



# EPA's Cleanup of the Gowanus Canal Superfund Site Brooklyn, NY

## WHAT EPA IS DOING TO CLEAN UP THE GOWANUS CANAL

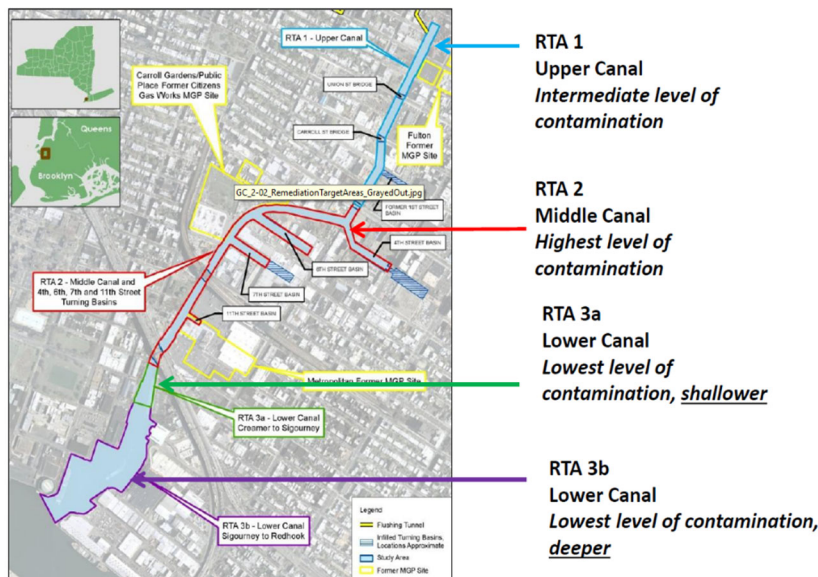
EPA's comprehensive approach to addressing contamination in the Gowanus Canal includes:

- Dredging the canal to remove all the accumulated contaminated sediment.
- Solidifying portions of the contaminated native sediment to prevent movement of the deep mobile tar into the cleaned canal.
- Capping the dredged areas with protective absorbing layers and a clean sand top.
- Implementing controls to prevent combined sewer overflows (CSOs) and street ends runoff from compromising the cleanup.
- Excavating and restoring approximately 475 feet of the former 1<sup>st</sup> Street turning basin and 25 feet of the former 5<sup>th</sup> Street turning basin.
- Thermally treating at an off-site facility and disposing the dredged sediment that contains high levels of liquid tar.
- Processing of the less contaminated dredged sediment at an off-site facility to transform it into a beneficial use product, such as landfill cover.
- The estimated current cost is in excess of \$1.5 billion.

## EPA IS TACKLING THE GOWANUS CANAL IN SEGMENTS

- The upper segment, Remediation Target Area (RTA) 1, runs from the top of the canal to 3<sup>rd</sup> Street.
- The middle segment, RTA2, runs from 3<sup>rd</sup> Street to just south of the Hamilton Avenue Bridge.
- The lower segment, RTA3, runs from the Hamilton Avenue Bridge to the mouth of the canal.

### Remediation Target Areas (RTAs)



### HOW MUCH SEDIMENT WILL BE REMOVED?

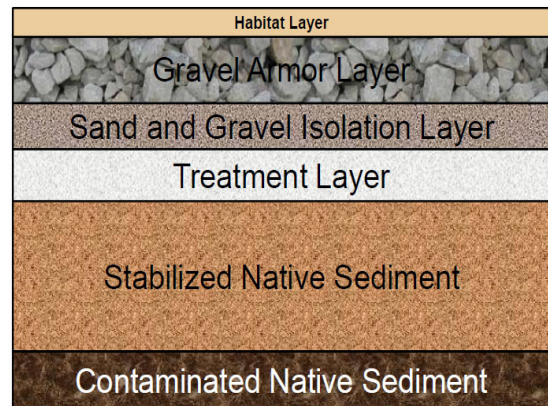
- 307,000 cubic yards of highly-contaminated sediment from RTA1 and RTA2
- 281,000 cubic yards of contaminated sediment from the RTA3

**Date: 11/16/2020**

## EPA IS REQUIRING A SPECIALIZED “CAP” BE PLACED IN THE CANAL

- A multilayer cap will be placed in dredged areas of the Gowanus Canal to isolate the contamination that will remain in the native sediment after dredging and absorb dissolved contaminants from upward-flowing groundwater.
- EPA will stabilize the sediment with cement-like materials in the segments of the canal where the native sediment is contaminated with upward-moving mobile liquid coal tar.
- The stabilized areas will then be covered with the multiple layer cap consisting of:
  - a “treatment” layer made of a specific type of material that will remove contamination that could well up from below;
  - an “isolation” layer of sand and gravel that will ensure that the contaminants are not exposed;
  - an “armor” layer of articulated concrete material to prevent erosion of the underlying layers from boat traffic and canal currents; and
  - clean sand will be placed in the gaps of the “armor” layer to fill in the voids in the concrete structure and to help establish a habitat.

### Conceptual Layout of Capping and *In Situ* Stabilization



## THE PLAN ADDRESSES COMBINED SEWER OVERFLOWS

- EPA is requiring that combined sewer overflow (CSO) discharges from two major outfalls and smaller outfalls located in their vicinity, in the upper portion of the canal, be outfitted with retention tanks (4 million and 8 million gallons, in the middle and the top of the canal, respectively) to reduce the volume of contaminated sewage solid discharges
- An estimated reduction of 58 to 74% of discharges of sewer solids is needed to maintain the effectiveness of the cleanup at current discharge levels

## SOURCES OF CONTAMINATION IN THE GOWANUS CANAL

- The Gowanus Canal was built in the mid-1800s as a major industrial transportation route.
- Manufactured gas plants, paper mills, tanneries, and chemical plants operated along the Gowanus Canal and polluted it through the waste products from their operations. More than a dozen contaminants, including polycyclic aromatic hydrocarbons, polychlorinated biphenyls and heavy metals, including mercury, lead and copper, are found at high levels in the sediment in the canal.
- Contamination also flows into the canal from overflows from the sewer system that carries sanitary waste from homes and industrial pollutants mixed in stormwater runoff.

**For more information about the site and how you can get involved, please contact:**

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**[www.epa.gov/superfund/gowanus-canal](http://www.epa.gov/superfund/gowanus-canal)**