

## CHAPTER 160

## GROUNDWATER PROTECTION STANDARDS

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**Cross-reference:** See also ch. NR 140, Wis. adm. code.

**160.001 Legislative intent.** The legislature recognizes that prior to May 11, 1984, most groundwater regulatory programs were not based on numerical standards. The legislature intends, by the creation of this chapter, to minimize the concentration of polluting substances in groundwater through the use of numerical standards in all groundwater regulatory programs. The numerical standards, upon adoption, will become criteria for the protection of public health and welfare, to be achieved in groundwater regulatory programs concerning the substances for which standards are adopted. To this end, the legislature intends that:

(1) This chapter will establish an administrative process which will produce numerical standards, comprised of enforcement standards and preventive action limits, for substances in groundwater. As more specifically provided in this chapter, administrative procedures also provide for minimizing the concentration of substances in groundwater.

(2) The enforcement standards and preventive action limits will be adopted under the authority of this chapter, independent of any regulatory programs concerning the substances for which enforcement standards and preventive action limits are adopted.

(3) This chapter supplements the regulatory authority elsewhere in the statutes, whether the regulatory programs exist under current statutes on May 11, 1984, or are created after that date. Regulatory agencies will continue to exercise the powers and duties in those regulatory programs, consistent with the enforcement standards and preventive action limits for substances in groundwater under this chapter. This chapter provides guidelines and procedures for the exercise of regulatory authority which is established elsewhere in the statutes, and does not create independent regulatory authority.

(4) In order to comply with this chapter, a regulatory agency is not required to adopt a particular type of regulation; regulatory agencies are free to establish any type of regulation which assures that regulated facilities and activities will not cause the concentration of a substance in groundwater affected by the facilities or activities to exceed the enforcement standards and preventive action limits under this chapter at a point of standards application. A regulatory agency may adopt regulations which establish specific design and management criteria for regulated facilities and activities, if the regulations will ensure that the regulated facilities and activities will not cause the concentration of a substance in groundwater affected by the facilities or activities to exceed the enforcement standards and preventive action limits under this chapter at a point of standards application.

(5) The enforcement standards and preventive action limits

adopted under this chapter provide adequate safeguards for public health and welfare. However, this chapter does not prevent regulatory agencies from adopting regulations under regulatory authority elsewhere in the statutes based on the best currently available technology for regulated activities and practices which ensure a greater degree of groundwater protection.

(6) Where necessary to comply with federal statutes or regulations, the department of natural resources may adopt rules in regulatory programs administered by it which are more stringent than the enforcement standards and preventive action limits adopted under this chapter.

(7) A regulatory agency may take any actions within the context of regulatory programs established in statutes outside of this chapter, if those actions are necessary to protect public health and welfare or prevent a significant damaging effect on groundwater or surface water quality for present or future consumptive or non-consumptive uses, whether or not an enforcement standard and preventive action limit for a substance has been adopted under this chapter. Nothing in this chapter requires the department of health services or the department of natural resources to establish an enforcement standard for a substance if a federal number or state drinking water standard has not been adopted for the substance and if there is not sufficient scientific information to establish the standard.

(8) Preventive action limits shall serve as a means to inform regulatory agencies of potential groundwater contamination problems, to establish the level of groundwater contamination at which regulatory agencies are required to commence efforts to control the contamination and to provide a basis for design and management practice criteria in administrative rules. A preventive action limit is not intended to be an absolute standard at which remedial action is always required.

**History:** 1983 a. 410; 1995 a. 27 s. 9126 (19); 2007 a. 20 s. 9121 (6) (a).

**Cross-reference:** See also ch. NR 140, Wis. adm. code.

The promulgation of rules that prescribe the use of risk-based methodologies to respond to petroleum contamination in soil and groundwater would violate ch. 160. OAG 3-99.

**160.01 Definitions.** As used in this chapter, unless the context requires otherwise:

(1) “Department,” when used without qualification, means the department of natural resources.

(2) “Enforcement standard” means a numerical value expressing the concentration of a substance in groundwater which is adopted under ss. 160.07 and 160.09.

(3) “Federal number” means a numerical expression of the concentration of a substance in water, established as:

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(a) A drinking water standard or maximum contaminant level, by the federal environmental protection agency;

(b) A suggested no-adverse-response level, by the federal environmental protection agency; or

(c) For oncogenic substances, a concentration based on a risk level determination by the federal environmental protection agency or a concentration based on a probability of risk model determined by the national academy of sciences.

(4) "Groundwater" means any of the waters of the state, as defined in s. 281.01 (18), occurring in a saturated subsurface geological formation of rock or soil.

(5) "Point of standards application" means the specific location, depth or distance from a facility, activity or practice at which the concentration of a substance in groundwater is measured for purposes of determining whether a preventive action limit or an enforcement standard has been attained or exceeded.

(6) "Preventive action limit" means a numerical value expressing the concentration of a substance in groundwater which is adopted under s. 160.15.

(6m) "Property boundary" means the boundary of the total contiguous parcel of land owned by a common owner, regardless of whether public or private roads run through the parcel.

(7) "Regulatory agency" means the department of agriculture, trade and consumer protection, the department of safety and professional services, the department of transportation, the department of natural resources and other state agencies which regulate activities, facilities or practices which are related to substances which have been detected in or have a reasonable probability of entering the groundwater resources of the state.

(8) "Substance" means any solid, liquid, semisolid, dissolved solid or gaseous material, naturally occurring or man-made chemical, parameter for measurement of water quality or biological organism which, in its original form, or as a metabolite or a degradation or waste product, may decrease the quality of groundwater.

**History:** 1983 a. 410; 1995 a. 27 ss. 4441, 9116 (5); 1995 a. 227; 2011 a. 32; 2015 a. 196.

**160.03 Duties of department.** The department shall exercise both the responsibilities assigned specifically to it under this chapter as well as those assigned generally to the department as a regulatory agency.

**History:** 1983 a. 410.

**Cross-reference:** See also ch. NR 140, Wis. adm. code.

**160.05 Identification of groundwater contamination; categories.** (1) IDENTIFICATION. Each regulatory agency shall submit to the department a list of those substances which are related to facilities, activities and practices within its authority to regulate and which are detected in or have a reasonable probability of entering the groundwater resources of the state.

(2) PETITION. (a) Any person may petition a regulatory agency to add a substance to or delete a substance from the list submitted to the department under sub. (1). The petition shall clearly and concisely state all of the following:

1. The name of the substance which is proposed to be added or removed from the list.

2. The regulatory authority of the regulatory agency over the facility, activity or practice which is the source of the substance.

3. The reasons for believing the substance exists in or has a reasonable probability of entering the groundwater or the reasons for believing the substance should be removed from the list.

(b) Within a reasonable period of time after the receipt of a petition a regulatory agency shall either deny the petition in writing or submit the name of the substance to the department under

sub. (1). If the regulatory agency denies the petition, it shall give notice of the denial promptly to the person who filed the petition, including a statement of its reasons for the denial.

(3) ESTABLISH CATEGORIES. Within 60 days following receipt of a name of a substance under sub. (1), the department shall place the substance into one of the following categories:

(a) Category 1, if the substance is detected in groundwater in concentrations in excess of a federal number for that substance.

(b) Category 2, if the substance is detected in groundwater and is of public health or welfare concern but:

1. Is not detected in concentrations in excess of a federal number; or

2. For which there is no federal number.

(c) Category 3, if the substance has a reasonable probability of being detected in groundwater and is of public health or welfare concern.

(4) RANKING WITHIN CATEGORIES. The department shall rank each substance within its category. The department shall give highest rankings to those substances which pose the greatest risks to the health or welfare of persons in the state, taking into consideration, among other things, the following characteristics:

(a) Carcinogenicity.

(b) Teratogenicity.

(c) Mutagenicity.

(d) Interactive effects.

(5) REVISION OF SUBSTANCE LISTS. The department shall revise, as necessary, the ranking of substances within categories to include additional substances as they are reported, to reflect a change in the status of a substance which requires that it be placed in a different category or to remove from the list substances which are not shown to involve public health or welfare concerns or which do not have a reasonable probability of entering the groundwater.

(6) PUBLIC HEALTH CONCERNS. (a) The department shall designate which of the substances in each category are of public health concern and which are of public welfare concern.

(b) In determining whether a substance is of public health concern, the department shall take into account the degree to which the substance may:

1. Cause or contribute to an increase in mortality;

2. Cause or contribute to an increase in illness or incapacity, whether chronic or acute;

3. Pose a substantial present or potential hazard to human health because of its physical, chemical or infectious characteristics; or

4. Cause or contribute to other adverse human health effects or changes of a chronic or subchronic nature even if not associated with illness or incapacity.

(c) In determining whether a substance is of public health concern, the department may consider other effects not specified under par. (b) if those effects are reasonably related to public health.

(d) In determining whether a substance is of public welfare concern, the department shall take into account whether the substance may:

1. Influence the aesthetic suitability of water for human use;

2. Influence the suitability of water for uses other than human drinking water; or

3. Have a substantial adverse effect on plant life or animal life.

(e) In determining whether a substance is of public welfare concern, the department may consider additional characteristics

not specified under par. (d) if those characteristics are reasonably related to public welfare.

**History:** 1983 a. 410.

**160.07 Establishment of enforcement standards; substances of public health concern.** (1) The department of health services and the department shall enter into a memorandum of understanding setting forth the procedures and responsibilities of each agency in establishing enforcement standards under this section. The memorandum shall include those standards to be used by the department in making the designation required under s. 160.05 (6).

(2) Within 10 days after placing the name of a new substance within a category or changing the category of a substance under s. 160.05, the department shall submit the current list of categories and rankings of substances to the department of health services.

(3) The department of health services shall recommend to the department an enforcement standard for each substance submitted to it under sub. (2) which is designated as of public health concern, in the order of rankings within each category under s. 160.05 (4).

(4) The department of health services shall develop recommendations for enforcement standards for substances of public health concern as follows:

(a) If a single federal number exists for a substance, the federal number shall be the enforcement standard.

(b) If more than one federal number exists for a substance, the most recently established federal number representing the most current data shall be the enforcement standard.

(c) If no federal number exists for a substance, but there is a state drinking water standard, the state drinking water standard shall be the enforcement standard.

(d) If neither a federal number nor a state drinking water standard exists for a substance, the department of health services shall develop a recommended enforcement standard using the methodology under s. 160.13.

(e) Notwithstanding pars. (a) and (b), the department of health services may recommend an enforcement standard different than the federal number if there is significant technical information which is scientifically valid and which was not considered when the federal number was established, upon which the department of health services concludes, utilizing the methodology under s. 160.13 and with a reasonable scientific certainty, that such a standard is justified. The department of health services may recommend a change in an enforcement standard previously adopted by utilization of a federal number. In evaluating the evidence for establishing an enforcement standard different than a federal number, the department of health services shall consider the extent to which the evidence was developed in accordance with scientifically valid analytical protocols and may consider whether the evidence was subjected to peer review, resulted from more than one study and is consistent with other credible medical or toxicological evidence.

(5) Within 9 months after transmitting the name of a substance to the department of health services under sub. (2), the department of natural resources shall propose rules establishing the recommendation of the department of health services as the enforcement standard for that substance and publish the notice required under s. 227.16 (2) (e), 227.17 or 227.24 (3).

(6) If a federal number is established or changed for a substance after an enforcement standard is recommended by the department of health services and if any person or regulatory agency submits a request, the department of natural resources

shall determine whether the enforcement standard needs revision based on recommendations under sub. (4).

**History:** 1983 a. 410; 1985 a. 182 s. 57; 1995 a. 27 s. 9126 (19); 2007 a. 20 s. 9121 (6) (a).

**160.09 Establishment of enforcement standards; substances of public welfare concern.** (1) Notwithstanding the authority of the department under ss. 280.11, 281.15 and 281.17 (8) to establish standards for pure drinking water, the department shall establish enforcement standards for substances of public welfare concern as follows:

(a) If a single federal number exists for a substance, the federal number shall be the enforcement standard.

(b) If more than one federal number exists for a substance, the most recently established federal number representing the most current data shall be the enforcement standard.

(c) If no federal number exists for a substance, but there is a state drinking water standard, the state drinking water standard shall be the enforcement standard.

(d) If neither a federal number nor a state drinking water standard exists for a substance, the department shall establish an enforcement standard using all relevant and scientifically valid information available in technical literature concerning the substance and, if necessary, by comparison to similar compounds or classes of compounds.

(e) Notwithstanding pars. (a) and (b), the department may establish an enforcement standard different than the federal number if there is significant technical information which is scientifically valid and which was not considered when the federal number was established, upon which the department concludes, with a reasonable scientific certainty, that such a standard is justified. The department may change an enforcement standard previously adopted by utilization of a federal number. In evaluating the evidence for establishing an enforcement standard different than a federal number, the department shall consider the extent to which the evidence was developed in accordance with scientifically valid analytical protocols and may consider whether the evidence was subjected to peer review, resulted from more than one study and is consistent with other credible medical or toxicological evidence.

(2) The department shall establish an enforcement standard for each substance of public welfare concern in the order of rankings within each category under s. 160.05 (4).

(3) The department shall establish enforcement standards by rule. The department shall prepare proposed rules establishing enforcement standards and shall provide the notice under s. 227.16 (2) (e), 227.17 or 227.24 (3) within 9 months after the name of a substance is received under s. 160.05.

(4) If a federal number is changed or newly established for a given substance after an enforcement standard is established by the department and if a request is submitted to the department by any person or regulatory agency, the department shall determine whether the enforcement standard needs to be revised based on sub. (1).

**History:** 1983 a. 410; 1985 a. 135; 1985 a. 182 s. 57; 1995 a. 227.

**160.11 Public information.** In promulgating any enforcement standards as rules under ss. 160.07 and 160.09, the department, with the assistance of the department of health services, shall prepare a document describing the information and methodology used and the conclusions reached in establishing each proposed enforcement standard. The department shall make the document available when the notice is provided under s. 227.16 (2) (e), 227.17 or 227.24 (3). Any person may submit written questions on the document to the department at any time after the notice is provided under s. 227.16 (2) (e), 227.17 or 227.24 (3)

and before any public hearing on the proposed rule is held. The department, with the assistance of the department of health services, shall respond at the public hearing to all questions previously submitted in writing.

**History:** 1983 a. 410; 1985 a. 182 s. 57; 1995 a. 27 s. 9126 (19); 2007 a. 20 s. 9121 (6) (a).

**160.13 Methodology to establish enforcement standard. (1) DEFINITIONS.** In this section:

(a) “Acceptable daily intake” means the dose of a substance which, if ingested daily over an entire human lifetime, appears to be without appreciable risk on the basis of all known facts at the time it is established. Acceptable daily intake is expressed in units of milligrams of the substance per kilogram of body weight.

(b) “Department” means the department of health services.

(c) “No-observable-effect level” means that level of intake of a substance which, when administered to a group of humans or experimental animals, does not produce any of the effects observed or measured at any higher level of intake and produces no significant difference between the test group and an unexposed control group of humans or animals maintained under identical conditions.

**(2) METHODOLOGY.** (a) The department shall establish a recommended enforcement standard for a substance by first determining the acceptable daily intake for the substance under par. (b) and then basing the recommended enforcement standard on that acceptable daily intake under par. (c). In complying with pars. (b) and (c), the department shall utilize, where available, relevant and scientifically valid information from the office of pesticide programs and the office of drinking water in the federal environmental protection agency.

(b) The department shall determine the acceptable daily intake for the substance as follows:

1. If an acceptable daily intake for the substance is established by the office of pesticide programs or office of drinking water in the federal environmental protection agency, that federal value shall be the acceptable daily intake.

2. Notwithstanding subd. 1., the department may determine an acceptable daily intake value different than the federal value established by the office of pesticide programs or office of drinking water in the federal environmental protection agency, if there is significant technical information which is scientifically valid and which was not considered when the federal value was established, upon which the department concludes, with a reasonable scientific certainty, that such a value is justified. In evaluating the evidence for establishing an acceptable daily intake value different than a federal value, the department shall consider the extent to which the evidence was developed in accordance with scientifically valid analytical protocols and may consider whether the evidence was subjected to peer review, resulted from more than one study and is consistent with other credible medical or toxicological evidence.

3. If no acceptable daily intake for the substance is established by the office of pesticide programs or office of drinking water in the federal environmental protection agency, the department shall determine the acceptable daily intake for the substance by dividing the substance’s no-observable-effect level by a suitable uncertainty factor. In establishing a suitable uncertainty factor, the department shall consider all of the following, utilizing, where available, information from the office of pesticide programs and the office of drinking water in the federal environmental protection agency:

a. The quality and quantity of data relevant to establishing an acceptable daily intake.

b. The relative importance to full health of the most sensitive target organs or body systems affected by the substance.

c. The amount of interspecies and intraspecies variations in the effects of the substance.

d. The dose-response curve and the time-concentration relationships for the substance.

e. The nature and degree of severity of injury incurred at the intake level at which the effect of exposure to the substance ceases to be reversible.

f. The potential interactions of the substance within the body with other environmental chemicals or therapeutic drugs.

g. The known potential cumulative effects of repeated exposure to the substance.

h. The known chronic or subchronic effects of exposure to similar or related compounds.

i. The identification of physiologic or pathologic states and functional abnormalities among the potentially exposed population which would constitute a health hazard in the event of exposure to the substance.

j. The possibility of chronic health effects from repeated, acute short-term exposure to the substance.

4. If no acceptable daily intake or equivalent value for an oncogen is established by the federal environmental protection agency or if an acceptable daily intake is established but oncogenic potential at the established acceptable daily intake presents an unacceptable probability of risk, the department shall provide the department of natural resources with an evaluation of the oncogenic potential of the substance. This evaluation of oncogenic potential shall indicate an acceptable daily intake for the substance which, if ingested daily over an entire human lifetime, appears to present an acceptable probability of risk which is presumed to be a risk level equal to a ratio of one to 1,000,000. A risk level equal to a ratio of one to 1,000,000 is the expectation that no more than one excess death will occur in a population of 1,000,000 over a 70-year period. The department shall base the evaluation of oncogenic potential on a review of the most recent and scientifically valid information available.

(c) The department shall base the recommended enforcement standard for the substance on the intake of one liter of water per day by a person weighing 10 kilograms, where that water is the only source of the substance for the person. The department shall establish the recommended enforcement standard so that the acceptable daily intake of the substance is not exceeded for this type of person under these conditions.

**History:** 1983 a. 410; 1995 a. 27 s. 9126 (19); 2007 a. 20 s. 9121 (6) (a).

**160.15 Establishment of preventive action limits. (1)**

The department shall establish by rule a preventive action limit for each substance for which an enforcement standard is established, as follows:

(a) For any substance of public welfare concern, the preventive action limit shall be 50 percent of the concentration established as the enforcement standard.

(b) For any substance of public health concern, the preventive action limit shall be 20 percent of the concentration established as the enforcement standard.

(c) Notwithstanding par. (b), for any substance that has carcinogenic, mutagenic or teratogenic properties or interactive effects, the preventive action limit shall be 10 percent of the concentration established as the enforcement standard.

**(2)** The department may establish a preventive action limit for a substance which is lower than the level specified under sub. (1) if the department concludes, to a reasonable degree of scientific certainty, based on significant technical information which is scientifically valid, that a more stringent level is necessary to protect public health or welfare from the interactive effects of the substance. In evaluating whether the evidence provides a sufficient

basis for a more stringent level, the department shall consider the extent to which the evidence was developed in accordance with generally accepted analytical protocols and may consider whether the evidence was subjected to peer review, resulted from more than one study and is consistent with other credible medical or toxicological evidence.

(3) Notwithstanding sub. (1), the department may establish by rule preventive action limits for indicator parameters used in monitoring waste storage, treatment or disposal facilities regulated by the department such as biochemical or chemical oxygen demand, alkalinity, hardness, conductivity and pH, if enforcement standards are not established under s. 160.07 or 160.09 for the indicator parameters. In establishing preventive action limits for indicator parameters, the department shall consider the background water quality and the potential for the indicator parameters to show that preventive action limits under sub. (1) may be exceeded.

History: 1983 a. 410.

**160.17 Collection of information.** Concurrently with the identification of substances under s. 160.05 (1), the regulatory agency shall conduct a literature search and shall request, where appropriate, the manufacturer of each substance and other knowledgeable sources to provide relevant data, information on the environmental fate of the substance and recommendations on measures which may be implemented to minimize the concentration of the substance in the groundwater.

History: 1983 a. 410.

**160.19 Regulatory agency; review of existing regulations; design and management criteria.** (1) When an enforcement standard or a preventive action limit is established by rule for a substance, each regulatory agency shall review its rules and commence promulgation of any rules or amendments of its rules necessary to ensure that the activities, practices and facilities regulated by the regulatory agency will comply with this chapter.

(2) (a) Each regulatory agency shall promulgate rules which define design and management practice criteria for facilities, activities and practices affecting groundwater which are designed, to the extent technically and economically feasible, to minimize the level of substances in groundwater and to maintain compliance by these facilities, activities and practices with preventive action limits, unless compliance with the preventive action limits is not technically and economically feasible.

(b) If a regulatory agency proposes a rule under par. (a) which is not designed to maintain compliance with preventive action limits, the proposed rule and the notice required under s. 227.16 (2) (e), 227.17 or 227.24 (3) shall include a statement to that effect, and a summary of the rationale for the proposed rule. If a regulatory agency determines not to amend the substance of an existing rule which contains design or management practice criteria that do not maintain compliance with preventive action limits, it shall nonetheless amend the rule to include a notice that the rule does not maintain preventive action limits. A summary of the rationale for not amending the substance of the rule shall be included in the notice required under s. 227.16 (2) (e), 227.17 or 227.24 (3).

(3) A regulatory agency may not promulgate rules defining design and management practice criteria which permit an enforcement standard to be attained or exceeded at the point of standards application.

(4) Notwithstanding previous regulatory agency action to review and amend existing rules or to promulgate new rules:

(a) If a rule is designed to maintain compliance with a preventive action limit under sub. (2) (a) and if a preventive action limit

is attained or exceeded at a point of standards application, the regulatory agency shall review its rules and, if necessary, revise the rules to maintain or achieve the objectives of subs. (2) and (3).

(b) If an enforcement standard is attained or exceeded at a point of standards application, the regulatory agency shall review its rules and, if necessary, revise the rules to ensure that the enforcement standard is not attained or exceeded at a point of standards application at other locations in the future.

(5) In conducting any review under sub. (4), the regulatory agency's analysis shall include an examination of the performance of other comparable activities in the state to determine if the noncompliance at a single site suggests an isolated problem or a problem which is likely to recur.

(6) The department shall promulgate by rule a scientifically valid procedure for determining if a preventive action limit or enforcement standard is, in fact, attained or exceeded or if a change in concentration of a substance has, in fact, occurred. This procedure shall be used for all regulatory and enforcement purposes under this chapter.

(7) Notwithstanding subs. (2) and (4) (a), modifications to rules and changes in the manner of their administration are not required under this section solely because the background concentration of nitrate or a substance of public welfare concern at individual locations is equal to or greater than the preventive action limit.

(8) Notwithstanding subs. (2) to (4), the department may allow a facility which is regulated under chs. 283 or 289 to 292 to be constructed, after May 11, 1984, in an area where the background concentration of nitrate or a substance of public welfare concern attains or exceeds the preventive action limit or the enforcement standard if the facility is designed to achieve the lowest possible concentration for that substance which is technically and economically feasible and the anticipated increase in the concentration of the substance does not present a threat to public health or welfare.

(9) Notwithstanding subs. (2) to (4), the department may allow a facility which is regulated under chs. 283 or 289 to 292 to be constructed, after May 11, 1984, in an area where the background concentration of a substance of public health concern, other than nitrate, attains or exceeds a preventive action limit for that substance:

(a) If the facility will not cause the further release of that substance into the environment;

(b) If the background concentration of the substance does not exceed the enforcement standard for that substance, the facility will not cause the concentration of the substance to exceed the enforcement standard for that substance and the facility is designed to achieve the lowest possible concentration of that substance which is technically and economically feasible; or

(c) If the background concentration of the substance equals or exceeds the enforcement standard for that substance, the facility is designed to achieve the lowest possible concentration of that substance which is technically and economically feasible, the anticipated increase in the concentration of the substance will not cause an increased threat to public health or welfare and the anticipated incremental increase in the concentration of the substance, by itself, will not exceed the preventive action limit. The department shall take action under s. 160.25 if it determines that the increase in the substance causes an increased threat to public health or welfare or it determines that the incremental increase in the concentration of the substance, by itself, exceeds the preventive action limit.

(10) If the department allows a facility to be constructed under sub. (9) (b) or (c), the department shall specify in the initial approval of or the initial or modified permit for the facility the

terms and conditions under which the department may seek remedial action for the specific site under ss. 160.23 and 160.25, relating to the substance.

(11) Regulatory agencies shall enforce rules promulgated under this section with respect to specific sites in accordance with ss. 160.23 and 160.25.

(12) The requirements in this section shall not apply to rules governing an activity regulated under ch. 293 or subch. III of ch. 295, or to a solid waste facility regulated under subch. III of ch. 289 which is part of an activity regulated under ch. 293 or subch. III of ch. 295, except that the department may promulgate new rules or amend rules governing this type of activity, practice or facility if the department determines that the amendment or promulgation of rules is necessary to protect public health, safety or welfare.

**History:** 1983 a. 410; 1985 a. 182 s. 57; 1995 a. 227; 2013 a. 1.

**160.21 Adoption of rules for regulatory responses for groundwater contamination.** (1) For each substance for which an enforcement standard or a preventive action limit is adopted by the department, each regulatory agency shall promulgate rules which set forth the range of responses which the regulatory agency may take or which it may require the person controlling a facility, activity or practice which is a source of the substance to take if:

(a) The preventive action limit is attained or exceeded at the point of standards application; or

(b) The enforcement standard is attained or exceeded at the point of standards application.

(2) Each regulatory agency shall determine by rule the point of standards application for each facility, activity or practice which is the source of a substance for which an enforcement standard or a preventive action limit is established, as follows:

(a) If monitoring is required under existing rules for a facility, activity or practice:

1. The regulatory agency shall establish a point of standards application at any location where groundwater is monitored for the purpose of determining whether the preventive action limit for a substance has been attained or exceeded.

2. The regulatory agency shall establish a point of standards application at the following locations for the purpose of determining compliance with enforcement standards, or determining whether design and management practice criteria established under s. 160.19 (2) (a) successfully maintain compliance with preventive action limits:

a. Any point of present groundwater use;

b. Any point beyond the property boundaries of the premises where the facility, activity or practice is located or undertaken; and

c. Any point beyond the design management zone but within the property boundaries of the premises where the facility, activity or practice is located or undertaken.

(b) If monitoring is not required under existing rules for a facility, activity or practice:

1. The regulatory agency shall establish a point of standards application at the following locations for the purposes of determining whether the preventive action limit or the enforcement standard is attained or exceeded:

a. Any point of present groundwater use, except the regulatory agency may exempt points of nonpotable groundwater uses if the regulatory agency determines that the substance will not affect the nonpotable groundwater use; and

b. Any point beyond the property boundary of the property where the facility, activity or practice is located or undertaken.

2. The regulatory agency may establish by rule additional points of standards application which the regulatory agency determines are necessary to protect future groundwater uses and the public interest in the waters of the state.

(c) If facilities are subject to regulation under chs. 283 or 289 to 292, the department shall develop by rule and utilize points of standards application for purposes of facility design, the review of facility performance and enforcement as follows:

1. Rules promulgated by the department under s. 289.05 (1) relating to facility design shall establish design criteria which ensure compliance with s. 160.19 (2) at any point of present groundwater use, at property boundaries and at any point beyond a 3-dimensional design management zone within property boundaries established under general criteria specified by rule and applied to individual facilities.

2. The department shall consider any point at which groundwater is monitored and at which a preventive action limit is exceeded a point of standards application for purposes of facility performance review, including investigations and evaluation of specific sites. If the point is within the design management zone, the department shall evaluate the location of the point, specific characteristics of the site, the nature of the substance involved and the likelihood of substance migration in assessing the need for response activities.

3. The department shall establish the point of standards application for enforcement standards at any point of present groundwater use, at property boundaries and at any point beyond a 3-dimensional design management zone within property boundaries established under general criteria specified by rule and applied to individual facilities.

(d) The department shall establish criteria for design management zones by rule for the facilities specified under par. (c). The rule shall take into account different types of facility designs. The design management zone which is applied to a facility utilizing the criteria in the rule may be adjusted based on the following factors:

1. Soil type, depth and permeability;

2. Type, depth and permeability of bedrock;

3. Volume and characteristics of the waste involved;

4. Mobility of contaminants;

5. Distance to property boundaries and surface waters;

6. Present and anticipated future uses of land and groundwater;

7. Expected useful life of the facility;

8. Depth, direction and velocity of groundwater and other hydrogeologic factors; or

9. Likely methods for abatement if an enforcement standard is exceeded.

(e) The department and each regulatory agency shall enter into a memorandum of understanding setting forth the criteria for acceptable monitoring wells and sample handling for the point of standards application.

(3) Responses may include remedial actions, revisions of rules or criteria on facility design, location and management practices, prohibition of an activity or practice or closure of a facility. Remedial actions for a specific site may include, but are not limited to, investigations, relocation, prohibition of activities or practices which use or produce the substance, closure of a facility, revisions of operational procedures, monitoring or, if only a preventive action limit is attained or exceeded, no remedial action. Responses may vary depending on the type and age of the facility, the hydrogeological conditions of the site and the cost effectiveness of alternative responses that will achieve the same objectives under the conditions of the site. Responses shall take into

account the background water quality at the site, the uses of the aquifer, the degree of risk, the validity of the data and the probability of whether, if a preventive action limit is exceeded, the enforcement standard will be exceeded at the point of standards application. In requiring a remedial action for a specific site, the regulatory agency shall use the authority and existing protections, including, but not limited to, due process provisions in other applicable statutes.

(4) In setting forth the range of responses and providing for implementation of appropriate responses under the rules promulgated under subs. (1) and (3), the regulatory agency shall consider, where applicable, the following:

- (a) Risk-benefit considerations including, but not limited to:
  1. Uses and substances alternative to the present use of the particular substance.
  2. Risks and benefits of the alternative uses or substances.
  3. Reliability and comprehensiveness of the information available for assessing such risks and benefits.
- (b) Hydrogeological considerations including, but not limited to:
  1. The depth to groundwater.
  2. The soil characteristics.
  3. Groundwater gradients and flow direction.
- (c) Management and practice considerations including, but not limited to:
  1. Reliability of sampling data.
  2. The geographic extent of the substance if detected in groundwater and the size of the population affected.
  3. The efficacy of label restrictions and other practical measures to minimize the concentration of the substance in the groundwater.
  4. The existing effects and potential risks of the substance on potable water supplies.
  5. The risks considered when the standard at issue was established or adopted.
  6. The known depth of the substance in the groundwater.
  7. Data and information provided by the manufacturer on the environmental fate of the substance.

**History:** 1983 a. 410; 1995 a. 227.

**Cross-reference:** See also ch. NR 140, Wis. adm. code.

**160.23 Implementation of responses for specific sites; preventive action limits.** (1) If the concentration of a substance in groundwater attains or exceeds a preventive action limit at a point of standards application, the regulatory agency shall assess the cause of the increased concentration, taking into account background concentrations, if known, and other known or suspected contributors in the area and shall evaluate the significance of the concentration of the substance and shall implement responses for a specific site designed to:

- (a) Minimize the concentration of the substance in the groundwater at the point of standards application where technically and economically feasible;
- (b) Regain and maintain compliance with the preventive action limit, unless, in the determination of the regulatory agency, the preventive action limit is either not technically or economically feasible, in which case, it shall achieve compliance with the lowest possible concentration which is technically and economically feasible; and
- (c) Ensure that the enforcement standard is not attained or exceeded at the point of standards application.

(2) A regulatory agency shall take responses with respect to a specific site in accordance with rules promulgated under s. 160.21.

(4) The regulatory agency may not impose a prohibition on the substance or the activity or practice which uses or produces the substance unless the regulatory agency:

- (a) Bases its decision upon reliable test data;
- (b) Determines, to a reasonable certainty, by the greater weight of the credible evidence, that no other remedial action would prevent the violation of the enforcement standard at the point of standards application;
- (c) Establishes the basis for the boundary and duration of the prohibition; and
- (d) Ensures that any prohibition imposed shall be reasonably related in time and scope to maintaining compliance with the enforcement standard at the point of standards application.

(6) (a) A regulatory agency shall consider the existence of the background concentration of a naturally occurring substance in evaluating response options to the noncompliance with a preventive action limit for that substance. Before a regulatory agency may order a remedial action under sub. (2) or issue a prohibition for a specific site where the background concentration of a substance is determined to be equal to or greater than the preventive action limit, the regulatory agency shall determine that the proposed remedial action will result in the protection of or substantial improvement in groundwater quality notwithstanding the background concentrations of naturally occurring substances.

(b) Paragraph (a) does not apply to a substance which may be carcinogenic, teratogenic or mutagenic in humans.

(7) If the concentration of a substance in groundwater attains or exceeds a preventive action limit at a point of standards application and if a waste facility subject to the waste management fund incurs costs for repairing environmental damage which arises from these occurrences which are not anticipated in the plan of operation and which poses a substantial hazard to public health or welfare, those costs may be paid as provided under s. 289.68.

(8) An action under this section with respect to a specific site does not constitute a major state action under s. 1.11 (2).

**History:** 1983 a. 410; 1989 a. 56; 1995 a. 227.

**160.25 Implementation of responses for specific sites; enforcement standards.** (1) (a) If an activity or practice is not subject to regulation under chs. 283 or 289 to 292 and if the concentration of a substance in groundwater attains or exceeds an enforcement standard at a point of standards application, the regulatory agency shall take the following responses unless it can be shown to the regulatory agency that, to a reasonable certainty, by the greater weight of the credible evidence, an alternative response will achieve compliance with the enforcement standard at the point of standards application:

1. Prohibit the activity or practice which uses or produces the substance; and
  2. Implement remedial actions with respect to the specific site in accordance with rules promulgated under s. 160.21.
- (b) A regulatory agency shall impose a remedial action for a specific site which is reasonably related in time and scope to the substance, activity or practice which caused the enforcement standard to be attained or exceeded at the point of standards application.

(2) If a facility is subject to regulation under chs. 283 or 289 to 292 and if the concentration of a substance in groundwater attains or exceeds an enforcement standard at a point of standards application, the department shall require remedial actions for a specific site in accordance with rules promulgated under s. 160.21 as are necessary to achieve compliance with the enforcement standard at the point of standards application.

(3) If nitrates or any substance of aesthetic concern only at-

tains or exceeds an enforcement standard, the regulatory agency is not required to impose a prohibition or close a facility if it determines that:

(a) The enforcement standard was attained or exceeded, in whole or in part, because of high background concentrations of the substance; and

(b) The additional concentration does not represent a public welfare concern.

(4) If compliance with the enforcement standard is achieved at the point of standards application, s. 160.23 applies.

(5) (a) A regulatory agency shall consider the existence of background concentrations of naturally occurring substances in evaluating response options to the noncompliance with an enforcement standard for that substance. A regulatory agency may not order remedial action under sub. (1) or (2) at a site where the background concentration of a substance is determined to be equal to or greater than the preventive action limit, unless the regulatory agency determines that the proposed remedial action will result in the protection of or substantial improvement in groundwater quality notwithstanding the background concentrations of naturally occurring substances.

(b) Paragraph (a) does not apply to a substance which is carcinogenic, teratogenic or mutagenic in humans.

(6) If the concentration of a substance in groundwater attains or exceeds an enforcement standard at a point of standards application and if a waste facility subject to the waste management fund incurs costs for repairing environmental damage which arises from those occurrences which are not anticipated in the plan of operation and which poses a substantial hazard to public health or welfare, those costs may be paid as provided under s. 289.68.

(7) An action under this section with respect to a specific site does not constitute a major state action under s. 1.11 (2).

History: 1983 a. 410; 1995 a. 227.

**160.255 Exceptions for private on-site wastewater treatment systems.** (1) In this section, “private on-site wastewater treatment system” has the meaning given in s. 145.01 (12).

(2) Notwithstanding s. 160.19 (1), (2) and (4) (b), a regulatory agency is not required to promulgate or amend rules that define design or management criteria for private on-site wastewater treatment systems to minimize the amount of nitrate in groundwater or to maintain compliance with the preventive action limit for nitrate.

(3) Notwithstanding s. 160.19 (3), a regulatory agency may promulgate rules that define design or management criteria for private on-site wastewater treatment systems that permit the enforcement standard for nitrate to be attained or exceeded at the point of standards application.

(4) Notwithstanding s. 160.21, a regulatory agency is not required to promulgate rules that set forth responses that the agency may take, or require to be taken, when the preventive action limit or enforcement standard for nitrate is attained or exceeded at the point of standards application if the source of the nitrate is a private on-site wastewater treatment system.

(5) Notwithstanding ss. 160.23 and 160.25, a regulatory agency is not required to take any responses for a specific site at which the preventive action limit or enforcement standard for nitrate is attained or exceeded at the point of standards application if the source of the nitrate is a private on-site wastewater treatment system.

History: 1995 a. 27; 2011 a. 146.

**160.257 Exceptions for aquifer storage and recovery systems.** (1) In this section:

(a) “Aquifer storage and recovery system” means all of the aquifer storage and recovery wells and related appurtenances that are part of a municipal water system.

(b) “Aquifer storage and recovery well” means a well through which treated drinking water is placed underground for the purpose of storing and later recovering the water through the same well for use as drinking water.

(c) “Municipal water system” means a community water system, as defined in s. 281.62 (1) (a), that is owned by a city, village, town, county, town sanitary district, utility district, public inland lake protection and rehabilitation district, or municipal water district, or by a privately owned water utility serving any of the foregoing.

(d) “Specified substance” means one of the following:

1. Chloroform.
2. Bromodichloromethane.
3. Dibromochloromethane.
4. Bromoform.

(e) “Treated drinking water” means potable water that has been treated so that it complies with the primary drinking water standards promulgated under ss. 280.11 and 281.17 (8).

(2) Notwithstanding s. 160.19 (1) and (2), the department is not required to promulgate or amend rules that define design or management criteria for aquifer storage and recovery systems to minimize the amount of a specified substance in groundwater or to maintain compliance with the preventive action limit for a specified substance, however, the department shall promulgate rules that define design or management criteria for aquifer storage and recovery systems to maintain compliance with drinking water standards promulgated under ss. 280.11 and 281.17 (8).

(3) Notwithstanding s. 160.21 (2), the point of standards application for an aquifer storage and recovery well with respect to a specified substance is 1,200 feet from the aquifer storage and recovery well and at any other well that is within 1,200 feet from the aquifer storage and recovery well.

History: 2001 a. 109.

**160.26 Enforcement.** Regulatory agencies shall enforce the provisions of this chapter in accordance with enforcement procedures and subject to the penalties established by statute for activities and practices regulated by the regulatory agency.

History: 1983 a. 410.

**160.27 Substances in groundwater; monitoring.** (1) The department, with the advice and cooperation of other agencies and the groundwater coordinating council, shall develop and operate a system for monitoring and sampling groundwater to determine whether substances identified under s. 160.05 (1) are in the groundwater or whether preventive action limits or enforcement standards are attained or exceeded at points of standards application.

(2) At a minimum, the monitoring system shall include the following components:

(a) Problem assessment monitoring to detect substances in the groundwater, including substances identified under s. 160.05 (1), and to assess the significance of the concentrations of the detected substances;

(b) Regulatory monitoring to determine if preventive action limits or enforcement standards are attained or exceeded and to obtain information necessary for the implementation of responses with respect to specific sites under ss. 160.21, 160.23 and 160.25;

(c) At-risk monitoring to define and sample at-risk potable



wells in areas where substances identified under s. 160.05 (1) are detected in the groundwater or where preventive action limits or enforcement standards are attained or exceeded;

(d) Management practice monitoring for establishing the management practices necessary to meet the requirements of ss. 160.19 and 160.21. The regulatory agency responsible for a particular management practice has primary responsibility for monitoring that practice and the department shall ensure that the monitoring specifications meet the needs of the regulatory agency; and

(e) A monitoring plan for collecting, managing and coordinating the monitoring components specified under pars. (a) to (d) with the monitoring information from other regulatory agencies.

(3) The department shall notify the regulatory agency and the department of health services when monitoring data indicate that:

(a) A substance is detected in groundwater;

(b) The concentration of a substance, by a reasonable degree of scientific certainty, is determined to be changing; or

(c) The concentration of a substance attains or exceeds a preventive action limit or an enforcement standard at a point of standards application.

(4) The department shall coordinate the collection of groundwater monitoring data and the exchange of these data among agencies for the purpose of this chapter and shall ensure, with the advice and cooperation of other agencies, the technical accuracy of the monitoring data used in the administration of this chapter.

(5) Notwithstanding subs. (1) to (3), a regulatory agency may develop and operate a system for monitoring and sampling groundwater to determine compliance with this chapter. This section does not affect the authority of the department to require groundwater monitoring by owners or operators of solid or hazardous waste facilities, water systems or wastewater systems under chs. 280 to 285 or 289 to 299.

(6) The department shall notify the owner of any potable well and the occupant of any residence served by that well of the results of any monitoring data it obtains from samples of water from that well.

**History:** 1983 a. 410; 1995 a. 27 s. 9126 (19); 1995 a. 227, 378; 1997 a. 35; 2005 a. 347; 2007 a. 20 s. 9121 (6) (a).

**Cross-reference:** See also ch. NR 141, Wis. adm. code.

**NOTE:** 2005 Wis. Act 347, which affected this section, contains extensive explanatory notes.

**160.29 Petitioning for rule making.** (1) Where the department finds that a preventive action limit or an enforcement standard for a substance is, or will be, attained or exceeded at points of standards application at numerous locations, and that adoption or revision of rules under s. 160.19 or 160.21 by the regulatory agency is an appropriate response, the department may submit a petition for rule making to the regulatory agency. The petition shall include all of the following:

(a) The reason for the request for rule making by the department.

(b) The research or monitoring data supporting the finding by the department that the preventive action limit or the enforcement standard for a substance is, or will be, attained or exceeded at the points of standards application.

(c) A recitation of the authority of the regulatory agency to regulate the substance.

(2) Within 120 days after receipt of a petition under this section, the regulatory agency either shall deny the petition in writing or shall submit to the department a proposed timetable for the revision or promulgation of the requested rules and proceed with rule making under subch. II of ch. 227. Failure of the agency to

respond to the petition within 120 days constitutes denial of the petition.

(3) Section 227.12 does not apply to petitions under this section.

**History:** 1983 a. 410; 1985 a. 182 s. 57.

**160.31 Legislative review.** Nothing in this chapter affects the legislative review of any proposed rule relating to animal waste treatment, under s. 13.565.

**History:** 1983 a. 410.

**160.32 Common law and liability.** (1) COMMON LAW UNAFFECTED. Nothing in this chapter restricts or abrogates any remedy which any person or class of persons may have under other statutory or common law.

(2) NO ADMISSION OF LIABILITY. A response at a specific site taken by any person under s. 160.23 or 160.25 is not evidence of liability or an admission of liability for any potential or actual environmental pollution, as defined under s. 299.01 (4).

**History:** 1983 a. 410; 1995 a. 227.

**160.33 Public participation.** Each regulatory agency shall promulgate rules which provide for public participation in the issuance and administrative enforcement by the regulatory agency of any special order adopted pursuant to the requirements of this chapter.

**History:** 1983 a. 410.

**160.34 No mandatory well repair as a condition for testing.** No regulatory agency may require as a condition for the testing of a private water system at the request of the owner that the owner agree to institute changes necessary to bring the construction or design of the water system into compliance with administrative rules in effect at the time of testing but not in effect prior to 1954.

**History:** 1983 a. 410; 1995 a. 378.

**160.36 Cooperation with American Indian tribes and bands.** (1) REQUIREMENT TO COOPERATE. The department shall cooperate with American Indian tribes and bands with the approval of the tribal governing body, for the purposes specified in this section.

(2) AGREEMENTS REGARDING MONITORING. The department may negotiate and enter into cooperative agreements with American Indian tribes and bands for the purposes of:

(a) Providing advice and assistance to American Indians who wish to establish a groundwater monitoring program on the lands of any American Indian tribe or band.

(b) Obtaining for state use any information on groundwater quality which results from a monitoring program conducted by American Indians.

(c) Using state resources to conduct groundwater monitoring on the lands of any American Indian tribe or band.

(d) Sharing with an American Indian tribe or band the results of groundwater monitoring conducted by the department, by a regulatory agency or by the geological and natural history survey which relate to the potential contamination of groundwater under the lands of an American Indian tribe or band.

(3) AGREEMENTS REGARDING ENFORCEMENT. The department may negotiate and enter into cooperative agreements with American Indian tribes and bands for the following purposes:

(a) Providing advice and assistance to American Indians who wish to establish groundwater regulatory programs on the lands of any American Indian tribe or band.

(b) Using state resources to conduct regulatory activities on the lands of an American Indian tribe or band.

**History:** 1983 a. 410.

**160.50 GROUNDWATER PROTECTION STANDARDS**

**Updated 23-24 Wis. Stats. 10**

**160.50 Groundwater coordinating council.** (1) GENERAL FUNCTIONS. The groundwater coordinating council shall serve as a means of increasing the efficiency and facilitating the effective functioning of state agencies in activities related to groundwater management. The groundwater coordinating council shall advise and assist state agencies in the coordination of nonregulatory programs and the exchange of information related to groundwater, including, but not limited to, agency budgets for groundwater programs, groundwater monitoring, data management, public information and education, laboratory analysis and facilities, research activities and the appropriation and allocation of state funds for research.

(1m) FUNDING FOR GROUNDWATER RESEARCH. The groundwater coordinating council shall advise the secretary of administration on the allocation of funds appropriated to the board of regents of the University of Wisconsin System under s. 20.285 (1) (a) for groundwater research.

(2) SUBCOMMITTEES. The groundwater coordinating council may create subcommittees to assist in its work. The subcommittee members may include members of the council, employees of the agencies with members on the council, employees of other state agencies, representatives of counties and municipalities and public members. The council shall consider the need for subcommittees on the subjects within the scope of its general duties under sub. (1) and other subjects deemed appropriate by the council.

(3) REPORT. The groundwater coordinating council shall review the provisions of 1983 Wisconsin Act 410 and report to the chief clerk of each house of the legislature, for distribution to the legislature under s. 13.172 (2), concerning the implementation of the act by January 1, 1989.

History: 1983 a. 410; 1987 a. 186; 1989 a. 31.