

# Stormwater Planter

## Overview

- A stormwater planter is a type of green stormwater infrastructure that absorbs stormwater through vegetation. Any overflow from the planter system is directed to the storm sewer system.
- Stormwater planters are small, contained areas that capture rainwater that would otherwise be lost as runoff and could have caused flooding issues on the property/street. The planters can decrease the amount of peak stormwater runoff and decrease flood levels.
- Stormwater planters have a bioretention system that collects and filters sediment and pollutants from stormwater using soil, vegetation, mulch, and gravel/stone.
- Stormwater planters can be built directly into the sidewalk in order to collect stormwater runoff from the sidewalk and/or road.
- Planters can be constructed in many different shapes/sizes.
- Stormwater planters are aesthetically pleasing and can provide habitat for pollinators.
- Stormwater planters are not intended to receive stormwater from a large area, they are intended for small scale structures/sidewalks.
- Plant native species in the planters.
- Overflow from the stormwater planter can be directed to existing storm sewer pipes.



## Key Takeaways

During storm events, water may pool in yards, flood roads, or flood structures. Flooding can cause extensive damage to the interior and exterior of structures. Pools of water can harm landscaping and provide breeding grounds for mosquitos. Flooded roads can cause safety hazards.


To help avoid flood damage costs, install a stormwater planter to beneficially reuse stormwater and reduce flooding.

## Estimated Costs/Benefits

\*U.S. dollars (2022), estimates are subject to change

Potential Costs		Potential Benefits	
Item	Estimate	Post-Flood Recovery Actions	Estimate
Stormwater planter	\$8 per square foot	Flood damage recovery (professional clean-up, mold removal, replacement/ repair of flood damaged items)	\$10,800-\$53,500+
		Mosquito control	\$400-\$600 per treatment
		Remove standing water	\$1,300-\$5,000
<b>ESTIMATED TOTAL COST</b> 10 feet wide, 20 feet long	<b>\$1,600+</b>	<b>ESTIMATED TOTAL SAVINGS</b>	<b>\$12,500-\$59,100+</b>





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## Yard Adaptation Stormwater Planter

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### Potential Funding Sources

- [Delaware Water Pollution Control Revolving Fund](#)

### Expected Maintenance

- Periodic inspection of the planter's structural components for damage, especially after storm events.
- Clean the inflow and outflow mechanisms regularly.
- Periodically check gutters and downspouts for blockages/clogging.
- Re-planting and weeding as necessary.

### Additional Resources

- [Philadelphia Water Department: Stormwater Planters](#)
- [Rutgers: Planning, Design, and Construction of Green Infrastructure](#)

Resources can also be found at <https://de.gov/iadapt>

### Additional Actions

- While installing a planter, plant native species.
- Ensure that the overflow will flow away from the structure so that excess stormwater does not cause flooding.
- Alter downspouts so that water flows into the stormwater planter, if applicable.

### Permitting Agencies

Contacts for permitting requirements include but are not limited to the following:

- Your city and/or county government for local flood ordinances or regulations
- Your city and/or county government for building permits
- [DNREC Coastal Construction Permit](#)

### Who to Contact

- Green infrastructure contractor
- Geotechnical engineer
- [811 Call Before You Dig](#)

Technical definitions and more information are located on the I-ADAPT website: <https://de.gov/iadapt>.



This information is intended to be used for planning purposes. It is not intended to substitute or take precedence over the guidance of design engineers, contractors, utility companies or regulatory agencies.

For more information, contact DNREC's Division of Climate, Coastal and Energy at [DNREC\\_IADAPT@Delaware.gov](mailto:DNREC_IADAPT@Delaware.gov)

