

Centralized Stormwater Structural Best Management Practices

Centralized Stormwater Structural Best Management Practices (BMP)

Description: Stormwater system is moderate to large in size,
accepts runoff from mixed land use drainage areas or drainage area greater than 10.0 acres.

BMP Type Description

Bed Filter

(**Examples:** Underground Sand Filter, Surface Sand Filter, Perimeter Sand Filter, Organic Media Filter)

- A flow-through structure that uses granular media (e.g. sand or activated alumina) to actively filter stormwater to remove pollutants.
- Little to no volume loss occurs through filtration process.
- Filtration is controlled by flow rate through media, runoff discharged via outlet or underdrain.
- Typically, moderate sized centralized BMPs but can be designed as small decentralized BMPs to treat small areas of imperviousness.
- Treatment Process: Media Filtration.
- **Vegetation:** No.
- Location: Above ground or below ground.
- Type: Centralized

Detention Basin

(Examples: Detention Pond)

- A flow through basin with discrete inlets and outlets to detain stormwater runoff for some minimum time to reduce peak flows.
- Must include at least one outlet at base of basin to allow complete draining between storms.
- Little to no volume loss via infiltration.
- Treatment Process: Particle Capture by settling.
- Vegetation: Optional
- Location: Above Ground
- Type: Centralized

Dry Basin

(Examples: Extended Detention, Basin Dry Pond)

- A flow through basin with discrete inlets and outlets to detain stormwater runoff for some minimum time to reduce peak flows.
- Must include at least one outlet at base of basin to allow draining between storms.
- Footprint is pervious and infiltration capacity of base is maintained to consistently infiltrate some fraction of volumes to unsaturated zone.
- Moderate distribution of grass and/or tree species in basin likely and acceptable. No wetland/riparian vegetation.
- Treatment Process: Infiltration, Particle Capture
- Vegetation: Yes
- Location: Above Ground
- Type: Centralized



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Infiltration Basin

(Examples: Extended Detention, Basin Dry Pond)

- A flow through BMP with highly permeable substrate (aggregate or rock) designed to store and infiltrate significant volumes of stormwater into unsaturated zone.
- Little to no surface detainment storage
- Vegetation distribution should be minimal (<10%)
- Treatment Process: InfiltrationVegetation: Yes, Minimal (<10%)
- Location: Above Ground
- **Type:** Centralized

Wet Basin

(Examples: Wet Pond, Retention Pond, Wetland Swale, Wet Extended Retention Pond, Stormwater Wetlands, Constructed Wetlands)

- A flow through basin with discrete inlets and outlets to detain storm water runoff for some minimum time to reduce peak flows.
- One or more outflow offices may exist at different elevations. Lowest outlet elevation sets wet pool capacity.
- Dense vegetation is common, specifically wetland species or riparian species with very high densities.
- Treatment Process: Bio-Chemical Cycling
- **Vegetation:** Yes, dense wetland/riparian species.
- Location: Above Ground
- Type: Centralized

Media Filter

(Examples: Proprietary Subsurface Filtration Systems: Stormfilter® Perk Filter™ Jellyfish® Tree Box Biofilter (TreePod™), FloGard® Downspout Filter)

- A proprietary subsurface flow-through structure that uses a membrane to actively filter stormwater pollutants.
- Proprietary models may be selected to target the specific removal of the pollutants of concern.
- Pollutant load reductions achieved but no stormwater volume reduction occurs (no infiltration).
- May be within a confined space.
- Treatment Process: Media Filtration
- Vegetation: No
- Location: Primarily Below Ground, some Above Ground.
- **Type:** Centralized



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Structural BMP Type

Description

Treatment Vault

(Examples: Hydrodynamic Separator (e.g. Vortechs, CDS®, DVS) Wet Vault Detention, Vault Flow Separation, Vault Gross Solids Retention Devices.)

- A subsurface flow-through structure that physically separates sediment, trash, leaf litter, debris and other particulate pollutants from stormwater.
- Pollutant load reductions achieved but no stormwater volume reduction or infiltration occurs within treatment vaults.
- Accumulation of material at base of BMP can be observed and measured via manhole access.
- Treatment Process: Particle Capture
- Vegetation: No
- Location: Below Ground
- **Type:** Centralized