

Storm Water Design Summary

June 28, 2023



The grading and drainage plan shall be designed to retain the first 0.50 inch (80th percentile storm) of precipitation, through infiltration, evapotranspiration and/or harvesting and reusing rainwater, as well as detaining the water generated by a “twenty-five year storm” within the proposed site with a discharge rate of no more than 60 GPM/acre.

Orem Standard Pre-treatment Catch Basin and Sump (SD-2 of the Orem Construction Standards and Specifications Drawings) may be used in any Safe Sump Zone area from Figure 5-1 of the Storm Water Master Plan. All proposed sumps and retention ponds areas must include percolation rates for individual proposed sites. Sumps located in a “poor percolation area” as shown in detail SD-8 must include a soils report and groundwater depths for every development. Sumps may be used in a poor percolation area if the applicant submits a soils report that addresses percolation rates and the rate is approved by the City Engineer. Sumps are not allowed in the 250 Day Zone in Figure 5-1 of the Storm Water Master Plan.

In areas where sumps or injection/infiltration is not allowed due to drinking water source protection zones, storm water retention standards still apply. Site detention with a maximum discharge rate of no more than 60 GPM/acre after utilization of other structural and non structural treatment LIDs shall be implemented for your site. Refer to A Guide to Low Impact Development Within Utah provided by the Utah Division of Water Quality for guidance.

The evaluation and use of at least one non-structural stormwater treatment practice is required on all new and redeveloped sites. Non-structural BMPs include design approaches and practices that are used for their ability to prevent the occurrence of stormwater runoff and reduce pollutant loads. Utilizing non-structural BMPs during site development is much more efficient and cost-effective than attempting to correct problems after development has occurred. The use of additional non-structural stormwater treatment practices is encouraged in order to minimize the reliance on structural practices. These non-structural practices can include minimizing development in areas susceptible to erosion and sediment loss, minimizing disturbance of native soils and vegetation, preserving pre-existing soil conditions that have greater infiltration rates, and protection of sensitive areas.

All storm water runoff generated from new development or redevelopment sites shall not discharge untreated storm water directly into any waters of the State (including the storm drain system and ground water) without treatment to the maximum extent practicable. Treatment type shall match expected pollutants from specific areas of the site.

Incorporate components of Low Impact Development (LID) where applicable throughout the entire site. For all sites that are a new development, rainfall must be managed on-site for the 80th percentile storm or the pre-development hydrological discharge conditions –whichever is less.