



***Removal, Disposal and Replacement of
Odor Control Wet Scrubber Media and Mist Eliminators***

Purchase Order Contract WRA-4950

June 23, 2021



Deer Island Odor Control

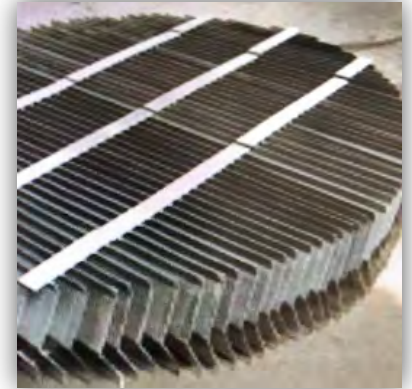
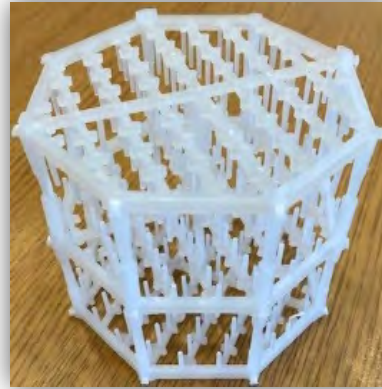
Title V Air Permit Required

Hydrogen sulfide – 1 ppmV at Stack

Non-methane Hydrocarbon

Odor Control Facilities on Deer Island

Wet Scrubbers -> Carbon Adsorbers -> Stack





Deer Island Odor Control

Wet Scrubbers

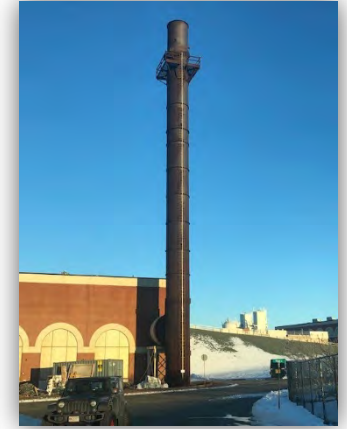
- Packed towers
 - Media-provides residence time
- Chemical rain – provides chemical reaction
- Targets hydrogen sulfide (H₂S) removal

Activated Carbon

- Polishing
- H₂S & TNMHC removal

Stack

- Release to Atmosphere





Procurement Process and Cost

- Media and Mist Eliminators from 11 active wet scrubbers across 4 process areas

Bidders	Cost	
Munters Corporation	\$186,340.00	Deemed Unresponsive-Materials only
Carbon Filtration System Inc.	\$325,000.00	Lowest Responsive Bidder
ACV Environmental	\$351,802.95	
RVT Process Equipment	\$634,292.50	



Contract Goals

- Upgrading all of the track through the watershed to Class 3 from the current Class I track that is there now
- Keeping train speed through the watershed to 25 mph
- Not idling trains within the watershed
- Provide the MWRA with monthly reports of materials being transported across the watershed, including notice of new freight customers that might be shipping hazardous materials



***Centrifuge Services
Deer Island Treatment Plant***

Contract S601

June 23, 2021



Deer Island Centrifuge Thickening



- Thicken waste sludge from secondary treatment prior to Anaerobic Digestion
- 16 Centrifuges installed on Deer Island
 - 4-9 operate concurrently
 - 6 operating centrifuges on average
- Overhaul recommended every 25,000 hours
- Staff provide day-to-day maintenance



Procurement Process and Cost

- Contract provides for 2 overalls per year for 3 years – 6 in total over 3 year contract
- Contract includes major overhaul, allowance for parts. MWRA responsible for removal/install.

Bidders	Cost	
Alfa Laval, Inc.	\$599,150	Lowest Responsive Bidder
<i>Engineer's Estimate</i>	<i>\$612,250</i>	
Franzenburg Centrifuge	\$616,000	
Sentrimax Centrifuges, Inc.	\$635,281	



***Chelsea Creek Headworks Upgrade
Contract 7161 - Change Order 47***

June 23, 2021



Chelsea Creek Headworks: Odor Control Fan Sensing Lines





Chelsea Creek Headworks: Communication Shelter Stairs





Chelsea Creek Headworks: Catenary Screens





Chelsea Creek Headworks: Grit Collection Equipment





Chelsea Creek Headworks: Operating Level





Chelsea Creek Headworks: Operating Level





Chelsea Creek Headworks: Odor Control Grease Filters





Chelsea Creek Headworks: 1-Megawatt Standby Generator





Chelsea Creek Headworks: Air Compressors





Chelsea Creek Headworks: Site Paving and Restoration





Chelsea Creek Headworks: Site Security System





Chelsea Creek Headworks: Building Exterior and Landscaping





***Nut Island Headworks
Odor Control and HVAC Improvements
Inspections, Evaluations, Design, Construction
Administration and Resident Engineering Services
Contract 7517, Amendment 3***

June 23, 2021



Nut Island Headworks

- Construction 33% complete
- Scheduled Substantial Completion December 2022



Ductwork Odor Control Fan #4



New Sodium Hypochlorite Tanks



Proposed Amendment 3

Additional Review of Contractor Submittals

- Increase from 810 to 1500 submittals
- Due to temporary systems, sequencing, and instrumentation and controls
- \$ 544,868

Additional Review of Contractor Requests for Information (RFIs)

- Increase from 270 to 550
- Due to sequencing and complexity of construction in an operating facility
- \$ 268, 650

Biweekly SCADA Coordination Meetings

- Improve Coordination between contractor, MWRA and consultant
- \$ 22,786

PRESENTATION TO THE MWRA BOARD OF DIRECTORS

A CASE FOR GREEN CERTIFICATION

Lexi Dewey and Whitney Beals

Water Supply Citizens Advisory Committee

June 23, 2021

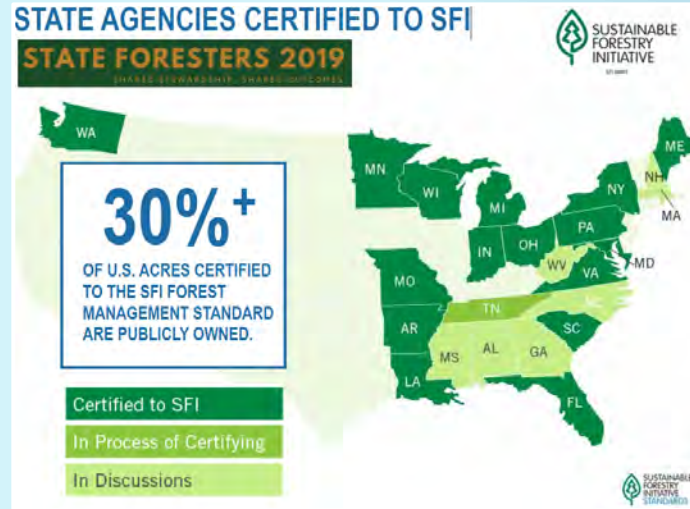
WHY WSCAC RECOMMENDS RECERTIFICATION

- ▶ Enhancing trust, addressing reputational risk, acknowledgement of public interest in sustainability of forests and forest products.
- ▶ There are public groups opposed to DCR forestry practices and have proposed legislation to restrict logging on all state lands.
- ▶ The changing climate in New England requires working with a wider base of professional foresters, climate scientists, and new technologies to modify and improve forest management.

BENEFITS OF RECERTIFICATION

- ▶ Revitalizes the knowledge base of forest management by providing access to research and support from a wide range of forestry professionals.
- ▶ Adds further credibility to the requirement to conduct forest management and avoid costly filtration.
- ▶ Strengthens support from environmental groups, improves public understanding and confidence.
- ▶ Establishes accountability for sustainable forest management.

STATE AGENCIES CERTIFIED TO SFI



State agencies using SFI Certification in the Northeast

- Maine Bureau of Parks and Lands
- New York State Department of Environmental Conservation
- Pennsylvania DCNR Bureau of Forestry

ROLE OF PUBLIC LANDS

- Public lands can afford to set the standard for statewide forestry practices.
- Appropriate scale for testing new equipment types, new ways of enhancing critical habitat or of overcoming landscape-scale problems (climate change, invasive species).
- State lands should benefit from public reassurance via certification.

From a 2002 DCR presentation by Environmental Analyst Tom Kyker-Snowman

<https://archives.lib.state.ma.us/bitstream/handle/2452/114312/ocn748285267.pdf?sequence=1&isAllowed=y>

CONCLUDING QUESTIONS

~ From the same DCR presentation by Environmental Analyst Tom Kyker-Snowman

- Has certification been worth the effort and cost?

YES

- Has it resulted in positive changes in the management of state or private forests?

YES



***Low Service Pressure Reducing Valve
Improvements***

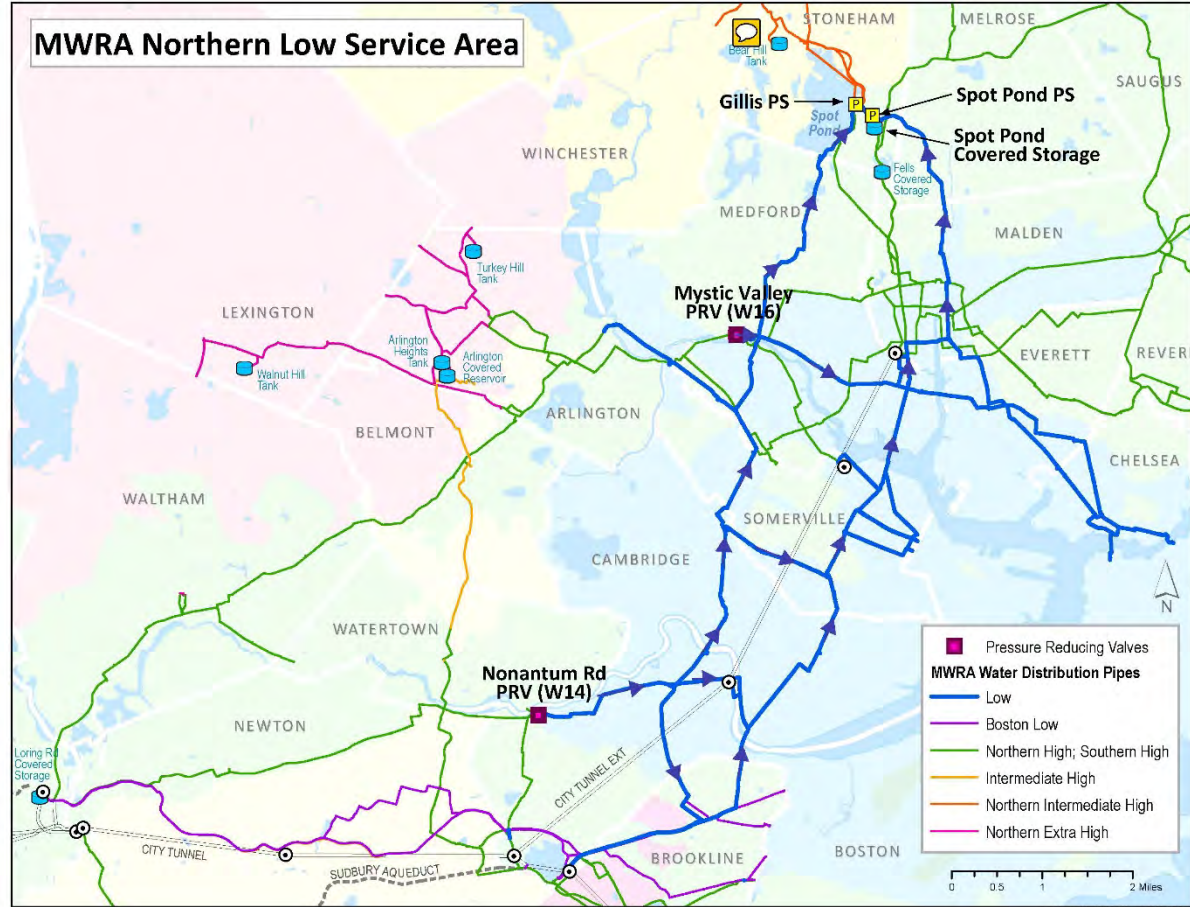
Contract 7674

June 23, 2021



Emergency Supply to the North

- PRVs would be activated at WASM 4 and WASM 3
- Supply rerouted through Spot Pond Bypass to Gillis and Spot Pond Pumping Stations to supply Northern Low, Northern High, and Northern Intermediate High





Contract 7674 Proposal Results

Contractor	Proposal Price	Level of Effort
<i>Engineers Estimate</i>	<i>\$888,624.00</i>	<i>5,808</i>
CDM Smith Inc.	\$718,079.91	5,928
Clean Properties Engineering, Inc.	\$783,417.88	5,808



Update on Diversity, Equity and Inclusion

June 23, 2021



Survey Question Results

Questions 1 - 4

Survey Question	Employees who <u>Strongly Agree</u> OR <u>Agree</u>
Q1: MWRA provides a workplace free of harassment, including sexual harassment and retaliation.	70%
Q2: The MWRA's workplace diversity training programs have helped to create a work environment free of harassment.	65%
Q3: Advancement opportunities are widely advertised, that is, made known within and throughout MWRA.	72%
Q4: I have an equal opportunity to be promoted at the MWRA.	56%



Survey Question Results

Questions 5 - 7

Survey Question	Employees who Strongly Agree OR Agree
Q5: MWRA has created opportunities for diverse employees to gain appropriate skills, knowledge and expertise for advancement and success at the MWRA.	68%
Q6: MWRA's efforts to recruit qualified women, minorities, veterans and individuals with disabilities has yielded a diverse workforce.	66%
Q7: Based on my observations or experiences, MWRA takes strict and effective action against discrimination.	70%



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Survey Question	Employees who <u>Strongly Agree</u> OR <u>Agree</u>
Q8: At the MWRA, race, ethnic, sexual and gender comments and materials are not tolerated and a swift investigation takes place if and when they are reported.	76%
Q9: MWRA demonstrates commitment to meeting the needs of employees with disabilities.	72%
Q10: The businesses that MWRA attracts are as diverse as the ratepayers we serve.	51%

Opportunities for Improvement

While there were a lot of positive areas highlighted around commitment to meeting the needs of employees with disabilities, and action taken against discrimination, we still have ample opportunities for improvement in the following



- Diversity Recruitment
- Job Shadowing
- Cross -Training
- Performance Reviews
- Mentoring
- Training
- Cultural Awareness