CONSERVATION COMMISSION AGENDA

Date: Thursday, March 2, 2023

Time: 7:00pm

Place: This meeting will be held as a virtual meeting via Zoom.

The Conservation Commission will hold this meeting as a virtual meeting; no in-person meeting will take place at City Hall.

Zoom access information for the meeting will be posted 48 hours in advance of the meeting at: https://www.newtonma.gov/government/planning/boards-commissions/conservation-commission

Contact <u>jsteel@newtonma.gov</u> or 617-796-1134 with any questions.

NOTE: In addition to the documents presented in the Commission's packet (available on the Commission's website), full application plans and narratives are available on the Commission's website.

NOTE: Times listed are estimates. Items may be taken out of order at the Chair's discretion. Discussion may be limited by the Chair.

DECISIONS

A. WETLANDS DECISIONS

- 1. 7:00 370 Quinobequin Rd NOI First and second floor additions and new deck DEP #239-948
 - Owner/Applicant. Seth Kosto
 - Representatives. Mitch Maslanka, Goddard Consulting; Bruce Bradford from Everett M Brooks
- 2. 7:30 50 Grace Rd NOI teardown/rebuild SFH DEP #239-???
 - Owner/Applicant. Wendell Phillips, 50 Grace Rd Investments LLC
 - Representatives. Edmond Spruhan, Engineer
- 3. 8:00 50 Grace Rd COC SFH tear down/rebuild DEP #239-772
 - Owner/Applicant. Wendell Phillips, 50 Grace Rd Investments LLC
 - Representatives. none
- 4. 8:10 31 Greenwood St COC-resign Restoration of historic barn into SFH DEP #239-859
 - Owner/Applicant. Anne Greer
 - Representatives. none
- 5. 8:15 0 Suffolk COC Hydroraking of Houghton Pond, trail enhancements DEP #239-868
 - Owner/Applicant. Newton Conservation Commission
 - Representatives. staff
- 6. 8:20 62 Olde Field COC Addition DEP #239-385
 - Owner/Applicant. Deborah and Jonathan Kay
 - Representatives. none
- 7. 8:25 125 Wells COC parking expansion/work never initiated DEP #239-863
 - Owner/Applicant. Solomon Schechter School
 - Representatives. Robert Finkel, Atty
- **B. CONSERVATION AREA DECISIONS**
- C. ADMNISTRATIVE DECISIONS
- D. ISSUES AROUND TOWN DECISIONS
 - Tree Ordinance
 - 8. 9:30 Watertown Dam project letter
 - Owner. The City of Watertown
 - Request. CRWA is trying to garner support for the removal of the Watertown Dam.

UPDATES

- E. WETLANDS UPDATES
- F. CONSERVATION AREA UPDATES

ADMINISTRATIVE UPDATES

G. ISSUES AROUND TOWN UPDATES

OTHER TOPICS NOT REASONABLY ANTICIPATED BY THE CHAIR 48 HOURS BEFORE THE MEETING ADJOURN



Mayor Ruthanne Fuller

> Director Planning & Development Barney Heath

Chief Environmental Planner Jennifer Steel

Assistant
Environmental
Planner
Ellen Menounos

Conservation Commission Members

Kathy Cade Dan Green Judy Hepburn Ellen Katz Susan Lunin Jeff Zabel Leigh Gilligan

Associate Member Sonya McKnight

Contact Information 1000 Comm. Ave. Newton, MA 02459

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DECISIONS

A. WETLANDS DECISIONS

1. 7:00 - 370 Quinobequin Rd - NOI - First and second floor additions and new deck - DEP #239-948

- Owner/Applicant. Seth Kosto
- Representatives. Mitch Maslanka, Goddard Consulting; Bruce Bradford from Everett M Brooks
- Proposed Project Summary.
 - First floor addition over existing rear deck
 - Second floor addition over existing house
 - New deck off rear of house
- Request. Issue OOC.
- <u>Documents in packets.</u> Locus map, highlighted plans.
- Additional documents presented at meeting. Site photos.
- Jurisdiction. BLSF, Buffer Zone, BVW (no work planned), RFA (no work planned)
- Performance Standards.

Bordering Land Subject to Flooding: 10.57

- Compensatory storage shall be provided for all flood storage volume that will be lost...
- 2. Work shall not restrict flows so as to cause an increase in flood stage or velocity.
- 3. Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions.

Buffer Zone 10.53(1): General Provisions: "... the Issuing Authority shall impose conditions to protect the interests of the Act for adjacent Resource Area..." "... ensure that adjacent wetland resource areas are not adversely affected during or after completion ..."

Staff Notes.

- Staff question wetland delineations.
 - The wetland was flagged along the "shrub" line, but likely comes well into the yard. A site visit should be arranged with Staff to look at the soils in the back yard
 - The BLSF elevation (according to the FEMA flood profile) is 65.5' NAVD88 which is well beyond the rear of the property and encompasses the whole property. The plans should be corrected and cuts and fills considered in a revised application. The application should clarify the nature of the proposed first floor addition and provide basement or slab information so that issues associated with fill in floodplain and likely high groundwater can be considered and addressed.
- The application states that the addition will only add 89 sf of impervious area because of building over the existing deck. This imperviousness or perviousness of the existing deck



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- should be verified/clarified.
- The application states that all reasonable efforts have been made to avoid adverse impacts to the Buffer Zone, but if the proposed deck were relocated, a 37" oak could be saved.
- o The rear yard extends off-site into a Conservation Restriction. The yard (and other amenities (i.e., a hockey rink) should be removed and restored with trees and native shrubs.

· Staff Recommendation.

Seek plan modifications that address the questions and concerns noted above.

7:30 – 50 Grace Rd – NOI – teardown/rebuild SFH – DEP #239-???

- Owner/Applicant. Wendell Phillips, 50 Grace Rd Investments LLC
- Representatives. Edmond Spruhan, Engineer
- Proposed Project Summary.
 - o Demolish existing single-family home and all site improvements
 - o Construct new single-family home and driveway in the same location
 - o 5 trees are proposed to be removed
 - o Create mitigation planting area.
- Request. Issue OOC.
- <u>Documents in packets.</u> Locus map, highlighted plans.
- Additional documents presented at meeting. Site photos.
- Jurisdiction. Riverfront Area
- Performance Standards.

RFA: Redevelopment in Previously Developed Riverfront Areas; Restoration & Mitigation: 10.58(5)

- ... work improves existing conditions.
- Redevelopment means ... reuse of degraded or previously developed areas.
- A previously developed riverfront area contains areas degraded prior to August 7, 1996....
- Work to redevelop previously developed riverfront areas shall ...:
 - (a) At a minimum, work shall result in an improvement over existing conditions ...
 - (b) Stormwater management is provided according to standards
 - (c) Proposed work shall not be closer to the river than existing conditions or 100', whichever is less
 - (d) Proposed work...shall be located... away from the river, except in accordance with 10.58(5)(f) or (g).
 - (e) proposed work shall not exceed the ... degraded area ... except in accordance with 10.58(5)(f) or (g).
 - (f) despite what it says in 310 CMR 10.58(5)(c), (d), and (e), more alteration at the RFA outer boundary may be allowed if an applicant proposes restoration ... of at least 1:1 ...
 - (g) despite what it says in 310 CMR 10.58(5)(c), (d), or (e), more alteration at the RFA outer boundary may be allowed if an applicant proposes mitigation ... of at least 2:1
 - (h) The issuing authority shall include a continuing condition in the COC ...under 10.58(5)(f) or (g) prohibiting further alteration within the restoration or mitigation area....

• Staff Notes.

- o There is an existing OOC for a teardown/rebuild (DEP file #239-772).
 - The original OOC was issued on 12/23/2016 and was due to expire on 12/22/2019.
 - The permit was extended 3 years to 12/22/2022.
 - The permit got the 462-day "COVID bump" and so is now due to expire on 3/28/24.
 - The old OOC will need to be closed with a COC at some point.
 - No demolition or construction has been undertaken, but there has been tree and shrub removal since the OOC was issued that must be taken into account in describing/understanding "existing" conditions.
- o Saw Mill Brook was flagged in 2016. Staff would like to review fresh/current wetland flags.
- o The application notes that 5 trees are due to be removed, but it is not clear from the plans which 5 those are.
- The plans indicate that most of the "property line" trees are due to remain, but all are within the limit of work line. The
 limit of work line should be moved and proper tree protection included on the plans, or more realistic tree loss should
 be anticipated and compensated for in the plans.
- The plans call for staked straw wattles on just the western part of the site. For a complete teardown/rebuild, much more robust erosion controls surrounding the entire down-gradient work area are warranted.
- The plans show grading changes across the entire site, indicating that there could be disturbance of the roots of established trees. It seems as if the limit of grading could be kept much closer to the proposed house and so help protect existing trees.

- o Impervious area is stated to increase by 454 sf. Mitigation for such an increase is required at a ratio of at least 2:1, so 908 or more sf of mitigation is required (and more may be required by the Commission). The mitigation area shown on the plans is surrounded by mature trees and cannot fit the proposed 10 new trees. The mitigation area should be enlarged, and a thoughtful mitigation planting plan with carefully selected native trees, native shrubs, and native vegetation should be created.
- o There were no stakes in the field at the time of the staff's site visit.
- · Staff Recommendation.
 - Seek plan modifications that address the questions and concerns noted above.

3. 8:00 – 50 Grace Rd – COC – SFH tear down/rebuild – DEP #239-772

- Owner/Applicant. Wendell Phillips, 50 Grace Rd Investments LLC
- Representatives. none
- <u>Request.</u> Commission should discuss the appropriate timing of the issuance of a COC.
- Documents in packets. none
- Additional documents presented at meeting. Site photos
- Staff Notes.
 - The OOC hasn't been recorded and a pre-construction site visit wasn't held.
 - Staff site visit on 2/16/2023 noted that no demolition or construction has been undertaken, but there has been tree and shrub removal since the OOC was issued.
 - o Staff don't see much value in keeping the old OOC open except to ensure that the "existing conditions" at the time of the original filing inform the current "existing conditions"/baseline.
- <u>Staff Recommendation</u>. Determine whether to: (1) issue a COC for "work never initiated", (2) wait on the COC and require replacement trees to be installed before work begins on demo or construction, (3) wait on the COC until the new OOC is issued under clear plans.

4. 8:10 – 31 Greenwood St – COC-resign – Restoration of historic barn into SFH – DEP #239-859

- Owner/Applicant. Anne Greer
- · Representatives. none
- Request. Re-issue COC, since original was lost.
- <u>Documents in packets.</u> none
- Additional documents presented at meeting. none
- Staff Notes.
 - The COC was signed on 12/20/22 and mailed on 12/21/22 to the requester, but the mailing address given is no longer operable.
- Staff Recommendation. Vote to resign the complete COC.

5. 8:15 - 0 Suffolk - COC - Hydroraking of Houghton Pond, trail enhancements - DEP #239-868

- Owner/Applicant. Newton Conservation Commission
- Representatives. staff
- Request. Issue COC.
- Documents in packets. none
- Additional documents presented at meeting. Site photos.
- Staff Notes.
 - Hydroraking was a success.
 - The improved trail is holding up well.
 - Use of the spoils worked out beautifully, revegetating the "corner" of Houghton Garden and the swimming pool in the Old Deer Park.
- Staff Recommendation. Vote to issue a complete COC.

8:20 – 62 Olde Field – COC – Addition – DEP #239-385

- Owner/Applicant. Deborah and Jonathan Kay
- · Representatives. none
- Request. Issue COC.
- Documents in packets. none
- Additional documents presented at meeting. Site photos.
- Staff Notes.

- o An as-built plan and a letter from an engineer have been provided.
- o The letter points out several differences between the approved plan (from 1999) and the as-built plan.
- Staff have not yet made a site visit to assess compliance. Site visit will determine whether the deviations from the approved plan are significant.
- Staff Recommendation. None at this point in time.

7. 8:25 – 125 Wells – COC – parking expansion/work never initiated – DEP #239-863

- Owner/Applicant. Solomon Schechter School
- Representatives. Robert Finkel, Atty
- Request. Issue COC.
- Documents in packets. none
- Additional documents presented at meeting. none
- Staff Notes. A site visit on 2/16/2023 confirmed that work was never initiated.
- Staff Recommendation. Vote to issue a COC for work never initiated.

B. CONSERVATION AREA DECISIONS

C. ADMNISTRATIVE DECISIONS

8. 9:25 -- Minutes to be approved

- Documents in packets. Draft 2/9/2023 minutes as edited by Dan Green.
- Staff Recommendation. Vote to approve the 2/9/2023 minutes as edited by Dan Green.
- Volunteer. Who will volunteer to review the 3/2/23 minutes?

D. ISSUES AROUND TOWN DECISIONS

- Tree Ordinance
 - The City Tree Warden and Mayor's Office are in discussion with City Council on possible revisions to the City's Tree
 Ordinance.
 - o <u>Documents in packets.</u> Staff created a summary of the current version of the City Tree Ordinance for comparison with the Conservation Commission's Tree Replacement Guidance.
 - o Commissioners should discuss and provide staff with comments, if any, to forward to the City's Tree Warden for his consideration.

9. 9:30 - Watertown Dam project letter

- Owner. The City of Watertown
- Request. CRWA is trying to garner support for the removal of the Watertown Dam. CRWA has asked the Commission to consider writing a letter of support.
- <u>Documents in packets.</u> Answers to the questions the Commission posed at the last meeting.
- Additional documents presented at meeting. none
- · Staff Notes.
 - This issue is not coming before the Commission as an application to be judged regarding the performance standards of the Wetlands Protection Act. It is coming before the Commission in their role as advocates "for the protection of watershed resources". "Such commission shall conduct researches into its local land areas and shall seek to co-ordinate the activities of unofficial bodies organized for similar purposes, and may advertise, prepare, print and distribute books, maps, charts, plans and pamphlets which in its judgment it deems necessary for its work." (MGL Chapter 40 Section 8C).
 - o Staff feel it is an excellent case to engage with, given its potential for large-scale renaturalization of the largest wetland resource in Newton and its potential to improve water quality, flood control, native vegetation and wildlife habitat, etc.
 - o Staff feel it could be beneficial to be involved early to understand the whole discussion prior to permitting obligations.
 - Staff doesn't feel that engaging now, and even writing a letter of support, would preclude the Commission's objective
 consideration if/when a wetland permit application is submitted. The dam is entirely within Watertown, so removal
 would occur in Watertown, but the effects of removal would impact Newton. Should a request to remove come to pass,
 the Commission would need to permit the anticipated alterations to Land Under Water, Bank, RFA, BLSF, BVW, and BZ.

UPDATES

E. WETLANDS UPDATES

- EO follow-ups
 - o 34 Hyde Ave. has cleared the stream channel,
 - o 65 Harwich has a restoration plan,

- 158 Otis has a restoration plan,
- J Steel had a conversation with DCR about Parkway Road and the Newton Yacht Club and should have received information but hasn't

EO next round

- o 24 Glen remove big bridge
- o 255-257 Newtonville Ave plant trees and shrubs

F. CONSERVATION AREA UPDATES

- Essex Horticulture special projects
 - Webster: Elgin Road access grading and drainage awaiting design and estimate
 - Norumbega: post and wire fences to protect slope awaiting design and estimate
 - Saw Mill Brook: Vine Street parking lot fence (and plantings) awaiting design and estimate
 - o Norumbega: dense-grade the main loop awaiting estimate
 - Oakdale Woods: plant to reclaim encroachment ready to go in spring
 - o Old Deer Park: fence panel removal for access to the Ira Wallach trail ready to go in spring

• Big capital projects

Old Deer Park: fence removal (after Hammond Pond Parkway is done)

• Trailhead signs and parcel maps

 Maps are nearing completion with improvements re accessibility thanks to coordination with the OSRP Trails Subcommittee.

Accessibility improvements

- Norumbega: dense-grade the main loop
- o Upper Falls Riverwalk: dense-grade the Saco Street entrance?

Kesseler Woods Trail

- o Staff are in talks with Chestnut Hill Realty to get an easement to Lagrange Street
- o Staff must release new RFQ for the boardwalk and bridge portion of the trail connecting to Harwich Road

ADMINISTRATIVE UPDATES – Intern

• <u>Spring High School Intern</u> – Possibly establishing a program to take certain populations (elderly, grieving, disabled, veterans, EJ communities, at risk youth, etc.) into Conservation parcels for healing.

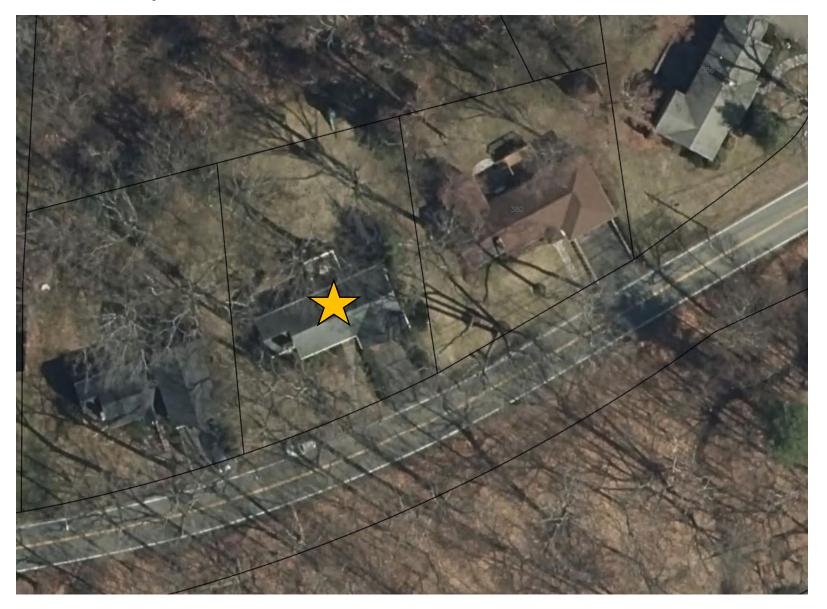
G. ISSUES AROUND TOWN UPDATES

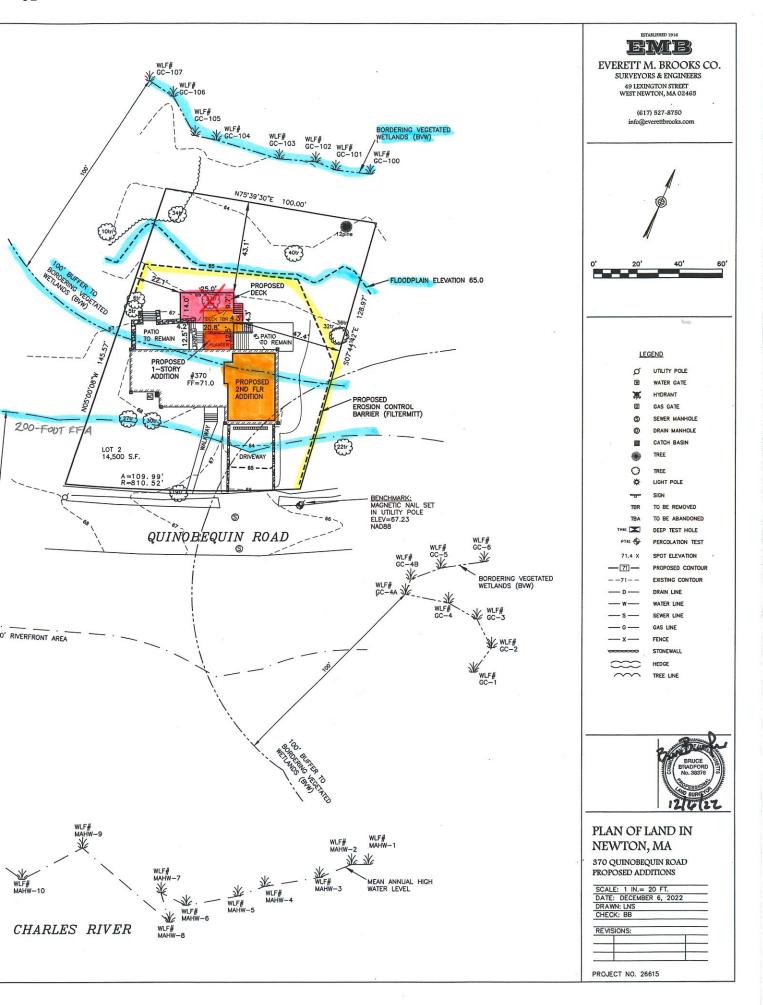
- <u>Flood Ordinance</u> Staff sent a draft to the state and are awaiting comments in response.
- <u>Complete Streets</u> Staff are working with the new Transportation Planner to have issues of stormwater and trees/shrubs feature more prominently in the Complete Streets working group discussions (that focus on car, bicycle, and pedestrian safety.
- Stream name signs Staff have asked the City's COO to look into possible source of funding for this (pilot) project.
- The Christina Street Bridge Project is moving along with a congressional earmark and commitments from Northland.

OTHER TOPICS NOT REASONABLY ANTICIPATED BY THE CHAIR 48 HOURS BEFORE THE MEETING

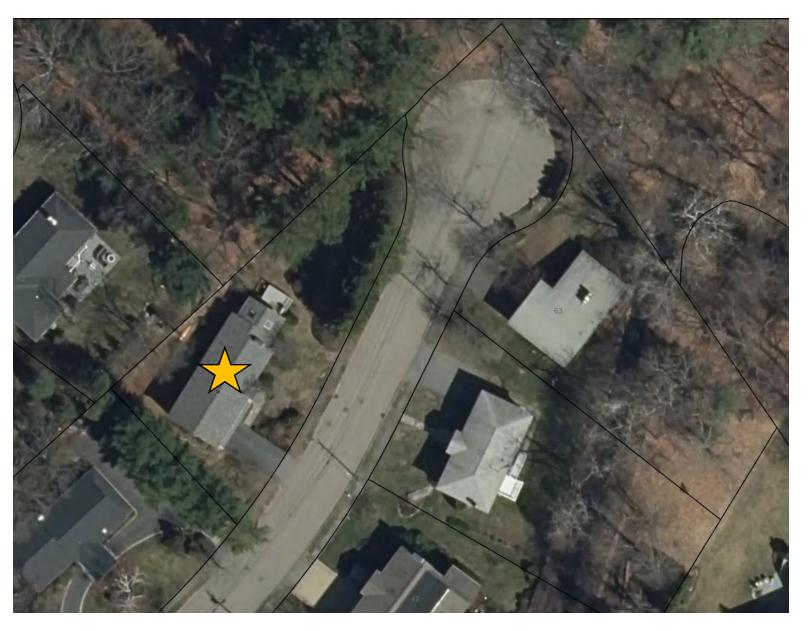
ADJOURN

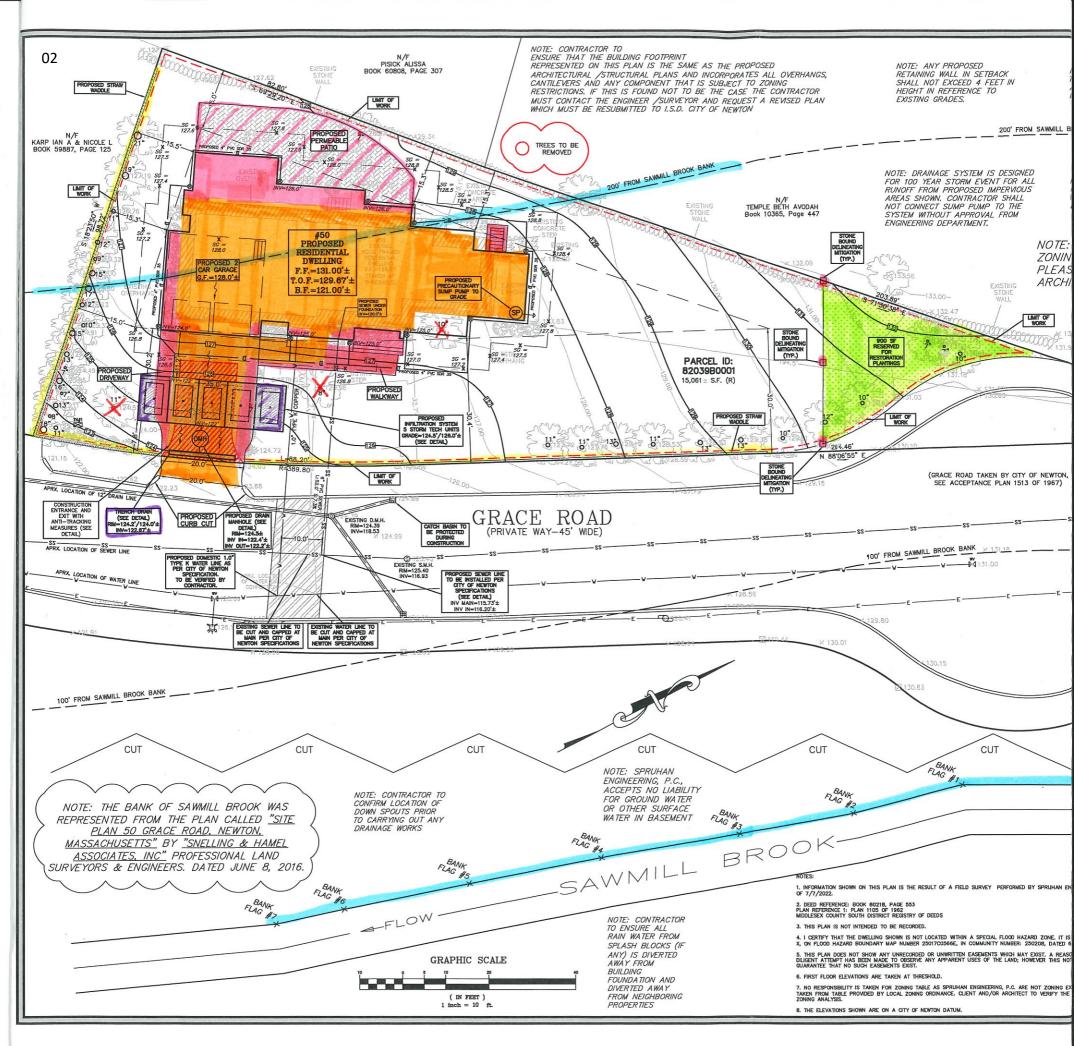
370 Quinobequin Rd





50 Grace Rd





CITY Tree Preservation Ordinance -- Excerpts from the Version Dated 10/14/2022

Findings, intent, and purpose.

- The city council has determined that <u>many trees are being lost without replacement</u> incident to demolition of existing buildings in order to construct new buildings and lot clearing in connection with the construction of new buildings on previously undeveloped land.
- The city council has further determined that trees have been lost, severely damaged or disfigured through excessive or improper pruning or other than natural causes.
- The <u>result is a net loss of the tree population</u> in the city.
- The preservation of the private tree canopy and the planting of replacement trees is intended to <u>enhance the quality of life and the environment</u> of the city; to <u>preserve the character of the wooded and natural areas</u>; to <u>reduce energy consumption</u>; to <u>protect air quality</u>; to <u>baffle noise</u>; to <u>preserve and enhance habitat for wildlife</u>; to <u>reduce topsoil erosion and storm water runoff</u>; to <u>protect and increase property values</u>; and to <u>enhance the overall appearance of the city</u>.

Definitions.

- Exempt lot: A lot which meets <u>all</u> of the following criteria: (1) The lot is occupied and used primarily as a dwelling for up to four families at the time any protected tree(s) are removed. (2) The lot owner at the time of protected tree removal has owned the lot continuously for a minimum of ninety (90) days prior to the removal of any protected tree(s). (3) The existing structure on the lot remains occupied as a dwelling with a person or persons living in it for eighteen consecutive months from the date any protected tree(s) are removed. (4) The lot remains owned by the same person for eighteen consecutive months from the date any protected tree(s) are removed.
- Protected tree: Any tree having a diameter of 6" DBH or larger ...
- Landmark Tree: Any tree having a diameter of 40" DBH to 54"...
- Legacy Tree: Any tree having a diameter of 55" DBH or large...
- <u>Significant Tree</u>: Any tree having a diameter of 25" DBH to 39" DBH and which is located on land subject to the provisions of section 21-82. Or is a replacement tree as described in 21-85 (e).
- <u>Tree Plan</u>: A plan showing (1) the location, type, and size of each tree 5" DBH and larger; (2) which tree(s) are to be removed; and (3) the location, type, and size of replacement trees. The tree plan should also show the location, estimated size, and tree type of any trees that were removed from the lot within the prior 24 months leading up to the application date.
- <u>Tree Protection Plan</u>: A plan developed by a Certified Arborist, following the most current version of the ANSI
 A300 standards including Part 5, management standards for site planning and development. This plan shall set
 out measures for protecting all trees on the lot during construction or tree removal as well as trees adjacent to
 the lot that may be impacted by the construction or tree removal activity on the applicant's lot.
- <u>Tree Save Area</u>: Area within the dripline of a tree or the area within a radius around the tree trunk of 1.5 feet for every inch of DBH, whichever is greater.

Tree replacement.

- Standards: A person who has removed a protected tree and is required to replace such tree pursuant to subsection (a) hereof or as a condition of granting a tree permit in accordance with section 21-83, <u>shall replace such tree within eighteen (18) months</u>, or prior to transfer of property ownership whichever comes first from the date the tree permit is issued and in accordance with the following standards:
 - Replacement tree(s) shall be of the <u>same or similar species</u> or such other species as deemed advisable by the tree warden.
 - Trees planted as hedges shall not count as replacement trees unless otherwise permitted by the Tree Warden.
 - In the event that a tree of the same or equivalent size as measured in DBH inches cannot be planted, then multiple smaller replacement trees may be planted provided that, wherever practicable, as determined by the tree warden, the total DBH of the replacement trees shall,

- For every protected tree removed, that does not qualify as a Significant, Landmark, or Legacy tree, the total DBH of the replacement trees shall, when added together, equal the total DBH of the protected tree that has been removed.
- For every protected tree removed that also meets the <u>Significant Tree</u> definition, but is not a Landmark or Legacy Tree, the total DBH of the replacement trees shall, when added together, equal <u>1.5 times the total DBH of the Significant Tree</u> that has been removed.
- For every protected tree removed that also meets the <u>Landmark Tree</u> definition, but is not a Legacy Tree the total DBH of the replacement trees shall, when added together, equal <u>2 times</u> the total DBH of the Landmark Tree that has been removed.
- For every protected tree removed that also meets the <u>Legacy Tree</u> definition, the total DBH of the replacement trees shall, when added together, equal <u>3 times the total DBH</u> of the Legacy tree that has been removed.
- A replacement tree shall be considered a Significant Trees regardless of trunk diameter, health or condition required to survive for a minimum of eighteen (18) months from the date it is planted. The Tree Permit holder person shall provide documentation as to the date of planting and file the same with the tree warden within fifteen (15) days of the planting of said replacement tree. Documentation shall be provided by a Certified Arborist on form(s) provided by the Tree Warden that the trees are in place.

CON COM Tree Replacement Guidelines – for comparison purposes

Replacement for healthy trees and shrubs

- <u>Size and number</u> of replacement trees and shrubs shall be calculated as follows:
 - For each inch of <u>tree over 8" dbh</u> removed, ½ <u>caliper inch</u> (measured 6 inches off the ground) must be planted. Replacement trees must be at least 1-2 caliper inches.
 - o For each shrub over 4' tall or 4' wide removed, two 1-gallon shrubs shall be planted.
- Replacement planting must occur no later than <u>6 months after completion of removal or end of construction</u> whichever is later.

In all situations

- <u>Shrubs</u> may be required in addition to or allowed in place of trees to increase ecological diversity and accommodate site constraints.
- Replacement trees and shrubs shall be native species.
- Replacement tree and shrub selections shall optimize the:
 - Likelihood of mitigation planting success,
 - o Degree to which lost tree (and shrub) functions are replaced,
 - o Value and complexity of the replacement vegetation, and
 - Appropriate <u>density</u> for the site.
- Replacement tree and shrub locations shall optimize wildlife habitat value to the maximum extent possible.
- Replacement trees and shrubs must <u>survive two growing seasons</u>.

Special Circumstances: Appropriate compensatory mitigation will vary project-by-project and site-by-site.

- If the trees or shrubs being replaced are invasive, mitigation requirements may be reduced.
- If the trees or shrubs being replaced are <u>hazards</u>, mitigation requirements may be <u>reduced</u>.
- If the trees or shrubs being replaced are on small lots, mitigation requirements may be reduced.
- If the trees or shrubs being replaced are <u>large trees</u> (i.e., over 24" dbh), mitigation caliper inch requirements may be <u>reduced</u>, but species selection may be limited to large canopy tree(s).
- If the trees or shrubs being replaced are in the <u>inner 50-foot Buffer Zone</u>, mitigation requirements may be <u>increased</u>.
- In <u>enforcement situations</u>, mitigation requirements may be <u>increased</u>.

CONSERVATION COMMISSION MINUTES

Date: Thursday, February 9, 2023

Time: 7:00pm—9:54 pm

Place: This meeting was held as a virtual meeting via Zoom.

With a quorum present, the meeting opened at 7:00 pm with Susan Lunin presiding as Chair.

Members Present: Dan Green (Chair) joined at 7:02, Susan Lunin (Vice-Chair), Kathy Cade, Judy Hepburn,

Jeff Zabel, Leigh Gilligan, Ellen Katz

Members Absent: Sonya McKnight (Associate Member)

Staff present: Jennifer Steel, Ellen Menounos

Members of the Public: not recorded due to remote nature of the meeting

DECISIONS

WETLANDS DECISIONS

1. 70 Suffolk Rd - NOI continued - construct pool, garage, site features - DEP #239-946

- Owner/Applicant. Frank & Kyra van den Bosch
- <u>Representatives.</u> Andrea Kendall, LEC Environmental; Peter Stephens, Dan K Gordon Assoc;
 Brian Nelson, MetroWest Engineering
- Project Summary.
 - o Remove existing hardscape (driveway, retaining walls, steps; a portion of the house).
 - o Build a pool, pool house, 1-car garage, terraces and paths. This will add 2,860 sf of impervious area within Commission jurisdiction.
 - o Install 2 underground stormwater infiltration systems.
 - o Remove 22 live trees over 8" dbh (489" total).
 - Mitigate/re-naturalize rear of lot beyond the hedge that demarcates the back lawn
 - Plant 42 (37 large native canopy trees, 7 smaller-stature native trees) (207" total)
 - Plant 125 native shrubs
 - Convert lawn to a "sun meadow" with 2500 plugs
 - Convert lawn to a "shade meadow" with 500 plugs
 - Remove footbridges by hand and plant the Bank with forbs and/or ferns.
 - Manage invasive species along the slope east of the house and within BVW along the perimeter of the new "meadows".
 - Demarcate the edge of lawn to be retained with distinct grading, hedges, and a fescuecovered slope to be mowed only once annually.
- Request. Issue an OOC.
- Documents in packets. Locus map, highlighted plans.
- Additional documents presented at meeting. Site photos.
- Jurisdiction. Bank, BVW to intermittent stream, Buffer Zone
- Presentation (staff, Peter Stephens, Brian Nelson) and Discussion.
 - Staff showed highlighted site plans and site photos and summarized the proposed work
 - Staff noted that revised landscape and civil plans were received.
 - The new plans show a revised wetland line and flood zone elevation.
 - The new plans clarify proposed and existing conditions.
 - Proposed trees are now all native.
 - Staff noted important site history. A memo summarizing the wetland permitting history of the site has been received. It indicated that:
 - In 1974 an OOC (239-11) was issued for fill to create some of the current lawn.
 - A COC was issued for that work in 1978.
 - Staff noted that one of the trees in the back yard area fell recently.
 - The applicants noted that roughly 2 of the 3.5 acre site is now defined as wetland and that they will retain only 700 sf of lawn in wetland and restore to native vegetation roughly 9,000 sf. The Commission applicated that effort.
 - The applicants requested that their proposed "alteration" of ~2000 sf of BVW (the "nose" of the lawn and slope) be allowed since it is now lawn and only a ~700 sf portion will



Mayor Ruthanne Fuller

> Director Planning & Development Barney Heath

Chief Environmental Planner Jennifer Steel

Assistant
Environmental
Planner
Ellen Menounos

Commission
Members
Kathy Cade
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remain lawn with the balance as a hedgerow and a fescue-covered slope. The applicants suggest that their proposed restoration of ~7,136 sf of BVW from lawn to native trees, shrubs, and vegetative plants represent an overall ecological improvement.

- The Commission discussed one of two options:
 - (1) Finding that since the BVW that is proposed to be altered is and has been filled lawn for decades, the presumption of significance could be overcome.
 - (2) Finding that since ~2000 sf BVW is due to be altered, ~2000 sf BVW must be replicated.
- o The Commission felt that "option 1" was most appropriate since on balance the project is a beneficial one: a large are of land now identified as BVW will get significantly enhanced with native plantings and be better protected with a clear demarcation of shrubs and a slope. The site is already developed with extensive, maintained lawn, devoid of native plant assemblages. Much of what is now defined as BVW is and has been lawn for decades. This parcel was granted an Order of Conditions in 1974 to place fill and grade lawn to "improve drainage" in what was then defined as Buffer Zone to the stream and ponding area, but now, using soils for delineation, qualifies as BVW. New development is being kept close to the existing house and driveway. Because this project is proposing re-naturalization of a large swath of existing lawn (in BVW), the Commission is approving the maintenance and improvement of a small portion of the existing lawn (in BVW). Mitigation will restore natural functions and values to the recently re-delineated BVW at the rear of the lot.
- Staff noted that the stormwater infiltration systems are being reviewed by Engineering under the City's new Stormwater
 Ordinance and that the project is exempt from Stormwater Standards under the Wetlands Protection Act.
- Staff notes indicated the following.
 - The erosion control line is shown running through an area to have tree cutting and planting.
 - Runoff from the steep slopes beside the pool may adversely affect slope stability and the adjacent parcel.
 - Flow over the level spreader on the eastern side of the property could lead to erosion.
 - Trees are shown being planted over the northern infiltration system.
 - Proposed trees and shrubs c/should be planted more in the "tongue" of lawn, not just at the very edges.
- <u>Vote</u> to close the hearing and issue an OOC with the following site-specific special conditions. [Motion: Zabel, Second: Lunin, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]
 - Once all questions have been answered and appropriate plans received, vote to close the hearing and issue an OOC with the following special conditions.
 - Adequate protection must be installed for the tree(s) that are due to remain but are close to grade changes. This may include moving the erosion control line, adding orange snow fencing near the drip lines, tying boards to the trunks, and/or placing mulch and plywood to protect roots.
 - A <u>concrete washout plan</u> designed to limit and control any adverse impact on the wetlands resource area(s) must be presented to the Conservation Commission for review and approval.
 - <u>Final plans and a stand-alone Operations and Maintenance Plan for the infiltration systems</u> must be approved by the Engineering Department and submitted to the Conservation Office.
 - <u>Individual specimens of non-native invasive shrubs may be removed by hand using best practices</u>. To mitigate for any such removal, a <u>suitable replacement native species specimen shall be installed</u>.
 - The BVW and Buffer Zone enhancement planting areas must:
 - Be installed in compliance with the approved plans (desired changes must be approved by the Conservation office in advance)
 - i. Including 37 native canopy trees with a survival rate of 90 % (after 2 growing seasons)
 - ii. Including 7 native understory trees with a survival rate of 100% (after 2 growing seasons)
 - iii. Including 125 native shrubs with a survival rate of 85% (after 2 growing seasons)
 - iv. Including the full aerial extent ad full coverage of the sun and shade meadows (after 2 growing seasons)
 - Be installed under the direction of a qualified wetland consultant to ensure proper installation, proper placement, and appropriate and even filling of the entire mitigation area.
 - Be installed and maintained in such a manner as to replicate to the maximum extent practical a diverse ecological system, provide habitat for native species, and keep invasive species in check. Mulch applications, if any, shall diminish over time and eventually cease as ground cover species and shrubs spread.
 - Stabilize all disturbed areas.
 - Be managed to control/minimize invasives species. If herbicides are use, manufacturer's recommended directions must be followed.
 - To ensure long-term protection of the wetland, a line of bounds shall be placed along the wetland line and thence across the top of the fescue covered slope that will demarcate the lawn, and thence along the wetland line. Bounds must be (1) 4"x4"x36" stone or concrete posts, (2) have instructive language regarding the required protection, (3) have at least 6" maintained above grade, and (4) be placed 20 feet or less apart.

- The fescue slope, "sun meadow", and "shade meadow" areas shall not be mowed more than once annually (to discourage the growth of woody vegetation) and shall not be mowed before October 30 of any year to allow the full life cycle of native insects and pollinators.
- Active monitoring and management of the required plantings must continue for 2 years, and annual reports with photos must be submitted to the Conservation Office.
- If any <u>trees intended to be protected within the project area die within 2 years of the start of construction as a result of the construction or have been demonstrably harmed by construction activities, they shall be replaced at a ratio of 2:1 with native canopy saplings (of roughly 2 caliper inches).</u>
- The stormwater infiltration system must be installed (and maintained) as per the approved plans.
- To protect the water quality of area wetlands, neither fertilizers nor pesticides shall be used beyond the limit of lawn.
- To protect wetland wildlife, exterior lighting shall:
 - a. be "dark sky" compliant -- i.e., shielded to prevent any "up lighting" and "backlighting", focused, and directed so as to not illuminate any part of the wetland.
 - b. have limited blue content to decrease skyglow and disruption of diurnal animals
 - c. be switched off when not in active use
- The approved Stormwater Operations and Maintenance Plan must be adhered to.

2. 0 Commonwealth Avenue – NOI – Marty Sender Phase II Path Improvements – DEP #239-947

- Owner/Applicant. Luis Perez Demorizi of Newton Parks, Recreation, Culture
- Representatives. Farah Dakkak of Weston & Sampson, Inc.
- Project Summary. Regrade/resurface the Marty Sender Path from Islington Road to the pump station.
 - o Improve the grading of and drainage from a short segment of the existing gravel roadway into a stone dust shared-use path,
 - Install a 500-foot-long by 10-foot wide boardwalk above the flood elevation (260 cf of fill from the piers of the boardwalk),
 - o Remove portions of the existing roadway "berm" from under the new boardwalk that blocks the flow of stormwater and disconnects wetlands from the floodplain to provide 307 cf of compensatory flood storage, and
 - o Convert existing turf grass into an area of native herbaceous plants, shrubs, and trees (4 trees, 89 shrubs, 181 sedges).
- Request. Issue OOC.
- Documents in packets. Locus map, highlighted plans.
- Additional documents presented at meeting. Site photos.
- Jurisdiction. Buffer Zone, BVW, and Flood Zone (BLSF).
- Staff Presentation.
 - Staff showed highlighted site plans and site photos and summarized the proposed work.
 - o Staff noted that all the staff questions and concerns were addressed in a response memo and plan changes.
 - Staff noted the many benefits of the project:
 - Focusing foot traffic within a 10-foot wide pathway (stone dust and boardwalk),
 - Allowing the restoration of long stretches of disturbed ground and reconnecting flood-prone wetlands,
 - Significant restoration of turfgrass to native plantings,
 - Honoring the draft/pending FEMA flood maps/elevations,
 - Utilizing suitable piers/foundations based on the currently unknown soil conditions, and
 - Completing construction by June 30, 2023 (because of grant deadline).
- Discussion (Luis Perez Demorizi).
 - o The applicant noted that the old exercise equipment would be removed from the area.
 - o The applicants were happy to include replacement of some of the old gravel of the roadway/path that is outside the new path and boardwalk alignment with loam and native seed mix
- <u>Vote</u> to close the hearing and issue an OOC with the following site-specific special conditions. [Motion: Cade, Second: Gilligan, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]
 - A <u>dewatering plan</u> designed to limit and control any adverse impact on the wetlands resource area(s) must be presented to the Conservation Commission for review and approval.
 - o A <u>concrete washout plan</u> designed to limit and control any adverse on the wetlands resource area(s) must be presented to the Conservation Commission for review and approval.
 - Adequate protection must be installed for the tree(s). This may include the addition of orange snow fencing near the drip line, boards tied to the trunk, and/or mulch and plywood placed over the roots.

- Dewatering basins and discharge, if any, must occur on the established grassy fields. It may not occur within wooded wetland areas.
- Compensatory flood storage must be provided in its entirety as per the plans. Finished grades must comport with the approved plans (i.e., there must be net removal of ~250 cubic feet of roadway material around the 38' NAVD88 contour from under the boardwalk and removal of ~50 cubic feet of turf grass and soil where the wetland plants are due to be established).
- o Existing trees shall be protected at all times, as per Condition #26 and the details and notes on sheets L-110 and L-500.
- The edges of the existing gravel roadway that extend beyond the edges of the boardwalk and parts of the pathway shall have some gravel material removed, possibly some loam installed, then be seeded with a shade-tolerant native seed mix.
- o Riverfront Area / Buffer Zone enhancement plantings must:
 - Be installed in compliance with the approved plans (desired changes must be approved by the Conservation office in advance) BUT:
 - i. The "aquatic seed mix planting" shown on the plans shall be "New England Wetmix" or "New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites" or an equivalent.
 - ii. Because of the risk of heavy browsing by herbivores, and the wet conditions, the lowbush blueberry shall be substituted with another shrub species from the approved plant schedule.
 - Be installed under the direction of a qualified wetland consultant to ensure proper installation, proper placement, and appropriate and even filling of the entire mitigation area.
 - Be installed and maintained in such a manner as to replicate to the maximum extent practical a diverse ecological system, provide habitat for native species, and keep invasive species in check. Mulch applications, if any, shall diminish over time and eventually cease as ground cover species and shrubs spread.
 - Stabilize all disturbed areas
 - Include 4 native canopy trees and have a survival rate of 100 % of total number of trees (after 2 growing seasons)
 - Include 71 native shrubs and have a survival rate of 80 % of total number of shrubs (after 2 growing seasons)
 - Include the native herbaceous plants shown on the approved plan and have a survival rate of 75 % aerial coverage of such plants (after 2 growing seasons)
 - Be managed to control/minimize invasives species. If herbicides are use, manufacturer's recommended directions must be followed.
- Restoration planting areas shall be surrounded with sand dune fencing or equivalent until establishment has been achieved to minimize animal browse and foot traffic.
- o If any trees intended to be protected within the project area die within 2 years of the start of construction as a result of the construction or have been demonstrably harmed by construction activities, they shall be replaced at a ratio of 2:1 with native canopy saplings (of roughly 2 caliper inches).

Newton's Standard Conditions After Work has been Completed

3. 65 Harwich Rd - Notice of Violation resolution - restoration of Buffer Zone planting

- Owner/Applicant. Chitra and Ravindra Uppaluri
- Representatives. Rich Kirby, LEC Environmental
- Project Summary.
 - Restore the natural buffer previously approved by the Con Com as part of the single-family home construction under DEP file #239-743.
 - Remove lawn grass.
 - Plant trees and shrubs
 - Install 3 native sapling trees measuring 4-6' tall and 10 native shrubs 2-3' tall at time of planting;
 - Select at least two different tree species and three different shrub species;
 - o Apply Ernst Conservation Seed mix for Mesic to Dry/Native Pollinator Mix after trees and shrubs have been installed.
 - o Install 5 bounds.
- Request. Accept the proposed restoration planting plan.
- <u>Documents in packets.</u> Locus map, Resolution Planting Sketch Plan.
- Additional documents presented at meeting. Site photos.
- Jurisdiction. Buffer Zone.
- Staff Presentation.
 - Staff showed highlighted site plans and site photos and summarized the proposed work.
 - Staff recounted the site history of initial compliance that was "undone" with the removal of a fence and conversion of natural area to lawn.

- o Staff noted that the BVW line may be different than that shown on the originally approved (and closed) plans.
- o The owners received a Notice of Violation that required a plan be submitted (done), approved by the Commission, and implemented on or before May 30, 2022.
- o The owners have been very responsive and the plan submitted seems mostly appropriate.
- o Staff indicated that the proposed plant species list was appropriate, but that numbers needed to be worked out.

Discussion (Rich Kirby).

- o Kirby explained the reasons the fence and vegetation had been removed (poison ivy and safety concerns), and noted the owner's interest in complying with the restoration plan.
- Kirby apologized for the discrepancy on the plans, noted that revised plans had been submitted and that 4 trees and 15 shrubs would be installed.
- In response to staff concerns about using Ernst Conservation Seed mix for Mesic to Dry areas in such a wet area, Kirby responded that they had had good success with some of the species thriving. The Commission agreed to allow the applicant to try, since they were obligated to ensure successful coverage..
- <u>Vote</u> to issue a "friendly" Enforcement Order citing the restoration plan that has been submitted, requiring that the plan be implemented on or before May 30, 2023, and requiring monitoring and photo-documentation for 2 years. [Motion: Gilligan, Second: Lunin, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]

4. 158 Otis St. - Notice of Violation resolution -- Unpermitted tree cutting

- Owner/Applicant. Gregg Nagel
- Representatives. John Rockwood of EcoTec
- Requested Project Summary. Restore mitigation areas established under DEP file #239-801 at rear of property on or before June 1, 2023.
 - o Retain wood-framed play area
 - o Plant 3 white pines, 4 red or pin oak, 4 red or sugar maple, and 4 American beech
 - Plant 6 clusters of 6 native shrubs
 - o Spread leaf litter about
 - Monitor the site for 2 years
- Documents in packets. Locus map, highlighted plans.
- Additional documents presented at meeting. Site photos.
- Jurisdiction. Buffer Zone.
- Staff Presentation.
 - Staff showed highlighted site plans and site photos and summarized the proposed work.
 - Staff recounted the site history
 - The property was subdivided and built under an OOC.
 - Mitigation plantings were required to offset the impact of new house and driveway.
 - A COC was issued and the required Enhancement Planting Areas were re-naturalizing successfully.
 - In the fall of 2022, Staff received calls from neighbors regarding tree cutting at the rear of 158 Otis Street and initiated discussions with the owner.
 - The owner retained John Rockwood (the original representative) to develop a plan to bring the site into compliance.
 - Activities that have occurred since the COC was issued:
 - Wood-framed play area installed
 - 1 white ash was cut
 - 5 girdled Norway maples were cut, 1 snapped off at 20 feet
 - 1-2 snags were cut
 - Several saplings and shrubs have damage to their bark
 - Leaf litter was removed
 - NOTE: 8 native saplings were planted in the fall of 2022.
- <u>Discussion (John Rockwood).</u>
 - Rockwood noted that:
 - the drought of 2022 adversely affected the Enhancement Planting Areas,
 - the owner had already planted 8 saplings in the rear of the property,
 - the City's permitted work to fix the pipe and drop inlet have removed the "intermittent stream" from the property,

- the owner's original COC cited incorrect perpetual conditions (a cut and paste error) and should be corrected and reissued.
- o It was clear to all that girdling trees in suburban settings was not prudent (because of the safety hazard they pose in later years) and will not be approved by the Commission in the future.
- The Commission gave permission for the remaining girdled trees to be topped, leaving roughly 20-25-foot tall "snags".
 Cut logs will be left as habitat.
- <u>Vote</u> to issue a "friendly" Enforcement Order citing the restoration plan that has been submitted, requiring that the plan be implemented on or before June 1, 2023, and requiring monitoring and photo-documentation for 2 years. [Motion: Katz, Second: Cade, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]
- <u>Vote</u> to issue a corrected COC (as "scrivener's error") for recording purposes. [Motion: Lunin, Second: Zabel, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (nay), Cade (aye). Vote: 6:1:0]

5. 180-210 Needham St - Notice of Violation resolution -- parking lot expansion, mitigation planting, rain garden - DEP #239-730

- Owner/Applicant. Kerry McCormack, CrossPoint Associates
- Representatives. John Rockwood of EcoTec
- <u>Project Summary.</u> Site needs to be brought into compliance with an expired OOC with invasive control, plantings, and a fully functional rain garden.
- Documents in packets. Locus map
- Additional documents presented at meeting. Highlighted site plans and site photos.
- Jurisdiction. Riverfront Area, Flood Zone, Buffer Zone.
- Staff Presentation.
 - o Staff showed highlighted site plans and site photos and summarized the situation.
 - The OOC had expired, but a site visit found that the site is not in substantial compliance with the approved plans.
 - A Notice of Violation was sent stating that the owner must bring the site into full compliance promptly to avoid an official Enforcement Order and that, due to the season, the full planting plan referenced in 239-730 must be installed on or before June 15, 2023.
 - John Rockwood has been retained to develop a plan. He expects to submit a plan addressing vegetation in the rain garden, invasive species removal, and planting/supplemental planting of the enhancement area.

Discussion (John Rockwood).

- o Commissioners noted the Crosspoint needed to "step up their game" as stewards of natural spaces and undertake invasive control, planting area management, and litter control much more seriously.
- Rockwood noted that initial invasive efforts had been fairly successful, so the density of invasives is diminished (especially Japanese knotweed and bittersweet).
- o Rockwood noted that the rain garden would require substantial reconstruction to be made fully functional. He suggested that cobble edges, a new/excavated beehive, new soil, and a thoughtful planting scheme would be required.
- o It was suggested that bollards be installed to protect the raingarden from traffic.
- o It was noted that snow must not be piled on the rain garden.
- <u>Vote</u> to issue a "friendly" Enforcement Order requiring that a plan be submitted to the Conservation Office for review and approval, and that the plan be implemented on or before June 15, 2023. [Motion: Gilligan, Second: Cade, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]

6. 42 Parsons St – COC – demo SFH/construct duplex – DEP #239-859

- Owner/Applicant. Arto Dermovsesian
- Representatives. John Rockwood of EcoTec
- Request. Issue COC.
- <u>Documents in packets.</u> Approved planting plan
- Additional documents presented at meeting. Site photos
- Staff Presentation.
 - o All necessary paperwork was received for this COC request.
 - A site visit on 2/1/2023 found that the site was is substantial compliance with the approved plans <u>but</u> for that fact that it appears that although 4 canopy saplings were to have been planted outside the bounded mitigation area, only 2 were planted outside the bounds and they are understory tree species (dogwoods).
- Discussion (John Rockwood).
 - o Two of the 4 required trees are very small magnolias and are inside the bounded area.

- o The Commission felt that the intent of the restoration requirements had been met.
- <u>Vote</u> to issue a complete COC. [Motion: Katz, Second: Hepburn, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]

7. 400 Beacon St - COC - Mary Baker Eddy House landscape improvements - DEP #239-843

- Owner/Applicant. Sandra Houston, Longyear Foundation
- Representatives. Bert Corey, DGT Associates
- Request. COC request was withdrawn before the hearing.
- Documents in packets. None.
- Additional documents presented at meeting. Site photos.
- Staff Presentation.
 - Most necessary paperwork was received for this COC request tree cutting and pruning information has not been received and a site visit on 2/1/2023 found that site work is incomplete.
 - The garden area is "raw" and unstabilized,
 - The rain garden has not been completed or stabilized, and
 - The inflow channel is not at the low point of the loop road.
 - o The applicant has requested that the request for a COC be withdrawn.

8. Commission's Tree Replacement Policy -- Discussion

- Staff Presentation.
 - At a recent hearing, the Commission noted interest in revisiting their Tree Replacement Policy as it relates to the protection of large/mature trees.
 - o The Commission has a Tree Replacement Policy <u>and</u> a Mitigation/Restoration Planting Area Guidelines. Staff provided in the packet these policies individually <u>and</u> a consolidated version that appears on the Conservation website.
 - The Commission was asked to review the policies and determine whether they:
 - provide sufficient guidance for situations wherein large trees are proposed to be removed, and
 - address the Commission's interest in preserving mature trees.

Discussion.

 Staff were asked to read the proposals for a revised City Tree Ordinance (one from Marc Welch and one from City Councilors) and to assess how the Commission's policies relate. There is value in trying to create consistency in how the City, writ broad, addresses tree preservation, tree cutting, and mitigation.

A. CONSERVATION AREA DECISIONS - none

B. ADMNISTRATIVE DECISIONS

9. Minutes to be approved

- <u>Documents in packets.</u> Draft 1/19/2023 minutes as edited by Ellen Katz.
- <u>Vote</u> to approve the 1/19/2023 minutes as edited by Ellen Katz. [Motion: Zabel, Second: Lunin, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]
- Volunteer. Dan Green volunteered to review the 2/9/23 minutes.

C. ISSUES AROUND TOWN DECISIONS

10. Watertown Dam project letter

- Owner/Applicant. Potentially, DCR
- <u>Project Summary.</u> The Charles River Watershed Association (CRWA) is garnering support for the removal of the Watertown Dam
- Request. CRWA has asked the Commission to consider writing a letter advocating for removal of the Watertown dam. CRWA, the Watertown Conservation Commission, and others have long expressed interest in removing dam and are building grassroots support to convince DCR to remove the dam
- <u>Documents in packets.</u> Locus map.
- Additional documents presented at meeting. Site photos.
- <u>Jurisdiction</u>. The dam is entirely within Watertown, so removal would occur in Watertown, but the effects of removal would impact Newton.
- Notes (according to CRWA).
 - History of the dam
 - Pre-1600s indigenous people constructed fish weirs in this area.

- In 1634 a stone dam was constructed to power grist and paper mills.
- In the 1700-1800s it was used as active mill power.
- Into the 1900s it was used for power generation.
- o In 1966 it was rebuilt as a 180-foot long, 8-foot high concrete weir. It is owned by DCR.
- o In 1972 a fish ladder was constructed.
- o In 2015 DMF found that fish were unable to pass.
- o In 2016 inspections report the dam to be in "poor" condition.
- o In 2017 CRWA got the dam listed as a priority project with the State Division of Ecological Restoration (DER)
- o In 2021 DER completed a feasibility study of dam removal that found:
 - The dam does not provide flood control.
 - The dam is in poor condition and is susceptible to failure without costly repairs
 - The dam impedes migratory fish passage, warms the water behind the dam, impedes sediment transport.
 - Removal:
 - o is feasible
 - o would have little impact on recreation
 - would restore ecological integrity and connectivity
 - o would lower flood elevations approximately 6 feet (at the dam)
 - o would reduce the floodplain approximately 1/2 mile upriver of the dam
 - o would not change flooding or flow downriver of the dam

• Staff Presentation.

- o Staff shared notes from materials provided by CRWA.
 - History of the dam
 - o Pre-1600s indigenous people constructed fish weirs in this area.
 - o In 1634 a stone dam was constructed to power grist and paper mills.
 - o In the 1700-1800s it was used as active mill power.
 - o Into the 1900s it was used for power generation.
 - o In 1966 it was rebuilt as a 180-foot long, 8-foot high concrete weir. It is owned by DCR.
 - o In 1972 a fish ladder was constructed.
 - o In 2015 DMF found that fish were unable to pass.
 - o In 2016 inspections report the dam to be in "poor" condition.
 - o In 2017 CRWA got the dam listed as a priority project with the State Division of Ecological Restoration (DER)
 - o In 2021 DER completed a feasibility study of dam removal that found:
 - Dam characteristics
 - o The dam does not provide flood control.
 - o The dam is in poor condition and is susceptible to failure without costly repairs
 - o The dam impedes migratory fish passage, warms the water behind the dam, impedes sediment transport.
 - Removal:
 - o is feasible
 - o would have little impact on recreation
 - o would restore ecological integrity and connectivity
 - would lower flood elevations approximately 6 feet (at the dam)
 - o would reduce the floodplain approximately 1/2 mile upriver of the dam
 - o would not change flooding or flow downriver of the dam
- o Mass Audubon has written in support of dam removal in Natick.
- Staff feel that restoring natural riverine flow and ecosystems would be ecologically beneficial and would support the 8 interests of the Act:
 - Protection of public and private water supply
 - Protection of ground water supply
 - Flood control
 - Storm damage prevention
 - Prevention of pollution
 - Protection of land containing shellfish
 - Protection of fisheries

Protection of wildlife habitat

Discussion.

- Commissioners acknowledged the likely positive effects of dam removal, but some questioned possible negative effects, e.g.,:
 - Adverse effects on bird populations (such as black crowned night heron) that capitalize on the fish being stopped by the dam,
 - Possible spreading of contaminated sediments during the anticipated removal of 1,400 tons of sediment, and
 - Sediment deposition in the already-shallow lower basin.
- Commissioners posed a number of questions:
 - Is this stretch of river too urban for dam removal to have a significant positive effect? (Ask the Division of Ecological Restoration if this is a priority project.)
 - Have there been dam removal projects on a river as large as the Charles? If so, what were the outcomes/consequences of those projects?
 - What are the magnitudes of anticipated ecological benefit and anticipated costs of repair to mitigate risk?
 - What is value of providing a natural channel when there is a dam just 2 miles upstream at Moody Street?
- o Commissioners came to the consensus to not issue a letter of support at this point in time, but wait until they receive more information on the anticipated effects on wetland resource areas (and other environmental impacts).

UPDATES

- **D. WETLANDS UPDATES** none at this time
- E. CONSERVATION AREA UPDATES none at this time
- F. ADMINISTRATIVE UPDATES none at this time
- G. ISSUES AROUND TOWN UPDATES none at this time

OTHER TOPICS NOT REASONABLY ANTICIPATED BY THE CHAIR 48 HOURS BEFORE THE MEETING

• Commissioners and staff were encouraged to take advantage of the MACC spring conference (Feb 28-Mar 9). They should submit class requests to staff so staff can register them.

ADJOURN at 9:54 [Motion: Lunin, Second: Zabel, Roll-call vote: Green (aye), Lunin (aye), Katz (aye), Gilligan (aye), Zabel (aye), Hepburn (aye), Cade (aye). Vote: 7:0:0]

Watertown Dam Removal Questions from the Commission 2/9/23 and Answers from CRWA 2/22/23

- Q: Timing of letter of support?
- A: We are hoping to send a package of information to the EEA/DCR soon in February, early march.
- Q: Have any other dams this large been removed in Massachusetts? If so, in what municipalities? The Watertown dam is a large dam, and a large swath of river, in a very urban context. It would be great to have as direct a comparison as possible.
- A: Yes. Watertown Dam is a significant hazard potential, run-of-river dam with a concrete spillway measuring 6-8-ft high and 200-ft wide. There have been various dams removed, or planned to be removed at this size in rural, urban and suburban areas in the Commonwealth of Massachusetts. Below is a list, some urban, some not. It is not exhaustive. Take a look at Whittenton and Briggsville. All are larger and of interest. Hazard potential definitions (high, significant) can be found here.

Dams Removed

- Old Mill Dam on the Charles River in **Bellingham** was a 200-ft wide and 13.5-ft tall dam. The significant hazard potential structure was removed by the Town of Bellingham in partnership with the Massachusetts Division of Ecological Restoration (DER) in 2017.
- Hunters Pond Dam, Scituate. 11-ft high, 220-ft long dam that was removed by the Town of Scituate and DER in 2017.
- Holmes Dam, Town Brook, was a 19-ft high 275-ft long high hazard potential dam removed by the Town of **Plymouth** in partnership with NOAA and DER in 2018.
- Off Billington Street Dam, Town Brook. The Town of **Plymouth** removed an 8.4-ft high, 110-ft wide concrete and stone industrial mill dam in November of 2013. For the full story on the restoration of Town Brook, click here.
- <u>Tel-Electric Pond Dam</u>, West Branch Housatonic River, **Pittsfield**. This 22-ft high by 100-ft long former stone and concrete mill dam was removed in 2018 by DER.
- Elm Street Dam, Jones River, **Kingston**. A concrete dam (9-ft tall by 200-ft wide) was removed in 2018 by the Town and DER.
- <u>Barstowe's Pond Dam</u>, Cotley River, **Taunton** was an 8.5-ft tall and 92-ft long wooden dam removed in 2018 by DER.
- Whittenton Dam, Mill River, Taunton. 8-ft high, 100-fet long dam removed in 2013 by DER.
- West Britannia Dam, Mill River, **Taunton**. The eight-ft tall by 85-ft long dam was removed in March 2018 by American Rivers and the DER. Read about flood control and removal.
- Hopewell Mills Dam, Mill River, Taunton. 8-ft high and 350-ft long. Removed in 2012 by DER.
- Forge Pond Dam, **Freetown**. 8-ft high, 260-ft long earthen dam removed in 2010 by DER. While earthen, worth noting that it <u>failed in 2010</u> and had to be removed.
- Roberts Meadow Upper Reservoir Dam, Northampton. 30-ft tall by 65-ft wide dam removed in 2018 by the City of Northampton in Partnership with DER.
- <u>Briggsville Dam</u>, North Branch Hoosic River, Clarksburg. 15-ft high by 200-ft long, removed in 2010 by American Rivers.
- <u>Bartlett Rod Shop Co. Dam</u>, Amethyst Brook, **Amherst**. 20-ft high and 170-ft wide stone dam removed in 2012 by DER.
- <u>Winchell Dam</u>, **Granville**. Granite stone masonry and concrete dam approximately 145-ft long by 14.5-ft high. Removed by the City of Westfield in 2016.

Dams To Be Removed

- The <u>Charles River Dam</u> in **South Natick** is a run-of-river dam with a concrete spillway measuring 130-ft and height of 7-ft. The dam is a high hazard potential dam. The Town of Natick decided last year to move forward with removing the dam and is soliciting designs of dam removal.
- <u>Armstrong Dam</u> in **Braintree** on the Monatiquot River is 12-ft high and 92-ft long significant hazard potential dam. The Town of Braintree along with the private dam owner is going out to bid for dam removal this spring.
- Quinapoxet Dam in West Boylston on the Quinapoxet River owned by the Commonwealth of Massachusetts DCR Division of Water Supply Protection is an 18-ft high 250-ft long dam that is set to be removed by the Massachusetts Water Resources Authority, DCR and DER.
- Q: In one of the older videos, I believe you said that the Watertown dam connects the free flow of the Charles to two small tributaries, which once had fish spawning in them but have not since the dam was installed. Can you clarify which brooks you were referring to?
- A: Yes, <u>Beaver and Chester Brooks</u> (in Waltham). CRWA has had discussions and site visits with the City of Waltham's Conservation Commission regarding these two tributaries below the Moody Street Dam. <u>Note that Moody Street Dam serves multiple purposes and is not a priority or appropriate for removal</u>. The Waltham Conservation Commission sent a letter to DCR in support of the Watertown Dam removal. Members of the Commission have observed river herring in Beaver Brook and have a goal of providing further fish passage in Beaver and Chester Brooks. Additionally, the Hardy Pond Association, which is a subsidiary group of the Waltham Land Trust, is interested in restoring fish passage to Hardy Pond, which is a Great Pond and headwaters of Chester Brook.
- Q: Removing the Watertown dam restores only about 2 miles of fish-swimmable river, as the fish will still encounter the dam at Moody St. How big a benefit is this, given the cost? In one video, Ben Gahagan answered this by saying that the fish would save energy by encountering one less dam. He also said that the fish ladder at Moody St. should be replaced/reworked. Commissioners would like to better understand the significance of allowing the diadromous fish to swim another couple of miles upstream. Is there any new information here?
- A: It's a significant step forward. Removing Watertown Dam would greatly improve fish passage for Alewife, Blueback Herring and American Shad up to the Circular Dam by Route 9 approximately 10 miles upstream. As you note, the Moody Street Dam is about 2.9 miles upstream of Watertown Dam. In between the dams about two miles upstream of Watertown is the Bleachery Dam, which is breached on two sides and allows for fish passage.

Ben Gahagan, Diadromous Fish Biologist at Massachusetts Division of Marine Fisheries (DMF) said it well, removing a barrier will help save the migratory fish energy and allow for more fish to pass in the system. At each dam and fishway you get diminishing returns of passage, meaning less fish on each ladder. One of the reasons is that there is more predation, such as by night herons and other birds, at ladders where the fish are funneled into a small area.

Importantly, rainbow smelt are losing their spawning habitat due to sea level rise. Removing Watertown Dam would open up extensive spawning habitat opportunities in the 2.9 miles between Watertown and Moody Street. The feasibility study states "One such species of concern is the rainbow smelt, which has been documented as having laid eggs in the fast-moving riffle area just downriver of the Watertown Dam" according to guidance from Brad Chase of the DMF (Chase, 2019).

- Q: A lot of the information presented by CRWA has been fish-oriented, with not as much analysis of other faunal populations, and how the dam removal will impact them. A couple of commissioners have voiced concerns specifically about the black-crowned night heron.

 https://www.mass.gov/doc/black-crowned-night-heron/download. One said that in years of paddling and walking along the river, she has only ever spotted this bird at the Watertown dam, looking for fish to eat. This is an example of a species which has adapted to anthropogenic change, and is currently benefiting from this dam. Could CRWA or Mass Audubon provide any reassurance that this colony would be able to relocate?
- A: Yes, the night herons can and do fish elsewhere, as confirmed by DER. They are most easily seen at dams. Overall, the restoration of the river to a more natural, unaltered state will promote an increase in flora and fauna diversity, allowing the Charles River corridor to form a more naturalized healthy riparian corridor. Night herons are able to fish throughout the river, and while they may move to areas where they are less visible to humans after dam removal, they are not negatively impacted. A river with a healthier fish population benefits night herons as well.

Other wildlife in the river that we sometimes get asked about includes beavers. Beavers and herring were both much, much more abundant in Massachusetts and coexisted for thousands of years. Note that beaver dams are permeable and temporary. Turtles also live in the river upstream and downstream of the Watertown Dam. Dam removal drawdowns are slow, giving time for resident turtles, frogs, and others to move. Catastrophic breaches are not slow and can have greater impacts. Relocation towards the river is used when needed and can be part of wetlands permitting process.

The species that live in impoundments (upstream of the dam) typically can also live in free-flowing rivers, however, there are species that live in free-flowing rivers that cannot live in impoundments. Free-flowing rivers and natural wetlands have a greater abundance and diversity than impoundments.

- Q: Concerns about contaminated sedimentation. Currently, the Watertown dam traps sediment with high levels of contaminants. When the dam is removed, more sediment will be deposited further downstream, making the already shallow area near the yacht club even shallower. Is there any new info about the extent of the contamination, tons of sediment that would have to be removed, or a cost associated with that step.
- A: While an understandable question, it is not necessarily true that more sediment will be deposited further downstream when a dam is removed. Please see the discussion below, and note that while there is contaminated sediment, it is not significant.

The most up-to-date information about the extent of contamination is in the 2021 feasibility study, which took initial sediment samples to determine the approximate extent, type, and contamination of the sediment impounded by the dam. That approximated that <u>7,300 cubic yards of sediment are impounded by the dam, and that approximately 1,700 cubic yards are currently estimated to need to be removed.</u> The 2021 cost estimate for removal of that sediment is \$350,000.

The final amount of sediment removed from the dam removal project would be determined by the sediment management plan in the next phase of the project.



Webster Conservation Area

This is a nature reserve. Please stay on the trail. Leash dogs and remove dog waste. No bicycling allowed.

















Conservation Land Other Open Space

Ten foot elevation contour

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