



## **Frequently Asked Questions (FAQs) Policy Manual Revisions (Sections 8000/8200)**

### **1. Which standards apply to my project?**

Technically, a development is vested under the policy in place at the time of the development application submittal. However in practice, the standards in place at the time of plan submittal are used.

### **2. Why were references to infiltration changed to “hydraulic conductivity”?**

Both of these terms have been used to varying degrees to describe water movement in the soil. However, they are subtly different. The infiltration rate is the rate at which water can enter the soil when water supply is not limiting. As infiltration refers to water entry into the soil, it is largely determined by the condition of the soil surface.

Hydraulic conductivity is the infiltration rate plus other constraints associated with water movement through soil. Hydraulic conductivity depends on physical characteristics of soil such as the intrinsic permeability (soil or fractures), the degree of saturation, the type of soil, bulk density, total porosity and the configuration of the soil pores. Well aggregated soil promotes high infiltration rates as there are more 'gaps' for water to flow through which is why it is so critical to protect the proposed infiltration area during construction as compaction by heavy equipment will decrease porosity. Infiltration rates are determined from saturated hydraulic conductivity testing.

### **3. What is the runoff reduction requirement and when will it be used?**

The runoff reduction standard of 0.6” in 24-hours (95<sup>th</sup> percentile storm) is a requirement of the EPA issued NPDES Permit. It replaces an earlier standard for the water quality treatment event of 0.34” (85<sup>th</sup> percentile storm). Development and redevelopment projects that disturb more than 5000 SF must meet the runoff reduction standard or provide off-site mitigation. The options for off-site mitigation have not yet been identified. When the Right-of-Way (ROW) is used to provide runoff reduction from private property, the facility must be sized to manage the runoff from the crown of the adjacent roadway as well as the site runoff.

### **4. What requirements apply to detention facilities?**

The selection and use of detention facilities for stormwater is permitted, however the project must meet the requirements for runoff reduction as found in ACHD Section 8000 – Drainage and Stormwater Management. Joint facilities that retain and detain stormwater runoff are permitted so long as both the requirements for detention facilities and runoff reduction are met.

### **5. Is BSM required for stormwater ponds?**

Not at this time. A sand bottom is still required in the forebay and generally, some soil amendment will be necessary to achieve successful revegetation, a requirement for all stormwater ponds.



**6. Has ACHD developed a Vegetation Seed Mix?**

ACHD has a Stormwater Management Pond Revegetation Guidance Manual (EPG, April 2014). This document contains several seed mixes that are based on soil conditions and site hydrology.

**7. How will items be paid (SP's ....SSP's)?**

It depends on the item. New SPs and SSPs are being developed for Green Stormwater Infrastructure facilities and for other changes to stormwater facility standards.

**8. Has the design spreadsheet been updated?**

Yes. The spreadsheet can be found here:

[http://www.achdidaho.org/AboutACHD/PolicyExhibits/ACHD\\_SD\\_Calc.zip](http://www.achdidaho.org/AboutACHD/PolicyExhibits/ACHD_SD_Calc.zip)

**9. Is the use of sand windows still allowed?**

Sand windows are no longer allowed to be used in bioretention swales (BMP 30) and treatment and conveyance swales (BMP 2) because they do not provide treatment for dissolved pollutants prior to infiltration. The use of 24" of Bioretention Soil Mix and vegetation is required instead.

**10. What are the requirements related to the use of Silva Cells or other stormwater tree cell products?**

The requirements for system sizing and infiltration testing vary depending on the project objectives. The following table shows several scenarios based on the purpose of the project and the project sponsor.

Scenario	Design Objective	System Sizing	Infiltration Testing
CCDC	Trees only	Sized for trees (500 ft <sup>2</sup> /tree)	No
CCDC	Trees + Stormwater	Sized for trees (500 ft <sup>2</sup> /tree) Larger stormwater volumes bypass	No
Developer	Comply with CCDC/Boise Streetscape requirement; Control of road runoff required for new construction	Sized for trees (500 ft <sup>2</sup> /tree) Larger stormwater volumes bypass	No
Developer	Address Boise on-site stormwater retention requirements within streetscape.	Sized to manage 0.6" runoff from site and 0.6" runoff from roadway from crown to curb	Yes



**11. How should a design demonstrating safe bypass of larger design events?**

A demonstration of safe bypass requires an analysis of both existing (pre-project) and post-project storm flows, capacity analysis of downstream stormwater facilities, and an assessment of the impacts to adjacent property.

**12. Where can we find information about allowable infiltration test methods?**

Acceptable infiltration test methods are described in Appendix C on page 68 of Section 8200 of the ACHD Policy Manual, including the small-scale pilot infiltration method, the large-scale pilot infiltration method, and the basin flooding tests. Other in-situ methods allowable methods may be used provided they are appropriate for the site conditions. They include the following:

- Double Ring Infiltrometer Test (ASTM D3385-03)
- Single Ring Infiltrometer Test (ASTM 3385-09)
- Well Permeameter Method (USBR Procedure 7300-89)
- Encased Borehole Test (ASTM D6391)

**13. Previously, the water quality capture volume was used for sizing pond forebays and other pre-treatment facilities where flows were treated and bypassed, either for discharge or to another BMP. What volume should be used for sizing treatment facilities now that the water quality capture volume standard has been removed from the Policy Manual?**

The recommended sizing for pond forebays and other pre-treatment facilities is the water quality capture volume, the two-year or 80<sup>th</sup> percentile event.