

## Chapter Trans 277

## HIGHWAY SALT STORAGE REQUIREMENTS

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**Trans 277.01 Statutory authority.** The purpose of this chapter is to implement and interpret s. 85.17, Stats., as authorized by ss. 85.17 (3) and (5) (d), 160.19 (1) and (2), 160.21 (1), (2) (intro.) and (b), (3) and (4), 160.23, 160.25, 160.26, 160.27 (2) (d), 160.33 and 227.11, Stats.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86; correction made under s. 13.93 (2m) (b) 7., Stats., Register, December, 1987, No. 384.

**Trans 277.02 Definitions.** In this chapter:

(1) “Chloride” means sodium chloride (NaCl) or calcium chloride (CaCl<sub>2</sub>).

(2) “Department” means the Wisconsin department of transportation.

(3) “Distribute” means to import, consign, sell, offer for sale, solicit orders for sale, deliver or otherwise supply highway salt, or bulk quantities of a chloride otherwise suitable for application to highways whether for use or resale.

(4) “Enforcement standard” has the meaning specified under s. 160.01 (2), Stats.

**Note:** See also ch. NR 140, Wis. Adm. Code for specific standards adopted.

(5) “Highways” means all ways and thoroughfares and bridges on the same and any streets, alleys, driveways, parking areas, state trunk highways, county trunk highways, town roads, national parkways, expressways, interstate highways, freeways and roadways commonly used for vehicular traffic, whether public or private.

(6) “Highway salt” means bulk quantities of sodium chloride or calcium chloride intended for application to highways and includes mixtures of sand and sodium chloride or calcium chloride in any proportion. If any portion of a bulk quantity of sodium chloride, calcium chloride or chloride-and-sand mixture is intended for application to highways, then the entire bulk quantity is highway salt for the purposes of this chapter. Liquid calcium chloride is not included in this definition. “Bulk quantity” of a chloride means 1000 avoirdupois pounds or more of a chloride distributed in unpackaged form but does not include any chloride in a solid form, including granules, which is packaged in bags or other units which do not exceed 100 avoirdupois pounds (45 kg.) each. Any chloride which is distributed in the form of a solid block weighing at least 50 avoirdupois pounds is packaged, for purposes of this chapter, while in block form. “Bulk quantities of a chloride” includes all such chlorides, not expressly excepted, which are stored for the purpose of subsequent application upon highways, whether by the person storing the highway salt or by others, and includes bulk quantities of such chlorides which are suitable for application to highways, and stored by a person who distributes or manufactures highway salt, whether for the person’s own use or to distribute to others.

(7) “Liquid calcium chloride” means a fluid which is an aqueous solution of calcium chloride, in any concentration, intended a) for application to highway salt to increase its effectiveness at lower temperatures, or b) for direct application to highways.

(8) “Manufacture” means to process, granulate, compound, produce, mix or alter the composition of highway salt, including adding liquid calcium chloride to highway salt.

(9) “Monitoring agency” means the department of natural resources.

(10) “Person” means any natural person, partnership, corporation, business entity or governmental body.

(11) “Point of standards application” has the meaning specified under s. 160.01 (5), Stats.

(12) “Preventive action limit” has the meaning specified under s. 160.01 (6), Stats.

**Note:** See also ch. NR 140, Wis. Adm. Code for specific standards adopted.

(13) “Secretary” means the secretary of the Wisconsin department of transportation.

(14) “Store” means to store, stockpile or otherwise own, possess or control highway salt including storage incidental to manufacture, distribution or use, but does not include the transportation of highway salt or applying a substance regulated by the department to highways.

(15) “Storage facility” means the site where a person stores a substance regulated by the department, enclosed by boundaries at the outermost edges of either the structures required by s. Trans 277.04 (3) (a) and (b), or other existing physical container of the substance, or, in the absence of a structure or other container, “storage facility” means the area enclosed by a boundary at the actual circumference of a highway salt stockpile.

(16) “Substance regulated by the department” means sodium chloride or calcium chloride from highway salt and calcium chloride from liquid calcium chloride.

(17) “Surface water” means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, and all lakes, bays, rivers, streams, springs, ponds, impounding reservoirs, marshes, water-courses and drainage systems, whether natural or artificial, public or private, excluding subsurface sewer systems.

(18) “Use” means to apply highway salt to highways.

(19) “Waters of the state” has the meaning specified under s. 281.01 (18), Stats., and specifically includes groundwater as defined by s. 160.01 (4), Stats.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86; correction in (19) made under s. 13.92 (4) (b) 7., Stats., Register March 2012 No. 675; CR 22-048: am. (6) Register July 2023 No. 811, eff. 8-1-23.

**Trans 277.03 Applicability.** This chapter shall apply to any person who stores highway salt or liquid calcium chloride within the boundaries or jurisdiction of this state in the course of manufacturing, distributing or using highway salt or liquid calcium chloride. This chapter does not restrict the actual use of highway salt or liquid calcium chloride on highways.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86.

**Trans 277.04 Storage practices and facilities.**

(1) HIGHWAY SALT STORAGE RESTRICTIONS. A person who stores

highway salt within the boundaries or jurisdiction of this state or who manufactures, distributes or uses highway salt, shall exercise all reasonable precautions to prevent the entry of highway salt, or any substance regulated by the department, from the storage facility into the waters of the state.

(2) **RESPONSIBILITY FOR COMPLIANCE.** A person who stores highway salt shall construct, inspect and maintain each of the person's storage facilities as necessary to assure compliance with this chapter. When more than one person stores highway salt, including when one person owns the highway salt stored at a storage facility owned or operated by another person, the department may require the compliance of, and issue compliance directives and special orders to, such person or persons as the department determines to be reasonable or necessary to obtain compliance with this chapter.

(3) **STORAGE FACILITY REQUIREMENTS.** (a) All highway salt shall be stored on a base which is both constructed and maintained to be impermeable, so as to prevent a substance regulated by the department, including solutions or combinations containing such substance, from passing through the base and reaching the waters of the state.

1. The storage facility shall be designed, constructed and maintained to divert any runoff from the terrain surrounding the storage facility to prevent any contact between the runoff and highway salt at the storage facility.

2. The base of the storage facility required by this subsection shall be designed, constructed and maintained to drain into, or function as, a holding basin of sufficient capacity to contain all precipitation which may reasonably be expected to come into contact with uncovered highway salt, and to prevent any runoff into the waters of the state of brine resulting from the combination of such precipitation and highway salt. Except as expressly allowed by a permit issued under ch. 283, Stats., brine collected in the holding basin may not be discharged onto the terrain surrounding the storage facility.

**Note:** Brine from the holding basin may be discharged into a municipal sewage system with surface water discharge, or directly discharged into surface water, after a permit is obtained from the department of natural resources under ch. 283, Stats.

(b) All highway salt, except as specifically exempted, shall be covered by a building or structure with walls and a roof sufficient to prevent contact between precipitation and the highway salt and to prevent wind from eroding the highway salt or carrying any amount of a substance regulated by the department into potential contact with the waters of the state. Highway salt which is stored in a covered pile shall be deemed to meet the requirements of this paragraph if the covering:

1. Is an impermeable or water-resistant covering such as a tarp or plastic sheeting;
2. Is secured against wind with weights or tie-downs, such as ropes, cables or wire-mesh, or both;
3. Is sealed at any seams by means which render the seams watertight;
4. Completely covers the entire pile of stored highway salt;
5. Is opened only at a working face, which is:
  - a. Uncovered only while highway salt is actually being removed; and
  - b. Open only to the minimum dimensions reasonably necessary;
6. Is regularly inspected, repaired and otherwise maintained by the person storing the highway salt so as to continue to possess all of the qualities required by this paragraph.

(c) Highway salt which is a mixture of a chloride and sand in which the untreated sand alone is 95% or more, by weight, of the total weight of the highway salt and which is covered from April 1 to October 1 by a cover meeting the requirements of par. (b), is exempt from the other requirements of this subsection.

(4) **PROHIBITED LOCATIONS.** Highway salt may not be stored in a location where the lateral distance between any portion of the storage facility and any lake or stream is 50 feet or less.

**Note:** Chs. NR 115 and 116 Wis. Adm. Code, or local zoning ordinances may also restrict the location of highway salt storage facilities.

(5) **DISCONTINUANCE OF STORAGE.** (a) Except when sold or leased for the express purpose of storing highway salt, no storage facility may be sold, leased or abandoned unless the person storing salt at the storage facility has first removed all highway salt and highway salt residue and any substance regulated by the department, or otherwise placed the storage facility in a condition such that, without any further maintenance, no highway salt residue or substance regulated by the department will enter the waters of the state from the facility.

(b) When a person discontinues storage of highway salt at a storage facility but does not sell, lease or abandon the storage facility, the person shall comply with par. (a) or shall continue to maintain the storage facility in full compliance with this chapter.

(6) **LIQUID CALCIUM CHLORIDE RESTRICTIONS.** A person who stores liquid calcium chloride within the boundaries or jurisdiction of this state shall exercise all reasonable precautions to prevent the entry of liquid calcium chloride from storage into the waters of the state.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86, except (3) (b) and (4) eff. 10-1-86 and (3) (a) eff. 10-1-87; correction in (3) (a) 2. made under s. 13.92 (4) (b) 7, Stats., Register March 2012 No. 675; CR 22-048: am. (2) Register July 2023 No. 811, eff. 8-1-23.

**Trans 277.05 Required reports and records.** (1) **REPORTING.** A person storing highway salt shall make reports in writing to the department as required by this section.

(a) The person shall report the receipt of any information or allegation concerning the storage facility as a source of contamination of the waters of the state by any substance regulated by the department. A copy of any written complaint or other information received by the person in this regard shall be attached to the report, and sent to the department within 10 days of its receipt. The department shall forward a copy of any such report to the monitoring agency.

(b) When a person who stores highway salt sells, leases, or abandons a storage site, or otherwise discontinues storage at a storage site, temporarily or permanently, or intends to do so, the person shall report to the department no later than 10 days after such discontinuance. If the discontinuance is reported in advance, the anticipated date of discontinuance shall be stated.

(c) Except if previously reported under par. (d), within 30 days of commencing to store highway salt or liquid calcium chloride for the first time, the person storing the highway salt shall file a report with the department containing the following information:

1. The name and address of the person or persons storing highway salt or liquid calcium chloride;
2. The street address and telephone number of the office where the records of the highway salt storage facility or stored liquid calcium chloride are kept;
3. The mailing address of the administering office, if different from the street address;
4. The actual location of the highway salt storage facility;
5. The storage capacity of the highway salt storage facility;
6. The actual location of the stored liquid calcium chloride; and
7. The liquid calcium chloride storage capacity.

(d) Within 30 days of May 1, 1986, each person to whom this chapter applies shall report to the department the information required in par. (c) for each storage facility where highway salt is stored and each container where liquid calcium chloride is stored by the person.

(2) **RECORDS.** A person storing highway salt or liquid calcium chloride shall maintain written records specified in this section at

a local office within this state and shall send copies to the department upon request and make the original records available for inspection and copying by employees of the department during normal business hours. These records shall be held for 6 years, and shall contain:

- (a) The location of each of the person's storage facilities;
- (b) The maximum and minimum quantities of highway salt and liquid calcium chloride stored at each storage facility during each month;
- (c) The date and nature of physical changes in a storage facility including:
  1. Creation of new storage capacity;
  2. Construction of, or major repairs to, structures or facilities required by s. Trans 277.04 (3); and
  3. Discontinuance of storage of highway salt at a facility.
- (d) A record of all complaints received concerning the storage facility as the source of contamination of the waters of the state by a substance regulated by the department.
- (e) Such other information as the department may from time to time require on forms provided by the department for the purpose of recording this information.

**Note:** DOT forms for recording and reporting this information are available from the DOT, State Maintenance Engineer for Highways, Bureau of Operations, Division of Highways and Transportation Services, 4802 Sheboygan Avenue, Room 601, P.O. Box 7916, Madison, Wisconsin 53707.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86, except (2) eff. 10-1-86.

**Trans 277.06 Department inspections.** (1) The department shall inspect each storage facility and the records of each person storing highway salt or liquid calcium chloride, at least once every 12 months, or more often as necessary to assure compliance with this chapter, and as follows:

- (a) The department shall inspect a storage facility within 30 days when:
    1. The monitoring agency reports that:
      - a. A preventive action limit or enforcement standard has been attained or exceeded at an applicable point of standards application, or
      - b. Surface water has been adversely impacted; and
    2. The monitoring agency reports that the storage facility may have been the source of the contamination.
  - (b) The department shall inspect a storage facility to verify compliance with this chapter upon receipt of a report required under s. Trans 277.05 (1) (a) or (b) from the person storing highway salt.
  - (c) The department shall inspect a storage facility as necessary to verify compliance with deadlines set either by special orders issued under s. 85.17 (5) (d), Stats., or s. Trans 277.08 (2) (d) or (3) (b) or by compliance directives issued under sub. (2).
- (2) Department employees inspecting a storage facility may issue written directives and deadlines to the person storing highway salt requiring the person to take such specific actions as the department employee finds necessary to assure compliance with this chapter.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86.

**Trans 277.07 Points of standards application.** (1) Each of the following locations shall, with the consent of the owner of the property where the point is located, or pursuant to a special inspection warrant under s. 66.0119, Stats., be a point of standards application for each storage facility for the purpose of determining compliance with ch. 160, Stats.:

- (a) Any point of groundwater use within 1500 feet of any portion of the storage facility, and at any depth from which groundwater is drawn for potable or nonpotable use.
- (b) Any point within 1500 feet of any portion of the storage facility, or any point inside of the property boundaries enclosing the storage facility, at which the monitoring agency determines it to

be necessary to apply standards in order to adequately perform monitoring.

(c) Any point beyond 1500 feet from the storage facility may also be accepted by the department as a point of standards application if the monitoring agency first demonstrates to the satisfaction of the department that probable cause exists to believe that a facility, activity or practice regulated by the department under this chapter has caused the preventive action limit or enforcement standard for a substance regulated by the department to be attained or exceeded at that point.

(2) A property owner who stores highway salt on the owner's property or permits others to do so has also consented to employees of the monitoring agency, as agents of the department, coming upon the owner's property during normal business hours, obtaining and removing such water samples as are reasonably necessary for both monitoring required under ch. 160, Stats., and enforcement of this chapter by the department.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86; correction in (1) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register March 2012 No. 675; CR 22-048: am. (2) Register July 2023 No. 811, eff. 8-1-23.

**Trans 277.08 Department responses.** (1) NONCOMPLIANCE REPORT. When a department inspector reports that a person storing highway salt has failed to comply with this chapter or with a written compliance directive issued under this subsection or s. Trans 277.06 (2), or with a special order issued by the department, the department may respond by issuing a compliance directive or a special order for remedial action. Remedial actions ordered may include, but are not limited to, those actions set out in sub. (2) (d) except sub. (2) (d) 1.

(2) PREVENTIVE ACTION LIMIT OR CONTAMINATION REPORT. The department shall respond as provided in this subsection when the department receives a report from the monitoring agency that the preventive action limit of a substance regulated by the department has been attained or exceeded at an applicable point of standards application or that surface water has been adversely impacted near a storage facility and the storage facility may have been the source of the contamination.

(a) The department shall send notice of the report by first class mail to the local office of the person storing highway salt at the storage facility.

(b) The department shall inspect the storage facility within 30 days of receipt of the report and determine if the storage facility is in compliance with all provisions of this chapter, as provided in s. Trans 277.06 (1) (a).

(c) Within 60 days of receipt of the monitoring agency report the department shall determine whether or not the storage facility is the source or most probable source of contamination by a substance regulated by the department.

(d) If the department determines that the storage facility is the source or most probable source of the contamination, then the department shall order appropriate remedial action to meet the goals of s. 160.23 (1), Stats. Orders may be either written compliance directives, including deadlines, or special orders. Remedial actions may include, but are not limited to:

1. No action;
2. Further investigation;
3. Increased monitoring of the storage facility in cooperation with the monitoring agency;
4. Revision of specific operational procedures at the storage facility;
5. Repair, construction or reconstruction of facilities as necessary to comply with s. Trans 277.04;
6. Prohibition of activities or practices which use or produce the substance;
7. Relocation of the storage facility or the highway salt at the storage facility; or

8. Remedial action to renovate or restore groundwater quality.

9. Closure of the storage facility.

**(3) ENFORCEMENT STANDARD REPORT.** (a) Within 60 days of a report from the monitoring agency that an enforcement standard of a substance regulated by the agency has been attained or exceeded, the department shall determine if a storage facility is the source or most probable source of contamination by the substance.

(b) If the department determines that a storage facility is the source or most probable source of contamination by a substance regulated by the department, the department shall issue a special order directing the person responsible for the storage facility to close the facility and discontinue storage as provided in s. [Trans 277.04 \(5\) \(a\)](#), unless the person responsible for the storage facility demonstrates that an alternative enforcement response under par. (c) will achieve compliance with the enforcement standard at the point of standards application.

(c) If the person responsible for the storage facility demonstrates to the department to a reasonable certainty, by the greater weight of the credible evidence, that one or more of the responses in sub. (2) (d) 2. to 8. will achieve compliance with the enforcement standard at the point of standards application, the department shall issue a special order directing the person to undertake the specific remedial action under sub. (2) (d) 2. to 8. which the department determines will achieve compliance with the enforcement standard at the point of standards application.

**(4) LIMITATIONS ON SPECIAL ORDERS.** (a) Orders for remedial actions under sub. (2) (d) shall be limited as expressly provided by ss. [160.21 \(3\)](#) and [160.23 \(4\)](#), Stats. The department shall consider the applicable factors set out in ss. [160.21 \(3\)](#) and (4), [160.23 \(1\)](#) and (6), Stats., when issuing orders under sub. (2) (d).

(b) Orders for remedial action under sub. (3) (b) shall be limited as expressly provided by s. [160.25 \(1\)](#) and (4), Stats. The department shall consider the applicable factors set out in s. [160.25 \(4\)](#) and (5), Stats., when issuing orders under sub. (3) (b).

(c) Orders under sub. (2) (d) and (3) (b) shall be issued as soon as is reasonably possible after the determination by the department that a storage facility is the source or most probable source of contamination of the waters of the state by a substance regulated by the department. The deadlines of sub. (2) (c) and sub. (3) (a) do not apply to the issuance of orders.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86.

**Trans 277.09 Rule review.** The department shall review this chapter to determine whether revisions are necessary to meet the goals of s. [85.17](#), Stats., and ch. [160](#), Stats., when the following conditions occur:

**(1)** The monitoring agency reports that the preventive action limit or enforcement standard for a substance regulated by the department has been reached or exceeded at a point of standards application of a storage facility;

**(2)** The department determines that the storage facility is the source or most probable source of the contamination reported; and

**(3)** The storage facility has been inspected by department employees as required by s. [Trans 277.06](#) and has been in compliance with this chapter at each inspection by the department.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86.

**Trans 277.10 Public participation.** In the issuance and administrative enforcement of special orders of the department pursuant to s. [85.17 \(5\) \(d\)](#), Stats., or s. [Trans 277.08 \(2\) \(d\)](#) or (3) (b), the secretary shall consider any concerns, complaints, response to the proposed terms of a special order or other information furnished to the secretary by any member of the public. In such cases as the secretary may designate, notice of proposed special orders may be published or publicly posted and public response solicited and considered prior to issuance of a special order.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86.

**Trans 277.11 Department determinations.** All departmental determinations under this chapter shall be made by the secretary or the particular person or persons the secretary may from time to time designate for that purpose.

**(2)** The secretary, or the person or persons designated by the secretary, may hold hearings and call witnesses. Any hearing shall be a class 1 proceeding as defined by s. [227.01 \(3\) \(a\)](#), Stats.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86; correction in (2) made under s. [13.92 \(4\) \(b\) 7.](#), Stats., Register March 2012 No. 675.

**Trans 277.12 Effective date.** **(1)** Except as otherwise expressly provided, this chapter shall become effective immediately.

**(2)** The provisions of s. [Trans 277.04 \(3\) \(a\)](#) shall become effective on October 1, 1987.

**(3)** The provisions of ss. [Trans 277.04 \(3\) \(b\)](#) and (4), and [277.05 \(2\)](#), shall become effective on October 1, 1986.

**History:** Cr. Register, April, 1986, No. 364, eff. 5-1-86.