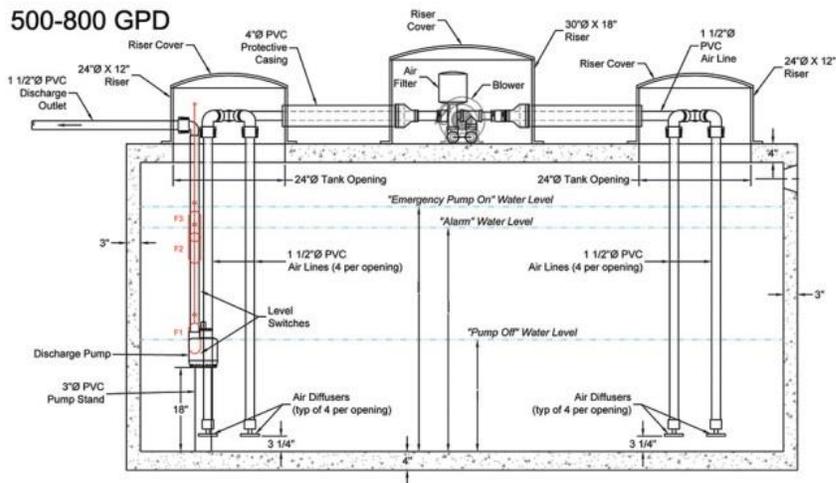
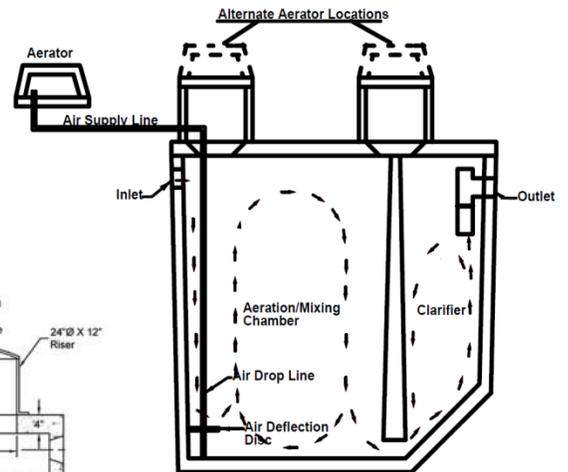
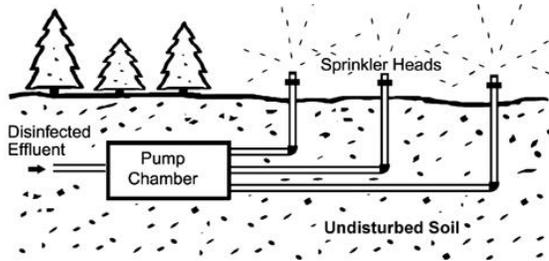




2014 ANNUAL REPORT of the Sewage Treatment Systems Technical Advisory Committee



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 2014. During 2014, TAC reviewed three sewage treatment systems (STS) or components from three manufacturers. All three were new requests for approval of STS or components. TAC also developed two special device approvals to allow for new technologies and system configurations to address difficult sites in Ohio.

The systems and components recommended for approval in 2014 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, and approval for constantly meeting the effluent quality standards outlined in the Ohio Environmental Protection Agency's (Ohio EPA) National Pollutant Discharge Elimination System (NPDES) General Permits for household STS.

Other activities and actions of the committee included revision of the Guidelines and Protocols for ORC 3718 Review, development of special device approvals to address specific site conditions in Ohio, discussion of the performance of systems approved for discharge under the NPDES General Permit, and technical standards of tertiary treatment products.

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 2014 were:

2014 TAC Member	Company	Representing	Appointed By
Rebecca Fugitt, MS, RS	Ohio Department of Health	Director of Health	Director of Health
*	Ohio Environmental Protection Agency	Engineer, Ohio EPA	Governor
*		Academia	Governor
Perry Brock	Fayette Township, Lawrence County	Ohio Township Association	Governor
Christopher Schraff	Porter Wright	Public Member	Governor
Matt Deaton	Ohio Department of Natural Resources, Division of Soil and Water Resources	Soil Scientist, ODNR	Governor
Dan Lark (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
Trent Lydic	Jet, Inc.	Manufacturer	Senate

*The Academia and Ohio EPA Engineer positions were vacant.

TAC scheduled monthly meetings to review products in 2014. TAC held six regular monthly meetings in 2014. Four meetings were canceled due to lack of quorum, and two meetings were canceled due to lack of products to review.

A complete record of the meeting summaries for each monthly meeting and the recommended approvals that were made may be found on the Ohio Department of Health (ODH) website at:

<http://www.odh.ohio.gov/~media/ODH/ASSETS/Files/eh/STS/tacyearlyminutes/TAC14min.ashx>

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 three sewage treatment systems (STS) or components from three manufacturers. All three were new requests for approval of STS or components. Two of the requests were recommended for approval by the TAC, and one request was a “no recommendation” from TAC as a result of a tie vote.

The systems and components recommended for approval in 2014 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, and approval for constantly meeting the effluent quality standards outlined in the Ohio EPA’s NPDES General Permits for household STS.

2014 TAC Product Review Summary

Manufacturer	Product	Approval Date (ODH Director)	Notes
Ecological Tanks	Aqua-Aire	7/31/2014	
Infiltrator Systems, Inc.	Infiltrator ATL	Denied**	No recommendation from TAC due to tie vote at September meeting. Product approval request denied by Director’s Journal Entry on 12/3/2014.
Consolidated Treatment Systems, Inc.	Sybr-Aer	2/10/2015	Approved for discharge under NPDES General Permit and spray irrigation to restricted sites. Request for discharge to soil (CBOD ₅ /TSS sizing reduction, 1 ft soil depth credit, and 2 ft soil depth credit) DENIED

**Product was subsequently granted temporary approval by Director’s Journal Entry in March 26, 2015. Approval is temporary until special device approval is developed by TAC to establish uniform performance standards for combined treatment and dispersal systems.

Other TAC Activities and Actions

Other activities and actions of the committee included review and revision of the Guidelines and Protocols for ORC 3718 Review, discussion of sand-lined soil absorption systems, and development of special device approvals to address difficult site conditions for sewage treatment system design and installation. The TAC discussed performance issues related to discharging systems installed under the NPDES General permit, and began discussion of technical standards for tertiary products authorized in the new statewide sewage rules.

Standards, Guidelines, and Protocols for Review of STS Products and Components

The Ohio Department of Health and Sewage Treatment Systems Technical Advisory Committee's *Standards, Guidelines, and Protocols for Ohio Revised Code Section 3718.04 Review of Sewage Treatment Systems Products and Components* document was updated to incorporate changes to treatment standards, including use of E. coli data for discharging HSTS to align with Ohio EPA's NPDES General Permit for Household Sewage Treatment Systems. The revisions also provided clarification on calculation of confidence intervals for data submitted to support each product approval request.

Special Device Approvals

Provisions within rule 3701-29-20 of the Administrative Code allow the Director of Health to authorize systems differing in design or principle of operation from those set forth in rule through establishment of a special device approval. TAC reviews and provides recommendation to the Director on special device approval requests.

Spray Irrigation Systems

The Ohio Administrative (OAC) Chapter 3701-29 does not specifically address restricted and/or unrestricted surface application of treated wastewater for use as a Sewage Treatment System (STS). Spray irrigation of treated wastewater has previously been permitted under experimental concurrence in Ohio. The TAC recommended approval of the special device approval for Spray Irrigation in July, 2014.

Thin Soil: Drip Distribution and Mound Systems

Rule 3701-29-15 of the Ohio Administrative Code requires a minimum 12 inches of undisturbed, naturally deposited soil above bedrock for the installation of a STS. ODH recognized that some areas of the state with failed STS are unable to meet this requirement and sought to establish alternative criteria through the provision for special device approval. This approval allows for the replacement of failed STS where in situ soil thickness is between six and twelve inches. Proper treatment and dispersal is ensured through the combination of pretreatment (<1,000 cfu/100mL), timed-micro-dosing of effluent, and/or use of sand fill. The TAC recommended approval for use of mounds or drip distribution with pretreatment for replacement of STS on sites with between six and twelve inches of in situ soil above bedrock.