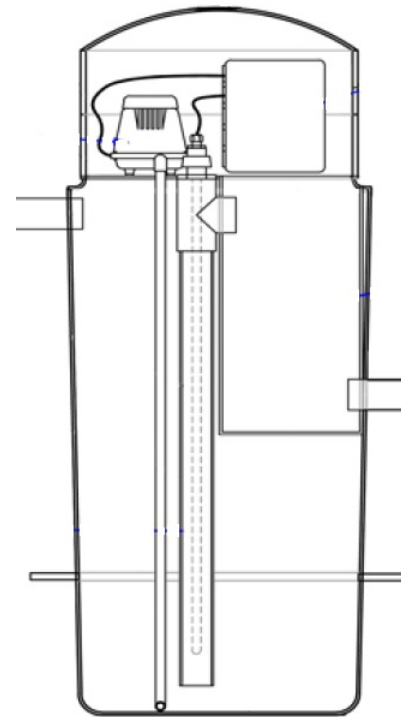
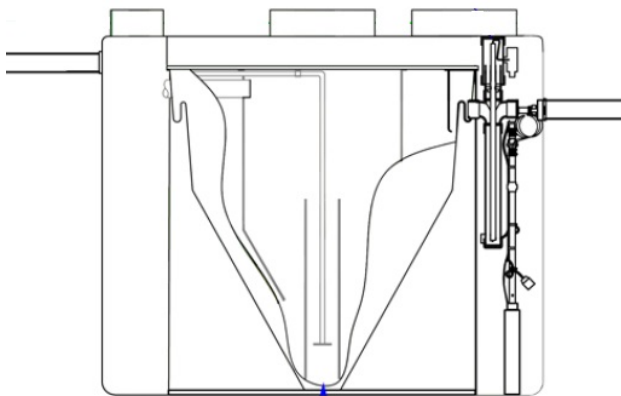
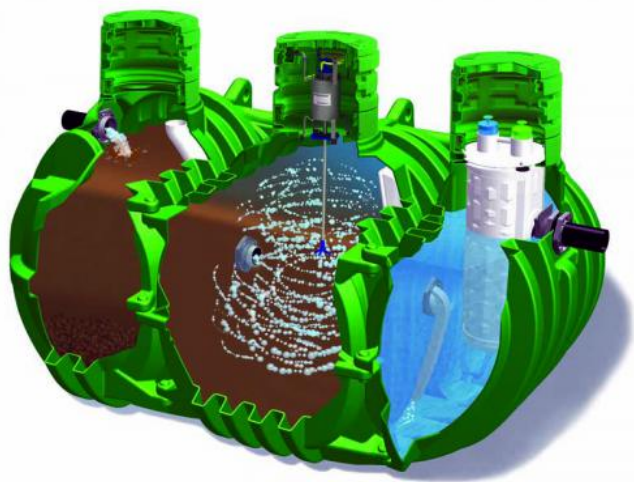




2016 ANNUAL REPORT of the

# Sewage Treatment Systems Technical Advisory Committee



## Executive Summary

Section 3718.03 of the Ohio Revised Code (ORC) creates the Sewage Treatment Systems (STS) Technical Advisory Committee (TAC), outlines its membership, identifies individuals granted the authority to appoint committee members, and provides guidelines concerning the committee's responsibilities and procedures. Paragraph (G) of ORC 3718.03 requires the chairperson of the committee to prepare an annual report concerning the activities of the committee and submit the report to the Ohio General Assembly. The purpose of this report is to fulfill that requirement.

TAC scheduled monthly meetings to review product applications received in 2016. During 2016, TAC reviewed ten requests from seven manufacturers of sewage treatment systems (STS) or components. Six of the requests were for modification of existing approvals of STS or components. Two of the requests were withdrawn by the manufacturer and one request was recommended for denial.

TAC also received a request from a manufacturer to develop a special device approval allowing the installation of two prototype STS for the purpose of data collection.

The systems and components recommended for approval in 2016 by TAC have provided for the use of soil absorption system area sizing reductions, soil depth credits to reduce the thickness of soil required below a soil absorption system, meeting treatment standards for the discharging and spray irrigation of highly pretreated effluent, and allowance for more design options to address varying site and operational issues across the state.

Other activities and actions of the committee included discussion of standards for review and approval of tertiary treatment devices, developing updated product standards, guidelines, and procedures for data collection and submission. The TAC also discussed strategies for implementing the required five-year product approval process.

TAC will continue to work with system manufacturers to review and recommend approval or disapproval of new technologies to the director of health, and will actively pursue the research, development, and timely approval of innovative and cost-effective, alternative technologies as required under section 3718.03 (F)(4) of the Ohio Revised Code.

## Sewage Treatment Systems Technical Advisory Committee Membership and Meetings

The Sewage Treatment Systems Technical Advisory Committee (TAC) membership and appointment authority is outlined in Section 3718.03 of the Ohio Revised Code.

The members of TAC during 2016 were:

<b>2016 TAC Member</b>	<b>Company</b>	<b>Representing</b>	<b>Appointed By</b>
Rachel Townsend, RS*	Ohio Department of Health	Director of Health	Director of Health
Brian Hall, PE**	Ohio Environmental Protection Agency	Engineer, Ohio EPA	Governor
Dr. Karen Mancl***	Ohio State University	Academia	Governor
Perry Brock	Fayette Township, Lawrence County	Ohio Township Association	Governor
Christopher Schraff	Porter Wright	Public Member	Governor
Matt Deaton	Ohio Department of Agriculture	Soil Scientist, Division of Soil and Water Conservation	Governor
Dan Lark, RS (chair)	Lake County General Health District	OEHA Sanitarian	House
Zak Sherman	Infiltrator Systems, Inc.	Manufacturer	House
Raymond Saporito, MPH, RS (vice-chair)****	Ashtabula County Combined Health District	AOHC Health Commissioner	House
Walt Sandefur, PE	Sandefur Consulting	Professional Engineer	House
Charles Patterson, RS	Clark County Combined Health District	AOHC Health Commissioner	Senate
Dan Michael	Clear Creek Environmental, Inc.	Designer	Senate
Mark Fehring	Fehring Services	System Installer	Senate
Chris Mandich	Jet, Inc.	Manufacturer	Senate

\*Ms. Townsend's appointment confirmed prior to May monthly meeting; Replacing Rebecca Fugitt (retired from TAC)

\*\*Mr. Hall's appointment confirmed prior to March monthly meeting.

\*\*\*Dr. Mancl's appointment confirmed prior to October meeting.

\*\*\*\*Mr. Saporito's term expired in July 2016. This position remained vacant for the remainder of the year.

TAC scheduled monthly meetings to review products in 2016. TAC held eight regular monthly meetings in 2016. Four meetings were canceled due to lack of products and applications to review.

A complete record of the meeting summaries for each monthly meeting and the recommended approvals that were made are located on the Ohio Department of Health's (ODH) website at:

<http://www.odh.ohio.gov/odhprograms/eh/sewage/STSpages/tac1.aspx>

## Sewage Treatment Systems and Components Reviewed by TAC

ORC 3718 review includes an evaluation of detailed system and component information including: product specific technical information, any limitations on use, performance information supporting the manufacturer's request, installation and sizing requirements, installation procedures, materials, and operation and maintenance information including estimates of operation costs and expected service life. In reviewing performance information, the TAC studies raw data and statistical analyses of the sample data (mean and standard deviation for normally distributed data and geometric mean and geometric standard deviation for microbial data) to determine the operational range of the product and its relationship to the documented performance standards. TAC reviews the environmental conditions of the collected data and related confidence intervals to determine if sufficient sample points have been submitted to conclude that the submitted data can be used to predict the products' operation in the range of environmental conditions the product will be exposed to across the state of Ohio.

TAC reviewed ten requests for approval from seven manufacturers of sewage treatment systems (STS) or components. Six of the requests were for modification of existing approvals of STS or components. Two of the requests were withdrawn by the manufacturer and one request was recommended for denial.

TAC received a proposal from a manufacturer to install two prototype sewage treatment systems for the purpose of data collection. It was determined that a Special Device Approval would be appropriate to allow the installation of the prototype systems to facilitate data collection for a future product approval application from the manufacturer. The TAC recommended approval of the proposal through a Special Device Approval at the December meeting. Installation of the prototype systems is anticipated to be in early 2017.

The systems and components recommended for approval in 2016 by TAC have provided for the use of soil absorption system area sizing reductions, soil depth credits to reduce the thickness of soil required below a soil absorption system, meeting treatment standards for the discharging and spray irrigation of highly pretreated effluent, and allowance for more design options to address varying site and operational issues across the state.

## 2016 TAC Product Review Summary

Manufacturer	Product	Approval Date (ODH Director)	Notes
Ecological Tanks, Inc.	Aqua Aire approved treatment trains Aqua Safe approved treatment trains Control Panel Model 209	5/17/2016	Approval modification for Aqua Aire and Aqua Safe treatment trains approved for spray irrigation to allow two different timers (209-H and 209-R) for control panel Model 209.
Premier Tech Aqua	Ecoflo Coco Filter	5/17/2016	Approval of Premier Tech Aqua Coco Filter models for meeting the treatment standards of five-day carbonaceous biochemical oxygen demand and total suspended solids for sizing reduction.
Consolidated Treatment Systems	Flow <sup>2</sup> Ultraviolet	8/15/2016 12/5/2016	Approval of the Flow <sup>2</sup> ultraviolet disinfection unit (F2-UV) as a substitute for ultraviolet disinfection in previously approved treatment trains with a concurring request from the manufacturer of the approved treatment train. Product is approved for: <ul style="list-style-type: none"> <li>• One-foot soil depth credit (8/15/16)</li> <li>• Two-foot soil depth credit (12/5/16)</li> <li>• NPDES discharge (12/5/16)</li> </ul>
Anua (formerly Bord na Mona)	Puraflo polishing (tertiary) filter	Manufacturer withdrew application 5/3/2016	Request for approval of the Puraflo Peat Fiber Biofilter Polishing Filter as a tertiary component or device.
Anua (formerly Bord na Mona)	Type A Peat Biofilter Type B Peat Biofilter	Manufacturer withdrew application 5/3/2016	Request for modification of previous approvals to increase loading rates for Type A and Type B Peat Biofilter systems.
Norweco, Inc.	Singular 960-500 and Singular Green TNT 500	9/12/2016	Modification of previous approval to utilize a new tank design.
Consolidated Treatment Systems	Multi-Flo and Enviro-Guard treatment trains	11/2/2016	Modification of previous approvals to allow use of alternative pumps and control panels for previously approved Consolidated Treatment Systems Inc. treatment trains utilizing Multi-Flo and Enviro-Guard units.
Consolidated Treatment Systems	Nayadic MV6 Evolution Tank	1/19/2017	Modification of previous approvals of the Consolidated Treatment Systems, Inc. Nayadic systems to include M6-Evolution tank configurations.
Consolidated Treatment Systems	Enviro-Guard, Nayadic, Multi-Flo, and Sybr-Aer treatment trains	1/19/2017	Modification of previous approvals to allow the use of ODH approved tanks for pump/dose tanks, trash tanks, and UV/re-aeration tanks,
Earthbuster	Earthbuster	Denial and notice of opportunity for hearing 1/31/17	Earthbuster™ 2015 approval request for soil de-compaction equipment remediation product.

## **Other TAC Activities and Actions**

### Standards for Tertiary Treatment Products

The Ohio Department of Health and Sewage Treatment Systems Technical Advisory Committee discussed the need to develop standards for review and approval of tertiary treatment products. The new statewide sewage rules require that tertiary treatment devices designed to provide additional treatment for discharging systems that are unable to meet the effluent quality standards of the household general NPDES permit shall be reviewed by the sewage treatment systems TAC. A workgroup was established to work on development of these standards. TAC will continue to work in 2017 to develop the standards needed for consistent review of tertiary product approval requests.

### Standards, Guidelines, and Protocols for ORC 3718.04

The Sewage Treatment Systems Technical Advisory Committee has been working to update the Standards, Guidelines, and Protocols for product review. There has been confusion on the part of manufacturers on how to complete statistical analysis to be submitted with a product approval request. Members of the TAC have been working with program staff to update the guidance in the Standards, Guidelines and Protocols for statistical analysis. In addition, the TAC is working to develop a spreadsheet that can serve as a statistical instrument for the product standards, guidelines, protocols, and appendices. This should streamline the application process for manufacturers and provide consistency in how the required geometric mean and standard deviations that are needed in the product approval are calculated and assist in the calculation of confidence interval for data that is submitted to support a product approval application.