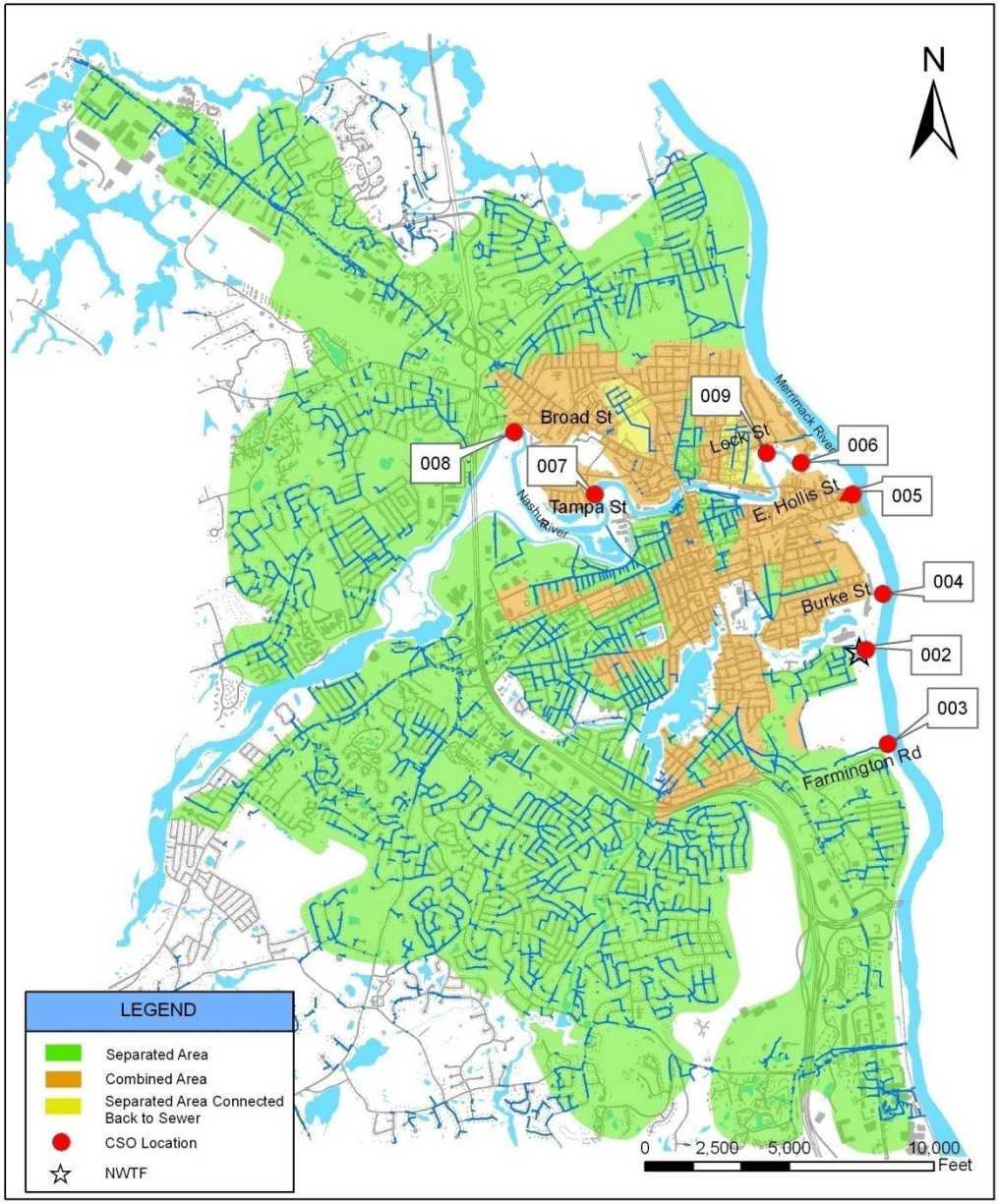
Major Wastewater Projects

- Combined Sewer Overflow (CSO) Mitigation
- Collection System Sewer Replacement
- Wastewater Treatment Plant Equipment Upgrades

Nashua Wastewater System

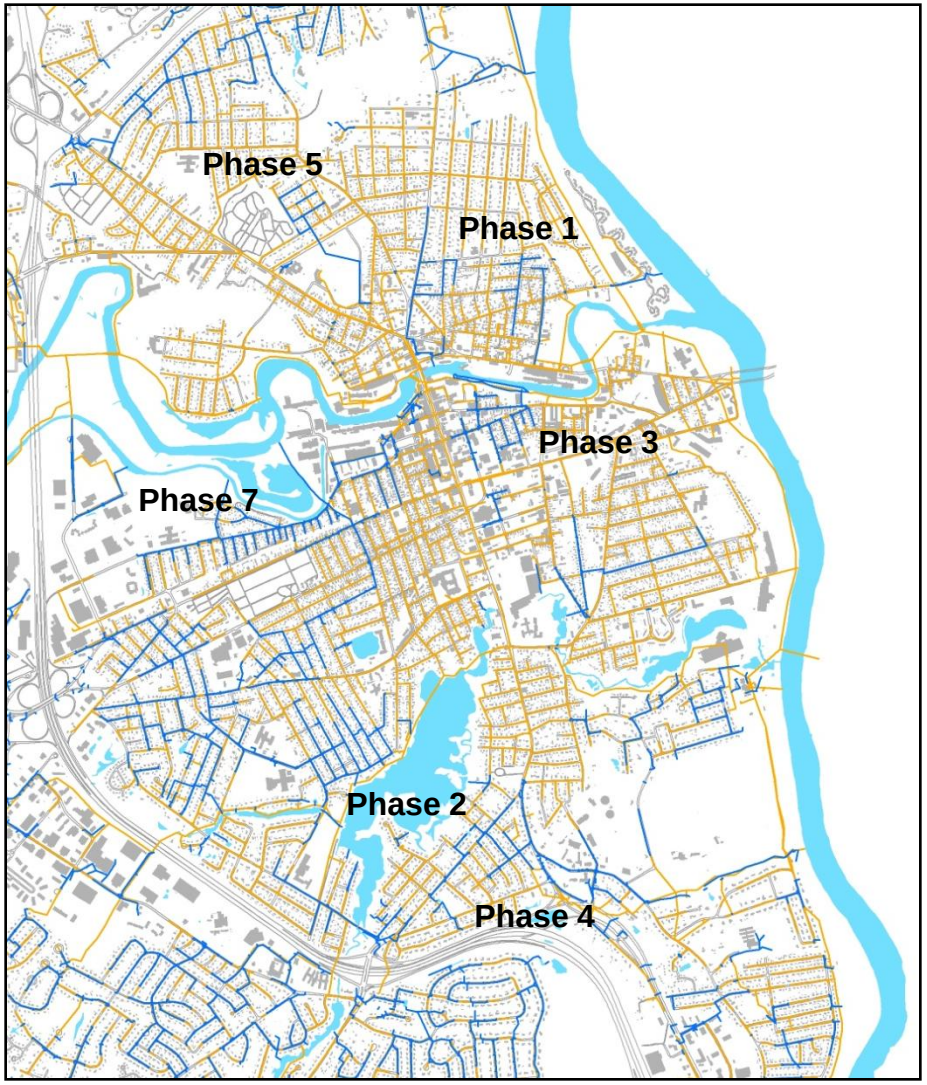
- Wastewater Treatment Plant – 50 Mil Gals/Day
- Wet Weather Treatment Facility – 60 Mil Gals/Day
- 190 miles separated sewers
- 100 miles combined sewers, 2,900 Acres
- 8 CSO Outfalls
- 13 sewage pump stations
- 130 miles storm drains



1999 EPA CSO Administrative Order: Complete Sewer Separation

- To separate 110 miles of combined sewers in 20 years – Est. $250 Million

Phase Completed	Project Name	Miles of separated sewers
Phase 1	French Hill	2.10
Phase 2	East Dunstable	2.16
Phase 3	Temple	1.55
Phase 4	Main/South Main	1.20
Phase 5	Sargents	1.08
Phase 7	Ledge	0.88
Total	**About $24.1 Million**	**8.97**



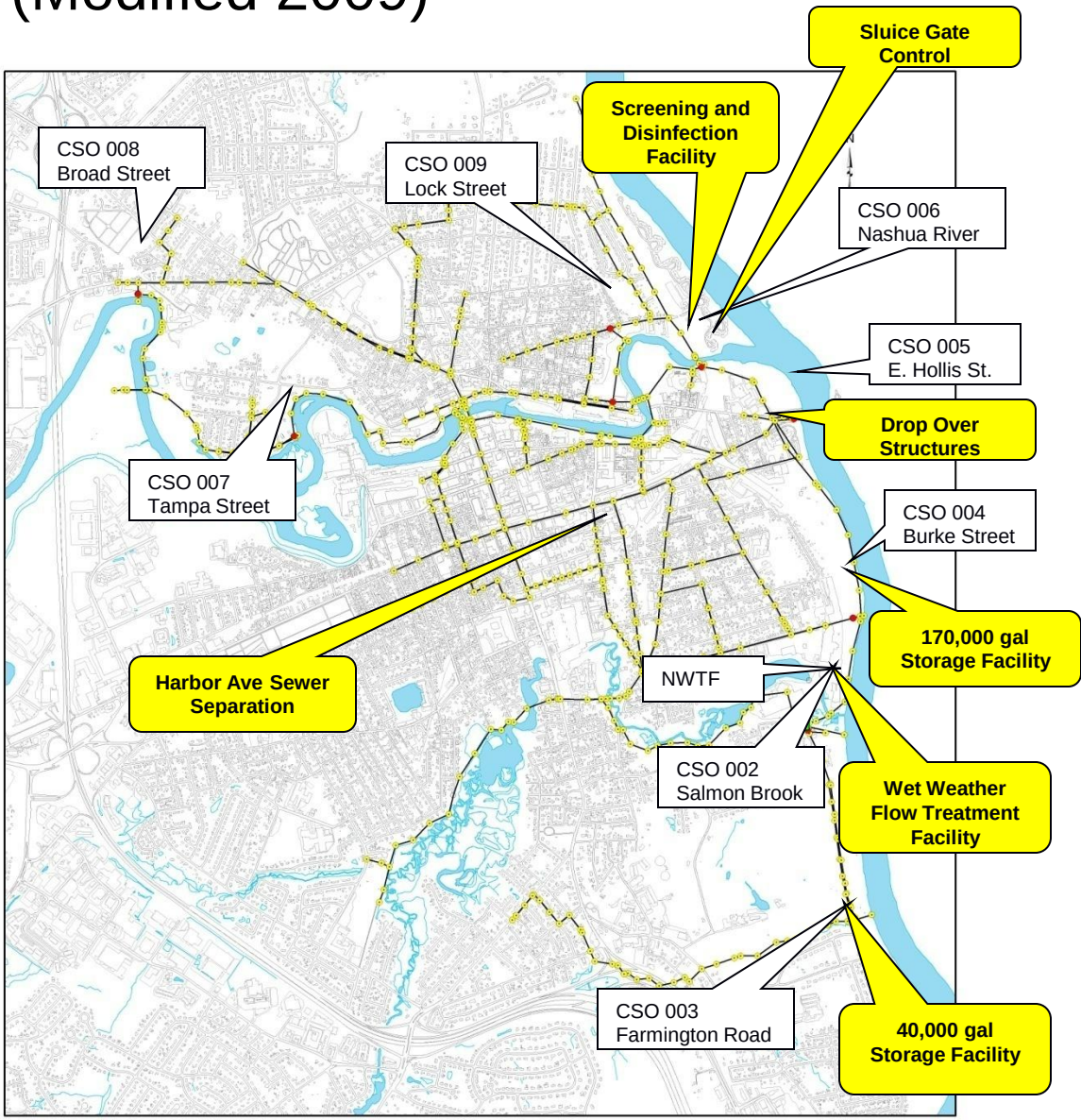
2005 EPA CSO Consent Decree,
(Modified 2009)

Major Projects:

1. Wet Weather Flow Treatment Facility 60 MGD
2. System Optimization of CSO Regulators
3. CSO 005 Drop Over Structures
4. CSO 006 Sluice Control
5. Harbor Ave Sewer Separation
6. Screening and Disinfection Facility 75 MGD

7a. 40,000 Gallon Storage Tank near CSO 003

7b. 170,000 Gallon Storage Tank near CSO 004



2005 EPA Consent Decree (Modified 2009)
Project Costs

	Project	Total Cost in $ Million	Percent Complete	Remaining Costs, in $ Million
1	Wet Weather Flow Treatment Facility 60 MGD	$32.37	100%	$0.05
2	System Optimization of CSO Regulators	$1.81	100%	$0
3	Drop Over Structures	$1.67	91%	$0.15
4	Sluice Control	$0.89	98%	$0.04
5	Harbor Ave Sewer Separation	$5.35	8%	$4.91
6	Screening and Disinfection Facility 75 MGD	$22.71	3%	$22.63
7	Storage Facilities	$5.76	5%	$5.44
8	Operational Projects - Monitor/Mtce Plans	$1.23	16%	$1.03
9	Inflow/Infiltration Removal Projects	$0.50	10%	$0.45
	Total	**$72.29**	48%	$34.70

Wet Weather Flow Treatment Facility

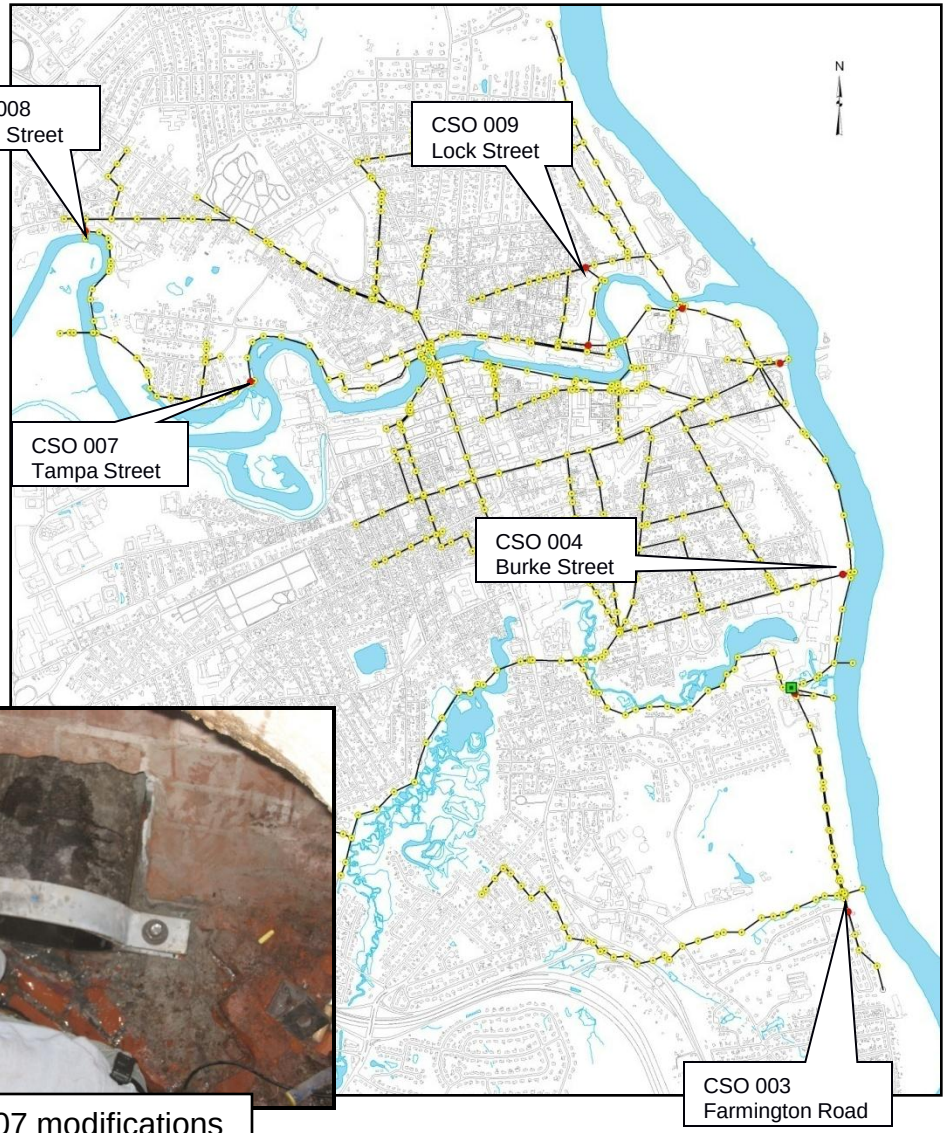
- To treat 60 MGD of wet weather flow in addition to 50 MGD at NWTF
- Put in service January 2009
- Total Project Cost $32.37 Mil

System Optimization of CSO Regulators

- To maximize use of existing interceptor storage and transport capacity
- Locations CSO 3, CSO 4, CSO 7, CSO 8, CSO 9
- Project Completed June 2009
- Total Project Cost $1.81 Mil

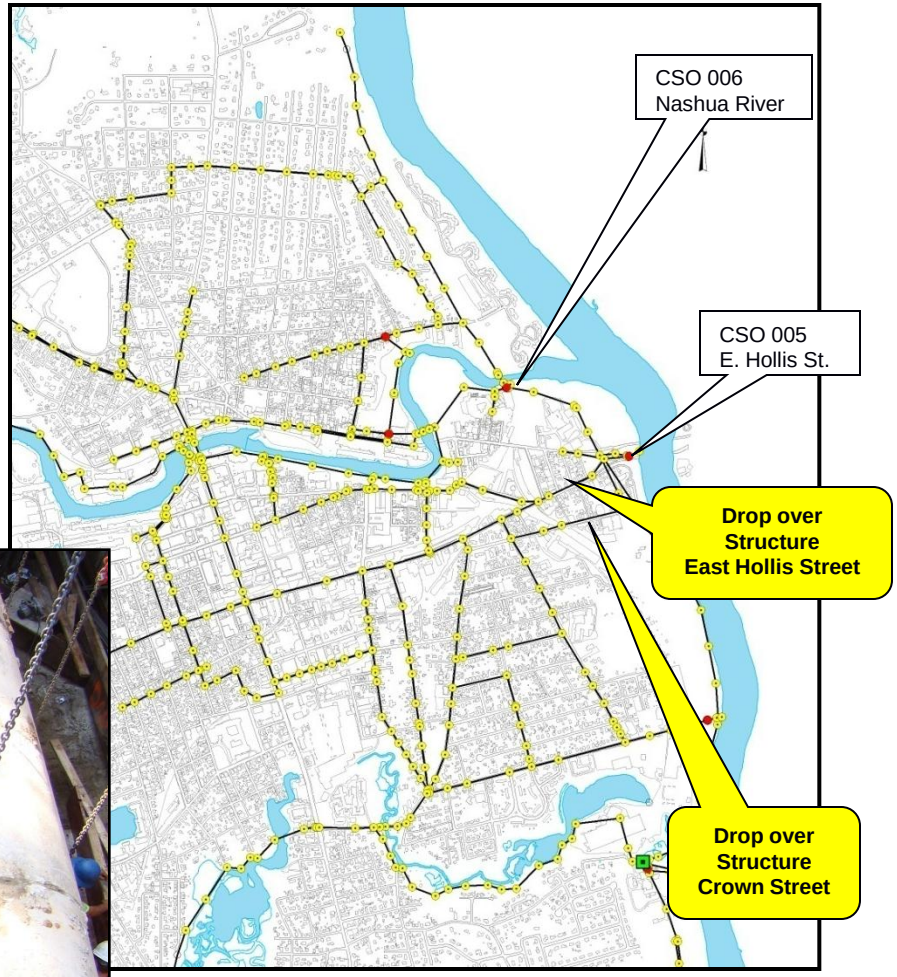
New weir wall CSO 008

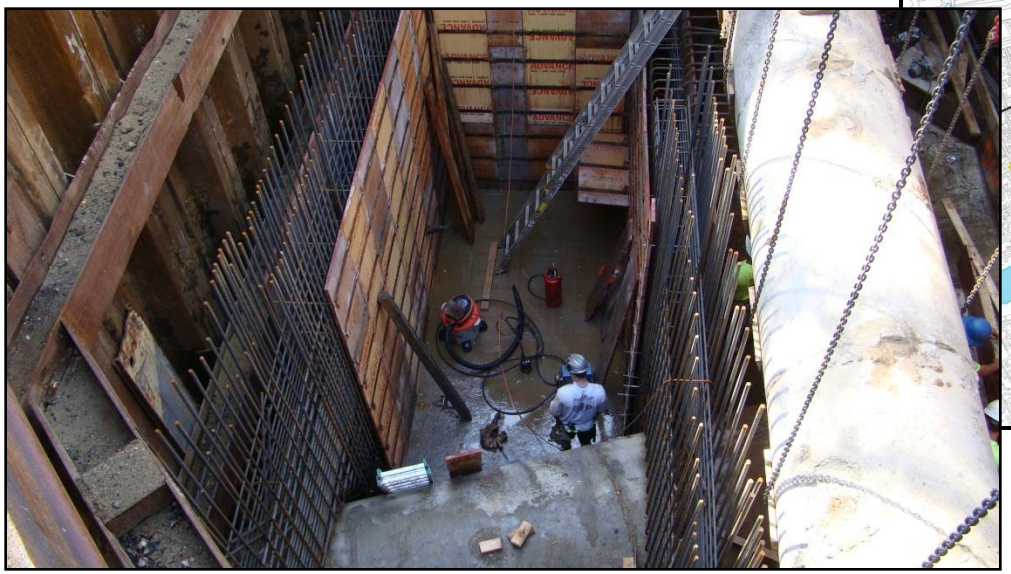
CSO 007 modifications



Drop Over Structures at CSO 005

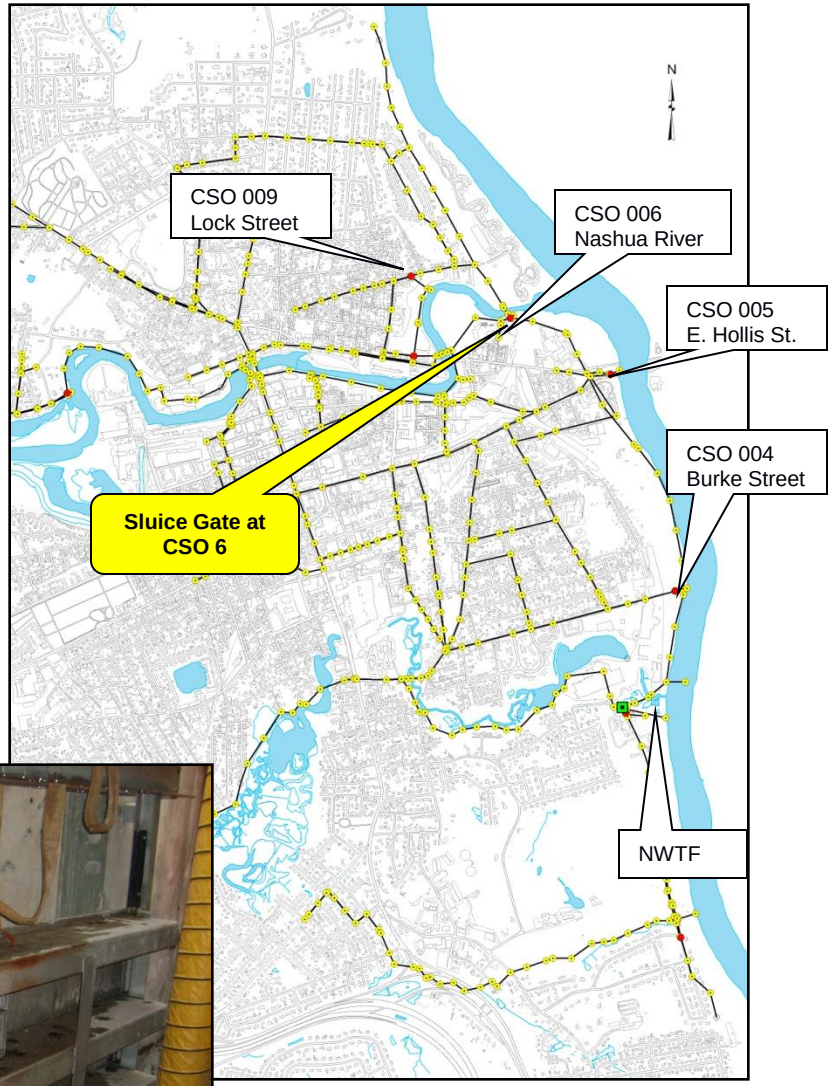
- To divert flow to the North Merrimack River Interceptor and to WWFTF
- Put in service December 2010
- Total Project Cost $1.67 Mil





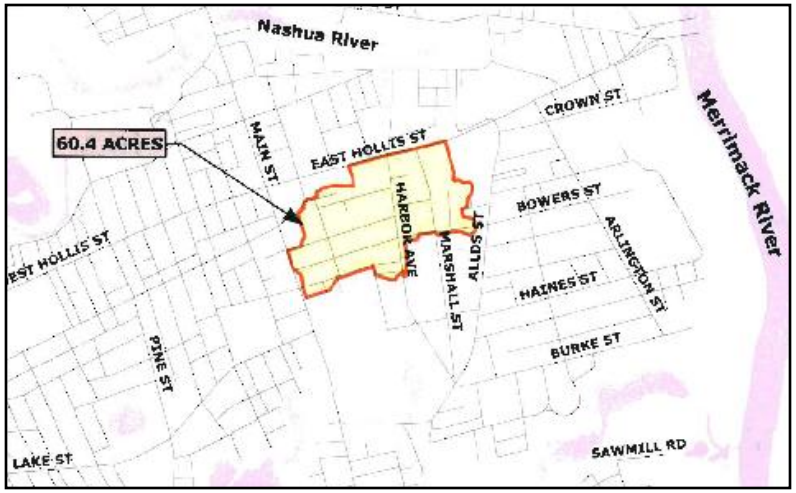
Sluice Gate Control at CSO 006

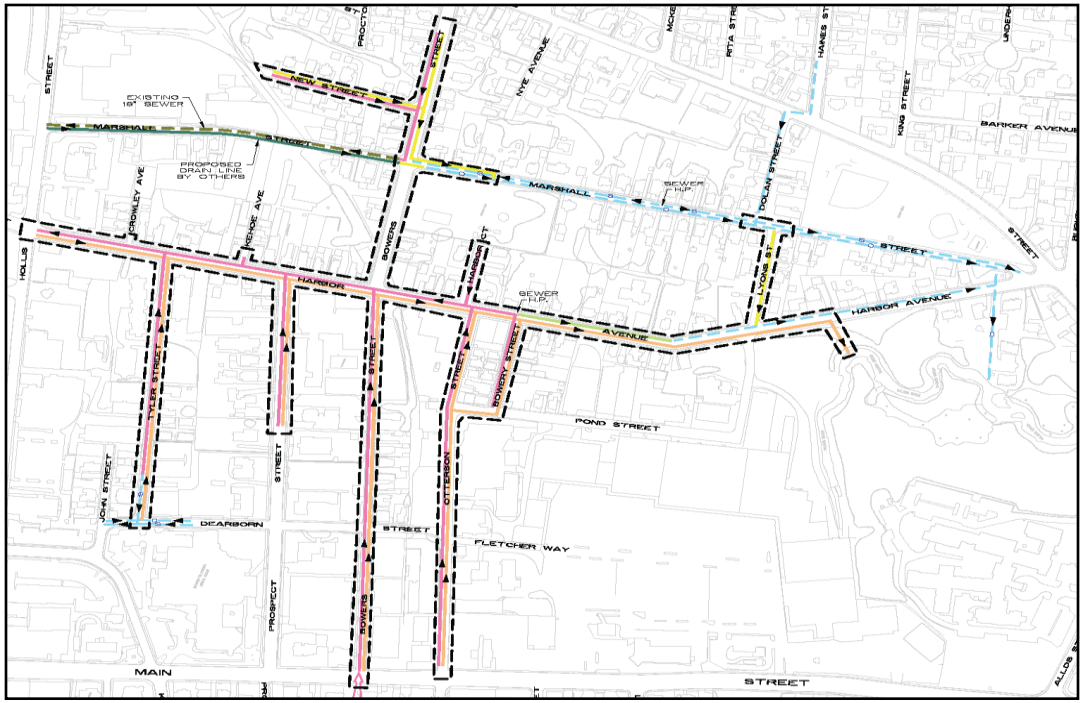
- To hold back wet weather flow in 108 inch interceptor and release for treatment
- Put in service November 2010
- Total Project Cost $0.89 Mil



Harbor Avenue area Sewer Separation

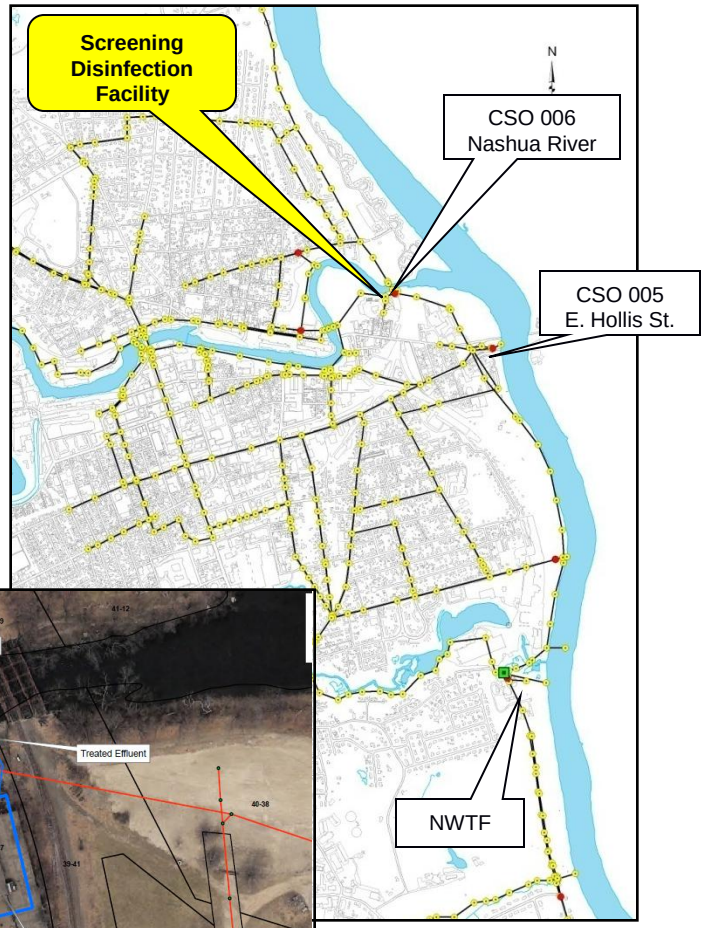
- Separation of 1.5 miles combined sewers, 60 acres
- Reduces Localized flooding and Basement Backups
- Design completed 2/2011
- Construction 5/2011 to 10/2012
- Total Project Cost $5.35 Mil

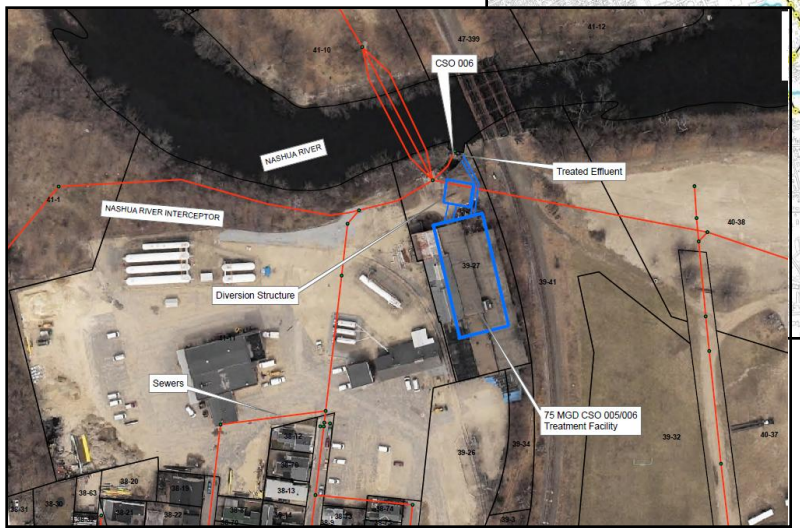




Screening & Disinfection Facility

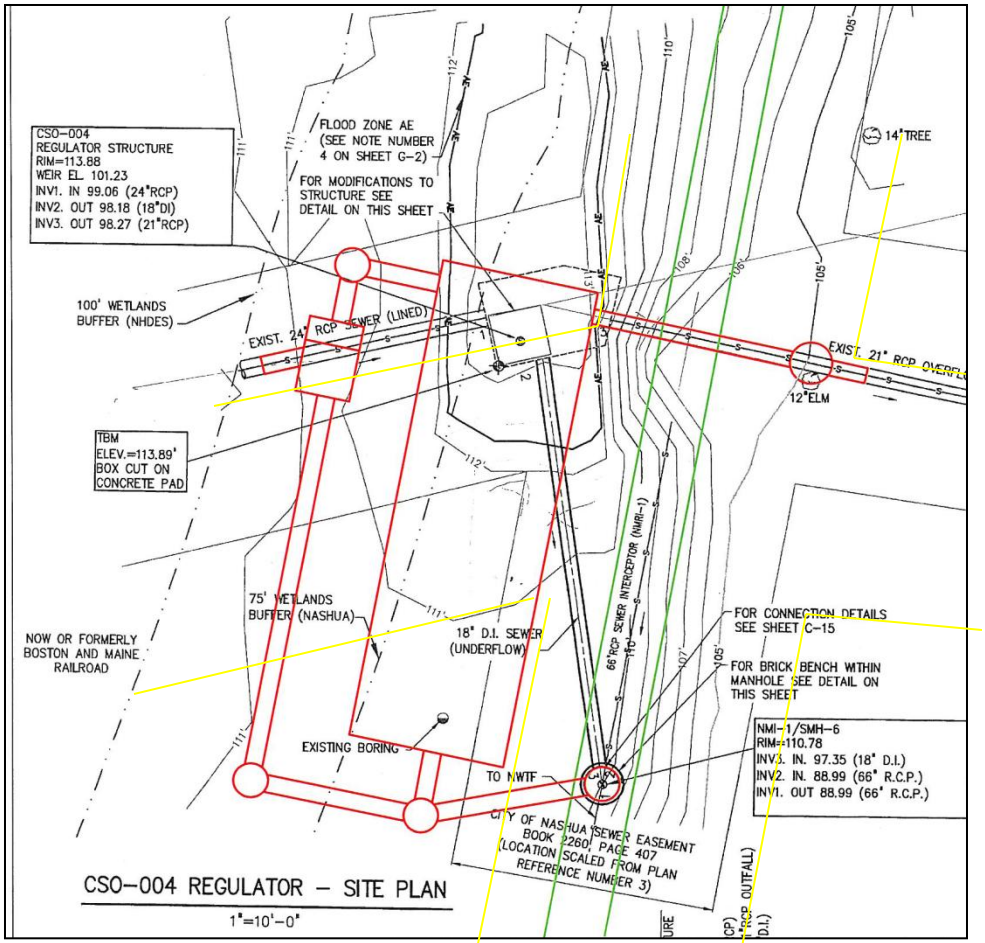
- To Treat 75 MGD peak flow
- Tank approx 130’x68’x20’ deep
- 17 Jackson St site selected
- Phase 2 Envir Site Assessment underway
- Design to begin 2/2012
- Construction 8/2013 to 8/2015
- Project Cost $22.71 Mil





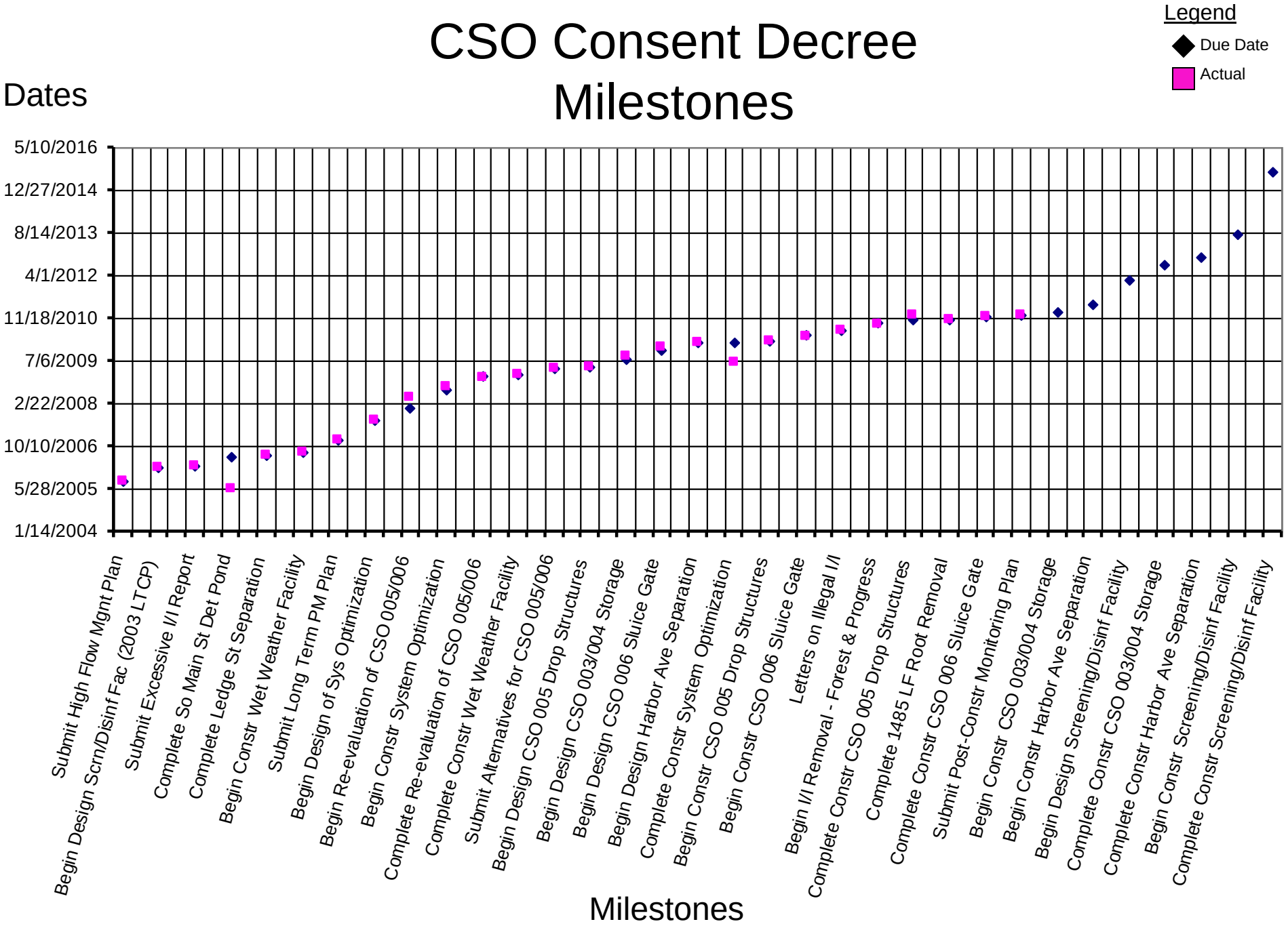
CSO Storage Facilities

- CSO 003 Tank no longer needed
- CSO 004 Tank design December 2010 suspended because of railroad issues
- Request to pursue alternative projects made to EPA
- Project Cost $5.76 Mil



- Credit for Haines Street Sewer Separation in 2009/2010 $1.5 Mil

CSO Consent Decree Milestones



Sewer Replacement Projects

Year	Length of Sewer	Cost
2006 – 2010	12,750 LF	Completed for Approx $3.3 Mil
Proposed Projects		
2011	6,400 LF	$1.56 Mil
2012	6,800 LF	$1.70 Mil
2013 to 2019	4,000 LF/YR	$1.26 Mil increasing 5% per year

Wastewater Plant Upgrades

Project	Year	Cost
Digester	2001	$10 Mil
Main Gate	2005	$0.1 Mil
Primary Clarifiers	2005-2007	$5.4 Mil
Grit Cycle Blowers	2007	$0.24 Mil
Net Metering	2010-2011	$0.50 Mil
Proposed Upgrades		
Aeration Blowers	2011-2013	$4.16 Mil
Dewatering Equipment	2011-2013	$5.57 Mil
Future Equipment Replacement	2011-2019	$14.51 Mil Total in 9 Years