



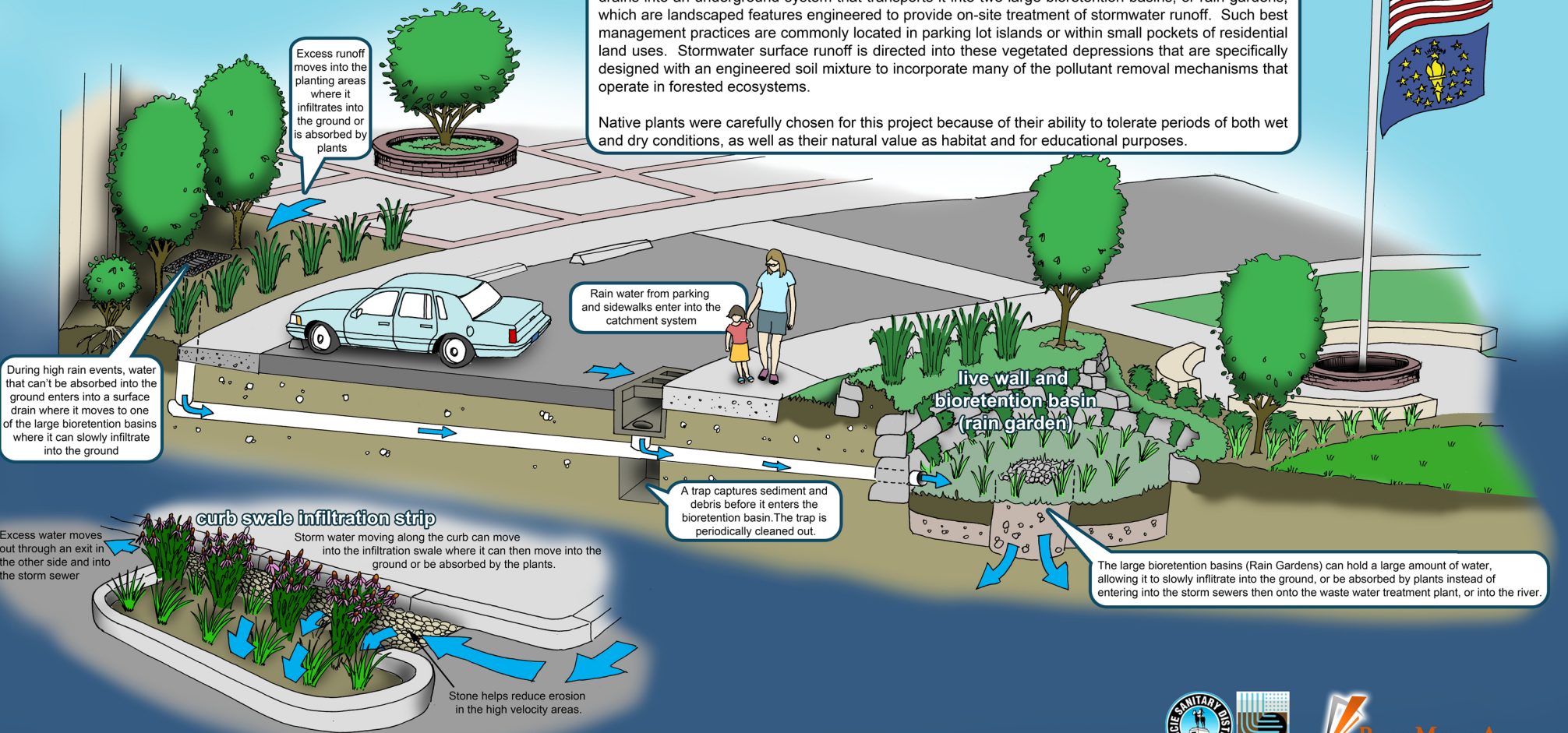
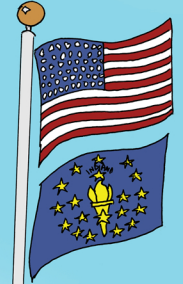
# Delaware County Building Green Infrastructure

## Stormwater Best Management Practices Demonstration Area

The Delaware County Building Plaza renovation includes some new and unique methods of managing stormwater runoff. Rather than simply letting the stormwater flow into the street and enter the storm sewers, the new design incorporates specially engineered areas that capture excess runoff, allowing the stormwater to naturally infiltrate in the ground, or be absorbed by vegetation.

During high rainfall events, when the ground is unable to absorb additional water, the excess stormwater drains into an underground system that transports it into two large bioretention basins, or rain gardens, which are landscaped features engineered to provide on-site treatment of stormwater runoff. Such best management practices are commonly located in parking lot islands or within small pockets of residential land uses. Stormwater surface runoff is directed into these vegetated depressions that are specifically designed with an engineered soil mixture to incorporate many of the pollutant removal mechanisms that operate in forested ecosystems.

Native plants were carefully chosen for this project because of their ability to tolerate periods of both wet and dry conditions, as well as their natural value as habitat and for educational purposes.



Excess runoff moves into the planting areas where it infiltrates into the ground or is absorbed by plants

During high rain events, water that can't be absorbed into the ground enters into a surface drain where it moves to one of the large bioretention basins where it can slowly infiltrate into the ground

Rain water from parking and sidewalks enter into the catchment system

live wall and bioretention basin (rain garden)

A trap captures sediment and debris before it enters the bioretention basin. The trap is periodically cleaned out.

curb swale infiltration strip  
Excess water moves out through an exit in the other side and into the storm sewer

Storm water moving along the curb can move into the infiltration swale where it can then move into the ground or be absorbed by the plants.

Stone helps reduce erosion in the high velocity areas.

The large bioretention basins (Rain Gardens) can hold a large amount of water, allowing it to slowly infiltrate into the ground, or be absorbed by plants instead of entering into the storm sewers then onto the waste water treatment plant, or into the river.



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