

SPRING 2018

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OF PINE OAK
WOODS**

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have overturned this succession. They grow faster, taking over a newly disturbed area to the exclusion of native plants that would have formerly prospered. It's reported that at Brookfield, 67 different species of native trees, shrubs, grasses and wildflowers were planted. How did they prevent alien species from immediately competing with them?

The site is remarkably free of new invasives, and I already had some ideas about how they accomplished this, but I suspect that the whole process was more complicated than what I imagined. I supposed that the top layer of soil might have been gathered from a site where no pre-existing seed-bed of invasive seeds was present, but getting a large quantity of such soil would probably have been very difficult. A second solution, and one I think was probably employed, would be to cover the site with a durable, black plastic sheet for several years, until the heat of the summer sun had killed off what seeds might be dormant in the soil.

The Challenge of Planting Trees

And what about the trees? There are no trees on the mounds at Freshkills. Trees

were forbidden because they might disturb the cap over the debris. A tree that grew a tap-root would certainly be a problem and larger trees with shallow root pans might, if allowed to grow to great size, also damage the cap when falling. So why are there trees at Brookfield now and more planned? The worry, it seems, was overblown. DEP's ecologist John McLaughlin, who worked on both Freshkills and Brookfield, said that since tree roots only go down a few feet the fear was based on a myth, and that as long as the soil cap was sufficiently thick, trees and ponds posed no threat to the landfill cap. Of course the "kicker" here is the qualification "sufficiently thick." One of the workmen said that they were trying to keep Eastern Cottonwood trees out of the site. Cottonwoods are inhabitants of wet places, and one might think that the roots of such a plant might pose a danger to the capping, but the roots of this tree are shallow and wouldn't have much effect on a barrier buried several feet below. More likely the concern is that Cottonwood is a vigorous pioneer tree whose numerous wind-blown, fluffy seeds quickly sprout on any moist disturbed soil that has no

established, taller vegetation, and the architects didn't want this opportunistic colonizer to mess up the palate of plants planned for the ponds there.

Keeping this new park clear of unwanted vegetation will require regular maintenance. Just three years after planting these grasslands, small strings of phragmites are beginning to appear along some of the trails. Left alone they will extend by means of thick underground rhizomes until their matted roots suppress the growth of other, more desirable plants. The border between this landfill park and the adjacent Richmond Marsh is striking: On the Brookfield side are hills of intro-

Brookfield Park (cont'd on p. 4)

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