



## Arlington Conservation Commission

**Date:** Thursday, February 4, 2021

**Time:** 7:30 PM

**Location:** Conducted by Remote Participation

Please note: The listing of matters are those reasonably anticipated which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may be brought up for discussion to the extent permitted by law.

### Agenda

#### 1. Administrative

- a. In accordance with the Governor's Order Suspending Certain Provisions of the Open Meeting Law, G. L. c. 30A, § 20 relating to the COVID-19 emergency, the February 4, 2021 public meeting of the Arlington Conservation Commission shall be physically closed to the public to avoid group congregation. The meeting shall instead be held virtually using Zoom.

Topic: Conservation Commission Meeting

Time: February 4, 2021 07:30 PM Eastern Time (US and Canada)

***Register in advance for this meeting:***

<https://town-arlington-ma-us.zoom.us/meeting/register/tJwtf--hpj4qH9elxwI8AbZJ9hrWL9pX3gmh>

Members of the public are strongly encouraged to send written comment regarding any of the hearings listed below to Conservation Agent Emily Sullivan at [esullivan@town.arlington.ma.us](mailto:esullivan@town.arlington.ma.us).

Please read Governor Baker's Executive Order Suspending Certain Provision of Open Meeting Law for more information regarding virtual public hearings and meetings: <https://www.mass.gov/doc/open-meeting-law-order-march-12-2020/download>

- b. Review draft 01/21/2021 minutes.
- c. Review 2020 goals and determine 2021 goals.
- d. Review draft annual report and financial budget spreadsheet.
- e. Review draft conditions for Thorndike Place.

#### 2. Discussion

- a. Regulations Update:  
Full Draft



## Town of Arlington, Massachusetts

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### Review draft 01/21/2021 minutes

#### Summary:

Review draft 01/21/2021 minutes.

#### ATTACHMENTS:

Type	File Name	Description
Minutes	01212021_Minutes_Conservation_Commission.pdf	Draft 01212021 Minutes



## **Arlington Conservation Commission**

Date: January 21, 2021

Time: 7:30pm

Location: Conducted through Remote Participation using Zoom

### **Minutes**

Attendance: Commission Members Susan Chapnick (Chair), Mike Gildesgame, Pam Heidell, Nathaniel Stevens, and David White; Associate Commissioner Cathy Garnett and Doug Kilgour; and Conservation Agent Emily Sullivan. Commissioners Dave Kaplan and Chuck Tirone (Vice Chair) were not present. Representatives for the Arlington Reservoir NOI hearing included: Joe Connelly (Recreation Department), Leslie Mayer (Park & Recreation Commission), Danielle Desilets (KZLA), and Mikey Marcus (SWCA).

### **01/07/2021 Meeting Minutes**

The Commission discussed edits to the draft 01/07/2021 minutes. N. Stevens motioned to approve the minutes as edited, P. Heidell seconded, all were in favor, motion approved. A roll call vote was taken. S Chapnick voted yes, M. Gildesgame voted yes, P. Heidell voted yes, N. Stevens voted yes, and D. White voted yes.

### **Community Preservation Act Update**

P. Heidell updated the Commission on the applications submitted to the Community Preservation Act Committee for the FY2022 funding cycle. Ten applications were submitted, and will be presented to the Committee during public hearings on 01/27/2021, 01/28/2021, and 02/03/2021. Projects of interest to the Commission include the bikeway bridge at 19R Park Ave, Spy Pond playground renovation, Spy Pond north beach ramp renovation, Hurd Field renovation, and public land management plan.

### **Water Bodies Working Group Update**

D. White updated the Commission on the status of the Working Group's budget and annual report. The Working Group will submit draft documents to the Commission for review at its 02/04/2021 meeting.

N. Stevens motioned to approve the warrant article submitted requesting that Town Meeting appropriate some amount of funding to the Water Bodies fund, M. Gildesgame seconded, all were in favor, motion approved. A roll call vote was taken. S Chapnick voted yes, M. Gildesgame voted yes, P. Heidell voted yes, N. Stevens voted yes, and D. White voted yes.

**Request for Minor Plan Modification: 49 Spy Pond Lane (Previously 47 Spy Pond Lane Lot 1/A)**

MassDEP File #091-0318

*Documents Reviewed:*

- 1) *"Proposed Site Plan in Arlington, Mass." showing Lot 1 by Keenan Survey of Winchester, MA, scale 1:10, dated November 7, 2018, revised June 27, 2019, stamped by James Richard Keenan, P.L.S #30751.*
- 2) *"Planting Plan in Arlington, Mass." showing Lot 1 by Keenan Survey of Winchester, MA, scale 1:10, dated November 7, 2018, revised June 27, 2019, by James Richard Keenan, P.L.S #30751.*
- 3) *Order of Conditions for 47 Spy Pond Lane Lot 1/A, issued by the Arlington Conservation Commission, dated 05/18/2020, recorded at the Middlesex South Registry of Deeds 05/21/2020.*
- 4) *Unilock Permeable Paver manufacturer specification sheets*
- 5) *49 Spy Pond Lane Deck & Patio Rear Elevation & Partial Plan, design by HM Architects, dated 12/18/2020.*
- 6) *"Proposed Site Plan in Arlington, Mass." showing Lot 1 by Keenan Survey of Winchester, MA, scale 1:10, dated November 7, 2018, revised June 27, 2019, stamped by James Richard Keenan, P.L.S #30751. Revised by hand to delineate proposed patio.*

This minor plan modification requested installing a porous paver patio and wall behind 49 Spy Pond Lane. The proposed patio would be in line with the approved porch, and would not extend beyond the porch.

The Commission discussed the proposed modification. The Commission agreed to approve the minor modification with the condition that the Applicant submits a stamped plot plan with the patio delineated. The Commission also requested that the porous paver patio is installed according to the specifications provided to the Commission for the porous paver driveway.

N. Stevens motioned to approve the minor amendment with the condition and recommendation discussed, D. White seconded, all were in favor, motion approved. A roll call vote was taken. S Chapnick voted yes, M. Gildesgame voted yes, P. Heidell voted yes, N. Stevens voted yes, and D. White voted yes.

**Deliberation: Notice of Intent: 210 Lowell Street, Arlington Reservoir Master Plan Phase 2**

MassDEP File #091-0327

*Documents Reviewed:*

- 1) *Arlington Reservoir Renovation Project Phase 2 NOI, prepared by SWCA, dated December 3, 2020*
- 2) *Arlington Reservoir Phase 2 NOI Plan Set, prepared Kyle Zick Landscape Architecture Inc, stamped by Kyle Zick RLA# 1163, dated November 13, 2020*
- 3) *Arlington Reservoir Phase 2 Stormwater Management Report, prepared by Woodard & Curran, stamped by Denise L Cameron PE# 56348, dated October 2020*

- 4) *Arlington Reservoir Supplemental Memo from KZLA, prepared by Kyle Zick Landscape Architecture Inc, dated December 30, 2020.*
- 5) *Arlington Reservoir Supplemental Memo from SWCA, prepared by SWCA Environmental Consultants, dated December 31, 2020.*
- 6) *Arlington Reservoir Phase 2 Revised Stormwater Management Report, prepared by Woodard & Curran, stamped by Denise L Cameron PE# 56348, dated October 2020, updated December 2020.*
- 7) *Arlington Reservoir Revised Parking Lot Plans, prepared by Woodard & Curran, stamped by Denise L Cameron PE# 56348, dated November 2020, revised December 30, 2020.*
- 8) *Arlington Reservoir Revised Tree Landscaping Plans, prepared by Kyle Zick Landscape Architecture Inc, stamped by Kyle Zick RLA# 1163, dated December 19, 2020, revised December 30, 2020.*

*Resource Areas:*

- 1) *100-ft Wetlands Buffer*
- 2) *Adjacent Upland Resource Area*
- 3) *Inland Bank*
- 4) *Arlington Reservoir*

This project consists of the second phase of implementation of the Arlington Reservoir Master Plan and includes the following activities: parking area and stormwater improvements; improvements to existing pathways to make them accessible under the Americans with Disabilities Act (ADA); renovation and addition of new recreational facilities; shoreline bank stabilization; and upland habitat restoration and invasive species removal. This project requires Order of Conditions from the Arlington and Lexington Conservation Commissions. The project was initially presented to the Commission at its 12/17/2020 meeting, and was continued to the Commission's 01/07/2021 and 01/21/2021 meetings.

S. Chapnick asked the status of the Lexington Notice of Intent. M. Marcus stated that the Lexington Town Engineer reviewed the project, but there were no substantial changes to the project. The Lexington Commission had not closed or issued an Order of Conditions yet.

C. Garnett summarized her site visit with the Applicant and Representatives to review the planting plan and tree replacement plantings. C. Garnett stated that she had no concerns regarding the planting plan.

C. Garnett recommended that Park & Recreation Commission add two waste bins to the habitat garden area to separate regular organic garden waste and invasive plant waste. N. Stevens recommended that the bins be fixed in place so that they cannot be removed by park users.

P. Heidell stated that the Commission could condition the permit to require a post construction monitoring plan to monitor the success of the bank stabilization, and include performance measures and remedial measures as necessary.

S. Chapnick asked for clarity on how the different water levels of the Reservoir would impact the coir logs and when the logs could be installed. M. Marcus stated that the coir logs would not be impacted by changes in the water level, but that the plantings installed along the logs could be impacted.

J. Connelly summarized the Hurd Field restoration project to the Commission. The project would renovate Hurd Field but is still in the schematic design phase of the project. The project would likely include some sort of restoration along Mill Brook. L. Mayer stated that the renovated field would use natural lawn turf. S. Chapnick recommended that the Park & Recreation Commission look into the organic turf lawn management programs that Marblehead and Swampscott have successfully implemented.

M. Marcus summarized the proposed invasive management plan, which includes using the cut-and-dab method for woody invasive species, the wipe method for some herbaceous invasive species, and the spray method for Multiflora rose, Phragmites, and Japanese knotweed.

C. Garnett recommended that the spray method be as directed as possible to reduce the likelihood of spraying non-invasive plants. M. Marcus clarified that for the spray method, the invasive plants would be cut down and the low growth would be sprayed. Additionally, dye would be added to the herbicide so that the Applicator would be able to clearly see where the spray was being directed.

S. Chapnick stated that Arlington's permit conditions should be consistent with Lexington's permit conditions.

M. Marcus requested that the Commission issue a five-year Order of Conditions rather than the typical three-year Order of Conditions.

The Commission called for public comment. No members of the public were present at the meeting.

N. Stevens motioned to close the public hearing, D. White seconded, all were in favor, motion approved. A roll call vote was taken. S. Chapnick voted yes, M. Gildesgame voted yes, P. Heidell voted yes, N. Stevens voted yes, and D. White voted yes.

The Commission reviewed a draft Order of Conditions for the project. The Commission discussed edits to the draft and additional conditions. N. Stevens motioned to approve the project under the Wetlands Protection Act and Arlington Wetlands Protection Bylaw and Regulations with the discussed conditions for a five-year Order of Conditions, M. Gildesgame seconded, all were in favor, motion approved. A roll call vote was taken. S. Chapnick voted yes, M. Gildesgame voted yes, P. Heidell voted yes, N. Stevens, and D. White voted yes.

M. Gildesgame and S. Chapnick thanked the Applicant and Representatives for their responsiveness to Commission's questions and willingness to collaborate on the project.

**Discussion: Arlington Land Trust Thorndike Place Proposal Resiliency Report**

S. Chapnick updated the Commission on the status of the Thorndike Place Comprehensive 40B Permit. The Arlington Land Trust submitted a Resiliency Report to the Zoning Board of Appeals regarding the Thorndike Place proposal.

S. Chapnick commented that the report included topics that the Commission could include in its regulation update for the Climate Change Resilience section.

The Commission reviewed the executive summary of the report, which assessed the quality of the Federal Emergency Management Agency's (FEMA) floodplain data, design storm depths considered in the stormwater calculations, and additional resilient design issues such as deployable flood barriers, compensatory flood storage, and extreme heat mitigation.

**Regulatory Update: Climate Change Resilience Section**

The Commission reviewed and discussed proposed updates to Section 31: Climate Change Resilience of the Arlington Regulations for Wetlands Protection.

**Regulatory Update: Floodplain Section**

The Commission reviewed and discussed proposed updates to Section 23: Land Subject to Flooding (Boarding and Isolated) of the Arlington Regulations for Wetlands Protection.

M. Gildesgame motioned to close the Commission meeting, N. Stevens seconded, all were in favor, motioned approved.

Meeting adjourned at 10:05pm.



## Town of Arlington, Massachusetts

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### Commission Goals

#### Summary:

Review 2020 goals and determine 2021 goals.

#### ATTACHMENTS:

	Type	File Name	Description
▢	Reference Material	Goals_and_Actions_2020_revised_for_2021.pdf	2020 and 2021 Goals





## TOWN OF ARLINGTON

730 Massachusetts Ave.  
Arlington, MA 02476  
781-316-3012

### ARLINGTON CONSERVATION COMMISSION

## Goals and Actions Identified for 2020

Yellow-highlighted goals/actions were prioritized for 2020 based on Conservation Commission meetings in Jan/Feb 2020.

Blue text indicates whether or not it was achieved and clarifications.

### 2021 Goals Outlined in the 2020 Annual Report

- A. Continue to strengthen and update regulations for permitting efficiency and process clarity with the specific goal to update the local Wetlands Regulations in early 2021.
- B. Improve the stewardship of conservation lands through better coordinated land management.
- C. Improve communication and educational outreach to residents in resource areas.
- D. Continue to look for opportunities to work collaboratively with neighboring towns and allied organizations towards protection of wetland resources.

#### 1. Strengthen and update regulations for performance standards, permitting efficiency, and process clarity

- **Revise the Arlington Regulations for Wetlands Protection**  
Began in 2020 – expected completion and vote early 2021  
Commission needs to coordinate public review of the revision and disseminate it to other boards/committees/departments for review prior to vote
- **Add administrative project/general project process to regulations**  
Done – added to revised regulations expected to be completed early 2021
- Add a consent agenda to meetings
- **Have Commission review/approve special conditions and OOCs for permits prior to permit issuance**  
Done – this has been enacted as standard practice for OOCs

#### 2. Host additional collaborative community clean-up and educational events

- **Devote 1-2 hours of a meeting to a wetland topic training and invite an expert to give the training**  
Not Accomplished
- Target trainings to frequent issues in Town
- Coordinate with schools for project ideas and class curriculums
- **Open space clean-ups**  
Not Accomplished due to COVID-19  
Commission likely won't be able to host clean-ups until the summer or later per Town policies

#### 3. Improve the stewardship of conservation lands and other town open spaces

- **Identify maintenance needs/gaps for ACC-managed properties and secure town resources for implementation**

In progress - Planning and Community Development Department submitted CPA Grant application for a Public Land Management Plan

- Open space clean-ups
- Tree planting
- Cooke's Hollow
- Vegetative buffers (C. Garnett's project)

In progress

- Floating wetlands pilot project
- Coordinate regional management of Upper/Lower Mystic Lakes

In progress – Have reached out to both the Winchester and Medford Conservation Agents, received all of Winchester's permits and waiting for Medford's. General interest from Winchester and Medford in coordinating Mystic Lake treatments but need to come to an agreed process for coordination with other municipalities.

- Promote low-impact landscaping, connect with groups like Garden Club and Sustainable Arlington
- Promote natural resource benefits
- Invasive removal
- Certify vernal pools
- Coordinate regional management of Upper/Lower Mystic Lakes

#### 4. Improve communication and educational outreach to residents in resource areas

- Create a floodplain guidance document / resource area document

In progress – Draft document created but Commission asked Agent to find guidance from floodplain trainings. All 2020 trainings cancelled due to COVID-19 but will look into 2021 trainings.

- Write educational articles for the Advocate and online
- Add tips and FAQ to webpage
- Include open forum for general questions on meeting agendas
- Create a list of all properties that fall under Commission jurisdiction and proactively send mailings about permitting procedures
- Attend MACC and AMWS workshops

#### 5. Other

- Allow agenda time during a meeting at least once per quarter to discuss how processes are going, recommendations for improvements/changes, needs for education, and to evaluate how the Commission is progressing on 2020 goals
- Include open forum for general questions on meeting agendas
- Create a master permit tracking list  
Done – need to add a 2021 goal to update and review this list on a regular basis.  
This list is updated with every permit application we receive.
- Schedule site visits for substantive projects prior to first hearing
- Encourage the Conservation Agent to provide recommendations on applications during hearing
- Have Commissioners submit questions/comments prior to first hearing
- Invite other town committees (Park & Recreation, DPW, etc.) to meetings to discuss areas of overlap and to improve permit coordination
- Create a permitting guide with ZBA, Inspectional Services, ARB, etc.

- Encourage each Commission member to lead at least one special project during the year or act as liaison to an existing project/effort.



## Town of Arlington, Massachusetts

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### Water Bodies Working Group Update

#### Summary:

Review draft annual report and financial budget spreadsheet.

#### ATTACHMENTS:

Type	File Name	Description
▢ Reference Material	Draft_Water_Bodies_2020_Annual_Report_ACC_Review.pdf	WBWG 2020 Annual Report
▢ Reference Material	WBWGAccounting_revised_2021-01-28_ACC_Review_overview.pdf	WBWG Budget Overview
▢ Reference Material	WBWGAccounting_revised_2021-01-28_ACC_Review_details.pdf	WBWG Budget Details

## 2020 Water Bodies Assessment and Recommendation Report

### Arlington Conservation Commission February 2021 – DRAFT 1/29/21

The Arlington Conservation Commission (ACC), through its Water Bodies Working Group (WBWG), continued the assessment of fourteen water bodies in the Town of Arlington, including five lakes and ponds and nine streams. A majority of these are negatively impacted by polluted runoff and stormwater discharges due to the highly urban nature of Arlington and surrounding towns. Most of these water bodies also have excessive aquatic invasive plants that degrade water quality, impede recreational use, and degrade aesthetics. In determining which water bodies could benefit from management measures using Town funding, the WBWG took a triage-based approach:

1. Water bodies that are in generally good shape, do not need much help, or whose issues are being addressed by other agencies or funding sources, e.g., Upper & Lower Mystic Lakes and Mystic River
2. Water bodies with some issues that could benefit from directed intervention, e.g. Spy Pond, Arlington Reservoir, Hills Pond, McClennen Park Detention Ponds (Reeds Brook)
3. Water bodies that are in poor shape with many issues that would need major efforts and additional funding to improve, e.g. Mill Brook and Alewife Brook.

Though the chemical treatments of several main water bodies must continue for the coming year to control aquatic invasives and harmful algal blooms, the WBWG is focused on obtaining the appropriate data to develop comprehensive management plans for Spy Pond, Arlington Reservoir, and Hills Pond. Our goal is to develop management plans where chemical use is only one step along with strategies to reduce inputs of nutrients to the water bodies, methods to manually remove aquatic plants, and techniques to prevent further spread and development of aquatic invasives.

Based on the 2020 analysis, the WBWG has identified the following priority locations for 2021.

**Arlington Reservoir** – A Town-owned water body in Arlington and Lexington with aquatic invasive water chestnuts that form dense, impenetrable mats at the water’s surface, which impair public use and water quality. These plants have been harvested mechanically every summer for many years and were again in 2020. For several years, the Mystic River Watershed Association (MyRWA) has been organizing hand harvesting events in the shallower areas but that was cancelled in 2020 because of COVID-19.

This water body was assessed as part of the Reservoir Master Plan project supported with CPA funding. One recommendation of that report was that the water chestnuts be harvested earlier than they have been in recent years in order to reduce seed production. In 2020 a study was conducted to evaluate the reservoir and its management practices. That study found:

*Based on the data collected and observations during the survey, Arlington Reservoir is a shallow, eutrophic waterbody that has overall dense growth of aquatic vegetation. Of the five invasive species observed, three are very aggressive in their growth habits – water chestnut, curly-leaf pondweed, and Eurasian watermilfoil. As a result, there can be a significant decline in native vegetation and water quality. Management of these three species (and other non-native species) can improve water quality, recreational use, wildlife habitat, and aesthetic value.*

The ACC is reviewing options for management of the Reservoir and may recommend additional actions beyond mechanical water chestnut harvesting.

There is also an on-going master plan for the Reservoir that primarily affects the land areas, but does include some bank restoration.

**Hill's Pond** – A small pond in the heavily used Menotomy Rocks Park with water quality and invasive plant problems. The Conservation Commission recommends continuing aeration, strictly limiting polluting activities near the pond or in areas that drain into the pond, maintaining a vegetated buffer strip around the pond four to ten feet wide of un-mowed grass or natural vegetation, and low-dose chemical treatments with aquatic herbicides to control algae and other detrimental water plants. Monthly site visits with proactive treatments in 2020 proved successful in reducing invasives, based on the annual report by the vendor, SOLitude. There was some algae growth that required treatment, but no harmful algal bloom (HAB) developed in 2020.

**Mill Brook** – The poor water quality of Mill Brook increased marginally in 2019 from D to a D+ (EPA/MyRWA 2019 Water Quality Report: <https://mysticriver.org/epa-grade/>). Mill Brook's poor water quality is primarily due to stormwater runoff; however, there may be illicit discharges to the brook from surrounding properties. The brook and its adjacent shore provide valuable wildlife habitat and opportunities for nature views.

The Mystic River Watershed Association (MyRWA) received CPA funds for improving public access, improving water quality, and reducing floodwaters along Mill Brook near Wellington Park.

In 2019, park construction included building more flood storage capacity and removing invasive terrestrial plants. The next phase of work, Phase III, will improve park amenities, improve stormwater quality, remove more invasive terrestrial plants, and create more robust native vegetated buffers along the brook's bank. Phase III construction is funded by a Judy Record Fund grant.



*Phase III proposes to add native plantings and informal play components along Mill Brook in Wellington Park.*

**McClennen Park Detention Ponds on Reeds Brook** – These stormwater detention ponds were created during the capping/closure of the landfill in this area, formerly called “Arlington Summer Street Landfill,” which was officially closed in 2006 with no further monitoring required. Technical contractor Woods Hole Group (WHG) submitted a memorandum report in 2019 summarizing their evaluation, based on site visits and sampling and analysis of surface water and sediment performed in 2018. WHG concluded that the observed iron flocculation at Reeds Brook does not constitute a condition of “readily apparent harm” (MassDEP terminology) to the environment of the wetland resource area. However, some sediment data

exceeded MassDEP sediment screening level benchmarks and several surface water samples exceeded the National Recommended Water Quality Criteria (NRWQC) for iron.

The ACC completed its goal in 2019 to investigate potential harm to the resource area of the iron flocculation at these detention ponds. Based on the findings, the WBWG concluded that there is no readily apparent harm to the resource area. However, given the findings of several metal concentrations that exceed screening levels, the ACC reported these findings in 2019 to the MassDEP Office of Solid Waste (OSW) and requested guidance or recommendations on further actions the Town might take. The WBWG has received no guidance from OSW in 2020. Therefore, since the 2019 report concluded that there is no “readily apparent harm” to the resource area, no additional investigations are planned at this time. The Town can decide if further investigations are warranted based on aesthetic values, as appropriate.

In 2020 the ACC in conjunction with Park and Recreation Commission and the Department of Public Works established a vegetated buffer strip around the ponds to control runoff and to improve wildlife habitat.

**Spy Pond** – One of Arlington's most heavily used open spaces for recreation, Spy Pond has an invasive plant problem within and around the pond. The surrounding managed landscape contributes to nutrient loading and low oxygen levels. Left untreated, invasive plants impair recreational use.

From 2017 to 2019, Spy Pond had problems with excessive aquatic vegetation despite yearly spot treatments. For 2020, the Working Group and Spy Pond Committee selected Sonar, a systemic herbicide that is effective in very low concentrations (parts per billion). Spy Pond was free of aquatic vegetation for most of the summer. The restrictions due to Covid 19 encouraged increase use of Spy Pond by sailboat, rowboat, kayak, fishing pole, and standup board. Spy Pond saw eagles, ospreys, cormorants, multiple mallard families, even a river otter. There was no skating or ice fishing for the first time in memory.

The Spy Pond Committee produced an aquatic history of Spy Pond. It documents a 100-year problem with excessive nutrients, and a 60-year problem with excessive vegetation due to rooted, aquatic plants. The plan for 2021 is multiple, low-dose treatments. With less vegetation and less decayed biomass, algae will hopefully stay at the bottom of Spy Pond. The Working Group will seek scientific oversight of Spy Pond to improve its management.

The Conservation Commission approved MassDOT’s plan to dredge the sandbar in the northwest corner of Spy Pond. When completed next year, it will end a 25-year effort of the Spy Pond Committee.

**Mystic River and Alewife Brook** – The Mystic River retained a good EPA/MyRWA water quality rating of A- as in 2019. The Alewife Brook’s poor water quality remained at D in 2019 (EPA/MyRWA 2019 Water Quality Report: <https://mysticriver.org/epa-grade/>). In order to improve the water quality of the Mystic River and Alewife Brook, the Town is installing green infiltration infrastructure, such as rain gardens and infiltration trenches. Rain gardens and infiltration trenches have been constructed in East Arlington to filter pollutants out of stormwater before stormwater discharges to the Mystic River and Alewife Brook.

This work is managed by DPW and funded through Coastal Pollutant Remediation Grants from the Office of Coastal Zone Management (CZM). In 2020, a CZM grant was awarded with the partnership of the Mystic River Watershed Association (MyRWA) and the Town of Lexington. The grant will fund the construction of more than 20 infiltration trenches in East Arlington. The trenches will reduce the amount of pollutants



entering Alewife Brook and the Mystic River, improving compliance with the state stormwater permit. This grant expands on another CZM grant awarded to Arlington and MyRWA in 2019, through which two rain gardens and twenty trenches were constructed in East Arlington in 2020.



*Two rain gardens were constructed at the Herbert Road/Milton Street intersection in 2020.*

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The Water Bodies Working Group has collected information for all the water bodies evaluated in support of this report. The Conservation Commission recommends that other locations that have not been identified above as a priority for current Town Water Bodies funding should continue to be monitored, and recommendations for actions and funding should be reviewed on an annual basis.

Respectfully Submitted by:

Water Bodies Working Group of the Arlington Conservation Commission:

David Kaplan  
Chuck Tirone  
David White

Approved by the Conservation Commission **February 4, 2021**



	A	B	C	H	I	J	K	L	M	N	O	P	Q
1	<b>Water Bodies Program Analysis</b>												
2	<b>Version Date: 1/28/2021 - EAS</b>												
3													
4													
5	The purpose of this schedule is to show activity of the Water Bodies Account over several years, specifically with a 5 year review of revenue and expenditures, current year projection, and the three years of budget based on current information available.												
6	Please note that the difference between fiscal years is one day. The ending balance as of 6/30 each year is carried forwarded to the top of the subsequent column as the opening, 7/1 balance.												
7													
8													
9	<b>Water Bodies Account History: 5 Years of Actual, Current Year Expected, 3 Years of Projected</b>												
10				<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>
11		<b>MUNIS #</b>		<b>Actual</b>	<b>Actual</b>	<b>Actual</b>	<b>Actual</b>	<b>Actual</b>	<b>Actual</b>	<b>Expected</b>	<b>Budget</b>	<b>Budget</b>	<b>Budget</b>
12													
13			Beginning Balance - 7/1	\$ 27,865	\$ 58,915	\$ 38,436	\$ 50,110	\$ 84,118	\$ 112,968	\$ 111,198	\$ 79,535	\$ 74,535	\$ 75,435
15													
16		230 4972	Revenue/Appropriation	\$ 40,000	\$ 40,000	\$ 50,000	\$ 55,000	\$ 60,000	\$ 50,000	\$ 45,000	\$ 50,000	\$ 50,000	\$ 50,000
17		230 4831	Revenue/Donations	\$ 1,800	\$ 800	\$ 1,950	\$ 1,450	\$ 1,800	\$ 1,800				
18													
19		230 5299	Expenses - Spy Pond	\$ -	\$ (41,279)	\$ (15,280)	\$ (10,155)	\$ (25,450)	\$ (25,070)	\$ (17,000)	\$ (23,100)	\$ (20,000)	\$ (17,000)
20			Spy Pond Sonar							\$ (30,623)			\$ (35,000)
21		230 5299	Expenses - Reservoir	\$ (10,750)	\$ (20,000)	\$ (15,000)	\$ (15,000)	\$ (16,500)	\$ (16,500)	\$ (24,840)	\$ (24,500)	\$ (21,500)	\$ (21,500)
22		230 5299	Expenses - Hills	\$ -	\$ -	\$ -	\$ (1,287)	\$ (4,000)	\$ (4,000)	\$ (4,200)	\$ (4,400)	\$ (4,600)	\$ (4,600)
23		230 5299	Expenses - McClennen			\$ -	\$ (10,000)	\$ (10,000)	\$ (2,000)	\$ -			
24		230 5299	Expenses - CC Other	\$ -	\$ -	\$ (9,996)	\$ -	\$ (5,000)	\$ (6,000)	\$ -	\$ (3,000)	\$ (3,000)	\$ (3,000)
25													
26			Ending Balance - 6/30	<u>\$ 58,915</u>	<u>\$ 38,436</u>	<u>\$ 50,110</u>	<u>\$ 84,118</u>	<u>\$ 112,968</u>	<u>\$ 111,198</u>	<u>\$ 79,535</u>	<u>\$ 74,535</u>	<u>\$ 75,435</u>	<u>\$ 44,335</u>
27													
28		Reserve for Spy Pond Sonar Treatment				\$ 14,000	\$ 28,000	\$ 42,000	\$ 56,000	\$ 25,377	\$ 30,377	\$ 35,377	\$ 5,377
29													
30			<b>Net Available Fund Balance</b>			<b>\$ 36,110</b>	<b>\$ 56,118</b>	<b>\$ 70,968</b>	<b>\$ 55,198</b>	<b>\$ 54,158</b>	<b>\$ 44,158</b>	<b>\$ 40,058</b>	<b>\$ 38,958</b>
31													
32								<b>Total Expenses</b>	<b>\$ (53,570)</b>	<b>\$ (76,663)</b>	<b>\$ (55,000)</b>	<b>\$ (49,100)</b>	<b>\$ (81,100)</b>
33													

<b>Water Bodies Program Analysis</b>									
<b>Expense Detail - Actual and Projected</b>									
The purpose of this schedule is to provide a breakout of the expenditure detail that is summarized on the preceding tab.									
<b>Detail - FY2019 - Budget</b>	<b>Spy Pond</b>	<b>Reservoir</b>	<b>Hills</b>	<b>McClennen</b>	<b>Other</b>	<b>FY Total</b>	<b>Spent to date</b>	<b>\$ available</b>	
treatment/sonar - spend in FY22	14000					14,000			
treatment/reward	10450					10,450	12600		
water chestnuts/hand pull		15000				15,000	15000		
algae treatment	5000					5,000			
water quality testing/plant id/Hills Pond	10000	1500	4000			15,500	1730		
spy permitting						-			
McClennen detention basin				10,000		10,000	10,000		
ConsCom - other water bodies	-	-	-		5000	5,000	3,495	-	
<b>Total</b>	<b>\$ 39,450</b>	<b>\$ 16,500</b>	<b>\$ 4,000</b>	<b>\$ 10,000</b>	<b>\$ 5,000</b>	<b>\$ 74,950</b>	<b>\$ 42,825</b>	<b>\$ -</b>	
<b>Detail - FY2020 - Budget</b>	<b>Treatment</b>	<b>Monitoring/Analysis</b>	<b>Management Plan</b>	<b>Report</b>	<b>Other</b>	<b>Comments</b>	<b>FY Total</b>	<b>Spent to date</b>	<b>Available</b>
Spy Pond	12,000		3,500	1,500		herbicide treatments, surveys, management plan, report	17,000	19,070	(2,070)
Reservoir	15,000			1,500		mechanical treatments (half pond), survey, report	16,500	16,000	500
Hill's	2,500			1,500		herbicide treatments, algae treatments, report	4,000	3,617	383
McClennen		2,000				floculation monitoring and analysis	2,000	895	1,105
Sonar (spend in FY22)	14,000					hold for Spy Pond FY22	14,000		14,000
Other	5,000				10,000	Spy Pond algae treatments	15,000	6,000	9,000
<b>TOTALS</b>	<b>\$48,500.00</b>	<b>\$ 2,000.00</b>	<b>\$ 3,500.00</b>	<b>\$ 4,500.00</b>	<b>\$10,000.00</b>		<b>\$68,500.00</b>	<b>\$ 45,581.71</b>	<b>\$22,918.29</b>
<b>Detail - FY2021 - Budget</b>	<b>Treatment</b>	<b>Monitoring/Analysis</b>	<b>Management Plan</b>	<b>Report</b>	<b>Other</b>	<b>Comments</b>	<b>FY Total</b>	<b>Spent to date</b>	<b>Available</b>
Spy Pond	12,000	3,500		1,500		treatments, report	17,000	5,700	11,300
Reservoir	20,000		10,000	1,500		mechanical treatments (full pond), survey, management plan, report	31,500	24,840	6,660
Hill's	2,700			1,500		herbicide treatments, algae treatments, report	4,200	2,753.15	1,447
McClennen		-				potential follow-up	-		-
Sonar (spend in FY22)						hold for Spy Pond FY22, final request for FY2022 Sonar treatment	-	30,623	(30,623)
Other	6,000				-	misc algae treatments, etc	6,000		6,000
<b>TOTALS</b>	<b>\$40,700.00</b>	<b>\$ 3,500.00</b>	<b>\$ 10,000.00</b>	<b>\$ 4,500.00</b>	<b>\$ -</b>		<b>\$58,700.00</b>	<b>\$ 63,916.15</b>	<b>\$ (5,216.15)</b>
<b>Detail - FY2022 - Budget</b>	<b>Treatment</b>	<b>Monitoring/Analysis</b>	<b>Management Plan</b>	<b>Report</b>	<b>Other</b>	<b>Comments</b>	<b>FY Total</b>	<b>Spent to date</b>	<b>Available</b>
Spy Pond	12,000	9,600		1,500		treatments, report, hand pulling	23,100		23,100
Reservoir	20,000			1,500	3,000	mechanical treatments (full pond), report	24,500		24,500
Hill's	2,900			1,500		herbicide treatments, algae treatments, report	4,400		4,400
Sonar (spend in FY2025)	5,000					potential follow-up	5,000		5,000
Other	3,000					misc algae treatments, etc	3,000		3,000
<b>TOTALS</b>	<b>\$42,900.00</b>	<b>\$ 9,600.00</b>	<b>\$ -</b>	<b>\$ 4,500.00</b>	<b>\$ 3,000.00</b>		<b>\$60,000.00</b>	<b>\$ -</b>	<b>\$60,000.00</b>
<b>Detail - FY2023 - Budget</b>	<b>Treatment</b>	<b>Monitoring/Analysis</b>	<b>Management Plan</b>	<b>Report</b>	<b>Other</b>	<b>Comments</b>	<b>FY Total</b>	<b>Spent to date</b>	<b>Available</b>
Spy Pond	12,000	3,500		1,500		treatments, report, hand pulling	20,000		20,000
Reservoir	20,000			1,500		mechanical treatments (full pond), report	21,500		21,500
Hill's	3,100			1,500		herbicide treatments, algae treatments, report	4,600		4,600
Sonar	5,000						5,000		5,000
Other	3,000					misc algae treatments, etc	3,000		3,000
<b>TOTALS</b>	<b>\$43,100.00</b>	<b>\$ 3,500.00</b>	<b>\$ -</b>	<b>\$ 4,500.00</b>	<b>\$ -</b>		<b>\$54,100.00</b>	<b>\$ -</b>	<b>\$54,100.00</b>
<b>Detail - FY2024 - Budget</b>	<b>Treatment</b>	<b>Monitoring/Analysis</b>	<b>Management Plan</b>	<b>Report</b>	<b>Other</b>	<b>Comments</b>	<b>FY Total</b>	<b>Spent to date</b>	<b>Available</b>
Spy Pond	12,000	3,500		1,500		treatments, report, hand pulling	17,000		17,000
Reservoir	20,000			1,500		mechanical treatments (full pond), report	21,500		21,500
Hill's	3,100			1,500		herbicide treatments, algae treatments, report	4,600		4,600
Sonar	5,000						5,000		5,000
Other	3,000					misc algae treatments, etc	3,000		3,000
<b>TOTALS</b>	<b>\$43,100.00</b>	<b>\$ 3,500.00</b>	<b>\$ -</b>	<b>\$ 4,500.00</b>	<b>\$ -</b>		<b>\$51,100.00</b>	<b>\$ -</b>	<b>\$51,100.00</b>
<b>Detail - FY2025 - Budget</b>	<b>Treatment</b>	<b>Monitoring/Analysis</b>	<b>Management Plan</b>	<b>Report</b>	<b>Other</b>	<b>Comments</b>	<b>FY Total</b>	<b>Spent to date</b>	<b>Available</b>
Spy Pond									
Reservoir									
Hill's									
Sonar									
Other									
<b>TOTALS</b>									



## Town of Arlington, Massachusetts

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### Draft Thorndike Place Conditions

#### Summary:

Review draft conditions for Thorndike Place.

#### ATTACHMENTS:

	Type	File Name	Description
▢	Reference Material	ACC_Recommended_Conditions_Thorndike_Place_02012021.pdf	Draft Thorndike Place Conditions



TOWN OF ARLINGTON

MASSACHUSETTS

## CONSERVATION COMMISSION

February 1, 2021

Zoning Board of Appeals  
Town of Arlington  
730 Massachusetts Avenue  
Arlington, MA 02474

**RE: Thorndike Place – Application for Comprehensive Permit  
Draft Recommended Permit Conditions**

Dear Chairman Klein and Members of the Board:

The Arlington Conservation Commission (ACC) provides this draft of recommended conditions regarding wetlands and stormwater management for the Thorndike Place Comprehensive Permit. These draft recommended conditions reflect the comments summarized in the five letters the ACC has submitted to the ZBA in response to the Thorndike Place Proposal. These comment letters are dated July 9, 2020, October 9, 2020, November 20, 2020, December 8, 2020, and December 18, 2020. The ACC may provide subsequent edits or changes to these draft conditions based on additional information presented at permit hearings.

The Conservation Commission urges the ZBA not to grant any waivers requested by the Applicant from the Town's Wetlands Protection Bylaw (Bylaw) and Regulations for Wetlands Protection (Regulations) as these provide flood control, storm damage prevention, wildlife and habitat preservation, and other interests of local concern.

We hope the ZBA finds the enclosed list of recommended conditions helpful. Please contact us should you have questions.

Very truly yours,

*Susan*

Susan Chapnick, Chair  
Arlington Conservation Commission

### **General Conditions**

No uncovered stockpiling of materials shall be permitted within the 100 foot Wetland Buffer Zone or Adjacent Upland Resource Areas ("AURA") or other Resource Areas.

No dumpsters shall be allowed within the 100 foot Buffer Zone or AURA or other Resource Areas.

No heavy equipment may be stored overnight within 50 feet of resource areas and no refueling or maintenance of machinery shall be allowed within the 100-foot Buffer Zone, AURA, or within any Resource Area.

Any dirt or debris spilled or tracked onto any paved streets shall be swept up and removed daily.

Any water discharged as part of any dewatering operation shall be passed through filters, on-site settling basins, settling tank trucks, or other devices to ensure that no observable sediments or pollutants are carried into any Resource Area, street, drain, or adjacent property. Any catch basins, drains, and outfalls to be used in dewatering operations shall be cleaned out before operations begin.

The Applicant shall work with the Arlington Conservation Commission and Arlington Land Trust to create a Conservation Restriction (CR) for the undeveloped 12 acres of the property to protect the open space in perpetuity. The CR shall include a restoration plan for the entirety of the protected open space, and detail invasive management and native planting strategies.

The Applicant must hire a qualified environmental monitor to be on-site during project construction. The monitor shall submit an electronic report to the ZBA weekly regarding construction progress and relation to resource areas. During the duration of construction and mitigation plantings or other activities permitted, the qualified environmental monitor shall also submit an electronic report after every rain event exceeding 0.5 inches of rain in a 24-hour period to the ZBA regarding the condition of the site during and after the rain event, as well as the status of erosion controls and any additional measures to address stormwater management issues caused by said rain event.

### **Stormwater Management Conditions**

The Applicant will provide design detail confirming that the rooftop detention system will conform to the runoff assumptions and calculations used in the Stormwater Analysis.

The Applicant shall provide thorough documentation establishing seasonal high groundwater elevations at the site to ensure that there is a minimum of a two foot separation between the bottom of the stormwater management infiltration chambers

and the seasonal high groundwater table. The design of the field data collection program to be conducted in March or April 2021, including location and number of test pits and wells, shall be submitted to the ZBA for approval. After site specific field data collection by a competent professional, the Frimpter Method or other methodology acceptable to Arlington shall be used to compare data to USGS data for nearby groundwater monitoring wells.

The Applicant shall use the NOAA Atlas 14+ data to recalculate the stormwater calculations and make appropriate changes to the proposed stormwater system's design to accommodate additional precipitation.

The Applicant must hire a qualified stormwater monitor or engineer to oversee the installation of the stormwater management system. The qualified stormwater monitor shall be a certified engineer. A stormwater mitigation report must be submitted to the ZBA within 10 days of the completion of the stormwater management system. The stormwater report shall include as-built plans, photographs from installation, and a written summary of the installation of the stormwater management system and stormwater best management practices (porous pavement, rain gardens, etc.).

To avoid adding excess nitrogen runoff, the Applicant shall only treat the planted areas within resource areas with slow release nitrogen fertilizer. Application of this fertilizer cannot occur in the summer, or after storm events. Lawn fertilizer shall only be applied twice a year, in spring and fall. The application of plant nutrients shall otherwise comply with 330 CMR 31.00. No other herbicides or treatment methods are approved. No pesticides or rodenticides shall be used to treat pest management issues within resource areas. These shall be continuing conditions in perpetuity that survives the expiration of this permit.

Pervious surfaces shown on the project plans shall be maintained and not be replaced by impervious surfaces. This shall be a continuing condition in perpetuity that survives the expiration of this permit.

No snow storage is permitted within 100-feet of resource areas. This shall be a continuing condition in perpetuity that survives the expiration of this permit.

The Applicant shall protect all adjacent catch basins using silt socks during construction.

The Applicant shall conduct catch basin sump cleanings at the end of the project work period.

### **Floodplain Management**

The Applicant shall provide a minimum ratio of 2:1 cubic feet of compensatory flood storage. Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at

each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project.

### **Landscape Conditions**

The Applicant shall submit a detailed landscape plan identifying all trees proposed for removal that are within the AURA and other resource areas. The plan shall identify the species, quantity, and size in diameter at breast height (DBH) of the trees proposed for removal. The quantity and size of replacement trees shall adhere to the standards set forth by Section 24: Vegetation Removal and Replacement of the Arlington Regulations for Wetlands Protection (2015). The landscape plan shall also identify the species and quantities of other vegetation proposed onsite (including Latin and common names, size of each plant, quantity of each species).

The Applicant shall submit for review by the ZBA a restoration plan for the proposed compensatory flood storage area of the site to mitigate for the negative environmental impacts of the vegetation removal and grading to create the compensatory flood storage area.

The Applicant shall submit for review and approval by the ZBA an invasive management plan for work in the AURA and other resource areas outlining all locations for invasive management, the species and quantities of invasive plants to be managed, and the method of management.

All mitigation plantings and all plantings within resource areas shall be native, and be installed and maintained according to the standards of the American Association of Nurserymen (AAN). No cultivars of native plantings shall be allowed. This shall be a continuing condition in perpetuity that survives the expiration of this permit.

All plantings planted and invasive species removed through this project shall be monitored for three years. A survival rate of 100% must be maintained for the approved plantings at the end of the third monitoring year. If there is less than a 100% survival rate of the plantings after the third year, the Applicant must submit recommendations for replacements to the ZBA for approval. A monitoring report shall be submitted annually in June for the three year monitoring period, reporting on the health of the new plantings and the success of the invasive plant management.

### **Work Proposed in the AURA**

The AURA to all resource areas on site shall be protected as follows: No work is allowed within 25 feet of the resource area; No disturbance is allowed within 50 feet of the resource area; limited activity only is allowed within 50 to 75 feet of the resource area; and mitigation must be provided for any disturbances of the 50 to 100 feet area of the AURA. Definitions of "work," "disturbance," "limited activity," and "mitigation" are as defined in the Arlington Regulations for Wetlands Protection (2015), Sections 4 and 25.



## Town of Arlington, Massachusetts

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### Regulations Update

#### Summary:

Regulations Update:  
Full Draft

#### ATTACHMENTS:

	Type	File Name	Description
▢	Reference Material	Arlington_Wetland_Regs_Draft__02042021.pdf	Draft Regulations 02042021



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**Section 1 - Introduction and Purpose**

A. Introduction. These regulations are promulgated by the Town of Arlington Conservation Commission pursuant to the authority granted to it under the Town of Arlington Wetlands Protection Bylaw (hereinafter referred to as the "Bylaw"). These regulations complement and implement the Bylaw and shall have the force of law upon their effective date. These regulations

set forth additional definitions, regulations and performance standards necessary to protect the values and/or intent of the Bylaw, protect additional Resource Areas and wetland values, and specify standards and procedures stricter than those of the Massachusetts Department of Environmental Protection's Wetlands Protection Act, G.L. c. 131, § 40 and implementing regulations at 310 CMR 10.00. Only those exemptions explicitly stated in the Act and state wetland regulations at 310 CMR 10.00 apply.

The portion of these regulations concerning consultants and consultant fees are also promulgated pursuant to the authority granted the Commission under G.L. c. 44, § 53G.

B. Purpose. The Bylaw sets forth a public review and decision making process by which activities affecting areas subject to protection under the Bylaw are to be regulated in order to ensure the protection of the following interests: public or private water supply, ground water supply, flood control, erosion control and sedimentation control, storm damage prevention, other water damage prevention, prevention of pollution, protection of surrounding land and other homes or buildings, wildlife protection, plant or wildlife habitat, aquatic species and their habitats, and the natural character or recreational values of the wetland resources (collectively, "Resource Area Values" or "Interests of the Bylaw"). The purposes of these regulations are to define and clarify that process by establishing standard definitions and uniform procedures by which the Arlington Conservation Commission shall carry out its responsibilities under the Bylaw.

## **Section 2 - Jurisdiction**

A. Areas subject to protection under the Bylaw and these regulations:

- (1) Any marsh, freshwater wetland, vernal pool, wet meadow, bog, swamp.
- (2) Any river, stream, creek, pond, reservoir, or lake.
- (3) Any bank of the areas set forth in A(1) or A(2) above.
- (4) Any land under the areas set forth in A(2) above said waters.
- (5) Any land bordering the areas set forth in A(1) or A(2) or A(3) above.
- (6) Any riverfront area as hereinafter defined.
- (7) Any land subject to flooding or inundation.

B. Activities subject to regulation under the Bylaw and the provisions of these regulations:

- (1) Any activity proposed or undertaken which constitutes removing, filling, dredging, discharging into, building upon, degrading or otherwise altering any area specified in Subsection A of this Section is subject to regulation under the Bylaw and requires the filing of an application for permit.
- (2) Any activity proposed or undertaken outside the areas specified in Subsection A above shall not be subject to regulation under the Bylaw unless, in the judgment of the Conservation Commission, said activity may result or has resulted in the removing, filling, dredging, discharging into, building upon, degrading or otherwise altering an area specified in Subsection A above. If anyone wishes to have the Conservation Commission determine whether an activity may be subject to regulation under the Bylaw, he or she shall submit a request for determination of applicability pursuant to Section 9(A) of these regulations.

- (3) For stormwater management systems constructed per Massachusetts Department of Environmental Protection's stormwater management policy (November 18, 1996) or standards (January 2, 2008), any activity proposed or undertaken within said stormwater management systems that includes the removal of less than 12 inches of sediment from a basin, water quality swale or constructed stormwater wetland (including forebays or other forms of pretreatment) is not subject to these regulations.

### **Section 3 - Burden of Going Forward and Burden of Proof**

- A. The applicant shall have the burden of going forward with credible evidence from a competent source in support of all matters asserted pursuant to Subsection B below by the applicant in accordance with his or her burden of proof.
- B. The applicant shall have the burden of proving by a preponderance of the credible evidence from a competent source that the work in the application will not have a significant or cumulative effect upon the wetland values protected by the Bylaw. Failure to meet the burden of proof shall be cause for the Conservation Commission to deny the application for permit along with any work or activity proposed therein.

### **Section 4 - Definitions**

- A. Except as otherwise provided in the Bylaw or these regulations, the definitions of terms in the Bylaw shall be as set forth in the Wetlands Protection Act, M.G.L. c. 131, Section 40, and its regulations, 310 C.M.R. 10.00.
- B. As used in these regulations, the following terms shall have the meanings indicated:
  - 1) **ABUTTER** – the owner of any land within 100 feet of the property line of the land where the activity is proposed, as determined by the most recent assessors' records including any land located directly across a street, river, stream or pond that is within 100 feet of the project's limits of work.
  - 2) **ACTIVITY** – on or in any area subject to protection by the Bylaw and its regulations: any form of draining, dumping, dredging, damming, discharging, excavating, filling or grading; the erection, reconstruction or expansion of any buildings or structures; the driving of pilings; the construction or improvement of roads and other ways; the changing of runoff characteristics; the intercepting or diverging of groundwater or surface water; the installation of drainage, sewage and water systems; the discharging of pollutants; the destruction of plant life; the cutting or removal of 20% or more of the growth or limbs of trees or vegetation; and any other changing of the physical characteristics of land or the physical or chemical characteristics of water; and alterations that impact the ability of the resource area to adapt to / be resilient to climate change impacts.
  - 3) **ADAPTATION** – resilience to the impacts of climate means measures designed or intended to protect resource areas from the impacts of climate change and to protect the ability of resource areas to mitigate the impacts of climate change through providing the interests protected by the Bylaw (the resource area values and functions).

- 4) **ADJACENT UPLAND RESOURCE AREA** – the area 100 feet horizontally lateral from the boundary of any of the following Resource Areas: marsh, freshwater wetland, vernal pool, wet meadow, bog, swamp, bank, stream, creek, pond, reservoir, or lake, or resource area defined in Section 2.A(1) through (4).
- 5) **ALTER** – to change the condition(s) of any area subject to protection by the Bylaw and shall include but not be limited to one or more of the following actions upon the resource areas protected by this Bylaw:
  - a. fill, removal, excavation or dredging of soil, sand, gravel or aggregate material of any kind;
  - b. changing of pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns or flood storage retention areas;
  - c. draining, disturbing or lowering of the water level or water table;
  - d. the dumping, discharging or filling with any material which could degrade the water quality; driving of pilings, erection of buildings or structures of any kind;
  - e. placing of any object or obstruction whether or not it interferes with the flow of water;
  - f. destruction, extensive trimming (defined as 20% or more of limbs or growth), or removal of plant life, vegetation, or trees;
  - g. changing of water temperature, biochemical oxygen demand, nutrient concentration or chemical concentration or other natural characteristics of the receiving water;
  - h. any activities, changes or work which pollutes any stream or body of water, whether located in or out of the Town of Arlington;
  - i. application of pesticides and herbicides;
  - j. any activity, change or work which adversely affects groundwater or drinking water supply;
  - k. any activity, change or work which adversely impacts the ability of the resource area to be resilient to climate change impacts; or
  - l. any incremental activity that has or may have a cumulative adverse effect on the Resource Area Values protected by the Bylaw.
- 6) **APPLICANT** – a person filing a Request for Determination of Applicability or Notice of Intent or other application with the Commission.
- 7) **AREA OF CRITICAL ENVIRONMENTAL CONCERN** – an area so designated by the Secretary of Environmental Affairs of the Commonwealth of Massachusetts pursuant to regulations (301 C.M.R. 12.00), said designation being due to the particular environmental factors which impact upon the areas in question and which highlight the importance of each area so designated.
- 8) **AREA SUBJECT TO PROTECTION UNDER THE BYLAW** – any area specified in Section 2(A). It is used synonymously with "resource area," each of which is defined in greater detail in these regulations.
- 9) **BANK** – the portion of the land surface which normally abuts and confines a water body, often between the mean annual low flow level and the first observable break in the slope or the mean annual flood level, whichever is lower;
- 10) **BEST AVAILABLE MEASURES** – the most up-to-date technology or the best designs, measures or engineering practices that have been developed and that are commercially or readily available.

- 11) **BEST MANAGEMENT PRACTICES** – technologies, designs, measures or engineering practices that are in general use to protect the resource area values of the Bylaw including but not limited to those for climate change adaptation and resilience.
- 12) **BORDERING** – any land within either of the following or the greater thereof:
  - a. 100 feet horizontally lateral from the edge of any marsh, freshwater wetland, vernal pool, wet meadow, bog, swamp, river, stream, creek, pond, reservoir, or lake; or
  - b. within the maximum lateral extent of the water elevation of the statistical 100 year frequency storm.
- 13) **BOUNDARY** – the boundary of an area subject to protection under the Bylaw. A description of the boundary of each area is found in the appropriate section of these regulations or in the Bylaw.
- 14) **BUFFER ZONE** – see definition for **ADJACENT UPLAND RESOURCE AREA**;
- 15) **BYLAW** – Article 8 of Title V of the Bylaws of the Town of Arlington, Massachusetts, entitled “Wetlands Protection”.
- 16) **BYLAW INTERESTS** – are defined in Section 1, above; also known as Resource Area Values.
- 17) **CALIPER** – diameter of a tree trunk (in inches) measured six inches above the ground for trees up to and including four-inch diameter, and 12 inches above the ground for larger trees.
- 18) **CERTIFICATE OF COMPLIANCE** – a written determination by the Conservation Commission as to whether work or a portion thereof has been completed in accordance with the permit issued under the Bylaw governing said work.
- 19) **CLIMATE CHANGE** – a change in the state of the earth’s climate that can be identified by statistical changes of its properties that persist for an extended period, typically decades or longer, whether due to natural variability or as a result of human activity. Climate change impacts can adversely impact resource area functions.
- 20) **COMPENSATORY FLOOD STORAGE** – a volume not previously used for flood storage, shall have an unrestricted hydraulic connection to the same waterway or water body, and, with respect to waterways, shall be provided within the same reach of the river, stream, or creek. Compensatory flood storage shall be replaced at each elevation where flood storage is lost.
- 21) **CONDITIONS** – those requirements set forth in a written permit issued by the Conservation Commission for the purpose of permitting, regulating or prohibiting any activity that removes, fills, dredges or alters an area subject to protection under the Bylaw.
- 22) **CONSERVATION COMMISSION or COMMISSION** – that body in Arlington comprised of members lawfully appointed pursuant to M.G.L. c. 40, Section 8C.
- 23) **CREEK** – the same as “stream.”
- 24) **CUMULATIVE EFFECT** – an effect that is significant when considered in combination with other activities that have occurred, are going on simultaneously, or that are likely to occur, whether such other activities have occurred or are contemplated as a separate phase of the same project, such as the build-out of a subdivision or an industrial park, or unrelated but reasonably foreseeable actions, including other development projects that are currently under construction, under review or that may be expected to come forward.

- 25) DATE OF ISSUANCE – the date a permit, order, or determination is mailed, as evidenced by a postmark, or the date it is hand-delivered.
- 26) DATE OF RECEIPT – the date of delivery to an office, home or usual place of business by mail or hand delivery.
- 27) DETERMINATION:
- a. DETERMINATION OF APPLICABILITY – a written finding by the Conservation Commission after a public hearing as to whether a site or the work proposed thereon is subject to the jurisdiction of the Bylaw.
  - b. DETERMINATION OF SIGNIFICANCE – a written finding by the Conservation Commission, after a public hearing, that the area on which the proposed work is to be done or which the proposed work will alter is significant to one or more of the interests identified in and protected by the Bylaw and these regulations.
  - c. NOTIFICATION OF NONSIGNIFICANCE – a written finding by the Conservation Commission, after a public hearing, that the area on which proposed work is to be done, or which the proposed work will alter, is not significant to any of the interests of the Bylaw.
- 28) DBH (“Diameter at Breast Height”) – the diameter (in inches) of the trunk of a tree (or, for multiple trunk trees, the aggregate diameters of the multiple trunks) measured 4 ½ feet from the existing grade at the base of the tree.
- 29) DREDGE – to deepen, widen or excavate, either temporarily or permanently.
- 30) DROUGHT – a period of abnormally dry weather long enough to cause a serious hydrological imbalance.
- 31) EXTENSION PERMIT – a written extension of time within which the authorized work shall be completed.
- 32) EXTREME HEAT – a Heat Advisory from the National Weather Service, issued when the heat index is forecasted to exceed 100°F for two or more hours.
- 33) EXTREME WEATHER EVENT – weather at the extremes of the historical distribution lying in the outermost 10 percent of a place’s history, including but not necessarily limited to droughts, high winds and microbursts, blizzards and ice storms, excessive precipitation, wildfires, tornadoes, and severe thunderstorms or hurricanes.
- 34) FILL - To deposit any material so as to raise the elevation of land surface or ground, either temporarily or permanently.
- 35) FLOOD CONTROL – the prevention or reduction of flooding and flood damage, both as currently expected to occur and as projected to occur based on the best available data regarding the impacts of climate change.
- 36) GROUNDWATER – all subsurface water contained in natural geologic formations or artificial fill including soil water in the zone of aeration. Activities within 100 feet of resource areas shall not significantly alter the existing quality or elevation of naturally occurring groundwater.
- 37) IMMINENT RISK TO PUBLIC HEALTH AND SAFETY – means the vegetation is an imminent risk to public health or safety or property as confirmed in writing and submitted to the Commission by the Arlington Tree Warden, Fire Department Representative, Public Safety Officer, or a certified arborist.
- 38) IMPACTS OF CLIMATE CHANGE – mean, but are not necessarily limited to, (i) extreme heat (ii) the timing, frequency, intensity, and amount of precipitation, (iii) storm

- surges and rising water levels, (iv) increased intensity and/or frequency of storm events or extreme weather events, and (v) frequency, intensity and duration of droughts.
- 39) IN or WITHIN an area subject to protection under the Bylaw means in, through, under, over, cantilevered over, shading; does not require physical touching of said area subject to protection. With respect to structures, “In” is measured from the drip-line of the roof or foundation or footing, whichever is closer to the resource area.
- 40) INTERESTS IDENTIFIED IN THE BYLAW – those interests specified in Section 1 of the Bylaw and Section 1(B) of these regulations. Also called Bylaw Interests or Resource Area Values.
- 41) ISSUING AUTHORITY – the Arlington Conservation Commission.
- 42) LAND SUBJECT TO FLOODING OR INUNDATION – the land within the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm; said boundary shall be that determined by reference to the most recently available flood profile data prepared for Arlington within which the work is proposed under the National Flood Insurance Program (“NFIP”). Where NFIP data are unavailable or deemed by the Commission to be outdated or inaccurate or not reflecting current conditions, the boundary of said land shall be based on the maximum lateral extent of flood water which has been observed or recorded, or other evidence presented and considered by the Commission. Said land shall also include isolated areas which frequently or seasonably hold standing water; such areas may or may not be characterized by wetland vegetation or soil characteristics.
- 43) LAKE – any open body of fresh water with a surface area of 10 acres or more, and shall include great ponds.
- 44) LAND SUBJECT TO FLOODING – defined in Section 23.
- 45) LAND UNDER WATER BODIES AND WATERWAYS – the bottom of or land under the surface of a creek, river, stream, pond or lake. Land under water bodies is further defined in Section 22.
- 46) LOT – an area of land in one ownership, with definite boundaries. When an area of land is comprised of more than one lot, the lots share a common boundary and are owned or controlled by the same entity or individual(s), and the lots combined are used for the same purpose or enterprise, the Commission may consider the lots as a single LOT.
- 47) MARSH, FRESHWATER WETLAND, SWAMP, WET MEADOW, BOG – defined in Section 21.
- 48) MEADOW (or WET MEADOW) – defined in Section 21.
- 49) NOAA ATLAS 14 – precipitation frequency data compiled by NOAA, used in evaluation/planning for flood storage capacity and other extreme precipitation measures; NOAA 14 = mid-range of 90% confidence interval (current conditions); NOAA 14+ = 0.9 x upper bound of 90% confidence interval (2030 projected); NOAA 14++ = upper bound of 90% confidence interval (2070 projected).
- 50) NOTICE OF INTENT – the written notice filed by any person intending to remove, fill, dredge or alter an area subject to protection under the Massachusetts Wetlands Protection Act, M.G.L. c. 131, Section 40, or the Bylaw, or both.
- 51) ORDER – an order of conditions, superseding order or final order, whichever is applicable, issued pursuant to M.G.L. c. 131, Section 40 or the Bylaw, or both.

- 52) OWNER OF LAND ABUTTING THE ACTIVITY – the owner of land sharing a common boundary or corner with the site of the proposed activity in any direction, including land located directly across a street, way, creek, river, stream, brook or canal.
- 53) PERMIT – the document issued by the Conservation Commission pursuant to this Bylaw which allows work in accordance with conditions set by the Commission in the resource areas protected by this Bylaw; also see “Order” in this definition section.
- 54) PERMIT DENIAL – the document issued by the Conservation Commission pursuant to the Bylaw which disallows proposed work.
- 55) PERSON – any individual, group of individuals, associations, partnerships, corporations, business organizations, trust, estate, Commonwealth of Massachusetts when subject to town Bylaws, any public or quasi-public corporation or body when subject to town Bylaws or any other legal entity, including the Town of Arlington or its legal representative, agents or assigns.
- 56) PERSON AGGRIEVED – any person who, because of an act of failure to act by the Conservation Commission, may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests identified in the Bylaw.
- 57) PLANS – such data, maps, engineering drawings, calculations, specifications, schedules and other materials, if any, deemed necessary by the Conservation Commission to describe the site and/or work to determine the applicability of the Bylaw or to determine the impact of the proposed work upon the interests identified in the Bylaw.
- 58) POND – any open body of fresh water, either naturally occurring or man-made by impoundment or excavation, which is never without standing water due to natural causes, except in periods of extended drought. For purposes of this definition, extended drought shall mean any period of four or more months during which the average rainfall for each month is 50% or less of the ten-year average for that same month. Basins or lagoons which are part of wastewater treatment plants, swimming pools or other impervious man-made retention basins shall not be considered ponds.
- 59) PREVENTION OF POLLUTION – the prevention or reduction of chemicals (e.g., nutrients, hydrocarbons, solvents, metals, vapors) known or suspected of causing harm to humans, plants, or animals via exposure to any media (air, water, soil, sediment).
- 60) PRIVATE WATER SUPPLY – any source or volume of surface or groundwater demonstrated to be in any private use or shown to have potential for private use for domestic purposes.
- 61) PROJECT LOCUS – the lot on which an applicant proposes to perform an activity subject to regulation under the Bylaw
- 62) PROJECT SITE – the area within the Project Locus that comprises the limit of work for activities, including but not limited to, the dredging, excavating, filling, grading, the erection, reconstruction or expansion of a building or structure, the driving of pilings, the construction or improvement of roads or other ways, and the installation of drainage, stormwater treatment, environmentally sensitive site design practices, sewage and water systems.
- 63) PROTECTION OF FISHERIES – protection of the capacity of an area subject to protection under the Bylaw to prevent or reduce contamination or damage to fish and to serve as their habitat and nutrient source.



- 64) PROTECTION OF WILDLIFE – the protection of any plant or animal species, including but not limited to those listed as endangered, threatened or special concern, or on the Watch List by the Massachusetts Natural Heritage Program; listed as Federally Endangered or Federally Threatened by the U.S. Fish and Wildlife Service; deemed locally threatened, in writing, by the Conservation Commission; and means protection of the ability of any resource area to provide food, breeding habitat, shelter or escape cover and species falling within the definition of wildlife set forth in these regulations.
- 65) PUBLIC WATER SUPPLY – any source or volume of surface water or groundwater demonstrated to be in public use or approved for water supply pursuant to M.G.L. c. 111, Section 160 by the Division of Water Supply of the Department of Environmental Protection or shown to have a potential for public use.
- 66) QUORUM – refers the number of Commissioners who must be present before business may be transacted; here, it shall mean a majority of the number of Commissioners then in office.
- 67) REMOVE – to take away any type of material, thereby changing the elevation of land surface or ground, either temporarily or permanently.
- 68) REQUEST FOR DETERMINATION OF APPLICABILITY – a written request made by any person to the Conservation Commission for a determination as to whether a site or work thereon is subject to the Bylaw.
- 69) RESILIENCE – the capacity to prevent, withstand, minimize, respond to, adapt to, and recover from adverse climate change impacts; to build capability and ability of the resource area to minimize and survive negative impacts of climate change to resource area values.
- 70) RESOURCE AREA – is used synonymously with "area subject to protection under the Bylaw," each one of which is listed in the Bylaw and in Section 2 of these regulations.
- 71) RESOURCE AREA ENHANCEMENT – with the Commission's prior approval: removal or management of invasive species; removal of man-made debris, garbage, or trash; stabilization of bank or other resource area; or planting of non-invasive species of vegetation.
- 72) RESOURCE AREA VALUES – collectively, "Resource Area Values" or "Interests of the Bylaw" may include but not be limited to the following: public or private water supply protection; ground water supply protection; flood control; erosion and sedimentation control; storm damage prevention; pollution prevention; protection of surrounding land and other homes or buildings; wildlife, plant, and aquatic species protection; habitat protection; and protection of the natural character or recreational values of the wetland resources.
- 73) RIVER – any natural flowing body of water that empties to any ocean, lake, pond, reservoir, stream, or other river.
- 74) RIVERFRONT AREA – the area of land between a river's mean annual high water line and a parallel line measured 200 feet horizontally landward of the mean annual high water line.
- 75) SIGNIFICANT – shall mean plays a discernable role; e.g., a resource area is significant to an interest identified in the Act when it plays a role in the provisions or protection, as appropriate, of that interest.
- 76) STORM DAMAGE PREVENTION – measures taken to mitigate the severity and consequence of a storm event on the resource area and the prevention of damage caused

by water from storms, as currently occurs and is predicted by best available data to occur from the impacts of climate change, including but not limited to erosion and sedimentation, damage to vegetation, property or buildings or damage caused by flooding, waterborne debris or waterborne ice.

- 77) STREAM – a body of running water, including brooks and creeks, which moves in a definite channel in the ground due to hydraulic gradient, and includes streamlets and rivulets. A portion of a stream may flow through a culvert or beneath a bridge. Such a body of running water which does not flow throughout the year (i.e., which is intermittent) is a stream.
- 78) STRUCTURE – means a combination of materials or things arranged or constructed for permanent or temporary occupancy, shelter, or use, such as a building, bridge, trestle, wireless communications facility, tower, rip rap associated with stormwater outfalls, framework, retaining wall, tank, tunnel, tent, shed, stadium, reviewing stand, platform, swimming pool, sports court, shelters, piers, wharves, bin, fence, sign, or the like.
- 79) TREE REMOVAL – any act that will cause a tree to die within a three-year period.
- 80) VEGETATED WETLANDS – defined in Section 21.
- 81) VULNERABILITY (to climate change impacts) – the degree to which a resource area is susceptible to or predisposed to be adversely affected by climate change impacts (including climate variability and extremes); as a function of exposure, sensitivity, and adaptive capacity.
- 82) WITHIN – see IN above.
- 83) WILDLIFE – any non-domesticated mammal, bird, reptile, amphibian, fish, mollusk, arthropod or other invertebrate other than a species of the Class insects which has been determined by the Commonwealth of Massachusetts or any agency thereof to be a pest whose protection under the provisions of the Bylaw would be a risk to man.
- 84) WILDLIFE HABITAT – the area being used by or necessary to provide breeding or nesting habitat, shelter, food and water for any animal species.
- 85) WORK – shall mean the same as "activity."

## **Section 5 - Time Periods**

All time periods of 10 days or less specified in the Bylaw and these regulations shall be computed using business days only. In the case of a Determination or Order, such period shall commence on the first day after the date of issuance and shall end at the close of business on the 10th business day thereafter. All other time periods specified in the Bylaw and regulations shall be computed on the basis of calendar days, unless the last day falls on a Saturday, Sunday or legal holiday, in which case the last day shall be the next business day following.

## **Section 6 - Actions by Conservation Commission**

A. Where the Bylaw states that a particular action (except receipt of a request or notice) is to be taken by the Conservation Commission, that action is to be taken by more than half the members present at a meeting of at least a quorum. A quorum is defined as a majority of the members then in office.

B. Where the Bylaw states that a determination, permit, or notification or certificate of compliance shall be signed and issued by the Conservation Commission, that action is to be taken by the majority of the quorum present at a public meeting or hearing, or by a majority of the members then in office who need not convene as a body in order to sign said permit or notification, provided that the Commission met pursuant to the Open Meeting Law, M.G.L. c. 30A, Sections 18 through 25, when voting on the matter.

C. Where the Bylaw states that the Conservation Commission is to receive a request or notice, Conservation Commission means a member of the Conservation Commission or an individual designated by the Conservation Commission to receive such request or notice.

### **Section 7 - Working Sessions**

When the Commission has time available, as a matter of courtesy, it may, but is not required, to conduct a working session with any person seeking guidance or direction on what type of application to file with the Commission, and what information the Commission might like to see in such an application in addition to that specified elsewhere in these regulations or the state Wetlands Protection Regulations. No one has a right to a working session.

Any working session shall be held in accordance with the Open Meeting Law, M.G.L. c. 30A, Sections 18 – 25.

For any working session, notwithstanding the Plan requirements in Section 12, the following information at a minimum must be provided (at the working session):

- (1) a map or plan showing the location of the proposed work;
- (2) photographs (minimum 5" x 7" size) of the area of the proposed work; and
- (3) a sketch of the area of the proposed work, showing existing conditions (structures, approximate locations of actual or potential resource areas).

Statements by the Commission or any Commission member in a working session shall not be construed as prejudging a project or guaranteeing a particular action by the Commission on a subsequent filing. The Commission shall not be bound any comments or opinions offered at a working session. A person who relies on any statements or information provided at the working session does so at his or her own risk.

### **Section 8 – Administrative Review of Minor Projects or Work**

- A. Findings. Some projects are simple, small in scale, minor, or routine, and such projects involve very little activity or alteration in Resource Areas protected by the Bylaw and are not likely to have a significant or cumulative effect on the Resource Area Values protected by the Bylaw. Such projects may be reviewed and approved by the Conservation Agent rather than the full Commission.
- B. Applicability. If a project meets the criteria in Section 8(B).1 or 2 below, the work may be reviewed and approved by the Conservation Agent. If the Conservation Agent has any

doubt that a project meets these criteria, the Applicant will be required to file a Request for Determination of Applicability or a full application for a permit (Notice of Intent).

- (1) A project that is listed in (B)2 below may be approved by the Conservation Agent if it meets all of the following conditions:
  - a. The work is proposed only in the AURA or Riverfront Area and not in any other Resource Area.
  - b. Work is not proposed within the first 50 feet of the AURA or Riverfront Area other than conversion of impervious surface to vegetated area provided erosion and sedimentation controls are implemented during construction.
  - c. The work shall not include the uprooting of non-invasive vegetation or mowing to the ground or clear-cutting vegetation.
  - d. Work will not adversely impact the climate change resilience functions of the project area.
- (2) A project may be approved by the Conservation Agent if it falls within one of the following activities and it meets the conditions listed in B(1) above:
  - a. Fencing, provided that it will not constitute a barrier to wildlife movement and there are openings along the bottom at least 4 inches high to allow wildlife movement; a sketch or survey of the property showing the proposed fence location must accompany the application.
  - b. Installation of dried laid (not mortared) stone walls and compacted gravel footing, provided they do not constitute a barrier to wildlife movement; a sketch or survey of the property showing the proposed fence location must accompany the application.
  - c. Vista pruning of shrubs and trees.
  - d. Removal of invasive species by hand within the Buffer Zone and Adjacent Upland Resource Area provided native plants are planted in the same area provided erosion and sedimentation controls are implemented during construction are implemented during work.
  - e. Planting of native species of trees, shrubs, or groundcover, but excluding planting or expansion of lawn area.
  - f. The conversion of impervious surface to vegetated area, provided erosion and sedimentation controls are implemented during construction;
  - g. Activities that are temporary in nature, having negligible impacts, and are necessary for planning and design purposes (e.g., installation of monitoring wells, exploratory borings, sediment sampling, and surveying); a sketch or survey of the property showing the proposed locations and resource areas must accompany the application.
  - h. Pervious walkways of no more than 30 inches in width as long as no trees or shrubs will be removed.

C. Procedure:

- a. The Applicant shall complete and submit the Administrative Review Form that shall contain sufficient information to determine where the project or work is proposed and whether it meets the requirements set forth in this section.
  - b. The Applicant must provide a complete written description of all the work proposed and protective or mitigation measures proposed.
  - c. The Conservation Agent shall visit the site and the boundaries of Resource Areas must be clearly evident to the Conservation Agent.
  - d. The Conservation Agent shall determine whether the project or work meets the criteria listed in Section 8(B) above.
  - e. The Conservation Agent shall issue an Administrative Review Decision within 10 work days of receipt of the Administrative Review Form that fulfills the information requirements of this section.
  - f. The Conservation Agent may approve the work as proposed, approve it with conditions, or deny the work.
  - g. The decision will be filed in the Conservation Department and a copy provided to the Applicant.
  - h. The Conservation Agent shall provide an up-to-date list of projects approved or denied under Administrative Review with the Commission.
- D. Appeal. The decision rendered by the Conservation Agent may be appealed by the person seeking Administrative Review by filing a Request for Determination of Applicability.

### **Section 9 - Determination of Applicability**

#### **A. Requests for determination of applicability.**

- (1) Any person who desires a determination as to whether the Bylaw applies to land, or to work that may affect an area subject to protection under the Bylaw, may submit to the Conservation Commission electronically and by certified mail, regular mail, or hand delivery a written request for a determination of applicability and other application materials in accordance with the submittal requirements set forth in the filing guidelines for requests for determination of applicability provided in these regulations. Said person shall also provide the number of paper copies as set forth in the filing guidelines of the Commission.
- (2) Simultaneously with filing the Request for Determination of Applicability, the applicant shall provide notification to each abutter by hand delivery or certified mail, return receipt requested, first class mail, postage prepaid. An affidavit specifying how and when abutter notice was made shall accompany the RDA. The contents of the abutter notification shall be specified by the Commission and shall, at a minimum, provide a brief description of the proposed work (if any), identify resource areas involved, list the location (street address, assessors lot and map identifiers), specify where a copy of the request may be obtained, and the date, time, and place of the hearing.
- (3) Said request shall include sufficient information to enable the Conservation Commission to find and view the area and determine whether the proposed work will alter an area subject to protection under the Bylaw.
- (4) A request for determination of applicability shall include certification that the owner of the area subject to the request, if the person making the request is not the owner, has been

notified in writing via certified mail, return-receipt requested that a determination is being requested under the Bylaw.

- (5) A request for determination of applicability shall be filed with the Commission no less than 10 days prior to the Commission's next meeting and simultaneously copies of the request for determination of applicability shall be hand delivered or mailed to each Commission member (including associate members). Failure to meet such filing and distribution deadline shall be cause for the Commission to continue or defer discussion of the request for determination to the following meeting.

**B. Determination of applicability.**

- (1) Within 21 days after the date of receipt of the request for a determination of applicability, the Conservation Commission shall hold a public hearing on the request for a determination of applicability. Notice of the time and place of the public meeting at which the determination will be made shall be given by the Conservation Commission at the expense of the person making the request not less than five business days prior to such meeting, by publication in a newspaper of general circulation in the Town of Arlington, and by mailing a notice to the person making the request, the property owner if not the applicant. The Commission will forward the notice of this hearing to the Town Manager, Board of Selectmen, Town Clerk, Planning Department, Town Counsel, Department of Public Works, Town Engineer, Zoning Board of Appeals, Board of Health, Building Inspector, and the Redevelopment Board. Notice shall also be given in accordance with the Open Meeting Law, M.G.L. c. 30A, Sections 18 - 25. Said determination shall be signed and issued by the Conservation Commission, and copies thereof shall be sent by the Conservation Commission to the person making the request and to the owner within 21 days of the close of the public hearing or any continuances thereof. Said determination shall be valid for three years from date of issuance and may not be extended or renewed.
- (2) The Conservation Commission shall find that the Bylaw applies to the land, or a portion thereof, if it is an area subject to protection under the Bylaw as defined in Section 2(A) above. The Conservation Commission shall find that the Bylaw applies to the work on the portion thereof, if it is an activity subject to the regulations under the Bylaw as defined in Section 2(B) above.
- (3) An application for permit shall be filed in the event of a positive determination, and all of the procedures set forth in Section 11 shall apply.
- (4) Request for Determination of Applicability vs. Notice of Abbreviated Resource Area Delineation. No Request for Determination of Applicability or Determination of Applicability shall be used to evaluate or confirm the delineation of any Resource Area.

**Section 10 – Emergency Certification**

A. Any person requesting permission to perform an emergency project, or within 24 hours of commencing an emergency project, shall specify in writing why the project is necessary for the protection of the health or safety of the citizens of the Town and what agency of the Commonwealth (or subdivision thereof) or Town entity is to perform the project or has ordered the project to be performed. Work may not proceed unless the Commission or its Administrator has certified the work to be necessitated by an emergency. In no case shall work or alteration by

such certification extend beyond the minimum amount of work and time necessary to abate the emergency. If the project is certified to be an emergency by the Conservation Commission, its Administrator, its Chair or Vice Chair, or the Department of Environmental Protection, the certification shall include a description of the work which is to be performed and shall not include work beyond that necessary to abate the emergency. If practicable, a site inspection shall be made prior to certification. If issued by the Conservation Administrator, the emergency certification must be ratified at the next meeting of the Conservation Commission.

B. An emergency certification may be issued by the Conservation Commission Chair, Vice Chair, or Administrator and shall be issued only for the protection of public health or safety.

C. The time limitation for performance of emergency work shall not exceed 30 days, or 60 days for Immediate Response Actions approved by the Bureau of Waste Site Cleanup (BWSC) of the Department of Environmental Protection in accordance with the provisions of 310 CMR 40.0410. The emergency certification may be extended for an additional 15 days only for good cause.

D. In appropriate circumstances, the Commission may require that within 14 days of issuance of an emergency certification, a Notice of Intent/permit application shall be filed by the recipient of the emergency certification with the Conservation Commission for review as provided by the Bylaw and these Regulations.

E. Upon failure to meet the requirements of this section and other requirements of the Conservation Commission, the Conservation Commission may, after notice and a public hearing, revoke or modify an emergency certification and order restoration and mitigation measures.

### **Section 11 – Notice of Intent/Application for Permit**

A. Any person who proposes to do work or activity that will remove, fill, dredge or otherwise alter any area subject to protection under the Bylaw shall submit an application, called a Notice of Intent, for a permit on forms specified by the Conservation Commission and in conformance with the plan requirements in Section 13. Simultaneously with filing the Notice of Intent with the Commission or its Agent, an applicant shall provide an electronic copy of the application to the Commission and provide the number of paper copies specified by the Conservation Administrator, and said paper copies shall be provided with envelopes with sufficient first-class postage, prepaid, for mailing (by the Administrator) of such copies to Commission members. Failure to provide the specified number of paper copies or electronic copies shall be grounds for the Commission to continue the public hearing without the applicant's consent. Simultaneously with filing the Notice of Intent, the applicant shall provide notification to each abutter by hand delivery or certified mail, return receipt requested. The contents of the abutter notification shall be specified by the Commission and shall, at a minimum, provide a description of the proposed work, location (street address and assessor's map and lot identifier), where a copy of the request may be obtained, and the date, time, and location of the hearing.

B. Upon receipt of the application materials referred to in Subsection A above, the Conservation Commission shall assign a file number, which file number shall be that issued by the Department

of Environmental Protection (“DEP”) for a Notice of Intent also submitted under the Wetlands Protection Act. The DEP will notify the applicant of the file number. The designation of file number shall not imply that the plans and supporting documents have been accepted or judged adequate for the issuance of a permit and does not prevent the Commission from requesting additional information at a later time. For a Notice of Intent not also filed under the Wetlands Protection Act, the Commission shall issue a file number.

C. If only a portion of a proposed project or activity lies within an area subject to protection under the Bylaw and the remainder of the project or activity lies outside those areas, all aspects of the project must be described in the detail, provided also that in such circumstances the Notice of Intent shall also contain a description and calculation of peak flow and estimated water quality characteristics of discharge from a point source (both closed and open channel), when the point of discharge falls within an area subject to protection under the Bylaw.

D. A public hearing shall be held by the Conservation Commission with 21 days of receipt of the complete Notice of Intent.

E. An Abbreviated Notice of Resource Area Delineation may be filed to confirm the delineated boundary of Vegetated Wetland or other Area Subject To Protection Under the Bylaw on the site. If utilized, an applicant must file an Abbreviated Notice of Resource Area Delineation prior to filing a Notice of Intent. Alternatively, the boundary of a Resource Area may be determined through the filing of a Notice of Intent. The procedures for a Notice of Intent shall be used for an Abbreviated Notice of Resource Area Delineation. Consistent with Section 6 of the Bylaw, “Applicant’s Obligation”, the applicant shall have the burden of proving by a preponderance of the credible evidence from a competent source that the delineation of Vegetated Wetland or other Area Subject To Protection Under the Bylaw is accurate.

F. If the Commission determines that the applicant incorrectly or incompletely delineates a Resource Area(s), the Commission shall request that the applicant provide the correct delineation or missing information. If the correct delineation or missing information is not provided, the Commission shall close the hearing and issue a denial Order of Resource Area Delineation or denial Order of Conditions within 21 calendar days, specifying each Resource Area that is incorrectly or incompletely delineated. The Commission shall have the authority to deny any proposed Resource Area delineation when: 1) the application is incomplete; 2) the delineation is incorrect; or 3) the Commission requires additional information that is not provided by the applicant.

G. Review period. Resource area boundary delineations shall be reviewed only between April 1 and December 1 of each year. Delineations may be reviewed at the sole discretion of the Commission between December 1 and April 1, and shall be reviewed only when site conditions are such that the Commission believes it can adequately review the relevant resource area indicators (e.g., soils, vegetation, topography, hydrology).

## **Section 12 - Filing Fees & Consultant Fees**

### **A. Filing Fees**



- (1) Rules:
  - (a) Permit fees are payable at the time of application and are nonrefundable.
  - (b) Permit fees shall be calculated by the Conservation Commission per the Bylaw.
  - (c) Town, county, state, and federal projects are exempt from fees.
  - (d) Upon request and demonstration of a compelling reason to do so, which circumstances the Commission anticipates shall be rare, the Commission in its sole discretion may grant a waiver or variance from, or reduction of, Permit fees.
- (2) These filing fees are in addition to the filing fees charged under M.G.L. c. 131, Section 40, the Wetlands Protection Act.
- (3) The requirements of this section shall be commensurate with the nature, scope, type, and cost of the proposed project or activity.
- (4) Fees:
  - (a) Fees are payable at the time of filing the application and are non-refundable.
  - (b) Fees shall be calculated per schedule below.
  - (c) Town, County, State, and Federal Projects are exempt from fees.
  - (d) These fees are in addition to the fees paid under M.G.L. Ch. 131, s.40 (the Wetlands Protection Act).

(Category)

(R1) Request for Determination of Applicability: \$150

(N1) Minor project: \$200

(house addition, tennis court, swimming pool, utility work, work in, on or affecting any body of water, wetland or floodplain).

(N2) Single Family Dwelling: \$600

(N3) Multiple dwelling structures: \$600 + \$100 per unit all or part of which lies within 100 feet of wetlands or within land subject to flooding.

(N4) Commercial, industrial, and institutional projects:

\$800 + 50¢/s.f. wetland disturbed; 2¢/s.f. land subject to flooding; 100 s.f. buffer disturbed.)

(N5) Subdivisions: \$600 + \$4/l.f. feet of roadway sideline within 100 ft. of wetlands or within land subject to flooding

(N6) Other Fees: copies, printouts: per public records law

(N7) Minor project change: \$50

(N8) Work on docks, piers, revetments, dikes, and similar: \$4 per linear foot

(N9) Resource boundary delineation (ANRAD): \$1 per linear foot

(N10) Certificate of Compliance (COC or PCOC): No charge if before expiration of Order, \$200 if after expiration date of Order.

(N11) Amendments: \$300 or 50% of original local filing fee, whichever is less

(N12) Extensions:

- a. Single family dwelling or minor project: \$100.
- b. Other: \$150.

## **B. Consultant Fees**

Upon receipt of a Notice of Intent, Abbreviated Notice of Resource Area Delineation, or Request for Determination of Applicability, or at any point during the hearing process, the Commission is authorized to require an applicant to pay a fee for the reasonable costs and expenses borne by the Commission for specific expert engineering and other consultant services deemed necessary by the Commission to come to a final decision on the application. The fee is called the “Consultant Fee.”

This Consultant Fee is pursuant to Bylaw § 16(B)(11) and independent from the Commission’s “Rules for Hiring Outside Consultants” pursuant to G.L. Ch. 44, § 53G adopted June 21, 2007. The specific consultant services may include, but are not limited to, performing or verifying the accuracy of a resource area survey and delineation, analysis of resource area functions, including but not limited to wildlife habitat evaluations, hydrogeologic and drainage analysis, and advice on environmental or land use law and legal issues.

The Commission may require the payment of the Consultant Fee at any point in its deliberations prior to a final decision. Failure by the applicant to pay the Consultant Fee specified by the Commission within five (5) business days of the request for payment shall be cause for the Commission to deny issuance of a permit or other requested action.

The applicant shall pay the fee to be put into a revolving fund, which may be drawn upon by the Commission for specific consultant services approved by the Commission at one or more of its public meetings. The consultant shall be chosen by, and report only to, the Commission or its designee.

The exercise of discretion by the Commission in making its determination to require payment of a Consultant Fee shall be based upon its reasonable finding that additional information acquirable only through outside consultants would be necessary for the making of an objective decision.

The Commission shall return any unused portion of the Consultant Fee to the applicant unless the Commission decides at a public meeting that other further or additional or different services of the consultant are necessary to make an objective decision. Any applicant aggrieved by the

imposition of or size of the Consultant Fee, or any act related thereto, may appeal according to the provision of the Massachusetts General Laws.

### **Section 13 - Plan Requirements**

A. Plans shall describe the proposed activity and its effect on the environment. Due regard shall be shown for all natural features such as large trees, watercourses and water bodies, wildlife habitat and similar community assets.

- (1) The following items are set out as a minimum standard. The applicant may submit, or be required to submit, any further information that will assist in the Commission's review and that is deemed necessary to determine the proposed effect on the interests protected by the Bylaw. The Conservation Commission may waive any of these plan requirements it deems insignificant or irrelevant for a particular project.
- (2) An eight-and-one-half-inch-by-eleven-inch reproduction of the USGS quadrangle sheet showing the project locus, and in the case where the project requires two or more plans to show the locus, an eight-and-one-half-inch-by-eleven-inch sheet clearly identifying the proposed site and work in addition to the labeled boundaries of the resource areas.

B. Plan content.

- (1) The following information shall be provided:
  - (a) The names and addresses of the record owner(s), the applicant(s) and of all abutters, as determined by the most recent local tax list, unless the applicant shall have a more recent knowledge of such abutters.
  - (b) Description of any alteration to flood storage capacity on the site. Include calculations and watershed maps if necessary.
  - (c) Soil characteristics in representative portions of the site.
  - (d) The Commission may in its sole discretion require the applicant to provide a runoff plan and calculations using the Rational Method or "the Cornell" method, and based on the ten-year, fifty-year and one-hundred-year-flood frequency event period. Calculations shall show existing and proposed runoff conditions for comparative purposes.
  - (e) Methods to be used to stabilize and maintain any embankments facing any wetlands, or show slope on plans of less than or equal to 3 to 1.
  - (f) Methods to control erosion during and after construction.

C. Plan specifications.

- (1) Drawings for a Request for Determination of Applicability must be to scale. All other application plans (e.g., for Notices of Intent) shall be drawn to scale (one inch equals 40 feet maximum) with the title designating the name of the project, location, the name(s) of the person(s) preparing the drawings and the date prepared, including all revision dates.
- (2) The Commission may require that plans and calculations be prepared and stamped by a registered professional engineer or a registered land surveyor of the Commonwealth of Massachusetts when, in the Commission's judgment, the proposed work warrants such professional certification. The Commission may also require preparation and submission of supporting materials by other professionals including, but not limited to, registered landscape architect, environmental scientist, geologist or hydrologist when in its

judgment the complexity of the proposed work and/or the wetland values of the Resource Areas warrants the relevant specialized expertise. Submitted materials may be used by the Commission to evaluate the effects of the proposed project/work on wetland values and compliance with these regulations. Submission of requested materials does not imply approval of the project.

- (2) Drawings must include the boundary and location of all Resource Areas protected by the Bylaw on the project site and within 100 feet, regardless of whether or not the applicant believes the work is subject to M.G.L. c. 131, Section 40, the Wetlands Protection Act or the Arlington Wetlands Bylaw
- (3) Alterations.
  - (a) Drawing must include a delineation of all alterations proposed in or adjacent to all Resource Areas as indicated below:
    - i. Areas to be dredged;
    - ii. Areas to be filled;
    - iii. Areas to be altered in any other way;
  - (b) All alterations should be clearly explained in text or footnotes.
- (4) All drawings shall show the distance twenty-five (25), fifty (50) and one-hundred feet from the resource areas listed in Section 2.A(1) through (3) as well as the Riverfront Area.
- (5) Calendar dates of measurements, samplings, contours and so forth should appear with such data. Datum shall be stated in NAVD 88 base. The contour interval shall be no greater than two feet.
- (6) Indicate existing and final contours and contour interval used, including pond bottom and stream invert contours.
- (7) Indicate locations and elevations of sills and bottom of foundation(s) and septic system(s) (if any).
- (8) Indicate soil characteristics in representative parts of property, including depth of peat and muck in wetlands.
- (9) Indicate locations, sizes and slopes of existing and proposed culverts and pipes.
- (10) Include cross-section of all wetlands, showing slopes, bank and bottom treatments for wetland creation or replication.
- (11) For projects in land subject to flooding, include existing and proposed water storage capacity of the property, including calculations and data on which the capacity is based. If filling is proposed, determine the effect of loss of storage on downstream channels and culverts.
- (12) Indicate location and elevation of bench mark used for survey.
- (13) Indicate existing trees, stone walls, fences, buildings, historic sites, rock ridges and outcroppings.
- (14) Indicate invert elevations on catch basins.
- (15) Indicate proposed on-site pollution control devices, such as hooded catch basins, oil absorption pillows, detention/retention basins, flow dissipaters or vegetative buffers.
- (16) Show locations/details of erosion control devices.
- (17) Assessors Map and Lot number(s) shall be shown.
- (18) If location is within an Area of Critical Environmental Concern, it shall be so indicated on the plan.

D. The requirements of this section shall be met commensurate with the nature, scope, type, and cost of the proposed project or activity

**Section 14 - Area to be Staked Prior to Site Inspection**

A. Before site inspections can be made by the Conservation Commission or the Commission's agent, the following conditions must be met:

(1) Stakes shall be provided as follows:

(a) Stakes indicating the corners of houses or other structures nearest the wetland resource area.

(b) Stakes indicating the septic tank and the leaching field location.

(c) Stakes indicating the limit of work.

(2) Lot number or house number should be posted at location.

(3) Edges of all resource areas shall be delineated. (Please refer to rules and regulations for definitions.)

(4) Directions shall be made available to the Commission to locate property.

B. Failure to have the lot staked may result in no review and thus delay of a project.

C. Upon completion of staking, the Conservation Commission shall be notified and a site inspection shall be arranged.

D. The requirements of this section shall be met commensurate with the nature, scope, type, and cost of the proposed project or activity.

**Section 15 - Public Hearings**

A. A public hearing shall be held by the Conservation Commission with 21 days of receipt of the complete Notice of Intent, and shall be advertised by the Commission at the applicant's expense in accordance with the Bylaw (Section 5) and the requirements of the Open Meeting Law, M.G.L. c. 30A, Sections 18 – 25. Abutter notification as detailed above shall be done by and at the expense of the applicant at the time of filing the Request for Determination of Applicability, Abbreviated Notice of Resource Area Delineation, Abbreviated Notice of Intent or Notice of Intent.

B. Continued hearings.

(1) Public hearings may be continued as follows:

(a) Without the consent of the applicant to a date certain announced at the hearing should the applicant or the applicant's representative fail to provide at least ten (10) calendar days prior to that scheduled meeting/hearing sufficient abutter notification, newspaper notification, an electronic copy or a sufficient number of paper copies specified by the Conservation Administrator of any written information or documents intended for discussion at a meeting/hearing, or fail to provide to the Commission office or Administrator envelopes with sufficient first-class postage, prepaid, for mailing of such copies to Commission members.

- (b) Without the consent of the applicant to a certain date announced at the hearing either for receipt of additional information offered by the applicant or others or for information required of the applicant deemed necessary by the Conservation Commission at its discretion; or
  - (c) With the consent of the applicant, to an agreed-upon date, which shall be announced at the hearing.
  - (d) Without the consent of the applicant, for lack of receipt of the DEP file number, to certain date announced at the hearing; or
  - (e) Without the consent of the applicant, for failure to pay the Consultant Fee pursuant to Section 11 of the Bylaw, to a date certain announced at the hearing.
  - (f) Without the consent of the applicant, for failure to pay the filing fee pursuant to Section 11 of the Bylaw, to a date certain announced at the hearing.
- (2) The date, time and place of any such continued hearing shall be publicized in accordance with the Open Meeting Law, and notice shall be sent by the applicant to any person at the hearing who so requests.

#### **Section 16 - Issuance of Permit**

A. Within 21 days of the close of the public hearing or any continuance thereof on an application/Notice of Intent for a permit, the Conservation Commission shall:

- (1) Make a determination that the area on which the work is proposed to be done, or on which the proposed work will remove, fill, dredge, discharge into, build upon, degrade or otherwise alter, is not significant to any of the interests identified in the Bylaw, and shall so notify the applicant;
- (2) Make a determination that the area on which the work is proposed to be done, or on which the proposed work will remove, fill, dredge or alter, is significant to one or more of the interests identified in the Bylaw and issue a permit for the protection of said interests;
- (3) Make a determination that the proposed work fails to meet the design specifications, performance standards, or other requirements of the Bylaw, its regulations, or policies of the Commission, or that the project fails to avoid or prevent unacceptable significant or cumulative effects upon the resource area values of the Bylaw, or that there are no conditions adequate to protect said values; or
- (4) If the Conservation Commission finds that the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Bylaw, it may issue a permit denial. The permit shall specify the information which is lacking and why such information is necessary. If the Commission issues a permit denial, no work may occur until an applicant reapplies and the Commission grants a permit allowing work.

B. A permit allowing the proposed work shall impose such conditions, in the judgment of the Conservation Commission, that are necessary for the protection of those areas found to be significant to one or more of the interests identified in the Bylaw. Such a condition may include, but are not limited to the placement of permanent bounds (granite or metal) to demarcate all or part of a resource area or mitigation area. Said permit shall prohibit any work or any portion

thereof that cannot be conditioned to meet said standards. The permit shall impose conditions setting limits on the quantity and quality of discharge from a point source (both open and closed channel) when said limits are necessary to protect the interests identified in the Bylaw.

C. The permit shall be valid for three years from the date of its issuance.

D. The permit shall be signed and issued by the Conservation Commission and shall be mailed or hand-delivered to the applicant, his or her agent or attorney.

E. A copy of the plans describing the work and the permit shall be kept on file by the Conservation Commission and shall be available to the public at reasonable hours.

F. Prior to the commencement of any work permitted or required by the permit, the permit shall be recorded in the Registry of Deeds or the Land Court. In the case of recorded land, the permit shall also be noted in the Registry's Grantor Index under the name of the owner of land upon which the proposed work is to be done. In the case of registered land, the permit shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is to be done. Certification of recording shall be sent to the Conservation Commission within two weeks of recording. If work is undertaken without the applicant first recording the permit, the Conservation Commission may issue an enforcement order.

### **Section 17 - Extension of Permit**

A. The Conservation Commission may extend a permit for a period of up to an additional three-year period from date of issuance. No permit may be extended for more than six years after date first issued. The request for an extension shall be made to the Conservation Commission at least 30 days prior to the expiration of the permit. The Commission shall hold a public hearing in accordance with the Bylaw and these regulations within 30 days of receipt of said request. Should said public hearing be continued past the date of the expiration of the permit, the expiration date shall be stayed to the date on which the Commission votes on whether to extend the permit, should the Commission vote not to grant the request for permit extension.

B. The Conservation Commission may deny the request for an extension and require the filing of a new application for permit for the remaining work in the following circumstances:

- (1) Where no work has begun on the project, except where such failure is due to an unavoidable delay, such as appeals and in the obtaining of other necessary permits;
- (2) Where new information, not available at the time the permit was issued, has become available and indicates that the permit is not adequate to protect the resource area values identified in the Bylaw;
- (3) Where incomplete work is causing damage to the resource area values identified in the Bylaw;
- (4) Where work has been done in violation of the permit or the Bylaw or these regulations; or
- (5) Where resource areas have changed.

C. If issued by the Conservation Commission, the extension permit shall be signed by a majority of the quorum of the members of the Conservation Commission present.

D. The extension permit shall be recorded in the Land Court or the Registry of Deeds, whichever is appropriate. If work is undertaken without the applicant recording the extension permit, the Conservation Commission may issue an enforcement order or may itself record the extension permit.

### **Section 18 – Minor Amendment of Permit**

A. In the event a permittee seeks to make a minor modification to an existing permit or other Commission determination, any such requested modification shall have the same or less impact on the resource area values protected by the Bylaw as the approved work. Requests for minor amendment shall follow the procedure described below. No amended permit shall be issued for a permit that has expired.

**B. Procedure:**

- (1) An applicant shall make a request for an amendment to the Conservation Commission. The request shall be either orally at a regularly scheduled meeting of the Commission or by submitting the request to the Commission in writing, which such request shall be discussed at a regularly scheduled meeting. The request shall describe what changes have been proposed and present any pertinent plans showing such changes.
- (2) The Conservation Commission first shall determine whether the requested change warrants the filing of a new Notice of Intent or whether it is of a sufficiently minor nature and can be considered as an amendment to the original Final Order of Conditions. The Conservation Commission may in its sole and unreviewable discretion determine the project change is relatively minor only if:
  - (a) the purpose of the project has not changed,
  - (b) the scope of the project has not increased,
  - (c) the project still meets relevant standards in these regulations,
  - (d) resource areas are still protected, and
  - (e) the potential for adverse impacts to resource area values will not be increased.

If the Conservation Commission determines the proposed change(s) is not minor, then it shall not issue an amendment, but instead require the filing of a new Notice of Intent/application for permit if the permittee intends to continue to pursue the modification.

Ministerial correction of obvious mistakes, such as citing a wrong file number or typographical errors, may be accomplished by correction of the permit by the Commission or the Conservation Administrator.

- (3) If the Conservation Commission determines that a new Notice of Intent is not necessary, the applicant shall at its expense publish newspaper notice of the proposed amendment in accordance with the Bylaw (Section 5). Abutter notification of the proposed amendment shall also be done by and at the expense of the applicant at the time. The notice must describe that an amendment to an Order/permit is being requested, that the request is



pending before the Commission for review, the date of the public hearing at which the Commission will consider the request for amendment, and where a copy of the application for the requested change may be obtained. The Conservation Commission shall provide notice of the public hearing in accordance with the requirements of the Open Meeting Law, M.G.L. c. 30A, Sections 18 – 25.

- (4) Under no circumstances will the issuance of an Amended Order of Conditions extend the effective date of the original Final Order of Conditions. The Amended Order shall run with the term of the original Order of Conditions or the effective date of an extended Order of Conditions.
- (5) The Amended Order should be issued on the form provided for an Order of Conditions/Permit, with the insertion of the word "Amended" and the amendment date. Amended Orders/Permit must be recorded with the registry of Deeds in the same manner as Orders.

### **Section 19 - Certificate of Compliance**

- A. Upon written request by the applicant, a certificate of compliance shall be issued by the Conservation Commission within 21 days of receipt thereof, and shall certify if it so determines, that the activity or portions thereof described in the application for permit and plans has been completed in compliance with the permit and any amendment(s) thereto. If approved by the Conservation Commission, the certificate of compliance shall be signed and issued by the Commission.
- B. Prior to the issuance of a certificate of compliance, a site inspection shall be made by the Conservation Commission or its agent, in the presence of the applicant or the applicant's agent if applicant so desires.
- C. If the Conservation Commission determines, after review and inspection, that the work has not been done in compliance with the permit, it shall refuse to issue a certificate of compliance. Such refusal shall be issued within 21 days of receipt of a request for a certificate of compliance, shall be in writing, and shall specify the reasons for denial.
- D. If a project has been completed in accordance with plans stamped by a registered professional engineer or a land surveyor or a registered landscape architect for landscaping projects, a written statement by such a professional person certifying substantial compliance with the plans and setting forth what deviation, if any, exists from the plans approved in the permit shall accompany the request for a certificate of compliance. The Commission reserves the right to administer the requirements of this paragraph in its sole discretion commensurate with the nature, scope, type, and cost of the proposed project or activity.
- E. If the permit contains conditions which continue past the completion of the work, such as maintenance or monitoring, the certificate of compliance shall specify which, if any, of such conditions shall continue. The certificate shall also specify to what portion of the work it applies, if it does not apply to all the work regulated by the permit.

F. The certificate of compliance shall be recorded in the Land Court or Registry of Deeds, whichever is appropriate. Certification of recording shall be sent to the Conservation Commission on the form specified by the Commission.

### **Section 20 – Prohibited Materials**

The Commission has determined that the following materials are harmful to the resource area values of the Bylaw and therefore are prohibited in resource areas:

- A. Copper pipes on the exterior of any structure.
- B. Coal-tar based sealant (asphalt-emulsion based sealant is allowed).

### **Section 21 - Banks**

#### **A. Findings.**

- (1) Banks are likely to be significant to wildlife, to plant or wildlife habitat, to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to the prevention of pollution, to erosion control and sedimentation control, and to the protection of fisheries. Where banks are composed of concrete, asphalt or other artificial impervious material, said banks are likely to be significant to flood control and storm damage prevention.
- (2) Banks are areas where groundwater discharges to the surface and where, under some circumstances, surface water recharges the groundwater.
- (3) Where banks are partially or totally vegetated, the vegetation serves to maintain their stability, which in turn protects water quality by reducing erosion and siltation. Partially or totally vegetated banks provide habitat for wildlife.
- (4) Banks may also provide shade that moderates water temperatures, as well as providing breeding habitat and escape cover and food, all of which are significant to the protection of fisheries. Banks which drop off quickly or overhang the water's edge often contain numerous undercuts which are favorite hiding spots for important species.
- (5) Banks act to confine floodwater during the most frequent storms, preventing the spread of water to adjacent land. Because banks confine water during such storms to an established channel, they maintain water temperatures and depths necessary for the protection of fisheries. The maintenance of cool water temperatures during warm weather is critical to the survival of many species. An alteration of a bank that permits water to frequently and consistently spread over a larger and more shallow area increases the amount of property which is routinely flooded, as well as elevating water temperatures and reducing fish habitat within the main channel, particularly during warm weather.
- (6) Land bordering or within 100 feet of a bank is likely to be significant to the protection and maintenance of the bank, and therefore to the protection of the interests which these resources serve to protect.

#### **B. Definition, critical characteristics and boundary.**

- (1) A bank is the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent

floodplain, or, in the absence of these, it occurs between a water body and an upland. A bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel or stone.

- (2) The physical characteristics of a bank, as well as its location, as described in the foregoing Subsection B(1), are critical to the protection of the interests specified in Subsection A.
- (3) The upper boundary of a bank is the first observable break in the slope or the mean annual flood level, whichever is higher in elevation. The lower boundary of a bank is the mean annual low flow level or mean low water level.

C. No activity, other than the maintenance of an already existing structure or Resource Area Enhancement, shall be allowed which will result in the building within or upon, removing, filling, or altering of a bank.

D. Any activity which is allowed under this section on a bank or on land bordering or within 100 feet of a bank shall comply with the following regulations. Any proposed work on a bank or bordering or within 100 feet of a bank shall not impair the following:

- (1) The physical stability of the bank.
- (2) The water-carrying capacity of the existing channel within the bank.
- (3) Groundwater and surface water quality.
- (4) The capacity of the bank to provide breeding habitat, escape cover and food for fisheries.

E. No work shall be performed within 50 feet of an inland bank that abuts an estimated habitat area as designated on the most current map prepared by the Massachusetts Natural Heritage and Endangered Species Program.

## **Section 22 - Vegetated Wetlands (Wet Meadows, Marshes, Swamps, and Bogs)**

A. Findings.

- (1) Vegetated Wetlands are likely to be significant to wildlife, to plant or wildlife habitat, to public or private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, and to the protection of fisheries. In these ways, vegetated wetlands are important in mitigating the negative impacts of climate change.
- (2) The plant communities, soils and associated low, often flat topography of vegetated wetlands remove or detain sediments, nutrients (such as nitrogen and phosphorous) and toxic substances (such as heavy metal compounds) that occur in runoff and floodwaters.
- (3) Some nutrients and toxic substances are detained for years in plant root systems or in the soils. Others are held by plants during the growing season and released as the plants decay in the fall and winter. This latter phenomenon delays the impacts of nutrients and toxins until the cold weather period, when such impacts are less likely to reduce water quality.
- (4) Vegetated Wetlands are areas where groundwater discharges to the surface and where, under some circumstances, surface water discharges to the groundwater.
- (5) The profusion of vegetation and the low, flat topography of Vegetated Wetlands slow down and reduce the passage of floodwaters during periods of peak flow by providing temporary floodwater storage, and by facilitating water removal through evaporation and

transpiration. This reduces downstream flood crests and resulting damage to private and public property. During dry periods the water retained in Vegetated Wetlands is essential to the maintenance of base flow levels in rivers and streams, which in turn is important to the protection of water quality and water supplies.

- (6) Wetland vegetation provided shade that moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat and cover for fish. Fish populations in the larval stage are particularly dependent upon food provided by overbank flooding which occurs during peak flow periods (extreme storms), because most river and stream channels do not provide quantities of the microscopic plant and animal life required.
- (7) Wetland vegetation supports a wide variety of insects, reptiles, amphibians, mammals and birds which are a source of food for important fish. Bluegills (*Lepomis macrochirus*), pumpkinseeds (*Lepomis gibbosus*), yellow perch (*Perca flavescens*), rock bass (*Ambloplites rupestris*) and all trout species feed upon nonaquatic insects, Largemouth bass (*Micropterus salmoides*), chain pickerel (*Esox niger*) and northern pike (*Esox lucius*) that feed upon small mammals, snakes, nonaquatic insects, birds and amphibians. These wetlands are also important to the protection of rare and endangered wildlife species.
- (8) Vegetated Wetlands, together with land bordering or within 100 feet of a vegetated wetland, serve to moderate and alleviate thermal shock and pollution resulting from runoff from impervious surfaces which may be detrimental to wildlife, and fisheries downstream of the vegetated wetlands.
- (9) Land bordering or within 100 feet of a Vegetated Wetland is likely to be significant to the protection and maintenance of Vegetated Wetlands, and therefore to the protection of the interests which these resource areas serve to protect.

#### B. Definition, critical characteristics and boundary.

- (1) Vegetated Wetlands are freshwater wetlands, including both Bordering Vegetated Wetlands (i.e., bordering on freshwater bodies such as on creeks, rivers, streams, ponds and lakes), and Isolated Vegetated Wetlands which do not border on any permanent water body. The types of freshwater wetlands are wet meadows, marshes, swamps, bogs and vernal pools. Vegetated Wetlands are areas where soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The ground water and surface water hydrological regime, soils and the vegetational community which occur in each type of freshwater wetlands, including both bordering and isolated vegetated wetlands, are defined under the Bylaw based on G.L. c. 131, § 40.
- (2) The boundary of Vegetated Wetland, whether Bordering or Isolated, is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist. Wetland indicator plants shall include but not necessarily be limited to those plant species identified in the Act.
- (3) The boundary shall be defined or delineated by the following:
  - (a) Areas containing a predominance of wetland indicator plants are presumed to indicate the presence of saturated or inundated conditions. Therefore, the boundary as determined by 50% or more wetland indicator plants shall be presumed accurate when:
    1. All dominant species have an indicator status or of obligate, facultative wetland+, facultative wetland, or facultative wetland- and the slope is distinct

- or abrupt between the upland plant community and the wetland plant community; or
- 2. The Conservation Commission determines that sole reliance on wetland indicator plants will yield an accurate delineation.
- (b) When the boundary is not presumed accurate as described in (3)(a)(1.-2.) or to overcome the presumption, credible evidence shall be submitted by a competent source demonstrating that the boundary of Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist. The Conservation Commission must evaluate vegetation and indicators of saturated or inundated conditions if submitted by a credible source, or may require credible evidence of saturated or inundated conditions sufficient to support wetland indicator plants, which shall include one or more of the following:
  - 1. Groundwater, including the capillary fringe, within a major portion of the root zone;
  - 2. Observation of prolonged or frequent flowing or standing surface water;
  - 3. Characteristics of hydric soils.
- (c) Where an area has been disturbed (e.g., by cutting, filling, or cultivation), the boundary is the line within which there are indicators of saturated or inundated conditions sufficient to support a predominance of wetland indicator plants, a predominance of wetland indicator plants, or credible evidence from a competent source that the area supported, or would support under undisturbed conditions, a predominance of wetland indicator plants prior to the disturbance or characteristic of hydric soils.

C. No activity, other than the maintenance of an already existing structure or Resource Area Enhancement, which will result in the building within or upon, removing, filling or altering of a Vegetated Wetland shall be permitted by the Conservation Commission.

D. No work shall be performed within 50 feet of a Vegetated Wetland that abuts on an estimated habitat area as designated on the most current map prepared by the Massachusetts Natural Heritage and Endangered Species.

#### E. Wetland Replication

(1) Introduction. Notwithstanding the foregoing subsections C. and D., the Commission in its sole discretion may allow work in Vegetated Wetland which results in the loss of up to 5,000 square feet of Vegetated Wetland when such area is replaced in a manner to ensure that the replacement area will provide a viable wetland that replaces the functions and values of the area lost. Detailed project design is required to guarantee that wetland impacts are avoided to the maximum extent possible, to minimize absolutely necessary impacts and lastly, to successfully replicate losses that cannot be avoided. The design of replication areas shall carefully consider and incorporate to the extent practicable the Massachusetts Inland Wetland Replication Guidelines (DEP, 2002). Restoration of a degraded wetland may be accepted by the Commission as satisfying the foregoing replication requirement.

(2) Required design criteria. Projects involving Wetlands Filling and/or permanent Alterations shall meet the requirements of 310 C.M.R. 10.60(3) and 310 C.M.R. 10.55(4) and the following requirements of the Commission:

- (a) The proposed replication area design must be submitted to the Commission for approval as part of the submittal of the project Notice of Intent.
- (b) The replication area must be shown to sufficiently duplicate the functions and values of the wetland proposed to be altered.
- (c) The area of the wetland replication shall be at a 2:1 ratio to that area of wetland loss.
- (d) The type of wetland created shall be similar to that lost in terms of physiology and function (e.g., similar plant species, hydrologic regime, and soils) except where an improvement in physiology and function is proposed. The applicant will take into consideration the impacts of climate change on the replication of the wetland, especially in terms of mitigation of extreme heat, resilience to increased/extreme storm events vents, and changes in precipitation.
- (e) The replication area must have similar groundwater and surface elevation as the lost area.
- (f) The replication area must have a similar location relative to the bank as the lost area when replicating bordering vegetated wetland.
- (g) The replication area must have an unrestricted surface hydraulic connection to the same waterbody or waterway as the lost area when replicating bordering vegetated wetland.
- (h) The location of the replication areas must be in the same general area as the lost wetland. The location of replacement wetland areas shall be in the following order of preference: 1) on site, 2) within the same watershed as the lost area, or 3) within the Town of Arlington.
- (i) The replication area shall be constructed prior to alteration of the existing wetland and during the same growing season. When replication involves transplanting plants and materials from existing wetland to the replicated wetland, the replication area shall be constructed, to the extent possible, immediately after alteration of the existing wetland. When transporting, all care shall be taken to prevent the transporting of invasive plants and invasive materials in soils.
- (j) The proposed replication area must be clearly flagged for Commission site inspection before the Notice of Intent filing.
- (k) The proposal for a replication area (submitted with the Notice of Intent) shall include a detailed plan of the wetland replication showing:
  - (i) Cross-section with indication of groundwater level, soil profile and thickness of organic soil in the existing and proposed wetlands;

- (ii) Plant species detail, including number, type and location of species found in the replication area to be altered, and number, types and locations of species to be introduced into the replacement area;
  - (iii) Detail of stabilization plans for replication area of Banks;
  - (iv) Wildlife Habitat diversity plan; and
  - (v) Any trees over 2" dbh shall be replaced in accordance with Section 24 of these Regulations, "Vegetation Removal and Replacement".
- (l) If, after three growing seasons, the Commission determines that the replication area has not satisfactorily developed into a wetland replacing the wetland area lost, the applicant or owner may be required to submit new plans to successfully replicate said lost wetland. No Certificate of Compliance shall be issued until the Commission has determined that a satisfactory replication area has been completed at the end of three growing seasons.

### **Section 23 - Land Under Water Bodies (Under Any Stream, Pond or Lake)**

#### **A. Findings.**

- (1) Land Under Water Bodies and Waterways is likely to be significant to wildlife, to public and private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution and to the protection of fisheries.
- (2) Where Land Under Water Bodies and Waterways is composed of pervious material, such land represents a point of exchange between surface water and groundwater.
- (3) The physical nature of Land Under Water Bodies and Waterways is highly variable, ranging from deep organic soils and fine sedimentary deposits to rocks and bedrock. The organic soils and sediments play an important role in the process of detaining and removing dissolved and particulate nutrients (such as nitrogen and phosphorous) from the surface water above. They also serve as traps for toxic substances (such as heavy metal compounds).
- (4) Land Under Water Bodies and Waterways, in conjunction with banks, serves to confine floodwater within definite channel during the most frequent storms. Filling within this channel blocks flows which in turn causes backwater and overbank flooding during such storms. An alteration of Land Under Water Bodies and Waterways that causes water to frequently spread out over a larger area at a lower depth increases the amount of property which is routinely flooded. Additionally, such alteration results in an elevation of water temperature and a decrease in habitat in the main channel, both of which are detrimental to fisheries, particularly during periods of warm weather and low flows.
- (5) Land under rivers, streams and creeks that is composed of gravel allows the circulation of cold, well-oxygenated water necessary for the survival of fish species. River, stream and creek bottoms with a diverse structure composed of gravel, large and small boulders and rock outcrops provide escape cover and resting areas for fish species. Such bottom type also provides areas for the production of aquatic insects essential to fisheries.
- (6) Land under ponds and lakes is vital to a large assortment of warm-water fish during spawning periods. Species such as largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), blue gills (*Lepomis macrochirus*) pumpkinseeds (*Lepomis gibbosus*), black crappie (*Promoxis nigromaculatus*) and rock bass (*Ambloplites*

*rupestris*) build nests on the lake and bottom substrates within which they shed and fertilize their eggs.

- (7) Land within 100 feet of any Bank abutting Land Under Water Bodies is likely to be significant to the protection and maintenance of land under a water body, and therefore to the protection of the interests which these water bodies serve to protect.

B. Definition, critical characteristics and boundaries.

- (1) Land Under Water Bodies is the land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock.
- (2) The physical characteristics and location of Land Under Water Bodies and Waterways specified in the foregoing Subsection B(1) are critical to the protection of the interests specified in Subsection A above.
- (3) The boundary of Land Under Water Bodies is mean low water level.

C. No activity, other than the maintenance of an already existing structure or Resource Area enhancement, which will result in the building within or upon, or removing, filling, dredging or altering of Land Under a Water Body or within 25 feet of Land Under a Water Body shall be done without written permission of the Commission.

D. The Commission may allow activity on Land Under a Water Body or within 100 feet of Land Under a Water Body if it complies with the following regulations. Any proposed work upon Land Under a Water Body or with 100 feet of Land Under a Water Body shall not impair the following:

- (1) The water-carrying capacity within the defined channel, which is provided by said land in conjunction with the banks.
- (2) Ground and surface water quality and quantity.
- (3) The capacity of said land to provide breeding habitat, escape cover or food for fisheries.

E. No work shall be performed within 50 feet of Land Under Water Bodies that abuts an estimated habitat area as designated on the most current map prepared by the Massachusetts Natural Heritage and Endangered Species Program.

**Section 24 - Land Subject to Flooding (Bordering and Isolated)**

A. Findings.

- (1) Bordering Land Subject to Flooding.
  - (a) Bordering Land Subject to Flooding is an area which floods from a rise in a bordering waterway or water body. Such areas are presumed to be significant to flood control and storm damage prevention and protection of surrounding land and other homes or buildings. In these ways, Bordering Land Subject to Flooding is important in mitigating the negative impacts of climate change.
  - (b) Bordering Land Subject to Flooding provides a temporary storage area for floodwater which has overtopped the bank of the main channel of a creek, brook, river or stream or the basin of a pond or lake. During periods of peak runoff, floodwaters are both retained (i.e., slowly released through evaporation and percolation) and detained (slowly released through surface discharge) by Bordering Land Subject to Flooding.



- Over time, incremental filling of these areas causes increases in the extent and level of flooding by eliminating flood storage volume or by restricting flows, thereby causing increases in damage to public and private properties and downstream resource areas.
- (c) The hydrologic regime, plant community and structure, topography, soil, and proximity to water bodies or vegetated wetlands provide important food, shelter, migratory, and overwintering areas, and breeding for wildlife.
  - (d) The hydrologic regime, surrounding plant community, topography, soil, and proximity to water bodies or vegetated wetlands allow vegetation to successfully grow in these areas.
  - (e) The Commission has found that new parking areas in Bordering Land Subject to Flooding may result in a significant or cumulative effect upon the resource area values protected by the Bylaw, and has found that these facilities can result in the uncontrolled acute or chronic release of these harmful materials into the resource areas protected by the Bylaw. The Commission has also found that using these structures for flood storage can result in the damage of vehicles and property under flooding conditions.
- (2) Isolated Land Subject to Flooding.
- (a) Isolated Land Subject to Flooding is an isolated depression or a closed basin which serves as a ponding area for runoff or high groundwater which has risen above the ground surface. Such areas are likely to be locally significant to flood control and storm damage prevention. In this way, Isolated Land Subject to Flooding is important in mitigating the impacts of climate change. In addition, where such areas are underlain by pervious material they are likely to be significant to public or private water supply and to groundwater supply. Where such areas are underlain by pervious material covered by a mat of organic peat and muck, they are also likely to be significant to the prevention of pollution. Isolated Land Subject to Flooding provides important breeding habitat for amphibians and some rare plants. Isolated Land Subject to Flooding provides a temporary storage area where runoff and high groundwater pond and slowly evaporate or percolate into the substrate. Filling causes lateral displacement of the ponded water onto contiguous properties, which may result in damage to said properties.
  - (b) Isolated Land Subject to Flooding, where it is underlain by pervious material, provides a point of exchange between groundwater and surface waters. Contaminants introduced into said area, such as road salts, find easy access into the groundwater. Where these conditions occur and a mat of organic peat or muck covers the substrate of the area, said mat serves to detain and remove contaminants which might otherwise enter the groundwater.
  - (c) The Commission has found that new parking areas in Isolated Land Subject to Flooding may result in a significant or cumulative effect upon the resource area values protected by the Bylaw, and has found that these facilities can result in the uncontrolled acute or chronic release of these harmful materials into the resource areas protected by the Bylaw. The Commission has also found that using these structures for flood storage can result in the damage of vehicles and property under flooding conditions.

## B. Definitions, critical characteristics and boundaries.

## (1) Bordering Land Subject to Flooding.

- (a) Bordering Land Subject to Flooding is an area with low, generally flat topography adjacent to and inundated by floodwaters rising from brooks, creeks, rivers, streams, pond or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland.
- (b) The topography and location of Bordering Land Subject to Flooding specified in the foregoing Subsection B(1)(a) are critical to the protection of the interests specified in subsection A(1) above.
- (c) The boundary of Bordering Land Subject to Flooding is the estimated or observed maximum lateral extent of floodwater which will theoretically result or has resulted from the statistical 1%-annual-chance flood (also known as the one-hundred-year-frequency storm).
  - 1. Said boundary shall be that determined by reference to the most recently available flood profile data prepared for the Town of Arlington within which the work is proposed under the National Flood Insurance Program (NFIP, currently administered by the Federal Emergency Management Agency). Said boundary, so determined, shall be presumed accurate. This presumption may be overcome only by credible evidence from a registered professional engineer or other professional competent in such matters.
  - 2. Notwithstanding the foregoing, where NFIP profile data is unavailable or is determined by the Commission to be outdated, inaccurate or not reflecting current conditions, the boundary of Bordering Land Subject to Flooding shall be the maximum lateral extent of floodwater which has been observed or recorded or the Commission may require the applicant to determine the boundary of Bordering Land Subject to Flooding by engineering calculations which shall be:
    - i. Based upon NOAA Atlas 14, Volume 10 (latest version) “NOAA Plus”; “NOAA Plus” is the NOAA Precipitation Frequency estimates at the upper bound of the 90% confidence level. It is calculated by multiplying the NOAA Upper Confidence for the 100-year 24-hour design storm by 0.9. (Example: if NOAA 100-year 24 hour design storm is 8.16 inches and the upper bound of the 90% confidence interval is 11.5 inches, NOAA Plus would be  $11.5 \times 0.9 = 10.35$  inches for the 100-year 24-hour design storm).
    - ii. Based upon the standard methodologies set forth in U.S. Soil Conservation Service Technical Release No. 55, Urban Hydrology for Small Watersheds and Section 4 of the U.S. Soil Conservation Service, National Engineering Hydrology Handbook; and
    - iii. Prepared by a registered professional engineer or other professional competent in such matters.

## (2) Isolated Land Subject to Flooding.

- (a) Isolated Land Subject to Flooding is an isolated depression or closed basin without an inlet or an outlet. It is an area which at least once a year confines standing water to an average depth of at least six inches and has a surface area of 1,000 square feet or greater. Isolated Land Subject to Flooding may be underlain by pervious material, which in turn may be covered by a mat of peat or muck.

- (b) The characteristics specified in the foregoing Subsection B(2)(a) are critical to the protection of the interests specified in Subsection A(2) above.
- (c) The boundary of Isolated Land Subject to Flooding is the perimeter of the largest observed or recorded volume of water confined in said area.

C. No activity, other than the maintenance of an already existing structure which will result in the building within or upon, or removing, filling, dredging or altering of Land Subject to Flooding shall be conducted without written permission of the Conservation Commission.

Any proposed activity within Bordering Land Subject to Flooding shall also be governed by all regulations of the Floodplain District of the Arlington Zoning Bylaw, the Town of Arlington Stormwater Bylaw and regulations, the State Wetlands Protection Act (G.L. c. 131, sec. 40), the state Wetlands Regulations (310 CMR 10.00), and the State Building Code (780 CMR).

D. The Commission may permit activity on Land Subject to Flooding provided it shall not result in the following:

- (1) Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area;
- (2) Adverse effect on surface or groundwater, where said area is underlain by pervious material;
- (3) An adverse effect on the capacity of said area to prevent pollution of the groundwater, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck.
- (4) A rise in the base flood elevation anywhere in the floodplain. This must be demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice performed by a registered professional.
- (5) Reduction in the ability of the land to buffer more inland areas from flooding.
- (6) Compensatory flood storage shall be provided at a 2:1 ratio, minimum, for each unit volume of flood storage lost at each elevation for any project that disrupts more than 10 cubic feet of floodplain. For projects that disrupt less than 10 cubic feet, compensatory flood storage shall be provided at a 1:1 ratio at each elevation.

Any such activity shall provide compensatory flood storage for all flood storage volume that will be lost at each elevation. Compensatory flood storage shall be at a 2:1 ratio, minimum, for each unit volume of flood storage lost at each elevation. Compensatory flood storage shall mean a volume not previously used for flood storage, shall have an unrestricted hydraulic connection to the same waterway or water body, and, with respect to waterways, shall be provided within the same reach of the river, stream, or creek. Work within Bordering Land Subject to Flooding, including that work required to provide the above specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity. No new parking areas or garages shall be used as compensatory flood storage.

E. The applicant shall take into consideration the impacts of climate change on the activities proposed on land subject to flooding, especially in terms of the compensatory flood storage as a climate change resilience strategy.

F. No work shall be performed within 50 feet of land subject to flooding that abuts an estimated habitat area as designated on the most current map prepared by the Massachusetts Natural Heritage and Endangered Species Program unless the Applicant can demonstrate by a preponderance of credible evidence that the work will not have any short term or long term adverse effect on the resource area values protected by the Bylaw.

### **Section 25 - Vegetation Removal and Replacement**

A. Findings: Vegetation in a resource area protected by the Bylaw is significant for wildlife, wildlife habitat and water quality. In addition, vegetation helps to control flood and storm damage, and trees provide carbon sequestration and shade to offset heat-island effects, thereby mitigating potential impacts of climate change when their replacement is equal to or greater than the loss. Vegetation provides food, shelter, shade, sediment control, bank stabilization, biodiversity, pollutant uptake, evapotranspiration, and aesthetics. In addition, plant size ordinarily is proportional to habitat value; i.e., large wooded trees are of greatest habitat value, followed by bushes, and then ground cover.

B. No vegetation in a resource area protected by the Bylaw shall be damaged, extensively pruned, or removed without written approval by the Commission, and in-kind replacement shall be provided according to Commission requirements. Extensive pruning is defined as removal of more than 20% of the crown and/or limbs. For extensive pruning or removal of vegetation because of an Imminent Risk to Public Health and Safety, in-kind replacement shall be to the extent practicable as determined by the Commission (See Section 10 of these Regulations for Emergency Certification).

C. An "in-kind replacement" shall consider a combination of species type, size, and surface area as measured by the drip line of the impacted plant(s) or the diameter at breast height (dbh) for trees. "In-kind replacement" means planting the same type of plant species (if native) that was removed, extensively pruned, or damaged, of sizes and quantities as specified in Section 25.E.5, unless compelling evidence is presented in writing that explains why the resource area values under the Bylaw are promoted through an alternative proposal. An in-kind replacement should occur within the same resource area or another resource area located in close proximity on the project site. Only native, non-invasive plant species shall be planted as replacements, unless there are non-native, non-invasive alternatives that are valuable in some/all of the following areas: bees, butterflies, etc.

D. In all instances, the reasons for removal must be clearly stated in writing before executing the removal. In administering this standard, the Commission shall consider species selection, location, and timing of the plantings. Vegetation removal criteria are as follows.

- (1) Existing vegetation is in a state of irreversible decay, or undesirable vegetation is present as a result of unintentional lack of maintenance.
- (2) A bank or slope stabilization plan requires the restructuring of soils occupied by the vegetation to be removed.

- (3) The vegetation being removed is an aggressive, invasive, or non-native species as professionally confirmed or as listed on a wetlands plant list acceptable to the Commission, such as, but not limited to that published by the United States Fish and Wildlife Service.
- (4) The vegetation is being removed as part of a project whose primary purpose is to restore or otherwise improve the natural capacity of a resource area to protect and sustain the interests of the Bylaw; also called Resource Area Enhancement.
- (5) The vegetation is being removed and replaced elsewhere on the project site or within the same resource area only if the Commission determines that such removal and replacement does not decrease the resource area's contribution to the resource area values protected by the Bylaw.
- (6) The vegetation is an imminent risk to public health or safety or property as confirmed in writing and submitted to the Commission by the Arlington Tree Warden, Fire Department, Public Safety Officer, or a certified arborist.

E. Application for Removal. For all projects, the application for vegetation removal shall be submitted as part of the application for permit or Notice of Intent as described by the Bylaw and these regulations. At a minimum, the application will include:

- (1) A narrative which shall describe the existing conditions, the proposed planting plan, the list of existing and proposed species, the size of existing and proposed species, and number of plants before and after revegetation.. The narrative shall also provide the rationale for the removal, by addressing the criteria D1 through D6 above, and discuss the proposed maintenance plan (see (7) below). The replacement of vegetation shall be according to the requirements in this Section unless the Applicant proves that the amount of replacement vegetation will not survive or contribute in the long-term to resource area values. A rationale for the species, size, and replacement quantities must be provided if not consistent with these requirements.
- (2) Written testimony and scaled diagram from a certified arborist or wetland scientist or landscape architect. At a minimum, this document must include the following information:
  - (a) Why the vegetation removal necessary? (See D. above)
  - (b) How much surface area of the vegetation will be removed (ft<sup>2</sup>-based on drip line)?
  - (c) How many individual plants will be removed by species; *i.e.*, is the species list submitted with the NOI correct?
- (3) A proposed planting plan drawn to scale and identifying the resource area and buffer zone and the project site, and including the locations of each replacement species and the number of each species proposed for planting in table form.

The planting plan and procedures shall comply with the American Standards for Nurserymen, Inc. or equivalent. It must include the location of the erosion control devices used during the restoration event and a brief narrative describing the storage location of all motorized equipment.

The planting plan shall show the estimated tree canopies after 15 years of growth, the specific names, sizes and locations of trees to be planted, and the total area of square feet

of the area shaded by tree canopies. In determining the shaded area, measure the shaded area assuming that the shaded area is only that area directly under the drip line.

- (4) A species list showing existing conditions before the restoration in terms of area of coverage (ft<sup>2</sup>) and number of individual plants and either height or dbh as specified in the tables below.
- (5) Replacement plant materials shall conform to the requirements described in the latest edition of American Standard for Nursery Stock, which is published by the American Association of Nurseryman (“AAN”).

Vegetation replacement is not considered successful until the replacement plants have survived three full growing seasons.

For extensive pruning or removal of vegetation because of an Imminent Risk to Public Health and Safety, in-kind replacement shall be to the extent practicable as determined by the Commission (See Section 9 of these Regulations for Emergency Certification).

(a) Replacement Requirements for Trees:

The following table indicates requirements for replacement quantity of Trees based on size of the Tree being removed. The size of the replacement Tree(s) shall be at least three inches in diameter at six inches in height above natural grade, or as approved by the Commission.

Existing Trunk (dbh)	Replacement Quantity
Sapling $\leq$ 1.5 inches	0*
> 1.5 to 3 inches	2
> 3 to 8 inches	3
> 8 to 20 inches	4
> 20 inches	Discuss with Commission

\*may require replacement at discretion of Commission

dbh = diameter at breast height

1. If a plant is healthy with a single stem, well-shaped and bushy, and has sufficient well-spaced side branches to give it weight and good bud qualities, it is an acceptable plant.
2. On multi-stem trees, height shall be defined as the measurement taken from the ground level to the average uppermost point of growth of the plant.
3. All replacement plants shall have ball sizes which are of a diameter and depth to encompass enough of the fibrous and feeding root system as necessary for the fully recovery of the plant once planted.

4. Sapling trees shall include deciduous trees with a dbh of 1.5 inches and less; evergreens of 2 feet or less and shall be replaced at the discretion of the Commission so as to reach an equivalent area of coverage and soil retention.

(b) Replacement Requirements for Shrubs:

The replacement of shrubs (bushes) shall be with bushes and shrubs of equivalent size. For bushes, the replacement must be healthy with a single stem, well-shaped and bushy, and have sufficient well-spaced side branches to give it weight and good bud quality as per the American Association of Nurserymen standards.

- (6) Vegetation replacement is not considered successful until the replacement plants have survived three full growing seasons. The maintenance plan shall describe how the restoration will be evaluated annually for three years and reported to the Commission. The Commission reserves the right to require a revised replanting plan, or additional plantings on an annual basis in the event that the revegetation plants are not successful.

F. The Commission may require one or more of the following measures to protect vegetation during work:

- (1) Tree protection fencing – Prior to commencing work, four (four-foot-high sections of snow fencing shall be installed and secured with wooden stakes (2” x 4” or 2” x 3”) or 6-foot steel channel posts so as to create an enclosure at the dripline of tree(s) or other distance as the site conditions allow to be protected. Such fencing shall be securely erected, be vertically plumb and be maintained for the duration of the project and shall protect individual trees or groups of trees.
- (2) Tree protection blanket – “BarkSavers” or similar armored blankets shall be installed and maintained according to product specifications.
- (3) No existing trees shall be used for crane stay, guys or other fastening.
- (4) Vehicles shall not be parked below the canopy of any existing tree or where damage may result to existing trees or tree roots.
- (5) Construction materials shall not be stored beneath the drip line of existing trees.
- (6) Following completion of work, a certified arborist shall regularly monitor the health of trees on site for possible damage and take measures to repair any damage.
- (7) Prior to commencing work prepare and submit a tree protection plan summarizing all trees on site (including dbh, species, extent of canopy, roots and health) and specifying whether each tree shall be saved or lost.

G. The Commission may require the placement of permanent bounds (e.g., granite or metal) to demarcate all or part of a resource area or vegetation mitigation area.

H. The requirements of this section shall be met commensurate with the nature, scope, type, and cost of the proposed project or activity.

**Section 26 – Adjacent Upland Resource Area****A. Findings.**

(1) The Adjacent Upland Resource Area (AURA) is significant to wildlife, plant or wildlife habitat, to water quality, public and private water supply, to groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, to erosion control and sedimentation control, to natural character and recreation, to protection of surrounding land and other homes or buildings and to mitigation of potential climate change impacts.

(2) Trees in the AURA provide additional important functions not provided by any other plant type. Trees provide shade to moderate water temperatures and levels of dissolved oxygen and water flow. Trees also mitigate heat island effects and sequester carbon as natural solutions to reducing greenhouse gases. They serve as windbreaks to moderate wind stress and shear during storms, and provide nesting, roosting and perching areas for birds and other wildlife. The transitional assemblage of trees, shrubs and groundcover (containing both wetland and upland elements) frequently found in AURAs has been found significant to the support of a greater number of native and specialist wildlife species in the interior of resource areas, which they border.

(3) Lands within the AURA are best left undisturbed or in a natural or vegetated state. These lands play a critical role in protecting the important functions provided by wetlands, waterways and water bodies. Undisturbed AURAs:

- a. Reduce runoff velocity and filter pollutants, which mitigate erosion and nutrient and other pollutant transport to wetland resources.
- b. Enhance the capacity of resource areas to adapt and provide resilience to challenges presented by climate change such as increased flooding and drought events.
- c. Provide habitat for wildlife that also utilize wetlands, waterways, and water bodies.

(4) There is overwhelming scientific consensus that significant physical, chemical, or biological alterations to AURAs will have significant physical, chemical, or biological impacts on associated or adjacent wetland resource areas such as banks, creeks, streams, rivers, ponds, lakes, and wetlands. AURAs are important to the protection of these resources because activities undertaken in close proximity to wetlands and other resource areas protected by the Bylaw have a high likelihood of adverse impact upon those areas, either immediately, as a consequence of construction, or over time, as a consequence of daily operation or existence of the activities. These adverse impacts from construction activities, impervious surfaces, and use can include, without limitation, erosion, siltation, loss of groundwater recharge, loss of flood control or storm damage prevention, poor water quality, harm to wildlife and wildlife habitat, and loss of resource resiliency for potential impacts of climate change. The ability of the AURA to protect a wetland resource, and to provide habitat, increases with buffer width and continuity.

(5) Generally, vegetated buffers within the AURA and next to the adjacent resource area of less than 25 feet wide are ineffective in protecting adjacent wetlands or providing wildlife habitat functions. Vegetated buffers often wider than 25 feet are necessary to provide wildlife habitat and to protect adjacent resource areas from continuing activities such as inputs of sediments and nutrients which adversely affect water quality, to protect



from direct human disturbance, to protect sensitive species from adverse impacts, and to protect adjacent resource areas from the adverse effects of climate change.

(6) The effectiveness of buffers in removing pollutants is dependent upon slope, soil condition, pollutant type, flow patterns, vegetation, exposure to sunlight, width and upland land use. Steep slopes increase the velocity at which water travels through a buffer, thereby decreasing the amount of time that rain can filter through soil and vegetation. For removal of most pollutants, flat slopes with gradients of less than 5% are desirable. Increasing buffer width is common when slopes are steeper than 15%.

B. Definition and Boundary. The AURA is the area adjacent to a resource area specified in Section 2, A(1) through (4) and is the land within 100 feet (measured horizontally) of any of the aforesaid resource areas.

C. Evaluation of Alternatives to Work in Adjacent Upland Resource Area. Work and activity in the AURA shall be avoided and discouraged, and practicable alternatives pursued that achieve the project purpose. Where work is proposed in the AURA, the Applicant shall conduct an Alternatives Analysis to prove by a preponderance of evidence that the project as proposed has met the standard of avoid, minimize and mitigate and there are no practicable alternatives to the proposed project with materially less adverse or cumulative effects on the interests protected by this bylaw, and that the work, including proposed mitigation will have no significant adverse impacts.

(1) Definition of Practicable. An alternative is practicable and substantially equivalent economically if it is available and capable of being done after taking into consideration costs, existing technology, proposed use, and logistics, in light of overall project scope or purpose. The Commission shall consider as practical alternative options that were available to the Applicant but appear to be precluded due to self-imposed hardships and constraints (e.g., lot, roadway and drainage layouts engineered without proper regard to impact on Wetland Resource Areas protected by the Bylaw). The four factors to be considered are:

- a. The Proposed Use. This term is related to the concept of project purpose. In the context of a typical single family home, the project purpose (construction of a single family house) and proposed use (family home) are virtually identical. In the context of projects where the purpose implies a business component, the proposed use typically requires economic viability. Practicable and substantially equivalent economic alternatives include alternatives which are economically viable for the proposed use from the perspective of site location, project configuration within a site, and the scope of the project. In the context of publicly financed projects, the proposed use includes consideration of legitimate governmental purposes (e.g., protection of health and safety, providing economic development opportunities, or similar public purposes);
- b. Logistics. Logistics refers to the presence or absence of physical or legal constraints. Physical characteristics of a site may influence its development. Legal barriers include circumstances where a project cannot meet other applicable requirements to obtain the necessary permits at an alternative site. An alternative site is not practicable if special legislation or changes to municipal zoning or zoning variance would be required to achieve the proposed use or project purpose.

- c. Existing Technology. Existing technology, which includes best available measures (i.e., the most up-to-date technology or the best designs, measures, or engineering practices that have been developed and are commercially available);
- d. Costs. Costs, including both costs of the alternatives and overall project costs, and whether such costs are reasonable or prohibitive to the owner. Higher or lower costs taken alone will not determine whether an alternative is practicable. Applicants should not submit, nor should the Commission request, financial information of a confidential nature, such as income tax records or bank statements. The Commission may require documentation of costs, but may also base its determinations on descriptions of alternatives, knowledge of alternative sites, information provided by qualified professionals, comparisons to costs normally associated with similar projects, or other evidence. Any documentation of costs should be limited to that required for a determination of whether the costs are reasonable or prohibitive.

(2) Scope of Alternative Analysis. The purpose of evaluating project alternatives is to locate activities so that impacts to the AURA are avoided to the extent practicable. The applicant shall submit information to describe sites and the work both for the proposed location and alternative site configurations and locations. The Applicant shall have the burden of proof for providing credible evidence that the work proposed will not have unacceptable significant or cumulative effects upon resource area values protected by the Bylaw. Failure to provide adequate evidence shall be sufficient cause for the Commission to deny a permit or grant a permit with special conditions. The Alternative Analysis shall include at a minimum: a) an alternative that does not alter the AURA to provide baseline data for evaluating other alternatives, and b) an assessment of alternatives to both temporary and permanent impacts to the AURA including configurations that would avoid, minimize, and mitigate disturbance and alteration by either moving the proposed project outside of or farther away from wetland resources or reducing the size of the proposed project. It shall also include a description of all reasonable identified alternatives that were considered by the Applicant along with the reasons why such alternatives were considered inadequate, unworkable or inadvisable. The level of detail of information shall be commensurate with the scope of the project and the practicability of alternatives. Where an applicant identifies an alternative which can be summarily demonstrated to be not practicable, an evaluation is not required. The Applicant shall carry the burden of proof for demonstrating to the Commission that activities in the AURA are necessary.

D. The Commission may, in its discretion, allow temporary, limited, or permanent disturbance as appropriate and consistent with this Section if the Applicant proves that there are no practicable alternatives to the project with materially less adverse and cumulative effects on the interests protected by this bylaw and convinces the Commission by a preponderance of evidence that the area or part of it may be altered without harm to the values protected by this Bylaw taking into consideration the characteristics of the AURA, including but not limited to the following:

- (1) slope
- (2) soil characteristics
- (3) drainage patterns
- (4) extent and type of existing native vegetation

- (5) extent and type of invasive vegetation
- (6) amount of impervious surface
- (7) wildlife and wildlife habitat
- (8) intensity and extent of use
- (9) intensity and extent of adjacent and nearby uses
- (1) capacity to provide resilience to climate change

This approach is intended to allow flexibility for use of property while maintaining necessary levels of protection of the resource values protected by the Bylaw.

E. No activities or work, other than passive passage and resource area enhancement, are permitted within the first 25 feet of the AURA (measured horizontally from a resource area specified in Section 2, A(1) through (4). Except as part of Resource Area Enhancement or an Ecological Restoration Project, no vegetation may be disturbed, and leaf litter and natural debris shall remain in place. This No-Disturbance area shall at a minimum contain the same amount of area of undisturbed and natural vegetation as its pre-project state. A previously disturbed or previously developed 25-foot area shall be restored to a naturally vegetated state to the greatest extent practicable. Depending on site conditions including but not limited to slopes greater than 15% on highly erodible soils or hydrologic conditions likely to promote significant erosion, affect soil permeability or other impact potential the Commission may require a wider undisturbed buffer.

F. No new structure(s) shall be placed in the first 50 feet of the AURA measured horizontally from a resource area specified in Section 2, A(1) through (4). The Commission may allow new structures within the first 50 feet if the project is deemed an overall improvement of the resource area. Depending upon site conditions, including but not limited to slopes greater than 15% on highly erodible soils, or hydrologic conditions likely to promote significant erosion, affect soil permeability or other impact potential, the Commission may require new structures to be setback greater than 50 feet.

G. For new lots created after (DATE OF REG. REVISION WILL BE INSERTED HERE) by dividing a pre-existing lot of record, or for undisturbed AURA (AURA determined by the Commission to be of a predominately natural character or to have been altered without a permit from the Commission), when partial intrusion into the AURA is unavoidable, in addition to the requirements noted above, the Applicant must mitigate the intrusion by increasing the width of a buffer (as addressed in E. above) by an amount equal to or greater than the distance of the intrusion into the AURA. For unavoidable encroachment, as mitigation, the Commission may require improvements to remaining undisturbed AURA function.

H. Impervious surface.

(1) The total area of impervious surface within the AURA shall not increase over existing total area unless the Commission in its sole discretion determines, based on sufficient proposed mitigation, that there is no permanent, significant impact on Resource Area values.

(2) Impervious surfaces shall not intrude farther into the AURA than pre-project conditions unless the Commission in its sole discretion determines that the total area of

impervious surface is significantly decreased or other sufficient mitigation is provided that serves to protect the resource area values. Impervious surface shall be kept as close as possible to the outer (upland) boundary of the AURA.

(3) Work in the AURA shall not adversely affect the hydrology of the site including runoff rates, volume, water quality, flood storage capacity, or flow paths.

I. For permitted projects in the AURA, landowners shall not apply or allow the application of phosphorus-containing fertilizers in the AURA unless needed as indicated by a soil test. All landowners in AURAs are otherwise expected to follow 330 CMR 31.00 Plant Nutrient Application Requirements for Agricultural Land and Land Not Used for Agricultural Purposes.

J. Certain Proposed Activities in AURA. The AURA should be left intact in a naturally vegetated state to the maximum extent practicable and as provided in these regulations. However there are some activities that may be permitted by the Commission that are not likely to have a significant or cumulative effect on the resource area values of the Bylaw, nor are they expected to have a significant effect on the resource area resilience to climate change, provided the other provisions of these Regulations are met. These proposed activities are addressed in Section XX: Administrative Review.

## **Section 27 – Vernal Pool and Its Associated 100-Foot Adjacent Upland Resource Area**

### **A. Findings**

- (1) Vernal Pools and their associated 100-foot No-Disturbance Zones are likely to be significant to the protection of wildlife habitat and rare plant and animal habitat. Vernal Pools constitute a unique and increasingly rare type of wetland that is inhabited by many species of wildlife, some of which are completely dependent on Vernal Pools and their associated habitat for their survival. Areas in the immediate vicinity of the Vernal Pool (i.e., 100-foot Adjacent Upland Resource Area) provide these species with important non-breeding habitat functions, such as migratory pathways, feeding, shelter, and overwintering sites. Many other species utilize Vernal Pools and their associated Adjacent Upland Resource Area for breeding and non-breeding functions, although such species are not limited to this type of wetland. The protection of Vernal Pools and their associated Adjacent Upland Resource Area are essential for the survival of wildlife species that depend on these unique and threatened resource areas. Vernal Pools need not be state-certified in order to be protected under the Bylaw or these Regulations.
- (2) The extreme edges of Vernal Pool habitat represent one of the most ecologically valuable portions of these habitats. Shallow water at the edges of a pool generally are the first to thaw in the spring. This provides early access to the pool for the earliest breeding species. The shallow water zones also tend to be significantly warmer than the deeper portions of a vernal pool throughout the spring. Egg masses of early breeding amphibians benefit from the warmer water temperatures at the pool edges that promote rapid egg development.

### **B. Definition, Critical Characteristics and Boundary:**

- (1) Vernal Pools exhibit a tremendous variation in physical, geographic, hydrologic and vegetative conditions, and therefore, for the purposes of these Regulations, these

conditions are not considered reliable criteria for their identification. A Vernal Pool is a temporary freshwater body, which, in most years holds water for a minimum of two (2) months and is free of established, reproducing fish populations, and is protected by these Regulations if it meets any of the following criteria:

- (a) The Vernal Pool contains evidence of the presence of any one (1) of the following obligate indicator species: Spotted Salamander, Blue-Spotted Salamander, Jefferson Salamander, Marbled Salamander, Wood Frog or Fairy Shrimp, or;
  - (b) In the absence of any obligate indicator species, the Vernal Pool contains evidence of two (2) of any of the following facultative indicator species: Spring Peeper, American Toad, Green Frog, Pickerel Frog, Gray Tree Frog, Four-Toed Salamander, Spotted Turtle, Caddisfly larvae or cases of Caddisfly larvae, Dragonfly or Damselfly larvae or shed skins (exuvia) of Dragonfly or Damselfly larvae, adults, juveniles or shells of either Fingernail Clams or Amphibious, air-breathing Snails.
- (2) The boundary of Vernal Pool is the lower of:
- (a) the maximum elevation of a topographic depression that holds water for a minimum of two (2) continuous months each year; or
  - (b) the maximum observed or recorded water level in a topographic depression.

The boundary of vernal pool may be defined differently for the purpose of state or federal protection. The boundary of vernal pool is not established when a vernal pool certification number is issued by the Commonwealth.

C. Timing of Evidence Collection: Many of the indicators of Vernal Pool habitat are seasonal. For example, certain salamander egg clusters are found only between late March and late May; Wood Frog chorusing occurs only between late March and late May, and then only at night. Consequently, failure to find evidence of breeding must be tied explicitly to those periods during which the evidence is most likely to be available.

Accordingly, in the case of challenges to the presumption of Vernal Pool habitat, the Commission may require that the determination be postponed until the appropriate time period consistent with the evidence being presented. The Commission may also require its own site visit(s) as necessary to confirm the evidence.

D. Presumptions of Significance for Adjacent Upland Resource Area to a Vernal Pool: Where a proposed activity involves the removing, filling, dredging, or altering of a Vernal Pool or its 100-foot Adjacent Upland Resource Area, the Commission shall presume that the Vernal Pool and its 100-foot Adjacent Upland Resource Area is significant to the protection of wildlife habitat and rare plant and animal habitat.

E. Performance Standards for 100-foot Adjacent Upland Resource Area: Unless the presumption set forth in Section 21.D of these Regulations is overcome, the following standards shall apply to Vernal Pools and their 100-foot Adjacent Upland Resource Area:

- (1) 100-foot Adjacent Upland Resource Area: No activity shall be permitted within 100 feet of the delineated edge of a Vernal Pool, or in the case of a wetland resource area that encompasses the pool, within 100 feet of the delineated edge of said wetland resource area. Prohibited activities include, but are not limited to, grading, landscaping,

vegetation control, pruning, cutting, filling, excavation, roadway construction and/or driveway construction.

- (2) Adjacent Upland Resource Area to Vernal Pool Demarcation: To maintain the perpetual integrity of the 100-foot Adjacent Upland Resource Area and to ensure that there will be no encroachments into this Area by the applicant or future owners of the subject property, the Commission may require the Adjacent Upland Resource Area to be marked on the ground, at the applicant's expense, with permanent markers. These markers shall be made of weather resistant material (e.g. granite, concrete, other), and the Commission shall determine their number, location and size. The Commission may require the maintenance of such markers in any certificate of compliance issued for the project.

### **Section 28 – Riverfront Area**

The Commission accepts and adopts the definitions, requirements, and performance standards for Riverfront Area as specified in the Massachusetts Department of Environmental Protection's Wetlands Regulations in 310 C.M.R. 10.58.

### **Section 29 - Variances**

A. The Conservation Commission may, in its discretion, grant variances from the operation of one or more of the provisions of the Bylaw, or the rules and regulations promulgated thereunder. Such variances are intended to be granted only in rare and unusual cases and upon a showing of clear hardship relating to the subject premises if the requested relief is not granted.

B. The standards as set forth herein shall be the sole basis upon which a variance shall be granted.

C. Applicants shall file a written request for variance at the same time as or as soon as possible an application (Notice of Intent) for a permit is filed with the Commission and, in any event, prior to the close of the hearing on said application. Such variance request shall be made in writing and shall be a separate writing from the application or request forms.

D. At any time subsequent to filing of the variance request, but in no event less than ten calendar days prior to the date of commencement of the public hearing at which the variance request is to be considered, the Applicant or his or her or its representative shall submit to the Commission and copies to each Commission member (including associate member) a written statement in support of the variance request. Such written statement shall include but not be limited to the following items:

- (1) A brief statement of the relief sought;
- (2) A description of all reasonably identifiable alternatives to the Applicant's proposal that were considered by the Applicant and that would avoid or minimize the necessity of the requested relief, along with the reasons why such alternatives were deemed to be inadequate, unworkable or inadvisable;
- (3) A statement of all efforts that will be undertaken to minimize impact upon resource areas and buffer zones arising out of the work proposed;
- (4) Detailed plans for any mitigation measures proposed;

- (5) Adequate engineering and expert evidence to permit the Commission to evaluate the basis for the Applicant's contentions in support of the variance requested; and
- (6) Any and all relevant information which the Applicant wishes the Commission to consider in deliberating the variance request.

E. A variance may be granted only for the following reasons and upon the following conditions:

- (1) The Conservation Commission may grant a variance upon a clear and convincing showing by the Applicant that any proposed work, or its natural and consequential impacts and effects, will not have any adverse effect upon any of the interests protected in the Bylaw, and that there are no reasonable conditions or alternatives that would allow the work to proceed in compliance with these regulations and the Bylaw. It shall be the responsibility of the applicant to provide the Conservation Commission with any and all information that the Commission may request orally or in writing, in order to enable the Commission to ascertain such adverse effects, and the failure of the Applicant to furnish any information that has been so requested shall result in the denial of a request for variance.
- (2) The Conservation Commission may grant a variance from these rules and regulations when necessary to avoid so restricting the use of the property as to constitute a taking of private property without compensation. The Commission may request an opinion from Town Counsel or other legal consultant at the expense of the Applicant as to whether the application of the Bylaw to a particular case will result in a taking of property without compensation.

### **Section 30 - Areas of Critical Environmental Concern**

A. Any areas within the Town of Arlington which have been designated as Areas of Critical Environmental Concern by the Secretary of Energy and Environmental Affairs, Commonwealth of Massachusetts, are so designated due to the particularly unique environmental factors that affect such areas and that highlight the unique importance of each area so designated.

B. As a result of such designation, it is incumbent upon the Commission to be even more diligent in its review of projects proposed within such areas. The highest standards of scrutiny as to the impact of any proposal are required shall be exercised by the Commission.

C. Further, close scrutiny shall be given by the Commission to any proposals involving an application of new pavement or newly installed other impervious materials within any area less than 100 feet from Bordering Vegetated Wetland, Bank, Beach, and Meadow.

### **Section 31 – Wildlife Habitat**

The Town of Arlington accepts and adopts the definitions, requirements, and performance standards for wildlife habitat as specified in the Massachusetts Department of Environmental Protection's Wetlands Regulations in 310 CMR 10.00.

### **Section 32 – Climate Change Resilience**

1. The impacts of climate change can adversely affect each Resource Area’s ability to provide and promote the resource area values protected by the Bylaw. (See definitions of “adaptation” and “alter” and “impacts of climate change” “resource area values” and other climate change-related definitions in Section 4 above). Resource Areas are critical to building a community’s resilience/adaptation to the impacts of climate change due to their ability to provide for flood control, storm damage prevention, extreme temperature mitigation, and other Resource Area Values including but not limited to water supply protection; pollution prevention; erosion and sedimentation control; protection of surrounding land and other homes or buildings; wildlife, plant, and aquatic species protection; habitat protection; and the protection of the natural character or recreational values of the wetland resources.
  2. The Applicant shall, to the extent practicable and applicable as determined solely by the Commission, integrate considerations of adaptation planning into their project to promote climate change resilience so as to protect and promote resource area values into the future. These considerations are especially important in Land Subject to Flooding (floodplain) and Riverfront Area and other Resource Areas which protect the interest of Flood Control and Storm Damage Prevention, including Adjacent Upland Resource Areas. These Resource Areas may be directly impacted by extreme weather events expected to be more prevalent or more intense due to climate change, in surface runoff of pollutants, and in wildlife habitat due to changes in temperature.
- C. The Applicant shall, to the extent practicable and applicable as determined solely by the Commission, ensure that the project is consistent with other local and state guidelines, best practices, and policies concerning climate change resilience, including, but not limited to: municipal vulnerability preparedness, green infrastructure, and nature-based solutions.

The Applicant shall consider the project’s adaptation to potential climate change impacts by addressing the following in writing:

1. Describe project design considerations to limit storm and flood damage during extended periods of disruption and flooding as might be expected in extreme weather events, using the FEMA 500-year base flood elevation to represent extreme weather event flood levels, depending on the size and nature of the project. See Vegetative Wetlands Section 22, Land Subject to Flooding Section 24, and Adjacent Upland Resource Area Section 26, of these Regulations.
2. Calculate project stormwater surface runoff that is expected to increase due to extreme weather events, and how this will be managed and mitigated to prevent pollution (including nutrients from fertilizers, roadway runoff, etc.) from entering the resource area in the future, with consideration of eliminating or decreasing impervious surfaces as much as feasible. See Stormwater Management Section 33 of these Regulations.
3. Describe project vegetation/planting plans and other measures to improve the resiliency of the resource areas to provide resource area values including but not limited to wildlife habitat ; that is, to enable resource areas to withstand extreme precipitation/rainfall changes (drought and excess) and extreme temperatures including extreme heat due to



climate change. See Vegetation Removal and Replacement Section 25 of these Regulations.

4. Describe measures to protect surrounding land and other homes or buildings due to the impacts of climate change.

### **Section 33 - Stormwater Management**

A. To the extent that standards for Stormwater Management in 310 CMR 10.05 (6)(k) and the requirements of Arlington's Stormwater Mitigation Bylaw are applicable, projects shall meet those standards. Nothing in these Regulations is intended to replace or be in derogation of the requirements of the Wetland Protection Act (310 CMR) or the Town of Arlington's Stormwater Management Bylaw (Article 15) and Stormwater Management Rules and Regulations administered by the Town of Arlington's Engineering Division. In the case of conflict between the regulations, the more stringent provisions shall apply. Should a project require a Stormwater Permit under Article 15 and approval of the Conservation Commission, the Applicant shall obtain approval of the Stormwater Management permit prior to the closing of a public hearing by the Conservation Commission. Should an Applicant fail to obtain such approval, the Conservation Commission shall deny the permit for the project.

B. Stormwater management design for all projects (including projects that do not require a Stormwater Management Report under 310 CMR 10.05 (6)(k) or projects that are exempt under Arlington's Stormwater Management Rules and Regulations) specified in a request for determination of applicability or an application for a permit shall accomplish the following:

- 1) Not exacerbate or create flooding conditions and shall not result in an increase in the peak rate of stormwater runoff over existing conditions during storm events.
- 2) Reduce stormwater pollution to the maximum extent possible. Low Impact Development techniques listed in the Massachusetts Stormwater Handbook, (LID BMPs) should be prioritized for their positive impact on overall site climate change resilience, improvements to water quality, and ability to handle water quantity. Depending upon the type of project proposed, this may include but not be limited to reduction in impervious surfaces, bio-retention (rain gardens) and infiltration systems.
- 3) Have a written operation and maintenance plan to inspect, properly maintain, and routine or minor repair installed BMPs after project completion to ensure they are functioning according to the design intent in perpetuity.

C. The rainfall amounts used for design and analysis shall be based on NOAA Atlas 14, Volume 10 (latest version) NOAA Plus which is the NOAA Precipitation Frequency estimates at the upper bound of the 90% confidence level for the project site. Calculations shall show existing and proposed runoff conditions for comparative purposes and include a narrative on the proposed project's impact on climate change resilience of the resource area (see Section 31).

D. The requirements of this section shall be administered by the Commission commensurate with the nature, scope, type, and cost of the proposed project or activity.

**Section 34 - Ecological Restoration Projects**

The Commission may allow ecological restoration projects as defined and provided in 310 CMR 10.00.

**Section 35 - Severability; Compliance With Court Decisions**

A. The invalidity of any section or provision of the Bylaw or of these regulations shall not invalidate any other section or provisions thereof, nor shall it invalidate any permit which previously has been issued.

B. If any Court of the Commonwealth shall invalidate any provisions of the Bylaw or of these regulations, the Conservation Commission may promulgate additional rules and regulations or present to the next Town Meeting after such invalidations, amendments to the Bylaw or regulations which are designed to comply with any Court decision invalidating such provisions or regulations, as the case may be.

**Section 36 - Effective Date**

The effective date of these rules and regulations shall be *March 1, 2018*, and the provisions of these rules and regulations shall apply to all work performed, and all applications or requests for determination of applicability received on or after that date.

*[Editor's notes: Regulations first approved January 4, 2001; revised: June 2001, September 20, 2001; February 2005; April 7, 2005; September 16, 2010; January 20, 2011; June 4, 2015; and March 1, 2018.]*