



*Water Resources-
Engineering –
Project Updates 2021-02-23*





OVERVIEW OF PUBLIC WORKS STRUCTURE

Public Works - General

Asset Management

Districting Operations

Engineering

Fleet Management

Portland Downtown District

Trash and Recycling Collection

Transportation Operations

Winter Operations

Water Resources

Public Works – Water Resources

Asset Management

CCTV of Sewers/ Storm Drain

Fats, Oils and Greases

Engineering

Green Infrastructure Programs

I/I, Sewer, Storm Investigations

Pump Station Operations

Sewer Operations and Maintenance

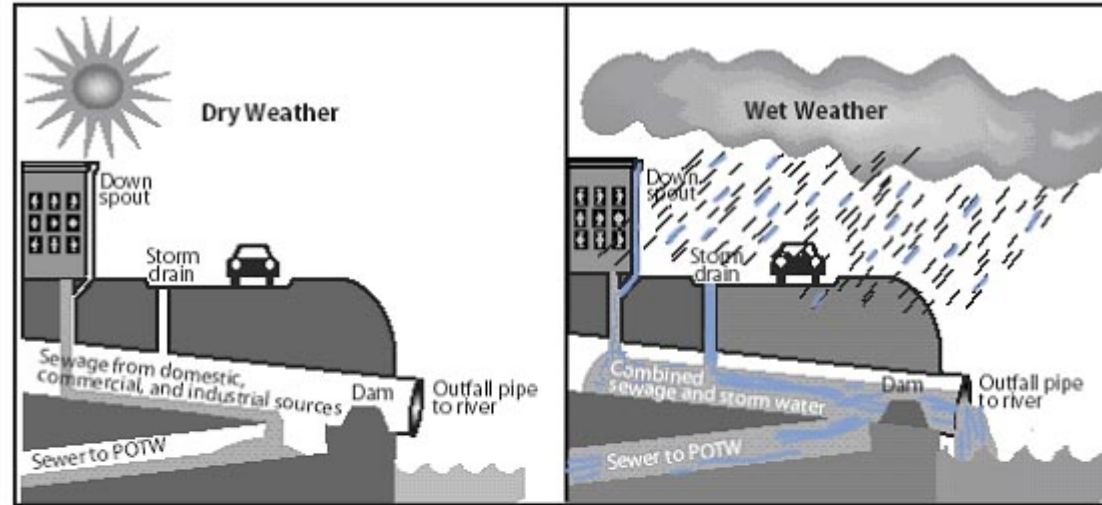
Sewer Rehabilitation

Stormwater Programs

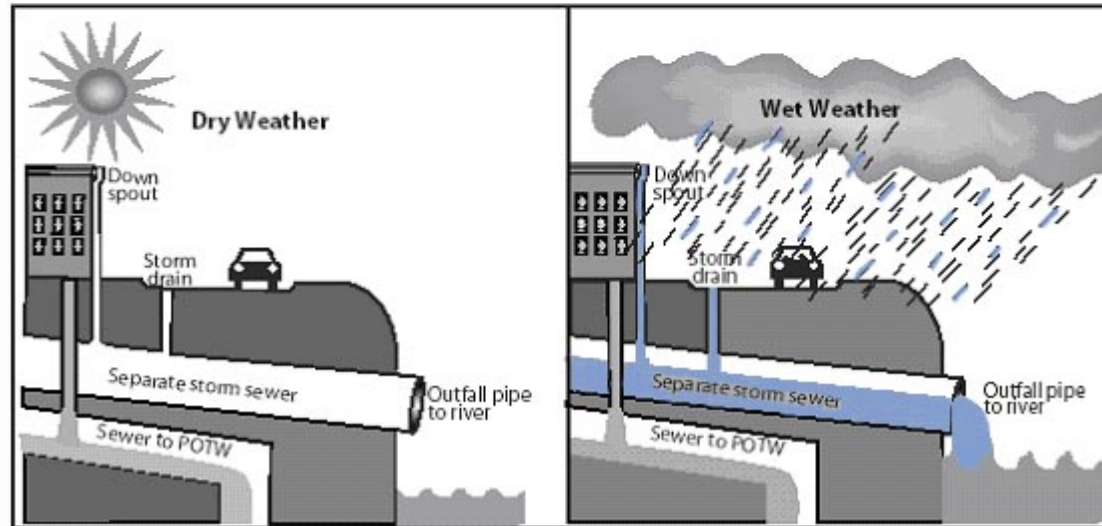
Watershed Management

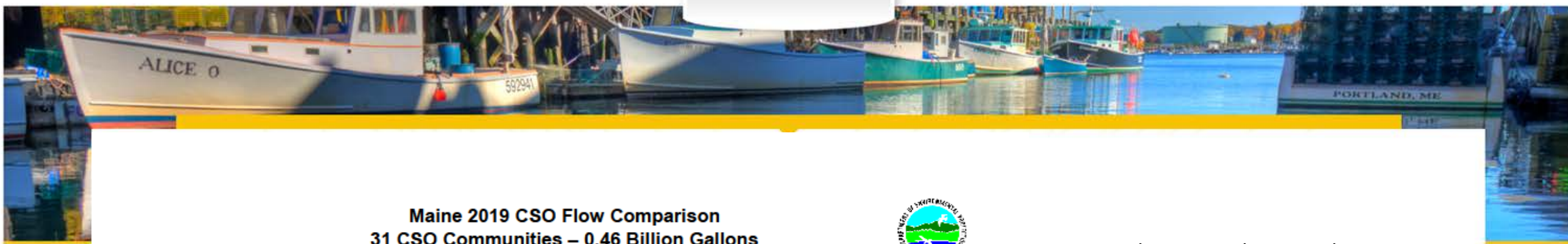
**COMBINED SEWER
OVERFLOW (CSO)
DRY VS WET WEATHER**

**SINGLE PIPE-
COMBINED SYSTEM**

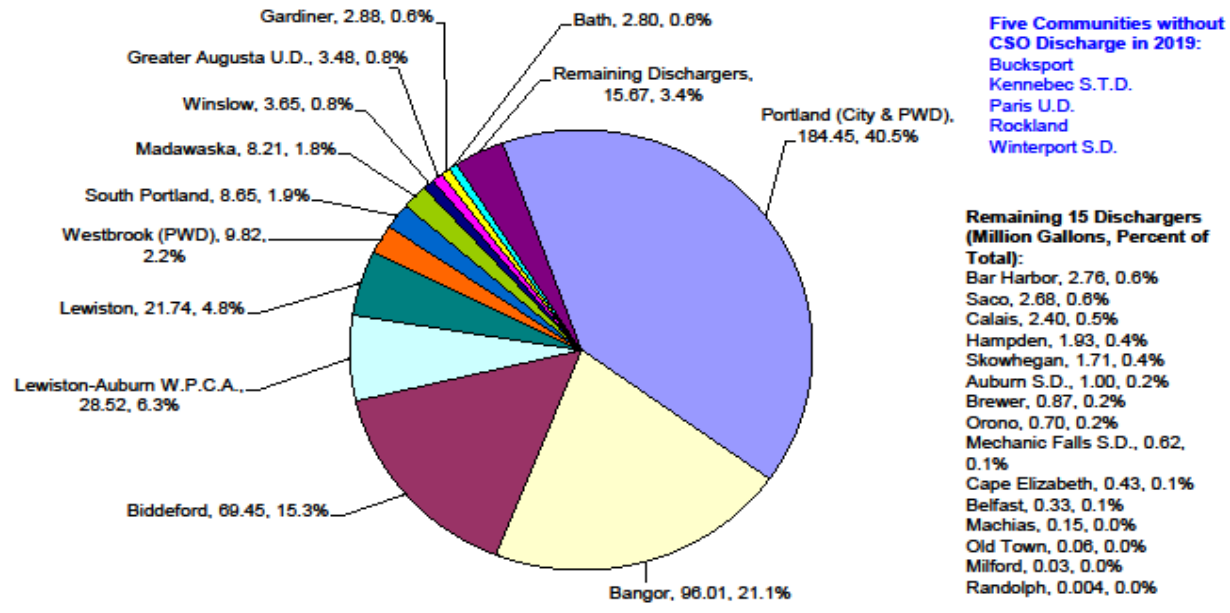


**SEPARATE SEWER
AND STORM DRAIN**





Maine 2019 CSO Flow Comparison 31 CSO Communities – 0.46 Billion Gallons



Five Communities without CSO Discharge in 2019:
 Bucksport
 Kennebec S.T.D.
 Paris U.D.
 Rockland
 Winterport S.D.

Remaining 15 Dischargers (Million Gallons, Percent of Total):
 Bar Harbor, 2.76, 0.6%
 Saco, 2.68, 0.6%
 Calais, 2.40, 0.5%
 Hampden, 1.93, 0.4%
 Skowhegan, 1.71, 0.4%
 Auburn S.D., 1.00, 0.2%
 Brewer, 0.87, 0.2%
 Orono, 0.70, 0.2%
 Mechanic Falls S.D., 0.62, 0.1%
 Cape Elizabeth, 0.43, 0.1%
 Belfast, 0.33, 0.1%
 Machias, 0.15, 0.0%
 Old Town, 0.06, 0.0%
 Milford, 0.03, 0.0%
 Randolph, 0.004, 0.0%

Discharger, Overflow in Million Gallons (MG), Percent of Total

Given the outsized impact that Portland’s CSO discharge contribution has on the State’s total discharge volume, it may be informative to exclude Portland’s data when examining Maine’s overall CSO abatement progress. From 2018 to 2019, Portland’s CSO discharge volume decreased by 35% from 283.6 MG to 184.5 MG. The overflow volume from the remaining thirty CSO Communities increased by 27.8% from 211.9 million gallons in 2018, to 270.9 million gallons in 2019.



CSO LOCATIONS AND VOLUMES

	YEARLY TOTAL PRECIP (INCHES)	YEARLY TOTAL CSO (GALLONS)
1966	40.0	719,800,000
1998	52.1	1,788,201,000
1999	33.3	740,737,000
2000	34.5	993,511,000
2001	29.5	807,157,162
2002	40.1	1,246,773,000
2003	40.7	454,680,000
2004	39.3	607,351,945
2005	66.2	1,296,310,464
2006	59.9	1,609,281,586
2007	41.6	589,203,712
2008	61.0	883,105,087
2009	61.0	872,751,281
2010	56.1	780,188,153
2011	56.2	496,288,000
2012	51.9	704,319,255
2013	43.6	191,949,901
2014	51.0	414,421,500
2015	39.8	254,663,330
2016	43.9	318,359,690
2017	40.3	175,675,000
2018	45.3	283,612,831
2019	50.9	184,453,600



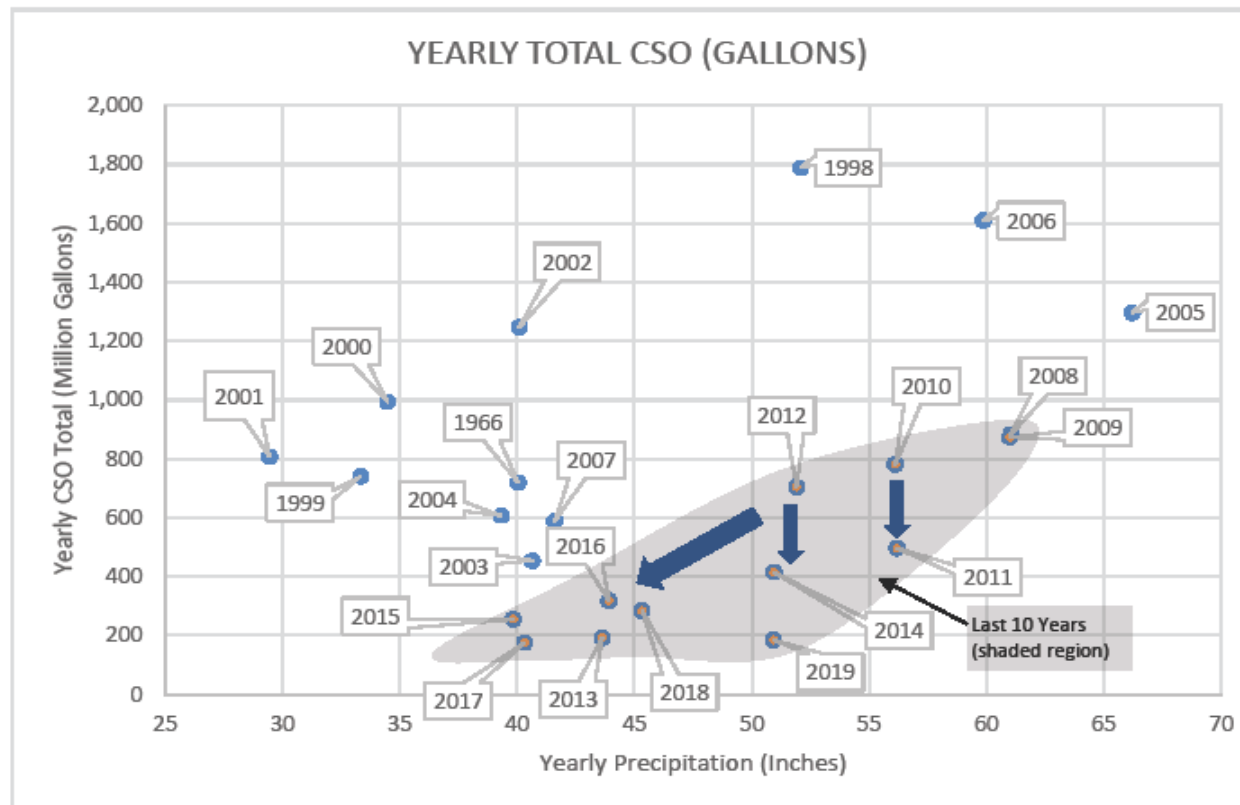
Legend

CSO_Outfalls Status

- Active
- Closed

HISTORIC CSO VOLUME VERSUS PRECIPITATION PORTLAND, MAINE

	YEARLY TOTAL PRECIP (INCHES)	YEARLY TOTAL CSO (GALLONS)
1966	40.0	719,800,000
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CSO HISTORIC ACTIVITY AND VOLUMES

RECEIVING WATER		BACK COVE															
	YEARLY TOTAL PREC.	RANDALL ST. (WASH AVE)	JOHANSEN STREET	OCEAN AVE EAST SIDE INT.	CLIFTON STREET	GEORGE STREET	MACKWORTH STREET	CODMAN STREET	VANNAH STREET	FOREST AVE AT BELMONT	FOREST AVE AT COYLE	DARTMOUTH AT BAXTER	BANK ST. BEDFORD ST.	PREBLE ST. AT MARGINAL	FRANKLIN ST. AT MARGINAL	ANDERSON AT FOX	OVERFLOW
YEAR	INCHES	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	NUMBER:	GALLONS
		CSO 005	CSO 006	CSO 007	CSO 008	CSO 009	CSO 010	CSO 011	CSO 012	CSO 013	CSO 014	CSO 015	CSO 016	CSO 017	CSO 018	CSO 019	
1966	40.04	100,000,000 13.90%	1,600,000 0.22%	100,000,000 13.90%	4,100,000 0.57%		8,200,000 1.14%	600,000 0.08%	26,000,000 3.61%	4,600,000 0.64%		400,000 0.06%	14,000,000 1.95%	110,000,000 15.29%	46,000,000 6.39%	200,000 0.03%	719,600,000 100%
1998	52.07	78,907,000 4.42%	3,531,000 0.20%	458,452,000 25.67%	3,111,000 0.17%	300,000 0.02%	86,456,000 4.84%	1,650,000 0.09%	69,000,000 3.86%	14,816,000 0.83%	230,000 0.01%	8,300,000 0.46%	44,393,000 2.49%	211,662,000 11.85%	79,886,000 4.47%	2,656,000 0.15%	1,786,114,000 100%
2015	39.84	7,081,000 2.78%	5,989,270 2.35%	13,400,000 5.26%	0	3,130 0.00%	7,075,000 2.78%	637,290 0.25%	3,011,500 1.18%	6,277,000 2.46%	834,100 0.33%	9,923,500 3.90%	3,328,600 1.31%	68,470,100 26.89%	29,870,600 11.73%	591,000 0.23%	254,663,330 100%
2016	43.92	6,897,000 2.17%	135,990 0.04%	12,373,000 3.89%			9,580,000 3.01%		4,125,000 1.30%	5,215,000 1.64%	360,000 0.11%	9,826,000 3.09%	3,363,000 1.06%	122,751,700 38.56%	34,240,000 10.76%		318,359,690 100%
2017	40.33	4,635,000 2.64%	42,000 0.02%	9,763,000 5.56%			17,971,000 10.23%		4,819,000 2.74%	3,293,000 1.87%	215,000 0.12%	5,249,000 2.99%	2,374,000 1.35%	66,693,000 37.96%	20,235,000 11.52%	209,000 0.12%	175,675,000 100%
2018	45.33	10,113,000 3.57%	22,000 0.01%	11,128,000 3.92%			47,704,000 16.82%		5,350,000 1.89%	3,743,000 1.32%	189,500 0.07%	8,102,400 2.86%	2,441,200 0.86%	107,433,000 37.88%	30,509,000 10.76%		283,612,831 100%
2019	50.94	8,609,000 4.67%	380,800 0.21%	16,630,000 9.02%			17,920,000 9.72%		7,014,000 3.80%	4,462,200 2.42%	94,500 0.05%	9,188,600 4.98%	1,864,600 1.01%	55,536,000 30.11%	17,567,000 9.52%		184,453,600 100%
						9.72%		11%				41%				76%	

PROJECT UPDATES WITHIN BACK COVE

SEWER SEPARATION PROJECTS COMPLETED RECENTLY

- Woodfords Corner/Woodford Street - 45.95 Acres separated
- Bedford Street - 39.11 Acres separated & includes Green Infrastructure
- USM Roundabout Sewer Separation – 15.81 Acres separated
- Preble Street – 36.5 Acres separated
- Madison-Washington-Walnut – 16.5 Acres separated

PROJECT UPDATES WITHIN BACK COVE

SEWER SEPARATION PROJECTS IN CONSTRUCTION

- Mackworth Street-Ocean Avenue-Walton Street- 127 Acres to be separated & includes Green Infrastructure - resulting in the closure of CSO 10
- Back Cove South Storage Facility – 3.5 MG storage tank
- Back Cove West Storage Conduit – 2.25 MG storage conduit
- Dartmouth Street – 55.73 Acres to be separated & includes Green Infrastructure
- Sewer Rehabilitation by CIPP

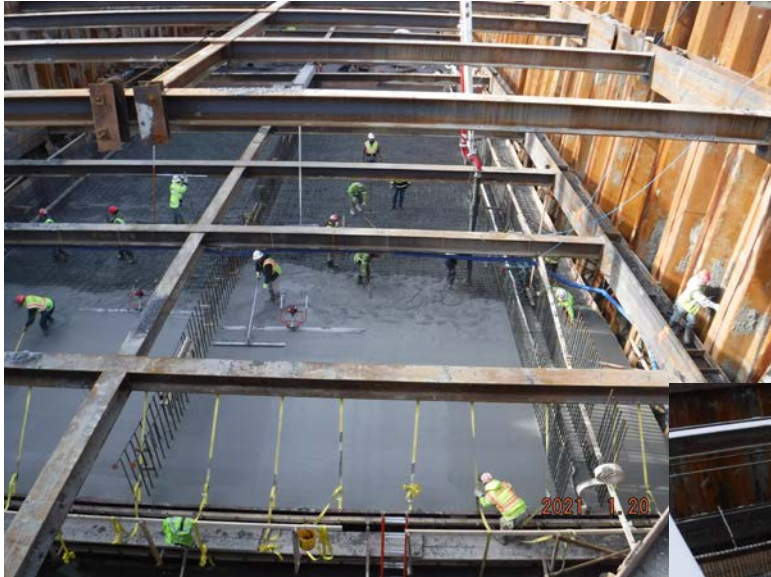
BACK COVE SOUTH STORAGE FACILITY



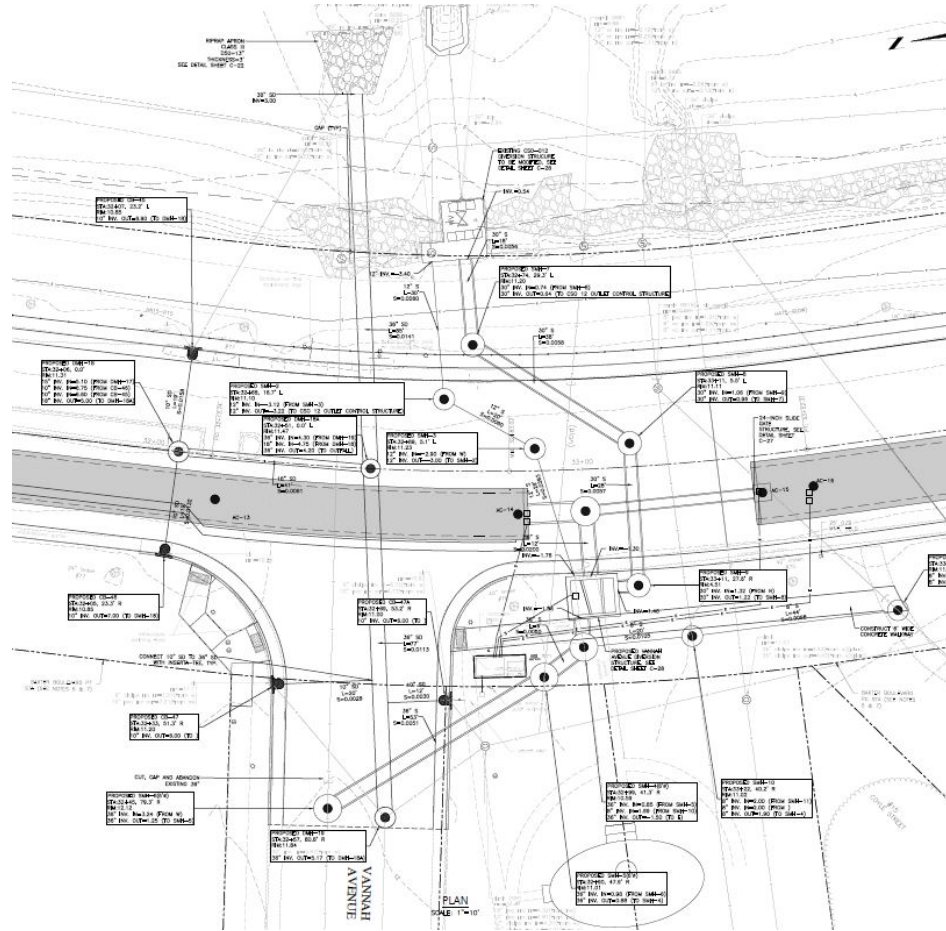
Back Cove South Storage Facility



Back Cove South Storage Facility



BACK COVE WEST STORAGE CONDUIT





MACKWORTH - OCEAN - WALTON SEWER SEPARATION



City of Portland, Maine
 Dept of Public Works
 2/22/2021

MACKWORTH LOCATION MAP



CSO SEPARATION PROJECT
 PHASE 1
 PORTLAND, ME



Forest Avenue



Mackworth Street

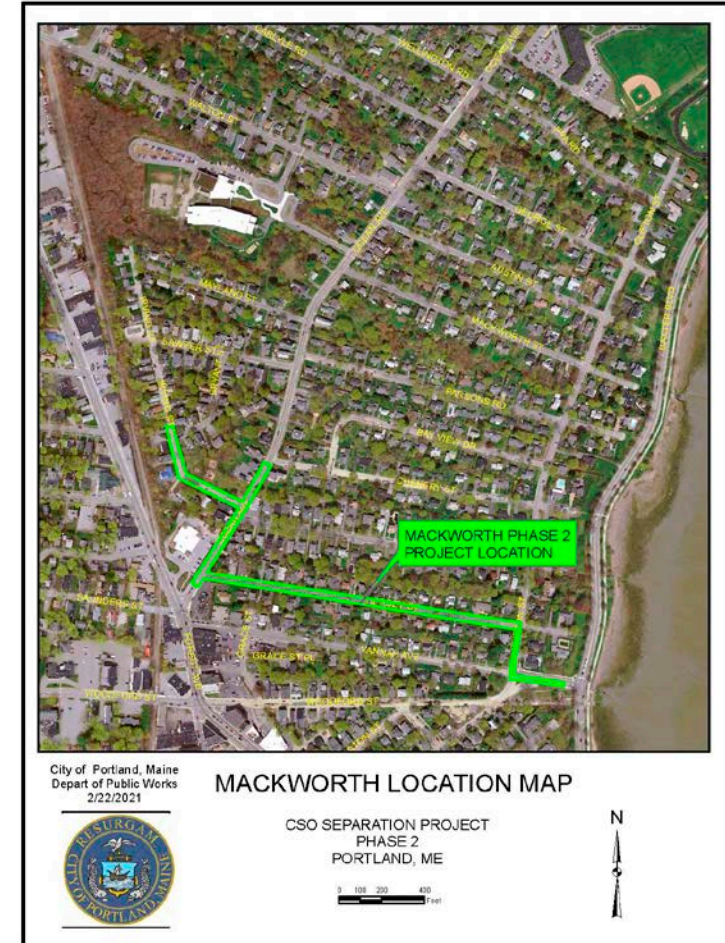




PROJECT UPDATES WITHIN BACK COVE

SEWER SEPARATION PROJECTS IN DESIGN

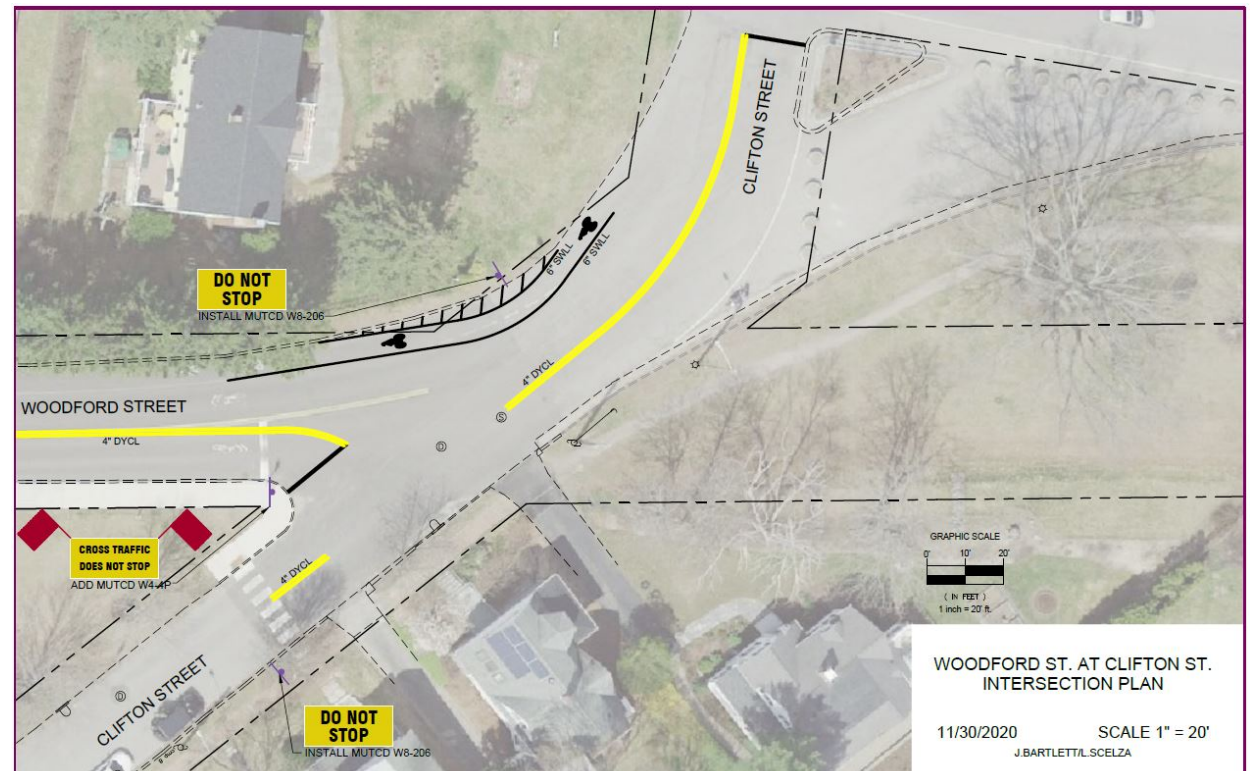
- Vanna- Hersey/ Codman to Irving
- Franklin Street – Marginal Way to Congress



PROJECT UPDATES WITHIN BACK COVE

TRANSPORTATION PROJECTS

- Vanna and Clifton Intersection Re-configuration
- Striping in Spring
- Funding for design/ construction





Thank You!

