

# Focal Point HP Bio-Filtration Frequently Asked Questions



## Focal Point

1. What type of plants should we use? Download the Tech note in our Stormwater Specifications page.
2. Do they have problems growing in such a sandy soil? No, selecting versatile plant material, the amount of organic content (peat) in the media and the fact that the watershed that usually drains into a Focal Point is large, there is sufficient moisture holding capacity in the media. Also, the pollutants are utilized by the plant as nutrients so the pollutant load makes the plant grow better.
3. With such a fast draining media, how does it filter the pollutants? As per Larry Coffman, the pioneer of LID, the pollutant transfer from the water to the media components is fast or very fast and is related to contact time, not “filtering”. Filtering takes place in the media zone with the mulch removing a large percentage of the suspended solids. The remaining pollutants are removed within the media on contact.
4. How does a fast-draining media allow me to meet my detention requirements? What the characteristic of “High Performance” or fast draining media allows for is to reduce the footprint and thereby the cost of the bioretention system. The detention above ground would be very similar in many cases. The Focal Point difference is that the media bed area would be 1/5 to 1/20 the footprint size. The outfall pipe from the Focal Point system overflow structure would be the same size as the pipe for a traditional system so the outflow would be identical.
5. What is the pollutant removal and where was that validated? \* see this Q&A on #11...
6. Can I just buy the media? Focal Point is a system. It requires each part of it to work properly. If you were to install the media in a more traditional underdrain system, the underdrain would not be able to keep up with the high flow and the system would not drain properly. The best part about the system is the Guarantee. The Focal Point system is fully guaranteed to perform for one full year. And detailed O&M Manual clearly describes maintenance procedures for the life of the system.
7. Do I have to have the mulch? The mulch is an important component of the system. One of its primary effects is to remove most of the suspended solids. By removing and replacing the mulch, you effectively keep these larger solids from getting into the media and causing the flow to slow. In some cases we can work with alternative surface treatment of the system but please get with an Bowman representative to make sure an alternative surface treatment does not void the warranty.



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### Frequently Asked Questions (continued)

8. What is the life span of a Focal Point system? The Focal Point High Performance Biofiltration system is a relatively new product. Our lifespan would be very similar to normal biofiltration systems as it performs in a similar method and has a sustainable feature the plants taking up the pollutants as nutrients and utilizing them. Due to the smaller size of Focal Point the future replacement of the media, plants and mulch is a fraction of the cost of rebuilding a traditional system.
9. Treatment rate? Based on our specifications, the FocalPoint media is certified at 100 "/hr. This translates to a loading rate of 1 gpm/SF (flow over surface area of media). By the nature of our design, the media flow is restrictive and creates a temporary ponding condition at the surface just as all bioretention/bioswale systems do.
10. Does the FocalPoint require a basin above the FocalPoint system? We can treat the WQV in a small footprint with large bowl (storage above the FocalPoint) or if there is not enough space on-site for the large bowl we can expand the size of the FocalPoint.
11. Pollutant removals?. We treat the same pollutants as any sand based bioretention media system that includes TSS, TP, TN, heavy metals, bacteria and oils and grease. Testing of high flow rate media and our own 3rd party testing has shown >80% TSS, >60% TP and >40% TN removal.
12. What is pretreatment? A pretreatment device manages gross pollutants and coarse sediment, thus protecting the FocalPoint, reducing maintenance and increasing the life and effectiveness of the FocalPoint. Our best pretreatment options are a Rain Guardian and a vegetated swale.
13. What are the dimensions of the FocalPoint system, and the different layers? All FocalPoint systems are custom-fit to each site. Input variables for each location determine the surface area and required storage volume for each FocalPoint. All systems have the same cross-section layers (see standard detail) with the option of using deeper tanks as the underdrain. Layer thicknesses are all standard, per detail.
14. Construction/Installation information? Refer to our Bowman Construction Supply installation manual.
15. Accessibility into the FocalPoint (access to the different layers) for repair/maintenance? FocalPoint is not contained within a structure. By design the mulch layer is easily accessible for maintenance. The inspection port goes down into the modular box (underdrain) layer to check for standing water and sediment. That inspection port also serves as a clean-out for required maintenance, if necessary. The beehive overflow grate would give you visibility to the underdrain as well.
16. How deep is a FocalPoint system? Unlike a traditional bioretention system FocalPoint is a compact system with a 3 ft vertical profile with 3 layers: mulch, media and underdrain (pea gravel and modular tanks). The layers are uniform and certified to meet spec by Bowman Construction Supply.
17. Besides the modular tank underdrain and micro mesh, how does FocalPoint differ from traditional biofiltration systems? Unlike traditional bioretention media, the FocalPoint media (as detailed in our written specifications) is blended and packaged under controlled conditions. The high-performance biofiltration media must meet the FocalPoint specification, which is verified by Bowman Construction Supply during the hydraulic conductivity test upon commissioning and again one year later, as written in our guarantee.
18. Potential maintenance issues? We have tried to alleviate maintenance challenges with traditional bioretention by including the first year of maintenance and hydraulic certification of our system. Clogging concern: The Rain Guardian is a great pretreatment device that will reduce this problem if properly maintained. Even if a Rain Guardian is not utilized, the mulch layer performs very well to remove the TSS. Periodic removal and replacement of the mulch can, in most cases eliminate clogging. Overflow during major storm events: You may specify a beehive overflow system with a removable filter inside. Contact your Bowman representative for options.
19. Maintenance Requirements? Refer to the O&M manual. We provide the 1st year of maintenance with the system at no cost to the owner. We can provide training to the owner for future maintenance. Maintenance consists of pulling off the expired mulch and replacing with new mulch. Minimal weeding is needed with a 3" mulch layer. Repair minor erosion areas, pull out any trash and debris, and inspect plants. In addition to the first year of maintenance, part of our guarantee is the hydraulic conductivity test that is performed by Bowman Construction Supply. This test verifies that the FocalPoint system is functioning as designed.

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