

Better Buildings Hub LID Solutions Summary Table

From "Answer these 5 questions to find the right stormwater drainage solution for your property" ([link](#))

LID Solution	Application Location(s)	Upfront Costs	Operations & Maintenance, Time & Costs	Water Conservation?	Peak Flow Control?	Volume Reduction?	Additional Benefits/Notes
Bioretention Cell	roof downspout, parking lot islands, edges of pavement, median strips	Residential = \$3-4/ft ² + excavation, soil, plant materials. Commercial = \$10-40/ft ²	biannual landscaping	no	yes	yes	
Cistern	anywhere there is room for above or below-grade storage tanks	varies	biannual inspection of components and accessories	yes	yes	yes	for non-potable use in residential, commercial, or industrial applications (fountains, pools, gray water, air conditioning). Can be implemented without the use of pumping devices, instead relying on gravity flow.
Downspout Disconnection	roof downspout	\$0 + any additional downspout material needed for redirection	\$0)	no	yes	yes	
Vegetated Swale	edges of pavement, parking lot islands, open space, adjacent to buildings	\$0.50/ft ²	weekly or monthly landscaping	yes	yes	yes	
Green Roof	flat roof	varies	varies	no	yes	no	provide energy conservation benefits and aesthetic improvements to buildings
Permeable Pavement	parking areas, sidewalks, roads	varies (higher than conventional pavement systems)	varies. Sweeping and vacuuming of surface	no	yes	yes	
Rain Barrel	roof downspouts, near drainage areas	\$120)	regular removal of leaves/debris collected on screens	yes	yes	yes	space-efficient. very easy to install. Can be implemented without the use of pumping devices, instead relying on gravity flow.
Rain Garden	green areas (dependant on sun, soil, and moisture requirements of the plantings). Target relatively flat or gentle slopes, or areas that are not consistently wet long after a rain event	varies	biannual landscaping	no	yes	yes	typically does not have the full spectrum of engineered features of a bioretention cell. Scalable in size. Enhances aesthetic.
Tree Box Filter	along curb of street near storm drain	\$6,000/unit, per 02.5 acres of impervious surface + \$1,500/unit to install	upfront costs include 2 years of maintenance, filter materials, and plants. After 2 years, annual manufacturer maintenance = \$500/unit; owner maintenance = \$100/unit.	no	yes	no	Maintenance is typically performed by Departments of Transportation or agencies responsible for storm drain maintenance
Native Species Planting	green areas (dependant on sun, soil, and moisture requirements of the plantings)	varies (native plants can have higher upfront costs depending on local availability)	biannual landscaping	no	yes	yes	Native plants are more cost-effective in the long run because they require less water and fertilizer, and are more resistant to local pests and diseases than non-natives.
Subsurface Retention Facilities	parking areas, sidewalks, roads	varies (higher than conventional pavement systems)	varies. Sweeping and vacuuming of surface	no	yes	yes	help reduce land allocated for ponds, decreases costs for pipes/inlets/gutters
Soil Amendments & Aeration	green areas	varies	varies. Aeration can be done in conjunction with routine mowing activities.	no	yes	no	Amending the soil with compost, lime, or organic materials will alter the physical, chemical, and biological characteristics of the soils to improve plant growth. Aeration can increase the storage, infiltration, and pollutant filtering capabilities of grassed areas.