



Katie Hobbs  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Karen Peters  
Director

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

### 1. Proprietary Treatment Product Name, Model, and Description

Product Name: Norweco Singulair 960 Low Profile

Models: Singulair 960LP-500 GPD (500 gpd), Singulair 960LP-500 GPD (600 gpd), Singulair 960LP-750 (750 gpd), Singulair 960LP-1000 (1,000 gpd), Singulair 960LP-1250 GPD (1,250 gpd), Singulair 960LP-1500 GPD (1,500 gpd)

Description: The Singulair 960 Low Profile (LP) model is a combination of primary treatment, flow equalization, and secondary treatment by way of an extended aeration process consisting of a 30-minute on, 30-minute off run cycle, an activated sludge process and a final filtration process. The system's pre-engineered tank consists of three chambers; the pretreatment chamber, the aeration chamber, and the clarification chamber. The clarification chamber contains the Bio-Kinetic system – a filtration device, non-mechanical flow equalization device, and has the capability to be a tablet-fed disinfection device. This listing is applicable for design flows less than 3,000 gpd.

### 2. Manufacturer Information

Name: Norweco, Inc.  
Address: 220 Republic Street  
City/State/Zip: Norwalk, Ohio 44857  
Phone: (419) 668-4471  
Fax: (419) 663-5440  
Website: [www.norweco.com](http://www.norweco.com)

### 3. Recognized Treatment Performance

Parameter	Statistical Measure	Value
5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> ), mg/L	30-day arithmetic mean	6
Total Suspended Solids (TSS), mg/L	30-day arithmetic mean	10
Total Nitrogen as Nitrogen(TN), mg/L	five-month arithmetic mean	53*
Total Coliform, Colony Forming Units/100mL	95th percentile	300,000 (Log <sub>10</sub> 5.5)

\*DEFAULT VALUE IN RULE ASSIGNED

#### 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](http://www.azdeq.gov)

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

**Applicability:** This listing is only for the Norweco 960 Low Profile models (listed above) and is listed as an aerobic treatment technology specified in A.A.C. R18-9-E315.

**Limitations:**

- A. The Norweco 960 LP models must receive wastewater that is treated to a level equal to or better than specified in R18-9-E302(B). Additionally, the system must meet the oil and grease requirements contained in R18-9-101(42) of  $\leq 75$  mg/L.
- B. The product shall conform to the following:

Maximum Design Flow (gallons per day) per R18-9-A309(B)(3)	Manufacturer’s Model Number (Stand-alone Pretreatment Tank) Pump or Gravity Disposal	Manufacturer’s Model Number (Built In Pretreatment Tank) Pump or Gravity Disposal
500 gpd	Singulair 960LP-500	None
600 gpd	Singulair 960LP-500	None
750 gpd	Singulair 960LP-750	None
1000 gpd	Singulair 960LP-1000	Minimum requirement per manufacturer is 1,000-gallon capacity, 15 gallons per inch of liquid level and 12 inches of freeboard
1250 gpd	Singulair 960LP-1250	Minimum requirement per manufacturer is 1,250-gallon capacity, 16 gallons per inch of liquid level and 12 inches of freeboard
1500 gpd	Singulair 960LP-1500	Minimum requirement per manufacturer is 1,500-gallon capacity, 22 gallons per inch of liquid level and 12 inches of freeboard

- C. This approval listing EXCLUDES appurtenances which are considered to be 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.
- D. This listing is for the treatment of wastewater that meets the definition of typical sewage in R18-9-101(42).
- E. The manufacturer recommends inspection of the pretreatment chamber around year 3 of service in addition to the routine maintenance.
- F. The requirement of R18-9-A312(B)(4)(e) has been met by first requiring a backup generator to cover a power outage; second by supplying a secondary pump to cover a pump outage.
- G. ADEQ approves the Design & Installation Manual, dated for this proprietary product. In addition, it should be noted that the Arizona Administrative Code (AAC) states the following: “if manufactured components are used, an applicant shall design, install, and operate the on-site wastewater treatment facility following the manufacturer’s specifications” as per R18-9-A312(F)(2).
- H. The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).

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

<b>Alternative:</b>	None
<b>Exception:</b>	<ul style="list-style-type: none"> <li>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 &amp; operational practices.</li> </ul>

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

Application for Treatment Product Listing:	October 1, 2024
3 <sup>rd</sup> Party Test data:	<ul style="list-style-type: none"> <li>- NSF Final Report, April 1996 for the Singulair Model 960 500 gpd</li> <li>- NSF equivalency letter dated December 18, 2006 for the following models: Singulair 960LP-500 GPD (500 gpd); Singulair 960LP-500 GDP (600 gpd); Singulair 960LP-1000 (1,000 gpd)</li> <li>- NSF equivalency letter dated May 19, 2016 for the following models: Singulair LP-750 GPD (750 gpd); Singulair 960LP-1250 GDP (1,250 gpd)</li> <li>- Total Coliform Testing Data Received October 1, 2024</li> <li>-NSF Product Approval Listing dated 12/17/24 for Singular 960LP – 500 gpd, 600 gpd, 750 gpd, 1000 gpd, 1250 gpd &amp; 1500 gpd</li> </ul>
Installation Instructions:	<ul style="list-style-type: none"> <li>-Norweco Singulair Bio-Kinetic Wastewater Treatment System Tank Delivery and Setting Received October 1, 2024</li> <li>- Singulair Bio-Kinetic System Operational Guidelines Received October 1, 2024</li> </ul>
Manufacturer’s Warranty:	<ul style="list-style-type: none"> <li>- Singulair Lifetime Warranty and Exchange Program Received October 1, 2024</li> <li>- Singulair Three Year Limited Warranty Received October 1, 2024</li> </ul>
Manufacturer’s Specifications:	<ul style="list-style-type: none"> <li>- Norweco Singulair Bio-Kinetic Wastewater Treatment System Model 960 Received October 1, 2024</li> </ul>
Manufacturer’s Design Calculations & Drawings:	<ul style="list-style-type: none"> <li>- Low Profile Singulair Bio-Kinetic Wastewater Treatment System Model 960LP-500 GPD Technical Drawing Received October 1, 2024</li> <li>- Low Profile Singulair Bio-Kinetic Wastewater Treatment System Model 960LP-750 GPD Technical Drawing Received October 1, 2024</li> <li>- Low Profile Singulair Bio-Kinetic System Model 960LP-1000 GPD Technical Drawing Received October 1, 2024</li> <li>- Low Profile Singulair Bio-Kinetic Wastewater Treatment System Model 960LP-1250 GPD Technical Drawing Received October 1, 2024</li> </ul>
Operation & Maintenance Manual:	<ul style="list-style-type: none"> <li>- Singulair Bio-Kinetic System Operational Guidelines Received October 1, 2024</li> <li>- Norweco Singulair Bio-Kinetic Wastewater Treatment System - Singulair System and Control Center Received October 1, 2024</li> </ul>
Owner’s Manual:	<ul style="list-style-type: none"> <li>- Norweco Singulair Bio-Kinetic Wastewater Treatment System – Final Instruction to the Owner Received October 1, 2024</li> </ul>

**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: Groundwater Protection, General Permits Unit
  - 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.

<b>Signature:</b>	 D1ACBBE2CFFE40F...	<b>Date Signed:</b>	1/15/2025
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<b>Title:</b>	Kyle Uptergrove, Manager Groundwater Protection Section and Reuse, General Permits Unit
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