

**Lake Encroachment Individual Permit**  
**Under 29 V.S.A. § 401 et seq.**



Permittee Information	
Permittee(s): Vermont Division for Historic Preservation & the Lake Champlain Transportation Company  Waterbody: Lake Champlain  Permit Number: 3027-LEP	Project Description: M/V Adirondack Artificial Reef  Project Location: Outer Harbor, Burlington Bay, Burlington  Coordinates: 44.480278, -73.247778
a. Specific Conditions	
<p>Based upon the findings contained in this permit, it is the decision of the Department of Environmental Conservation (Department) that the project described herein, as set forth in the following findings and in the application on file with the Department, complies with the criteria of 29 V.S.A. § 405 and is consistent with the public trust doctrine, and is hereby approved under the following conditions.</p> <p>The artificial reef project shall be carried out in accordance with the Approved Application, the additional permit terms and conditions contained herein, and such amendments as may be approved in writing by the Department, and the following specific conditions:</p> <ol style="list-style-type: none"> <li>1. Documentation of clean-up activities performed in accordance with <i>Appendix E. National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs</i> and <i>Appendix F. Ferry M/V Adirondack Reefing Project Vessel Preparation</i> in the Approved Application shall be submitted to the Department for review prior to sinking. Sinking of the M/V Adirondack may only proceed after Department review and written approval of those clean-up activities.</li> <li>2. The Department shall be notified at least two weeks in advance of the scheduled sinking date of the M/V Adirondack. On the scheduled day of sinking, the Department shall be notified that the sinking will proceed as scheduled. If the sinking is postponed for any reason, the Department shall be notified of the new proposed sinking date.</li> <li>3. The M/V Adirondack shall be sunk in the location as identified in <i>Appendix J. M/V Adirondack Anchoring System Drawing</i> in the Approved Application, or as approved in writing by the Department.</li> <li>4. On the day the M/V Adirondack is sunk, the sinking site shall be surveyed for floating debris. All floating debris originating from the M/V Adirondack shall be removed from the waterbody.</li> <li>5. Upon sinking, the M/V Adirondack artificial reef shall become a part of the Vermont Underwater Historic Preserve, be managed to promote the public good and public trust uses of the water, and the permit shall transfer solely to the Vermont Division for Historic Preservation.</li> <li>6. After the M/V Adirondack has sunk, an inspection dive shall be made to assess the final position of the artificial reef. Results of this inspection shall be sent to the Department within one month of completing the inspection.</li> <li>7. Temporary anchoring shall be removed from the water once it is no longer required for the project. The Department shall be notified when temporary anchoring has been removed from the water.</li> </ol>	
b. Standard Conditions	
<ol style="list-style-type: none"> <li>1. <u>Permit modification.</u> Permit modifications shall be reviewed in accordance with 10 V.S.A. Chapter 170 and any rules adopted thereunder.</li> <li>2. <u>Nuisance species spread prevention.</u> Prior to placing any equipment (e.g., boat, trailer, vehicle, or gear) that has been in or on any other waterbody into public waters for project implementation/construction, the permittee shall decontaminate the equipment in compliance with the <a href="#">Voluntary Guidelines to Prevent the</a></li> </ol>	

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[Spread of Aquatic Invasive Species through Recreational Activities, Aquatic Nuisance Species Task Force, November 2013.](#)

- 3. Erosion prevention and sediment control.** Erosion prevention and sediment control best management practices shall be utilized and maintained to prevent erosion and control sediment to minimize and prevent adverse impacts to water quality during construction of the authorized project. In addition, the permittee shall comply with the following conditions:

  - A.** Areas above mean water level disturbed by the construction activities shall be protected from erosion through the application of seed and mulch upon completion of construction and shall be temporarily mulched during construction in advance of precipitation events.
  - B.** Work shall stop immediately if visible turbidity occurs in the water as a result of construction activities and shall not recommence until the source of the turbidity is identified and corrected.
- 4. Heavy equipment operation.** Heavy equipment shall work from shore and shall not work lakeward of mean water level unless approved in writing by the Department, and/or specified in the Approved Application.
- 5. Spill prevention.** Fuel and lubricants from equipment shall not be discharged into the water. Any spills shall be managed in accordance with all applicable local, state, and federal regulations.
- 6. Waste management.** Any pieces of concrete, stone, construction debris, or other temporary project materials (e.g., sandbags, barriers) deposited below mean water level during project implementation/construction shall be removed from the water and disposed of properly, in accordance with all applicable local, state, and federal regulations.
- 7. Compliance with other regulations.** This permit does not relieve the permittee from obtaining all other approvals and permits prior to commencement of activity or from the responsibility to comply with any other applicable federal, state, and local laws or regulations, including but not limited to the Vermont Solid Waste Management Rules, the Vermont Wetland Rules, and the Vermont Shoreland Protection Act.
- 8. Transfer of permit.** Prior to transferring ownership over the encroachment authorized by this permit or the portion of property associated with the encroachment authorized by this permit, the permittee shall give the Department notice of the transfer. The notice shall include the name and contact information for the current permittee and prospective permittee, the proposed date of permit transfer, and a statement signed by the prospective permittee stating that he/she has read and is familiar with this permit and agrees to comply with and be bound by its terms and conditions.
- 9. Access to property.** The permittee shall allow the Commissioner of the Department, or a duly authorized representative, at reasonable times and upon presentation of credentials, to enter upon permittee's property, or to otherwise access the authorized encroachment, if necessary, to inspect the project to determine compliance with this permit.
- 10. Legal responsibilities for damages.** The Department, by issuing this individual permit, accepts no legal responsibility for any damage direct or indirect of whatever nature and by whoever suffered arising out of the approved project.
- 11. Rights and Privileges.** This permit does not authorize any damage to private property or invasion of private rights or the violation of federal, state, or local laws or regulations. In addition, this permit does not convey any title or interest to the lands lying under public waters or waters affected.
- 12. Duty to comply and enforcement.** The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance shall constitute a violation of 29 V.S.A. Chapter 11 and may be cause for an enforcement action and revocation, modification, or suspension of this permit. It shall not be a defense for

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the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

13. **Reopener.** If, after granting this permit, the Department determines that there is evidence indicating that an authorized activity does not comply with the requirements of 29 V.S.A. Chapter 11, the Department may reopen and modify this permit to include different limitations and requirements.
14. **Revocation.** This permit is subject to the conditions and specifications herein and may be suspended or revoked at any time for cause including: failure by the permittee to disclose all relevant facts during the application process which were known at that time; misrepresentation of any relevant fact at any time; non-compliance with the conditions and specifications of the permit; or a change in the factors associated with the encroachment's effect on the public trust or public good so that on balance the Department finds that the encroachment adversely affects the public trust or public good.
15. **Severance.** The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
16. **Appeals.** Pursuant to 10 V.S.A. Chapter 220 and the Vermont Rules for Environmental Court Proceedings, any appeal of this decision must be filed with the clerk of the Environmental Division of the Superior Court within 30 days of the date of the decision. An aggrieved person shall not appeal this permit unless the person submitted to the Secretary a written comment during the applicable public comment period or an oral comment at the public meeting conducted by the Secretary. Absent a determination of the Environmental judge to the contrary, an aggrieved person may only appeal issues related to the person's comments to the Secretary as prescribed by 10 V.S.A. § 8504(d)(2). The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Division; and must be signed by the appellant or the appellant's attorney. The appeal must give the address or location and description of the property, project, or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings available at [www.vermontjudiciary.org](http://www.vermontjudiciary.org). The address for the Environmental Division is: 32 Cherry Street; 2nd Floor, Suite 303; Burlington, VT 05401 Telephone #: 802-951-1740.

**c. Findings**

1. **Jurisdiction - 29 V.S.A. § 403:** Lake Champlain in Burlington is a public water of the state of Vermont as defined in 29 V.S.A. § 402. The project encroaches beyond the shoreline as delineated by the mean water level of Lake Champlain, 95.5 feet National Geodetic Vertical Datum (NGVD) 1929. Therefore, the Department has jurisdiction under 29 V.S.A. Chapter 11.
2. **Application Receipt and Review - 29 V.S.A. § 404:** On February 14, 2020, the Department received an application from the Vermont Division for Historic Preservation and the Lake Champlain Transportation Company (permittees), pursuant to the provisions of 29 V.S.A. Chapter 11, for authorization to create an artificial reef by sinking the M/V Adirondack located within the public waters of Lake Champlain, Burlington.
3. **Public Notification - 29 V.S.A. § 405(a):** Upon receipt of the application, the Department proceeded to process and review the application in accordance with 10 V.S.A. Chapter 170.
4. **Background; Lake Encroachment Permit History:** None

5. Project Description: The project involves the sinking of the ferry M/V Adirondack in the outer harbor of Burlington Bay, Lake Champlain to create an artificial reef. Upon sinking, the M/V Adirondack will become the tenth site of Vermont's Underwater Historic Preserve (UHP) and ownership of the artificial reef will transfer from the Lake Champlain Transportation Company to the Vermont Division for Historic Preservation. The M/V Adirondack is 152 feet long, 42 feet in beam, and 43 feet from the keel to the top of the smokestack.

*Preparations for sinking*

To ensure the vessel is in a condition that is suitable for creating an artificial reef, the vessel will be prepared in accordance with the U.S. Environmental Protection Agency's and U.S. Maritime Administration's National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs, Appendix E in the Approved Application. This preparation includes hazardous waste mitigation, ballasting, and preparing flooding access and air egress holes to ensure the vessel sinks upright, at the intended location. Documentation of preparing the vessel for sinking in accordance with that guidance will be provided to the Department for review and approval prior to sinking. The project may proceed as planned upon Department approval of this documentation.

*Sinking location*

The vessel is to be sunk in the outer harbor of Burlington Bay, Lake Champlain, at coordinates 44.480278, -73.247778. The location chosen to sink the vessel is 68 feet deep at 93.5 feet NGVD. At that depth, the smokestack will be 25 feet below the surface of the water. This location was chosen as the site because it is mostly flat (2% slope); it is suitably protected from lake forces (e.g., prevailing winds and underwater currents) that may impact recreational opportunities at the site; the depth will allow for recreational divers to access the site; and it is not anticipated that navigation will be negatively impacted by this proposed project. The site was chosen to minimize adverse impacts to water quality, fish and wildlife habitat, and navigation and maximize benefits for recreational use.

*Sinking procedure*

Prior to sinking, four to six 3,500-pound concrete temporary anchor blocks will be deployed at the sinking location in a star pattern with 200 to 300 feet of temporary anchor line. On the day of sinking, the vessel will be attached to these anchor lines to keep the vessel on station and in the correct upright orientation during the sinking process. To initiate the sinking process, the vessel will be flooded by opening its four sea valves to let water flow in.

*Post sinking*

On the day the M/V Adirondack is sunk, the sinking site will be surveyed for floating debris. All floating debris originating from the M/V Adirondack will be removed from the waterbody. After the M/V Adirondack has sunk, an inspection dive will be made to assess the final position of the M/V Adirondack to ensure the sinking occurred as planned. All temporary anchoring will be removed from the water once it is no longer required for the project.

Once sunk, the M/V Adirondack artificial reef will become a part of the UHP. This new UHP site will be managed to promote the public good and public trust uses of the water. This includes providing an additional location for recreational diving (including the use of remote operated vehicles), providing a location for fishing, providing a location for potential environmental research, and the potential addition of onshore signage to explain the maritime cultural resource that is the UHP to the general public.

6. Project Purpose: The purpose of the project is to create an additional site for Vermont's UHP, which will increase recreational diving opportunities, provide unique underwater habitat that may be utilized for fishing or environmental research, and preserve a piece of Lake Champlain maritime history.

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7. Effect of Encroachment – Whether Excessive for Stated Purpose: The project purpose is to both create a new dive site and preserve the ferry Adirondack as part of Vermont’s Underwater Historic Preserve, which is achieved by sinking the ferry at the location identified in this permit. This is the first purposefully created artificial reef in public waters of the State to achieve this project purpose. Provided this one artificial reef adequately supports public good uses, primarily recreational diving and historic preservation, the creation of additional artificial reefs within public waters of the State for a similar purpose may be considered excessive.
8. Effect of Encroachment – Less Intrusive Feasible Alternatives: Various alternatives regarding the fate of the M/V Adirondack were considered. Alternatives considered included creating a static site on land, creating a static site on the water, scrapping the vessel, or selling the vessel for continued use elsewhere. While there are various alternatives, sinking the M/V Adirondack in accordance with the conditions of this permit is considered a less intrusive feasible alternative when considering the project purpose.
9. Effect of Encroachment – Measures to Reduce Impacts on Public Resources: Numerous measures have and will be implemented to reduce the impact on the public resource. This includes:
  - A. The M/V Adirondack will be prepared for sinking in accordance with the U.S. Environmental Protection Agency’s and U.S. Maritime Administration’s *National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs, Appendix E* of the Approved Application.
  - B. Once the M/V Adirondack is sunk, the temporary anchoring system, including anchor blocks and anchor line, used to assist with the sinking will be removed from the water.
  - C. The sinking location was chosen to be at a depth that would eliminate any potential impact to navigation.
  - D. The sinking location will be patrolled immediately after sinking to collect any floating debris.
  - E. The buoys used to identify this UHP site will be mounted to the artificial reef itself rather than using additional mooring blocks on the lake bottom.
10. Placement of Fill: Four to six 3,500-pound concrete anchor blocks will be temporarily deployed at the sinking location to assist with sinking the M/V Adirondack. Once sunk, this temporary anchoring will be removed from the water.
11. Effects on Water Quality - 29 V.S.A. § 405(b): Prior to sinking, the M/V Adirondack will be prepared in accordance with the U.S. Environmental Protection Agency’s and U.S. Maritime Administration’s *National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs, Appendix E* of the Approved Application. The purpose of following the best management practices is to provide clean-up performance goals and the methods for achieving those goals. Materials of concern identified in the best management practices include oil/fuel, asbestos, polychlorinated biphenyls (PCBs), paint, solids/debris/floatables, and other materials of environmental concern. Prior to sinking, the Department will review how the permittee implemented these best management practices to ensure the vessel is in a condition that is suitable for creating an artificial reef. The M/V Adirondack may only be sunk upon final Department review and approval of the permittee’s compliance with the best management practices. Provided the best management practices are followed and all clean-up goals are met, the project is not anticipated to have an adverse impact on water quality.

The following is the list of hazardous materials identified in the best management practices, a description of how those hazardous materials are associated with the M/V Adirondack, the measures that have or will be taken to address those hazardous materials, and the clean-up performance goals that must be achieved in order to minimize potential impacts to water quality:

- A. Oil and fuel: most items on the vessel that contained oil and fuel will be removed prior to sinking. Items that are to remain will be cleaned to the maximum extent possible so that no film or visible accumulation is remaining on any vessel structure or component.
  - B. Asbestos: the vessel was tested for any concentrations of asbestos in 2018 and all test results were negative. The Vermont Department of Health reviewed the findings from this testing and concluded that there should be no concerns related to asbestos. All other equipment that may be a potential source of asbestos (i.e., electrical contactors, motor starters, steering clutches, or brake linings) will be completely removed from the vessel prior to sinking.
  - C. PCBs: there are several potential sources of PCB contamination on the vessel, which includes paint, fluorescent light ballasts, and electrical capacitors. All fluorescent lights and electrical equipment that may contain capacitors will be removed from the vessel prior to sinking. Sampling of the paint was conducted in 2018 and PCBs were detected in concentrations below the 50 parts per million threshold identified in the best management practices, therefore no additional action is required.
  - D. Paint: the bottom paint on the M/V Adirondack is epoxy and vinyl. No anti-fouling paint has been used on the hull. Various painted surfaces were tested for lead in 2018. In general, lead based paint was found to be present on some original wood surfaces on the passenger deck, bulkhead paint, and some original surfaces in the voids of the vessel. Any loose or exfoliating paint will be removed from the vessel prior to sinking.
  - E. Solids/debris/floatables: all loose materials on the vessel will be removed prior to sinking. The rubber roofing and foam underlayment on the hurricane deck and pilothouse roofs will be removed. Wooden planking on the superstructure will be steel reinforced to prevent any from coming loose. On the day of sinking, the sinking location will be surveyed and any debris that may be generated while sinking will be removed from the water.
  - F. Miscellaneous other materials of environmental concern: sewage holding tank and associated piping, all electrical wiring, thermometers containing mercury, all plastic and rubber items, and all thermal insulation will be removed from the vessel prior to sinking.
- 12.** Effects on Fish and Wildlife Habitat - 29 V.S.A. § 405(b): The sinking location for the M/V Adirondack is relatively flat (2% slope), has no dynamic structure (i.e., stones/boulders, woody debris), and primarily consists of soft sediments. In the absence of dynamic structure, the artificial reef would likely attract fish, but would not provide necessary fish habitat due to the presence of ample existing habitat in the lake. In addition to attracting fish, it is anticipated that the artificial reef will be colonized by zebra mussels to a degree. The maximum depth of the sinking location is at or beyond the depth at which zebra mussels typically colonize, which is around 50 feet deep. The project is anticipated to either have no impact or provide a minor benefit to fish and wildlife.
- 13.** Effects on Aquatic and Shoreline Vegetation - 29 V.S.A. § 405(b): The sinking location is 68 feet deep, a depth at which aquatic plants do not grow. Shoreline vegetation will not be removed. The project is not anticipated to have an adverse impact on aquatic and shoreline vegetation.
- 14.** Effects on Navigation and Other Recreational and Public Uses, Including Fishing and Swimming - 29 V.S.A. § 405(b): The sinking location for the M/V Adirondack was chosen to avoid any potential impacts to navigation while still providing benefits to recreational and public uses. To avoid impacts to navigation, the site must not be in a narrow or congested area and be deep enough to allow for vessels to pass overtop the site without coming into contact with the artificial reef. The sinking location is 68 feet deep when the surface of the lake is at 93.5 feet NGVD 1929, which leaves 25 feet of depth between the surface of the water and the

smokestack. To ensure the selected sinking location will not impede navigation, a buoy was deployed from September 6, 2019 through September 15, 2019 in collaboration with the U.S. Coast Guard. A notice was posted to mariners and the Lake Champlain Transportation Company's ferry captains for them to provide feedback on the buoy location and whether it posed a hazard to navigation. No negative feedback on the location of the buoy was received. While the depth is adequate to avoid impacts to navigation, it is beneficial for recreational diving as the site will be accessible to beginner and advanced divers.

On the day of sinking, a security zone at the sinking location will be established by Vermont State Police to ensure the boating public is (1) aware of what is occurring and (2) avoids the area. The impact to public good uses will be temporary and limited to the sinking location only. Once the M/V Adirondack has sunk, inspection dives will be made to assess the final position of the artificial reef to ensure the sinking occurred as planned. The M/V Adirondack artificial reef will become a part of the UHP and will be managed to promote the public good and public trust uses of the water.

Overall, it is anticipated that the M/V Adirondack artificial reef will not impact navigation and will benefit recreation and public uses, such as fishing and swimming.

15. Consistency with the Natural Surroundings - 29 V.S.A. § 405(b): Once the M/V Adirondack has been sunk, the artificial reef will not be visible from above the surface of the water and the site will become a part of the UHP, which has several other sites within Burlington Bay and other locations nearby in Lake Champlain. The project will be consistent with the natural surroundings.
16. Consistency with Municipal Shoreland Zoning Ordinances and Applicable State Plans - 29 V.S.A. § 405(b): No adverse comments were received during the investigation from local and state officers and the project is therefore considered to be consistent with municipal shoreland zoning ordinances and applicable state plans.
17. Cumulative Impact - 29 V.S.A. § 405(b): Any cumulative impacts from the project are minimal and outweighed by benefits to public good uses. Any request to create an additional artificial reef for a similar purpose within public waters may be an unacceptable cumulative impact until it can be proven that the M/V Adirondack artificial reef can no longer adequately support public good uses, and the public benefit of additional artificial reef structures outweighs any potential adverse impacts.
18. Public Good Analysis Summary - 29 V.S.A. § 405(b): Based upon findings c. 11-17, the project will not adversely affect the public good.
19. Public Trust Analysis: The public trust doctrine requires the Department to determine what public trust uses are affected by the proposal, to determine if the proposal serves a public purpose, to determine the cumulative effects of the proposal on the public trust uses, and to balance the beneficial and detrimental effects of the proposal. A project will be determined to be consistent with the public trust doctrine if the public purpose and benefits of the project outweigh any potential adverse effects on the public good. The public trust uses relevant to this proposal are fishing, boating, swimming and diving, navigation, boating-related recreation, and environmental research. The sinking location for the M/V Adirondack has been chosen to avoid impacts on public trust uses, specifically navigation, as the artificial reef is anticipated to be too deep to interfere with navigation. The M/V Adirondack artificial reef provides public benefits in the form of creating an additional location in the UHP for divers to recreate (swimming). This additional location will take diving pressure off more fragile wrecks within the UHP, which will help preserve the maritime cultural resources within the UHP. The M/V Adirondack artificial reef is also anticipated to attract fish, which may benefit fishing in this area. The public benefits outweigh the potential negative impacts on public trust uses. The Department has therefore determined that the project is consistent with the public trust doctrine.

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**d. Authorization**

Based upon the foregoing findings, and in consideration of the Department's Interim Procedures for the Issuance or Denial of Encroachment Permits, dated October 4, 1989, excluding Section 3, which was invalidated by Lamoille County Superior Court, Docket No. S96-91, 9/04/92, it is the decision of the Department that the project described herein, as set forth in the above findings and in the plans on file with the Department, complies with the criteria of 29 V.S.A. § 405, and is consistent with the public trust doctrine.

In accordance with 29 V.S.A. § 401 et seq., the Department hereby issues this decision and permit to the permittee for the above-named project. The Department has approved the project subject to the conditions contained herein.

This permit shall not be effective until 10 days after the Department's notice of action and permit issuance in accordance with 29 V.S.A. § 405(c). The permittee shall establish the permitted encroachment within 5 years of the effective date of this permit, or this permit shall expire.

Should the permitted encroachment be established prior to the expiration stated above; this permit shall expire 15 years from the effective date of this permit. At least 90 days prior to the expiration of this permit, a permit application shall be submitted to the Department to continue to encroach. The Department shall review the project area and determine if any site restoration or removal of the encroachment will be required. A renewal decision shall be based on the relevant statutory criteria and Department rules, procedures, and policies prevailing at that time.

If the permittee wishes to modify the encroachment or conduct other jurisdictional activities not authorized by this permit, the permittee must submit a new permit application.

Peter Walke, Commissioner  
Department of Environmental Conservation

By: \_\_\_\_\_

Misha Cetner, Environmental Analyst  
Lakes and Ponds Management and Protection Program  
Watershed Management Division