

CWD Source Water Protection Program Updates

9/21/2023 Fresh Pond Advisory Board

Hobbs Brook Reservoir

Photo credit: Philip Greenspun, 2015

New (and old) Staff – We're Growing!



Jamie O'Connell - Watershed Protection
Supervisor



Anna Van Dreser – Watershed Technical
Supervisor



?? – Watershed Management
Assistant

Source Water Protection Program Overview

- **Water Quality Monitoring**
- **Site Monitoring and Dam Management**
- Hazmat and Emergency Response
- Natural Resources Restoration
- Partnership Development

CWD Water Quality Monitoring Program



HB @ KG on February 17, 2022

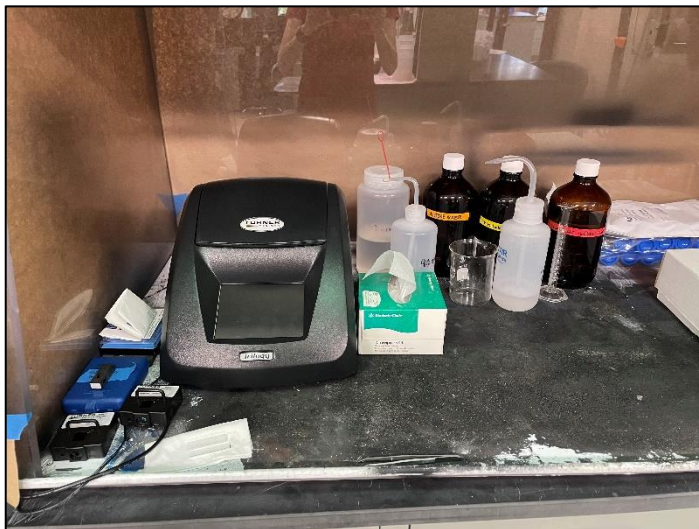
CWD Water Quality Monitoring

- 12 Tributary Sites, 3 Reservoirs
- Sample 6-8x/year per site
- Analyze >20 physical, chemical, and biological parameters
- USGS JFA




New

- In-house analysis of chl-*a* and phycocyanin (2023)
- Restarted algae monitoring program at Fresh Pond Reservoir (2023)
- Interactive Source Water Quality Report – 2022 Update expected soon



[Source Water Quality Report \(arcgis.com\)](https://arcgis.com)




Collection

Source Water Quality Report


Results from the Cambridge Water Department Source Water Quality Monitoring Program

Updated through calendar year 2020


[Get started](#)




1 Introduction




2 Standards and Guidelines




3 Land Cover




4 Reservoir Retention Time




5 Temperature and Dissolved Oxygen




6 pH




7 Bacteria




8 Salts




9 Nutrients



10 Metals



11 Macroinvertebrates (2019 pdf)



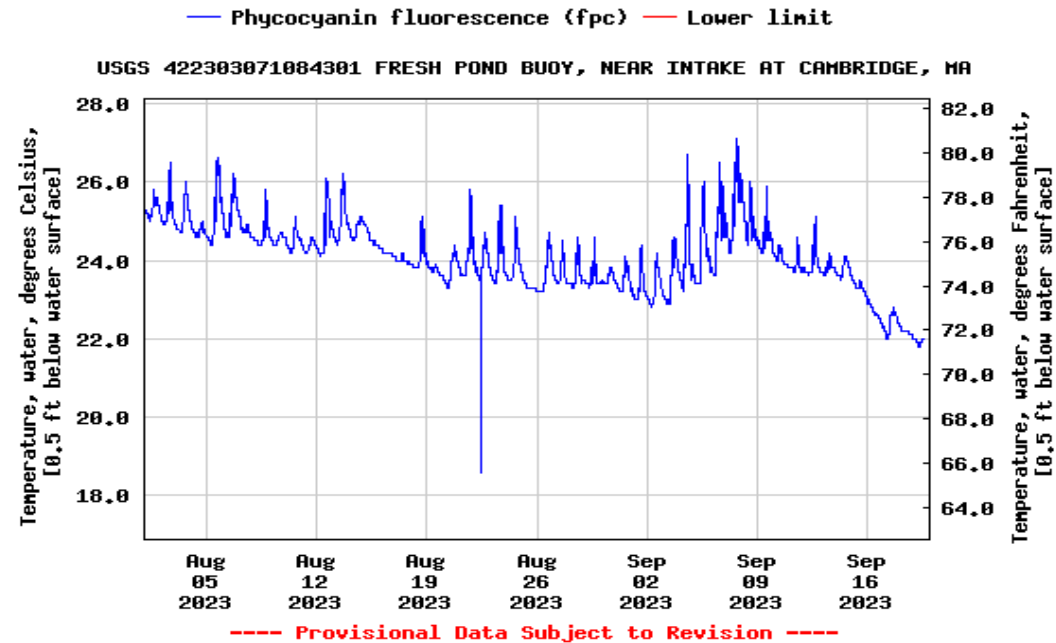
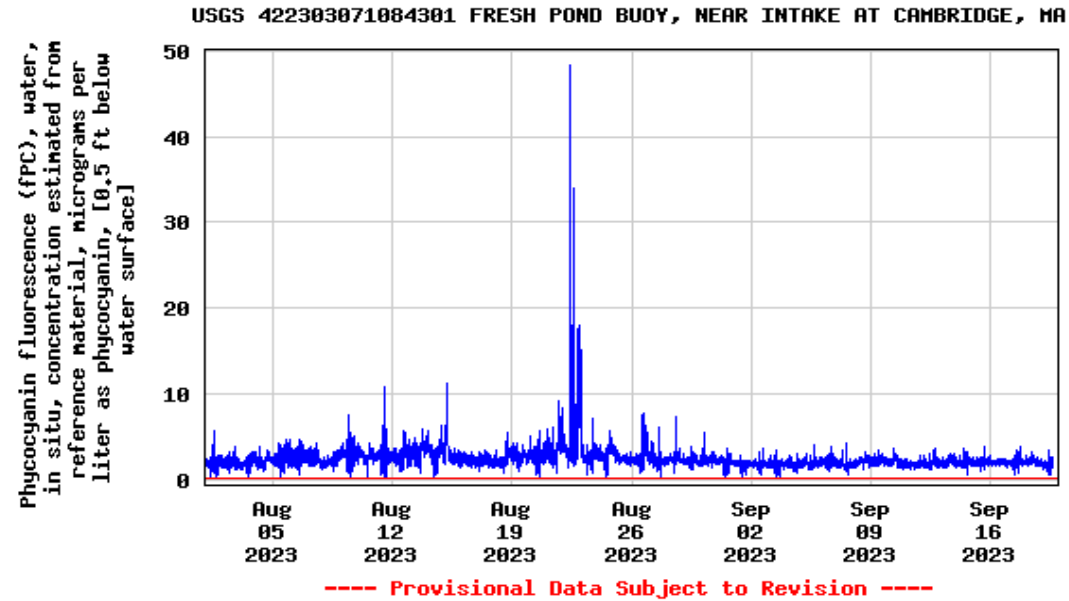
12 Algae (2019 pdf)

Asterionella, FP @ Intake 14 ft deep, 6/23/2023. Preserved in Iodine.

10 μm

New

- May 2022- added new USGS station to measure phycocyanin (cyanobacteria indicator) and temperature near the Fresh Pond Reservoir treatment plant intake



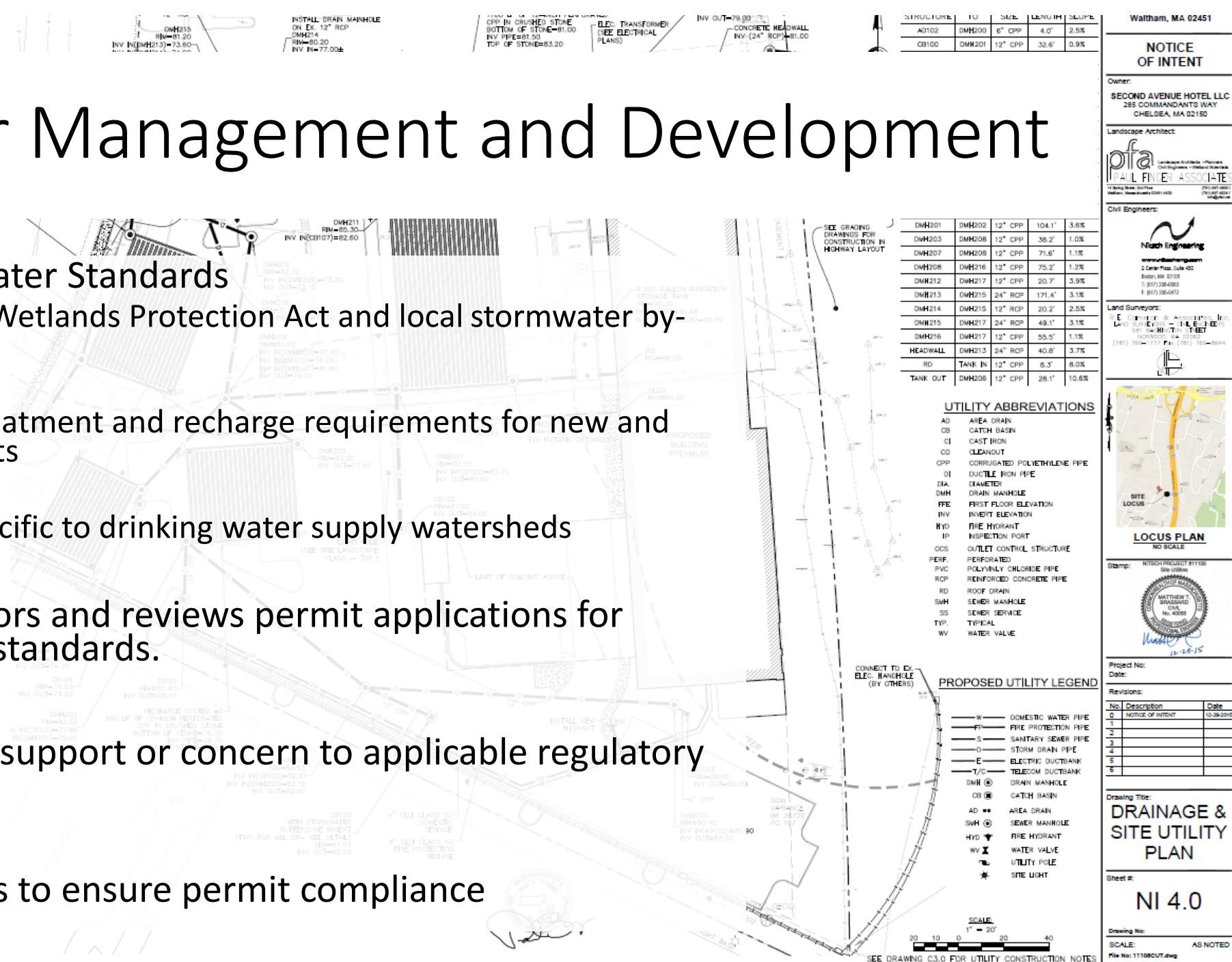
Site Monitoring Program



830 Winter St, Waltham Site Inspection 12/5/2016

Stormwater Management and Development

- Massachusetts Stormwater Standards
 - Implemented though Wetlands Protection Act and local stormwater by-laws
 - Specify stormwater treatment and recharge requirements for new and redevelopment projects
 - Contain provisions specific to drinking water supply watersheds
- CWD proactively monitors and reviews permit applications for compliance with these standards.
- CWD submits letters of support or concern to applicable regulatory boards.
- Perform site inspections to ensure permit compliance



Waltham, MA 02451

NOTICE OF INTENT

Owner:

SECOND AVENUE HOTEL LLC
285 COMMANDANTS WAY
CHELSEA, MA 02150

Landscape Architect:

pfa
PAUL FINER ASSOCIATES
Landscape Architects • Planners
Civil Engineers • Interior Architects
135 Spring Street, Suite 400
Boston, MA 02108
(617) 552-8888
www.pfa.com

Civil Engineers:

Neach Engineering
www.neachengineering.com
2 Cedar Plaza, Suite 400
Boston, MA 02108
(617) 552-8888
F: (617) 552-8888

Land Surveyors:

JOHN P. FINER & ASSOCIATES, INC.
551 WASHINGTON STREET
BOSTON, MA 02108
(617) 750-1777 Fax: (617) 750-0044

LOCUS PLAN
NO SCALE



Stamp: NISCHPROJECT #1158
Date: 12-28-15



Project No:
Date:

Revisions:		
No.	Description	Date
0	NOTICE OF INTENT	12-28-2015
1		
2		
3		
4		
5		
6		

Drawing Title:
DRAINAGE & SITE UTILITY PLAN

Sheet #:
NI 4.0

Drawing No:
SCALE: AS NOTED
File No: 11108CUT.dwg

New

- Site Monitoring Tool – in development
 - GIS-based tool for mobile data collection and data management in office
 - Track all aspects of CWD permit review and requirements for long term site management
 - Perform inspections using GIS surveys with knowledge of stormwater infrastructure and relevant permit restrictions

Zoom to

Cambridge Watershed Parcels: Reservoir Woods East Campus

40, 44, 50, 60 Sylvan Road
Reservoir Woods East Campus

Parcel OID / Parcel ID / Old ObjectID
6868 - {10E8F5C5-DF79-4049-907C-4211C6783FCB} - 6,868

of Restriction Types on this Parcel
12

of Infrastructure Types on this Parcel
13

Construction Site Form

Stable Site Form

Disconnect = true

CWD SMP DMS - Parcel Details

Name	Reservoir Woods East Campus	Address	40, 44, 50, 60 Sylvan Road
Town	1	CWD Owned?	<input checked="" type="checkbox"/>
Public Access Allowed?	<input checked="" type="checkbox"/>	Conservation Easements?	<input checked="" type="checkbox"/>
Date Acquired		Acquisition Type	Planning
Utility Easements?	<input checked="" type="checkbox"/>		
Description			
MAP	029	BLOCK	001
LOT	0003	PARCELID	120
LOC_ID	717704_2969049	MAP_PAR_ID	R029 001 0003
PROP_ID	R029 001 0003	GISParcelID	666
GlobalID	10e8f5c5-df79-4049-907c-4211c6783fcb		

This Parcel is related to the following projects

- ORAD**
No project information. Just info about an ORAD issued in February of 2021. The ORAD approved BVW, bank, and river.
- New Parking Garage and Parking Lot**
This project was a redevelopment to build a new parking garage in an existing parking area. The project will also demolish an existing building to build a surface parking lot. Stormwater treatment for the development is provided by an exiting wet basin. The project also includes WQUs and deep sump hooded CBs. The project also includes new sod swales and stone swales, though it's not clear if those swales are for water quality treatment or conveyance only.
- New Parking Garage and Office Buildings**
In December 2021, the applicant applied for an RPA just for demolition of the existing site. In February 2022, the applicant applied


Dam Management



Hobbs Brook Dam Outlet,
10/31/2017 Inspection

CWD Dams

- 2 High Hazard dams in Satisfactory condition
- CWD staff target 10 inspections/yr
- Created mobile data collection and reporting tool to standardize inspections and improve problem tracking over time
- Uses various ESRI apps to integrate field and office data
- Presenting at NEARC conference in October 2023

 CWD Dam Inspections

[Home](#) [Site Data and Dam Ops](#) [Outstanding Problems](#) [Problem Details](#) [Problems Over Time](#)

Fixed Monitoring Stations


Fixed Sites - Inspection Results

Date of Inspection is between
September 1, 2023 and September 30, 2023

Dam Name
Stony

Monitoring Station Name
- All -

Filter for a specific monitoring station



< 7 of 24 >



Stony: SCrestSouthWest

Date of Inspection	September 7, 2023
Notes	
Describe the problem(s)	

Inspection Details

Excessive vegetation growthNo

Visible depressions or inconsistencies in slope or gradeNo



Questions?

Fresh Pond, 10/5/2015