



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E) ADEQ LTF #72167

1. Proprietary Treatment Product Name, Model, and Description

Product Name: Norweco Singulair 960

Models: Singulair 960-500 GPD, 960-750 GPD, 960-1000 GPD, 960-1250 GPD, 960-1500 GPD, Singulair Green® 960-500 GPD

Description: The Singulair 960 is a combination of primary treatment, flow equalization, and secondary treatment by extended aeration, an activated sludge process and a final filtration process. The system pre-engineered tank consists of three chambers; the pretreatment chamber, the clarification chamber and the third chamber consists of the Bio-Kinetic system where filtration, settling and flow equalization takes place. This listing is applicable for design flows less than 3,000 gpd.

2. Manufacturer Information

Name: Norweco, Inc.
Address: 220 Republic St.
City/State/Zip: Norwalk, Ohio
Phone: (419) 668-4471
Fax: (419) 663-5440
Website: www.norweco.com

3. Recognized Treatment Performance

Parameter	Averaging Time	Parameter Value for Averaging Time
5-Day Biochemical Oxygen Demand (BOD ₅), mg/l	30-day arithmetic mean	10
Total Suspended Solids (TSS), mg/l	30-day arithmetic mean	13
Total nitrogen as nitrogen (TN), mg/l	five-month arithmetic mean	53*
Total coliform, colony forming units/100ml	95th percentile	300,000*

*Default value due to lack of submitting 3rd party data per R18-9-E315(B).

4. Product Applicability and Limitations for Use for a Recognized General Permit Technology

Main Office
1110 West Washington Street • Phoenix, AZ 85007
(602) 771-2300

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

www.azdeq.gov
printed on recycled paper

Applicability: This listing is for only the Norweco Singulair 960 Models 500 GPD, 750 GPD, 1000 GPD, 1250 GPD, 1500 GPD and Singulair 960 Green 500 GPD treatment technology and is listed as an aerobic treatment technology specified in A.A.C. R18-9-E315.

Limitations:

- A. This listing is for the treatment of wastewater that meets the definition of typical sewage as listed in R18-9-101(42) from homes and small businesses.
- B. The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).
- C. The product shall conform to the following:

Maximum Design Flow (gallons per day) per R18-9-A309(B)(3)	Manufacturer's Model Number	Materials of Construction	Manufacturer requires external pretreatment chamber
Up to 600*	Singulair Bio-Kinetic Wastewater Treatment System Model 960 – 500 GPD	Concrete	None Required
Up to 800*	Singulair Bio-Kinetic Wastewater Treatment System Model 960 – 750 GPD	Concrete	None Required
1000	Singulair Bio-Kinetic Wastewater Treatment System Model 960 – 1000 GPD	Concrete	Minimum requirement per manufacturer is 1,000 gallons capacity, 15 gallons per inch of liquid level and 12 inches of freeboard
1250	Singulair Bio-Kinetic Wastewater Treatment System Model 960 – 1250 GPD	Concrete	Minimum requirement per manufacturer is 1,250 gallons capacity, 16 gallons per inch of liquid level and 12 inches of freeboard
1500	Singulair Bio-Kinetic Wastewater Treatment System Model 960 – 1500 GPD	Concrete	Minimum requirement per manufacturer is 1,500 gallons capacity, 22 gallons per inch of liquid level and 12 inches of freeboard
600	Singulair Bio-Kinetic Wastewater Treatment System Model Green 960 – 500 GPD	HDPE	None Required

*Manufacturer provided a letter for the rated capacity for the Model 960-500 GPD and the Model 960-750 MGD.

- D. This listing is only for technology approved in accordance with A.A.C. R18-9-E315 and does not include other technology/product including disinfection devices.
- E. Anti-flotation systems must be installed where high water is a concern.
- F. The tank must be located in an area where NO VEHICLES of any size will operate over the tank per Manufacturer's requirement.

G. This listing DID NOT include the evaluation of appurtenances which are considered to be “other manufactured materials and components” such as an alarm, control panel, control, switch, timer, wiring, other electrical devices, and installation components; which are subject to both the manufacturer specifications and any more restrictive requirement in 18 A.A.C. 9, Article 3.

5. Alternative Criteria and Exceptions for Use under the Recognized General Permit Technology

Alternative:	None
Exception:	a. When the wastewater does not meet the definition of typical sewage as defined in R18-9-101(42), a Manufacturer’s Design Review Report shall be submitted for review and approval along with the Notice of Intent to Discharge. This Design Review Report shall specify component capacities, control settings, and supplemental installation & operational practices.

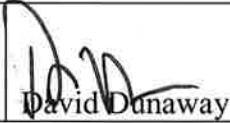
6. Documents Used as the Basis for this Proprietary Treatment Product Listing Notice

Application for Treatment Product Listing:	June 6, 2018
3 rd Party Test data:	NSF Final Report, April 1996 The recognized treatment performance for the Norweco Singulair 960 model was reauthorized November 2005. The recognized treatment performance for the Norweco Singulair Green 960 model was revised and approved September 2013. ADEQ’s listing of this product was based solely on the testing and reporting of treatment performance reported from the following documents: Application received by ADEQ in 2005 for Norweco Singulair 960 model. Final NSF report dated April 1996. Application received by ADEQ in January 2011 for the Singulair 960 Green model. NSF Final Report dated April 1996 & November 2007.
Supplemental Information	ANSI/NSF Standard 40 – Singulair 960-500 with 600 gpd Rated Capacity, June 8, 1998 ANSI/NSF Standard 40 – Singulair 960-750 with 800 gpd Rated Capacity, July 17, 2003.
Installation Instructions:	Norweco Service Pro Installation and Instructions, June 6, 2018
Manufacturer’s Warranty:	Singulair Three Year Limited Warranty, June 6, 2018
Manufacturer’s Specifications:	Norweco Singulair Wastewater Treatment System Model 960 General Specifications, June 6, 2018
Manufacturer’s Design Calculations & Drawings:	Norweco Singulair 960 – 500 GPD, 750 GPD, 1000 GPD, 1250 GPD, 1500 GPD Norweco Singulair Green 960-500 System, June 6, 2018
Owner’s Manual	Norweco Models 960 and TNT Owner’s Manual, June 6, 2018

NOTE 1 – This document is an integral part of this Proprietary Treatment Product Listing Notice and is included in the Arizona Department of Environmental Quality Proprietary Product List website.

7. Terms and Conditions for this Proprietary Treatment Product Listing Notice

- A. This Notice of Proprietary Treatment Product Listing shall remain in effect until any of the following occurs:
1. Applicable provisions of the Arizona Administrative Code, Title 18, Chapter 9, Article 3 are revised;
 2. Documents used for the basis of this listing are altered or modified;
 3. Manufacturer claims which are relied upon for this listing are later determined to contain an error or omission;
 4. The manufacturer requests termination of this listing;
 5. A listing error or omission is identified; or
 6. The manufacturer and ADEQ mutually agree to reissue this notification to incorporate correction or update for any reason.
- B. This Notice of Proprietary Treatment Product Listing does not apply when the:
1. Listed proprietary treatment product is modified or operated in a manner that conflicts with Arizona law or the documents used for the basis of this listing action in Section 6.
 2. Listed proprietary treatment products are used in a manner that cannot achieve the performance in Section 3 above.
- C. This Notice of Proprietary Treatment Product Listing applies solely to the product specified in Section 1 above.
- D. The manufacturer is responsible for notifying ADEQ of changes to the contact information at the following address:
 Attention: Product Listing Supervisor
 Engineering Review Desk,
 1110 West Washington Street
 Phoenix, AZ 85007.
- E. The listing by ADEQ of any proprietary product or service is not an endorsement by ADEQ or the State of Arizona. ADEQ does not endorse, represent, guarantee, warranty or defend the use of any product which is authorized for use pursuant to A.A.C. R18-9-A309(E). Product providers are a direct source unrelated to ADEQ or the State of Arizona. Use of any listed product is at the user's risk and the State assumes no liability.

Signature:	 David Dunaway	Date Signed:	10/1/18
Title:	Manager, Groundwater Protection Value Stream		

ADEQ LTF # - 62617
 Reviewer: Linneth López, Raymond Morgan