

SETEC

SOIL AND ENVIRONMENTAL TECHNOLOGY, INC

111 N. Franklin Street Christiansburg, Va. 24073

Phone (540) 381-0309

MEMORANDUM

TO: Bruce Tuten

FROM: David Hall

David Hall CPSS # 140

DATE: 12/10/01

SUBJECT: Preliminary Soil and Site Evaluation on Claytor Lake

On 11/14 and 11/28/01 we conducted a preliminary soil and site investigation of +/- 68 acres located on Claytor Lake in Pulaski Co., VA, to determine the suitability of the site for an on-site waste disposal system to serve a proposed Auquatics Center.

You have indicated the proposed center may accomodate up to 300 campers and staff. Facilities with plumbing will include a dining hall and shower houses with toilets. We have estimated the sewage flow at 25 GPD/person, or a total of 7500 GPD.

The property consists mainly of narrow shale ridges, steep sideslopes, and associated drainageways. Soils are generally shallow to moderately deep and well drained. Steep slopes and inadequate depth of suitable soil make most of the property unsuitable for on-site waste disposal systems. Small areas contain soils with sufficient depth for placement of on-site waste disposal systems.

The northernmost portion of the property, along the lake, contains remnants of an old alluvial terrace. Soils in this area are deep and moderately well to well drained. As shown on the enclosed map, we have identified several potential drainfield sites in this area. The total area available for drainfields is about 1/3 to 1/2 acre.

Since drainfield area is limited on this site we have evaluated serveral possible scenarios for effluent treatment and disposal. Because of soil and site conditions (some of the area indicated is unsuitable for conventional systems due to the presence of a seasonal water table), more area is available for alternative type on-site systems than for conventional systems.

Type of System	Area available(sqft)	GPD effluent	# campers/staff
Conventional @ EPR=50MPI	15,300	2050	82
Shallow placed w/pretreatment @ EPR=30MPI	22,500	3900	156
Drip irrigation w/ pretreatment @ EPR=30MPI	24,550	5000	200
Puraflo treatment modules@EPR=30 MPI	22,500	9990	400

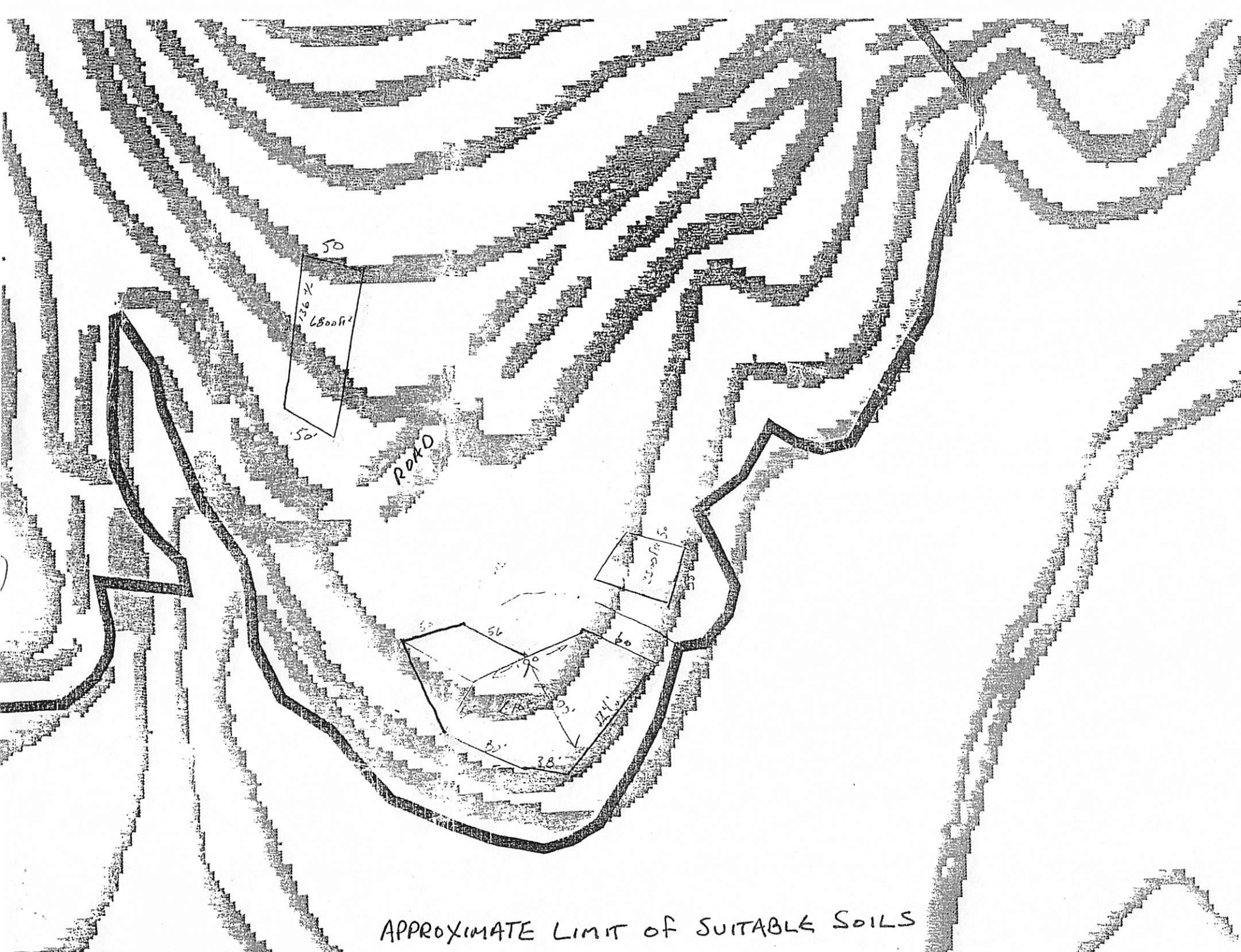
EPR=estimated perc rate MPI=minutes per inch GPD=gallons per day

These figures are estimates based on our preliminary findings. Generally, as the number of campers increase so does the degree of effluent pretreatment. I have included some literature about the various systems. The FAST unit is what is installed at Camp Otari Trading Post.

Also, please be aware that any system receiving more than 1200 GPD is considered a mass drainfield and is subject to more stringent requirements. Engineered plans are also required for mass drainfields. I have enclosed a copy of the mass drainfield requirements for your information.

This evaluation is for preliminary planning purposes only and further evaluation will be required before we have enough information to begin the permitting process.

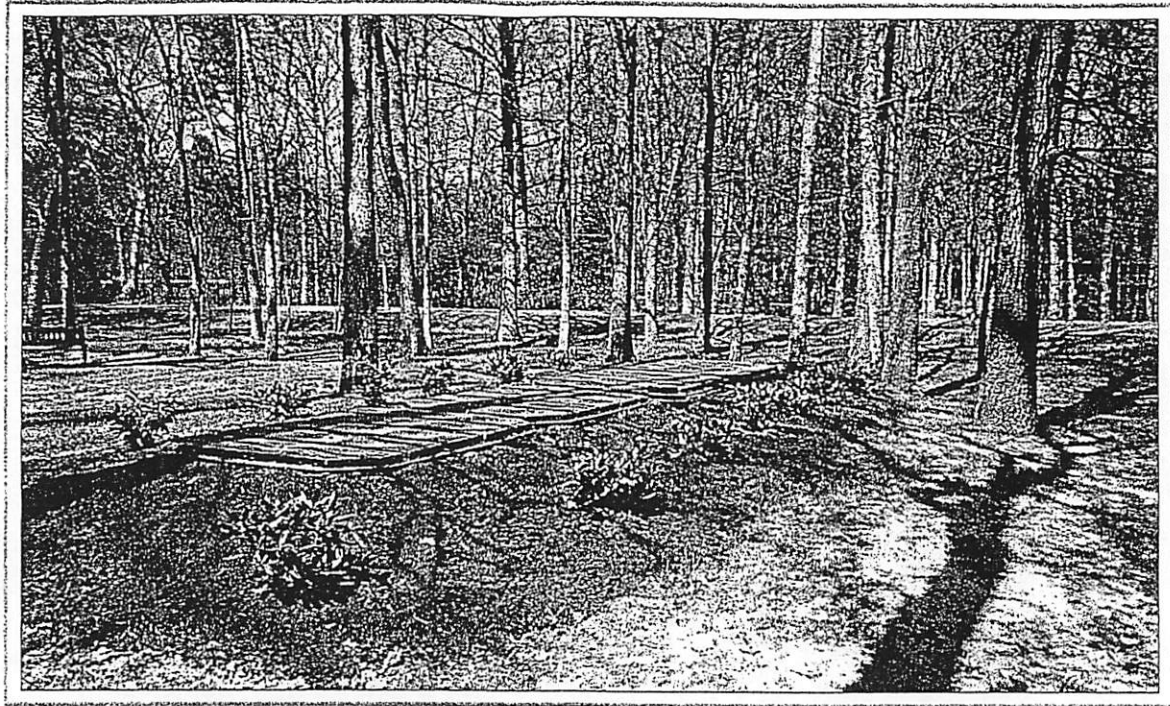
If you have any questions or comments, please feel free to contact us anytime.



APPROXIMATE LIMIT OF SUITABLE SOILS



PEAT BIOFILTER *for Wastewater Treatment*



An example of an installed Puraflo® unit

The Puraflo® System

Puraflo® is a highly effective biofiltration system that uses biofibrous peat to treat septic tank effluent. The peat media filters the effluent and promotes the growth of microorganisms which naturally treat household strength wastewater. The high quality treatment prevents the effluent from polluting the groundwater, thereby protecting the environment.

Because of the special properties of the peat media, the Puraflo® Biofilter is an excellent option for onsite treatment where conventional systems have failed or are restricted due to high groundwater, shallow bedrock, poor soil, or other site conditions. Puraflo® is also a good choice for homes, businesses, and residential developments in areas where centralized treatment is unavailable or too expensive.

Key Benefits Include:

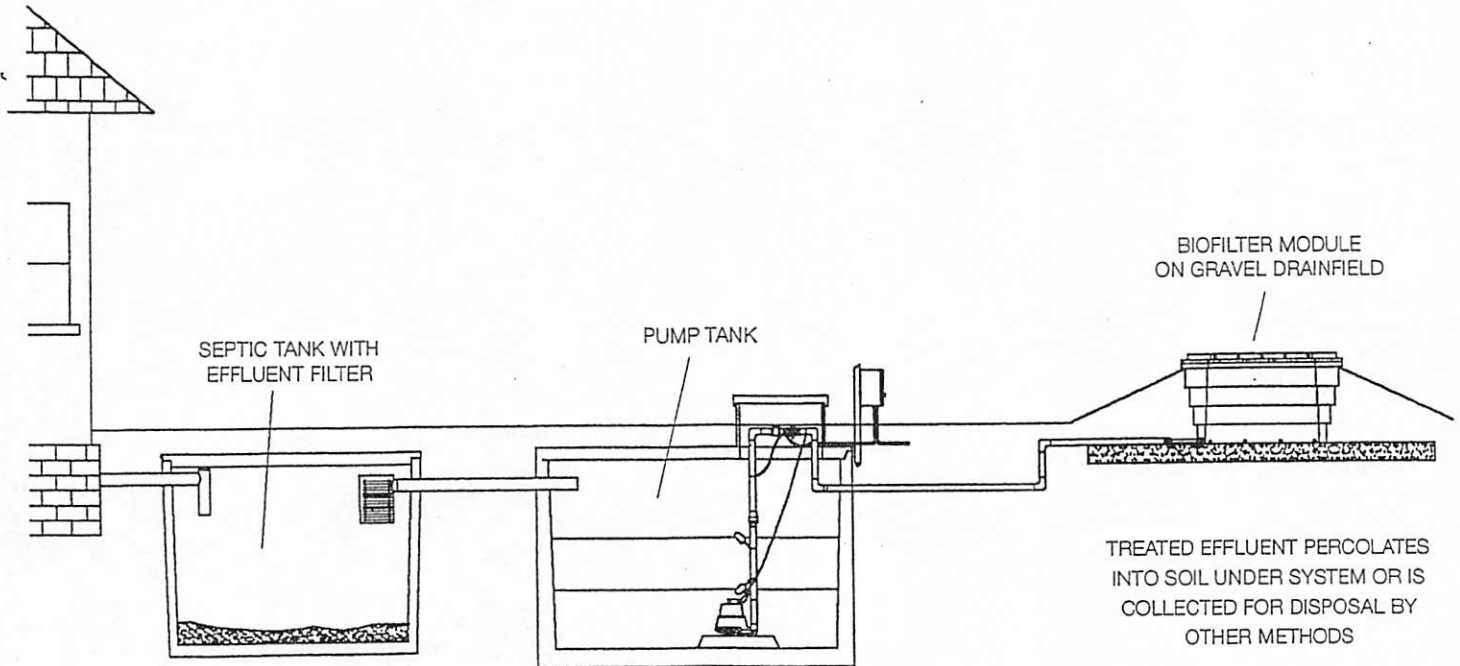
- Small space requirement
- Simple installation of pre-assembled system
- Low operating and maintenance costs
- Odor free natural system
- No additives or chemicals
- High quality, passive performance
- Two year warranty
- Can be used with any disposal method (trenches, gravel pad, discharge, etc.)

AVERAGE TEST RESULTS

PARAMETER	INFLUENT	EFFLUENT	% REDUCTION
B.O.D. (mg/l)	280	Less than 10	96+
T.S.S. (mg/l)	190	Less than 10	95+
NH ₃ - N (mg/l)	50	Less than 5	90+
Total Coliforms	3.9 x 10 ⁶	6.0 x 10 ³	99.9+
E. coli	9.1 x 10 ⁵	7.6 x 10 ²	99.9+
Pathogenic Bacteria	Present	Absent	100



PEAT BIOFILTER *for Wastewater Treatment*



How It Works

The wastewater flows from the building into a watertight septic tank where solids settle and the liquid continues to the pump tank. It is then pumped to the modules and is evenly distributed over the surface of the biofibrous peat. The waste liquid is treated by natural microorganisms as it percolates down through the peat. It weeps from the base as a clear, odorless liquid which is usually dispersed into a shallow gravel bed or trenches and then into the surrounding soil.

The percolation area required by Puraflo® is substantially less than other systems due to the quality of treatment.

The very low maintenance and long life of the system ensures that the patented Puraflo® Biofilter will be the most cost effective solution for years to come.

Guarantee

Bord na Móna Environmental Products, U.S., Inc. will guarantee the Puraflo® biofilter treatment for a period of two years provided it is designed, installed and operated in accordance with Bord na Móna recommendations and guidelines.

DISTRIBUTED BY



Halcyon Associates

INCORPORATED

CALL TOLL FREE 1-800-895-0856

P.O. BOX 536, MATHEWS VA 23109 • Telephone (804) 725-9056 • Fax (804) 725-0195

LARGE SUBSURFACE WASTEWATER SYSTEMS MASS DRAINFIELD SOIL AND SITE EVALUATIONS

An application for a mass drainfield must be submitted to the local health department. After the submittal of the application a preliminary engineering conference (PEC) shall be held. The PEC shall include the owner or agent, his engineering consultant, and representatives of the local and district health department and engineer from the Office of Environmental Health Services. A preliminary engineering proposal (PEP) shall be prepared for all mass drainfield proposals. The need for a PEP for systems less than 5000 gpd, may be waived by the Division in lieu of a letter from the owner's engineer summarizing the agreements reached at the PEC. The PEP when submitted for evaluation shall consist of an engineering report and preliminary plans which shall contain the necessary data to support the proposed design. The PEP shall include but not be limited to the information outlined below.

A. Proposed design data and general information.

1. Design flows and analysis of sewage constituents as a basis for process design. Any changes to the proposed wastewater characteristics (either flow or strength) after the application and plan submittal may require a new application with appropriate fees.
2. Description of treatment processes and flow plans identifying the proposed arrangement of basins, piping and related equipment with unit operation design parameters and sizes.
3. Description of sludge management method.
4. Plan for imposed operational requirements to include provisions for a certified operator and hours of operation.

B. Site plan and boundary survey.

1. All corners of property and property line boundaries relevant to system design.
2. Wells/water supply sources (existing and proposed) within property or 500 feet of any proposed drainfield and within 100 feet of all other system components.
3. Existing water lines within property and within 10 feet of any projected system component.
4. Surface waters with any water quality classifications, designated wetlands, and existing storm drainage features.
5. Existing roads and structures.
6. Locations of any existing wastewater system components, drainfield/repair areas or other utility easements.

7. Areas being proposed for facilities and system components.
 8. Topographic map with at least five feet contour intervals for areas to be evaluated for drainfields or reserve areas.
- C. General soil and site mapping. A soil scientist and/or geologist familiar with onsite wastewater dispersal systems should prepare and work with the engineer on this portion of the report.
1. Detailed soil maps of entire mass drainfield areas at a scale of 1 inch = 200 feet (1:2400). Soil mapping includes areas where individual mass drainfields are not contiguous but share common landscapes and watersheds. As a minimum, soil mapping should delineate landforms, soils, slopes, and drainage. If soil mapping at 1:2400 is not feasible, soil mapping at the largest (most detailed) scale of any site or contour mapping provided by the project engineer for other aspects of the project shall be used. Detailed mapping can be done with a hand auger, though backhoe pits will be needed for detailed describing of the soils/geology and for VDH review.
 2. Soil profiles and site features described and identified according to commonly used criteria and conventions of Virginia Department of Health and/or National Cooperative Soil Survey. Soils identified to a series or series-like level and correlated with published soil survey information for the county. If published soil survey information is unavailable; soils can be identified to a working level sufficient for scope of the project, as agreed upon by VDH and the consultant.
 3. A soil legend describing map units, special symbols, and other items pertinent to the project.
 4. As a minimum, relative soil ratings, limitations, and potentials for onsite wastewater disposal (septic system drainfields) or other intended uses shall be provided. The soil consultant can develop these ratings, or if available, published Soil Survey ratings can be used. Soil characteristics and properties that are limiting for wastewater treatment and disposal should be defined.

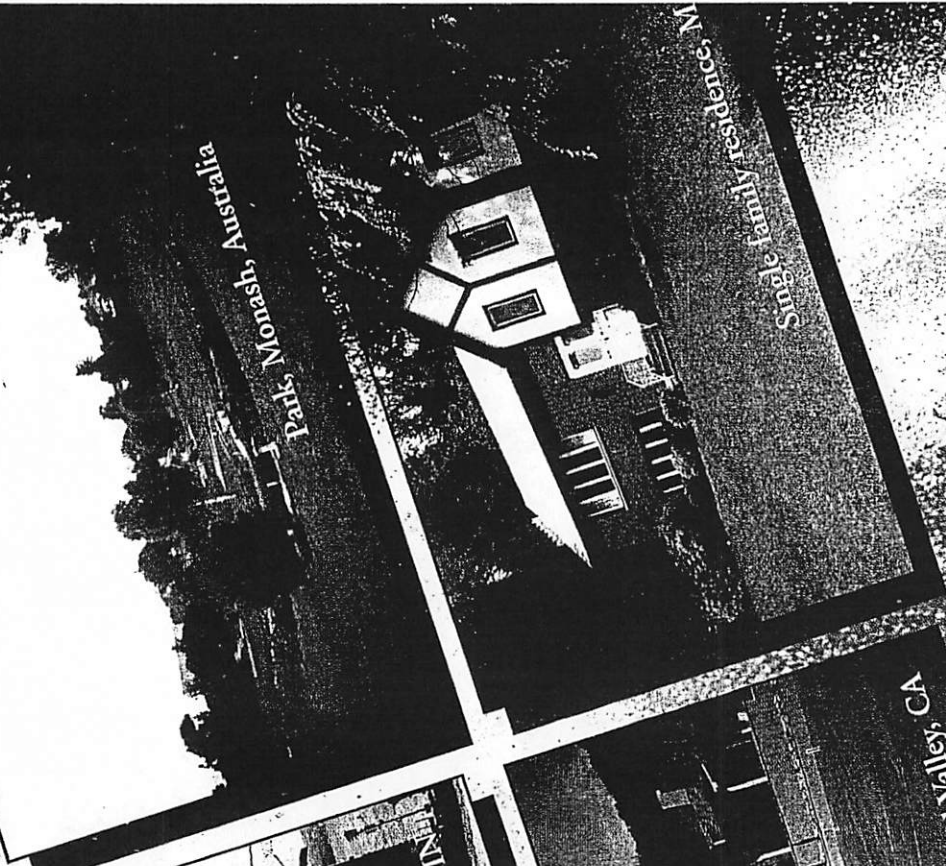
5. Underlying geology shall be described to a working field level common in mapping soils. Published geologic information, particularly geologic quadrangles, shall be provided if available. As a minimum, underlying lithology (mica schist, granite gneiss, stratified Coastal Plain sediments, etc.) shall be described along with features that are pertinent to wastewater treatment and disposal. This would include rock fractures, joints, voids and relative dip. Of particular importance is fracturing of the bedrock including hard (R horizons) and soft (Cr) horizons. Size, extent, and continuity of the bedrock fractures must be described. Chroma 2 colors, manganese coatings, clay plugs and coatings, and clay buildup at the soil-rock interface are some of the additional features to be described. The soil consultant shall comment about the relative permeability of the geology (hard and soft bedrock and Coastal Plain unconsolidated sediments) in relation to the proposed wastewater project. If geological concerns are a major issue for site suitability and approval, a geologist or hydro-geologist will need to provide a professional analysis and opinion.
6. Backhoe pits shall be used for detailed observation and describing of soils and geology, especially during the VDH review phase. Pit depth shall be at least 4 feet below any proposed trench installation depth, unless hard rock prevents excavation. The number of backhoe pits needed to promote reliability is soil and site dependent, but as a minimum shall include 3 per mass drainfield or 5 per soil series mapped at the 1:2400 scale. Where only one soil series is present in several mass drainfields, 10 total backhoe pits are sufficient.
7. A statement of professional opinion by an authorized onsite soil evaluator that the soil and site features are compatible with the project proposal.

D. Hydraulic conductivity and permeability information.

1. When VDH and project consultants agree on soils and potential water movement data for a proposed site, hydraulic conductivity and soil permeability data may be taken or derived from VDH percolation tables for texture groups, or permeability tables in published Soil Surveys. Permeability shall be determined for the most limiting soil horizon 4 feet below any proposed trench installation depth. Where trenches are proposed beneath a pronounced restrictive soil horizon, permeability data for the restrictive horizon should also be provided.

2. When necessary, in-situ hydraulic conductivity or permeability measurements that comply with VDH and/or common engineering practices may be conducted. Common methods include percolation tests, and saturated hydraulic conductivity tests. Data shall be reported in minutes per inch if using standard VDH percolation tests, and in inches per hour cross-referenced with centimeters per second if using other tests.
 3. Number of permeability measurements necessary to promote reliability is site and soil dependent, but as a minimum shall include 3 measurements per mass drainfield area, or 5 per different soil series mapped at the scale of 1:200. Where only one soil series is present in several mass drainfields, 10 measurements total are sufficient.
 4. All in-situ permeability measurements shall be recorded, averaged and reported. Where an occasional measurement may "fail", the area represented by the failing hole shall still be included in the proposed mass drainfield area, unless soil morphology and site features can be defined that indicate why the hole "failed", or why the failing hole is significantly different from surrounding holes.
 5. Estimated or measured permeability (K_{sat}) values of the most restrictive soil within (below) 4 feet of the proposed trench depth shall be used for design purposes. Application rates used in determining total absorption area should not exceed 25% of the K_{sat} values when secondary treatment is provided. Higher percentages of K_{sat} values may be when the soils are free from restrictions, soil wetness features, or other limitations and additional wastewater treatment is provided. When wastewater treatment beyond a septic tank is not proposed the application rates should not exceed 15% K_{sat} values. Ground water mounding may restrict the loading rates to less than those values above.
- E. Site-specific information on site loading capacity and assessment of groundwater impact.
1. Logs from deep borings (usually 10-20 feet deep) identifying restrictive layers, relevant changes in texture and density, and aquifer boundaries.
 2. In-situ lateral hydraulic conductivity measurements of effective shallow aquifer.
 3. Groundwater mounding analysis.
 4. Contaminant transport assessment showing compliance with groundwater standards at property lines or at any water supply sources within property. This would include background nitrate values.
 5. Suggested location of groundwater monitoring wells and sampling protocol.

GEOFLOW™



**WASTEFLOW® Drip Systems for
Subsurface Wastewater Disposal & Reuse**

• WASTEFLOW

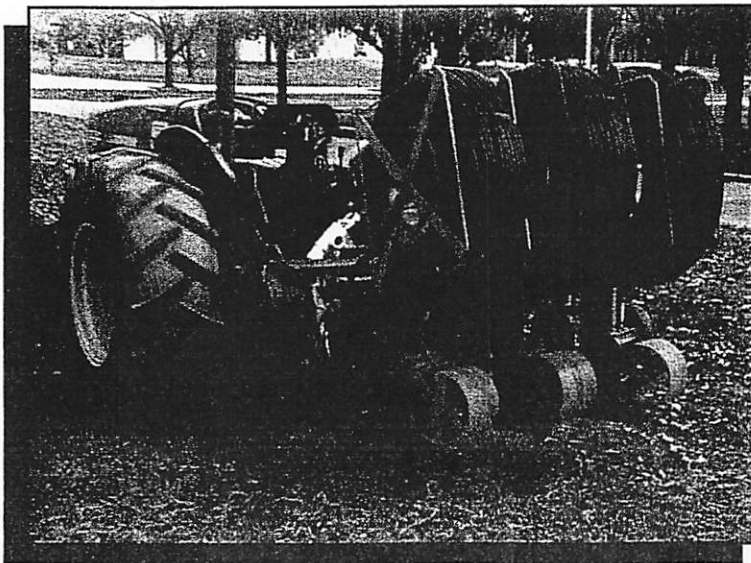


Drip Systems for Subsurface Wastewater Disposal & Reuse

Geoflow is proud to offer **WASTEFLOW**[®] drip systems to the onsite wastewater industry for disposal or reuse of effluent. The flexible polyethylene dripline is 1/2-inch (16mm) in diameter with emitters pre-spaced evenly along the line. The dripline is typically buried six inches below the surface in the biologically active soil horizon where the effluent is pumped slowly and uniformly, reducing ponding, even in difficult soils and hilly terrain.

WASTEFLOW is easily adaptable for projects ranging in size from single-family homes to multi-million gallon per day commercial and municipal projects.

Plow single or multiple driplines at a time



WASTEFLOW is Built to Last

ROOTGUARD[®]

Each emitter has ROOTGUARD protection, a patented process that prevents roots from entering the emitters. The active ingredient, Treflan[®], is impregnated into the emitter during the molding process to direct root growth away from the emitter. It is non-toxic.

BACTERICIDE

Geoflow's WASTEFLOW dripline is coated on the inside with a bactericide, Ultra Fresh DM-50, to inhibit bacterial growth on the walls of the tube and in the emitter, eliminating the need to scour the dripline with velocities exceeding turbulent flow. It does not migrate through plastic nor does it leach into the water.

10-YEAR WARRANTY

WASTEFLOW dripline is supported with a ten-year warranty against manufacturing defects and root intrusion.



Characteristics

Reliable and economic.

The low cost of the system and low cost of installation make it possible to cover large areas or have backup fields without incurring high costs.

No ponding, surfacing or deep percolation.

Effluent is uniformly distributed over the entire area using low flow rate, uniformly spaced emitters. Water is slowly applied at each individual point, enabling the water to move laterally through capillary action, reducing percolation.

Flexible and easy to install.

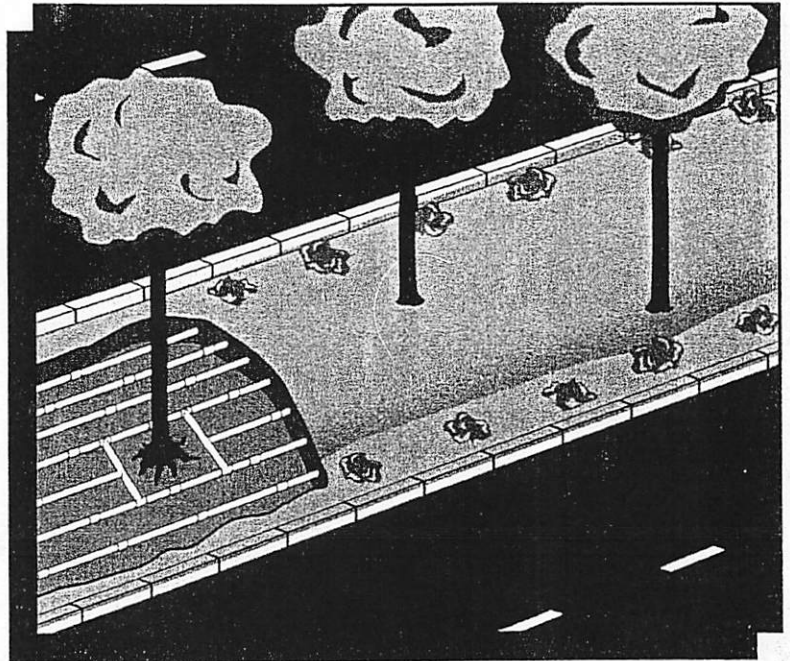
A small vibratory plow or trencher is all that is required to install several thousand feet of tubing.

Easy to design.

The flow characteristics of the emitters and the uniform water distribution make it very easy to design a safe and reliable system.

Resistant to plugging.

Geoflow's drip systems are installed with self-cleaning Vortex Filters to keep large particles from entering the drip field. The emitters are made with large orifices, raised entry ports and turbulent flow paths to keep particles from collecting in the emitters. Incorporation of ROOTGUARD guarantees protection from root intrusion and bactericide inside the tube inhibits slime formation on the walls of the tube.



Purple stripes.

2 stripes identify the WASTEFLOW quality product.

Can be used for irrigation.

The system is ideal for irrigating landscapes or agricultural crops.

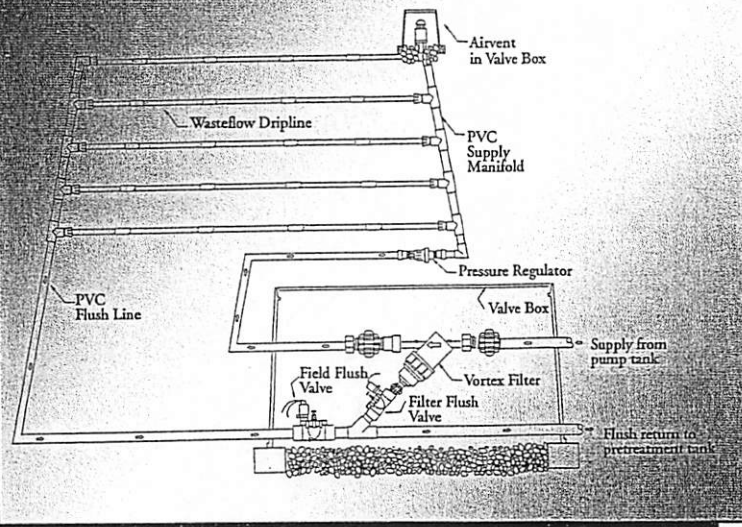
Solves limited area and soil problems.

Can be used in small and odd shaped areas, and where soil type or steep slopes preclude conventional systems.

Freezing conditions.

WASTEFLOW has proven successful in freezing conditions.

Typical Dripfield Layout



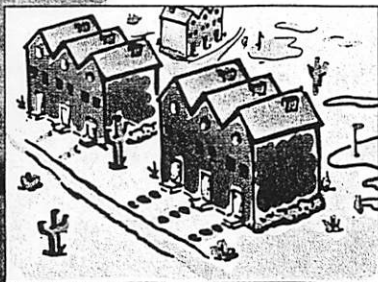
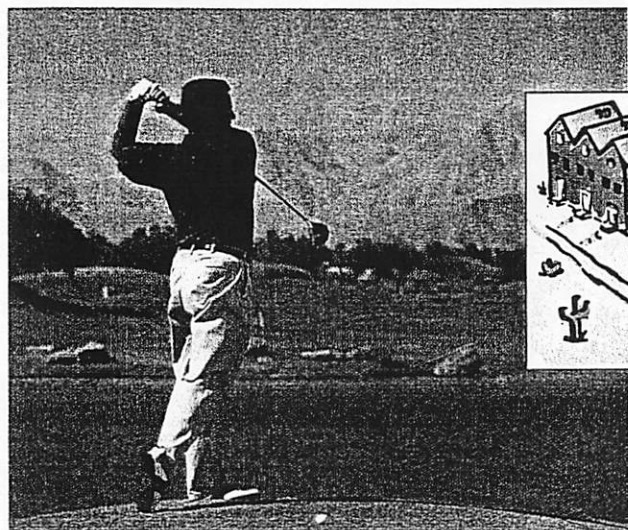
• GEOFLOW™



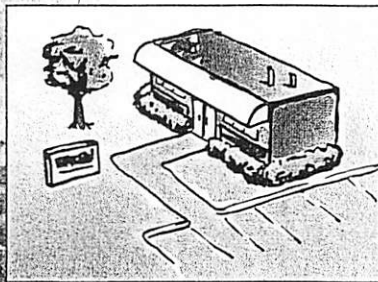
GEOFLOW, INC.
Tel: 800.828.3388
Fax: 415.553.4110
Homepage: www.geoflow.com



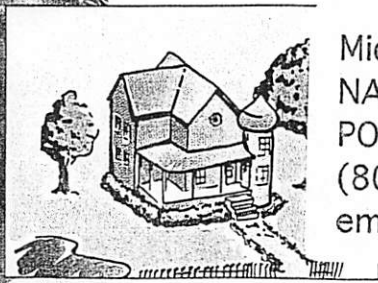
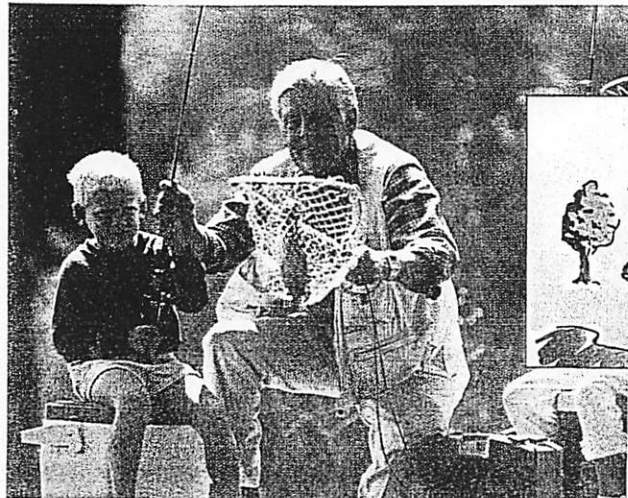
Single Family Dwellings



Clustered Subdivisions



High Strength Commercial

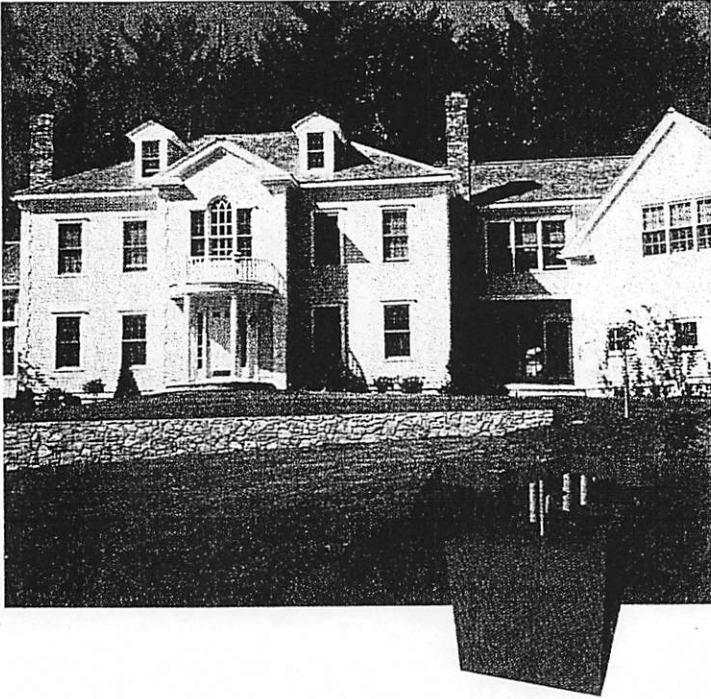


Michael Burch
NATURE WORKS, INC.
PO Box 639 Burgess VA 22432
(804) 453-7946 FAX: 804-453-6911
email: natureworks@hers.com

Failed System Renovation

Dependable, Affordable FAST®

FAST® is simply great technology. Ideally suited for use in single family dwellings, clustered residential developments and subdivisions, restaurants or other high strength commercial applications, a versatile FAST system is ready to serve your needs. FAST can even be used to retrofit a failed conventional septic system, giving homeowners and small communities the innovative solutions they seek. Dependable, affordable...FAST.



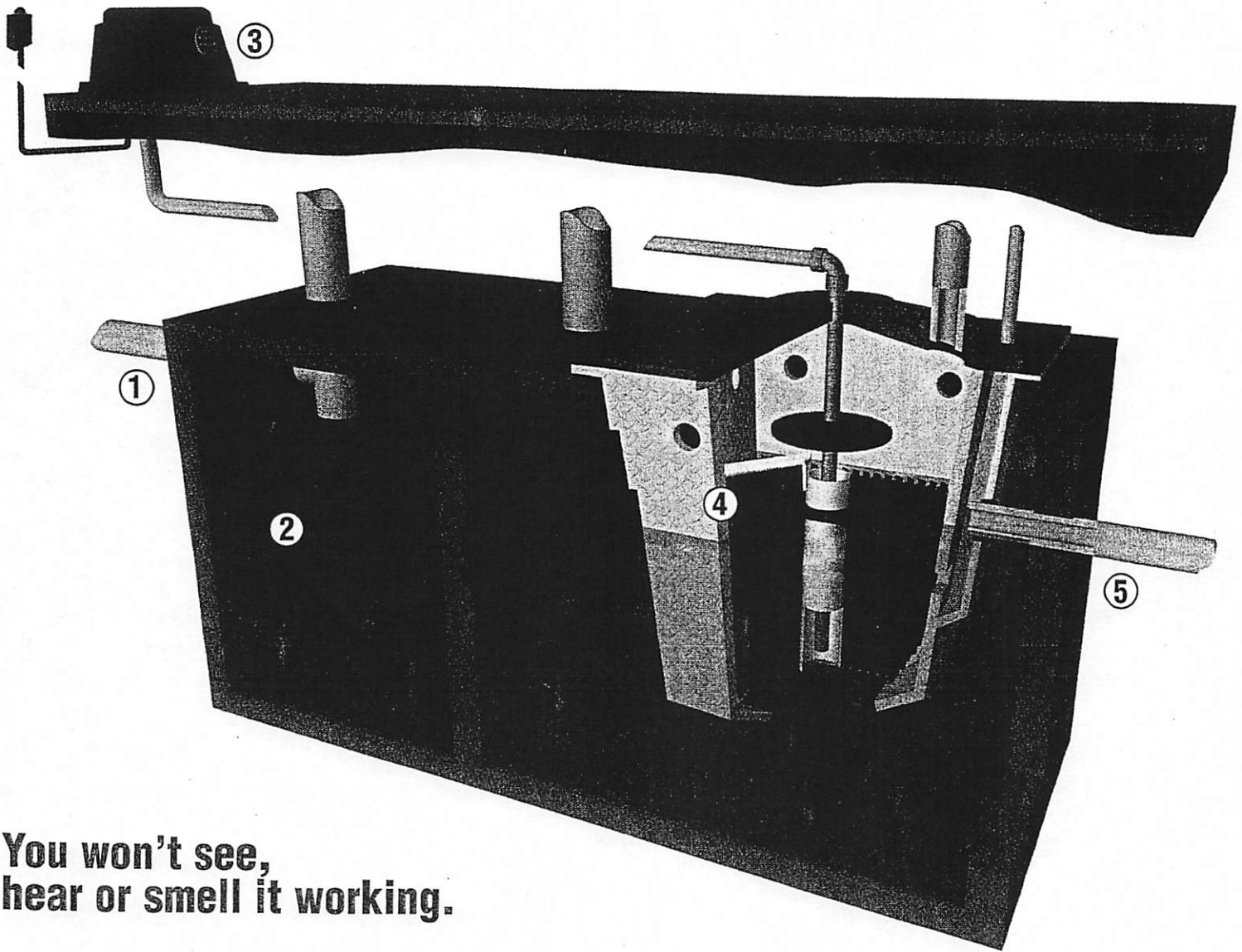
Nothing to disturb your view.

You'll like the view your FAST wastewater treatment system affords—because you can't see it. Everything is tucked neatly underground, except for an unobtrusive blower housing that can be located up to 100 feet away. For years to come you won't notice a thing about your FAST system except how well it's working. And the beautiful view.



FAST wastewater
treatment
systems

Introducing **FAST** Wastewater Treatment Systems



**You won't see,
hear or smell it working.**

- ① FAST® wastewater treatment systems process all the wastewater from single family homes, clusters of homes, small communities or even the high strength wastes from restaurants or commercial facilities.
- ② Natural separation and settling processes occur in the first compartment of the underground tank.
- ③ Remote blower (the system's only moving part) delivers large volumes of air into the heart of the system, creating vigorous water movement. FAST is oxygen-rich and self-cleaning.
- ④ Proven, reliable FAST treatment module provides the perfect environment for "friendly bacteria" to grow and multiply. FAST consistently processes and removes more than 95% of common impurities. Special patented technology allows exceptional Total Nitrogen reductions (including nitrates) of more than 70%.
- ⑤ Clear, odorless treated water is ready for standard or innovative dispersal.

The real beauty of this remarkable system is how well it works.

The science behind a FAST® wastewater treatment system is environmentally sound and simple. FAST is an acronym for Fixed Activated Sludge Treatment. Here's why this technology is so effective:

A FAST wastewater treatment system is a pre-engineered modular apparatus designed to treat wastewater from residential, commercial, high strength and small community applications.

FAST is a fixed film, aerated system utilizing a combination of attached and suspended growth, capable of nitrification/denitrification in a single tank. This innovative combination includes the stability of fixed film media and the effectiveness of proven activated sludge treatment, making FAST technologically advanced and extraordinarily reliable.

A FAST system provides an ideal home for large volumes of friendly organisms in the inner aerated media chamber to digest the wastewater and turn it into a clear, odorless, high-quality effluent. The attached growth system assures that more organisms remain inside the system instead of being flushed out, even during times of peak hydraulic flows (for example, during large social gatherings or on multiple-washload laundry days). During times of low usage, the large volumes of

thriving organisms prevent a dying-off of the system, making FAST equally well suited to intermittent use applications.

Sufficient conditions are present which allows nitrification and denitrification to occur in the same tank—without any system modifications. Special patented technology allows FAST to consistently reduce nitrogen levels—including nitrates and all other nitrogen species—by over 70%.

Installation of the lightweight and durable FAST system is easy. It simply mounts into a septic tank. FAST is designed to be efficient, dependable, user-friendly and very easy to install.

Once installed, the FAST system is virtually maintenance free. Tastefully located below ground level, the clean, odorless system blends beautifully into any landscaping design. The only moving part is the quiet aerating blower, placed above ground level in the most convenient location. FAST needs no other filters or pumps.

FAST is ideally suited for residential development, high strength waste, light commercial applications and renovation of failing systems on marginal or severely limited sites.

FAST wastewater treatment systems share many advantages:

Single Family Dwellings

- Hidden, installs underground
- Quiet, automatic operation
- Garbage disposal and dishwasher compatible
- Affordable options



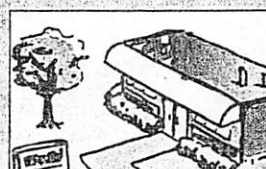
Clustered Subdivisions

- Makes marginal sites buildable
- Flexible development and landscape planning
- Saves money versus centralized system



High Strength Commercial

- Robust process handles even the toughest applications
- Virtually maintenance free—less mess
- Pretreatment or complete treatment



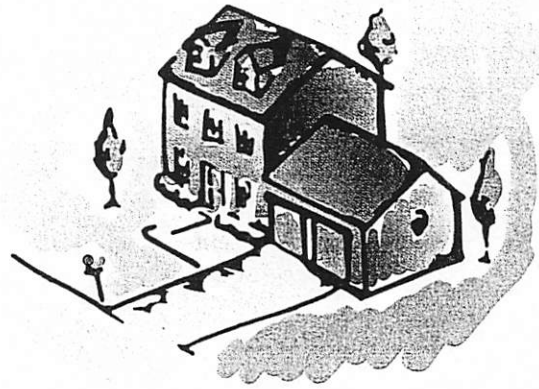
Failed System Renovation

- Simple, dependable retrofit
- Minimal disruption
- Low cost, long-lasting solution
- Renovates soil and leach fields



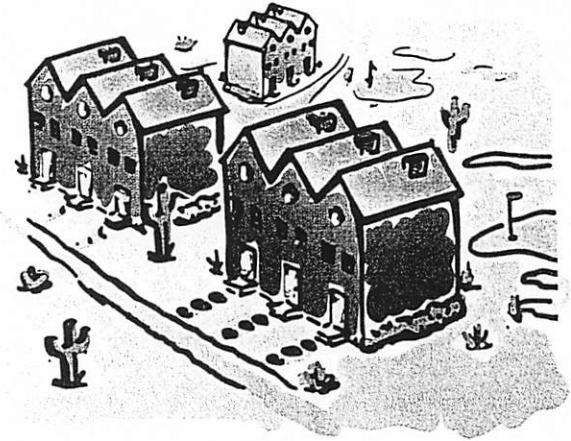
Single Family Dwellings

- Environmentally safe treatment allows full use of property by homeowners, children and pets
- Proven high performance levels could mean reductions in lot size, separation distances and other limiting factors
- Possible innovative re-use of precious water resources for irrigation
- Advanced wastewater treatment system ready for next generation requirements



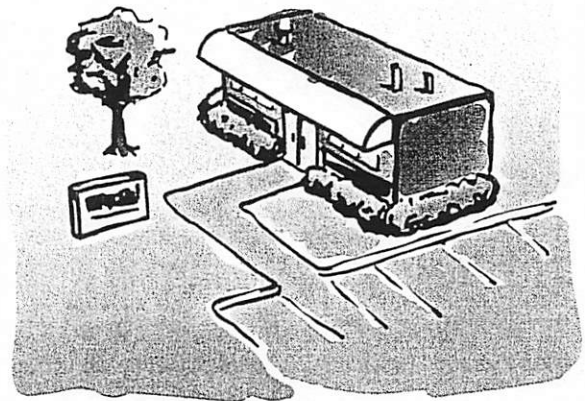
Clustered Subdivisions

- FAST may make previously unbuildable land useful and profitable
- Modular design of FAST system allows project planners maximum flexibility
- Builders and developers are able to purchase and install only when and where needed, saving large capital expenditures of a costly centralized system



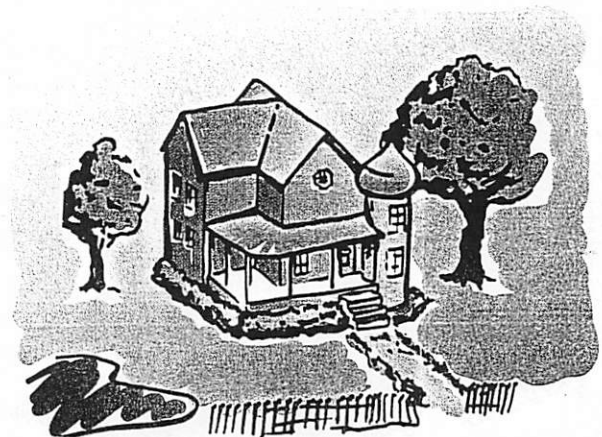
High Strength Commercial

- Restaurants and other difficult high strength waste applications are effortlessly treated with FAST's robust aerobic process
- Clubhouses, schools, trailer parks, office buildings and other commercial properties are natural fits for a FAST wastewater treatment system
- With FAST's reliable process engineering design, operation is simple and virtually maintenance free



Failed System Renovation

- Failing septic systems can easily be retrofitted and upgraded with the simple, affordable design of FAST
- Small communities now have a practical, proven alternative to cost prohibitive centralized sewer systems
- Modernizing the wastewater treatment system with FAST increases value and usefulness of the property



Proven, safe, reliable.

The advanced technology behind FAST[®] was originally developed by Smith & Loveless, Inc., a worldwide leader in the design and manufacture of wastewater treatment equipment since 1946. FAST has been used successfully for many years in municipal, industrial, marine, commercial and residential applications. Known globally for superior engineering and manufacturing, the Smith & Loveless companies are one of the most recognized water and wastewater transfer and treatment groups in the world. This innovative group of companies is known for high standards, proven technology, engineering expertise and manufacturing quality.

Environmental Protection

FAST systems greatly reduce groundwater contamination and help protect the delicate ecosystem. Potentially harmful nitrates and all other forms of nitrogen are removed at unparalleled rates (more than 70%) through the patented FAST process. FAST is made with post-consumer recycled materials. Use of this remarkable system allows for responsible new development and the renovation of failed conventional systems.

FAST Certifications

U. S. Coast Guard
Canadian Great Lakes
UK Department of Trade
NSF Standard 40, Class I
International Maritime Organization (IMO)



Technical Specifications

Power required: Normal household current (120v, 60Hz). Other options (220v and international requirements) are available.

Materials of construction: Made with 100% corrosion resistant materials and contains post-consumer recycled materials.

Underground housing: FAST systems can be housed in concrete, fiberglass, steel or plastic tanks. Always check local regulations before installing or altering a wastewater system. Contact Bio-Microbics or a dealer near you for more information on the availability of proper tankage in your area.

Dispersal Options: Check your local regulations. The extraordinarily high treatment levels may allow reductions in drain field areas, use of treated water for irrigation or other innovative discharge methods.

Capacity: Available in several convenient, affordable sizes and configurations. Please contact Bio-Microbics or a dealer near you for more information on the FAST system that's right for your application.

Bio-Microbics, Inc.
8450 Cole Parkway
Shawnee, KS 66227

913-422-0707

1-800-753-FAST

Fax: 913-422-0808

E-mail: onsite@biomicrobics.com
Web site: www.biomicrobics.com



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**GAY AND KEESEE, INCORPORATED**

ENGINEERING ♦ LANDSCAPE ARCHITECTURE ♦ SURVEYING

FAX TRANSMITTAL FORM**TO:** Mr. Bruce Tuten**FAX #:** 540-265-0659**COMPANY:** Boy Scouts of America**PAGES:** (Including Cover) 6**PROJECT NAME:** Agreement for a Design for an Alt. Septic**PROJECT #:** E02079**FROM:** John T. Neel**DATE:** 12/3/2002**MESSAGE:** Following is the revised proposal we had discussed. If you have any questions, feel free to call.

Thank you,

John Neel

cc:

1260 RADFORD STREET ♦ CHRISTIANSBURG, VIRGINIA 24073
PHONE (540) 381-6011 ♦ info@gayandkeese.com ♦ FAX (540) 381-2773

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GAY AND KEESEE, INCORPORATED

1260 RADFORD STREET • CHRISTIANSBURG, VA 24073

December 3, 2002

Mr. Bruce Tuten
 Boy Scouts of America
 Blue Ridge Mountains Council
 2131 Valley View Boulevard
 Roanoke, VA 24012

RE: Agreement for Design of an Alternative Septic System
 Claytor Lake Boy Scout Aquatics Base
 E02079

Dear Bruce:

The OWNER, as noted above, and Gay and Keesee, Incorporated, hereinafter referred to as ENGINEER, agree that the ENGINEER will perform the following services for the OWNER in order to prepare a Design for a 9,600 gallon per day Alternative Septic System for submission to the Virginia Department of Health and Subsequent Construction:

1. Plans, Specifications, and required Calculations for the Design of an Alternative Septic System.
2. Submission of the Plans to the Virginia Department of Health for review.
3. Coordination with the Health Department and accomplishment of minor revisions as required by the Health Department.
4. Supply OWNER with two sets of Plans and Specifications after Health Department Approval.
5. Intermediate Site Visit at the request of OWNER to perform an inspection of the system under construction.
6. Final Site Visit to calibrate and certify system after construction is complete.

OWNER understands that he shall have the responsibility of furnishing the following:

1. A Property Plat to scale, showing all property lines, drainfield locations, existing well and any other items related to the Onsite Wastewater Disposal System.
2. A Topographic Survey of the drainfield locations and surrounding areas. Topography shall extend for a minimum of 40' beyond the edges of the drainfield locations.

**Agreement for Design of an Alternative Septic System
Claytor Lake-Boy Scout Aquatics Base
E02079**

Page 2 of 3

3. All corners of proposed structures and drainfield corners located in the field. All corners shall be marked with either wooden or PVC stakes, clearly labeled, and wrapped with fluorescent flagging.
4. A Soils Report of the site performed by a qualified soil scientist and including the design percolation rate, soil characteristics, and a properly sized drainfield, all correspondence from the Virginia Department of Health. Any other soils information as required by the Virginia Department of Health. Groundwater sampling as required by the Virginia Department of Health.
5. Permission to enter upon all necessary properties either public or private to accomplish the design.

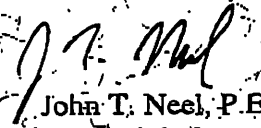
The OWNER understands that the following services are not included within this contract and are additional services subject to additional fees:

1. The furnishing of building locations and drainfield site locations.
2. The furnishing of a Boundary Survey of the property and a Property Plat.
3. The furnishing of a Topographic Survey.
4. The furnishing of Construction Stakeout Services.
5. The furnishing of additional sets of Plans and Specifications.

The fee for furnishing the above will be a lump-sum amount of \$8,200.00, which is due and payable at the time of submission to the Virginia Department of Health. Any additional services shall be billed to the OWNER at our standard hourly rates. I have enclosed a copy of our standard hourly rates for your review.

Two copies of this proposal are enclosed for your review. The return of an executed copy will serve as our Authorization to Proceed. Gay and Keesee, Incorporated's Standard Terms and Conditions are incorporated and made part of this agreement. Should you have any questions or concerns about the above-mentioned tasks, or our understanding of your project, please do not hesitate to contact us at your convenience.

Sincerely,
Gay and Keesee, Incorporated


John T. Neel, P.E.
Project Manager

Enclosures

*Agreement for Design of an Alternative Septic System
Claytor Lake Boy Scout Aquatics Base
E02079*

Page 3 of 3

AUTHORIZATION TO PROCEED

I hereby authorize Gay and Keese, Incorporated to proceed with the Scope of Services as outlined in the above "Agreement for Design of an Alternative Septic System, Claytor Lake Boy Scout Aquatics Base", dated December 3, 2002, and attached hereto.

SIGNATURE

DATE

BILLING NAME AND ADDRESS:

Please sign in the space indicated and return to:

Gay and Keese, Incorporated
1260 Radford Street
Christiansburg, VA 24073

**GAY AND KEESEE, INC.
HOURLY RATE SHEET**

Effective June 1, 2002

Title	Hourly Rate
Principal:	\$95.00/hr.
Engineer I:	\$75.00/hr.
Engineer II:	\$65.00/hr.
Landscape Architect I:	\$75.00/hr.
Landscape Architect II:	\$65.00/hr.
CADD Technician I:	\$60.00/hr.
CADD Technician II:	\$55.00/hr.
Survey Technician I:	\$60.00/hr.
Surveyor I:	\$75.00/hr.
Surveyor II:	\$55.00/hr.
Rodman:	\$35.00/hr.
2-Man Crew:	\$90.00/hr.
3-Man Crew:	\$120.00/hr.
Clerical:	\$35.00/hr.

Gay and Keesee, Incorporated Standard Terms and Conditions

The Client and Gay and Keesee, Incorporated, (GKI) agree that the following Standard Terms and Conditions are incorporated into this agreement:

1. The Client binds himself, his partners, successors, executors, administrators, and assigns to GKI by this agreement in respect to all terms and conditions of this agreement.
2. In the event that the plans, specifications, and/or field work covered by this contract are reviewed and subject to approval by various governmental agencies; and, in the event that, due to change of policy and/or unwritten policies and/or design changes requested by said governmental agencies, after the date of this agreement, additional office or field work is required, the said additional work shall be paid for by Client as extra work.
3. The Client shall reimburse GKI for all expenses not outlined within the proposal, plus fifteen percent (15%). Such expenses include, but are not limited to, subdivision fees, assessment fees, fees for governmental checking and inspection, permits, blueprints and reproduction, travel expenses, shipping/courier expenses, subcontractor services, and all other charges not specifically covered by the scope of this agreement.
4. All original drawings, original survey notes, digital files, and other original documents as instruments of service are, and shall remain, the property of GKI.
5. Should litigation be necessary to enforce any term or provision of this agreement, or to collect any portion of the amount payable under this agreement, then, all litigation and collection expenses, witness fees and court costs, and attorney's fees shall be paid by the Client.
6. Fees and all other charges will be billed monthly as the work progresses, and the net amount shall be due within thirty (30) days of invoice date.
7. All late payment FINANCE CHARGE will be computed at the periodic rate of 1 1/2% per month, which is an ANNUAL PERCENTAGE RATE of 18% and will be applied to any unpaid balance commencing thirty (30) days after the date of the original invoice. Client agrees to pay such finance charges.
8. In the event all or any portion of the work prepared or partially prepared by GKI is suspended, abandoned, or terminated the Client shall pay GKI for the work performed on an hourly basis, not to exceed any maximum contract amount specified herein.
9. All claims, disputes, or controversies arising out of, or in relation to the interpretation, application, or enforcement of this agreement shall be decided through arbitration, as adopted and described by the then most current rules of the American Arbitration Association. The parties further agree that client will require, as a condition for participation in the project and their agreement to perform labor or services, that all Contractors, Subcontractors, Subsubcontractors and Material men, whose portion of the work amounts to five thousand dollars (\$5,000) or more, and their insurers and sureties, shall agree to this procedure.
10. In the event that client institutes a claim, dispute, or controversies against GKI because of an alleged failure to perform, error, omission or negligence, and if such action is not successfully prosecuted, or if it is dismissed, or its verdict is rendered in favor of GKI, Client agrees to pay GKI any and all costs of defense, including attorney's fees, expert witnesses' fees, and any and all other expenses of defense which may be needed, immediately following the case or immediately upon verdict being rendered in behalf of GKI. If resulting finding is in favor of the client, GKI's liability shall in no case exceed the compensation paid or payable to GKI under this contract.
11. GKI's liability hereunder, shall be limited to amounts due to GKI for services actually rendered, or reimbursable expenses actually incurred. In case of termination, GKI will not be liable for lost profits or other direct or indirect damages.
12. In the event Client fails to pay within thirty (30) days after invoices are rendered, then Client agrees that GKI shall have the right to consider said default a total breach of the agreement and the duties of GKI under this agreement terminated. Also, in such event, Client agrees to indemnify and hold harmless GKI from and against all claims, damages, losses and expenses, direct and indirect, or consequential damages, arising out of or resulting from the work stoppage. Additionally, GKI has the right to withhold from the Client any work prepared under this contract until all delinquent invoices are paid in full.
13. In the event any provisions of this agreement shall be held to be invalid and unenforceable, the other provisions of this agreement shall be valid and binding on the parties hereto.
14. Services provided within this agreement are for the exclusive use of the Client. Nothing in this agreement shall create a contractual relationship for the benefit of any third party.
15. The attached proposal is valid for 45 days from the date of the proposal. Should GKI choose to cancel the proposal, it is GKI's right to do so prior to the expiration date. The proposal signed by GKI and the Client in conjunction with the attachments will serve as the entire agreement between the parties. If verbal authorization to begin work is given to GKI, then all conditions and terms of the proposal are constructed as acceptable to the Client whether or not the contract is signed and returned by the Client to GKI.

Facsimile

To: Mr. Bruce Tuten

Company: Boy Scouts of America

Fax number: 540.265.0659

From: IAN Whitlock

Date: 3-11-04

Project #: Proposal for
CLAYTON LAKENumber of pages: 12 including cover sheetEnvironmental
Construction
Operation &
RemediationECOR Solutions, Inc.
3333 West Marshall St.
Richmond, VA 23230

(804) 354-0700

(804) 354-1548 (fax)



Please see Attached proposal. Ecor is mailing
you A copy AS well. Feel free TO CALL me WITH
Any QUESTIONS OR COMMENTS.

Thanks

PRIVILEGE AND CONFIDENTIALITY NOTICE

This message is intended only for the use of the individual(s) to whom it is addressed and may contain information that is privileged and/or confidential. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately at (804) 354-0700 and return the original message to us at the address above via the U. S. Postal Service. Thank you.

Environmental
Construction
Operations &
Remediation

ECOR Solutions, Inc.
3333 West Marshall Street
Richmond, VA 23230
(804)354-0700
(804)354-1548 (fax)

11 March 2004

Reference: Proposal #03-0181

via facsimile and U.S. Mail

Mr. Bruce Tuten

Scouts Executive - Boy Scouts of America

Blue Ridge Mountains Council

2131 Valley View Boulevard, NW

P.O. Box 7606

Roanoke, VA 24019-0606



Dear Mr. Tuten:

ECOR Solutions, Inc. (ECOR) is pleased to present this cost proposal to Boy Scouts of America (BSA) to provide turnkey environmental construction services for the Camp Claytor alternative septic system specified in the system design (dated August 7, 2003) completed by Gay and Keesee, Inc. Although the original design did not specify a grease trap, it is to ECOR's understanding that a 3,000-gallon grease trap will be installed at the Dining Hall. ECOR has reviewed the above referenced system design and considers the treatment system installation cost presented herein accurate to the best of our ability based on the information provided and our understanding of the project.

This proposal is organized as follows: Section 1.0 discusses the scope of work; Section 2.0 discusses health and safety; Section 3.0 discusses project schedule; Section 4.0 discusses project assumptions; Section 5.0 discusses ECOR's Qualifications; and Section 6.0 discusses project cost.

1.0 SCOPE OF WORK

Task 1 - System Specifications and Permitting

Notifications and Permits

It is ECOR's understanding that the system construction permit, discharge permit (if applicable), erosion & sediment (E&S) control plan, and all other necessary permits will be obtained by BSA prior to ECOR's mobilization to the site. In addition, ECOR assumes that all E&S controls required by the E&S plan will be installed by the BSA prior to initiating excavation activities. If necessary, ECOR can provide these services under separate proposal upon receipt of the approved E&S plan.

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 2

Underground Line Identification

ECOR will contact Miss Utility prior to commencing with excavation activities. All underground lines and obstructions will be marked on the surface with high visibility marking paint. Markings will be color-coded to indicate the type of obstruction (i.e., electrical, water, sewer, etc.). Based on our review of the site conditions, ECOR does not anticipate impedance by any utilities; however, should any discovered utilities require relocation, this will be performed at an additional cost.

FAST® Specifications

The treatment system design requires the installation of four (4) FAST® Treatment Units below the ground surface. These treatment units include: one (1) 0.5 FAST® Unit, one (1) 1.5 FAST® Unit, and two (2) 4.5 FAST® Units. The FAST® technology refers to Fixed-film Activated Sludge Treatment. The FAST® System consists of a honeycomb media unit suspended in a concrete tank, an aerator with housing, and a control/ alarm panel. The only aboveground system components are the aerator unit and control/ alarm panel.

Task 2 - System Procurement

ECOR recommends that BSA directly purchase the FAST® Units and drip line system directly to save ECOR's handling markup (typically 10%). ECOR has contacted FAST® regarding the specified treatment units, Wasteflow® drip tubing, and all associated control devices required per the site design and will gladly assist BSA in a direct purchase of the FAST® and Wasteflow® drip line system. The FAST® pretreatment unit vendor requires a deposit in the amount of 80% of the treatment unit cost and drip tubing to authorize manufacture. The remainder of the balance is due when the system is delivered to the site.

The cost for the four (4) FAST® Treatment Units, four (4) FAST® control panels, 8,500 linear feet of Wasteflow® drip tubing (including all connections and valve boxes), and three (3) geoflow control cabinets when purchased directly by BSA is approximately \$56,658 plus tax (freight is included in cost). A one (1) year manufacturer's warranty with inspection services for the FAST® Treatment Units is included with this cost. It should be noted that typical lead time on delivery of the system is approximately one (1) month to manufacture and ship to the site. Once BSA purchases the FAST® treatment units and Wasteflow® drip tubing, ECOR will contact FAST® to finalize treatment system specifications and coordinate system delivery to the site.

In addition to direct purchase of the FAST® Units, ECOR recommends that BSA directly purchase the septic, pump, dosing, and grease trap tanks from C.T. Jamison's

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 3

Precast Septic Tanks, Inc. (C.T. Jamison) to save ECOR's handling markup. ECOR has been in contact with C.T. Jamison and will gladly assist BSA with the procurement process of the specified concrete tanks required by the site design. BSA's purchase of these tanks from C. T. Jamison, including freight to the site, manhole risers, and tank water proofing is approximately \$63,985 plus tax.

It should be noted that typical lead time to manufacture these tanks is between two (2) to three (3) months. Due to payment terms required by C.T. Jamison, a 40% payment is required to authorize manufacture of the tanks. The remaining balance is due upon delivery of the tanks to the site. Once BSA purchases the tanks, ECOR will contact C. T. Jamison to finalize tank specifications according to design and coordinate tank deliveries to the site.

Task 3 - Site Preparation

Prior to installing the treatment system, all trees and roots will be cleared and grubbed from the site by others so that the treatment system and drip tubing can be installed properly according to design. This includes all stumps and root mass. Additional grubbing required for the treatment system installation will be performed at an additional cost. Following clearing and grubbing activities, ECOR assumes that additional grading will not be required for the installation of the treatment systems. While approximate topographical data were provided in the site design, ECOR assumes that the treatment system and relevant piping runs have been designed with the assistance of such topographical features (i.e., gravity supplied lines).

Roads will need to be installed by others prior to ECOR's mobilization so that all proposed system site locations are accessible by heavy equipment and ECOR pick-up trucks. Once the site is cleared, ECOR requests that BSA or others to stake/mark all proposed building locations. This will provide ECOR with site points of reference during the system installation phase. In addition, BSA or the design engineer will provide ECOR with invert elevation data for the piping runs from the proposed buildings to the treatment systems. If this information cannot be provided, ECOR will contract an initial site survey at an additional cost.

In addition, electric power needs to be installed at the site to allow for system activation and startup activities. For estimating purposes, ECOR has assumed that the power supplied to the site will be 230-volt with single and three phase capabilities. Should a different electrical configuration be supplied to the site, ECOR may need to adjust procurement costs for compatible system pumps and controls.

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 4

Task 4 - System Installation

With site preparation activities complete, ECOR will obtain utility clearance and mobilize to the site to install the Camp Claytor Treatment System. Immediately after mobilization, ECOR will install highly visible orange construction safety fencing to cordon off the excavation areas. In addition to the required E&S controls specified in the plan, ECOR will install silt fencing along the perimeter of the excavation areas to prevent any runoff into the surrounding lake. Additional E&S control measures that may be required by the site E&S Plan are assumed to be completed by others and therefore not included in this cost proposal.

The treatment system will be installed according to the system design (dated August 7, 2003) completed by Gay and Keese, Inc. The system design requires the installation of the following:

- Four (4) FAST® Units inside their respective modified concrete tank;
- Septic Tanks: one (1) 1,000 gallon; one (1) 3,000 gallon; and one (1) 4,000 gallon;
- Pump Chamber Tanks: two (2) 1,000 gallon; and one (1) 3,000 gallon;
- Dosing Tanks: one (1) 2,000 gallon; and two (2) 5,000 gallon;
- Grease Trap: one (1) 3,000 gallon;
- Approximately 3,500 linear feet of one (1) inch forcemain and approximately 1,300 linear feet of six (6) inch sewer line stubbed to proposed building locations; and
- Three (3) drainfields comprising a total of 8,500 linear feet of Wasteflow® drip tubing (WFPC 16-2-24), three (3) control panels, valve boxes, and all other associated Wasteflow® fittings and components.

During excavation activities, ECOR will stockpile soils immediately adjacent to the work area. At the completion of each workday, the stockpiled soils will be covered with poly to minimize the impact of precipitation.

The tanks and piping will be installed according to the design engineer's specifications. At the completion of each tank installation, ECOR will fill the tanks half way with water to allow the tanks to settle in place and prevent tank movement. ECOR has obtained permission from the Pulaski County Health Department to withdraw water from Claytor Lake to provide water for this task. The tanks will be completely filled during system startup activities.

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 5

Task 5 - System Pressure Test and Site Restoration

Once the entire treatment system is completely installed, ECOR will pressure test the system's forcemain, sewer, and drip lines at a pressure recommended by the design engineer. Following system pressure testing, ECOR will proceed with backfilling all excavated areas with the soils removed during excavation activities. The excavated areas will be rough graded to their original surface elevations. The disturbed areas will be restored with seed and straw. Assuming that the excavated soils are clean, ECOR will stage all remaining soils on site at a location approved by BSA. No soil disposal is included in this cost proposal.

It is to ECOR's understanding that the campsite's buildings will be installed during or after treatment system installation. Connections/tie-ins to the pre-installed treatment system, installed by ECOR, will be performed by others. After the campsite buildings are constructed, ECOR can proceed with system startup activities. During system startup, system operation will be activated, monitored for any mechanical problems and all control loops, instruments and alarms will be tested after the proposed buildings are constructed. System startup will continue through several effluent cycles to assure that all components are working properly. ECOR strongly recommends that the campsite buildings be constructed soon after treatment system installation is complete. Otherwise, operation of system equipment/components may be compromised should the equipment lay dormant for an extended period of time. ECOR will provide a cost for system startup activities once all proposed buildings are constructed. Since the campsite buildings are being installed after system installation, ECOR will be required to remobilize to the site to conduct system startup activities.

2.0 HEALTH AND SAFETY

All field activities will be conducted according to ECOR's project workplan and health and safety plan. ECOR personnel shall wear Level D personal protection equipment (i.e., safety glasses, hard hats, steel-toe boots and work gloves). In addition, ECOR will be equipped with confined space entry equipment to install the FAST® Units and pumps inside their respective concrete tanks. All confined space entries will be conducted by ECOR's certified confined space technicians. ECOR will prepare a site-specific health and safety/workplan prior to conducting any field activities.

3.0 SCHEDULE

As discussed earlier, lead time regarding procurement of the FAST® treatment units is one (1) month and concrete tanks is estimated to be between two (2) and three (3)

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 6

months. It is anticipated that the construction services can be completed within nine (9) weeks following delivery of the treatment units and tanks. A more detailed schedule will be provided to BSA prior to commencing with field activities.

4.0 PROJECT ASSUMPTIONS

- ECOR based all costs associated with this project on the Camp Claytor alternative septic system design (dated August 7, 2003) completed by Gay and Keesee, Inc. Any deviation from this design may result in additional costs;
- The proposed buildings will be constructed as soon as possible after the treatment system is installed so that system equipment is not kept dormant, possibly compromising system start-up and operation;
- ECOR will stub the sewage lines to the approximate building locations during the system installation phase and the final connections will be performed by others. If necessary, ECOR will provide a cost to complete final sewage line connections from the stubbed lines to the campsite buildings once campsite construction is finished;
- The campsite's water source (private well) will be installed by others;
- ECOR has not provided an electrician's cost to energize the control panels and pumps since the camp site is currently not equipped with input power (electricity);
- Procurement of pumps and control panels is under the assumption that the input power source to be supplied to the campsite will have 230-volt single-phase and three (3)-phase (Note: ECOR can provide an electrician cost to activate all control panels and pumps once the input power source is installed);
- Property lines will be marked prior to ECOR's mobilization to the site;
- Buildings locations will be staked/marked prior to ECOR's mobilization to provide landmarks and allow proper placement of the treatment system (i.e., tanks, piping, and drain fields) in relation to the buildings and according to design;
- Prior to ECOR's mobilization to the site, the camp areas requiring construction of the treatment system and drain fields will be cleared and grubbed of trees, stumps, root mass, and roots, and access roads will be extended so that all areas

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 7

requiring construction services are accessible by pickup trucks and heavy equipment;

- Access roads from highway will accommodate delivery of crane and other heavy equipment;
- All site activities may be performed in Level D PPE;
- No overhead or underground utilities or appurtenances will impede the proposed work activities;
- Once mobilized, ECOR assumes a continuous, uninterrupted work schedule. The costs presented herein do not account for "lost" time due to inclement weather, utilities relocation, excessive groundwater, subsurface rock impedances, etc.;
- ECOR will have unrestricted access to the work site. Access control procedures will not impede work activities;
- ECOR's work will not be impeded by other on-site contractors;
- As agreed upon in October 2003, ECOR will be allowed to stay at BSA's cottage(s) at Claytor Lake for the duration of the project;
- Excavated soils are not contaminated and are suitable for fill material in the excavation areas. Additional fill imported to the site is not included in this cost proposal;
- Any soil remaining after backfilling activities are complete can be staged or dispersed at the site and will not require off site disposal;
- Top soil will be provided to restore disturbed areas. For the purposes of this proposal ECOR has assumed 85 cubic yards of topsoil will be provided. ECOR suggests that BSA strip and stage available native topsoil materials during the clearing and grubbing phase of this project;
- Electricity (input power) will be supplied to the campsite prior to initiation of the startup phase; and
- Per the manufacturer's warranty, a FAST® System representative will provide system service for one (1) year following installation. This warranty covers all repair/replacement parts installed during the warranty period; however the cost of labor for repairs is not warranted. Labor and equipment costs for such repair will be provided by ECOR at the request of BSA;
- The local health department and the design engineer will be available in a timely manner to inspect the system during construction and startup phases.

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 8

5.0 *ECOR'S QUALIFICATIONS*

ECOR is a fully licensed and insured environmental company providing full-service environmental construction and remediation services with a staff of over 100 full time employees strategically placed in six (6) offices within the mid-Atlantic region. ECOR has a broad range of in-house capabilities, providing a single-source solution for clients needing environmental construction and remediation services. ECOR has installed numerous package wastewater treatment systems throughout the mid-Atlantic region. ECOR just recently installed a 9.0 FAST® Treatment System (largest FAST® Unit made) at a grocery store located in Heathsville, Virginia. Feel free to contact Mr. Mike Birch with Nature Works (Representative Company of FAST®) at (804) 453-7946 regarding ECOR's qualifications with installing the FAST® Treatment System.

A copy of ECOR's evidence of insurance and a summary of ECOR's qualifications and experience has been attached to this proposal for further reference.

6.0 *PROJECT COST*

Assuming BSA will directly purchase the FAST® Treatment Units and concrete tanks, ECOR will provide all equipment and labor to install the treatment system outlined above for a LUMP SUM COST of \$158,000. Should BSA elect ECOR to purchase the FAST® Treatment Units and concrete tanks, ECOR's total LUMP SUM COST will include the costs referenced above for the purchase of the FAST® units and tanks plus tax and ECOR's handling markup.

ECOR will provide a system startup cost once all campsite buildings are in place. Given that campsite construction will commence after the treatment system installation phase, a separate mobilization to the site will be required by ECOR to conduct startup activities. Depending on site conditions following final campsite construction, system startup will most likely require two (2) to four (4) days on site to complete.

ECOR has provided Table 1 below to summarize project costs.

Mr. Bruce Tuten
 Boy Scouts of America
 03/11/04
 Page 9

Table 1: Proposed Fee Schedule

Assumption: (BSA directly purchases FAST® Units and Concrete Tanks)

Item Description	Fee (\$\$)
Manufacture Fees (<i>Payable directly to vendor upon proposal agreement to authorize manufacture of vessels and treatment units</i>) 40% of Tanks Cost 80% of FAST® Systems Cost <p style="text-align: right;">Subtotal</p>	 \$25,594 \$45,326 <p style="text-align: right;">\$70,920 (plus tax)</p>
Shipping Fees (<i>Payable directly to vendor upon delivery to site</i>) 60% of Tanks Cost 20% of FAST® Systems Cost <p style="text-align: right;">Subtotal</p>	 \$38,391 \$11,332 <p style="text-align: right;">\$49,723 (plus tax)</p>
ECOR's Installation Fee Labor, Materials, and Equipment	 <p style="text-align: right;">\$158,000</p>
<p style="text-align: right;">Total Procurement Cost</p>	<p style="text-align: right;">\$120,643 (plus tax)</p>
<p style="text-align: right;">Total Project Cost</p>	<p style="text-align: right;">\$278,643</p>

Procurement costs for the Tanks and FAST® Units do not include tax. Therefore the Total Project Cost listed above should be considered approximate. The costs listed above for the Tanks are valid for six (6) months and the costs for the FAST® Units are valid for 30 days. It should be noted that the costs listed above for the FAST® units include costs for the Wasteflow® drip line, control panels, and all other associated drip line components.

ECOR's LUMP SUM COST reflects those costs associated with labor, equipment, and materials required to install the alternative septic treatment system as described in the

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 10

design completed by Gay and Keesee, Inc. ECOR will not modify the work scope without consultation and authorization from BSA. Invoices will be submitted monthly based on percent of completion. This project will be conducted according to ECOR's terms and conditions dated June 2001, a copy of which are attached to this proposal.

If this proposal is acceptable to you, please indicate your agreement by having an authorized officer or representative sign the proposal in the space provided below and by returning to the undersigned an executed copy of this proposal. Upon receipt of the acceptance copy, ECOR will commence the performance of the services described in this proposal. If you wish you may fax your acceptance to us at (804) 354-1548.

ECOR sincerely appreciates the opportunity to provide our environmental construction services. If after reviewing this proposal, you have any questions or require additional information, please feel free to contact Scott Mortimer or me at (804) 354-0700.

Sincerely,

ECOR Solutions, Inc.



Ian Whitlock

Project Scientist III

Enclosures: ECOR's Terms and Conditions (dated June 2001)
Evidence of Insurance
Summary of ECOR's Qualifications and Experience

cc: S. Mortimer and R. Tippett (ECOR)

Mr. Bruce Tuten
Boy Scouts of America
03/11/04
Page 11

Agreed and Accepted:

Proposal #: 03-0181

**Boy Scouts of America
Claytor Lake
Pulaski County, Virginia**

**Installation of alternative septic treatment system based on Gay and Keese design
(dated August 7, 2003)**

By: _____

(Signature)

(Printed Name)

(Title)