Jews traditionally bury their dead. This method of disposing of a dead body is based on the text, Deuteronomy 34:6, in which God is said to bury Moses. (1) A Talmudic text, Sota 14a, makes it clear that we are to follow this example:”... as [God] buried the dead, so must you bury the dead.” (2) A second text cited to support burial as the proper means of disposing of a dead body is Deuteronomy 21:22-23, which states that even the body of a capital criminal, put to death on a stake, must be taken down and buried before nightfall in order not to cause “an affront to God” and not to “defile the land.”(3) Great leader or criminal, a Jew was to be buried after death.

The stories of the Patriarchs and Matriarchs teach us that the dead were buried in caves. Abraham acquired “the cave in the field of Machpelah” specifically to serve as the burial place of Sarah.(4) Later texts teach us that this involved leaving a body to decompose in the cave and then collecting the bones together a year later. Sometimes the bones of all family members were mingled together in a pit, a true gathering of the deceased to the ancestors. This practice is known as ossilegium.(5) It is probably the case that there was an understanding that the decomposing of the body served as an atonement for an individual’s sins and left the soul ready to be with God.(6)That this normally happened in a year’s time coincides with the later practice of reciting kaddish for a year, cut short to eleven months out of concern that no parent should be publicly thought to need the full twelve months of time to atone for misdeeds. By no means was the fleshy body to be preserved or protected from decomposition.

Contemporary American burial practices can be seen as the attempt to promote the idea that the body of the deceased is not decomposing, is not, in fact, really dead at all, but is entering an eternal and peaceful sleep. Bodies are embalmed, made up and dressed in finery to appear “lifelike” for viewing by mourners at open casket funerals and wakes. Elaborate caskets, placed at burial into larger reinforced concrete grave liners or metal vaults, suggest that the body can be kept intact, safe from the elements. Jews have not been immune to this funeral and burial culture. Even if they much less often embalm bodies, Jewish funeral directors sometimes dress bodies in normal clothing, use creams and cosmetics on the face, and sell expensive caskets. Jewish funeral directors and cemeteries, like many non-Jewish cemeteries, have promoted, and in fact more often have required, the use of grave liners or vaults. These are not legally required by state or federal laws, add to the cost of burial, and give the illusion of protecting the casket and the body within it. In Israel today, Jews are most often buried in a shroud. Caskets are
used for soldiers who have been maimed in combat. Graves may be lined with bricks, but never with full vaults. There is still the practice of "burying" in the earth, although in the newer cemeteries that can mean that the graves are in layers in a cliff of earth. (7)

In green burial, the body is put in a casket made of soft wood or other easily biodegradable material, or perhaps is wrapped only in shrouds. No embalming is performed. No concrete, metal, or fiberglass vault surrounds the casket. Such a burial allows the most rapid return of the body to the earth through the natural process of decay. In this way, green burial is in keeping with traditional Jewish practice. In choosing green burial, we recognize the fundamental fact of the transient nature of the body and of its being part of the natural world.

Choosing green burial also protects the natural world. Standard burial practices in the United States create permanent, harmful change to the environment while not ultimately preventing the decay of the body. Standard burial pollutes with embalming fluid, toxic varnishes used on caskets, and often the use of pesticides and herbicides to keep the grass green, as well as the use of gas-powered mowers to keep it groomed. Green burial seeks to reduce the negative impact of burial on the environment and even to create positive environmental changes. This includes changes to promote the health and safety of those employed in manufacturing products used for burial. Many people believe that cremation is the most environmentally sound way to dispose of a body, but cremation harms the environment enough that “greener” methods have been developed. None are as green as simple natural burial.

More than sixty green burial options exist throughout the United States, but only three specifically Jewish green cemeteries are known to me. They are: Gan Yarok, opened in 2010, part of Forever Fernwood Cemetery in Mill Valley, California, with Orthodox, Conservative, and community sections (8); Hebrew Memorial Gardens in Roseville, Michigan which in 2012 opened as a certified nature preserve cemetery (9); and an inclusive Jewish green section at Willow Lawn Memorial Park in Vernon Hills, IL, opened in 2013 (10).

History of The Project

This project, developed for Course 3 of the Gamliel Institute, "Chevra Kadisha - Educating, Organizing, and Training," presents information helpful for educating Jewish communities about green burial and the ways that it reflects the values of traditional Jewish burial. It is presented here as a packet of information with pages that might be individually printed for use as handouts appropriate for different audiences. It also has suggestions for how someone might go about opening a new green cemetery or cemetery section. Finally, there is a list of books and on-line resources for further information. I undertook this project to document my experience working to provide a green burial option for my 230-family Reform community, Congregation Hakafa, in Glencoe, Illinois. The traditional Jewish cemetery in which we had a section was not interested in working with us to do this. Instead, we sought to open a small Jewish green section in a traditional multi-faith cemetery, Willow Lawn Cemetery in Vernon Hills, in the near northwest
suburbs of Chicago. This required, after getting the cemetery owners to agree to offer green burial, convincing members of my congregation to commit to buying enough plots for the cemetery owners to be willing to establish a Jewish green section. I started this process in November of 2010, and by the time there were enough people committed to this project, the cemetery owners had decided to open a much larger green area. We were the first to purchase in the area, buying our first twenty-five plots in February 2013. We were joined by Lomdim Minyan, an egalitarian community from the Chicago near north suburbs, who bought eleven plots. By June of 2013, these communities together had purchased a total of fifty-four plots. Our section was consecrated with our first burial in May 2013, and a community celebration of the consecration was done in August 2013.

Dr. Liz Feldman of Evanston, Illinois, a member of Lomdim and The Progressive Chevra Kadisha, and I will be working in the next year to reach out to other area congregations to interest them in green burial and in this particular cemetery, in order to establish a larger Jewish presence in an area that can provide up to a thousand grave sites. It is of note that neither Hakafa or Lomdim owns its own building, but rents space in other buildings, preserving human and financial resources for educational and outreach activities. We may not know where we will be meeting for services ten years from now, but some of us know where we will be buried!

I am a practicing physical therapist, working mostly with geriatric patients to help them care for their bodies as they strive to maintain functional independence. This work of hands-on caring for the living has led me to hands-on care of the dead. I have been an active member of Hakafa since 1993 and currently serve as coordinator and educator of our Chevra Kadisha, started in 2009, as well as being the leader for the women’s tahara team. Through attendance at the Kavod v’Nichum annual conferences and study with the first cohort of students in the Gamliel Institute, beginning in 2009, I became aware that the work of a chevra goes beyond providing tahara. When our rabbi, Bruce Elder, asked me to look for a cemetery in which all members of our congregation could be buried together, including those who are not formal converts to Judaism, I started on a quest which led to my selfish determination to provide a more natural burial for myself and my husband. I am happy that I was able to bring others to the awareness that green burial was their desire, too. I am gladly available to speak with anyone about this topic and can be reached by phone at 847-421-3985 or by e-mail at dmb9476@gmail.com.

Endnotes for the first section

(1) Deut 34:5-8  - The Death of Moses
“So Moses the servant of the Lord died there, in the land of Moab, at the command of the Lord. He buried him in the valley in the land of Moab, near Beth-peor; and no one knows his burial place to this day. Moses was a hundred and twenty years old when he died; his eyes were undimmed and his vigor unabated. An the Israelites bewailed Moses in the steppes of Moab for thirty days. The period of wailing and mourning for Moses came to and end.”
(2) **Sotah 14a**: “Rabbi Hama son of Rabbi Hanina further said: What does the text mean: *You shall walk after Adonai your God?* (Deut. 13:5) Is it, then, possible for a human being to walk after the Shechinah; for has it not been said: *For Adonai your God is a devouring fire?* (Deut. 4:24). But [the meaning is] to walk after the qualities of character (midot) of the Holy One, blessed be God. As God clothes the naked, for it is written (Gen 3:21) *And Adonai God made Adam and his wife coats of skin, and clothed them,* so do you also clothe the naked. The Holy One, blessed be God, visited the sick, for it is written (Gen. 18:1): *And Adonai appeared to him by the oaks of Mamre,* so do you also visit the sick. The Holy One, blessed be God, comforted mourners, for it is written (Gen. 25:11): *And it came to pass after the death of Abraham, that God blessed Isaac his son,* so do you also comfort mourners. The Holy One, blessed be God, buried the dead, for it is written (Deut. 34:6): *And God buried him in the valley,* so do you also bury the dead.”

(3) **Deut 21:23**

“If a man is guilty of a capital offense and is put to death, and you impale him on a stake, you must not let his corpse remain on the stake overnight, but must bury him the same day. For an impaled body is an affront to God: you shall not defile the land that the Lord your God is giving you to possess.”

(4) **Gen 49:29-33 - Jacob's death**

“Then he instructed them, saying to them, ‘I am about to be gathered to my kin. Bury me with my fathers in the cave which is in the field of Ephron the Hittite, the cave which is in the field of Machpelah, facing Mamre, in the land of Canaan, the field that Abraham bought from Ephron the Hittite for a burial site - there Abraham and his wife Sarah were buried; there Isaac and his wife Rebekah were buried; and there I buried Leah - the field and the cave in it, bought from the Hittites. When Jacob finished his instructions to his sons, he drew his feet into the bed and, breathing his last, he was gathered to his people.’”

(5) **Texts pertaining to cave burial and ossilegium**

http://www.academia.edu/367866/Jewish_Ossilegium_in_Galilee_-_Low_resolution_pdf_7_MB


Chapters XII and XIII of the Talmudic era text Semachot (see Resources) detail the rules for the practice of ossilegium.

(6) http://www.jewishencyclopedia.com/articles/3842-burial


(8) http://www.foreverfernwood.com/

(9) http://www.thejewishnews.com/greener-than-green

(10) https://www.facebook.com/wlmpcemetery/info

Outline of the Project

Goals: 1. To educate Jewish communities about green burial and its consonance with traditional Jewish burial practices.

2. To open a new green cemetery or a section in an existing traditional cemetery which will provide green burial.

Audience: 1. Members of my own congregation

2. Members of other congregations in the area with similar concerns regarding
environmental issues and/or non-Jewish congregational members, including Reconstructionists, other Reform groups, other small non-affiliated groups, and at least one self-described “secular” Jewish educational group. 3. Owners of Jewish cemeteries and non-Jewish cemeteries.

Behaviors: 1. Recognize that a Jewish community has an obligation to provide appropriate burial space for its members. 2. Understand the components of traditional Jewish burial. 3. Understand contemporary American burial patterns, their origins, and their environmental effects. 4. Understand the elements and the environmental benefits of green burial. 5. Understand how green burial is consonant with Jewish burial. 6. Understand the environmental costs of cremation.

Conditions: 1. During congregational decisions about funeral and cemetery policy. 2. At the time of a death when making burial decisions and arrangements. 3. At the time of making pre-need burial arrangements. 4. When someone becomes aware of a need to provide this option for Jewish burial in her or his community.

Degree: 1. Individuals and/or congregations will be willing to purchase a plot in a green cemetery or to help to start a green cemetery or cemetery section.

Challenges to Be Met: “Notes From the Trenches”

This process will probably take a minimum of two years, longer if the congregational rabbi is not interested in the project. Why so long?

It is hard to get people interested in discussing death, funerals, and cemeteries:

People don’t like to talk about the issue until they have to, i.e. when
someone dies. Not many people plan their wedding the day before getting married, but many people plan a funeral and burial only when it is at hand.

People know very little about the issues involved and don’t know how much there is to know. Again, think about all the parts of planning a wedding, or a bat mitzvah. People do not understand how many choices are involved in every funeral and burial or cremation.

People don’t know how hard it is to learn things at the time of a death when dealing with grief.

People assume that funeral professionals know what they are doing and do not always question what they are told they should do.

People assume that common funeral, burial, and cremation practices are based in legal requirements rather than a business model.

Moving a project through the congregational governance is slow:

   Educational program schedules fill up quickly.
   Newsletters are not always read, or do not offer enough space to cover important topics.
   The committee process is slow.
   Committees don’t meet in the summer and through the High Holidays.
   Congregations are facing what seem like more pressing issues most of the time, often involving children and younger members of the congregation.
   If the congregation has an existing relationship with a cemetery, some members may feel that opening a new cemetery section will dishonor those already buried elsewhere.
   If the congregation does not have a existing relationship with a cemetery, members may not have a sense that it is the responsibility of the congregation to do so.

Cemeteries owners do not expect the customers to tell them how to do what they do:

   Funeral directors and cemetery owners consider themselves professionals who can best tell their customers what constitutes a proper burial.
   Cemeteries and funeral directors are not familiar with the idea of green burial.
   For-profit cemeteries and funeral homes are geared toward selling products such as vaults and caskets. Green burial involves fewer products to sell.

Finding Your Audience

To reach members of your own congregation:

1. Ask to speak with any and every congregational group that meets. This includes Adult Education, Religious School for children, adolescents, and families, Rosh Chodesh groups, Chevra Kadisha meetings, book clubs, Torah study groups, any discussion group.

2. Your congregational website should include information on your current
funeral and cemetery arrangements. Add links to the Kavod v’Nichum site, the Green Burial Council site, other sites about green burial, and information about cremation.

3. Submit articles for congregational newsletter, presenting information on something related to the Chevra Kadisha and/or cemeteries, funeral practices, etc, most months.

4. Attend all congregational meetings and ask to make at least a brief statement about the project.

5. I have found **one-on-one conversations**, which I initiate in almost all congregational gatherings, official or merely social, to be the most effective means of educating people. The responses I most often get are: “You need to educate us about these things!” “I guess I didn’t see that in the newsletter.” “I wasn’t able to attend that meeting.” I also talk to all my non-Jewish friends about green burial and preplanning.

6. When possible, get the rabbi or an officer to talk about the project at a meeting or from the bimah. Having the support of the rabbi/s and officers is extremely helpful.

To reach members of other congregations:

1. Talk with members of chevrae of other congregations.
2. Contact environmental groups in your area; they will most likely have some Jewish members.
3. Ask your rabbi to speak with her or his colleagues.
4. Teach at your local Limmud.
5. Get an article in your community’s Jewish newspaper.
6. Contact your movement’s environmental or social action group. For the Reform movement, this is Isaac Nuell, Manager, Congregational Social Action, at the Religious Action Center for Reform Judaism.

To find a cemetery that might be willing to open a green Jewish section:

1. Ask a cemetery with which you already have a relationship.
2. Ask any Jewish cemetery in your area.
3. Ask any non-Jewish cemetery in your area.
4. Contact The Green Burial Council and ask them if they know of any cemeteries in your area with a green section or of other people working to open one. The Green Burial Council will help you educate a cemetery about green burial practices.
5. See the list of green cemeteries below under "What is Green Burial?"
6. There are cemeteries with green sections that are not certified by GBC.
7. Remember that there are many small cemeteries that might be happy to sell some plots in this cremation-trending time. Propose a new revenue source for them. Funeral directors and cemeteries were slow to get involved with cremation but responded to consumer demand. Help create a demand for simpler green funerals.

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**How to Educate Your Audience**
I have gathered information on a variety of topics that were helpful to me in educating different communities for this project. My goal is to provide you with a place to start your own effort. Each topic has its own page with a general outline or information. These pages could be used as handouts. For most topics, there is an additional page with full texts and additional resources to supplement your knowledge. Use them as appropriate to your audience and your time limitations. At the end of this section is a list of general resources.

To understand why green burial is consonant with Jewish tradition, it is necessary to understand that tradition in at least a cursory way. To understand the significant aspects of green burial, it is necessary to understand standard contemporary burial practices in the United States. It is helpful to understand the historical development of these practices. I have provided information on cremation and newer forms of body disposition because many people intend to be cremated without really understanding the physical process of cremation or its environmental costs. I believe their interest in a simpler way to dispose of their bodies might better be met with green burial.

**Topic 1: The Obligation of a Jewish Community to Provide Burial for Its Members**
**Topic 2: Components of Traditional Jewish Burial**
**Topic 3: Contemporary American Burial, Its Origins, and Its Environmental Impact**
**Topic 4: Green Burial**
**Topic 5: Green Burial is Jewish Burial**
**Topic 6: Cremation and its Environmental Costs; Newer Alternatives to Cremation**

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**The Obligation of a Jewish Community to Provide Burial for Its Members**

1. In Biblical times, burials were done in family caves or land. Genesis 23: 2-20 tells the story of Abraham buying the cave of Machpelah to bury Sarah, rather than burying her “in the choicest of [the Hittites’] burial places.” (1)

2. Beginning in Talmudic times (200-500 CE), we learn that those who accompany the body of the dead during the burial procession are considered to be generous to the poor (Berachot 18a) (2), that community members must contribute to the burial fund (Baba Batra 7b,8a) (3), and that there are certain groups of people in the community who are directly responsible for performing the burial (4).

3. The earliest known communal Jewish cemetery is in Worms, Germany, dating to about 1000 CE. According to Sylvie-Anne Goldberg, (5) after that time there is no mention of any community where Jews were allowed to live where they did not have their own cemetery or had
permission to be buried in a nearby Jewish cemetery. Additionally, when Jews as a group were expelled from a community, their cemeteries were violated or destroyed. According to Goldberg, this was the same period in which Jewish “quarters” were appearing throughout cities in Europe and in which Jews came to be forbidden to carry weapons.

4. Maimonides, in about 1100 CE, writes in The Book of Judges, the 14th Book of the Mishneh Torah, about the duty of the community to participate in burial of the dead:

“The following positive commands were ordained by the Rabbis: visiting the sick; comforting the mourners; joining a funeral procession; dowering a bride; escorting departing guests; performing for the dead the last tender offices; acting as pallbearer; making lamentation (for the dead); digging a grave and burying the body; causing the bride and bridegroom to rejoice; providing them with all their needs (for the wedding). These constitute the deeds of loving kindness performed in person and for which no fixed measure is prescribed.”

5. Starting in the 14th Century in Italy, Bohemia, and Germany, the chevra kadisha developed as the group within the Jewish community that cared for the sick and the dying, and assisted with funerals and burials, as well as helping with other acts of tzedakah. Supporting the chevra was required if an individual wanted to be buried in the Jewish cemetery, the only burial option available.

6. In the United States, beginning in the 19th century, immigrants organized Landsmanschaften as mutual aid societies specific to national, and even city, origin. These organizations assisted with funerals and burials much as the European chevrae did. These groups had their own sections in cemeteries or their own separate cemeteries. Some are still in existence today.(6) Gradually this function was taken over in the American Jewish community by the professional funeral director, who operated a for-profit business that resembled that of the surrounding Christian community.

Endnotes: The Obligation of a Jewish Community to Provide Burial for Its Members

(1) Genesis 23: 1-20 “Sarah’s lifetime - the span of Sarah’s life - came to one hundred and twenty-seven years. Sarah died in Kiriath-arba - now Hebron - in the land of Canaan; and Abraham proceeded to mourn for Sarah and to bewail her. Then Abraham rose from beside his dead, and spoke to the Hittites saying, “I am a resident alien among you; sell me a burial site among you, that I may remove my dead for burial.” And the Hittites replied to Abraham, saying to him, "Hear us, my lord; you are the elect of God among us. Bury your dead in the choicest of our burial places; none of us will withhold his burial place from you for burying your dead."
Thereupon Abraham bowed low to the people of the land, the Hittites, and he said to them, "If it is your wish that I remove my dead for burial, you must agree to intercede for me with Ephron son of Zohar. Let him sell me the cave of Machpelah that he owns, which is at the edge of his land. Let him sell it to me, at the full price, for a burial site in your midst. Ephron was present among the Hittites; so Ephron the Hittite answered Abraham in the hearing of the Hittites, all who entered the gate of his town, saying, "No, my lord, hear me: I give you the field and I give you the cave that is in it; I give it to you in the presence of my people. Bury your dead." Then Abraham bowed low before the people of the land, and spoke to Ephron in the hearing of the people of the land, saying, "If only you would hear me out! Let me pay the price of the land; accept it from me, that I may bury my dead there." And Ephron replied to Abraham, saying to him, "My lord, do hear me! A piece of land worth four hundred shekels of silver - what is that between you and me? Go and bury your dead." Abraham accepted Ephron's terms. Abraham paid out to Ephron the money that he had named in the hearing of the Hittites - four hundred shekels of silver at the going merchants' rate. So Ephron's land in Machpelah, near Mamre - the field with its cave and all the trees anywhere within the confines of that field - passed to Abraham as his possession, in the presence of the Hittites, of all who entered the gate of his town. And then Abraham buried his wife Sarah in the cave of the field of Machpelah, facing Mamre - now Hebron - in the land of Canaan. Thus the field with its cave passed from the Hittites to Abraham, as a burial site.

(2) Berachot 18a - "One who accompanies the met (body of the dead) during the burial procession, to that person applies the texts (Prov. 19:17) "He who is generous to the poor makes a loan to the Lord; He will repay him his due" and (Prov.14: 31) "He who withholds what is due to the poor affronts his Maker; He who shows pity for the needy honors Him."

(3) Baba Batra 7b,8a - "One must contribute to the town’s soup kitchen after living in the town 30 days, to the charity box after 3 months, to the clothing fund after 6 months, to the burial fund after 9 months, and to the fund to repair the city walls after 12 months. At 12 months a person is considered a townsman, or immediately if he buys a house."

(4) [Moed Katan, 27b]


(6) http://en.wikipedia.org/wiki/Landsmanshaft
http://forward.com/articles/14060/last-call-for-landsmanschaften-aid-societies-fold/

Components of Traditional Jewish Burial

1. Taharah - ritual bathing and shrouding of the met/metah (body of the deceased)
2. Tachrichim - burial in simple shrouds
3. Aron - simple wooden box for a casket
4. Shmira - staying with the body from death to burial
5. Levayah - accompanying/carrying the body to the cemetery
6. Hesped - eulogy at the funeral
7. K’vurah - mourners fill the grave with dirt until a mound is formed

Jewish tradition does not include flowers, music, viewing, street clothes, embalming, autopsy, or
cremation. Organ donation is allowed and even considered an obligation by the Conservative movement and many other Jewish leaders. All aspects of the tradition involve the community directly in the experience of the death and taking care of the deceased and the mourners. The chevra kadisha, or burial society, is a group within a Jewish community that historically has performed many of the traditional rituals. The following is a brief description of these traditions.

1. Taharah: The practical and ritual washing of the body of the deceased by the chevra kadisha
   A. The body is first cleaned with warm water and soft cloths.
   B. The ritual washing is similar to a mikvah, and in some communities, a mikvah is used instead of pouring water from buckets by hand.
   C. Men's bodies are washed by men, and women's bodies by women
   D. Usually follows a traditional liturgy, said in Hebrew or English, or some of each.
      The liturgy has references to other Jewish liturgy and Tanach texts which will be familiar to taharah team members. The liturgy dates to the sixteenth century.(1)
   E. Can be done by professionals at the funeral home, usually for a fee.
   F. When done by a trained, volunteer chevra team, usually in the funeral home, directly involves the community in comforting the mourners and honoring the deceased.
   G. Provides an immediate experience of the met/ah (the body of the deceased) for the taharah team, which often is a profound spiritual experience that transforms their understanding of death and thus, of life.

2. Tachrichim: After the washing, the body is dressed in tachrichim, simple shrouds, for burial.
   A. Shrouds are used in many cultures, including Muslim cultures. Jewish tachrichim have seven parts, including pants, two shirts, a head and face cover, a sash, a tallit, and an outer covering sheet.
   B. Traditionally, they were made of linen, historically an inexpensive material. Plain cotton is often used today. They are usually white and have no pockets, no seams, no buttons or zippers, or snaps, fastened with simple cloth ties. In some communities, they are made by individuals for themselves in advance or for others.
   C. In the traditional taharah liturgy, the tachrichim are taken to represent the robes the High Priest wears so that he can appear before God on Yom Kippur. This suggests that we are preparing the met/ah to appear before God.
   D. Rabbi Gamliel, leader of the Jewish legislature in the 1st Century CE, is credited with establishing simplicity in Jewish funeral observance, including the use of simple shrouds and biers.(2)

3. Aron: The body is buried in a simple wood casket or bier
   A. Wood possibly is meant to remind us of the Tree of Knowledge, since Torah teaches that humankind was subjected to death after eating of its fruit.
   B. Metal, the material of war, is never used. It does not degrade and does not allow the body to decompose as quickly.
   C. In Talmudic texts, it is held that metal takes on the ritual impurity of the met/ah it touches, whereas wood does not do so. (3)

4. Shmira: The body is "watched" from the time of death to burial, traditionally within the day of
death.

A: It is done to honor and comfort the deceased, whose soul is traditionally thought to hover near the body until burial. Those performing this service may take turns sitting for a few hours; they traditionally read Psalms and other non-Torah texts while sitting.

B. This is traditionally done by volunteers, again allowing the community to help comfort the mourners and to be reminded themselves of the reality of death. Today it is often done by a professional shomer, hired by the funeral home, to watch all the deceased in its care.

C. 2 Samuel 21: 1-14 tells the story of Rizpah, the mother of two of Saul's sons, who watched the bodies of her sons and five other sons of Saul to guard them from the "the birds of the air" and "the beasts of the field" for the seven months they had to wait for burial. (4)

5. Levayah: Accompanying the body of the deceased

A. The community participates in the funeral, procession, and burial.

B. Community members carry the casket to the grave.

C. Talmudic texts indicate there was an obligation for those who see a funeral procession to stop work and join it, unless there is a specific group of people to do it. (5)

7. K'vurah: Mourners fill in the grave themselves to complete the burial.

Endnotes: Components of a Traditional Jewish Burial


(2) The Talmud, in Moed Katan 27a-27b, explains the reason for simplicity in Jewish funerals:

"Our Rabbis taught: Formerly, they would bring food to the house of mourners in
following manner: to the rich, in baskets of gold and silver and to the poor in wicker baskets made of peeled willows. And the poor people were ashamed. The sages therefore instituted that all should be provided with food in wicker baskets made of peeled willows out of deference of the poor.

Our Rabbis taught: Formerly, they would provide drinks to the house of mourners in the following manner: to the rich, in white glass [which was very expensive] and to the poor in colored glass. And the poor people were ashamed. The sages therefore instituted that all should be provided with drinks in colored glass out of deference to the poor.

Formerly, they would uncover the face of the rich [corpse] and cover the face of the poor because their face became blackened by famine. And the poor people were ashamed. The sages therefore instituted that all faces should be covered out of deference to the poor.

Formerly, they would carry out the rich [corpse] in a state bed and the poor on a common bier. And the poor people were ashamed. The sages therefore instituted that all should be carried out on a common bier out of deference to the poor…

Formerly, the expense of carrying out the dead was harder on the family than the death itself; the family therefore abandoned the corpse and fled. Until Rabban Gamliel [President of the Sanhedrin] disregarded his own dignity, and had his body carried out in flaxen shrouds. Afterwards, all the people followed his lead and had themselves carried out in flaxen shrouds.”

(3) Pesachim Daf Yomi 14. See also http://www.webshas.org/taharah/mais.htm

(4) 2 Samuel 21: 1-14 "And there was a famine in the days of David three years, year after year; and David sought the face of the Lord. And the Lord said, "It is for Saul, and for his bloody house, because he put to death the Gibeonites," and David said unto the Gibeonites "What shall I do for you? and wherewith shall I make atonement, that you may bless the inheritance of the Lord?" And they said unto the king: "The man that consumed us, and that devised against us, so that we have been destroyed from remaining in any of the borders of Israel, let seven men of his sons be delivered unto us, and we will hang them up unto the Lord. But the king took the two sons of Rizpah the daughter of Aiah, whom she bore unto Saul, Armoni and Mephibosheth; and the five sons of Michal the daughter of Saul, whom she bore to Adriel the son of Barzillai the Meholathite, and he delivered them into the hands of the Gibeonites, and they hanged them in the mountain before the lord, in the first days, at the beginning of barley harvest. And Rizpah the daughter of Aiah took sackcloth, and spread it for her upon the rock, from the beginning of harvest until water was poured upon them from heaven; and she suffered neither the birds of the air, nor the beasts of the field by night. And it was told David what Rizpah the daughter of Aiah, the concubine of Saul, had done, and David brought up thence the bones of Saul and the bones of Jonathan his son, and they gathered the bones of them that were hanged. And they buried the bones of Saul and Jonathan his son in the country of Benjamin in Zela, in the sepulchre of Kish his father; and they performed all that the king
commanded. And after that God was entreated for the land."

(5) Moed Katan 27b

Contemporary American Burial, Its Origins, and Its Environmental Impact

History of the American Funeral

Many funeral and burial practices in the United States were developed with the profit of the industry in mind. Much of this has been possible because it has been suggested that these practices protect the public’s health and/or protect the dead body from decomposing. It is easy to convince consumers of these things, because of the uneasiness of people regarding dead bodies.

American funerals were simpler before the Civil War. People most often died at home, tended to in illness and dying by their family and community, who washed and laid out the body in the front parlor. Family members or friends built the caskets themselves, and carried the casket to the cemetery. Two things changed this, writes Mark Harris in his book Grave Matters,(1) One was “the entrenchment of a genteel code of conduct” which suggested the perceived need for a funeral
done “in good taste.” Newer wealth produced the market for fancier caskets. The other change was the development of embalming.

During the Civil War, the effort was made to ship the bodies of soldiers back to the homes in the North. This is when embalming was first used for bodies prior to burial, rather than just for bodies used for medical research. Arsenic, mercury, and other chemicals were used. Embalming of Abraham Lincoln’s body, to allow it to be taken from Washington DC to Springfield, Illinois, made the public aware of effects of embalming. Gradually a class of professional undertakers evolved who could produce the coffins and provide the embalming. The “funeral parlor” was developed by the early 20th century and was made to mimic private homes where bodies had previously been sat with and mourned. As more people died in hospitals, it was just as easy to remove a body to a funeral home as to an actual residence.

The literature of the trade from early in this century to today indicates that many funeral directors believe that embalming bodies, dressing them in street clothes, and restoring faces to present a lifelike appearance provide a “memory picture” for mourners, so that their last image of a loved one is not of a dead body. It is said that this is helpful to mourners. Selling metal or sturdy hardwood caskets with “sealers,” and surrounding the casket with a concrete or metal vault which may be thought by mourners to protect it, suggest to the mourners that the body will stay in this manufactured “lifelike” condition forever.

Contemporary American funeral directors generally transport the body of the deceased, embalm, clean and dress it, sell the casket and the cement or metal vault for the burial, provide facilities and staffing for a viewing, provide flowers and condolence books, and organize the funeral, the trip to the cemetery, and the burial. Jewish funeral directors are less likely to embalm or to provide a viewing, both of which are not in keeping with traditional Jewish practices, but they do sell all types of caskets and vaults. In many states, it is illegal to transport a dead body or bury one without the presence of a funeral director.

Embalming

Harris’s book contains a thirteen page description of the embalmer’s preparation of a body for viewing. “Embalming is a three-stage process of preserving a corpse for viewing: setting the deceased’s “features” as they will appear in the casket, draining the body of blood and replacing it with a formaldehyde-based preservative, and then inserting a sharp-pointed “trocar” into the abdomen in order to puncture the body’s inner organs, vacuum up the released bacteria and surrounding visceral fluids, afterward flooding the “cleared” area with more preservative.” For one embalming, approximately 120 gallons of untreated “funeral waste” may be put directly into the embalmer’s sink and then into the sewer system. In some states it has to be “pre-treated” with bleach. Studies have confirmed increased risks of leukemia, brain and colon cancer among embalmers, as well as certain skin conditions. Safer materials for embalming have been developed but are not used by most funeral directors.

There are only a few situations in which embalming is legally required, involving transportation of a body between states or overseas. It is not generally required for health reasons, and in the presence of some infectious agents, such as tuberculosis, it is hazardous to the embalmer and the general public. Why, then, is embalming so widely used in the United States?

The professionalization of the funeral director was based in embalming, which is the single unique skill of funeral directors. Most states require funeral directors to be trained in embalming,
even those, like Jews and Muslims whose traditions forbid its use. The academic education of a funeral director at Worsham School of Mortuary Sciences in Wheeling, Illinois includes 80 credit hours; of these, forty are related to embalming and cosmetology, fourteen are funeral business courses, and twenty-six cover practical issues of funeral directing, as well as the history, sociology, and psychology of the funeral. (8)

However, there are states that have a two-tiered system, allowing for both morticians, who embalm, and funeral directors, who do not. There has been a recent change to the laws to allow this in Maryland, due to the joined efforts of Jews and Muslims. (9) There has also been a legal case involving Rabbi Daniel Wasserman’s challenge to the funeral directors in Pennsylvania who insisted that this orthodox rabbi could not conduct a funeral. The law was clarified to say that religious leaders are able to direct funerals without formal education as funeral directors.(10) This makes it clear that learning to embalm is not necessary to direct a funeral.

Cemetery soil is contaminated by metals, as well as arsenic (used in the post-Civil War years for embalming) at older cemeteries. Formaldehyde has been found in groundwater in “small quantities” in non-peer reviewed studies done in Canada; it is not tested for in the US. It has been shown to be a health risk for embalmers. (11)

Caskets

Caskets are a primary source of revenue for the funeral industry. In Louisiana, Oklahoma, and Virginia, no one but funeral directors are allowed to sell them. (12) Sales tactics include the idea that a more expensive casket shows greater honor to the dead. The daughter of Supreme Court Justice Hugo Black wrote movingly about her experience buying an inexpensive casket for her father to lie in state. (13) Federal Trade Commission regulations require a funeral director to sell at least three caskets of different prices and to give consumers a price list before showing them the actual merchandise. A consumer is allowed to supply a casket to a funeral director from any source, and the funeral director must use it. (14) Caskets are widely available on line, as well as from manufacturers small and large.

Casket statistics from Mark Harris (15):

2 million sold every year in the US. The world’s largest manufacturer, Batesville Casket Co., makes one every 7 minutes.

27,000 tons of bronze and copper and 90,000 tons of steel are used annually

All-wood caskets (about 20% of all caskets sold) use 45 million board-feet of lumber, mostly oak, cherry, and maple - “enough to fully build more than thirty-five hundred homes.”

Varnishes used on caskets are hazardous to workers and to the earth in which they are buried.

Grave Liners and Vaults

Grave liners are usually made of reinforced concrete. They cover the bottom, sides and top of the grave but are sometimes bottomless. Bottomless liners are used for Orthodox Jewish burial so that the casket comes in contact with the earth. Liners are porous to water. Vaults are usually
made of metal, from stainless steel to bronze, and are supposed to provide more "protection" for the casket. (16) Vaults can also be made of fiberglass.

The use of metal vaults in which caskets are enclosed may have originated in the 1800’s to prevent graves from being opened and robbed of the bodies and/or items buried with them. It may be suggested that they will keep the casket and the body from decomposing, but they cannot do so. They add to the cost of the funeral, from a low of about $500 for a basic concrete liner, to as high as $10,000 for a bronze vault. Fiberglass vaults are lighter and less expensive.

There is no federal or state legal requirement for a liner or vault. (17) They do not exist to protect the body from the elements. They are not needed to protect the mourners from the body. Their purpose is two-fold. The weight of the earth over a casket without a liner or vault will collapse the casket eventually, creating a depression in the ground surface. Liners keep these depressions from forming and provide a flat grass lawn in the cemetery for easier lawn maintenance. They also provide a solid surface over the graves to support the heavy machinery used to dig the graves and lower the vaults. That is, the vault is used partially to allow other vaults to be installed!

Funeral directors may claim that liners protect the mourners and cemetery personnel from falling in depressions in the lawn when the earth sinks in over a decomposing casket, or from the danger of a gravestone falling over because of such sinking. Continuing to put more dirt into these depressions is one way to fix this problem. Using smaller headstones is another. The headstones themselves usually require an additional concrete platform for their support.

It is noteworthy that the reinforced concrete industry is a hazardous one that produces many deaths and occupational illnesses and accidents each year. (18) It is also an industry which is energy intensive. Newer methods of producing concrete from coal fly ash have been developed, which both recycles the fly ash, a byproduct of burning coal, and reduces the environmental impact of making concrete (19). The National Cemetery Administration has found ways to make the installation of vaults in state and national veterans' cemeteries more green by reducing fuel use. (20)

**Environmental effects of the “traditional” American funeral**

“Over time the typical ten-acre swatch of cemetery ground, for example, contains enough coffin wood to construct more than forty houses, nine hundred-plus tons of casket steel, and another twenty thousand tons of vault concrete. To that add a volume of formalin sufficient to fill a small backyard swimming pool and untold gallons of pesticide and weed killer to keep the graveyard preternaturally green.” (21)
Endnotes/Resources: Contemporary American Burial, Its Origins, and Its Environmental Impact


(2) Harris, op. cit, p 42

(3) Harris, op. cit, pp. 44-46


(6) Harris, op. cit., pp 14-29.

(7) http://www.enigma-champion.com/

(8) http://www.worshamcollege.com/courses/quarter1-2.html
YES, VIRGINIA, THERE IS A CHEAP COFFIN!
by Josephine Black Pesaresi

My father, Hugo L. Black died in 1971. At that time he was 85 years old and the second longest sitting Associate Justice in the history of the United States Supreme Court, having sat on the Court for nearly 35 years. An avid tennis player, he served on his two beloved courts - the Supreme Court and the tennis court - until a few months before his death. He gave up both reluctantly, but died at peace with his life and his death.

He was buried in Arlington National Cemetery, not as a Supreme Court Justice but as a Captain in the Cavalry during the First World War. His grave is next to my mother, Josephine, who died in 1951 and had been a Yeomanette in the Navy during the same war. Their grave markers are standard government issue and they note only the dates of birth, death, and service in the armed forces.

A funeral service was held for my father at the National Cathedral in Washington, D.C. Over 1,000 people attended, including the President of the United States, the Supreme Court, judges, and many Congressmen and Senators. The Bishop of the Cathedral, Dean Francis Sayre, oversaw the arrangements and delivered a eulogy.

In making the funeral arrangements we had only three directives from my father: 1) simple; 2) cheap; 3) no open casket.

These were not last minute orders. Our family had heard my father's views
about funerals for many years. Appalled by the high costs, he felt that "funeral merchants" often took advantage of grieving families when they were at their most vulnerable. Coming from a humble background, he had seen families spend themselves into debt. He was equally appalled by any person who wished an elaborate and expensive funeral, seeing this as evidence that the person was "puffed up about his own importance in the scheme of things."

With my father's directives firmly in mind, we planned our trip to the funeral parlor to pick out a coffin. We had chosen Gawler's Funeral Home in Washington D.C., recommended as a place used by many government officials. Our group included three family members - my brother, my stepbrother, and myself - and two Supreme Court Justices - Byron White and William Brennan.

The casket room was elegantly appointed. The carpeting, wall paneling and piped in music set a tone for coffin shopping in undisputed good taste. On entering, one's eye was immediately drawn to the extreme left wall where a superbly crafted dark wood coffin, softly spotlighted to show the fine wood grain, was perched high on a velvet draped dais. It looked like a throne coffin. However, we were steered counter clockwise, starting our search at the right. The caskets were arranged head to toe in a semi-circle leading up to the throne coffin and it was obvious that we were going from least to most expensive. The first coffin we came to, the cheapest, was covered with pink organza, pink satin bows, with a pink ruffled skirt around the bottom. Tasteless and frilly, it seemed totally out of place. The next ones were also cloth covered, but the cloth looked increasingly more expensive. Our salesman was surprised that we even glanced at these, let alone asked their prices and indirectly dismissed these as a final resting-place for a man of importance. He began to hurry us on until we came to the throne coffin. We stood in front of this masterpiece of craftsmanship with heads slightly bowed reverently. "This", the coffin salesman said, "is the worthy resting place for a Justice of the United States Supreme Court." When we asked the cost of the throne coffin, he did not immediately give a dollar amount. He noted that while it was the most expensive, he knew that the price was not our main concern when burying a man of my father's stature. Cost considerations would be unworthy. This response was a big mistake and backfired immediately. Suddenly, almost simultaneously, we looked at each other, smiling as my father's directive hit us full force - cheap. We moved to another emotional dimension, common at wakes, going from a deep, grieving sadness to an almost playful mood. Right there, in that elegant room, we knew that together we could do one last thing for my father. No one was going to talk us out of cheap! When pressed, the coffin salesman allowed that the throne coffin cost thousands of dollars. That settled that.

We dispersed, zigzagging around the room, separately appraising the caskets and asking prices down to the penny. All of the polished wood caskets were soon dismissed as too expensive. It had to be a cloth covered one. To the salesman's horror, Justice White began to scrutinize the first pink organza coffin and then asked what was under the frills. The salesman said it was just a plain, unfinished pine box. Then someone asked about the most expensive cloth covered casket. That too was a plain pine box. When asked the difference between the boxes, the salesman, now completely
befuddled, whispered that the more expensive had a "better shape". We looked and thought the shapes were identical.

Huddling for a final conference, someone asked: "Shall we get the pink one, the cheapest?" and we all gave a resounding YES. We said we would buy the pink for $165 with the cloth stripped off. The salesman said that was impossible, it would look terrible. We, however, wanted to see for ourselves since this was our coffin of choice. First one of us pulled away a little cloth to take a peek, then another pulled more forcefully, and finally we all started ripping off the fabric with careless abandon. Off came the bows, the coffin skirt, and all but a few patches of stubbornly glued pink organza. There stood a perfectly fine plain pine box. The debris littered the elegant carpet, but we were practically euphoric. We had followed my father's directive almost to a tee, with added bonus of deflating pretensions in this very pretentious room. (Though my father would have felt some compassion for the poor coffin salesman.)

When we went into the office to settle the bill, the funeral home director, now understanding our zeal for cheap, asked timidly about filling in the nail holes and sanding down the glue spots. With a closed casket visitation at the funeral home and a display at the Cathedral, they felt their reputation was at stake. We agreed if nothing was added to the bill and were assured nothing would be.

Dean Sayre of the National Cathedral made a final request in the spirit of my father's wishes. He asked that at the funeral we have the casket displayed without the American flag or flowers on top of it. He, as my father, had long been concerned about the excessive cost of burying the dead and the financial burden this put on living loved ones. He wanted people to see that the cost of a coffin did not symbolize the abiding love of the living for the dead, nor did it reflect the stature of a man.
What is Green Burial?

Green burial is burying bodies in a simple way that promotes the decay of the body and its return to the earth. Nothing unnecessary is done to the body, such as embalming and make-up. Simple clothing or shrouds are used to dress the body. Caskets are simple, made of readily biodegradable materials, such as soft wood, wicker, or cardboard. To promote decomposition, graves are dug less deeply than conventional graves. Generally, local and state laws require just two feet of earth over a casket or shrouded body. No vaults or liners are used, since they would delay decomposition of the body and the casket. Cemeteries that have been providing such burial have existed for decades in the United States, although they may have considered themselves to be offering "just regular burial." But more frequently, burial in the United States involves unnecessary procedures and products, all designed to keep our bodies from the earth, and requiring energy and materials in their manufacture.

Green burial preserves natural resources by reducing carbon emissions involved in the manufacture of cemetery products. Use of **locally produced products** will further reduce fuel costs for transportation. **Simple grave markers** with minimal production activity, such as natural boulders, are common. **Hand-digging of graves** reduces fossil fuel use. Grass is not fertilized, watered, and mowed. Use of **native plants** or woodland plantings allows for fewer or no pesticides and herbicides. The use of toxic materials that would contaminate the earth, such as varnishes on caskets and embalming fluids, are prohibited in green burial.

Green burial may also preserve land. “Conservation” burial grounds are designed to restore the land in which they are placed by allowing subsequent natural plantings to fill a landscape. “Natural” burial grounds may or may not involve restoration of the land, but will keep it from being developed. “Hybrid” burial grounds are sections of conventional
cemeteries that use green methods of burial and may be placed in wooded or other natural areas that are not artificially landscaped or covered with lawn grass.

**Green caskets** have no metal nails, screws, or hardware. They are made only of biodegradable materials, such as soft woods, cardboard, bamboo, wicker, or heavy felted wool. They do not have toxic varnishes, are not transported a long distance to point of use, and they are made from materials harvested in an environmentally sustainable manner. (1) Orthodox caskets may be kosher but not truly green, depending on the varnishes used and how far they are transported.

**Shrouds** should be made of all-natural materials. (2)

**Organic pesticides and herbicides** are allowable when needed.

**Minimal, natural grave markers**, such as boulders with small attached plaques or simple engraving, are used. Some green cemeteries use only trees or plants as markers.

The Green Burial Council (www.greenburialcouncil.org) is an independent, nonprofit organization founded in 2005. It has certified at least 22 cemeteries in the US as conforming with various levels of green standards. The GBC also certifies funeral homes and various products, including caskets and embalming fluids, to be green. (3) However, the GBC does charge a fee for its certification process, and smaller cemeteries and manufacturers may not choose to be certified by GBC. Other organizations providing information on green or natural burial and products include Final Footprint (http://www.finalfootprint.com/) and The Natural Burial Company (http://www.naturalburialcompany.com/).

Here is a list of websites or other contact information of some existing green cemeteries, most not identified as having Jewish sections, but they may be open to having them. You won't know until you ask. You may need to ask more than once!

http://fcasocal.org/green-burial-cemeteries-in-california.html sites in California

Conservation Burial Grounds

    www.memorialecosystems.com/ Ramsey Creek Preserve in South Carolina
    www.honeycreekwoodlands.com Conyers, Georgia
    www.commonwealconservancy.org Galisteo Basin Preserve, Santa Fe, NM
    www.foxfieldpreserve.org Wilmot, Ohio

Natural Burial Grounds
www.glendalenaturepreserve.org    DeFuniak Springs, Florida
www.rainbowsendcemetery.com    Orrington, Maine
www.steelmantowncemetery.com/    Tuckahoe, New Jersey
www.naturalburial.org    Greensprings Natural Cemetery Preserve, Newfield, NY
www.ethicianfamilycemetery.org    Huntsville, Texas
www.naturalburialground.org    White Eagle Memorial Preserve, Goldendale, WA
http://websitedesignonline.com/greencemetery/cbbg_f/mailing_list.html    Cedar Brook Burial Ground, Limington, Maine
http://pennforestcemetery.com/    Verona, Pennsylvania
http://www.eloisewoods.com/about.html    Cedar Creek, Texas
http://conservationburialinc.org/    Prairie Creek Conservation Cemetery, Gainesville, Florida
http://www.mvgreencemetery.com/about.html    Mountain View Green Cemetery, Ladore, Idaho

Hybrid Burial Grounds
www.foreverfernwood.com    in Mill Valley, Jewish section Gan Yarok Sebastopol Memorial Lawn, Sebastopol, CA
www.eternalrest.com    in Dunedin, Florida
Valley Memorial Park, Hillsboro, Oregon
Central Texas, Mt. Zion, Garden of Memories; in Temple, Texas
www.foresthometcemetery.com    in Milwaukee, Wisconsin
http://www.greenmeadowpa.org/rules-regulations/    Fountain Hill Cemetery, Fountain Hill, Pennsylvania
http://www.naturalend.com/2010/11/windridge-memorial-park-and-nature-
sanctuary-cary-illinois.html

This cemetery is owned by Stonemor, which also owns Willow Lawn Cemetery in Vernon Hills, IL, where a natural burial section, with an inclusive Reform Jewish area, was recently opened.

http://www.mtpleasantsf.com/ Sioux Falls, South Dakota

http://www.ascensionfuneralgroup.com/?siteid=104 Spring Hill Memorial Gardens, Mobile, Alabama

http://www.oakhillonline.com/ Eugene, Oregon

http://www.sunsethillscemetery.com/natural-burials/ Eugene, Oregon

Endnotes for Topic 4

(1) A small maker of natural caskets is Gazelle Woodworks, 766 W Boyd Rd, Pleasant Hill CA. juliecohen@comcast.net, 925-787-6192


Hainsworth wool caskets are distributed in the US: http://www.naturallegacy.co.uk/contact-details/global-distributors/hainsworth-usa-ltd

http://finalfootprint.com/green-caskets

http://www.naturescasket.com/Caskets.html

(2)http://www.kinkaraco.com/ A source for green shrouds

(3) http://www.greenburialcouncil.org/finding-a-provider/ Sources for providers, caskets, and shrouds, as well as cemeteries and funeral homes.
Green Burial is Jewish Burial

1: Simplicity in burial:

Gamliel’s rulings emphasize simplicity in all aspects of burial to allow equal dignity for all members of the community.

Green burial also uses simple materials and uses nature itself as the equalizer of those buried. Anna Locki of Willow Lawn Cemetery states: "It is not right when people have to feel regret that they can't put up a big monument for their loved one. Out here, the trees are beautiful for everyone equally."

2: Embalming:

Traditional Jewish funeral practice forbids both the public viewing of the body of the deceased and the practice of embalming which funeral directors often require to make it possible.

Green burial does not allow bodies to be embalmed.

3. Decomposition of the body:

Jewish tradition includes the idea that the earth and the decomposing of the body in the earth is atoning.

Green burial accepts and accelerates the decomposition of the body.

4: Burial by the mourners:

Jewish tradition requires the mourners to fill the grave themselves.

In green burial, vaultless, shallower graves allow the mourners more easily to lower the casket into the earth. There is no waiting for a backhoe to lower the casket and the vault cover before k’vurah.

5. Care for the natural world:

Many contemporary Jews understand themselves to have a religious obligation to take care of the natural world.
Green burial allows for a minimal environmental impact at death.

**Cremation, its Environmental Costs, and Newer Forms of Body Disposition**

Many people believe that cremation is the most environmentally friendly way to dispose of a body. But the actual process of cremation is an industrial process that requires a fairly large expenditure of non-renewable energy. Emissions from crematoria have toxic content. Because of these negative environmental effects of cremation, newer forms of "body disposition" have been developed.

Cremation “. . . reduc[es] a body to some five pounds of sterile, grain-size particles by subjecting it to temperatures of between fourteen hundred and eighteen hundred degrees inside an enclosed furnace for two to three hours and pulverizing the remaining bones into ‘ashes.’ ”(1) A video of the process is available.(2)

Cremation typically uses non-renewable energy sources and produces approximately 200-350 kg of carbon dioxide. The body can be cremated in a cardboard box, but often people also purchase and burn a casket. Cremains can be scattered in a garden or a special area of a cemetery. Often they are kept in an urn, which can be a cardboard box, a basket, a simple metal container, or something more elaborate made of marble or a more expensive metal like bronze. If cremains are to be buried, some cemeteries will require the use of an urn vault, a smaller version of a vault used for ground burial. All of this merchandise will add to the cost of cremation.

Crematoria emissions contain some amount of toxic substances, such as dioxins, furans, and mercury.(3) While some government agencies and members of the cremation industry insist that cremation is not an environmental risk (4), citizens in many communities have fought having crematoria built in their midst because of environmental concerns. (5) Mercury emissions come from dental fillings and are not regulated by the EPA. They are regulated in some European countries, including Austria, Belgium, Germany, Holland, Switzerland, Sweden, Norway, and England, countries with high rates of cremation. In 2007 in UK, 1/6 of all mercury emissions were from cremation. Special filters are available to reduce all emissions, but they are expensive. Laws have been proposed in 2006 in Minnesota (6) and in 2005 in Maine that would have required removal of dental fillings before cremation, but they were not passed.(7)

Cremation rates continue to rise in the United states, reaching 42 %, over one million
cremations, in 2011.(8) Any negative environmental impact from cremation emissions will continue to grow if regulations are not changed. Because of the environmental costs of cremation, other non-burial body disposition techniques have been developed and are used in some other countries and to a limited extent in the US. These include resomation and promession.

Resomation (9) is a process that dissolves the body to its chemical components and uses one-eighth the energy of cremation, since the temperature required is only 360 deg C. It is also known as “alkaline hydrolysis” or “bio-cremation.” The body is placed in a silk bag and then in a metal cage frame. This is loaded into a resomation machine for approximately three hours. The machine is filled with a mixture of water and potassium hydroxide, and heated at a high pressure. The end result is a small quantity of green-brown tinted liquid containing amino acids, peptides, sugars and salts, and calcium phosphates. These are easily crushed in the hand to form a white-colored dust. Both the liquid and the dust can be returned to the deceased's next of kin and may be buried in a cemetery or scattered in a garden. Like embalming, resomation leaves about 150 gallons of waste water that will go into a sewer system. Metal objects, including dental fillings, are left behind and can be picked out and recycled.

The resomation process is currently being championed by a number of ecological groups. It is being presented as an alternative option at some British crematorium sites. It is approved for use in 7 states, including Florida, Maine, Oregon, Maryland, Colorado, Kansas, and Minnesota. It has been used by the Mayo Clinic for bodies donated for research/education between since 2006. A resomator is in use for the public in St. Petersburg, FL. A resomation device costs twice as much as a crematorium. The cost of process is one to three thousand dollars.

In promession (10), within a week and a half after death, the body is submerged in liquid nitrogen at 18 degrees C which removes the water, 70% of the body, and causes the body to become brittle. It is then exposed to vibrations that reduce the remains into a fine, organic powder weighing about 30% of the original mass. The powder is vacuum-dried and any metals present can be removed for recycling. Remains can be stored indefinitely if they are kept in a vacuum-sealed container. Exposure to moisture will allow for natural decomposition in six to eighteen months, or one can opt for a green burial or scattering of the remains. Promession costs about one thousand dollars.

People may believe that cremation "saves land for the living." While it may be true that cremation "uses" less land than burial, green burial often is used to keep land from otherwise being developed or used. Green conservation areas preserve land in its natural beauty.
A Brief History of Cremation (11)

1. Cremation was used by ancient Greeks, Romans, Hindus, and European pagan cultures.

2. It was banned by early Christians because of Christianity’s roots in Judaism, which used ground burial. The Christian emperor Charlemagne made cremation a capital offense. This opposition to cremation may be related to the idea of resurrection in both Jewish and Christian traditions in two ways. In Judaism, there was a belief that the decomposition of the body atoned for past sins. Both Jewish and Christian texts referred to the resurrection of the body, and believed that a cremated body could not be resurrected.

3. There was an attempt to de-Christianize burial in the 18th century in the French Republic by promoting cremation. Legislation was passed favoring it. The Parisian journal “La Cremation” was first published in 1856.

4. The second half of the 19th century saw cremation promoted in Europe and the US as more sanitary than burial. It was believed that cemeteries were dangerous, letting unhealthy “miasmas” into the air. Cremation was also felt to be more esthetically pleasing. It was noted that the body was consumed by light and heat rather than the cold, damp darkness of the grave, that the body moved up to the heavens rather than down into the earth, and that the spirit was quickly released from the body by its demise. Rituals, some religious and some not, were designed for funerals followed by the cremation, observed by the mourners, and burial of ashes.

5. The promotion of cremation was a movement among a well-educated, elite, Protestant, white culture. Its advocates were Episcopalians, Unitarians, members of the Society for Ethical Culture, and many supporters of rights for women. Prothero suggests that it was also aimed against immigrant cultures, like Catholics and Jews, who had strong burial rituals.

6. In 1886, Catholics were forbidden by Pope Leo XIII to use cremation, a ban that was not lifted until Pope Paul VI allowed it in some instances in 1963. In 1997, US Catholic bishops were allowed by the Vatican to permit cremains to be present at funeral masses.

7. The Central Conference of American Rabbis stated in 1892 that cremation was not antithetical to Jewish tradition and permitted rabbis to officiate at cremations. Orthodox authorities continue to prohibit cremation. Most non-Orthodox cemeteries now allow for the burial of cremains.

8. The US funeral industry fought cremation, until realizing in the 1970’s that they were
losing too much business. Even the Batesville Casket Company began a cremation campaign in 1993, named “Options ® by Batesville. See David Harris's *Grave Matters,* Chapters 3, 4, and 5, for information about the current options for disposing of cremains. Endnotes for Section 6

(1) Harris, op. cit., p.66

(2) http://www.youtube.com/watch?v=cFNDZIf0qXI

(3) http://no2crematory.files.wordpress.com/2011/01/toxic_emission_from_-_crematoriesenv-intl.pdf

(4) http://www.health.state.ga.us/pdfs/environmental/ChemHazards/Documents/CrematoryFS.pdf
   http://www.cremationassociation.org/?MercuryAndCremation

(5) https://sites.google.com/site/grinnellcremationresearch/
   http://no2crematory.wordpress.com/the-toxic-truth-data/
   http://citizens.betterspringhill.org/?p=110


(8) http://connectingdirectors.com/articles/35987-2011-cremations-surpass-the-1-million-mark

(9) http://www.resomation.com/index.htm

(10) http://www.thelocal.se/33178/20110413/

(11) This brief synopsis of information about the history of cremation is taken from *Purified By Fire: A History of Cremation in America,* by Stephen Prothero.
**Resource list: books, websites**


   Website of Mark Harris with additional materials: [http://www.gravematters.us/index.html](http://www.gravematters.us/index.html)


   [http://www.funerals.org/](http://www.funerals.org/) This is the website of the Funeral Consumers Alliance, of which Joshua Slocum is the president

3. [www.greenburialcouncil.org](http://www.greenburialcouncil.org)