



WALKABLE OLEAN

A VISION FOR UNION STREET

Rain Gardens Take Shape As Part of the Walkable Olean Project

While major construction is underway along the south section of North Union Street, a project equally important has commenced on the north section of North Union Street – specifically the planning and planting of rain gardens (or bio-retention basins) in the bump-outs. These are not ordinary planting areas and as such, look much different than what residents might expect. So, what exactly is a rain garden and why are they incorporated into the Walkable Olean project?

Rain gardens consist of shallow depressions that combine vegetation with designed soil mixes to filter and absorb water – much like a forest floor. The soil mix and vegetation enhance the infiltration, storage, and removal of pollutants from stormwater. When designed properly, they hold standing water for no longer than forty-eight hours after the end of a rain event with maximum ponding depths of 6 – 12 inches. The rain gardens have a simple inflow where rainwater enters the garden, as well as an above-ground overflow where excess water exits. ⁱ

The benefits of installing rain gardens that are integrated with traffic calming measures (such as the Walkable Olean project) are three-fold:

1. These gardens reduce nutrient export through plant uptake, filtering and sorption. The vegetation also improves soil infiltration.
2. There are water conservation implications since the gardens are designed to capture and retain stormwater in recessed gardens that typically do not need irrigation beyond plant establishment.
3. There are also stormwater implications in that the infiltration processes and absorption to plant roots remove pollutants from the flow stream. It also reduces the quantity of water flowing off-site into the larger municipal stormwater system. ⁱⁱ



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As the Walkable Olean project has progressed, residents have commented on the planting process since it looks much different than what is normally seen in a landscaping project. Some commonly asked questions and/or comments include:

1. When it rains, there is ponding in the middle of the bump-outs – aren't you going to put more soil in these areas to level off the area? The ponding is exactly what should happen with this rain garden design. The plants (especially as they grow and fill in the area) will draw from this water through the permeable soil mix. As the gardens mature, they will need little maintenance. The ponding should last no more than 48 hours.
2. The drainage units are too high within the rain gardens. Actually they are at higher elevation than expected so that the rain gardens can function properly. The only time water should actually flow into the larger municipal stormwater system is when too much rain comes down and the rain gardens are at maximum water capacity. This will help minimize the impact on our municipal water system.
3. These rain gardens will require too much maintenance. The first few years, as the plants become established, will require some weeding and cleaning. Already, volunteer groups have stepped forward to assist the city with this effort. Once the plants are firmly established, the rain gardens will actually require little maintenance as water will be provided by our natural environment and the plants will be large enough to override weeding issues.

The rain garden component is one more valuable addition to the overall Walkable Olean project. We encourage the community to stay apprised of the project and impacts on traffic through our Walkable Olean Facebook page ([Facebook.com/walkableolean](https://www.facebook.com/walkableolean)) or through the website at www.walkableolean.com.

For additional information, please contact the Olean City Public Works Department at 716.376.5651.

ⁱ <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/LID/Resources/LandscapersLIDarticle3.pdf>

ⁱⁱ http://buildgreen.ufl.edu/fact_sheet_bioretention_basins_rain_gardens.pdf