AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2nd FLOOR
MONTPELIER, VT 05620-3522

Permit No.: 3-1184
PIN: SJ98-0173
NPDES No.: VT0000019

Name of Applicant: Weidmann Electrical Technology, Inc.
One Gordon Mills Way
St. Johnsbury, VT 05819

Expiration Date: September 30, 2024

DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act as amended (10 V.S.A. chapter 47), the Vermont Water Pollution Control Permit Regulations as amended (Environmental Protection Rules, Chapter 13), and the federal Clean Water Act as amended (33 U.S.C. § 1251 et seq.), and implementing federal regulations, Weidmann Electrical Technology, Inc. (hereinafter referred to as the "Permittee") is authorized by the Secretary of the Agency of Natural Resources (hereinafter referred to as the "Secretary") to discharge from the Weidmann Technology, Inc. Process Wastewater Treatment Facility (WWTF) (hereinafter referred to as the "WWTF") to the Passumpsic River in accordance with the following conditions.

This permit shall become effective on November 1, 2019.

Emily Boedecker, Commissioner
Department of Environmental Conservation

By: _____ Date: _____

Chris Gianfagna, Wastewater Program Manager
Watershed Management Division

I. SPECIAL CONDITIONS

A. EFFLUENT LIMITS

1. Discharge Point S/N 001

a. During the term of this permit, the Permittee is authorized to discharge from outfall serial number S/N 001: treated process wastewater from pressboard manufacturing (located at Latitude 44.48190 and Longitude -72.01200) to the Passumpsic River, an effluent for which the characteristics shall not exceed the values listed below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Monthly Average	Maximum Day	Measurement Frequency	Sample Type
Flow	0.250 MGD	0.350 MGD	Continuous	Daily Total
Biochemical Oxygen Demand (BOD_5)[1]	142 lbs./day	221 lbs./day	1 x week	Composite
Total Suspended Solids (TSS)[1]	139 lbs./day	200 lbs./day	1 x week	Composite
Styrene[2]		2.0 mg/L	1 x week	Grab
Total Nitrogen[3]		Monitor Only, mg/L	1 x month	Calculated
TKN[1]		Monitor Only, mg/L	1 x month	Composite
NO_x[1]		Monitor Only, mg/L	1 x month	Composite
Total Phosphorous (TP)[1]		Monitor Only, mg/L	1 x month	Composite
Turbidity		Monitor Only, NTU	1 x week	Grab
pH[4]	Between 6.5 and 8.5 S.U.		Continuous	Daily Max & Min

Samples collected in compliance with the monitoring requirements specified above shall be collected at the effluent sampling station.

[1] Composite samples shall be collected over a minimum of an 8-hour period and shall be flow proportioned.

[2] Styrene sampling and analysis is not required unless the "broke" used in the recycling process contains laminated polyester resin material. The Permittee shall notify the Watershed Management Division in writing, at least 10 days prior to the start-up of a "broke" recycling process which will contain laminated polyester resin material and shall begin styrene sampling and analysis within one week of starting the recycling process using this material.

[3] $TN = TKN + NO_x$

[4] The pH of the discharge shall be maintained within the range of 6.5-8.5 Standard Units (S.U.). Excursions outside this range are permitted provided:

a. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and
b. No individual excursion from the range of pH values shall exceed 60 minutes.

pH shall be continuously monitored and recorded. The daily minimum and maximum pH values and the maximum and cumulative time of daily excursions outside the range of 6.5-8.5 S.U. shall be reported on the monthly Discharge Monitoring Report form (WR-43). The pH recordings shall be made available upon request of the Secretary. The pH probe shall be calibrated daily.

2. Special Conditions

a. The effluent shall not have concentrations or combinations of contaminants including oil, grease, scum, foam, or floating solids which would cause a violation of the Vermont Water Quality Standards.

b. The effluent shall not cause a visible discoloration of the receiving waters.

c. The use of chlorophenolic-based biocides in the production process is prohibited.

d. The Permittee shall report the type of furnish used (percentage of unbleached kraft and double lined kraft) and production (tons per day) on the monthly discharge monitoring report.

3. Outfall Inspection

a. The Permittee shall inspect the outfall pipe weekly for signs of solids accumulation unless the pipe is inaccessible due to ice or high river flow.

b. If an inspection indicates that excessive solids have accumulated on the inside of the outfall pipe, then the Permittee shall take the necessary steps to clean the inside of the pipe as soon as possible. These steps include:

i. plugging the outfall pipe to prevent the discharge of the accumulated solids to the river during cleaning;

ii. high pressure washing of the inside of the outfall pipe; and

iii. collection and transport of the solids to the Permittee's wastewater treatment facility.

c. The dates of the outfall pipe cleaning shall be specifically noted on the Discharge Monitoring Report (DMR) form WR-43.

d. The Permittee shall keep records of all outfall inspections and make them available to the Secretary or duly authorized representative upon request.

B. PRIORITY POLLUTANT ANALYSIS

The Permittee shall collect and analyze a sample from outfall S/N 001 for the priority pollutants specified in Attachment A. The Permittee shall collect the priority pollutant sample at the same time as the Whole Effluent Toxicity (WET) test samples outlined in Condition I.E. The results of this sampling and analysis shall be submitted as an attachment to the appropriate monthly Discharge Monitoring Report.

C. REAPPLICATION

If the Permittee desires to continue to discharge after the expiration of this permit, the Permittee shall reapply on the application forms then in use at least 180 days before this permit expires.

Reapply for a Discharge Permit by: **March 31, 2024**

D. OPERATING FEES

This discharge is subject to operating fees as required by 3 V.SA. § 2822.

E. TOXICITY TESTING

a. During **August or September 2020,** the Permittee shall conduct a two-species (*Pimephales promelas* and *Ceriodaphnia dubia*) modified acute/chronic WET tests (48-hour acute endpoints within a 7-day chronic test) on a composite effluent sample collected from S/N 001. The results shall be submitted to the Secretary by **December 31, 2020.**

b. During **January or February 2022,** the Permittee shall conduct a two-species (*Pimephales promelas* and *Ceriodaphnia dubia*) modified acute/chronic WET tests (48-hour acute endpoints within a 7-day chronic test) on a composite effluent sample collected from S/N 001. The results shall be submitted to the Secretary by **June 30, 2022.**

The WET tests shall be conducted according to the procedures and guidelines specified in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" and "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (both documents U.S. EPA October 2002 or, if a newer edition is available, the most recent edition).

Based upon the results of these tests or any other toxicity tests conducted, the Secretary reserves the right to reopen and amend this permit, pursuant to Condition II.B.4. of this permit, to require additional WET testing or a Toxicity Reduction Evaluation.

F. MONITORING AND REPORTING

1. Sampling and Analysis

The sampling, preservation, handling, and analytical methods used shall conform to the test procedures published in Title 40 of the Code of Federal Regulations (C.F.R.) Part 136. The Permittee shall use sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 for the analysis of the pollutants or pollutant parameters required under this Section.

Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period. All samples are to be taken during normal operating hours. The Permittee shall identify the effluent sampling location used for each discharge. A description of the effluent sample location is included in Condition I.A.1.

2. Reporting

The Permittee is required to submit monthly reports of monitoring results as required in Condition I.A.1. and operational parameters on Discharge Monitoring Report (DMR) form WR-43 or through an electronic reporting system made available by the Secretary. Reports are due on the 15th day of each month, beginning with the month following the effective date of this permit.

Unless waived by the Secretary, the Permittee shall electronically submit its DMRs via Vermont's online electronic reporting system. The Permittee shall electronically submit additional compliance monitoring data and reports specified by the Secretary. When the Permittee submits DMRs using an electronic system designated by the Secretary, which requires attachment of scanned DMRs in PDF format, it is not required to submit hard copies of DMRs. The link below shall be used for electronic submittals:

https://anronline.vermont.gov/

If, in any reporting period, there has been no discharge, the Permittee must submit that information by the report due date.

All reports shall be signed:

a. In the case of corporations, by a principal executive officer of at least the level of vice president, or his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the permit form originates and the authorization is made in writing and submitted to the Secretary;

b. In the case of a partnership, by a general partner;

c. In the case of a sole proprietorship, by the proprietor; or

d. In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

3. Recording of Results

The Permittee shall maintain records of all information resulting from any monitoring activities required, including:

a. The exact place, date, and time of sampling or measurement;

b. The individual(s) who performed the sampling or measurements;

c. The dates and times the analyses were performed;

d. The individual(s) who performed the analysis;

e. The analytical techniques and methods used including sample collection handling and preservation techniques;

f. The results of such analyses.

g. The records of monitoring activities and results, including all instrumentation and calibration and maintenance records; and

h. The original calculation and data bench sheets of the operator who performed analysis of the influent or effluent pursuant to requirements of this permit; and

i. For analyses performed by contract laboratories:

    a. The detection level reported by the laboratory for each sample; and

    b. The laboratory analytical report including documentation of the QA/QC and analytical procedures.

When "non-detects" are recorded, the method detection limit shall be reported and used in calculating any time-period averaging for reporting on DMRs.

4. Additional Monitoring

If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form WR-43. Such increased frequency shall also be indicated.

II. GENERAL CONDITIONS

A. MANAGEMENT REQUIREMENTS

1. Facility Modification / Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties pursuant to 10 V.S.A. chapters 47, 201, and/or 211. Any anticipated facility alterations or expansions or process modifications which will result in new, different, or increased discharges of any pollutants must be reported by submission of a new permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Secretary of such changes. Following such notice, the permit may be modified, pursuant to Condition II.B.4. of this permit, to specify and limit any pollutants not previously limited.

In addition, the Permittee, within 30 days of the of the date on which the Permittee is notified of such discharge, shall provide notice to the Secretary of the following:

a. Any new introduction of pollutants into the treatment works from a source which would be a new source as defined in Section 306 of the Clean Water Act if such source were discharging pollutants;

b. Except for such categories and classes of point sources or discharges specified by the Secretary, any new introduction of pollutants into the treatment works from a source which would be subject to Section 301 of the Clean Water Act if such source were discharging pollutants; and

c. Any substantial change in volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into such works at the time of issuance of the permit.

The notice shall include:

i. The quality and quantity of the discharge to be introduced into the system, and

ii. The anticipated impact of such change in the quality or quantity of the effluent to be discharged from the WWTF.

2. Noncompliance Notification

a. The Permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

b. In the event the Permittee is unable to comply with any of the conditions of this permit due, among other reasons, to:

   i. Breakdown or maintenance of waste treatment equipment (biological and physical-chemical systems including all pipes, transfer pumps, compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion exchange columns, or carbon absorption units);

   ii. Accidents caused by human error or negligence;

   iii. Any unanticipated bypass or upset which exceeds any effluent limitation in the permit;

   iv. Violation of a maximum day discharge limitation for any of the pollutants listed by the Agency in this permit; or

   v. Other causes such as acts of nature,

   the Permittee shall provide notice as specified in subdivisions (c) and (d) of this subsection.

c. Pursuant to 10 V.S.A. §1295, notice for "untreated discharges," as defined.

   i. Public notice. For "untreated discharges" an operator of a wastewater treatment facility or the operator's delegate shall as soon as possible, but no longer than one hour from discovery of an untreated discharge from the WWTF, post on a publicly accessible electronic network, mobile application, or other electronic media designated by the Secretary an alert informing the public of the untreated discharge and its location, except that if the operator or his or her delegate does not have telephone or Internet service at the location where he or she is working to control or stop the untreated discharge, the operator or his or her delegate may delay posting the alert until the time that the untreated discharge is controlled or stopped, provided that the alert shall be posted no later than four hours from discovery of the untreated discharge.

   ii. Secretary notification. For "untreated discharges" an operator of a WWTF shall within 12 hours from discovery of an untreated discharge from the WWTF notify the Secretary and the local health officer of the municipality where the facility is located of the untreated discharge. The operator shall notify the Secretary through use of the Department of Environmental Conservation's online event reporting system. If, for any reason, the online event reporting system is not operable, the operator shall notify the Secretary via telephone or e-mail. The notification shall include:

a) The specific location of each untreated discharge, including the body of water affected. For combined sewer overflows, the specific location of each untreated discharge means each outfall that has discharges during the wet weather storm event.

b) Except for discharges from a WWTF to a separate storm sewer system, the date and approximate time the untreated discharge began.

c) The date and approximate time the untreated discharge ended. If the untreated discharge is still ongoing at the time of reporting, the entity reporting the untreated discharge shall amend the report with the date and approximate time the untreated discharge ended within three business days of the untreated discharge ending.

d) Except for discharges from a WWTF to a separate storm sewer system, the approximate total volume of sewage and, if applicable, stormwater that was released. If the approximate total volume is unknown at the time of reporting, the entity reporting the untreated discharge shall amend the report with the approximate total volume within three business days.

e) The cause of the untreated discharge and a brief description of the noncompliance, including the type of event and the type of sewer structure involved.

f) The person reporting the untreated discharge.

d. For any non-compliance not covered under Condition II.A.2.c. of this permit, an operator of a WWTF or the operator's delegate shall notify the Agency within 24 hours of becoming aware of such condition and shall provide the Agency with the following information, in writing, within five days:

i. Cause of non-compliance;

ii. A description of the non-complying discharge including its impact upon the receiving water;

iii. Anticipated time the condition of non-compliance is expected to continue or, if such condition has been corrected, the duration of the period of non-compliance;

iv. Steps taken by the Permittee to reduce and eliminate the non-complying discharge; and

v. Steps to be taken by the Permittee to prevent recurrence of the condition of non-compliance.

3. Operation and Maintenance

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

a. The Permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment and control facilities and systems (and related appurtenances) installed or used by the Permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the Permittee only when the operation is necessary to achieve compliance with the conditions of this permit;

b. The Permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to insure compliance with the conditions of this permit; and

c. The operation and maintenance of this facility shall be performed only by qualified personnel who are licensed as required by Secretary and the Director of the Vermont Office of Professional Regulation.

4. Quality Control

The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements or shall ensure that both activities will be conducted.

The Permittee shall keep records of these activities and shall provide such records upon request of the Secretary.

The Permittee shall demonstrate the accuracy of the effluent flow measurement device **monthly** and report the results on the monthly report forms. The acceptable limit of error is ± 10%.

The Permittee shall analyze any additional samples as may be required by the Agency to ensure analytical quality control.

The Permittee shall conduct an annual proficiency test (via a qualified laboratory) for the analysis of all pollutant parameters performed within their facility laboratory and reported as required by this permit. Results shall be submitted to the Secretary by **December 31, annually.** The first results are due by **December 31, 2020**.

5. Bypass

The bypass of facilities (including pump stations) is prohibited, except where authorized under the terms and conditions of an Emergency Pollution Permit issued pursuant to 10 V.S.A. § 1268. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the activity in order to maintain compliance

with the conditions of this permit.

6. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State, the environment, or human health resulting from non-compliance with any condition specified in this permit, including accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, all calibration and maintenance of instrumentation records and all original chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a minimum of three years, and shall be submitted to the Secretary upon request. This period shall be extended during the course of unresolved litigation regarding the discharge of pollutants or when requested by the Secretary.

8. Solids Management

Collected screenings, sludges, and other solids removed in the course of treatment and control of wastewaters shall be stored, treated, and disposed of in accordance with 10 V.S.A. chapter 159 and with the terms and conditions of any certification, interim or final, transitional operation authorization, or order issued pursuant to 10 V.S.A. chapter 159 that is in effect on the effective date of this permit or is issued during the term of this permit.

9. Emergency Pollution Permits

Maintenance activities, or emergencies resulting from equipment failure or malfunction, including power outages, which result in an effluent which exceeds the effluent limitations specified herein, shall be considered a violation of the conditions of this permit, unless the Permittee's discharge is covered under an emergency pollution permit under the provisions of 10 V.S.A. § 1268. The Permittee shall notify the Secretary of the emergency situation by the next working day, unless notice is required sooner under Condition II.A.2.

10 V.S.A. § 1268 reads as follows:

When a discharge permit holder finds that pollution abatement facilities require repairs, replacement or other corrective action in order for them to continue to meet standards specified in the permit, he may apply in the manner specified by the secretary for an emergency pollution permit for a term sufficient to effect repairs, replacements or other corrective action. The secretary shall proceed in accordance with chapter 170 of this title. No emergency pollution permit shall be issued unless the applicant certifies and the

secretary finds that:

(1) there is no present, reasonable alternative means of disposing of the waste other than by discharging it into the waters of the state during the limited period of time of the emergency;

(2) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;

(3) the granting of an emergency pollution permit will result in some public benefit;

(4) the discharge will not be unreasonably harmful to the quality of the receiving waters;

(5) the cause or reason for the emergency is not due to willful or intended acts or omissions of the applicant.

Application shall be made to the Secretary at the following address: Agency of Natural Resources, Department of Environmental Conservation, One National Life Drive, Main Building, 2nd Floor, Montpelier VT 05620-3522.

10. Power Failure

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the Permittee shall either:

a. Provide an alternative power source sufficient to operate the wastewater control facilities, or if such alternative power source is not in existence,

b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The Permittee shall allow the Agency or authorized representative, upon the presentation of proper credentials:

a. To enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. To have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;

c. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. To sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

2. Transfer of Ownership or Control

This permit is not transferable without prior written approval of the Secretary. All application and operating fees must be paid in full prior to transfer of this permit. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the Permittee shall provide a copy of this permit to the succeeding owner or controller and shall send written notification of the change in ownership or control to the Secretary at least 30 days in advance of the proposed transfer date. The notice to the Secretary shall include a written agreement between the existing and new Permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them. The Permittee shall also inform the prospective owner or operator of their responsibility to make an application for transfer of this permit.

This request for transfer application must include as a minimum:

a. A properly completed application form provided by the Secretary and the applicable processing fee.

b. A written statement from the prospective owner or operator certifying:

i. The conditions of the operation that contribute to, or affect, the discharge will not be materially different under the new ownership;

ii. The prospective owner or operator has read and is familiar with the terms of the permit and agrees to comply with all terms and conditions of the permit; and

iii. The prospective owner or operator has adequate funding to operate and maintain the treatment system and remain in compliance with the terms and conditions of the permit.

c. The date of the sale or transfer.

The Secretary may require additional information dependent upon the current status of the facility operation, maintenance, and permit compliance.

3. Confidentiality

Pursuant to 10 V.S.A. § 1259(b):

Any records or information obtained under this permit program that constitutes trade secrets under 1 V.S.A. § 317(c)(9) shall be kept confidential, except that such records or information may be disclosed to authorized representatives of the State and the United States when relevant to any proceedings under this chapter.

Claims for confidentiality for the following information will be denied:

a. The name and address of any permit applicant or Permittee.

b. Permit applications, permits, and effluent data.

c. Information required by application forms, including information submitted on the forms themselves and any attachments used to supply information required by the forms.

4. Permit Modification, Suspension, and Revocation

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance shall not stay any permit condition.

The Permittee shall provide to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Secretary upon request, copies of records required to be kept by this permit.

5. Toxic Effluent Standards

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the Permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, then this permit shall be modified or revoked and reissued, pursuant to Condition II.B.4. of this permit, in accordance with the toxic effluent standard or prohibition and the Permittee so notified.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the

Permittee is or may be subject under 10 V.S.A. § 1281.

7. Other Materials

Other materials ordinarily produced or used in the operation of the WWTF, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

a. They are not:

(i) Designated as toxic or hazardous under provisions of Sections 307 and 311, respectively, of the Clean Water Act, or

(ii) known to be hazardous or toxic by the Permittee,

(iii) except that such materials indicated in (i) and (ii) above may be discharged in certain limited amounts with the written approval of, and under special conditions established by, the Secretary or his/her designated representative, if the substances will not pose any imminent hazard to the public health or safety;

b. The discharge of such materials will not violate the Vermont Water Quality Standards; and

c. The Permittee is not notified by the Secretary to eliminate or reduce the quantity of such materials entering the water.

8. Navigable Waters

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

9. Civil and Criminal Liability

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Except as provided in "Bypass" (Condition II.A.5.) and “Emergency Pollution Permits” (Condition II.A.9.), nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance. Civil and criminal penalties for non-compliance are provided for in 10 V.S.A. Chapters 47, 201, and 211.

10. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

11. Property Rights

Issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

12. Other Information

If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Secretary, it shall promptly submit such facts or information.

13. Severability

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.

14. Authority

This permit is issued under authority of 10 V.S.A. §§1258 and 1259 of the Vermont Water Pollution Control Act, the Vermont Water Pollution Control Permit Regulation, and Section 402 of the Clean Water Act, as amended.

15. Definitions

For purposes of this permit, the following definitions shall apply.

Agency – means the Vermont Agency of Natural Resources.

Annual Average – means the highest allowable average of daily discharges calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar year divided by the number of daily discharges measured during that year.

Average – means the arithmetic means of values taken at the frequency required for each parameter over the specified period.

Bypass – means the intentional diversion of waste streams from any portion of the treatment facility.

The Clean Water Act – means the federal Clean Water Act, as amended (33 U.S.C. § 1251, et seq.).

Composite Sample – means a sample consisting of a minimum of one grab sample per hour collected during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportionally to flow over that same time period.

Daily Discharge – means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

For pollutants with limitations expressed in pounds the daily discharge is calculated as the total pounds of pollutants discharged over the day.

For pollutants with limitations expressed in mg/L the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge – means the placing, depositing, or emission of any wastes, directly or indirectly, into an injection well or into the waters of the State.

Grab Sample – means an individual sample collected in a period of less than 15 minutes.

Incompatible Substance – means any waste being discharged into the treatment works which interferes with, passes through without treatment, or is otherwise incompatible with said works or would have a substantial adverse effect on the works or on water quality. This includes all pollutants required to be regulated under the Clean Water Act.

Instantaneous Maximum – means a value not to be exceeded in any grab sample.

Major Contributing Industry – means one that: (1) has a flow of 50,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its wastes a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Clean Water Act; or (4) has a significant impact, either singly or in combination with other contributing industries, on a treatment works or on the quality of effluent from that treatment works.

Maximum Day or **Maximum Daily Discharge Limitation** – means the highest allowable "daily discharge" (mg/L, lbs or gallons).

Mean – means the arithmetic mean.

Monthly Average or **Average Monthly Discharge Limitation** – means the highest allowable average of daily discharges (mg/L, lbs or gallons) over a calendar month,

calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar month divided by the number of daily discharges measured during that month.

NPDES – means the National Pollutant Discharge Elimination System.

Secretary – means the Secretary of the Agency of Natural Resources or the Secretary's duly authorized representative.

Septage – means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Untreated Discharge – means (1) combined sewer overflows from a WWTF; (2) overflows from sanitary sewers and combined sewer systems that are part of a WWTF during dry weather flows, which result in a discharge to waters of the State; (3) upsets or bypasses around or within a WWTF during dry or wet weather conditions that are due to factors unrelated to a wet weather storm event and that result in a discharge of sewage that has not been fully treated to waters of the State; and (4) discharges from a WWTF to separate storm sewer systems.

Waste – means effluent, sewage or any substance or material, liquid, gaseous, solid, or radioactive, including heated liquids, whether or not harmful or deleterious to waters.

Waste Management Zone – means a specific reach of Class B waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings. Throughout the receiving waters, water quality criteria must be achieved but increased health risks exist in a waste management zone due to the authorized discharge.

Waters – means all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs, and all bodies of surface waters, artificial or natural, which are contained within, flow through, or border upon the State or any portion of it.

Weekly Average or **Average Weekly Discharge Limitation** – means the highest allowable average of daily discharges (mg/L, lbs or gallons) over a calendar week, calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar week divided by the number of daily discharges measured during that week.

Whole Effluent Toxicity (WET) – means the aggregate toxic effect of an effluent measured directly by a toxicity test.

Wastewater Treatment Facility (WWTF) – means a treatment plant, collection system, pump station, and attendant facilities permitted by the Secretary for the purpose of treating domestic, commercial, or industrial wastewater.

Attachment A
EHV Weidmann NPDES Permit Testing Requirements

Metals (total recoverable), cyanide and total phenols:
Antimony
Arsenic
Beryllium
Cadmium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide
Total phenolic compounds

Volatile organic compounds:
acrolein
acrylonitrile
benzene
bromoform
carbon tetrachloride
chlorobenzene
chlorodibromomethane
chloroethane
2-chloroethylvinyl ether
chloroform
dichlorobromomethane
1,1-dichloroethane
1,2-dichloroethane
Trans-1,2-dichloroethylene
1,1-dichloroethylene
1,2-dichloropropane
1,3-dichloropropylene
ethylbenzene
methyl bromide
methyl chloride
methylene chloride
1,1,2,2-tetrachloroethane
tetrachloroethylene
toluene
1,1,1-trichloroethane
1,1,2-trichloroethane
trichloroethylene
vinyl chloride

Acid-extractable compounds:
p-chloro-m-cresol
2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol
4,6-dinitro-o-cresol
2,4-dinitrophenol
2-nitrophenol
4-nitrophenol
pentachlorophenol
phenol
2,4,6-trichlorophenol

Base-neutral compounds:
acenaphthene
acenaphthylene
anthracene
benzidine
benzo(a)anthracene
benzo(a)pyrene
3,4-benzofluoranthene
benzo(ghi)perylene
benzo(k)fluoranthene
bis(2-chloroethoxy)methane
bis(2-chloroethyl)ether
bis(2-chloroisopropyl)ether
bis(2-ethylhexyl)phthalate
4-bromophenyl phenyl ether
butyl benzyl phthalate
2-chloronaphthalene
4-chlorophenyl phenyl ether
chrysene
di-n-butyl phthalate
di-n-octyl phthalate
dibenzo(a,h)anthracene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3'-dichlorobenzidine
diethyl phthalate
dimethyl phthalate
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
fluroranthene
fluorene
hexachlorobenzene
hexachlorobutadiene
hexachlorocyclo-pentadiene
hexachloroethane
indeno(1,2,3-cd)pyrene
isophorone
napthalene
nitrobenzene
N-nitrosodi-n-propylamine
N-nitrosodimethylamine
N-nitrosodiphenylamine
phenanthrene
pyrene
1,2,4-trichlorobenzene

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2ND FLOOR
MONTPELIER, VT 05620-3522

FACT SHEET FOR PERMIT
(September 2019)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE STATE

PERMIT NO: 3-1184
PIN: SJ98-0173
NPDES NO: VT0000019

NAME AND ADDRESS OF APPLICANT:

Weidmann Electrical Technology, Inc.
One Gordon Mills Way
St. Johnsbury, VT 05819

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

One Gordon Mills Way
St. Johnsbury, VT 05819

RECEIVING WATER: Passumpsic River

CLASSIFICATION: All uses Class B(2) with a waste management zone. Class B waters are suitable for swimming and other primary contact recreation; irrigation and agricultural uses; aquatic biota and aquatic habitat; good aesthetic value; boating, fishing, and other recreational uses; and suitable for public water source with filtration and disinfection or other required treatment. A waste management zone is a specific reach of Class B(1) or B(2) waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings.

I. Proposed Action, Type of Facility, and Discharge Location

The Secretary of the Vermont Agency of Natural Resources (Secretary) received a renewal application for the permit to discharge into the designated receiving water from the above-named applicant on September 27, 2016. The facility's previous permit was issued on May 10, 2012. The previous permit (hereafter referred to as the "current permit") has been administratively continued, pursuant to 3 V.S.A. § 814, as the applicant filed a complete application for permit reissuance within the prescribed time period as per the Vermont Water Pollution Control Permit Regulations

(VWPCPR) § 13.5(b). At this time, the Secretary has made a tentative decision to reissue the discharge permit.

The facility is engaged in the production of electrical grade transformer board.

A map showing the location of the facility, outfall, and the receiving water is provided in the Reasonable Potential Determination (RPD) (see Attachment A).

II. Description of Discharge

The wastewater treatment system consists of a storage/equalization lagoon and a Vincent screw press. Excess process water and stock from the board machines flow into the refiner pit in the mill basement. From there it is pumped to the primary wastewater storage lagoon (primary lagoon), or to the Bird Drum pit which is pumped to the primary lagoon. From the primary lagoon, the process wastewater flows by gravity back to the mill basement to the Sveen Dissolved Air Flotation (DAF) unit.

III. Limitations and Conditions

The effluent limitations of the draft permit, the monitoring requirements, and any implementation schedule (if required), may be found on the following pages of the draft permit:

Effluent Limitations:	Pages 2-3 of 19
Monitoring Requirements:	Page 2 of 19

IV. Statutory and Regulatory Authority

A. Clean Water Act and NPDES Background

Congress enacted the Clean Water Act (CWA or Act), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except as authorized by specified permitting sections of the Act, one of which is Section 402. CWA §§ 301(a), 402(a). Section 402 establishes one of the CWA's principal permitting programs, the National Pollutant Discharge Elimination System (NPDES). Under this section of the Act, the U.S. Environmental Protection Agency (EPA) may "issue a permit for the discharge of any pollutant, or combination of pollutants" in accordance with certain conditions. CWA § 402(a). The State of Vermont has been approved by the EPA to administer the NPDES Program in Vermont. NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. CWA § 402(a)(1) - (2).

Section 301 of the CWA provides for two types of effluent limitations to be included in NPDES permits: "technology-based" limitations and "water quality-based" limitations. CWA §§ 301, 303, 304(b); 40 CFR Parts 122, 125, 131. Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant-reducing technology available and economically achievable for the type of facility being permitted. CWA § 301(b). As a class, WWTFs must meet performance-based requirements based on available wastewater treatment

technology. CWA § 301(b)(1)(B). The performance level for WWTFs is referred to as "secondary treatment." Secondary treatment is comprised of technology-based requirements expressed in terms of BOD5, TSS and pH; 40 C.F.R. Part 133.

Water quality-based effluent limits, on the other hand, are designed to ensure that state water quality standards are achieved, irrespective of the technological or economic considerations that inform technology-based limits. Under the CWA, states must develop water quality standards for all water bodies within the state. CWA § 303. These standards have three parts: (1) one or more "designated uses" for each water body or water body segment in the state; (2) water quality "criteria," consisting of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the designated uses of that water body; and (3) an antidegradation provision, focused on protecting high quality waters and protecting and maintaining water quality necessary to protect existing uses. CWA § 303(c)(2)(A); 40 C.F.R. § 131.12. The applicable water quality standards for this permit are the 2017 Vermont Water Quality Standards (Environmental Protection Rule, Chapter 29a).

A permit must include limits for any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality standard, including narrative water quality criteria. See 40 CFR §122.44(d)(1). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion. A NPDES permit must contain effluent limitations and conditions in order to ensure that the discharge does not cause or contribute to water quality standard violations.

Receiving stream requirements are established according to numerical and narrative standards adopted under state law for each stream classification. When using chemical-specific numeric criteria from the State's water quality standards to develop permit limits, both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable in stream pollutant concentrations. Acute aquatic life criteria are generally implemented through maximum daily limits and chronic aquatic life criteria are generally implemented through average monthly limits.

Where a state has not established a numeric water quality criterion for a specific chemical pollutant that is present in the effluent in a concentration that causes or has a reasonable potential to cause a violation of narrative water quality standards, the permitting authority must establish effluent limits in one of three ways: based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use"; on a "case-by-case basis" using CWA Section 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, in certain circumstances, based on an "indicator parameter." 40 CFR § 122.44(d)(1)(vi)(A-C).

The state rules governing Vermont's NPDES permit program are found in the Vermont Water Pollution Control Permit Regulations (Environmental Protection Rule, Chapter 13).

1. Reasonable Potential Determination

In determining whether this permit has the reasonable potential to cause or contribute to an impairment, Vermont has considered:

1) Existing controls on point and non-point sources of pollution as evidenced by the Vermont surface water assessment database;

2) Pollutant concentration and variability in the effluent as determined from the permit application materials, monthly discharge monitoring reports (DMRs), or other facility reports;

3) Receiving water quality based on targeted water quality and biological assessments of receiving waters, as applicable, or other State or Federal water quality reports;

4) Toxicity testing results based on the Vermont Toxic Discharge Control Strategy, and compelled as a condition of prior permits;

5) Available dilution of the effluent in the receiving water, expressed as the instream waste concentration. In accordance with the applicable Vermont Water Quality Standards, available dilution for rivers and streams is based on a known or estimated value of the lowest average flow which occurs for seven (7) consecutive days with a recurrence interval of once in ten (10) years (7Q10) for aquatic life and human health criteria for non-carcinogens, or at all flows for human health (carcinogens only) in the receiving water. For nutrients, available dilution for stream and river discharges is assessed using the low median monthly flow computed as the median flow of the month containing the lowest annual flow. Available dilution for lakes is based on mixing zones of no more than 200 feet in diameter, in any direction, from the effluent discharge point, including as applicable the length of a diffuser apparatus.

6) All effluent limitations, monitoring requirements, and other conditions of the proposed draft permit.

The Reasonable Potential Determination for this facility is attached to this Fact Sheet as Attachment A.

B. Anti-Backsliding

Section 402(o) of the CWA provides that certain effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the current permit. EPA has also promulgated anti-backsliding regulations which are found at 40 C.F.R. § 122.44(l). Unless applicable anti-backsliding exemptions are met, the limits and conditions in the reissued permit must be at least as stringent as those in the current permit.

V. Description of Receiving Water

The receiving water for this discharge is the Passumpsic River, a designated Cold-Water Fish Habitat. At the point of discharge, the river has a contributing drainage area of 233 square miles. The summer 7Q10 flow of the river is estimated to be 46.58 cubic feet per second (CFS) and the summer Low Median Monthly flow is estimated to be 122.9 CFS. The instream waste concentration at the summer 7Q10 flow is 0.011 (1.1%) and the instream waste concentration at the summer Low Median Monthly flow is 0.004 (0.4%).

VI. Facility History and Background

Weidmann Electrical Technology, Inc. produces specialized pressboard that is used to manufacture the insulation inside oil-filled electrical transformers. There are two board machines that produce the transformer board from electrical grade, unbleached kraft wood pulp. In 2012, the facility completed a major expansion, which included the relocation of Board Machine 2 into a new building and a new horizontal high-pressure energy efficient press for Board Machine 2.

In the 1990s, the Permittee received approval from the Agency to conduct a trial to recycle materials in the "broke" stream that contained parts of laminated polyester resin material. The facility's pumps and screens were unable to properly handle the material and the Permittee hasn't tried to recycle materials with laminated polyester resin since the Agency-approved trial. The styrene sampling requirement remains in the draft permit in case the Permittee decides to recycle products with laminated polyester resin material in the future.

VII. Permit Basis and Explanation of Effluent Limitation Derivation

1. **Flow** – The draft permit maintains the monthly average flow limitation of 0.250 MGD and a daily maximum of 0.350 MGD. This facility maintains a continuous discharge. Continuous flow monitoring is required.

2. **Biochemical Oxygen Demand (BOD_5)** – Effluent limitations of 142 lbs/day, monthly average and 221 lbs/day, daily maximum remain unchanged from the current permit. The BOD_5 weekly monitoring requirement is unchanged from the current permit.

3. **Total Suspended Solids (TSS)** – Effluent limitations for TSS remain unchanged from the current permit (139 lbs/day, monthly average and 200 lbs/day, daily maximum). The TSS weekly monitoring requirement is unchanged from the current permit.

4. **pH** – The fact sheet for the 1990 draft permit listed an effluent limitation of 6.2-8.0 Standard Units (S.U.) based on facility monitoring data and the 1978 Vermont Water Quality Standards. The 1990 fact sheet also listed the Passumpsic River as a Class C receiving water. The Passumpsic River is currently classified as a Class B receiving water as Class C waters no longer exist. A pH limitation of 6.5 - 8.5 S.U. as specified in Section 29A-303(6) in the Vermont Water Quality Standards has been included in the draft permit. Continuous pH monitoring is required.

5. **Total Phosphorus (TP)** – The draft permit includes a monthly, monitor only sampling requirement and remains unchanged from the current permit.

6. **Total Nitrogen (TN)** – TN is a calculated value based on Total Kjeldahl Nitrogen (TKN) and Nitrate/Nitrite (NO_x) Nitrogen. The sum of TKN and NO_x shall be used to derive TN. As in the current permit, monthly monitoring is required.

7. **Total Kjeldahl Nitrogen (TKN)** – TKN is the sum of nitrogen in the forms of ammonia (un-ionized (NH_3) and ionized ($NH4^+$)), soluble organic nitrogen, and particulate organic nitrogen. The draft permit includes a monthly, monitor only sampling requirement and remains unchanged from the current permit.

8. **Nitrate/Nitrite (NOx)** – Nitrite and nitrate are oxygenated forms of nitrogen. The draft permit includes a monthly, monitor only sampling requirement and remains unchanged from the current permit.

9. **Turbidity** – The draft permit includes a weekly monitor only sampling requirement and remains unchanged from the current permit.

10. **Styrene** – The draft permit includes a weekly styrene sampling requirement when the "broke" used in the recycling process contains laminated polyester resin material and remains unchanged from the current permit.

11. **Priority Pollutant Analysis** – The Permittee shall collect and analyze a sample from outfall S/N 001 for the priority pollutants specified in Attachment A of the draft permit. The results of this sampling and analysis shall be submitted as an attachment to the appropriate monthly Discharge Monitoring Report.

12. **Toxicity Testing** – 40 CFR Part 122.44(d)(1) requires the Secretary to assess whether the discharge causes or has the reasonable potential to cause or contribute to an excursion above any narrative or numeric water quality criteria. Per these federal requirements, the Permittee shall conduct WET testing and toxic pollutant analyses according to the schedule outlined in Section I.E. of the draft permit. In addition, a priority pollutant analysis is required to be completed on the S/N 001 discharge on the same day that the WET samples are collected.

    If the results of these tests indicate a reasonable potential to cause an instream toxic impact, the Secretary may require additional WET testing, establish a WET limit, or require a Toxicity Reduction Evaluation.

A. <u>Special Conditions</u>

1. **Electronic Reporting -** The EPA recently promulgated a final rule to modernize the Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires the inclusion of electronic reporting requirements in NPDES permits that become effective after December 21, 2015. The rule requires that NPDES regulated entities that are required to submit discharge monitoring

reports (DMRs), including majors and nonmajors, individually permitted or covered by a general permit, must do so electronically after December 2016. The Secretary has created an electronic reporting system for DMRs and has recently trained facilities in its use. As of December 2020, these NPDES facilities will also be expected to submit additional information electronically as specified in Appendix A in 40 CFR part 127.

2. **Noncompliance Notification -** As required by the passage of 10 V.S.A. §1295, promulgated in the 2016 legislative session, Condition II.A.2 has been included in the proposed permit. Section 1295 requires the Permittee to provide public notification of untreated discharges from wastewater facilities. The Permittee is required to post a public alert within one hour of discovery and submit to the Secretary specified information regarding the discharge within 12 hours of discovery.

3. **Reopener -** This draft permit includes a reopener whereby the Secretary reserves the right to reopen and amend the permit to implement an integrated plan to address multiple Clean Water Act obligations.

A. Reasonable Potential Analysis

The Secretary has conducted a reasonable potential analysis, which is attached to this Fact Sheet as Attachment A. Based on this analysis, the Secretary has determined that this discharge does not have a reasonable potential to cause or contribute to an instream toxic impact or instream excursion above the water quality criteria.

VIII. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit was from September 4, 2019 to October 4, 2019. The Agency received no comments from the public concerning this draft permit.

Agency of Natural Resources
Department of Environmental Conservation

Watershed Management Division
1 National Life Drive 2 Main
802-828-1535

MEMORANDUM

To: Kathleen Parrish, Wastewater Program (WWP)

From: Rick Levey, Monitoring, Assessment and Planning Program (MAPP) Rick Levey 08/28/2019

Cc: Pete LaFlamme, Director, WSMD
Chris Gianfagna, Manager, WWP
Ethan Swift, Manager, (MAPP)

Date: August 28, 2019

Subject: MAPP Reasonable Potential Determination for EHV Weidmann Industries

---

MAPP has evaluated the draft permit limits for the EHV Weidmann Industries in St. Johnsbury, Vermont pursuant to the 2012 procedure outlining WWM-WSMD roles and responsibilities. This memo provides MAPP's concurrence with the permit limits set forth by the draft permit for EHV Weidmann Industries prepared by the WWP.

Facility:
EHV Weidmann Industries
Permit No. 3-1184
NPDES No. VT0000019

Hydrology for EHV Weidmann Industries used in this evaluation:
Design Flow: 0.35 MGD = 0.542 CFS
7Q10 = 46.58 CFS
LMM = 122.9 CFS
IWC-7Q10 = .011 (IWC > 1%)
IWC-LMM= 0.004 (IWC < 1%)

Receiving Water:
Passumpsic River, St. Johnsbury, VT
Outfall Location: Lat. 44.48190 Long. 72.01200 (NAD 83)

The Passumpsic River downstream of EHV Weidmann is classified as Class B and designated a Cold-Water Fish Habitat. At the point of discharge, the river has a contributing drainage area of 233 square miles. The Lyndon WWTF is approximately 4 miles upstream of this facility.

General Assessment – VTDEC Assessment Database:

MAPP maintains the VTDEC assessment database, an EPA-required database which describes the conditions of Vermont's surface waters with respect to their attainment of VWQS. The Passumpsic River is not listed as impaired where this facility discharges.

Ambient Chemistry Data for the Passumpsic River below the EHV Weidmann Facility:
There is ambient chemistry data available from VTDEC sampling that occurred in 2010 and 2015 above and below facility outfall at River Mile (RM) 14.3 and RM 14.0

Water chemistry measures for the following parameters are available: pH, hardness, dissolved oxygen, turbidity, total phosphorus (TP), total nitrogen (TN), total ammonia (TAN) and water temperature are summarized in Table 1. Priority metals were analyzed above and below the WWTF in 2010 and below only in 2015, all were below detection limits (Table 4).

Data representativeness was assessed by evaluating the flow conditions at which samples were collected from field sheets and from the most proximally-located USGS gauge for which data were available, and in consideration of possible downstream sensitive reaches. The location of the downstream sampling location RM 14.0 and the upstream sampling location at RM 14.3 effectively targets the WWTF outfall (Figure 1). The downstream sampling location (RM 14.0) is the most sensitive location, and the sampling results are representative of low flows based on the actual flows shown from the USGS gauge, and field notes collected by DEC technical staff. Thus, the data presented below are relevant for inclusion in this analysis.

Table 1: Concentrations of surface-water chemistry above and below the EHV Weidmann Industries (RM 14.3 and RM 14.0).

Sample Date	Location	River Mile	Water Temp (deg C)	pH	Hardness	DO (%)	DO (mg/l)	Turbidity (NTU)	Total Phosphorus (ug/l)	Total Nitrogen (mg/l)	Total Ammonia Nitrogen (mg/l)
8/13/2010	Above	14.3	20.7	8.12	101.0	93.1	8.19	0.44	11.6	0.27	<0.05
	Below	14.0	21.0	8.12	102.0	97.9	8.52	0.63	11.7	0.26	<0.05
9/8/2010	Above	14.3	18.4	8.23	111.0	86.5	7.83	0.85	12.4	0.35	<0.05
	Below	14.0	18.3	8.23	113.0	83.0	7.40	0.48	12.7	0.31	<0.05
11/15/2010	Above	14.3	3.8	7.54	-	75.9	9.73	1.23	7.8	0.34	<0.05
	Below	14.0	3.8	7.54	-	85.3	10.85	1.52	8.5	0.33	<0.05
8/3/2015	Above	14.3	19.2	7.96	-	-	-	1.07	8.4	0.41	<0.05
	Below	14.0	19.2	8.05	-	-	-	0.62	7.5	0.38	<0.05
8/20/2015	Above	14.3	23.0	7.98	-	96.0	8.09	0.60	8.3	0.46	<0.05
	Below	14.0	23.1	8.06	-	93.7	7.88	0.64	9.5	0.39	<0.05
9/18/2015	Below	14.0	18.2	8.06	106.2	89.4	8.40	1.20	11.0	0.36	-

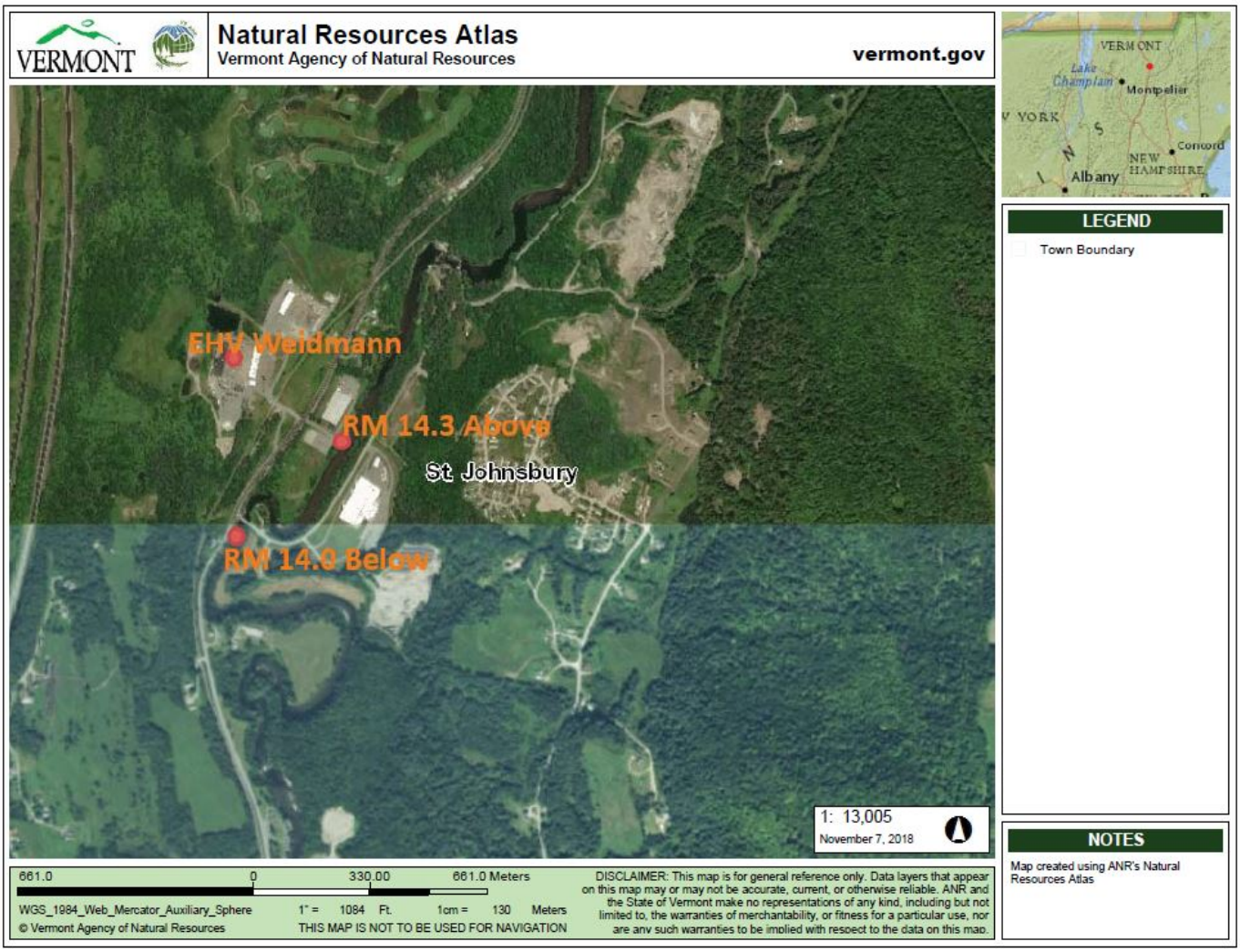

Figure 1. Passumpsic River near the EHV Weidmann Facility; shown is the upstream and downstream sampling locations (RM 14.3 & 14.0 respectively). Outfall location shown by arrow. Figure taken from the Vermont Integrated Watershed Assessment System on the VTANR Atlas (https://anrweb.vt.gov/DEC/IWIS/).

Total Phosphorus (TP) values below the outfall (RM 14.0) from 2010 & 2015 ranged from 7.5 – 12.7 µg/L. TP values above the outfall (RM 14.3) ranged from 8.3 – 12.4 µg/L. The TP values observed above and below the WWTF are below the nutrient criteria threshold of 27 µg/L-TP designated for Warmwater Moderate Gradient Stream Types. Total Nitrogen (TN) values below the outfall (RM 14.0) ranged from 0.26 – 0.39 mg/L. TN values above the outfall (RM 14.3) ranged from 0.27 mg/L - 0.46 mg/L-TN.

Turbidity, Dissolved Oxygen, pH:

Turbidity values below the outfall (RM 14.0) ranged from 0.48 – 1.52 Nephelometric Turbidity (NTU). Above the outfall (RM 14.3) turbidity ranged from 0.44 – 1.23 NTU. Dissolved oxygen and percent saturation below the outfall ranged from 7.40 – 10.85 mg/L and 83.0 – 85.3 percent saturation. Above the outfall the DO ranged from 7.83 – 9.73 mg/L and 75.9 and 86.5 percent saturation. All pH values above and below the outfall ranged from 7.54 – 8.23 and were within the range of VWQS.

Biological Assessments:
The receiving waters of this warm water moderate gradient reach are non-wadeable; as such biological assessments have not been conducted above or below the outfall.

Total Phosphorus:
Instream Phosphorus Concentrations were calculated using the low monthly median flow (LMM) of 122 CFS at design flow of 0.54 CFS (0.35 MGD) and using the effluent phosphorus concentration of 0.53 mg/L which is the average monthly effluent concentration observed during 2013 – 2018 (n=55), from facility monitoring records. The calculated phosphorus concentration at these conditions attributable to discharge is 0.0021 mg/L (2.1 µg/L), a modest increase.

Review of the EHV Weidmann facility flow records indicate that average flow for 2013- 2018 is ¾ (.26 MGD) of the design flow (.35 MGD). Instream TP concentrations at these flow rates would be 1.5 µg/L-TP using the average effluent concentration observed. The instream TP increase from above the outfall observed was about 1.0 µg/L, which squares well with the above calculations modeling effluent data at LMM conditions. As such TP contribution from the facility contributes at most only a few micrograms of TP to this receiving water concentration. The nutrient criteria for a warm water medium gradient stream type are 27 µg/L-TP; more than twice the highest concentration observed below the EHV Weidmann facility.

The potential impacts of phosphorus discharges from this facility to the receiving water have been assessed in relation to the narrative criteria in §29A-302(2)(A) of the 2017 VWQS, which states:

> *In all waters, total phosphorous loadings shall be limited so that they will not contribute to the acceleration of eutrophication or the stimulation of the growth of aquatic biota in a manner that prevents the full support of uses.*

To interpret this standard, MAPP typically relies on a framework which examines TP concentrations in relation to existing numeric phosphorus criteria and response criteria in §29A-306(a)(3)(c) of the Water Quality Standards, for streams that can be assessed using macroinvertebrate biocriteria. Under this framework, MAPP can make a positive finding of compliance with the narrative standard when nutrient criteria are attained, or when specific nutrient response variables; pH, Turbidity, Dissolved Oxygen, and aquatic life use, all display compliance with their respective criteria in the Water Quality Standards.

However, as the receiving water is non-wadeable and thus not amenable to assessment using the VTDEC biocriteria for macroinvertebrates, the standard assessment framework should not be used, and with respect to phosphorus discharge, this Determination relies instead on calculated instream concentrations.

The total phosphorus concentrations in receiving waters are presently low, well below the nutrient criteria value of 27 µg/L-TP, established for this warmwater moderate gradient stream type. Mass balance calculation, presented above, indicated that increases in phosphorus attributable to the facility are very modest; less than 2 µg/L-TP at full design flow. The program considers that the reach will be protected from the effects of phosphorus-driven eutrophication at these low phosphorus concentrations.

Additionally, although aquatic life use has not been assessed (non-wadeable) below the facility, the stream complies with VWQS for the balance of identified response variables. Therefore, the narrative standard presented in the VWQS is supported (Table 2), as are the combined numeric nutrient criteria in §29A-306(a)(3)(c). As described below, for facilities where there are increases in phosphorus attributable to the discharge and biological monitoring results consistently indicate attainment of all thresholds, MAPP supports the effluent monitoring, which includes TP, required by the permit; this will help to better assess compliance with the 2014 nutrient criteria at the next permit issuance.

Table 2. Assessment of phosphorus response variables for EHV Weidmann Facility. The relevant target values are referenced to the appropriate section of the VWQS.

Response variable (VWQS reference)	Target Value	River-mile 14.3 (Upstream)	River-mile 14.0 (Downstream)
pH (§3-01.B.9), range	<8.5 s.u.	7.98	8.06
Turbidity (§3-04.B.1), range	< 10 NTU at low mean annual flow	0.6	0.64
Dissolved Oxygen (§3-04.B.2), min	>6 mg/L and 70% saturation	8.09 (96.0%)	8.4 (89.4%)
Aquatic biota, based on macroinvertebrates, (§3-04-B.4), also see Table 2.	Attaining an assessment of good, or better.	NA	NA

Whole Effluent Toxicity (WET) and Priority Pollutant Testing:
40 C.F.R. § 122.44(d)(1) requires the Agency to assess whether the discharge causes or has the reasonable potential to cause or contribute to an excursion above any narrative or numeric water quality criteria. The goal of the Vermont Toxic Discharge Control Strategy is to assure that the state water quality standards and receiving water classification criteria are maintained. The draft permit includes a requirement to conduct a two species modified acute/chronic WET test in conjunction with Priority Pollutant testing in August or September 2020 and January or February 2022. If the results of the test indicate a reasonable potential to cause an instream toxic impact, the Department may require additional WET testing, establish a WET limit, or require a Toxicity Reduction Evaluation.

Ammonia Monitoring:
Currently there is no effluent ammonia monitoring data to review from the facility. However, it is extremely unlikely that ammonia would exceed VWQS due to available dilution. At pH 8.0, the chronic ammonia criteria at a temperature of 20C is 0.78 mg/L-TAN; at these conditions the TAN effluent concentration would need to exceed 70 mg/L-TAN to exceed VWQS, an improbably high value. Additionally, instream monitoring for TAN below the outfall has been conducted (n=5), and results have been below the detection limit of 0.05 mg/L-TAN.

Sediment, Hardness, Total Residual Chlorine (TRC) and Metals:
Instream total suspended solids were calculated using the 7Q10 of 46.5 CFS at design flow of 0.54 CFS (0.35 MGD), assuming the maximum permitted daily concentration of 50 mg/L. The calculated suspended sediment concentration at these conditions was 0.55 mg/l, indicating a modest increase of instream ambient suspended sediment concentrations in receiving waters.

The hardness of the Passumpsic River at RM 14.0 was recorded to be 106 mg/L-CaCO3 on 9/18/2015. Hardness data is utilized to determine compliance with Vermont's aquatic biota-based metals criteria as specified in § 29A-303(7) and Appendix C of the Vermont Water Quality Standards. Vermont DEC priority metal chemistry data below the outfall (Table 3) did not detect any exceedances and were below detection for all priority metals.

Table 3. Passumpsic River Metals Water Chemistry – above and below the EHV Weidmann Facility at RM 14.3 & RM 14.0 respectively.

Sample Date	9/8/2010		9/18/2015
Location	Above	Below	Below
River Mile	14.3	14.0	14.0
Hardness	111	113	106
Aluminum (ug/l)	25.6	17.0	<50
Antimony (ug/l)	<10	<10	<10
Arsenic (ug/l)	<1	<1	<1
Beryllium (ug/l)	<1	<1	<1
Cadmium (ug/l)	<1	<1	<1
Chromium (ug/l)	<5	<5	<5
Copper (ug/l)	<10	<10	<10
Iron (ug/l)	91.2	73.0	87.7
Lead (ug/l)	<1	<1	<1
Manganese (ug/l)	45.6	44.6	42.1
Nickel (ug/l)	<5	<5	<5
Selenium (ug/l)	<5	<5	<5
Silver (ug/l)	<1	<1	<1
Thallium (ug/l)	<1	<1	<1
Zinc (ug/l)	<50	<50	<50

Recommended Biological and Water Quality Monitoring:

In light of the fact that all measured thresholds, the stream complies with VWQS for all measured response variables, and that the narrative standard presented in §29A-302(2)(A) of the VWQS is supported (Table 3), MAPP does not recommend biomonitoring be included in the permit. To better assess compliance with the 2014 nutrient criteria at the next permit issuance, MAPP does support the effluent monitoring required by the permit which includes monthly effluent monitoring for TP.

Conclusion:

The available data indicate that this discharge does not cause, have a reasonable potential to cause, or contribute to an instream toxic impact or instream excursion above the water quality criteria. As such, the development of WQBELs will not be necessary.