

Project Information					
Project Name	Calamity Jane Brewpub				
Merlin Project#		Land Use			
Total Disturbed Area (acres)	4	Total Project Area (acres)	4		
Country	US	State	Montana	City	Billings
ZipCode	59101	Date	3/20/2014	Design By	Vaikko Allen

Contact Information			
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Company	Contech Engineered Solutions		

DMA Information			
DMA Name	Overflow parking - poor soils		
DMA Land Surface Type	Long term parking, Residential streets	DMA Area	1
Time of Concentration	15	Runoff coefficient	0.85
Potentially Suitable BMPs	High Rate Biofiltration		

Feasibility Screening Summary

Selected BMPs	
BMP	Description
High Rate Biofiltration	High rate biofiltration systems are typically <1/20th the size of conventional biofiltration due to the use of optimized soils that have sustained infiltration rates of more than 50"/hr. They may also be configured to allow incidental infiltration.

Other Potentially Suitable BMPs	
BMP	Description
Media Filter	Media filters use a bed of engineered media or a membrane without vegetation to filter stormwater prior to discharge downstream. They are commonly installed below grade
Swale	A swale is a long linear vegetated ditch designed to provide a residence time of at least 7-10 minutes for stormwater runoff. Pollutants settle out and are filtered as they travel the length of the swale. Swales typically provide significant volume reduction through incidental infiltration and evapotranspiration.

Infeasible BMPs		
Unit Process	BMP	Reason for Infeasibility
INFILTRATION	Bioretention	High groundwater within 5-10' of surface, Expansive soils, Low permeability soils (<0.5"/hr infiltration rate), Available area for BMP is less than 4% of contributing drainage area.
	Permeable pavement	
	Infiltration trench or gallery	
	Drywell	
RAINWATER HARVEST	Rainwater Harvest	Rainwater harvesting and use is limited or prohibited due to water rights conflicts
FILTRATION	Conventional Biofiltration	Available area for BMP is less than 4% of contributing drainage area.

The Low Impact Development (LID) Site Planner is intended to guide the user in preliminary selection of the most effective and likely to be approved stormwater control measures that are technically feasible given known site constraints. The feasibility constraint thresholds in this program were selected from leading stormwater design manuals currently in use in the United States.

Please be aware that specific local criteria may vary for factors like minimum separation from groundwater, minimum soil permeability, distance from slopes etc. Local stormwater control measure design guidance may also dictate the dimensions and acceptability of specific systems. Where local criteria are different than the criteria in the LID Site Planner, local criteria should govern selection and design. Drainage management area reports generated by this tool are intended to be a precursor to, not a replacement for detailed stormwater management planning in consultation with a civil engineer, geotechnical engineer, landscape architect and/or other qualified stormwater design professional.

Contech maintains a dedicated team of Stormwater Consultants, Stormwater Design Engineers and Regulatory Managers ready to help you navigate your local stormwater program requirements.

For assistance with your project, please click the "Contact Contech" link on the bottom banner of any page.



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