

Key Factors to Consider to Help Plan Your Landfill Closure

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Preparing for a landfill closure project requires research, patience, and specific considerations prior to implementation. The choices you make during operations will also affect your closure project including cost, timeline, and compliance. With any landfill closure, the specifics of the site will vary. A good plan starts with what you are going to do and how much area are you planning to close. Assess where the closure materials and equipment will be staged at your landfill. Consider when you want construction to be completed and work backward from that milestone.



Recently, we have witnessed a significant increase in the cost of materials and construction; consider doing some of the preliminary construction work yourself to reduce costs.

Typically, contractors can close 20 to 30 acres between rainy seasons. Recognizing that, any area greater than that will require additional mobilizations, which, in turn, increases your construction costs.

Site Factors to Consider During Closure Assessment

Site factors to consider during assessment are:

- Do you have an area large enough to allow for proper staging that is out of the way of operations? For example, a 25 acre closure, typical spatial requirement could consist of the following:
 - Soil ~ 15,000 square feet (SF)
 - Geosynthetics ~ 15,000 SF
 - Pipe, gravel, stormwater structures, other items ~ 10,000 SF
 - Total ~ 1 acre needed to prepare and mobilize the materials

- Is the area far enough from disposal operations but close enough to the closure area?
- A thorough site analysis will allow for proper assessment; planning and creating a successful roadmap for future closure activities.

Time of Year and Season Factors are Critical

Once you have thoroughly evaluated the site, focus on timing. When is the best time to close the landfill? Work backward and consider, when do you want construction to end, when should it start, when should you procure a contractor, materials, etc.? Setting these milestones will help you schedule properly.



We recommend using the dry season for construction and performing your planning and procurement during the rainy season.:

- Why construct during the dry season?:
 - Less weather delays
 - Reducing redo work
 - Reduced repairs in the future
 - Diminished contractor risk—lower construction cost

Mapping out your closure schedule with material selection, procurement, and storage is key. As we have seen throughout the past 24 months, the pandemic has greatly impacted the cost of materials. Timing and other external factors will play a role in the success of your closure. It is safe to bid the project during the rainy season and save construction until later.

A sample task list and schedule for Florida could include:

- January: Commence procurement process
- February through May: Bid and Contractor selection phase
- June through September: NTP and engineering support services
- October through May: Construction

During rainy season (June through September), you could:

- Conduct shop drawing reviews
- Procure materials
- Test for material conformance
- Deliver the material
- Obtain a certification report

Ways to Reduce Costs

Do not forget about material costs. While you could let the contractor purchase the materials prior to construction, work with your engineer and consider purchasing the materials yourself. If the contractor procures materials, there is typically a 15 to 20 % markup on the materials. Other factors to consider area:

- Consider extended warranty terms

- Determine where you will store the materials dependent upon materials type (geomembrane stores well outdoors, geotextiles or

- Contractor pre-qualification is key—reduce the pool early

Another way to reduce costs is to do some of the work yourself. For instance, locating the liner locations tie in and having them surveyed and staked reduces contractor uncertainty and helps facilitate construction. Another option is to confirm cover soil layer thickness. Identifying significant areas of cut and fill in existing cover prior to construction will also reduce costs.



- geocomposite may have issues)
- Think through strategies to achieve lower bid prices such as very clearly defined plans and a breakdown in unit prices to mitigate contractor risk

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