

**TOWN OF PHILIPSTOWN  
CONSERVATION BOARD  
238 Main St., Cold Spring, NY 10516**

**July 12, 2016 7:30 PM**

**MEETING AGENDA**

**1) Approval of Minutes:**

- September 15, 2015
- June 14, 2016

**2) Correspondence:**

- AKRF – Conservation Analysis Report for Horton Road LLC, Hudson Highlands Reserve
- Erosion & Sediment control Plan, Pond Grading Plan, Cut sheets for Aeration system and drainage analysis for Edward Kreps, 10 Deerland Acres.

**3) Lakeisha T Esau**

**TM# 90.8-2-41**

**WL# 16269**

**66 Highland Drive, Garrison**

( Renovation and expansion of existing decks and add a lower level of decking with the installation of 27 new footings)

**4) Robert and Lauren Bresnan (Erin Muir)**

**TM# 60.-18-1-54**

**31 Nelson Lane, Garrison**

(Invasive species Management Plan using chemical applications for the removal of Black swallow-wort, Japanese Stiltgrass and Aralia elata (Japanese Angelica Tree) adjacent to a fresh meadow wetland.

**5) Stormwater Discussion:**

**6) Mini Workshop** – Presentation by Nicole Pidala based on her research for Open Space Inventory.

**\*\*\*NOTE: All items may not be called. Items may not always be called in order \*\*\***

**TOWN OF PHILIPSTOWN CONSERVATION BOARD  
238 MAIN STREET, COLD SPRING, NY 10516**

**June 14, 2016**

**MINUTES**

The Conservation Board held its regular meeting at the Town Hall on Tuesday, June 14, 2016

Present: Mark Galezo, (Chairman)  
David Klotzle (Wetlands Inspector)  
Max Garfinkle  
Lew Kingsley  
Eric Lind  
M. J. Martin  
Robert Repetto

Absent: Andrew Galler

**\*\* PLEASE NOTE that these minutes were abstracted in summary from the meeting and a taped recording.**

Mr. Galezo opened the meeting at 7:38 P.M.

**1. Boscobel Restoration (Peter Davoren), 1601 Route 9D, Garrison TM#49.1-29 WL# 16-267**  
Mr. Glenn Watson from Badey and Watson reviewed the application. Mr. Watson noted that the applicant and the owner of the property is giving permission for Mr. Davoren to construct a barn on the property that he leases for agricultural purposes. The proposed barn would be used to store mechanical equipment. Mr. Watson reviewed the wet area which included Dale Pond and a stream. There are two channels of the stream. Grading for the project will be done to keep it away from the pond. The proposed barn will be built with a slab that will be pitched in the middle with a containment tank which can be emptied out professionally in case any equipment leaks.

Mr. Lind noted while doing the site visit he noticed a drainage cut. The drainage cut could be a problem during a flood event and suggested building up stone around the area and try to connect the cut to the main channel.

Mr. Watson noted that the stream is classified as a Class B stream and would need a permit by the DEC if any work is done on the stream. Mr. Watson suggested putting in a berm right next to the cut and plant the bank which would control the overflow and they will look into cleaning out the pond for a future project. Mr. Lind suggested that native plants should be used. Mr. Davoren noted that the stream is constant even during the dry season which causes a lot of erosion. It was suggested by the Board that the DEC be contacted so work can be done on the stream in the future for a more permanent solution.

The Board discussed erosion control and noted that root mass could be used to help stop erosion.

Mr. Lind asked about the drainage off the roof of the proposed barn and asked if splash pads were needed. Mr. Watson responded that the drainage will be part of the construction plan and will run down the side of the hill. Mr. Klotzle noted that the runoff should be absorbed into the ground.

The Board requested the following items:

- Pitch to the floor for drainage.
- Berm in the southeast corner to include a list of plantings.
- Treatment of the runoff from the barn to the west.

Mr. Kingsley moved to grant the permit to include the conditions listed above and Mrs. Martin seconded the motion. The motion passed as follows:

Mr. Galezo	Aye
Mr. Galler	Absent
Mr. Garfinkle	Aye
Mr. Kingsley	Aye
Mr. Lind	Aye
Mrs. Martin	Aye
Mr. Repetto	Aye

Mr. Klotzle noted the applicant must submit a new Site Plan showing the conditions of the approval before a permit can be written.

**2. Edward Kreps, 10 Deerland Acres, Cold Spring      TM# 17.-2-68      WL# 16-268**

The applicant is proposing to dredge a significant amount of the pond and repair the damaged dam. Mr. Watson from Badey and Watson described the project and noted the pond was built in the late 20's to early 30's. It was noted that at one time the pond was used for swimming.

While the pond will be dredged some water will be left at the deepest section of the pond to preserve the pond life. The spoils will be dredged and stored in another location. The material will be taken out of the pond, allowed to lose most of its liquid before it will be taken to the site where it will be left to be graded and contoured.

Mr. Kreps noted that the dam has been patched so many times that it is crumbling. The dam will be repaired but the way the repair will take place is not yet known. Mr. Michael Carr, who will be doing the work, needs to know more detail before the repair can be done.

Mr. Klotzle noted that previously the applicant had a (Storm Water Pollution Prevention Plan (SWPPP) which is required when more than an acre of soil is disturbed. The SWPPP amendment will need to be reviewed by Mr. Gainer and accepted by Mr. Klotzle. Mr. Watson will contact Insite Engineering who did the original SWPPP report regarding the original SWPPP process.

Mr. Klotzle noted that aeration is needed to keep oxygen in the section of the pond that is being left for the pond life to survive while the pond is being dredged. A discussion ensued over the aeration and the pond life. Animals such as frogs and turtles will need to follow the water down as it recedes so they can burrow in the mud if the pond is not filled before the cold weather sets in. There is a section of the pond that is not being dredged but it is very shallow. There was a discussion over whether or not that side of the pond could be temporarily used for the pond life.

The pond is very murky and full of weeds so you cannot see the pond life to see how much or what kind of pond life there is.

Mr. Kreps noted that his father, who owned the property, dredged the pond about every 15 years which was about 4 times.

Mr. Lind suggested doing a pond life assessment as the pond is being dredged. Mr. Garfinkle suggested getting a recharge rate on the pond.

Mr. Kreps noted that the pond is generally full in late spring. Mr. Kreps noted that water drainage will go down into the Clarence Fahnestock Memorial State Park property.

Mr. Galezo asked if Copper Sulfate was ever used in the pond. Mr. Kreps noted that years ago it was used and his neighbors would like him to use it again. Mr. Klotzle noted that if Copper Sulfate is used a permit will be needed.

The Board requested the following items:

- SWPPP amended and approved.
- Require active aeration of the remaining water while the work is being done.
- Some measure or maintenance to keep the sedimentation down so it would not have to be dredged out every 15 years.
- A recharge assessment must be done to determine the best time to do the work.
- Assess or observe the pond life as the pond is being drained.

Mr. Klotzle noted the Town will charge a larger than normal escrow due to the assessment or observance of the pond life as the draining is taking place.

Mrs. Martin moved to grant the permit including the conditions listed above and Mr. Kinglsey seconded the motion. The motion passed as follows:

Mr. Galezo	Aye
Mr. Galler	Absent
Mr. Garfinkle	Aye
Mr. Kingsley	Aye
Mr. Lind	Aye
Mrs. Martin	Aye
Mr. Repetto	Aye

### **3. Review of draft letter written by Mr. Galler:**

The Board members all agreed that the letter drafted by Mr. Galler was acceptable. Mr. Klotzle will put the letter in final form and send it to the Conservation Board and the Planning Board. Mr. Glenn

Watson will receive a copy from the Conservation Board Secretary after it is received in final format. There was no motion. The vote was as follows:

Mr. Galezo	Aye
Mr. Galler	Absent
Mr. Garfinkle	Aye
Mr. Kingsley	Aye
Mr. Lind	Aye
Mrs. Martin	Aye
Mr. Repetto	Aye

#### **4. Mini Workshop:**

Mrs. Martin noted that Nicole Pidala is away and the mini workshop will take place next month. Mrs. Martin distributed maps( Hudson Highlands Land Trust Legacy Landscapes Parcels, Landscape Parcels and Open Space Index and a Conservation Open Areas Map) and a list of Conservation Open Areas Inventory Tax Parcel list that she was given by Ms. Pidala. Which included the open space index, more items have been added.. Mrs. Martin noted that Ms. Pidala went through every parcel in Philipstown to see what the current status was.

The Board requested the following:

- Mrs. Martin will supply the Board members with the criteria for Different Tiers from Legacy Landscapes.
- Mrs. Martin will send all Board members an existing Natural Resource list which will need to be updated.
- Emails can go back and forth regarding comments to help Ms. Pidala prepare for her presentation.
- Criteria for how the lots are ranked.

As a finished project a large map was suggested by Mr. Klotzle for the Building Department.

Mr. Lind discussed the potential risk for the projected rise of the river. The Board discussed looking at a town such as Kingston's Climate Resilience Plan which is based on the projected rise of the river and what it means for riverfront properties. It might be time for the town to think about the potential risk of the potential rise in sea level.

#### **5. Board business:**

Mrs. Martin asked for a copy of the Conservation Analysis Report by Susan Jainchill for Horton Road LLC, Hudson Highlands Reserve and suggested to meet with the planning Board members.

#### **6. Minutes:**

The minutes of July 14, 2015 were reviewed and amended to say "Mr. Galler" instead of "Mr. Geller" in three places. Mrs. Martin moved to approve the minutes as amended and Mr. Lind seconded the motion. The amended minutes were approved as follows:

Mr. Galezo	Aye
Mr. Galler	Absent
Mr. Garfinkle	Aye

Mr. Kingsley	Aye
Mr. Lind	Aye
Mrs. Martin	Aye
Mr. Repetto	Aye

The minutes of May 10, 2016 were reviewed. Mr. Garfinkle moved to approve the minutes as presented and Mr. Lind seconded the motion. The minutes were approved as follows:

Mr. Galezo	Aye
Mr. Galler	Absent
Mr. Garfinkle	Aye
Mr. Kingsley	Aye
Mr. Lind	Aye
Mrs. Martin	Aye
Mr. Repetto	Aye

Mr. Kingsley moved to adjourn the meeting and Mr. Garfinkle seconded the motion. The meeting adjourned at 9:16 P. M.

**\*\* NOTE: These minutes were prepared for the Conservation Board and are subject to review, comment, emendation and approval thereupon.**

DATE APPROVED: \_\_\_\_\_

Respectfully submitted,

Linda Valentino  
Secretary

**TOWN OF PHILIPSTOWN CONSERVATION BOARD  
238 MAIN STREET, COLD SPRING, NY 10516**

**MINUTES  
SEPTEMBER 15, 2015**

The Conservation Board held its regular meeting at the Town Hall on Tuesday, September 15, 2015

Members: Mark Galezo (Chairman)  
Andrew Galler  
Max Garfinkle  
Lew Kingsley  
Eric Lind  
M. J. Martin  
Robert Repetto  
David Klotzle (Wetlands Inspector)

**\*\* PLEASE NOTE** that these minutes were abstracted in summary from the taped recording.

**\*\*\* There was no agenda at this meeting The applicants stepped up to present there proposals.**

1. **Edward Kreps,** **TM# 17.-2-68** **WL# 16-268**  
**10 Deerland Acres, Cold Spring**

Mr. Kreps noted he had a small pond with a dam on East Mountain Road that is in need of repair. He would like to lower the water in the pond to fix and protect the dam from further harm. Mr. Kreps noted that there is a lot of silt in the bottom of the pond which has reduced the depth of the pond from about six feet to about three foot. Mr. Kreps noted that other neighbors have rights to the pond also.

Mr. Klotzle noted the pond was dredged about 10 years ago. The applicant siphoned the lake and went in with equipment to clean the bottom of the pond. Mr. Klotzle noted he believed that there is an undershoot valve but it is not functioning. The work on the pond should be done in the summer. The pond should be aerated and should have about two feet of water left after draining in the deepest end to protect the pond life.

2. **Steve Auth** **TM# 81.-1-55** **WL# 15-258**  
**3 Pepper Grass Lane**  
***Drainage pipe:***

Mr. Auth proposed to replace and change a collapsed driveway pipe. Mr. Auth noted he would like to enlarge the pipe. The idea of enlarging the pipe is for better driveway access which should help raise the grade to increase the turn. Mr. Auth noted silt and runoff comes down Pepper Grass Lane right before his driveway and goes into the stream. There is a new cut on the side of the driveway which was cut to get building material in.

Mr. Galezo noted that an accurate representation, such as a drawing or a map, is needed of the location of the driveway, the existing stream, the stream bed and the 100 foot buffer around the stream.

Mr. Klotzle noted that the neighbors have not been noticed of this meeting with this applicant and will need to be notified.

Mr. Galezo noted that during the site visit he noticed that the stream seems to "zig-zag".

The Board noted the following:

- The proposed pipe will be 40 feet long (previous pipe was 12 feet long).
- The proposed pipe will not have any meandering which will make the water flow better.

The Board noted the following items are needed:

- Local gravel will be needed to fill around the proposed pipe. Currently there is a plate over the pipe.
- A written statement is needed describing the proposal.
- Each stage of the process is to be written in the order it will occur.
- The map needs to show the location of the silt fence and it must be a wire backed silt fence.

***Dredging of pond:***

Mr. Auth proposed to dredge the pond. Mr. Klotzle noted that the dredging information will have to be in writing and discussed at a future meeting.

The applicant will be put on the agenda for October the following items are needed:

- Map showing delineate the wetlands 100 foot setback, show where silt fence is going, show and explain what is being done to and by the pond and what is being done by the street.
- Note on map that the head walls will not be reused.
- A note on the map stating that stock piling of material will not be put in the buffer.
- A step by step narrative of the project is needed.
- Where the applicant made the cut by the driveway would have to be stabilized by using a grass mat.

Mr. Klotzle noted the silt fence should go up by the cut in the driveway. Mr. Klotzle noted that straw mats filled with seed can be used.

Mr. Klotzle noted when the items listed above are received he will send them out to the Board members for review.

**\*\*\* Tape ended meeting did not end.**

**\*\* NOTE: These minutes were prepared for the Conservation Board and are subject to review, comment, emendation and approval thereupon.**

DATE APPROVED: \_\_\_\_\_

Respectfully submitted  
Linda Valentino, Secretary



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**RECEIVED**  
JUN 06 2016

BY: *L*

## Memorandum

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**To:** Town of Philipstown Planning Board  
**From:** Susan Jainchill AICP  
**Date:** June 4, 2016  
**Re:** Horton Road LLC, Hudson Highlands Reserve - Conservation Analysis Report  
**cc:** Applicant, Ron Gainer, Glenn Watson, Conservation Board, David Klotzle, Wetlands Inspector

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On behalf of the Planning Board, AKRF Inc. has been reviewing the Conservation Analysis submitted by Horton Road LLC dated 2/10/2016. As the Board is aware, the submitted Conservation Analysis Report indicates that the subject property for this application is 205.6 acres, made up of five (5) separate tax parcels. The objective of the review of the submitted Conservation Analysis Report is for the Planning Board to make a determination of which of the lands possess conservation value and should be preserved in the development of the overall parcel. The review comments below are provided to assist the Planning Board in your evaluation of which areas of the tract should be considered for preservation.

AKRF/ Gainer submitted a review memo dated 3/23/16 that addressed substantive issues regarding the Archeology and Cultural Resources Assessment included in the Conservation Analysis Report. Since that memo was issued, AKRF's natural resources specialists have visited the project site twice. On 3/25/16 AKRF accompanied the Kelley McKean of the NYSDEC to verify the wetland delineation. On 5/18/16 AKRF conducted a site inspection to verify the information included in the Conservation Analysis Report, Sections 5: Limnology, Section 6: Initial Report (wetland delineation and natural resources analysis dated 9/15/14) and Section 7: Supplemental Report (wetland delineation and natural resources analysis dated 8/12/15). Below are substantive review comments pertaining to the natural resources analysis based on requirements of the Town's Zoning Code, the guidance provided in the Town's Comprehensive Plan, and the recent site inspections.

### SUMMARY AND RECOMMENDATIONS

The studies within the Conservation Analysis Report for the Horton Highlands Reserve Dated 2/10/2016 form a viable basis for assessing the conservation value of the 205.6 acre project site as required by Town Code § 175-20.

- AKRF/ Gainer is in agreement with the general findings of the analysis, namely that the higher value conservation land consists of the less-disturbed forested lands within the more steeply sloped, eastern regions of the site and the lands proximal to Clove Creek and the onsite Pond in the western and

south-central portions of the project site. Retaining the eastern forested areas undeveloped in a conservation easement will help preserve the large contiguous forested lands extending east/south offsite which are of particular ecological and conservation value to the Hudson Highlands region. Protecting the wetlands on the southern portions of the site and providing large undisturbed buffers adjacent to Clove Creek and the Ulmar Pond will benefit water quality and preserve plant/animal diversity.

- It is our opinion that the maps and findings of the Conservation Analysis can be used for the next phase of the Town's analysis of the proposed site development which will be looking more specifically at what can be built. Such issues as: preserving habitat corridors linking the lower elevation wetland and stream areas with the higher elevation upland habitats; determining the width of buffers protecting the pond/stream, and; determining the ultimate size/footprint and density of the residential development will be among the critical issues that must be explored to ensure that onsite and regional ecological values and resources are protected.
- Projects of this type located in high value habitat typically are reviewed under SEQRA via the full EIS process, if only to provide more opportunity for public review and comment. We encourage the Town to issue a Pos Dec and commence scoping of the environmental review for a full EIS. The completed Conservation Analysis studies and maps may form much of the basis for the ecological portions of an EIS.

#### **ZONING ANALYSIS AND COMPREHENSIVE PLAN**

Town Code § 175-20 indicates that a conservation analysis must include maps showing areas identified in the Comprehensive Plan or the Town's Natural Resource and Open Space Plan. The maps submitted with the project's Conservation Analysis provide most of the required information, most critically the high value habitats, wetlands, slopes and historic resources. We note the following additional resources/designations taken from the Town's Plans most of which are not shown in the applicant's maps, for consideration:

- The Philipstown Natural Resource and Open Space Plan (NROSP) identifies the project site, "the view east from Route 9 towards East Mountain Road South" as a Significant Viewshed to be protected. The Plan also maps part of the project site, including a portion of the proposed "potential development area" as a site that is "Visible from a Significant Viewpoint" on the map entitled "Priority Community Character Resource Areas". Once a site plan is developed a viewshed simulation analysis will be required to identify sensitive receptors as part of the environmental review process under SEQRA.
- The NROSP identifies two areas – the "East Mountain" and "Clove Creek" areas, which contain and are adjacent to the project site, as among the Town's Open Space Index areas, important for the protection of natural resources and community character, in accordance with New York State law (General Municipal Law §239-y). The proposed project "Map 9" shows the Open Space Conservation Overlay District (OSO) for East Mountain, but the key is hard to understand and doesn't list the OSO district.
- The wetlands and pond onsite form part of the headwaters of Clove Creek, which overlies one of four aquifers in the Hudson River basin designated as a "Primary Water Supply Aquifer" by the NYSDEC, and is specifically identified in the Town's Natural Resource and Open Space Plan (NROSP). The lower elevations of the project site are also mapped as the Clove Creek Aquifer (CCA) by the Town's Aquifer Overlay District.
- The NROSP rates the project site 4 out of 5 (high) for the number of natural resource functions (See map "Priority Resource Functions, Philipstown, NY).

## DENSITY AND CONSERVATION EASEMENT CALCULATION

- The applicant's Zoning Analysis (Section 1.03) indicates that the required open space set-aside is 147.4 acres. This is based on Minimum Protection Percentage applying only to the RR Zone (not the M Zone) portion of the property, and calculated in accordance with §175-20.H at 80% for land within the OSO overlay district and 60% for land outside OSO. Conservation subdivisions are allowed in the RC, RR, IC, and SR Districts only. For this project, M Zone land is also included. This M Zone land onsite is adjacent to Clove Creek and designated as high/medium conservation value. Since the applicant proposes to include the 11.1 acres of M Zone lands in the conservation subdivision, and because the Town Code indicates that "conservation subdivisions shall preserve at least 60% of the land as open space", these preservation set-aside provisions must apply to the entire site, including the M zoned land. Including the M Zone land at 60% set-aside yields a total required site conservation acreage of 154.1 acres. The total amount of applicant-designated high/medium conservation value land (i.e. non-developable) is a close match at 153.7 acres. Therefore there is no significant penalty in including the M Zone land in the calculation.
- Density calculations used to determine allowable residential unit number and impervious cover may need to be revisited in the next phase of project review, in accordance with Code sections §175-19/21, §175-74 and §175-1113. It is expected that a reasonable development of the land designated "potential developable area" by the applicant's conservation analysis will produce a smaller number of units than calculated by the zoning density formulas in order to protect the onsite pond and Clove Creek.
- Town Code §175-20.I, requires that "any conservation subdivision containing 10 or more dwelling units which is not served by a common or municipal sewage disposal facility...shall provide an analysis of the impact of nitrate loading on groundwater and surface water and shall take all necessary measures to prevent any adverse impacts on water resources." Considering the phytoplankton bloom identified within the onsite pond, water quality analysis of the contributing flows to the pond for nitrogen, phosphorus, and BOD is recommended to identify potential sources of contamination/nutrient inputs. Developing the site raises the potential for increased nutrient pollution to enter the pond so, as discussed below, this is one of the issues requiring further investigation.

## GENERAL NATURAL RESOURCE ANALYSIS COMMENTS

- Use of the site by Indiana bat (*Myotis sodalists*) and northern long-eared bat (*Myotis septentrionalis*) is assumed based on existing habitat and the NYNHP response. Timber rattlesnake (*Crotalus horridus*) is also listed by the NHP for the site and has been the subject of several studies conducted by the applicant's consultants which indicate that the site is sub-optimal for denning/basking habitat but may offer seasonal foraging habitat for rattlesnakes from other documented denning sites in the region. Site inspection shows rocky terrain onsite in both "developable" and "conservations" areas (Map 2) that contains both patches of open, sun-lit forest as well as denser cover and shade. Though no timber rattlesnakes have been found on site, this terrain appears ideally suited for foraging (if not denning) by timber rattlesnake. The conclusions of the latest bat and rattlesnake studies and their assessment of potential impacts to these Federally-listed and State-listed species must be reviewed by the NYSDEC and USFWS. The Town will rely on input from NYSDEC and USFWS in gauging potential impacts to these listed species.
- The Conservation Analysis should include the applicant's NYNHP request letter and the map submitted to NYNHP showing the project boundaries (which changed recently). NYNHP uses variable search radii extending from the outermost project boundary depending on species. If the NYNHP request letter did not show the current project boundary, a new one should be sent.
- All federally-listed species listed by USFWS's IPaC system should be discussed. The project site receives a positive response for bog turtle (*Glyptemys muhlenbergii*) from the IPaC site. While this species is unlikely to occur, an assessment/discussion of bog turtle and potential habitat onsite should

be included based the applicant's consultants current understanding of onsite habitat (no additional field work is necessary).

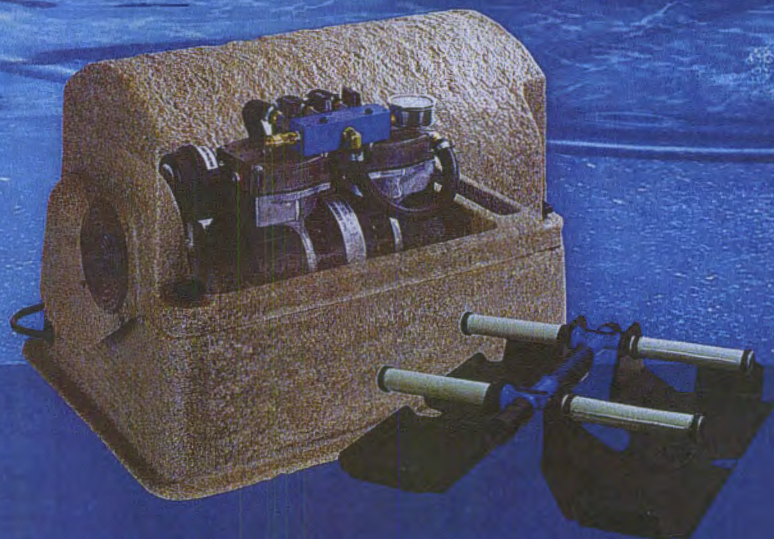
- During the site plan development stage, consideration should be given to maintaining and improving the existing southerly access off Mill Road/Horton Road rather than an entrance off East Mountain Road North, in order to avoid steep slope impacts and to more effectively preserve the contiguous Oak/Hickory forest and to avoid the talus/scree areas identified in the 2010/2011 timber rattle studies. A new, northern entrance drive may result in greater ecological impacts than a single driveway via Mill/Horton Roads.
- During the site plan development stage, consideration should be given to providing vegetated buffers wider than 100 feet to preserve the water quality of Clove Creek and the onsite pond. As discussed in the *Biodiversity Assessment of the North Highlands, Philipstown*, "The standard thinking is that it is sufficient to protect Clove Creek's water quality by maintaining the 100-foot buffer as called for in Philipstown's wetlands ordinance. The importance of a more sizable buffer to preserve the associated habitat and floodplain needs to be communicated to local planning authorities and the public at large."
- As cited in the conservation analysis reports (Coleman, 2014), during the site plan development stage, consideration should be given to maintaining habitat corridors between the pond and uplands and between the pond and Clove Creek to preserve movement of wildlife between these interconnected habitats within the property.
- The Executive Summary (Section 1.0) or Environmental Assessment (Section 7.0) should have some additional information about the past land-use history of the property and areas of past mining. Maps should show locations of past lands use/disturbance including mining.
- Although Map 1 (Executive Summary Maps) provides a good illustration of the surrounding contiguous forest, the conservation analysis needs a description of context, including identification/description of adjacent properties and whether there are opportunities to connect to adjacent preserved lands.
- Site inspection indicates that the on-site seeps that have been identified appear to be larger than indicated on the map and are connected to the wetland/stream complex contributing to wetland hydrology. Several seeps and streams higher up in elevation appear and disappear through rocky outcrops. The location of the seeps is adjacent to the "potential development area" on Map 2. Moving the "potential development area" further from the seeps is advised.
- The 3/25/16 site visit by NYSDEC did not inspect onsite wetlands east/south of Horton Road. However, these wetlands are contiguous with NYSDEC Wetland WP-19 so presumably would be NYSDEC-regulated. This issue must be resolved with communication/documentation with NYSDEC. (These wetlands will likely be preserved in the conservation area and the Town already regulates a 100-foot buffer. Nevertheless, NYSDEC jurisdiction over all onsite wetlands must be clarified.)

## COMMENTS ON SECTION 5: LIMNOLOGY

The Limnology section provides a great deal of information that will be helpful for planning development of the project site. The study indicates that a phytoplankton bloom of Ulmar Pond occurred at the time of sampling affecting parameters such as Chlorophyll a, pH, and clarity. Despite this, fish sampling showed fish condition/health and species assemblage was high value for angling and aquatic plant sampling showed good condition, with only trace density of filamentous algae and invasive curly-leaf pond weed. Clove Creek macroinvertebrate sampling showed an even mix of species indicative of a generally healthy system. These results speak to the need to protect these aquatic resources when developing the site plan with such measures as wide buffers, limits on clearing/lawn areas, proper stormwater treatment measures, and a clustered lot configuration that provides relief from zoning and bulk regulations to achieve a limited footprint. The phytoplankton bloom observed on June 29, 2015 is an unexpected event considering the surrounding forested conditions. Additional water quality sampling and investigation for possible causes,

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MAX DEPTH 21'



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### ENGLISH

SECTION		PAGE
1	System Components	3
2	Safety	4
3	System Installation	4
4	Initial Start-Up & Seasonal Operation	4
5	Maintenance	5
6	Troubleshooting	5
7	Replacement Parts	6
8	Warranty	15

### FRANÇAIS

SECTION		PAGE
1	Composants du système	7
2	Sécurité	8
3	Installation du système	8
4	Mise en service et exploitation saisonnière	8
5	Maintenance	9
6	Dépannage	9
7	Pièces de rechange	10

### ESPAÑOL

SECTION		PAGE
1	Componentes del sistema	11
2	Seguridad	12
3	Instalación del sistema	12
4	Puesta en funcionamiento y de Temporada Operación	12
5	Mantenimiento	13
6	Solución de problemas	13
7	Piezas de repuesto	14

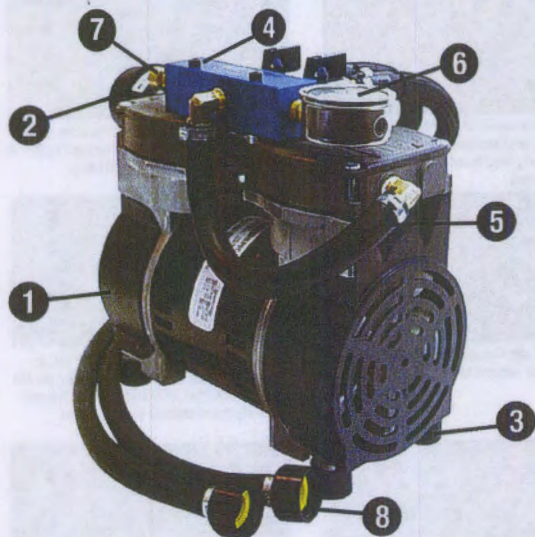
## Airmax® Composite Cabinet



1. Enhanced cooling system tunnels air flow evenly through the cabinet with a high flow cooling fan & high density air intake pre-filter.
2. Composite cabinet with removable top protects components while providing easy access
3. Elevated base protects against damaging flood water
4. Pre-wired electrical box simplifies electrical connections for easy setup (All systems over 1/3 HP include power switch)

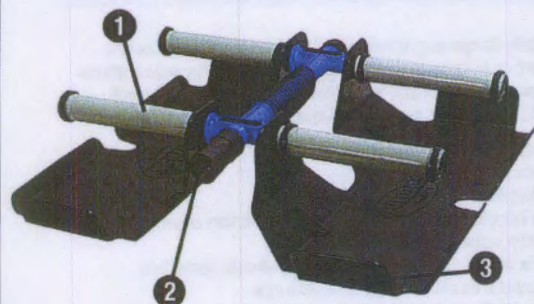
**Cabinet Size: 23"L x 17"W x 15"H**

## SilentAir™ RP Series Rocking Piston Compressor



1. High efficiency, continuous-duty rocking piston compressor
2. Air Filter maximizes the life of the compressor
3. Rubber compressor mounts reduce noise and vibration for silent operation
4. Airflow manifold simplifies airflow management to individual diffusers (only available on systems with multiple diffusers)
5. Heat-resistant, 5/8" flex-tube protects against high temperatures of the compressor
6. Pressure gauge helps monitor system performance
7. Pressure relief valve safeguards from back pressure
8. Airline quick disconnects for easy system removal and storage

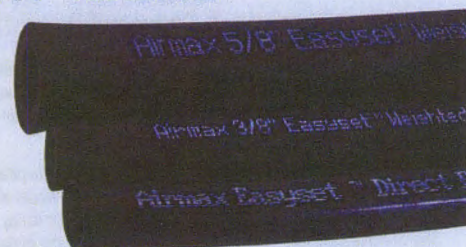
## ProAir™ 4 Weighted Diffuser



1. PTFE non-stick membrane diffuser sticks provides the synergy of air stones while being virtually maintenance-free
2. Check valve prevents back pressure to compressor
3. Weighted design keeps diffuser submerged while maintaining an upright position during installation

**Diffuser Size: 19"L x 19"W x 5"H**

## EasySet™ AIRLINE



- Self-Weighted Airline: 3/8" 100' Roll (#510118), 5/8" 100' Roll (#510119): Lead-free weighted airline is made of durable PVC composite. Fish hook resistant and kink-free. Use from pond's edge to diffuser.
- Direct Burial Airline (sold separately): 5/8" 100' Roll (#510120) Flexible, yet kink-free. Bury from cabinet and compressor to pond's edge when placing the cabinet and compressor away from the pond.

\*Depending on the type of installation, additional connector kits may be required. See section 7 for connector kits.

## 2. Safety

- Read all operating instructions carefully.
- To reduce the risk of electric shock, connect only to a properly grounded, grounding-type receptacle. If in doubt, have the outlet checked by a qualified electrician.
- This unit is to be used in a circuit protected by a ground fault circuit interrupter (GFCI).
- Disconnect unit from power source before handling or maintenance.
- Repair or exchange of cable/power cord must be carried through by the supplier/manufacturer.
- This unit has not been investigated for use in swimming pool areas.

### CAUTION

- Never connect to an extension cord. This may result in equipment failure.
- Do not allow anything to rest on the power cord.
- Do not place the cabinet where people may step on the power cord.
- Never override or "cheat" electrical or mechanical interlock devices.
- Never attempt any maintenance function that is not specified in the user manual.
- Never operate the system if unusual noises or odors are detected. Disconnect the power cord from the outlet and call for service.

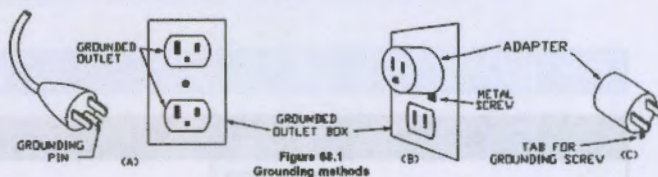
**GROUNDING INSTRUCTIONS** – This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

**WARNING** – Improper installation of the grounding plug is able to result in a risk of electric shock. When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.

Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded. Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified technician.

**For 120 VAC products:** This product is for use on a nominal 120V circuit, and has a grounding plug similar to the plug illustrated in sketch A in Figure below. A temporary adapter similar to the adapter illustrated in sketches B and C may be used to connect this plug to a 2-pole receptacle as shown in sketch B when a properly grounded outlet is not available. The temporary adapter shall be used only until a properly grounded outlet (sketch A) is installed by a qualified electrician. The green colored rigid ear, lug, or similar part extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw.

**For 230 VAC products:** This product is for use on a circuit having a nominal rating more than 120 V and is factory-equipped with a specific electric cord and plug for connection to a proper electric circuit. Only connect the product to an outlet having the same configuration as the plug. Do not use an adapter with this product. When the product must be reconnected for use on a different type of electric circuit, the reconnection shall be made by qualified service personnel.



## 3. System Installation

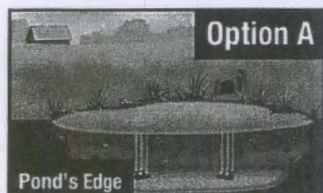
For quick, easy and professional installations, it is suggested that the following materials be on-site: (None of the following are included with the Airmax® Aeration System)

- Placement Rope
- Level
- Coast Guard-approved life jacket
- Shovel
- Flathead screwdriver
- Utility razor knife
- Boat/Raft/Swimsuit
- Small stone or gravel
- Rake
- Permanent Marker

### Location

- Locate cabinet on a solid support with adequate strength for weight of unit.
- Locate cabinet away from irrigation sprinklers.
- Wear a Coast Guard-approved life jacket; follow all safety and caution guidelines.

**WARNING:** All compressor cabinets must be located above the water level.



**Option A:** When power source is available at pond's edge, simply connect one end of EasySet™ Airline to flex-hose and other end to diffuser plate. Steps 2 & 3 below are not necessary using this option.



**Option B:** When power source is not available at pond's edge, place SilentAir™ Cabinet next to nearest power source. Trench Direct Burial Airline (sold separately, 1/2" standard irrigation pipe may be substituted) from flex-tube to pond's edge; then connect to EasySet™ Airline and run to diffuser plate. Each diffuser will be a separate run of airline. Each run may not exceed several hundred feet.

## 4. Initial Start-Up & Seasonal Operation

The circulation of poor quality, low oxygen, deep water to the pond's surface can introduce harmful gases and by-products into the previously healthy upper regions of the water column. These by-products can make the upper regions unfit for aquatic life and could result in fish-kill.

### Initial Start-Up Procedure To Prevent Fish-Kill:

Follow this procedure anytime system has been shut-off for an extended period of time.

- Day 1: Run system for 30 minutes; turn system off for remainder of day.
- Day 2: Run system for 1 hour; turn system off for remainder of day.
- Day 3: Run system for 2 hours; turn system off for remainder of day.
- Day 4: Run system for 4 hours; turn system off for remainder of day.
- Day 5: Run system for 8 hours; turn system off for remainder of day.
- Day 6: Run system for 16 hours; turn system off for remainder of day.
- Day 7: Begin running system 24 hours/day, 7 days/week.

### Summer Operation

To reduce the risk of fish kills in hot summer months and for optimum aeration benefits, Airmax® Aeration Systems should run continuously throughout the summer. To enhance pond health, reduce mucky bottoms and enhance pond's aesthetic appeal, try Pond Logic® products:

MuckAway™ PondClear™ EcoBoost™ Pond Dye



Decide on a location for the cabinet and prep ground. May be placed several hundred feet from shoreline (using direct burial airline) if power is not available at shore.



**Option B Only:** Excavate trench to a minimum of 8" of depth for direct burial line. Place and backfill all direct burial airline (one line per diffuser).



**Option B Only:** Connect direct burial airline to EasySet™ self-weighted airline.



Connect airline to flex lines supplied with cabinet. Open cabinet, plug compressor and cooling fan into power control. Plug power control cord into power outlet. Flip power switch to the ON position.



Connect diffuser to airline. Extend EasySet™ self-weighted airline to proper location. Place diffuser. To ensure proper placement, use nylon rope. Plates should be located towards the deepest part of the pond with a maximum depth of 21'.



Bubbles should be noticeable from all diffuser locations. When more than one diffuser is installed, adjust valves for maximum performance. Once adjustments are made, wait several minutes to see results at the diffuser location(s). Deeper placement of plate(s) and longer runs of tube will require more flow.

### Winter Operation

Owner assumes all responsibility for operating Airmax® Aeration System during winter months. Operating in freezing conditions on an ice-covered pond will cause large open water areas at diffuser sites. Ice thickness around open areas will be much thinner than the surrounding areas. Airmax® strongly recommends that "Danger - Thin Ice" be posted at frequent intervals around pond.

If you choose to turn your system off for the winter, do the following:

- Unplug your aeration system.
- Disconnect compressor flex-tube(s) from airline(s).
- Cover airline ends with the included winterization caps to prevent debris from entering airline.
- Move cabinet and compressor inside to keep dry.
- If operating during the winter season, condensation could cause airlines to freeze. If so:
  - Use 1 cup isopropyl alcohol in the airline running out to each plate.
  - Turn on compressor to push through line and free any ice blockage.

## 5. Maintenance\*\*

ENGLISH

Airmax® Aeration Systems are designed for low-maintenance and require minimal scheduled maintenance. Cabinet inlets and outlets should be kept free of debris and weed growth allowing normal ventilation.

- Always unplug system before performing any maintenance or troubleshooting.
- Always unplug system and refer servicing to a qualified electrician when: cord is damaged or frayed, compressor, power control, compressor fan, or other electrical components are producing unusual noises or odors.

• Always use parts that are supplied or approved by Airmax®, Inc. Use of other parts may result in poor performance and could create a hazardous situation.

\*\*Local environmental conditions may require more frequent maintenance.

**WARNING:** Compressors are equipped with a thermal overload switch. If temperature becomes high enough to trip the overload, the compressor will shut down. It will then automatically start up when temperature decreases as long as power is applied.

**EVERY 3-6 MONTHS - Air Filter:** Clean/replace air filter. **Cooling Fan:** Check to ensure cooling fan is operating. Hot air should be pulled from cabinet, not cool air blowing in.

**Pressure Gauge:** Mark pressure gauge upon initial start up. Check to verify pressure has not significantly risen above or dropped below initial reading. Normal operation will range between 5-10 psi.

**Pressure Relief Valve:** Check to ensure air is not escaping from valve. If unit is shut off, pressure will need to be released from the system in order for compressor to restart.

**EVERY 12 MONTHS - Membrane Sticks:** Purge membrane sticks. For PS10, while compressor is running, pull the pressure relief valve and let go. Repeat 6 – 8 times. For PS20, PS30 & PS40, while compressor is running, shut off all air flow valves except one, forcing all air to one diffuser plate for 10 seconds. Repeat for each plate.

**EVERY 12-18 MONTHS - Piston Maintenance Kit:** It is recommended to install a piston maintenance kit every 12-18 months to ensure optimum performance.



Watch the Maintenance Kit  
How-To Video at  
[airmaxeco.com/PondSeriesAeration](http://airmaxeco.com/PondSeriesAeration)

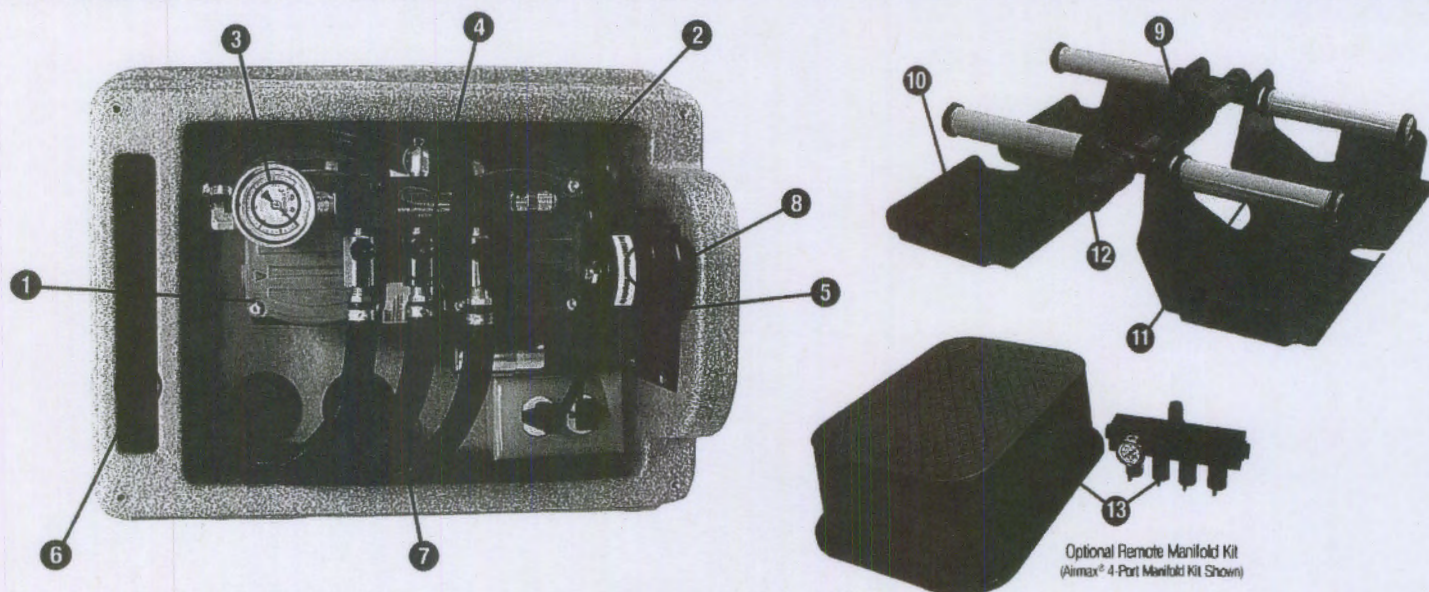
## 6. Troubleshooting

### IF COMPRESSOR IS NOT OPERATING:

ISSUE	CHECK	LIKELY CAUSE	CORRECTION
Cabinet fan is not running.	Option 1: GFCI circuit tripped.	Damage to electrical cord or low voltage from power supply.	Contact Airmax® or local dealer for electrical troubleshooting assistance.
	Option 2: GFCI circuit not tripped.	GFCI malfunction.	
Cabinet fan is running.	Option 1: Check compressor capacitor wiring for frays or poor connections.	Wiring loosened or was damaged during shipment or maintenance.	Contact Airmax® or local dealer for repair/replacement.
	Option 2: No capacitor wiring issues can be seen.	Bad capacitor.	
	Option 3: Capacitor has been replaced.	Compressor is bad.	

### IF COMPRESSOR IS OPERATING:

ISSUE	CHECK	LIKELY CAUSE	CORRECTION
No bubbles at any diffusers.	Option 1: No air leaks are audible in cabinet. Compressor running louder and possible excessive vibration.	Compressor air filter is dirty/clogged.	Clean or replace air filter. <b>NEVER</b> re-install wet filter.
	Option 2: Compressor operating normally or making unusual noises. Exhibits reduced pressure and/or air flow.	Compressor needs <b>piston maintenance kit</b> and possibly new air filter.	Contact Airmax® or local dealer with specifications for <b>maintenance kit</b> . Clean or replace air filter. <b>NEVER</b> re-install wet filter.
No bubbles at some diffuser plates.	Option 1: Check for leaks at all connections in line and in cabinet. If none are audible, carefully spray <b>SMALL</b> amount of soapy water onto connections and look for bubbles.	Vibration loosened connection or cracked fitting.	Tighten loose connection or replace cracked fitting as necessary.
	Option 2: Are all flow control valves in compressor wide open?	Improper "balancing" of diffusers.	Adjust air flow valves on manifold in cabinet until all diffusers operate properly. <b>See Section 4. System Installation</b> for more information.
	Option 3: Valves in cabinet are properly "balanced" and no leaks are evident.	Compressor beginning to lose compression and needs <b>piston maintenance kit</b> .	Contact Airmax® or local dealer with compressor specifications for <b>maintenance kit</b> .
Large rolling bubbles instead of fine bubbles at surface above one or more diffuser plates.	Inspect each diffuser plate for malfunction.	Diffuser membrane damaged, diffuser plate fitting broken or diffuser plate is flipped over.	Contact Airmax® or local dealer for repair/replacement.
Air coming out of pressure relief valve.	Option 1: High pressure reading on gauge. Inspect diffuser plates and tubing for clogging.	Diffuser maintenance needed.	Remove any overgrowth around diffuser membrane surface. <b>See Section 5. Maintenance</b> for more information.
	Option 2: Low pressure reading on gauge. Diffuser plates not clogged.	Bad pressure relief valve.	Contact Airmax® or local dealer for repair/replacement.
Compressor stops working for periods of time, then restarts.	Inspect cooling fan for proper function.	Compressor over-heating due to bad cooling fan.	Contact Airmax® or local dealer for fan replacement. If possible, leave top of cabinet open for cooling. Otherwise, unplug system until fan is replaced.
Compressor shakes erratically and is making loud noises.	Option 1: Check for low voltage while compressor is running.	Gauge of supply wires to circuit possibly undersized or cabinet is plugged into extension cord.	If gauge of circuit wiring is incorrect, have electrician replace. <b>NEVER</b> use extension cord to operate system for continual use.
	Option 2: Check for clogged air filter.	Air filter in need of replacement.	Clean or replace air filter. <b>NEVER</b> re-install wet filter.



Optional Remote Manifold Kit  
(Airmax® 4-Port Manifold Kit Shown)

## Cabinet & Compressor Replacement Parts

### 1. High Efficiency Compressor

- #510100 – SilentAir™ RP25 1/4 HP Single Piston Compressor, 115V
- #510200 – SilentAir™ RP25 1/4 HP Single Piston Compressor, 230V
- #510103 – SilentAir™ RP33 1/3 HP Dual Piston Compressor, 115V
- #510203 – SilentAir™ RP33 1/3 HP Dual Piston Compressor, 230V
- #510181 – SilentAir™ RP50 1/2 HP Dual Piston Compressor, 115V
- #510281 – SilentAir™ RP50 1/2 HP Dual Piston Compressor, 230V
- #510108 – SilentAir™ RP25 1/4 HP Maintenance Kit
- #510111 – SilentAir™ RP33 1/3 HP Maintenance Kit
- #510115 – SilentAir™ RP50 1/2 HP Maintenance Kit

### 2. #490239 – Pressure Relief Valve

### 3. #490272 – Pressure Gauge

### 4. Airflow Manifold Assembly

- #600186 – PS10 Airflow Manifold Assembly
- #600187 – PS20 Airflow Manifold Assembly
- #600188 – PS30 Airflow Manifold Assembly
- #600189 – PS40 Airflow Manifold Assembly

### 5. Cooling Fan

- #510302 – Cooling Fan for 115V Systems
- #510301 – Cooling Fan for 230V Systems

### 6. #510395 – Air Intake Pre-Filter

### 7. #490194 – 3/8" Flex-Tube

### 8. Air Filter

- #510150 – Air Filter, Complete
- #510151 – Air Filter Media Only

## ProAir™ 4 Replacement Parts

- |                                      |  |
|--------------------------------------|--|
| 9. #490332 – Diffuser Manifold       | *#490158 – 1" Marine Stainless Hose Clamp      |
| 10. #490337 – Diffuser Sled          | *#490118 – 1/2" to 3/4" Insert Reducer Adapter |
| 11. #510168 – PTFE 6" Membrane Stick | *#490118 – 3/8" to 1/2" Insert Reducer Adapter |
| 12. #490340 – Check Valve            | <i>*Not shown in Diagram</i>                   |

## EasySet™ Airline

- #510118 – 3/8" Weighted Airline, 100' Roll
- #510119 – 1/2" Weighted Airline, 100' Roll
- #510120 – 3/4" Direct Burial Airline, 100' Roll

## Optional Remote Manifold Kits

### 13. Optional Remote Manifold Kits

- #600192 – Airmax® 2-Port Remote Manifold Kit
- #600190 – Airmax® 3-Port Remote Manifold Kit
- #600194 – Airmax® 4-Port Remote Manifold Kit

## Connector Kits



THANK YOU FOR CHOOSING

**Airmax®**  
Aeration & Fountains

Cleaning Water Naturally™

Airmax®, Inc.  
www.airmaxeco.com  
866.424.7629



# Airmax<sup>®</sup>, Inc.

## Airmax<sup>®</sup> Aeration Systems

### *Limited Warranty*

Airmax<sup>®</sup>, Inc. warrants to the original purchaser (the end user) of any Airmax<sup>®</sup> Aeration System manufactured by Airmax<sup>®</sup>, Inc. that any aeration system component which proves to be defective in materials or workmanship, as determined by the factory within the timeframe specified below from the shipping date, will be repaired or replaced at no charge with a new or remanufactured part, and returned freight prepaid. The end user shall assume all the responsibility and expense for removal, packaging, and freight to ship to Airmax<sup>®</sup>, Inc. to determine the warranty claim and for all reinstallation expenses.

- Cabinet – Lifetime
- Compressor – 2 Years
- Airline & Diffusers – 5 Years

The warranty is void in cases where damage results from: improper installation, improper electrical connection, improper voltage, alteration, lightning, careless handling, misuse, abuse, disassembly of motor or failure to follow maintenance or operating instructions. Modification or repair by an unauthorized repair facility will void the warranty. Compressor seals, diaphragms, air filters and diffuser membranes are considered wear parts and are not covered under warranty.

In no case will Airmax<sup>®</sup>, Inc. or its dealers accept responsibility for any costs incurred by the user during installation, removal, inspection, evaluation, repair, parts replacement, or for return freight. Nor will any liability be accepted for loss of use, loss of profits, loss of goodwill, for consequential damage, or for personal injuries to the purchaser or any person.

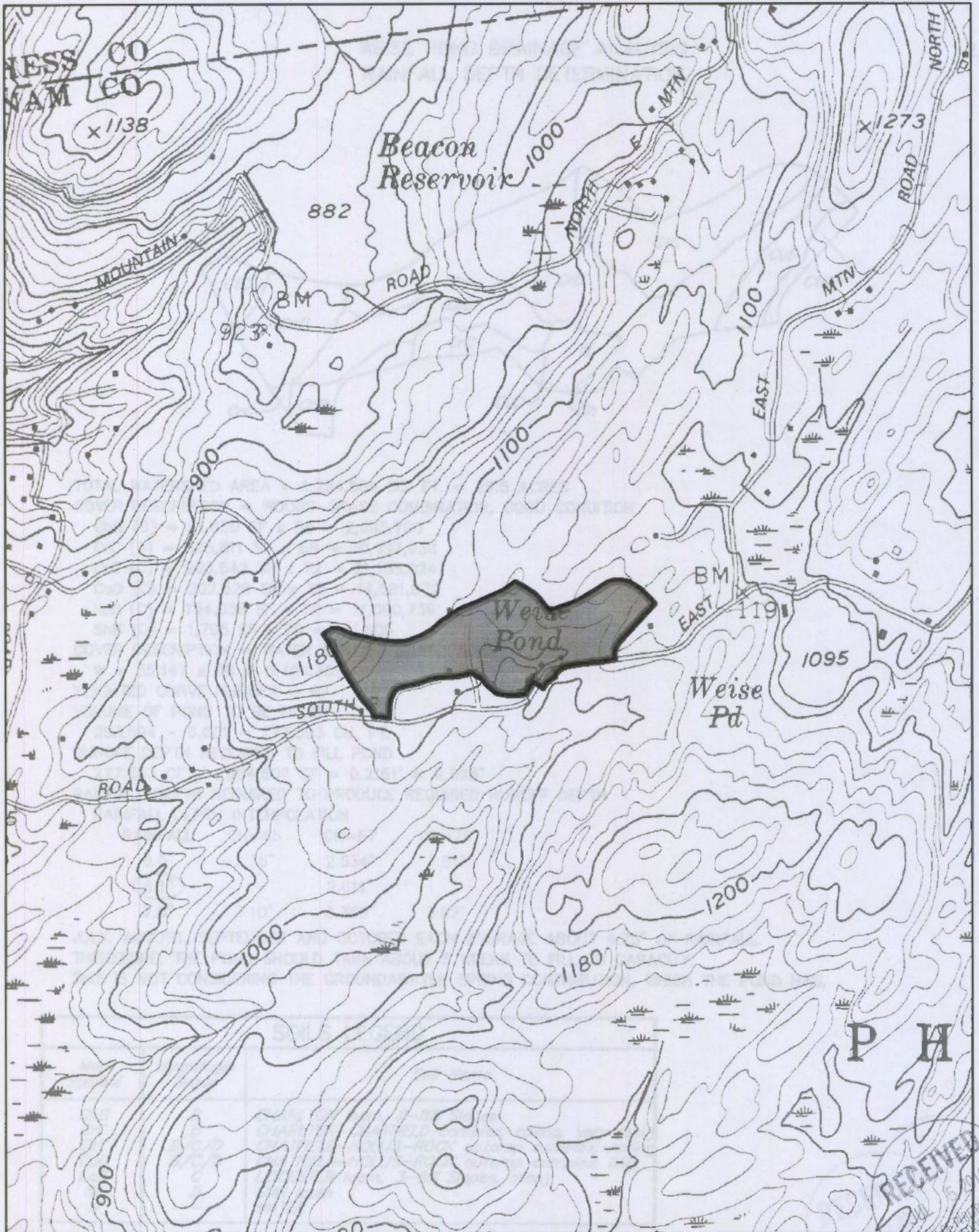
In the event of problems believed to be covered under warranty, it will be necessary to notify the dealer who will try to help resolve the problem and who may contact the factory for additional assistance. If it is concluded that there may be a defect which may be covered under warranty, it will be necessary to get a Return Material Authorization (RMA) from the dealer before shipment. Freight collect shipments will not be accepted by the factory on warranties or repairs.

The product or part(s) must be returned freight prepaid, to the factory, as directed, and in its original packaging or in a container which will prevent damage. Parts returned under warranty and damaged during shipping will not be covered under warranty for the shipping damage. If the factory evaluation of the returned goods concludes that the failure is due to defects in materials or workmanship, the part or parts in question will be replaced under warranty with new parts, remanufactured parts, or will be repaired; at the factory's option. The warranty period for all parts supplied under warranty will terminate at the end of the original product's warranty. All warranty shipments from the factory will be shipped freight prepaid.

Warranty registration is HIGHLY recommended.

No implied warranties of any kind are made by Airmax<sup>®</sup>, Inc. for its products, and no other warranties, whether expressed or implied, including implied warranties of merchantability and fitness for a particular purpose, shall apply. Should an Airmax<sup>®</sup>, Inc. product prove to be defective in materials or workmanship, the retail purchaser's sole remedy shall be repair or replacement of the product as expressly provided above.

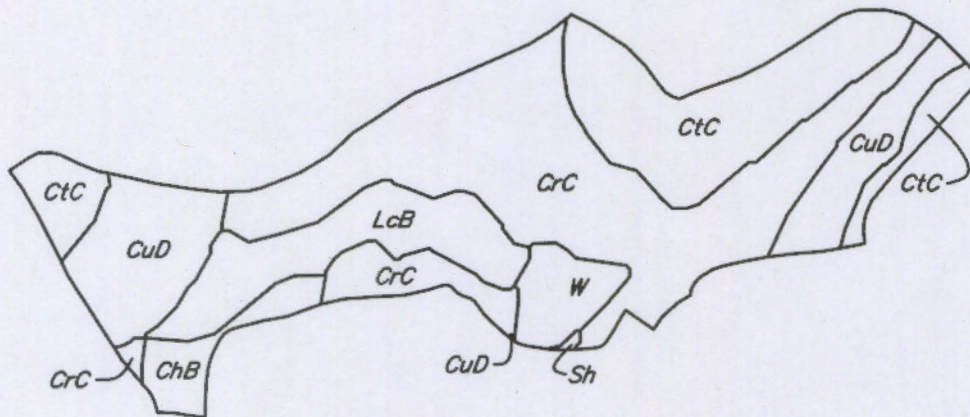
The manufacturer's warranty will begin from the dealer's original purchase date if the product is not registered. To register a product you are required to fill out the warranty form at [airmaxeco.com/warranty](http://airmaxeco.com/warranty). Warranty registration must be submitted directly to Airmax within 30 days of the end-users purchase date. When making warranty claims end-users may be required to supply their proof of purchase.



RECEIVED  
JUL 15 2016  
TOWN OF PLYMOUTH  
CONSERVATION BOARD

# WEISE POND DRAINAGE ANALYSIS RAINFALL DEPTH DETERMINATION

2/2



TOTAL WATERSHED AREA = 1,284,509 SQ. FT. = 29.5 ACRES

COVER DESCRIPTION = WOODS-GRASS COMBINATION, GOOD CONDITION

ChB (B) = 51,650 SF x 58 = 2,995,700

CrC (B) = 525,811 SF x 58 = 30,497,038

CrC (C) = 293,542 SF x 72 = 21,135,024

CuD (C) = 202,526 SF x 72 = 14,581,872

LcB (C) = 154,038 SF x 72 = 11,090,736

ShB (D) = 1,795 SF x 79 = 141,805

COVER DESCRIPTION = WATER SURFACE (IMPERVIOUS)

W = 55,147 x 98 = 5,404,308

WEIGHTED CURVE NUMBER = 67

VOLUME OF POND TO BE FILLED

283,594 - 6,001 = 277,593 CU. FT.

RUNOFF DEPTH REQUIRED TO FILL POND

277,593 CF / 1,284,509 SF = 0.2161' = 2.593"

RAINFALL DEPTH REQUIRED TO PRODUCE REQUIRED RUNOFF DEPTH

RAINFALL DEPTH INTERPOLATION

RAINFALL	CN=65	CN=67	CN=70
6.0"	2.35"	2.534"	2.81"
6.1"		2.611"	
7.0"	3.10"	3.308"	3.62"

JULY, AUGUST, SEPTEMBER AND OCTOBER EACH AVERAGE ABOUT 4.75" OF RAINFALL.

THEREFORE, THE POND SHOULD TAKE ABOUT 5 WEEKS TO FILL TO CAPACITY.

THIS IS NOT CONSIDERING THE GROUNDWATER SPRING CONTRIBUTION, WHICH THE POND HAS.

## SOILS LEGEND

Map Symbol	Hydrologic Group	Soil Name
ChB	B	CHARLTON loam, 2-8% Slopes
CrC	B	CHARLTON-CHATFIELD complex, rolling, very rocky
CtC	B/C/D	CHATFIELD-HOLLIS-ROCK outcrop complex, rolling
CuD	B/C/D	CHATFIELD-HOLLIS-ROCK outcrop complex, hilly
LcB	C	LEICESTER loam, 3-8% Slopes, stony
Sh	D	SUN loam
W	-	WATER

— = Soil delineation (boundary) lines

Soils classifications and delineated lines have been derived from U.S. Department of Agriculture, Soil Conservation Service "Soil Survey of Putnam & Westchester Counties, New York" issued September 1994.





# Town of Philipstown

Code Enforcement Office  
238 Main Street, PO Box 155  
Cold Spring, NY 10516

Office (845) 265- 5202 Fax (845) 265-2687

RECEIVED  
JUN 28 2016  
K

## OWNER CONSENT & AUTHORIZED AGENT FORM

Date: 6/27/2016

I, Lakeisha Esan, residing at  
Owner

66 Highland Drive, Garrison, NY 10524 do hereby authorize  
Mailing Address, being the same as Putnam County Tax Records

Martin Friedman, residing at  
Authorized Agent

66 Highland Drive Garrison, NY 10524 to act as my agent in  
Authorized Agent Resident Mailing Address

securing permits in the Town of Philipstown at the following location;

66 Highland Drive, Garrison, NY 10524 TM# 90.08-2-41  
Street Address and Tax Map Number

I, as owner of this property, understand that I am responsible for any information and work submitted and performed by my agent. I further understand that each time my agent applies for a permit, that he/she must submit a new authorization form to the Town of Philipstown.

Martin Friedman (914) 548-5123  
Authorized Agent's signature phone #

[Signature] (914) 310-3779  
Property Owner or Corporate Officers signature phone #

State of New York  
County of Westchester

The foregoing instrument was acknowledged before me this 28<sup>th</sup> day of June, 2016  
By (Owner's name) Lakeisha Esan, who is personally known to me or as identification  
shown: Drivers License  
Type of Identification

Notary Public Signature: [Signature]  
Printed Name of Notary: Richard Nappi Jr.  
My commission expires: May 2nd, 2020

Commission # 01NAG341247

RICHARD NAPPI JR.  
Notary Public - State of New York  
NO. 01NAG341247  
Qualified in Putnam County  
My Commission Expires May 2, 2020

APPLICATION FOR WETLANDS PERMIT

**Note to Applicant:**

Submit the completed application to the appropriate permitting authority. The application for Wetlands Permit should be submitted simultaneously with any related application (e.g., subdivision approval, site plan approval, Special Use Permit, etc.), being made to the permitting authority.

(Office Use Only)

Application # \_\_\_\_\_

Permitting Authority \_\_\_\_\_

Received by: \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_ Conservation Board

Fee \_\_\_\_\_

\_\_\_\_\_ Wetlands Inspector

**RECEIVED**  
JUN 27 2016  
BY: *h*

Pursuant to Chapter 93 of the Code of the Town of Philipstown, entitled "Freshwater Wetlands and Watercourse Law of the Town of Philipstown" (Wetlands Law), the undersigned hereby applies for a Wetlands Permit to conduct a regulated activity in a controlled area.

1. Owner: Name: Lekwuk Essay

Address: 66 Highland Drive, Garrison, N.Y. 10524

Telephone: 914 310 3779

If Corporation, give names of officers:

Mailing Address: \_\_\_\_\_

2. Name of Agent (must have letter of permission from property owner.) Martin Friedman  
(Applicant must be owner of the land. The Application may be managed an authorized agent of such person.)

Mailing Address: 66 Highland Drive, Garrison, N.Y. 10524

Telephone: 914 548 5123

3. Location of Proposed Activity:

66 Highland Dr. Garrison

Tax Map #: # 90.08-2-41

Square footage of Controlled Wetland Area Affected:

1550 (Buffer)

Square footage of soil disturbed by the entire project: 1550

4. Type of Activity: (See list of regulated activities)

Renovation and expansion of existing docks with installation of new footings

5. Other permit(s) required and agency or agencies responsible for granting such permits such as but not limited to P.C.B.O.H, N.Y.D.E.C, Army Core of Engineers, EPA, DOT, Building Dept. Planning Board, and Z.B.A.

A permit from the Building Dept will be required

6. Each copy of this application shall be accompanied by:

- a. A detailed description of the proposed activity and a comparison of the activity to the criteria for approval specified in §93-8 of the Wetlands Law. (See below)
- b. A completed short form environmental assessment form (*included in the application folder*)
- c. A map prepared by a licensed surveyor, landscape architect or engineer showing:
  1. The controlled area(s) wetland buffer zone 100 feet from the edge of any wetlands, lakes, ponds or streams on the site;
  2. Any wetland or watercourse therein and the location thereof;
  3. The location, extent, and nature of the proposed activity.
- D. The names of claimants of water rights in the wetland or watercourse of whom the applicant has record notice and the names and addresses of all owners of record of properties abutting and directly across from the proposed activity as shown on the latest tax record.

(Note: Any map, plat or plan showing the above information that is required to be submitted for any other permit or approval in connection with the regulated activity, and that is acceptable to the Permitting Authority, may be used.)

Date:

6/27/2016

Signature of Applicant:

Mark Friedman

# **Short Environmental Assessment Form** **Part 1 - Project Information**

**RECEIVED**  
 JUN 27 2016

## **Instructions for Completing**

BY: .....

**Part 1 - Project Information.** The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

<b>Part 1 - Project and Sponsor Information</b>			
Name of Action or Project: <i>Home / Deck renovation - expansion</i>			
Project Location (describe, and attach a location map): <i>66 Highland Drive, Garrison, NY</i>			
Brief Description of Proposed Action: <i>Expansion of existing decks with additional lower level. New footings throughout deck area</i>			
Name of Applicant or Sponsor: <i>Martin Friedman</i>		Telephone: <i>914 548 5123</i>	
		E-Mail: <i>mmdcg1@yahoo.com</i>	
Address: <i>66 Highland Dr</i>			
City/PO: <i>Garrison</i>		State: <i>NY</i>	Zip Code: <i>10524</i>
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?			NO YES
If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency?			NO YES
If Yes, list agency(s) name and permit or approval:			<input checked="" type="checkbox"/> <input type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		<i>1.41</i> acres	
b. Total acreage to be physically disturbed?		_____ acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<i>1.41</i> acres	
4. Check all land uses that occur on, adjoining and near the proposed action.			
9Urban    9Rural (non-agriculture)    9Industrial    9Commercial    9Residential (suburban) <input checked="" type="checkbox"/> 9Forest    9Agriculture    9Aquatic    9Other (specify): _____ 9Parkland			



<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)?</p> <p>If Yes, explain purpose and size: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p>✓</p>	<p>YES</p>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p>✓</p>	<p>YES</p>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?</p> <p>If Yes, describe: _____</p> <p>_____</p> <p>_____</p>	<p>NO</p> <p>✓</p>	<p>YES</p>
<p><b>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</b></p> <p>Applicant/sponsor name: <u>Martin Friedman</u> Date: <u>6/27/2016</u></p> <p>Signature: <u>[Signature]</u></p>		

Martin Friedman  
66 Highland Drive  
Garrison, NY 10524

RECEIVED  
JUN 27 2016  
BY:.....

6/27/2016

Philipstown Conservation Board  
238 Main Street  
Cold Spring, NY 10516

Re: Wetland Permit Application  
66 Highland Drive, Garrison, NY  
Tax Map #90.08-2-41

In the affected area, we are proposing to expand our existing decks as well as to add a lower level of deck. This will require some excavation to install the 27 required footings (Overall). Silt fencing will be put in place prior to digging (noted on page A-1) and will remain until all backfilling, stabilization and construction is complete.

This activity will not have a substantial adverse effect on the buffer area or on the wetland nearby.

We will not be changing or inhibiting any natural channels or watercourse. We will not be degrading or polluting any waters.

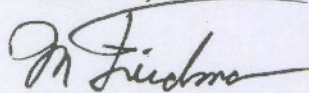
This activity will not increase the potential for flooding.

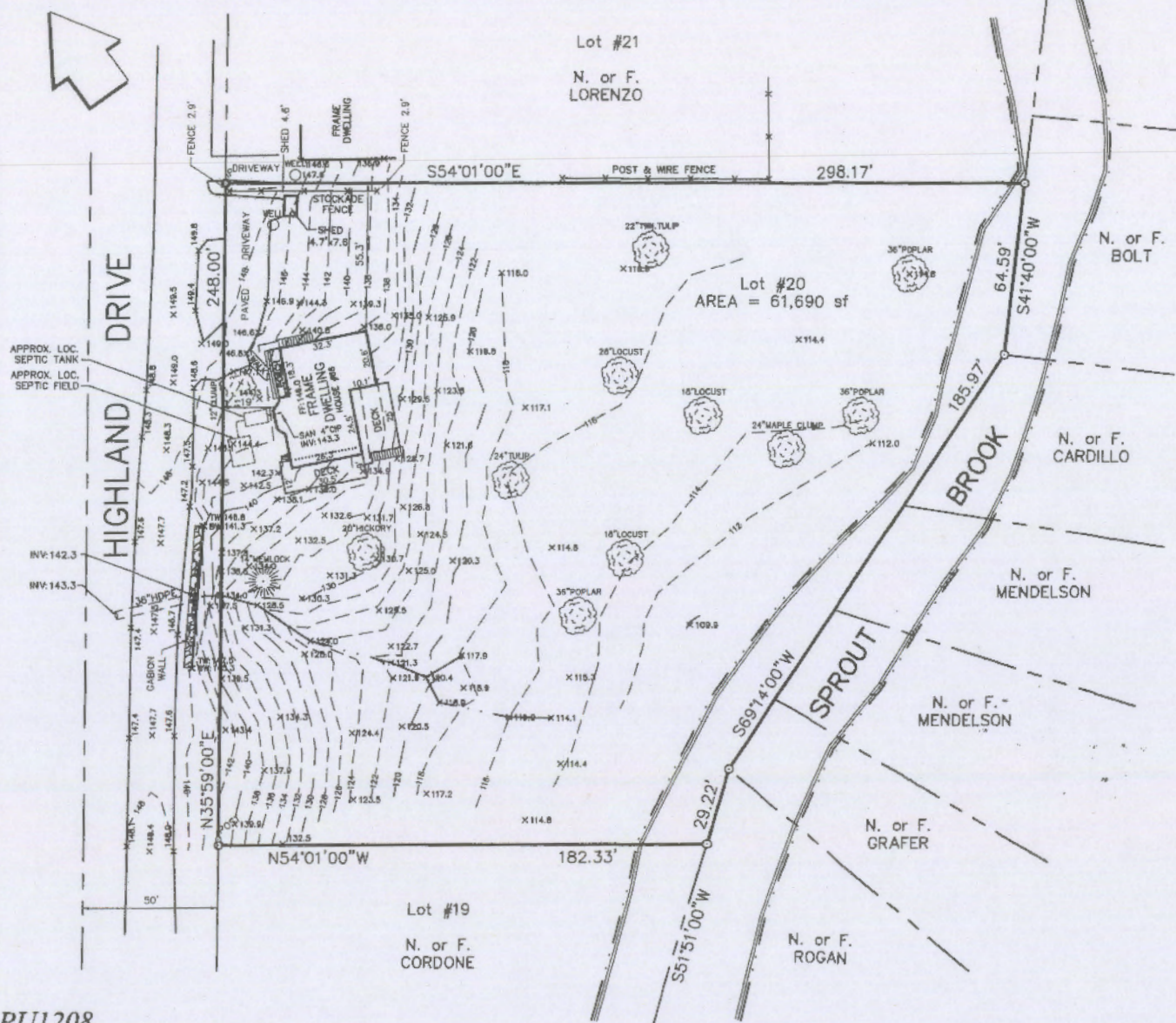
The silt fence will control erosion during construction. Landscape fabric and stone will be in place below decks after construction to mitigate any potential future erosion.

This is the best, most practical placement for the expansion.

Please feel free to contact me at 914 548 5123 if any additional information is required.

Thank You,

  
Martin Friedman



Title # ST-P-426040

Topography  
Land Survey  
For

Eq

LAKEISHA T. ESAU

GARRISON

Town of Philipstown Putnam County, NY

Scale: 1" = 40'                      Area = 1.41 Ac.

October 15, 2014

REVISION #1: November 17, 2015 - Added Topographic Survey

Tax Lot Designation Sect. 90.08 Blk. 2 Lot 41

Reference: Map entitled "MAP 10 OF CONTINENTAL VILLAGE" filed in the Putnam County Clerks Office March 7, 1950 as map #372-F.

Certified to:

- Lakeisha T. Esau.
- Stewart Title Insurance Company.
- TitleVest Agency, Inc.

Certifications indicated hereon signify that this survey was prepared in accordance with the existing code of practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors. Said certification shall run only to the person for whom the survey is prepared, and on his behalf to the title company, governmental agency and lending institution listed hereon, and to the assignees of the lending institution. Certifications are not transferable to additional institutions or subsequent owners.

## NOTES:

Topography shown hereon is based on a field survey completed by this office on October 21, 2015, 2 foot contour interval, and is intended to cover only a portion of the parcel as shown.



RECEIVED  
JUN 27 2016

Lic. 49162

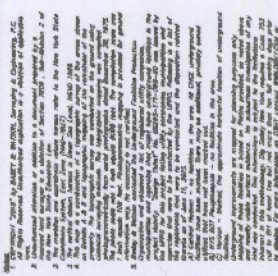
Robert E. Sorace, PLS  
155 South Main Street  
New City, NY 10956  
845-638-1498

SHEET 1 OF 2  
TOPOGRAPHIC MAP & SURVEY  
PREPARED FOR  
**ROBERT & LAUREN VESEL BRESNAN**  
STATE IN THE  
**TOWN OF PHILIPSTOWN**  
PUTNAM COUNTY

SCALE 1 in. = 30 ft. NEW YORK  
GRAPHIC SCALE  
JUNE 4, 2015

100 0 100 200 300 400 500 600 700 800 900 1000  
1 in. = 300 ft.

We hereby certify that the topographic survey shown on this map was made in accordance with the provisions of the State Survey Law of 1908, and that the same is complete for use on June 4, 2015, and that the same is correct and true.



Prepared for:  
Robert Bresnan and Lauren Versel  
31 Nelson Lane  
Garrison, NY 10524

Invasive Species Management Plan  
For  
31 Nelson Lane, Garrison NY



#### Site Description

The property at 31 Nelson lane is an approximate 10.8 acre parcel. The focus of this plan lies on the five acre meadow, its edges and a 0.5 acre wooded section. The remainder of the property is comprised of developed residential space or maintained lawn and landscaping.

Several non-native invasive species were identified on site. The species list (see below) is comprised of many highly invasive species, some of which are considered widespread in the region and site-management is typically considered only when attempting to reclaim the land for restoration of native plant communities. This document prioritizes and outlines plans for the management of species that are not widespread in the region (Japanese Angelica Tree), that influence deer tick populations (Japanese Barberry and other non-native shrubs) and that will impact the meadow restoration (Black Swallow-wort and Japanese Stiltgrass).

The meadow is actively hayed, a practice that has suppressed several invasive plant species that are actively growing in the area and several species that likely have seeds present in the area. This plan presents management methods for the meadow area that are compatible with both haying and meadow restoration.

#### Environmental and permitting factors

The meadow has been delineated as a wet-meadow and as such any herbicide applications within the meadow require permitting from the Town of Philipstown. Activities outlined in this plan will not require permitting from State or Federal Agencies.



### Species List

Common Name	Scientific Name	NYS Invasiveness Rank
Black Swallow-wort	<i>Cynanchum louiseae</i>	VH
Burning Bush	<i>Euonymus alatus</i>	VH
Common/European Privet	<i>Ligustrum sp.</i>	M-H
Elongate Hemlock Scale	<i>Fiorina externa</i>	Insects are not ranked
Garlic Mustard	<i>Alliaria petiolata</i>	VH
Hemlock Woolly Adelgid	<i>Adelgus tsugae</i>	Insects are not ranked
Japanese Angelica Tree	<i>Aralia elata</i>	VH
Japanese Barberry	<i>Berberis thunbergii</i>	VH
Japanese Stiltgrass	<i>Microstegium vimineum</i>	VH
Multiflora Rose	<i>Rosa multiflora</i>	VH
Norway Maple	<i>Acer platanoides</i>	VH
Wineberry	<i>Rubus phoenicolasius</i>	VH




This list was developed on a visit September 3<sup>rd</sup> 2015. Other species may be present that had been mown or senesced for the season. Some species that are likely to have been suppressed by haying/mowing are; Canada Thistle (*Cirsium arvense*), Common Mugwort (*Artemisia vulgaris*), and knapweeds (*Centaurea sp.*).

**Project Map**

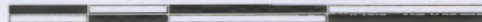
**Project Area**  
**31 Nelson Lane, Garrison NY**



Parcel Data Source; Putnam County GIS. Orthophoto Source; NYSGIS Clearinghouse

-  Invasive Shrub Area
-  Black Swallow-wort Area
-  Philipstown Parcels

200 0 200 400 Feet



Map Created 2015: Copyright Trillium ISM, INC

**Meadow Management:**

Two species were identified within the meadow that present problems for meadow restoration and reduce the quality of the hay product; Black Swallow-wort and Japanese Stiltgrass. If a meadow restoration project is initiated and no control is exercised these species will outcompete native plantings and dominate the habitat. If haying is continued, both species will be suppressed by the cutting but will continue to spread. Additionally, without control these species will likely be moved to other locations by cutting equipment.

**Black Swallow-wort-**

This perennial vine exists throughout meadow in low density. Patches along and within edges are more dense and small, approximately 100-400 square feet. The challenge presented in managing a large area with low density is ensuring that all plants are treated. Follow-up visits after initial treatment are essential to ensuring complete control. The seeds of swallow-wort are persistent in the soil for approximately 5 years. In the years following initial treatment, seedling control becomes the primary concern and essential to ensuring additional seed bank introduction.

Currently black swallow-wort does not have a biocontrol available for use. Manual and mechanical methods have been found to have low efficacy due to the persistent rhizomes that are capable of regrowth when broken by digging tools. Chemical treatment is currently the most effective method for black swallow-wort control. Applications of post-emergent, broadleaf specific herbicide (triclopyr) will kill mature plants that are actively growing. Elimination of the plant from the site is possible after a minimum of 5 years of treatment assuming that no new seeds are introduced from neighboring areas.

Chemical control of Black swallow-wort throughout the area is recommended with the goal of patch eradication over a period of approximately five to seven years.

2015- Cutting suppression of seed pod development. Hand removal of mature seed pods in edge areas.

Completed

2016 – Application of triclopyr based product (5% Garlon 4 Ultra, EPA Reg No. 62719-527)

IF haying is stopped – Initial application in June on all Black Swallowwort stems with a follow-up application approximately three weeks later.

IF haying is continued – Initial application approximately four-six weeks after spring/early summer cutting with a follow-up application approximately three weeks later.

2017-2020– It may be expected that the majority of mature plants will not survive the preceding year's control activity, however existing seeds in the soil will germinate and require control. In each successive year the number of plants in the meadow will diminish, however given the large area the time to search for individual plants will remain high.

**Japanese Stiltgrass –**

This annual grass exists within the meadow and into forest edges in moderate to high density. Stiltgrass is an extremely challenging plant to manage. A highly morphologically plastic plant, stiltgrass is capable of rebounding from most manual and mechanical control methods and able to produce seed as a plant as small as 1" tall while capable of growing to six feet in height. Management options for stiltgrass include; early season torching, early season herbicide applications, late season weed-whipping and hand

pulling. If attempting complete elimination, highest efficacy is found when all tools are applied to continually reduce stem count throughout the season.

Complete elimination from the site is unlikely without significant investment and effort. Therefore suppression management methods are recommended that will keep populations reduced with minimum required investment. Mechanical control of Japanese stiltgrass is proposed in the area with the goal of suppression and patch density reduction. These suppression methods should occur on an annual basis.

#### **Meadow area - mown by others**

The areas of the meadow infested with stiltgrass should be mown in mid-august. At least one follow-up cutting, ~1 week after mowing, with string trimmers will be required to cut the stiltgrass to the ground. This cutting should leave no stem nodes above ground.

#### **Edges and forested area –**

Patches of stiltgrass in the edges and forested areas will be weed-whipped to the ground in mid-august, with two follow-up cuttings spaced approximately one week apart and one visit for hand-pulling un-cut stems.

#### **Other potential species -**

As noted above in the species list, several species are likely to emerge as the meadow restoration progresses. These will be treated as spot treatments when they emerge. Digging, seed collection, and herbicide spot treatments will all be employed depending on where the plant is in its life history when it is discovered

#### **Aralia elata (Japanese Angelica Tree):**

A small population of Aralia is growing in the forested area in the south-west corner of the property. This is a highly invasive tree. Flowers and seeds were collected on the initial site visit (9/3/15), bagged and left for disposal.

The trees should not be cut or dug up. These actions will result in vigorous vegetative re-sprouting. Basal bark application of triclopyr is an extremely effective control method for this plant.

2015 – Late fall, basal bark application of Pathfinder II (EPA Reg No. 62719-176)

Annual monitoring for new stems and follow-up applications as necessary depending on seed bank size and germination success rate. Monitoring may occur when Trillium is on-site for other management activities.

#### **Invasive Shrubs:**

Several species of invasive shrubs are growing throughout this management area. Trillium proposes to cut and apply Pathfinder II (EPA Reg. No. 62719-176) by cut-stump application.

2015-2016 – Winter cutting and cut-stump application.

Follow-up monitoring for re-growth and seed germination will be required to maintain control.

#### **Hemlock Woolly Adelgid and Elongate Hemlock Scale:**

These insects are present in the hemlocks along the eastern property boundary. Their populations are in low/moderate densities.



PO BOX 96  
Esopus, NY 12429  
NYSDEC Registered Business #15974

The neighbor sharing this property boundary indicated to Trillium that they have contracted with an arborist to treat these hemlocks. The nature of the control method is not known by Trillium at this time. While on-site for other control applications Trillium will monitor insect populations on these trees and recommend treatments as necessary.

#### **Other Non-Native Invasive Species**

Other invasive species on-site such as Wineberry and Garlic Mustard may be managed should the land-owner wish to initiate a plan that creates an invasive species prevention area.

#### **Notes –**

Unless otherwise noted, no other pesticide treatment may be exercised during the implementation of this plan. All records of any other herbicide use on the property during each management year shall be shared with Trillium ISM, INC immediately after their application in order to properly calculate the amount of herbicide allowed for control efforts.

All plants treated with herbicide shall not be cut for a minimum of 30 days to allow for herbicide translocation.

Monitoring for at least three years after survey efforts do not find any plants is required to confirm patch elimination.

All plant material will be left to dry or disposed of on-site, except any material bearing viable seeds which will be bagged, solarized for not less than 30 days on-site and taken to a landfill.

Prior to herbicide application, NYSDEC law requires all neighboring landowners within 100 feet of the treatment area be notified of the application. This is the responsibility of Trillium ISM, INC.

Trillium Invasive Species Management, INC only provides performance guarantees for patch elimination projects when a management plan is fully implemented by Trillium ISM, INC.

Sales Tax applies to all costs outlined in this document.

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