

Appendix J:  
Annotated Summary of  
Maintenance Requirements and  
Actions

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## APPENDIX J –MAINTENANCE ACTIONS

As described in Section 2.3 of the main report, maintenance issues were impeding treatment at the bioretention planter boxes (BPBs) and Filterra® at various points of the study. The following provides a log of the maintenance performed at the site by City of Shoreline contracts (Table J-1). Despite these efforts, the BPB inlets (i.e., curb cuts to roadway) were frequently blocked. The project field crew frequently cleared the inlets to the BPB. They estimated curb cuts would need to be cleared as frequently as every other week at the height of the storm season to maintain their function.

It was unclear how street sweeping affected these maintenance needs. The field crew observed that sweeping would sometimes clear the BPB curb cuts, and other times block them more completely. This could be due to a several variables, including the distance of the sweeper from curb, the amount of debris on the roadway, and the time elapsed since the last curb cut cleaning.

Additionally, the Filterra were draining at the beginning of this project. The media was replaced in September 2015. By the end of the project sampling period in March 2017 the media again needed to be replaced. It is likely that the Filterra were plugged by sediment build up at the surface of the media.

**Table J-1. Maintenance completed through City of Shoreline based on annual inspection results.**

Study ID	City Asset ID	Maintenance Type	Date Completed
BPB1	BR-20	Cleared Inlet	3/31/2015
BPB1	BR-20	Cleared Inlet	1/20/2017
BPB2	BR-13	Cleared Inlet	3/31/2015
BPB2	BR-13	Cleared Inlet	1/20/2017
BPB3	BR-10	Cleared Inlet	3/31/2015
BPB3	BR-10	Cleared Inlet	1/20/2017
FLT1	FA7	Cleared Inlet	9/15/2015
FLT1	FA7	Replaced Media	9/15/2015
FLT1	FA7	Replaced Mulch	9/22/2015
FLT1	FA7	Cleared Inlet	8/19/2016
FLT1	FA7	Replaced Mulch	1/20/2017
FLT1	FA7	Cleared Inlet	1/20/2017

**Additional Maintenance Provided through City of Shoreline:**

- Street sweeping is conducted on a monthly schedule. This was consistent throughout the study period.
- Contractor was tasked with clearing inlets at BMP assets on monthly schedule throughout the year; however, this was not consistently done.



**Figure J-1. Debris blocking curb cuts at BPB1 inlet (January 21, 2016).**



**Figure J-2. Clearing debris blocking curb cuts at BPB1 inlet (December 3, 2015).**



**Figure J-3. Sediment at the top of Filterra media (April 4, 2014).**



**Figure J-3. Sparse vegetation and yellowed trees at BPB2 - this did not appear to affect performance (October 26, 2016).**