

1
2 An act relating to demineralization
3 concentrate; amending s. 403.0882, F.S.;
4 reorganizing and clarifying the section;
5 directing the Department of Environmental
6 Protection to enter into rulemaking; creating a
7 technical advisory committee to assist in rule
8 development; providing permitting requirements
9 relating to failure of toxicity tests due to
10 naturally occurring constituents; amending s.
11 403.061, F.S.; providing an exemption allowing
12 demineralization concentrate mixing zones in
13 Outstanding Florida Waters with specific
14 requirements; providing an effective date.

15

16 Be It Enacted by the Legislature of the State of Florida:

17

18 Section 1. Section 403.0882, Florida Statutes, is
19 amended to read:20 (Substantial rewording of section. See21 s. 403.0882, F.S., for present text.)22 403.0882 Discharge of demineralization concentrate.--23 (1) The Legislature finds and declares that it is in
24 the public interest to conserve and protect water resources,
25 provide adequate water supplies and provide for natural
26 systems, and promote brackish water demineralization as an
27 alternative to withdrawals of freshwater ground water and
28 surface water by removing institutional barriers to
29 demineralization and through research, including demonstration
30 projects, to advance water and water byproduct treatment
31 technology, sound waste byproduct disposal methods, and

1 regional solutions to water resources issues. In order to
2 promote the state objective of alternative water supply
3 development, including the use of demineralization
4 technologies, and to encourage the conservation and protection
5 of the state's natural resources, the concentrate resulting
6 from demineralization must be classified as potable water
7 byproduct regardless of flow quantity and must be
8 appropriately treated and discharged or reused.

9 (2) For the purposes of this section, the term:

10 (a) "Demineralization concentrate" means the
11 concentrated byproduct water, brine, or reject water produced
12 by ion exchange or membrane separation technologies such as
13 reverse osmosis, membrane softening, ultra-filtration,
14 membrane filtration, electrodialysis, and electrodialysis
15 reversal used for desalination, softening, or reducing total
16 dissolved solids during water treatment for public water
17 supply purposes.

18 (b) "Small water utility business" means any facility
19 that distributes potable water to two or more customers with a
20 concentrate discharge of less than 50,000 gallons per day.

21 (3) The department shall initiate rulemaking no later
22 than October 1, 2001, to address facilities that discharge
23 demineralization concentrate. The department shall convene a
24 technical advisory committee to assist in the development of
25 the rules, which committee shall include one representative
26 each from the demineralization industry, local government,
27 water and wastewater utilities, the engineering profession,
28 business, and environmental organizations. The technical
29 advisory committee shall also include one member representing
30 the five water management districts and one representative
31 from the Florida Marine Research Institute. In convening the

1 technical advisory committee, consideration must be given to
2 geographical balance. The rules must address, at a minimum:
3 (a) Permit application forms for concentrate disposal;
4 (b) Specific options and requirements for
5 demineralization concentrate disposal, including a
6 standardized list of effluent and monitoring parameters, which
7 may be adjusted or expanded by the department as necessary to
8 protect water quality;
9 (c) Specific requirements and accepted methods for
10 evaluating mixing of effluent in receiving waters; and
11 (d) Specific toxicity provisions.
12 (4)(a) For facilities that discharge demineralization
13 concentrate, the failure of whole effluent toxicity tests
14 predominantly due to the presence of constituents naturally
15 occurring in the source water, limited to calcium, potassium,
16 sodium, magnesium, chloride, bromide, and other constituents
17 designated by the department, may not be the basis for denial
18 of a permit, denial of a permit renewal, revocation of a
19 permit, or other enforcement action by the department as long
20 as the volume of water necessary to achieve water quality
21 standards is available within a distance not in excess of two
22 times the natural water depth at the point of discharge under
23 all flow conditions.
24 (b) If failure of whole effluent toxicity tests is due
25 predominately to the presence of the naturally occurring
26 constituents identified in paragraph (a), the department shall
27 issue a permit for the demineralization concentrate discharge
28 if:
29 1. The volume of water necessary to achieve water
30 quality standards is available within a distance not in excess
31

1 of two times the natural water depth at the point of discharge
2 under all flow conditions; and

3 2. All other permitting requirements are met.

4
5 A variance for toxicity under the circumstance described in
6 this paragraph is not required.

7 (c) Facilities that fail to meet the requirements of
8 this subsection may be permitted in accordance with department
9 rule, including all applicable moderating provisions such as
10 variances, exemptions, and mixing zones.

11 (5) Blending of demineralization concentrate with
12 reclaimed water shall be allowed in accordance with the
13 department's reuse rules.

14 (6) This subsection applies only to small water
15 utility businesses.

16 (a) The discharge of demineralization concentrate from
17 small water utility businesses is presumed to be allowable and
18 permissible in all waters in the state if:

19 1. The discharge meets the effluent limitations in s.
20 403.086(4), except that high level disinfection is not
21 required unless the presence of fecal coliforms in the source
22 water will result in the discharge not meeting applicable
23 water quality standards;

24 2. The discharge of demineralization concentrate
25 achieves a minimum of 4-to-1 dilution within a distance not in
26 excess of two times the natural water depth at the point of
27 discharge under all flow conditions; and

28 3. The point of discharge is located at a reasonably
29 accessible point that minimizes water quality impacts to the
30 greatest extent possible.

31

1 **(b) The presumption in paragraph (a) may be overcome**
2 **only by a demonstration that one or more of the following**
3 **conditions is present:**

4 **1. The discharge will be made directly into an**
5 **Outstanding Florida Water, except as provided in chapter**
6 **90-262, Laws of Florida;**

7 **2. The discharge will be made directly to Class I or**
8 **Class II waters;**

9 **3. The discharge will be made to a water body having a**
10 **total maximum daily load established by the department and the**
11 **discharge will cause or contribute to a violation of the**
12 **established load;**

13 **4. The discharge fails to meet the requirements of the**
14 **antidegradation policy contained in the department rules;**

15 **5. The discharge will be made to a sole-source**
16 **aquifer;**

17 **6. The discharge fails to meet applicable surface**
18 **water and groundwater quality standards; or**

19 **7. The results of any toxicity test performed by the**
20 **applicant under paragraph (d) or by the department indicate**
21 **that the discharge does not meet toxicity requirements at the**
22 **boundary of the mixing zone under subparagraph (a)2.**

23 **(c) If one or more of the conditions in paragraph (b)**
24 **has been demonstrated, the department may:**

25 **1. Require more stringent effluent limitations;**

26 **2. Require relocation of the discharge point or a**
27 **change in the method of discharge;**

28 **3. Limit the duration or volume of the discharge; or**

29 **4. Prohibit the discharge if there is no alternative**
30 **that meets the conditions of subparagraphs 1.-3.**

31

1 (d) For facilities owned by small water utility
2 businesses, the department may not:

3 1. Require those businesses to perform toxicity
4 testing at other than the time of permit application, permit
5 renewal, or any requested permit modification, unless the
6 initial toxicity test or any subsequent toxicity test
7 performed by the department does not meet toxicity
8 requirements.

9 2. Require those businesses to obtain a
10 water-quality-based effluent limitation determination.

11 (7) The department may adopt additional rules for the
12 regulation of demineralization and to administer this section
13 and s. 403.061(11)(b).

14 Section 2. Paragraph (b) of subsection (11) of section
15 403.061, Florida Statutes, is amended to read:

16 403.061 Department; powers and duties.--The department
17 shall have the power and the duty to control and prohibit
18 pollution of air and water in accordance with the law and
19 rules adopted and promulgated by it and, for this purpose, to:

20 (11) Establish ambient air quality and water quality
21 standards for the state as a whole or for any part thereof,
22 and also standards for the abatement of excessive and
23 unnecessary noise. The department is authorized to establish
24 reasonable zones of mixing for discharges into waters.

25 (b) No mixing zone for point source discharges shall
26 be permitted in Outstanding Florida Waters except for:

27 1. Sources that ~~which~~ have received permits from the
28 department prior to April 1, 1982, or the date of designation,
29 whichever is later;

30 2. Blowdown from new power plants certified pursuant
31 to the Florida Electrical Power Plant Siting Act; ~~and~~

1 3. Discharges of water necessary for water management
2 purposes which have been approved by the governing board of a
3 water management district and, if required by law, by the
4 secretary; and-

5 4. The discharge of demineralization concentrate which
6 has been determined permittable under 403.0882 and which meets
7 the specific provisions of s. 403.0882(4)(a) and (b), if the
8 proposed discharge is clearly in the public interest.

9
10 Nothing in this act shall be construed to invalidate any
11 existing department rule relating to mixing zones. The
12 department shall cooperate with the Department of Highway
13 Safety and Motor Vehicles in the development of regulations
14 required by s. 316.272(1).

15 Section 3. This act shall take effect upon becoming a
16 law.