

# CITY OF BETHLEHEM

---

## DEPARTMENT OF WATER AND SEWER RESOURCES INTEROFFICE MEMORANDUM

**TO:** Michael Colon, City Council President

**FROM:** Edward J. Boscola, PE, Director of Water and Sewer Resources

**RE:** City of Bethlehem Act 537 Special Study  
Wastewater Treatment Plant Organic Capacity Increase

**DATE:** November 28, 2023

---

Attached please find a copy of the City of Bethlehem Act 537 Special Study for review and adoption by resolution by the Bethlehem City Council. This Act 537 Special Study addresses planned improvements at the Bethlehem Wastewater Treatment Plant (WWTP) to increase its organic design capacity. The Special Study has been reviewed and approved by the governing bodies of all twelve tributary municipalities for which the wastewater system serves in accordance with the sewage facility planning requirements of the Pennsylvania Department of Environmental Protection (PaDEP). The Special Study was also reviewed by the Lehigh Valley Planning Commission and the Bethlehem Health Department, and was subject to a 30-day public review period. No public comments were received.

The final step is to obtain formal adoption by resolution from the Bethlehem City Council followed by submission to PaDEP. Attached is a draft Resolution for Council's consideration.

### **Background**

The Bethlehem WWTP has two primary rating factors: 1) a hydraulic or flow capacity of 20 million gallons per day; and 2) an organic treatment capacity of 39,365 pounds per day of biochemical oxygen demand (BOD). Over the past couple of decades, the trend is such that flow to the plant has remained relatively steady while the concentration of organic sewage entering the plant has been steadily increasing. This trend was originally identified and evaluated in the City's Act 537 Plan adopted in 2012. Corrective actions proposed at the time involved substantial capital improvements at high cost (\$26 million). Those corrective actions were deferred so that other higher priority capital improvements

could be addressed. The purpose of this Act 537 Special Study is to re-evaluate those alternatives to upgrade the WWTP and increase the organic treatment capacity from 39,365 lbs/day of BOD to 50,000 lbs/day in a cost-effective and phased approach.

The updated alternative as described in the Special Study is the installation of a Chemically Enhanced Primary Treatment (CEPT) system at the WWTP. CEPT involves the addition of a coagulant to the primary settling tanks to improve their solids removal efficiency, thereby increasing the plant's overall capacity to treat more organic waste. The cost to install CEPT is approximately \$1.4 million.


The Special Study does not address the sewage collection system and does not change the sewage service area or the sewage allocations for any of the tributary municipalities.

#### **Municipal Review and Approval Process**

The Act 537 Special Study was reviewed by the various planning commissions of all municipalities served by the City's WWTP, including the Bethlehem PC and LVPC. Planning Commission comments are included in the Study. All tributary municipal councils and boards of supervisors have also passed resolutions of adoption. Bethlehem City Council's review and adoption is the final step prior to submission of the Study to PaDEP for their review and approval.

The City's WWTP serves all or parts of the following municipalities: City of Bethlehem, Hanover Township Northampton County, Hanover Township Lehigh County, Hellertown Borough, Fountain Hill Borough, Bethlehem Township, Freemansburg Borough, City of Allentown, Salisbury Township, Lower Saucon Township, Palmer Township, Lower Nazareth Township and East Allen Township.

Council's consideration of this matter will be greatly appreciated. Please feel free to contact me at 610-865-7207 or [EBoscola@bethlehem-pa.gov](mailto:EBoscola@bethlehem-pa.gov) should you have any questions or need additional information

By: 

Copies to: J. William Reynolds, Mayor  
J. Spirk, Solicitor  
E. Evans  
J. Lawrence  
File

RESOLUTION NO. \_\_\_\_\_  
A RESOLUTION OF ADOPTION FOR AN  
ACT 537 SPECIAL STUDY FOR THE CITY OF BETHLEHEM

Resolution of the Council of the City of Bethlehem, Pennsylvania (herein “the municipality”).

WHEREAS, Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537 known as the “Pennsylvania Sewage Facilities Act”, as amended, and the Rules and Regulations of the Pennsylvania Department of Environmental Protection (“the Department”) adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, required municipalities to adopt an Official Sewage Facilities Plan providing for sewage facilities adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the municipality; and

WHEREAS, AECOM has prepared an Act 537 Special Study (“the Special Study”) which provides for an increase in the organic design capacity at the City of Bethlehem’s Wastewater Treatment Plant; and

WHEREAS, the City of Bethlehem is served by the City of Bethlehem’s Wastewater Treatment Plant; and

WHEREAS, the selected alternative of the Special Study is the installation of a Chemically Enhanced Primary Treatment (CEPT) system.

NOW, THEREFORE, BE IT RESOLVED that the City of Bethlehem has found the Special Study adequate for the wastewater disposal and management needs of the municipality and hereby adopts the Special Study known as the City of Bethlehem Act 537 Special Study, dated June 2023, as a revision to the Official Plan of the municipality. The Council of the City of Bethlehem hereby assures the Department of the proper and timely implementation of the Special Study as set forth therein.

I, \_\_\_\_\_, the Clerk of Council of the City of Bethlehem hereby certify that the foregoing is a true copy of the City’s Resolution No. \_\_\_\_\_, adopted \_\_\_\_\_, 2023.

AUTHORIZED SIGNATURE

CITY SEAL

\_\_\_\_\_