

Hermosa Beach Infiltration Facility Overview

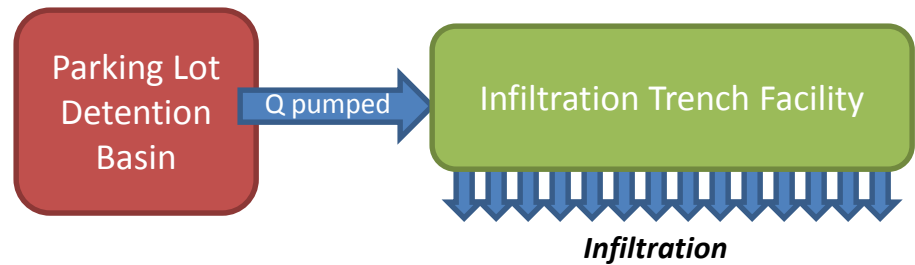
A volume reduction BMP is planned along the beach near the Herondo storm drain outfall in Hermosa Beach. Underground infiltration trenches are long, linear facilities with permeable base and sides designed to infiltrate stormwater runoff. It is usually not practical to infiltrate stormwater runoff at the same rate that it is generated; therefore, these facilities generally include both storage and drainage components. Infiltration facilities remove pollutants from stormwater network by infiltrating stormwater into the native soil beneath the system.

Existing Site Conditions



The site is a public beach located within Hermosa Beach. The beach is adjacent to a walking/bike path and consists of recreational open space.

Treatment Process



The BMP will consist of a detention basin, a pump system and an infiltration trench facility. Wet-weather flows are diverted from the Herondo storm drain and stored in the Parking Lot detention basin. The runoff is then pumped to the beach and then flow into the infiltration facility where runoff will infiltrate into native soil.

Site Configuration



Plan View (Preliminary Footprint – Subject to Change)

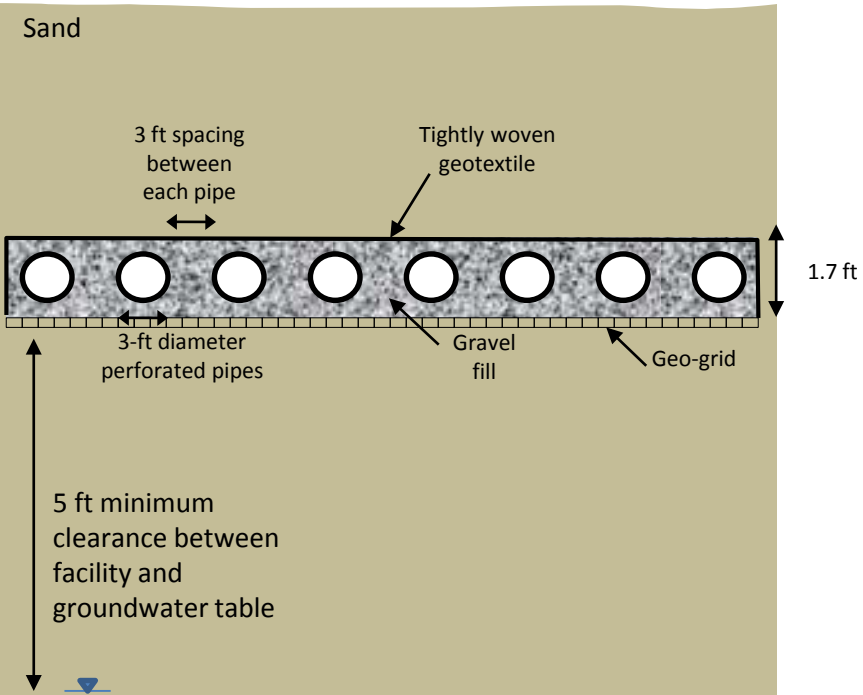
Design Parameters

General			
Tributary Area (ac)	2957	Drawdown Time (hrs)	72
Sat. Hyd. Cond. (in/hr)	12.5 ^a		
Design Criteria			
Max. Pump Rate/Max. Design Inflow Rate (Q_{dmax}) (cfs)	25	Cumulative Loss Rate (cfs)	17.05
Design Storage Volume (AF)	0.3	Infiltration Footprint (ft ²)	7700
Design Parameters			
Facility Length (ft)	120	Facility Width (ft)	40
Facility Depth (ft)	1.7		

^aBased on HB Trench infiltration testing with a conservative factor of 9 applied (original source found infiltration rate to be 113 in/hr.

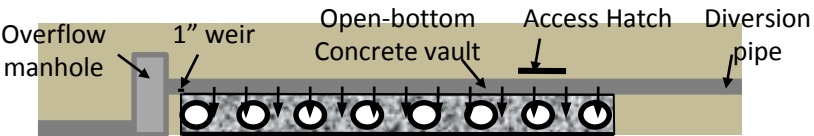
^bBMP designed in conjunction with the Parking Lot detention facility (see Figure 14a) to achieve compliance 9 out of 10 years.

Typical Details



Infiltration Facility – Cross-section (not to scale)

**Size of individual storage cubes and number of total cubes not determined during this phase of design.*



Secondary Connection to Infiltration Trench – Cross-section (not to scale)

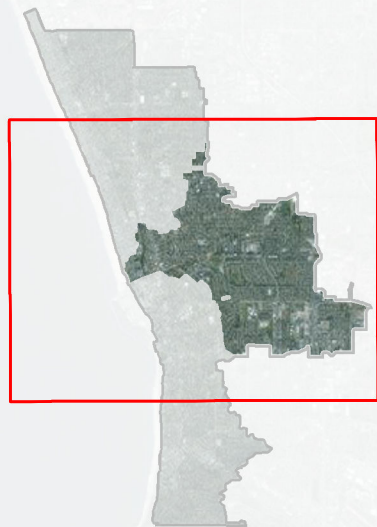


Photo credit: riverglenva.com*

Infiltration Trench Facility



DRAFT	Hermosa Beach Subsurface Infiltration Facility Conceptual Design : Hermosa Beach	
March 2016	LA0298	Geosyntec consultants

*Products shown above were used as examples for sizing and cost analyses; other equivalent products may be used.



**Hermosa Beach
Subsurface Infiltration
Project Tributary Area**

Legend

-  Proposed BMP Footprint
-  Storm Drains

