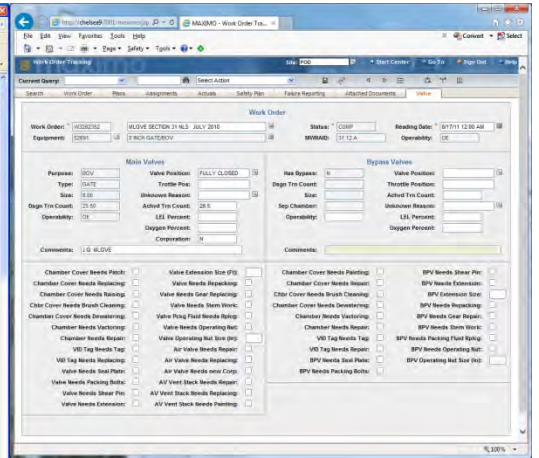
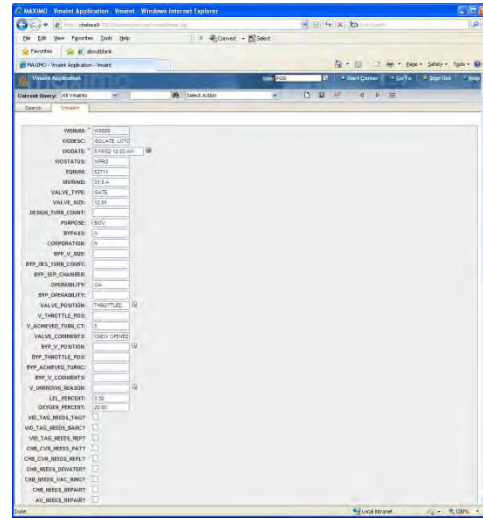




Massachusetts Water Resources Authority

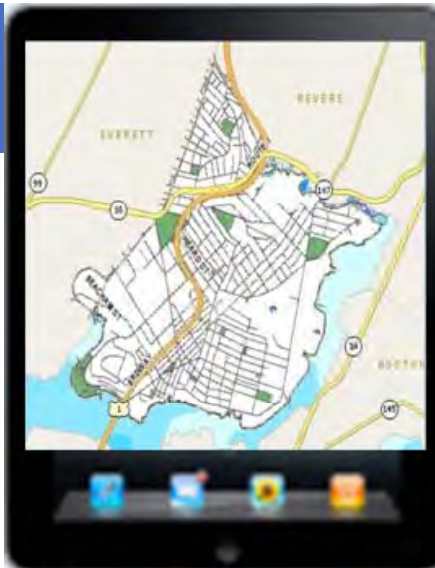
*Application Virtualization and
Mobile Device Management Design &
Implementation*

April 16, 2014



Route WCH: 50000002		Status: Valves		Revisions: 4/10/2014		Lead: Chris Miller	
EQU: 5178		90 INCH		WV: 50000002		Reading Value: 4/10/14	
Summary of Specifications - Main Valve							
Valve Purpose:	MAIN LINE	Valve Type:		BUTTERFLY	Valve Size:		60.00
Valve Design Turn Count:	177.00	Valve Last Achieved Turn:	174.00				
Equipment Specifications - Bypass Valve							
Has Bypass: N							
Has Separate Bypass Chamber: N							
By-Pass Valve Size: N/A							
By-Pass Design Turn Count: N/A							
Valve Conditions							
Main				Bypass			
Corrosion:	Acted Tr. Cor:	175	Openability:	Acted Tr. Cor:			
Reason/Unopen Op:	LEL%:		Reason/Unopen Op:	LEL%:			
Position:	Open/Pr:		Position:	Open/Pr:			
Throttle Position:		last good	Throttle Position:				
Main				BYP			
Chamber Cover Needs Aliphatic Painting:			Valve Extension Size:				
Chamber Cover Needs Resealing:			Valve Needs Repairing:				
Chamber Cover Needs To Be Reamed:			Valve Needs Gear Repair:				
Chamber Cover Needs Brush Cleaning:			Valve Needs Seal Work:				
Chamber Needs Dewatering:			Valve Needs Packing Flange Repair:				
Chamber Needs Venting:			Valve Needs Operating Nut:				
Chamber Needs Repair:			Operating Nut Size:				
V10 Tag Needs Tag:			Air Valve Needs Repair:				
V10 Tag Needs Repair:			Air Valve Needs Replacement:				
Valve Needs Seal Plate:			Air Valve Needs New Connection:				
Valve Needs Packing Bolts:			Air Valve Vent Stack Needs Repair:				
Valve Needs Shear Pin:			Air Valve Vent Stack Needs Rework:				
Valve Needs Extension:			Air Valve Vent Stack Needs Painting:				
Openability				Position			
(00) Operable/Closed	(01) Frozen/Closed	(1) Broken Actuator	(5) High LEL	(1) Broken Actuator	(2) Brush Cleaning		
(0A) Closed/Unopen	(02) Unknown Position	(2) Spun/ Cleaning	(6) Low Oxygen	(2) Brush Cleaning	(3) Car Parked		
(01) Partially Open/Unopen	(03) Stuck	(3) Oil Filled	(7) Flood Over				
(02) Present in Unknown Position	(04) Stuck Air Valve	(4) Fused in Area	(8) Other				
(03) Present Open	(05) Assemblies						





Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Watershed Permitting Program
Sanitary Sewer Overflow (SSO)/Bypass
 Notification Form

FOR DEP USE ONLY
 For Distribution Purposes

A. Reporting Facility

1. Facility Information
 Massachusetts Dept. Resource Protection Authority: MA0102164
 Reporting State Authority: #

2. Authorized Representative Transmitting Form:
 Richard Wozniak
 Position: District Environmental Mgr./Site
 Title: Richard Wozniak/Environmental Supervisor/MA0102164
 Last Name: Wozniak
 Telephone No.: 617-288-4339
 E-mail Address: rwozniak@dep.state.ma.us

B. Phone Notifications:

1. MassDEP staff contacted:
 Date/Time contacted: 6-7-2013 12:00 PM
 Date/Time EPA contacted: 6-7-2013 1:00 PM
 Date/Time Board of Health contacted: 6-7-2013 2:00 PM

2. EPA staff contacted:
 Date/Time EPA contacted: 6-7-2013 1:00 PM
 Date/Time Board of Health contacted: 6-7-2013 2:00 PM

3. Board of Health contacted:
 Date/Time contacted: 6-7-2013 2:00 PM

4. Others notified (select all that apply):
 Conservation Commission
 Harbormaster Shellfish Warden Division of Marine Fisheries
 Downstream Drinking Water Supplier Watershed Association
 Beach Resources Manager Other: (specify)

C. SSO Information

1. SSO Discovered:
 Date: 6-7-2013 Time: 12:30 PM

By: MSRA Staff

2. SSO Stopped:
 Date: 6-7-2013 Time: 1:30 PM

3. SSO Discharge from:
 Sanitary Sewer Manhole Pump Station
 Backup into Property Other: (see 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 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2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 211



100

Friday, March 7th 2014
 Hours worked by contract or team - 11:30 AM
 Weather as sunny 71°
 pm - sunny 27°

- MUCA Personnel J. Shee Lee
 T. Whiting 36 2246 pg. 69
- MUCA Operations T. Whiting 36 2246 pg. 69
 8:00am - LOTO of engine # - Start time in location of DOC re engine exhaust pipe
 11:30am - Work on Engine #1
- IPC Hydrom

1. Insps - Mike G.	1. put up truck
2. Drillers	1. Spray the scissor lift
1. millwright	1. take 6000 rpm motor
	1. Miller 302 welding machine
- 3a. Sys. Contractors
 2 electricians
- 3b. Atlantic Insulating
 2 insulators
- 3c. Baker Testing
 1 inspector

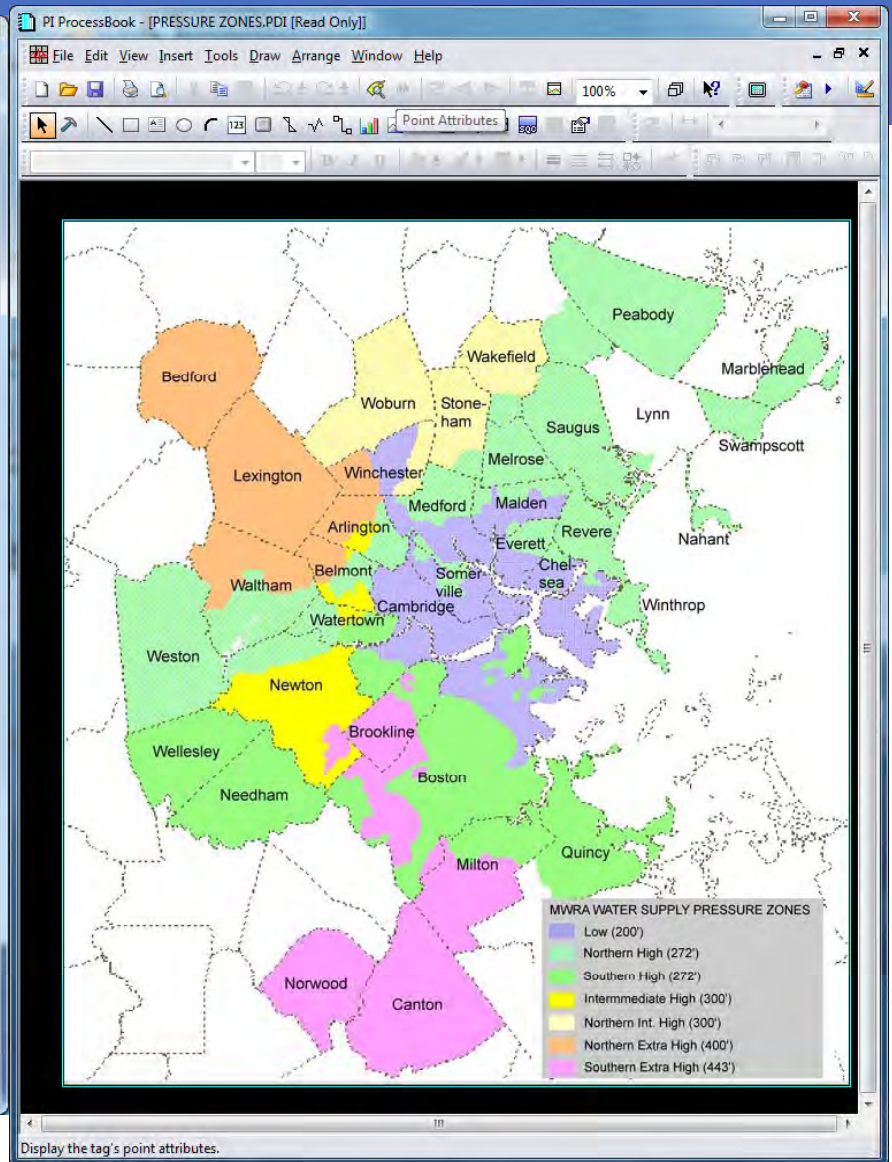
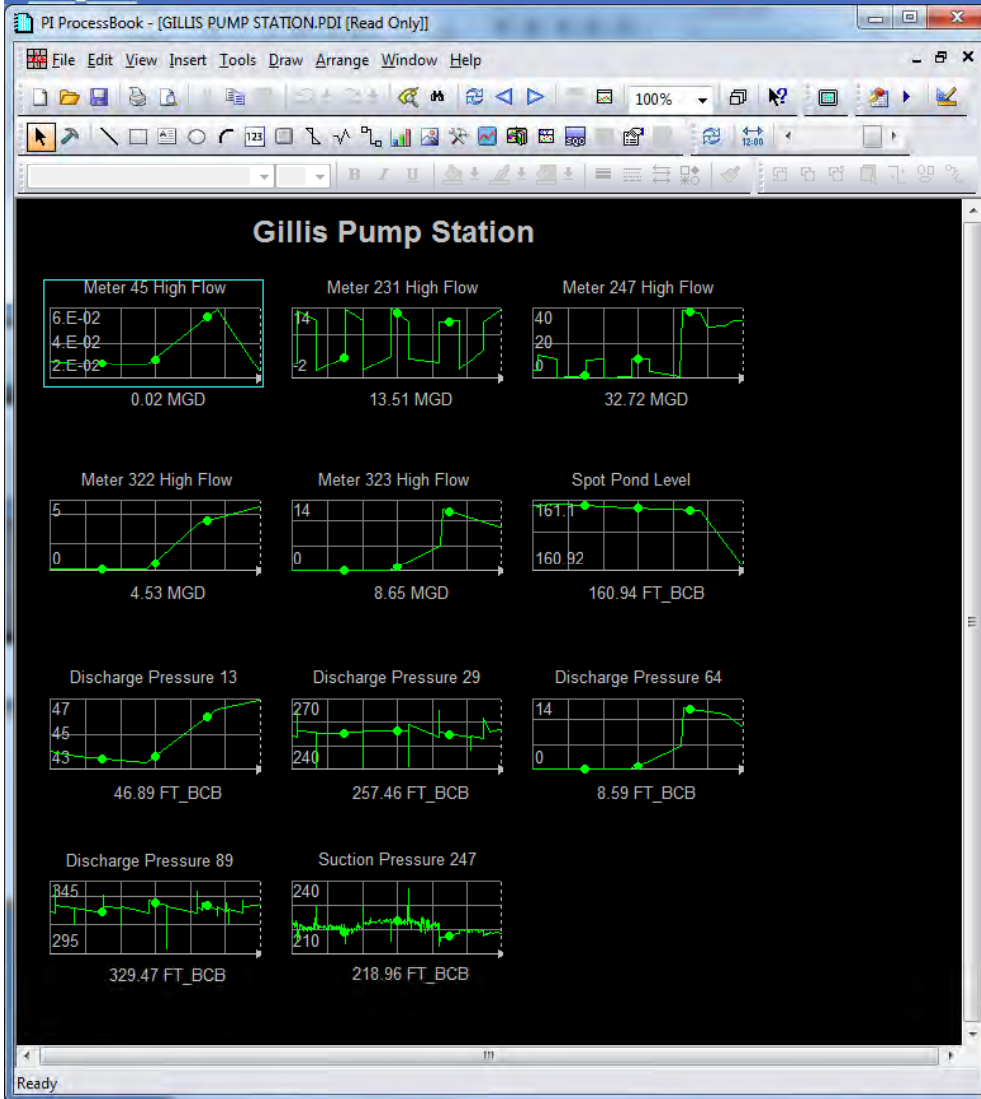
4. IPC Hydrom @ Drive Point
 - 8:00am IPC Hydrom removed internal components of Engine #4 diesel oxidation catalyst so that it is not damaged
 - MUCA stopped IPC Hydrom from putting shaft back
 - Completed installation of new diesel oxidation catalyst on Engine #1 exhaust piping and torqued bolts to 107 ft lbs.

4a. Systems Contractors @ Drive Point
 - Remove obstruction in Engine #4 water valves and new electric conduit so that there is no contact or conflict.

4b. Atlantic Insulating @ CT
 - Continue installing 4-in. calcium silicate insulation on Engine #3 exhaust piping from engine to DOC.

04.15.2014 11:13









Massachusetts Water Resources Authority

*2014 Update on
I/I Local Financial Assistance Program*

April 16, 2014



Infiltration/Inflow (I/I)



Infiltration



Inflow

Goal: Rehabilitation of local sewer systems and long-term reduction of I/I



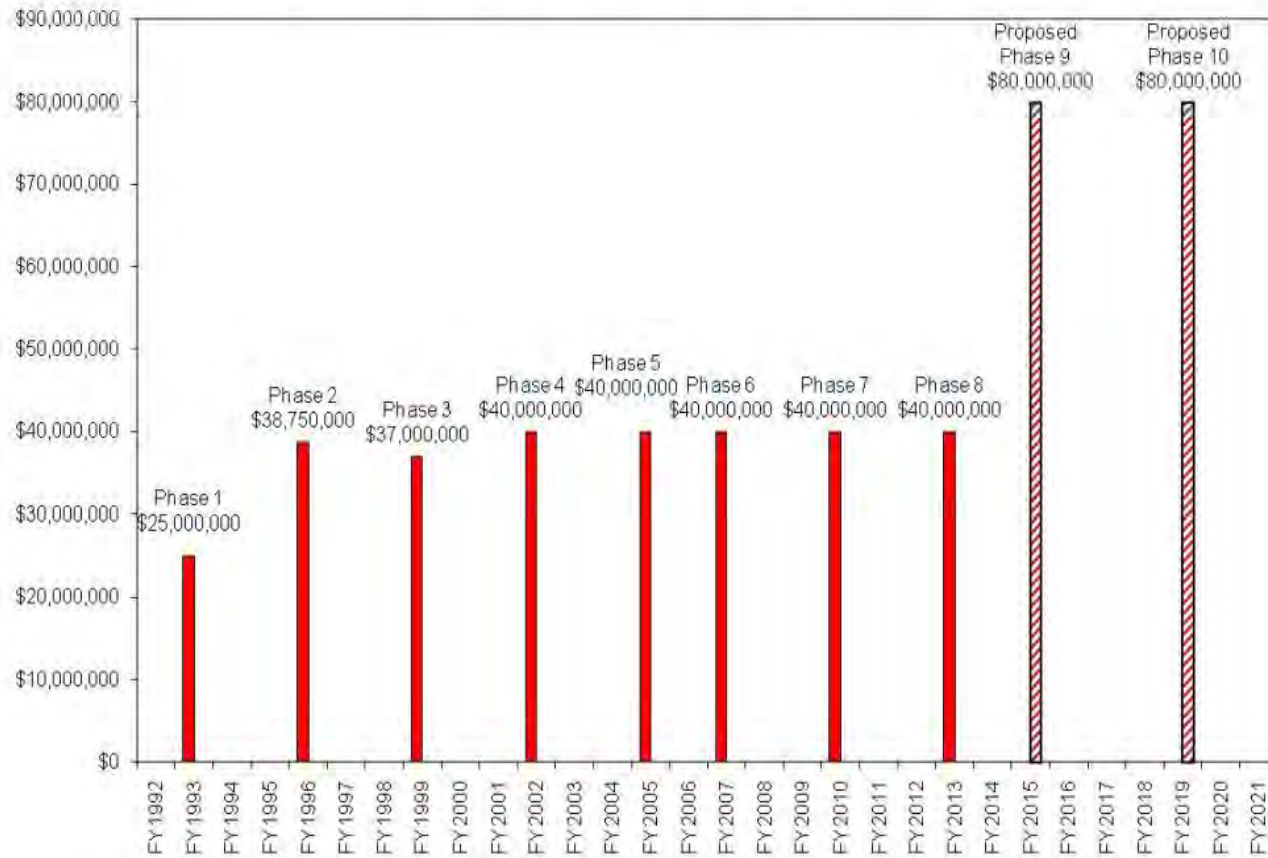
I/I Local Financial Assistance Program - Update

- \$300M approved for distribution (8 Phases)
- \$259M distributed over 21 years to fund 454 local sewer projects
- 45% grant / 55% interest-free, 5-year loan
- All 43 sewer communities participating
- All loans repaid to MWRA
- Currently 11 community with no funds remaining



Financial Assistance Program Phases

I/I Local Financial Assistance Program - Timing of Phase 1 through 8 Funds and Proposed Addition of Phases 9 and 10 at \$80 Million per Phase





Recommended Sunset Dates for Grant Portion

- Phase 6 - \$6.5M remaining
 - Sunset at end of FY18
- Phase 7 - \$12.0M remaining
 - Sunset at end of FY21

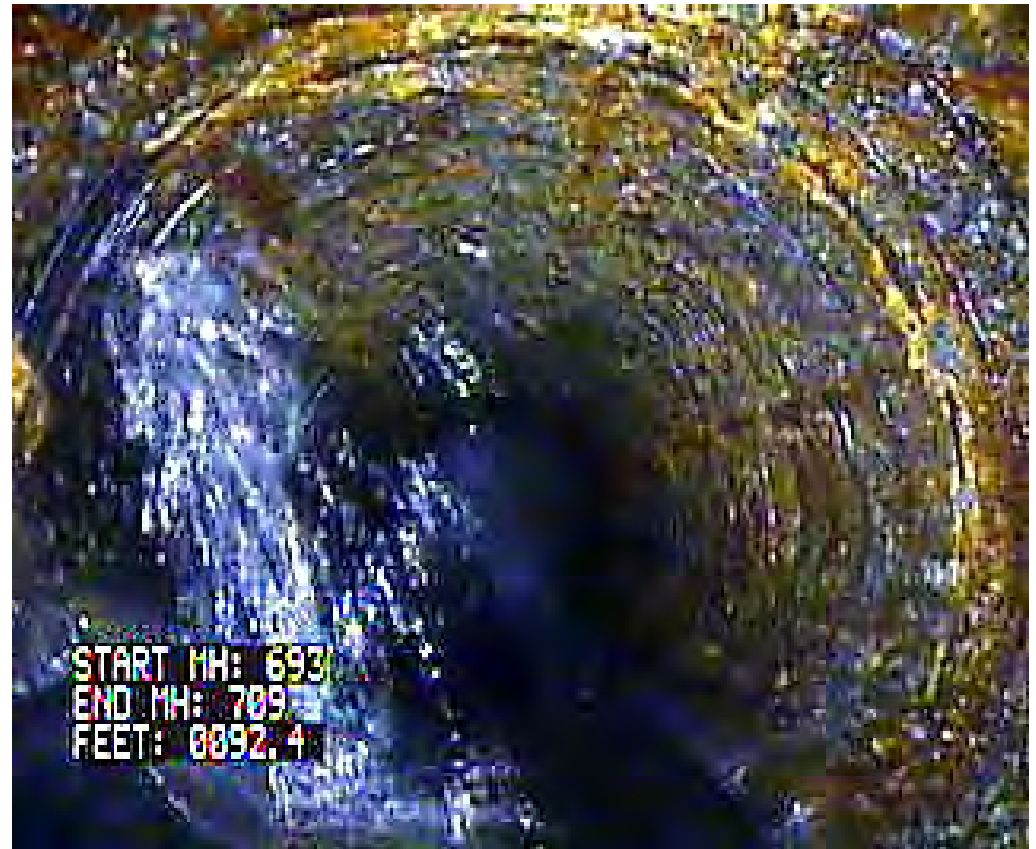


I/I Funding Results – Infiltration

- TV inspection of sewers and manholes
- Sewer replacement and spot repairs
- Cured-in-place pipe (CIPP) liners
- Manhole rehabilitation
- Service lateral repairs



Weymouth TV Inspection





Weymouth Cured-In-Place Pipe Spot Repair





Weymouth Manhole Rehabilitation



H₂S Deterioration of Manhole



Cementitious
Liner Applied





Norwood Sewer Rehabilitation

Cured-in-Place Pipe Installation



Sewer Spot Repair and New Manhole



Quincy Sewer Repair





I/I Funding Results – Inflow

- Smoke testing of sewers
- House-to-house inspection for sump pumps/downspouts
- Redirection of storm drains, area drains, sump pumps, downspouts
- Inspection and rehabilitation of manholes in wetlands and marshes



Arlington Smoke Testing

Catch Basin and Service
Connection Cleanout Direct
Connection to Sewer





Newton Smoke Testing



Downspout Direct Connection to Sewer

Catch Basin Direct Connection to Sewer





Burlington Identification of Sump Pump Sewer Connections





Boston Private Inflow Identification



Sump Pump Direct Connection to Sewer



Downspout Direct Connection to Sewer



Quincy Manhole Rehabilitated in Salt Marsh





Wakefield Inflow into Manhole in Wetland





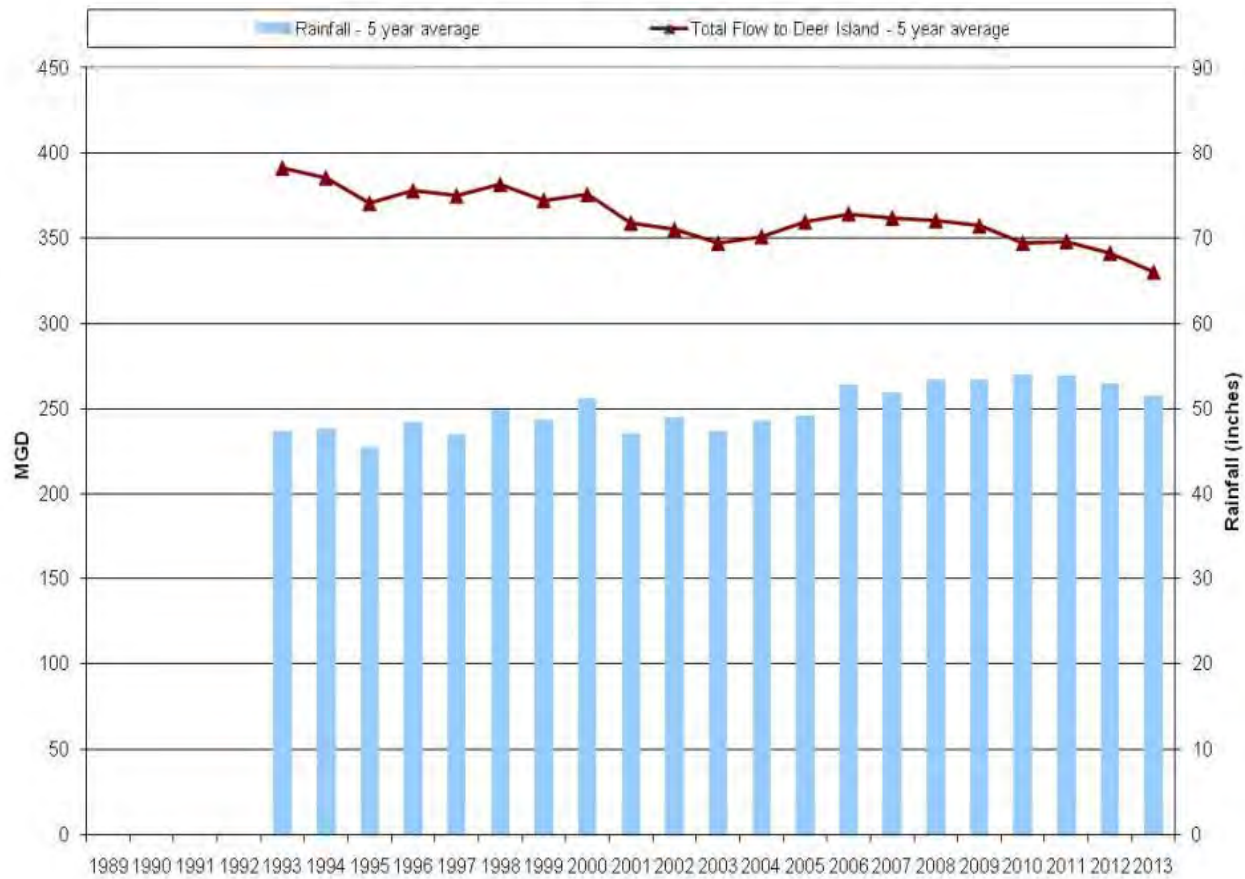
Wakefield Inflow into Manhole in Wetland





MWRA Long-Term Flow Data (5-year running average)

MWRA Long-Term Regional Flow Data
5-year Running Averages
5 year running NOAA Rainfall Average at Logan Airport







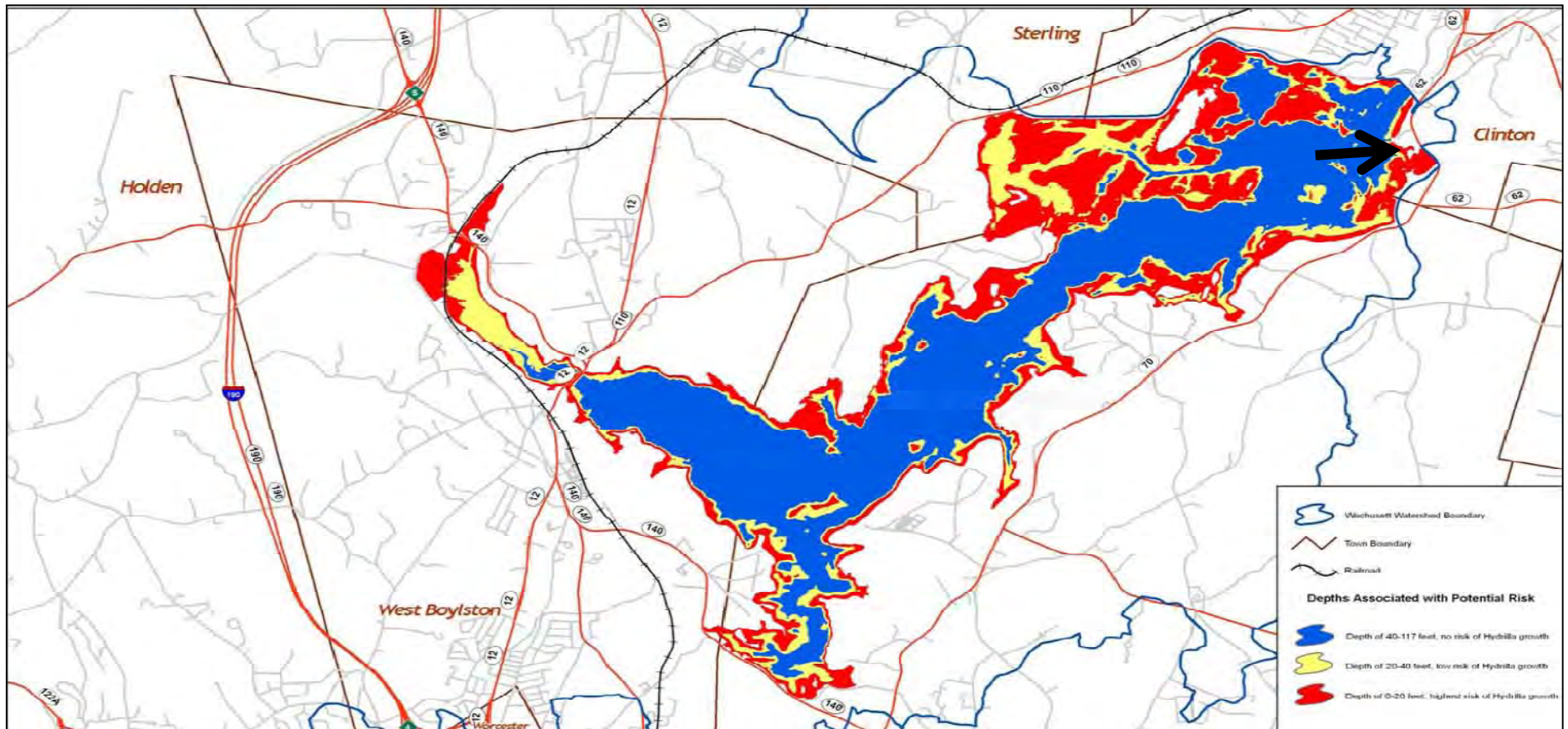
Massachusetts Water Resources Authority

*Update on Invasive Aquatic Plant Management
at Wachusett Reservoir*

April 16, 2014

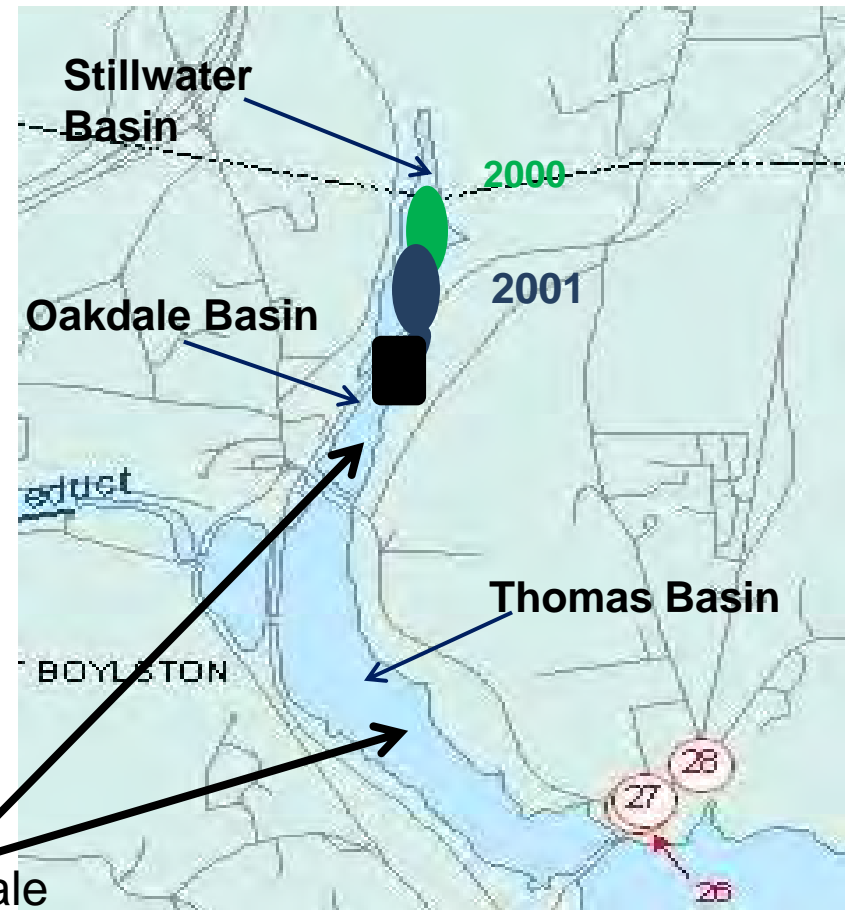
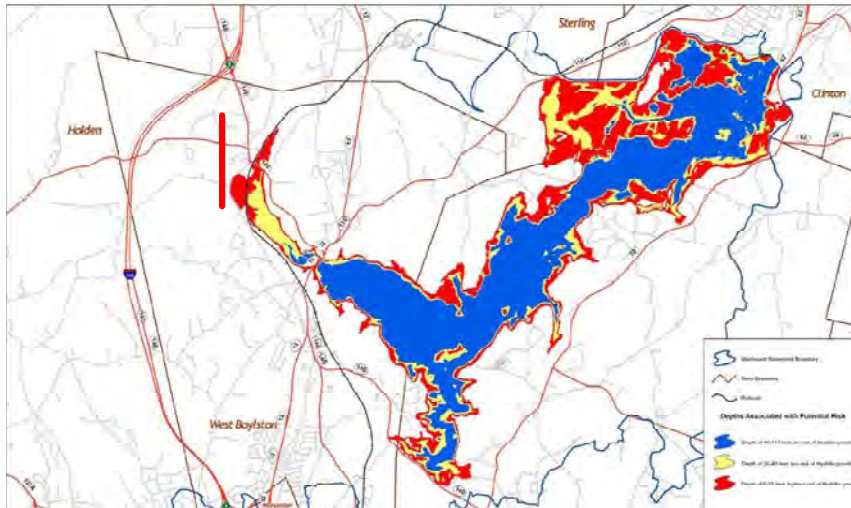


Wachusett Reservoir Is A High Risk For New Invasives





Control Efforts Underway At Wachusett Reservoir Since 2002



2002 – vegetation survey

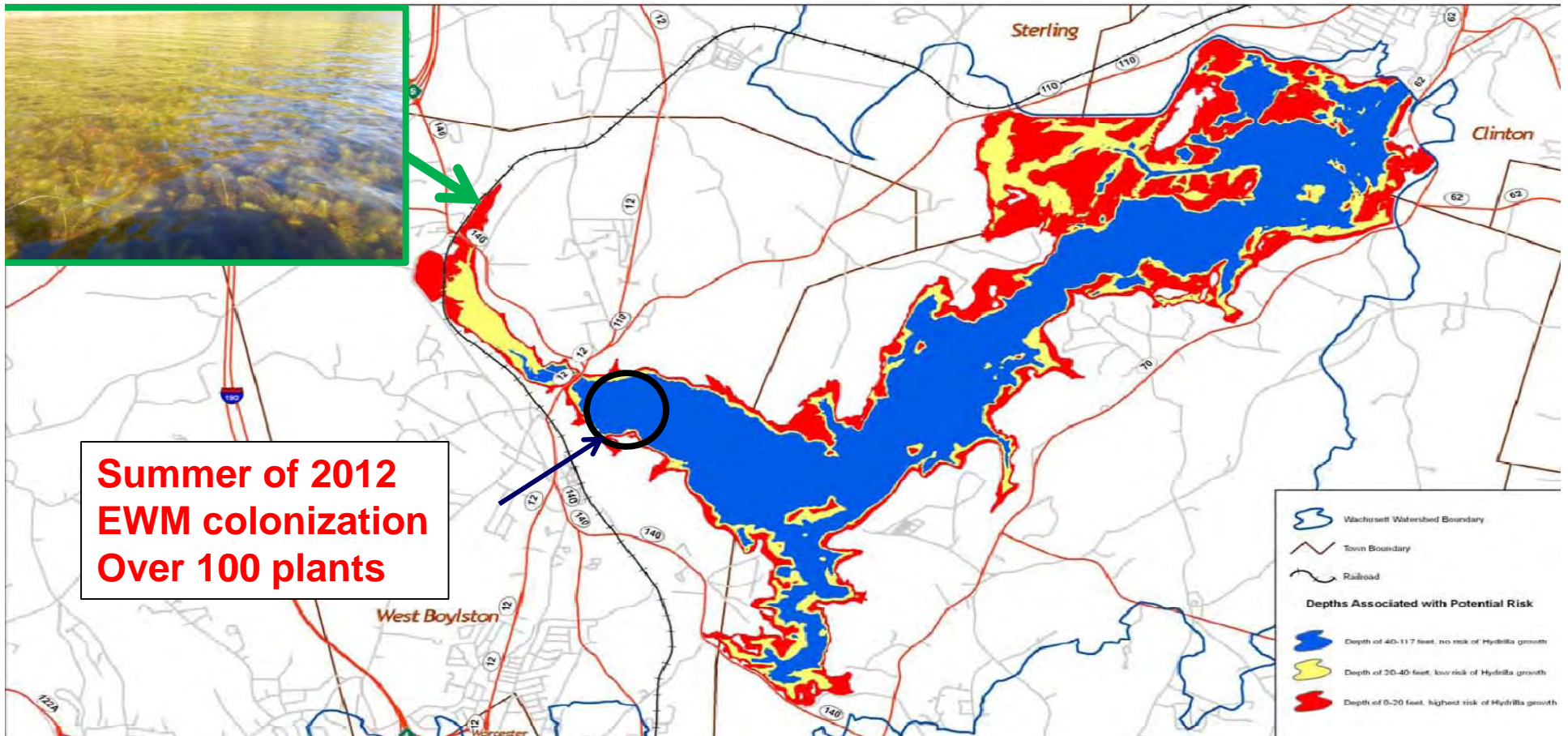
Benthic Barriers = 2 acres

And floating barriers

Hand-pulling of scattered plants in Oakdale
and Thomas Basin



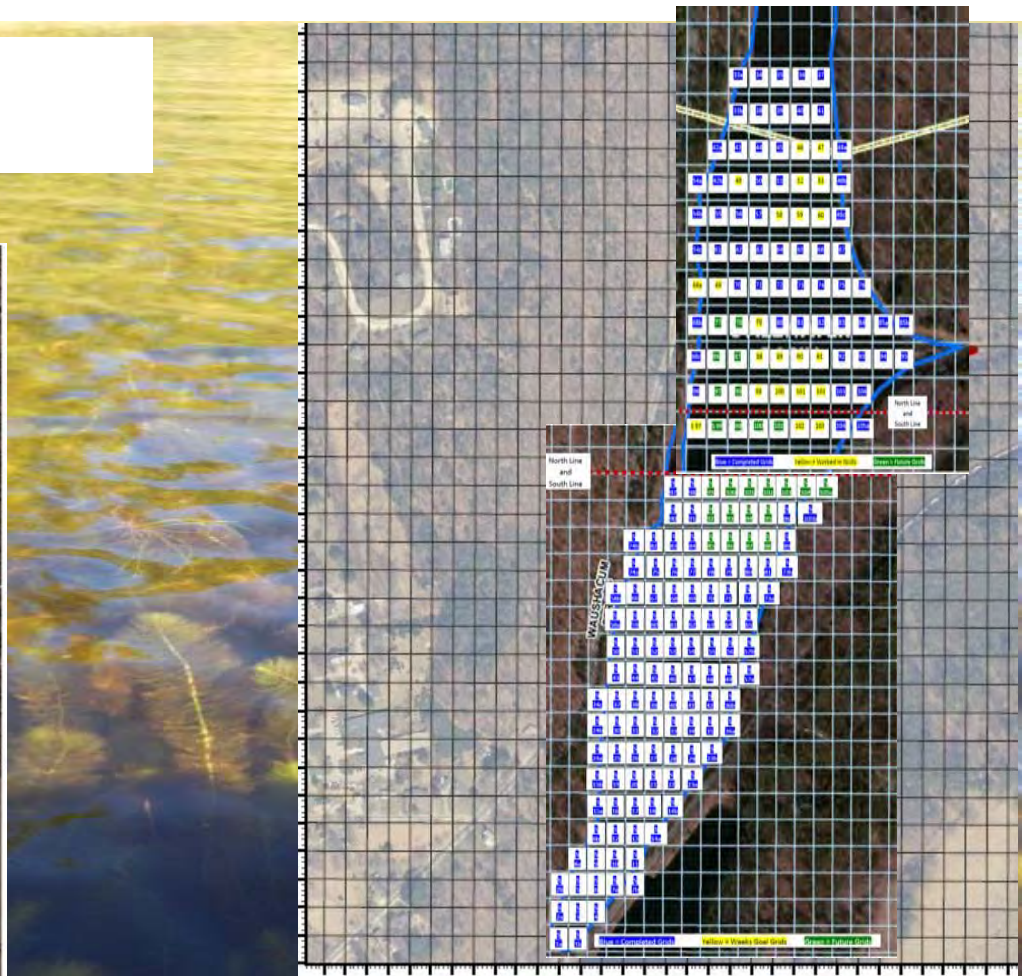
Wachusett Reservoir Is A High Risk For New Invasives





Stillwater Basin – Return To The Source Of The Problem

Stillwater Basin = 37.5 acres
Max depth = 17.5 ft. / ave. depth 8 ft.





Three DASH Boats Operating In Stillwater Basin



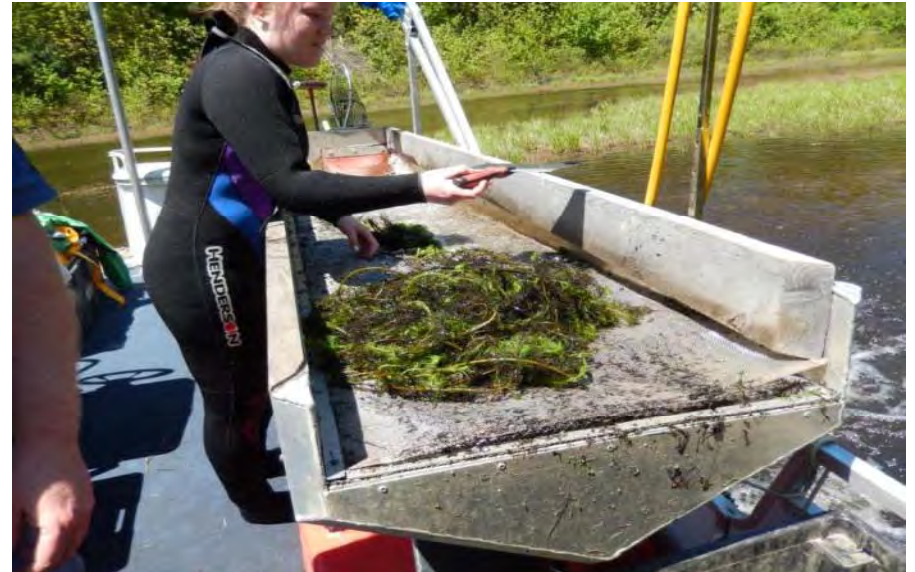


Divers Deploying Suction Hose





Suction Harvested Plants Collected Aboard DASH Boats





Underwater Views – Before And After



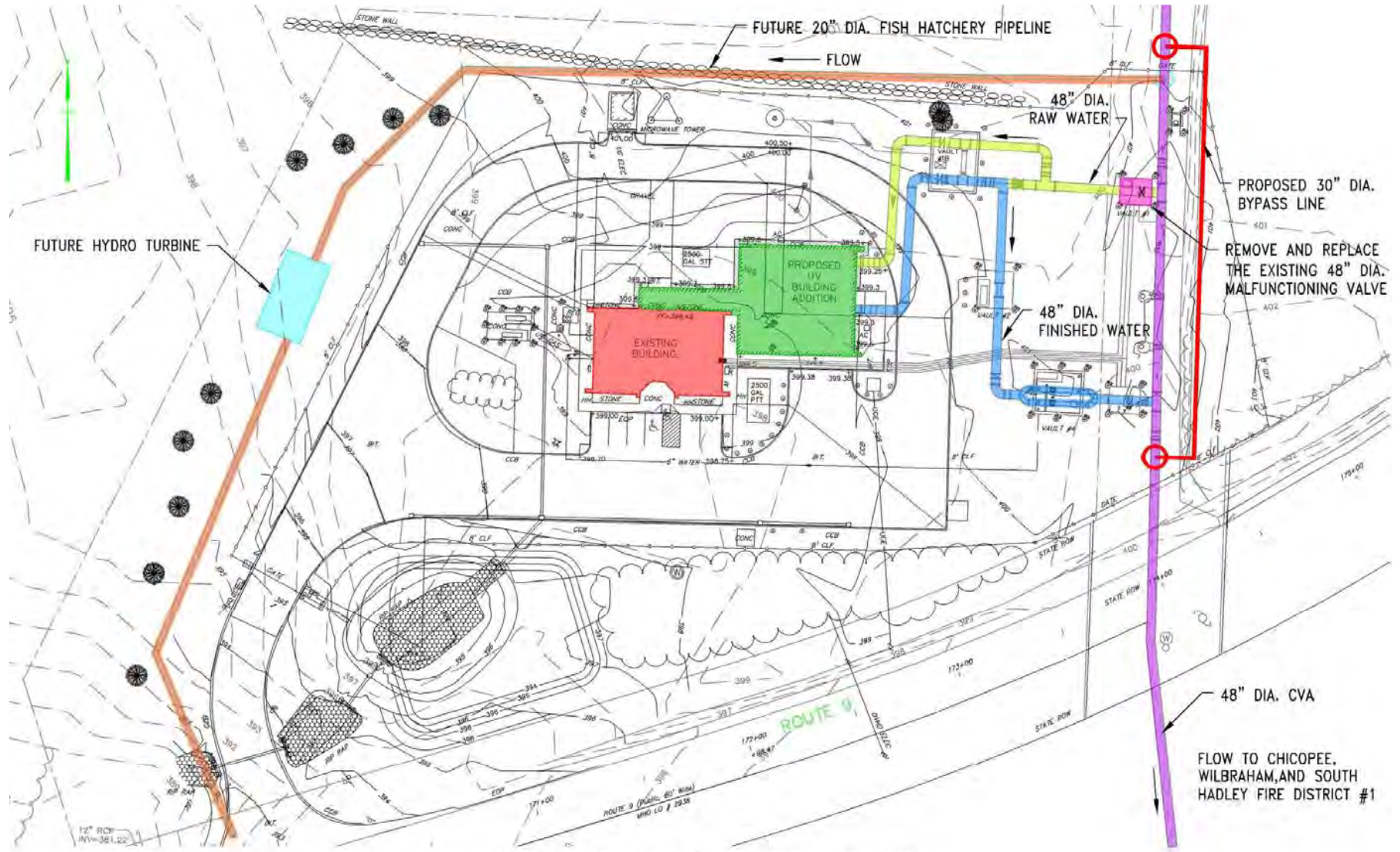




Massachusetts Water Resources Authority

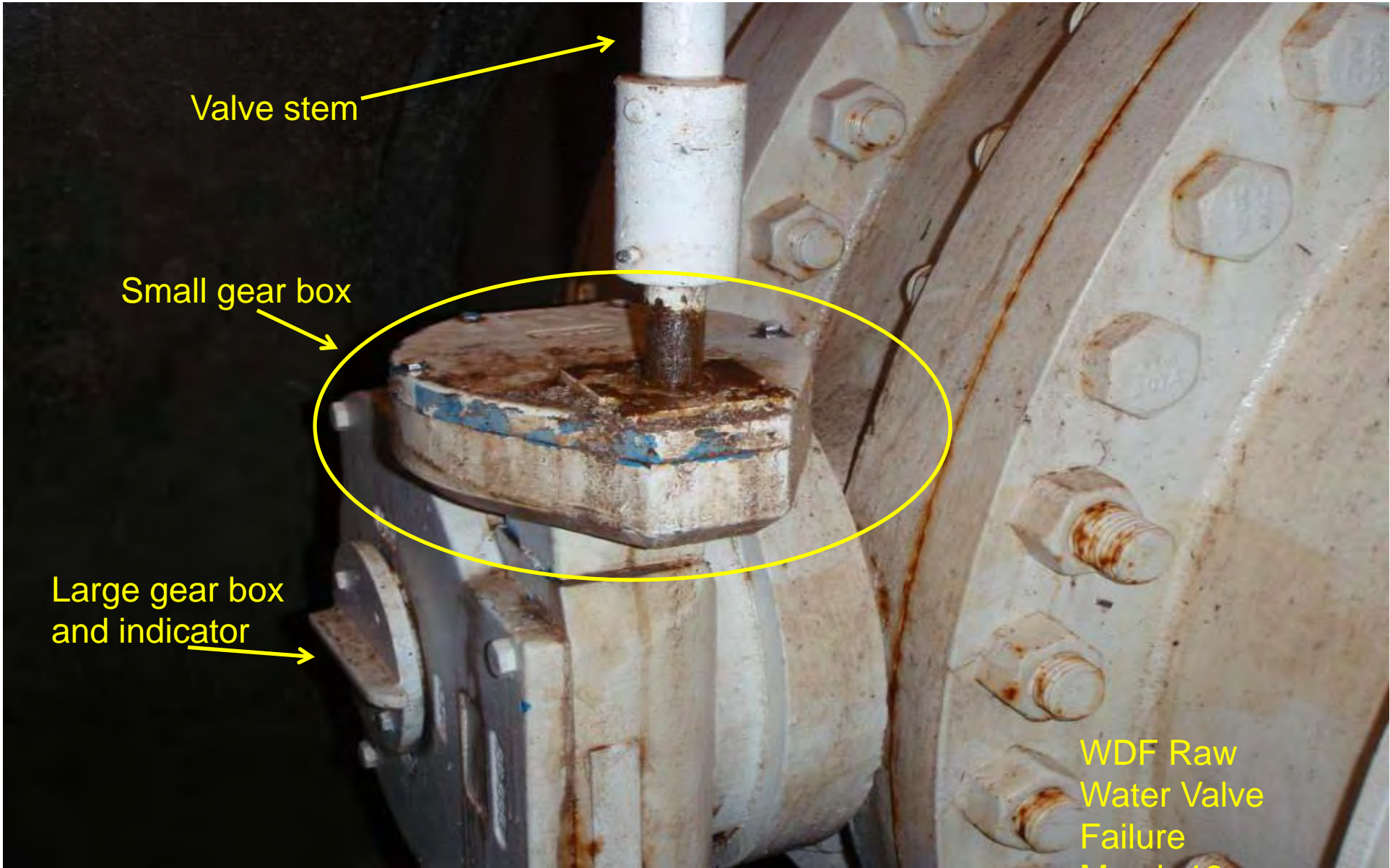
*Ware Disinfection Facility
Valve Shut Down*

April 16, 2014



MASSACHUSETTS WATER RESOURCES AUTHORITY
 WARE DISINFECTION FACILITY
 SUBSURFACE POWERHOUSE VAULT

PROPOSED 30" DIA. BYPASS LINE
 REMOVE AND REPLACE THE EXISTING 48" DIA. MALFUNCTIONING VALVE
 48" DIA. CVA
 FLOW TO CHICOPEE, WILBRAHAM, AND SOUTH HADLEY FIRE DISTRICT #1

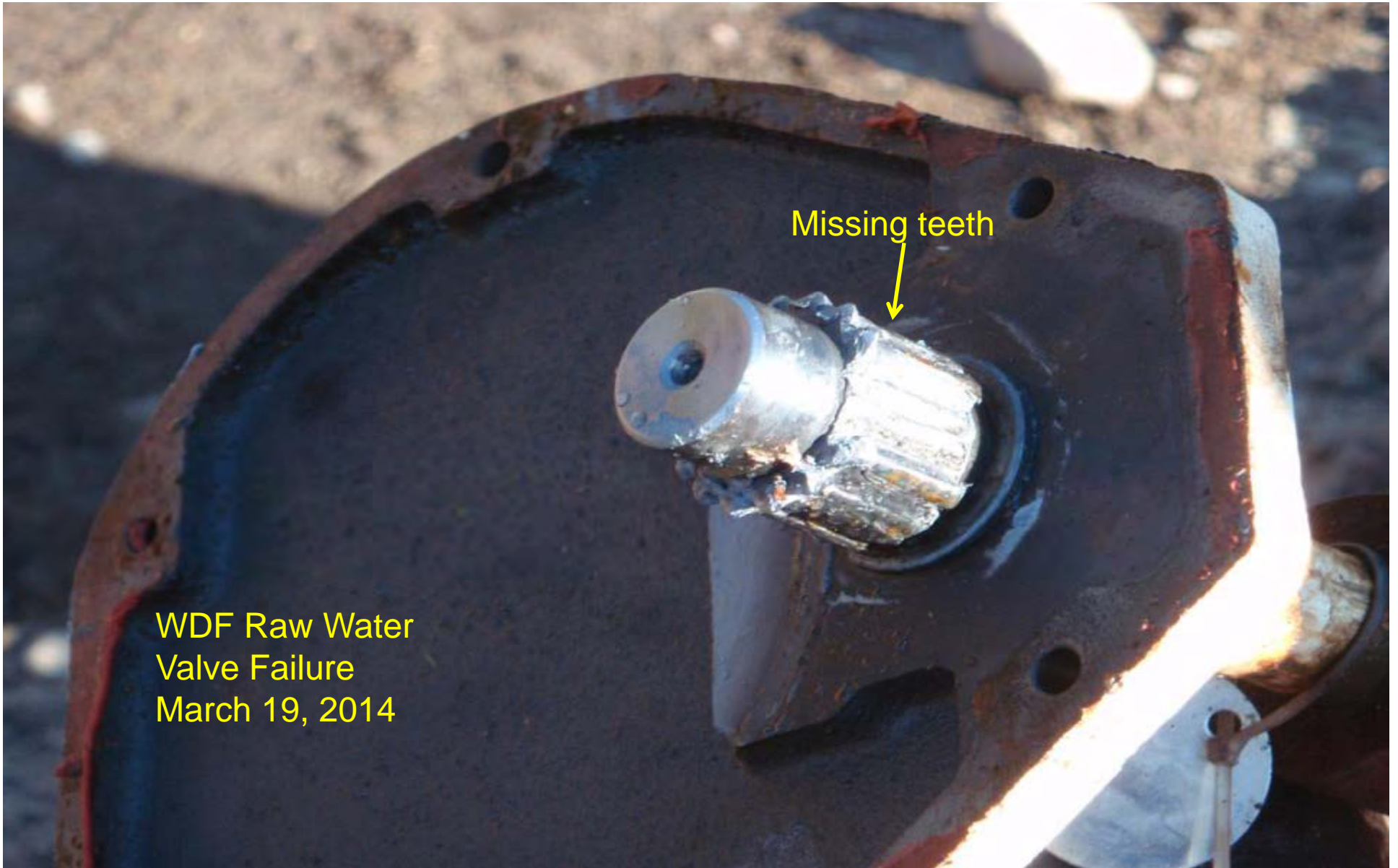


Valve stem

Small gear box

Large gear box
and indicator

WDF Raw
Water Valve
Failure



Missing teeth

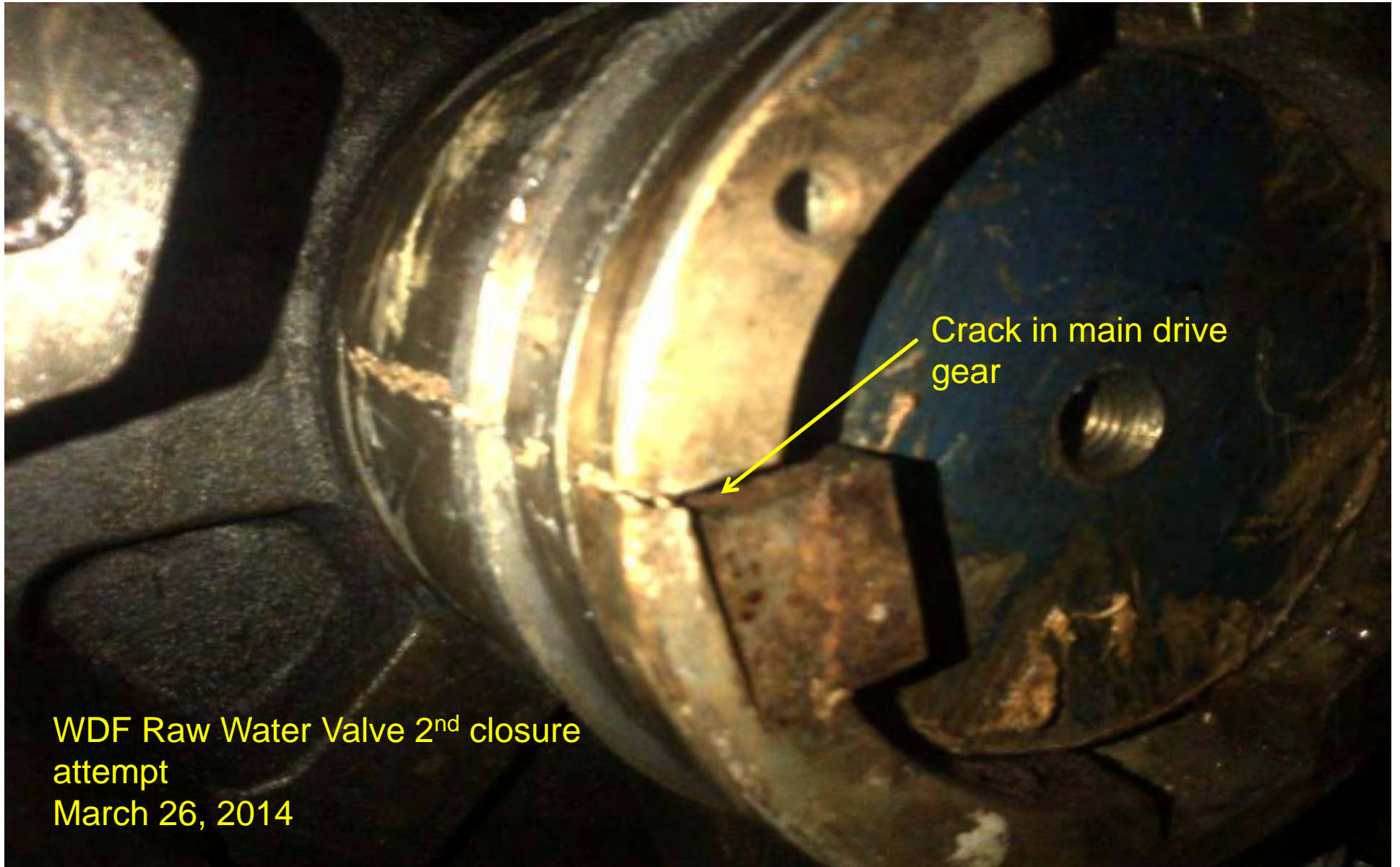
WDF Raw Water
Valve Failure
March 19, 2014

Actuator Plate removed



Thrust washer on worm gear found damaged (not in place) causing drag and skipping on actuation

WDF Raw Water Valve Actuator Inspection
March 21, 2014



Crack in main drive gear

WDF Raw Water Valve 2nd closure attempt
March 26, 2014



