

By Senator Bronson

312-504-01

1                                   A bill to be entitled  
 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.

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

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 18           Section 1. Section 403.0882, Florida Statutes, is  
 19 amended to read:

20           (Substantial rewording of section. See  
 21           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.

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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.

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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.

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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.

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19           SENATE SUMMARY

20           Revises the regulation of the discharge of  
21 demineralization concentrate by the Department of  
22 Environmental Protection. Allows demineralization  
23 concentrate mixing zones in Outstanding Florida Waters  
24 under certain circumstances.  
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