary widely, there are three characteristics required of a burial for it to qualify as “green”: toxic chemicals are not used to preserve the human remains or maintain the burial ground, biodegradable containers or shrouds are used for burial,¹³⁰ and practices prioritize restoration or

¹²³ Emily Atkin, *The Fight for the Right to Be Cremated by Water*, NEW REPUBLIC (June 14, 2018), <https://newrepublic.com/article/148997/fight-right-cremated-water-rise-alkaline-hydrolysis-america> [<https://perma.cc/QYB8-H9AV>]. Funeral homes in California will begin offering alkaline hydrolysis in 2020. *Id.*

¹²⁴ A 2010 bill to legalize alkaline hydrolysis in California failed, as reported by the *Los Angeles Times*, largely due to concerns over lack of data about how the liquid waste it creates might affect aging sewer pipes and employees’ health at crematoria—safety concerns that Fisher says he has addressed after years of testing with the City of Los Angeles. A second bill in 2013 for a pilot program in five funeral homes also failed to make it across the finish line. And the California Catholic Conference is urging the state’s Senate to vote “no” on the latest legislation, concerned that alkaline hydrolysis “does not appear to respectfully treat human remains.”

Powell, *supra* note 118.

¹²⁵ Kamenev, *supra* note 7.

¹²⁶ The Indiana bill was defeated by a 34-59 vote after the impassioned speech of Representative—and casket-maker—Dick Hamm. Atkin, *supra* note 123; Tony Cook, *Casket-Making Lawmaker Helps Kill Bill Allowing Alternative to Burial*, INDYSTAR (Mar. 20, 2015, 6:11 PM), <https://www.indystar.com/story/news/politics/2015/03/20/casket-making-lawmaker-helps-kill-bill-allowing-alternative-burial/25109443> [<https://perma.cc/3S83-7ULG>].

¹²⁷ The proffered rationale is that the waste product from the embalming process returns to the earth, whereas the waste product from alkaline hydrolysis flows to the sewage system as wastewater. *Alkaline Hydrolysis: Questions and Answers from a Catholic Perspective*, ARCHDIOCESE ST. LOUIS, <https://www.archstl.org/Portals/0/Documents/Worship/AlkalineHydrolysisQandA.pdf> [<https://perma.cc/Y766-69LR>].

¹²⁸ *Green Burial Characteristics*, GREEN BURIAL COUNCIL, http://www.greenburialcouncil.org/burial_grounds_cemeteries.html [<https://perma.cc/6QU8-YLPR>]. “Cemeteries are among the most toxic of modern landscapes in both their immediate and ongoing environmental impacts and intensive use of resources.” Jo Russell-Clarke, *Rethinking the Landscape of Death*, FOREGROUND (Feb. 7, 2019), <https://www.foreground.com.au/environment/urban-burial-cemetery-landscapes> [<https://perma.cc/E434-QQA8>].

¹²⁹ *Green Burial Characteristics*, *supra* note 128.

¹³⁰ Traditional cemeteries often require the use of vaults, or concrete liners lining the grave, so that the ground does not sink as decomposition occurs. Kiley, *supra* note 9.

preservation of the natural habitat.¹³¹ Some green burial providers eschew the use of non-native grave markers, opting instead for native grave markers or GPS coordinates.¹³²

Interestingly, disruption is coming to the death care industry in the form of alternative green technologies. Human remains in the United States have normatively ended up in one of two places—either casket or crematorium.¹³³ The alt-death movement is, however, taking traditional notions of green burial in previously unexplored directions with four promising green death care technologies:¹³⁴ composting, promession, tree-nourishing pods, and mushroom mycelium-infused fabrics, each of which is discussed below.

The non-profit Urban Death Project, spearheaded by Seattle-architect Katrina Spade, proposed an alternative approach in the form of composting—a process that may be viewed as “cremation by carbon” or “organic reduction.”¹³⁵ Composting of human remains is a natural process facilitated through human intervention that, when done correctly, produces no foul odors, does not attract vermin, will not pollute the water supply, and kills pathogens.¹³⁶ The byproduct is an average of two wheelbarrows¹³⁷ of dark humus that has the same scent as high quality topsoil.¹³⁸

¹³¹ *Green Burial Characteristics*, *supra* note 128 (as compared to traditional cemeteries, which use concrete, plastic, vaults or liners, and exotic wood or metal caskets).

¹³² *Id.*

¹³³ The American dead, like American voters, fall roughly into two camps. In this analogy, the conventional burial industry is like the Republican Party: a lot of suits, a lot of money, lobbyists to protect their interests, and a general acceptance that cutting down trees (for caskets), pouring concrete (for vaults), and putting toxic chemicals underground (embalming fluids) are simply part of the American way. Cremationists are more like the Democratic Party: slightly looser dress code, still interested in profit margins but perhaps not as fanatically (there is a lot less money to be made from a \$400 urn than a \$3,000 casket), and a belief that they are on the progressive side of history.

Kiley, *supra* note 9.

¹³⁴ “Americans, who often define themselves as people in pursuit of independence and individuality in life, are now seeking those same ideals in death. The film [*Alternate Endings*] credits the baby boomer generation, now reaching its older years, with this change.” Elena Sheppard, *Funerals – and Death – Are Changing as Americans Try to Control What Happens When They Die*, NBC NEWS (Aug. 20, 2019, 7:06 AM), <https://www.nbcnews.com/think/opinion/funerals-death-changing-americans-try-control-what-happens-when-they-ncna1043541> [<https://perma.cc/J4G5-RNF9>].

¹³⁵ Kiley, *supra* note 9.

¹³⁶ Tekle, *supra* note 110, at 143.

¹³⁷ Rachel Layne, *Soil to Soil? Washington Is the First State to Legalize Composting Bodies*, CBS NEWS (May 27, 2019, 9:26 AM), <https://www.cbsnews.com/news/washington-state-composting-bodies-is-now-legal-natural-burial> [<https://perma.cc/7CVU-FE35>]. “Weeks or months later, survivors could collect some of the compost to use as they saw fit, perhaps in their garden or to plant a tree.” Catrin Einhorn, *A Project to Turn Corpses into Compost*, N.Y. TIMES (Apr. 13, 2015), <https://www.nytimes.com/2015/04/14/science/a-project-to-turn-corpses-into-compost.html> [<https://perma.cc/3DJ4-YGMN>].

¹³⁸ Tekle, *supra* note 110, at 138, 144; Layne, *supra* note 137.

The Urban Death Project's human composting idea managed a pilot study in the summer of 2018 on six volunteers and successfully produced clean, odorless soil that passed all testing for pathogens and pollutants.¹³⁹ Consequently, Washington became the first state¹⁴⁰ to legalize human composting in May 2019.¹⁴¹ Recompose, the for-profit business organized by the founder of the Urban Death Project, anticipates that it will have its first facility running by the close of 2020.¹⁴² The CEO of Recompose estimates that this process will be offered to the public for \$5,500.¹⁴³

The second promising funeral technology, promession, has yet to come to market. Promession is a process that has been compared to the Tibetan practice of "sky burial,"¹⁴⁴ in that both recycle remains¹⁴⁵—the latter into food for animals and the former into soil.¹⁴⁶ Swedish biologist Susanne Wiigh-Mäsak spent two decades researching this innovative, ecological option which essentially uses liquid nitrogen to freeze dry human remains.¹⁴⁷ The corpse is exposed to

¹³⁹ Brendan Kiley, *Washington Becomes First State to Legalize Human Composting*, SEATTLE TIMES (May 22, 2019, 1:42 PM), <https://www.seattletimes.com/seattle-news/washington-becomes-first-state-to-legalize-human-composting> [<https://perma.cc/9TFX-VZDR>].

¹⁴⁰ Although this is an ancient method of laying the deceased to rest, only one state has approved this composting method, over substantial objection of the Catholic Church. The Church representative stated that this approach runs contrary to Church doctrine in its failure to show enough respect for human remains. Julia Duin, *In Washington State, Humans Can Be Turned into Compost (Catholics Have a Problem with That)*, GET RELIGION (May 28, 2019), <https://www.getreligion.org/getreligion/2019/5/26/in-washington-state-humans-can-be-turned-into-soil-catholics-have-a-problem-with-that> [<https://perma.cc/D33S-9Z63>].

¹⁴¹ Kiley, *supra* note 139.

¹⁴² *Id.*

¹⁴³ We are tentatively aiming for a price of \$5500 for the Recompose service. For context, a green burial in Washington is around \$6000, a cremation can range from \$1000-\$7000, and a conventional burial is \$8000+. The price of a Recompose service will include transportation of the body to our facility from within the Seattle metropolitan area, filing of the death certificate, time with family and friends in our beautiful space, and the transformation of the body into soil. FAQ, RECOMPOSE, <https://www.recompose.life/faq> [<https://perma.cc/C96Z-2PH5>].

¹⁴⁴ [A]n undertaker, sweat-drenched, hacks away with a machete at the naked corpse, while *lamas* chant prayers from a distance; super-sized vultures hop gleefully around the circle of chanting mourners; a human leg is wrenched from the torso by a bloody beak. It's not necessarily appealing, but . . . sky burial has existed in various forms for thousands of years.

JACQUELINE ELAM & CHASE PIELAK, *CORPSE ENCOUNTERS: AN AESTHETICS OF DEATH* 150 (2018) (footnote omitted).

¹⁴⁵ *Id.* at 148.

¹⁴⁶ *Id.*

The function of the sky burial is simply to dispose of the remains in as generous a way as possible. Not only was Wiigh-Mäsak familiar with this, but she had received a letter from an "Indian priest" claiming that they were very interested in learning more about Promessa, as they are currently experiencing an inconvenient shortage of vultures.

Nicholas Tufnell, *Freeze-Drying the Dead Could Help Save the Planet*, WIRED (Oct. 14, 2013), <https://www.wired.co.uk/article/promessa> [<https://perma.cc/67B2-9JLZ>].

¹⁴⁷ *Is Promession the Ultimate Ecological Goodbye?*, *supra* note 13.

temperatures below -196°C ,¹⁴⁸ and because the human body is roughly 75 percent water, all fluid is removed and the remaining solid is frozen.¹⁴⁹ Mechanical vibration is applied to the extremely brittle frozen solid, causing the mass to reduce to dry, flesh-colored granules.¹⁵⁰ These granules produce high-quality topsoil that is nurturing to plants, and when buried in a bio-degradable container, the granules and container will decompose within six to twelve months.¹⁵¹ A company was formed in 1997 to explore commercial implementation and asserts that there has been serious interest from countries such as South Korea and the United Kingdom; the potential for the technology even piqued the interest of NASA.¹⁵² There are now five Promessa Representatives covering fifteen states in the United States, with the goal of developing their markets through education and one day legalizing this technology.¹⁵³

Yet another promising funeral technology is Capsula Mundi or “world’s capsule.”¹⁵⁴ Developed by an Italian start-up company, it is a biodegradable pod that is suitable for cremains or human remains.¹⁵⁵ When the bio-plastic shell of the pod degrades, nutrients are fed to the tree sitting atop it.¹⁵⁶ Although

¹⁴⁸ The corpse is more or less turned into a popsicle. ELAM & PIELAK, *supra* note 144, at 149.

¹⁴⁹ Within a week and a half after death, the corpse is frozen to minus 18 degrees Celsius and then submerged in liquid nitrogen. This makes the body very brittle and the vibration of specific amplitude transforms it into an organic powder that is then introduced into a vacuum chamber where the water is evaporated away.

Tufnell, *supra* note 146.

¹⁵⁰ ELAM & PIELAK, *supra* note 144, at 149.

¹⁵¹ Amy Houchin, *Promession: The Most Ecological Way to Bury Our Dead?*, ANTHROPOLOGICAL PERSPS. ON DEATH (Apr. 3, 2017), <https://scholarblogs.emory.edu/grave-matters/2017/04/03/promession-the-most-ecological-way-to-bury-our-dead> [<https://perma.cc/Q9KW-QSWL>].

¹⁵² The United Nations’ Outer Space Treaty (1967) prohibits the disposal of deceased astronauts in space and invited Wiigh-Mäsak to collaborate on temporary storage of deceased astronauts. ELAM & PIELAK, *supra* note 144, at 149–50.

¹⁵³ In November 2019, the Kansas Attorney General issued a legal opinion setting forth that promession did not fall within the state definition of cremation. This is the first state in which an opinion was sought because Kansas has a comparatively broad definition of what constitutes cremation. Jonathan Shorman, *Can You Get Your Body Vibrated into Particles When You Die? Debate Unfolds in Kansas*, WICHITA EAGLE (Dec. 4, 2019, 12:04 PM), <https://www.kansas.com/news/politics-government/article237888864.html> [<https://perma.cc/BH3X-TG9A>].

¹⁵⁴ *Capsula Mundi. Life Never Stops*, CAPSULA MUNDI, <https://www.capsulamundi.it/en> [<https://perma.cc/3PMT-LLTC>]; Paula Erizanu, *The Biodegradable Burial Pod That Turns Your Body into a Tree*, CNN (Jan. 11, 2018, 4:29 AM), <https://www.cnn.com/2017/05/03/world/eco-solutions-capsula-mundi/index.html> [<https://perma.cc/MXD5-4YZ2>] (defining capsula mundi).

¹⁵⁵ Tim Donnelly, *Here’s a Plan to Bury Corpses in Pods, Grow Trees*, N.Y. POST (Feb. 27, 2015, 11:04 AM), <https://nypost.com/2015/02/27/heres-a-plan-to-bury-corpses-in-pods-grow-trees> [<https://perma.cc/P5HS-MCS6>].

¹⁵⁶ Such burials are presently illegal in Italy, which requires wooden coffins lined with tin. Dragana Stepic, *I Want to Die, Like, Yesterday Just so I Can Be Buried in This Pod That*

such an approach is arguably legal in the United States, these pods have been developed only for cremains, with corpses reserved for later development.¹⁵⁷

The final emerging funeral technology is the Infinity Burial Suit,¹⁵⁸ which is essentially a jumpsuit made from mushroom mycelium-infused fabric.¹⁵⁹ The mushrooms are able to simultaneously decompose¹⁶⁰ and clean toxic contaminants,¹⁶¹ a process known as mycoremediation.¹⁶² The Infinity Burial Suit retails for \$1,500 with a two-to-three week delivery time in the United States.¹⁶³ Products similar in concept are being offered by other companies, including a pine wood surface to which the deceased is strapped and covered with woven netting infused with fungal spores that accelerate decomposition and absorb released toxins.¹⁶⁴

Turns Me into a Tree, FRISKY (Oct. 7, 2019), <https://thefrisky.com/i-want-to-die-like-yesterday-just-so-i-can-be-buried-in-this-pod-that-turns-me-into-a-tree> [<https://perma.cc/5NQN-GBEK>].

¹⁵⁷ Erizanu, *supra* note 154.

¹⁵⁸ The burial wish of actor Luke Perry was to be buried in an Infinity Burial Suit. When he unexpectedly passed away in March 2019, his daughter took to Instagram to make the following statement about it: “My dad discovered it, and was more excited by this than I have ever seen him. He was buried in this suit, one of his final wishes. They are truly a beautiful thing for this beautiful planet, and I want to share it with all of you.” *Luke Perry’s Daughter Says He Was Buried in a Mushroom Suit*, NBC2 NEWS (May 4, 2019), <https://www.nbc2.com/story/40417857/luke-perrys-daughter-says-he-was-buried-in-a-mushroom-suit> [<https://perma.cc/5DVK-CKQ3>].

¹⁵⁹ *Frequently Asked Questions*, COEIO, <https://coeio.com/faqs> [<https://perma.cc/2B6D-HJ7M>].

¹⁶⁰ The founder of Coeio also formed the Decompiculture Society:

[A] group of people called decompinants who actively explore their postmortem options, seek death acceptance, and cultivate decomposing organisms like the Infinity Mushroom. The Decompiculture Society shares a vision of a cultural shift, from our current culture of death denial and body preservation to one of decompiculture, a radical acceptance of death and decomposition.

Jessica Xiao, *Would You Let Mushrooms Eat Your Body After Death?*, HUMANIST (Feb. 18, 2016), <https://thehumanist.com/commentary/let-mushrooms-eat-body-death> [<https://perma.cc/4XQW-XTC7>].

¹⁶¹ Human bodies contain high levels of toxins, including flame retardants, pesticides, dry cleaning residues, heavy metals, bisphenol A, etc. The Centers for Disease Control and Prevention estimate that the average individual has 219 chemicals in their body; hence, the need for mushrooms to break these down and make the surrounding soil cleaner.

Katherine Martinko, *Actor Luke Perry Was Buried in This Biodegradable Mushroom Suit*, TREEHUGGER (May 29, 2020), <https://www.treehugger.com/actor-luke-perry-chose-be-buried-biodegradable-mushroom-suit-4858614> [<https://perma.cc/V2H9-3ET5>].

¹⁶² Fiona MacDonald, *This Mushroom Suit Digests Your Body After You Die*, SCIENCEALERT (Feb. 16, 2016), <https://www.sciencealert.com/this-mushroom-suit-digests-your-body-after-you-die> [<https://perma.cc/9EK5-KD5J>].

¹⁶³ *Purchase*, COEIO, <https://coeio.com/infinity-burial-suit-2> [<https://perma.cc/34AK-GJEL>]. By popular demand, Infinity pet shrouds are also available both for physical pet remains as well as pet cremains. *Purchase*, FOREVER SPOT BY COEIO, <http://theforeverspot.com/purchase> [<https://perma.cc/N4K2-PN5L>].

¹⁶⁴ Günseli Yalcinkaya, *Shaina Garfield Redesigns Death with Sustainable Coffin*, DEZEEN (Mar. 18, 2019), <https://www.dezeen.com/2019/03/18/shaina-garfield-leaves-sustainable-cof>

III. THE POTENTIAL OF DISRUPTIVE CHANGE

Although cemeteries have been rebranded through manicured landscaping and park-like surroundings,¹⁶⁵ the reality is that they are essentially urban landfills that store one specific type of decomposing matter. Over the next decade, an estimated half a billion people will die,¹⁶⁶ and it is not sustainable to traditionally inter any significant number of those corpses or to fill the planet with poisonous chemicals¹⁶⁷ and shellacked non-biodegradable coffins.¹⁶⁸ Annually, in the 22,500 cemeteries in the United States, it is estimated that the following will be buried within the earth: “14,000 tons of steel vaults; 90,272 tons of steel caskets; 2,700 tons of copper and bronze caskets; 1,636,000 tons of reinforced concrete vaults; 30 million board feet . . . of hardwood caskets; and, 827,060 US gallons . . . of embalming fluid.”¹⁶⁹ These statistics do not include the mercury from dental fillings and medical devices—such as pacemakers—which may potentially leach into groundwater after human remains have decomposed.¹⁷⁰

The landscaped urban cemetery was the precursor to the modern day park, functioning in the nineteenth century as areas in which families came to relax, play, and picnic.¹⁷¹ This is a surprising juxtaposition to the modern cemetery—which serves as a center for toxic burial practices and environmental degradation.¹⁷² Experts have suggested that it is time to re-think human-designed lawn areas due to ecological impact;¹⁷³ a conservative estimate is that there are three times more acres of lawn (including residential lawn, commercial lawn, golf courses, and cemeteries) in the United States than irrigated corn.¹⁷⁴ Although

fin [<https://perma.cc/X4EZ-7XK2>].

¹⁶⁵ The manicured landscaping comes at a cost with significant fertilizer and water needs. Erin Blakemore, *Could the Funeral of the Future Help Heal the Environment?*, SMITHSONIAN MAG. (Feb. 1, 2016), <https://www.smithsonianmag.com/science-nature/could-funeral-future-help-heal-environment-180957953> [<https://perma.cc/5W8A-Y2S3>].

¹⁶⁶ Roughly 1,255,200 were traditionally buried in the United States in 2013 alone. *Id.*

¹⁶⁷ “A traditional ten-acre cemetery holds enough embalming fluid to fill a small swimming pool.” *Id.*

¹⁶⁸ Max Plenke, *Traditional Burials Are Ruining the Planet – Here’s What We Should Do Instead*, BUS. INSIDER (Apr. 7, 2016, 1:23 PM), <https://www.businessinsider.com/traditional-burials-are-ruining-the-planet-2016-4> [<https://perma.cc/EU74-33GG>].

¹⁶⁹ *Groundwater Pollution and Radiation Contamination in Cemeteries and Local Communities*, DISABLED WORLD (Mar. 2, 2019), <https://disabled-world.com/health/cemetery.php> [<https://perma.cc/742Q-BW69>] (list punctuation edited for clarity).

¹⁷⁰ *Id.*

¹⁷¹ Russell-Clarke, *supra* note 128.

¹⁷² “Cemeteries are among the most toxic of modern landscapes in both their immediate and ongoing environmental impacts and intensive use of resources.” *Id.*

¹⁷³ “I tell ya, country clubs and cemeteries, the biggest wasters of prime real estate . . . Dead people, they don’t want to be buried nowadays. Ecology, right?” CADDYSHACK (Orion Pictures 1980).

¹⁷⁴ *More Lawns than Irrigated Corn*, NASA EARTH OBSERVATORY (Nov. 8, 2005), <https://earthobservatory.nasa.gov/features/Lawn/lawn2.php> [<https://perma.cc/5SHE-FHFG>].

the water consumed by lawn varies dramatically by region,¹⁷⁵ there is no question that water wasted on acres of well-watered lawn is a national concern; with population growth in the United States, the water table has dropped several hundred feet in some locations.¹⁷⁶ Saltwater is invading freshwater aquifers in some areas as water table recede¹⁷⁷—because, as the wise Aristotle observed, nature abhors a vacuum.¹⁷⁸ Because lawns are not indigenous in most parts of the country, gasoline-fueled machinery that maintains human-designed lawn exacerbates carbon pollution¹⁷⁹ and runoff from nitrogen-based fertilizers exacerbates water pollution.¹⁸⁰ Despite the fact that lawn pulls carbon dioxide out of the air, the environmental impact of lawn far exceeds its benefit.¹⁸¹

Urban cemeteries present several other challenges that are not often discussed. The first challenge is one of practical use: the urban need for housing (for the living) outweighs the need for cemeteries (for the deceased). As urban areas continue to grow in size, land that has traditionally been off-limits to development, such as cemeteries, will necessarily need to be reclaimed for housing—because shuttling a growing population to rural areas and away from mass-transit is not a viable solution.¹⁸² The second challenge is one of capacity: the centuries-old dilemma that urban cemeteries eventually run out of space.¹⁸³ In other parts of the world, burial plots are used for an established period of time, after which remains are disinterred or deepened¹⁸⁴ and the grave is leased

¹⁷⁵ In dry regions of the country, watering lawns accounts for 75 percent of water consumption. Bob Yirka, *Ecologists Suggest It Is Time to Rethink the Modern Lawn*, PHYS.ORG (Oct. 12, 2018), <https://phys.org/news/2018-10-ecologists-rethink-modern-lawn.html> [<https://perma.cc/7TBV-N5XA>].

¹⁷⁶ *Ecological Impact of Lawns*, NASA EARTH OBSERVATORY (Nov. 8, 2005), <https://earthobservatory.nasa.gov/features/Lawn/lawn3.php> [<https://perma.cc/48EQ-2WJX>].

¹⁷⁷ *Id.*

¹⁷⁸ Thomas DeMichele, *Nature Abhors a Vacuum*, FACT/MYTH (Jan. 25, 2017), <http://factmyth.com/factoids/nature-abhors-a-vacuum> [<https://perma.cc/ESV4-XNKF>].

¹⁷⁹ *Ecological Impact of Lawns*, *supra* note 176.

¹⁸⁰ *Id.*

¹⁸¹ Yirka, *supra* note 175.

¹⁸² Joanne Tang, *Cemeteries Use a Lot of Space and Are Terrible for the Environment. Is There a Better Way?*, GREATER GREATER WASH. (Jan. 9, 2019), <https://ggwash.org/view/70300/burial-culture-and-the-issues-with-using-so-much-space-for-cemeteries> [<https://perma.cc/K6D7-H6NB>].

¹⁸³ The catacombs in Paris were an eighteenth-century approach to dealing with urban cemetery overcrowding. Allison C. Meier, *How the Paris Catacombs Solved a Cemetery Crisis*, JSTOR DAILY (July 23, 2019), <https://daily.jstor.org/how-the-paris-catacombs-solved-a-cemetery-crisis> [<https://perma.cc/X9UA-6VYP>].

¹⁸⁴ In such a case the burial and its headstone are given the “lift and deepen” treatment. The existing burial is removed and replaced lower down in the grave so that another burial can be included on top. The headstone is either smashed and buried with them, or removed to an inconspicuous place.

Lynley Wallis et al., *Losing the Plot: Death Is Permanent, but Your Grave Isn't*, CONVERSATION (Nov. 5, 2014, 8:03 PM), <http://theconversation.com/losing-the-plot-death-is-permanent-but-your-grave-isnt-33459> [<https://perma.cc/GGH6-VGH4>].

by another.¹⁸⁵ Although the reuse of graves is customary in a number of countries, the absurd notion one owns a rectangular four-foot by eight-foot patch of land for eternity has become normalized,¹⁸⁶ and also, chemical preservation and burial methods geared towards delay of decomposition would need to be abandoned.

The tax incentive proposal advanced in Part IV is premised upon the foundational notion that there is an inescapable human dependence upon natural resources and all human needs must be met equitably and sustainably,¹⁸⁷ which in this instance requires recognition that global population growth necessitates that different approaches be considered and explored to address disposal of human remains. There is an existential equity to “greening up death,” and harm to the planet is definitely an important motivation for government investment into this sector¹⁸⁸—but utilizing tax incentives to favor green death care technologies is a good idea for several other important reasons.

The death care industry is described as being “40 to 50 years out of date technologically and culturally.”¹⁸⁹ It is one that is steeped in formalism and tradition, servicing uniquely vulnerable consumers. Few consumers engage in pre-need (or pre-death) death care planning or prepayment, and the consequence is that the grief-stricken consumer is generally limited to the options and prices offered at the one funeral home they contact. In fact, the percentage of consumers who contact more than one funeral home is only 18.9 percent.¹⁹⁰ Grief impairs cognitive activity, leaving the consumer feeling distracted and unable to concentrate—and it is safe to say that the grief-stricken consumer does not behave like the typical consumer.¹⁹¹ There is cause to be concerned about the con-

¹⁸⁵ Tang, *supra* note 182.

¹⁸⁶ Many other European countries regularly reuse old graves after a couple of decades. Britain does not, as a result of Victorian hygiene obsession, piecemeal regulation and national tradition. For many, an Englishman’s tomb, like his home, is his castle. That view is also common in the United States, which like Britain tends to regard graves as eternal and not to be disturbed – although the U.S. has a lot more space, so the burial crisis is less acute.

U.K.’s Grave Crisis: Share a Plot with a Stranger?, NBC NEWS (Oct. 29, 2009, 9:10 AM), http://www.nbcnews.com/id/33520796/ns/world_news-europe/t/uks-grave-crisis-share-plot-stranger [<https://perma.cc/RL8E-8K3W>].

¹⁸⁷ J.K. Summers & L.M. Smith, *The Role of Social and Intergenerational Equity in Making Changes in Human Well-Being Sustainable*, 43 *AMBIO* 718, 718 (2014).

¹⁸⁸ “The funeral industry has always been about making your body immune to nature, preserving yourself in spite of it” Atkin, *supra* note 123 (quoting Phillip Olson, assistant professor, Virginia Tech).

¹⁸⁹ Lisa Fickenschner, *These Websites Unearth Funeral Homes’ Tight-Lipped Pricing Practices*, N.Y. POST (May 26, 2019, 6:24 PM), <https://nypost.com/2019/05/26/these-websites-unearth-funeral-homes-tight-lipped-pricing-practices> [<https://perma.cc/6W2M-6TP4>] (quoting Josh Slocum of the Funeral Consumers Alliance).

¹⁹⁰ *NFDA Consumer Survey: Funeral Planning Not a Priority for Americans*, *supra* note 16.

¹⁹¹ CONSUMER RESEARCH: POSTCARDS FROM THE EDGE 371 (Stephen Brown & Darach Turley eds., 1997).

solidation that has occurred within this industry.¹⁹² And importantly, there is a structural chokehold on the range of prices and options presented to the consumer.¹⁹³

This is troubling in an industry in which pricing for the same services may vary wildly—with a survey from the Consumer Federation of America and Funeral Consumers Alliance noting price ranges of more than 200 percent in the same city.¹⁹⁴ Because of outdated Federal Trade Commission (FTC) regulations,¹⁹⁵ it is estimated that only 25 percent of the funeral homes in the United States post pricing online.¹⁹⁶ Further, funeral homes have little incentive to offer less expensive, emerging, or green technologies that may lower consumer cost: despite the fact that more than half of consumers are interested in green options, only 32 percent of National Funeral Director members offered green options in 2015 (up from 12 percent in 2011).

A tax incentive to support and bolster the green burial industry has the added purpose of addressing both market failures and market barriers. An example of a market failure is the disconnect between the consumer and the product—specifically, consumers do not seem overly motivated to expend capital on a product from which they will never extract any lifetime value or enjoy-

¹⁹² Death conglomerate Service Corporation International reportedly earns 22.4 percent of all funeral profits in the United States. Michael Waters, *The Death Industry Is Getting Away with Murder*, WASH. MONTHLY (July 23, 2019), <https://washingtonmonthly.com/2019/07/23/the-death-industrys-biggest-threat> [<https://perma.cc/47M6-PKZ2>]. Further, two companies control 82 percent of the market share in the casket industry. Michael Waters, *Can the American Casket Monopoly be Disrupted?*, HUSTLE (Dec. 20, 2019), <https://thehustle.co/casket-industry-monopoly-batesville> [<https://perma.cc/KK2D-8CF9>].

¹⁹³ In New York City, a direct cremation (without casket, viewing or ceremony) may run as little as \$550 and as much as \$10,125. Grant, *supra* note 25.

¹⁹⁴ *Id.*

What those families rarely realize is that their local funeral home, once run as a “mom-and-pop” family business, is now probably owned by a Wall Street firm. Service Corporation International, or SCI, for example, operates 1,477 funeral service locations and 483 cemeteries across the country, and is worth \$13.3 billion SCI charges between 40 percent and 75 percent more for its services than independent funeral homes do.

Mona Chalabi, *The Rising Cost of Not Living*, N.Y. REV. OF BOOKS (Dec. 16, 2019, 12:16 PM), <https://www.nybooks.com/daily/2019/12/16/the-rising-cost-of-not-living> [<https://perma.cc/FMK6-HLWF>].

¹⁹⁵ Ann Carrns, *Funeral Prices Are Hard to Get and Vary Widely, Survey Finds*, N.Y. TIMES (Oct. 21, 2015), <https://nyti.ms/1KoFdtg> [<https://perma.cc/92S4-XKK7>]. “‘I don’t think money should be at the forefront of a funeral,’ Joseph Giordano Jr. of Curry & Giordano Funeral Home in Peekskill, NY, told The Post before adding: ‘I don’t include my prices on my website because I want people to come in and see my facility.’” Fickenscher, *supra* note 189.

¹⁹⁶ Fickenscher, *supra* note 189. Technology such as the Funeralocity—collecting pricing data on 14,000 of 19,000 funeral homes as of November 2019—will facilitate online shopping and price comparison in an industry that is traditionally price opaque. Aldo Svaldi, *Pricing Flights and Cars Online Is Common. Are Funerals Next? Founder of Funeralocity Thinks So*, DENVER POST (Nov. 22, 2019, 10:48 AM), <https://www.denverpost.com/2019/11/22/pricing-flights-cars-funerals-funeralocity> [<https://perma.cc/8MPG-L2UV>].

ment.¹⁹⁷ Market barriers include the aberrational and cost insensitive behavior of the grieving consumer and structural limits upon information. Laws preventing the development of green burial technology also impede investment in this sector.¹⁹⁸

Perhaps the most impactful—but rarely discussed—market failure involves consumer inaccessibility to pre-death burial planning and trustworthy financial products that facilitate prepayment of funeral expenses. The law, historically, has normatively discouraged pre-need burial planning through outright prohibition: the “no property in a dead body rule” (or *nullius in bonus* rule) of English common law held that because the decedent did not have a property interest in his or her remains, one could not dispose of one’s own human remains by will.¹⁹⁹ Modern law is deferential to the expressed intent of the decedent, and burial instructions clearly set forth in a testamentary instrument are generally honored and enforced.²⁰⁰ And though a substantial majority of respondents (62.5 percent) in a 2017 study felt that death care preplanning was important, less than 22 percent²⁰¹ of consumers had communicated their wishes to others.²⁰²

Obstacles to preplanning include other priorities and costly, inflexible financing options. Pre-need prepayment issues differ based upon whether a consumer wishes to pay for funeral versus burial.²⁰³ As concerns the latter, cemeteries regularly sell interment rights in advance of need, with payment being made in full and the rights to a grave being transferred immediately.²⁰⁴ By way of contrast, while a number of at-need funeral financing options exist,²⁰⁵ the de-

¹⁹⁷ “Changing how individuals impact the environment through their daily behaviors, however, requires a reorientation of environmental law and policy and a balancing of government prerogatives with individual liberty.” Katrina Fischer Kuh, *When Government Intrudes: Regulating Individual Behaviors That Harm the Environment*, 61 DUKE L.J. 1111, 1112 (2012).

¹⁹⁸ See Kan. Att’y Gen. Op. No. 2019-9, <https://ag.ks.gov/docs/default-source/ag-opinions/2019/2019-009.pdf?sfvrsn=d564ad1a> [<https://perma.cc/J4PY-R23M>].

¹⁹⁹ Roy Hardiman, Comment, *Toward the Right of Commerciality: Recognizing Property Rights in the Commercial Value of Human Tissue*, 34 UCLA L. REV. 207, 225 (1986).

²⁰⁰ Ann M. Murphy, *Please Don’t Bury Me Down in That Cold Cold Ground: The Need for Uniform Laws on the Disposition of Human Remains*, 15 ELDER L.J. 381, 400–01 (2007).

²⁰¹ *NFDA Consumer Survey: Funeral Planning Not a Priority for Americans*, *supra* note 16.

²⁰² *Id.* Data shows that pre-need planning is usually purchased by individuals over the age of 65—with an average of seven years passing between purchase of the plan and date of death—and is paid for with installments. Complaint for Injunctive Relief, Restitution, and Other Equitable Remedies, *supra* note 26, at 8; Jennifer Huffman, *State Alleges Millions of Dollars Mismanaged in Funeral Trust*, NAPA VALLEY REG. (Apr. 23, 2011), https://napavalleyregister.com/news/local/state-alleges-millions-of-dollars-mismanaged-in-funeral-trust/article_ba86d176-6e0d-11e0-9a47-001cc4c002e0.html [<https://perma.cc/YHP2-SB5L>].

²⁰³ TANYA MARSH, *THE LAW OF HUMAN REMAINS* 75 (2016). The at-need consumer is one who is making arrangements because a death has occurred. *Id.*

²⁰⁴ *Id.*

²⁰⁵ See *id.*

iciency of funeral pre-need funeral financing options is staggering and will be treated separately (and in great depth) in a forthcoming article.²⁰⁶

It nonetheless bears mentioning that neither of the two main options²⁰⁷ for pre-need funeral financing—pre-need trusts and pre-need insurance policies—is ideal.²⁰⁸ If a consumer wants to pay for arrangements on a pre-need basis, most states require that the consumer place most of the prepaid funds into a trust account.²⁰⁹ This use of pre-need trusts has not been without substantial controversy. A number of state funeral home associations have established preneed trusts as a pooled income fund: almost 500 funeral homes and 10,500 investors had preneed contracts tied to the Wisconsin Funeral Director's Preneed Trust and a \$21 million shortfall occurred;²¹⁰ in 2006, the Illinois Funeral Director's Preneed trust ran a \$40 million shortfall;²¹¹ in 2011, the California Master Trust (created in 1985, with more than 27,000 investors and in excess of \$63 million under management) was sued by then-Attorney General Kamala Harris—who estimated that \$14 million needed to be repaid to the trust for charging excessive administrative fees and paying illegal kickbacks to funeral homes.²¹² The use of insurance policies to fund pre-need contracts is also without disadvantages: two states (New York and Alaska) prohibit the funding of pre-need contracts through life insurance;²¹³ many plans have a minimum age of forty to apply; benefits may not be portable to a different funeral home

²⁰⁶ The many disadvantages of pre-need financial instruments are touted in popular media and use is discouraged. *See, e.g., Should You Prepay for Your Funeral? Safer Ways to Plan Ahead*, FUNERAL CONSUMERS ALL., <https://funerals.org/?consumers=should-you-prepay-for-your-funeral> [<https://perma.cc/Q2J7-UTB5>]; Leanne Potts, *Smart Ways to Cover the Costs of a Funeral*, AARP (July 7, 2020), <https://www.aarp.org/home-family/friends-family/info-2017/funeral-payment-options-fd.html> [<https://perma.cc/DV5P-5QE3>]; Anthony Martin, *11 Reasons to Avoid Prepaid Funeral Plans & What to Do Instead*, CHOICE MUT., <https://choicemutual.com/prepaid-funeral-plans> [<https://perma.cc/G8WV-3HQV>]; Selena Maranjian, *Think Twice About "Pre-Need" Funeral Insurance*, MOTLEY FOOL (Nov. 19, 2014, 8:00 AM), <https://www.fool.com/investing/general/2014/11/19/think-twice-about-pre-need-funeral-insurance.aspx> [<https://perma.cc/Z7D6-S2YC>].

²⁰⁷ *See* MARSH, *supra* note 203.

²⁰⁸ Funeral home owners need to rethink on a large scale the best way to handle preneed "It's not to say that trust is bad or insurance is good . . . that's not the point," "We just have to realize that if we are going to make a commitment to be in the financial services business, which is what we are doing, then we have to be prepared to run this money as if we are a bona fide professional financial services company."

\$21M Preneed Shortfall Leads to Takeover of Wisconsin Association, FUNERAL SERV. INSIDER 7 (Sept. 24, 2012), <http://www.fsawisconsin.org/Resources/Documents/Funeral%20Service%20Insider%20-%20Wisconsin%20Funeral%20Trust.pdf> [<https://perma.cc/5TY9-27Q8>] (quoting Dan Isard, Founder, The Foresight Companies).

²⁰⁹ *See* MARSH, *supra* note 203. The at-need consumer is one who is making arrangements because a death has occurred. *Id.*

²¹⁰ *\$21M Preneed Shortfall Leads to Takeover of Wisconsin Association*, *supra* note 208.

²¹¹ *Id.*

²¹² Complaint for Injunctive Relief, Restitution, and Other Equitable Remedies, *supra* note 26, at 8 n.4, 23, 35, 37.

²¹³ *See* MARSH, *supra* note 203, at 76.

and/or different state; there may be a significant waiting period before benefits are available; and benefits may be impacted if the funeral home goes out of business.²¹⁴ Further, enforcement of any pre-need contract is complicated due to the underlying privity issue: courts are divided as to whether or not these contracts may be enforced after death on behalf of the executor.²¹⁵

And while religion is often raised as a market barrier to green burial, it is because there is an inaccurate stereotype that green burial attracts the eco-chic, environmentally conscious, well-educated, unchurched consumer.²¹⁶ The reality is that 12 percent of green burial cemeteries are Catholic,²¹⁷ and it may be fair to characterize Jews and Muslims as the original green burialists.²¹⁸ Muslims have practiced natural burial for more than 1,400 years, and in accordance with Islamic law, prefer to be buried within twenty-four hours without a casket, in a plain white shroud.²¹⁹ For those of the Jewish faith, a wholly biodegradable wooden casket (sometimes with holes drilled in the bottom to hasten decomposition) must be placed directly in contact with the earth.²²⁰ Both Jewish and

²¹⁴ See Anthony Martin, *12 Best Burial and Final Expense Insurance Companies in 2020*, CHOICE MUT. (Sept. 26, 2020), <https://choicemutual.com/best-burial-insurance-companies> [<https://perma.cc/ATT3-XF7M>] (identifying the portability that “pre-need polic[ies] at a funeral home . . . could be a big issue” if the insured moves away from that funeral home and the expediency of options other than preneed insurance contracts); Maranjian, *supra* note 206 (noting that the New York State Funeral Directors Association identified the volatility of the benefits for preneed funeral insurance); *Should You Prepay for Your Funeral? Safer Ways to Plan Ahead*, *supra* note 206 (“In most cases, you will spend as much or more in premiums than the policy will actually pay out at the time of your death.”).

²¹⁵ See MARSH, *supra* note 203, at 76 (“Generally, an action for breach of contract may only be brought by a party to the contract. Typically, the only two parties to pre-need contract are the funeral home and the decedent. Courts are divided on the question of whether or not a pre-need funeral contract can be enforced by the executor . . .”).

²¹⁶ Lauren Markoe, *Green Burials Reflect a Shift to Care for the Body and Soul*, RELIGION NEWS SERV. (Jan. 23, 2014), <https://religionnews.com/2014/01/23/green-burials-reflect-shift-care-body-soul> [<https://perma.cc/85S2-CQ8N>].

²¹⁷ Ann Hoffner, *Why Are 12% of Green Burial Cemeteries Catholic?*, GREEN BURIAL NATURALLY (Feb. 7, 2017), <https://www.greenburialnaturally.org/blog/2017/2/6/why-are-there-so-many-catholic-green-burial-cemeteries> [<https://perma.cc/FP2H-MFUG>] (“Catholic dioceses across the country are embracing the new movement toward green burial which not only eschews toxic embalming, burial vaults and painted steel caskets but considers the land and the landscape of the cemetery itself and the possibilities for human burial to add value them.”).

²¹⁸ See *id.* (“Jewish burial is often referred to as approximating green burial; embalming is not generally used, burial is in a plain wooden box that may have holes drilled to speed decomposition through contact with the earth. . . . [A] few Jewish cemeteries have opened dedicated natural burial sections”); see also *Forest Home Cemetery’s Green Burial Site Is a Traditional Muslim-Style Interment*, WIS. MUSLIM J. (July 20, 2018), <https://wisconsinmuslimjournal.org/forest-home-cemeterys-green-burial-site-is-a-traditional-muslim-style-interment> [<https://perma.cc/A9UY-9STU>].

²¹⁹ *Forest Home Cemetery’s Green Burial Site Is a Traditional Muslim-Style Interment*, *supra* note 218.

²²⁰ Gail Rubin, *Jewish Burial Equals Green Burial*, GOOD GOODBYE, <https://agoodgoodbye.com/news/articles/jewish-burial-equals-green-burial> [<https://perma.cc/3LTB-N6T8>].

Christian religions treat as sacred the text of Genesis 3:19 in the Bible that states “for dust thou art, and unto dust shalt thou return”—meaning, in effect, that one must return to the earth after death.²²¹ The Vatican released instructions in October 2016 noting that green burial (but not aquamation) for the eco-Catholic is fully appropriate and in keeping with “authentic Christian practice.”²²² For Christians, generally, green burial comports with the belief that Jesus was humble and would have likely rejected the grandeur of many American funerals.²²³

When dealing with market failures and market barriers, the government may take a number of different approaches: tax incentives, grants, rebates, or credit enhancements.²²⁴ Part IV of this Article explores the myriad of reasons that tax incentives are an appropriate solution for investment in green death care technologies.

IV. TOWARDS SOLUTIONS

There are a number of different approaches that the government may take to invest in the green death care industry. Coarse economic measures—such as tax incentives—may not be the ideal way to deliver a government subsidy to a nascent market—and, in fact, probably would not make the top-ten list of approaches by which a government subsidy should be delivered. And yet, these suboptimal spending mechanisms have long been used to shape change and drive environmental protection.²²⁵ The unfortunate reality is that our current climate of political partisanship creates stalemate and paralysis, and a discussion about government subsidy into the green burial space is likely to be purely academic unless a tax expenditure is used. This Article suggests that a Pigouvian tax subsidy may be appropriate to incentivize green burial, and Part IV outlines important features of a tax expenditure to facilitate support and innovation of an important industry that may potentially touch upon every taxpayer’s life (or death).

A. Use of Tax Expenditures, Generally

Tax expenditures²²⁶ are (fairly) criticized for their use in policy implementation for being crude, opaque, and context-oblivious.²²⁷ They are a form of

²²¹ Hoffner, *supra* note 217; *Genesis* 3:19 (King James).

²²² *Id.*

²²³ Markoe, *supra* note 216.

²²⁴ See MARGOT L. CRANDALL-HOLLICK & MOLLY F. SHERLOCK, CONG. RSCH. SERV., R42089, RESIDENTIAL ENERGY TAX CREDITS: OVERVIEW AND ANALYSIS 5–6 (2018).

²²⁵ See generally Stephen M. Johnson, *Economics v. Equity II: The European Experience*, 58 WASH. & LEE L. REV. 417 (2001).

²²⁶ “Professor Stanley Surrey was the first to note this functional equivalency between certain tax provisions and direct governmental spending; he coined the term ‘tax expenditures’ to refer to such provisions.” Jonathan P. Schneller, *The Earned Income Tax Credit and the Administration of Tax Expenditures*, 90 N.C. L. REV. 719, 722 (2012).

government spending²²⁸ that arguably produce exactly the same economic consequences as direct spending programs.²²⁹ And yet, tax expenditures are resilient and politically popular,²³⁰ likely because they are uniquely situated in their ability to circumvent the Senate filibuster by being passed in reconciliation legislation, which makes them one of the few tools that may be wielded to shape policy in a partisan climate.²³¹ And though there have been attempts to curb the use of tax expenditures,²³² most notably through the tax expenditure budget,²³³ it seems as though the Joint Committee on Taxation has even declared defeat in its efforts to reduce reliance on this form of indirect spending.²³⁴

There are easy arguments to be made both for and against the use of tax expenditures to facilitate government spending. It is arguably inappropriate to use tax incentives to achieve a non-revenue policy objective and as the primary means of driving social policy (i.e., the implementation of environmentally friendly, sustainable innovation and practices). Further, tax expenditures are often used as surreptitious spending measures, allowing politicians to spend large amounts of money without drawing the attention of direct spending programs.²³⁵ This lack of transparency at best obfuscates and at worst deceives—

²²⁷ For more on tax expenditures, see Boris I. Bittker, *Accounting for Federal "Tax Subsidies" in the National Budget*, 22 NAT'L TAX J. 244, 244 (1969); Stanley S. Surrey & William F. Hellmuth, *The Tax Expenditure Budget – Response to Professor Bittker*, 22 NAT'L TAX J. 528, 529 (1969); Boris I. Bittker, *The Tax Expenditure Budget – A Reply to Professors Surrey & Hellmuth*, 22 NAT'L TAX J. 538 (1969); STANLEY S. SURREY, *PATHWAYS TO TAX REFORM* 3 (1973); STANLEY S. SURREY & PAUL R. MCDANIEL, *TAX EXPENDITURES* 3 (1985).

²²⁸ "The Congressional Research Service and the Treasury Department now produce annual 'tax expenditure' reports showing how much spending Congress has buried in the Tax Code." Adam Chodorow, *The Parsonage Exemption*, 51 U.C. DAVIS L. REV. 849, 895 (2018).

²²⁹ Schneller, *supra* note 226, at 721–22 (noting that Justice Kagan explained this idea in the dissent in *Arizona Christian School Tuition Org. v. Winn*, 131 S. Ct. 1436 (2011)).

²³⁰ Congress's use of tax expenditures has accelerated over the years. In 1972, for example, the JCT Staff's first description of tax expenditures totaled some 60 items. Our 2007 pamphlet, by contrast, while employing essentially the same methodology as that of our first description 35 years earlier, listed 170 tax expenditures.

JOINT COMM. ON TAX'N, JCX-37-08, *A RECONSIDERATION OF TAX EXPENDITURE ANALYSIS* 4 (2008).

²³¹ David Roberts, *Congressional Democrats' Last, Long-Shot Attempt at Climate Progress This Year*, VOX (Dec. 12, 2019, 3:30 PM), <https://www.vox.com/energy-and-environment/2019/12/12/21010552> [<https://perma.cc/GS6V-5Z42>].

²³² Steven A. Dean, *The Tax Expenditure Budget Is a Zombie Accountant*, 46 U.C. DAVIS L. REV. 265, 272–73 (2012) (discussing the tax expenditure budget as a failed commitment device).

²³³ "Unfortunately, dragging tax expenditures into budgetary daylight has eliminated neither policymakers' opportunities nor incentives to exploit the fiscal advantage they provide." *Id.* at 283.

²³⁴ Schneller, *supra* note 226, at 723–24.

²³⁵ Dean, *supra* note 232, at 274–75.

shielding indirect spending from budgetary daylight and public scrutiny.²³⁶ Further, direct spending should be favored over use of tax expenditures because deadweight loss in the tax system (or economic waste) rises exponentially when there is increased reliance upon the latter.²³⁷

On the other hand, there are a number of compelling arguments in favor of tax incentives as a general proposition. Tax expenditures may sometimes be used to subtly shift behaviors: public perception of a tax credit or deduction has an unquantifiable but tacit impact upon behavior.²³⁸ To the extent that every tax expenditure is an act of social engineering,²³⁹ the Internal Revenue Code serves a powerful telegraphing function—and is perhaps one of the most effective tools in the hands of the legislators by which the attention of the taxpayer (and their professional advisors) can be captured and important information may be delivered.²⁴⁰ This is particularly important when trying to promote positive innovative change to those consumers/voters/taxpayers who embrace change only when they do not find themselves inconvenienced or burdened, or in those instances when an initiative does not receive bipartisan support. One scholar refers to tax expenditures as fiscal superconductors, and “[j]ust as superconductivity allows electrical currents to flow without resistance, substituting tax expenditures for direct expenditures allows policymakers to neutralize impediments to spending.”²⁴¹ The voting public may object to dollars being spent for a specific purpose, but is far less likely to be aware of the existence of a tax expenditure that offers the targeted group the same benefit as direct spending.²⁴² The benefit of a tax expenditure rests in its ability to “nudge” taxpayers towards a certain behavior, while also obscuring that the government is spending money on the subsidy.²⁴³

²³⁶ Andrew Chamberlain, *The Growing Problem of Tax Expenditures*, TAX FOUND. (Sept. 29, 2006), <https://taxfoundation.org/growing-problem-tax-expenditures> [<https://perma.cc/G6J5-PMNR>].

²³⁷ *Id.*

²³⁸ A placebo effect in the law has received scholarly attention. See Amitai Aviram, *The Placebo Effect of Law: Law's Role in Manipulating Perceptions*, 75 GEO. WASH. L. REV. 54, 102 (2006) [hereinafter Aviram, *Placebo Effect*]; Amitai Aviram, *In Defense of Imperfect Compliance Programs*, 32 FLA. ST. U. L. REV. 763, 765, 773–74 (2005).

²³⁹ “[I]t is always the case that changes in tax policy have the intended or unintended effect of changing society, that is, of being at least inadvertent acts of social engineering.” Neil H. Buchanan, *The Case Against Income Averaging*, 25 VA. TAX REV. 1151, 1162 (2006) (emphasis omitted).

²⁴⁰ “[O]ur tax laws have an important expressive function and convey distinct messages about who we are as Americans—that is, about what and whom we value and the type of society we aspire to be.” ANTHONY C. INFANTI, *OUR SELFISH TAX LAWS: TOWARD TAX REFORM THAT MIRRORS OUR BETTER SELVES* 132 (2018).

²⁴¹ Dean, *supra* note 232, at 284.

²⁴² Marjorie E. Kornhauser, *Cognitive Theory and the Delivery of Welfare Benefits*, 40 LOY. UNIV. CHI. L.J. 253, 264 (2009).

²⁴³ See RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* 1–3 (2008).

B. Tax Expenditures and the Environment

Green policy (and the climate crisis, generally) does not receive bipartisan support needed to craft regulations and targeted investment,²⁴⁴ and tax incentives are a useful way in which to broadly communicate information to taxpayers—and so it naturally follows that use of tax incentives may serve to broaden public access to and interest in disruptive innovation. This is not an outlandish idea: tax incentives have dominated green energy policy for some time, as a way of subsidizing development of alternate, inexpensive, sustainable energy sources.²⁴⁵

There is a broad array of recent federal energy/environmental tax expenditures that include the following: a \$300 tax credit for purchase of a biomass stove or appliance that is at least 75 percent efficient before December 31, 2020;²⁴⁶ a credit for 26 percent of the cost of renewable home energy systems (solar water heating system, solar electric, geothermal heat pumps), with no upward limit, for any home (not just a personal residence) through December 31, 2020;²⁴⁷ tax credits ranging from \$2,500 to \$7,500 for all-electric motor vehicles; and, until the end of 2017, an array of federal tax credits were available for energy efficient improvement of principal residences, including duct sealing and qualifying insulation, doors, windows, skylights, and roofs.²⁴⁸ Damage to the environment is a national problem that deserves to be the focus of national attention. Changing destructive consumer behaviors in favor of environmentally friendly ones first requires education, and then requires changing of ingrained consumer habits.²⁴⁹ Environmental tax credits have been proven to be extremely cost-effective incentives that often leverage substantial private sector investment as part of obtaining the benefits of the credit.²⁵⁰

²⁴⁴ See Roberts, *supra* note 231.

²⁴⁵ Mona Hymel, *The United States' Experience with Energy-Based Tax Incentives: The Evidence Supporting Tax Incentives for Renewable Energy*, 38 LOY. UNIV. CHI. L.J. 43, 45 (2006) (“Studies evaluating the effectiveness of tax incentives in stimulating the alternative fuel technology industry confirm that such incentives, or equivalent measures, are necessary to the industry’s development.”).

²⁴⁶ *Biomass Stove Tax Credit*, HEARTH, PATIO & BARBECUE ASS’N, <https://www.hpba.org/Consumer-Information/Hearth-Fireplace-Stove/Woodstove-Cost-Savings> [<https://perma.cc/5NHG-ZDRT>].

²⁴⁷ The credit drops from 26 percent in 2020 to 22 percent in 2021, and then expires completely. Brian Martucci, *Green Energy Tax Credits for Home Improvement & Energy Efficiency*, MONEY CRASHERS, <https://www.moneycrashers.com/federal-green-energy-efficiency-tax-credits-home-improvement> [<https://perma.cc/RW99-2WR7>].

²⁴⁸ *Id.*

²⁴⁹ See Ryan Leagre, Note, *Community-Based Tax Credits: Tax Credits That Reduce Consumer-Driven Pollution by Encouraging Collective Action*, 47 IND. L. REV. 791, 800–01 (2014).

²⁵⁰ STEVEN NADEL & KATE FARLEY, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON., REP. NO. E132, TAX REFORMS TO ADVANCE ENERGY EFFICIENCY 17, 33 (2013), <https://www.aceee.org/sites/default/files/publications/researchreports/e132.pdf> [<https://perma.cc/3MFK-E29L>].

A structural failing of the tax expenditure is the ever-lurking possibility that the incentive has simply rewarded those taxpayers who would have incurred an expense anyway—without regard to the tax expenditure itself. With regard to preplanning and prepayment of death care expenses earmarked for green burial, this is not a concern: the financial products needed to facilitate prepayment of funeral expenses through reliable and broadly used financial products do not yet exist. This is a marketplace in serious need of development, given that an estimated 40 percent of Americans would have difficulty managing an unexpected \$400 expense,²⁵¹ and the most efficient and obvious way in which to ameliorate the unexpected financial burden imposed by funeral poverty is to render it expected.

The tax credit proposal set forth in Part IV takes its cue from the tax credit that fueled the boom in the nascent solar energy industry:²⁵² the legislation in 2007 that allowed taxpayers to take a credit of 30 percent of the cost of purchasing and installing solar panels against taxpayers' income.²⁵³ In fact, the CEO of the Solar Energy Industry Association claims that evidence of the subsidy's success is the 10,000 percent increase in solar capacity, almost 250,000 new jobs, and \$140 billion in investment since the enactment of the incentive.²⁵⁴ The solar industry demonstrates the efficacy of using tax incentives to attract capital investment in new or undeveloped areas of a market.²⁵⁵ Further, tax credits for sustainable energy receive broad support from voters—with anywhere from 60 percent²⁵⁶ to 89 percent²⁵⁷ of those surveyed supporting environmentally-friendly energy initiatives.

²⁵¹ BD. OF GOVERNORS, FED. RSRV. SYS., REPORT ON THE ECONOMIC WELL-BEING OF U.S. HOUSEHOLDS IN 2017, at 21 (2018), <https://www.federalreserve.gov/publications/files/2017-report-economic-well-being-us-households-201805.pdf> [<https://perma.cc/W55M-QQE5>].

²⁵² [I]n 2007 there were only 8,775 megawatts of solar energy on the US grid—less than one-tenth of 1 percent of America's electricity supply. But Congress had just passed a bill that gave Sun-run a chance: It allowed businesses and individuals to deduct 30 percent of the cost of installing new solar panels from their taxes. The tax credit became essential to helping the company attract investors

Daniel Oberhaus, *A Tax Credit Fueled the Solar Energy Boom. Now It's in Limbo*, WIRED (Aug. 14, 2019, 7:00 AM), <https://www.wired.com/story/a-tax-credit-fueled-the-solar-energy-boom-now-its-in-limbo> [<https://perma.cc/5YQW-G6BP>].

²⁵³ I.R.C. §§ 25D, 48.

²⁵⁴ Oberhaus, *supra* note 252.

²⁵⁵ See Maya Forstater, *The Good, the Bad, and the Ugly: How Do Tax Incentives Impact Investment?*, CTR. FOR GLOB. DEV. (Oct. 16, 2017), <https://www.cgdev.org/blog/good-bad-and-ugly-how-do-tax-incentives-impact-investment> [<https://perma.cc/7X8P-SKB4>].

²⁵⁶ Tom Gray, *National Survey: 60 Percent of Americans Back Tax Credits for Renewable Energy*, AM. WIND ENERGY ASS'N BLOG (Nov. 9, 2012), <https://www.aweablog.org/national-survey-60-percent-of-americans-back-tax-credits-for-renewable-energy> [<https://perma.cc/P57H-8D8Z>].

²⁵⁷ *New Poll: Nearly All Americans Want Congress to Extend Clean Energy Tax Incentives*, SOLAR ENERGY INDUS. ASS'N. (Dec. 3, 2019), <https://www.seia.org/news/new-poll-nearly-all-americans-want-congress-extend-clean-energy-tax-incentives> [<https://perma.cc/J2Z2-CRZ6>].

And while some economists insist that such green tax credits are a terrible idea, this is based upon two main objections: the distributional inequity of the benefits flowing from the credit, and the little impact that the incentive has upon reduction of greenhouse gas emissions.²⁵⁸ New markets often see higher income taxpayers driving demand, at least initially, until there are pricing corrections²⁵⁹—and so distributional inequity is a real concern but may be addressed in part through the refundability of the tax credit proposed in Section IV.C. The concern that a green death care tax credit will not directly reduce greenhouse emissions is reductionist—not every green tax incentive is (or should be) wholly about cost-effectively and directly reducing carbon emissions.²⁶⁰ Tax expenditures necessarily implicate the law of unintended or ancillary consequences, and those unintended or ancillary consequences can be difficult to measure: the number of consumers for whom the tax credit operated as a nudge to change behavior;²⁶¹ the impact of increased consumer awareness of new options, spurring industry growth; and, the siren song²⁶² of consumer attention (or the promise of consumer attention) as a way in which to attract investment capital necessary to fund disruptive and innovative technologies.

A compelling argument can be made that the green death care industry is an area ripe for capital investment: more than half (53.8 percent) of consumers expressed an interest in green options.²⁶³ Almost two-thirds of surveyed consumers felt that it was important to pre-plan their own funeral, but only 21.4 percent of consumers had done so.²⁶⁴ Modern traditional funeral and death approaches are not economically or environmentally sustainable; preservation

²⁵⁸ Lyman Stone, *Green Tax Incentives Just Don't Work*, TAX FOUND. (June 25, 2013), <https://taxfoundation.org/green-tax-incentives-just-dont-work> [<https://perma.cc/RLQ5-NZQJ>].

²⁵⁹ See David Roberts, *Clean Energy Tax Credits Mostly Go to the Affluent. Is There a Better Way?*, VOX (Nov. 24, 2015, 1:20 PM), <https://www.vox.com/2015/11/24/9792474/energy-tax-credits-inequitable> [<https://perma.cc/HKQ8-7M2J>].

²⁶⁰ *Id.*

²⁶¹ A credit can be used as a behavioral “nudge,” applying nudge theory. Andy Lymer, *Nudging Taxpayer Behaviour*, TAX ADVISER (Apr. 1, 2018), <https://www.taxadvisermagazine.com/article/nudging-taxpayer-behaviour> [<https://perma.cc/J8JC-D3HB>]; see also William English, *Two Cheers for Nudging*, 14 GEO. J. L. & PUB. POL’Y 829, 829–31 (2016).

²⁶² First you will come to the Sirens who enchant all who come near them. If any one unwarily draws in too close and hears the singing of the Sirens, his wife and children will never welcome him home again, for they sit in a green field and warble him to death with the sweetness of their song. There is a great heap of dead men’s bones lying all around, with the flesh still rotting off them. Therefore pass these Sirens by, and stop your men’s ears with wax that none of them may hear; but if you like you can listen yourself, for you may get the men to bind you as you stand upright on a cross-piece half way up the mast, and they must lash the rope’s ends to the mast itself, that you may have the pleasure of listening. If you beg and pray the men to unloose you, then they must bind you faster.

HOMER, *THE ODYSSEY*, scroll xii l. 37 (Samuel Butler trans.), <https://cyber.harvard.edu/home/odyssey.html> [<https://perma.cc/2EA9-EG2D>].

²⁶³ *NFDA Consumer Survey: Funeral Planning Not a Priority for Americans*, *supra* note 16.

²⁶⁴ *Id.*

chemicals are pollutants, raw materials are wasted, cemeteries²⁶⁵ are basically golf courses for the dead.²⁶⁶ In a sense, a tax subsidy for green death technology operates as a Pigouvian subsidy—or a subsidy that is meant to be “corrective” in providing an incentive to encourage an activity with positive social externalities (which, in this case, steers taxpayers away from the activity with negative social externalities).²⁶⁷ Although the use of both Pigouvian taxes and subsidies has been subject to scholarly criticism, at least one scholar asserts that such taxes or subsidies are fairly used when harm or benefit does not vary based upon source (e.g., harm from global environmental pollution).²⁶⁸

And while there is no question that some of the benefit of this subsidy will be inframarginal (and benefit those who would have opted for green disposition anyway),²⁶⁹ the inefficiency of an inframarginal subsidy must be taken in balance against the fact that broad success of this tax credit will implicitly mean that the availability of prepayment financial instruments has broadened. It is also likely that information constraint within the industry has been reduced to some degree.

C. *The Green Burial Tax Credit*

The practical reality is that tax expenditures are the most efficient (and perhaps the only possible) path towards subsidy in a fractured, politically polarized government, and such green tax credits remain popular with a majority of voters.²⁷⁰ Tax incentives have been used to encourage a reduced reliance on fossil fuels, increased use of sustainable energy sources, or to generally increase participation in environmentally sustainable practices.²⁷¹ This section

²⁶⁵ A hill that the author will die on. #punintended.

²⁶⁶ Julia Calderone, *Burying Dead Bodies Takes a Surprising Toll on the Environment*, BUS. INSIDER (Nov. 4, 2015, 1:23 PM), <https://www.businessinsider.com/burying-dead-bodies-environment-funeral-conservation-2015-10> [<https://perma.cc/353L-2NYV>].

²⁶⁷ “Lily Batchelder, Fred Goldberg, and Peter Orszag argue that when policymakers want to use a tax instrument to encourage activities with positive social externalities, the tax instrument should typically take the form of a uniform refundable tax credit.” Victor Fleischer, *Curb Your Enthusiasm for Pigovian Taxes*, 68 VAND. L. REV. 1673, 1688 (2015).

²⁶⁸ *Id.* at 1691–92.

²⁶⁹ *Id.* at 1709.

²⁷⁰ Gary M. Lucas, Jr., *Voter Psychology and the Carbon Tax*, 90 TEMPLE L. REV. 1, 12 (2017) (“[M]ost Americans believe that global warming is real, that humans are at least partly responsible for it, and that the government should adopt policies to address it.”).

²⁷¹ While opinion polls show that people generally rate protecting the environment as among their highest priorities, many individuals continue to behave in environmentally-destructive ways. A former EPA Administrator once remarked, “we like to drive big power cars, use a lot of electricity, generate a lot of waste, enjoy cheap food, live in grassy suburbs, and collectively send pollution in massive amounts to often distant waterways and airsheds.” The majority of the population behaves in such ways—by driving cars, fertilizing and mowing yards, pouring household chemicals on the ground and down the drain. Each behavior might only contribute minute amounts of pollutants, but in the aggregate across millions of individuals, it results in a stunning amount of pollution.

Leagre, *supra* note 249, at 800–01 (footnotes omitted).

offers a broad sketch of the type of tax expenditure that would support the green burial industry, stir consumer interest, and generate financial products to support increased investment in this space: a refundable tax credit for expenses related to the nonrefundable prepayment of expenses arising from “sustainable disposition or transition of human remains.”

Distributional equity is an important consideration that drives the refundability of this proposed tax credit²⁷²—because regardless of income, everybody dies. The difference between a refundable and non-refundable tax credit is quite simple: the former is a credit that allows the taxpayer to receive a tax refund when the credit exceeds the taxpayer’s tax liability, and the latter does not.²⁷³ Credits only operate as an incentive when a taxpayer owes tax against which to offset the credit, and the refundability of this credit will subsidize the costs of advance planning for those with low incomes—those for whom advance burial planning may be most important, and for whom the subsidy of the credit may be indispensable. Crafting tax credits that may be utilized by lower-income households is essential, given that the use of non-refundable energy credits has regressive distributional consequences and disproportionately benefits higher income households.²⁷⁴ It is important that green death technologies not be accessible only to the white and wealthy, and a non-refundable credit would afford no benefit to more than forty million households.²⁷⁵

For purposes of the proposed tax credit, “sustainable disposition or transition of human remains” shall be defined as any burial or disposal process that meets all of the following qualifications:

1. Does not involve the use of embalming fluid and similar chemicals used for preservation;
2. If burial is involved,
 - a. the burial site may not be maintained by the use of fertilizers, pesticides or herbicides;
 - b. the burial site must preserve or restore natural habitat;

²⁷² “While tax expenditures come in the form of exemptions, credits, and deductions, the latter are particularly inequitable in their conferral of a higher subsidy or benefit upon the taxpayers in the highest tax brackets . . .” Victoria J. Haneman, *A Timely Proposal to Eliminate the Student Loan Interest Deduction*, 14 NEV. L.J. 156, 170 (2013).

²⁷³ Jason M. Thiemann, *The Past, the Present, and the Future of Pro Bono: Pro Bono as a Tax Incentive for Lawyers, Not a Tax on the Practice of Law*, 26 HAMLINE J. PUB. L. & POL’Y 31, 372 (2005).

²⁷⁴ “California households with more than \$100,000 in annual income have participated in energy efficiency programs at twice the rate of households earning less than \$50,000, according to analysis of the U.S. Energy Information Administration’s Residential Energy Consumption Survey.” Andrew G. Campbell, *Bringing Fairness to Energy Programs*, ENERGY INST. BLOG (July 5, 2017), <https://energyathaas.wordpress.com/2017/07/05/bringing-fairness-to-energy-programs> [<https://perma.cc/ZL8J-WWJA>].

²⁷⁵ Severin Borenstein & Lucas W. Davis, *The Distributional Effects of U.S. Clean Energy Tax Credits*, 30 TAX POL’Y & ECON. 191, 213 (2016), <https://www.nber.org/system/files/chapters/c13692/c13692.pdf> [<https://perma.cc/VHL5-228R>].

- c. non-biodegradable burial plot liners or vaults may not be used;
 - d. only caskets or shrouds made of natural, non-toxic, biodegradable materials may be used; and,
 - e. if marked, the grave marker may only be a plaque that is flush with the ground or a native plant or tree.
 - f. An exception may be made to (a), (b) and (e) if the burial site is a site in which remains were previously interred that is now being reused by for new remains.
3. Cremation only if accomplished through a process that produces no toxic emissions and is not accomplished through the use of fire (such as aquamation, alkaline hydrolysis, or liquid cremation).
 4. Any decomposition process or technology that biodegrades remains within a twelve-month period of time.

The tax credit amount may be adjusted based upon the amount of subsidy the government wishes to make available. For the sake of discussion, modeling many energy tax credits but taking a cost-sharing approach, 30 percent of the cost of lifetime burial planning would be made available as a refundable credit—with a lifetime cap per taxpayer of \$600 (or \$2,000 in burial expenses). This lifetime cap may be adjusted as data is collected with regard to average costs of green burial.²⁷⁶

The table set forth below illustrates the way in which such a credit would operate, assuming a flat, monthly contribution by a taxpayer over a five-year term and a \$600 proposed cap. These calculations exclude interest that may be accrued and also any management fees that may be imposed.

²⁷⁶ No reliable data has been gathered on the number of green burials in the United States and attendant costs; it is estimated that the average green burial costs (including burial plot, interment, shroud, and/or environmentally friendly casket) range from \$1,000 to \$4,000. Robert Schroeder, *Why More Americans Are Considering 'Green' Funerals*, MARKETWATCH (Dec. 26, 2015, 10:55 AM), <https://www.marketwatch.com/story/why-more-americans-are-considering-green-funerals-2015-10-29> [https://perma.cc/B3ZF-9Y59]; *Guide to Green Burial – A Natural Approach to Funerals*, LINCOLN HERITAGE LIFE INS. CO., <https://www.lhlic.com/consumer-resources/green-burial> [https://perma.cc/AE62-GPCC].

TABLE 1

Monthly Payment	Twelve-Month Total	Five-Year Total	Annual Tax Credit	Five-Year Tax Credit
\$20	\$240	\$1,200	\$72	\$360
\$30	\$360	\$1,800	\$108	\$540
\$40	\$480	\$2,400	\$144	CAP \$600
\$50	\$600	\$3,000	\$180	CAP \$600

The way in which unconsidered expenses create burdens that perpetuate cycles of intergenerational poverty is outside of the scope of this Article, but does bear upon this tax credit proposal. It has become a societal norm in the United States for families dealing with unexpected deaths to turn to crowdfunding campaigns to assist with funeral and burial expenses, with the Chief Executive Officer of GoFundMe stating that his staff coaches funeral organizers²⁷⁷ on ways to stage fundraising campaigns to help them go viral.²⁷⁸ There is valid cause for concern that crowdfunding is the new funeral insurance,²⁷⁹ with families lulled into believing that burial costs will easily be met by friends and family through crowdsourcing campaigns.²⁸⁰ This is particularly troubling given the structural inequity that it highlights: crowdfunding campaigns are proven to be more lucrative when the subject of the campaign is young,²⁸¹ white, and attractive.²⁸²

Although this important discussion about funeral poverty will be deeply considered in a subsequent Article, it is worth mentioning that a tax credit in the death care industry will advance the importance of saving for an inevitable family expense, while also being structured in such a way that affordable, envi-

²⁷⁷ But if I were a crooked funeral director, I would see directing customers to these new fundraising opportunities as an alternative to letting them glimpse the last page in my “menu of services” marked in fancy cursive “For the Bereaved of Humblers Means.” Why show a customer the cheaper option if I can direct them to a source of money instead?

Mike Pearl, *People Are Now Crowdfunding Their Funerals Online*, VICE (Sept. 19, 2013, 5:30 AM), <https://www.vice.com/sv/article/9bz5wa/people-are-now-crowdfunding-their-funerals-online> [<https://perma.cc/6HUW-C45N>].

²⁷⁸ Laura M. Holson, *As Funeral Crowdfunding Grows, So Do the Risks*, N.Y. TIMES (June 5, 2018), <https://nyti.ms/2xKHupx> [<https://perma.cc/7K3D-L72Z>].

²⁷⁹ *See id.*

²⁸⁰ *Id.*

²⁸¹ “It would cost about \$10,000 to bury your dead ass right now. I’m talking to you, 18- to 35-year-olds. . . . If you die penniless, your family could and should consider going the crowdfunding route on Giveforward, Donationto, or Graceful Goodbye.” Pearl, *supra* note 277.

²⁸² “Those who are most marginal in society are the least likely to attract sufficient compassion and are therefore likely to have failed crowdfunding campaigns.” Tamara Kneese, *Mourning the Commons: Circulating Affect in Crowdfunded Funeral Campaigns*, SOC. MEDIA + SOC’Y, Jan.–Mar. 2018, at 1, 9.

ronmental options are also advanced. Although industry regulation is unquestionably an effective way in which to protect the vulnerable consumer, so too is creating paths by which the vulnerable consumer becomes less vulnerable: information and pre-need prepayment options.

CONCLUSION

Bereavement, or loss of a loved other, is one of life's most stressful events.²⁸³ After a major loss, such as the death of a spouse or child, a third of survivors will suffer detrimental physical or mental health issues.²⁸⁴ One-quarter of surviving spouses will suffer clinical depression or anxiety within the first year of loss.²⁸⁵ Grief is frequently accompanied by weight loss, anxiety, despair, hypnagogic hallucinations, temporarily impaired immune response, disorganization, and/or disorientation.²⁸⁶ And yet, the vast majority of Americans adopt the messy, expensive approach of ignoring death until it happens—shuffling the consequences of failure to pre-plan one of life's most expensive expenditures²⁸⁷ onto grieving loved ones.²⁸⁸

Death will soon be trending upward with the gradual demise of the aging Baby Boomer generation, and mortality rates are predicted to increase by more than one-third over the next two decades.²⁸⁹ Contemporary death care industry practices impact and shape consumer choices that are problematic and increasingly relevant, and this Article proposes the use of a green tax credit as both an informational device and a multi-purposed behavioral nudge. The implicit market barrier of information constraint is easily overcome by an income tax system that is powerful in its ability to reach consumers. With regard to the latter, a tax incentive for pre-need planning and prepayment is likely to generate con-

²⁸³ *Bereavement and Grief*, MENTAL HEALTH AM., <https://www.mhanational.org/bereavement-and-grief> [<https://perma.cc/W2DH-LQWL>].

²⁸⁴ Colin Murray Parkes, *Coping with Loss: Bereavement in Adult Life*, 316 BRIT. MED. J. 856, 856 (1998), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1112778/pdf/856.pdf> [<https://perma.cc/J34S-8X2S>]. One study found that death following termination of life support induced stress levels on par with survivors of construction and ferry disasters, and more than twice as high as those who have lost their personal residence to fire. *OHSU Researchers Discover Powerful Role of Advance Directives in Relieving Family Stress*, OHSU (Mar. 15, 2001), <https://news.ohsu.edu/2001/03/15/ohsu-researchers-discover-powerful-role-of-advance-directives-in-relieving-family-stress> [<https://perma.cc/7BC7-469W>].

²⁸⁵ Parkes, *supra* note 284, at 856.

²⁸⁶ *Id.* at 857.

²⁸⁷ It is estimated that 40 percent of Americans would have difficulty paying for an unexpected \$400 expense. BD. OF GOVERNORS, FED. RSRV. SYS., *supra* note 251, at 21.

²⁸⁸ GoFundMe, one of the largest fund-raising sites, says that 13 percent of its campaigns created in 2017 were described as memorials, which include funerals and are one of the company's fastest growing categories. That follows on a 2015 study by the Funeral and Memorial Information Council, which reported that 17 percent of adults aged 20 to 39 had used the internet to solicit or donate money for funeral-related arrangements.

Holson, *supra* note 278.

²⁸⁹ Leland, *supra* note 19.

sumer interest and investment into the creation of more accessible financial products to facilitate prepayment.²⁹⁰ The American emphasis upon life over death leaves the consumer extraordinarily disconnected from death in ways that will inevitably be economically impactful and the proposed green tax credit is one potential tool of reconnection.

²⁹⁰ Christine Colby, *Want to Plan for Your Death and Funeral? Here's How*, N.Y. TIMES (Feb. 20, 2018), <https://nyti.ms/2CvcYq> [<https://perma.cc/4WYF-TBHC>] (“There are advantages for consumers who want to spend down their assets in order to qualify for Medicaid But for consumers who aren’t in this situation, there are benefits to prearrangement, but not clear advantages for purchasing pre-need plans.” (quoting Tanya Marsh, Professor of Funeral and Cemetery Law, Wake Forest University)).