

D Kelly O'Day

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Date: Wednesday, January 29, 2014 2:05 PM
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Subject: Phila's Green City, Clean Waters Research Needs



I would like to extend my congratulations to the recipients of EPA's Performance and Effectiveness of Green Infrastructure grants. Your research will be helpful to Philadelphia residents as well as the national green stormwater research audience.

As a Philadelphia resident, I am quite proud of the City's green stormwater infrastructure approach and believe that the program will benefit the City for years to come. With that said, there is a serious blind spot in Philadelphia's approach which needs to be carefully studied before this approach is widely adopted by EPA and other cities.

Need for Caution

Philadelphia, like all major cities, has a serious street litter problem. Areas like Center City and a few commercial zones have special business districts that address street cleaning, the rest of the City has only a minor/no street cleaning program.

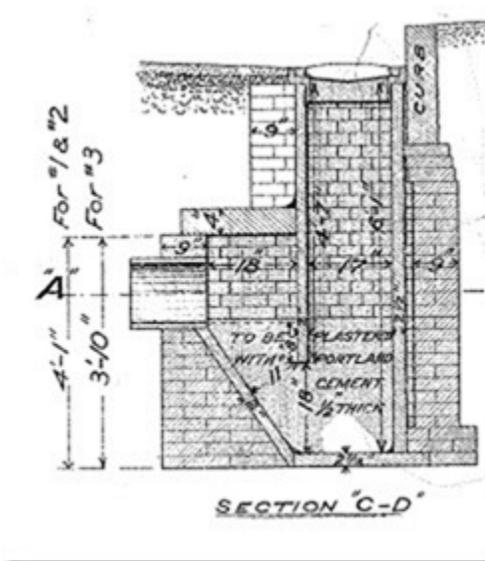
I have been documenting the flow of Philadelphia street litter through PWD's MS4 and CSO sewers to the Tookany Tacony Creek for about 18 months and have found strong evidence that Philadelphia's stormwater inlets pass a

significant quantity of plastic bags and food wrappers that flow to this small Creek where they get caught on branches and along the Creek banks.

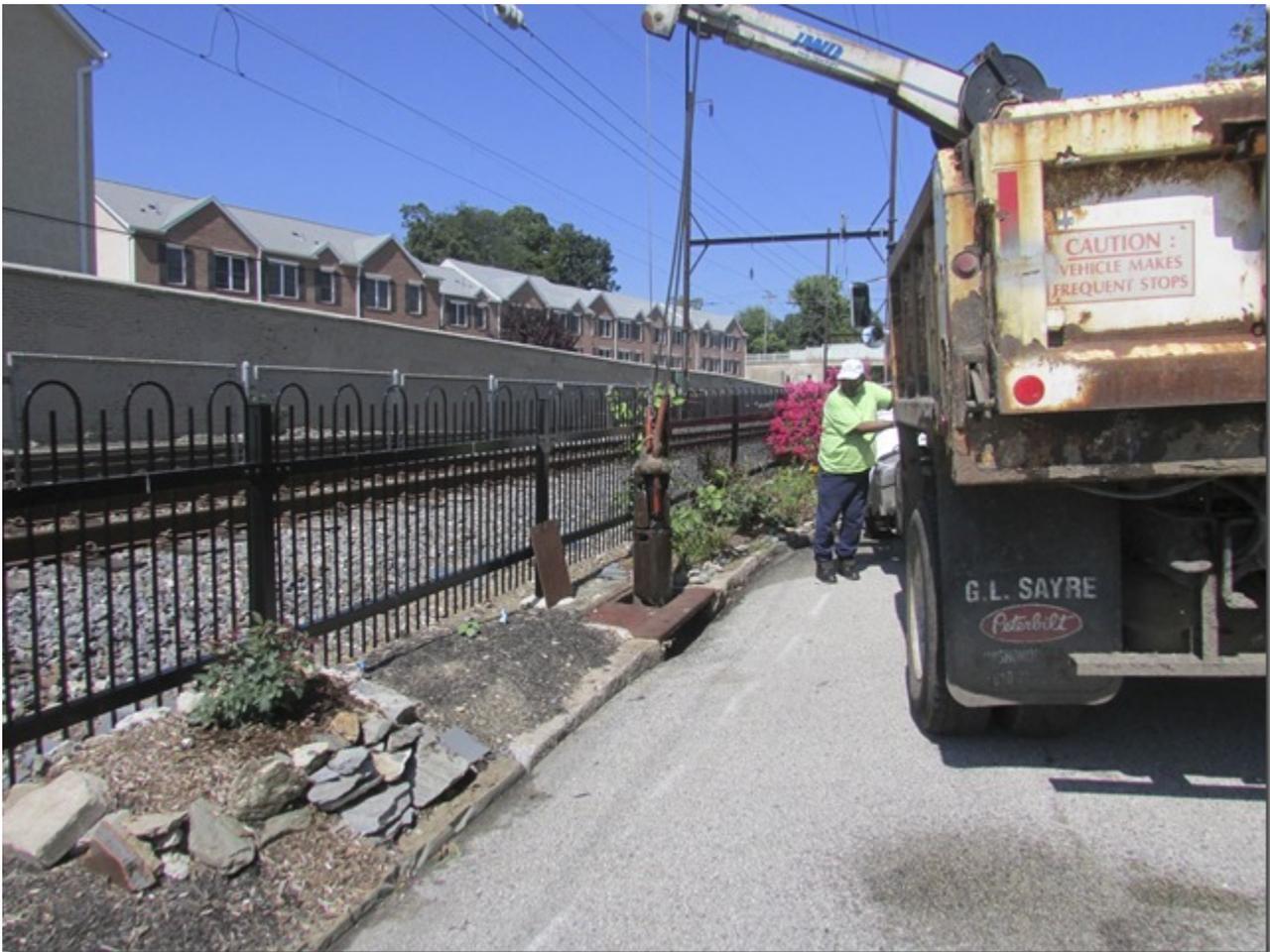
Based on my initial observations of creek trash, I revisited the Creek a number of times to determine the cause of the extensive trash accumulation in the Tookany â€” Tacony Creek. You can find complete documentation of my photo surveys and assessment of the creek trash sources [here](#).

Floatables Control

PWD has relied on trapped stormwater inlets since the late 1800s. This image shows a 1899 detail of a Philadelphia inlet. Storm water enters through a grate at the top. Notice that flow must pass through a water trap before it can exit through the discharge pipe. This simple water trap has worked well for Philadelphia for well over 100 years, keeping floatables out of the storm sewer system and our local creeks, Delaware Rive and Delaware Bay.



All of Philadelphiaâ€™s stormwater inlets are trapped. PWD has an active inlet cleaning program to remove both floating material and heavy materials that accumulate in the bottom of the inlet. here is a photo of a PWD crew cleaning a Tacony Creek watershed inlet.



PWD's™ trapped inlets work well for floaters like bottle and cans and sinkers like heavy plastics, dirt, heavy debris. What about neutral buoyancy materials like plastic bags and food wrappers?

Having found numerous locations downstream of PWD outfalls that have extensive build-ups of plastic bags and food wrappers, I carefully examined a number of PWD outfalls. I found clear indications that PWD outfalls (both MS4 and CSO) are discharging plastic bags and food wrappers during rain storm events.

This photo shows plastic bag build-up below PWD's™ T-03 outfall.



I have documented my understanding of how Philadelphia plastic bags pass through PWD's sewer system [here](#).

PWD Does Not Plan to Change Its Floatables Control Program

As you research Philadelphia's stormwater program, please consider what happens to street litter carried by runoff to PWD inlets. While the GC,CWP program will reduce the quantity of run-off, it may only have a minor impact on plastic bag debris discharges to the Tookany " Tacony Creek, Delaware River and Bay.

Can little laden stormwater really be called green?

The Anacostia Watershed Society has done an excellent job investigating the sources and fate of street litter that makes its way to the Anacostia River. I encourage you to review their work to get a comprehensive treatment of the street litter " creek trash relationship.

Please feel free to contact me for any assistance that I can provide to you in your research of Philadelphia's stormwater program.

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