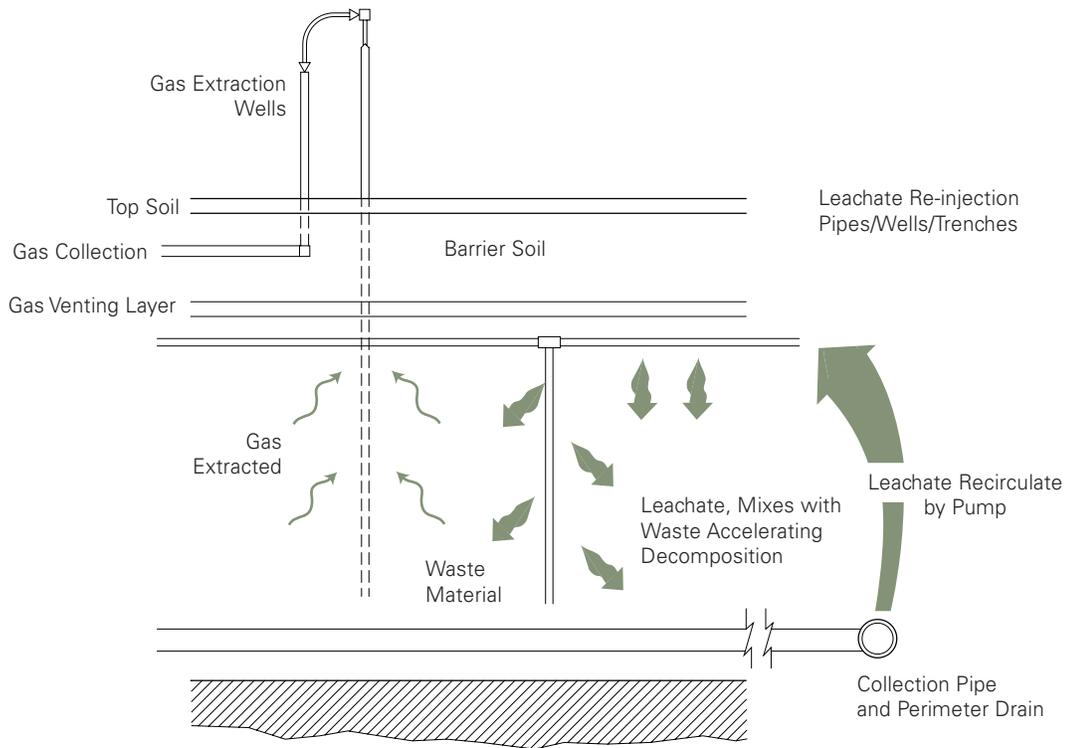


bio-reactor section



What is a "bioreactor"?

A landfill closure process that collects leachate and re-injects liquid back into the landfill, accelerating the transformative process of changing household organic waste into more stable, inert material.

What other aspects of a clay cap are important?

- clay cap with bioreactor allows for reduced cap maintenance labor and cost, as it is self-healing relative to puncture and differential settlement
- clay cap encourages thriving tree and shrub growth that a membrane deters
- 'clean' and 'free' clay is available over the next 5-10 years from the adjacent Arthur Kill dredging project, that is currently being barged and dumped offshore
- 'free' clay delivered to site could be applied to Fresh Kills by current DSNY crews already familiar with the machinery and operations

What other aspects of a "bioreactor" are important?

- collection of methane gas continues as planned
- re-injection pipes could share the same trench as gas extraction wells
- some leachate bypasses treatment facility for the 5-10 years during the bioreactor phase, though ultimately returned to treatment
- re-injection of leachate has been successful on smaller landfills elsewhere in NY and NJ, as part of ongoing technology studies, though current NYDEC regulations will require a variance to introduce at Fresh Kills

Why re-inject the leachate?

- Several interrelated aspects of the bioreactor make it a strong strategy:
- accelerates the consolidation of waste, yielding a dramatically more stable landscape for a park or memorial use
 - compatible with a clay cap which could be more cost effective than a membrane cap
 - cost savings from eliminated membrane would more than pay for the bioreactor