

July 20, 2010

ECOWATER SYSTEMS INCORPORATED  
MARGARET BICKING  
PO BOX 64420  
SAINT PAUL MN 55164

Re: Description: WATER TREATMENT DEVICE- SOFTENER  
Manufacturer: ECOWATER SYSTEMS INCORPORATED  
Product Name: ECOWATER SYSTEMS SOLID STATE WATER CONDITIONING SYSTEM  
(POE)  
Model Number(s): ESS1000XR32 (POE)  
Product File No: 20100263

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of July 2015.

This approval supersedes the approval issued on October 24<sup>th</sup>, 2005 under product file number 20050739.

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 266-3415.
- If this approved device is modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- These cation exchange water softeners shall be sized, installed, programmed and maintained such that wastewater volumes, total dissolved solids and chloride discharges are minimized.
- Operation of this/these device(s) and flow rates above the rated service flow rates indicated within this approval letter are not supported or acknowledged by this approval. The rated service flow rate(s) is/are the flow rate(s) at which this/these device(s) were tested.

Because the level of treatment obtained is a function of how long the water is in contact with the treatment media within this/these device(s), arbitrary increases in the flow rate(s), above the rated service flow rate(s) may compromise the quality of the treated water.

Based on testing data submitted to and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of contaminants as specified on pages 1 through 2 of this letter.

**WATER SOFTENING CAPABILITIES  
 PRODUCT FILE NUMBER 20100263  
 TABLE 1 OF 1**

Model Numbers	Capacity*						Max. Rated Service Flow Rate
	Rating 1		Rating 2		Rating 3		
Metered	Grains	Pounds	Grains	Pounds	Grains	Pounds	gpm @ psig
Ecowater							
ESS1000XR32	13,400	2.9	28,600	9.2	34,400	15.6	9.0 @ 13

\* The softener capacity rating is based on grains of hardness, due to calcium and magnesium cations, removed (as calcium carbonate) while producing soft water between successive regenerations and is related to the pounds of salt required for each regeneration. The tests run to generate the hardness reduction data for table 1 were conducted in accordance with NSF Standard 44.

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter  
 Engineering Consultant-Plumbing Product Reviewer  
 Bureau of Integrated Services  
 Safety and Buildings Division  
 Department of Commerce  
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