

BOARD OF CEMETERY TRUSTEES
GREEN BURIAL Q and A - MAY 2020

Questions prepared By C. Hauke, Board of Cemetery Trustees

Answers provided by P. McCarthy, Sexton

1. A hybrid cemetery would likely be the most realistic option at this time. Would green burial be allowed in a designated area only?

If it was recommended by the board and approved by council that green burials were to proceed in Lebanon under our municipal cemetery's we would recommend that they take place in a designated area with adequate spacing to allow for safety of equipment and employees if it is determined that they would be able to safely perform the digging and interments of the human remains. It would also be beneficial to hire a consulting firm totally outside the area to conduct a study on how owners in current lots, sections and cemetery's would feel as well as the general public.

2. Which cemetery would have space for this? What work would have to be done to the space to prepare it for green burials? Would there be a zoning change or other legal considerations?

Legal considerations would need to be reviewed by Attorney Waugh. West Lebanon Cemetery does have additional sections in it that a designated area could possibly be utilized. This area does have a stream that runs along the back side and front of the Cemetery. Surveys would need to be done to determine boundary lines and distances. It should also be noted that adding an area such as this would drastically change the scope and appearance the cemetery currently possesses. The recommended area would also need to be surveyed and pinned. Currently all cemetery lots and graves are pinned with steel markers along with aluminum plates with numbers. This allows for exact locations of graves to help eliminate incorrect placing of human remains or unearthing a grave with human remains previously buried. especially in the winter months when there is snow covering the ground. Other consideration should be taken in this area. Possibly a survey to residents on what the impact would be of children at the elementary school witnessing such a burial. West Lebanon Cemetery see's a large amount of foot traffic. It also has seemed to become a common drop off and pickup location for children at the Mount Lebanon School. This should also be taken into consideration so that children, parents and walkers are not disturbing the burial ground area.

3. Site selection for green burial should include consideration of soil conditions. Optimum soil conditions include sandy, loamy soils with permeability coefficients of more than 10^{-3} m/s. Waterlogged soil or clay should be avoided. Other soil considerations include

amount of organic matter present, alkalinity, salt levels, texture, depth of bedrock, and slope. Well drained soil with some clay to absorb organic compounds, and an active biological presence of bacteria are ideal for promoting efficient decomposition. Do we need to test soil in the chosen green burial location(s)?

Yes, any perspective sites should be tested. If the Board of Cemetery Trustees decide to recommend green burials in Lebanon Municipal Cemetery's followed by the approval of the City Council, it would be recommended that the perspective sites be tested at whatever the determined depth of burial would be.

4. How would graves be marked for green burials? Options include GPS coordinates, plat diagrams, native plants, trees/shrubs, fieldstone, cornerstones, flat markers. Use of concrete is discouraged, as are upright monuments.

As it is inevitable that graves are going to settle when not using a protective outer burial container any upright stones are going to settle, shift and move. Also, any upright stone would have a concrete foundation under it preventing it from tipping, leaning or falling on someone or thing causing bodily injury. In which concrete is discouraged, uprights stones would likely not be an option. As flat stones sit flush with the ground if the grave settles so will the flat stone. If flat stones are determined to be the best option additional fees to raise and level sinking, sunken or shifting stones should be considered as well. Trees and Shrubs are not allowed to be planted in our cemeteries per the bylaws. They also create a maintenance issue for the cemeteries. As we know over time whether it is a shrouded body or casketed body for a green burial the remains over time will decompose and create a void. If equipment is needed to maintain trees or shrubs as they grow it would create a safety issue bringing equipment in over these areas. As we have experienced numerous times in our older sections where vaults were not used, the equipment hits the void and sinks to a point where it needs to be towed out and extensive damage had been done to additional lots, graves, sections and equipment. Photographs from such incidents are currently on file with the department of public works.

5. Would a person buy a specific gravesite for green burial, or rights to be buried in a particular area of the cemetery?

All City run and maintained cemeteries should operate on the same purchase policy weather it be buying the lot or purchasing burial rights.

6. How much would a green burial cost? Most hybrid cemeteries report graves cost the same or somewhat less than conventional burials.

It is recommended for the safety of staff and equipment if the Board of Cemetery Trustees decides to recommend green burial as an option in Lebanon and voted and approved by City Council the lots for green burial should be larger to insure no equipment or staff comes in contact with previously buried human remains. A traditional single grave sale now is 4 feet by 11 feet. To insure the safety of the staff, the disturbance of previously buried remains and allowing the natural nutrients in the soil to work it is my recommendation that if the board and council recommend green

burial that an individual grave be a width of 8 feet wide by 11 feet long. The human remains be placed in the center of that individual grave space. This would allow approximately 5-6 feet between each burial. As sandy soils seem to collapse easier as graves and holes are prepared at this suggested lot size it would reduce the risk if a grave does collapse that human remains from a previously buried burial be exposed to staff and the general public. Cost for the lot would be reflected on the same as a normal grave space size as they are purchasing grave space as well.

7. From a logistical standpoint, how would the body be handled in a green burial? We would have to choose how to deal with family involvement (does the family participate in moving or lowering the body, or do we keep it more similar to a conventional burial process?). Would machines be used? Are gravesites prepared ahead of time by cemetery staff? How would the body be lowered into the grave?

Handling of remains casketed body's or urns are typically conducted by Funeral Home staff. In the case of a traditional burial, equipment (a backhoe) is utilized to prepare the grave to keep time and cost of the grave preparation to a realistic price. Graves in Lebanon other than cremation graves are not dug by hand. In older sections where vaults were not used it has been noticed time and time again that this equipment will go through the graves or voids left behind from decomposition and cause damage to the surrounding lots, equipment and could lead to injury with staff operating. A lowering device is typically utilized to lower the casket for a traditional burial in the grave. Caskets are lined with liners to prevent fluids from leaking and contaminating equipment as well as harming staff during the lowering process. A lowering device would need to be utilized to lower remains into a grave. Any device coming in contact with remains that have not been disinfected would need to be disinfected after every use. It would need to be determined as to where this disinfection station would be. Proper personal protective equipment such as Gloves, masks and suits are recommended to wear for any staff if involved with burial of remains as it is unknown if any human remains have potentially contagious diseases or viruses that could be transmitted through any types of fluid.

8. Are there any circumstances with which a body could be turned away for green burial? Considerations for if the body is in "bad condition" when received for burial. This would likely be communicated through/with funeral directors.

Would it be required that funeral homes be involved in this case then? In every case there is always the unknown for communicable diseases or virus. Not all are listed on death certificates and some go unknown for one's entire life. Take Covid-19 as an example. Many cases worldwide likely went undetected for a period of time. Would this be the case in green burials especially if another pandemic happened?

9. What would happen if a green burial grave was purchased in advance, but the body is not able to be green buried for whatever reason? What is the contingency plan?

If recommended by the board and passed by council to proceed with green burials because it is a case by case basis not knowing if the persons remains would be in a

state that would be safe for family, funeral homes or staff to perform a burial lots should be purchased at the time of passing.

10. Would green burials during winter be allowed? It is often recommended to dig graves ahead of time and fill with straw, compost, or other organic material.

Preparing graves in advance not knowing if they would be used or not creates a safety issue for staff as well as visitors and residents who use the grounds to exercise, walk and visit loved ones in the cemetery. It is not recommended for safety reasons to prepare graves for burial not having a service lined up. Even filling with straw as the ground gets covered with snow if a resident, family member or natural wildlife does come in contact they very easily could fall into the hole causing serious bodily injury to themselves holding the City liable.

11. For the most part, graves can be dug at the green burial depth without fear of collapse. In some soils, cemetery operators may choose to lay in temporary plywood supports for the walls that are removed prior to the service. Wide wooden planks set on either edge of the grave provide footing for those lowering the body. If the weather is especially damp, a deeper reservoir dug at one end of the grave will collect excess water. When removing soil, best practices recommend removing the soil strata in succession and piling each separately, to be returned in reverse order, subsoil to topsoil to surface material. Where would the soil be placed during the ceremony/burial? A process/standard operating procedure for grave opening and burial should be in place and workers should be trained appropriately. When closing a grave, rocks and stones that originated in the removed soil should be put back. The addition of lime and mulch can aid in decomposition but is not required. All of the soil that was removed is re-mounded on the top of the grave and will settle to a flattened surface as decomposition occurs.

Removing soils strategically in a layered form and setting aside would take additional time and would reflect in cost of preparing a grave. Typically, when preparing a grave the earth is removed from the grave location and loaded in a 1-ton dump truck allowing maximum space around the site for family and friends to gather without having the obstruction of the soil present. Following the graveside service and all family and friends have left, the grave is closed and back filled by the 1-ton dump truck backing up to the site. Dumping the soil and compacting to prevent settling and damage to equipment while maintaining the grounds. If using Lime and mulch this would also reflect on increased cost as those materials would need to be purchased.

12. How will the green burial areas be maintained? Will they be mowed? Additional soil may be added to graves over time if a lot of settling occurs.

Mowing grounds that have mounds and the potential of grave collapse would create the possibility of safety issues of staff as well as equipment. Going back to fill graves if they settled below the grade of the natural ground would also be an additional cost

as the top soil would need to be purchased and should reflect on the cost of the opening and closing fee as well.

For the Board:

Questions prepared By C. Hauke, Board of Cemetery Trustees

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2. **TONY:** Site selection for green burial should include consideration of soil conditions. Optimum soil conditions include sandy, loamy soils with permeability coefficients of more than 10^{-3} m/s. Waterlogged soil or clay should be avoided. Other soil considerations include amount of organic matter present, alkalinity, salt levels, texture, depth of bedrock, and slope. Well drained soil with some clay to absorb organic compounds, and an active biological presence of bacteria are ideal for promoting efficient decomposition. Do we need to test soil in the chosen green burial location(s)?
3. How would graves be marked for green burials? Options include GPS coordinates, plat diagrams, native plants, trees/shrubs, fieldstone, cornerstones, flat markers. Use of concrete is discouraged, as are upright monuments.
4. Would a person buy a specific gravesite for green burial, or rights to be buried in a particular area of the cemetery?
5. How much would a green burial cost? Most hybrid cemeteries report graves cost the same or somewhat less than conventional burials.
6. From a logistical standpoint, how would the body be handled in a green burial? We would have to choose how to deal with family involvement (does the family participate in moving or lowering the body, or do we keep it more similar to a conventional burial

process?). Would machines be used? Are gravesites prepared ahead of time by cemetery staff? How would the body be lowered into the grave?

7. How will the green burial areas be maintained? Will they be mowed? Additional soil may be added to graves over time if a lot of settling occurs.
8. Who is allowed to be buried in green burial plots? Just Lebanon residents or anyone?

Legal Considerations:

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1. City or state regulations would dictate setbacks from water sources. What are these?
2. Should the City require a liability waiver for green burial processes (carrying, digging, lowering, closing the grave)? It has been recommended that next-of-kin sign a liability waiver that indemnifies the cemetery and all of its employees from responsibility for injuries of anyone in their party during the funeral. This could be included in a contract or as a stand-alone waiver and also depends on how much the family is allowed to participate in the process.
3. Disinterment considerations: Typically, families are asked to sign a contract stating that they understand that their family member will not be disinterred unless legally ordered to do so by the State, and that the family is responsible for any costs not born by the State should this be ordered.
4. Green burial cemeteries have the ability to reuse ground space in the future if desired. Is this something the City would consider, and does it need to be included in Chapter 46 or in a contract disclosure, regardless of whether it is allowed?

For other hybrid cemeteries:

Questions prepared By C. Hauke, Board of Cemetery Trustees

1. How are graves marked after green burials? Is there a wait time after burial for this to happen?
2. How much would a green burial cost?
3. Are there any circumstances with which a body could be turned away for green burial?
4. Outline what a green burial looks like at your cemetery. Where is soil placed during burial? How do your workers perform the steps for burial? What safety measures are taken? What training occurs?