

#### WPA Form 5 - Order of Conditions

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

Provided by MassDEF	<b>)</b> :
208-1168	

MassDEP File #

eDEP Transaction #

Lunenburg

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.



Lunenburg - NOTE THIS IS A 5 YEAR ORDER OF CONDITIONS	Lunenbura -	NOTE THIS IS A	5 YEAR ORDER	R OF CONDITIONS
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- 1. From: Conservation Commission
- 2. This issuance is for a. 

  Order of Conditions b. 

  Amended Order of Conditions (check one):
- 3. To: Applicant:

Bilotta-Simeone JoAnna b. Last Name a. First Name

- Lake Shirley Improvement Corp.
- c. Organization
- 362 Sunset Lane
- d. Mailing Address
- Lunenburg
- e. City/Town

MA f. State 01462 g. Zip Code

4. Property Owner (if different from applicant):

Tom a. First Name

Town of Lunenburg

- c. Organization
- 17 Main Street d. Mailing Address
- Lunenburg

e. City/Town

MA f. State 01462

b. Last Name

g. Zip Code

5. Project Location:

Lake Shirley a. Street Address Lunenburg b. City/Town

c. Assessors Map/Plat Number

d. Parcel/Lot Number

Latitude and Longitude, if known:

42d33m20s d. Latitude

71d42m06s

e. Longitude

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A	CAMANA	Information (	annt )
A	General	mnormation	COIIL.
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A.	Genera	I Informatio	n (d	con	t.)				
6.	Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):			tion if more than					
	a. County	3				b. Certificate Numb	er (if	registe	ered land)
	c. Book				40/4	d. Page		1	0/21/16
7.	Dates:	8/27/19 a. Date Notice of Into	ant Eil	od	10/1	o/16 te Public Hearing Clo	osed		Date of Issuance
8.	as needed	oved Plans and C	Other	Doo	cuments (a	ittach additional	plan	or do	cument references
	a. Plan Title								
	ARC LLC					Wendy Gendro			e only)
	b. Prepared I	Зу				c. Signed and Star	nped	by	
	8/2019					not applicable			
	d. Final Revis	sion Date				e. Scale			
	f. Additional I	Plan or Document Titl	е					g	. Date
B.	Finding	gs							
1.	Findings p	ursuant to the Ma	assa	chus	etts Wetla	nds Protection A	ct:		
	provided in the areas	this application	and propo	pres sed	ented at the is signification	ne public hearing	, this	s Con iteres	on the information nmission finds that ts of the Wetlands
a.	Public	Water Supply	b.		Land Cor	taining Shellfish	C.		Prevention of ution
d.	□ Private	e Water Supply	e.	$\boxtimes$	Fisheries		f.		Protection of Ilife Habitat
g.	⊠ Groun	dwater Supply	h.	$\boxtimes$	Storm Da	mage Prevention	n i.	$\boxtimes$	Flood Control
2.	This Comr	nission hereby find	ds the	e pro	oject, as pro	oposed, is: (check	c one	e of th	e following boxes)
Ap	proved sub	oject to:							
a.	standards be perform General C that the fo	ned in accordance	etlar e wit ny oth s mo	nds r h the ner s dify	egulations Notice of special cor or differ fro	. This Commissi Intent reference Inditions attached In the plans, spe	on o ed ab to the ecific	orders bove, his Or cation	that all work shall the following der. To the extent s, or other



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### B. Findings (cont.)

Dei	nied because:				
b.	in the proposed work cannot the wetland regulations. Until a new Notice of Intent protect the interests of the Athe performance standard Order.	Therefore, work is submitted whi Act_and a final (	on this project ท ich provides mea Order of Conditio	nay not go forwa asures which are ons is issued. <b>A</b> c	rg unless and adequate to description of
c.	the information submitted or the effect of the work on Therefore, work on this produced intent is submitted which produced adequate to protect the Act description of the specific attached to this Order as  Buffer Zone Impacts: S	the interests ide ject may not go ovides sufficien 's interests, and c information w per 310 CMR 1	entified in the VV6 forward unless a t information and a final Order of hich is lacking 0.05(6)(c).	etiands Protection and until a revise dincludes measing Conditions is issuand why it is n	n Act. d Notice of ures which are sued. <b>A</b>
3.	disturbance and the wetlan	d resource area	specified in 310	CMR 10.02(1)	a. linear feet
Inl	and Resource Area Impact	s: Check all tha	t apply below. (F	or Approvals Or	nly)
Re	source Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4.	Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5.	<ul><li>☐ Bordering</li><li>Vegetated Wetland</li><li>☐ Land Under</li></ul>	a. square feet	b. square feet	c. square feet	d. square feet
6.	<ul><li>☑ Land Under Waterbodies and Waterways</li></ul>	a. square feet	b. square feet	c. square feet	d. square feet
		e. c/y dredged	f. c/y dredged		
7.	☐ 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.	☐ 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.	☐ 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-	a square feet	h. square feet	i, square feet	j. square feet



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### B. Findings (cont.)

Coastal Resource Area Impa	cts: Check all th	nat apply below.	(For Approvals	Only)
	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. Designated Port Areas	Indicate size u	ınder Land Und	er the Ocean, be	low
11.	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. Barrier Beaches	Indicate size ι below	ınder Coastal B	eaches and/or Co	pastal Dunes
13. Coastal Beaches			cu yd	cu yd
13. Coastal Beaches	a. square feet	b. square feet	c. nourishment	d. nourishment
14.   Coastal Dunes	a. square feet	b. square feet	c. nourishment	d. nourishment
15. Coastal Banks	a. linear feet	b. linear feet		
<ol> <li>Rocky Intertidal Shores</li> </ol>	a. square feet	b. square feet		
17. Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
<ol> <li>Land Under Salt Ponds</li> </ol>	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
<ol> <li>19.</li></ol>	a. square feet	b. square feet	c. square feet	d. square feet
20. Fish Runs	Indicate size the Ocean, ar Waterways, a	nd/or inland Lan	anks, Inland Ban d Under Waterbo	k, Land Under dies and
21.  Land Subject to	a. c/y dredged	b. c/y dredged	-	
Coastal Storm Flowage	a. square feet	b. square feet	-	



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#### B. Findings (cont.)

* #22. If	the	22
project is	s for	
the purp	ose of	
restoring		
enhanci	ng a	
wetland		23.
resource		23.
in additi	on to	
the squa		
footage		
has bee		C.
entered		
Section		
(BVW)		Th
B.17.c (		
Marsh)		1.
please		
the add		0
amount	here.	۷.

22. Restoration/Enhancement *:	
a. square feet of BVW	b. square feet of salt marsh
23. 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.
- 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.
- 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.
- 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 October 21, 2024 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.
- 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.



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

- 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.
- A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

"Massachusetts Department o	of Environmenta	al Protection" [or, "MassDEP"
"File Number	208-1168	"

- 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.
- 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.



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

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.

#### NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

- 19. The work associated with this Order (the "Project") is (1) ☐ is not (2) ☒ 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;

*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.



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

- 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.)

q) 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.
- I) 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):

"Special Conditions" attachment is also incorporated into the approved general conditions section under the state wetland protection act with the exception of special condition 5 under the section entitled " annual reporting", which specifically is based on Section 239 of Lunenburg Wetland Protection By-Law.



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## D. Findings Under Municipal Wetlands Bylaw or Ordinance

1.	ls a	a municipal wetlands bylaw or ordinance applicable? 🏻 Yes 🗀 No		
2.	The	Lunenburg hereby finds (check one to Conservation Commission that the proposed work cannot be conditioned to meet the standards someticipal ordinance or bylaw, specifically:		
		1. Municipal Ordinance or Bylaw	2. Citation	
		Therefore, work on this project may not go forward unless and until a revision intent is submitted which provides measures which are adequate to meet standards, and a final Order of Conditions is issued.	sed Notice of these	
	b.	that the following additional conditions are necessary to comply with a ordinance or bylaw:  Lunenburg Protective Wetlands By-Law	municipal  see attached	
3.	cor the The mo	1. Municipal Ordinance or Bylaw 2. Citation 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 note space for additional conditions, attach a text document): See Local By Law Condtions attached as Special Conditions		
			444	



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#### 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.

Please indicate the number of members who will sign this form. This Order must be signed by a majority of the Conservation Commission.

10/16/19 1. Date of Issuance

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:	Cuffer
Bus Pease	
by hand delivery on     10 (0.140)	by certified mail, return receipt requested, on
10/21/19 Date	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 of 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.

#### LUNENBURG CONSERVATION COMMISSION SPECIAL CONDITIONS FOR ORDER OF CONDITIONS October 16,2019

All activities 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 Lunenburg Conservation Commission.

Prior to first weed control treatment in 2020, LSIC 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 deemed concludes the measures implemented by the LSIC Aquatic Plant Management Program has resulted in the loss of ecologically important species, the LSIC & consultant(s) will submit a request to modify the management 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 Lunenburg Conservation Commission (LCC) with any issues with wells during the drawdown. The LCC 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/algaecide treatments, the LSIC and licensed applicator shall immediately cease and desist all treatments and contact the MassDEP's Emergency Response section at 888-304-1133; the Department of Fish and Game's Westborough office at 508-389-6300 (during normal business hours) or the Boston 24-hr response line at 800-631-8075 and the Lunenburg and Shirley Conservation Commissions. Should a fish kill occur during non-treatment periods, the LSIC should notify the Department of Fish and Game's (MF&G) Westborough office at 508-389-6300 and the Lunenburg and Shirley Conservation Commissions. Any information provided by the MF&G 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 LCC will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by LCC, (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 LCC two weeks prior to treatment. The treatment plan will include:

- a results of the plant survey, with a summary of the 3 prior year survey reports
- b 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 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 grab samples from three in-lake locations (North, Middle and South Basins) 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 LCC will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by LCC.
- 5. The Pre Treatment report shall be reviewed with LCC 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 LCC 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 Lunenburg website, Lunenburg Access 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 LCC with the report.

#### Algae Control

- 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 LCC
  will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by
  LCC
- 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 LCC for review. Locations and timing may be updated during Annual Report review.
- 3. During periods of low clarity [Secchi Disk Transparency (SDT) 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 LCC 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. 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 LCC will be presented to LSIC at the time the product is approved for use and remain in effect until such time as altered by LCC.
- 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 LCC with the phycologist's recommendation, and proposed treatment plan. Due to the time sensitive nature of algae treatment the LCC 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 LCC prior to treatment.
- 8. All notification channels (local newspaper, on LSIC website, Town of Lunenburg website, Lunenburg 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 LCC with the Annual Report.

#### **Annual Reporting**

- 1. The Annual Report with 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 Lunenburg Conservation Commission by December 15th or the next business day. A public meeting will be scheduled with LCC 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.

- 3. Each year, prior to September 15, during the period of this permit, an annual late summer lake vegetation survey will be conducted by a qualified contractor, other than the herbicide/algaecide treatment contractor,. Vegetation type, density and biomass and the dominant species will be collected at the same 66 historic locations as used in prior year's surveys.
- 4. At the time of a permit extension request or new Notice of Intent filing, a revised Lake Shirley In-Lake Aquatic Plant Management Plan (LMP) will be submitted to the LCC. The plan will have a comprehensive accounting of activities and set out a five year schedule of activities to maintain and improve the health of the lake and surrounding environment within reasonable control of LSIC. This plan is a living document that is being developed to provide a structure to layout a process to document the conditions of Lake Shirley, how to manage the problems affecting the lake, document the success of the management activities, act as an information repository for review and to research and review the next step in protecting the lake for the future.
- 5. At any time deemed necessary, in conformance with Lunenburg Wetland Protection By Law section 239 (7) (G9) the LCC can update, halt or require any activities or reporting it feels appropriate to protect Lake Shirley's environment and the health of the public affected by any management activities

ATTEST NO. WORC. REGISTRY OF DEEDS KATHLEEN REYNOLDS DAIGNEAULT, REGISTER