



TOWN OF SHIRLEY CONSERVATION COMMISSION

7 KEADY WAY • SHIRLEY, MASSACHUSETTS 01464

(978) 425-2600 ext. 245
FAX (978) 425-2627

11/26/2019

Lake Shirley Improvement Corp.
P.O. Box 557
7 Main Street
Lunenburg, MA 01462

Re: Order of Conditions, DEP File No. 284-0474
Lake Shirley, Shirley, MA (36-A-1)

Dear Applicant:

Enclosed is the Order of Conditions for the above referenced project.

There is a ten (10) business day period in which you or other persons may file an appeal on this Order of Conditions to the Department of Environmental Protection. Once the ten day appeal period has elapsed, and no appeal has been filed, the Order MUST be recorded at the Registry of Deeds. The recording receipt on the final page of the Order MUST BE returned to this office, bearing the book and page notation from the Registry. No work may commence until the Order has been recorded at the Registry and the recording information returned to this office.

If you have any questions concerning the procedures of the Conservation Commission or your responsibilities, please contact me.

Sincerely,

Michael Fleming
Conservation Agent

cc: Shirley Conservation Commission
MassDEP Central Regional Office, 8 Bond Street, Worcester, Massachusetts 01606

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Joanna Bilotta
362 Sunset Lane
Lunenburg, MA 01462



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Page: 1 of 17 03/18/2020 11:21 AM



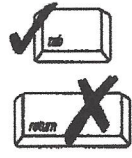
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
284-0474
MassDEP File #
eDEP Transaction #
Shirley
City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: Shirley
Conservation Commission

2. This issuance is for (check one):
a. Order of Conditions b. Amended Order of Conditions

3. To: Applicant:
Joanna Bilotta-Simeone
a. First Name b. Last Name

Lake Shirley Improvement Corp.
c. Organization
P.O. Box 567
d. Mailing Address
Shirley MA 01464
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):
Tom Alonzo
a. First Name b. Last Name
Town of Lunenburg
c. Organization
P.O. Box 135 / 7 Main Street
d. Mailing Address
Lunenburg MA 01462
e. City/Town f. State g. Zip Code

5. Project Location:
Lake Shirley Shirley
a. Street Address b. City/Town
36 A/1
c. Assessors Map/Plat Number d. Parcel/Lot Number
Latitude and Longitude, if known: 42d33m15s 71d40m29s
d. Latitude e. Longitude



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A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Middlesex South
 a. County 18809 b. Certificate Number (if registered land) 346
 c. Book 18809 d. Page 346
7. Dates: 10/22/2019 11/12/2019 11/26/2019
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
Lake Shirley Improvement Corp. Lake Shirley Aquatic Vegetation Management Plan
 a. Plan Title ARC LLC b. Prepared By Wendy Gedron (narrative only)
 c. Signed and Stamped by August 2019 d. Final Revision Date N/A
 e. Scale N/A
- f. Additional Plan or Document Title _____ g. Date _____

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. Public Water Supply b. Land Containing Shellfish c. Prevention of Pollution
 d. Private Water Supply e. Fisheries f. Protection of Wildlife Habitat
 g. Groundwater Supply h. Storm Damage Prevention i. Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. 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 Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) _____ a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	15420240 _____ a. square feet	15420240 _____ b. square feet	_____ c. square feet	_____ d. square feet
	_____ e. c/y dredged	_____ f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet
9. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



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B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 11/26/2022 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
 "File Number 284-0474 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1) is subject to the Massachusetts Stormwater Standards
- (2) is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See attached "Special Conditions" pages 1 - 5.

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The Shirley hereby finds (check one that applies):
 Conservation Commission
- a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw	2. Citation
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Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

<u>Shirley</u>	2. Citation
1. Municipal Ordinance or Bylaw	

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):
 See attached "Special Conditions" pages 1 - 5.

SPECIAL CONDITIONS: Lake Shirley - DEP # 284-0474
PROPERTY OWNER: Town of Lunenburg

The Lake Shirley Improvement Corporation shall submit a "Request for Certificate of Compliance", for Mass DEP File #s 284-0384 and 284-0388 (two separate RCOCs), to the Shirley Conservation Commission no later than December 16, 2019.

All activities under this Order of Conditions (#284-0474) shall follow the guidelines and procedures set forth in the most recent Eutrophication and Aquatic Plant Management in Massachusetts Final Generic Environmental Impact Report (GEIR), unless revised herein by the Shirley Conservation Commission.

Prior to first weed control treatment in 2020, Lake Shirley Improvement Corporation and agent will provide a report addressing the concerns of the loss of native species as shown by the decrease in the 12 year trend line produced by the annual vegetative survey. Report will contain research, comparisons and conclusions. If the consultant concludes the measures implemented in the "Lake Shirley Aquatic Vegetation Management Program" have resulted in the loss of ecologically important species, the Lake Shirley Improvement Corporation (LSIC) & consultant(s) shall submit a request to modify the Program to emphasize prevention of further loss and/or recovery of key species in Lake Shirley.

Drawdown

1. The target drawdowns are to be up to 6 feet and the achieved depth will naturally vary based on variations in precipitation during the drawdown period.
2. The data collection on lake levels, valve setting and stream flows are to be gathered no less than weekly between October 1 and April 15 and submitted with the Annual Report
3. Commence drawdown on or after October 15th.
4. Achieve the target drawdown depth by or before December 1st.
5. Achieve full lake level by April 1st.
6. Keep outflow during drawdown below a discharge equivalent to 57.2 cfs unless water is flowing over the spillway. Once the target water level is achieved, match outflow to inflow to the greatest extent possible, maintaining a stable water level.
7. Keep outflow during refill above a discharge equivalent to 7.15 cfs.
8. LSIC will post notification of drawdown on the website and other social media. The notification will instruct residents to contact the Shirley Conservation Commission with any issues with wells during the drawdown. The Shirley Conservation Commission will notify LSIC of any reported issues and discuss steps to limit drawdown or more closely monitor the situation if warranted.
9. A dissolved oxygen profile shall be performed at the one of the deep locations on the lake. Data will be graphically displayed from surface to the bottom showing dissolved O2 concentrations and temperature. The measurements shall take place between January 15 and March 1 as allowed by ice safety.

10. In the event of any fish kill within Lake Shirley during or immediately following any herbicide/algacide treatments, the LSIC and licensed applicator shall immediately cease and desist all treatments and immediately contact the Mass DEP's Emergency Response section at 888-304-1133; the Mass Division of Fisheries and Wildlife (MassWildlife) Field Headquarters Westborough office at 508-389- 6300 (during normal business hours) or the Boston 24-hr response line at 800-631-8075 and the Shirley and Lunenburg Conservation Commissions. Should a fish kill occur during non-treatment periods, the LSIC shall immediately notify the Mass Division of Fisheries and Wildlife (MassWildlife) Field Headquarters Westborough office at 508-389-6300 and the Shirley and Lunenburg Conservation Commissions. Any information provided by the Mass Division of Fisheries and Wildlife (MassWildlife) will be incorporated into the Annual Report.

Aquatic Vegetation Control

1. During the review of the Annual Report, all products for the next year will be submitted for review and approval. If a product is not previously approved; the report will provide product label, reasoning/justification for product recommendation and a discussion of risks/benefits of products for review and approval. Any limits in excess of labeling imposed by the Shirley Conservation Commission will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by Shirley Conservation Commission, (including but not limited to, well testing, treatment area restrictions, chemicals, etc.).
2. The herbicide treatment contractor will perform a pre-treatment plant survey utilizing the same methodology and points as in prior surveys to assess plant densities. The contractor will estimate treatment areas based on these data and prior year's survey data (last 3 years) that note areas that will likely exceed the 50% plant density threshold during the growing season. This survey, along with an estimated treatment plan will be submitted to the Shirley Conservation Commission two weeks prior to treatment. The treatment plan will include:
 - a. the results of the plant survey, with a summary of the 3 prior year survey reports;
 - b. a map showing the planned treatment area (based on a combination of existing survey data and best professional judgement after review of prior year's growth characteristics to justify treatment of points, particularly in areas with less than 50% plant density at the time of the pre-treatment survey);
 - c. the estimated herbicide application volume, proposed timing, target species, and measures to avoid native species (e.g., *P. robbinsii* and others of importance as noted by the biologist during the plant survey);
 - d. any additions to the treatment area will be approved by Conservation Agent as long as less than a 10% addition to approved area.
3. During the Pre-Treatment plant survey, the contractor will collect a grab sample from the Shirley portion of Lake Shirley for total phosphorus and total nitrogen. Sample results may not be available at the time of the pre-treatment survey due to

analytical laboratory turnaround time, but results will be reported in the Annual Report.

4. Any product applied will be labeled for use in Massachusetts to control the target aquatic weeds, applied by a Massachusetts licensed applicator using a delivery system that can be properly metered to ensure correct application. All precautions listed or recommended safety procedures will be noted in Pre-Treatment Report and followed during use. Any limits in excess of labeling imposed by the Shirley Conservation Commission will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by Shirley Conservation Commission.
5. The Pre Treatment report shall be reviewed with Shirley Conservation Commission for approval, prior to treatment. The applicator's name, a copy of their current Massachusetts Pesticide License and a certificate of insurance shall be furnished to the Shirley Conservation Commission prior to treatment. Pre-Treatment Report shall be submitted at least 7 days prior to a scheduled meeting date.
6. Unless approved by Town of Shirley Conservation Commission, no chemical treatments will be allowed within 100 feet of the town boundary line.
7. Treatment Notice will be posted in local newspaper, on LSIC website, Town of Shirley website, Shirley Public Access TV Channel, written notice to the Town Manager and posted at any public access point to Lake Shirley a minimum of 1 week prior to treatment. The notice will contain a listing of all products being applied, all precautions to people in the treatment area and reentry information. LSIC will also have available on their website information about the treatment, products being used, sample labels of the products and any precautions for public safety.
8. Post Treatment Report for each product applied will contain, time of application, product and quantity of product used, a map showing GPS or approximate track taken during application, water temperature, water level, weather conditions, any other conditions noted that may affect the effectiveness of the products used, the applicator's name, a copy of their current Massachusetts Pesticide License and a certificate of insurance. The Post Treatment Report will be submitted to the Shirley Conservation Commission with the report.

Algae Control

1. During the review of the Annual Report, all products for the next year will be submitted for review and approval. If product is not previously approved, the report will provide product label, reasoning for product recommendation and a discussion of risks/benefits of products for review and approval. Any limits in excess of labeling imposed by the Shirley Conservation Commission will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by Shirley Conservation Commission.
2. LSIC will perform water clarity monitoring beginning on May 1, weather and lake conditions permitting, through the recreation season until September 30. Monitoring will be performed at two locations in the northern basin as shown on attached map. Weekly reports will be sent to Shirley Conservation Commission

- for review. Locations and timing may be updated during Annual Report review.
3. During periods of low clarity [Secchi Disk Transparency (SOT) less than five feet] water clarity monitoring will be conducted at four additional locations and weekly algal samples will be collected at four stations as determined by the phycologist. The grab samples will be sent to an analytical lab or phycologist and analyzed for algal composition. The phycologist will determine whether algal treatment is needed. Algae and water clarity are to be reported to Shirley Conservation Commission no less than weekly and included in Annual Report.
 4. Any product applied will be labeled for use in Massachusetts to control algae, applied by a Massachusetts licensed Applicator and using a delivery system that can be properly metered to ensure correct application precautions listed or recommended safety procedures will be noted in Pre Treatment Report and followed during use. Any limits in excess of labeling imposed by the Shirley Conservation Commission will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by Shirley Conservation Commission.
 5. Application of products can commence when cell counts or biomass totals are deemed to be above a level where immediate treatment is recommended by the phycologist.
 6. Unless approved by Town of Shirley Conservation Commission, no chemical treatments will be allowed within 100-feet of the town boundary line.
 7. Once the LSIC receives data and recommendations from the phycologist, LSIC will notify Shirley Conservation Commission with the phycologist's recommendation and proposed treatment plan. Due to the time sensitive nature of algae treatment the Shirley Conservation Commission agent is empowered to grant permission for algae control treatment. The applicator's name, a copy of their current Massachusetts Pesticide License, a certificate of insurance and a listing of products to be applied shall be furnished to the Shirley Conservation Commission prior to treatment.
 8. All notification channels (local newspaper, on LSIC website, Town of Shirley website, Shirley Access Channel, Written Notice to Town Manager, and posted at any public access point to Lake Shirley) will be used, as time permits, to inform residence of the treatment and treatment precautions to be followed.
 9. Post Treatment Report will contain, time of application, products and quantities of products used, a GPS or approximate track taken during application, water temperature, water level, weather conditions and any other conditions noted that may affect the effectiveness of the products used. The Post Treatment Report will be submitted to the Shirley Conservation Commission with the Annual Report.

Annual Reporting

1. The Annual Report will include data from October 15th to October 14th of the following year. The report will be prepared by an independent contractor, other than the herbicide/algaecide treatment contractor and be submitted to the Shirley Conservation Commission by December 15th or the next business day. A public

meeting will be scheduled with Shirley Conservation Commission in January for Annual Report presentation and review by LSIC. A copy of the report will also be provided to the Town Selectman.

2. The Annual Report will include:

- Introduction and summary of early summer conditions based on Pre Treatment Report.
- Description of survey methodologies (macrophyte survey and water quality monitoring).
- Description of the previous annual drawdown data progress and any issues in achieving target depth or refill.
- Summary of treatment activities (macrophyte and algae)
- Graphical display of SDT data.
- Summary of phytoplankton data if collected.
- Table of nutrient and in-situ monitoring data, if collected.
- Results of the summer/early fall macrophyte survey.
- Semi-quantitative evaluation of macrophyte cover and biomass, species richness and number of species observed.
- Evaluation/comparison of differences in the metrics listed above to prior year's data. Long term trends should be discussed if apparent.
- Evaluation of management measures implemented and comparison to targets. Also if appropriate, an attempt to explain any macrophyte changes in relation to drawdown.
- A narrative with graphics if applicable to show shifts/changes in species composition/observation frequencies over time.
- Reported fish kills.
- Document any outreach and education of landowners in the watershed with regard to protection, preservation and limit pollution within the lake and/or watershed.
- Recommendation of any changes to the prior year's management program.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 284-0474
 MassDEP File #

eDEP Transaction #
 Shirley
 City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

1. Date of Issuance

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Jennifer McGuinness, Chair _____
[Signature] _____
[Signature] _____

by hand delivery on

by certified mail, return receipt requested, on

Date

12/04/2019
 Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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284-0474
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eDEP Transaction #
Shirley
City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Shirley
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Shirley
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location 284-0474
MassDEP File Number

Has been recorded at the Registry of Deeds of:

Missesex South
County Book Page

for: Town of Lunenburg
Property Owner

and has been noted in the chain of title of the affected property in:

Book Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant