APPLICATION FOR INDIVIDUAL SECTION 401 WATER QUALITY CERTIFICATION

1. Applicant	Applicant Information			
1.1 Contact Person	Bob Harrington			
1.2 Company Name	Harrington Engineering, Inc.			
1.3 Mailing Address	**Street / PO Box:** PO Box 210	**City / Town:** N. Pomfret	**State:** VT	**Zip Code:** 05053
1.4 Email Address	HEInet@aol.com			
1.5 Phone Number	802-457-3151			
2. Representative	Consultant, engineer, or other representative that is responsible for filling out this application, if other than the applicant.			
2.1 Representative Name	Bob Harrington			
2.2 Representative Company Name	Harrington Engineering, Inc.			
2.3 Representative Address	**Street / PO Box:** PO Box 210	**City / Town:** N. Pomfret	**State:** VT	**Zip Code:** 05053
2.4 Representative Phone Number	802-457-3151			
2.5 Representative Email Address	HEInet@aol.com			
3. Landowner	If the applicant is not the landowner, please provide a list of all landowners owning property that is part of the project site.			
3.1 Landowner Name	James Barnes			
3.2 Landowner Company Name	Hermitage Inn Real Estate Holding Company, LLC			
3.3 Landowner Address	**Street / PO Box:** PO Box 2210	**City / Town:** W. Dover	**State:** VT	**Zip Code:** 05356
3.4 Landowner Phone Number/Email Address	860-521-3838 / jbarnes@hermitageclub.com			
4. Pre-Application Meeting	Have you had your meeting yet? The Department of Environmental Conservation strongly encourages applicants to schedule and attend a pre-application meeting with affected programs prior to submitting an application.			
	☒ Yes, the meeting was held on 5/7/2015. If you need to schedule a meeting, please call or email Megan McIntyre at 802-490-6110 or megan.mcintyre@state.vt.us.			

5.a Resource Proposed for Alteration:	5.b Type(s) of Proposed Alteration(s):
☒ Wetlands ☒ Stream / Rivers ☒ Lake / Pond / Reservoir Name of Resource(s) (Please use consistent ID#s throughout the application for identification of unnamed resources.	☒ Stream / River Crossing ☒ Utility Line or Linear Transportation Project ☒ Intake / Outfall Structure ☐ Stream or Wetland Restoration ☒ Wetland Fill / Excavation ☐ Dredging ☐ Launch Ramp ☐ Bank Stabilization ☐ Impoundment ☐ Other:

6. Additional Permits and Supporting Documents

6.1 Supporting Documents (Appendix I). Please list any additional Supporting Documents and attach to application labeled Appendix I. This should include, but not be limited to Memorandum of Understanding (MOU)'s with the Vermont Agency of Natural Resources (if applicable), applicable state and federal permits and permit applications, federal 404 permit application including alternatives analysis and mitigation package, site maps and plans, vegetation management plans, easement information, etc. Complete on an attached sheet if more room is needed. In the brief description column include page numbers for each appendix for quick reference. **Note, this section needs to be updated as supporting documents are updated.

Appendix	Document Title	Preparing Agent	Date of Last Revision	Brief Description
Appendix IA	Please See attached List			
Appendix IB				
Appendix IC				
Appendix ID				
Appendix IE				
Appendix IF				
Appendix IG				
Appendix IH				

7. Project Details

7.1 Project / Site Name	Hermitage Resortt
7.2 County or Counties	County or counties in which the project site is located. Windham
7.3 Town(s)	Town(s) in which the project site is located. Dover / Wilmington
7.4 Physical Address	911 street address, if available. 10 Gate House Road
7.5 Compass Directions & Road(s)	Compass direction of the project in relation to the road(s) or nearest intersection. Name the road(s) that the project is located on. West of Cold Brook Road - MTN
7.6 Geographic Features	Identify any distinguishing geographic features near project location site. Haystack Mountain

7.7 Geographical Location Points

Identify the meridian points of all project components. Attach a USGS topographic Site Location Map.

Project Components:	Latitude (decimal degrees, NAD83):	Longitude (decimal degrees, NAD83):
Mirro Lake	42.920049	-72.884994
Maintenance Building	42.924552	-72.895493

7.8 Project Description Summary

Give a short narrative summary describing what the project is.

This is a 10-year master plan to improve and expand Haystack Ski Area with associated residential and resort development. Construction will include snowmaking piping, snowmaking pond enlargement, new maintenance building, 550 residential units, new ski lift.The outdoor recreational activities include ski, snowmobiling, snowshoeing, skating, sleigh rides, and tubing, as well as summer activities: hiking, biking, boating, and ATV and UTV riding. All facilities are open to the public with limitations, since this is a private resort with 1500 memberships. Hermitage Club is a family orientated all-year recreational resort which will include multiple facilities. For more information please refer to Appendix 5 Exhibit 4.

7.9 Project Description Details

Give a more detailed narrative description of the project, including phasing and a list of specific project components.

The project include several residential components: Stag's leap, Rushing Creek Homes, Chamonix Village, Upper Mountain Trailside, and 3 hotels. For more information please refer to Appendix 5 Exhibit 4.

7.10 Project Purpose

Describe the project purpose.

The purpose of this project is to rehabilitate the existing ski area at Haystack Mountain and Hermitage Inn lands into a year-round resort, which will include ski lifts, adequate snow-making facilities, recreational trails, approximately 550 residential homes, new Club House and amenities. The project will bring vitality to the town and surrounding areas and create economic growth; thus, serving the region as a job-creator, local business booster and revenue creator for the local municipalities. Approximately 550 ski-in/ski-out residential units are proposed to offer residence to the members of the Hermitage Club, and allowing for an open recreational area supporting green lifestyle and minimizing motor vehicle commuting. For more information please refer to Appendix 5 Exhibit 4.

7.11 Total Project Acres

803 acres (608 acres owned, 195 acres leased).

7.12 Total Disturbed Area Associated with Project

Approximately 260 acres.

7.13 Site Slope Percent

Please provide the maximum slope percent. For linear projects, please provide the maximum and minimum slope percentage across the project.

Varies 0 to 25%

7.14 Physical Description of

Give a narrative description of the physical attributes of the project site.

Project Area	Mountainous terrain, headwaters, ski trails, forested, open.
7.15 Soil K-Factor(s)	0.10 to 0.49
7.16 Hydrologic Soil Group(s)	HSG A - 0.8% HSG B - 50.4% HSG C - 28.4% HSG D - 19.9%
7.17 Receiving Waters	Identify all surface waters within the major basins (including streams/rivers, wetlands, and lakes) that drain from the project, beginning with waters within the proposed project area and progressing downstream. If the waterbody does not have a formal name, a descriptive name should be provided (e.g. unnamed tributary of the Mad River). (There are 17 major watershed basins defined by VTDEC in: http://www.vtwaterquality.org/mapp/htm/mp_assessment.htm) Cold Brook tributaries to North Branch of Deerfield River. Oak Brook and Haystack Brook tributaries to Cold Brook.

7.18 Table 1: Watershed Area Summary from Project Area to Receiving Waters

Watershed(s)	Watershed Area (acres)	Disturbed Area (acres)	% Area Disturbed
Cold Brook(after confluence with Haystack Brook)	3040	260	6.6%

8. Cumulative Impacts: For help identifying environmental features regarding your property use the VTANR Natural Resources Atlas: http://www.anr.state.vt.us/dec/maps.htm.

8.1 Impervious Surface	Impervious surface % of property	Impervious surface square footage
	Existing 4% Build-out 7%	Existing approximately 31 acres Build-out approximately 55 acres
8.2 Land Use	Describe current and prior uses of the project property, including activities such as logging and agriculture or other uses that may have impacted water quality. Ski area and resort community since 1960's.	
8.3 Land Cover	Percent and type of change in land cover associated with the project relative to natural cover.	

	Hard surface from natural approximately 3% Open from forested (lawn, ski trails, meadow) approximately 10% Treatment Plant approximately 1%
If the Agency finds that additional information on the current condition of the receiving water(s) beyond what is available is needed to adequately assess potential impacts from the proposed activity, the applicant will be required to supply that information.	

Resource Descriptions	
9. Wetland Resources	
9.1 Type of Wetland(s)	Describe the wetland(s) in the project area including the total number of wetlands in the area, the square footage of each wetland, the number of Class II and III wetlands (according to the Vermont Wetland Rules). If more than two wetlands will be affected by the project, fill out Wetland Resource Table 2, Appendix II by clicking (here) (xlsx, 12kb). See attached Appendix Table 2
9.2 Wetland Pre-Project Cumulative Impacts	Describe any known pre-project cumulative impacts to wetlands from land use, agriculture, forestry, development, etc. See attached ACOE Wetland Summary Table #3
9.3 Wetlands Impacted	Describe the proposed impacts to the wetlands and buffer area (include impacts from fill, clearing, temporary trenching, etc.) See attached ACOE Wetland Summary Table #5 and attached engineering plan set for details.
9.4 Table 3: Wetland Impact Table	Fill out the Wetland Impact Table, Appendix III by clicking (here) (xlsx, 11kb)
9.5 Converted Wetlands	List the square footage of wetlands converted from one type of wetland to another. Example would be conversion of forested wetland to shrub wetland for power line right of way clearing. Submit table if needed as an appendix. The proposed project involves 0.86 acres of tree clearing in wetland resources. See attached ACOE Wetland Summary Table 5 for details.

10. Stream/River Resources

10.1 Streams/Rivers Impacted	Describe the perennial streams impacted by the project. SC#1 New Concrete Bridge w/ Open Bottom for roadway SC#2 Replace Ex. Culvert with Open Bottom Arch Culvert for Roadway, Trails SC#3 Replace Ex. Culvert with Open Bottom Arch Culvert for Hotel fill & Trail SC#4 Replace Ex. Culvert with Open Bottom Arch Culvert for Roadway SC#7 New Bridge Crossing for Hermitage Inn Lots SC#8 New Open Bottom Arch Culvert for Roadway SC#10 New Open Bottom Arch Culvert for Proposed Ski Trail SC#11 New Bridge Crossing for the Ratheau Lot SC#12 Cold Brook Withdrawal upgrades SC#13 Mirror Lake Expansion SC#15 Proposed Haystack Brook Withdrawa
10.2 Table 4: Stream/Rivers Impacted	Fill out the following table with perennial streams impacted by the project, Appendix IV by clicking (here) (xlsx, 12kb).

10.3 Table 5: Summary of Physical Impacts to Streams/Rivers

Proposed Stream Area Impacts

Project Component	Permanent (s.f.)	Permanent (acres)	Temporary (s.f.)	Temporary (acres)	Total (s.f.)	Total (acres)
SC#1	1,008	0.0231405	0	0	1,008	0.02314
SC#2	1,127	0.02587236	0	0	1,127	0.025872
SC#3	790	0.0181359	0	0	790	0.018136
SC#4	2,390	0.05486685	0	0	2,390	0.054867
SC#5	180	0.00413223	0	0	180	0.004132
SC#6	140	0.00321396	0	0	140	0.003214
SC#7	0	0	0	0	0	0
SC#8	0	0	0	0	0	0
SC#9	240	0.00550964	0	0	240	0.00551
SC#10	240	0.00550964	0	0	240	0.00551
SC#11	0	0	0	0	0	0
SC#12	1,050	0.02410468	0	0	1,050	0.024105
SC#13	420	0.00964187	0	0	420	0.009642
SC#14	2,190	0.05027548	0	0	2,190	0.050275
SC#15	0	0	0	0	0	0
Lower MTN Lift	0	0	0	0	0	0
MTN Coaster	0	0	0	0	0	0

Siegel Pond	68	0.00156107	0	0	68	0.001561

10.4 Stream / Rivers Pre-Project Cumulative Impacts	Describe any known pre-project cumulative impacts to streams and rivers from land use and development, etc. Streams and rivers in the area have been impacted by general development in the Deerfield Valley.
10.5 Impacts to the Geomorphic Condition and Geomorphic Sensitivity of the Stream	Describe using phase I & phase II stream geomorphic stream assessment protocols: Geomorphic condition means the degree of departure, if any, from the dimensions, pattern, and profile associated with the naturally stable channel that results from the unique set of natural stream processes or dynamic equilibrium conditions of a stream or river segment. Geomorphic sensitivity means the potential of a river, given its inherent characteristics and present geomorphic conditions, to be subject to a high rate of fluvial erosion and other river channel adjustments, including erosion, deposit of sediment, and flooding. Phase 1 and Phase 2 stream geomorphic assessments have not been conducted on the streams in the project area with the exception of all stream crossings as described earlier. Bear Creek Environmental conducts stream morphology assessments on all stream crossings and includes recommendations in all stream alteration designs and applications.
11. Physical, Chemical, & Biological Conditions. Include & attach all analysis in appendix I.	
11.1 Physical Water Conditions	Summarize the physical conditions of the waters the project impacts or discharges into, including, temperature regime, conductivity, pH, turbidity, suspended sediment, and substrate type. Document source of data, geo-referenced to sampling location. If data are from the Bio-monitoring Sites Layer or the DEC Watershed Data Portal on the VTANR Atlas http://www.anr.state.vt.us/dec/maps.htm, please reference specific station identification numbers. Data are also available at www.vtwaterquality.org/wqd_mgtplan/waterq_data.htm. Site specific data is not available. The State of Vermont has a biomonitoring site (BiMo502476) at the mouth of the Cold Brook. A WQMP has been approved by ANR and is being implemented for all streams within the project area.
11.2 Chemical Water Conditions	Summarize the chemical conditions of the waters the project impacts or discharges into, including, as available, total phosphorus and nitrogen, biochemical & chemical oxygen demand, hardness, metals, *E. coli*, and other data relevant to evaluation of the chemical condition of waters. If data are from the Bio-monitoring Sites Layer or the DEC Watershed Data Portal on the VTANR Atlas http://www.anr.state.vt.us/dec/maps.htm, please reference specific station identification numbers. Data are also available at www.vtwaterquality.org/wqd_mgtplan/waterq_data.htm.

	Site specific data is not available. The State of Vermont has a biomonitoring site (BiMo502476) at the mouth of the Cold Brook. Chemical water conditions are included in the approved WQMP for the project area.
11.3 Biological Water Conditions	Summarize the biological water conditions of the waters the project impacts or discharges into. If data are available, summarize biological condition in relation to DEC biological assessment endpoints as described by http://www.vtwaterquality.org/bass/htm/bs_biomon.htm. Document the occurrence or absence of aquatic rare, threatened, or endangered plant or animal species. If data are from the DEC Watershed Data Portal on the VTANR Atlas http://www.anr.state.vt.us/dec/maps.htm, please reference specific station identification numbers. Follow-up with the Fish & Wildlife Department's Natural Heritage Inventory (802-371-7333) if any such species are present.
	Site specific data is not available. The State of Vermont has a biomonitoring site (BiMo502476) at the mouth of the Cold Brook. Cold Brook Macroinvertebrate sampling on Cold Brook in Dover occurred at rivermile 0.1 in 1992, 1998, and 2004. The community integrity and health was found to be "good" in 1992 and 1998 and "excellent" in 2004. The State will be initiating water sampling at new locations within the project area in the summer and fall of 2015. Biological water conditions are also included in the approved WQMP for the project area.
12. Fish & Wildlife Resources	
12.1 Fisheries	
12.1.1 Fisheries Resource(s)	Provide a description of the existing fish resources within the waters that the project impacts or discharges into.
	The State of Vermont has a biomonitoring site (BiMo502476) at the mouth of the Cold Brook. The State will be initiating new sampling locations within the project area in the summer and fall of 2015. Fisheries monitoring is also included in the approved WQMP for this project.
12.1.2 Habitat	Are the fisheries within and downstream from the proposed project managed as warm water or cold water?
	Cold Water
12.1.3 Fisheries Affects & Minimization	Provide a description of the anticipated and other possible impacts of the proposed project on aquatic habitat, fish resources, and recreational fisheries and how those will be avoided or minimized.
	All existing crossings are being replaced with open channel streambeds. All existing and new stream crossing designs are being done by a stream morphologist working directly with an Engineer plus Vermont Stream Alteration Enginer and Vermont Fish & Wildlife.
12.2 Wildlife: For help identifying wildlife habitat, natural communities, and rare, threatened, or	

endangered species use the VTANR Natural Resources Atlas: http://www.anr.state.vt.us/dec/maps.htm.	
12.2.1 Habitat	Provide an assessment of wildlife habitat within the project area. This must include a description of the methods employed to identify, map, and assess the habitats. Include a map that depicts all the wildlife habitat resources of the area (e.g., deer wintering habitat, riparian habitat, floodplain forest natural communities, wetland types). Tina Scharf, MS, Consulting Wildlife Biologist, conducted a number of site visits on Haystack Mountain and its environs, including all the holdings of the Hermitage Club. Some of the assessments and surveys were made in 2005-6 for a report for the previous owners. All that information has been included in the present maps. Other site visits were conducted in 2012-2014; Tina was accompanied on a couple of site visits by VFWD biologist Forrest Hammond. Besides general wildlife habitat assessments, a survey of bear-scarred beeches (BSB) was conducted on all the sites thought to contain them. No deer wintering habitat was found on Hermitage Club/Haystack Mountain Ski Area lands. The two main upland habitats considered to be sensitive and/or critical are the BSB and the upper mountain above 3,000 feet altitude, where Bicknell's thrush are known to breed. The Bicknell's breeding habitat was confirmed by several surveys conducted in the 1990's and early 2000s by Pioneer Environmental and the University of Vermont. Ms. Scharf also observed a fledgling Bicknell's thrush on Haystack Mountain summit in August, 2005. All wetland and riparian habitats were surveyed and mapped by Arrowwood Environmental. These habitats, including individual BSB, are shown on Map TS003.
12.2.2 Natural Communities	Provide an assessment of significant natural communities within the project area. This must include a description of the methods employed to identify, map and assess the communities. Include a map that depicts the natural communities. Arrowwood Environmental conducted field assessments of the project area and determinted that there are no significant upland natural communities. Wetland communities are detailed in the wetland assessment
12.2.3 Rare, Threatened, and Endangered Species	Provide an assessment of rare, threatened, and endangered species within the project area. This must include a description of the methods employed to identify and map the locations of these rare species of plants and animals. Include a map that depicts the locations of these species. See RTE Plant Species Report dated 6/9/15 included in the ACOE 404 permit application
12.2.4 Wildlife Affects & Minimization	Provide a description of the anticipated and other possible impacts of the proposed project on the foregoing wildlife resources and how those will be avoided or minimized. Terrestrial (e. g. non-aquatic) significant wildlife habitats are a bear-scarred beech (BSB) stand north of the ski area; and Bicknell's thrush breeding habitat, which is above 3,000 feet altitude. The breeding season is generally agreed to be from mid-May to August 1st.To avoid and minimize impacts to the BSB, the Tage lift, which connects the Hermitage Inn with Haystack Ski Area, was moved to avoid direct impact. Also, the Hermitage Club is foregoing development of many housing lots within the BSB that were previously permitted in the 1970s. Most of the alternate housing lots have been sited as far from the edge of the BSB stand as possible. Impacts to the Bicknell's thrush breeding habitat will be avoided in several ways: no net loss of habitat to development, limits to construction during the breeding season (e.g., no building of the summit lift during breeding season), and limits to recreational activities such as mountain biking and ATV use above 3,000 feet altitude. Scenic chair lift rides may take place during the breeding season with the

	permission of the VFWD.

13. Fee	Pursuant to 3 V.S.A. § 2822(j)(30), use the following formula to calculate the certification fee: 1% of project cost with a minimum of $200.00 and a maximum of $ 20,000.00. Project Cost: $79.4M Total Enclosed: $20,000.00 ☐ Exempt Please make check or money order payable to "Treasurer – State of Vermont"

Signature (original signature required)	I certify under penalty of law that this document and all attachments were prepared at my request or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person who manages the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I recognize that by signing this application, I am giving consent for the Commissioner of the Department, or a duly authorized representative, at reasonable times and upon presentation of credentials, to enter upon and inspect the subject property to verify information in and process the Section 401 application.	
	X_____	Date:
Signature details	Please Print Name: James Barnes	Signor Contact Phone# and Email: jbarnes@hermitageclub.com

Administrative Information - Official Use Only

Date Received	Project #	Fee Received	Application Administratively Complete:	Application Technically Complete:
		Yes ☐ No ☐ Amount Received: $	Yes ☐ No ☐ Additional Information Requested on:	Yes ☐ No ☐ Additional Information Requested on: