

March 2017

City's Environmental Agency Increases Its Focus on Green Infrastructure Projects

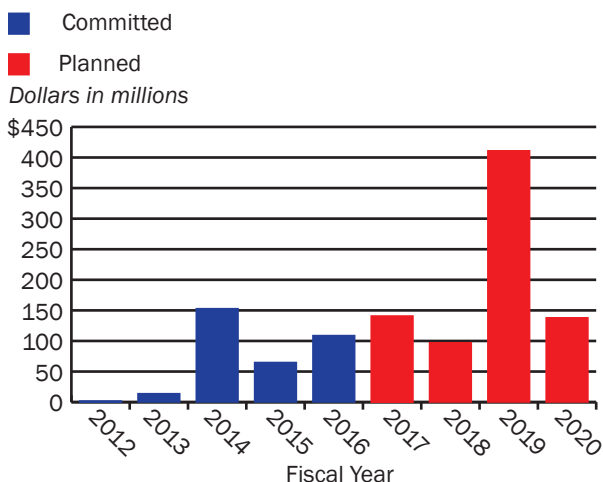
The Preliminary Capital Commitment Plan for 2017 through 2020 (the January plan) includes an additional \$268 million for green infrastructure-related projects in the Department of Environmental Protection's (DEP) capital budget (all years refer to fiscal years). Green infrastructure includes installations that capture or divert water runoff from traditional sewers. The additional funds are part of an ongoing, multiyear effort led by DEP to reduce combined sewer overflows and runoff, improve water and air quality, and beautify city neighborhoods. Building green infrastructure in the city's watersheds is part of DEP's comprehensive strategy to meet the New York State Department of Environmental Conservation mandates for water quality. The city's strategy is laid out in its 2010 Green Infrastructure Plan.

The additional funding added to the January plan increases DEP's capital budget for green infrastructure projects over the 2017 through 2020 period by 52 percent to \$787 million. Of the new \$268 million investment, \$78 million has been allocated to projects in the Gravesend Bay watershed and drainages on the west side of Jamaica Bay in Brooklyn. Another \$52 million was added for the Little Bay watershed and areas in north central Queens that drain into the East River and Flushing Bay, as well as \$1 million included for the Bronx River watershed in the Bronx. Roughly half of the new funds (\$137 million), largely added to the latter years of the capital plan, have not yet been allocated to specific projects or have been reserved for projects to be completed in conjunction with other city agencies.

Much of New York City's 7,500 miles of sewers has exceeded its useful life and approximately 60 percent of the system is combined, which means that both stormwater runoff from streets and parking lots and wastewater from buildings empty into the same system. Newer separate sewer systems keep stormwater and wastewater apart, ensuring that only stormwater is discharged into local bodies of water. During normal operations, wastewater treatment facilities are able to treat and discharge combined sewage safely. During storms, however, the amount of runoff can drastically increase, overwhelming the city's wastewater treatment facilities and storage systems, causing a combined sewer overflow, where untreated sewage and runoff is discharged directly into local waterways. This overflow degrades local water quality as bacteria, pollutants, litter, and chemicals are discharged into open water.

Green infrastructure is designed to reduce the amount of runoff that enters the combined sewer system,

Green Infrastructure Capital Funds Increasing



SOURCE: Fiscal Year 2018 Preliminary Capital Commitment Plan
NOTE: Totals include Interfund Agreements (IFA). Contingency not included.

New York City Independent Budget Office

thereby reducing the chance that a rain or snow storm will overwhelm the treatment system. Examples of green infrastructure projects include rain gardens, green roofs, permeable pavement, and bioswales. Bioswales, which are common in New York City, consist of small gardens on the sidewalk that include specifically designed soil, stones, and plants that are able to absorb large amounts of water. By allowing water to run into bioswales, green roofs, and rain gardens instead of street sewer drains, less stormwater ends up in wastewater treatment and local waterways.

Green infrastructure can also be beneficial in areas served by separate sewers as even runoff from city streets that is not mixed with waste is often contaminated with pollutants, which end up being discharged into local waterways. The plants used in green infrastructure arrangements also help with citywide air quality and provide small areas of green space on the city's streets.

DEP has been making substantial investments in green infrastructure capital projects in the past few years. Annual

capital commitments for green infrastructure projects rose from \$2.3 million in 2012 to \$109 million in 2016. Going forward, DEP plans to commit even more funds for green infrastructure projects, with \$400 million in green infrastructure investments planned for 2019, although it would not be unusual for at least some of this funding to be shifted into 2020 or beyond as plans evolve.

Much of the capital funding committed in previous years went towards green infrastructure projects that are now underway or completed in the Newtown Creek, Gowanus Canal, and Bronx River watersheds or in areas that drain into Jamaica Bay or Flushing Bay. (Existing and in progress green infrastructure projects are mapped by DEP and available [here](#).) In the future, the city plans to continue adding green infrastructure in these areas and expand these types of projects to areas that drain directly into the East River, New York Harbor, and Westchester Creek.

Prepared by Daniel Huber

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