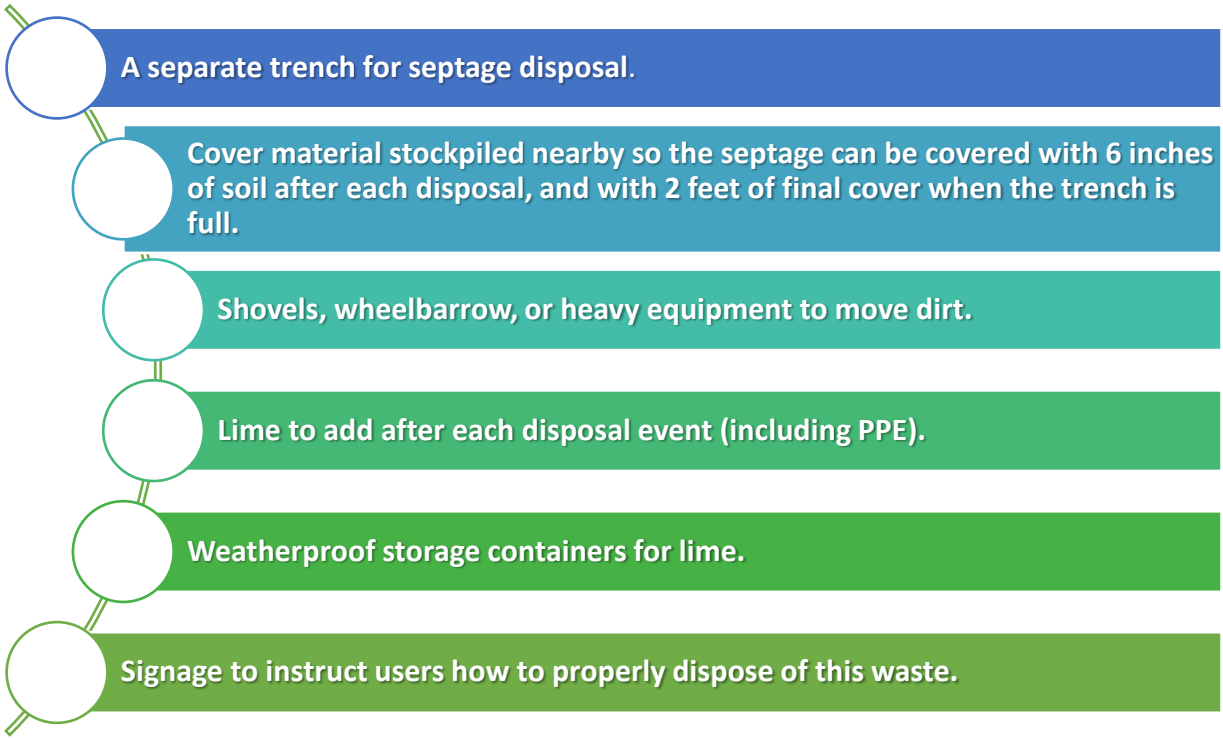
5.2 Septage Waste

The landfill may accept septage waste if the landfill is permitted for this waste, the waste is deposited into a designated trench or bermed area that meets required standards, and the waste is maintained so that it doesn't overflow. Hydrated lime must be added to achieve a pH of 12 for 30 minutes after each disposal (18 AAC 60.365). Septage has specific geology requirements for drainage. These are not appropriate for above ground landfills with poor geology or high groundwater tables. If these conditions are present, a Wastewater utility should be utilized to manage septage in a sanitary manner.

Requirements for good management of septage waste at the landfill:



Why are these important?

- Separate trench: Ideally, the septage trench should be located in a separate area with its own fencing and signage in the landfill. This area is only used during episodic pumping events, so this reduces the possibility of exposure to potential diseases from contact with exposed septage. It also makes it easier to cover and manage the waste.
- Cover material: A minimum of 6 inches of cover material added to the waste that is sufficiently solid will help to control odors.
- Hydrated lime: Lime is a powdered substance that kills the bacteria and reduces the smell associated with septage waste.

- Weatherproof container: Lime needs to be kept dry until application for it to be effective. Storing it in a weatherproof container near the septage area will keep it dry and promote regular use.
- Signage: Giving directions for how and where to dispose of septage waste will reduce the risk to landfill users.

Septage trench with lime added.

Helpful Tips:

- If possible, instead of a designated trench in the landfill, construct a separate lagoon outside of the landfill for septage waste. This will be managed by the ADEC Wastewater Program.
- A minimum of 4 feet between the bottom of the designated septage trench and the seasonally high groundwater is required.
- The trench should be dug in soil that drains easily, such as sandy soil, so that liquids put into the trench will soak into the soil. Consult the ADEC Solid Waste Program for specific specifications of how trenches should be constructed.
- Lime should be added by the operator to the septage waste at a rate of approximately 25 pounds of lime for every 1,000 pounds of septage waste or approximately 2 cups of lime for every 5 gallons of septage waste.

Lime – Which one is the right one?

The correct type of lime to use in a septage trench is a lime that sanitizes. The two types of lime that sanitize are calcium oxide (commonly called quicklime) and calcium hydroxide (also known as hydrated lime). Either of these lime types, when mixed with the moisture within the septage waste, will generate a high pH (alkaline) solution. It is this high pH that kills microorganisms. Again, the correct forms of lime to use are ***"quicklime"*** or ***"hydrated lime."*** Quicklime is the best, but it can be very expensive and difficult to obtain in Alaska, so hydrated lime may be the more practical option.

<u>DO NOT USE calcium carbonate.</u> This is another form of lime that will not sanitize and thus is not useful for a septage disposal trench. Another common form of lime that does not sanitize is Aglime (garden lime), which contains calcium carbonate and magnesium carbonate.

Where to purchase hydrated or quicklime?

Option #1	Option #2	Option #3
• Ask a local store to order some.	• Ask the local or regional corporation.	• Order online.

Personal Protective Equipment (PPE): When handling lime be sure to use any appropriate PPE recommended by the manufacturer. This often includes gloves, eye protection, and a mask to prevent inhalation.

Septage trench.

Sewage Solids

The landfill may accept sewage solids if the landfill is permitted for this waste, the waste is adequately dewatered, the waste is not hazardous, and the waste is maintained so that it doesn't attract vectors for diseases and does not provide a habitat for pathogen growth. Sewage solids disposal at Class III rural solid waste facilities is not a ubiquitous practice across the state of Alaska, please consult ADEC Solid Waste Program staff with questions about proper management.

Sewage solids differ from septage as they must have been dewatered to no less than 10% solids by weight. Some communities conduct bulk disposal events of sewage solids from the wastewater treatment plant in the landfill. This practice requires regular analytical sampling and will require approval from ADEC.