

Doing Business with BWSC

ACEC **Private Sector** Committee & **Energy & Environmental Affairs** Committee

January 17, 2019

Aldrich Center – One Walnut Street, Boston

Mike Nelson, Director of Engineering
Boston Water and Sewer Commission

Doing Business with BWSC

Today's Topics:

System Highlights

People & Structure

Development Approvals

Technology Initiatives

Approach to **Capital Planning**

Integrating **Green Infrastructure**

The diagram features a central point on the right side from which five arrows point leftward to five distinct topics. The topics are arranged vertically from top to bottom: 'System Highlights' (blue), 'People & Structure' (yellow), 'Development Approvals' (red), 'Technology Initiatives' (green), and 'Approach to Capital Planning' (purple). The central point is labeled 'Integrating Green Infrastructure' (green).

BWSC Who we are

Distribution

1,010 Miles of Water Mains

12,700 Hydrants

17,500 Valves

91,000 Accounts

5 Pressure Zones

Northern High - 4.2

Northern Low - 89.5

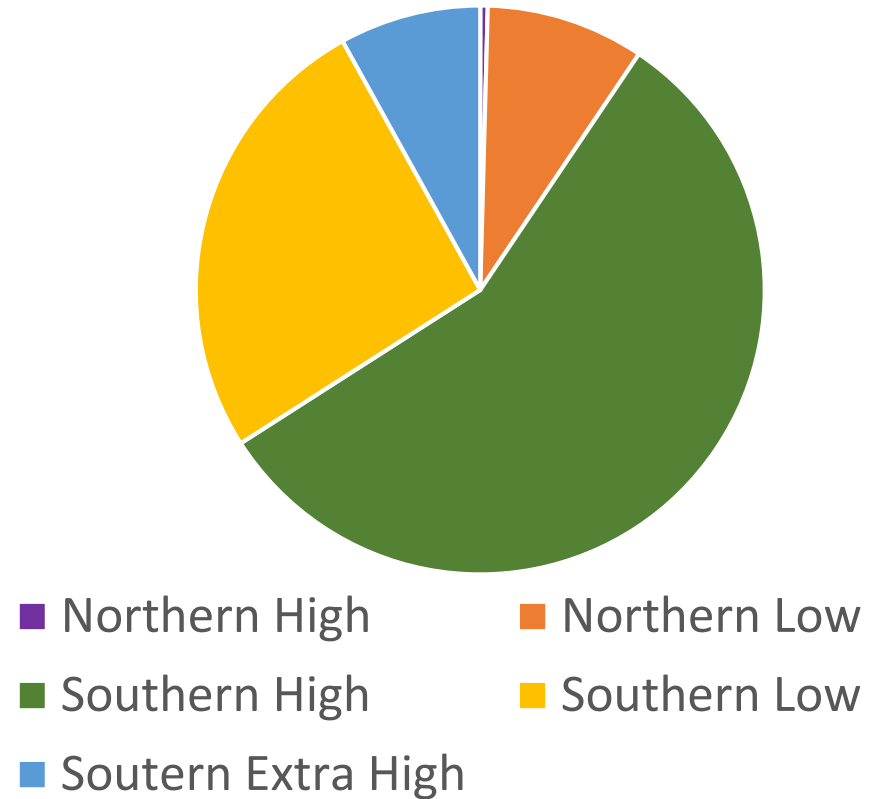
Southern High - 562

Southern Low - 258.75

Southern Extra High - 80

HPFS - 15.8

Miles of Water Main



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Collection

706 Miles of Sanitary Sewer

157 Miles of Combined Sewers

665 Miles of Storm Drains

30,257 Catch Basins

50,300 Manholes

252 Outfalls

200+ Tide Gates

9 Pump Station Facilities

BWSC Who are we

Operations Division

Engineering Division

Planning

Design

Construction

Design Engineering
CAD Drafting
GIS
Engineering Customer Service

Engineering Customer Service

Engineering **Customer Service**

- Review plans for any proposed connections to BWSC system
- Provide permits for approved work
- Provide research (records) to contractors and utilities
- Is the **Gateway** between Developers and BWSC



Tips From Phil, Frank, and Luis



Site Plan Process

Volume Increase:

Site Plan Submissions

2016: 635

2017: 682

2018: **767**

Utility Plan Submissions

2016: **249**

2017: 619

2018: 703

Backlog can range 4-8 weeks

2.5 Engineers currently staffed

Most Common Issue:

1"

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Most Common Issue:

This is GI



1.25"

For Projects over 100k Sq. Ft.

Large Project Review

Large- Scale Development is Reviewed by the Design Group

- Current Projects:
- **Harvard** University – Allston Landing
- Suffolk Downs Race Track

- Future:
- South Boston
- **I-90** / Allston Landing South



BREEK CONDUIT, COMMONWEALTH AV.
AT BRIGHTON AVE.
CONDUIT, BRICK ARCH, BUILT 189

Large Project Review

Large- Scale Development Considerations

Hydraulic **Model Buildout** – InfoWater
Drainage and Sewer Modeling – **PCSWMM**
Green Infrastructure Approaches

- ✓ Public or Private Ways
- ✓ Complete Streets
- ✓ Smart Utilities



LEVEL SEWER ACROSS TIDAL BA

Technology Initiatives at BWSC

Big 2019 Planned:

- **Paperless Bid Documents**
- **New Website**
- **New Billing System**

Near **Future**:

- **New Work Management System**
- **Improved Modeling**

Technology Initiatives at BWSC

Electronic Bid Documents:

- Solicitation & Advertising thru **BidNet**
- **BidNet**: Procurement Portal
 - Proprietary Service
 - **Free** to Sign up
- Responses thru BidNet
 - Now: RFPs
 - Future: Bidding

Annual Capital Improvement Plan

2018 Highlights

- Over **\$35M** in Construction Bids
- 7.5 miles of water main renewal **\$21.5M**

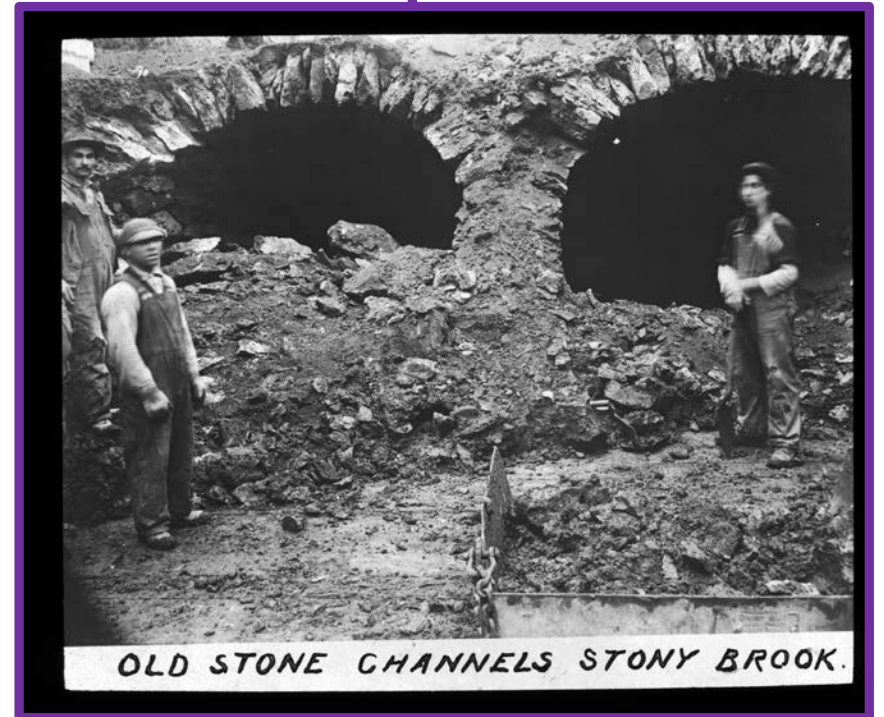
Water Relay (ft)	Water Portion (\$)	Sewer Relay (ft)	Sewer Portion (\$)	Sewer Rehab (ft)	Rehab Portion (\$)	Drain Relay (ft)	Drain Portion (\$)	Drain Rehab (ft)	Rehab Portion (\$)
5,045	2,144,574.97	4,380	2,136,784.28	6,235	578,290.12	2,495	1,462,143.97	2,420	257,735.05
16,850	5,707,375.21	1,830	1,118,351.01	350	38,612.93	1,125	458,583.55	2,035	224,506.58
2,130	2,174,772.17								
3,725	3,060,456.32			500	82,137.06	30	50,000.00	500	82,137.07
2,020	1,132,868.58	290	322,004.86	2,130	374,064.21	3,455	2,938,171.38		
						330	681,339.72		
7,115	6,242,714.50	250	308,179.20						
1,500	512,685.52	808	562,547.45	390	25,855.49	632	165,075.00		
775	575,406.79	385	835,587.79			945	205,502.75		
39,160	\$21,550,854.06	7,943	\$5,283,454.59	9,605	\$1,098,959.81	9,012	\$5,960,816.37	4,955	\$564,378.70

Annual Capital Improvement Plan

2019 CIP

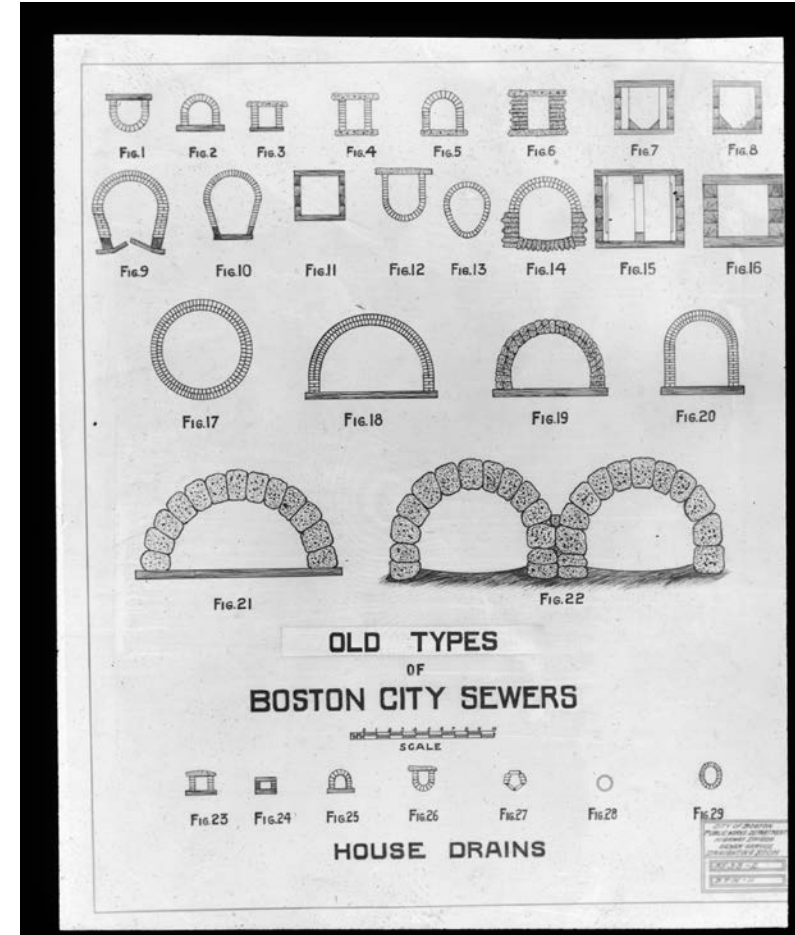
- 6+ miles of Water Renewal
- East Boston Sewer Separation Continues
- South Boston Sewer Separation Begins
- Tide Gates
- Dorchester I-I

Charlestown
South End
City Proper
City-Wide



System Renewal

“What’s Old is New Again”



System Renewal

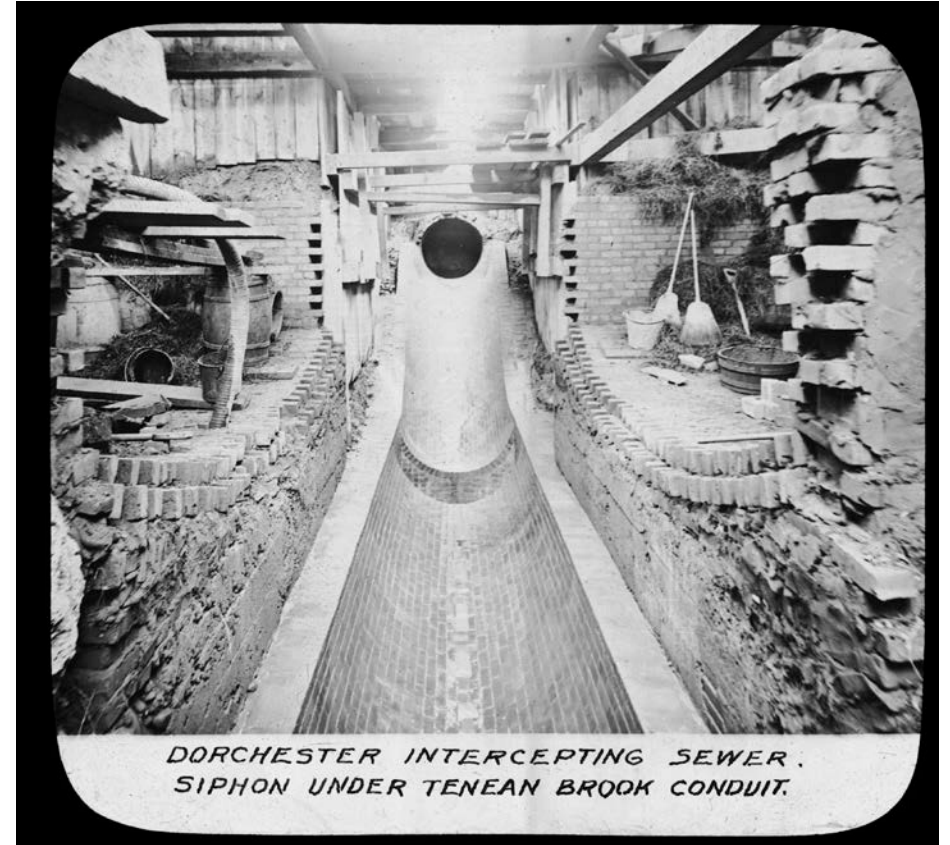
“What’s Old is New Again”



He's not around anymore



and This is still in Service



Thank you for your Time

