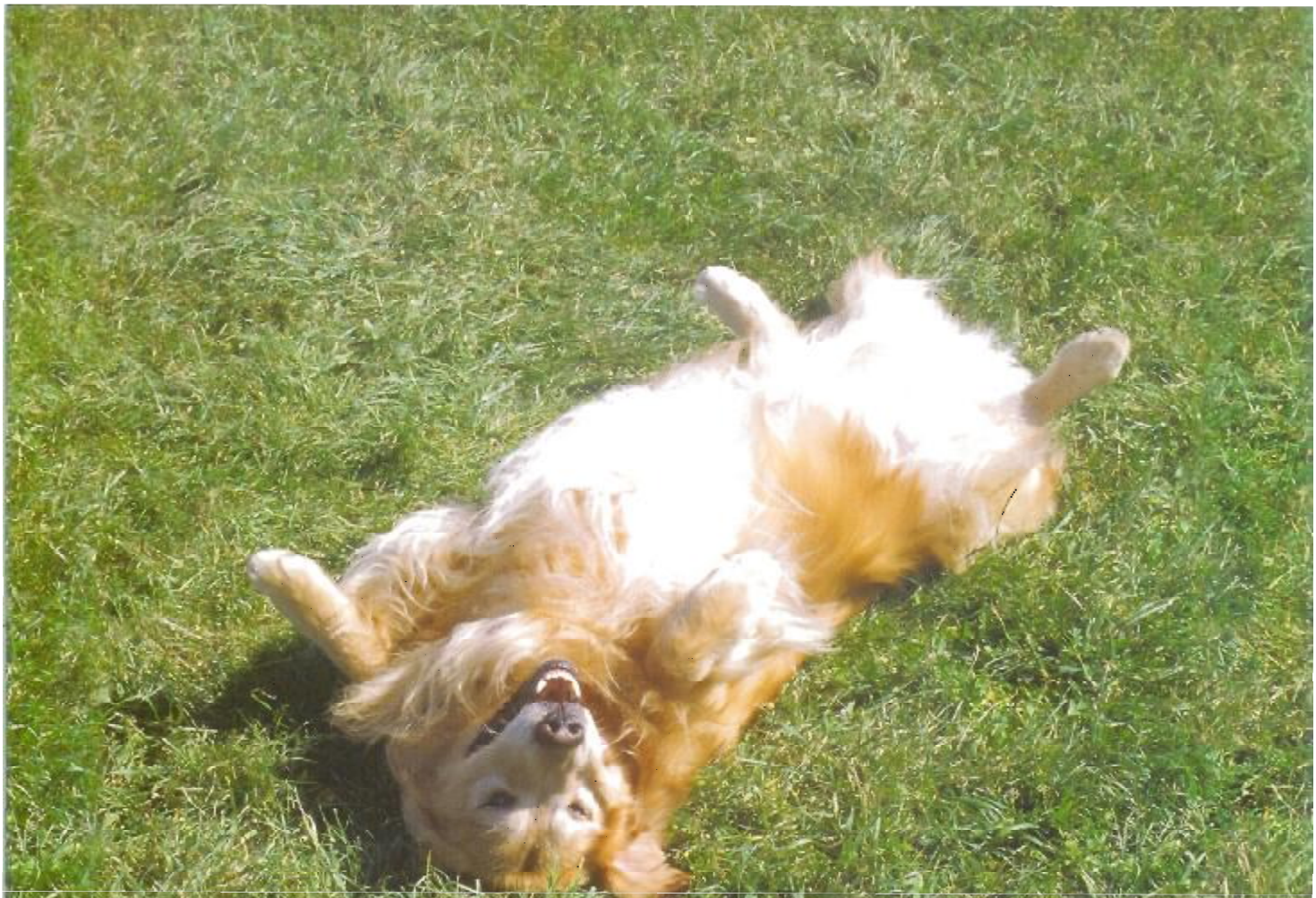


And this is a wastewater dispersal field.

No Worries.

GEOFLOW

SUBSURFACE DRIP SYSTEMS

Geoflow WASTEFLOW®

Geoflow's subsurface drip systems solve many of the problems that plague traditional methods of wastewater dispersal. Since the effluent is dispersed underground where it is absorbed in the biologically active soil layer, there is no surface contamination, no ponding, no run-off problems, no bad smells.

Issues such as overspray and aerosol drift are eliminated, dose scheduling is unaffected by land use or weather, and it is a politically and environmentally favorable means of dispersing wastewater.

With subsurface drip, secondary reclaimed wastewater can be used, eliminating the ongoing cost of additional effluent treatment.

Geoflow drip dispersal is recommended for commercial, municipal, industrial, residential and agricultural applications.

Subdivision in Minnesota.

How It Works

The WASTEFLOW dripline has factory-installed emitters evenly spaced along the tubing. The dripline is usually installed six to ten inches below the surface, directly into the biologically active soil horizon where the treated effluent can be absorbed by the plants, animal life, and soil.

Wastewater is pumped to the dripfield on a time-activated dose cycle. The slow, even application of effluent with resting periods is key to the drip system's success.

Easy To Install — New or Retrofit

Geoflow subsurface systems are simple to install. The tubing can be laid on a graded parcel then covered with topsoil or installed using a tubing plow or trencher.

Subsurface drip also solves the problem of small or odd-shaped areas, such as property edges and around buildings and other structures. The flexible tubing can easily be fit to uneven spaces. Since the wetted area is within close proximity of each emitter, run-off problems are easily eliminated.

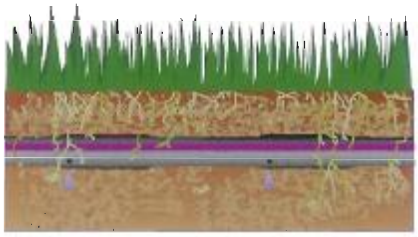
Plow single or multiple driplines at a time.

But What About...?

Clogging — Geoflow drip systems are installed with self-cleaning filters to keep large particles from entering the drip field.

WASTEFLOW emitters are also self-cleaning and have been used for over 15 years in actual onsite applications. They are made with large orifices, raised entry ports, and turbulent flow paths to keep smaller particles from collecting in the emitters.

Root intrusion — *Each emitter features* ROOTGUARD®, patented protection against roots entering the emitters. The non-toxic active ingredient, Treflan®, directs root growth away from the emitters. Treflan is impregnated into the emitters during the molding process.



Rootguard keeps roots from penetrating and clogging the emitters.

Bacterial growth — Geoflow's WASTEFLOW dripline is coated inside with the anti-bacterial, *Ultra-Fresh*® to inhibit bacterial growth on the walls of the tube and in the emitters. *Ultra-Fresh* has been found to be effective in preventing slime build-up inside the tube, even with effluent that has very high BOD.

Look for the anti-bacterial turquoise lining.

This eliminates the need to scour the dripline with high flush velocities.

There is virtually no discharge into the environment because the active ingredient, TBT-maleate, does not migrate readily through plastic (Note: Ultra-Fresh does not treat the water flowing through the tube.)

Freezing climates – Geoflow systems can be used year round, even in freezing conditions. The polyethylene dripline is flexible enough so as not to crack when it freezes. The dripline self-drains through the emitters every time the system is turned off, and will not hold water. Sound design, including drainback of the system, air vacuum breakers and insulation of the more rigid parts of the system keep the system working even in the coldest climates.

Difficult sites – Geoflow systems can be effective in areas with

- tight soils,
- rocky terrains,
- steep slopes,
- high water tables.

Design guidelines are available directly from Geoflow and at www.geoflow.com.

A steep slope installation in California — 65% slope.

Testimonials

Higgins Corner Retail Development
Nevada County, California

"The Geoflow dripline system proved to be successful in four areas: Foremost, there was a tremendous cost saving in installing the Geoflow system. Secondly, the time and effort saved in installing Geoflow as compared to the construction of deep absorption trenches was also a benefit. Thirdly, one and a half acres of land could be used for other monetary-inducing projects; and fourth, the final disposal site looks like the original untouched property. Neighbors are pleasantly surprised at the final effluent disposal field."

Mark Kahl, Design Engineer
7H Technical Services Group Inc.

Higgins Corner, Nevada County, CA.

Ocala Airport
Ocala, Florida

"The [44-acre] site has operated successfully at an average of 500,000 gpd over a three-year period. Monitoring data reveals that groundwater quality has not been adversely effected despite high loading rates... The cost to operate and maintain a subsurface reuse system is much less than a conventional irrigation system..."

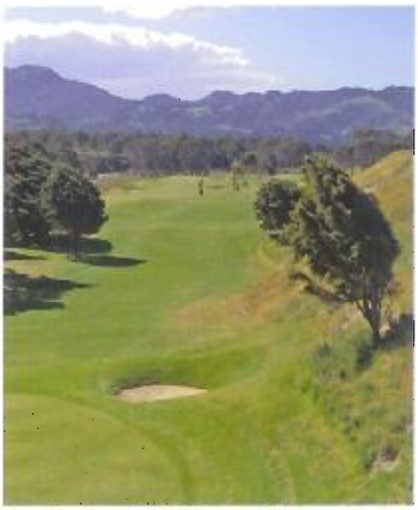
Ed T. Earnest, P.E. Utility Engineer.
City of Ocala Engineering Dept.

Ocala Airport.

Omaha Beach Golf Course
Matakana, New Zealand

"As part of the construction of the new 9-holes the developer installed a new subsurface drip irrigation system on some of the new fairways to act as part of the overall community treated effluent disposal system... We are extremely pleased with the system, which gives a very even deep green appearance to the fairways where it was been installed. The fairways that are irrigated with the subsurface drip system are in better condition than those that do not yet have the system."

Allan Anderson,
Head Greenkeeper



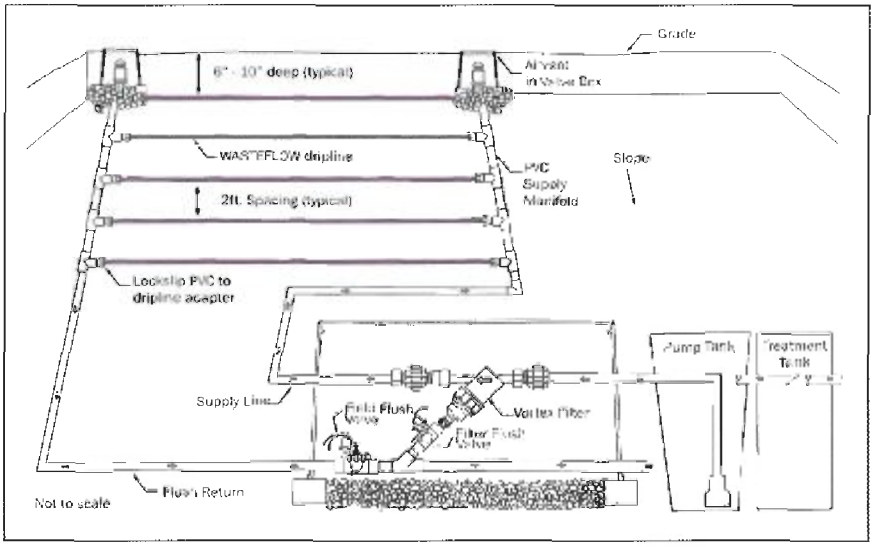
Omaha Beach Golf Course, N.Z.

Typical Layout

WASTEFLOW dripline is made of flexible ½" polyethylene tubing coated on the inside with an anti-bacterial lining to inhibit bacterial growth. The factory-installed emitters are spaced evenly along the tubing.

The dripline is placed six to ten inches below the surface, directly into the biologically active soil horizon. Effluent is pumped on a time-activated dose cycle through a self-cleaning filter out to the dripfield, providing slow, even application of effluent.

The system returns back to the pump tank or treatment tank in a closed loop, and is kept clean with regular flushing.



Typical disposal field elements and layout

The Drip Emitters

Geoflow offers two different emitters, the Classic and the PC.

WASTEFLOW Classic

WASTEFLOW PC

Each dripper has a filter built in at the entry port to to keep particles out.

Turbulent flow path

Effluent travels through a turbulent flow path that helps keep any fine particles from settling inside the dripper.

CUTAWAY OF THE PC EMITTER

Dose mode – When pressurized, the rubber diaphragm flexes across the compensating chamber to regulate flow across 7 to 60 psi.

Flushing mode – As the pump is powered on and off again, the rubber diaphragm relaxes across the exit hole enabling the dripper to self-flush every cycle.

Geoflow Team

The people at Geoflow are the subsurface drip *experts*. We offer training, answers to your questions, and support every step of the way from concept through design and installation.

Geoflow dripline comes with an unprecedented 10-year limited warranty for root intrusion, workmanship and materials.

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GEOFLOW
SUBSURFACE DRIP SYSTEMS

Look for the purple stripe on the tubing to be sure you are getting Geoflow!