

Burger-Baylor School Bioretention Basin Maintenance Plan

Introduction:

Effective long-term operation of bioretention basins require a responsible party who performs routine scheduled inspection and maintenance. This document outlines the recommended tasks necessary for inspections, routine maintenance, and documentation. This document also includes the planting plan, photographic list of plants for each practice, and an example inspection and maintenance checklist. The plants list and inspection checklist provide inspection consistency over time.

Inspections:

Scheduled inspections should be performed of the bioretention basin surface area, plants, and structures (inlets, catch basins, overflows, and underdrains). During the inspection, it is recommended that the inspector complete the inspection and maintenance checklist provided in Appendix A to document condition and potential remedial action. It is recommended that the property owner and/or facilities manager maintain copies of inspection and maintenance checklists in a logbook, along with recorded dates and descriptions of maintenance activities performed to remedy issues noted during prior inspections. If there is standing water more than 48 hours after a rainfall event, then major rehabilitation may be needed to restore function¹. If major rehabilitation is required, a qualified contractor or design professional should be engaged in diagnosing the problem and devising a solution.

Maintenance Tasks:

Routine maintenance, as well as any major maintenance identified during inspections, should be documented in an inspection and maintenance logbook. Most maintenance is performed on an as-needed basis and is noted on the inspection and maintenance checklist (Appendix A). Maintenance activities should be performed to not cause compaction within the bioretention basins including restricting motorized equipment access. Many maintenance and inspection tasks are based on aesthetic appeal. Bioretention basins that are highly visible or in prominent areas should have more frequent inspections and will require a higher degree of manicuring than those that are less visible. Level of aesthetic requirements should be noted on the planting plans in Appendix B. Finally, the bioretention basins should not be used as snow storage areas during winter maintenance of paved areas. The weight of stockpiled snow and debris from the parking lot will cause bioretention basins to become clogged. If this happens, major rehabilitation will be required.

Planting Plan:

The planting plan (Appendix B) includes plant type, number of plugs planted, and plant layout². To help identify the plants listed in the planting list for maintenance, photographs of each of these plants in emergent (juvenile) and mature forms is included as an example, Appendix C – Photographic List of Bioretention Plants. If a maintenance crew is unable to identify a plant based on these photos, then the plant is either a weed or invasive plant that should be removed.

¹ Unless the ground is frozen in which case ponded or standing water might occur on the planted surface area until thawing occurs.

² If in subsequent years the planting plan is modified due to routine maintenance or practice upgrades, this maintenance plan should be updated accordingly.

Appendix A – Recommended Inspection and Maintenance Checklist

Appendix B – Planting Plan

Appendix C – Photographic List of Bioretention Plants