

By the Committee on Natural Resources & Environmental
Protection and Representative Harrington

1 A bill to be entitled
2 An act relating to demineralization
3 concentrate; amending s. 403.0882, F.S.;
4 reorganizing and clarifying provisions relating
5 to discharge of demineralization concentrate;
6 providing legislative findings; providing
7 definitions; directing the Department of
8 Environmental Protection to enter into
9 rulemaking; creating a technical advisory
10 committee to assist in rule development;
11 providing permitting requirements relating to
12 failure of toxicity tests due to naturally
13 occurring constituents; providing for discharge
14 of demineralization concentrate from small
15 water utility businesses; amending s. 403.061,
16 F.S.; providing an exemption allowing
17 demineralization concentrate mixing zones in
18 Outstanding Florida Waters if specific
19 requirements are met; providing an effective
20 date.

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22 Be It Enacted by the Legislature of the State of Florida:
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24 Section 1. Section 403.0882, Florida Statutes, is
25 amended to read:
26 (Substantial rewording of section. See
27 s. 403.0882, F.S., for present text.)
28 403.0882 Discharge of demineralization concentrate.--
29 (1) The Legislature finds and declares that it is in
30 the public interest to conserve and protect water resources,
31 provide adequate water supplies and provide for natural

1 systems, and promote brackish water demineralization as an
2 alternative to withdrawals of fresh water from ground and
3 surface water sources by removing institutional barriers to
4 demineralization and through research, including demonstration
5 projects, to advance water and water byproduct treatment
6 technology, sound waste byproduct disposal methods, and
7 regional solutions to water resources issues. In order to
8 promote the state objective of alternative water supply
9 development, including the use of demineralization
10 technologies, and to encourage the conservation and protection
11 of the state's natural resources, the concentrate resulting
12 from demineralization must be classified as a potable water
13 byproduct regardless of flow quantity and must be
14 appropriately treated and discharged or reused.

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

16 (a) "Demineralization concentrate" means the
17 concentrated byproduct water, brine, or reject water produced
18 by ion exchange or membrane separation technologies such as
19 reverse osmosis, membrane softening, ultrafiltration, membrane
20 filtration, electrodialysis, and electrodialysis reversal used
21 for desalination, softening, or reducing total dissolved
22 solids during water treatment for public water supply
23 purposes.

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

27 (3) The department shall initiate rulemaking no later
28 than October 1, 2001, to address facilities that discharge
29 demineralization concentrate. The department shall convene a
30 technical advisory committee to assist in the development of
31 the rules, which committee shall include one representative

1 each from the demineralization industry, local government,
2 water and wastewater utilities, the engineering profession,
3 business, and environmental organizations. The technical
4 advisory committee shall also include one member representing
5 the five water management districts and one representative
6 from the Florida Marine Research Institute. In convening the
7 technical advisory committee, consideration must be given to
8 geographical balance. The rules must address, at a minimum:

9 (a) Permit application forms for concentrate disposal;

10 (b) Specific options and requirements for
11 demineralization concentrate disposal, including a
12 standardized list of effluent and monitoring parameters, which
13 may be adjusted or expanded by the department as necessary to
14 protect water quality;

15 (c) Specific requirements and accepted methods for
16 evaluating mixing of effluent in receiving waters; and

17 (d) Specific toxicity provisions.

18 (4)(a) For facilities that discharge demineralization
19 concentrate, the failure of whole effluent toxicity tests
20 predominantly due to the presence of constituents naturally
21 occurring in the source water, limited to calcium, potassium,
22 sodium, magnesium, chloride, bromide, and other constituents
23 designated by the department, may not be the basis for denial
24 of a permit, denial of a permit renewal, revocation of a
25 permit, or other enforcement action by the department as long
26 as the volume of water necessary to achieve water quality
27 standards is available within a distance not in excess of two
28 times the natural water depth at the point of discharge under
29 all flow conditions.

30 (b) If failure of whole effluent toxicity tests is due
31 predominantly to the presence of the naturally occurring

1 constituents identified in paragraph (a), the department shall
2 issue a permit for the demineralization concentrate discharge
3 if:

4 1. The volume of water necessary to achieve water
5 quality standards is available within a distance not in excess
6 of two times the natural water depth at the point of discharge
7 under all flow conditions; and

8 2. All other permitting requirements are met.

9
10 A variance for toxicity under the circumstance described in
11 this paragraph is not required.

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

16 (5) Blending of demineralization concentrate with
17 reclaimed water shall be allowed in accordance with the
18 department's reuse rules.

19 (6) This subsection applies only to small water
20 utility businesses.

21 (a) The discharge of demineralization concentrate from
22 small water utility businesses is presumed to be allowable and
23 permittable in all waters in the state if:

24 1. The discharge meets the effluent limitations in s.
25 403.086(4), except that high level disinfection is not
26 required unless the presence of fecal coliforms in the source
27 water will result in the discharge not meeting applicable
28 water quality standards;

29 2. The discharge of demineralization concentrate
30 achieves a minimum of 4-to-1 dilution within a distance not in
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1 excess of two times the natural water depth at the point of
2 discharge under all flow conditions; and
3 3. The point of discharge is located at a reasonably
4 accessible point that minimizes water quality impacts to the
5 greatest extent possible.
6 (b) The presumption in paragraph (a) may be overcome
7 only by a demonstration that one or more of the following
8 conditions is present:
9 1. The discharge will be made directly into an
10 Outstanding Florida Water, except as provided in chapter
11 90-262, Laws of Florida;
12 2. The discharge will be made directly to Class I or
13 Class II waters;
14 3. The discharge will be made to a water body having a
15 total maximum daily load established by the department and the
16 discharge will cause or contribute to a violation of the
17 established load;
18 4. The discharge fails to meet the requirements of the
19 antidegradation policy contained in the department rules;
20 5. The discharge will be made to a sole-source
21 aquifer;
22 6. The discharge fails to meet applicable surface
23 water and groundwater quality standards; or
24 7. The results of any toxicity test performed by the
25 applicant under paragraph (d) or by the department indicate
26 that the discharge does not meet toxicity requirements at the
27 boundary of the mixing zone under subparagraph (a)2.
28 (c) If one or more of the conditions in paragraph (b)
29 has been demonstrated, the department may:
30 1. Require more stringent effluent limitations;
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1 2. Require relocation of the discharge point or a
2 change in the method of discharge;

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

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

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

8 1. Require those businesses to perform toxicity
9 testing at other than the time of permit application, permit
10 renewal, or any requested permit modification, unless the
11 initial toxicity test or any subsequent toxicity test
12 performed by the department does not meet toxicity
13 requirements.

14 2. Require those businesses to obtain a
15 water-quality-based effluent limitation determination.

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

19 Section 2. Paragraph (b) of subsection (11) of section
20 403.061, Florida Statutes, is amended to read:

21 403.061 Department; powers and duties.--The department
22 shall have the power and the duty to control and prohibit
23 pollution of air and water in accordance with the law and
24 rules adopted and promulgated by it and, for this purpose, to:

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

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

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

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

6 3. Discharges of water necessary for water management
7 purposes which have been approved by the governing board of a
8 water management district and, if required by law, by the
9 secretary; ~~and~~;

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

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15 Nothing in this act shall be construed to invalidate any
16 existing department rule relating to mixing zones. The
17 department shall cooperate with the Department of Highway
18 Safety and Motor Vehicles in the development of regulations
19 required by s. 316.272(1).

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21 The department shall implement such programs in conjunction
22 with its other powers and duties and shall place special
23 emphasis on reducing and eliminating contamination that
24 presents a threat to humans, animals or plants, or to the
25 environment.

26 Section 3. This act shall take effect upon becoming a
27 law.

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HOUSE SUMMARY

Reorganizes and clarifies provisions relating to discharge of demineralization concentrate into waters of the state. Provides legislative findings and definitions. Directs the Department of Environmental Protection to adopt rules, and creates a technical advisory committee to assist in rule development. Provides permitting requirements relating to failure of toxicity tests due to naturally occurring constituents. Provides for discharge of demineralization concentrate from small water utility businesses. Provides an exemption allowing demineralization concentrate mixing zones in Outstanding Florida Waters if specific requirements are met.