

CHECKLIST FOR INSPECTION OF BIORETENTION SYSTEM/TREE FILTERS

Location: FedEx Ground, 1901 W 29th St.

Inspector: Chris Bourbois

Date: August 18th 2023

Time: 11:30 AM

Site Conditions: Sunny, 76°

Days Since Last Rain Event: 1

Inspection Items	Satisfactory (S) or Unsatisfactory (U)	Comments/Corrective Action
1. Initial Inspection After Planting		The native plants installed here are stable and no erosional issues were noted. However, one of the swamp white oaks on site is experiencing crown dieback. No preferential flow was observed outside of the engineered topography of the site. Inlets to site were functional and unblocked.
Plants are stable, roots not exposed	Ⓢ U	
Surface is at design level, no evidence of preferential flow/shoving	Ⓢ U	
Inlet and outlet/bypass are functional	Ⓢ U	
2. Debris Cleanup (1 time/year minimum, Spring/Fall)		No dead vegetation or vegetative debris on site, although litter is scattered throughout. Mowing is also definitely needed here, both to help control some of the invasive species and to prevent volunteer cottonwoods from continuing to appear on site. Other than the swamp white oak with crown dieback, the installed trees are doing well and are good choices (swamp white oak and bald cypress).
Litter, leaves, and dead vegetation removed from the system	S Ⓢ	
Prune/mow vegetation	S Ⓢ	
3. Standing Water (1 time/year and/or after large storms)		No standing or pooled water one day after rain. Lack of erosional issues and bare ground shows that stormwater is not entering the system with excess force.
No evidence of standing water after 24-48 hours since rainfall	Ⓢ U	
4. Vegetation Condition and Coverage		Vegetation conditions here are poor, although the installed trees were good choices and some native plants are hanging on. These include pale purple coneflower, some sedges surviving on the periphery of the rain garden, boneset, and some compass plant. However, most of the site is populated by various invasive species, including purple loosestrife, teasel, reed canary grass, phragmites, crown vetch, and tall goldenrod.
Vegetation condition good with good coverage (typically >75%)	S Ⓢ	

Final Comments

This site is in fairly poor shape, despite some natives that were not as common at other sites, like compass plant and pale purple coneflower. The trees installed on site were also good choices for the site, as swamp white oaks and bald cypresses are hardy and wet-adapted. However, the site needs more maintenance. Timed mowings would be very beneficial here, even though herbiciding would also be needed. The timed mowings at this site could help control the reed canary grass, phragmites, and crown vetch. An added benefit of specifically planned and timed mowing is that it would prevent volunteer cottonwoods from appearing on site. Right now, there are two roughly 12 foot tall cottonwoods growing very close together. The species and their close proximity suggests that these were volunteers and not planted during the rain garden installation. Although cottonwoods are fast growers, individuals of this size have likely been growing unimpeded for at least a couple of years. The amount of litter on site also suggests that this site is receiving spotty maintenance, if any. An initial plan to herbicide purple loosestrife and the basal rosettes of teasel, along with cutting teasel seedheads, should begin to get these populations under control. Along with the planned mowing, this should begin to control everything but the tall goldenrod, which is less of a concern. This work will need follow-up seeding and/or plug planting, as the native species on site are likely not dense enough to establish in the open areas created by invasives control. There is reason to hope these plantings/seedings will be successful after sufficient control though. Compass plant is not a species that often appears in degraded areas, so the soil profile here must be sufficient to support native prairie and wetland plants. Overall, the design of this site appears intact and effective, even if the maintenance may be lacking.