

STORMWATER CAPITAL IMPROVEMENT PLAN

AN UPDATE TO BETHLEHEM TOWNSHIP'S STORMWATER CAPITAL IMPROVEMENT PLAN

OCTOBER 2025

Bethlehem Township implemented a stormwater capital improvement plan (CIP) to help meet the community's stormwater program needs including mitigation of decades-old flooding and water quality permit requirements. The establishment of a stormwater utility fee in 2022 has assisted in providing a dedicated revenue stream to complete the projects and address identified needs in the CIP.

The Stormwater Authority and stormwater fee has enabled Bethlehem Township to conduct a deliberate stormwater program for addressing its stormwater needs. This includes ongoing modeling and inspection of the stormwater system to identify areas of concern. Additionally, property owners can report stormwater concerns for Township review on the Township's website.

Bethlehem Township's stormwater program needs include operation and maintenance items along with larger capital improvements. These larger-scale projects involve designing and constructing new infrastructure to reduce flooding and enhance drainage patterns, as well as pollution reduction projects required by the state. To effectively handle these significant projects, Bethlehem Township created a CIP that outlines infrastructure enhancements for the next five years.

The CIP is updated based on known priority projects in Bethlehem Township, where sufficient information exists to determine the best solution. The plan provides a path forward to proceed with engineering, design, financing, and construction of the necessary improvements to address known areas of flooding. The Township recognizes that there are some areas where further study is needed to understand the stormwater issues and better identify appropriate solutions. As further assessment occurs, priority projects are completed, and new information becomes available Bethlehem Township will continue to update its CIP.



Clifton and Sunset damage in August 2020



Fairway and Bethman flooding in 2023

COMPLETED IMPROVEMENTS

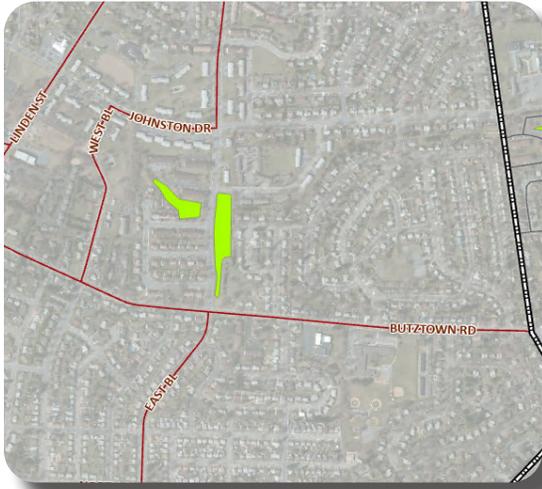
1. **Washington Street Basin Retrofit** (near Freemansburg Ave) ✓
2. **Washington Street Basin Retrofit** (at Oliver Court) ✓
3. **Long Court Basin Retrofit** ✓
4. **Vintage Drive Basin Retrofit** ✓
5. **Bethman and Fairway Flood Mitigation Project** ✓
6. **Walnut Street Drainage Improvements** ✓



Long Court Basin Retrofit

PRIORITY CAPITAL IMPROVEMENTS

Bethlehem Township's Capital Improvements Plan identifies priority projects that are crucial for managing and improving the Township's stormwater infrastructure. These projects are designed to address issues such as flooding, erosion, water quality, and stormwater runoff management. The Township is in the process of planning and constructing these projects to enhance the resilience and efficiency of its stormwater system. The graphic highlights the current status of the project.



1 EASTON AVENUE AND SANTEE ROAD FLOOD MITIGATION PROJECT – PHASE 1A

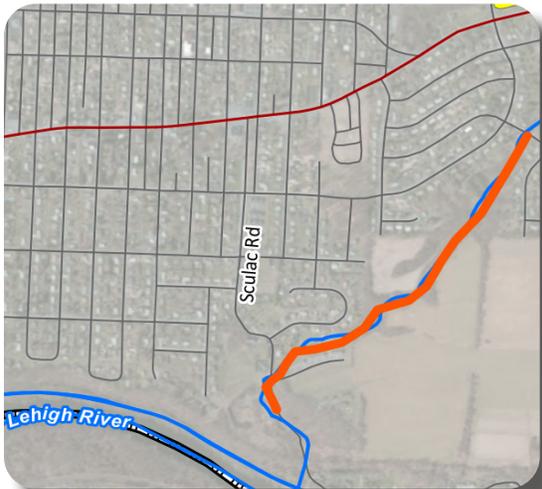
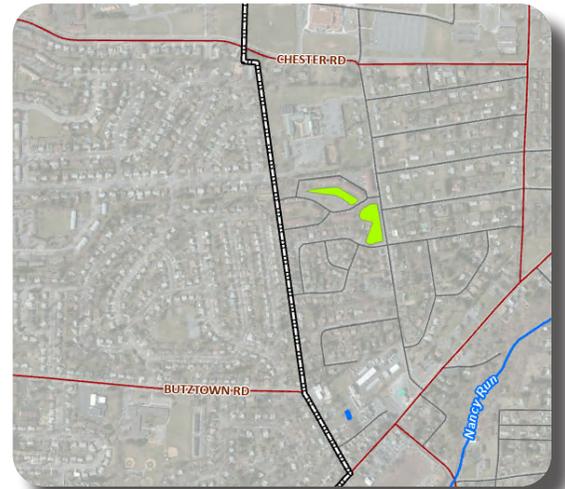
Substantial flooding has occurred in this area for decades. To address flooding during smaller storm events, Phase 1A of this two phase project focuses on improvements to two detention basins located within the City of Bethlehem. In addition to mitigation of flooding, these improvements will assist the Township in meeting some of the water quality improvements required by the state through the MS4 permit.

This phase is being completed in cooperation with the City of Bethlehem.



2 EASTON AVENUE AND SANTEE ROAD FLOOD MITIGATION PROJECT – PHASE 1B

Phase 1B of this two phase project will focus on improvements to two additional detention basins located within the Township. These upgrades will address localized flooding and help the Township meet the next set of state water quality requirements under its MS4 permit.



3 SCULAC STREAM RESTORATION

The creek upstream of Sculac Drive has experienced significant erosion, affecting nearby properties and exposing sanitary sewer infrastructure. A feasibility study was completed to evaluate potential restoration options, and design and permitting are now complete. Construction is anticipated to begin in late 2026. The planned improvements will restore the creek channel and help meet the Township's MS4 permit PRP requirements.





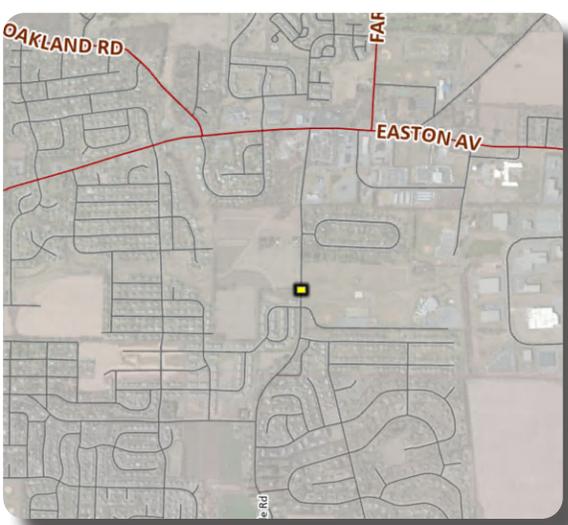
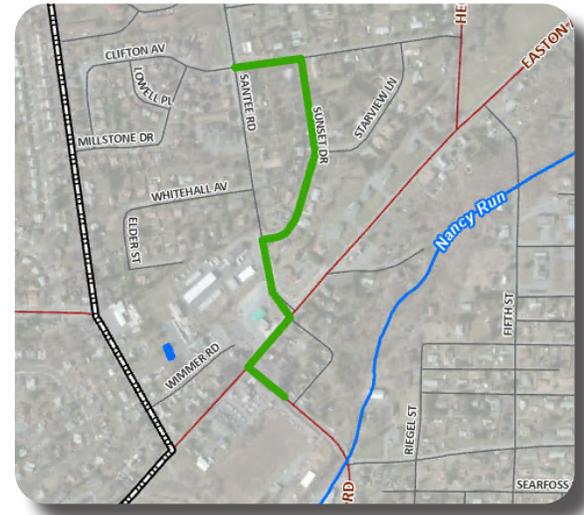
4 POLLUTION REDUCTION BASIN RETROFITS- PHASE 2

Phase 2 of the involves improvements to additional existing basins throughout the Township. These retrofits will enhance stormwater retention, allow for greater pollutant removal through infiltration, and support the Township's efforts to meet requirements for the next MS4 permit.



5 EASTON/SANTEE FLOOD MITIGATION PROJECT – PHASE 2

Phase 2 of the Easton/Santee Flood Mitigation Project, resulting from a FEMA Flood Study of the Nancy Run watershed, will enhance Phase 1 improvements by upgrading the conveyance systems and installing large stormwater infrastructure. These enhancements, combined with the Phase 1A and 1B basin improvements, will provide substantial flood reduction benefits.



6 MUNICIPAL PARK CULVERT

The culvert under Farmersville Road, next to Bethlehem Township Municipal Park is insufficient to handle stormwater effectively, resulting in flooding on the roadway and nearby park walking trails.

Upgrading this infrastructure will help mitigate flooding and improve safety in the Nancy Run watershed.



STORMWATER MANAGEMENT HAS MULTIPLE BENEFITS

Stormwater, as depicted in the images below, goes beyond flooding in the Township; it leads to persistent erosion issues. Erosion poses multifaceted challenges, including the contamination of streams and rivers with pollutants, disruption of habitats for wildlife, structural damage to infrastructure, and heightened flood risks. These impacts underscore the critical need for effective stormwater management strategies. Notably, the Township has taken proactive steps by including projects in their capital improvement plan that not only address flooding but also tackle adverse effects of stormwater.



Erosion adjacent to residential property near Sculac Stream



ONGOING PRIORITIES ASSESSMENT & FUTURE FLOOD MITIGATION PROJECTS

Future flood mitigation projects will be needed throughout the Township that are not highlighted in this plan. The stormwater program conducted an infrastructure assessment that assisted in identifying system needs and guide updates to this plan. Additionally, the Authority intends to continue working with property owners through the online forum for stormwater concerns throughout the Township. By working with property owners and assessing the Township's stormwater system, the Township will be better prepared to mitigate flooding concerns, maintain infrastructure and meet MS4 permit requirements. Future updates to this plan will serve to prioritize the flood mitigation and water quality projects. **Stormwater concerns can be submitted using the form available on the Township's stormwater webpage: <https://www.bethlehemtownship.org/stormwater>.**