



### FPNA NEIGHBORHOOD GATHERING: REDUCING FLOOD RISK, NEIGHBORHOOD UPDATES & YOUR TOP WISHES

### REDUCING THE RISK OF STORM WATER BACK SURGE FLOODING



CHIEF ENGINEER

MAY 22, 2018

### Fort Point Channel – South Boston Tributary Areas

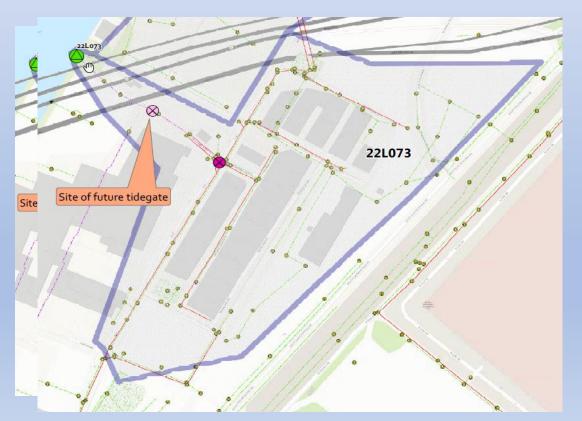
Blue lines mark tributary boundary lines.

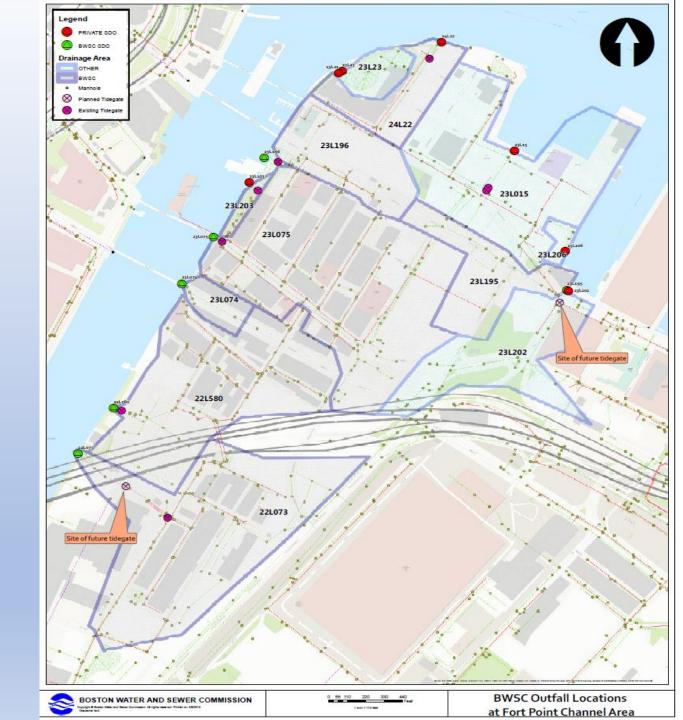
All water that falls within these polygons outlets to the designated outfall



Blue Lines indicate area which flows to individual outfall

Sub area shown below:



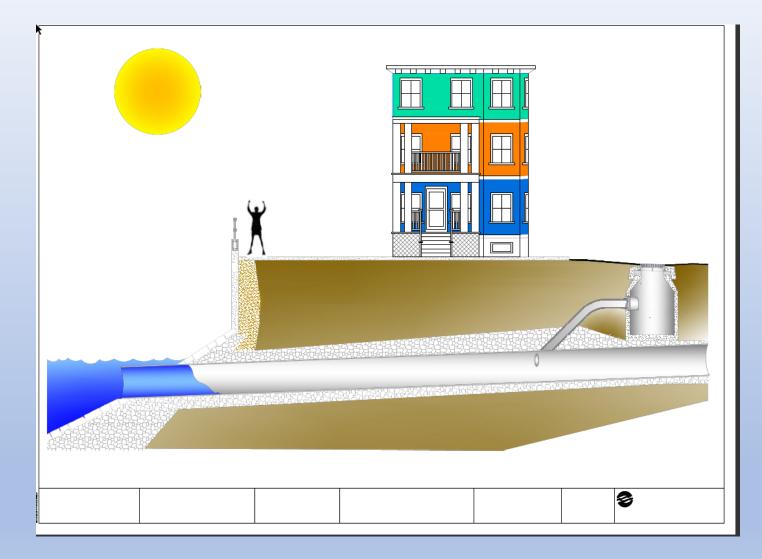


### South Boston Sanitary Sewer System



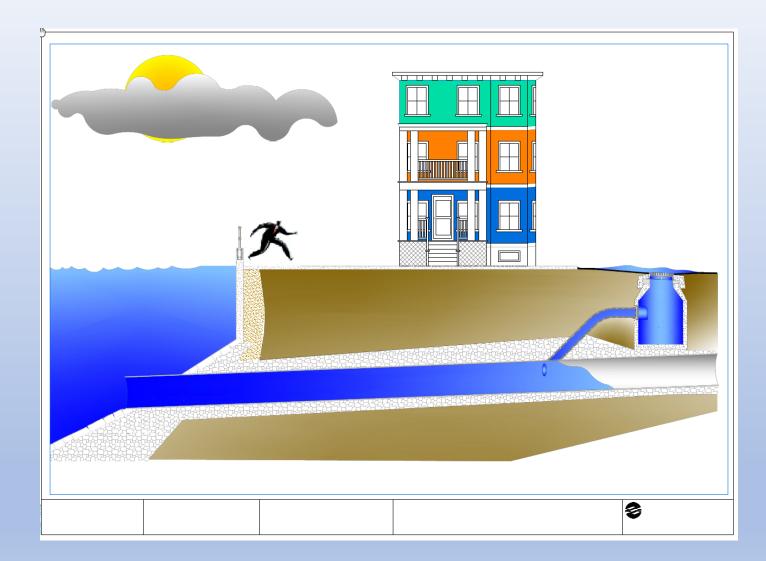
### Sunny Day – no worries

Unless there is an extreme high tide predicted, there are no major concerns for unprotected outfalls



### Wet Weather Event

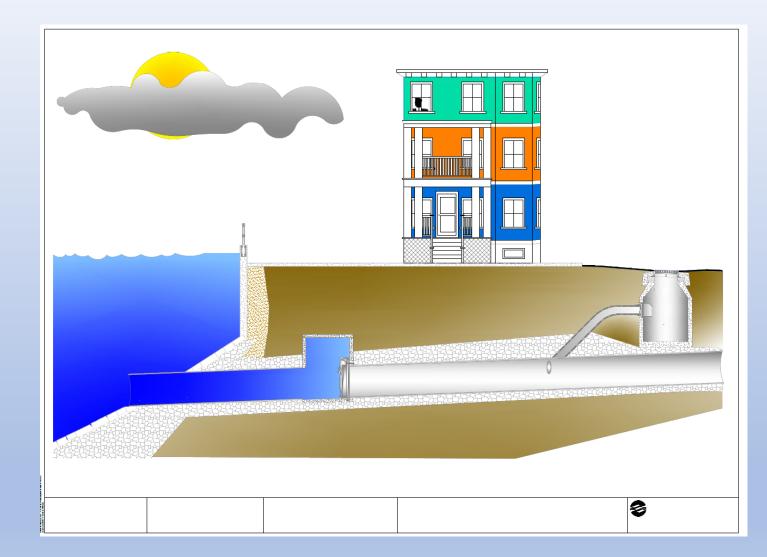
During high tides and extreme rainfall, or extreme high tides with no rainfall, unprotected drain lines allow for major surcharging of the systems putting streets and all basement areas of buildings under stress



### Tidegates Protect Drain Systems

During Extreme High tides, tide gates can keep the tide from flowing up the drainage system, protecting roadways and buildings.

When there are extreme tides and there is rainfall, the tidegates allow for storage capacity until the tide recedes. (Storage may be limited)



## Single Cast Iron Tidegate

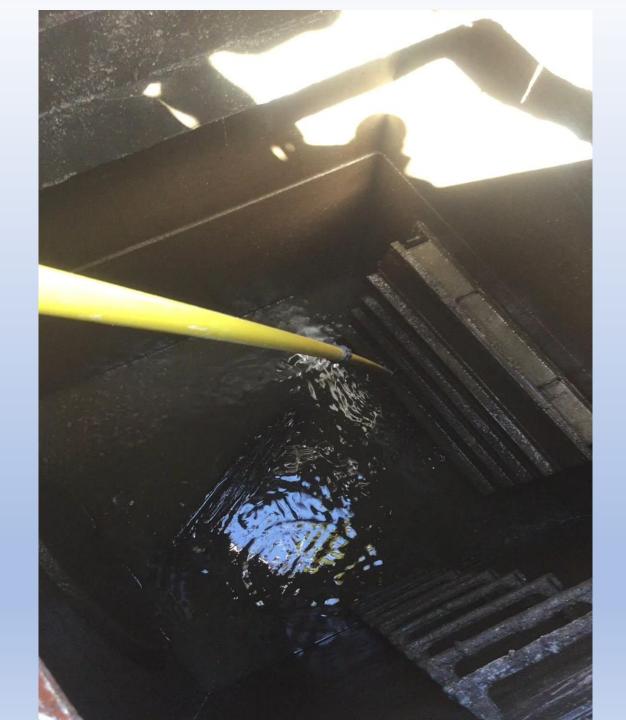


# Double tidegate within chamber

Cast Iron Tidegate in Deep Chamber

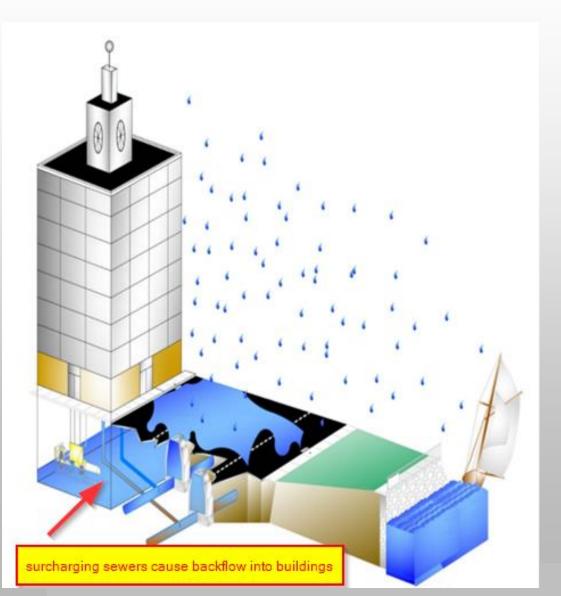
Special entry precautions must be used when entering this chamber to perform maintenance

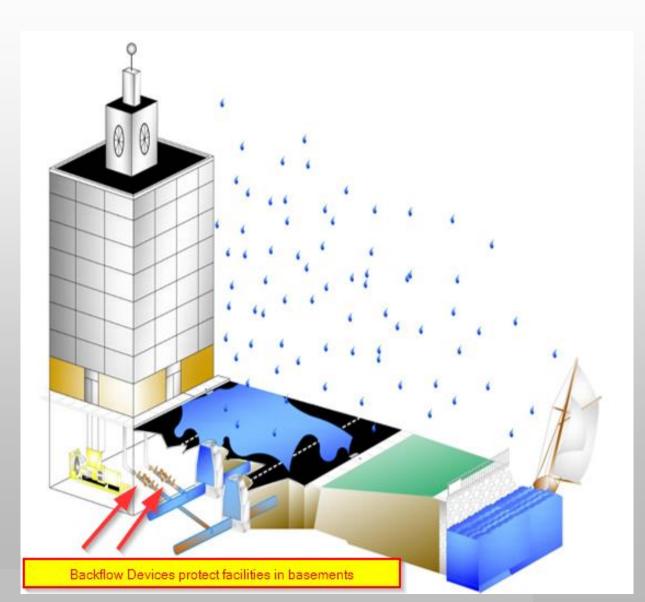




Exercising a large flexible tidegate at Martin Richard Park

### **Private Property Issue:** Internal basement flooding from unprotected facilities connected to sewers and drains





### Fort Point Channel Outfalls

Reported outfalls observed during a 2014 study of the water quality in the Fort Point Channel

(BWSC (14), MassDOT(13), Gillette(10), USPS (9), Other Private(3), Require Further investigation (15) as of 5/22/18)

Source Provide and Sewer Commission

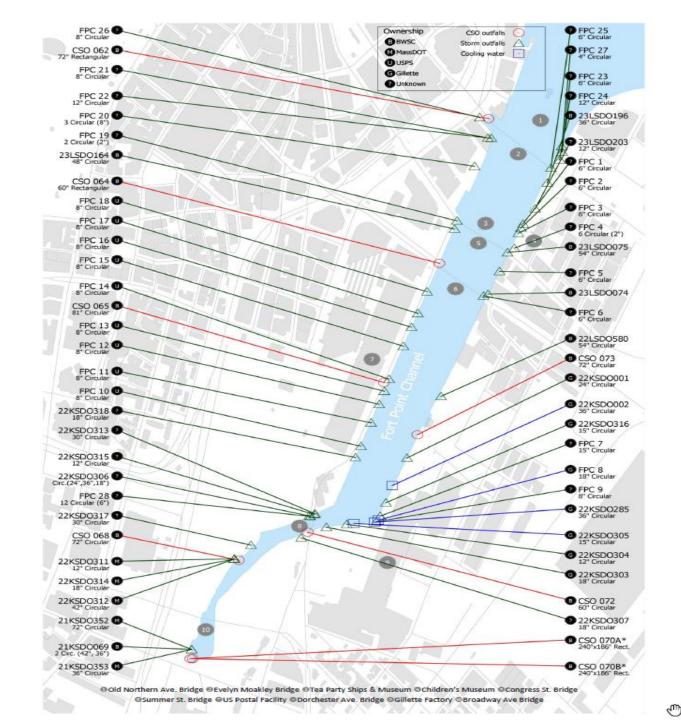
### Fort Point Channel Water Quality Assessment Report

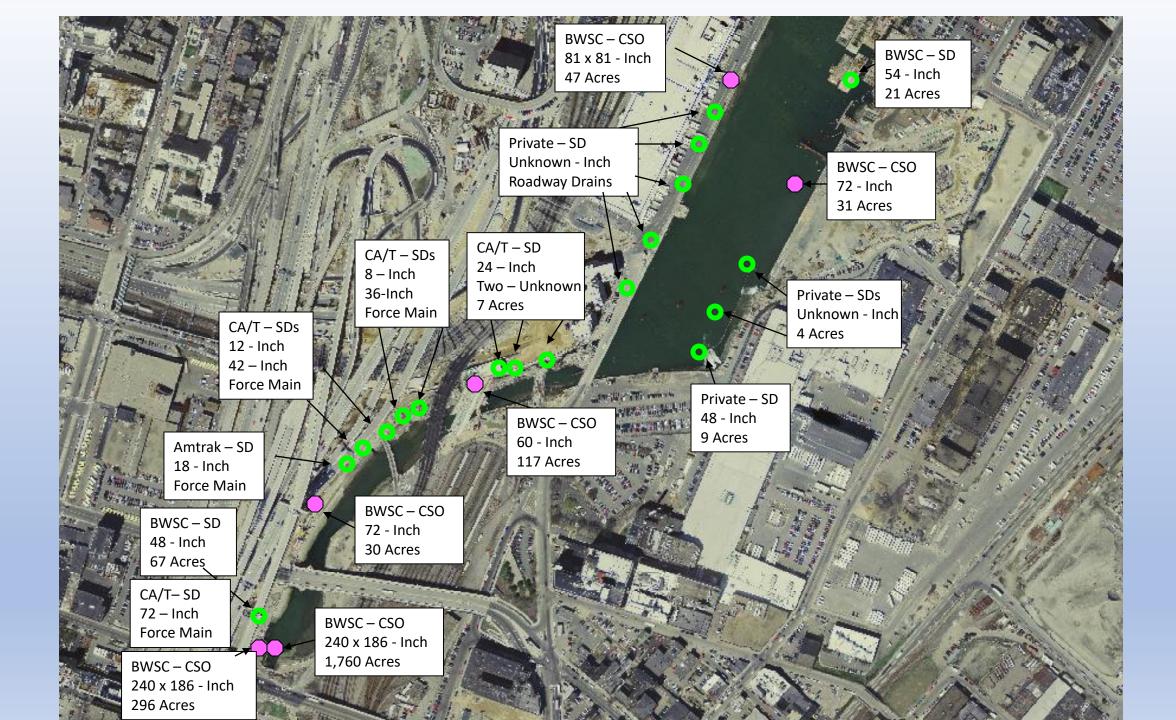
October 31, 2014

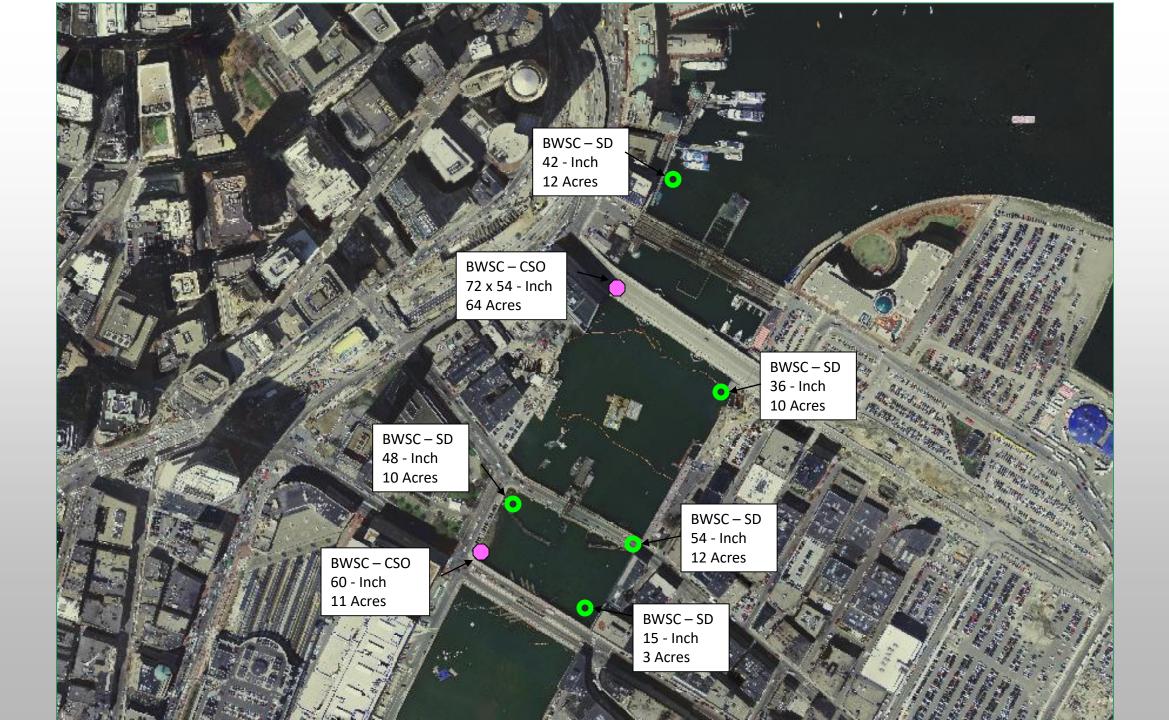


Prepared by Brown AND Caldwell

in association with SDE • Woods Hole Group • PEER Consultants • ADS Environmental Services







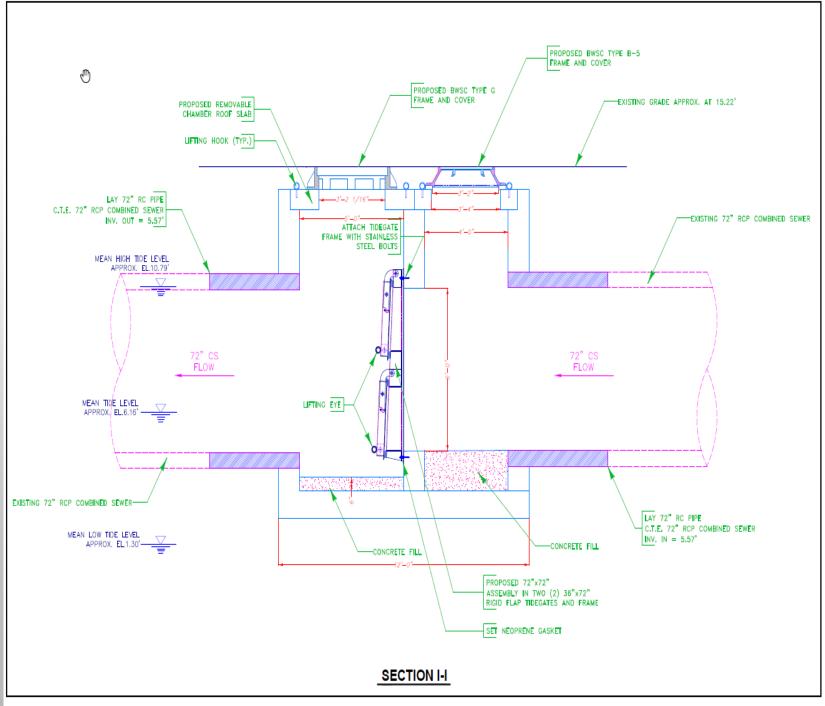
### Mt Washington Ave. Tidegate

Construction Ongoing to install new tidegate to protect tributary area to Outfall 22L073



### Mt WashingtonAve Tidegate Drawing

Cross-sectional view of new tidegate and chamber





# Discussion

John Sullivan, P.E. sullivanjp@bwsc.org

www.BWSC.ORG